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KEY TO DATES AND PAGES

THE following table giving a key to the dates of issue and the page numbers of the BRITISH MEDICAL JOURNAL and SUPPLEMENT in the first volume for 1932 may prove convenient to readers in search of a reference

Serial No	Date of Issue	Journal Pages	Supplement Pages
3704	Jan 2nd	1 - 44	1 - 8
3705	,, 9th	45 - 84	9 - 12
3706	,, 16th	85 - 128	13 - 20
3707	,, 23rd	129 - 176	21 - 28
3708	,, 30th	177 - 222	29 - 36
3709	Feb 6th	223 - 268	37 - 48
3710	,, 13th	269 - 316	49 - 60
3711	,, 20th	317 - 362	61 - 68
3712	,, 27th	363 - 410	69 - 76
3713	March 5th	411 - 456	77 - 84
3714	,, 12th	457 - 506	85 - 92
3715	,, 19th	507 - 550	93 - 104
3716	,, 26th	551 - 598	105 - 112
3717	April 2nd	599 - 642	113 - 120
3718	,, 9th	643 - 692	121 - 132
3719	,, 16th	693 - 738	133 - 144
3720	,, 23rd	739 - 784	145 - 160
3721	,, 30th	785 - 826	161 - 208
3722	May 7th	827 - 872	209 - 232
*3723	,, 14th	873 - 918	—
3724	,, 21st	919 - 968	233 - 252
3725	,, 28th	969 - 1016	253 - 264
3726	June 4th	1017 - 1062	265 - 280
3727	,, 11th	1063 - 1110	281 - 288
3728	,, 18th	1111 - 1156	289 - 312
3729	,, 25th	1157 - 1200	313 - 348

This No contains the *Register of Bio Physical Assistants*

INDEX TO VOLUME I FOR 1932

Readers in search of a particular subject will find it useful to bear in mind that the references are in several cases distributed under two or more separate but nearly synonymous headings—such for instance as Brain and Cerebral Heart and Cardiac Liver and Hepatic Renal and Kidney Cancer and Carcinoma Pithelioma Malignant Disease New growth Sarcoma etc Child and Infant Bronchocele Goitre and Thyroid Diabetes Glycosuria and Sugar Light Isolation Isolation Rays Static Emphysema and Thymus Eye Ophthalmia and Vision Pyelography and Urography Lunacy and Mental Defect Subject Sunlight and Ultra violet Bicycle and Cycle Motor and Automobile Association Institution and Society etc Subjects dealt with under various main headings in the JOURNAL have been set out in alphabetical order under their respective headings—for example Correspondence Leading Articles The Week Reviews etc Original Articles are indicated by the letter (O)

A

ABBEY M On Silver wire as a drain in cerebral abscess 11—

Abdomen acute retraction in Hysterectomy abdominal operations Incision of Sensation after operations

Abortion Criminal (T A Lacey) 411 Criminal law and the law of Liberal Islam Criminal (and Medical Ethics Criminal Sessions and Ethics of Sterilisation Therapeutic Abortion and Contraception in Belgium Abortion Criminal (Lord Buckmaster) 1 Criminal (Lord Dawson) 1 Criminal (Lord Horder) 1 Criminal (Lord Riddell) 1 Criminal (Lord Thomson) 1 Criminal in Yorkshire case of (Alexander Lord Horder) Criminal Law Amendment Bill Criminal Law and Ethics of (Sydney Smith) Criminal Law and Practice of (Lord Riddell) 1 Criminal Law and Public Health Legislation Criminal Law and Practice of (Lord Riddell) 1 Criminal Law and Practice of (Lord Riddell) 1 Criminal Law and Practice of (Lord Riddell) 1

Aneurysm of aorta rupture of survival for seven days after (N McFarlane) 98
ANDREWS M C Herpes and chicken pox
rta with complete Haridas) 236
Aneurysm arterio venous of the left superficial temporal vein (A H Morley) 14
Aneurysm cerebral with recurrent leakage (R M J Harper) 13 (O)
Aneurysms review of books on 65
Angina Vincent's fatal case of (F James) 1031
Anglo French Drug Co Ltd Change of address 1016
ANIGSTEIN L Prophylaxis against typhus fever 158
Aniline pencil perforating orbit (J Cole Marshall) 706
Animals experiments on (parliamentary note) 916 1014 *See also* Vivisection
Animals Imported Destruction of Bill 408 502 548—Royal Assent to 638
Ankle joint fractures in the region of (R Broomhead) 473
Ankle oedema in varicose veins 506 692
Annals of Medical History *See* Medical history
ANNATONE General Carlo Angelo death of 732
Announcements of forthcoming events etc 42 82 127 175 220 267 314 361 409 455 501 549 596 640, 691 736 782 825 870 916 966 1015 1060 1109 1155 1199
Ano rectal fistula *See* Fistula
Anorexia nervosa review of book on 20
I 735
Anthrax treatment of 123—By carbolic acid injections 123
Anti Cancer League 857 *See also* Cancer
Antimalarial drugs synthetic (W Schulemann) 100—Correspondence 263 *See also* Malaria
Antimalarial measures in Travancore 33—Correspondence on 75 *See also* Malaria
Antitoxin diphtheria dosage of 35 *See also* Diphtheria
Antitoxin treatment of scarlet fever 440 *See also* Fever
Antrim County tuberculosis in 256
Antrum maxillary suppuration in the (W M Mollison) 480
Antrum shiagrams of interpretation of (R Graham Brown) 1089
Aortic valvular disease (Maurice Campbell and J W Shackle) 328 (O) *See also* Heart
Aphasia syntactic 592
Apothecaries Society of London degrees and pass lists 82 264 450 868 1014
Appendicectomy in early life 262
Appendicitis acute in children 1101
Approved societies valuation (leading article) 67—Without surplus (parliamentary note) 916 *See also* Insurance
ARAFA M A Synthetic antimalarial drugs 101—A sigmoidoscopic scoop 572
ARC Y member
of e Section
of
ARCHAMBAULT Gustave death of 867
Armagh county school children health of 494
ARMITAGE George Suction surgery 354
ARMSTRONG Herbert Another vicious circle 316
ARMSTRONG John Richardson obituary notice of 125
ARMSTRONG Richard R Immediate pneumococcal typing 187 (O) 260 354
ARMSTRONG JONES Sir Robert Medical conditions in Soviet Russia 169—Appreciation of Robert Stenhouse Williams 314
Army British Amalgamation of the medical services of 1103—Annual Bill 733—Army Medical Services 1154—Commissions ings surgical eco 502 548—Maxillo facial injuries Army Advisory Committee formed to investigate 825—Parliamentary notes 549 733 1103 1154—Promotion examination R A M C 82—Report on the health of for the year 1930 434—
A dical Services 920
A *See also* Supple ment Index
Army British –Regular Army Reserve of Officers Royal Army Medical Corps Supplementary Reserve of Officers 920
Arterial pressure high the stroke in (H O Gunewardene) 180 (O)—Correspondence on 449
Arterial pressure maximum method of recording (I Harris) 563
Arterio venous aneurysm *See* Aneurysm
Artery mesenteric inferior gangrene due to embolus of (P Brown and M M Dey) 186 (O) —(Charles D Lorentzen) 840
Arthritis chronic ambulatory treatment of 39
Arthritis chronic radiographic dissection of (S Gilbert Scott) 275 (O)
Arthritis control and treatment of (C W Buckley) 140 (O)
Arthritis of hip suppurative (J Crooks) 898
Arthritis rheumatoid treatment of 38 *See also* Rheumatoid
Arthritis and rheumatism as a public health problem (Sir William Willcox) 207
Artificial pneumothorax *See* Pneumothorax
Ascaris removed from the common bile duct (J B G Muir) 1077 (O)
ASCHHEIM-ZONDEK *See* Zondek
ASHERSON N Early myringotomy in otitis media 168
ASHWORTH H B Use of avertin in the presence of damaged liver function 1123 (O)
ASLIN W I A Crystalline vitamin D 143
Asphyxia adrenaline in action of (Sir Edward Sharpey Schafer and W A Bain) 1063
Aspiration of fluid from the chest apparatus for 818
Assam cholera prevention in 720
ASSINDER Eric An epiphyseal lesion in congenital syphilis 237
ASSMANN H (and others) *Ergebnisse der Gesamten Tuberkuloseforschung* rev 64
Association Aberdeen University Edinburgh Annual dinner 304
Association American Medical Issues an illustrated primer on fractures 158—Annual meeting New Orleans (1932) 163 271 577
Association of Bio Physical Assistants 41 895—Roll of 896
Association Birth Control National Conference on contraception 719 999 1047 *See also* Contraception
Association British Annual meeting (1932) York 870
Association British Empire Leprosy Relief Annual report 1136
Association British Coast Resorts proposed formation of 162 *See also* Association British Health Resorts
Association British Health Resorts Conference at Hastings 455 478—Report of meeting 478—Conference at Bournemouth 895 897—Report of meeting 851—Report of meeting at Llandrindod Wells Spa 1001—The British Spas A medical appreciation 1093
Association British Hospitals Annual meeting Liverpool (1932) 163 577 1004
ASSOCIATION BRITISH MEDICAL
Bath and Bristol Branch —Flat foot 463
Bath Bristol and Somerset Branch —Surgical treatment of intrathoracic new growths 827
Belfast Division —Essential hypertension a review of 100 cases 468
Calcutta Branch —Group specific substances in forensic medicine 281—Pregnancy anaemia in India 1031
City Division —Injection treatment of varicose veins 237
Essex Mid Division —Endocrines and associated psychoneuroses 223
Essex South Division The psychological interest in general practice 593
Hull Branch —Common forms of dermatitis 407
Hollestone Division —Osteo arthritis 789
Guildford Division —Diagnosis and treatment of carcinoma of the colon 969
Kenya Branch —The brain of the East African native 581
Leicester and Rutland Division —Some clinical aspects of coronary disease 368
Manchester Division — The problem of hearing aids 1126
Marylebone Division —The mischiefs of motoring 250
Metropolitan Counties Branch —Annual reception to final year students 531 — The
on —Minor injuries rheumatism and the endocrines 472
Norfolk West Division —Acute mastoiditis 699
Northampton Branch —The significance of haematuria 177
Nuneaton and Tamworth Division — The
Division —Cottage erapy of puerperal fever erysipelas and scarlet fever 797
Suffolk West Division —The chronic pelvic woman 551
Sunderland Division —The accidents of the male climacteric 50
Tyrone Branch — A dispensary medical officer's depute 1187
Ulster (North East) Division —Tuberculosis of the abdominal lymphatic glands 60
Association British Medical centenary meeting London (1932) 26 666 765 853 914 994 1183 — Centenary dinner 994—Cinema 1181—Leading article on 666—Masonic welcome 853 914—Overseas visitors 853 914—Presidential address title of 1183—Presidents of Sections 26—The Museum 765 1183
Association British Medical history of The first hundred years (I Muirhead Little) 27 204 578 672 913 1091
ASSOCIATION BRITISH MEDICAL SECTIONS (1931)
Anaesthetics —Report of proceedings 421 571
Dermatology —Report of proceedings 8 142
Hydrology and Climatology —Report of proceedings 57 140
Laryngology —Report of proceedings 59
Medicine —Report of proceedings 573
Orthopaedics —Report of proceedings 55
Pathology and Biochemistry —Report of proceedings 59
Public Health —Report of proceedings 693
Urology —Report of proceedings 560
Association British Orthopaedic Bone graft and fusion operations for he spine 5—Tuberculous orthopaedic problems 823 — Suppurative arthritis of the hip 828 — Dislocation of the patella 828—Fracture of the spine 828
Association British Provident Scheme for hospital provision for people of moderate means 76 997 1122
Association Canadian Medical Annual meeting 577 671 814—President 671 814
Association of Clinical Pathologists Annual meeting 333—Pathological methods 334—Zondek Aschheim reaction in the diagnosis of pregnancy 333—Bacteriology of normal urine 333—Use of the bacteriophage in the treatment of *B coli* infection of the urinary tract 334 — The production of immunity by means of convalescent serum with particular reference to measles 334—The Van Slyke urea clearance tests of renal efficiency 73—The micro scopical differentiation of cerebral tumours 334
Association French for the Advancement of Science annual meeting Brussels (1932) 67 1107
Association Irish Medical Annual meeting 1187
Association London of the Medical Workers Federation Analgesia and anaesthesia in normal labour 660—Diagnosis of pregnancy 905 *See also* Medical
Association Medical Officers of Schools Abnormal behaviour in children 43
Association for Mental Welfare Central Annual report 43
Association for Mental Welfare Scottish Annual conference 1183
Association of Past Students of the Royal College of Surgeons in Ireland Fifty second Session College Royal of Surgeons
Association of Port Sanitary Authorities Annual meeting and dinner 1181
Association Royal Medico Psychological Maudsley Lecture 681 — Tour of Governmental hospitals 683—Examination for the Gaskell gold medal 917
Association Tuberculosis Provincial meeting 307 681—Bronchoscopy and diathermy in lung suppuration 681
Assumption of title *See* Title
Assurance policy unusual claim under accident or disease (Weyerhaeuser v Evans) 873
Asthma and allied conditions (G H Orlel) 377—Discussion 379
Asthma notes on 1500 cases of (James Adam) 973 (O)
Asthma liver therapy in 1057
A liver therapy in
Blind Annual
Athlete's foot *See* Epidermomycosis
ATHLONE Earl of elected Chancellor of the University of London 172 210
ATIYIH Sayed Kaisar i Hind medal conferred on 75
Atmospheric pollution Report for 1931 433
AUDEN G The Shuttleworth Samaritan Fund 1057
Aural *See* Ear
Australia Dysidrosis in Western Australia 1200—Infantile paralysis in Melbourne (Jean Macnamara) —In New South Wales 906—Royal Australasian College of Surgeons 905—Sydney hospital finances 906—Told Robert memorial to 906—*See also* New South Wales
Auto intoxication intestinal (leading article) 1010
Automobil Club Médicale formed in Paris 1109
Automobile Association and first aid equipment on the roads 738
AVARGAL M R RY Rao Bahadur Mangalore Kesava Pai O B E conferred on 1097
Avertin and damaged liver function (H B Ashworth) 1123 (O)
AVERY Harold Polycythaemia rubra and achlorhydria 660
AYLI John *Humour among the Doctors* rev 529

Bal les Club Dublin the work of the 7
Baby Week Council National Annual me ting and report 19—North Pactical les of a
Bacillus coli as an ind x of wat r purity
Bacillus meningitis due to (W R Dunscomb et al) 1073
Bacillus abortus (Carlin Trial at Lille) 71
Bacillus calmette Guerin vaccination against (Lesbre and Weill Hallé) 31—Note on
Bacillus diphtheriæ fatal infection by (Cecil Lucas) 1135
Bacillus typhosus in ulcers of the leg 1
Bacillus viridans septicæmia due to 1
Tubercle bacillus (see also Tuberculosis) Method of staining in sections 1
Bacteriology see also Pathology
Bacteriology and Immunity Research Fund 1
Bacteriology Report of the Royal Commission on Sewage Disposal for the year 1919 (Eighteenth and last report of the Royal Commission) 1
Bacteriology review of book on 10
Bacteriology Text book of (Norman Lacey) 1
Bacteriophage in treatment of B coli infection 1
Bacteriophage review of book on 10
Bacteriophage treatment of cervical abscess 11 (O)—Technique 11 (O)—Correspondence on 11 12—(and H J Stiff) Effect of bacteriophage on the peritoneum 11
Bailey Sir Anthony Earl Haig's services to the Army 1135
Bailey H W Case in which the peritoneum was the only part of the body affected by tubercle 5 (O)
Bain W A Acute pneumococcal infection of intracerebral injections in rabbits 1073
Baker A Medical problems of coal mining 1009
Baker H The virulent property of cancer cells 1
Baker J Watson The manufacture of fibro cartilage and of normal cartilage 1
Baker W J Cobalt in hæmato poiesis 1010
Baker Sir William Cobalt in hæmatopoiesis 1010
Baker Sir William memorial to 257
Baker Sir Charles Alfred (Obituary notice) 911
Baker Sir Charles Operative treatment of facial palsy 7—(O)—Letter medal awarded to 1
Balfour Sir George Address on some experiences with ole il orax 693
Balfour Sir George Address on some experiences with ole il orax 693
Balfour Sir George Address on some experiences with ole il orax 693

Aneurysm of aorta rupture of survival for seven days after (N McFarlane) 93
ANDREWS M C Herpes and chicken pox occurring together 1062
Aneurysm of (thoracic) aorta with complete transposition of viscera (G Haridas) 236
Aneurysm arterio venous of the left superficial temporal vein (A H Morley) 14
Aneurysm cerebral with recurrent facial palsy (R M J Harper) 13 (O)
Aneurysms review of books on 65
Angina Vincent's fatal case of (F James) 1031
Anglo French Drug Co Ltd Change of address 1016
ANGSTRÖM L Prophylaxis against typhus fever 158
Aniline pencil perforating orbit (J Cole Marshall) 406
Animals experiments on (parliamentary note) 916 1014 *See also* Vivisection
Animals Imported Destruction of Bill 408 502 548—Royal Assent to 638
Ankle joint fractures in the region of (R Broomhead) 473
Anterior oedema in varicose veins 566 692
Annals of Medical History *See* Medical history
ANNATONI General Carlo Angelo death of 732
Announcements 82 127 170 210 691 736 1155 1199
Ano rectal fistula *See* Fistula
Anorexia nervosa review of book on 20
Anterior poliomyelitis 735
Antiacetic acid injections 123
Anti Cancer League 857 *See also* Cancer
Antimalarial drugs synthetic (W Schulemann) 100—Correspondence 263 *See also* Malaria
Antimalarial measures in Travancore 33—Correspondence on 75 *See also* Malaria
Antitoxin diphtheria dosage of 35 *See also* Diphtheria
Antitoxin treatment of scarlet fever 640 *See also* Fever
Antrim County tuberculosis in 256
Antrum maxillary suppuration in the (W M Mollison) 480
Antrum skiagrams of interpretation of (R Graham Brown) 1039
Aortic valvular disease (Maurice Campbell and J W Shackle) 378 (O) *See also* Heart
Aphasia syntactic 592
Apothecaries Society of London degrees and pass lists 82 264 450 808 101
Appendicectomy in early life 267
Appendicitis acute in children 1101
Approved societies valuation (leading article) 67—Without surplus (parliamentary note) 916 *See also* Insurance
ARAPA M A Synthetic antimalarial drugs 101—A sigmoido copic scoop 572
ARCI Joseph elected a corresponding member of the Académie de Médecine in the Section of Surgery 1061
ARCHAMBAULT Gustave death of 867
Armagh county school children health of 494
ARMITAGE George Suction surgery 354
ARMSTRONG Herbert Another vicious circle 316
ARMSTRONG John Richardson obituary notice of 125
ARMSTRONG Richard R Immediate pneumococcal typing 187 (O) 260 351
ARMSTRONG JONES Sir Robert Medical conditions in Soviet Russia 169—Appreciation of Robert Stenhouse Williams 314
Army British Amalgamation of the medical services of 1103—Annual Bill 733—Army Medical Services Revision of departments 1154—Commissions in the R A M C 547—Dressings surgical economy in 1154—Estimates 502 548—Maxillo facial injuries Army Advisory Committee formed to investigate 825—Parliamentary notes 549 733 1108 1154—Promotion examination R A M C 82—Report on the health of for the year 1930 431—Successful candidates 407
Army British Colonial Medical Services 920 *See also* Supplement Index
Army British Militia 920 *See also* Supplement Index
Army British—Regular Army Reserve of Officers Royal Army Medical Corps Supplementary Reserve of Officers 920 *See also*
Arterial encephalography *See* Encephalography
Arterial pressure high the stroke in (H O Gunewardene) 180 (O)—Correspondence on 449
Arterial pressure maximum method of recording (I Harris) 565
Arterio venous aneurysm *See* Aneurysm
Artery mesenteric inferior gangrene due to embolus of (I Brown and M M Dey) 186 (O)—(Charles D Lorimer) 810
Arthritis chronic ambulatory treatment of 39
Arthritis chronic radiographic dissection of (S Gilbert Scott) 275 (O)
Arthritis control and treatment of (C W Buckley) 140 (O)
Arthritis of hip suppurative (H Crookall) 898
Arthritis rheumatoid treatment of 38 *See also* Rheumatoid
Arthritis and rheumatism as a public health problem (Sir William Willcox) 257
Artificial pneumothorax *See* Pneumothorax
Ascaris removed from the common bile duct (J B G Muir) 1077 (O)
ASCHNER Otto 991 *See* Vienna
ASHFORD Bailey K Early myringotomy in otitis media 168
ASHWORTH H K Use of avertin in the presence of damaged liver function 1125 (O)
ASLAN J A Crystalline vitamin D 144
Asphyxia adrenaline in action of (Sir Edward Sharpey Schafer and W A Bain) 162
Aspiration of fluid from the chest apparatus for 818
Assam cholera prevention in 732
ASSHETON R Ivie An epiphyseal lesion in congenital syphilis 237
ASTBURY H (and others) *Irradiance der Gesamten Tuberkuloseforschung* rev 6
Association Aberdeen University Edinburgh Annual dinner 304
Association American Medical Issues an illustrated primer on fractures 159—Annual meeting New Orleans (1932) 163 771 577
Association of Biological Assistants 11 86—Roll of 876
Association Birth Control National Conference on contraception 719 999 1047 *See also* Contraception
Association British Annual meeting (1931) York 870
Association British Empire Leprosy Relief Annual report 1176
Association British Coast Resorts proposed formation of 12 *See also* Association British Health Resorts
Association British Health Resorts Conference at Hastings 155 178—Report of meeting 178—Conference at Bournemouth 852 854—Report of meeting 851—Report of meeting at Llandrindod Wells Spa 1001—The British Spas A medical appreciation 1005
Association British Hospitals Annual meeting Liverpool (1931) 163 577 1057
ASSOCIATION BRITISH MEDICAL
Bath and Bristol Branch—Flat foot 413
Bath Bristol and Somerset Branch—Surgical treatment of intra thoracic new growths 877
Belfast Division—Essential hypertension a review of 100 cases 68
Calcutta Branch—Croup specific substances in forensic medicine 983—Pregnancy anaemia in India 1031
City Division—Injection treatment of varicose veins 237
Essex Mid Division—Endocrines and associated psychoneuroses 923
Essex South Division—The psychological interest in general practice 593
Fife Branch—Common forms of dermatitis 407
Hailsham Division—Osteo-arthritis 789
Guildford Division—Diagnosis and treatment of carcinoma of the colon 969
Kenya Branch—The brain of the East African native 81
Leicester and Rutland Division—Some clinical aspects of coronary disease 368
Manchester Division—The problem of hearing aids 116
Marylebone Division—The mischiefs of motoring 250
Metropolitan Counties Branch—Annual reception to final year students 531—The entrance upon practice 531
Middlesex (South) Division—Minor injuries of the hands 15—Chronic rheumatism and the endocrines 472
Norfolk West Division—Acute mastoiditis 699
Northampton Branch—The significance of haematuria 177
Nuneaton and Tamworth Division—The menace of obesity 1021
South Eastern Counties Division—Cottage hospitals 315—Specific therapy of puerperal fever erysipelas and scarlet fever 797
Suffolk West Division—The chronic pelvic woman 521
[illegible] ts of the medical [illegible] reulosis
Association British Medical centenary meeting London (1932) 26 666 765 853 914 994 1183—Centenary dinner 991—Cinema 118—Leading article on 666—Masonic welcome 893 911—Overseas visitors 850 911—Presidential address title of 112—Presidents of Sections 26—The Museum 760 1182
Association British Medical History of The first hundred years (J Muirhead Little) 27 204 578 672 903 1091
ASSOCIATION BRITISH MEDICAL SECTIONS (1931)
Anaesthetics—Report of proceedings 421 561
Dermatology—Report of proceedings 142
Hydrology and Climatology—Report of proceedings 57 140
Laryngology—Report of proceedings 60
Medicine—Report of proceedings 53
Orthopaedics—Report of proceedings 55
Pathology and Biochemistry—Report of proceedings 52
Public Health—Report of proceedings 693
Urology—Report of proceedings 560
Association British Orthopaedic Bone graft and fusion operations for the spine 5—Three orthopaedic problems 893—Suppurative arthritis of the hip 898—Dislocation of the patella 899—Fracture of the spine 823
Association British Provident Scheme for hospital provision for people of moderate means 707 1112
Association Canadian Medical Annual meeting 577 671 815—President 671 815
Association of Clinical Pathologists Annual meeting 333—Histological methods 334—Zenker Archibald resection in the diagnosis of pregnancy 334—Bacteriology of normal cervix 335—Uterine bacteriology in the treatment of B coli infection of the urinary tract 336—The production of immunity by means of convalescent serum with particular reference to measles 3—The Van Slyke urea clearance tests of renal efficiency 3—The microscopical differentiation of cerebral tumours 33
Association French for the Advancement of Science Annual meeting Brussels (1932) 607 1103
Association Irish Medical Annual meeting 1167
Association London of the Medical Women's Federation Anabasin and arsphenamin in normal human beings 60—Diabetes and pregnancy 60 *See also* Medical
Association Medical Officers of Schools Abnormal behaviour in children 38
Association for Mental Welfare Central Annual report 953
Association for Dental Welfare Scottish Annual conference 1185
Association of Lay Students of the Royal College of Surgeons in Ireland First meeting 107 *See also* College Royal of Surgeons
Association of Port Sanitary Authorities Annual meeting and dinner 1181
Association Royal Medico Psychological Maudsley Lecture 68—Tour of German mental hospitals 66—Examination for the Gaskell gold medal 917
Association Tuberculosis Provincial meeting 307 611—Bronchoscopy and diathermy in lung suppuration 611
Assumption of titles *See* Titles
Assurance policy unusual claim under accident or disease (Weyerhaeuser v Evans) 822
Asthma and allied conditions (C H Orloff) 577—Discussion 579
Asthma notes on 1,500 cases of (James Adam) 973 (O)
Asthma liver therapy in 1027
Asthma nasal factor in 59
Asthma polycythaemia and liver therapy in (H H Moll) 576 (O)
Asthma review of book on 1055
Asthma statistics 78 215
Asylum Edinburgh Royal Blind Annual report 806
Athlete's foot *See* Epidermomycosis
ATHLONE Earl of elected Chancellor of the University of London 179 240
ATKIN Hazel Kaisar I Hind medal conferred on 75
Atmospheric pollution Report for 1931 433
ATKINS C A The Shuttleworth Samaritan Fund 1057
Aural *See* Ear
Australia Dysidrosis in Western Australia 1200—Infantile paralysis in Melbourne (Jean Macnamara)—In New South Wales 906—Royal Australasian College of Surgeons 905—Sydney hospital finances 906—Todd Robert H memorial to 906—*See also* New South Wales
Auto intoxication intestinal (leading article) 1010
Automobile Club Médicale formed in Paris 1109
Automobile Association and first aid equipment on the roads 738
AVABHAI M R Rao Bahadur Mangalore Lessna Pai O B E conferred on 1097
Avertin and damaged liver function (H K Ashworth) 1123 (O)
AVERY Harold Polycythaemia rubra and achlorhydria 860
AYD John *Humour among the Doctors* rev 529

B

Babies Club Dublin the work of the 493
Baby Week Council National Annual meeting and report 549—Further activities of 825
Bacillus coli communis as an index of water purity 826
Bacillus anthracis meningitis due to (W K Dunscombe) 190
Bacillus Calmette Guerin Trial at Lübeck 71 301 484—Judgement delivered 301—Note on 392 48
[illegible] tion a survey [illegible] of the (Ian ling [illegible] 401 *See also*
Bacillus tuberculosis fiftieth anniversary of Koch's report of the discovery of 343 403 575
Back cold 80
Backache and the orthopaedic surgeon (Norman Capener) 710
Backache in women (Harold F Seymour) 576
Bacon cured with borax (parliamentary note) 596
Bacteria Sulphur rev 840
Bacterial toxaemia and menopausal insanity (T Gillman Moorhead) 923 (O) *See also* Menopause
Bacteriology biochemical aspects of (A J Kluyver) 557
Bacteriology review of books on 19 382 430 529 559 1083
Bacteriology Systemo in Relation to Medicine vol ix rev 19
Bacteriophage in treatment of *B coli* infection of urinary tract (Dr Whitby) 334
BADCOCK J H Dry mouth 410
BADGEROW Sir George Mischiefs of motoring 252
BAILDON Francis J Plantar corns 876
Ba[illegible]
[illegible]
Ba[illegible]
BAIN C W C Etiological factors in hyperpiesia 57 (O)
BAIN W A Action of intracardiac injections of adrenaline in asphyxia 169 668
BAKER John L Medical problem of contraception 1000
BAKER S L The virus theory of cancer 937—The parathyroids and generalized osteitis fibrosa 947
BAKER W E Watson The manufacture of a microscope 614
BAKETEL H Sheridan Cobalt in haematopoiesis 1010
BALFOUR Sir [illegible]
BALL W *Diseases of*
BALLANCE Sir Charles Operative treatment of facial palsy 787 (O)—Lister medal awarded to 961
BALLON Some experiences with oleothorax 893
Bangor sewerage scheme 164
BANISTER H Retinal structure and function 1082
BANKART A S Blundell *Manipulative Surgery* rev 663—Fractures of the spine 878
BANKS A Gray A case of brachial embolectomy 56 (O)
Bar calls to the 271 825 1125
BARBER Hugh A case of thrombo phlebitis migrans 281 (O)
Barbiturates in anaesthesia (R C Garry) 421 (O)—Leading article 438—Correspondence on 496 543 588
BARCLAY A E Protection of x ray workers 193
BARCLAY Irene Report on a housing survey 493
BARCROFT J The limits placed by altitude to physical exercise 23
BARFORD A M Doctors and district nurses 784
BARIL Louis Ernest death of 981
BARKER N W Thrombo angiitis obliterans and its relation to tobacco 996
BARLOW Donald Fractures in the region of the ankle joint 473
BARLOW H Cecil (and H A Prid) Death from rupture of the liver in a newborn infant 887
Barnard J E Microscopy of filterable viruses 798
BARRETT Lady After-effects of the toxaemias of pregnancy 660—Analgesia and anaesthesia in normal labour 681
BARTER P appointed secretary to the Board of Control 83
BARTLETT Bertram Friend obituary notice of 41
BARTLETT S Doctors and district nurses 738
BARTON Pingston Normal development in the young child 17—Acute rheumatic infection 1033
BARUK H (and H DE JONG) *La Catatonie Experimentale par la Bulbocapnine* 623
BARWELL Harold Infections and ear inflammation 1126
Bass Lawrence W (and P A LEVENE) *Nucleic Acids* rev 104
BASTIBLE C Medical profession in County Wexford and the county M O H 709
BASU H L Foreign bodies in the alimentary tract 456
BASU U P [illegible]
BATES R M [illegible] (case of porencep [illegible]
[illegible] 192
[illegible] calp 402
[illegible] 410
[illegible] re the recent disorder at Dartmoor Convict Prison 315
BAXTER James S Undulant fever in Northern Ireland 97 (O)
BAYNES H G Preparation for marriage 1105
BEADLE *Ormond A Report* on intervertebral discs 26
BEADNELL Surgeon Rear Admiral Charles Marsh First x ray photographs in the Navy 498
BEADON Mary O Brien Karl and Hind medal conferred on 1097
BEARDWOOD Joseph T (and Herbert T KELLY) *Simplified Diabetic Management* rev 759
BEATTIE W J H M The teaching of obstetrics 983
BEAUMONT W Cheap goggle for actinotherapy clinics 891
BECART A Gastrophotography 2
BECCLE Louis F Maternal mortality 167
BECK Conrad Microscopy of filterable viruses 798
BEDFORD-RUSSELL H G The common cold 292
BEDSON S P Micro copy of filterable viruses 799
BEDWELL C E A Pathological services of the London County Council 349
Bee stings 452 1061
Beer consumption decline of in Germany 315
Begging letter writer 1200
Behaviour abnormal in children (William Moodie) 428
Bell Memorial Fellowship Election of Junior Fellows 502
BEITZKE H (and others) *Ergebnisse der Gesamten Tuberculosefors hung* rev 67
Belfast *See* Ireland
Belgium centenary of the independence of celebrated by *Le Scalpel* in a special issue dealing with the achievements of Belgian doctors during the last hundred years 83—Abnormal persons legislation for 586—Preventive
BELL George H *Colour index nomogram* 706
BELL J M The teaching of obstetrics 983
BELL W Blair *See* Blair Bell
BELLERBY C W Medical problems of contraception 1000
BENECH Edouard *Parasites et Cancer* rev 41
BENEY Charles A tonsil haemostat 276
BENNETT Sir Norman *The Science and Practice of Dental Surgery* second edition rev 715—Dental needs of the people 1004
BENNETT T Izod Lactic acid in the gastric contents 1006
BENNETT Sir William Henry Death of 20—Obituary notice of 80
BENSON Alfred obituary notice of 1058
BENSON George Corporal punishment 129
BENSON T W Specific therapy of puerperal fever erysipelas and scarlet fever 797
Bequests to hospitals and medical charities 83 211 267 437
BERING Dr appointed professor of dermatology and syphilology at Cologne 312
BEREFLEY Comyns (and J S FAIRBAIRN editors) *Midwifery by Ten Teachers* fourth edition rev 102
BERNARD Jean (and Paul CHEVALLIER) *La Maladie de Hodgkin* rev 713
BERNARD Léon Nominated president of the French Council of Public Health 257—*Les Débuts et les Arrets de la Tuberculose Pulmonaire* rev 807
BERRY Sir James Fallen idols 904 908—A correction 968
BERRY R J A Appreciation of R H Todd 41—(And R M BATES) Case of porencephalic imbecility 830 (O)
BERTWISTLE A P *A Descriptive Atlas of* [illegible]
[illegible]
[illegible]
BICKERTON J Myles Welfare of the blind and national economy 815
BIER August elected an honorary member of the Berlin Medical Society 315
Bile-duct common cystic dilatation of the (James H Saint) 230 (O)—Correspondence on 771 911
Bile duct common foreign body in (R G Cooke) 840
Bile duct common idiopathic congenital dilatation of the (Ernest R Frizelle) 610 (O)—Correspondence on 725
Bile-ducts surgical treatment of disease of (R P Rowlands) 643 (O)
BILHAM P L Determination of aluminium in foods 1000
BILLIG I (W N WEST-WATSON and C J YOUNG) The intravenous liver treatment of pernicious anaemia 273 (O)
BILLINGTON William Death of 301—Obituary notice of 338
BINET Léon (and G H ROGER) *Traité de Physiologie Normale et Pathologique* tome ii *Alimentation et Digestion* rev 771
BINNEY Cecil Voluntary sterilization 1000
Biochemical aspects of the etiology *See* Etiology
Biochemical medicaments review of books on 536
Biochemistry in medicine (W Langdon Brown 525—(Sir Frederick Gowland Hopkins [illegible] —A correction 563
Biological standardization recent advance in 481
Biologist the philosophy of a 981
Biology review of books on 891 1122
Bio-physical Assistant Association
Bio Physical Assistants Poll of 829
BIRD Tom death of 71
Birmingham The cinematograph and child psychology 992
Birmingham Medical School and the hospital centre scheme 349
Birth control laboratories and sterilization Lord Riddell) 106
Birth Control Association *See* Association
Birth control clinic (parliamentary note) 870
Birth control conference on 719 857 1000 1077 1200 (parliamentary note) 870 *See also* Conception
Birth Control and Public Health rev 830
Birth control review of books on 577
Birthday Honours 1005 1097
Birth rate decline of in Italy 80
Birth registration of in Northern Ireland 30
Births in Trinidad (parliamentary note) 870
Bishop of Salisbury and the begging letter writer 1200
BJORKSTEN Elli *Principles of Gymnastics for Women and Girls* rev 1005
BLACK David on elected a Fellow of the Royal Society 577
BLACK E Cowper Diet and dental caries 969
Black Death review of book on 577
BLACKADER Alexander Dougall obituary notice of 537 709
Blackader Lecture *See* Lecture
BLACKBURN A E Vasovagal syncope 1005
BLACKBURN W Howard obituary notice of 1015
BLACKER C P Medical problems of contraception 1000 1047—Voluntary sterilization 1000
BLACKETT Sir Basil *Standing as Conservative* candidate for the St Marylebone division 783
BLACKLOCK D B (and T SOUTHWELL) *A Guide to Human Parasitology* rev 1047—Parasitology in the medical curriculum 1125
BLACKMAN Josiah George obituary notice of 47
Bladder diverticulitis of the (Dr Bonney Hayes) 335
Bladder growth cystoscope for applying diathermy to 386
Bladder healing after suprapubic cystotomy especially in prostatectomy (James P Macalpine) 225 (O)—Correspondence on 500 818
Bladder urinary involved by herpes zoster (Clement C Chesterman) 963
BLAIKLEY J B The teaching of obstetrics 983
BLAIR George obituary notice of 501
BLAIR J A Shoe leather dermatitis 171 [illegible]
BLAIR BELL William Presentation portrait to 31—Lloyd Roberts Lecture on the present and the future of the science and art of obstetrics and gynaecology 45 (O)—An experimental radiology 337
B [illegible]
B [illegible]
Blind person unemployable (parliamentary note) 1125
[illegible] note) 870
[illegible] funds for in Prevention of
[illegible] al economy (J
[illegible] lung 1181
[illegible] te with annex
[illegible] the [illegible]
[illegible]
[illegible] rs
Blood diseases review of book on 709
Blood extravasation shock following 1125
Blood films Kenman's celluloid spreader for making 427
Blood groups importance of the (leading article) 437
Blood pigments spectropnoemetric curve of (Wilfrid Marshall) 95 (O)
Blood pressure high as an early sign of [illegible] (F J Browne) 20 (O)
B [illegible] ber
B [illegible] the
[illegible] O)

Blood sugar effect of smoking on (F and S Thysellius Lundberg) 392
Bloxsome H I Doctors and district nurses 826
Bluhm Agnes Seventieth birthday celebrations of 351—Awarded the Leibnitz medal 361
Blumberg Mrs Medical problems of contraception 1047
Blumer G (editor) *The Practitioner's Library of Medicine and Surgery Vol I Anatomy and Physiology as Applied to Practical Medicine Vol II The Technique of Physical and Laboratory Examination in Clinical Medicine* rev 1176
Board Central Midwives Report of meetings 165 455 519 769 1034 1145
Board Central Midwives Scotland Report of meetings 165 347 1035
Board of Control Appointments 1187
Board of Control Scotland Annual report 116—Scottish mental hospitals 116
Bocci Ruth Teratomatous cyst of the ovary discharging via the umbilicus 89
Bodkin Richard Joseph obituary notice of 914
Bodman Frank Thylaxis 170 — Russell & Groves and Lancaster 1197
Body Mechanics Education and Practice 852
Boime William elected president of the Prussian parliament 361
Boolbrit L Joan *Nutrition and Physical Fitness* rev 295
Borns doctor sentenced for fraud and bigamy 1195
Bond C I Voluntary sterilization 1046
Bond Sir Hubert Maudsley Lecture 63
Bone in child an unusual (William Hunter) 658
Bone clamp for fractures 1133
Bone drills 809
Bone graft and fusion operations for the spine (S A S Mallins) 5 (O)
Bonhoeffer K (and P Jossmann) *Ergebnisse der therapie der progressiven Paralyse* rev 607
Bonnet Victor Research on sex hormones 149—After effects of the toxaemias of pregnancy 660—The teaching of obstetrics 937
Book's for midwives 1097
Book's old medical 6
Boome F J (and M V Richardson) *The Nature and Treatment of Stamm ring* rev 616
Boone Pritchard and Allen 591
Booth G H H Herpes zoster with facial paralysis chicken pox in the same household 15
Bordeaux chair of clinical dentistry founded at 527
Bornstein Arthur death of 453
Bostock Arthur H Appendicectomy in early life 267
Bostock John *The Neural Energy Constant* rev 1176
Bottle hot or ice bag alternative 891
Bouchier Hayes Dr Pyelographs 315—Diverticulitis of the bladder 335—Hepatosplenography 1032
Bourdillon R B Crystalline vitamin D 144
Bourne Francis (and Bethel Solomons) The nomenclature of clamps in 731 (O)
Bourne Alcock The chronic pelvic woman 5 (O)—Philosophy and medicine 728—*Synopsis of Surgery and Gynaecology* fifth edition rev 1038
Bourne Geoffrey Medical treatment of gastric ulcer 118
Boutflower Andrew obituary notice of 1152
Bowden I P Artificial preparation of vitamin A 948
Boycott A E Wasp stings and bee stings 455
Boyle H E G Analgesia in childbirth 1173
Boyle v Martin 966
Boys employed in mines death rate among (parliamentary note) 505 *See also* Mines
Brachial embolectomy See Embolectomy
Bracki bury Henry Britton knighthood conferred on 1088 1097
Bradley W H Infection in the dormitory 802—Acute rheumatic infection 1035
Brafuning H (and others) *Ergebnisse der Gesamten Tuberkulosefurschung* rev 64
Brailsford James F Diseases of the hip joint and its immediate neighbourhood 92 (O) 612—Cholecystography 567
Brain abscess See Abscess cerebral
Brain circulation alteration of by surgical means (N D Royle) 1063 (O)
Brain of the Last African native (H L Gordon) 581—(F W Vint) 812—Norman Leyes) 826
Brain and spinal cord malformations of (Sir Arthur Keith) 387
Brain W Russell Functions of the sympathetic nervous system 566—Visceral herpes zoster 632
Brand A T Stethoscope for deaf doctor 97
Brasher C W J Acute rheumatic infection 1034
Braun Heinrich Issue of the *Zentralblatt für Chirurgie* for January 2nd dedicated to 127—Seventy
Bray G
Breast
Breech extended spontaneous version of (Marguerite M Penn and Florence Whitrow) 379
Breech presentation (J G Hastings Ince) 15—Correspondence on 1011
Breech presentation *See also* Labour
Bremen Medical Club celebrates its hundredth anniversary 315
Brend W A Medical conditions in Soviet Russia 170 309
Brennan S Ambulatory treatment 39
Brentnall C I Thyroid with red and cystic degeneration 382
Brentnall I S Treatment of infantile paralysis 123
Brewin R A The teaching of obstetrics 986
Bridge John C Notification of industrial diseases statutory requirements 118
Briscoe Sir Charlton Movements of the chest 420
Bristol Colony for Mental Defectives at Horfield opening of 857
Bristow Mr Fractures in the region of the ankle joint 473
Bristow Walter Rowley appointed orthopaedic consultant at King Edward VII Convalescent Home for Officers at Osborne 126
British Coast Resorts Association *See* Association
British Health Resorts Association See Association
British Hospitals Association See Association
British Industries Fair 301
British Institute of Philosophy *See* Philosophy
British Legion Village Preston Hall Annual report on 709
British Medical Association *See* Association
British Orthopaedic Association *See* Association
British Pharmacopoeia See Pharmacopoeia
British Postgraduate Hospital and Medical School See Postgraduate
British Provident Association See Association
British Social Hygiene Council *See* Hygiene
Broad W H Diathermy 635
Broadmoor dietary at (Parliamentary reply) 613
Brock Arthur J Child guidance clinics and Hippocratism 174— The use of 1192
Brockbank E M Mind in cramp 1
Brockman E P Fractures in the region of the ankle joint 473
Brodribb C W Dental fees 1
Brodrick John Strat on obituary notice of 8
Brodrick Langholt Combined disinfection and suture holder for eyes 153
Bronchial filtrinous treatment of 1167
Bronchomoniliasis in Jersey 839—A correction 903—Correspondence on 1027 1160
Bronchoscopy and drainage in lung suppuration (A B Scott Hinchin) 661—(H V Morlock) 611
Bronchus foreign body unusual 111 in a 171
Brunsti Robert Matthew obituary notice of 637
Bronti's causes of death of the (C Mabel Lees) 619
Broom Stanley obituary notice of 903
Broomfield C O S Birth The problem of tuberculosis 37
Brooke R Backache in women 1
Broom Standardization of ergo 109
Broomhead R Fractures in the region of the ankle joint 473
Brosius O F Treatment by plasmoquine 341
Brown A Sumler (and G Gordon Brown (editors) *The South and East African Year Book and Guide* thirty-eighth edition rev 476
Brow Bevan Individual psychology 835
Brown Dorothy appoint de lecturer in bacteriology at Sheffield 503
Brown I Kempson (and Arthur I Cutler (and) Case of spirochaetosis icterohaemorrhagica 283
Brown I dith M
Brown G I T
Its relation to
Brown G
its relat
Brown
chronic infective endocarditis 796 (O)
Brown J Forcival Wasp stings and bee stings 1061
Brown L Graham Conservative mastoidectomy for chronic suppurative otitis media 470 (O)
Brown Lawrason (and Fred H Hirst) *The Lungs and the Early Stages of Tuberculosis* rev 385
Brown I (and M M Dey) Gangrene due to embolus of the inferior mesenteric artery 185 (O)
Brown R Graham *Skiagrams in Diseases of the Maxillary Sinus their Surgical and Pathological Significance* 1089
Brown R kin Appreciation of Herbert William Cuningham 501
Brown W Langdon *Anorexia Nervosa* rev 20—The endocrines and some associated psychoneuroses 223 (O)—The syndrome of chronic toxic cholecystitis 287—Asthma and allied in medicine 523 thetic nervous ll paper 777—Individual psychology 804
Brown W Chorea and mitral stenosis 193—Vagotonia 193—Diarrhoea of parenteral origin 193
Browne Denis Anatomy and surgery 860
Brown I nld Analgesia and anaesthesia in normal labour 611
Browne I I High blood pressure as an early sign of toxaemia of pregnancy 329 (O)—After effects of the toxaemias of pregnancy 660
Brown Georgia Rickston Honour of knighthood conferred on 1087 — Honorary LL D Aberdeen conferred on 1031
Brown O Dorel Shock following blood extravasation 1143
Brown Cathrine Ralph H Plantar corns 872
Brown Sir David Appreciation of in the *Deutsch medizinische Wochenschrift* 43—At the Academie de Medecine 127—In the *Munchen medizinische Wochenschrift* 177—Estate and legacies of 777
Brown Edward Isaac obituary notice of 503
Brown G G Splanchnic
Brown H I Cryo-diathermy in D I I
Brucella abortus Bang case of in Yorkshire (Maxwell Pritchard) 1 (O)
Brucella abortus infection in the female goat (A Sheather) 1 (O)
Bruzzes Medicinal all alterations organically
Brynmor Jones award to Professor in quinquennial medical appointment 127
Buchan Sir George Tuberculosis of bones of strepto ce Infection 46
Buckley C W Control and treatment of arthritis 149 (O)—To repair on the staff of the Devon hire Hospital Board's scheme for five years 871
Buckmaster J Viscountess conferred 1
Bull Sir Hospital fund 771 Services Finance Act
Bulletin de l'Institut Pasteur Treatment of Hæmorrhagic and Infectious
Bulloch E C Hydrogen ion concentration of saliva 8—Thermal death point 99
Bulbring Edith Production of experimental ketosis 11 de Jong and H Bernard 63
Burbidge H M Pyelography 71
Burgess Alfred Vaccination against by means of killed typhoid 203
Burgess Norman Allergy and hay fever 17
Burn J H Chemical Mydriasis Medicinal preparations 1 (O)—Action of sympathomimetic drugs 1 (O)—Action of ergot preparations 1 (O)—Arterial supply of the pituitary body 491—Pharmacological Laboratory of the Royal Society 491—Action of pituitary extract on the isolated uterus 1 (O)—The action of ergot preparations 1 (O)
Burn Effect of the Stock following blood extravasation
Burn R B Anæsthetic mask for open drop use
Burns treatment of (Grant Massie)
Burnett L S F Diagnosis and treatment of lung abscess
Burrows A X-ray dosage in malignant disease 1
Burt J B Remain on the staff of the Devonshire Hospital Buxton for a further five years 871
Burville V Treatment by plasmoquine 341
Burton Harrison Operation for congenital epicanthus 447
Burton W The epidemiology of streptococcal infections
Butter fat in cream *See* Cream
Butterworth Sir A Kaye Mischief of motoring 257
Buttersany Vl (and N Hontolomei) *Chirurgia del Ulcere Gastrique e Duodenal* rev 813
Buxton Dorothy J (and Edward Lorrain) —*The White Flame The Story of the Save the Children Fund* rev 197
Buxton Noel St J Diagnosis of diseases of the hip joint 613
Buxton St J D Fractures in the region of the ankle joint 473
Buzzard Sir Farquhar Genito-urinary tuberculosis and the Ministry of Pensions 330 448

C

Cahot Hugh Recent advances in urology 803—Nephrostomy in theory and practice 811
ool on 617
Bureau at (parliamentary reply) 730
e for 78—Liquor
Calcium metabolism (David Campbell) 939
Calculi urinary management of (Arthur Jacobs) 513 (O)
Calvandin L Dougal Forceps for use with

CAMERON Dr Medical services in Scotland 1019
CAMERON Duncan M The practitioner in Irons 775
CAMERON Colonel John Lhilip O S I conferred on 75
CAMERON S J Prevention of puerperal sepsis 574
CAMERON T W M Part played by the eosino phil cell in the formation of fibrous tissue 427
—Method of keeping parasitic worms alive in vitro 427—Life history of the lesser liver fluke in sheep (and man) 427
CAMPBELL Anna Montgomery *The Black Death and Men of Learning* rev 572
CAMPBELL David Clinical application of recent studies in calcium metabolism 939
CAMPBELL Major Ernest Kenneth O B E conferred on 1097
CAMPBELL Harry Milk and dental caries 306 496
CAMPBELL J Menzies Diet and dental disease 685
CAMPBELL John The milk problem 1101
CAMPBELL Maurice (and J W SHACKLE) Aortic valvular disease 328 (O)
CAMPBELL Ross Ferguson obituary notice of 547
Campolon 1180
Canada medical tour to 1199
Canadian Medical Association Annual meeting (1932) 577 671 814
Cancer An Anti Cancer League formed 807
Cancer aspects of (C E Walker) 383
Cancer of breast collective inquiry into 897 837—(Leading article) 892—(Arthur I Luff) 897—Correspondence on 1005
Cancer of breast post operative x ray treatment of 10 6 1036 1191
Cancer of breast deep x rays for (R Stumpf) 569
Cancer Campaign British Empire Quarterly meeting of (Grand Council 110 719—Note on the work of the New Zealand Branch 115—Report of the Manchester Committee 492
Cancer of the colon diagnosis and treatment of (Sir Charles Gordon Watson) 9 3 (O)
Cancer comparative study of 1180
Cancer aetiology of (W E Gye) 392 639—Correspondence on 590 634 685 773 853—(W M Crofton) 662
Cancer in ex service men survey of in the United States (Philip R Mattz) 254
Cancer Fund Dunlop 1003
Cancer of the hypopharynx and its treatment by excision (Wilfred Trotter) 510 (O)
Cancer of the larynx 818 859 912
Cancer of the larynx (leading article) 620
Cancer literature on 669
Cancer mortality in Holland 1103
Cancer in nickel workers (parliamentary note) 369
Cancer of ovary thoracic metastases in (Herbert T Evans and Gilbert I Strachan) 519 (O)
Cancer of the perineum (R V Bailey) 382
Cancer of pharynx 818 859 912
Cancer pituitrin in effect of (E W Riches and M Kremer) 877 (O)
Cancer preventive treatment of (Glynn Wh title) 17
Cancer research grants for (parliamentary note) 1103
Cancer research in Manchester Report 492
Cancer research and treatment 1075
Cancer review of books on 21 194 383
Cancer spontaneous cure of 352
Cancer treatment of (Malcolm Donald on) 150
Cancer treatment of Ministry of Health s circular re 816
Cancer virus theory of (S L Baker) 938
Cancer *See also* Malignant Sarcoma Tumours etc
CANDLER Mr Backache and the orthopaedic surgeon 711
Canine tooth *See* Tooth
CANN L W Medical problems of contraception 1009
CANNON Walter B Diploma of doctor *honoris causa* awarded by the Paris University 43
Cannula uterine 21 66—For the rubin test 66
CANTACUZENE J appointed Minister of Public Health in the new Rumanian cabinet 83—A new eruptive fever 813
CANTON Lisbon death of 126
CAPENER Norman Backache and the orthopaedic surgeon 110—Sacro iliac displacements 1009
Capitals and italics 128
CAPPS M Polypi 1129
Captain of the Men of Death 352 410 456
Carbolic acid injections in the treatment of anthrax 123 *See also* Anthrax
Carbon dioxide absorption methods in anaesthesia (Francis T Evans) 631 (O) *See also* CO²
Carbon monoxide poisoning (parliamentary note) 499
Carcinoma *See* Cancer
CARDEW Major A B appointed an Officer of the Order of St John of Jerusalem 83
Cardiac *See also* Heart
CARDIN Herbert Sunburn 1061
Cardiology instrumental methods in (leading article) 193
Cardio vascular syphilis (leading article) 810
CARDWELL Mary G Intestinal flatulence 44
CAREY Eben J Scoliosis 340
CAREY Lieut Col John Thomas obituary notice of 126
CARLETON H M Medical problems of contraception 1048
CARLING Esther The problem of tuberculosis 119
CARLTON C Hope Diverticulum of the male urethra 376 (O)—Fractures of the spine 838
CARMALT Jones D W Low visceral tone 10 (O)—Use of vitamin B in cases of oedema 374
Carnegie clinics in Dunfermline 1003
Carotid sinus *See* Sinus
CARR SAUNDERS A M Social and moral aspects of sterilization 1046
CARSWELL Robert The Spahlinger formula 306
CARTER Ernest Edwin obituary notice of 407
CARTER Henry Rose *—Yellow Fever An Epidemiological and Historical Study of its Place of Origin* rev 57
CARTER Ronald Young child 17
CASTIGLIONI Arturo *Italian Medicine* rev 943
Catadyn silver method of water purification 624
See also Water
Cataract senile (J Van der Hoeve) 938
Catarrh *See also* Cold
Catarrhal infection and formalin vapour (C J L Wells) 60—Correspondence on 129 309
CATHCART Charles Walker obituary notice of 457
CATHCART E P *Studies in Nutrition* 1137
CATHIE David M Cow pox or vaccinia 93 268
CATTELL Henry W (editor) *International Clinics* rev 153 386
Cattle contagious abortion in (parliamentary note) 1060
CAVALIE Dr appointed to the chair of clinical dentistry at Bordeaux 597
CAVE H A Narcolepsy and ephedrine 703
CAWADIAS A P The use of self 1036—Modern treatment of gastro enteropathosis 1163 (O)
CELLAN-JONES C Local anaesthetic syringe 1038
CELSIUS Andress two hundred and thirtieth anniversary of the birth of 43
Census Reports (parliamentary note) 494
Centenarians medical 124
Centenary meeting of the Association 1832–1932 (leading article) 699 *See also* Association
Central Provinces *See* India
Cereal free diet and dental caries (May Mellanby and C Lee Pattison) 307 (O)
Cerebral abscess *See* Abscess
Cerebral aneurism *See* Aneurism
Cerebral haemorrhage *See* Haemorrhage
Cerebro spinal fever rapid recovery in 918
Cerebro spinal fever serum treatment of 540
Cerebro spinal fever at Windsor (parliamentary note) 780 916—at Alder hot (parliamentary note) 1199
Cerebro spinal meningitis *See* Meningitis
Cervical abscess *See* Abscess
Cervical discharges (Colonel L W Harrison) 330
Cervix chancre of (J St George Wilson) 62
CHABANIER H (and C LOBO-ONELL) *Précis du Diabète* rev 337—Insulin hypoglycaemia 1136
Chadwick Lectures *See* Lectures
CHADWICK Mary *Nursing Psychological Patients* rev 152
CHALKE Herbert D Lichen urticatus a differential diagnosis of small pox 7 (O)
CHALMERS A K Rickets in Glasgow 116—Social services in Glasgow 857
CHALMERS Patrick J *Where the Spring Salmon Run* rev 470
CHALMERS R Simulation of heart disease 303
—Captain of the Men of Death 410
CHAMBERLAIN Sir Austen Elected Chairman of the Court of Governors of the London school of Hygiene and Tropical Medicine 722—A review of achievement in tropical medicine 722
CHAMBERLAIN Dr Intra thoracic new growths 17
CHAMBERLAIN E Noble *A Text book of Medicine for Nurses* rev 475
CHAMBERLAIN L R P B A misclaimer 1156
CHAMBERLIN Frederick *The Private Character of Henry the Eighth* rev 1035
CHANCE Oliver Deep x rays for cancer of breast 563
Chancre of cervix (J St George Wilson) 62
CHANDLER F G Artificial pneumothorax adhesion cutting and artificial pneumothorax 1118 (O)
CHANNON Harold John title of Fellow of University College London conferred on 407
CHAPMAN Paul Morgan obituary notice of 1121
CHARLES Enid Medical problems of contraception 1047
Charle Herbert Analgesia in childbirth 1173
CHARLES Nicolas death of 857
CHARMEIL Professor Paul death of 639 807
CHEATLE Sir G Lenthal (and Max CUTLER) *Tumours of the Breast Their Pathology Symptoms Diagnosis and Treatment* rev 151
CHELLAPPAH Seemampillai Francis O B E conferred on 1097
Chemical defence (parliamentary note) 662
Chemistry review of books on 21 104 245 699 837
Cheselden s death 593
Chest diseases review of book on 664
Chest movements (L Schmidt) 426
Chest radiograms and the Manoux tes in children (Dorothy J Dow and W Erce Lloyd) 701 (O)
Chest *See also* Thorax
CHESTERMAN C C The result of tryp amide and combined treatment of sleepings chne s 427—Herpe zo ericrolvirs the urinary bladder 599
CHESTERTON G E At he Marie Curie Hospital 903
CHETAILLER Paul (and Jean BERNARD *Maladies de Hodgkin* rev 15
CHEYNE Sir William Watson obituary notice of 821
CHICK Harriette C B E conferred on 75
Chicken pox convalescent serum in p ophylaxis (William Gunn) 185 (O)
Chicken pox and herpes 264
Child Guidance Clinics *See* Herpes
Child Health Organization of Gre Bri ain and to economise 737
Child Psychology National Institute o r d
Child welfare in Ireland 423
Childbirth *See* Labour
Children Act 1908 amendment of s
Children School *See* School
Children s Bill 69 93 599 1014 11 e nd reading 395—Report stage 1014
Children s disease review of book on *See also* Paediatrics
China national conference on leprosis in 392—blood relief for (parliamentary note) 99 —Work of the Relief Committee 10
Chinese Medical Journal new
National Medical Journal of
China Medical Journal 127 (Chir and the
Chloroform and the Edinburgh s loo 692
Chloroform in Labour 35 78 1 35 *See also* Labour
Cholecystectomy la e results of 1
Cholecystitis chronic t tre the syndrome of (W Harold Dodd) 2 6
Cholecystitis symp omatic enter ul s of operations for (J Cosbie Ro 1099 O
Cholecystography (J 1 Brul ford) 69 *See also* Gall bladder
Cholera in India (parliamentary no el 899
Cholera a popular pamphlet on (E ashworth Underwood) 23
Cholera prevention in a sam 75
Chorea in three children occupying the same bedroom (I G Waller) 39 O
Chorea epidemic (Charles O Donovan)
Chorea and mitral steno is (W Brown
CHRISTIAN Max death of 314
CHRISTIE Graham W Unusual tumour of the gluteal region 1051
CHRITTY Cuthbert death of 1070
CHURCH J F Gas gangrene complicating obstructed labour 189
CHURCHILL J T obituary notice of
Cigarette habit (J D Rolleston) 257
Cinematograph the (leading article) 1
Cinematograph and child psychology
Cinematography medical 2
Circulation afferent control of the Sa son Wright) 457 (O)
Circulation after an endurance te (E B Gunson and T Harold Pettit) 2 9 (O)
Circulation review of book on 1132
Cirrhosis of liver atrophic coarse in a con genital syphilitic (A C L Paddle) 23 (O)
CLAIRMONT P (O WINTERSTEIN and A DIETZA) *Die Chirurgie der Tuberkulose* rev 234
CLARE T C Research on sex hormones 1
CLAPE A J edition rev *Applied Pharmacology* fourth
CLARE S andardization of ergo 10
CLAPE Erne t *The Eye* rev 10
CLAREF John S Che elden s death 593 *The Functions of the Human*
CLAREF J Tertius Ae iology of cancer 899
CLARKSON R D Mental defec ives in Scotland 723
Claudication intermittent 221
CLAUSEN I John uac ion in surgery 917—Mischiefs of mo orink 257
CLAYTON B T appointed a Serving Bro her o the Order of St John of Jerusalem 83
CLAYTON William *Colloid Chemistry and Technology* rev 665
CLEGHORN R A Cortical ex ract in Addison s di ease 252
CLEMENTI Gesualdo death of 31
CLEMESH Lieu Colonel W W Anti malarial measures in Travancore 33
CLELOW F G Medical conditions in Soviet Russia 123 253
CLEVELAND Arthur J (and E Kempson BROWN) Case of spirochaetosis ic erohaemorrhagica 283
Climacteric male accidents of the (Kenneth Walker) 50 (O) — Correspondence on 222—Goethe and 222
Climatology and the medical profe sion (parliamentary no e) 916
CLOW Alice L Sanderson Treatment o dys menorrhoea by exercise 4 (O)—A correction 84—Infection in the dormitory 802
CLOW William The sacrum 1200
Club Bremen Medical celebra es its hundredth anniversary 315

Club Osler The history of rickets 383—Koch's discovery of the tubercle bacillus 641—Goethe's medical history 670
CO apparatus for the administration of 665
CO apparatus portable 21
CO2 and oxygen in medicine (J. S. Haldane) 144
CO2 in post anaesthetic respiratory complica 561 (O)

do
Coal gas *See* Gas
Coal Mines Bill 1929 1107 1198
Coast Resorts Conference in South Devon 212 *See also* Wintering in England and Association British Health Resorts
Cobalt in haematopoiesis 1010
Cobban K. The stroke in high arterial pressure 449
Coca addiction a century or more ago 1012
Coca Arthur (Matthew Walker and August A. Thommen) *Asthma and Hay Fever in Theory and Practice* rev. 1035
Cochrane W. A. Fractures of the spine 888
Cod liver oil vitamin concentrates of 339
Cohen Percy *The British System of Social Insurance* rev. 912
Cohen S. M. A disclaimer 1110
Cohn Alfred E. —*Medicine Science and Art Studies in Interrelations* rev. 336
Coin (a swallowed) 1750 (F. Roland Williams) 721
Coincidence 642
Cole Franl Asthma statistics 78—Asthma and allied conditions 380
Colenis A. John Two rare types of hernia occurring in the same patient 1171
Cold back *See* Back
Cold the common (Sir Thomas Horder) 299—Discussion 291 — A correction 462 — Correspondence on 403 449 506 543 550
Cole Leslie The treatment of tetanus 743 (O)
Colebrook Dora appointed to investigate puerperal sepsis 442
Colebrook Leonard The source of infection in an outbreal of puerperal fever 31
Colic renal regurgitation (Bransford Lewis) 1137
Collapse therapy in phthisis (J. M. Johnston) 754—(William Anderson) 795
Colledge Lionel Cancer of the larynx 670—The ear and referred pain 1125
College Anderson's Glasgow Closing addres for winter session 540
College Bedford Lectures 196
College Epsom France pension 917—Proposed abolition of the voting system 398—Parliamentary note on 733 823 915 1107 1198
College King's London Hambleden department of anatomy 720 858
College Livingstone Leyton Annual report 674—Commemoration day 1100
College London Hospital Medical *See* Hospital
College of Obstetricians and Gynaecologists British Annual meeting 777—Council meeting 360 777—Fellows admitted 360—Members elected 360
College of Physicians of Philadelphia *Catalogue of the Incunabula* in the library of 315
College Royal Army Medical Tri owinners 1014
Co —

—Parkin Prize awarded 310—Quarterly meeting 310 914
College Royal of Physicians of Ireland Degrees —

College Royal of Physicians of London

Election of President 595
Fellowship 867
Lectures 301 868
Leverhulme Research Scholarships 1090
Licences 264 868
Membership 264 867
Radiology medical conjoint diploma in 1014

College Royal of Surgeons of Australasia Annual meeting 905—Presentation of mace to 905
College Royal of Surgeons of Edinburgh Bathgate Memorial prize 1014—Degrees and pass lists 174 1013—Fellows admitted 42—Kerns [Henry Arthur Dalziel] bursary 1014—Ivison Macadam Memorial Prize 1014—Liston Victoria Jubilee Prize 1013

Co NS OF ENGLAND
Research Farm at
Downe 174
Council election 595 732
Council meetings 174 360 547 777 961 1153
Degrees and pass lists 174 360 547 777 961 1153 1198 —

77 1153
ows 547 1153
Examiners elected 1153
Gift to 360
Grove (J. W.) bequest to 961

College Royal of Surgeons (*contd.*)
Hallett prize 171
Hunterian festival 317
Hunterian Oration 317
Jacksonian pri e 777
Lectures 126 ,
Leverhulme research scholarships 77
Licence 1153
Lister medal 961
Macl enzie Macl innon Research Fellowships 547
Members of 80 961 1153
Members of over twenty years standing elected to the Fellowship 777
Museum demonstrations 407

in 1011
nary for
Howship
Examination for non members 360
Representatives elected 547
Transactions Periodicals and Memoirs in the Library of List of second edition rev. 943

College Royal of Surgeons in Ireland Association of Past Students first meeting 109—Charter Day dinner 303—Election of officers 1198—Examiner appointed 1198
College Trinity Dublin Degrees and pass lists 592—John Malle Turner Lecture 1107 *See also* University
College University Cork Degrees and pass lists 777 1198
College University Dublin Degrees and pass lists 640—Election of members of the Governing Body 42
College University Dundee Jubilee of 3 *See also* University of St. Andrews
College University Galway Degrees and pass lists 641
College University London Annual report 622—Election of officers 362—Lectures 42 81 1 —*Collected Papers* from the Department of Physiology and Biochemistry vol. xxx rev. 214—Bayliss Starling memorial scholarship

ships Scien
967
and Me
dicine 779
Collier J. J. The true place of serum in the prophylaxis of measles 703 (O)
Collis Sir William Liberty of the subject 211
Collis W. J. W. *Hunterian* corne 83
Collis W. R. F. Infection in the dormitory 802 — Epidemic erythema nodosum 803 — Prevention and treatment of acute rheumatic infection 1032
Colloids review of book on 711
Colyer Lieut.-Col. George Maurice Hoblyn obituary notice of 640
Colon function of the (leading article) 92
Colon or stomach pain in 1110
Colour in lexonomy ram (George H. Bell) 76
Colour vision *See* Vision
Colporrhaphy for uterine prolaps 119 165 916 269 418 541 683
Colston Medical Research Fellowship 911 *See also* Research
Colwell Hector A. *Notes on Radium Therapy* rev. 195
Colyer Sir Frank *Abnormal Condition of the Teeth of Animals in their Relationship to Similar Conditions in Man* rev. 10 —(and Evelyn Brawne) *Dental Surgery and Pathology* sixth edition rev. 1176
Commemoration of great men (Wilfred Trotter) 317 (O)—Leading article 339
Common cold *See* Cold
Communicable diseases *See* Diseases
Compression fracture *See* Fracture
Compton Piers *The Genius of Louis Pasteur* 80
Comrie John D. *History of Scottish Medicine* second edition rev. 614
Conditional reflexes *See* Reflexes
Congress of the American Medical Association New Orleans (1932) 577
Congress on Asthma International Mont Dore (1932) 640
Congress of the Balneological Society of Berlin Bad Salzuflen (Lippe) (1932) 640
Congress on Biliary Lithiasis International Vichy (1932) 577
Congress of the British Hospitals Association

Co sociation
for
Co sociation
Toronto (1932) 577 671
Congress for Childhood Protection International Union for French committee meeting Paris (1933) 736
Congress on Digestive Diseases *See* Congress of the Society for the Study of Diseases of Digestion and Metabolism
Congress of Laryngics International New York (1932) 361
Congress French of Legal Medicine Paris (1932) 917
Congre of the Fren Oto neuro
or
Con 736
165 5 Paris (1932)
Congress of the German Association for Natural Science and Medicine Wiesbaden (1932) 577
Congress of the German Association for Occupational Hygiene Nuremburg (1 2 1
Congress of the German Dermatologic Society Vienna (1932) 165 561 577
Congress of the German Ophthalmological Society Leipsic (1932) 547
Congress of the German Thermotherapeutical Society Wiesbaden (1 2) 991 5 2 577
Congress of the German Society for Circulation Investigation Tübingen (1 2) 17
Congress of the German Society for Internal Medicine Wiesbaden (1 2) 16 967 977
Congress of the German Society for Psychiatry Bonn (1932) 977
Congress German for Public Hygiene Bonn (1 2) 871
Congress of the German Society for Surgery Berlin (1932) 315
Congress of the German Society of Urology Vienna (1932) 165 577 649—Postponed until 1933 6 9
Congress German Tuberculosis Berlin Harburg (1932) 641
Congress of the History of Medicine Rome *Transactions* rev. 165 967
Congress of Hydrology Climatology and Physical Therapy Italian Viareggio (1 2) 143
Congress of Hydrology Thermal Mineral Marine (1 2) 5 577
Congress Italian Welfare Dental Therapeutic Hygienic (1 2) 11
Congress of the International Union Against Tuberculosis The Hague (1 2) 977
Congress Italian of Medicine in Relation to Sport Rome (1 2) 547
Congress of the Italian Society for Study of the Mouth and Dental Special Orthopaedic Surgical (1 2) 971
Congress Italian of Urology Turin (1 2) 165 977
Congress Journees Medicales de Bruxelles Brussels (1 2) 971 977 (O)
Congress on Light International Congress (1932) 165 971 —
Congress of Low Countries International Union of Leprosy (1932) 165 —
Congress on Mental Hygiene International Union of Leprosy (1932) 165 5
Congress of Military Medicine and Pharmacy International Hague (1932) 7
Congress of the National Association for the Prevention of Tuberculosis London (1 77 *See also* Tuberculosis
Congress of Neurology International Lisbon (1932) 871 1015
Congress of Orthopaedic Surgery International Society of London (19
Congress on Otolaryngology In
Co 971
Co 1
977
Congress on Paediatrics Geneva (1932) 165 977
Congress of Phonetic Sciences International Amsterdam (19 7
Congress of Physiology International Rome (1932) 7
Congress of Psychology International Copenhagen (1932) 871
Congress of Radiology International (1931) 703 —X-ray and radium protection 703—The radiographic dissection of chronic rheumatic arthritis 72
Congress of the Reunion Internationale de Prophylaxie et d'Hygiene Mentale Paris (1932) 7
Congress against Rheumatism International Rome indefinitely postponed 403—To be held in Paris in October (1932) 1081
Congress of the Royal Institute of Public Health Belfast (1932) 165 577 677 9
Congress of the Royal Sanitary Institute Brighton (1932) 165 577 11 5
Congress of the Safety First Association National London (1932) 737
Congress of Sanitary Technicians and Urban Lyons (1932) 43
for the Study of Diseases
abolism Vienna (1932)

Congress of Surgery International Society of Madrid (1932) 87 165 203
Congress on Syphilis International Paris (1932) 505
Congress of Tropical Medicine International Amsterdam (1932) 165 640—Postponement of 610
Congress on Tuberculosis International Davos (1932) 577
Congress on Tuberculosis International Union Against The Hague (1932) 577
Conjoint Board in Ireland Degrees and pass lists 42 915
Conjoint Board in Scotland Degrees and pass lists 778
Conn J. C. Intelligence and disease 206
Connal Andrew O.B.E. conferred on 1097
Connell Colonel A. M. appointed an Officer of the Order of St. John of Jerusalem 83
Connery Treatment of pernicious anaemia 1180
Constantza outbreal of exanthematous fever at 83
Constipation and right sided ptosis 38

Consumption *See* Tuberculosis
Contraception Conference on 719 893 1047 1900
See also Birth Control
Contraception International Medical Group for
(B
37—
Correspondence on 76
Contraceptive delivery of a (part of a whirling spray) 84
C
C ultra
Convalescent serum *See* Serum
Convulsions ether 959 1156
COOK Albert Ruskin knighthood conferred on 1088 1097
COOK Bessie E Death associated with anaesthesia 217
COOP James Obstetrical heresies 727
COOKE A M Normal development in the young child 16
COOKE R C Foreign body in the common bile duct 840
COOKE W B (and Sir Leonard ROGERS) Resistant pruic anaemia yielding to intravenous liver extract 277 (O)—Silico anthraco i presenting curious bodies similar to those in asbestosi 656 (O)
COOKE TAYLOR C R Coe he and the male climacteric 72
Coombs Carey Cardiovascular syphilis 810—Acute rheumatic infection 1033
COOPER J W Astley *Preparation for marriage* 864
COOPER R M le Hunte The danger of food contamination by aluminium 576 852 1155
COPE Zachary The mischiefs of motoring 200—The syndrome of chronic toxic cholecystitis 287— Excessive surgery 938
COPELAND A J Analgesia in childbirth 1175
COPEMAN Monckton Treatment of carcinoma 150—Puerperal fever and pyrexia 871
COPPINGER Major General W V appointed an Officer of the Order of St John of Jerusalem 83
CORBETT Lieut Col Daniel Maurice obituary notice of 87
Cork medical appointment 494
CORNER H Wolfe Electric lighting for testing temperature sensation 477
Corns plantar 692 737 783 876 879 918 967 1016
Coronary disease some clinical aspects of (Thomas F Cotton) 63 (O)—Note on 391—Correspondence on 649
Coroners inquests in London 909
Coroners London 589
Corporal punishment pamphlet on 159
Corrections 84 362 456 550 569 708 774 866 919 958 1016 1110

Correspondence
Advertising and canvassing 359
Aftercoming head 632
Allergy and the proteose 37 77
Aluminium and health 656 727 774 800 1010 1056 1105 1147 1193
Ambulatory treatment 39 *See also* Rheumatism *and* Fractures
Anaesthesia deaths associated with 217
Anaesthesia local for tonsillectomy 959 1009 1053 1147 1191
Anaesthesia methods of 819
Anaesthesia spinal in va ospla tic diseases 1189
Antagonistic diseases 403 493
Anatomy and surgery 860
Anthrax treatment of 1200
Anti malaria measures 72
Aphasia syntactic 592
Appendicectomy in early life 267
Appendicitis acute in children 1101
Arsenic and wall paper 726 772
Artificial pneumothorax *See* Pneumothorax
Asthma liver therapy in 1057
Asthma nasal factor in 449
Asthma statistics 78 215
of
the 725 771 911
Birmingham Medical School and the Hospitals Centre Scheme 494
Bladder healing after cystotomy 350 818
Blindness certification of 405
Breech delivery 1011
British Institute of Philosophy 356 450
British Pharmacopoeia (1932) 1101
Bronchomoniliasis 1052 1190—In Jersey 863
Calamine lotion a substitute for 78
Cancer aetiology of 490 590 634 685 773 863
Cancer of breast post operative *x* ray treatment in 1006 1056 1191
Cancer of pharynx and larynx 818 859 912
Cancer pituitrin in effect of 1008
Cancer research and treatment 1000
Cancer spontaneous cure of 355
Catarrhal infection and formalin vapour 120 309
Child guidance clinics 39 122 168 217—And
Neo-Hippocratism 122
170
403
Coca addiction a century and more ago 1012
Cold the common 403 449 543
Colporrhaphy for prolapse 119 166 216 270 448 544 684
Constipation and right sided ptosis 38

Correspondence (*continued*)
Cow pox or vaccinia case of 171
Cox Alfred testimonial fund 1146
Criminal prosecutions 730
Deafness and hooters two auditory problems of motoring 770
Deaths associated with anaesthesia *See* Anaesthesia
Dermatitis shoe leather 171 261 352 447
Diet and dental disease 893 989 992 1007
Diphtheria antitoxin dosage of 55
Disseminated sclerosis *See* Sclerosis
Duties of non
Dysmenorrhoea treatment of 955
Eclampsia incidence of 1102
Fracture standardization of 305 399
Erysipelas treated by injections of milk 352
Ether convulsion 959
Exophthalmos and sinusitis 448
Face masks and fogged spectacles 169 263
Fallen idols or false gods 958 1102
Fertility after protectomy 1107 1148
Flatfoot 635
Footwear cramped 591 603
Forceps failed 635
Foreign bodies in the air passages 401
Foreign body unsuspected in a bronchus 171
Fouling of footways by dogs 886 911 959 997
Fracture depressed of foetal skull 773
Fracture practice a primer of 634
Fractures ambulatory treatment of 447 470 542 587 634 770 1101
Fractures of the spine 547 684
Gastric ulcer *See* Ulcer
Gentle protest 1011 *See also* Pelvic
Glaucoma 70 121
Goitre research on 177
Grafenberg ring 76
Hearing defects correction of 1189
Heart disease simulation of 282 305 444
Hepatic calcium research on 730
Herpes cervical with facial palsy 172
Herpes zoster visceral 637 728
Hospitals London County 250
Hydrochloric acid in diabetes mellitus 542
Hyperpiesia 170
Hypertension essential 590
Hyperthyroidism with achlorhydria 490
Imbotep 917
Immunity and malignant tumours 60
Indian Medical Service pensions 635 685
Industrial diseases notification of 118
Influenza ear complications of 214
Jaundice epidemic bacillus of 259
Joint stiff treatment of 39
Lactic acid in the gastric contents 687 771 859 997 1006 1052
Law and abortion 41 79 120
Lipiodol introduction into the lung 57
Liver therapy intravenous in pernicious anaemia failure of 910 1007
Liver therapy parenteral 400
London and Counties Medical Protection Society 1193
London Hospital *See* Hospitals
Malignant disease *See* Cancer
Marriage preparation for 592 697 727 770 819 864 912 959 1010 1102 1150
Massage and medical gymnastics training in 1147
Medical centenarians 12
Medical conditions in Soviet Russia 59 124 169 218 263 309
Medical engineering 55
Medical supplies for missions 305
Members of the Royal College of Surgeons 80
Meningitis epidemic 544
Milk problem 1104
404 495
180
epidemics
770
Osteo-arthritis of hip treatment of 776 777 820 861 907 1056
Ovulation and the oestrous cycle 166 259 306
Oxygen and Everest 120
Pathological services of the London County Council 305 348 545 636 676 770 776 820 909
Pelvic joints in pregnancy mobility of 634
Pelvic woman the chronic 683 1011
Philosophy and the medical man 591 778
Phylaxis 170
Pituitary posterior 559
Pneumothorax Society International Artificial 1104
Practitioner in irons 775 *See also* Student in irons
Polycythaemia vulva and achlorhydria 817 860
Pregnancy acute illness in effect on child of 264
Prostatectomy vaso-ligation in 756
Psychoneuroses endocrines and terminology 350
Public health and the future 541

Correspondence (*continued*)
Public health intelligence of the Health Organisation of the League of Nations 950
Puerperal fever source of infection in an outbreak of 576
Puerperal eclampsia and C M B 555 546
Punch Mr his hump 792 12
Quinine and malaria 250 772
Radium 401—Conference on 1145
Rheumatism ambulatory treatment of
Rheumatism early recognition of
Rheumatism tuberculous 1147
Rheumatoid arthritis 8
Rickets and vitamin D 789 890 917 1007
Ringworm of the scalp treatment of 1200 1261 1402
Road traffic signal 591 689
Sacro-iliac displacement 912 1000
Sacrum the 910 1012
Sanitation dome tic 1100
Sclerosis disseminated aetiology of 611
Sero therapy in septicaemia 1191
Shock following blood extravasation 1200 1255
Shoe leather dermatitis *See* Dermatitis
Shut leworth Samaritan Fund 150
Sobering up rate of
Spahlinger formula 700
Spahlinger vaccines 401
Spinal anaesthesia *See* Anaesthesia
Sprue in Malta 911
Stomach type of predisposition to duodenal ulcer 817
Stroke in high arterial pressure
Student in iron 541 595 655 707
1011 1100 *See also* Practitioner in irons
Surgery suction in 217 250
Syntactic aphasia *See* Aphasia
Temperature the normal 1150 1200
Tendencies in modern medicine
Tetanus treatment of 700
Thallium treatment of ringworm 1000 217
Therapeutic assessment 300
Thyroid extract and pulmonary embolism 862 905
Tinea capitis *See* Ringworm
Tiles as umes by unqualified persons 650
Tonsil and adenoid 443
Tubercle bacillus type of 91
Tuberculosis genito urinary 90—And the Ministry of Pensions 307 350 400
Tuberculosis problems of 1157 1202 1247 1296 1346 545 630
Tuberculosis pulmonary early diagnosis of 354
Tumours origin of 910 957 1000 1150

Ulcers of leg chronic treatment of 1000
Undulant fever in the British Isles 215 1150
Use of Self 912 1009 1050 1149 1192
Vaccine in dairy workers 216
Varicose veins treatment of 1254 1150
Vasovagal syncope 900 1050
Vision recovery of
X ray photography in the Navy the use of

Corrigendum. *See* Correction
Cortical extract in the treatment of Addison's disease (S Levy Simpson) 299—(L S P David on) 525—(R A Cockburn) 600
CORY F W Ferri perchloride in skin disease 724
COSENS W B *Four Sermons at the Doctor* rev 1098
COSIN C F The parathyroid and generalised osteitis fibrosa 947
COSTELLO J W Local anaesthesia for tonsillectomy 859 (O)
COTES PREEDY Digby appointed Recorder of Oxford 1015
Cottage hospitals *See* Hospitals
COTTELL Lieut Col Arthur Bowdich obituary notice of 1150
COTTON Lieut Col F W Dysidrosis Western Australian 1100
COTTON Thomas F Some clinical aspects of coronary disease 868 (O) 391
Cotton industry dust in report of Departmental Committee) 684
Cough cure of by shortening an elongated uvula (Sir James Dundas Grant 575 (O)—Correspondence on 806
COUNCIL LONDON COUNTY
Ambulance service *See* Ambulance
Annual report 1070 617 900
Food inspection (parliamentary control) 502
Hospitals services report on medical supplement to the 617
Hospitals of (leading article) 150 190 243 343
See also Hospitals
Instructional hospitals 629
Laboratories of 443
London County Council Bill 502
Medical staff non residential allowance to
Nursing staff of the Hospitals of 628
Pathological services 300 348 505 636 676 770 776 820 903
Post graduate teaching at the hospitals of 5
Public health services this year of united hospital control 900
School children medical treatment of 31
Spahlinger treatment and the Council 908
Venereal disease clinics 774

Club Osler The history of rickets 383—Koch s discovery of the tubercle bacillus 641—Goethe s medical history 670
CO_2 apparatus for the administration of 665
CO_2 apparatus portable 21
CO_2 and oxygen in medicine (J S Haldane) 144
CO_2 in post anaesthetic respiratory complications (J Ross Mackenzie) 561 (O)
CO in resuscitation 84
CO *See also* Carbon dioxide
Coal gas *See* Gas
Coal Mines Bill 1059 1107 1198
Coast Resorts Conference in South Devon 212 *See also* Wintering in England *and* Association British Health Resorts
Cobalt in haematopoiesis 1010
COBBAN K The stroke in high arterial pressure 449
[illegible] or more ago 1012
WALZER and August A *nd Hay Fever in Theory and Practice* rev 1035
COCHRANE W A Fractures of the spine 888
Cod liver oil vitamin concentrates of 338
COHEN Percy *The British System of Social Insurance* rev 942
COHEN S M A disclaimer 1110
COHN Alfred E —*Medicine Science and Art Studies in Interrelations* rev 336
Coin (a swallowed) 1750 (E Roland Williams) 721
Coincidence 642
COPE Frank Asthma statistics 78—Asthma and allied conditions 380
COKKINIS A John Two rare types of hernia occurring in the same patient 1171
Cold back *See* Back
Cold the common (Sir Thomas Horder) 290—Discussion 291 — A correction 362 — Correspondence on 403 449 506 543 550
COLE Leslie The treatment of tetanus 743 (O)
COLEBROOK Dora appointed to investigate puerperal sepsis 442
COLEBROOK Leonard The source of infection in an outbreak of puerperal fever 34
Colic renal regurgitation (Bransford Lewis) 1137
C [illegible]ns (J M Johnston) 755
[illegible] of the larynx 620—1125
College Anderson s Glasgow Closing address for winter session 540
College Bedford Lectures 126
College Epsom France pension 917—Proposed abolition of the voting system 398—Parliamentary note on 733 823 915 1107 1198
College King s London Hambleden department of anatomy 720 858
College Livingstone Leyton Annual report 674—Commemoration day 1100
College London Hospital Medical *See* Hospital
College of Obstetricians and Gynaecologists British Annual meeting 777—Council meeting 360, 777—Fellows admitted 360—Members elected 360
College of Physicians of Philadelphia *Catalogue of the Incunabula* in the library of 315
College Royal Army Medical Prizewinners 1014
College Royal of Physicians of Edinburgh Appointments 310 914—Fellows elected 310 914—Jessie Macgregor prize in medical science 350—Kirk Duncanson Fellowship awarded 310—Parkin Prize awarded 310—Quarterly meeting 310 914
College Royal of Physicians of Ireland Degrees and pass lists 310 915 1107—Fellows elected 691 915—Licentiates 310 915—Membership 310 691 1107—Honorary Fellows elected 82 220 768

COLLEGE ROYAL OF PHYSICIANS OF LONDON
Appointments 264 868
Degrees and pass lists 264 595 867
Diplomas 264 595 868
Election of President 595
Fellowship 867
Lectures 301 868
Leverhulme Research Scholarships 1090
Licences 264 868
Membership 264 867
Radiology medical conjoint diploma in 1014

College Royal of Surgeons of Australasia Annual meeting 905—Presentation of mace to 905
College Royal of Surgeons of Edinburgh Bathgate Memorial prize 1014—Degrees and pass lists 179 [illegible]
[illegible]erns [Henry Arthur] [illegible]
Ivison Macadam [illegible]
Victoria Jubilee Prize 1015

COLLEGE ROYAL OF SURGEONS OF ENGLAND
Appointments 174 360 777
Buckston Browne Surgical Research Farm at Downe 174
Conn [illegible]
[illegible] 777 961 1153
1155 1198 360 547 717 961
[illegible] 77 1153
[illegible]ows 547 1153
[illegible]t to 360
Grove (J W) bequest to 961

COLLEGE ROYAL OF SURGEONS (*continued*)
Hallett prize 174
Hunterian festival 347
Hunterian Oration 317
Jacksonian prize 777
Lectures 126
Leverhulme research scholarships 77
Licence 1153
Lister medal 961
Mackenzie Mackinnon Research Fellowships 547
Members of 80 961 1153
Members of over twenty years standing elected to the Fellowship 777

Recognition of Chester Royal Infirmary for surgical practice for Final Fellowship Examination for non members 360
Representatives elected 547
Transactions Periodicals and Memoirs in the Library of List of second edition rev 943

College Royal of Surgeons in Ireland Association of Past Students first meeting 1098—Charter Day dinner 303—Election of officers 1198—Examiners appointed 1198
College Trinity Dublin Degrees and pass lists 595—John Mallet Purser Lecture 1107 *See also* University
College University Cork Degrees and pass lists 777 1198
College University Dublin Degrees and pass lists 640—Election of members of the Governing Body 42
College University Dundee jubilee of 398 *See also* University of St Andrews
College University Galway Degrees and pass lists 691
College University London Annual report 629—Election of officers 595—Lectures 42 81 126—*Collected Papers* from the Department of [illegible] rev [illegible]larship [illegible] Scien

COLLIER Howard E Philosophy and medicine 729
COLLIER J I The true place of serum in the prophylaxis of measles 703 (O)
COLLINS Sir William Liberty of the subject 241
COLLINSON F W Plantar corns 783
COLLIS W R F *Infection in the dormitory* 802 — Epidemic erythema nodosum 893 — Prevention and treatment of acute rheumatic infection 1032
Colloids review of book on 714
COLMAN Lieut Col George Maurice Hobbyn obituary notice of 640
Colon function of the (leading article) 22
Colon or stomach pain in 1110
Colour index nomogram (George H Bell) 706
Colour vision *See* Vision
Colporrhaphy for uterine prolapse 119 166 216 260 448 544 684
Colston Medical Research Fellowship 211 *See also* Research
COLWELL Hector A *Notes on Radium Therapy* rev 195
COLYER Sir Frank *Abnormal Conditions of the Teeth of Animals in their Relationship to Similar Conditions in Man* rev 104—(and [illegible] *Surgery and Pathology* 16 (Wilfred Trotter)

Communicable diseases *See* Diseases
Compression fracture *See* Fracture
COMPTON Piers *The Genius of Louis Pasteur* 850
COMRIE John D *History of Scottish Medicine* second edition rev 614
Conditional reflexes *See* Reflexes
Congress of the American Medical Association New Orleans (1932) 577
Congress on Asthma International Mont Dore (1932) 640
Congress of th [illegible]
Bad Sulzuflo
Congress on
Vichy (1932) 577
Congress of the British Hospitals Association Liverpool (1932) 577 1004
Congress of the British Medical Association London (1932) 577 *See also* Association
Congress of the Canadian Medical Association Toronto (1932) 577 671
Congress for Childhood Protection International Union for French committee meeting Paris (1933) 736
Congress on Digestive Diseases *See* Congress of the Society for the Study of Diseases of Digestion and Metabolism
Congress of Eugenics International New York (1932) 361
Congress French of Legal Medicine Paris (1932) 917
Congress of the French Societies of Oto neuro ophthalmology Montpellier (1932) 736
Congress French of Stomatology Paris (1932) 163 577
Congress of the German Association for Natural Science and Medicine Wiesbaden (1932) 577

Congress of the German Association for Occupational Hygiene Nuremburg (1932 163
Congress of the German Dermatological Society Vienna (1932) 163 361 577
Congress of the German Ophthalmological Society Leipzig (1932) 577
Congress of the German Pharmacological Society Wiesbaden (1932) 221 549 577
Co [illegible]or Circulation 75
Co [illegible] for Internal 267 577
Congress of the German Society for Psychiatry Bonn (1932) 577
Congress German for Psychical Hygiene Bonn (1932) 871
Congress of the German Society for Surgery Berlin (1932) 315
Congress of the German Society of Urology Vienna (1932) 163 577 640—Postponed until 1933 640
Congress German Tuberculosis Bad Harzburg (1932) 691
Congress of the History of Medicine Rome *Transactions* rev 104 577
Congress of Hydrology Climatology and Physical Therapy Italian Viareggio (1932) 43
Congress of Hydrology International Monaco (1932) 455 577
Congress on Infant Welfare Dutch The Hague (1932) 1155
Congress of the International Union Against Tuberculosis The Hague (1932) 577
Congress Italian of Medicine in Relation to Sport Rome (1932) 597
Congress of the Italian Society of Surgery of the Mouth and Dentofacial Orthopaedics Parma (1932) 361
Congress Italian of Urology Bari (1932) 163 577
Congress Journées Médicales de Bruxelles Brussels (1932) 221 577 640
Congress on Light International Copenhagen (1932) 163 221 577
Congress o [illegible] national Union of
Congress o Inter national Society for Remedial training of speech and voice) Budapest (1932) 957 — Vienna 1155
Congress of Mediterranean Hygiene International Marseilles (1932) 163 577
Congress of Military Medicine and Pharmacy International Liége (1932) 737
Congress of the National Association for the Prevention of Tuberculosis London (1932) 577 *See also* Tuberculosis
Congress of Neurology International Paris (1932) 871 1015
Congress of Orthopaedic Surgery International Society of London (1932) 504
[illegible] [illegible] [illegible] er-

Congress Pedagogic Medical Rome (1932) 163 577
[illegible] Geneva (1932) 163 577
[illegible]sciences International

Congress of Physiology International Rome (1932) 967
Congress of Psychology International Copenhagen (1932) 871
Congress of Radiology International (1931) 203 275—X ray and radium protection 203—The radiographic dissection of chronic rheumatic arthritis 279
Congress of the Réunion Internationale de Prophylaxie et d Hygiène Mentale Paris (1932) 736
Congress against Rheumatism International Rome indefinitely postponed 409—To be held in Paris in October (1932) 1061
Co [illegible]blic Health
Co Institute
Co Association
[illegible] Urban 43
Diseases na (1932)
[illegible]
Congress of Surgery International Society of Madrid (1932) 82 163 203
Congress on Syphilis International Paris (1932) 505
Congress of Tropical Medicine International Amsterdam (1932) 163 640—Postponement of 640
Congress on Tuberculosis International Davos (1932) 577
Congress on Tuberculosis International Union Against The Hague (1932) 577
Conjoint Board in Ireland Degrees and pass lists 42 915
Conjoint Board in Scotland Degrees and pass lists 778
CONN J C Intelligence and disease 206
CONNAL Andrew O B E conferred on 1097
CONNELL C [illegible] of the Order
CONNERY [illegible]na 1180
Constantza outbreak of exanthematous fever at 83
Constipation and right sided ptosis 38

Consumption *See* Tuberculosis
Contraception Conference on 719 993 1047 1200
See also Birth Control
Contraception International Medical Group for the Investigation of fourth issue rev 809
Contraceptive a (Grafenberg ring) (C B Green Armistice) 13—(G T Cregan) 237—spray) 84
Correspondence on 70
Contraceptive delivery of a (part of a whirling
Contraceptive methods adequacy of 1200
Convalescent Homes Saltcoats Miners ultra violet lamps installed 33
Convalescent serum *See* Serum
Convulsions ether 929 1156
Cook Alb rt Ruskin knighthood conferred on 1033 1097
Cook Bessi E Deaths associated with anaesthesia 217
Cook James Obstetrical heresies 727
Cook A M Normal development in the young child 16
Cook R Foreign body in the common bile duct 840
Cook W J (and Sir Leonard Rogers) Re is tant sprue anaemia yielding to intravenous liver extract 272 (O)—Silico anthracosi pre senting curious bodies similar to those in asbestosis 656 (O)
Cook Taylor C R Coe ho and the male climacteric 22
Cooke Carey Cardio vascular syphilis 810—ion o rheumatic infection 1033
Cooper J W Astley Preparation for marriage 864
Cooper R M le Hunte The dang r of food contamination by aluminium 576 852 1155
Copp Zachary The mischiefs of motoring 200—The syndrome of chronic toxic cholecystitis 257— Excessive surgery 918
Copeland A J Image in childbirth 1173
Copeman Monckton Treatment of carcinoma 150—Puerperal fever and pyrexia 871
Coplinger Major General W V appointed an Officer of the Order of St John of Jerusalem 83
Corbett Lieut Col Daniel Maurice obituary notice of 82
Cork medical appointment 491
Corner H Wolfe Electric fitting for testing temperature sen sation 477
Corns plantar 692 737 783 826 872 918 967 1016
Coronary disease some clinical aspects of (Thomas F Cotton) 69 (O)—Note on 391—Correspondence on 642
Coroners inque ts in London 959
Coroner London 583
Corporal punishment pa nphle on 159
Corrections 84 362 456 550 569 738 790 850 919 958 1016 1110

Correspondence
Advertising and canvassing 359
Aftercoming head 632
Allergy and the proteose 37 77
Aluminium and health 696 727 774 869 1010 1056 1105 1147 1197
Ambulatory treatment 39 *See also* Rheumatism *and* Fractures
Anaesthesia deaths associated with 35 217
Anaesthesia local for tonsillectomy 959 1009 1053 1147 1191
Anaesthesia methods of 819
Anaesthesia spinal in vasoplastic disea es 1189
Antagonistic diseases 405 493
Anatomy and surgery 860
Anthrax treatment of 123
Anti malaria measures 70
Aphasia syntactic 592
Appendicectomy in early life 202
Appendicitis acute in children 1101
Arsenic and wall paper 726 772
Artificial pneumothorax *See* Pneumothorax
Asthma liver therapy in 1057
Asthma nasal factor in 449
Asthma statistics 78 215
Bal our Sir Andrew memorial to 257
Barbiturates in anaesthesia 405 543 583
Bile duct common idiopathic dila ation of the 725 771 911
Birmingham Medical School and the Hos pitals Centre Scheme 494
Blindness certification of 405
Breech delivery 1011
Briti h Institute of Philosophy 350 450
British Pharmacopoeia (1932) 1101
Bronchomoniliasis 1052 1190—In Jersey 863
Calamine lotion a substitute for 78
Cancer aetiology of 495 590 634 685 773 853
Cancer of breast post operative x ray treatment in 1006 1056 1191
Cancer of pharynx and larynx 818 859 912
Cancer pituitrin in effect of 1003
Cancer research and treatment 1002
Cancer spontaneous cure of 305
Catarrhal infection and formalin vapour 120 309
Child guidance clinics 39 122 168 217—And Neo-Hippocratism 122
Cholecystectomy late results of 170
Chloroform in labour 35 78 124 403
Cobalt in haematopoiesis 1010
Coca addiction a century and more ago 1012
Cold the common 403 4 9 543
Colporrhaphy for prolapse 119 156 216 270 448 544 684
Constipation and right sided ptosis 38
Correspondence (*continued*)
Cow pox or vaccinia case of 171
Cox Alfred testimonial fund 1146
Criminal prosecutions 730
Deafness and hooters two auditory problems of motoring 770
Deaths associated with anaesthesia *See* Anaesthesia
Dermatitis shoe leather 171 261 352 447
Diet and dental disease 588 685 862 959 1007
Diphtheria antitoxin do age of 30
Disseminated sclerosis *See* Sclerosis
Drugs Dangerous Register Duties of non dispensing practitioners 259
Duodenal ulcer *See* Ulcer
Dysmenorrhoea treatment of 90
Eclampsia incidence of 1102
Encephalitis chronic oculogyric attacks in 3
Epicanthus congenital operation for 447
Ergot preparations action of 1189
Ergot standardization of 305 393
Erysipelas treated by injections of milk 350
Ether convulsions 959
Exophthalmos and sinusitis 448
Face masks and fogged spectacles 169 263
Fallen idols or fatal errors? 958 1102
Fertility after prostatectomy 1102 1148
Flatfoot 633
Footgear cramped 591 633
Forceps failed 633
Foreign bodies in the air passages 401
Foreign body unsuspected in a bronchus 171
Fouling of foot ways by dogs 851 911 959 1057
Fracture depressed of foetal skull 773
Fracture practice a primer of 631
Fractures ambulatory treatment of 447 495 542 587 631 710 1101
Fractures of the spine 509 694
Gastric ulcer *See* Ulcer
Gentl protest 1011 *See al o* Lelvic
Glaucoma 78 121
Goitre research on 172
Gräfenberg ring 70
Hearing defec s correction of 1189
Heart disease simulation of 262 309 444
Hepatic calcium research on 730
Herpes cervical with facial palsy 171
Herpes zoster visceral 632 707
Hospitals London County 258
Hydrochloric acid in diabetes mellitus 542
Hyperpiesia 170
Hypertension essential 590
Hyperthyroidism with achlorhydria 405
Imbotep 917
Immunity and malignant tumours 69
Indian Medical Service pension 635 685
Industrial dis eases no tification of 118
Influenza ear complications of 21
Jaundice epidemic bacillus of 259
Joints stiff treatment of 39
Lactic acid in the gas ric contents 681 771 859 907 1006 1052
Law and abortion 41 73 125
Lipiodol in re duction of into the l ngs 257
Liver therapy in ravenous in pernicious anaemia failure of 910 1007
Liver therapy parenteral 400
London and Coun ies Medical Pro ection Socie y 1190
London Hospital *See* Hospitals
Malignant disease *See* Cancer
Marriage preparation for 592 637 707 770 819 864 912 959 10 0 1102 1140
Massage and medical gymnastics training in 1147
Medical centenarians 124
Medical conditions in Soviet Pu ia 39 124 169 218 263 309
Medical engineering 93
Medical supplies for missions 350
Members of the Royal College of Surgeons 80
Meningitis aseptic 50
Milk problem 1104
Milk raw and dental caries 261 306 404 495
Milk vitamin potency of 590
Mortality maternal 167 308 443
Myringotomy early in o itis media 168
Neo-Hippocratism and child guidance clinics 122 *See al o* Child guidance
Obstetrical heresies 727
Oedema extrarenal 634
Oleothorax treatment the origin of 773
Osteo-arthritis of hip treatment of 726 772 820 861 907 1050
Ovulation and the sex cycle 166 259 306
Oxygen and Everest 120
Pathological services of the London County Council 305 348 545 635 680 729 776 820 909
Pelvic joints in pre nancy mobility of 634
Pelvic woman the chronic 683 1011
Philosophy and the medical man 591 728
Phylaxis 170
Pituitary posterior 349
Pituitrin in malignant disease effect of 1003
Plumbism and peptic ulcer 262 308 351 494 497
Pneumococcal typing immediate 260 305
Pneumothorax Society International Artificial 1104
Practitioner in irons 775 *See also* Student in irons
Polycythaemia vulva and achlorhydria 817 860
Pregnancy acute illness in effect on child of 262
Prostatectomy vaso-ligation in 36
Psychoneuroses endocrines and terminology 350
Public health and the future 541
Public health intelligence of the Health Organization of the League of Nations 635
Puerperal fever source of infection in an outbreak of 34 76
Puerperal septicaemia and C M B nurses 493 546
Punch Mr his hump 79 124
Quinine and malaria 263 772
Radium 401—Conference on 1005
Rheumatism ambulatory treatment 39
Rheumatism early treatment of 450
Rheumatism tuberculous 11 7
Rheumatoid arthritis 78
Rickets and vitamin D 769 859 912 1003 201 351 402
Ringworm of the scalp treatment of 140 21
Road traffic signals 591 682
Sacro-iliac displacement 912 10 9
Sacrum the 913 1012
Sanitation domestic 1105
Sclerosis disseminated aetiology of 631
Sero therapy in septicaemia 1191
Shock following blood extravasation 1056 11 3
Shoe leather dermatitis *See* Dermatitis
Shut leworth Samaritan Fund 157
Sobering up rate 37
Spahlinger formula 305
Spahlinger vaccines 401
Spinal anaesthesia *See* Anaesthe ia
Sprue in Malta 911 *See* Anaesthe ia
Stomach type of predisposing to duodenal ulcer 817
Stroke in high arterial pressure 49
Student in irons 541 597 630 683 725 775 1011 1105 *See also* Practitioner in irons
Surgery suction in 217 262 307 402
Syntactic aphasia *See* Aphasia
Temperature the normal 11 6 1105
Tendencies in modern medicine 771
Tetanus treatment of 805
Thallium treatment of ringworm 140 214
Therapeutic assessment 1052
Thyroid extract and pulmonary embolus 771 862 908
Tinea capitis *See* Ringworm
Titles assumed by unqualified persons 303
Tonsils and adenoid 442
Tubercle bacillus types of 401
Tuberculosis genito urinary 350—And the Ministry of Pensions 337 350 403 458 527
Tuberculosis problem of 119 172 217 306 457 546 635
Tuberculosis pulmonary early diagnosis of 357
Tumours origin of 910 957 1005 1105
Ulcer duodenal aetiology of 906
Ulcer gastric medical treatment of 118
Ulcer peptic and plumbism 262 308 351
Ulcers of leg chronic treatment of 1055
Undulant fever in the British Isles 215 262 11 5
Use of Self 912 1009 10 6 11 2 11 2
Vaccinia in dairy workers 215
Varico e veins treatment of 1052 1190
Vasovagal syncope 906 1053
Ve tion recovery of 36
X ray pho ographs in the Navy the first 4
Corrigendum *See* Corrections
Cor real extrac in the treatment of Add on s disea e (S Levy Simpson) 200—(L S P David on) 525—(R A C eghorn) 525
Cort F W Ferri per hlor in lun dis ease 72
Cosens W B *Your Servant the Doc or* rev 1005
Cosin C F The para hyroids and generalized osteitis fibro a 647
Costello J W Local anaesthe ia for ton ill ectomy 839 (O)
Cores Preedy Digby appoin ed Recorder of Oxford 1015
Cottage hospitals *See* Hospitals
Cotterell Lieut Col Arthur Bowdich obituar notice of 126
Cotton Lieut Col F W Dysidrosis Wes ern Australia 1 00
Cotton Thomas F Some clinical aspects of coronary di ease 308 (O) 331
Co ton industry dus in report of Depar mental Committee) 584
Cone one bet er than 768
Cough cure of by shor ening an e ongated uvula (Sir James Dundas Grant 375 (O)—Correspondence on 506
Council London County
Ambulance service *See* Ambulance
Annual report 160 617 903
Food inspection (parliamentary no e) 502
Hospital services report on medical supple ment to the 617
Hospitals of (leading article) 156 160 208 348
See also Hospitals
Instruction at the hospitals 629
Laboratories of 443
London County Council Bill 502
Medical staff of the hospitals of 628
Medical staff non re idential allowances to 31
Nursing staff of the hospitals of 628
Pathological services 305 348 405 635 686 729 776 820 903
Post graduate teaching at the hospitals 1145
Public health services first year of unified hospital control 903
School children medical treatment of 31
Spahlinger treatment and the Council 903
Venereal diseases clinics 724

County hospitals See Hospitals
COURTS A C S Subarachnoid haemorrhage with glycosuria and hemiplegia 190—Lthei convulsions 959
Cowper s insanity 316 361 410 506
Cow pox or vaccinia (David M Cathie) 99 268—Correspondence on 171 268
COX Alfred Retirement of 537—Testimonial to 628 1137 1146
COX Gladys Medical problems of contraception 1047
Coxa vara adolescent treatment of (George Perkins) 55 (O)
COYTL Ralph *Surgery of the Genito urinary Tract* rev 759
Crab evolution of from the lobster 947
CRABBE George the poet centenary of 202
CRABBE J Sandison Ionization of nasal cavity 918
CRAIG John Meningo encephalitis with hydro cephalus 193—Epi tuberculosis 193
CRAIG Sir Maurice The student in irons 630
CRAIG R W presentation to 954
CRAMB E Hamilton Appreciation of John Parlane Kinloch 313
CRAMER W Comparative study of cancer 1180
Cramp miners 176—Sodium chloride for 176
Craniotomy forceps *See* Forceps
CRAVEN Cecily M Corporal punishment 159
CRAWFORD D G Medical centenarians 124
Cream imported butter fat content of (parliamentary note) 1060
CRLED R S Retinal structure and function 1082
CREGAN G T The Grafenberg ring 237
Cremation in Great Britain 576
CRESSY A Z C Chloroform in labour 78
CRICHTON BROWNL Sir James Andrew Balfour Memorial 257
CRICHTON MILLER H The student in irons 680
Crichton Royal Institution Annual report 304
Criminal prosecutions 730
Criminal statistics 811
Criminal tendencies among juveniles and young adults 1135
CRITZMAN Daniel —*La Goutte son Mécanisme et son Traitement* rev 153
CROCKFORD A L *Meningo encephalitis of* measles 1171
CROFTON W M Aetiology of cancer 662
CROOKS James Two unusual examples of osteo genesis imperfecta 705 (O)—Suppurative arthritis of the hip 888—Fractures of the spine 888
CROOKSHANK F G *Anorexia Nervosa* rev 20
ie and the ychological -Individual Samaritan ige 1146
Croonian Lectures See Lectures
Cross Dorothy Temple Research Fellowships in Tuberculosis 816
CROWDEN G P Uses of oxygen and CO_2 in medicine 145—Correction of hearing defects 1189
CROWE H Warren Treatment of osteo arthritis of the hip joint 861 1056
CROZIER T H Exophthalmic goitre in a child 659
CRUCHET Rene Treatment of tetanus diphtheria and other neurotropic diseases by the method of phylaxis 85 (O)
CRUICKSHANK J Norman Vaccinia in dairy workers 216
CRUISE Sir Richard Senile cataract 969
Crystalline vitamin D *See* Vitamin
CULHANE K Estimation of hormones 711
Cully Royal Surrey County Hospital and H B Butler 1195
CULPIN Millais Psychoneuroses endocrines and terminology 350
CUMMER Clyde Lottridge *A Manual of Clinical Laboratory Methods* third edition rev 474
CUMMING Hugh S reappointed Surgeon General of the United States Public Health Service 917
CUMMING W M Types of the tubercle bacillus 401—The tuberculosis problem 546
CUNINGHAM Herbert William obituary notice of 501
CUNNINGHAM Leslie Intra thoracic new growths 17
Cunningham s Text Book of Anatomy sixth edition rev 806
CURRIE James Andrew Balfour Memorial 257
CUSHING Harvey Function of posterior pituitary lobe 299
Cushing s endocrine pituitary syndrome *See* Hyperpituitarism
CUTLER Max (and Sir G Lenthal CHEATLE) *Tumours of the Breast their Pathology Symptoms*
CUTNER M
CYRIAX Edga
Vasovagal s
CYRIAX J H Painful heel 43
Cyst hydatid in lung (U P Basu) 1079
C
C via
C e C
wneler) 194
Cystic dilatation of the common bile duct (James H Saint) 230 (O—Correspondence on 771 911
Cystoscope for applying diathermy to bladder growths 386
Cystotomy suprapubic bladder healing after (James B Macalpine) 226 (O)—Correspondence on 350 818
CZEPA Alvis death of 732

D

D ABREU A L Antagonistic diseases 498
DAHMANN Heinz death of 961
Dairy Research Institute the Hannah Report 907
Dairy workers vaccinia in 216 *See also* Vaccinia
DALE Henry Hallett Honour of Knighthood conferred on 69 75—Synthetic anti malarial drugs 100—(And Chassar MOIR) Action of ergot preparations on the puerperal uterus 1119 (O)
DALLY J F Halls Normal development in the young child 17—Movements of the chest 427
DALRYMPLE CHAMPNEYS W Undulant fever in the British Isles 215 1146—Puerperal fever and pyrexia 801
DALTON C H C Plantar corns 918
Dangerous Drugs *See* Drugs
DANIEL Augustus Moore K B I conferred on 75
DANIELS L F Narcolepsy and ephedrine 764
DARIAUX A (and others) *Atlas de Radiographie Osseuse II Pathologie I Lésions Traumatiques* rev 63
DARLING Harry C Rutherford Bladder healing after suprapubic cystotomy 818
Dartmoor Convict Prison *See* Prison
DARWIN Ruth appointed Senior Commissioner of the Board of Control 1187
DASS Rai Bahadur Lala Mathra Bar to Kaisar i Hind Medal conferred on 1097
DATNOW Dr Zondek Aschheim test in ectopic pregnancy 382
D AVILINF Guy *Mémoires d un délégué sanitaire* rev 338
DAVEY J B Bacteriology of normal teeth 333
DAVIDSON Hugh Stevenson obituary notice of 125
DAVIDSON James Fatal case of eclampsia associated with cerebral haemorrhage 333
DAVIDSON I B Tracheal tug in normal person 221—Cowper s insanity 410
DAVIDSON J M Phototherapy in erysipelas 929 (O)
DAVIDSON L S P Intramuscular liver extract therapy in the treatment of pernicious anaemia 269 (O)—Cortical extract in Addison s disease 525
DAVIDSON Stanley Lactic acid in the gastric contents 859—Failure of intravenous liver therapy in pernicious anaemia 910—Treatment of pernicious anaemia 1179
DAVIL T B Intra thoracic new growths 17
DAVIPS Arthur The syndrome of chronic toxic cholecystitis 286—Pathological services of the London County Council 729
DAVIES A B Actinomycosis involving a long bone 705
DAVIES T Anwyl Gonorrhoea and other cervical discharges 381
DAVIPS Trevor B The Grafenberg ring 76
DAVIS Colley Major Hugh O B E conferred on 1097
DAVIS Thomas K (editor) —*The Vegetative Nervous System An Investigation of the Most Recent Advances* rev 103
DAWSON OF PLNN Lord elected an Honorary Fellow of the Royal College of Surgeons of England 547—Elected a member of the committee of the Radium Institute London 916
DAWSON Shepherd Intelligence and disease 296
DAY Lieutenant I T L awarded the Marshall Webb Prize 1014
DEACON R J Association of Bio Physical Assistants 44
Deaf children education (parliamentary note) 824
Deaf and dumb (parliamentary note) 869
Deaf hearing aids for the (A W Ewing) 1126
Deaf lip reading courses for the 641
Deaf National Institute for the note on 953
Deaf non electrical aids for the 529
Deaf persons investigation of defective hearing (A W G Ewing) 1003—A survey of two years research 1139—Correspondence on 1189
Deaf mutism (J S Fraser) 289
Deafness and hooters Two auditory problems of motoring 770 *See also* Motoring
Deafness *See also* Hearing
DEAN H R Pathological services of the London County Council 909
Deaths associated with anaesthesia *See* Anaesthesia
Deaths registration of in Northern Ireland 303
Deaths in Trinidad (parliamentary note) 549
DEBIERRE C death of 867
DE BRUN H death of 453
DE GARIS Mary C Failed forceps 633
DEGLAUDE L (and J WALSER) *Atlas d Electrocardiographie Pratique* rev 1131
DE GRAFF Arthur C *Criteria for the Inter*
D
D a
rev 572
DI IARUF Tuberculous rheumatism 1041
DI LAVIS TRAFFORD Marcus Antonius Johnston C V O conferred on 75
Dr LIGH Harry Legh obituary notice of 914
DI LI THI 7 Alphonse death of 453
DPLMI OI I Anthony *Towards National Health* rev 1037
DI MPILI ON Botha *Illustrated Keys to the Full Grown Larvae and Adults of South African Anopheline Mosquitos* rev 617
Dementia praecox *See* Schizophrenia
Dental caries and cereal free diet (May Mellanby and C I ee Pattison) 507 (O)
DI NGLI Sister Anna honorary M D of the National University of Ireland conferred on 1013
Dental caries and raw milk (I C Sprawson) 189 401—Correspondence on 261 306 404 496 550 598 642
Dental disease and diet (leading article) 5 4—Correspondence on 588 685 862 9 9 1007
Dental needs of the people (Sir Norman Bennett) 1004
Dental officers in the Navy (parliamentary note) 596
Dental profession numbers of 411
Dental service school (parliamentary note) 1154 *See also* School
Dental surgery review of books on 713 1176
Dentists Register (1931) rev 617
Depopulation in France 44
Derby post graduate lectures in 691
Dermatitis common forms of (G H Percival) 707
Dermatitis industrial (parliamentary note) 454
Dermatitis shoe leather 171 261 352 447 456
Dermatitis venenata caused by shoe leather 171 261 352 447 456
Dermatology review of books on 173 244 527 1038
Dermatology *See also* Skin
Dermoid cyst *See* Cyst
DPROM Wilfred death of 314
Destruction of imported animals *See* Animals
Determinism is it dead? 738
Development normal in the young child (Sidney Owen) 16
DL VILLAMIL Lieut Col R —Newton *the Man* 343
DRVINE Henry Liberty of the subject 241
Devon South Coast Resorts Conference in 212
DL WAAI J F elected a Fellow of the Royal College of Physicians of Edinburgh 310
DI WISSI LOW O L V appointed to the University Chair of Medicine at St Thomas s Hospital Medical School 42—Non infective nephritis 522
DPY M M (and P BROWN) Gangrene due to embolus of the inferior mesenteric artery 186 (O)
Diabetes mellitus hydrochloric acid in 542
Diabetes review of books on 19 337 789
Diabetes synthalin in the treatment of (A P Thomson R J Gittins and Garfield Thomas) 322 (O)
Diagnosis Clinical Interpretation of Aids to vol II rev 20
Diagnosis review of books on 20
Diarrhoea of parenteral origin (W Brown) 193
Diathermy apparatus surgical 84
DIBLE J H Reticulo endothelial system 192—*Recent Advances in Bacteriology and the Study of the Infections* second edition rev 385
DICK Bruce M (and Charles I W ILLINGWORTH) *A Text Book of Surgical Pathology* rev 527
DICK J Staveley Therapeutic assessment 355
DICKIE William S Operation at advanced age 362
DICKSON Elliot Medical services in Scotland 1049
DICKSON Hill Hospitals and motor accidents 1050
h of County
Medicine
dition rev
338
534—
Diet for the healthy individual 628
Diet prison *See* Prison
Dietaries family 1137
Dietetics review of books on 990 1083
Digestive system review of books on 242 294 571 847
DIGGLE F Holt Foreign bodies in the oesophagus 277 (O)
Digitaline crystalline 891
Digitalis review of books on 153
DILL M Graham Doctors and district nurses 550 612
DILLON Frederick A Student in Irons 631 1105
DIMTZA A (P CLAIRMONT and O WINTERSTEIN) *Die Chirurgie der Tuberkulose* rev 294

Diphtheria antitoxin dosage of 35 *See also* Antitoxin
Diphtheria communal immunisation against 671
Diphtheria past and present (leading article) 533
Diphtheria treated by phylaxis (René Cruchet) 85 (O) *See also* Neurotropic diseases *and* Phylaxis
Disabilities due to war service (parliamentary note) 454
Disclaimers 456 642 1016 1110 1156
Disease and intelligence report on 206
Disease communicable control of Report of committee 104
[illegible] 780

Diseases communicable review of book on 101
Diseases industrial notification of statutory requirements 118 *See also* Industrial
Diseases nomenclature of a revised (leading article) 892
Disinfectants cheap (parliamentary note) 1063
Disinfectants sale of (parliamentary note) 639
Disinfection steam control of 214
Dispensary medical officers deputy (Omagh Board of Guardians and) 1187
Disseminated sclerosis *See* Sclerosis
DISTIN Harold obituary notice of 690
District nursing *See* Nursing
Diverticulitis of the bladder (Dr Bouchier Hayes) 335
Diverticulitis perforated (V J Morcom Taylor) 1124
Diverticulum of *duodenum* associated with calculus formation (V C J Harris) 1030
Diverticulum of the male urethra (C Hope Carlton) 376 (O)
Divorce where one of the spouses has become insane after marriage (parliamentary note) 590
DIXON A F Laryngocele 295
Dixon W F memorial to 577
DOBSON Margaret *Dynamic Retinoscopy* 109
DOCK RAY C C Hepato splenography 1082
Doctor social training for the (W J Mayo) 1044
Doctors in Belgium for the last hundred years achievements of 83
Doctors and nurses in industrial areas 456 550 593 642 738 [illegible]8 825 842 918
Doctors review of book on 18
DODD W Harold The syndrome of chronic toxic cholecystitis 289
DODDS E C Research on sex hormones 148—(And Lionel I H WHITBY) *The Laboratory in Surgical Practice* rev 570—Lactic acid in the gastric contents 687—Nutritive value of margarine 1137
DODDS Gladys The Zondek Aschheim test for pregnancy 986
Dogs fouling of footways by 851 911 959 1057
Dogs and horses for experimental purposes (parliamentary note) 870 *See also* Vivisection
DOHI Keizo death of 173
Domiciliary sanitation *See* Sanitation
DONALDSON Malcolm Treatment of carcinoma 150
DONALDSON Robert *Practical Morbid Histology* second edition rev 664
DONFLAN J O C Report on mental diseases in Ireland 677
DONOVAN H Jejunostomy and Witzel's operation in the treatment of vicious circle vomiting 609 (O)
DOOLIN W Transplantation of fibula 18
DORLING George C Treatment of anthrax 123
Dormitory infection in the (J Alison Glover) 801
DOSSOT R (and M PALAZZOLI) *Les Urétrites Chroniques* rev 615
DOUGAL Daniel A gestation period calculator 105
DOUGLAS C G Uses of oxygen and CO in medicine 146
DOUGLAS Henry Edward Manning C B conferred on 1097
DOUGLAS S R Microscopy of filterable viruses 789
DOUTHWAITE A H (and Chetwynd J P GROSVENOR) A case of pyrexia of obscure origin 139 (O)—[illegible] toxic cholecystitis [illegible]
Streptococcal [illegible] recovery 752—Treatment of osteo arthritis of the hip 772 957
DOW Dorothy J (and W Ernest Lloyd) Chest radiograms and the Mantoux test in children 701 (O)—Tuberculin tests in man value of 715
DOWLING G B The etiology of dysidrosis 142 (O)
DOWNER Harold Open safety pin in oesophagus of baby successful removal by endoscopy 705
DOWSETT F B Raw milk and dental caries 190
Doyle Arthur Conan A Memoir 25
DOYLE J B Narcolepsy and ephedrine 764
DRAKE Brockman Lieut Col Vivian Godfrey obituary notice of 735
DRENNAN Alexander Murray Reflections on the centenary of the chair of pathology at Edinburgh 213
Dressings Army economy in (parliamentary note) 1154
DREVER Helen *Tales of the Scottish Clans for Children (and Grown ups)* rev 932
DREVER J Mechanism of colour vision 1081
Drills bone 809
Drink Problem the Social and Economic Aspects of the rev 571
Driving licence test in cases of physical disability (parliamentary note) 1060 *See also* Motor
[illegible]
Drug eruptions some interesting (H Haldin Davis) 492 (O)
Drugs dangerous Bill 356 408 502 548 595 638—Second reading 408 548—Royal Assent to 638
Drugs dangerous Register of 295—Duties of non dispensing practitioner 259—Manufacture in Britain (parliamentary note) 870
Drugs dangerous traffic in in Egypt 813 *See also* Drugs narcotic
Drugs defective 440
Drugs in general and in particular (leading article) 666
Drugs narcotic traffic in 110 813—In Egypt 813—Records of the Conference for the Limitation of the Manufacture of [illegible]ol i rev 1085
Drugs synthetic an i malarial (W Schulemann) 100—Correspondence on 253 *See also* Malaria
DRUMMOND Sir David obituary notice of 865
DRUMMOND J C Nutritive value of margarine 1137
Drunkenness diagnosis of from the excretion of alcohol (Sydney Smith and C I Stewart) 87 (O)
DUBOIS Dr death of 314
Dublin *See* Ireland
DUDLEY Surgeon Captain S F The epidemiology of streptococcal infections 476—Infection in the dormitory 801
DUFF A M Anaesthetic masks 826
DUFF Thomas obituary notice of 892
DUGDALE J Norman Quinine and malaria 772
DUKES Clement Bacteriophage in treatment of *B coli* infections of the urinary tract 334
DUNCAN A G B Spontaneous haemorrhage of the newborn 521
DUNDAS GRANT Sir James Treatment of carcinoma 159—Shortening an elongated uvula for the cure of cough 379 (O)—Asthma and allied conditions 330—The nasal factor in asthma 449
Dundee *See* Scotland
Dunfermline Health of 907—Carnegie clinics in 1073
DUNLOP B Depopulation 44
DUNLOP D M Baby weight 1012
DUNLOP J I (and I G M FINDLAY) Fatal case of acute necrosis of liver associated with epidemic catarrhal jaundice 652 (O)
DUNN Nanabton *Fractures in the region of* the ankle joint 473—Fractures of the spine 888
DUNSCOMBE W K Meningitis due to *B anthracis* 190
Duodenal ulcer See Ulcer
Duodenum adenomatous papilloma of the (Andrew Fowler) 233 (O)
Duodenum diverticulum of associated with calculus formation (V C J Harris) 1030
DU PARCQ Herbert Statements of the medical officers *re* the recent disorder at Dartmoor Convict Prison 315
Dust in the cotton industry (report of Departmental Committee) 584
DUVAL Pierre elected president of the Société de Chirurgie 267
DYER S C Zondek Aschheim reaction in the diagnosis of pregnancy 333—(and others) *When and How to Collect Pathological Specimens for* [illegible]

Dysmenorrhoea endocrine therapy in (Walter P Kennedy) 746 (O)—Correspondence on 955
Dysmenorrhoea treatment of 955
Dysmenorrhoea treatment of by exercise (Alice I Sanderson Clow) 4 (O) 84—A correction 84

E

Ear complications of influenza (J F O Malley) 90 (O) 214—Leading article 107—Correspondence on 214
Ear inflammation and infections (Harold Barwell) 1126
Ear and referred pain (Lionel Colledge) 1125—Discussion 1125
Ear review of book on the 529
EARL C J C Child guidance clinics 217—A simple technique *for photography* of pathol[illegible]
[illegible]ol and mental defect
East Anglian Field Ambulance *See* Ambulance
EASTERBROOK C C Report on Crichton Royal Institution 304
EASTWOOD Cyril G (and Albert RAINSBOTTOM) *Spontaneous hypoglycaemia* 833 (O)
EBERSON Frederic The infective agent of infantile paralysis 70
ECCLES W McAdam Foetal pathology 709
Eclampsia incidence of 1102
Eclampsia nomenclature of (Bethel Solomons and Francis Bourke) 791 (O)
Eclampsia treatment of (F A Gerrard and R L Newton) 613
ECONOMO Professor von memoir of in the *Zeitschrift für die gesamte Neurologie und Psychiatrie* for May 10th 1199
Ectopia vesicae (G G Bruce) 193—(Sir Arthur Keith) 489
Ectopic kidney *See* Kidney
Ectopic pregnancy *See* Pregnancy
EDGE Frederick Preparation of breast for nursing 784
EDGECOMBE V Treatment of hyperpiesia 58 (O)
EDGERLEY C Mabel Causes of death of the Brontës 619
[illegible] 638
March contains papers read at the 1931 meeting of the Tuberculosis Society of Scotland 505
EDINGTON G H appointed a deputy lieutenant for the county of the city of Glasgow 221
Education estimates 779
Education review of book on 890
EDWARDS A Tudor Surgical treatment of intrathoracic new growths 827 (O)
EDWARDS V L Endometrioma in an abdominal scar following Caesarean section 62
EDWARDS Tudor Diagnosis and treatment of lung abscess 289
EDWARDS JONES J C Plumbism and peptic ulcer 449
EGLETON P awarded the William Julius Mickle Fellowship 503
[illegible] te) 454
article) 350—
EHRMANN A appointed a Serving Brother of the Order of St John of Jerusalem 83
EISELSBERG Anton Freedom of the City of Vienna presented to 503
Elbow injuries in children (Sir Robert Jones) 739 (O)—Leading article 762
ELDER Surgeon Commander A G Royal Naval Volunteer Reserve Officers Decoration awarded to 503
Electric shock protection against Ministry of Health's memorandum 1015
Electricity medical illustrated catalogue on 1067
Electrocardiography review of book on 1131
Electro surgery review of book on 528
ELFORD W J Microscopy of filterable viruses 799
Elityran a preparation of thyroid gland 88
ELLIOT Lieut Col R H Recovery of vision 35—Glaucoma 121—Medical conditions in Soviet Russia 218—Face-masks and fogged spectacles 263—The common cold 403—British sea-coast resorts 478
ELLIOT Walter Elliot Privy Councillorship conferred on 697
ELLIS Colonel C I Fractures of the spine 542
ELLIS David *Sulphur Bacteria* rev 86
ELLIS T S obituary notice of 219
ELLMAN Philip *Chest Disease in General Practice with Special Reference to Pulmonary Tuberculosis* rev 664
ELMSLIE R C Suppurative arthritis of hip 888—Dislocation of patella 888—Training in massage and medical gymnastics 1147
EMBLETON Dr Bacteriophage in treatment of *B coli* infections of the urinary tract 337
Embolectomy brachial case of (A Gray Banks) 56 (O)—Correspondence on 208
Embolism pulmonary (Sir Bernard Spilsbury) 564
Embolism pulmonary thyroid extract and (Ian Fraser) 659—Correspondence on 774 897 908
Embolus of the inferior mesenteric artery causing gangrene (P Brown and M M Dey) 186 (O)—(Charles D Ferguson) 810
Embryology review of book on 151 757
EMILIANI Gaetano of Faenza the first ovariotomist in Europe 1090
[illegible]
[illegible] note) 454
[illegible]
[illegible]h
[illegible]r
[illegible] Kennedy) 746 (O)
Endocrines and associated psychoneuroses (W Langdon Brown) 223 (O)—Leading article on 243—Correspondence on 350
Endocrines and chronic rheumatism (H Gardiner Hill) 472
Endocrinology Society *See* Society
Endometrioma in an abdominal scar following Caesarean section (V L Edwards) 62
Endometrioma of anterior wall of vagina (Leith Murray) 61
Endoscopic methods value of (V F Negus and H S Souttar) 315 352
Endothelioma pleural (J Lewis) 194
Enema faultily administered causes injury to rectum (H H Rayner) 419 (O)
ENGEL St (and others) *Erg bnisse der gesamten Tuberkulose forschung* rev 64
Engineering medical 353
ENGLISH W L Rickets in Scotland 506
ESSOR Rupert Charles Handley found not guilty of obtaining money under false pretences 266

Entamoeba coli in a child 427
Eocarinus fossil form of 947
Eosinophil cell part played by in the formation of fibrous tissue (T W M Cameron) 427
Ephedrine hydrochloride overdose of 737
Ephedrine and narcolepsy 763
Epicanthus congenital and ptosis transmitted through four generations (Norman Ross) 378—Correspondence on 447
Epidemics forecasting of (Sir Leonard Rogers) 724
Epidemiological reports of the League of Nations 201 573 *See also* League of Nations
Epidermomycosis research on 737
Epilepsy and heredity (J S Manson) 887
Epiphyseal lesion in congenital syphilis (Eric Assinder) 237
Episol for varicose veins 316
Epitaphs medical 738
Epituberculosis (John Craig) 193
Ergot preparations action of on the puerperal uterus (Chassar Moir and Sir H H Dale) 1119 (O)—Correspondence on 1189
Ergot standardization of Report of Pharmacopoeia Commission 109—Correspondence on 305 399
Ergotamine and ergotoxine (Chassar Moir) 1022 (O)
Ergotoxine and ergotamine clinical comparison of (Chassar Moir) 1022 (O)
Eruptive fever *See* Fever
ERXLEBEN Marguerite C *Notes on Children's Nursing* rev 665
Erysipelas phototherapy in (J M Davidson) 929 (O)
Erysipelas specific therapy of (T W Benson) 797
Erysipelas treated by injections of milk (Ibrahim Abd El Sayed) 281 (O)—(A C McEachern) 1124 (O)—Correspondence on 352
Erythema nodosum epidemic 893
ESCHWEILER Rudolf death of 593 732
Estimates Agriculture 868—Air Force 502 548—Army 502 548—Civil 549—Education 779—India 869—Navy 502 548
Ether convulsions 959 1156
Ethmoidal and frontal sinusitis (Donald A P Macalister) 983
ETTLES Captain D C Awarded the Parkes Memorial Prize 1109
Eugenic Organizations International Federal Farnham (1930) Proceedings now published in pamphlet form 106
Euthanasia plea for (C Killick Mullard) now published in pamphlet form 111
Eutopotropism (A C Lane) 851
EVANS Francis T Carbon dioxide absorption methods in anaesthesia 931 (O)
EVANS Geoffrey Essential hypertension 238—London County Hospitals 258—London County Council pathological services 305— Excessive surgery 938—(And W Girling BALL) *Diseases of the Kidneys* rev 941
EVANS Griffith Ifor awarded the gold medal of the Hunterian Society 409
EVANS Herbert M Ovulation and the sex cycle 108
EVANS Herbert T (and Gilbert I STRACHAN) Thoracic metastases in ovarian carcinoma 519 (O)
EVE F C Philosophy and the medical man 591
EVERIDGE John Prostatectomy in a nonagenarian aged 95 752
Everest Mount and oxygen 23 120
EWING A W G Investigation of defective hearing 1003—The problem of hearing aids 1126
Exanthematous fever *See* Fever
Excessive surgery *See* Surgery
Excretion urography *See* Urography
Exercise review of book on 942
Exophthalmos and sinusitis 448
Extrarenal oedema *See* Oedema
Eye review of books on 196 243 663 991
Eye *See also* Ophthalmology
Eyelids twitching of 919

F

FABER Knud *Medical Schools in China* 21
Face masks and fogged spectacles 169 263
Face and mouth malformations of (Sir Arthur Keith) 388
Factories amendment of laws relating to 1107
Factory clinic at Leysin 211
Factory inspector's report (parliamentary note) 870
FAGGE C H *The Acute Abdomen* rev 1177
Failed Forceps *See* Forceps
FAIRBAIRN J S (and Comyns BERKELEY

FAIRBROTHER R W Treatment of infantile paralysis 429
FAIRFIELD Letitia Abnormal behaviour in children 429
FAIRLEY Hamilton Treatment of sprue 482—Megalocytic anaemias 708—Filariasis 1035
FAIRLEY W appointed assistant secretary to the Board of Control 83
FAIRWAY Sidney *The Doctors Defence* rev 476

FAIRWEATHER S D — *Flat foot The True Nature Cause and Rational Cure* 481
FAIRINER Ninian M The teaching of obstetrics 985
Fallen idols (Sir James Berry) 904 968—A correction 968—Correspondence on 958 1102

man Nelson
of medical
bible 690 1196—Sentenced for fraud and bigamy 1196
FAUVEL Dr goes one better than Coué with a wonderful therapeutic instrument 768
FELDMAN W H *Neoplasms of Domestic Animals* 1180
FELDMAN W M The sacrum 913
FELL M H G Andrew Balfour memorial 257
Fellowship of Medicine and Post-Graduate Association *See* Post graduate
FENN Marguerite M (and Florence WHITROW) Spontaneous version of extended breech 379
FENTON E G Is determinism dead? 738
FENTON James Normal development in the young child 16
FENTON M J Disclaimer and warning 642
FERGUSON Archibald The problem of tuberculosis 497
FERGUSON Charles D Gangrene and perforation due to embolism of the inferior mesenteric artery 840
FERGUSON Thomas Industrial hygiene in Scotland 256
Fermanagh county school children health of Report 397
FERREYROLLES Dr Treatment by acupuncture 767
Ferri perchlor in skin disease 784
FERRY Georges death of 126
Fertility after prostatectomy 1102 1148
Fever abortus *See* Abortus *and* Brucella
Fever cerebro spinal *See* Cerebro spinal
Fever enteric In Ohio River cities (M V Veldee) 159
Fever enteric prophylaxis of 268
Fever enteric simulated by carcinomatous gastro colic fistula (T G Starkey Smith) 682 (O)
Fever enteric some aspects of (J R Harper) 292
Fever eruptive a new (J Cantacuzène) 813
Fever exanthematous Outbreak at Constantza 83
Fever rat bite case of suspected (Peter Hutchison) 936
Fever *relapsing on the Gold Coast* (Helen Russell) 989
Fever scarlet antitoxin treatment of (M V Veldee F E Stevenson and A G Mitchell) 440
Fever scarlet specific therapy of (T W Benson) 797
Fever typhus prophylaxis against (L Anigstein) 158
Fever zies) 427
Fever (James S Baxt s 215 259
1146—Case of in Derbyshire (P H J Turton and C F Peckham) 1029 (O)
Fever undulant review of book on 528
Fever yellow review of book on 337
Fevers tropical review of book on 6 6
Fibrinous bronchitis *See* Bronchitis
Fibroid with red and cystic degeneration (C P Brentnall) 382
Fibroid of uterus subperitoneal unusual case of (Sidney B Radle) 840
Fibula transplantation of (F Gill) 17
FIESSINGER Dr nominated professor of experimental and comparative pathology in the Paris Faculty of Medicine 221
Fife grouping of hospital services in 723
Film *x* ray cinematographic demonstration of 241
Filariasis (F W O Connor) 1034
Film in National Life the 1087 *See also* Cinematograph
Filterable viruses *See* Viruses
Finance Act (1932) 765 778 915 1014 1107 1153 1198
FINDLAY G M (and J L DUNLOP) Fatal case of acute necrosis of liver associated with epidemic catarrhal jaundice 652 (O)—Microscopy of filterable viruses 800
FINDLAY Leonard The history of rickets 383—Movements of the chest 426—British Sea coast resorts 478—Acute rheumatic infection 1033
FINE J A direct halometer 1085
Finger foreign body (unusual) in (George S R Little) 1080
Finger fractures *See* Fractures
FINZI N S *X* ray dosage in malignant disease 147—Post operative *x* ray treatment in breast cancer 1006
First aid classes 872
First aid equipment On the roads 738—On vehicles (parliamentary note) 1060
FISCHER I *Biographisches Lexikon der hervorragenden Arzte der letzten fünfzig Jahre* rev 1085
FISCHL Rudolf Seventieth birthday of 641—February issue of the *Archiv für Kinderheilkunde* dedicated to 641
FISHER A G Timbrell The sacrum 1012
FISHER Frederick Richard obituary notice of 218
FISHER J H Certification of blindness 989
FISON E T Obstinate urticaria 128

F
F
F

Fracture of the first lumbar vertebra (H J McCurrich) 424 *See also* Fractures of the Spine
Fracture of the foetal skull *See* Fracture of

whorn 521—
correspondence on 775
Fractures ambulatory treatment of 447 495 542 577 634 735 1101
Fractures bone clamp for 1133
Fractures of finkers appratus for treatment of 848
Fractures in the region of the ankle joint (R Broomhead) 473
Fractures review of book on 336
Fractures of the spine 542 684 858
Fractures treatment of recent advances in (R Watson Jones) 1073 (O)

FRANCE
Académie Royale de Chirurgie bicentenary of 937
Acupuncture treatment by 767
Alcoholism French National League against 871
Automobil Club Médicale formed in Paris 1109
Blindness prevention of in 1929
France and the French Canadian 484
French Association for the Advancement of Science annual meeting Brussels (1932) 967 1109
Journal médicale pratique rev 997
France
the 767
One better than Conan 958
Post graduate course 505 966
Smoke abatement in 1043
Tuberculosis scheme in 278
See also Paris

FRANCE W H called to the Bar 825
FRANCIS Alexander Aluminium and health 727
FRANCOTTE Xavier death of 314
FRANKLIN Helen Marion Kaisar i Hind Medal conferred on 1097
FRANKLIN J Curtis obituary notice of 732
FRANKLIN Philip Intranasal treatment by ionization in hay fever vasomotor rhinitis and ozaena 751 (O)
FRASER D Books for midwives 1062
FRASER H L Report on the health of Aberdeen 34
FRASER Ian Ectopic kidney 128—Thyroid extract and pulmonary embolism 659
FRASER J S Deaf mutism 289
FRASER Mr Medical services in Scotland 1049
FRASER HARRIS David Fraser —*Jokes Seen and Unseen* rev 476—Medical pioneers in science 576
FRAZER J E *A Manual of Embryology* rev 151
FREEMAN Edward T Treatment of scalp ring worm 214—Parental liver therapy 400
FREEMAN John The common cold 291—
F
F
F ie Empire s debt to medical research 232—Knighthood conferred on 1088 1097
French surgery two hundred years of 997
FREY Max von death of 593
FRIDJHON M H Aluminium and health 1192
FRIEDBERGER Ernst death of 593
FRIPP [Alfred] Memorial Fellowship established at Guy s Hospital 505
FRIZELLE Ernest R Idiopathic congenital dilatation of the common bile duct 610 (O)
Frost precautions for motorists 84
FRY Maxwell (and others) *Recent Advances in Town Planning* 1039
FRYER M Mischiefs of motoring, 252
FULLARTON Elizabeth Estate and bequests of 737
FULLER
FULLER BUXTON) —*The Save the Children Fund* rev 197
FULLER F H Raw milk and teeth 593
Memorial 160 *See*
nal meeting of the
ospital Annual for grants 473—of the Hospital
Economy (to 127 267 — with provisions made for professional and middle classes in voluntary hospitals in London 505— Mock trials in aid of 825
Fund Metropolitan Hospitals Contribution (Australia) 210
Fund Royal Medical Benevolent 03 574 953—Annual meeting 574 953
Fund Shuttleworth Samaritan 1057

G

GAINSBOROUGH H Non infective nephritis 522
GALLAUGHER William Twitching of eyelids 919
Gall bladder diseases surgical treatment of
the
first ovariotomist in Europe 1090
mesenteric artery (P Brown and M M Dey) 186 (O)
Gangrene gas complicating obstructed labour (J E Church) 189
GANSLEN Treatment of pernicious anaemia 1180
GANTT W Horsley Conditioned reflexes and habit formation 517 (O)
GARDINER Frederick *Hand book of Skin Diseases* third edition rev 244
GARDINER HILL H Research on sex hormones 149—Chronic rheumatism and the endocrines 472
GARDNER William obituary notice of 689
GARROD Sir Archibald Biochemistry in medicine 524
GARROW
GARRY
GARRY T Gerald —*Egypt The Home of the Occult Sciences* rev 21—Imhotep 217
In e of 483
Masterman and
Gas gangrene *See* Gangrene
Gas and oxygen in midwifery (G R Porter) 809
Gas poison in warfare (parliamentary note) 502
Gas s and a convenien 593
Gastric contents significance and origin of lactic acid in (Ian Murray and Andrew B Robertson) 607 (O)—Correspondence on 683 771 859 957 1006 1052
n (John A Ryle) 192
Gastro-colic fistula *See* Fistula
Gastro-colic omentum haematoma of (W C W Nixon) 797
Gastro-enteroptosis modern treatment of (A P Cawadias) 1165 (O)
Gastro-intestinal tract review of book on 242
Gastrophy ography 24
GAUVAIN Sir Henry Infection in the dormitory 82
GEFFEN Everett h Tuberculosis among nurses 534
GEMMELL A Simultaneous intrauterine and
(F G Crookshank) 599 (O)
Genetics review of book on 293
Genito-urinary tuberculosis *See* Tuberculosis
Gentle protest 1011 *See also* Pelvic woman the chronic
German dictionary of practical medicine *Neue Deutsche Klinik* vol viii rev 338
German Technical Words and Phrases Marlborough s third edition rev 1038
Germany Alcoholic expenditure in 1109—Beer consumption less in 315 — Deaths due to motor cars and motor cycles 1199 — Decline in the use of luxury articles 315 — Mental hospitals a tour of the 692 — Universities to be closed officially denied 127—Workmen s Compensation German code 112
sia 613
gnancy
nant disease 1003
GIBBENS John Oedema in the newborn 837 (O)
GIBBONS R A Analgesia in childbirth 1173
GIBSON A Keith Preparation for marriage 776
GIBSON Charles Langdon elected a corresponding member of the Académie de Médecine in the section of Surgery 1061
GIBSON Lieut Col George John obituary notice of 126
GIFFORD Mrs E Refractive indices 614
GILBERT Oleothorax 993
GILES Arthur E *A Fantasy of the Seasons and*
97
GILL Lieut Col appointed honorary surgeon to the king 1089
GILL F Transplantation of fibula 17
GILL Hope awarded the Langley Memorial Prize 315
GILLESPIE neurosis 132 (O)
ext Book of Psy
GILLIES
n anaes thesia 496
GILMORE Haldane C Raw milk and dental caries 642
GIPARD Henri death of 638
GIVENS R J (A P Thomson and Garfield Thomas) Synthalin in the treatment of diabetes 322 (O)
GIVEN Surgeon Commander D H C Die and dental disease 589
Giza Memorial Ophthalmic Laboratory Annual report 390
Gland thyroid chemical analysis of (G Middleton) 711
Gland thyroid review of book on 711
Glands lymphatic abdomin l tuberculosis of (S T Irwin) 60
Glands parathyroid and osteitis fibrosa 947
Glasgow *See* Scotland
Glaucoma 78 121
GLOVER Edward Corporal punishment 1.9
GLOVER J A The epidemiology of streptococcal infections 426—Infection in the dormitory 811
GLUCK Cancer of the larynx 600
Glycogenic function of the liver discoverer of 263
Glycosuria and hemiplegia with subarachnoid haemorrhage (A C S Courts) 190
GODBY Sir Kenneth *Diseases of the Gums and Oral Mucous Membrane* fourth edition rev 105
GODBOLE N N *Butter fat (Ghee)* rev 66
GODDARD Isobel Visits to Soviet Russia 78
Goethe And the male climacteric 722—March issue of *Forschungen und Fortschritte* devoted to 597—And his relations to science and foreign countries 597—His medical history (J D Rolleston) 670—Tour to Thüringen in memory of 871—Goethe medal founded and first recipient 1199
GOFFE James Riddle death of 807
GOGLES cheap for act notherapy clinics 871
Goitre exophthalmic in a child (T H Crozier) 659
Goitre research on 172 736
Gold Coast relapsing fever on the (Helen Russell) 682
Gold standard 548
GOLD W J death of 961
GOLDBACHER Lawrence *Haemorrhoids the Injection Treatment and Prurtus Ani* second edition rev 692
GOLDBERG Rosamund W *Occupational Diseases* rev 65
GOLDING BIRD C H Erysipelas treated by injections of milk 342
GOLDWATER Treatment of pernicious anaemia 1180
Golf medical Blyth Division s annual meeting 820 — Dumbarrenshire Division and the
Gonorrhoea review of books on 337 847
GOOCH H Congenital malformation of the heart in two successive pregnancies 1016
GOODALL Alexander Appreciation of Joseph Ryland Whitaker 260
GOODALL E W Dosage of diphtheria antitoxin 35—Some preclinical etiological views on infectious disease 241—The epidemiology of streptococcal infection 425—Infection in the dormitory 802
GOODFELLOW James *The Lymphatic Gland Jointing of Carcases and Animal Anatomy* rev 847
GOODHART Gordon W Pathological services of the London County Council 348 650 709—
709
Sir John K.C.M.C
GORDON George *Anorexic Nervosa* rev 20
GORDON H Overdose of ephedrine hydrochloride 737
GORDON H L The brain of the East African native 581
GORDON TAYLOR G The parathyroids and generalized osteitis fibrosa 947
GORDON WATSON Sir Charles Fallen idols or false gods 958—Diagnosis and treatment of
longa ed nvula
GOSCHEN W H N Andrew Balfour Memorial 207
GOSSE William Plantar corns 735
GOUGH A Carcinoma of Fallopian tube 117
GOULD E Pearce Asthma and allied conditions 389
GOULDESBROUGH C X-ray dosage in malignant disease 147
Gould s Medical Dictionary rev 338
Gout review of book on 183
Government Commissions still at work (parliamentary note) 916
Gräfenberg ring as a contraceptive (W R Green Armytage) 13—(G T Cregan) 207—Correspondence on 76—Discussion on at the National Birth Control Association conference 1047
GRAHAM C W Certification of blindness 630
GRAHAM Evarts A (editor) *General Surgery* rev 529
GRAHAM John Campbell obituary notice of 1194

GRAHAM LITTLE Sir E London County Hospitals 258—Pathological service of the London County Council 545 686 820
GRAM H C Asthma statistics 215
GRANGER E Antagonistic diseases 405
GRANIT Ragnor Retinal structure and function 1082
GRANT D Lyall Andrew Balfour Memorial 257
GRANT Lieut Col Graham Catarrhal infection and formalin vapour 120
GRANT Graham *Plantar corns* 1016
GRANT Lachlan Puerperal temperatures and their prevention 148—Aluminium and health 686
GRASBY E Dudley Treatment of scalp ring worm 215
GRASSET F (and A ZOUTENDYK) *Immunological Studies in Reptiles and their Relation to Aspects of Immunity in Higher Animals* rev 891
GRAVES William P *Female Sex Hormonology* rev 615
GRAY Colonel A C H appointed Honorary Surgeon to the King 547
GRAY J D Allan *B aerogenes* as an index of water purity 826
GREAVES Aubrey V Use of Takayama's solution in the identification of blood stains 932 (O)
GRELN ARMYTAGE V B A Contraceptive 13
GREENFIELD J G Production of immunity by convalescent human serum 334—Microscopical differentiation of cerebral tumours 334—(and others) *When and How to Collect Pathological Specimens for Laboratory Examination* 1183
GREENWOOD Major The epidemiology of streptococcal infections 426— The student in irons 541—Puerperal fever and pyrexia 801
GREGORY Dr Schizophrenia 994
GREIG Colonel exhibits tissue of fatal cases of yellow fever and malaria 427
GREIG David M honorary LL D St Andrews conferred on 82
GREIG Wing Commander Louis A B E conferred on 1088 1097
GREVES Edwin Hyla obituary notice of 173
GRIERSON Sir Andrew Medical services in Scotland 1049
GRIFFITH E F Medical problems of contraception, 1047
GRIFFITTS *Mosquitos and aeroplanes* 670
GRINDLEY G C Report on the physiology of vision 622
GROBER Julius Invited to deliver addresses in American universities 1061
Grosse Albert death of 961
GROSSER Otto Toxaemia of pregnancy 995
GROSVENOR Chetwynd J P (and A H DOUTHWAITE) Case of pyrexia of obscure origin 139 (O)
Group specific substances in the human body (Lieut Col R B Lloyd) 284
GUDZENT Friedrich invited by the Royal Egyptian Medical Society to lecture at Cairo 967
GUEST L Haden Treatment of scalp ring worm 261
GULLAND J M title of Reader in Biochemistry conferred on 220
Gums review of book on *diseases of* 103
GUNN William Convalescent serum in prophylaxis of measles chicken pox and mumps 183 (O)—The epidemiology of streptococcal infections 425
GUNSON E B (and T Harold PETTIT) The circulation after an indurance test 280 (O)
GUNEWARDENE H O The stroke in high arterial pressure 180 (O)—Awarded the Sir Charles Hastings Clinical Prize (1930) 180
GUPTA N Anaemia in pregnancy in India 1031
GUTHRIE A Cowan Treatment of influenza 222
GUTHRIE Thomas Foreign bodies in the air passages 401
GUYON Félix centenary of the birth of 43
GYE W E Aetiology of cancer 395 495 685—Origin of tumours 801
Gymnastics review of book on 383
Gynaecological tumours *See* Tumours
Gynaecology present and future of (W Blair Bell) 45 (O)
Gynaecology review of books 889 1038
Gynaecology *See also* Obstetrics *and* Midwifery

H

Habit formation and conditioned reflexes (W Horsley Gantt) 517 (O)
HACKING Douglas Hewitt appointed a crown nominee on the General Medical Council 111
Haematoma of the gastro colic omentum (W C W Nixon) 797
Haematopoiesis cobalt for 1010
Haematuria significance of (Henry Wade) 177 (O)
Haemolytic streptococci colony variation in and its importance in puerperal sepsis immunity (C G Paine) 1174 *See also* Puerperal sepsis
Haemorrhage cerebral internal due to accident (Stratford Sheldon) 332
Haemorrhage spontaneous of the newborn (A G B Duncan) 521
Haemorrhage subarachnoid with glycosuria and hemiplegia (A C S Courts) 190
Haemorrhage into suprarenal capsules in a child sudden death from (J A Henderson
tion for
ma 967
77
edal con
ferred on 75
HALDANE J B S elected a Fellow of the Royal Society 484
HALDANE J S Uses of oxygen and CO_2 in medicine 144
HALDIN Mrs Henry *Bottle Feeding of Infants* third edition rev 714
HALDIN Davis H Some interesting drug eruptions 422 (O)
HALER David H Sarcoma associated with *known trauma* 933 (O)—*Bronchomoniliasis* 1052
HALI Arthur J Oculogyric attacks in chronic encephalitis 34
HALL Lieut Col Edmund Alexander William obituary notice of 639
HALL H E F Village settlements for the tuberculous 954
HALLINAN Major Thomas John C B L conferred on 75
Halometer a direct 1085
HALPENNY A R Tuberculous pericarditis 662
HAM B Burnett *Handbook of Sanitary Law for the Use of Candidates for Public Health Qualifications* rev eleventh edition 296
HAMILTON E S B appointed a Serving Brother of the Order of St John of Jerusalem 83
HAMILTON Deputy Inspector General Fraser obituary notice of 639
HAMILTON Surgeon General Sir Henry obituary notice of 360
HAMILTON T D Kouman's celluloid spreader *for making blood films* 427
HANDLEY W Sampson *The Genesis of Cancer* rev 194
Hands minor injuries of the (Grant Massie) 15
Hannah Dairy Research Institute *See* Dairy
HANNAN John H Spontaneous cure of cancer 355—Thyroid extract and pulmonary embolus 774 958
HAPPER Captain W awarded the Parkes Memorial Prize 1014
HARDCASTLE D Noël Child guidance clinics 168
HARDMAN T Garratt Pyelography 335
HARDY F S appointed a Serving Brother of the Order of St John of Jerusalem 83
HARP Dorothy Treatment of anaemias 63
HARE Evan Herring, obituary notice of 1013
HARE Tom Mr Punch's hump 124—A case of cow pox or vaccinia 171—Foetal pathology 710
Hare lip clinic at the Royal Free Hospital 597
Hare lip review of book on 1036
HARPT H (and others) *Atlas de Radiographie Osseuse* rev 63
HARIDAS G Aneurysm of thoracic aorta with complete transposition of viscera 236
HARKNESS A H Preparation for marriage 592
HARMAN N Bishop An electric ophthalmoscope 197—A device for preventing glare in electric ophthalmoscopes 477—Road traffic signals 682
HARPER J R Some aspects of typhoid 292
HARPER R J M Cerebral aneurysm with recurrent leakage 13 (O)
HARRIES D J (and Howel B PIERCE) Hydronephrotic pelvic kidney 612
HARRIS H A Normal development in the young child 16
HARRIS Henry Albert title of Fellow of University College London conferred on 407
HARRIS I Method of recording maximum arterial pressure 563
HARRIS V C J Diverticulum of duodenum associated with calculus formation 1080
HARRISON C C Sex equality 222
HARRISON Colonel L W Gonorrhoea and other cervical discharges 380
HART P D'Arcy *Report on the Value of Tuberculin Tests in Man with special refer*
the Un
Harveian Oration Pulmonary embolism (Sir Bernard Spilsbury) 564
HARVEY Henry obituary notice of 731
HARVEY Lieut Col W F Kouman's celluloid spreader for making blood films 427
HASLAM William Frederic Death of 393—Obituary notice of 453
Hastings Sir Charles 27—Memorial fund 160 *See also* Fund
HASTINGS Somerville Mouth breathing and nasal obstruction 842
HASTINGS Violet E Maternal mortality 445
Havre Cases of
HAWORTH James
HAWTHORNE C
riage
727
and mouth disease
onization in (Philip

Hay fever review of book on 1035
HAYEM Professor Georges Ninetieth birthday of 83 667—Reads a paper before the Medical Society of the Hospitals of Paris 667
Head aftercoming 630
Headache review of book on 295
Health Exhibition in Edinburgh 32 255 442

HEALTH MINISTRY
Annual report (1930–31) 440
Cancer treatment of circular *re* 816
Children Act (1908) a nendment of circular *re* 83
Diets criticism and improvements of 628
Electric shocks protection against memorandum on 1015
Foods and drugs defective 440
Medical officers in 596 639
Maternity and child welfare services payment of contributions to voluntary associations providing 967
Parliamentary note on 596 639
Serum treatment of cerebro spinal fever 540
Sterilization of mental deficients deputation *re* 315
Tuberculosis report on (A S MacNalty) 675

Health pamphlets —*Sugar Why Worry about It?* and *Honey versus Other Forms of Sugar* 267
Health Resorts Association British *See* Association
Health resorts Of Switzerland 211—Of Italy 1177
Health services (parliamentary notes on) 733 778—Cost of 778—In Scotland 780
Health services for the pre school child 342
Hearing aids problem of (A W G Ewing) 1126
Hearing defective investigation of (A W G Ewing) 1103—A survey of two years research 1139—Correspondence on 1189
Hearing *See also* Deaf
HEARN Captain Lewis Julius Christopher obituary notice of 735
Heart aortic valvular disease of (Maurice Campbell and J W Shackle) 328 (O)
Heart disease the simulation of (K Shirley Smith) 129 (O)—Correspondence on 262 308 444
Heart congenital malformation of in two successive pregnancies 1016
Heart review of book on 199
Heart *See also* Cardiac *and* Coronary disease
081
e
HEFFERMAN L W Puerperal septicaemia and C M B nurses 546
The
loss
rev 385
HEITMANN Dr *Tuberculosis in Denmark Norway and Sweden* 21
HELBICH Karl death of 314
HELLER Julius death of 638
3
th subarachnoid
190
HEMMANT Lynette Gonorrhoea and other cervical discharges 381
HENDERSON Albert Hailey Kaisar i Hind Medal conferred on 1097
HENDERSON David Kennedy Appointed physician superintendent of the Royal Edinburgh Hospital for Mental Disorders and professor of psychiatry in the University of Edinburgh 907—(And R D GILLESPIE) *A Text Book of Psychiatry* third edition rev 941—Report of the Glasgow Royal Mental Hospital 955
HENDERSON J A (and F PETTIGREW) Sudden death from haemorrhage into the suprarenal capsules in a child 14—Antagonistic diseases 408
HENDERSON Major General P H Aluminium and health 1056
HENDLEY Major General Harold obituary notice of 450
yncocele 293
entials of Psychiatry
ok on 1036

HENSHALL Dr Gambian sleeping sickness 428
Hepatex 1180
Hepatic calcium *See* Calcium
(leading
Hepato splenography (T J Morris) 1082
HERD S B Intra thoracic new growths 17—Chorion epithelioma of broad ligament 1174—Epithelioma of vulva 1174
Heredity and epilepsy (J Manson) 887
Heredity and naevi 1156
HERN J R B Large thoracic growth pro
trachea 1126
age in malig
osteo arthritis
post operative
x ray therapy in breast cancer 1191
Hernia two rare types of in the same patient (A John Cokkinis) 1171
Herpes cervical with *facial palsy* 171

Herpes and chicken pox occurring together 1062
Herpes zoster with facial paralysis chicken pox in the same household (G H H Hoothi) 15
Herpes zoster involving the urinary bladder (Clement C Chesterman) 563
Herpes zoster visceral 637 726
HERTZLER Arthur E *Surgical Pathology of the Genito-Urinary Organs* rev 163—*Surgical Pathology of the Skin Fascia Muscles Tendons Blood and Lymph Vessels* rev 527
HERXHEIMER Karl awarded the Ehrlich Weinkert medal of the University of Frankfort 767
HESS W R *Die Regulierung des Blutkreislaufes* rev 113—*Die Regulierung der Atmung* rev 1133
HEYN M On extraneous bodies retained in the oesophagus 721
HEWER C Langton Suction surgery 262
HEWLETT C J and Son Centenary dinner of 870
HEYER Gustav *Hypnosis and Hypnotherapy* rev 20
HIGGINS W R memorial tablet to 641
HIGGINSON Glenn Dewey *Fields of Psychology a Study of Man and his Environment* rev 45
Highlands and Islands Fund 1186 *See also* Insurance
HILL Gladys The teaching of obstetrics 930
HILL Sir Leonard Oxygen and Everest 170
HILL N Gray Acute rheumatic infection 1034
HILLMAN George Brown Death of 577—Obituary notice of 636
HILTON Reginald Uses of oxygen and CO in medicine 15
HIMES Norman F *A Guide to Birth Control Literature* rev 807
HINDLE E Transmission of Leishmania infections 870—Microscopy of filterable viruses 870
HINSIE L E Schizophrenia 904
HINTON M A C *Rats and Mice as Enemies of Mankind* third edition rev 66
Hip joint disease of the (James F Brailsford) 92 (O) 612
Hip-joint osteoarthritis of *See* Osteoarthritis
Hippocrates bust of presented to the German Museum of Hygiene at Dresden 1199
HIRSCHMAN N Delivery of a contraceptive 81
Hirschsprung's disease (Sir W I de Courcy Wheeler) 756
Histology review of book on 664
HOBBS Arthur Remington Maternal morbidity and mortality 569—Puerperal fever and pyrexia 891—Obituary notice of 1106
HOBDAY F T G Foetal pathology 710
Hodgkin's disease a hundred years of 247—Review of books on 713
HODSON C B S Voluntary sterilization 1046
HOGBEN Lancelot *Genetic Principles in Medicine and Social Science* rev 293—Medical problems of contraception 939
Hog's stomach *See* Stomach
HOLBECHE Arthur Oliver obituary notice of 593
HOLDFRNESS E W F—Dangerous drugs register duties of non-dispensing practitioners 259
HOLDERNESS R Cautley Inhaling tobacco smoke 1016
HOLFELDER H (and others) *Ergebnisse der medizinischen Strahlenforschung (Rontgen diagnostik Röntgen Radium und Licht therapie)* vol v rev 1175
HOLLAND Eardley Essential hypertension 239—Teaching of obstetrics 934—Analgesia in childbirth 1173
HOLLAND Sir Thomas Proposed extension of the medical curriculum 212
Holland cancer mortality in 1109
HOLMES Sir Charles *A Grammar of the Arts* rev 663
HOLROYD B re-elected chairman of the West Riding County Council 1015
HOLTHUSEN H (and others) *Ergebnisse der medizinischen Strahlenforschung (Röntgen diagnostik Röntgen Radium und Licht therapie)* vol v rev 1175
Home administration Industrial diseases and young offenders (parliamentary note) 778
Home Office Report on criminals statistics 811—New pottery regulations 814
Honey versus other forms of sugar 267
Honours New Year 69 7—Birthday 1088 1097
HOOKER R J Raw milk and dental caries 550
Hooters and deafness *See* Deafness
HOPKINS Sir F Gowland Biochemistry in medicine 524—A correction 569—D C L Durham conferred on 592
HOPWOOD F R X-ray dosage in malignant disease 147
HORDER Sir Thomas The common cold 290—Medical problems of contraception 999—Medical aspects of sterilization 1045
Hormones estimation of (K Culhane and S W F Underhill) 711
Hormones sex research in (E C Dodds) 148—Correspondence on 268
Hormones sex review of book on 615
HORNABROOK R W Methods of anaesthesia 819
HORNE Andrew Child welfare in Ireland 493
Horses and dogs for experimental purposes (parliamentary note) 870 *See also* Vivisection
Horsley lecture *See* Lecture
HORTON-SMITH (and VI BUTCHEANU) *Chirurgie de l'Ulcère Gastrique et Duodénal* rev 846
HORTON B T Thrombo-angiitis obliterans and its relation to tobacco 996
HOSFORD J P Fractures in the region of the ankle joint 473
HOSKIN Jennifer Non infective nephritis 522
Hospital administration In New Zealand 115—In Northern Ireland 855
Hospital almoners value of 858—Annual report of the Institute of 1100
Hospital Battersea General (anti vivisection) restored to by London County Council for accident ambulance cases 737
Hospital Belfast Royal Victoria Annual meeting 768—Paying patients and the radium supply to 768—Statistics 10 9
Hospital Bush Ulster Annual meeting and report 856
Hospital British Dental Annual meeting 1004
Hospital Chalmers's Edinburgh New building 116
Hospital for Children Great Ormond Street opened 1031
Hospital for Consumption and Diseases of the Chest New pavilion at the Recovery Branch Hospital opened 1051
Hospital Coombe Lying in Clinical Report for 1931 1185
Hospital Cork District Mental Appointment of medical superintendent 474
Hospital Deaconess Edinburgh Annual meeting 630
Hospital Down County Mental new department opened 533
Hospital Dreadnought Annual court 966
Hospital Dublin Royal Victoria Eye and Ear Report 1007
Hospital Dunfermline Annual meeting 256
Hospital Edinburgh and Dispensary for Women and Children Annual meeting 630
Hospital Edinburgh Dental and School Annual dinner 347
Hospital Edinburgh Fiele Inglis Memorial Maternity Annual meeting 630
Hospital Edinburgh Royal Maternity and Simpson Memorial Report 772
Hospital Edinburgh for Women Annual meeting 630
Hospital Galway Central Proposed appointment of radiologist 1187
Hospital Glasgow Cancer Annual meeting 673
Hospital Glasgow Children's Annual meeting 585
Hospital Glasgow Dental opening of the new 1003
Hospital Glasgow Ear Nose and Throat Annual meeting 857
Hospital Glasgow for Infectious diseases proposed new 630
Hospital Glasgow Mental Appointment of physician superintendent 1185
Hospital Glasgow Royal Maternity and Womens Annual meeting 442
Hospital Glasgow Royal Mental Annual meeting and report 580 695
Hospital Grangecorman Mental Inspection report 39—Laboratory for pathological research 1007—Report from the medical superintendent 677—Statistics 1002
Hospital Guy's Lectures 81—*Reports* vol lxxxi (vol ii fourth series) No 4 rev 385—Fripp (Alfred) Memorial Fellowship established at 505—Visit of the Prince of Wales to 769—*Guy's Hospital Nursing Guide Handbook of Nurses League and Register of Nurses Trained at Guy's Hospital* rev 902
Hospital Highgate allegations against 968
Hospital Kashmir Mission Report 10 2
Hospital King Edward VII Memorial Bombay Annual report 725
Hospital Lebanon for Men al Diseases Annual meeting 1015
Hospital for Limbless Sailors and Soldiers Princess Louise Scottish Erskine Annual meeting 447
Hospital Limerick Annual meeting 164
Hospital Liverpool Northern diet clinic at 68
Hospital Livingstone Dartford fatal mistake at 359
Hospital London Scholarship at the medical college 777—Lectures 661—Prize giving 1107
Hospital a London progress of surgery at (1830–1930 (Sir D Arcy Power) 857—*Researches Published from the Wards and Laboratories of the London Hospital during 1931* rev 902
Hospital Longmore Edinburgh Annual meeting 32
Hospital Madras Government General Annual Report 33
Hospital Marie Curie Dedication of the Devonshire 221—Annual meeting 968
Hospital Middlesex *Collected Clinical Papers 1930–1931* rev 843—Lectures at the Medical College 961
Hospital Monkstown County Dublin Annual meeting 856
Hospital Mount Vernon forms an Anti Cancer League 857
Hospital municipal (Highgate) allegations against 903
Hospital nursing service *See* Nursing
Hospital provision for people of moderate means British Provident Association's scheme 760 997 1142
Hospital Queen Charlotte's *Clinical Reports 1929–1930* rev 878
Hospital Rotunda Progress of obstetrics in 583—Annual report 1049
Hospital Royal Edinburgh of Mental and Nervous Disorders Annual report 431
Hospital Royal Free Hare-lip and cleft palate clinic to be opened at 597—New physical medicine and orthopaedic department 6 0—Charlieb memorial ward and tablet 666 951
Hospital Royal London Ophthalmic (Moorfields) Annual dinner 373
Hospital Royal National for Consumption Ireland Annual general meeting and report 855
Hospital Royal Prince Alfred Sydney difficulties of 210
Hospital St Bartholomew's Lectures at the Medical College 123—*Reports* vol lxiv rev 443—Progress of surgery at (1850–1930) 857
Hospital St John Ophthalmic Jerusalem Report 617
Hospital St Thomas's Lectures 81
Hospital Seamen's *See* Hospital Dreadnought
Hospital Sir Patrick Dun's and the sweepstakes 1069
Hospital services in Fife grouping of 703
Hospital Sunday Fund *See* Fund
Hospital Sydney finances of 466
Hospital Tadworth Recovery New pavilion opened 1051
Hospitals centre scheme Birmingham medical school and 393 464
Hospitals civic in Edinburgh 706 907
Hospitals conference in Liverpool 1704 *See also* Association, British Hospitals
Hospitals cottage (Lt Erne Maylard) 315
Hospitals county in Northern Ireland conference on 583
Hospitals and economy 1110
Hospitals Edinburgh municipal 667 1144—Changes in 11
Hospitals Edinburgh visited by the Lord High Commissioner 1068
Hospitals London County Council (leading article) 156—History of the transfer 160—Correspondence on 248—Instruction at 629—Nursing staff of 628—Plastic surgery unit transferred from Balham to Hammersmith 348—Post graduate teaching at 1145—Statistics 348 *See also* Council London County
Hospitals mental German a tour of 692
Hospitals mental in Northern Ireland grants for 624
Hospitals mental Scottish Report 116—In the Irish Free State Returns 164
Hospitals and motor accidents cost of (parliamentary note) 735 780 1100—In Northern Ireland 1050 *See also* Accidents
Hospitals in Northern Ireland paying patients and the radium supply to 768
Hospitals obligations to 32 *See also* Pensions (parliamentary note) 503
Hospitals Pensions
Hospitals sweepstakes for *See* Sweepstakes
Hospitals visiting staffs of payment of 439
Hospitals voluntary in London provisions made for the professional and middle classes in 505—Annual report of the London Voluntary Hospitals Committee 850—Constitution of committee 850
Hospitals voluntary and the State (See Land 1144
Houses built with State assistance statistics (parliamentary note) 1157
Housing in Paddington 1158
Housing scheme for the poor in Dublin 226
Housing survey in London 490
HOUSTON Sir Alexander Appreciation of John Clough Threlfall 1058—Report on London's water in 1931 1178
HOUSTON R A The absorption of light 615
HOWARD Christopher *Bedside Manners* rev 1045
HOWE Earl Mischiefs of motoring 451
HOWELL Whitchurch Normal development in the young child 17—Diagnosis of diseases of the hip-joint 613—Treatment of osteo-arthritis of hip 820
Howlers 316
HUBBACK Eva M First-aid classes 872
HUGOUNENQ L Ozone in industry and public health 1182
Hump of Mr Punch *See* Punch
Hungary Medical education in (A B L Bezmak) 993—Prize for original work in the aetiology of trachoma 1012
HUNT Elizabeth Shoe-leather dermatitis 253
HUNTER Donald The parathyroids and generalized osteitis fibrosa 647
HUNTER J B Diagnosis and treatment of lung abscess 283
HUNTER William Unusual bone injury in a child 608
Hunterian Lectures *See* Lectures
Hunterian oration The commemoration of great men (Wilfred Trotter) 317 (O)—Leading article on 339
HUNWICKE R F *The Essentials of Biotechnological Technique* rev 828
HURST A F As hms and allied conditions 380—Non infective nephritis 522—Functions of the sympathetic nervous system 666—Hirschsprung's disease 757—Types of stomach predisposing to duodenal ulcer 817
HURST C C Micro copy of filterable viruses 769
HUTCHISON Peter Case of suspected rat bite fever 96

GRAHAM LITTLE Sir E London County Hospitals 258—Pathological service of the London County Council 545 686 820
GRAM H C Asthma statistics 215
GRANGER E Antagonistic diseases 405
GRANIT Ragnor Retinal structure and function 1082
GRANT D Lyall Andrew Balfour Memorial 257
GRANT Lieut Col Graham Catarrhal infection and formalin vapour 120
GRANT Graham Plantar corns 1016
GRANT Lachlan Puerperal temperatures and their prevention 148—Aluminium and health 686
GRASBY E Dudley Treatment of scalp ring worm 215
GRASSET E (and A ZOUTENDYK) *Immunological Studies in Reptiles and their Relation to Aspects of Immunity in Higher Animals* rev 891
GRAVES William P *Female Sex Hormonology* rev 615
GRAY Colonel A C H appointed Honorary Surgeon to the King 547
GRAY J D Allan *B aerogenes* as an index of water purity 826
GREAVES Aubrey V Use of Takayama's solution in the identification of blood stains 932 (O)
GREEN ARMYTAGE V B A Contraceptive 13
GREENFIELD J G Production of immunity by convalescent human serum 334—Microscopical differentiation of cerebral tumours 334—(and others) *When and How to Collect Pathological Specimens for Laboratory Examination* 1183
GREENWOOD Major The epidemiology of streptococcal infections 420— The student in irons 541—Puerperal fever and pyrexia 801
GREGORY Dr Schizophrenia 994
GREIG *Colonel exhibits tissue of fatal cases of yellow fever and malaria* 427
GREIG David M honorary LL D St Andrews conferred on 82
GREIG Wing Commander Louis R B E conferred on 1088 1097
GREVES Edwin Hyla obituary notice of 173
GRIERSON Sir Andrew Medical services in Scotland 1049
GRIFFITH E F Medical problems of contraception 1047
GRIFFITTS Mosquitos and aeroplanes 670
GRINDLEY G C Report on the physiology of vision 622
GROBER Julius Invited to deliver addresses in American universities 1061
Crosse Albert death of 961
GROSSER Otto Toxaemia of pregnancy 995
GROSVENOR Chetwynd J I (and A H DOUTHWAITE) Case of pyrexia of obscure origin 139 (O)
Group specific substances in the human body (Lieut Col R B Lloyd) 284
GUDZENT Friedrich invited by the Royal Egyptian Medical Society to lecture at Cairo 967
GUEST L Haden Treatment of scalp ring worm 261
GULLAND J M title of Reader in Biochemistry conferred on 220
Gums review of book on *diseases of* 103
GUNN William Convalescent serum in prophylaxis of measles chicken pox and mumps 183 (O)—The epidemiology of streptococcal infections 425
GUNSON E B (and T Harold PETTIT) The circulation after an indurance test 280 (O)
GUNEWARDENE H O The stroke in high arterial pressure 180 (O)—Awarded the Sir Charles Hastings Clinical Prize (1930) 180
GUPTA N Anaemia in pregnancy in India 1031
GUTHRIE A Cowan Treatment of influenza 222
GUTHRIE Thomas Foreign bodies in the air passages 401
GUYON Félix centenary of the birth of 43
GYE W E Aetiology of cancer 395 495 685—Origin of tumours 801
Gymnastics review of book on 383
Gynaecological tumours *See* Tumours
Gynaecology present and future of (W Blair Bell) 45 (O)
Gynaecology review of books 889 1038
Gynaecology *See also* Obstetrics *and* Midwifery

H

Habit formation and conditioned reflexes (W Horsley Gantt) 517 (O)
HACKING Douglas Hewitt appointed a crown nominee on the General Medical Council 111
Haematoma of the gastro colic omentum (W C W Nixon) 797
Haematopoiesis cobalt for 1010
Haematuria significance of (Henry Wade) 177 (O)
Haemolytic streptococci colony variation in and its importance in puerperal sepsis immunity (C G Paine) 1174 *See also* Puerperal sepsis
Haemorrhage cerebral internal due to accident (Stratford Sheldon) 332
Haemorrhage spontaneous of the newborn (A G B Duncan) 521
Haemorrhage subarachnoid with glycosuria and hemiplegia (A C S Courts) 190
Haemorrhage into suprarenal capsules in a child sudden death from (J A Henderson and F Pettigrew) 14
Haemorrhoids review of book on 991
Haemostasis and the radical operation for hydrocele (C Max Page) 658
Haemostat tonsil 296
HAGENBACH Charles Unilateral oedema 967
HAIRE Norman The Gräfenberg ring 77
HAJJ Ibrahim El Kaisar i Hind medal conferred on 75
HALDANE J B S elected a Fellow of the Royal Society 484
HALDANE J S Uses of oxygen and CO_2 in medicine 144
HALDIN Mrs Henry *Bottle Feeding of Infants* third edition rev 714
HALDIN Davis H Some interesting drug eruptions 422 (O)
HALER David H Sarcoma associated with known trauma 933 (O)—Bronchomoniliasis 1052
HALL Arthur J Oculogyric attacks in chronic encephalitis 34
HALL Lieut Col Edmund Alexander William obituary notice of 639
HALL H E F Village settlements for the tuberculous 954
HALLINAN Major Thomas John C B E conferred on 75
Halometer a direct 1085
HALPENNY A R Tuberculous pericarditis 662
HAM B Burnett *Handbook of Sanitary Law for the Use of Candidates for Public Health Qualifications* rev eleventh edition 296
HAMILTON E S B appointed a Serving Brother of the Order of St John of Jerusalem 83
HAMILTON *Deputy Inspector General* Frazer obituary notice of 639
HAMILTON Surgeon General Sir Henry obituary notice of 360
HAMILTON T D Kouman's celluloid spreader for making blood films 427
HANDLEY W Sampson *The Genesis of Cancer* rev 194
Hands minor injuries of the (Grant Massie) 15
Hannah Dairy Research Institute *See* Dairy
HANNAN John H Spontaneous cure of cancer 355—Thyroid extract and pulmonary embolus 774 958
HAPPLE Captain W awarded the Parkes Memorial Prize 1014
HARDCASTLE D Noël Child guidance clinics 168
HARDMAN T Garratt Pyelography 335
HARDY F S appointed a Serving Brother of the Order of St John of Jerusalem 83
HARE Dorothy Treatment of anaemias 63
HARE Evan Herring obituary notice of 1013
HARE Tom Mr Punch's hump 124—A case of cow pox or vaccinia 171—Foetal pathology 710
Hare-lip clinic at the Royal Free Hospital 597
Hare lip review of book on 1036
HARET H (and others) *Atlas de Radiographie Osseuse* rev 63
HARIDAS G Aneurysm of thoracic aorta with complete transposition of viscera 236
HARPHESS A H Preparation for marriage 592
HARMAN N Bishop An electric ophthalmoscope 19"—A device for preventing glare in electric ophthalmoscopes 477—Road traffic signals 682
HARPER J R Some aspects of typhoid 292
HARPER R J M Cerebral aneurysm with recurrent leakage 13 (O)
HARRIES D J (and Howel B PIERCY) Hydronephrotic pelvic kidney 612
HARRIS H A Normal development in the young child 16
HARRIS Henry Albert title of Fellow of University College London conferred on 407
HARRIS I Method of recording maximum arterial pressure 563
HARRIS V C J Diverticulum of duodenum associated with calculus formation 1080
HARRISON C C Sex equality 222
HARRISON Colonel L W Gonorrhoea and other cervical discharges 380
HART P D'Arcy *Report on the Value of Tuberculin Tests in Man with special reference to the Un*
Harveian Oration Pulmonary embolism (Sir Bernard Spilsbury) 564
HARVEY Henry obituary notice of 731
HARVEY Lieut Col W F Kouman's celluloid spreader for making blood films 427
HASLAM William Frederic Death of 393—Obituary notice of 453
Hastings Sir Charles 27—Memorial fund 160 *See also* Fund
HASTINGS Somerville Mouth breathing and nasal obstruction 842
HASTINGS Violet E Maternal mortality 445
Havre Cases of poisoning ? arsenic at 825
HAWORTH James Ether convulsions 1156
HAWTHORNE C O Preparation for marriage 727
H and mouth *disease*
H onization in (Philip
Hay fever review of book on 1035
HAYEM Professor Georges Ninetieth birthday of 83 667—Reads a paper before the Medical Society of the Hospitals of Paris 667
Head aftercoming 630
Headache review of book on 295
Health Exhibition in Edinburgh 32 255 442

HEALTH MINISTRY
Annual report (1930–31) 440
Cancer treatment of circular *re* 816
Children Act (1908) amendment of circular *re* 83
Diets criticism and improvements of 628
Electric shocks protection against memorandum on 1045
Foods and drugs defective 440
Medical officers in 596 639
Maternity and child welfare services payment of contributions to voluntary associations providing 967
Parliamentary note on 596 639
Serum treatment of cerebro spinal fever 540
Sterilization of mental deficients deputation *re* 315
Tuberculosis report on (A S MacNalty) 675

Health pamphlets —*Sugar Why Worry about It?* and *Honey versus Other Forms of Sugar* 267
Health Resorts Association British *See* Association
Health resorts Of Switzerland 211—Of Italy 1177
Health services (parliamentary notes on) 733, 778—Cost of 778—In Scotland 780
Health services for the pre school child 342
Hearing aids problem of (A W G Ewing) 1126
Hearing defective investigation of (A W G Ewing) 1103—A survey of two years research 1130—Correspondence on 1189
Hearing See also Deaf
HEARN Captain Lewis Julius Christopher obituary notice of 735
Heart aortic valvular disease of (Maurice Campbell and J W Shackle) 328 (O)
Heart disease the simulation of (K Shirley Smith) 129 (O)—Correspondence on 262 308 444
Heart congenital malformation of in two successive pregnancies 1016
Heart review of book on 199

Heel painful 43
HEFFERMAN L W Puerperal septicaemia and C M B nurses 546
H
H

rev 385
HEITMANN Dr *Tuberculosis in Denmark*

Helminthological abstracts 1089
Hemiplegia and glycosuria with subarachnoid haemorrhage (A C S Courts) 190
HEMMANT Lynette Gonorrhoea and other cervical discharges 381
HENDERSON Albert Hailey Kaisar i Hind Medal conferred on 1097
HENDERSON David Kennedy Appointed physician Edinburgh royal infirmary and professor Edinburgh 907—(And R D GILLESPIE) *A Text Book of Psychiatry* third edition rev 941—Report of the Glasgow Royal Mental Hospital 955
HENDERSON [illegible] death from capsules 468
HENDERSON Major General P H Aluminium and health 1055
HENDLEY Major General Harold obituary notice of 450
HENRY F J Laryngocele 293
HENRY George W *Essentials of Psychiatry* second edition rev 664
Henry VIII review of book on 1036
HENSEN Victor 268
HENSHALL Dr Gambian sleeping sickness 428
Hepatex 1180
Hepatic calcium *See* Calcium
Hepatic and splenic diseases combined (leading article) 1134
Hepatic *See also* Liver
Hepato splenography (F J Morris) 1082
HERD S B Intrathoracic new growths 17—Chorion epithelioma of broad ligament 1174—Epithelioma of vulva 1174
Heredity and epilepsy (J R Manson) 887
Heredity and naevi 1156
HERN J R B Large thoracic growth producing a gross deflection of the trachea 1126
HERNAMAN JOHNSON F X ray dosage in malignant disease 146—Treatment of osteo arthritis of the hip 726 861—Fire and post-operative *x ray* therapy in breast cancer 1191
Hernia two rare types of in the same patient (A John Cokkinis) 1171
Herpes cervical with facial palsy 171

Herpes and chicken pox occurring together 1062
Herpes zoster with facial paralysis chicken pox in the same household (G H H Booth) 15
Herpes zoster involving the urinary bladder (Clement C Chesterman) 563
Herpes zoster visceral 632 726
HERTZLER Arthur I *Surgical Pathology of the Genito-Urinary Organs* rev 153—*Surgical Pathology of the Skin Fascia Muscles* [illegible] rev 527
[illegible] Ehrlich of Frankfort 267
HESS W R *Die Regulierung des Blutkreislaufes* rev 1132—*Die Regulierung der Atmung* rev 1133
HEVIN M On extraneous bodies retained in the oesophagus 791
HEWER C Langton Suction surgery 262
HEWLETT C J and Son Centenary dinner of 820
HEYER Gustav *Hypnosis and Hypnotherapy* rev 20
HIGGINS W R memorial tablet to 641
HIGGINSON Glenn Devere *Fields of Psychology a Study of Man and his Environment* rev 415
Highlands and Islands Fund 1186 *See also* Insurance
HILL Gladys
HILL Sir Leon
HILL N Gray
HILLMAN George brown Death of 577—Obituary notice of 636
HILTON Reginald Uses of oxygen and CO in medicine 135
HIMES Norman F *A Guide to Birth Control Literature* rev 807
HINDLE E Transmission of Leishmania infections 240—Microscopy of filterable viruses 800
HINSIE L I Schizophrenia 994
HINTON M A C *Rats and Mice as Enemies of Mankind* third edition rev 66
Hip joint disease of the (James F Brailsford) 92 (O) 612
Hip-joint osteoarthritis of *See* Osteoarthritis
[illegible] German [illegible] receptive 84
Hirschsprung's disease (Sir W I de Courcy Wheeler) 756
Histology review of book on 664
HOBBS Arthur Remington Maternal morbidity and mortality 569—Puerperal fever and pyrexia 801—Obituary notice of 1106
HOBDAY F T G Foetal pathology 710
Hodgkin's disease a hundred years of 247—Review of books on 713
HODSON C B S Voluntary sterilization 1016
HOGBEN Lancelot *Genetic Principles in Medicine and Social Science* rev 293—Medical [illegible] tuary notice of 593
HOLDERNESS E W P—Dangerous drugs register duties of non-dispensing practitioners 259
HOLDERNESS R Cautley Inhaling tobacco smoke 1016
HOLFELDER H (and others) *Ergebnisse der medizinischen Strahlenforschung (Röntgen diagnostik Röntgen Radium und Licht therapie)* vol v rev 1175
Holiday Home (in the New Forest) 968
HOLLAND Eardley Essential hypertension 239—Teaching of obstetrics 984—Analgesia in [illegible] losed extension of
Holland cancer mortality in 1109
HOLMES Sir Charles *A Grammar of the Arts* rev 665
HOLROYD B re elected chairman of the West Riding County Council 1015
HOLTHUSEN H (and others) *Ergebnisse der medizinischen Strahlenforschung (Röntgen diagnostik Röntgen Radium und Licht therapie)* vol v rev 1175
Home administration Industrial diseases and young offenders (parliamentary note) 778
Home Office Report on criminal statistics 811—New pottery regulations 814
Honey versus other forms of sugar 267
Honours New Year 69 70—Birthday 1088 1097
HOOKER R J Raw milk and dental caries 550
Hooters and deafness *See* Deafness
HOPKINS Sir F Gowland Biochemistry in medicine 524—A correction 569—D C L Durham conferred on 595
HOPWOOD F R X-ray dosage in malignant disease 147
HORDER Sir Thomas The common cold 290—Medical problems of contraception 999—Medical aspects of sterilization 1045
Hormones estimation of (K Culhane and S W F Underhill) 711
Hormones sex research in (E C Dodds) 148—Correspondence on 268
Hormones sex review of book on 615
HORNABROOK R W Methods of anaesthesia 819
HORNE Andrew Child welfare in Ireland 493
Horses and dogs for experimental purposes (parliamentary note) 870 *See also* Vivisection
Horsley lecture *See* Lecture
HORTOLOMEI V (and VI BUTURFANU) *Chirurgie de l'Ulcère Gastrique et Duodénal* rev 816
HORTON B T Thrombo-angiitis obliterans and its relation to tobacco 995
HOSFORD J P *Fractures in the region of the ankle joint* 473
HOSKIN Joanna Non-infective nephritis 522
Hospital administration In New Zealand 115—In Northern Ireland 855
Hospital almoners value of 858—Annual report of the Institute of 1100
Hospital Battersea General (Anti-vivisection) restored to by London County Council for accident ambulance cases 737
Hospital Belfast Royal Victoria Annual meeting 768—Paying patients and the radium supply to 768—Statistics 1059
Hospital Benn Ulster Annual meeting and report 856
Hospital British Dental Annual meeting 1004
Hospital Chalmers's Edinburgh New building 116
Hospital for Children Great Ormond Street New pavilion at the Recovery Branch Hospital opened 1051
Hospital Coombe Lying-in Clinical Report for 1931 1185
Hospital Cork District Mental Appointment of medical superintendent 404
Hospital Deaconess Edinburgh Annual meeting 630
Hospital Down County Mental new departments opened 583
Hospital Dreadnought Annual court 966
Hospital Dublin Royal Victoria Eye and Ear Report 1002
Hospital Dunfermline Annual meeting 256
Hospital Edinburgh Dental and School Annual dinner 317
Hospital Edinburgh and Dispensary for Women and Children Annual meeting 630
Hospital Edinburgh Elsie Inglis Memorial Maternity Annual meeting 630
Hospital Edinburgh Royal Maternity and Simpson Memorial Report 722
Hospital Edinburgh for Women Annual meeting 630
Hospital Galway Central Proposed appointment of radiologist 1187
Hospital Glasgow Cancer Annual meeting 678
Hospital Glasgow Children's Annual meeting 585
Hospital Glasgow Dental opening of the new 1093
Hospital Glasgow Ear Nose and Throat Annual meeting 857
Hospital Glasgow for Infectious diseases proposed new 630
Hospital Glasgow Mental Appointment of physician superintendent 1185
Hospital Glasgow Royal Maternity and Womens Annual meeting 442
Hospital Glasgow Royal Mental Annual meeting and report 886 955
Hospital Grangegorman Mental Inspection report 397—Laboratory for pathological research 1002—Report from the medical superintendent 677—Statistics 1002
Hospital Guy's Lectures 81—*Reports* vol lxxxi (vol ii fourth series) No 4 rev 385—Fripp [Alfred] Memorial Fellowship established at 505—Visit of the Prince of Wales to 709—*Guy's Hospital Nursing Guide Handbook of Nurses League and Register of Nurses Trained at Guy's Hospital* rev 932
[illegible]
Hospital Lebanon for Mental Diseases Annual meeting 1015
Hospital for Limbless Sailors and Soldiers Princess Louise Scottish Erskine Annual meeting 442
Hospital Limerick Annual meeting 164
Hospital Liverpool Northern diet clinic at 768
Hospital Livingstone Dartford fatal mistake at 359
Hospital London Scholarship at the medical college 777—Lectures 861—Prize giving 1107
Hospital a London progress of surgery at (1880–1930 (Sir D'Arcy Power) 857—*Researches Published from the Wards and Laboratories of the London Hospital during 1931* rev 992
Hospital Longmore Edinburgh Annual meeting 32
Hospital Madras Government General Annual Report 33
Hospital Marie Curie Dedication of the Devonshed 221—Annual meeting 908
Hospital Middlesex *Collected Clinical Papers 1930–1931* rev 848—Lectures at the Medical College 961
Hospital Monkstown County Dublin Annual meeting 856
Hospital Mount Vernon forms an Anti-Cancer League 857
Hospital municipal (Highgate) allegations against 908
Hospital nursing service *See* Nursing
Hospital provision for people of moderate means British Provident Association's scheme 766 997 1142
Hospital Queen Charlotte's Clinical Reports 1928–1930 rev 848
Hospital Rotunda Progress of obstetrics in 583—Annual report 1049
Hospital Royal Edinburgh of Mental and Nervous Disorders Annual report 491
Hospital Royal Free Hare lip and cleft palate clinic to be opened at 597—New physical medicine and orthopaedic departments 60—Scharlieb memorial ward and tablet 966 051
Hospital Royal London Ophthalmic (Moorfields) Annual dinner 398
Hospital Royal National for Consumption Ireland Annual general meeting and report 855
Hospital Royal Prince Alfred Sydney difficulties of 210
Hospital St Bartholomew's Lectures at the Medical College 126—*Reports* vol lxiv rev 243—Progress of surgery at (1880–1930) 857
Hospital St John Ophthalmic Jerusalem Report 6 7
Hospital St Thomas's Lectures 81
Hospital Seamen's *See* Hospital Dreadnought
Hospital Sir Patrick Dun's and the sweepstakes 1059
Hospital services in Fife grouping of 723
Hospital Sunday Fund *See* Fund
Hospital Sydney finances of 906
Hospital Tadworth Recovery New pavilion opened 1051
Hospitals centre scheme Birmingham medical school and 393 494
Hospitals civic in Edinburgh 304 907
[illegible] *e also* [illegible] [illegible] [illegible]

HUTCHISON Robert (editor) *An Index of Treatment* tenth edition rev 243—Mischiefs of motoring 252
HUXLEY Aldous Huxley Memorial Lecture 894
HUXLEY Julian Visits to Soviet Russia 642
Huxley Thomas Henry and Aldous Huxley 894
Hydatid cyst in lung (U P Basu) 1079
Hydrocele haemostasis and the radical operation for (C Max Page) 658
Hydrocephalus otitic a report of three cases (C P Symonds) 53 (O)
Hydrochloric acid in diabetes mellitus 542
Hydrosalpinx twisted (J E Stacey) 382
Hygiene Council British Social Annual report 536—Preparation for marriage project not to be proceeded with 1044
Hygiene industrial in Scotland (Thomas Ferguson) 256
Hygiene Institute of Nutritive value of margarine 1137
Hygiene review of book on 665
Hygiene Rural European Conference on 21
Hygiene and Tropical Medicine London School of Appointments 126—Degrees and pass lists 264 777—Langley Memorial Prize awarded 315—Lectures and demonstrations 42—Sir Austen Chamberlain's review of achievement 722
Hyperpiesia 170
Hyperpiesia etiological factors of (C W C Bain) 57 (O)
Hyperpiesia treatment of (W Edgecombe) 58 (O)
Hyperpituitarism basophilic [Cushing's endocrine pituitary syndrome] and ? basophilic hypopituitarism (F Parkes Weber) 935
Hypertension essential (Geoffrey Evans) 238—(Robert Marshall) 468 (O)—Correspondence on 590
[illegible] 496
Hypoglycaemia spontaneous (Albert Ramsbottom and Cyril G Eastwood) 833 (O)
Hypopharynx malignant disease of *See* Cancer
Hypertrichosis treatment of (leading article) 667
Hypopituitarism and hyperpituitarism *See* Hyperpituitarism
Hysterectomy abdominal total for myoma of uterus (Herbert Spencer) 1157 (O)

I

Ice bag or hot bottle alternative 891
Idols fallen *See* Fallen idols
Illegal detention of servant girl (parliamentary note) 357
ILLINGWORTH Charles F W (and Bruce M DICK) *A Text Book of Surgical Pathology* rev 527
Imbecility porencephalic (Richard J A Berry and R M Bates) 830 (O)
Imhotep 217
Immuni[illegible]
Import [illegible] Applications for Free List 871
Import Duties Bill 356 408 454 823 868
Impotence following tonsillectomy 221 268
INCE J G Hastings Breech presentation 15

INCOME TAX 44 83 128 176 222 268 316 362 410 456 506 550 598 641 692 737 784 826 872 918 968 1016 1059 1061 1110 1156 1200
Appointment under the Crown free quarters 84
Appointment travelling expenses 456
Appointments various 1061
Assessments for past years 222
Assistant expenses 268
Assistant tax not applied for 84
Cash basis partnership 968
Casual earnings 44
Change of proprietorship 641
Colonial appointment *liability of bonus 128*
Continuous employment 83
Disability pension 826
Dissolution of partnership 1062
Division of partnership assessment 362
Employment of boy on car and garden 738
Employment expenses 1110
Employment in India emoluments 84
Examination fees 968
Expenditure on medical books and apparatus 598
Firm depreciation and renewal of cars 1062
Free furnished quarters 1156
Income from property 128
Insurance practitioners income tax on reduced fees of 1059
Loss on practice 918
Maidservant professional expense 692
Motor car Allowance 222—Depreciation of 316 872 1016 1062 1110—Obsolescence 872—Replacement 176 316 598 1110 1156 1200—Used for private purposes 641
Partnership change expenses and basis 784
Payment of interest 362
Payment for recommendation 598
Professional expenses 872
Proportion of house used professionally 737
Proportion of rent etc for professional use 84
Public appointment expenses 872
INCOME TAX *(continued)*
Purchase of professional equipment 1200
Receipt of gifts 918
Receipts for lectures 316
[illegible] 410
Salaried appointments subscriptions 362
Sale of practice 176
Sale of share in partnership 506
Shares in a colonial company 598
Statement of capital 83
Use of residence for practice 506
Wear and tear claim for arrears 362
X ray equipment depreciation 1016
Incunabula Catalogue of the in the library of the College of Physicians of Philadelphia 315
Incurable disease *See* Disease
Incurables home relief of in Scotland 1003
Indexes half yearly 71

INDIA
All India Medical Council 310 824
Anaemia in pregnancy in (N Gupta) 1031
Anti malarial measures in Travancore 33
Cholera in 869
Cholera prevention in Assam 725
Epidemics forecasting of 724
Estimates 869
Governm[illegible]
Kashmir
King Edw[illegible]
[illegible] 725
[illegible]
Parliamentary notes on 310 503 639 734 824, 869
Pensions in the Indian services 503 635 686 738—A correction 738
Public Health Director of in the Central Provinces 639
Punjab public health in the 444
Unlegalized practice and qualifications 33

Indian medical qualifications 934
Indian Medical Service Annual dinner 1194—Appointments and promotions 920 *See also* Supplement Index
Individual psychology *See* Psychology
Industrial dermatitis *See* Dermatitis
Industrial diseases notification of 118—Statutory requirements 118—Cost of (parliamentary note) 778
Industrial hygiene in Scotland (Thomas Ferguson) 256
Industrial psychology *See* Psychology
Infant feeding review of book on 153
Infantile paralysis *See* Poliomyelitis
Injection in the dormitory *See* Dormitory
Infections and ear inflammation (Harold Barwell) 1126
Infectious disease some pre bacteriological views on (F W Goodall) 241
Infectious diseases review of book on 572
Infirmary Aberdeen Royal New buildings 540
It[illegible] h exhibi[illegible] peal Fund [illegible] or paying patients 255
Infirmary Falkirk Royal Opening of the new 213—Annual meeting 679
[illegible] sting 630 [illegible] ainst 166—[illegible] al meeting, Auxiliary
Infirmary Glasgow Western Annual meeting of contributors 346
Infirmary Leeds General Annual meeting 679
Infirmary Perth Royal Annual meeting 586 [illegible] nual meeting 304 [illegible] of (J F O Malley) [illegible] 107—Correspondence on 214
Influenza in Switzerland fatal cases 783
Influenza treatment of 222—By pneumosintes vaccine 222
INGRAM John T Thallium acetate in the treatment of ringworm of the scalp 8 (O)
Inheritance review of book on 1130
[illegible] on 75
Inquests coroners in London 909
Insanity menopausal and bacterial toxaemia (T Gillman Moorhead) 923 (O) *See also* Menopause
Institute of Hygiene *See* Hygiene
Institute of Medical Psychology *See* Psychology
Institute of Ray Therapy *See* Ray
Institution of Gas Engineers Annual meeting 1188—Gas fires and ventilation 1188
Institution Liverpool Medical —Intra thoracic new growths 17—Reticulo endothelial system 191—Ante natal radiology 334—Scalp lesions 335—Some aspects of cancer 383—Treatment of infantile paralysis experiences in Melbourne 676—Value of hospital almoners 858—Recent advances in the treatment of fractures 1073
Insulin one of the first patients to receive 597
Insulin hypoglycaemia 1136

Insurance National Health
Amendment Bill 868 962 1005 1107 1153 1198—Second reading 962—In committee 1153
Approved societies valuation (leading article) 67
Approved societies without surplus 916
Asthma patients hypodermic syringes for 502 548
Benefits to insured persons through Approved Societies 595
Decrease in expenditure 502
Dental benefits 357
Highlands and Islands Fund 1186
Income tax on reduced fees of insurance practitioners 1059
Insured persons not on panel of any practitioner 1199
Medical benefits 356 454
Northern Ireland 1050
Parliament and (leading article) 945
Parliamentary notes 356 454 502 548 595 733 868 915 916 962 1059 1198
Prolongation of Insurance Act 595—In Scotland 1186
Traders small as voluntary contributors 454
Transitional benefits 733
Women workers increase in claims of insured 548 1198
Women's National Health Insurance (Northern Ireland) 1002

Insurance social review of book on 942

London

International Clinics vol iii forty first series rev 153—Vol iv forty first series rev 386
Intervertebral disks (leading article) 246
Intestinal auto intoxication (leading article) 1040
Intestinal disease and urinary complications 946
Intestinal flatulence *See* Flatulence
Intra thoracic new growths (Leslie Cunningham) 17—(A Tudor Edwards) 827 *See also* New growths
Intussusception in an adult unusual case of (Ian M Orr) 331
Ionization intranasal in hay fever vasomotor rhinitis and ozaena (Philip Franklin) 751 (O)—Correspondence on 918

Ireland
Armagh County health of school children 494
Bangor sewerage scheme 164
Belfast Public Health Congress in 677 954—Public health services in cost of 117—School children education of 117—Tuberculosis committee estimates 256—White abbey Sanatorium 164
Belfast Royal Victoria Hospital 768 1099—Annual meeting 768—Paying patients and the radium supply to 768
Benn Ulster Hospital 856
Births and deaths registration in Northern Ireland 303
Child welfare in 493
Coombe Lying in Hospital 1186
Cork medical appointment 494
County Hospitals in Northern Ireland 583
Dispensary medical officer's deputy 1187
Down County Mental Hospital 583
DUBLIN
Housing scheme for the poor 256
Lunacy increase in the district of 397
Public health in 303
Royal Victoria Eye and Ear Hospital 1002
Fermanagh County school children health of 397
Hospital administration and the North of Ireland government 855
Hospitals and motor accidents (Northern Ireland) 1050
Insurance National Health (Northern Ireland) 10 0
Insurance Women's National Health 1002
Irish Hospitals Medical Services Exhibition 1002
Irish Hospitals Nursing and Midwifery Conference 1002 1050
Irish Medical Association 1186
Laboratory for pathological research at Grangegorman Mental Hospital 1002
Limerick hospital 164
McIlroy James memorial to 724
Medical inspection and treatment of school children 1050
Mental cases in Northern Ireland treatment of 724
Mental diseases in 677
Mental hospitals in Northern Ireland grant to 954
Midwife work of the 1002 [illegible] 3 Dublin 856 [illegible] idium supply to [illegible] of at [illegible] –Annual report 1049
Royal Academy of Medicine 1049
Royal College of Physicians Honorary Fellowships 768

Ireland (*continued*)
Royal College of Surgeons Charter day 303—Association of Past Students first meeting 1098
Royal National Hospital for Consumption 855
[illegible] to 337
[illegible] and the sweep
Stillorgan Sunshine Home 1099
Tuberculosis in County Antrim 726
Tuberculosis in relation to national health 1002
Unitant fever in Northern Ireland (James S Baxter) 97 (O)
Village settlements for the tuberculous 954
Vital statistics For Northern Ireland 544—In the Free State 850
Wexford County the medical profession of and the county M O H 769
Whitechurch sanatorium 164

Iris pattern of Sphenodon [rentilla] (Ida Mann) 570
Irish Hospitals Medical Services Exhibition 1097—*Tuberculosis in relation to national health* 1002
Irish Hospitals Nursing and Midwifery Conference 1097 1050—Work of the midwife 1002—Medical inspection and treatment of school children 1050
Irish Medical Association *See* Association
Iron *See* Ferri perchlor
IRVINE Surgeon Commander L C D Royal Naval Reserve Officers Decoration conferred on 915
IRVINE I G Control of silicosis in industry in South Africa 693 (O)
IRWIN S T Tuberculosis of the abdominal lymphatic glands 60
ISAACS H David Compression fracture with comminution of body of third lumbar vertebra and neural arch of fourth vertebra with paraplegia 835 (O)
ISAACS Susan *The Children We Teach* rev 890
Iso amyl ethyl barbituric acid *See* Amytal
Italics and capitals 128
Italy Decline in the birth rate 83—Medical tour of the spas climatic resorts and sea bathing therapeutic centres of 733—Tuberculosis scholarships in Rome 893—*Health Resorts Seaside and Watering Places* in rev 1177
IVENS-KNOWLES Frances *Caesarean Section* rev 617—Analgesia and anaesthesia in normal labour 661 — Medical problems of contraception 1047
IWANOW Wladimir W death of 742

J

Jackson John Hughling memorial and medal 899 1099—*Selected Writings of* vol II *Evolution and Dissolution of the Nervous System Speech Various Papers Addresses and Lectures* rev 1033
JACKSON M Medical problems of contraception 1047
JACKSON W M The common cold 850
JACOBS Arthur Management of urinary calculi 513 (O)
JAKOB Alphons death of 173
JAMES Alexander obituary notice of 731
JAMES Wing Commander A W H Voluntary sterilization 1046
JAMES Coram Aluminium and health 646
JAMES E Dosage of diphtheria antitoxin 85—Fatal case of Vincent's angina 1 31
James Colonel S P says he is an insolent malarial drugs 100—Induced malignant tertian malaria 987
JAMES W Warwick Mouth breathing and nasal obstruction 842
JAMESON R W Aluminium and health 774
JAMESON W W Andrew Balfour Memorial 257
JANSEN Hans Adipo algia 670
Jaundice epidemic the bacillus of 259 *See also* Pyrexia
Jaundice epidemic catarrhal associated with fatal acute necrosis of liver (G M Findlay and J L Dunlop) 62 (O)
Jaundice infective (E C Macdonald) 564
Jaundice *See al o* Spirochae osis icterohaemorrhagica
JEANS F A G Nephrostomy 842
JEFFREY John Medical services in Scotland 1049
Jejunostomy and Witzel's operation in the treatment of vicious circle vomiting (H Donovan) 609 (O)
JELLIFFE Smith Ely Schizophrenia 904
Jersey bronchomoniliasis in 863 919—A correction 919
Jerusalem Report of the St John Ophthalmic Hospital 627
JEWELL N P (and W H KAUNTZE) *Handbook of Tropical Fevers* rev 616
Jewish Health Organization Annual report 111—Child guidance clinics lectures on the psychological problems of childhood 315
JOANNOVITCH Georg death of 593
JOBSON T B Tonsil scraseur 244
JOHNSON B K (and I C MARTIN) *Practical Micro copy* rev 1094
JOHNSON Lieut Col Cecil Willoughby obituary notice of 915
JOHNSON F K Microscopy of filterable viruses 800
JOHNSON Percy T Mi chiefs of mo oring 742
JOHNSTON Augustus Henry G obituary notice of 867
JOHNSTON D J Gair Public health and the future 541
JOHNSTON John M appointed a medical officer in the Department of Health for Scotland 85—Collapse therapy in phthisis 754
JOHNSTONE Professor Toxaemias of pregnancy 333
Joints stiff treatmen of 39
JOLL Cecil A *Diseases of the Thyroid Gland with Special Reference to Thyrotoxicosis* rev 711
JOLOWICZ Frns *Suggestion Therapy* rev 20
JONES A Rocyn Appreciation of Frederick Richard Fisher 218
JONES George The law and abortion 40 125
JONES P T pre entation to 1150
JONES Sir Robert awarded the Dawson Williams Memorial Prize 27—*Injuries about the elbow in children* 733 (O)—Manipulation as a therapeutic measure 753
JONES P Watson Ambulatory treatment of fractures 447 651—Fractures of the spine 654 8 3—Recent advances in the treatment of fractures 1075 (O)
JONES W Howard Addi claimer 1110
JONES W Tudor *Contemporary Thought of Germany* rev 10
JORDAN Alfred C Constipation and ptosis 38
JORDAN Edwin O *A Text Book of Bacteriology* tenth edition rev 430
JOSEFOVICH Miguel (and Tulio MARTINI) *Les Anévrismes Intrapéricardiques de l'Aorte* rev 60
JOSLIN Elio P *Diabetes its Control by the Individual and the State* rev 709
JOSSMANN P (and K BONHOEFFER) *Erg bnisse Reintherapie bei progressiver Paralyse* rev 807
Journal of the Chartered Society of Massage and Medical Gymnastics Special number issued containing the lectures delivered at the annual congress (1931) 83
Journal de l'Hôtel Dieu de Montreal first number of 557
Journal of Neurology and Psychiatry twelfth volume of 1100
Journees Medicales de Bruxelles Congres *See* Congress
Joyce P Wilson 914
JUNGLING O (and others) *Ergebnisse der medizinischen Strahlenforschung (Systems diagnosis Pflugen Padiam und Lichttherapie* vol v rev 1175
JUPP T H Infections and ear inflammation 115

Juvenile offenders *See* Young

K

KARSNER Howard T *Human Pathology* third edition rev 720
KASTEIN J Schistosomiasis in Shanghai 249
katatonia experimental produced by bulbocapnine (H de Jong and H Baruk) 623
KATAYAMA Kunika death of 314
KAUFMANN Eduard death of 126 867
KAUNTZE W H (and N P JEWELL) *Handbook of Tropical Fevers* rev 616
KAYE G W C Protection of x-ray workers 193
KEEN William Williams obituary notice of 1150
KEITH Sir Arthur Hunterian Lectures on *malformations of the human body from a new point of view* 337 435 492—Stephen Paget Memorial Lecture The conflict between sentiment and reason 1184
KELLER Helen Honorary LL D Glasgow conferred on 1061
KELLY Herbert T (and Joseph T BEARDWOOD) *Simplified Diabetic Management* rev 759
KELLY Percy James C B E conferred on 1097
KELLY R E Teaching of surgery with the cinematograph 718
KELVIN J Sabeaneous emphysema in measles 178—Brachial embolus 63
KELYNACK T N Shattered skull Samaritan Fund 1057
KEMPENEERS P (and P LOPTHOIEB) *Les Fractures du Calcanéum* 249
KEMPSTER Christopher Treatment of osteo arthritis of the hip 773
KEN AYAT A new cause of sarcoma 603
KENNEDY A M *Food allergy* 1157 (O)
KENNEDY Walter P Endocrine therapy in dysmenorrhoea 76 (O)
KENNEDY Fraser D. David *Education of the Backward Child* rev 870
Kent foot and mouth disease in (parliamentary news) 824
Kenya the stone age cultures of 45
KERLEY Peter Diagnosis and treatment of lung abscess 209—Radiography in malignant disease of the lung 416 (O)
KERR England obituary notice of 657
KERR Harold Report on public health in Newcastle on Tyne 117
KERR Munro Toxaemias of pregnancy 43
KERRY Richa
KESSLER Hen
he ering 448
KETTNER Franz *Die Elektrochirurgie* rev 52
KHANDWALLA Major Munauldas Tuljaram obituary notice of 17
kidney ectopic 128
kidney Hydronephrotic pelvic (Homer B Pierce and D J Harries) 612
kidneys review of book on 61
king Edward VII Sanatorium *See* Sanatorium
KING Lieut Col H H Surgeon Major 811
KING Norman C Advertising and canvassing 89—*The British Pharmacopoeia* (1932) 111
KING Colonel W G Indian Medical Service pensions 835 7—A correction
KING W W Zondek Aschheim test in the operation of pregnancy 32
KINGSBURY A New Report on the Institute for Medical Research at Kuala Lumpur 148
KINLOCH John Parlane Death of 29—Obituary notice of 311 47
KINNEAR John Tread mon o inea captain 821
KINNEAR N A Mucocutaneous ulcer 704
KIRK Hamilton A warning 962
KIRKPATRICK H J R awarded medical Duncan on Fellowship 310
KIRSTEIN *See* Kanner
KIRSNIFELL Hermann eigenhändiger 1041
KISCH Bruno *Verhandlungen der Deutschen Gesellschaft für Kreislaufforschung* rev 1
Kitchener School of Medicine Khartoum Report 31
KJAERGARD Hans *Spontaneous Pneumothorax in the Apparently Healthy* rev 712
KLAESSER Ferdinand death of 128
KLEMPERER Georg (and Felix KLEMPERER) *Neue Deutsche Klinik* vol viii rev
KLUYVER A J *The Chemical Activities of Micro organisms* 557
KNAUS Ovulation and the exocycle 12
Knee joint operation on the 1063 *See also* Semilunar cartilage
KOCH Robert Symposium upon 522—Special number of the *Zeitschrift für Tuberkulose* devoted to 1092—Letters of the *Deutsche Medizinische Wochenschrift* devoted to 72—Square in Berlin renamed after 1 15
Koch's discovery of *Bacillus tuberculosis* fiftieth anniversary of 523 572
KOELLIKER Theodor eighteenth birthday of 1155
KOELREUTER Wolfgang (and Ferdinand August SCHMIDT) *Physiology of Exercise* rev 642
KOERBY Fernandine Carolie E death of 867
KONIKOW An onine e F *Physicians Manual of Birth Control* rev 807
KOSMEN George death of 661
kouman's celluloid spreader for making blood film 427
KRANTZ John C —*Fighting Disease with Drugs The Story of Pharmacy* rev 42
KRAUSE Dr Curative method of vaccination 62
KREMER M (and E W RICHES) Effect of pituitrin in malignant disease 877 (O)
KRETSCHMER Ern *The Psychology of Men of Genius* rev 103
KRISCHNER Harold death of 314
KRYSTALOFICH Profe sor death of 435
KYLE David Treatment of chronic ulcers of the leg 1032—Spontaneous cure of spina bifida with congenital dislocation of the lumbar spine 1076 (O)

L

LABBE Marcel elected president of the Societe des Hôpitaux de Paris 221
Labora ories of the London County Council 443 *See a so* Council
Laboratories National Physical Annual report 643
Labora ories the planning of 814
Laboratory methods review of books on 47 570
Laboratory for pathological research a Grangegorman Mental Hospital 1002
Labour — Aftercoming head 632 — Analgesia in childbirth discussion at the Royal Society of Medicine 1172 — Breech presentation (J G Hastings Ince) 15—Breech presentation 1041—Spontaneous version of extended breech (Margueri e M Fenn and Florence Whitrow) 378—Chloroform in 77 124 405 — Normal analgesia and anaesthesia in (Phoebe Adamson) 86—Normal and operative foci (Helen Lerton) 830 (O —Obstructed gangrene complicating (J E Church) 192 —Obstructed by a tumour (Putn Nicholson) 62
Labour Office In ernational issues further brochures under the title *Occupation and Health* on nail worms native labour (hygiene) titanium wa ch and clock makers occupational diseases o the eye and crematory system mines (hygiene in) oxalic colonde rope works selenium and sequestrated hydrogen s arch manufacture tortoiseshell pyridine and pyrolignecus acid salicylic acid molybdenum and mother o pearl shoddy and occupational diseases o the respiratory system locomotor system and ear nose and throat 559

Lactic acid in the gastric contents significance and origin of (Ian Murray and Andrew B Robertson) 607 (O)—Correspondence on 682 771 859 957 1006 1052
LADELL R G M Tendencies in modern medicine 774
LADELL R MacD Impotence following tonsil lectomy 268
LAIGNEL LAVASTINE M *The Concentric Method in the Diagnosis of Psychoneurotics* rev 20
LAIT J Solitary renal cyst 194
LAKE H A Urology 806
LAKE Norman C Suction in surgery 446
LAMARQUE Pierre Smoke abatement in France 1043
LAMB W L elected a Fellow of the Royal Edinburgh 310
nial window to 505
pected foreign body in a bronchus 171
LAMOND Rev John —*Arthur Conan Doyle a Memoir* 25
Lamp hand slit and inspection 1133
LAMPITT L H Determination of aluminium in foods 1080
LANDAU A
LANE A C
LANGDON Do of sterilization 1045—Shuttleworth Samaritan Fund 1057
Langford Frank Vacancies and courtesies 598
LANGMEAD F Essential hypertension 239
L Animateur des Temps Nouveaux 159
LAPOINTE Dr death of 314
LAPP F W (and H NUETTER) *Diätetik bei chirurgischen Erkrankungen* rev 990
Larbert Colony for Mental Defectives Report 723
Laryngocele (Sir William H de Courcy Wheeler) 292
Laryngo pharyngoscope illuminated direct 432
LASSEN H C A *Experimental Studies on the Course of Paratyphoid Infections in Avitaminotic Rats with Special Reference to Vitamin A*
Lati
Lau
Lav perature 1183
Law and abortion 40 79 125
LAWRENCE Evelyn M *An Investigation into the Relations between Intelligence and Inheritance* rev 1130
LAWREY Surgeon Lieut Commander (D) Andrew O B E conferred on 75
LAWSON Sir Arnold Senile cataract 988
LAWSON T Individual psychology 805
LAYTON T G Appreciation of Frank Mortimer Rowland 782
LAYTON T B *On the Conservation of the Lymphoid Tissue of the Upper Respiratory Tract* 341—Deafness and hooters two auditory pro
and ear
and nasa
Laying up the car *See* Motor
LAZARUS BARLOW P A disclaimer 1156—Serotherapy in septicaemia 1191
Lead poisoning as a cause of peptic ulcer (David R Lewis) 185 (O) 308 449—Correspondence on 262 308 354 449 497

Leading Articles
Anaemia pernicious treatment of 1179
Approved societies valuation 67
of 389
438
inquiry
into 892
Cancer of the larynx 620
in 193
ner 994
Diphtheria past and present 533
rticular 666
762
Hepatic and splenic diseases combined 1134
Hunterian Oration 339
Hypertrichosis treatment of 667
Influenza aural complications of 107
Insurance National Health 945
Intervertebral discs the 246
Intestinal auto intoxication 1040
Lighting and vision 200
London County Council Hospitals 156
Loose milk 716
Maternal and child welfare international 621
Maudsley Henry 68
Medical research and the patent law 810
Mental abnormality inquiries into 1134
Milk problem 944
the revised 892
390
Ovulation and the sex cycle 108
Parliament and National Health Insurance 945
Population the growth of 573
Public health progress 761
Psychoneuroses and the endocrines 245
Reading and seeing 23

Leading Articles (*continued*)
Rheumatism chronic 1086
Rheumatism juvenile 155
Rickets some aspects of 479
Schizophrenia the problem of, 991
Scoliosis 340
Spahlinger vaccines 297
Suppuration in the maxillary antrum 480
Surgery and gastric ulcer 849
Town planning 1039
Tubercle bacillus the toxic products of the 438
Tuberculin tests in man value of 715
Tumours comparative study of 1180
Work and theory 850

LEAGUE OF NATIONS
Drugs narcotic traffic in 110
Epidemiological Report Monthly Survey of the incidence mortality and fatality of small pox throughout the world 201—The growth of population 573—Poliomyelitis in (1931) 764—Measles from 1919 to 1931 1044
European Conference on Rural Hygiene report 21
Health Committee's report 622
Maternity and child welfare International report on 621
Health Bulletin contents of the first number 937
Medical Schools in China report 21
O
Pl of the Health
Tuberculosis in Denmark Norway and Sweden report 21
X rays and radium protection a review of 203

LEAKEY L S B *The Stone Age Cultures of Kenya Colony* 483
Lebanon Hospital *See* Hospital
LE BON Gustave death of 126
Lecture Bakerian 1060
Lecture Blackader Richards (E A Park) 479
Lecture Bowman Senile cataract (J Van der Hoeve) 988
Lecture Finlayson Memorial 722 857—Progress of surgery at a London Hospital 1880–1930 (Sir D Arcy Power) 857
Lecture Frazer in anthropology 360
Lecture Guthrie 1060
Lecture Horsley [Victor] Memorial 484
Lecture Hunterian Excretion urography (Reginald T Payne) 649
Lecture Huxley Memorial T H Huxley as a man of letters (Aldous Huxley) 894
Lecture Maudsley (Sir Hubert Bond) 68
Lecture Morris [Malcolm] memorial 917
Lecture Newbold [Mary Scot] Vasovagal syncope (Sir Thomas Lewis) 873
Lecture Paget [Stephen] Memorial The conflict between sentiment and reason (Sir Arthur Keith) 1184
Lecture Roberts [Lloyd] The present and the future of the science and art of obstetrics and gynaecology (W Blair Bell) 45
Lecture Romanes The advance of Medicine (Lord Moynihan) 1090
Lectures Chadwick Public 628 Benjamin
Le
Lectures Hunterian Malformations of the human body from a new point of view (Sir Arthur Keith) 387 435 489
Lectures Thomson [Farquhar] The importance of the child (James Ritchie) 213
LE DANTEC A death of 638
LEDINGHAM J C G Microscopy of filterable viruses 799
Lee Harold case of (parliamentary note) 916
LEE Lieut Colonel William Alexander obituary notice of 174
LEECH Paul Nicholas A primer of fracture practice 634
LEEDHAM GREEN John Charles awarded the George Herbert Hunt Travelling Scholarship 732
LEES David Gonorrhoea and other cervical discharges 381
Leg ulcers of *See* Ulcers
LEGGE Sir Thomas Morison New light on workmen's compensation the German code 112—Plumbism and peptic ulcer 497—Obituary notice of 913
LEHMANN H I Urticaria 316
Leishmania infections transmission of (C M Wenyon) 240
LELEAN P S Andrew Balfour Memorial 257
Théra
Tube
Endo
Voyers
Amygdalaires 70
LEMPRIERE L A Infection in the dormitory 802
L Enseignement de la Médecine en France new edition 536
LEON Nicolas death of 219
Leprosy in the British Empire 1136
Leprosy Conference National in China (1932) 362
Leprosy in India (parliamentary note) 869—Treatment of 1052
LERFBOULLET Pierre elected an Officer of the Legion of Honour 505
L lal of
L the achievements of Belgian doctors for the last hundred years 83
LESSIAR J E M B I conferred on 75
LEVENE P A (and Lawrence W Bass) *Nucleic Acids* rev 104
Leverhulme Research Scholarships 1090
LEVI Mr Gastrophotography 24
LEVITT W M Xrays dosage in malignant disease 147—Protection of X ray workers 193
LEWIN J Acute mastoiditis 699 (O)
LEWIN Louis —*Phantastica Narcotic and Stimulating Drugs their Use and Abuse* rev 476
LEWIS Bransford Regurgitation renal colic 1137
LEWIS David R Lead poisoning as a cause of peptic ulcer 185 (O) 308 449
LEWIS J Pleural endothelioma 194
LEWIS Sir Thomas May Scott Newbold Lecture on vasovagal syncope and the carotid sinus mechanism 873 (O)
Leyden University *See* University
LEYS Norman Brain of the East African native 826
Leysin factory clinic 211
LEYTON Helen Septic foci and normal labour 880 (O)
Liberty of the subject (Lionel A Weatherly) 241
Licence driving *See* Driving
Lichen urticatus a differential diagnosis of
454
18 709
LINDWORSKY Johannes *Experimental Psychology* rev 475
LINKLATER G J appointed an Officer of the Order of St John of Jerusalem 83
o the lungs 37
of 314
LIPSCOMB Godfrey Early treatment of rheumatism 450
LIPSCOMB T W Appreciation of Robert Henry Todd 500
Liquor aluminii acetici a substitute for calamine lotion 78
Lister Institute of Preventive Medicine Norma Macleod studentship in biochemistry 871
LITTLE P Muirhead —History of the Association The first hundred years 27 201 578 672 949 1091—Appreciation of Frederick Richard Fisher 218—Tuberculosis of bones and joints before Koch 763
LITTLE George S R An unusual foreign body (mercury) in the finger 1080
Liver cirrhosis of *See* Cirrhosis
Liver diet recipes for 244
Liver fluke lesser life history of (T W M Cameron) 427
Liver function damaged avertin and (H K Ashworth) 1123 (O)
Liver glycogenic function of discovered of the 268
Liver necrosis acute fatal associated with epidemic catarrhal jaundice (G M Findlay and J L Dunlop) 652 (O)
Liver rupture in a new born infant death from (H A Pim and H Cecil R
Liver and spleen associations
Liver therapy
Liver therapy parenteral 400
Liver therapy and polycythaemia in asthma (H H Moll) 976 (O)
Liver treatment intramuscular of pernicious anaemia (I S P Davidson) 269 (O)
Liver treatment intravenous of pernicious anaemia (I Billig W N West Watson and C J Young) 293 (O)—Case illustrating failure of (J G McCrie) 792 (O)—Correspondence on this case 910 1007
Liver treatment intravenous of resistant spinal anaemia (Sir Leonard Rogers and W E Cooke) 272 (O)
Liverpool Medical Institution *See* Institution *and* University
Liverpool Post graduate lectures in 691—Hospitals conference in 1001
LIVINGSTON Edward Meakin *A Clinical Study of the Abdominal Cavity and Peritoneum* rev 1036
LLAMBIAS Gioacchino death of 453
LLOYD D Jordan Shoe leather dermatitis 261
LLOYD Eric I Ambulatory treatment of fractures 496
LLOYD Colonel F Lindsay Mischiefs of motoring 252
LLOYD I E S called to the Bar 1155
LLOYD Lord Andrew Balfour Memorial 257
LLOYD Lieut Col R B Group specific substances in the human body 234
LLOYD W Ernest (and Dorothy J Dow) Chest radiograms and the Mantoux test in children 701 (O)—Value of tuberculin tests in man 715
LOBO ONELL C (and H CHABANIER) *Précis du Diabète* rev 337—Insulin hypoglycaemia 1136
Lobster who decided to become a crab 947
Local Government law (parliamentary note) 905
LOCH Norman The enteric fevers 292
LOCKE Arthur Criminal statistics 811
Locke John his books and MSS 919

LOCKHART Leonard P Preparation for marriage 1010
LOCKHART MUMMERY J H Anorectal fistula 523—The origin of tumours 765 (O) 1002
LOCKWOOD H C Apparatus and method for determining the freezing point of milk 711
LOFTUS Maurice (and André Lemaire) —Thérapeutique Médicale Maladies du Tube Digestif rev 291—III Lone Clendes Index crines et Nutrition rev 1175
LOMAS J Aluminium and health 1147
LOGAN W R (and J T Sweatt) A direct method of typing pneumococci 188 (O)
LOGIE W J Child guidance clinics 39—Preparation for marriage 969
LOMBFIN Dr appointed professor of ophthalmology at Freiburg 315—Awarded the Goethe medal 1193

LONDON
Ambulance service See Ambulance
Coroners 685
Coroners inquests in 909
County Council See Council
District nursing in 493
Housing survey 493
Inter Colle iate Scholarships Board 310
Public Health Services First year of unified hospital control 903
School of Hygiene and Tropical Medicine See Hygiene
Voluntary Hospitals Committee See Hospitals
Water of in 1931 report on 1173

London Clinic and Nursing Home opening by the Duchess of York 300
London Light and Electrical Clinic Inauguration of 610
London Pulmico the work of 610
Lord High Commissioner visits Edinburgh hospitals 10 8
LORENTHORN P (and P KRAPFNER) Les Fractures du Calcanéum 2 9
Lotteries public (parliamentary note) 638 735—Royal Commission on 735 See also Sweepstake
LOUDON I Livingstone The insanity of puerperium 1161
LOUGHEED Lieut Col Samuel Foster obituary notice of 507
LOUGHNANE F M G Excessive surgery 939
LOVE J Kerr Deaf mutism 259
LOVE R J McNeill (and Hamilton BAILEY) A Short Practice of Surgery vol i rev 1130
LOVELL Clement Blood collecting apparatus 154
LOW Carmichael Cambian sleeping sickness 428—Filariasis 1035
LOW Lieutenant I M awarded the Deanant di ea e 1 03—some causes of failure in vaccine therapy 1160 (O)
LOWE Godfrey appointed chairman of the Lincoln County Borough Insurance Committee 267
LOWE P called to the Bar 221
LOWENFELD Margaret Normal development in the young child 17
LOWENSTEIN Dr appointed professor of psychiatry at Bonn 315
LOWRY Sir Arthur to act as D puty Secretary to the Ministry of Health 871
Lubeck B C G trial at 71 301 48 —Judgement delivered 301—Note on 302 434 See also Bacillus
LUBLIN Helge Surgery and gastric ulcer 8 9
LUCAS A Forensic Chemistry and Scientific Investigation second edition rev 847
LUCKISH M (and Frank K Mo s) Seeing a Partnership of Lighting and Vision 200
LUDFORD R J Origin of tumours 803
LUFF Arthur P Incidence of cancer of the breast and its history after treatment 897
Lunacy increase in the Dublin district 397
LUND J Rushworth Early diagnosis of pulmonary tuberculosis 354
Lung ab cess See Abscess
Lung disease in tube workers (parliamentary note) 310
Lung suppuration bronchoscopy and drainage in (I S Scott Fraser) 651—(H V Morlock) 661
Lungs chronic non tuberculous infection of in children (F H Young) 604 (O)
Lungs lipiodol introduction into the
Lungs malignant disease of radiography in (Peter Kerley) 416 (O)
LUPTON Charle presentation to 679
Lymphatic glands See Glands
LYNHAM J T X ray dosage in malignant disease 147—Treatment of carcinoma 150
LYON D M (and H L Wallace) The mean temperature in non febrile hospital patients 983 (O)—Body weight 1042
LYON R M Murray (G H Percival and C P Stewart) A note on urinary proteose 136 (O)

M

MACALISTER Charles Appreciation of Henry Harvey 731
MACALISTER Donald A I Ethmoidal and frontal sinusitis 683
MACALISTER W Appreciation of George Matthew Robertson 683
MACALLUM James B Bladder healing after suprapubic cystotomy especially in prostatectomy 216 (O) See also Surgery suction
MACAULAY Elizabeth L A Textbook for Nurses rev 152
MACAULAY H F Transplantation of fibula 18
McBURNEY Letter The Philosophy of Sport rev 893
MCCALL Isa Rickets and vitamin D 802
McCALLUM The barbiturates in anaesthesia 438
MACCALMAN Lieut Col Hugh obituary notice of 1109
McCANN F J Foetal pathology 710
McCANN J F Treatment of carcinoma 150
McCARTNEY J E The epidemiology of streptococcal infections 426
McCONNELL A Pyelography 332
McCOND Cares P (and others) Benzol (Benzene) Poisoning second edition rev 692
McCREA H Morland Origin of tumours 803
McCRIE J G Case illustrating failure of intravenous liver therapy in pernicious anaemia 97 (O)
McCULLOUGH J W S Sunburn 1156
McCULLOUGH H J Compressed fracture of the first lumbar vertebra showing reduction of compression 424
MACDERMOT H F A gentle protector (the chronic pelvic woman) 1011
MACDONAGH J F R The Nature of Disease Part III Section I rev 166
MACDONALD F C Infective jaundice 564
MACDONALD Peter The use of self 1149
McDONALL Robert John Stewart The Science of Signs and Symptoms in Relation to Modern Diagnosis and Treatment rev 430
McDOWALL S A Biology and Man in rev 891
McEACHERN A C Erysipelas treated by milk injections 11 4 (O)
McFARLAND Brian Ambulatory treatment of fractures 547 730
McFARLANE Survival for seven days after rupture of aortic aneurysm 93
MACFARLANE William Dove ob tuary notice of 960
MACFIE J D (and Arthur J P ALEXANDER) Right sided artificial pneumothorax complicated by almost complete left-sided spontaneous pneumothorax 1073
McGOWAN R G The use of self 912
MACGREGOR A S M Co ordination of Glasgow Health Services 678—Puerperal fever and pyrexia 803—Medical services in Scotland 1049
MacGregor Jes ie Irze See Irize
McGREGOR Lieut Col John obituary notice of 310
MacGREGOR T N awarded the Freeland Barbour Fellowship at Edinburgh 47—Treatment of salpingitis 1179
MACHARD Alfred death of 219
McILROY James memorial to 79
McILROY Dame Louise Maternal morbidity and mortality 563 — After effects of the toxaemias of pregnancy 650—Appreciation of Arthur Remington Hobbs 1105
McINTOSH J Microscopy of filterable viruses 739
MACINTYRE Hugh R obituary notice of 501
McINTYRE Sir Vice Mar hall John appointed honorary surgeon to the king 82—C B conferred on 1097
MACKAY George Certification of blindness 405
MACKAY Helen Treatment of anaemias 63
MACKAY W G Teaching of obstetrics 935
McKEAG Robert M Raw milk and dental caries 404
MACKENNA R M B A substitute for calamine lotion 78—Scalp lesions 335
McKENTY Cancer of the larynx 670
MCKENZIE Dan Appreciation of Nicol Macnicol 125—A Queen s (Mary Queen of Scots) obstetric history 218—The common cold 29 — Malignant disease of the pharynx and larynx 859
MACKENZIE Colonel Harry Malcolm C I E conferred on 1097
MACKENZIE J Ross C O in prophylaxis and cure of post-anaesthetic respiratory complication 551 (O)—Anaesthesia in thoracic surgery 756
MACKENZIE Sir W Leslie Public health work 304
MACKENZIE William Rickets and vitamin D 912
McKERROW Elizabeth Plantar corns 918
McKERROW James Charles Notus Organum rev 584
MACKIE Brevet Col Frederic Percival C S I conferred on 1097
MACKINTOSH Sir Ashley W pre entation to 1048 1110—A correction 1110
MACKY Stewart —Sclerel marker an accessory to the ligat puncture treatment of detached retina 943

M

MACLATCHIE J D P Treatment of varicose veins 1190
McLAUCHLAN John Suction in surgery 4 6
MACLEAN Sir Ewen J Dr Alfred Cox Tes monial Fund 1146
MACLEOD A Cameron Some Radium Cases at the Middlesex Hospital rev 570
MACLEOD A R appointed a Commander of the Order of St John of Jerusalem 83
MACLEOD D H Gonorrhoea and other cervical di charges 331
MACLEOD Lieut Col John Norman obituary notice of 360
Macleod Mornal Studentship in Biochemistry 871
McLESTIE James S Nutrition and Die in Health and Disease second edition rev 1035
McMULLIN J C Mixed parotid tumour 18
MACNALTY A S Report on tuberculosis in cluding an examination of the results of sanatorium treatment 675—Improvements in the tuberculosis service 83 —Appreciation of John Cleoph Thresh 1028
MACNAMARA Jean Treatment of infantile paralysis in Melbourne 676
MACNAMARA Lieut Col John William Unthank obituary notice of 733
McNEE J W —Croonian Lectures on the liver and spleen their clinical and pathological a sociations 1017 1068 1111 (O)
MACNIVEN Angus Appointed physician s per intendent of Glasgow Mental Hospital 1185
MACPHAIL J M Pain in stomach or colon 1110
MACPHAIL S P Treatment by plasmoquine 341
McPHERSON Evelyn Hydrochloric acid in diabetes mellitus 542
MACRAE Lieutenant R D awarded the Tulloch Memorial prize 1015
MADDOX Hemp on Rickets in Report Madras medical adminis ration in 443
McSWINEY C J Juvenile rheumatism 152
MAGILL I W The barbiturates in anaesthesia in childbirth 1173
MAHOUDEAU G death of 1202
MAINGOT Rodnei H The Manag ment of Abdominal Operations rev —Treatment of varicose veins 10 4
MAITLAND W Schizophrenia 90
Malaria an i malarial drugs synthetic (W Schulemann) 100—Correspondence on 33—Correspondence on 75 See also Anti malarial
Malaria courses of study on in Rome 600
Malaria and quinine 205 772
Malaria plasmoquine treatment of 341
Malaria in South Africa 8 2
Malaria ter ian induced malignant (Colonel b P James W D Nicol and P G Shute) 917
Malformations of the human body from a new point of view (Sir Arthur Keith) 387 432 469
Malignant disease of the lungs radiography in (Peyser Kerley) 416 (O)
Malignant disease o pharynx and larynx See Cancer
Malignant disease effect of pituitrin in (E W Riches and M Kremer) 877 (O)—Correspondence on 1008
Malignan disease X ray do age in (W V Marneord) 146
Malignant See Cancer New growths Tumours etc
MALKIN S A S Bone graft and fusion operations for the spine 5 O —Dislocation of the patella 8 8
Malmö small pox outbreak at 403
MALPAS I The efficacy o Gauze packing in maintaining radium containers in situ 62
Malta the fir t case of sprue in (James Milne) 471—Correspondence on 911
Manchester cancer re earch in 402—Po t graduate courses in 861—Venereal disea e courses of in truction 863
Manchuria plague preven tion in 673
Manipulation as a therapeutic measure (Sir Robert Jone) 735
Manipul tive surgery review of book on 663
MANN Ida The iris pattern of Sphenodon (rep tilia) 520—Iris Pat e n in the Vertebrates rev 991
MANNINGTON Frank C O in re n citation 87
MANSELL-MOULLIN Mrs Visits to Soviet Russia 642
Manson Hou e 552 See also Society Royal of Tropical Medicine and Hygiene
MANSON J S Institute of Philosophy 400—Heredity and epilep y 887
Manson [Sir Patrick] medal 806
MANSON BAHR P H Synthe ic anti malarial drugs 101
Mantoux test and chest radiograms in children (Doro by J Dow and W Ernest Lloyd) 701 (O)
MARCUS M Normal development in the young child 17—Individual psychology 800
MARETT Lieut Colonel P Jauvrin Bronchomoniliasi 1190
Margarine nutritive value of 1137
MARINESCO Profe or elected a foreign associate member of the Académie de Medecine 737
MARNOCH Sir John Re ignation of from the chair of surgery at Ab rdeen 1185
MARQUIS Canac death of 732
MARR Hamilton Clelland C B conferred on 1097

Marriage preparation for 592 687 727 776 819 864 912 959 1010 1044 1102 1146—Project not to be proceeded with 1044
Marriage review of book on 808
MARRIAN G F *Research in sex hormones* 149
MARROW Lieutenant W A N awarded the second Montefiore Prize 1014
MARSDEN James Aspinall obituary notice of 266
MARSH Alfred Herbert obituary notice of 1013
MARSH D G Cause of urethral discharge 917
MARSHALL G Struan Medical engineering 353
MARSHALL J Cole Perforation of orbit with an aniline pencil 706
MARSHALL John Certification of blindness 989
MARSHALL Robert Essential hypertension 468 (O)
MARSHALL Wilfrid Remarks of spectrophotometric curves of blood pigments 98 (O)
MARSHALL William epitaph on 738
MARTA Felice *Gonorrœa* rev 847
MARTIN A F Obstetrics of a general practice in the last decade 625
MARTIN Christopher —*Lawson Tait His Life and Work with Personal Reminiscences* rev 476
MARTIN C P Laryngocele 293
MARTIN D J a disclaimer 1156
MARTIN J Middleton Factors in the problem of tuberculosis 72 306 497 635
MARTIN L C Mechanism of colour vision 1081 —(And B K Johnson) *Practical Microscopy* rev 1084
MARTINI Tullio (and Miguel JOSELEVICH) *Les Anévrismes Intrapéricardiaques de l'Aorte* rev 65
MARTIUS H (and others) *Ergebnisse der Medizinischen Strahlenforschung (Röntgen diagnostik Röntgen Radium und Licht therapie)* vol v rev 1175
Mary Queen of Scots obstetric history of 248
Mask anaesthetic 714 784 826—For ophthalmic use 296
Masks face *See* Face masks
Massage and medical training in gymnastics 1147
[illegible] certified forms
[illegible] the hand 15
[illegible] id ventilation 1188
[illegible] ironic otitis
Materia medica review of book on 336
Maternal mortality *See* Mortality
Maternity and child welfare authorities circular of Minister of Health *re* the amendment of the Children Act (1908) 83 *See also* Children Act
Maternity and child welfare conference on 917
Maternity and infant welfare statistics (parliamentary note) 915
Maternity and child welfare International (Leading article) 621
Maternity and child welfare services Ministry of Health's notice *re* payment of annual contributions to voluntary associations providing 967
MATSON R W Oleothorax 993
MATTHEWS John Bacillus of epidemic jaundice 259
MATZ Philip B Survey of cancer in ex service men 254
[illegible] isory Com
MAXWELL James Diagnosis and treatment of lung abscess 288—Apparatus for aspiration of fluid from the chest 848
MAXWELL James L National conference on leprosy in China 362
MAY P M Infection in the dormitory 802
MAYDON Lieut Col William George obituary notice of 687
MAYLARD A Ernest Cottage hospitals 315
MAYNEORD W V X ray dosage in malignant disease 146
Mayo Clinic Proceedings of the Staff Meetings of the Pain in peptic ulcer 535—One of the first patients to receive insulin 597
MAYO W J Social training for the doctor 1044
Mazoplasia 151
Measles amidopyrin in 1200
Measles convalescent serum in prophylaxis of (William Gunn) 183 (O)—(A G Signy) 334
Measles meningo encephalitis of (A L Crockford) 1171
Measles serum prophylaxis of (J I Collier) 703 (O)
940
Medical Annual *L'Année médicale pratique* rev 992
Medical books *See* Books
[illegible] See Services
[illegible] matography
[illegible] See Russia
Medical curriculum parasitology in the (D B Blacklock) 1178
Medical curriculum The student in irons (C M Wilson) 485 *See also* Student in irons —*Proposed extension of in Scotland* 212 629 *See also* Universities Scottish
Medical and Dental Students Register (1932) rev 617
Medical education in Hungary (A B L Beznak) 998
Medical education methods of 764
Medical education reform of 212 629
Medical education in the Sudan 301
Medical electricity *See* Electricity
Medical engineering *See* Engineering
Medical epitaphs 738
Medical History Annals of (edited by Francis R Packard) new series vol iii No 5 rev 66 vol iii No 6 rev 196 vol iv No 1 rev 714 vol iv No 2 rev 943 vol iv No 3 rev 1132
Medical History Foundations of (Sir D Arcy Power) 474
Medical jurisprudence review of book on 474
Medical man acquitted on charge of manslaughter (Alfred Hugh Bell) 219
Medical man awarded damages for personal injury (Joyce *v* Wilson) 914
Medical man and philosophy 591 728
Medical missionaries *See* Missionaries
Medical obituaries bygone 302
Medical Officers of Schools Association *See* Association
Medical portraits at the Royal Academy 853
Medical presidents of the Royal Society 576
Medical profession and climatology (parliamentary note) 916
Medical profession overcrowding of in France 767
Medical Register 1932 rev 617
Medical referees (parliamentary note) 408 *See also* Workmen's Compensation Act
Medical Research Council *See* Research
Medical secretariat 537
Medical services in the Forces amalgamation of (parliamentary note) 1108
Medical services in Scotland conference on 1049
Medical Superintendents Society *See* Society
Medical supplies for missions 355
Medical and surgical preparations and appliances *See* Preparations
Medical title false use of (Faulkner *alias* Kirkup) 690
Medical tours of the spas etc of Italy 783—In France 1109—To Canada and the United States 1199
Medical Women's Federation London Branch Treatment of anaemias 62—Analgesia and anaesthesia in normal labour 660—Diagnosis of pregnancy 936 *See also* Association London
Medicine advance of (Lord Moynihan) 1096
Medicine biochemistry in (W Langdon Brown) 523—(Sir Frederick Gowland Hopkins) 524 569—A correction 569
Medicine forensic group specific substances in (Lieut Col R B Lloyd) 284
Medicine mental yesterday and to-morrow 25
Medicine modern tendencies in 774
Medicine military lectures on in France 640
Medicine preventive Centres of in Belgium 586—In the Rand mines (A J Orenstein) 996
Medicine review of books on 102 336 338 475 614 617 758 808 1176

MEDICO LEGAL
Assurance Policy unusual claim under accident or disease (Weyerhaeuser *v* Evans) 822
Bogus doctor sentenced for fraud and bigamy 1196
Fatal mistake at hospital 359
Medical man acquitted on charge of manslaughter (Alfred Hugh Bell) 219
Medical man awarded damages for personal injury (Joyce *v* Wilson) 914
Medical title false use of (Faulkner *alias* Kirkup) 690 *See also* Bogus doctor
Negligence alleged against insurance practitioners charges withdrawn after hearing (Boon *v* Pritchard and Allen) 594
Negligence alleged against an Irish doctor (Boyle *v* Martin) 966
Negligence charge of against surgeon withdrawal of charge (Tudor *v* Mein) 504
Negligence charge of surgeons vindicated (Russell *v* Hey Groves and Lancaster) 1152 1197
Osteopath High Court decision against (A E Shakesby) 914 965 1060
Penal servitude for unqualified practitioner (George Edward Williams) 359
Physician and surgeon false use of the title (A E Shakesby) 1060
Position of an unregistered medical practitioner (Rupert Charles Handley Ensor) 266
Slander action by medical man for (Owen *v* Barham) 174
Trespass to the person negligence and breach of contract charge against hospital and surgeon (Cull *v* Royal Surrey County Hospital and H B Butler) 1195

MEHTA J N Report of the King Edward VII Memorial Hospital Bombay 725
MEILLÈRI Dr elected president of the Académie de Médecine 221
MEIN W A withdrawal of charge of negligence against 504
Melbourne treatment of infantile paralysis in (Jean Macnamara) 676
MELGRAVE M Maternal mortality 308
MELLIS Lieutenant General death of 593
MELLANBY Edward awarded the Cameron Prize 407
MELLANBY May (and C Lee PATTISON) Influence of a cereal free diet rich in vitamin D and calcium on dental caries in children 507 (O)
MELVILLE Stanley Protection of x ray workers 192
Membership of the Royal College of Physicians Demonstrations for candidates 870
MENDEL Lafayette B presentation to 361
Meningitis aseptic acute (Adam L K Rankin) 138 (O)—Correspondence on 544
Meningitis cerebro spinal (parliamentary note) 1154
Meningitis due to *B anthracis* (W K Dunscombe) 190
Meningitis epidemic (A W Hedrich) 248
Meningitis meningococcal fulminating (J N C Ford Geoffrey Shera and Sir James Purves Stewart) 558 (O)
Meningitis streptococcal (haemolytic) recovery (T R Trounce and A H Douthwaite) 702
Meningo encephalitis with hydrocephalus (John Craig) 193
Meningo encephalitis of measles (A L Crockford) 1171
MENON T Bhaskara *An Introduction to Tropical Pathology* rev 1085
Menopausal insanity and bacterial toxaemia (T Cillman Moorhead) 923 (O)
Menopause and its complications (Gibbon FitzGibbon) 924 (O)
Menstruation in mental disease (Gilbert I Strachan and Ian Skottowe) 524
Mental abnormality inquiries into (leading article) 1134
Mental cases treatment of in Northern Ireland 724
Mental clinic Edinburgh corporation 256
Mental defect and alcohol (W Norwood East) 113
Mental defectives Bristol colony for opening of 857
Mental defectives in Great Britain numbers of (parliamentary note) 735
Mental defectives Larbert Colony for report 723
Mental deficiency lectures on 257
Mental deficiency review of book on 990
Mental deficients sterilization of Deputation to Minister of Health 315—Parliamentary notes on 357 409 548
Mental disease menstruation in (Gilbert I Strachan and Ian Skottowe) 524
Mental diseases in Ireland (J O C Donelan) 677
[illegible] 491
[illegible] ncil for Per
[illegible] ent for confer
Mental medicine Yesterday and to-morrow 25 *See also* Medicine
724
[illegible] nnual Report 43
Mental Welfare Association Scottish Annual conference 1185
Mentally defective children Education (parliamentary note) 824 870 1154—In special schools 1154
MENZIES Frederick Norton Kay K B E conferred on 69 75—Report on the work of the London County Council hospitals 156—London county hospitals 258
MENZIES Major T Tropical typhus 427
Merck's Annual Report English edition second part rev 386—Third part rev 1037
Mercury as a foreign body in a finger (George S R Little) 1080
MERRILL H G (and L W OAKS) *Your Vision and How to Keep It* second edition rev 243
Mersey tunnel ventilation of (parliamentary note) 916
MESSER A I The incidence of *Br abortus* infections 1030 (O)
Nutrition
Meteorology and health (G C Simpson) 156
Metropolitan Water Board Report for 1931 1178
MEUNIER Léon *Traitement Médical des Affections Stomacales* rev 294
MEYER Max *Les Affections de l'Oreille chez l'Enfant* rev 663
Microbiology review of book on 1083
Microscopy an accessory instrument in (ultro pak illuminator) 529
Microscopy review of book on 1084
MIDDLETON George Proctor appointed Surgeon Apothecary to the Household at Balmoral 71
MIDDLETON G Chemical assay of thyroid gland 711
MIDDLETON Henry Report of the Leeds General Infirmary 679
MIDDLETON James obituary notice of 1107
Midwife work of the (Bethel Solomons) 1002

Midwifery gas and oxygen in (C R Cotter) 809
Midwifery review of books on 102 1038
Midwifery training (Government grants for (parliamentary note) 596
Midwifery *See also Obstetrics and Gynaecology*
Midwives Board *See* Board
Midwives books for 1062
Migraine prolonged drug treatment of 127
MIKULICZ-RADECKI Felix von appointed to the chair of obstetrics and gynaecology at Königsberg 519
Milan post graduate courses at 127
MILES Alexander (and D I D Wilkie) *Thomson and Miles' Manual of Surgery* eighth edition rev 431
MILES W E and Ano rectal fistula 523
Military medicine *See* Medicine
Milk adulterated (parliamentary note) 454
Milk clean legislation for in Ireland 678
Milk for children in elementary schools (parliamentary note) 1108
Milk for children of school age (parliamentary note) 549
Milk and Dairies Act 596
Milk fresh imported (parliamentary note) 503
Milk freezing point of apparatus for determining 711
Milk injections in the treatment of erysipelas (Ibrahim Abd El Hay) 281 (O)—(A C McEachern) 1121 (O)—Correspondence on 357
Milk liquid imported (parliamentary note) 357
Milk loose (leading article) 716
Milk problem (leading article) 944—Correspondence on 1104
Milk raw and dental caries (F C Sprawson) 190 261 404—Correspondence on 261 306 404 496 550 593 642
Milk Reorganization Committee (parliamentary note) 870
Milk served in the House of Commons (parliamentary note) 639
Milk vitamin potency of 593
MILLARD C Killick A plea for the legalization of voluntary euthanasia under certain conditions now published in pamphlet form 111—Medical problems of contraception 1047
MILLER C H The syndrome of chronic toxic cholecystitis 286
MILLER Frederick Robert elected a Fellow of the Royal Society 484
MILLER J B Medical services in Scotland 1019
MILLER Reginald Housing in Paddington 1188
MILLIN Terence Fertility after prostatectomy 1148
MILLS H H Normal development in the young child 17—Excessive surgery 939
MILNE Arthur Dawson obituary notice of 453
MILNE James The first case of sprue in Malta 471
MINAKOFF Dr death of 732
MINAKOW I A death of 219
Mine workers pulmonary disease and (parliamentary note) 357
MINER Elmer A *Living the Liver Diet* rev 244
Miners Convalescent Homes *See* Convalescent
Miners cramp *See* Cramp
Miners nystagmus *See* Nystagmus
Miners Welfare Fund (parliamentary note) 1154
Mines death rate among boys employed in (parliamentary note) 503 *See also* Boys
Mines lighting in (parliamentary note) 454
Mines vote debate 869
Missionaries medical the training of 492 1109
Missions medical supplies for 355
MITCHELL A Malignant tumour of the posterior end of a rib 193
MITCHELL Lieut Col A B Benn Ulster Hospital 856
MITCHELL A G Antitoxin treatment of scarlet fever 440
MITCHELL C Ainsworth *The Scientific Detective and the Expert Witness* rev 104
MITCHELL H A Standardization of ergot 305—Intravenous liver therapy 1077
MITCHELL Sir Peter Chalmers Visits to Soviet Russia 642
MITCHINER Colonel Philip H Pitfalls of practice 531—Appointed Honorary Surgeon to the King 639
MOIR Chassar Clinical comparison of ergotoxine and ergotamine 1022 (O)—(and Sir H H Dale) The action of ergot preparations on the puerperal uterus 1119 (O)
MOIR J C Gonorrhoea and other cervical discharges 381—The teaching of obstetrics 965
MOLE R H Reticulo endothelial system 191
Moles treatment of 1015 1061
MOLINIE J Raymond death of 126
MOLL H H Hyperthyroidism with achlorhydria 496—Polycythæmia and the value of liver therapy in asthma 976 (O)
MOLLISON W M Acute and chronic suppuration in the antrum of Highmore 480—*Acute Otitis Media* rev 529—Polypi 1126
MONAKOW C M Schizophrenia 934
MONIZ Egas *Diagnostic des Tumeurs Cérébrales et Epreuve de l'Encéphalographie Artérielle* 573
MONOD Gustave The student in irons 725—Letter from France 767
MONTEITH W B R Local anæsthesia for tonsillectomy 1191
MOODIE William Child guidance clinics 39—Abnormal behaviour in children 428
Moon Frewen Essential hypertension 590
Moore J Craven Lactic acid in the gastric contents 771
Moore Henry A clinical study of achlorhydria 363 (O)—A correction 550
Moore R Foster Senile cataract 969
Moorhead T Gillman Report of the Royal National Hospital for Consumption 805—Mental insanity and bacterial toxæmia
Moorhouse C H obituary notice of 637
Morgan D M Medical problems of contraception 1047
Morgan William Carey *Functional Disorders of the Gastrointestinal Tract* rev 242
Morison Lieut Col John C I I conferred on 73—Awarded the Larkin prize 310—Cholera prevention in Assam 725—Report of the King Edward VII Memorial Pasteur Institute and Medical Research Institute Shillong 725
Moritz Friedrich awarded the Karl Ludwig medal 1015
Morland Andrew The normal temperature 1146
Morley A H Arterio venous aneurysm of the left superficial temporal vein 14
Morley H Seaward Duodenal ulcer types of stomach 647 (O)
Morlock H V Electric suction or pressure pump 154—Bronchoscopy and drainage in lung suppuration 661
Morris P J Hepato-splenography 1089
Morris Ernest William honour of knighthood conferred on 69 75
Morris R J Plantar corns 737
Morrison John T Intra thoracic new growths 17
Morrison Whitelaw Reid (and Jesse Fearing Williams) *A Text Book of Physical Education* rev 295
Morrison W S appointed a member of the Medical Research Council 441
Morson Clifford Vasoligation in prostatectomy 36—Radium 401
Mortality maternal 167 308 309 445 568 735 1060—Committee's report (parliamentary note) 1060—Committee's report (parliamentary note) 735 1060
Mortality maternity (James Young) 946—(Dame Louise McIlroy) 568
Mortality figures New York report on 157
Morton Hugh *Diseases of the Stomach* rev 197
Mosquitos and aeroplanes 670
Mosquitos anopheline review of book on 617
Moss F Lawton Face masks and fogged spectacles 169
Moss Frank A (and M Luckiesh) —*Seeing A Partnership of Lighting and Vision* 200
Motor accidents 735 *See* Accidents
Motor cars Driving licence test in cases of physical disability (parliamentary note) 1060—First aid equipment on motor vehicles (parliamentary note) 1060—Laying up the car in winter 316—Number of persons killed in Germany in 1930 by 1199—Premiums for insurance 598
Motoring deafness and hooters 770 *See also* Deafness
Motoring mischiefs of (Zachary Cope) 200—Discussion 251
Motorists and conveyance of goods 872
Motorists frost precautions for 84
Mottram J C Aetiology of cancer 495 593—Origin of tumours 803
Mouchet Dr elected vice president of the Société de Chirurgie 267
Mourge R Schizophrenia 934
Mouth breathing and nasal obstruction (Somerville Hastings and W Warwick James) 842—Discussion 843
Mouth dry 361 410
Mouth and face malformations of (Sir Arthur Keith) 383
Moynihan Lord The prognosis of gastric and duodenal ulcer 1 (O)—Elected a member of committee of the Radium Institute London 504—And Yorkshiremen 969—Honorary D C L Oxford conferred on 1013 1096—Romanes Lecture on the advance of medicine 1096
Mueckl Francis Malignant disease of pharynx and larynx 818
Muthehnfe Major S N Local novocain and splanchnic anæsthesia 84
Muir Ernest bar to Kaisar i Hind Medal con on 1097
Muir J B G Removal of an ascaris from the common bile duct 1077 (O)
Muir Robert (and James Ritchie) *Manual of Bacteriology* ninth edition rev 889
Mutheland S W Study of prostatic secretion and its relation to malignancy 201
Mullins Claud Liberty of the subject 241
Multibral 1177
Mumps convalescent serum in prophylaxis of (William Gunn) 183 (O)
Munby Alan E *Laboratories their Planning and Fittings* 814
Munro Norman M Oleothorax with observations on twenty cases 554 (O) 993
Murdoch A The use of self 1009
Murgatroyd Dr Gambian sleeping sickness 428
Muriel G Bertram appointed to the Commission of the Peace for Cumberland 221
Murphy J B oration 814
Murphy Lieut Col John Patrick Joseph obituary notice of 596
Murphy J Kennedy Treatment of varicose veins 1054
Murphy W P Treatment of pernicious anæmia 1129
Murray A M T Treatment of pernicious anæmia 1129
Murray Douglas *Studies in Nutrition* 1137
Murray Farquhar Backache and the orthopædic surgeon 711
Murray H Leith Gynæcological tumours 61—Endometrioma of anterior wall of vagina 61—Dermoid cyst of ovary 62—Ante natal radiology 335—Appreciation of Robert Stephenson Williams 358—Prolapse of female urethra 382—Tubal gestation 843—Simultaneous intra uterine and extra uterine pregnancy 84—Treatment of dysmenorrhœa 695—Death of 1137—Obituary notice of 1193
Murray Ian (and Andrew B Robertson) Significance and origin of lactic acid in the gastric contents 607 (O) 957
Muthu C Diet and dental caries 969
Myers Bernard Normal development in the young child 16—Non infective nephritis 52—Foetal pathology 710
Myoma of uterus total abdominal hysterectomy for (Herbert R Spencer) 1157 (O)
Myopia aetiology of 894
Myringotomy early in otitis media 168

Nagana trypanosome of (parliamentary note) 1053
Narcolepsy and ephedrine 703
Narcotic drugs *See* Drugs
Narcotics Intelligence Bureau Cairo (parliamentary note) 1108
Nasal cavity ionization of 751 918 *See also* Ionization
Nasal factor in asthma *See* Asthma
Nasal obstruction and mouth breathing (Somerville Hastings and W Warwick James) 842—Discussion 843
Nash W Clifford Cervical herpes with facial palsy 171
Nathan Marcel death of 631
National Institute of Industrial Psychology *See* Psychology
National Medical Journal of China amalgamates with the *China Medical Journal* and in future to be known as the *Chinese Medical Journal* 127
Nature for May 7th contains an article on the scientific career and work of Lord Rutherford 871
Navy Royal
Cerebrospinal meningitis in 1154
Dental officers in 506
Estimates 502 548
Health of in 1930 669
Invaliding 1109
Medical Service—Amalgamation of 1108—Promotions and appointments 75 920 *See also* Supplement Index
Naval surgeons shortage of 454 505
Parliamentary note 454 548 596 1108 1154
Royal Naval Volunteer Re erve Promotions and appointments 920 *See also* Supplement Index
Royal Naval Volunteer Re erve Officers Decoration 503 915
X ray photographs in the first 493
Neandff Dr *Tuberculosis in Denmark Norway and Sweden* 21
Needham Joseph *The Great Amphibium* 391—*Chemical Embryology* rev 757
Needham Richard Arthur Knighthood conferred on 1033 1097
Needle swallowed fate of a (Peter Rattray) 302—(William S Stevens) 456
Negligence alleged against insurance practitioners charges withdrawn after hearing (Boon v Pritchard and Allen) 594
Negligence alleged against an Irish doctor (Boyle v Martin) 966
Negligence charge of against a surgeon with drawal of charge (Tudor v Mein) 504
Negligence charge of surgeons vindicated (Russell v Hey Groves and Lancaster) 1152
Negus V E Diagnosis and treatment of lung abscess 789—Value of endoscopic methods 315 332
Neligan A E Industrial rheumatism 443
Nembutal as an analgesic 661
Nemet Geza *Guide to Radiologic Diagnosis in Heart Disease* 199
Neo-Hippocratism and child guidance clinics 122
Nephritis non infective Discussion at the Medical Society of London 522
Nephrostomy in theory and practice (Hugh Cabot) 841
Nerve cells and sense organs activity of 947
Nervous disorder functional nomenclature and (Doris M Odlum) 1169 (O)
Nervous system central brain circulation in *See* Brain
Nervous system review of books on 103 242 846

Nervous system sympathetic functions of the (H H Woollard) 566—Discussion 566
Nervous system sympathetic surgery of the (J Bagot Oldham) 568
Neurology, review of book on 1132
Neuropathology review of books on 293
Neurosis and occupation (R D Gillespie) 1320
Neurotic conditions in general practice diagnosis of (David Forsyth) 300
Neurotropic diseases treatment of by the method of phylaxis (René Cruchet) 85 (O) *See also* Phylaxis
Nivill W S Thacker Local anaesthesia for tonsils 1110
Newcastle upon Tyne public health in 117
Nicoms Wilfrid Davison awarded the Raymond Horton Smith Prize 41
New growths intra thoracic (Leslie Cunningham) 17—Surgical treatment of (A Tudor Edwards) 827 (O) *See also* Cancer malignant etc
Newland Sir Henry Simpson Appreciation of R H Todd 358
Newman Charles The syndrome of chronic toxic cholecystitis 287—*Medical Emergencies* rev 432
Newman Maurice The training of a specialist 176—Coronary disease 642
Newsholme Sir Arthur Appreciation of John Parlane Kinloch 407—Preparation for marriage 687 819

New South Wales
Infantile paralysis in 206
Metropolitan Hospitals Contribution Fund 210
Royal Prince Alfred Hospital 210
State Lottery 211 *See also* Australia *and* Sydney

Newton [Sir Isaac] the man 343
Newton R L Treatment of eclampsia 613
New Year honours 69 75
New York mortality figures 157
New Zealand British Empire Cancer Campaign 115—Hospital administration 115—*New Zealand Official Year Book* new issue 505—Vital statistics 115
Nicholson Ruth Unusual tumour obstructing labour 62
Nickle workers cancer in *See* Cancer
Nicol W D Induced malignant tertian malaria 987
Nicolle J Ernest The age incidence of sero positive syphilis in females 749 (O)
Nicolich Merida death of 867
Nicolle Professor appointed to the chair of medicine at the Collège de France 505
Nielsen Ludwig death of 314
Nietzsche's mental breakdown 537
Nightingale Florence rev 431
Nixon J A Effect on child of acute illness in pregnancy 464
Nixon W C W Haematoma of the gastro colic omentum 797
Noble T G Gas fires and ventilation 1188
Noble Watson obituary notice of 593
Nockolds H Pathological services of the London County Council 729
Nomenclature of diseases a revised (leading article) 892
Nomenclature and functional nervous disorder (Doris M Odlum) 1169 (O)
Norman Montague C Andrew Balfour memorial 257
North West Frontier operations Names mentioned in dispatches 915

Notes Letters Answers etc
Abscess cerebral silver wire as a drain in 222
Acetic anhydride test priority of 176
Achlorhydria 550
Acid water supply 641
Aircraft wreckage Air Ministry's appeal 692
Amidopyrin in measles 1200
Anaesthesia local for tonsils 1110
Anaesthesia splanchnic and local novocain 84
Anaesthetic masks 784 826
B aerogenes as an index of water purity 826
Back cold 83
Bee stings 455 1061
Begging letter writer 1200
Bio Physical Assistants Association of 44
Brachial embolus 268
Brain of the East African native 826
Breast for nursing preparation of 784 826
British students at Leyden 784
atment of 1156
Death 362 410 456
Cerebro spinal fever rapid recovery in 918
Che elden's death 598
Chloroform and the Edinburgh school 692
Claudication intermittent? 221
CO in resuscitation 84
Coincidence 642
Cold back 83
Cold the common 362 506 550
Contraceptive methods adequacy of 1200
Corns plantar 692 737 783 826 872 918 957 1016
Corrections 84 268 362 456 550 738 784 826 919 968 1016
Coronary disease 642
Cowper's insanity 316 361 410 506
Cow pox or vaccinia case of 268
Cramp miners 116

Notes Letters Answers etc *(continued)*
Delivery of a contraceptive 84
Dermatitis shoe leather 456
Determinism is it dead? 738
Diathermy apparatus surgical 84
Disclaimers 456 642 1016 1110 1156
Doctors and district nurses in industrial areas 456 550 598 642 738 784 826 872 918
Drug addicts in court 316
Drug advertisements replies to 44
Dysidrosis in Western Australia 1200
Dysmenorrhoea treatment of 84
Ears prominent 597
Emphysema subcutaneous in measles 176
Ephedrine hydrochloride overdose of 737
Ether convulsions 1156
ase 784
Fever enteric prophylaxis of 268
First aid classes 872
First aid equipment on the roads 738
456
Gas stand a convenient 598
German mental hospitals a tour of 692
Goethe and the male climacteric 222
Golf medical 826—Blyth Division Annual match 826—Dumbarton Division Treasurer's Cup competition 1016—Manchester and District Medical Golfers annual competition 919—Medical Golfing Society Summer meeting 872—Meeting at Walton Heath 1156—Southport Division Treasurer's cup 1062—Surrey Medical (B M A) Golfing Society Spring meeting 1062
Heart congenital malformation of in two successive pregnancies 1016
Heaviside John and his museum 1062
Heel painful 43
Hensen Victor 268
Herpes and chicken pox occurring together 1062
Holiday home 958
Hospitals and economy 1110
Impotence following tonsillectomy 221 268
Income Tax 44 83 128 176 222 268 316 362 410 456 506 550 598 641 692 737 784 826 872 918 968 1016 1061 1110 1156 1200
Appointment under the Crown free quarters 84
Appointment travelling expenses 456
Appointments various 1061
Assessment for past years 222
Assistant expenses 268
Assistant tax not applied for 84
Cash basis partnership 968
of bonus
Continuous employment 83
Depreciation of car *See* Motor
Disability pensions 826
Dissolution of partnership 1062
Division of partnership assessment 362
Employment of boy on car and garden 738
Employment expenses 1110
Employment in India emoluments 84
Examination fees 968
Expenditure on medical books and apparatus 598
Firm depreciation and renewal of cars 1062
Free furnished quarters 1156
Income from property 128
Loss on practice 918
Maidservant professional expense 692
Motor car Allowance 222—Depreciation 316 872 1016 1062 1110—Obsolescence 872—Replacement 176 316 598 1110 1156 1200—Used for private purposes 641
Partnership change expenses and basis 784
Payment of interest 362
Payment for recommendation 598
Professional expenses 872
Proportion of house used professionally 737
Proportion of rent for professional use 84
Public appointment expenses 872
Purchase of professional equipment 1200
Receipt of gifts 918
Receipts from lectures 316
Residence professional use 44
Residence in the United Kingdom 410
Resident hospital director 550
Retirement of partner 222
Salaried appointment subscriptions 362
Sale of practice 176
Sale of share in partnership 506
Shares in a colonial company 598
Statement of capital 83
Use of residence for practice 506
Wear and tear claim for arrears 362
X ray equipment depreciation 1016

Indian Medical Service pensions a correction 738
362
eral practice

Notes Letters Answers etc *(continued)*
Medical epitaph 738
Midwives books for 1062
Motor car insurance premiums for 598
Motorists First precautions for 84—And conveyance of goods 872
Mouth dry 361 410
Naevi and heredity 1156
Needles swallowed fate of 456
Novocain anaesthesia *See* Anaesthesia
Obstetric calculator 222
Oedema in the newborn 968
Oedema unilateral 783 872 967
Operation at advanced age 362 410
Orthoptic treatment 918
Pain in stomach or colon? 1110
Pediculosis in schools results of a campaign against 128
Prostatectomy and results of 871
Purchase of professional equipment 1200
Rickets in Scotland 506
Russia Soviet visits to 642 784
Sacrum the 1200
Sepsis and subinvolution 128
Sex equality 222
Sex hormones research on 268
Shoe leather dermatitis *See* Dermatitis
Silver wire as a drain in cerebral abscess 222
Specialist training of a 176
Stethoscope for deaf doctor 506 550 597
Student in irons 550
Sunburn 872 918 1061 1156
Tartar removal of 1156
Tea and sugar 968
Testimonials return of 1016 *See also* Vacancies
14
Typhoid carrier treatment of 1156
Ulcers mucocutaneous 737 784
316—
Relief of 221
Uvula shortening of elongated for cure of cough 506
t
ment 692

Nova et Vetera
Brontë's causes of death of the (C Mabel Edgerley) 619
Bygone medical obituaries 302
Cholera a popular pamphlet on (E Ashworth Underwood) 29
Poison cup mediaeval made from the terra sigillata of Malta (C J S Thompson) 73
Swallowed coin (1750) (F Roland Williams) 721
Novocain anaesthesia *See* Anaesthesia
Nuffield H (and F W Lapp) *Didaktik der chirurgischen Erkrankungen* rev 990
Nunan William Kaisar i Hind medal conferred on 75
Nurses C M B and puerperal septicaemia 498 546
Nurses and doctors in industrial areas 456 550 598 642 738 784 826 872 918
Nurses pensions *See* Pensions
Nursing District in London Annual meeting of the Central Council 493
Nurses tuberculosis among (Everett K Geer) 574
Nursing District in Scotland annual meeting of the Scottish Branch of the Queen's Institute of 32
Nursing Home and Clinic the London *See* London
Nursing Profession (Wages and Hours) Bill 962 1014
Nursing review of book on 152 475
Nursing service hospital Final report of the *Lancet* commission 344
Nursing staff of the London County Hospitals 628 *See also* Hospitals
Nutrition review of books on 1083 1137 1175
Nystagmus miners focal sepsis a predisposing factor in (F O Sullivan) 611—Parliamentary notes on 639 1059

O

Oaks L
and Hc
Obesity
—Note on 1042
Obituaries bygone medical 302
practice in the last
Obstetrics present and future of (W Blair Bell) 45 (O)

Obstetrics at the Rotunda Hospital progress in 559
Obstetrics teaching of (D Campbell) at Royal Society of Medicine 8
Obstetrics See also Cesarean Gynaecology and Midwifery
Obstruction acute surgical anaesthetic in (A S D Ilbert and B B Sworn) 552 (O)
Occupation and neurosis (D Gillespie) 132
Occupational diseases review of book on 60
Ochsner A (and) Introduction of bismuth into the larger
O'Connor F W Filariasis 1 of
O'Connor J Tuberculosis pericardial 6
Odontogenic cysts in chronic empyema See Empyema
Oedema Dorsal Nonrenal nature and functional treatment (Allen H Cott) 10
O'Donovan Charles Epidemic cholera 1
O'Dwyer Simeon and others Representative on the Committee of the National Association for the Prevention of Blindness 871
Oedema amenable in war conditions to 6
Oedema extrarenal 6
Oedema in the newborn (John Cuthbert) 557 (O) —Correspondence on 6
Oedema of the eyelids 552
Oedema of the vulva in Bright's disease (D W Carmalt Jones) 557 (O)
Oesophageal radium tube in urethra 57
Oesophagus Oesophagectomy in successful removal by endothoracic (Harold Dodwell) 553
Offenders Persistent 1160
Oliver W H Teaching of surgery in London (address in surgery) 5 6
Ohio River floodlevels in 1913 (M V Ardreyn) 8
Oil cod liver vitamin content of 8
Oldcastle reviews books on 60
Oldham J M Analgesia and childbirth 1155
Oldfield Cancer Diffuse epithelioma of the body of the uterus 11 —Three cases of carcinoma of the cervix associated with pregnancy 11
Oldfield Mitchell Chronic gangrenous ulceration of the duodenum 1
Oldham J Baron Surgery of the sympathetic nervous system 10
Oliver Ralph Sanham O B E conferred on 1
Oliver Mary Medical inspection and treatment of school children 1
Oesophagus (Norman M Morrell) 552 (O) —Correspondence on 1—Leading article on 553
Oesophagus adhesion and stricture and artificial pneumothorax (F C Chandler) 1115 (O)
Oesophagus treatment becomes of 1
Oliver H Corson Bronchomoniasis in Jersey 56 6—A correction on 618
Olpp G Recommended Tree children in Wertheim Bird rev 1
Omagh Board of Guardians and district any medical officer density 1
O'Malley J F Lardaceous organisms on colon in enteritis 93 (O)—The common cold 553—The ear and nerve referred pain 1115
Omentum gastrocolic Leiomyoma of (W C W Nixon
Omerod G L Treatment of pernicious anaemia 11
O'Neill Francis obituary notice on 555
Operation at advanced age 552
Ophthalmology in Egypt (leading article) 1193
Ophthalmology review of book on 1
Ophthalmology See also Eye
Ophthalmoscope and electric 1
Opium manufacture (parliamentary notes) 5 —Manufacture and distribution in India 557
Opium smoking and the Legislature of Nations 553
Opium Traffic Commission's Report (parliamentary notes) 6
Orbit perforated by an antler tine (J Cole Marshall
Order of St John of Jerusalem See St John
Organ Mouth and Antrum in measles 1571
Organ Perforated J Preventive medicine in the Rand mines 6
Organ G H All way and the profession —Alums and all conditions 5
Orkney-Gordon V G A Andrew Balfour memorial
Orr Campbell Address in
Orr Lyle An unusual case of insanity in an adult 551
Orr John Boyd elected a Fellow of the Royal Society
Orthopaedic Association See Association
Orthopaedic Clinic Edinburgh Annual meeting 1192
Orthopaedic problems 6
Orthopaedic surgery review of book on 665
Orthopaedics memoranda
Osteitis fracture of the (P Lecène and P Lemaresquier) 1
Osler Club 553 See also Club
Osteoma Orbital Report 5
Osteomyelitis a campaign against pessimism in the case of 12
Ostlere Arthur A Note in severe pharyngitis 552
Otitis fibrosa generalised and the pure agranulocytic
Otterhead Dr Tuberculosis in Denmark Norway etc 5 21
Otto-arthritis (Matthew B Ruel) 1192
Otto-arthritis of hip treatment of 772, 870 1 6
Osteogenesis imperfecta (James Crooke) 1 (O)
Osteopath High Court decision against (A L Shaw) 61 1 10
Otorhinolaryngology See Hydrocephalus
Otitis hydrocephalus See Hydrocephalus
Otitis media chronic suppurative conservative mastoidectomy or (L Graham Brown) 1 (O)
Otitis media tympanotomy early in 1
Otorhinolaryngology review of book on 660
Ovaban crystalline 1
Ovarian Tuberculosis rheumatism and 1
Ova early human (Wilfred Shaw) 11 (O)
Ovarian cyst See Cyst
Ovarian cyst early 1
Ovario Gestation Laparotomy Cesarean rev 11
Ovulation and the sex cycle (leading article) 1 —Correspondence on 1
Owens Barham (Letton and Leader) 1
Owens Hugh Brindley O B E conferred on 1
Owen Richard appointed an Officer of the Order of St John of Jerusalem 8
Owen Sidney Normal development in the young child 1
Oxley W H After-effects of the toxaemias of pregnancy 6
Oxygen and CO in medicine (J S Haldane) 1
Oxygen and gas in midwifery (G P Potter) 5
Oxygen and Everest 1
Oxford Infirmary Jubilee (Phillip Franklin) 1 (O)
Ozone in treatment and public health 1192

P

Packard Francis R Editor of Annals of Medical History vol iii No 5 rev to vol iii No 6 rev 1 to iv No 1 rev vol iv No 2 rev to iv No 3 rev 11
Pain sensation and origin 11
Pain (John C L Ainsworth) cosmetic orthoform in the relief of incompetent prostate 2 (O)
Paediatrics review of book on 65
Paediatrics teaching of in the United States
Paterson Hans Personal Injuries Act under Determination 1
Page C Max Haemolysis and the radical operation for hydrocele 1 —Apparatus for treatment of fractures 5 8
Page H L Acute Medicine book 1
Lacy Gotchen Hermann obituary notice of
Pain in peptic ulcer (L E Prickman) 5 See also Ulcer
Pain referred and the ear See Ear
Pain in stomach or colon 1160
Paine C G appointed lecturer in bacteriology at Sheffield 59—Colony variation in haemolytic streptococci and its importance in puerperal sepsis immunity 1
Paine C E review of book on 1
Pallerol M (and R Dessoir) Les Urines et Chromogènes rev 6
Palmer F W M appointed a Serving Brother of the Order of St John of Jerusalem 8
Palsy See Paralysis
Pan Edouard Marie Du destin de 1
Pancreas sarcoma See Sarcoma
Pannett Professor Cancer photography
Papilloma adenomatous of the duodenum (Andrew Fowler) 1 (O)
Paralysis facial operative treatment of (Sir Charles Ballance) 1 (O)
Paralysis facial with cervical Leprosy 1
Paralysis general review of book on
Paralysis infantile treatment of (E W Farnsworth) 1
Paralysis infantile In the United States of America, 1—In Melbourne (Jean Macnamara) 5
Parasitology review of book on 1
Pare byrdd and general medicine fibre in
Paramedical curriculum in the medical curriculum D B Blacker 1 Illus See also Medical curriculum
Parenteral liver therapy See Liver
Paris See France
Parkes E A Bischoff Lecture on rickets
Parker Percival on Death of 52—Obituary notice on 690
Parrish S I The teaching of obstetrics
Parsons Professor Retirement of sex hormone 1
Parliament Medical Notes in
Abortion cessation in cattle 1060
abortion Law concerning 653—Therapeutic indication of 5 —Induction of in cases of tuberculosis
Accidents Motor 535—Hospitals and 735 and 1192—Railway 5 8—Road 1 5 8 5 6, 1 6
Africa East, medical officers in and private practice 0
Agricultural policy 1
Alienation enforcement (leading article Harold Lee) 5 6
All India See India
Animals experimental on 91 101 See also Vivisection
Ante natal clinics 1
Anthracosis 115
Army and Air Force Annual Bill 3
Army British Economy on Army dress 11 —Recruits 5
Bacon cured with borax 595
Birth control clinics 1
Birth Control Conference National 1
Births and deaths in Trinidad 5
Blind persons unemployable 11
Blind statistics 52
Boys working in mine death rate among 5
Broadmoor dietary at 6
Budget 5 See also Finance Bill
Cancer in nickel workers 5
Cancer research grant for 11
Carbon monoxide poisoning 1
Census report 1
Central Provinces See India
Cerebral arterial Wind or 7 1 —A Aneurysm 1
Chemical defence 5
Children's Bill 2 3 356, 1 1, 1107 1158
Cholera in India 5
Coal Mines Bill 1058 1107 118
Cream imported butterfat content of 1
Dairy herds disease among 5
Deaf children education of 6
Deaf and dumb persons 1
Dental service school 115
Dermatitis industrial
Destruction of Imported Animals Bill 1 2 5 6
Diphtheria see Immunity
Disease incurable 1
Disinfectant cheap 1
Disinfectant sale of 1
Divorce where one of the spouses becomes insane after marriage 5
Dressing Army economy on 11
Driving licence test in cases of physical disability 1
Drugs Dangerous Bill 5 1 502 5 5 5 6 —Second reading 5
Drugs dangerous manufacture of in Britain 5
Edinburgh Corporation Bill 595 6
Egg imported
Encephalitis post vaccinal
Epsom College Bill 52, 915 1 1107 11
Examinations Navy 5 5—Army 52 5 —Air Force 52, 5 —Civil 5 —Home Office —Function —Agricultural 6
Factories laws relaxing to 11
Fascioliasis pectoralis report, 5
Finance Bill 915 1 1107 1152, 1
Fire brigade equipment on motor vehicle 1
Flood relief for China 2
Floods 11
Food Committee suppression of 115
Food inspection 5
Foot and mouth disease 2 52 —In Kent 5
Gas poisoning in warfare 5
Gold standard 5
Government Commissions staff at work 6
Health Unitary medical officer in 6
Health service —Cost of —In Scotland
Home administration Industrial diseases and young offenders
Horse and dog for experimental purposes See also Vivisection and Animals
Hospitals and the control of accident
Houses built with Smoke abatement 115
Illegitimate extension of surname girl
Import Duties Bill 5 5 5
Income tax on reduced earnings of practitioner 1
Incurable disease See Disease
India All Indian Medical Council 510 —Cholera in —Director of Public Health in the Central Provinces, —Medical qualifications in —Opium manufacture and distribution in —Pensions in the Indian service 505
Iron insufficiency of
Insurance National Health Amendment Bill 915 922, 1 1155 1158—Second reading —Approved Societies without surplus 915—Asthma patients hypodermic syringes for 522, 5 —Benefit through approved societies 595—Claims of insured women workers 5 —Decrease in expenditure —Dental benefit, —Income tax on reduced fees of practitioners, 1 —Insured persons not on panel of any practitioner 1158—Legislation concerning, 9 — Maternity benefit, 55—Medical benefit, 55 —Prolongation of Insurance Act, 595—Transfers small as voluntary contributor 45—Transitional benefit 5
Invention See Young
Kettering Gas Bill 595
Local Government Law 5
London County Council Bill 522
Lotteries Public, 65 —Royal Commission on 5
Lung disease tuberculous her 510
Maternal mortality 5 5 1 —Report, 1
Maternity and infant welfare 915
Meat imported fresh 510
Medical officers in East Africa See Africa

Parliament Medical Notes in (*contd*)
Medical profession and climatology 916
Medical referees 408
Medical Research Council's reduced grant 549
Medical services in the Forces amalgamation of 1108
Meningitis cerebro spinal 1154
Mentally defective children Education 824—In elementary schools 870 — In special schools 1154
Mental defectives in Great Britain number of 735
Mental defectives sterilization of 357 409 548
Mersey tunnel ventilation of 916
Midwifery training Government grants for 596
Milk adulterated 454
Milk for children in elementary schools 1108
Milk for children of school age 549
Milk and Dairies Act 596
Milk imported fresh 503
Milk imported liquid 357
Milk Reorganization Committee 870
Milk served in the House of Commons 639
Miners Welfare Fund 1154
Mines lighting in 454
Mines vote debate 869
Narcotics Intelligence Bureau Cairo 1108
Naval surgeons shortage of 454 596
Navy dental officers in 596 — Invalidings 1109
Nurses pensions 310
Nursing Profession (Wages and Hours Bill) 962 1014
Nystagmus 639 1059
Opium manufacture 824—In India 870
Opium Traffic Commission's report 454
C
I
P service 454
Pensions hospitals 503
Petrol fumes and exhausts sickness from 1108
Poison gas *See* Gas
Police services 868
Prison dietary 868 965
Prison services 868
Psittacosis 1060
Public Health (Cleansing of Shellfish) Bill 548 735 1059 1107 1154 1198
Pulmonary disease and mine workers 357
Radium 408 502—National Radium Trust 869
Reassembling of Parliament 266
Recruits limiting of 549
Refuse dumps 409 915—Metropolitan 409
Rent Restrictions Act 1107
Road accidents *See* Accidents
Road Traffic Act (1930) 408
Royal Medical Benevolent College Epsom 733
Royal Society for the Prevention of Cruelty to Animals Act 1198
School dental service 1154
Services committee on medical branches of the 915
in 780
Health
Ships British sanitary condition of 1014
Silicosis 638 870
Slum clearance 310 549 735 780 824—By Wallasey Corporation 824
Spahlinger formula 356 409
Sunday Performances Regulation Bill 638 733 1014
Sweepstakes *See* Lotteries
Tariff Advisory Committee *See* Imports Duties Bill
Tin foil and food poisoning 549
Town and Country Planning Bill 266 915 1059 1107 1198
Traffic in streets occupied by medical profession 639
Trypanosomes of Nagana 1060
Tuberculosis 454 868
Tuberculosis a remedy for 549
Tuberculosis treatment grants for 1059
Unfounded allegation *See* Allegation
Vaccination 408 503 548 1060 1109 1154 1199—In the United States 548—The manufacture of vaccine lymph in the Government lymph establishment 548
Vaccination Act 503
Vaccination pads 1060 1109
Veterinary Surgeons (Irish Free State Agreement Bill) 548 638
Vivisection 502 870 916 1014 *See also* Animals experiments on
Water supplies in rural parishes 549
Wheat Bill 454 502 595
Workmen's Compensation Act medical referees 408
Workmen's Compensation Conventions adopted at the International Labour Conference 964
Young offenders Cost of 778—Observation centres for 869

Parliament and National Health Insurance (leading article) 945
Parotid tumour *See* Tumour
Paroxysmal tachycardia *See* Tachycardia
PARRY L A The law and abortion 79—*Criminal Abortion* 441
PARRY T Wilson Members of the Royal College of Surgeons 0
PARRY EDWARDS T Llewelyn obituary notice of 1107
PARSONS A R Tuberculous pericarditis 662
PARSONS Sir John Problems of vision 1081
PARTRIDGE T Joyce Morbidity of the pelvic joints in pregnancy 684
Pasteur Institute Paris new tuberculosis laboratories 852
Pasteur Institute Shillong Report 725
PASTEUR Louis the genius of 850
Patella dislocation of (S A S Malkin) 888
Patent law and medical research (leading article) 810
Patents and Designs Bill 1069 1107
PATERSON Donald (and J Forest SMITH) *Modern Methods of Feeding in Infancy and Childhood* third edition rev 197
PATERSON D R The ear and referred pain 1125
PATERSON Marcus Sinclair Death of 1090—Obituary notice of 1151
PATERSON R Ralston The radio sensitivity of tumours 937
Pathological services of the London County Council *See* Council
Pathological specimens collection of 1183
Pathological specimens simple technique for 0 (O)
PATTERSON J W T Royal College of Ph
PATTISON C Lee (and May MELLANBY) Influence of a cereal free diet rich in vitamin D and calcium on dental caries in children 507 (O)
Paying patients Edinburgh Royal Infirmary scheme 255
Paying patients and hospitals 766 997 1142 *See also* Hospital provident scheme
Paying patients and radium supply to hospitals in Northern Ireland 768
Payment of visiting staffs of hospitals *See* Hospitals
PAYNE Lewin Raw milk and dental caries 191
PAYNE Reginald T Injection treatment of varicose veins 237—Hunterian Lecture on excretion urography 649 (O)
PEACOCK Roydon Cancer of the larynx 620
PEARCE T Vibart Adequacy of contraceptive methods 1200
PEARN O I Napier *Mental Nursing* (*Simplified*) rev 152
PEARSON S Vere International Artificial Pneumothorax Society 1104
PEARSON W Deep x rays for breast cancer 569
PECKHAM C F (and P H J TURTON) Case of undulant fever in Derbyshire 1029 (O)
PEDDIE W Problems of Vision 1081
Pediculosis in schools Results of a campaign against in Oslo (A Sundal) 128
PEEL A A Fitzgerald Simulation of heart disease 444
PELOUZE P S *Gonorrhoea in the Male and*
(O)—Correspondence on 685 1011
Pelvis disruption of the (L A H Snowball) 1076 (O)
PEMBERTON H S A diet clinic 568
PENDRED Vaughan Normal development in the young child 16
Pensions hospitals (parliamentary note 503 *See also* Hospitals
Pensions in the Indian Services (parliamentary note 503—Correspondence on 635 686—A correction 738 *See also* India
Pensions Ministry And genito urinary tuberculosis 307 350 403 448 544—Disabilities due
t
Pe
Pe 43
of
Peptic ulcer *See* Ulcer
Percaine preparations 198
PERCIVAL G H A note on the epidemiology of tinea capitis 93 (O)—(And R M Murray LYON and C P STEWART) A note on urinary proteose 136 (O) — Common forms of dermatitis 707
Percussion review of book on 431
Pericarditis tuberculous (J O Connor) 662
Perineal injury two unusual cases (G H Steele) 983
Perineum malformations of the (Sir Arthur Keith) 490
Peripheral vision *See* Vision
PERKINS G Fractures in the region of the ankle joint 473
PERKINS George Treatment of adolescent coxa vara 55 (O)
PERN Sidney Exophthalmos and sinusitis 448
PERRY Evelyn Report on a housing survey 493
Persistent offenders *See* Offenders and criminal
Personal injury medical man awarded damages for (Joyce v Wilson) 914
Petrol fumes and exhausts sickness from (parliamentary note) 1108
PETTIGREW F (and J A HENDERSON) Sudden death from haemorrhage into the suprarenal capsules in a child 14
PETTIT T Harold (and E B GUNSON) The circulation after an endurance test 280 (O)
Pharmaceutical centenary (C J Howlett and Son) 820
Pharmacology review of books on 384
Pharmacopoeia British 1932 1101
PHELPS C Analgesia and anaesthesia in normal labour 661
PHILIPS Murray N Cremation in Great Britain 576
PHILIBERT André *Précis de Bactériologie Médicale* rev 1083
PHILIP Peter W Elevation of depressed fracture of the skull in a newborn child 521
PHILLIPS Hugh Richard obituary notice of 1194
Philosophy British Institute of work of 356 450—Correspondence on 591
Philosophy and the medical man 591 728
PHILPOT J St L Crystalline vitamin D 144
Phosphorus therapy (zoin ciba) 198
Photography of pathological specimens *See* Pathological
Phototherapy in erysipelas (J M Davidson) 929 (O)
Phthisis *See* Tuberculosis
Phylaxis in the treatment of neurotropic diseases (René Cruchet) 85 (O)—Correspondence on 170 *See also* Neurotropic
book on 29
se use of the title
Physiological chemistry *See* Chemistry
oks on 244 430 571
Dunham lecturer at
Pickett Thomson Research Laboratory Annals of vol vii *The Pathogenic Streptococci* rev 570
PIERCE Howel B (and D J HARRIES) Hydronephrotic pelvic kidney 612
PIM H V (and H Cecil BARLOW) Death from rupture of the liver in a newborn infant 887
PINCHIN A J Scott Electric suction or pressure pump 154—Bronchoscopy and drainage in lung suppuration 661
PINUS N Hyperpiesia 170
PINEY A Treatment of carcinoma 150—(And Stanley WYARD) *Clinical Atlas of Blood*
marriage 913
PITTS V T Raw milk and dental caries 191
Pituitary lobe posterior function of (Harvey
dence on 1008
laria 341
PLATT Harry Fractures in the region of the ankle joint 473
PLATT Robert Visceral herpes zoster 623—Case of polycythaemia rubra developing anaemia 750 (O)
PLESSIER Paul *Traitement du Bec de Lièvre Unilatéral Procédé du Dr Veau* rev 1036
Pleuro pneumonia causative organism of 937
Plotz Ella Sach Foundation Report 1082
Plumbism *See* Lead poisoning
Pneumococcal typing a direct method of (W R Logan and J T Smeall) 188 (O)
Pneumococcal typing immediate (Richard R Armstrong) 187 (O) 260—Correspondence on 260 305 354
Pneumonia recent outbreak of (T John Poynton) 698 (O)
Pneumosintes vaccine in the treatment of influenza 222
Pneumothorax artificial adhesive cutting and oleothorax (T
Pneumothorax com
plicated by neumo
thorax (James D Macfie and Arthur J P Alexander) 1079
Pneumothorax artificial Report of Refills Committee 1155
P
Poison cup mediaeval made from the terra sigillata of Malta (C J S Thompson) 73
Poison gas *See* Gas
Poisoning arsenic at Havre 825
Poisoning carbon monoxide (parliamentary note) 409
Poisoning food and tin foil (parliamentary note) 549
Poisoning lead as a cause of peptic ulcer (David R Lewis) 185 (O) 308 449—Correspondence on
erica
76—In
New
South Wales 906
POLLARD Bilton estate and bequests of 221
Polycythaemia and liver therapy in asthma (H H Moll) 976 (O)
Polycythaemia rubra and achlorhydria 817 860
Polycythaemia rubra *developing* anaemia (Robert Platt) 750 (O)—Correspondence on 817
Polypi (G Scott Williamson) 1126
POPE P A disclaimer 642
Population growth of (leading article) 573

[illegible]

[illegible]

[illegible]

Parliament Medical Notes in (*contd*)
Medical profession and climatology 916
Medical referees 408
Medical Research Council's reduced grant 549
Medical services in the Forces amalgamation of 1108
Meningitis cerebro spinal 1154
Mentally defective children Education 824—In elementary schools 870 — In special schools 1154
Mental defectives in Great Britain number of 735
Mental defectives sterilization of 357 409 548
Mersey tunnel ventilation of 916
Midwifery training Government grants for 596
Milk adulterated 454
Milk for children in elementary schools 1108
Milk for children of school age 549
Milk and Dairies Act 596
Milk imported fresh 503
Milk imported liquid 357
Milk Reorganization Committee 870
Milk served in the House of Commons 639
Miners Welfare Fund 1154
Mines lighting in 454
Mines vote debate 869
Narcotics Intelligence Bureau Cairo 1108
Naval surgeons shortage of 454 596
Navy dental officers in 596 — Invalidings 1109
Nurses pensions 310
Nursing Profession (Wages and Hours Bill) 962 1014
Nystagmus 639 1059
Opium manufacture 824—In India 870
Opium Traffic Commission's report 454
Ottawa Economic Conference 1153
Patents and Designs Bill 1059 1107
Pensions Disabilities due to war service 454
Pensions hospitals 503
Petrol fumes and exhausts sickness from 1108
Poison gas *See* Gas
Police services 868
Prison dietary 868 965
Prison services 868
Psittacosis 1060
Public Health (Cleansing of Shellfish) Bill 548 735 1059 1107 1154 1198
Pulmonary disease and mine workers 357
Radium 408 502—National Radium Trust 869
Reassembling of Parliament 266
Recruits limiting of 549
Refuse dumps 409 915—Metropolitan 409
Rent Restrictions Act 1107
Road accidents *See* Accidents
Road Traffic Act (1930) 408
Royal Medical Benevolent College Epsom 733
Royal Society for the Prevention of Cruelty to Animals Act 1198
School dental service 1154
Services committee on medical branches of the 915
Sexual offences examination of girls in 780
Shellfish 735 1154 *See also* Public Health (Cleansing of Shellfish) Bill
Ships British sanitary condition of 1014
Silicosis 638 870
Slum clearance 310 549 735 780 824—By Wallasey Corporation 824
Spahlinger formula 356 409
Sunday Performances Regulation Bill 638 733 1014
Sweepstakes *See* Lotteries
Tariff Advisory Committee *See* Imports Duties Bill
Tin foil and food poisoning 549
Town and Country Planning Bill 266 915 1059 1107 1198
Traffic in streets occupied by medical profession 639
Trypanosomes of Nagana 1060
Tuberculosis 454 868
Tuberculosis a remedy for 549
Tuberculosis treatment grants for 1059
Unfounded allegation *See* Allegation
Vaccination 408 503 548 1050 1109 1154 1199—In the United States 548—The manufacture of vaccine lymph in the Government lymph establishment 548
Vaccination Act 503
Vaccination pads 1060 1109
Veterinary Surgeons (Irish Free State Agreement Bill) 548 638
Vivisection 502 870 916 1014 *See also* Animals experiments on
Water supplies in rural parishes 549
Wheat Bill 454 502 595
Workmen's Compensation Act medical referees 408
Workmen's Compensation Conventions adopted at the International Labour Conference 964
Young offenders Cost of 778—Observation centres for 869

Parliament and National Health Insurance (leading article) 945
Parotid tumour *See* Tumour
Paroxysmal tachycardia *See* Tachycardia
PARRY L A The law and abortion 79—*Criminal Abortion* 441
PARRY T Wilson Members of the Royal College of Surgeons 0
PARRY EDWARDS E Llewelyn obituary notice of 1107
PARSONS A R Tuberculous pericarditis 667
PARSONS Sir John Problems of vision 1081
PARTRIDGE E Joyce Morbidity of the pelvic joints in pregnancy 684
Pasteur Institute Paris new tuberculosis laboratories 652
Pasteur Institute Shillong Report 725
PASTEUR Louis the genius of 850
Patella dislocation of (S A S Malkin) 888
Patent law and medical research (leading article) 810
Patents and Designs Bill 1059 1107
PATERSON Donald (and J Forest SMITH) *Modern Methods of Feeding in Infancy and Childhood* third edition rev 197
PATERSON D R The ear and referred pain 1125
PATERSON Marcus Sinclair Death of 1090—Obituary notice of 1151
PATERSON R Ralston The radio sensitivity of tumours 937
Pathological services of the London County Council *See* Council
Pathological specimens collection of 1183
Pathological specimens simple technique for 0 (O) 527 572 760 notice of 866
PATTERSON J W T elected a Fellow of the Royal College of Physicians of Edinburgh 310
PATTISON C Lee (and May MELLANBY) Influence of a cereal free diet rich in vitamin D and calcium on dental caries in children 507 (O)
Paying patients Edinburgh Royal Infirmary scheme 255
Paying patients and hospitals 766 997 1142 *See also* Hospital provident scheme
Paying patients and radium supply to hospitals in Northern Ireland 768
Payment of visiting staffs of hospitals *See* Hospitals
PAYNE Lewin Raw milk and dental caries 191
PAYNE Reginald T Injection treatment of varicose veins 237—Hunterian Lecture on excretion urography 649 (O)
PEACOCK Roydon Cancer of the larynx 620
PEARCE T Vibart Adequacy of contraceptive methods 1200
PEARN C P Napier *Mental Nursing* (*Simplified*) rev 152
PEARSON S Vere International Artificial Pneumothorax Society 1104
PEARSON W Deep x rays for breast cancer 569
PECKHAM C F (and P H J TURTON) Case of undulant fever in Derbyshire 1029 (O)
PEDDIE W Problems of Vision 1081
Pediculosis in schools Results of a campaign against in Oslo (A Sundal) 128
PEEL A A Fitzgerald Simulation of heart disease 444
PELOUZE P S *Gonorrhœa in the Male and Female* second edition rev 338
Pelvic joints mobility of in pregnancy 684
Pelvic woman the chronic (Aleck Bourne) 551 (O)—Correspondence on 683 1011
Pelvis disruption of the (L A H Snowball) 1076 (O)
PEMBERTON H S A diet clinic 568
PENDRED Vaughan Normal development in the young child 16
Pensions hospitals (parliamentary note 503 *See also* Hospitals
Pensions in the Indian Services (parliamentary note 503—Correspondence on 635 686—A correction 738 *See also* India
Pensions Ministry And genito urinary tuber

P
People's League of Health Annual meeting 43—Report of Committee on Tuberculosis of Bovine Origin in Great Britain 618
Peptic ulcer *See* Ulcer
Percaine preparations 198
PERCIVAL G H A note on the epidemiology of tinea capitis 93 (O)—(And R M MURRAY LYON and C I STEWART) A note on urinary proteose 136 (O) — Common forms of dermatitis 707
Percussion review of book on 431
Pericarditis tuberculous (J O Connor) 662
Perineal injury two unusual cases (G H Steele) 983
Perineum malformations of the (Sir Arthur Keith) 490
Peripheral vision *See* Vision
PERKINS G Fractures in the region of the ankle joint 473
PERKINS George Treatment of adolescent coxa vara 55 (O)
PERN Sidney Exophthalmos and sinusitis 448
PERRY Evelyn Report on a housing survey 493
Persistent offenders *See* Offenders and criminal
Personal injury medical man awarded damages for (Joyce v Wilson) 914
Petrol fumes and exhausts sickness from (parliamentary note) 1108
PETTIGREW F (and J A HENDERSON) Sudden death from haemorrhage into the suprarenal capsules in a child 14
PETTIT T Harold (and E B GUNSON) The circulation after an endurance test 280 (O)
Pharmaceutical centenary (C J Hewlett and Son) 820
Pharmacology review of books on 384
Pharmacopœia British 1932 1101
PHELPS C Analgesia and anæsthesia in normal labour 661
PHILPS Murray N Cremation in Great Britain 576
PHILIBERT André *Précis de Bactériologie Médicale* rev 1083
PHILIP Peter W Elevation of depressed fracture of the skull in a newborn child 521
PHILLIPS Hugh Richard obituary notice of 1194
Philosophy British Institute of work of 356 450—Correspondence on 591
P
P
P
Photography of pathological specimens *See* Pathological
Phototherapy in erysipelas (J M Davidson) 929 (O)
Phthisis *See* Tuberculosis
Phylaxis in the treatment of neurotropic [illegible] Correspond
[illegible] on 29[illegible]
[illegible] e of the title
(A E Shakesby) 1060
Physics applied of to day 948
Ph[illegible]ics new conc[illegible]ts for 110
See Chemistry
oks on 244 430 571
PICK Ludwig elected Dunham lecturer at Harvard 967
Pickett Thomson Research Laboratory Annals of vol vii *The Pathogenic Streptococci* rev 570
PIERCE Howel B (and D J HARRIES) Hydronephrotic pelvic kidney 612
PIM H A (and H Cecil BARLOW) Death from rupture of the liver in a newborn infant 887
PINCHIN A J Scott Electric suction or pressure pump 154—Bronchoscopy and drainage in lung suppuration 661
PINES N Hyperplesia 170
PINEY A Treatment of carcinoma 150—(And Stanley WYARD) *Clinical Atlas of Blood*
I
I 146
PITT RIVERS George Preparation for marriage 913
PITTS A T Raw milk and dental caries 191
Pituitary lobe posterior function of (Harvey Cushing) 299—Correspondence on 349
Pituitrin in malignant disease effect of (F W Riches and M Kremer) 877 (O)—Correspondence on 1008
Plague prevention in Manchuria 623
Plantar corns *See* Corns
Plasmoquine in the treatment of malaria 341
PLATT Harry Fractures in the region of the ankle joint 473
PLATT Robert Visceral herpes zoster 623—Case of polycythæmia rubra developing anæmia 750 (O)
PLESSIER Paul *Traitement du Bec de Lièvre Unilatéral Procédé du Dr Veau* rev 1036
Pleuro pneumonia causative organism of 947
Plotz Ella Sach Foundation Report 1082
Plumbism *See* Lead poisoning
Pneumococcal typing a direct method of (W R Logan and J T Smeall) 188 (O)
Pneumococcal typing immediate (Richard R Armstrong) 187 (O) 260—Correspondence on 260 305 354
Pneumonia recent outbreak of (F John Poynton) 698 (O)
Pneumosintes vaccine in the treatment of influenza 222
Pneumothorax artificial adhesive cutting and oleothorax (I [illegible]
Pneumothorax
plicated by
thorax (James D Macfie and Arthur J P Alexander) 1079
Pneumothorax artificial Report of Refills Committee 1155
Pneumothorax review of book on 712
Pocock Hilda Voluntary sterilization 1046
PODACH E F *The Madness of Nietzsche* 537
Poison cup mediæval made from the terra sigillata of Malta (C J S Thompson) 73
Poison gas *See* Gas
Poisoning arsenic at Harlie 825
Poisoning carbon monoxide (parliamentary note) 409
Poisoning food and tin foil (parliamentary note) 549
Poisoning lead as a cause of peptic ulcer (David R Lewis) 185 (O) 308 449—Correspondence on 962 30 35 449 497
erica
76—In
New
South Wales 906
POLLARD Bilton estate and bequests of 221
Polycythæmia and liver therapy in asthma (H H Moll) 976 (O)
Polycythæmia rubra and achlorhydria 817 860
Polycythæmia rubra developing anæmia (Robert Platt) 750 (O)—Correspondence on 817
Polypi (G Scott Williamson) 1126
POPE P A disclaimer 642
Population growth of (leading article) 573

Porencephalic imbecility case of (Richard J A Berry and I R M Batt) 839 (O)
Port Sanitary Authorities Association of Annual meeting and dinner 1184
PORTER Charles Poulton of foot-rays by dogs 809
LOVETT Elsie awarded the Jessie Macgregor prize 1165
PORTEUS Stanley D *The Psychology of a Primitive People* rev 1038
PORTMANN Georges *Traité de Technique Opératoire Oto-Rhino-Laryngologique* rev 990
Post-graduate courses In Aberdeen 543—In Dundee 597—In Derby 631—In Edinburgh 675—In France 965 966—In Glasgow 1005—In Liverpool 691—In London 43 89 127 175 220 221 67 31 361 409 455 5 5 519 586 733 825 871 967 1015 1061 11 5 1155 1191—In the London County Council's hospitals 1[illegible]—In Manchester 581 783—In Milan 127—In Salford 409—For ship surgeons 1011—In Vienna 297 870—In Wales 725
Post-Graduate Hospital and Medical School British note on 533
POTTER G R Gas and oxygen in midwifery 859
Pottery regulation new 814 *See also* Silicosis
POTTS W A The cinema from the psychological standpoint 493—Shut Ieworth Samaritan fund 1057
[illegible] ent
[illegible] in
[illegible] 26—
British sea-coast resorts 478—Non-infective [illegible] ormitory 802
Fo[illegible] nd-aitions of *Medical History* rev 474—Finlayson Memorial Lecture on the progress of surgery as a London hospital (1850-1850) 857
POWER R Wood Ambulatory treatment of fractures 469
POYNTON F John Comments on the recent outbreak of pneumonia 698 (O)—Acute rheu[illegible] H Mitchiner) 631
[illegible] ualifications (India) 35
Practitioner March issue devoted to skin diseases 425
Practitioner in irons 770 *See also* Student
PRAUSNITZ Carl appointed Heath Clark Lecturer for 1932 560
PREECE T M Urology 856
Pregnancy acute illness in effect on child of 204
Pregnancy diagnosis of (Gladys Dodds) 935—(Dulcie Staveley) 937
Pregnancy ectopic Zondek-Aschheim test in (W W King) 382
Pregnancy mobility of the pelvic joints in 684
Pregnancy paroxysmal tachycardia associated with (David Fyfe Anderson) 657 (O)
Pregnancy simultaneous intrauterine and extrauterine (A Gemmell and H Leith Murray) 877
Pregnancy toxæmia of and puerperal sepsis (C G Paine) 1177
Pregnancy toxæmia of hitch blood pressure as an early sign of (F J Browne) 320 (O)
Pregnancy toxæmias of (Munro Kerr) 333—(Otto Grosser) 960—(Carlton Oldfield) 1177—After-effects of (James Young) 600
Pregnancy x-ray diagnosis of 937
Pregnancy [illegible] in the diagnosis [illegible] Gladys Dodds) 904
Pregnancy *See also* Gestation

PREPARATIONS AND APPLIANCES
Abdominal retractor Berkeley's modification of 1177
Anæsthetic mask 714—For ophthalmic use 296
Aspiration of fluid from the chest apparatus for 868
Blood-collecting apparatus 1054
Bone clamp for fractures 1133
Bone drills 809
Cannula uterine 21 66—For the rubin te 60
[illegible] 600
[illegible] bladder growths 386
Deaf non electrical aids for the 529
[illegible] thyroid gland) 848 for treatment of
Forceps biopsy and skin graft 617
Forceps craniotomy 296
Forceps dissecting and suture holding combined 145
Forceps for use with Michel and Kifa clips 760
Gas and oxygen in midwifery 869
Gestation period calculator 1062
[illegible] mics 891
[illegible]
Lamp hand [illegible] and inspection 1133
Laryngo-pharyngoscope illuminated direct 432
Microscopy accessory instrument in Ultropak illuminator 529
Multibral or sodium monobromolesate 1177
Ophthalmoscope an electric 197
Ophthalmoscopes electric device for preventing glare in 477
Ouabain crystalline 891
Percaine preparation 1062
Phosphorus therapy (zoin ciba) 1063
Pump electric suction or pressure 114
Radium tube for œsophagus rubber 477
Rapid 600
Scleral marker an accessory to the [illegible] puncture treatment of detached retina 953
[illegible] section of
Splint Thomas's modified 1063
[illegible] of 244
[illegible] tetraiodophenol
Syringe local anæsthetic 1035
Temperature sensation electric fitting for testing 477
Tonsil écraseur 234
Tonsil haemostat 200
Vitamin concentrate (Adexolin 600
Vitamin concentrates of cod liver oil 338
Vitamin D crystalline 855
Wirella sleeve 200
Wire extension new apparatus for 1062

Prescriptions 31 45 of 367 603 1041 1061 1162
Presidents Hall Aylesford visit of the Prince of Wales 1109
Preventive medicine See Medicine
PRICE-JONES C Megalocystic anæmia 779
PRICKARD A L F Pain in peptic ulcer 535
PRIESEL Richard (and R Richard WAGNER) *Zuckerkrankheit und ihre Behandlung* rev *Kinderalter* rev 960
PRIMROSE Alexander elected president of the Canadian Medical Association 671 814
PRIMROSE Ed J Road traffic signal 891
PRINGLE Seton Deep x-ray for breast cancer 569
Prison Dartmoor Convict's statement from the medical officer re the recent disorder 315
Prison dietary (parliamentary notice) 867 960
Prison services (parliamentary answer) 868
Prize Bathgate Memorial 1014
Prize Cameron 477
Prize Le Chaumont 101
Prize Halle 17
Prize Herbert 1014
Prize Ivison Macadam Memorial 1014
Prize Jacksonian 777
Prize Langley Memorial 815
Prize Lisle on Victoria Jubilee 1013
Prize Macgregor [Jessie] 300 1165
Prize Marshall Webb 1014
Prize medical science quinquennial 127
Prize Montefiore 1014
Prize Parkes Memorial 1111 1103
Prize Parkin 310
Prize Raymond Horton Smith 41
Prize Ranald Martin 1014
Prize Savill 1155
Prize trachoma œtiology of 1015
Prize Tulloch Memorial 1014
Prize Dawson William Memorial 207
Prizes awarded at the Army Medical College 1014
Prizes for essays by senior students and newly qualified practitioners 315
Procidentia review of book on 1084
Prognosis review of book on 603
Prolapse of uterus *See* Uterus
Prostate malignant diagnosis of (S W Mc[illegible] holland) 901
Prostate review of book on 443
Prostatectomy end results of 871
Prostatectomy fertility after 1102 1155
Prostatectomy in a nonagenarian aged 83 (John Everidge) 772
Prostatectomy simple (A Ralph Thompson) 600 (O)
Prostatectomy technique of discussion at the Manchester Surgical Society 225
Prostatectomy v. colligation in 80
Prostatic case nursing the 315
Protein [illegible] and allergy *See* Allergy
Protein [illegible] urinary (R M Murray Lyon G H Percival and C P Stewart) 156 (O)
PRUDDEN T Mitchell (and Francis DELAFIELD) *A Text Book of Pathology* fifteenth edition rev 572
PRUITT Marion C *Modern Proctology* rev 1084
Pruritus review of book on 891
Prussian Parliament election as first medical president 361
Psittacosis (parliamentary notice) 1060
Psychiatry review of books on 607 941
Psychological interest in general practice (F G Crookshank) 599 (O)
[illegible] on 728
[illegible] 42
[illegible] quiries) 80
Psychology Industrial National Institute of Annual meeting and report 462
Psychology Medical the Institute of Annual meeting 1060
Psychology review of books on 1027
Psychoneuroses and endocrine (W Langdon Brown) 225 (O)—Leading article 245—Correspondence on 350
Psychoneurosis review of book on 20
Psychopathology review of book on 20
Ptosis and congenital [illegible] epicanthus transmitted through four generations (Norman Po[illegible]
Ptosis right-sided con[illegible] ion and 35
[illegible] [illegible] thcoming 4[illegible]
[illegible] (of SLell[illegible] L) Bill
[illegible]
Public health in County Dublin 283
Public health review of book on 1037
Public Health Intelligence of the Health Organization of the League of Nations 600
Public Health International Report of committee 207
Public health in the Irish Free State Annual report 1116
Public health progress (leading article) 781
Public Health review of book on 1037
Public Health Services cost in Belfast 1117
Public health workers 504
Puerperal fever the source of infection in an outbreak of 375
Puerperal fever and pyrexia (A S M Macgregor) 800
Puerperal fever specific therapy of (T W Benson) 797
Puerperal sepsis bacteriological investigations 462
Puerperal sepsis prevention of (Lachlan Grant) 1[illegible]—(S J Cameron) 54—
Puerperal sepsis and prophylactic vaginal antisepsis (C L Somerville) 54 (O)
Puerperal sepsis and toxæmia of pregnancy (C G Paine) 1177
Puerperal sepsis æmia and C M B nurses 54
Puerperal temperature *See* Puerperal sepsis
Puig Felipe death of 867
Pulmonary disease and mine workers (parliamentary notice) 867
Pulmonary embolism *See* Embolism
Pump electric suction or pressure In *See also* Surgery suction in
[illegible] [illegible] of
Pupil I M *Lectures of Apoplexy Modernised with full Description of the Cure of the Irish Peasant* rev 617
PURVES-STEWART Sir James (J N C Ford and Geoffrey SHERA) Fulminating meningococcal menin[illegible]s 500 (O)—*The Diagnosis of Nervous Diseases* seventh edition rev 856
PYE Eva Analgesia and anæsthesia in normal labour 661
Pyelography (Dr Bonchier Hayes) 333 *See also* Urography
Pyogenic diseases review of book on 282
Pyrexia of obscure origin (Chetwynd J P Grosvenor and A H Douthwaite) 129 (O)—Correspondence on 209
Pyrexia and puerperal fever *See* Puerperal fever

Q

Queen's Institute of District Nursing Annual meeting of Scottish Branch 52 *See also* Nursing
Queen's [Mary Queen of Scots] obstetric history 278
QUENU Jean (and others) *Atlas de Radiographie Osseuse* rev 63
Quinine and malaria 280 779 *See also* Malaria

R

RAIMOND Martland Medical problems of contraception on 1047
[illegible] [illegible] ear) 1155
[illegible] toux test in W Ernest
[illegible] e the lungs
47—[illegible] *See*
[illegible]
Radiologists proposed appointment of a (Central Hospital Calway) 1155
Radiology anæsthesia (P E Roberts) 75
Radiology British Institute of Protection for x-ray workers 102
Radiology medical conjoint diploma in 1014
Radiology therapeutic lecture on 713
Radio-sensitivity of tumours *See* Tumours
Radium 931—Parliamentary notices on 502 867—National Radium Trust 869
Radium action of on malignant growths 647
Radium Conference Report with special reference to the four gram bomb 962—Correspondence on 1062
Radium containers in silk gauze packing for
[illegible] port 92
[illegible]
[illegible]
[illegible]
Radium Commission [illegible]

Radium tube for oesophagus a rubber 477
Radium and x ray protection 203
Radium and x ray workers blood condition of 1182
Radium and x rays in treatment Report of the State of Ontario Royal Commission 1088
RADLEY Sidney B Unusual case of sub peritoneal uterine fibroid 840
RAE Dr Report on the health of Aberdeen 32
RAHMAN K A Report on public health of the Punjab 444
RAINSFORD Colonel William John Read obituary notice of 503
RAJCHMAN Ludwik Public health intelligence of the Health Organization of the League of Nations 955
RALPH R S Pathological services of the London County Council 729
RAMON Y CAYAL Professor eightieth birthday of 1155
RAMSBOTTOM Albert (and CYRIL G EASTWOOD) Spontaneous hypoglycaemia 833 (O)
Rand mines preventive medicine in (A J Orenstein) 906
RANDALL Alexander *Surgical Pathology of Prostatic Obstructions* rev 430
RANDALL Burton Alexander death of 807
RANKIN Adam L K Acute aseptic meningitis 138 (O)
RANKIN Nicol Macnicol obituary notice of 125
Rassegna Internazionale di Otorino laryngologia first issue of 1015
Rat bite fever *See* Fever
Rat destruction Report of International Committee 207
RATHERY Professor appointed to the chair of medical therapeutics in the Paris Faculty of Medicine 221
RATTRAY Malcolm John obituary notice of 501
RATTRAY Peter Fate of a swallowed needle 302
RAVINA A *L Année Thérapeutique* sixth edition rev 760
RAW Nathan Human and bovine tuberculosis the question of mutation of the tubercle bacillus 377 (O)
RAWLENCE H F A modified Thomas splint 198
RAY Matthew B Osteo arthritis 789 O)—Fouling of footways by dogs 960
Ray Therapy Institute of Annual report 1174
RAYNER E Brian An unusual method of enucleating the tonsil 564
RAYNER H H Injury of rectum caused by the

rlia

Rectum injured by the faulty administration of an enema (H H Rayner) 419 (O)
Red Cross Rheumatism Clinic Annual report 584 1004
Red Cross Society Annual meeting of Edinburgh Branch 492—Ambulance service 953—Annual report 1004—*Report of Joint Council* 1051
REEKIE C Barclay Report on the health of Dunfermline 907
Reflexes conditioned and habit formation (W Horsley Gantt) 517 (O)
Refuse dumps 915—(Parliamentary note) 915—
note) 409
See Vital statistics
ith of 638
REID Lieutenant R I awarded the Montefiore Prize 1014
REID R I G Report on the health of County Armagh school children 494
REID Walter A honorary LL D Aberdeen conferred on 691
REID William Loudon obituary notice of 40
Relapsing fever *See* Fever
RÉMOND Antoine death of 314
Renal case investigation of a (F Hector Scotson) 235 (O)
Renal colic *See* Colic
Renal cyst *See* Cyst
Renal efficiency Van Slyke urea clearance test of (F Wordley) 334
Renal insufficiency meeting and competition on the study of at Evian les Bains September (1933) 691
Renal *See also* Kidney
RENAULT Jules nominated vice president of the French Council of Public Health 267
RENSHAW A (and others) *When and How to Collect Specimens for Laboratory Examination* 1183

port 439
Relation
Temple Research Fellowship in tuberculosis 816—Intelligence and disease report on (Sheperd Dawson and J C M Conn 205—Interver
eadie) 246
P Cath
nl s) 1137
C Grind
ley) 622—I
note) 549

oor on the value

R
211
Medical note on

Research Institute at Kuala Lumpur Annual report 158—Prophylaxis against typhus fever 158
Research Institute James Mackenzie Annual report 115
Research Laboratory Pickett Thomson Annals of vol vii *The Pathogenic Streptococci* rev 570
Research medical the Empire's debt to (F E Fremantle) 202
Research medical and the patent law (leading article) 810
Research Scientific and Industrial Department of Report for 1930-31 388—Report on atmospheric pollution 433
Respiration review of book on 1133
Respiratory complications post anaesthetic CO_2 in (J Ross Mackenzie) 561 (O)
Resuscitation CO_2 in 84
Rest 665
Reticulo endothelial system (R H Mole) 191
Retina detached a scleral marker as an accessory to the ignipuncture treatment of 943
Retinal structure and functions (R S Creed) 1082
Retinoscopy 109
Retractor Berkeley's abdominal modification of 1177
REVILLIOD Ernest death of 961
Revue de Laryngologie enters its fifty third year with an introduction by its founder E J Moure 127

Reviews of Books

Abdomen the Acute (C H Fargo) 1177
Abdominal Cavity and Peritoneum a Clinical Study of the (Edward Meal in Livingstone) 1036
Abdominal Operations the Management of (Rodney H Maingot) 384
Accidental Injuries (Henry H Kessler) 845
Acute Abdomen *See* Abdomen
Alcoholism The Social and Economic Aspects of the Drink Problem 571
Anatomy Cunningham's Text Book of (edited by Arthur Robinson) sixth edition 805
Anopheline Mosquitos *See* Mosquitos
Anorexia Nervosa (W Langdon Brown F G Crookshank J C Young, George Gordon and C M Bevan Brown) 20
Aneurysm of Aorta Les Anévrismes Intra pericardiques de l Aorte (Tulio Martini and Miguel Joselevich) 65
Annals of Medical History *See* Medical
Arts A Grammar of the (Sir Charles Holmes) 665
Asthma and Hay Fever in Theory and Practice (Arthur Coca Matthew Walzer and August A Thommen) 1035
Backward Child *See* Child
Bacteria Sulphur (David Ellis) 846
Bacteriological Technique the Essentials of (R F Hunwicke) 528
Bacteriology General a Text Book of (Edwin O Jordan) tenth edition 430
Bacteriology Manual of (Robert Muir and James Ritchie) *ninth edition* 889
Bacteriol
(André
Bacteriol
of vol ix 19
Bacteriology and the Study of Injections Recent Advances in (J Henry Dible) second edition 385
Bedside Manners (Christopher Howard) 1085
Benzol [Benzene] Poisoning (Carey P McCord Nora Cox and Charlotte O Boyle) second edition 992
Biographical Dictionary Biographisches Lexikon der hervorragenden Arzte der letzten fünfzig Jahre (I Fischer) 1085
Biology and Mankind (S A McDowall) 891
Biology Tabulae Biologicae Periodicae 714 1132
Birth Control Literature a Guide to (Norman E Himes) 807
Birth Control Physicians Manual of (Antoinette F Konikow) 807
Birth Control and Public Health 808
Birth Control *See also* Contraception
Black Death and Men of Learning (Anna Montgomery Campbell) 572
Blood Diseases Clinical Atlas of (A Piney and Stanley Wyard) 665
Blood Diseases Leçons cliniques sur les Maladies du Sang et des Organes Hématopoiétiques (Ch Achard) 759

phy
Haldin)

ot tescue

d Sadgo

pal) 65
Cae arean Section (Frances Ivens Knowles) 617
Cancer the Genesis of (W Sampson Handley) 194
Case of Mrs A (the Diagnosis of a Life Style) (Alfred Adler) 20

est sation (A Lucas) second edition 847
Chemistry Organic Recent Advances in (Alfred W Stewart) sixth edition 295
Chest Disease in General Practice with Special Reference to Pulmonary Tuberculosis (Philip Ellman) 664
Child Backward the Education of the (David Kennedy Fraser) 890
Childhood Disorders of Clinical Notes on (D W Winnicott) 65
Children We Teach (Susan Isaacs) 890
Children's Nursing *See* Nursing
Church Towers of England the Great (Frank J Allen) 1084
Circulation Die Regulierung des Blutkreislaufes (W R Hess) 1132
Cleft Palate Division Palatine (Victor Veau) 195
College Royal of Surgeons of England List of the Transactions Periodicals and Memoirs in the Library of second edition 943
Colloids (Ernest L Hedges) 714
Colloidal Chemistry *See* Chemistry
Colour Vision La Vision des Couleurs (Guiseppe Ovio) second edition 1177
Communicable Disease Control Report of Committee 104
Congress of the History of Medicine Rome Transactions 104
Contemporary Thought of Germany vol ii (W Tudor Jones) 104
Contraception the Practice of (edited by Margaret Sanger and Hannah M Stone) 807
Contraception International Medical Group for the Investigation of fourth issue 808
Contraception *See also* Birth Control
Cunningham's Text Book of Anatomy sixth edition 806
Dental Surgery and Pathology (Sir Frank Colyer and Evelyn Sprawson) sixth edition 1176
Dental Surgery the Science and Practice of (edited by Sir Norman Bennett) second edition 713
Dentists Register (1932) 617
Dermatologie (A Sézary) 1078
Dermatology Fundamentals of (Alfred Schalek) second edition 153
Dermatology *See also* Skin
Diabetes its Control by the Individual and the State (Elliott P Joslin) 759
Diabetes Directions for Treatment by Insulin and Diet (Benjamin F Smith) 19
Diabetes Mellitus the Pathology of (Shields Warren) 19
Diabetes Précis du Diabète (H Chabanier

ihre Behand
Priesel and
Richard Wagner) 760
Diabetic Management Simplified (Joseph T Beardwood and Herbert T Kelly) 759
Diagnosis the Clinical Interpretation of Aids to vol ii 20
Diagnosis and Treatment Modern the Science of Signs and Symptoms in Relation to (Robert John Stewart McDowall) 430
Dictionary Gould's Medical (edited by R J E Scott) third edition 338
Dietetics Diatetik bei Chirurgischen Erkrankungen (F W Lapp and H Nueffer) 990
Digestion Physiology of Traité de Physiologie Normale et Pathologique (G H Roger and Léon Binet) vol ii Alimentation et Digestion 571
Digestive Disorders Therapeutique Médicale des Maladies du Tube Digestif (Maurice Loeper and André Lemaire) 294
Digestive Disorders Traitement Medical des Affections Stomacales (Leon Meunier) 294
Digestive Organs Diseases and Disorders of the (Adolphe Abraham) 847
Digestive system *See* Gastro intestinal
D
ntschen
(Bruno

Disease Communicable Control of Report of Committee 104
Disease The Nature of (J E A Macdonagh) Part III Section I 196
Doctor's Defence (Sidney Fairway) 476
Doctors Grosse Arzte (Henry E Sigerist) 18
Drink Problem the Social and Economic Aspects of the 571
Drugs Narcotic Conference for the Limitation of the Manufacture of Records of vol i 1085
East Anglian Field Ambulance the 3rd [Four Lines] Record of during the Great War 1914-1919 476
Edinburgh Obstetrical Society Transactions vol ii 1038
Egypt The Home of the Occult Sciences (T Gerald Gaily) 21
Electrocardiography Atlas d Électrocardiographie Pratique (J Walser and L Deglaude) 1131
Electro Surgery Die Elektrochirurgie (Franz Keyssel) 528
(
eph Needham) 757
I L Frazer) 151
urgery
of Medicine at the
W Innes Smith)
713

Reviews of Books (*continued*)
European Conference on Rural Hygiene 21
Exercise Physiology of (Ferdinand Auns Schmidt and Wolfgang Kohlrausch) translated by Carl B Spurling Emil Rath and Leopold Zwarg 92
Eye Human The Fundus of the (Innes Clarke) 196
Eye Les affections de l Oreille chez l Enfant (Max Meyer) 63
Eye Your Vision and How to Keep It (H C Merrill and L W Oaks) second edition 243
Fantasy of the Seasons and Other Verses (Arthur E Gill) 135
Feeding Infants See Infants
Fertility in Marriage See Marriage
Fever Undulant La Fievre Ondulante (H Violle) 528
Fevers Tropical Handbook of (N P Jewell and W H Haunt) 816
Fighting Disease with Drugs the Story of Pharmacy (edited by John C Krantz jun) 432
Forensic Chemistry See Chemistry
Fractures (Maurice Sinclair) 336
French Medical Annual for 1931 692
Functions of the Human Eye (Innes Clarke) 196
Gastro-intestinal Tract Functional Disorders of the (William Cerry Morgan) 2 2
Gateways of Learning (Margaret Drummond) 890
Genetic Principles in Medicine and Social Science (Lancelot Hogben) 223
Genito-Urinary Organs Surgical Pathology of the (Arthur F Hertzler) 155
Genito-Urinary Tract Surgery of the (Ralph Colte) 753
German Technical Words and Phrases Marlborough's third edition 103
Gonorrhoea Gonorrhea (Bierrorragie) (Felice Maraini) 87
Gonorrhoea in the Male and Female (P S Leon
Gould's
Gout —
Traitement (Daniel Crillman) 120
Grammar of the Air See Air
Great Church Towers See Church
Gum and Oral Mucous Membrane Diseases of the (Sir Kenneth Goadby) fourth edition 13
Guy's Hospital Nursing Guide Handbook for Nurses League and Register of Nurses Trained at Guy's Hospital 62
Guy's Hospital Report vol 81 (vol xi fourth series) No 4 336
Gymnastics for Women and Girls Principles of (Ellis Hicks on) translated by Agnes Dawson and E M Wilkie) 336
Gynaecology Lehrbuch der Gynäkologie (W Stoeckel) third edition 8
Haemorrhoids and Anal Pruritus Proctoscopic Examination and the Treatment of (Louis Buie) 691
Hygiene
tion Treatment and
Goldbacher) second
Bec de-Lievre Et
Vein (Paul Ploscer)
Headache (William H Pobey) 276
Health Resorts Seaside and Watering Places in Italy 1177
Health Towards National (J Anthony Delmege) 1037
Henry the Eighth the Private Character of (Frederick Chamberlin) 1026
Histology Morbid Practical (Robert Donald
Higkin
Areas)
615
Hospital Services of the London County Council Medical Supplement to the Report 617
Hughlings Jackson See Jackson
Human Nature Laws of (Raymond H Wheeler) 975
Humours Among the Doctors (John Aye) 528
Hygiene an Introduction to (W Robertson) 660
Hypnotism and Hypnotherapy (Gustav Heyer translated by Arnold Liliart) 0
Infant Feeding Modern Methods of (Donald Paterson and J Forest Smith) third edition 197
Infant Feeding Notes on (G B Fleming) 153
Infant Food Feeding of (Mrs Henry Haldane) third edition 714
Infectious Diseases Resistance to (Hans Zinsser) fourth edition 572
(Price) 11s 0
International Clinics (Edited by Henry W Cattell) vol iii Forty-first series 153 vol iv Forty-first series 3 6
Intracranial Pyogenic Diseases (A Logan Turner and F Esmond Reynolds) 293
Iris Pattern in the Vertebrates (Ida Mann) 901
Italian Medicine See Medicine
Jackson John Hughlings Selected Writings of vol ii Evolution and Dissolution of the Nervous System Speech Various Later Addresses and Lectures (edited by James Taylor Gordon Holmes and F M R Walshe) 1 83
Jokes Seen and Unseen (David Fraser Harris) 476
Kidney Diseases of the (W Girling Ball and Geoffrey Evans) 61
Laboratories Manuel des Calculs de Laboratoire (H Vincent) 943
Laboratory Methods Clinical a Manual of (Clyde Lockridge Cummer) 5
Laboratory in Surgical Practice (E C Dodds and Lionel F H Whitby) 570
Lavage Therapeutique (A Ravina) sixth edition 760
Laws of Human Nature (Raymond H Wheeler) 975
Liver the Liver Diet (Emil A Vainer) 200
London Hospital Researches Published from the Wards and Laboratories during 1931 692
Lung and the Early Stage of Tuberculosis (Garrison Brown and Fred H Heise) 835
Lymphatic Glands Joining of Circulatory and Arterial Anastomy (James Goodfellow) 847
Manipulative Surgery (A S Blundell Bangs) 663
Marriages Arrangements for the Search for (G Ellis Smith) 62
Marlborough German Technical Words and Phrases third edition 103
Marriage Fertility and Sterility in Their Voluntary Promotion and Limitation (Th Van de Velde) Translated by F W Stella Browne) 8 5
Materia Medica Recent Advances in (J H Burn) 200
Medical Annual A Year Book of Treatment and Practitioner's Index fifty-ninth year 1932 (edited by Carey F Coombs and A Pendle Short) 640
Medical Annual French Année médicale practique 1932 (edited by Camille Lian and others) 92
Medical and Dental Students Register (1932) 617
Medical Dictionary See Dictionary
Medical Emergencies (Charles Newman) 432
Medical History Annals of (edited by Frank P Packard) new series vol iii No 5 to No 6 196 vol iv No 1 714 vol iv No 2 943 vol iv No 3 1132
Medical History the Foundations of (Sir D'Arcy Power) 476
Medical Peers of 1932 617
Medical Schools in China 21
Medicine General (Practical Medicine Series) 617
Medicine Italian (Archivio Cantonale ranslated by F B Krumbhaar) 943
Medicine Neue Deutsche Klinik (Georg and Felix Klemperer vol viii 200
Medicine for Nurses Text-Book of (E Noble Cleveland) 976
Medicine a Practice of (E Seyfarth translated by C F Marshall and C M Oeyl 192
Medicine Practice of (A A Stevens) third edition 800
Medicine and Surgery Practitioner's Library of (edited by G Blumer) vol i Anatomy and Physiology as Applied to Practical Medicine vol ii The Technique of Physical and Laboratory Examination in Clinical Medicine 1176
Medicine Science and Art Studies in Interrelations (Alfred E Cohn) 200
Medicine Short History of (John D Comrie) second edition 615
Mental Deficiency Practice of (F C Shrubsall and A C Williams) 60
Mental Nurses Textbook for (Elizabeth L Macalpine) 142
Mental Nursing Simplified (O P Napier Pearn) 132
Mercier's Annual Report English edition second part 3 6—Third part 1 37
Metabolism Therapeutique Medicale (Maurice Loeper and André Lemaire) 1176
Microbiology See Bacteriology
Microscopy Practical (L C Martin and B N
Schoo Collected
(
Midwifery by Ten Teachers (under the direction of Comyns Berkeley) edited by Comyns Berkeley and J S Fairbairn) fourth edition 102
Midwifery and Gynaecology Synopsis of (Alec W Bourne) third edition 63
Monkeys and Apes the Social Life of (S Zuckerman) 760
Mosquitoes Anopheline Larvae of with full Description of those of the Indian Species (L M Puri) 617
Mosquitoes Anopheline of South Africa Illustrated Keys to the Full Grown Larvae and Adults (Bonhadena Medlon) 617
Narcotic Drugs See Drugs
Nervous Diseases The Diagnosis of (Sir James Purves-Stewart) seventh edition 86
Nervous Manifestations—Les Accidents nerveux consecutifs aux Pertes de Sang Etude clinique et experimentale (Robert Worms) 242
Nervous System Vegetative An Investigation of the Most Recent Advances (Walter Timme Thomas h Davis and Henry Alsop Riley) 163
Neural Energy Conduction (John Bostock) 1176
Neurology Clinical A Text-book of (Israel Strachstein) second edition 1132
Nightingale Florence (Irene Cooper Willis) 432
Nosokomeion Medico Chirurgical Society Centenary of (March 7th 1932) 21
Novius Organum James Carey McKerrow) 200
Nucleic Acids (P A Levene and Lawrence W Bass) 1
Nurses Handbook for (J K Watson and
ed ion 476
Nurses Medicine for Text Book of (E
Chamberlain 976
Nurses Mental a Text-book for (Elizabeth L Macaulay) 132
rses (Junior) and Midwives Handbook for (J K Watson) second edition 976
Nursing Children's Nodes on (Margaret C Erskeben) 60
Nursing Mental Simplified (O P Napier Pearn) 132
Nursing Psychological Problems Mary Chadwick) 132
Nutrition and Diet in Health and Disease (James S McLester) second edition 10
Nutrition and Physical Fitness (L Vernon Loger) 260
Nutritional Physiology See Physiology
Occupational Diseases (Hesketh W Goadby) 65
Old Age The Conquest of (Pearson Schmidt trans ated by Eden and Cedar Paul) 8 6
Old Age Medical Aspects of (Sir Humphry Rolleston) second edition 8 6
Ophthalmological Society of the United Kingdom Transactions vol li 8 7
Ophthalmic See Eye
Organic Chemistry See Chemistry
Organotherapies Orthodox the Therapeutic Indications (Hans Spitz) 8 6
Other and Other Parents (William Sydney Thayer) 8
Otitis Media Acute (Wm Mansell Mollison) 5 6
Otorhino-Laryngology Traité de Technique Oto Rhino Laryngologique (Georges Portmann H Benoday Jean Desplas Paul Ledoux and G Jarmaud) 960
Oxford University Press General Catalogue seventh edition 1080
Paediatrics See Children's Diseases
Paralysie Générale Traitement de la (Victor Vesse) 196
Paralysis General Ergebnisse der Therapie der progressiven Paralyse (K Bonhoeffer and P Jossmann) 907
Parasites of Cancer (Edouard Benech) 21
Pathology a Guide to (D B Blacklock and T Southwell 15
Pathogenic Infection in Animals the Basis with Special Reference to Viruses (H C A Lamont) 871
Pathology Human (Howard T Karsner third edition 760
Pathology Surgical of the Genito-Urinary Organs (Arthur E Hertzler) 153
Pathology Surgical of the Skin Fascia Muscles Tendons Blood and Lymph Vessels (Arthur E Hertzler) 2
Pathology Surgical Text Book of (Charles W Illingworth and Bruce D Cail) 5 7
Pathology Text book of (Francis Delafield and T Mitchell Prudden) nineteenth edition 572
Pathology Tropical an Introduction to (T Bhalkara Menon) 1176
Pepsine Witte's Von Eiweiss Enzymen und Lipoiden 437
Percussion Die Perkussion under Lungenerkrankungen (Alfons Winkler) 21
Poisons as Narcotics and Stimulating Drugs Their Use and Abuse (Louis Lewin) 976
Pharmacology Applied (A J Clark fourth edition
Pharmacy the Story of 432
Philanthropy Sport See Sport
Philanthropy the Union of Oars (Eduard von Hartmann) new edition 976
Physical Education a Text Book of Theory and Practice (Irving Williams and Winslow Reid Morrison) 295
Physiological Chemistry See Chemistry
Physiology and Biochemistry Department University College London Collected Papers 5
Physiology Traité de Physiologie Normale et Pathologique (G H Roger and Léon Binet) vol i Alimentation et Digestion 572
(
570
Pneumothorax Spontaneous in the Apparently Healthy (Hans Rosenwald) 712
Poisons and Poisoners (J S Thompson) 135
Practitioner's Library of Medicine See Medicine

Parliament Medical Notes in (*contd*)
Medical profession and climatology 916
Medical referees 408
Medical Research Council's reduced grant 549
Medical services in the Forces amalgamation of 1108
Meningitis cerebro-spinal 1154
Mentally defective children Education 824—In elementary schools 870—In special schools 1154
Mental defectives in Great Britain number of 735
Mental defectives sterilization of 357 409 648
Mersey tunnel ventilation of 916
Midwifery training Government grants for 596
Milk adulterated 454
Milk for children in elementary schools 1108
Milk for children of school age 549
Milk and Dairies Act 596
Milk imported fresh 503
Milk imported liquid 357
Milk Reorganization Committee 870
Milk served in the House of Commons 639
Miners Welfare Fund 1154
Mines lighting in 454
Mines vote debate 869
Narcotics Intelligence Bureau Cairo 1108
Naval surgeons shortage of 454 596
Navy dental officers in 596—Invalidings 1109
Nurses pensions 310
Nursing Profession (Wages and Hours Bill) 962 1014
Nystagmus 639 1059
Opium manufacture 824—In India 870
Opium Traffic Commission's report 454
Ottawa Economic Conference 1153
Patents and Designs Bill 1059 1107
Pensions Disabilities due to war service 454
Pensions hospitals 503
Petrol fumes and exhausts sickness from 1108
Poison gas *See* Gas
Police services 868
Prison dietary 868 965
Prison services 868
Psittacosis 1060
[illegible] of Shellfish) Bill [illegible] workers 357
Radium 408 502—National Radium Trust 869
Reassembling of Parliament 266
Recruits limiting of 549
Refuse dumps 409 915—Metropolitan 409
Rent Restrictions Act 1107
Road accidents *See* Accidents
Road Traffic Act (1930) 408
Royal Medical Benevolent College Epsom 733
Royal Society for the Prevention of Cruelty to Animals Act 1198
School dental service 1154
Services committee on medical branches of the 915 [illegible] uls in 780 [illegible]blic Health [illegible] of 1914
Slum clearance 310 549 735 780 824—By Wallasey Corporation 824
Spahlinger formula 356 409
Sunday Performances Regulation Bill 638 733 1014
Sweepstakes *See* Lotteries
Tariff Advisory Committee *See* Imports Duties Bill
Tin foil and food poisoning 549
Town and Country Planning Bill 266 915 1059 1107 1198
Traffic in streets occupied by medical profession 639
Trypanosomes of Nagana 1060
Tuberculosis 454 868
Tuberculosis a remedy for 549 [illegible]— re of vaccine lymph in the Government lymph establishment 548
Vaccination Act 503
Vaccination pads 1060 1109 [illegible] Free State Agree 6 1014 *See also* Animals experiments on
Water supplies in rural parishes 549
Wheat Bill 454 502 595
Workmen's Compensation Act medical referees 408
Workmen's Compensation Conventions adopted at the International Labour Conference 964
Young offenders Cost of 778—Observation centres for 869

Parliament and National Health Insurance (leading article) 945
Parotid tumour *See* Tumour
Paroxysmal tachycardia *See* Tachycardia
PARRY L A The law and abortion 79—*Criminal Abortion* 441
PARRY T Wilson Members of the Royal College of Surgeons 0
PARRY EDWARDS E Llewelyn obituary notice of 1107
PARSONS A R Tuberculous pericarditis 667
PARSONS Sir John Problems of vision 1031
PARTRIDGE F Joyce Morbidity of the pelvic joints in pregnancy 684
Pasteur Institute Paris new tuberculosis laboratories 852
Pasteur Institute Shillong Report 725
PASTEUR Louis the genius of 850
Patella dislocation of (S A S Malkin) 888
Patent law and medical research (leading article) 810
Patents and Designs Bill 1059 1107
PATERSON Donald (and J Forest SMITH) *Modern Methods of Feeding in Infancy and Childhood* third edition rev 197
PATERSON D R The ear and referred pain 1125
PATERSON Marcus Sinclair Death of 1090—Obituary notice of 1151
PATERSON R Ralston The radio-sensitivity of tumours 937
Pathological services of the London County Council *See* Council
Pathological specimens collection of 1183
Pathological specimens simple technique for [illegible] 0 (O) 527 572 760 notice of 866
PATTERSON J W T elected a Fellow of the Royal College of Physicians of Edinburgh 310
PATTISON C Lee (and May MELLANBY) Influence of a cereal free diet rich in vitamin D and calcium on dental caries in children 507 (O)
Paying patients Edinburgh Royal Infirmary scheme 255
Paying patients and hospitals 766 997 1142 *See also* Hospital provident scheme
Paying patients and radium supply to hospitals in Northern Ireland 758
Payment of visiting staffs of hospitals *See* Hospitals
PAYNE Lewin Raw milk and dental caries 191
PAYNE Reginald T Injection treatment of varicose veins 237—Hunterian Lecture on excretion urography 649 (O)
PEACOCK Roydon Cancer of the larynx 620
PEARCE T Vibart Adequacy of contraceptive methods 1200
PEARN O P Napier *Mental Nursing* national Artificial
PEARSON W Deep *x* rays for breast cancer 569
PECTHAM C F (and P H J TURTON) Case of undulant fever in Derbyshire 1029 (O)
PEDDIE W *Problems of Vision* 1031
Pediculosis in schools Results of a campaign against in Oslo (A Sundal) 128
PELL A A Fitzgerald Simulation of heart disease 444
PELLOUZE P S *Gonorrhœa in the Male and Female* second edition rev 338
Pelvic joints mobility of in pregnancy 684
Pelvic woman the chronic (Alecl Bourne) 551 (O)—Correspondence on 683 1011
Pelvis disruption of the (L A H Snowball) 1076 (O)
PEMBERTON R S A diet clinic 568
PENDRED Vaughan Normal development in the young child 16
Pensions hospitals (parliamentary note 503 *See also* Hospitals
Pensions in the Indian Services (parliamentary note 503—Correspondence on 635 686—A correction 738 *See also* India
P [illegible]
P
P
Percaine preparations 198
PERCIVAL G H A note on the epidemiology of tinea capitis 93 (O)—(And R M MURRAY LYON and C P STEWART) A note on urinary proteose 136 (O)—Common forms of dermatitis 707
Percussion review of book on 431
Pericarditis tuberculous (J O Connor) 662
Perineal injury two unusual cases (G H Steele) 983
Perineum malformations of the (Sir Arthur Keith) 490
Peripheral vision *See* Vision
PERKINS G Fractures in the region of the ankle joint 473
PERKINS George Treatment of adolescent coxa vara 55 (O)
PERN *Sidney Exophthalmos and sinusitis* 448
PERRY Evelyn Report on a housing survey 493
Persistent offenders *See* Offenders and criminal
Personal injury medical man awarded damages for (Joyce v Wilson) 914
Petrol fumes and exhausts sickness from (parliamentary note) 1108
PETTIGREW F (and J A HENDERSON) Sudden death from haemorrhage into the suprarenal capsules in a child, 14
PETTIT T Harold (and E B GUNSON) The circulation after an endurance test 280 (O)
Pharmaceutical centenary (C J Hewlett and Son) 820
Pharmacology review of books on 384
Pharmacopœia British 1932 1101
PHELPS C Analgesia and anæsthesia in normal labour 661
Phyllis Murray N Cremation in Great Britain 576
PHILIBERT André *Précis de Bactériologie Médicale* rev 1083
PHILIP Peter W Elevation of depressed fracture of the skull in a newborn child 521
PHILLIPS Hugh Richard obituary notice of 1194
Philosophy British Institute of work of 356 450—Correspondence on 591
Photography of pathological specimens *See* Pathological
Phototherapy in erysipelas (J M Davidson) 929 (O)
Phthisis *See* Tuberculosis
Physiatrics in the treatment of neurotropic diseases (René Cruchet) 85 (O)—Correspondence on 170 *See also* Neurotropic
Physical education review of book on 295
Physician and Surgeon false use of the title (A E Shakesby) 1060
Physics applied of to day 918 [illegible] 71
PICK Ludwig elected Dunham lecturer at Harvard 967
Pick et Thomson Research Laboratory Annals of vol vii *The Pathogenic Streptococci* rev 670
PIERCE Howel B (and D J HARRIES) Hydronephrotic pelvic kidney 612
PIPER H V (and *H Cecil* BARLOW) *Death from* rupture of the liver in a newborn infant 887
PINCHIN A J Scott Electric suction or pressure pump 154—Bronchoscopy and drainage in lung suppuration 661
PINUS N Hyperplesia 170
PINEY A Treatment of carcinoma 150—(And Stanley WYARD) *Clinical Atlas of Blood Diseases* second edition rev 665
Pinfuss Alfred death of 593
PINSON K B Suction in surgery 446
PITT RIVERS George Preparation for marriage 913
PITTS A T Raw milk and dental caries 191
Pituitary lobe posterior function of (Harvey Cushing) 299—Correspondence on 349
Pituitrin in malignant disease effect of (F W Riches and M Kremer) 877 (O)—Correspondence on 1008
Plague prevention in Manchuria 623
Plantar corns *See* Corns
Plasmoquine in the treatment of malaria 341
PLATT Harry Fractures in the region of the ankle joint 473
PLATT Robert Visceral herpes zoster 623—Case of polycythæmia rubra developing anæmia 750 (O)
Plessier Paul Traitement du Bec de Lièvre Unilatéral Procédé du Dr Veau rev 1036
Pleuro-pneumonia causative organism of 947
Plotz Ella Sach Foundation Report 1032
Plumbism *See* Lead poisoning
Pneumococcal typing a direct method of (W R Logan and J T Smeall) 188 (O)
Pneumococcal typing immediate (Richard R Armstrong) 187 (O) 260—Correspondence on 260 305 354
Pneumonia recent outbreak of (F John Poynton) 698 (O)
Pneumosintes vaccine in the treatment of influenza 222
Pneumothorax [illegible] ng and oleothorax (F
Pneumothorax com plicated by neumothorax (James D Macfie and Arthur I P Alexander) 1079
Pneumothorax artificial Report of Refills Committee 1155
Pneumothorax review of book on 712
Pocock Hilda Voluntary sterilization 1046
PODACH F [illegible] he 537
Poison cur he terra sigillata c 73
Poison gas [illegible]
Poisoning arsenic at Hayle 895
Poisoning carbon monoxide (parliamentary note) 409
Poisoning food and tin foil (parliamentary note) 549
Poisoning lead as a cause of peptic ulcer (David R Lewis) 185 (O) 308 449—Correspondence on 262 308 354 449 497 [illegible] orica 76—In New South Wales 906
POLLARD Bilton estate and bequests of 221
Polycythæmia and liver therapy in asthma (H H Moll) 976 (O)

London ... (Richard) J. A. Berry ...
Port ... socia tion of ...
Ponte ... ways by dogs ... c 9
Porter Elsie awarded the Jessie Macgregor prize 11 5
Portus Stanley D. *The Psychology of a Primitive People* rev. 1033
Portman Georges. *Traumatic Technique Operatoire Oto-Rhino-Laryngologique* rev. 990
Post-graduate courses. In Aberdeen 549—In Dundee 500—In Derby 691—In Edinburgh 673—In France 500 600—In Glasgow 103—In Liverpool 691—In London 45 82 1 170 221 267 31 361 503 5 5 519 596 633 825 871 967 1015 1 61 11 5 1165 1192—In the London County Council hospitals 1145—In Manchester 361 735—In Milan 127—In Salford 409—For ship surgeons 1 61—In Vienna 207 870—In Wales 705
Post-Graduate Hospital and Medical School British notes on 25
Potter G. R. Gas and oxygen in midwifery 600
Poultry regulation, new 814 *See also* Silicosis
Potts W. A. The cinema from the psychological standpoint 930—Silkworth Sanatorium fund 1025
Pouchet Professor nominated vice-president of the French Council of Public Health 967
Poulsen Christian, death of 314
Poulton E. P. Uses of oxygen and CO2 in medicine 1 50—Movements of the cheek 425—British sea-coast resorts 472—Non-infective nephritis 522—Infection in the dormitory 802—Ten years' rheumatic infection 1033
Power Sir D'Arcy. *The Foundations of Medical History* rev. 474—Finlayson Memorial Lecture on the progress of surgery as a London hospital (1850-1930) 857
Power R. Wood. Ambulatory treatment of fractures 970
Poynton F. John. Comment on the recent outbreak of pneumonia 673 (O)—Acute rheumatic infection 1033
Practice, Rules of (Philip H. Mitchiner) 531
Practice unlegalised and qualifications (India) 35
Practitioner. March issue devoted to skin diseases 425
Practitioners, Index of. *See also* Students
Prandnitz Carl appointed Health Claras Lecturer for 1932 5 5
Prepace T. M. Urology 8 6
Pregnancy, acute illness in, effect on child of 254
Pregnancy, diagnosis of (Gladys Dodd) 630—(Dulcie Staveley) 637
Pregnancy, ectopic, Zondek-Aschheim test in (W. W. King) 382
Pregnancy, mobility of the pelvic joints in 684
Pregnancy, paroxysmal tachycardia associated with (David Fyfe Anderson) 627 (O)
Pregnancy, simultaneous intrauterine and extrauterine (A. Gemmell and H. Leith Murray) 844
Pregnancy, toxæmia of, and puerperal sepsis (L. G. Paine) 1174
Pregnancy, toxæmia of, high blood pressure as an early sign of (F. J. Browne) 120 (O)
Pregnancy, toxæmias of (Munro Kerr) 333—(O. Gross er) 965—(Carl on Oldfield) 1174—Afterefects of (Jas. Young) 660
Pregnancy, x-ray diagnosis of 937
Pregnancy, Zondek-Aschheim reaction in the diagnosis of (A. F. Wright) 333—(Gladys Dodd) 636 *See also* Zondek-Aschheim
Pregnancy. *See also* Gestation

PREPARATIONS AND APPLIANCES
Abdominal retractor Berkeley's modification of 1177
Anæsthetic mask, 714—For ophthalmic use 276
Aspiration of fluid from the chest apparatus for 8 8
Blood-collecting apparatus 150
Bone clamp for fractures 1133
Bone drills 899
Cannula, uterine 21 60—For the rubin test 60
CO2 apparatus for administration of 665
CO2 apparatus portable 21
Cystoscope for applying diathermy to bladder growths 976
Deaf, non-electrical aid for the 529
Digitaline crystalline 871
Elityran (a preparation of thyroid gland) 843
Finger fractures, apparatus for treatment of 843
Forceps, biopsy and skin graft 617
Forceps, cranioclasty 296
Forceps, dressing and suture holding, combined 189
Forceps for use with Michel and Kilner clips 760
Gas and oxygen in midwifery 899
Gelatin, peritoneal calculus of 109
Goggles, cheap, for actinotherapy clinics 871
Halometer, a direct 10 9
Hot-bottle or ice bag, alternative 891
Lamp, hand, and inspection 1135
Laryngo-pharyngoscope, illuminated, direct 4321
Microscopy, accessory instrument in Ultropak illuminator 529
Multibral or sodium monobromolevate 1177
Ophthalmoscope, an electric 187
Ophthalmoscopes, electric, device for preventing glare in 977
Ouabain crystalline 871
Procaine preparations 19
Phosphorus, therapy (Loin cloth) 191
Pump, electrical action of, pressure 14
Rectum tube for œsophagus, a rubber 477
Rigol 665
Scleral marker, an accessory to the lens, and measurements of detached retina 603
Sigmoidoscopic, coop 572
Splint for forearm, subcutaneous reduction of nasal septum 183
Splint, Thomas, a modified 17
Stream, disinfection control of 24
Stripolene, or solium, its relation to beef, palatable (S. Rapp) 1177
Syringe, local anæsthetic 19
Temperature sensation, electrical, testing 477
Tonsil écraseur 2
Tonsil haemostat 294
Vitamin concentrates (Adexolin) 600
Vitamin concentrates of cod-liver oil 103
Vitamin D crystalline 871
Vitrella sheet 296
Wire extension, new apparatus for 109

Presentations 31 [illegible] 3 7 677 699 10 1 [illegible] 115
Presidents, Hall Aylen, Lord, visit of, the Prince of Wales 1109
Prevention, medicine. *See* Medicine
Price-Jones C. Morphology in anæmia 1177
Prickman L. E. Pain in peptic ulcer 522
Priestley, Richard (and Richard Wagner). *Zuckerkrankheit und ihre Behandlung im Kindesalter* rev. 760
Principose, Alexander, elected president of the Canadian Medical Association 671 81
Prinsose, Edward J. Toad rattle's gall 591
Pringle Session, Deep x-rays for breast cancer 967
Prison Dartmoor, Convict, statement from the medical officers regarding recent disorders 315
Prison diet, anti-pellagra, 965
Prison services (parliamentary notes) 8
Prize Bathurst Memorial 101
Prize, Cameron 477
Prize, Le Cæsumont 11
Prize, Le Hallé 17
Prize, Herbert 114
Prize, Ivison Macadam, Memorial 10
Prize, Jacksonian 777
Prize, Langley Memorial 815
Prize, London, Victoria Jubilee 1015
Prize, Macgregor (Jessie) 300 11 5
Prize, Marshall Webb 104
Prize, Medical science, quinquennial 1177
Prize, Montefiore 11
Prize, Parkes Memorial 107 11 5
Prize, Parsin 310
Prize, Raymond Horton Smith 47
Prize, Parnall Mar in 1014
Prize, Savill 1115
Prize [illegible]
Prize [illegible]
Prize [illegible] 1177
Prizes awarded at the Army Medical College 1014
Prizes for essays by senior students and newly qualified practitioners 915
Proctology, review of books on 168
Prolapse, review of book on 662
Prolapse of uterus. *See* Uterus
Prostatectomy, malignant, diagnosis of (S. W. Mitholland) 221
Prostatectomy, review of books on 43
Prostatectomy, end results of 871
Prostatectomy, fertility after 1102 11 5
Prostatectomy, in a nonagenarian, aged 96 (John Everidge) 722
Prostatectomy, simple (A. Ralph Thompson) 660 (O)
Prostatectomy, technique of, discussion at the Manchester Surgical Society 778
Prostatectomy, vaso-ligation in 1
Prostatic case, nursing the 1115
Protein and allergy. *See* Allergy
Proteose, urinary (F. M. Murray Lyon, G. H. Percival and C. P. Stewart) 126 (O)
Prudden T. Mitchell (and Francis Delafield). *A Text-Book of Pathology*, 11th edition, revised rev. 572
Pruitt Marion C. *Maternity Procedure* rev. 1076
Pruritus, review of book on 904
Prussian Parliament elects its first medical president 761
Psittacosis (parliamentary notes) 1 60
Psychiatry, review of books on 664 841
Psychological interest in general practice (F. G. Crookshank) 568 (O)
Psychology [illegible]
Psychology [illegible]
Psychology, Industrial, National Institute of, Annual meeting and report 992
Psychology, Medical, the Institute of, Annual meeting 1069
Psychology, review of books on 105 [illegible]
Psychology [illegible] ...ance 25—Correspondence on [illegible]
Psychoneurosis, review of book on 20
Psychopathology, review of book on 20
Psoriasis and congenital epidermolysis bullosa, treatment of, through gastro-enterostomy (Norman Po[illegible] 847
[illegible] B.H. [illegible]
[illegible] 1165 1177 1185 1196
Public health in County Dublin 5
Public Health and the Theatre 541
Public health, intelligence of the Health Organization of the League of Nations 600
Public Health in Germany, Report of Committee on 207
Public health, the Irish Free State, Annual report 115
Public health, progress (leading article) 721
Public Health, review of books on 1027
Public Health Services of Belfast 117
Public health, women's 54
Puerperal fever, the source of infection in an outbreak of 55
Puerperal fever and pyrexia (A. S. M. Macgregor) 800
Puerperal fever, pyrexia, therapy of (C. W. Benson) 197
Puerperal sepsis, bacteriological investigations 4
Puerperal sepsis, prevention of (Lecture Grant) 14—(S. Cameron) 5
Puerperal sepsis and pyrexia, vaginal and cervical, sepsis (C. L. Somerville) 5—(O)
Puerperal sepsis and oxæmia of pregnancy (C. G. Panel) 117
Puerperal septicæmia and C.M.B. nurses 54
Puerperal temperature. *See* Puerperal sepsis
Pugh, Felice, death of 827
Pulmonary disease and mine workers (parliamentary notes) 25
Pulmonary embolism. *See* Embolism
Pump, [illegible] ...ance on, of pressure 15. *See* [illegible]
[illegible]
[illegible]
[illegible] of
Purdon, J. M. *Lectures on Anæsthetics, Medical and Surgical, with Full Description of Boyle's Apparatus* rev. 817
Purves-Stewart Sir James (J. N. C. Ford and Geoffrey Sherlock). Fulminating meningococcal meningitis 22 (O)—*The Diagnosis of Nervous Diseases*, seventh edition rev. 800
Pye Eva. Analgesia and anæsthesia in normal labour 981
Pyelography (Dr. Bonnaire-Hutch) 1111. *See also* Urography
Pyogenic diseases, remote, of brain 1111
Pyrexia of obscure origin (Chetwynd J. P. Grosvenor and A. H. Douthwaite) 117 (O)—Correspondence on 1115
Pyrexia and puerperal fever. *See* Puerperal fever

Q

Queen's Institute of District Nursing, Annual meeting of Scotch Branch 111. *See also* Nursing
Queen's Mary Quarterly, Scottish, [illegible] 2
Queen Jean (Lady Cochrane). *Atlas de Radiographie Osseuse* rev. 62
Quinine and malaria 965 771. *See also* Malaria

R

Raymond Maitland Medical problems of contraception 1077
Radiation in divided doses (F. G. Spear) 1115
Radiation, review of books on 1115
Radiography, chest and abdominal, of infants in children (Dorothy J. Foster and W. Evans Lloyd) 721 (O)
Radiography in mediastinal disease of the lungs (Peter Kerley) 74 (O)
Radiography, review of books on 62 474 771. *See also* X-ray
Radiological improved appointment of a (Central Hospital, Galway) 115
Radiology, appointment of (E. E. Pobereskin) 111
Radiology, British Institute of, Prize Thesis for x-ray workers 1102
Radiology, medical contribution of, in 1931 [illegible]
Radiology, therapeutic, lectures on 715
Radiosensitivity of tumours. *See* Tumours
Radium 471—Parliamentary notes on 50 [illegible] 965—National Radium Trust 889
Radium, action of, on malignant growths 647
Radium Conference, Report of, with special reference to the four-gram bomb 982—Correspondence on 1115
Radium, containers for, for safe packing for mailing (P. Mallrat) 62
Radium, medical aspects, Report on 55
Radium, purchase of 1200
Radium, review of books on 176 [illegible] 800
Radium, supply to hospitals in Northern Ireland and paying patients 1102
Radium therapy, deep. Statement by the Radium Commission [illegible]

Radium tube for oesophagus a rubber 477
Radium and x ray protection 203
Radium and x ray workers blood condition of 1182
Radium and x rays in treatment Report of the State of Ontario Royal Commission 1088
RADLEY Sidney B Unusual case of sub peritoneal uterine fibroid 840
RAE Dr Report on the health of Aberdeen 32
RAHMAN A A Report on public health of the Punjab 444
RAINSFORD Colonel William John Read obituary notice of 503
RAJCHMAN Ludwik Public health intelligence of the Health Organization of the League of Nations 955
RALPH R S Pathological services of the London County Council 729
RAMON Y CAYAL *Professor eightieth birthday* of 1155
RAMSBOTTOM Albert (and Cyril G EASTWOOD) Spontaneous hypoglycaemia 833 (O)
Rand mines preventive medicine in (A J [illegible] *cal Pathology of* 430
RANDALL Burton Alexander death of 857
RANKIN Adam L A Acute aseptic meningitis 138 (O)
RANKIN Nicol Macnicol obituary notice of 125
Rassegna Internazionale di Oto rino laryngologia first issue of 1015
Rat bite fever *See* Fever
Rat destruction Report of International Committee 207
RATHERY Professor appointed to the chair of medical therapeutics in the Paris Faculty of Medicine 221
RATTRAY Malcolm John obituary notice of 501
RATTRAY Peter *Fate of a swallowed needle* 302
RAVINA A *L Année Thérapeutique* sixth edition rev 760
RAW Nathan Human and bovine tuberculosis the question of mutation of the tubercle bacillus 377 (O)
RAWLENCE H T A modified Thomas splint 198
RAY Matthew B *Osteo arthritis 789 O*—Fouling of footways by dogs 960
Ray Therapy Institute of Annual report 1174
RAYNER E Brian An unusual method of [illegible] used by the 419 (O)
READ C D The teaching of obstetrics 987
Reading and seeing (leading article) 23
Recruits limit on number accepted (parliamentary note) 549
Rectum injured by the faulty administration of an enema (H H Rayner) 419 (O)
Red Cross Rheumatism Clinic Annual report 584 1004
Red Cross Society Annual meeting of Edinburgh Branch 492—Ambulance service 953—Annual report 1004—Report of Joint Council 1051
REEKIE C Barclay Report on the health of Dunfermline 907
Reflexes conditioned and habit formation (W Horsley Gantt) 517 (O)
Refuse dump 915—(Parliamentary note) 915—Metropolitan (parliamentary note) 409
Registrar General's reports *See* Vital statistics
REICHERT Edward Tyson death of 638
REID Lieutenant R I awarded the Montefiore Prize 1014
REID R I G Report on the health of County Armagh school children 494
REID Walter A honorary LL D Aberdeen conferred on 691
REID William Loudon obituary notice of 40
Relapsing fever *See* Fever
RÉMOND Antoine death of 314
Renal case investigation of a (F Hector Scotson) 235 (O)
Renal colic *See* Colic
Renal cyst *See* Cyst
Renal efficiency Van Slyke urea clearance test of (F Wordley) 334
Renal insufficiency meeting and competition on the study of at Evian les Bains September (1933) 691
Renal *See also* Kidney
RENAULT Jules nominated vice president of the French Council of Public Health 267
RENSHAW A (and others) *When and How to Collect Specimens for Laboratory Examination* 1183
[illegible] sport 439
Relation
Temple Research [illegible] J—Cross Dorothy 816—Intelligence a[illegible]
[illegible] (Carl J M [illegible] Murray and M Shanks) 1137—Physiology of vision report on (G C Grindley) 622—Reduction of grant to (parliamentary [illegible] uses of radium ellowship 816—ort on the value
R [illegible] 211 Medical note on
Research Institute at Kuala Lumpur Annual report 158—Prophylaxis against typhus fever 158
Research Institute James Mackenzie Annual report 115
Research Laboratory Pickett Thomson Annals of vol vii *The Pathogenic Streptococci* rev 570
Research medical the Empire's debt to (T F Fremantle) 202
Research medical and the patent law (leading article) 810
Research Scientific and Industrial Department of Report for 1930-31 388—Report on atmospheric pollution 433
Respiration review of book on 1133
Respiratory complications post anaesthetic CO in (J Ross Mackenzie) 561 (O)
Resuscitation CO in 84
Rest) 665
Reticulo endothelial system (R H Mole) 191
Retina detached a scleral marker as an accessory to the igni puncture treatment of 943
Retinal structure and functions (R S Creed) 1082
Retinoscopy 109
Retractor Berkeley's abdominal modification of 1177
REVILLIOD Ernest death of 961
Revue de Laryngologie enters its fifty third year with an introduction by its founder E J Moure 127

Reviews of Books

Abdomen the Acute (C H Fagge) 1177
Abdominal Cavity and Peritoneum a Clinical Study of the (Edward Meal in Livingstone) 1036
Abdominal Operations the Management of (Rodney H Maingot) 384
Accidental Injuries (Henry H Kessler) 845
Acute Abdomen *See* Abdomen
Alcoholism The Social and Economic Aspects of the Drink Problem 571
Anatomy Cunningham's Text Book of (edited by Arthur Robinson) sixth edition 805
Anopheline Mosquitos *See* Mosquitos
Anorexia Nervosa (W Langdon Brown F G Crookshank J C Young George Gordon and C M Bevan Brown) 20
Aneurysm of Aorta Les Anévrismes Intra péricardiques de l Aorte (Tulio Martini and Miguel Joselevich) 65
Annals of Medical History *See* Medical
Arts A Grammar of the (Sir Charles Holmes) 665
Asthma and Hay Fever in Theory and Practice (Arthur Coca Matthew Walzer and August A Thommen) 1035
Backward Child *See* Child
Bacteria Sulphur (David Ellis) 846
Bacteriological Technique the Essentials of [illegible] ext Book of (Edwin 430
Bacteriology Manual of (Robert Muir and James [illegible]
Bacterio (André
Bacteriol of vol ix 19
Bacteriology and the Study of Injections Recent Advances in (J Henry Dible) second edition 385
Bedside Manners (Christopher Howard) 1085
Benzol [Benzene] Poisoning (Carey I McCord Nora Cox and Charlotte O Boyle) second edition 992
Biographical Dictionary Biographisches Lexikon der hervorragenden Arzte der letzten funfzig Jahre (I Fischer) 1085
Biology and Mankind S A McDowall) 891
Biology Tabulae Biologicae Periodicae 714 1132
Birth Control Literature a Guide to (Norman E Himes) 807
Birth Control Physicians Manual of (Antoinette F Konikow) 807
Birth Control and Public Health 808
Birth Control *See al o* Contraception
Black Death and Men of Learning (Anna Montgomery Campbell) 572
Blood Diseases Clinical Atlas of (A Piney and Stanley Wyard) 665
Blood Diseases Leçons cliniques sur les Maladies du Sang et des Organes Hémato [illegible] phy Haldin)
[illegible] ortescue
[illegible] d Sadgo pal) 69
Cae arean Section (Frances Ivens Knowles) 617
Cancer the Genesis of (W Sampson Handley) 194
Ca e of Mrs A (the Diagnosis of a Life Style) (Alfred Adler) 20
[illegible] mbryology Food Chemistry laston) 665
Chemistry Forensic and Scientific Criminal Investigation (A Lucas) second edition 847
Chemistry Organic Recent Advances in (Alfred W Stewart) sixth edition 295
Reviews of Books (*continued*)
Chemistry Physiological Praktikum der Physiologischen Chemie Fermentmethoden (Ister Rona) 21
Chest Disease in General Practice with Special Reference to Pulmonary Tuberculosis (Philip Ellman) 661
Child Backward the Education of the (David Kennedy Fraser) 890
Childhood Disorders of Clinical Notes on (D W Winnicott) 65
Children We Teach (Susan Isaacs) 890
Children's Nursing *See* Nursing
Church Towers of England the Great (Frank J Allen) 1084
Circulation Die Regulierung des Blutkreislaufes (W R Hess) 1132
Cleft Palate Division Palatine (Victor Veau) 195
College Royal of Surgeons of England List of the Transactions Periodicals and Memoirs in the Library of second edition 943
Colloids (Ernest J Hedges) 714
Colloidal Chemistry See Chemistry
Colour Vision La Vision des Couleurs (Guiseppe Ovio) second edition 1177
Communicable Disease Control Report of Committee 104
Congress of the History of Medicine Rome Transactions 104
Contemporary Thought of Germany vol ii (W Tudor Jones) 104
Contraception the Practice of (edited by Margaret Sanger and Hannah M Stone) 807
Contraception International Medical Group for the Investigation of fourth issue 808
Contraception *See also* Birth Control
Cunningham's Text Book of Anatomy sixth edition 806
Dental Surgery and Pathology (Sir Frank Colyer and Evelyn Sprawson) sixth edition 1176
Dental Surgery the Science and Practice of (edited by Sir Norman Bennett) second edition 713
Dentists Register (1932) 617
[illegible] 3
[illegible] ts of (Alfred
Diabetes its Control by the Individual and the State (Elliott P Joslin) 729
Diabetes Directions for Treatment by Insulin and Diet (Benjamin F Smith) 19
Diabetes Mellitus the Pathology of (Shields Warren) 19
Diabetes Précis du Diabète (H Chabanier and C Lobo Onell) 337
Diabetes Zuckerkrankheit und ihre Behandlung im Kindesalter (Richard Priesel and Richard Wagner) 760
[illegible] plified (Joseph T Kelly) 759
[illegible] rpretation of Aids
to vol ii 20
Diagnosis and Treatment Modern the Science of Signs and Symptoms in Relation [illegible]
Digestion 571
Digestive Disorders Therapeutique Médicale *Maladies du Tube Digestif* (Maurice Loeper and André Lemaire) 294
[illegible]
Disease The Nature of (J E A Macdonagh) Part III Section I 196
Doctor's Defence (Sidney Fairway) 476
Doctors Grosse Aerzte (Henry E Sigerist) 18
Drink Problem the Social and Economic Aspects of the 571
Drugs Narcotic Conference for the Limitation of the Manufacture of Records of vol i 1085
East Anglian Field Ambulance the 3rd [Four Lines] Record of during the Great War 1914-1919 476
Edinburgh Obstetrical Society Transactions vol ii 1038
Egypt The Home of the Occult Sciences (T Gerald Garry) 21
Electrocardiography Atlas d Electrocardiographie Pratique (J Walser and L Deglande) 1131
Electro Surgery Die Elektrochirurgie (Franz Keysser) 528
[illegible] eph Needham) 757
[illegible] J Fraser) 151
[illegible] urgery
[illegible] of Medicine at the
W Innes Smith)

Reviews of Books (*continued*)
European Conference on Rural Hygiene 21
Exercise Physiology of (Ferdinand Augustus Schmidt and Wolfgang Kohlrausch trans lated by Carl B Spaeth Emil Raeth and Leopold Zwarg) 617
Eye Human The Fundus of the (Ernest Clarke) 166
Eye Les Affections de l Oreille chez l Enfant 63
Eye Your Vision and How to Keep it (H C Merrill and L W Oaas (second edition 213
Fantas) of the Seasons and Other Verses (Arthur F Clive) 1
Feeding Infant See Infan
Fer ility in Marriage See Marriage
Fever Undulan La Fièvre Ondulan e (H Violle) 53
Fevers Tropical Handbook of (N P Jewell and W H Kaunitz) 616
Fish ng Disea e with Drugs he S ory of Pharmacy (edi ed by John C Kran Jun) 492
Forensic Ch mis ry See Chemis ry
Fra ures (Maurice Sinclair) 330
French Medical Journal for 193 oc
Fundus of the Human Eye (Ernest Clarke) 166
Gas ro-in es inal Trac Func ional D orders o the (William Gerry Morgan) 212
Gas ways o Learning (Marjorie Drummond) 90
Gene ic Principles in Medicine and Social Science (Lancelo H Aiken) 269
Geni o Urinary Organ Surgical Pa hology of the (Arthur F Her ler) 153
Geni o Urinary Trac Surgery of Le (Raiph Coy e) 552
German Tec nical Words and Phrases Marlborough s third edi ion 1033
Gonorrhoea Gonorrea (Bl norragia (Bulk e Mar a) 547
Gonorrhœa in the Male and Female (P S Pelner) second edi ion 238
Gould s Medical D c onary 338
Gout —La Gou e son Mecanisme et son Trai emen (Daniel Crit man) 150
Grammar of the Ar See Art
Grea Church Towers See Church
Gums and Oral Muco s Membrane Diseases 1 3
Guy s Hospital Nursing Guide Handbook for Trained Nur es League and Regi ar o Nur es
Guy s Hospital Repor s vo 81 (vol xi four h serie) No 4 3 0
Gymnas ics for Women and Girls Principles of (Elli Fi k es en translated by Agnes Dawson and E M Wilsale) 393
Gynaecolog y Lehrbuch der Gynäkolog e (W S oecke) third edi ion 8 0
Haemorrhoi s and Anal Pruri us Croc oscopic Examina ion and the Trea men o (Louis Buie) 69
Haemorrhoids the In ec ion Trea men and Pruritu Ani (Lawrence Goldbacher) second edition 602
Hare lip Traitemen du Bec de-Lievre Un latéral Procédé du Dr Ve au (Paul Plessier) 1036
Headache (William H Pobey) 265
Health Re ort Seasi e and Watering Places in Italy 1177
Health Toward Nat onal (J Anthony Def Henry the Eigh h te Priva e Character of (Frederick Chamber in) 1036
Hi ology Morbid Prac ical (Robert Donald son) second edi ion 664
Hodg in s Di ea e La Malad e de Hodgkin (Paul Chevallier and Jean Bernard) 713
Hormonology Female Sex (William P Graves) 615
Hosp al Services of the London Coun y Council Medical Supplemen to the Repor 617
Hughlings Jack on See Jacason
Human Na ure Laws of (Raymond H Wheeler) 475
Humorra lons the Doc ors (John Are) 529
Hygiene an Introduc ion to (W Robert on) 665
Hypnosis and Hypno herapy (Gu av Heye- transl ed by Arnold Lloar) 0
Immunological S udies in Reptiles and their Relation to Aspec s of Immuni y in Higher Animals (E Grasset and A Zoutendyk) 821
Index of Treatmen See Treatment
Infant Feeding Modern Methods of (Donald Pa erson and J Fores Smith) third edi ion 197
Infan Feeding Notes on (G B Fleming) 13
Infant Bo e Feeding of (Mrs Henry Haldin) third edition 714
Infectious Di eases Resistance to (Hans Zinsser) fourth edition 572
Injuries Accidental See Accidental
In urance Social the Bri ish System of (Percy Cohen) 642
Intelligence and Inheritance An inves igation into the Relations be ween (Evelyn M Law rence) 1130
International Clinics (Edited by Henry W Cat ell) vol iii Forty first series 153 vo iv Forty first series 6
Intracranial Pyogenic Diseases (A Logan Turner and F Esmond Reynolds) 269
Iris Pat ern in the Ver ebrates (Ida Mann) 691
Its ian Medicine See M dicine
Jac on John Hughlings Selec ed Writings of vol i i vol ii on and D solu ion of the Nervous Sys em Speech Various Papers Ad resses and Lec ures (edi ed by James Taylor Gordon Holmes and F M R Walshe) 1 83
Jokes Seen and Unseen (David Fra er Fraser Harris 470
Kidney Diseases of the (W Gir ing Ball and Geoffrey Evans) 641
Labora ories Manuel des Calculs de Labora oire (H Vincent) 613
Labora ory Me hods Clinical a Manual of (Clyde Lo ish Cummer 4 4
Labora ory in Surgical Prac ice (E C Dodds and Lionel H Whi by) 570
Labour Therapeu ic (A Pavina) sixth edi ion 700
Laws of Human Nature (Raymond H Wheeler) 477
Liver the Liver Die E mer A Mirsky) 1
London Hospital Re earches Published from the Wards and Labora ori s during 1931
Lupus and Its Early S ages during Ioni o (Lawrason Brown and Fred H Heise) 33
Lymphatic Gland Join ing o Carcass and Animal Ana omy (James Groo fellow) 817
Malignancy ive Surgery (A S Blandell Ban ar 662
Man s Ancestors th Search for (G Ellio Smi h) 0
Marlborough s German Technical Words and Phrases third edi ion 1033
Marriage Fer ility and Sterili y in Tro ic Volume ary Pron o n and Limitation Th Van de Velde) Trans la ed by F W Stella Ma ria Medica Recen Advances in (J H Burn) 356
Medical Annual A Year Book of Trea men and Trac itioners Index to the Volume for the Year 1932 (e ited by Carey F C omit and A Pendle Short) 613
Medical Annual Fronc L tzmann-Mahrdale Pra ique 1932 (edi ed by Camille Lian and o hers) 602
Medical and Dental S uden s Pegis er (1932 61
Medical D c ionary See D c ionary
Medical Edi ri es (Cesar es ewman) 432
Medical His ry Annals of (edi ed by Franc s I Packard) new series vol iii No 5 60 No 6 1 6 vo iv No 1 714 vol iv No 2 vo vol iv No 3 1132
Medical Hi ory the Found ion o (Sir D Arcy Power 4
Medical Pegis er 1932 617
Medical School in Clinical
Medicine General (Francis s Medicine Ser e 617
Medicine Italian (Ar uro Cas iglioni rans la ed by E B Krumbhaar) 613
Medicine Nerve Dep the Elixia (George and Felix Klemperer vol viii and
Medicine for Nurses Tex Bo k of (E Nob e Chamberlain) 473
Medicine a Prac ice o (E Sey arth transl ed by C F Marshall and C M O ley) 1 2
Medicine Prac ice o (A A S e-ens) third edi ion 8 8
Medicine and Surgery Prac i oner Library of (edi ed by G Blumer) vol i Anatomy and Phy iology as Applied to Prac ical Medicine vol ii Tec e hnic of Physical and Labora o y Examina ion in Clinical Medicine 1178
Medicine Science and Ar Studie in Inter relat ons (Alfred E Cohn 350
Medicine Sou h His ory o (John D Comrie) second edition 617
Medicine Prac ice (F C Shrubsal and A C Williams) 60
Medical Nurses Tex book for (Elizabe h L Macaulay) 1 2
Men al Nursing Simplified (O P Nay er Pearl) 17
Merck s Annual Repor Eng ish ed ion second par s—Third part 1 7
Mesobolism Therapeu ique Medicale u (Maurice Loeper and André Lemaire) 1173
Microbiology See Bac eriolo y
Microscopy Practical (L C Mar in and B K John on) 1081
Middlesex Hospital Medical School Collected Clinical Papers 1930 1931) 42
Midwifery by Ten Teachers (under the direc tion of Comyns Berkeley ei ed by Comyns Berkeley and J S Fairburn) fourth edi ion 102
Midwifery and Gynaecology Syllabus of (Aleck W Bourne) fifth edi ion 1032
Monkeys and Ape (S Zuckerman) 760
Mos ui oes Anopheline Larvae of with full Description of the e of the Indian Species (F M Puri) 617
Mosquitos Anopheline of South Africa Illu trated Keys to the Full Grown Larvae and Adults of (Both e de Meillon) 617
Narco ic Drugs See Drugs
Nervous Di ea es The Diagnosis of (Sir James Purves-Stewart) seventh edi ion 846
Nervous Manifesta ions —Les Accidents nerveux consecu ifs aux Pertes de Sang Etude clinique e experimentale (Robert Worms) 242
Nervous Sys em Vegeta ive An Inves ga- ion o the Mos Recent Advances (Walter Timme Tho as K Davis and Henry Alsop Riley) 1 3
Neural Energy Constant (John Bos ock) 1173
Neurology Clinical A Textbook o (Fran S Ingalls) second edi ion 1132
Nicholls Florence (Irene Cooper Willis) 401
Nursing Medico Chirurgical Soc y Centenary o (March 1 1 2 1932) 1
Nursing Organi a ion (James Clark McKerron) 1
Nursing Act s (P A Lewis and Lawrence W Ba s) 1 4
Nurses Handbook for (J E Wa son) fourth edi ion 475
Nurses Medico-le al Tex Book of (E Cec Chamberlain 475
Nurse Mental a Tex bo k for (Elizabe h L Macaulay) 1 2
Nurses (Sixth edi ion) and Midwives Handbook for (J L Wa son) second ed ion 475
Nursing Cautions No e on (Margare s C Ertlebee) 665
Nursing Mental Simplified (O P Nay er Pearl) 1 2
Nursing Psycho ogical Pa hology Mann (Ch dwick) 102
Nutri ion and Di e in Health and Disease (James S McLe er) second ed ion 1
Nutri on and Phy ical Train ng (L Jean Lo er 75
Occupational Phy o ogy See Phys o ogy
Odontological D ea es (Leonard W Gold berg) 60
Odontology Tec C ncises of (Pe er Subm tans ed by Edgar and Cecil Pam 0
Ophthalmic Medical Jurisprudence (Sir Humphry Pollock) second edi ion 8 2
Ophthalmological Society of the United King dom Trans ac ions vol li 847
Optical Cinematography See Cinematography
Optical Orthoped ics See Therapeu ics and
Oyster and Other Pu ures (William Sydney Tu ye) 0
Pa ho Medica Acte (Wm Matthew Mo ison) 1
Oto-Rhino-Laryngo ogy Trai de Technique Opéra oire O o Rhino Laryngo ogie (Gaston Po ausse E Pernoud and J an Des ons Paul Ledoux and G Mahoudeau) 200
Oxford Corners by Prince General Cookery Recipes See Cuisine and D ea es Pal e Cur D vine Palaeontology (Vere)
Paralysis General Encephalitic Pe tine ap a ba Progressive Paralysis (E Bonhoeffer and P Jossmann) 9
Parasitology Cance-(Leonard Bene ct) 11
Parasitology a Guide (D B Blacklock and T Southwell) 1 4
Parasitology Infec ion in Animals some Basic Principles with Spec a Re erence o Vitamin A Def c ency (H C A Lu en) 0
Pathology Human (Howard T Karsner third edition 760
Pathology Surgical of the Gen o-Urinary Organs (Ar hur E Hertzler) 1 3
Pathology Surgical of the Skin Fu cis (Arthur E Henry e 22
Pathology Surgical Tex Book of (Charles W Hungworth and Bruce D Cal 5 7
Pathology Tex book o (Francis Dal as and T Mitchell Prudden) fifteenth edition 1178
Pathology Tropical an Introduction to (T Shakara Mori on) 1 0
Peptic Ulcer Von Ewe s Enzymes and (Alois Winkler) 1
Personality Psycho ogical under Lunacy Laws (Edward Hu man) 1 2
Pharmacology Applied (A J Clark) fourth edi ion 1 1
Pharmacy the Sc ence of 4
Physiology of Sport See Spo
Philosophy of the Unconscious (Eduard von Hartmann) new edition 4
Physical Education Williams and Wh elaw Bed Fleming Morrison) 265
Physiological Chemistry See Chemistry
Physiology and Biochemistry Departmen Universi y College London Collec ed Papers 7 4
Physiology Tra e de Physiologie Normale e Pathologique (G H Roger and Lecoq Bize) vol ix Alimentation e Digestion 571
Physiology Natural (Percy Goldsmith Gi les) seventh edition 244
Pierce Thomson Research Labora ory Annals of vol viii —The Pathogenic Strep tococci The Pole o the Strep tococci in Erys elas Skin Diseases and Meas es 5
Pneumothorax Spontaneous in the Arra- nged Healthy (Hans Kaiserrand) 711
Poisons and Poisoners (L J S Thomson) 205
Practi ioner s Library o Medicine See

Radium tube for oesophagus a rubber 477
Radium and x ray protection 203
Radium and x ray workers blood condition of 1182
Radium and x rays in treatment Report of the State of Ontario Royal Commission 1038
RADLEY Sidney B Unusual case of sub peritoneal uterine fibroid 840
RAE Dr Report on the health of Aberdeen 32
RAHMAN K A Report on public health of the Punjab 444
RAINSFORD Colonel William John Read obituary notice of 503
RAJCHMAN Ludwik Public health intelligence of the Health Organization of the League of Nations 955
RALPH R S Pathological services of the London County Council 729
RAMON Y CAJAL Professor eightieth birthday of 1155
RAMSBOTTOM Albert (and Cyril G EASTWOOD) Spontaneous hypoglycaemia 833 (O)
Rand mines preventive medicine in (A J Orenstein) 906
RANDALL Alexander *Surgical Pathology of Prostatic Obstructions* rev 430
RANDALL Burton Alexander death of 807
RANKIN Adam L K Acute aseptic meningitis 138 (O)
RANKIN Nicol Macnicol obituary notice of 125
Rassegna Interna tonale di Oto rino laryngo logia first issue of 1015
Rat bite fever *See* Fever
Rat destruction Report of International Committee 207
RATHERY Professor appointed to the chair of medical therapeutics in the Paris Faculty of Medicine 221
RATTRAY Malcolm John obituary notice of 501
RATTRAY Peter Fate of a swallowed needle 302
RAVINA A *L Année Thérapeutique* sixth edition rev 760
RAW Nathan Human and bovine tuberculosis the question of mutation of the tubercle bacillus 377 (O)
RAWLENCE H E A modified Thomas splint 198
RAY Matthew B Osteo arthritis 789 O)—Fouling of footways by dogs 960
Ray Therapy Institute of Annual report 1174
RAYNER E Brian An unusual method of enucleating the tonsil 564
RAYNER H H Injury of rectum caused by the ? (O) 987

Recruits limit on number accepted (parliamentary note) 549
Rectum injured by the faulty administration of an enema (H H Rayner) 419 (O)
Red Cross Rheumatism Clinic Annual report 584 1004
Red Cross Society Annual meeting of Edinburgh Branch 492—Ambulance service 953—Annual report 1004—Report of Joint Council 1051
REFFIE C Barclay Report on the health of Dunfermline 907
Reflexes conditioned and habit formation (W Horsley Gantt) 517 (O)
Refuse dumps 915—(Parliamentary note) 915—Metropolitan (parliamentary note) 409
Registrar General's report *See* Vital statistics
REICHERT Edward Tyson death of 638
REID Lieutenant R I awarded the Montefiore Prize 1014
REID R I G Report on the health of County Armagh school children 494
REID Walter A honorary LL D Aberdeen conferred on 691
REID William Loudon obituary notice of 40
Relapsing fever *See* Fever
RÉMOND Antoine death of 314
Renal case investigation of a (F Hector Scotson) 235 (O)
Renal colic *See* Colic
Renal cyst *See* Cyst
Renal efficiency Van Slyke urea clearance test of (I Wordley) 334
Renal insufficiency meeting and competition on the study of at Evian les Bains September (1933) 691
Renal *See also* Kidney
RENAULT Jules nominated vice president of the French Council of Public Health 267
RENSHAW A (and others) *When and How to Collect Specimens for Laboratory Examination* 1183

Research Institute at Kuala Lumpur Annual report 158—Prophylaxis against typhus fever 158
Research Institute *James Mackenzie* Annual report 115
Research Laboratory Pickett Thomson Annals of vol vii *The Pathogenic Streptococci* rev 570
Research medical the Empire's debt to (F E Fremantle) 202
Research medical and the patent law (leading article) 810
Research Scientific and Industrial Department of Report for 1930–31 388—Report on atmospheric pollution 433
Respiration review of book on 1133
Respiratory complications post anaesthetic CO in (J Ross Mackenzie) 561 (O)
Resuscitation CO² in 84
Resyl 665
Reticulo endothelial system (R H Mole) 191
Retina detached a scleral marker as an accessory to the igni puncture treatment of 943
Retinal structure and functions (R S Creed) 1032
Retino copy 109
Retractor Berkeley's abdominal modification of 1177
REVILLIOD Ernest death of 961
Revue de Laryngologie enters its fifty third year with an introduction by its founder E J Moure 127

Reviews of Books

Abdomen the Acute (C H Fagge) 1177
Abdominal Cavity and Peritoneum a Clinical Study of the (Edward Mealin Livingstone) 1036
Abdominal Operations the Management of (Rodney H Maingot) 384
Accidental Injuries (Henry H Kessler) 845
Acute Abdomen *See* Abdomen
Alcoholism The Social and Economic Aspects of the Drink Problem 571

and C M Bevan Brown) 20
Aneurysm of Aorta Les Anévrismes Intrapéricardiques de l Aorte (Tulio Martini and Miguel Joselevich) 65
Annals of Medical History *See* Medical
Arts A Grammar of the (Sir Charles Holmes) 665
Asthma and Hay Fever in Theory and Practice (Arthur Coca Matthew Walzer and August A Thommen) 1035
Backward Child *See* Child
Bacteria Sulphur (David Ellis) 846
Bacteriological Technique the Essentials of (R F Hunwicke) 528
Bacteriology General a Text Book of (Edwin O Jordan) tenth edition 430
Bacteriology Manual of (Robert Muir and James Ritchie) *ninth edition* 889
Bacteriol
(André
Bacteriol
of vol IX 19
Bacteriology and the Study of Injections Recent Advances in (J Henry Dible) second edition 385
Bedside Manners (*Christopher Howard*) 1085
B (Carey P McCord O Boyle) second

Biographical Dictionary Biographisches Lexikon der hervorragenden Ärzte der letzten fünfzig Jahre (I Fischer) 1085
Biology and Mankind S A McDowall) 891
Biology Tabulae *Biologicae* Periodicae 714 1132
Birth Control Literature a Guide to (Norman E Himes) 807
Birth Control Physicians Manual of (Antoinette F Konikow) 807
Birth Control and Public Health 808
Birth Control *See also* Contraception
Black Death and Men of Learning (Anna C
Bl of (A Pines

Blood Diseases Leçons cliniques sur les Maladies du Sang et des Organes Hématopoiétiques (Ch Achard) 759
See Radiography (Mrs Henry Haldin)

British Spas and Seaside Resorts (R Fortescue Fox) twenty third edition 432
Butter fat [Ghee] (N N Godbole and Sadgopal) 65
Cæsarean Section (Frances Ivens Knowles) 617
Cancer the Genesis of (W Sampson Handley) 194
Case of Mrs A the Diagnosis of a Life Style) (Alfred Adler) 20
nbryology
ood Chemistry
ston) 665
Chemistry Forensic and Scientific Criminal Investigation (A Luces) second edition 847
Chemistry Organic Recent Advances in (Alfred W Stewart) sixth edition 295

Chemistry Physiological Praktikum der Physiologischen Chemie Fermentmethoden (*Peter Rona*) 21
Chest Disease in General Practice with Special Reference to Pulmonary Tuberculosis (Philip Ellman) 664
Child Backward the Education of the (David Kennedy Fraser) 890
Childhood Disorders of Clinical Notes on (D W Winnicott) 65
Children We Teach (Susan Isaacs) 890
Children's Nursing *See* Nursing
Church Towers of England the Great (Frank J Allen) 1084
Circulation Die Regulierung des Blutkreislaufes (W R Hess) 1132
Cleft Palate Division Palatine (Victor Veau) 195
College Royal of Surgeons of England List of the Transactions Periodicals and Memoirs in the Library of second edition 943
Colloids (Ernest F Hedges) 714
Colloidal Chemistry *See* Chemistry
Colour Vision La Vision des Couleurs (Guiseppe Ovio) second edition 1177
Communicable Disease Control Report of Committee 104
Congress of the History of Medicine Rome Transactions 104
Contemporary Thought of Germany vol II (W Tudor Jones) 104
Contraception the Practice of (edited by Margaret Sanger and Hannah M Stone) 807
Contraception International Medical Group for the Investigation of fourth issue 878
Contraception *See also* Birth Control
Cunningham's Text Book of Anatomy sixth edition 806
Dental Surgery and Pathology (Sir Frank Colyer and Evelyn Sprawson) sixth edition 1176
Dental Surgery the Science and Practice of (edited by Sir Norman Bennett) second edition 713
Dentists Register (1932) 617
Dermatologie (A Sézary) 1078
Dermatology Fundamentals of (Alfred Schalek) second edition 153
Dermatology *See also* Skin
Diabetes its Control by the Individual and the State (Elliott P Joslin) 709
Diabetes Directions for Treatment by Insulin and *Diet* (Benjamin F Smith) 19
Diabetes Mellitus the Pathology of (Shields Warren) 19
Diabetes Précis du Diabète (H Chabanier and C Lobo Onell) 337
Diabetes Zuckerkrankheit und ihre Behandlung im Kindesalter (Richard Priesel and Richard Wagner) 760
Diabetic Management Simplified (Joseph T Beardwood and Herbert T Kelly) 759
Diagnosis the Clinical Interpretation of Aids to vol II 20
Diagnosis and Treatment Modern the Science of Signs and Symptoms in Relation

logie
and L
Digestion 571
Digestive Disorders Therapeutique Médicale I Maladies du Tube Digestif (Maurice Loeper and André Lemaire) 294
Digestive Disorders Traitement Medical des 294
rs of

Digitalis Verhandlungen der Deutschen Gesellschaft für Kreislaufforschung (Bruno Kisch) 153
Disease Communicable Control of Report of Committee 104
Disease The Nature of (J E A Macdonagh) Part III Section I 196
Doctor's Defence (Sidney Fairway) 476
Doctors Grosse Ärzte (Hans E Sigerist) 18
Drink Problem the Social and Economic Aspects of the 571
Drugs Narcotic Conference for the Limitation of the Manufacture of Records of Vol I 1085
East Anglian Field Ambulance the 3rd [Four Lines] Record of during the Great War 1914–1919 476
Edinburgh Obstetrical Society Transactions vol II 1038
Egypt The Home of the Occult Sciences (T Gerald Gaily) 21
Electrocardiography Atlas d Electrocardiographie Pratique (J Walser and L Deglaude) 1131
Electro Surgery Die Elektrochirurgie (Franz Kesser) 528
Embryology Chemical (Joseph Needham) 757
Embryology A Manual of (J P Frazer) 151
Emergency Surgery *See* Surgery
English Speaking Students of Medicine at the University of Leyden (R W Innes Smith) 713

Temple Research Fellowship in tuberculosis 816—Intelligence and disease report on (Shan
ley) 622—Reduction of grant to (parliamentary note) 549—Report on medical uses of radium 23—Rockefeller Medical Fellowship 816—Tuberculin tests in man report on the value of (P D Arcy Hart) 715
Research Fellowship Colston Medical note on 211

Reviews of Books (*continued*)
Nervous System (Vegetative) and Internal Secretions (Walter B Cannon) 1175
Nervous System, Diseases of. See Medicine
Nervous System, Selected Writings (Hughlings Jackson) 1175
Nervous System, Textbook of the Anatomy, Physiology and Pathology of the (Herbert Spencer) 1175
Nervous System, Textbook of the Diseases of the (Sir Frederick Walker Mott) 1175
Nervous System, Textbook of the Diseases of the (Sir Frederick Walker Mott and F M R Walshe) 1175
Nervous System, The Autonomic and its Disorders (Sir John Ryle and T Russell Brain) 1175
Nervous System, The Human (David Fraser Harris) 475
Nervous System, The Structure and Development of the (W Gordon Ball and Geoffrey Bourne) 1175
Nervous System, The Vegetative (Walter B Cannon) 1175
Nervous Tissue, Manual of Histology and Microscopic Anatomy of (Casimir Funk) 1175
Neuralgia, Clinical Lectures on Facial (Sir Charles Ballance) 1175
Neurasthenia and Other Nervous Disorders, Psychotherapy in (Arthur Cleveland Jones) 1175
Neurasthenia, Shell Shock and (Frederick Walker Mott) 1175
Neurasthenic Condition, Treatment of the (Sir Thomas Clifford Allbutt) 1175
Neurectomy, Surgical Anatomy and Technique of (Leonard Wilson) 1175
Neurological Examination, Manual of (Sir Charles Ballance) 1175
Neurological Practice, Handbook of (E C Dodds and L Bell) 1175
Neurology, Clinical Lectures on (Arthur Hurst) 1175
Neurology, Handbook of (Sir Charles Ballance and Others) 1175
Neurology, Lectures on (Sir Charles Ballance) 1175
Neurology, Outlines of (Sir Charles Ballance) 1175
Neurology, Practical (Sir Charles Ballance) 1175
Neurology, Recent Advances in (F M R Walshe) 1175
Neurology, Textbook of (Sir Charles Ballance and Others) 1175
Neuroses, Functional Nervous Disorders and the (Sir Maurice Craig and Cuthbert Smyth) 1175
Neuroses, Psychoanalysis and the (Wilhelm Stekel) 1175
Neuroses, Psychopathology of the (Ernest Jones) 1175
Neuroses, Treatment of the (Sir Thomas Clifford Allbutt) 1175
Neurosis and Psychosis, Outlines of (Sir Frederick Walker Mott) 1175
Neurosis, Psychology of (Wilfred Trotter) 1175
Neurosis, The Psychology of (Ernest Jones) 1175
Neurosis, War (Sir Frederick Walker Mott) 1175
Neurosis, War, a Reprint of Original Papers (Sir Frederick Walker Mott) 1175
Neurosis, War, and Allied Nervous Affections (Sir Frederick Walker Mott) 1175
Neurosis, War, Shell Shock and Other Problems (Sir Frederick Walker Mott) 1175
Neurosis, War, Shell Shock and Psychopathology of War

Radium tube for oesophagus a rubber 477
Radium and x ray protection 203
Radium and x ray workers blood condition of 1182
Radium and x rays in treatment Report of the State of Ontario Royal Commission 1088
RADLEY Sidney B Unusual case of sub peritoneal uterine fibroid 840
RAF Dr Report on the health of Aberdeen 32
RAHMAN K A Report on public health of the Punjab 444
RAINSFORD Colonel William John Read obituary notice of 503
RAJCHMAN Ludwik Public health intelligence of the Health Organization of the League of Nations 955
RALPH R S Pathological services of the London County Council 729
RAMON Y CAJAL Professor eightieth birthday of 1155
RAMSBOTTOM Albert (and CYRIL G EASTWOOD) Spontaneous hypoglycaemia 833 (O)
Rand mines preventive medicine in (A J Orenstein) 996
RANDALL Alexander *Surgical Pathology of Prostatic Obstructions* rev 430
RANDALL Burton Alexander death of 857
RANFIN Adam L K Acute aseptic meningitis 138 (O)
RANKIN Nicol Macnicol obituary notice of 125
Rassegna Interna zionale di Oto rino laryngo logia first issue of 1015
Rat bite fever *See* Fever
Rat destruction Report of International Committee 207
RATHERY Professor appointed to the chair of medical therapeutics in the Paris Faculty of Medicine 221
RATTRAY Malcolm John obituary notice of 501
RATTRAY Peter Fate of a swallowed needle 302
RAVINA A *L Année Thérapeutique* sixth edition rev 760
RAW Nathan Human and bovine tuberculosis the question of mutation of the tubercle bacillus 377 (O)
RAWLENCE H E A modified Thomas splint 198
RAY Matthew B Osteo arthritis 789 O)—Fouling of footways by dogs 960
Ray Therapy Institute of Annual report 1174
RAYNER E Brian An unusual method of enucleating the tonsil 564
RAYNER H H Injury of rectum caused by the
rlia
mentary note) 549
Rectum injured by the faulty administration of an enema (H H Rayner) 419 (O)
Red Cross Rheumatism Clinic Annual report 584 1004
Red Cross Society Annual meeting of Edinburgh Branch 492—Ambulance service 953—Annual report 1004—Report of Joint Council 1051
REEKIE C Barclay Report on the health of Dunfermline 907
Reflexes conditioned and habit formation (W Horsley Gantt) 517 (O)
Refuse dumps 915—(Parliamentary note) 915—Metropolitan (parliamentary note) 409
Registrar General s report *See* Vital statistics
REICHERT Edward Tyson death of 638
REID Lieutenant R I awarded the Montefiore Prize 1014
REID R I G Report on the health of County Armagh school children 494
REID Walter A honorary LL D Aberdeen conferred on 691
REID William Loudon obituary notice of 40
Relapsing fever *See* Fever
RÉMOND Antoine death of 314
Renal case investigation of a (F Hector Scotson) 235 (O)
Renal colic *See* Colic
Renal cyst *See* Cyst
Renal efficiency Van Slyke urea clearance test of (F Wordley) 334
Renal insufficiency meeting and competition on the study of at Evian les Bains September (1933) 691
Renal *See also* Kidney
RENAT president of the lth 267
RENS *and How to Collect Specimens for Laboratory Examination* 1183
l Annual report 439
cteriology in *Relation* 19—Cross Dorothy
Temple Research Fellowship in tuberculo
ley) 622—Bal
note) 549
port on the value
Medical note on
211
Research Institute at Kuala Lumpur Annual report 158—Prophylaxis against typhus fever 158
Research Institute James Mackenzie Annual report 115
Research Laboratory Pic ett Thomson Annals of vol vii *The Pathogenic Streptococci* rev 570
Research medical the Empire s debt to (F E Fremantle) 202
Research medical and the patent law (leading article) 810
Department
on atmos
Respiration review of book on 1133
Respiratory complications post anaesthetic CO² in (J Ross Mackenzie) 561 (O)
Resuscitation CO in 84
Rest 665
Reticulo endothelial system (R H Mole) 191
Retina detached a scleral marker as an accessory to the ignipuncture treatment of 943
Retinal structure and functions (R S Creed) 1082
Retinoscopy 109
Retractor Berkeley s abdominal modification of 1177
REVILLIOD Ernest death of 961
Revue de Laryngologie enters its fifty third year with an introduction by its founder E J Moure 127

Reviews of Books

Abdomen the Acute (C H Fagge) 1177
Abdominal Cavity and Peritoneum a Clinical Study of the (Edward Mealin Livingstone) 1036
Abdominal Operations the Management of (Rodney H Maingot) 384
Accidental Injuries (Henry H Kessler) 845
Acute Abdomen *See* Abdomen
Alcoholism The Social and Economic Aspects of the Drink Problem 571
dited
F G
Crookshank J C Young George Gordon and C M Bevan Brown) 20
Aneurysm of Aorta Les Anévrismes Intrapéricardiques de l Aorte (Tulio Maritini and Miguel Joselevich) 65
Annals of Medical History *See* Medical
Arts A Grammar of the (Sir Charles Holmes) 665
Asthma and Hay Fever in Theory and
Ba
Ba
Ba of
(
Bacteriology General a Text Book of (Edwin O Jordan) tenth edition 430
Bacteriology Manual of (Robert Muir and James Ritchie) ninth edition 889
Bacteriol
(André
Bacteriol
of vol IX 19
Bacteriology and the Study of Injections Recent Advances in (J Henry Dible) second edition 385
Bedside Manners (Christopher Howard) 1085
Benzol [Benzene] Poisoning (Carey P McCord Nora Cox and Charlotte O Boyle) second edition 992
Biographical Dictionary Biographisches Lexikon der hervorragenden Arzte der letzten funfzig Jahre (I Fischer) 1085
Biology and Mankind S A McDowall) 891
Biology Tabulae Biologicae Periodicae 714 1132
Birth Control Literature a Guide to (Norman E Himes) 807
Birth Control Physicians Manual of (Antoinette F Konikow) 807
Birth Control and Public Health 808
Birth Control *See al o* Contraception
Black Death and Men of Learning (Anna Montgomery Campbell) 572
Blood Diseases Clinical Atlas of (A Piney and Stanley Wyard) 665
Blood Diseases Leçons cliniques sur les Maladies du Sang et des Organes Hémato
pal) 68
Cae arean Section (Frances Ivens Knowles) 617
Cancer the Genesis of (W Sampson Handley) 194
Ca e of Mrs A (the Diagnosis of a Life Style) (Alfred Adler) 20
Investigation (A Lucas) second edition 847
Chemistry Organic Recent Advances in (Alfred W Stewart) sixth edition 295
Chest Disease in General Practice with Special Reference to Pulmonary Tuberculosis (Philip Ellman) 664
Child Backward the Education of the (David Kennedy Fraser) 890
Childhood Disorders of Clinical Notes on (D W Winnicott) 65
Children We Teach (Susan Isaacs) 890
Children s Nursing *See* Nursing
Church Towers of England the Great (Frank J Allen) 1084
Circulation Die Regulierung des Blutkreislaufes (W R Hess) 1132
Cleft Palate Division Palatine (Victor Veau) 195
College Royal of Surgeons of England List of the Transactions Periodicals and Memoirs in the Library of second edition 943
Colloids (Ernest I Hedges) 714
Colloidal Chemistry *See* Chemistry
Colour Vision La Vision des Couleurs (Guiseppe Ovio) second edition 1177
Communicable Disease Control Report of Committee 104
Congress of the History of Medicine Rome Transactions 104
Contemporary Thought of Germany vol II (W Tudor Jones) 104
Contraception the Practice of (edited by Margaret Sanger and Hannah M Stone) 807
Contraception International Medical Group for the Investigation of fourth issue 808
Contraception *See also* Birth Control
Cunningham s Text Book of Anatomy sixth edition 806
Dental Surgery and Pathology (Sir Frank Colyer and Evelyn Sprawson) sixth edition 1176
Dental Surgery the Science and Practice of (edited by Sir Norman Bennett) second edition 713
Dentists Register (1932) 617
Dermatologie (A Sézary) 1078
Dermatology Fundamentals of (Alfred Schalek) second edition 153
Dermatology *See also* Skin
Diabetes its Control by the Individual and the State (Elliott P Joslin) 759
Diabetes Directions for Treatment by Insulin and Diet (Benjamin F Smith) 19
Diabetes Mellitus the Pathology of (Shields Warren) 19
Diabetes Précis du Diabète (H Chabanier
ibre Behand
Priesel and
Diabetic Management Simplified (Joseph T Beardwood and Herbert T Kelly) 759
Diagnosis the Clinical Interpretation of Aids to vol II 20
Diagnosis and Treatment Modern the Science of Signs and Symptoms in Relation 430
R J E
kungen (F W Lapp
Digestion Physiology
logie Normale et Pathologique (G H Roger and Léon Binet) vol II Alimentation et Digestion 571
Digestive Di
I Maladies
and André
Digestive Disorders Traitement Medical des
Meunier) 294
nd Di orders of
Digestive system *See* Gastro intestinal
Digitalis Verhandlungen der Deutschen Gesellschaft für Kreislaufforschung (Bruno Kisch) 153
Disease Communicable Control of Report of Committee 104
Disease The Nature of (J E A Macdonagh)
way) 476
E Sicelist) 18
the Social and Economic
Aspects of the 571
Drugs Narcotic Conference for the Limitation of the Manufacture of *Records of* vol I 1085
the 3rd [Four
he Great War
Transactions
Egypt The Home of the Occult Sciences (T Gerald Gairy) 21
Electrocardiography Atlas d Électrocardiographie Pratique (J Walser and L Deglaude) 1131
Electro Surgery Die Elektrochirurgie (Franz Keysser) 528
eph Needham) 757
J I Frazer) 151
urgery
of Medicine at the
University of Leyden (R W Innes Smith) 713

Reviews of Books (*continued*)
European Conference on Rural Hygiene 21
Exercise, Physiology of (Ferdinand August Schmidt and Wolfgang Kohlrausch) trans lated by Carl H Smith Emil Rath and Leopold Zwarg) 0 2
Eye, Human The Tunics of the (Bruce Clarke) 166
Eye Les Affections de l Oreille chez l Enfant (Max Meyer) 6 3
Eye, Your Vision and How to keep it (H C Merrill and L W Oaks) (second edition) 2 3
Fantasy of the Seasons and Other Verses (Arthur Le Clerc) 105
Feeble Infant *See* Infant
Fertility in Marriage *See* Marriage
Fever, Unnamed La Fievre Ondulante (H Vallée) 5 5
Fever, Tropical Handbook of (A P Jewell and W H Kaunt e) 616
Fighting Disease with Drugs the Story of (Arthur Cushny) 1 5
Food and Drugs Pharmacy (edit d by John C Krantz Jun) 4
Forensic Chemistry *See* Chemistry
Fractures (Mervyn Sinclair) 355
French Medical Annual for 1931 992
Fundus of the Human Eye Errata (Clarke) 105
Gastro-intestinal Tract Functional Disorders of the (William Gerry Morgan) 2
Gateways of Learning (Margaret Drummond) 592
Genetic Principle in Medicine and Social Science (Lancelot Hogben) 295
Genito-Urinary Organs Surgical Pathology of the (Arthur F Hertzler) 153
Genito-Urinary Tract Surgery of the (Ralph Colp) 1 3
German Technical Words and Phrases Marlborough's third edition 10 5
Gonorrhœa Gonococcus Bl ir tragic (Felice Mar s) 1
Gonorrhœa in the Male and Female (P S Good) second edition 2 5
Gould's Medical Dictionary 3 5
Gout —La Goutte Son Mecha me et son Traitement (Daniel Crit man) 155
Grammaro the Art *See* Art
Great Church Towers *See* Church
Gums and Oral Mucous Membrane Diseases of the (Sir Kenneth Goadby) 3 5 3 5
Guy's Hospital Nursing Guide Handbook for Nurses Le gue and Register of Nurses Trained at Guy's H spital 92
Guy's Hospital Reports Vol 81 (vol xi fourth series) No 4 5 5 Vol 82 (vol xii fourth series) No 1 5 5 Vol 82 No 2 5 5
Gymnastics for Women and Girls Principles of (Elli B C klen trans lated by Agnes Dawson and E M Wilkie) 5 5
Gynæcology Lehrbuch der Gynäkologie (W Stoe kel) third edition 5 5
Hæmorrhoids and Anal Pruritus Proctoscopic Examination and the Treatment o (Louis Buie) 991
Hæmorrhoids the Injection Treatment and Pruritus Ani (Lawrence Golobacher) second edition 992
Hare-lip Traitement du Bec-de-Lièvre Uni latéral Procédé du Dr Veau (Paul Ple sier) 1055
Headache (William H Pobey) 2 5
Health Resorts *See* Seaside and Watering Places
Health Towards National (J Anthony Del mege) 1037
Henry the Eighth the Private Character o (Frederick Chamber in) 1055
Histology Morbid Practical (Robert Donald son) second edition 6
Hodgkin's Disease La Maladie de Hodgkin (Paul Chevallier and Jean Bernard) 713
Hormones of Female Sex (William P Graves) 615
Hospital Services of the London County Council Medical Supplement to the Report 61
Hughlings Jackson *See* Jackson
Human Nature Laws of (Raymond H Wheeler) 4 5
Humours among the Doctors (John Ayre) 5 5
Hygiene an Introduction to (W Robert son) 6 5
Hypnotism and Hypnotherapy (Gustav Meyer tran lated by Arnold Lillcart) 0
Immunological Studies in Reptiles and their Relation to Aspects of Immunity in Higher Animals (E Grace et and A Zoutendyk) 8 5
Index of Treatment *See* Treatment
Infant Feeding Modern Methods of (Donald Paterson and J Fore t Smith) third edition 197
Infant Feeding Notes on (G B Fleming) 153
Infant Bott e Feeding of (Mrs Henry Haldin) third edition 71
Infectious Diseases Re istance to (Hans Zinsser) fourth edition 572
Injuries Accidental *See* Accidental
Insurance Social the Briti h System of (Percy Cohen) 9 2
Intelligence and Inheritance An investigation into the Relations between (Evelyn M Law rence) 1150
International Clinics (Edited by Henry W Cattell) vol iii Forty first series 153 vol iv Forty first series 355
Intracranial Progenic Diseases (A. Logan Turner and F Esmond Reynolds) 293
Iris Pattern in the Vertebrates (Ida Mann) 991
Italian Medicine *See* Medicine
Jackson John Hughlings Selected Writings of vol ii Evolution and Dissolution of the Nervous System Various Papers Addresses and Lectures (edited by James Taylor Gordon Holme and F M R Walshe) 1083
Jokes Seen and Unseen (David Fraser Harris) 4 5
Kidney Diseases of the (W Gurney Ball and Geoffrey Evans) 0 1
Laboratories Manuel des Calculs de Labora toire (H Vierordt) 0 3
Laboratory Methods Clinical a Manual of (Clyde Lottridge Cummer) 4
Labor Ward and Surgical Practice (E C Dodds and Josephine H Whitby) 5 0
L'Année Thérapeutique (A Ravina) sixth edition 5 0
Laws of Human Nature (Raymond H Wheeler) 4 5
Living the Liver Diet Either A Miner 2 7
London Hospital Researches Published from the Wards and Laboratories during 1931 992
Lungs and the Early Stages of Tuberculosis (Lawrence Brown and Fred H Heise) 355
Lymphatic Glands Function of (Sir Thomas Animal Anatomy (James Goodfellow) 8 7
Manipulative Surgery (A S Blundell Bankart) 655
Marriage for the Search for (G Elliot Smith) 1 0
Marlborough's German Technical Words and Phrases third edition 10 5
Marriage Fertility and Sterility in Their Influence on the Liver Diet Either A Miner 2 7
Marriage Hygiene (Norah Vincent) 5 5
Married Love (Marie Stopes) 1 5
Massage Vibratory (Mercy Cornelius Wheeler) 4 5
Maternity Medical Advance in (J H Burn) 355
Medical Annual A Year Book of Treatment and Practitioner's Index fiftieth year 1932 (edited by Carey F C Coombs and A Pendle Short) 0 0
Medical Annual French L'Année médicale pratique 1932 edited by Camille Lian and other) 0 2
Medical and Dental Students Register (1932) 61
Medical Dictionary *See* Dictionary
Medical Emergencies (Charles Newman) 432
Medical History Annals of (edited by Francis R Packard) new series vol iii No 5 00 No 6 1 5 vol iv No 1 71 vol iv No 2 0 5 vol iv No 3 1 2
Medical History the Foundations of (Sir D'Arcy Power)
Medical Register 1932) 61
Medical Schools in China 21
Medicine General (Practical Medicine Series) 61
Medicine Italian (Arturo Castiglioni trans lated by E B Krumbhaar) 0 3
Medicine Neue Deutsche Klinik (Georg and Felix Klemperer) vol viii 5 5
Medicine for Nurses Text-Book of (E Noble Chamberlain) 4 5
Medicine a Practice of (E Seyfarth trans lated by C F Marshall and C M Ottley) 102
Medicine Practice of (A. A. Sirenko) third edition 5 5
Medicine and Surgery Practitioner's Library of (edited by G Blumer) vol i Anatomy and Physiology as Applied to Practical Medicine vol ii The Technic of Physical and Laboratory Examination in Clinical Medicine 11 5
Medicine Science and Art Studies in Inter relations (Alfred E Cohn) 33
Medicine Scottish Histories of (John D Comrie) second edition 61
Medicine Practice of (F C Shrubsall and A C Williams) 0
Mental Nurses Text-book for (Elizabeth L Macaulay) 152
Mental Nursing Simplified (O P Napier Pearn) 152
Merck's Annual Report English edition Second part —Third part 1027
Metabolism Therapeutique Medicale (Maurice Loeper and André Lemaire) 11 5
Microbiology *See* Bacteriology
Microscopy Practical (L C Martin and B K Johnson) 10 4
Middlesex Hospital Medical School Collected Clinical Papers (1930-1931) 8 5
Midwifery by Ten Teachers (under the direction of Comyns Berkeley edited by Comyns Berkeley and J S Fairbairn) fourth edition 102
Midwifery and Gynæcology Sproat's (Alec W Bourne) fifth edition 1035
Monkeys and Apes the Social Life of (S Zuckerman) 5 0
Mosquitoes Anopheline Larvæ of with full Description of those of the Indian Species (L M Puri) 61
Mosquitos and Sheline of South Africa Illustrated Keys to the Full Grown Larvæ and Adults of (Botha de Meillon) 617
Narcotic Drugs *See* Drugs
Nervous Diseases The Diagnosis of (Sir James Purves Stewart) seventh edition 8 5
Nervous Manifestations —Les Accidents nerveux consecutifs aux Pertes de Sang Etude clinique et exrerimentale (Robert Worms) 2 2
Nervous System Vegetative An Investigation of the Most Recent Advances (Walter Timme Thomas K. Davis and Henry Alsop Riley) 103
Neural Energy Constant (John Bostock) 1176
Neurology Clinical A Textbook of (Israel S Wechsler) second edition 1152
Nightingale Florence (Irene Cooper Willis) 431
Nottingham Medico Chirurgical Society Centenary of (March 7th 1932) 21
Novum Organum (James Clark McKerrow) 55
Nucleic Acids (P A Levene and Lawrence W Ba s) 10
Nurses Handbook for (J K Watson) ninth edition 0
Nurses Medicine for Text-Book of (E Noble Chamberlain) 4 5
Nurses Mental a Textbook for (Elizabeth L Macaulay) 152
Nurses (Senior) and Midwives Handbook for (J K Watson) second edition 4 5
Nursing Children s Notes on (Marguerite C Lyxlebey) 6 0
Nursing Mental Simplified (O P Napier Pearn) 1 2
Nursing Psychological Patients (Mary Chadwick) 152
Nutrition and Diet in Health and Disease (James S McLester) second edition 1083
Nutrition and Physical Fitness (L Jean Logeri) 2 0
Nutritional Physiology *See* Physiology
Occupational Diseases (Leo amund W Gold berg) 6 0
Old Age The Conquest of (Peter Schmidt translated by Eden and Cedar Paul) 8 0
Old Age Medical Aspects of (Sir Humphry Pollet on) second edition 4 5
Ophthalmological Society of the United King dom Transactions vol li 5 7
Ophthalmology *See* Eye
Organic Chemistry *See* Chemistry
Orthopædics Orthopädische Therapie in der Allgemeinpraxis (Hans Spitzy) 8 0
Other and Other Papers (William Sydney Thayer) 5 7
Otitis Media Acute (Wm Mathew Mollison) 529
Otology Rhino-Laryngology Traité de Technique Opératoire Oto Rhino Laryngologique (Georges Portmann H Retrouvey Jean de pons Paul Leduc and G Martinaud) 0 0
Oxford University Press General Catalogue seventh edition 10 0
Paediatrics *See* Children s Diseases
Palate Cleft Division Palatine (Victor Veau) 19
Paralysis General Erg-bnisse Reintherapie bei progressiver Paralyse (K Bonhoeffer and Jo mann) 807
Parasitology a Guide to (D B Blacklock and T Southwell) 194
Paratyphoid Infections in Antiamœbotic Rats with Special Reference to Vitamin A Deficiency (H C A. Lason) 851
Pathology Human (Howard T Karsner) third edition 790
Pathology Surgical of the Genito-Urinary Organs (Arthur E Hertzler) 153
Pathology Surgical of the Skin Fascia Muscles Tendons Blood and Lymph Vessels (Arthur E Hertzler) 527
Pathology Surgical Text Book of (Charles W Illingworth and Bruce Dick) 5 7
Pathology Text-book of (Francis Delafield and T Mitchell Prudden) fifteenth edition 572
Pathology Tropical an Introduction to (T Bhaskara Menon) 1052
Peptone Witte s Von Eiweiss Enzymen und Lipoiden 43
Percussion Die Perkussionstöne der Lungenspitzen (Alfons Winkler) 431
Phantastica Narcotic and Stimulating Drugs Their Use and Abuse (Louis Lewin) 4 6
Pharmacology Applied (A J Clark) fourth edition 384
Pharmacy the Story of 432
Philosophy of Sport *See* Sport
Philosophy of the Unconscious (Eduard von Hartmann) new edition 4 7
Physical Education a Text-Book of (Jes s Fearnley Williams and Whitelaw Reid Morrison) 255
Physiological Chemistry *See* Chemistry
Physiology and Biochemistry Department University College London Collected Papers 2 4
Physiology Traité de Physiologie Normale et Pathologique (G H Roger and Leon Binet) vol ii Alimentation et Digestion 571
Physiology Nutritional (Percy Goldthwait Stiles) seventh edition 2 4
Pickett Thomson Research Laboratory Annals of vol viii —The Pathogenic Streptococci in Erysipelas Skin Diseases and Measles 570
Pneumothorax Spontaneous in the Apparently Healthy (Hans Kjaergaard) 712
Poisons and Poisoners (C J S Thompson) 385
Practitioner's Library of Medicine *See* Medicine

Reviews of Books (*continued*)
Prognosis and Lnd Results of Treatment An Index of (edited by A Rendle Short) fourth edition 663
Proctology Modern (Mar on C Pruitt) 1084
Prostatic Obstruction Surgical Pathology of (Alexander Randall) 430
Proteins Enzymes and Lipoids 432
Psychiatry Essentials of (George W Henry) second edition 664
Psychiatry Lectures on (E D Wiersma) 942
Psychiatry a Text book of (D K Henderson and R D Gillespie) third edition 941
Psychological Medicine Clinical Lectures on (Henry Yellowlees) 758
Psychology Experimental (Johannes Lindworsky) translated by Harry R De Silva 475
Psychology Fields of A Study of Man and his Environment (Glenn Devere Higginson) 475
Psychology of Men of Genius (Ernst Kretschmer translated by R B Cattell) 103
Psychology of a Primitive People (Stanley D Porteus) 1038
Psychology the Science of (Raymond H Wheeler) 475
Psychoneurotics the Concrete Method in the

Jüngling H Martius and H R Schinz) 1175
of (A P
adiographie
ns Trauma
and Jean
Quénu in Lésions non traumatiques (Etienne Sorrel and Madame Sorrel Dejerine) 63
Radiology in Relation to Medical Jurisprudence (S Gilbert Scott) 474
Radium and Cancer (H S Souttar) 383
Radium Cases at the Middlesex Hospital (A Cameron Macleod) 570
Radium Therapy Notes on (Hector C Colwell) 196
Rats and Mice as Enemies of Mankind (M A C Hinton) third edition 66
rung der Atmung
See College
Reports vol lxiv
Sanitary Delegate Mémoires d un délégué Sanitaire (Guy D Aveline) 338
Sanitary Law Handbook of for the use of Candidates for Public Health Qualifications (B Burnett Ham) eleventh edition 296
Scalp Diseases Diagnostic et Traitement des Affections de Cuir Chevelu (R Sabouraud) 1131
Science of Signs and Symptoms in Relation to Modern Diagnosis and Treatment (Robert John Stewart McDowall) 430
is
4
d
Grown ups) (Helen Drever) 992
Scottish Medicine History of (John D Comrie) second edition 614
Search for Man s Ancestors (G Elliot Smith) 889
Self Use of (F Matthias Alexander) 808
Sex Hormonology *See* Hormonology
Skin Diseases of the (Richard L Sutton) eighth edition 527
Skin Diseases Handbook of (Frederick Gardiner) third edition 244
Skin *See also* Dermatology
Smoke Abatement Handbook 66
Social Insurance *See* Insurance
Social Life of Monkeys *See* Monkeys
Splint Wayfaring in a (Ottilie Wallace) 432
Sport the Philosophy of (Peter McBride) 890
Stammering the Nature and Treatment of (E J Boome and V A Richardson) 616
Stomach Diseases of the (Hugh Morton) 197
Stomach Traitement Médical des Affections Stomacales (Léon Meunier) 294
Stom ve
Sug trans
la
Sul
Sur vol II
15
Surgery General (edited by Evarts A Graham) 529
Surgery a Short P
and R J McNeil
Surgery Manipula
663
Surgery Thomson and Miles Manual of (Alexander Miles and D P D Wilkie) eighth edition 431
Tabulae Biologiae Periodicae (C Oppenheimer and L Pincussen) 714 1132
Tait Lawson His Life and Work with Personal Reminiscences (Christopher Martin) 470

Reviews of Books (*continued*)
Teeth of Animals Abnormal Conditions of in their Relationship to Similar Conditions in Man (Sir Frank Colyer) 104
Third East Anglian Field Ambulance *See* East Anglian
Thomson and Miles Surgery 431
Thyroid Gland Diseases of with Special Reference to Thyrotoxicosis (Cecil A Joll) 711
Treatment An Index of (edited by Robert Hutchinson) tenth edition 243
Treatment L Année Thérapeutique (A Ravina) sixth edition 760
Treatment — Thérapeutique Médicale I Maladies du Tube Digestif (Maurice Loeper and André Lemaire) 234—III Foie Glandes Endocrines et Nutrition (Maurice Loeper and And
Tropical Tropen
Ärzte in
Tropical Fevers Handbook of (W I Jewell and W H Kauntze) 616
Tropical Pathology *See* Pathology
Tuberculosis in Denmark Norway and Sweden 21
Tuberculosis Ergebnisse der Gesamten Tuberkuloseforschung (H Assmann H Beitzke H Braeuning St Engel) Band III 64
Tuberculosis Pulmonary Chest Disease in General Practice with Special Reference to Pulmonary Tuberculosis (Philip Pilman) 664
Tuberculosis Pulmonary Les Débuts et les Arrêts de la Tuberculose Pulmonaire (Léon Bernard) 807
Tuberculosis Surgery of Die Chirurgie der Tuberkulose (P Clairmont O Winterstein and A Dimtza) 294
Tumours of the Breast their Pathology Symptoms Diagnosis and Treatment (Sir C Lenthal Cheatle and Max Cutler) 151
Ulcer Peptic Chirurgie de l Ulcere Gastrique et Duodénal (N Hortolomei and V Butureanu) 846
Urethritis Les Urétrites Chroniques (R Dessot and M Talazzoli) 615
Undulant fever *See* Fever
University of Cambridge Abstracts of Dissertations Approved for the Ph D M Sc and M Litt Degrees for the Academical Year 1930–31 992
Use
Vere
of
Thomas K Davis and Henry Alsop Riley) 103
Vision and
L W O
Vitamins
Warfarin Wallace) 432
Where the Spring Salmon Run (Patrick J Chalmers) 476
White Flame The Story of the Save the Children Fund (Dorothy F Buxton and Edward Fuller) 197
Witte s Peptone *See* Peptone
Women Diseases of (Thomas George Stevens) new edition 244
Year Book and Guide South and East African (edited by A Samler Brown and G Gordon Brown) thirty eighth edition 476
Year Book of the Scientific and Learned Societies of Great Britain and Ireland the Official 66
Yellow Fever An Epidemiological and Historical Study of its Place of Origin (Henry Rose Carter) 337
Your Servant the Doctor (W B Cosens) 1085

Reynolds F Esmond (and A Logan Turner) *Intracranial Pyogenic Diseases* rev 293
Reynolds H E King Captain of the Men of Death 456
Reynolds Lieut Col James Henry obituary notice of 546
Reynolds Russell John C B E conferred on 1097
Rhese Hans death of 638
Rheumatic arthritis chronic radiographic dissection of (S Gilbert Scott) 275 (O) *See also* Arthritis
Rheumatic infection acute prevention and treatment of (W R F Collis) 1032—Discussion 1033
39
to health
1086
times (H
Annual
report 584—Note on 1094
Rheumatism early treatment of 4 0
3
ee also
Arthritis
Rhinitis vasomotor intranasal ionization in (Philip Franklin) 751 (O)
Richards Major H E S re appointed a member of the Executive Committee of the island of Grenada 967
Richardson Sir Benjamin Ward (J D Rolleston) 399
Richardson G Post operative x ray treatment in breast cancer 1056
Richardson M A (and F J Boome) *The Nature and Treatment of Stammering* rev 616
R ffect of
R of the Académie des Sciences for 1932 and president for 1933 43
Richmond R G E Statement *re* the recent 15
479
Rickets in Glasgow (A K Chalmers) 116
Rickets the history of (Leonard Findlay) 383

sterilization and birth control 106—London County Hospitals 258—London County Council pathological services 305
Riddell M Hyperthyroidism 63
Ridout Scott The ear and referred pain 1125
Rielly Stanley Desmond, O B E conferred on 75
Riley Henry Alsop (editor) —*The Vegetative Nervous System An Investigation of the Most Recent Advances* rev 103
Ringworm of the scalp Thallium acetate in the treatment of (John T Ingram) 8 (O)—Correspondence on 120 214 261 402—Epidemiology of (G H Percival) 93 (O)—Correspondence on 351
Ritchie James Farquhar Thomson Lectures on the importance of the child 213
Ritchie James (and Robert Muir) *Manual of Bacteriology* ninth edition rev 889
Rivers A B Pain in peptic ulcer 536
Rivers polluted 994
Rivett L Carnac After effects of the toxaemias of pregnancy 660—Teaching of obstetrics 985—Analgesia in childbirth 1172
Road accidents *See* Accidents
Road Traffic Act (1930) 408
Road traffic signals 441 591 682
Roaf Herbert F appointed to the George Holt chair of physiology at Liverpool 595 1197—Mechanism of colour vision 1082—Resignation of from the Chair of Physiology at the London Hospital Medical School 1197
Robb John J Aetiology of duodenal ulcer 956
Robert E Ambulatory treatment of fractures 1101
Roberts F Hesketh Colporrhaphy for prolapse 216 448 684
Roberts Ifrangcon Protection of x ray workers 192
Roberts F R Oedema in the newborn 968
Roberts Lloyd Lecture *See* Lecture
Roberts R E Ante natal radiology 334
Robertson Andrew B (and Ian Murray) Significance and origin of lactic acid in the
The cinemato
92
Report on the
for Mental and
Nervous Disorders 491—Death of 624—Obituary notice of 688—A correction 738—His successor 907
Robertson J D Lactic acid in the gastric contents 682
Robertson Lewis S Canine tooth emptying externally 44
Robertson W *An Introduction to Hygiene* rev 665
Robertson W N Appreciation of Robert Henry Todd 500
Robey William H *Headache* rev 295
Robinson Arthur (editor) *Cunningham s Text Book of Anatomy* sixth edition rev 806
Robinson Robert title of Professor of Biochemistry conferred on 220
Robson John A Unilateral oedema 872
Robson J M Research on sex hormones 149 258—Ovulation and the sex cycle 259
Robson William title of Reader in Biochemistry conferred on 220
Roche Hilary The blood sedimentation rate in pulmonary tuberculosis 466 (O)
Rockefeller Foundation *Methods and Problems of Medical Education* twentieth series 764
Roger G H (and Léon Binet) *Traité de Physiologie Normale et Pathologique* Tome II *Alimentation et Digestion* rev 571
Rogers Major General Sir Leonard K C S I conferred on 69 75—(And W L Cooke) Resistant sprue anaemia yielding to intravenous liver extract 272 (O)—Forecasting epidemics 724
Rohmer Professor elected foreign corresponding member of the Belgian Royal Academy of Medicine 315
Rolleston Sir Humphry Davy *History of the Cambridge Medical School* 298—Accepts the presidency of the Devonshire Hospital for Rheumatic Diseases Buxton 455—*Medical Aspects of Old Age* second edition rev 845—Medical problems of contraception 1047—The Grafenberg ring 1047—Dr Alfred Cox Testimonial Fund 1146
Rolleston J D —Juvenile rheumatism 155—Chadwick Lecture on Sir Benjamin Ward Richardson his life and work 393—Goethe s medical history 670 The cigarette habit 757

Scotland (continued)
Fife hospital services grouping of 723
Finlayson Memorial Lecture 722 857
Glasgow
Anderson's College 540
Cancer Hospital 678
Children's Hospital 555
Children's Ho pital the new 139
Dental Hospital the new 139
Ear Nose and Throat Hospital 857
Royal Infirmary 650
Health of 229
Health service co ordination of 678
Hospital for infectious disease proposed new 650
Hospital Sunday Fund 540
Maternity Hospital 442
Medical curriculum 212
Medical Missionary Society 52
Mental Hospital 1155
Pickets in 116
Post graduate course 1035
Royal Infirmary 166 213 39
Royal Mental Hospital 555 955
Social services in 857
Victoria Infirmary 441
Western Infirmary 545
Hannah Dairy Research Institute 907
Health Department See Scottish Department of Health
Health of Scotland 442
Health service in (parliamentary note) 780
Hearing defective investigation into 1035
Henderson David Kennedy Appointed to succeed G M Robertson 907
Highlands and Islands Fund 1155
Hospitals voluntary and the State 1144
Incurable bone relief of 1035
Industrial hygiene in 229
Insurance National Health 1155
Larbert Colony for mental defectives 725
Mackenzie James) Institute 115
Malignant disease Sir A Blair presentation to 1048
Maternity mortality 955
Medical education report on 212 829
Medical services in Scotland 1049
Mental disorder certification of 491
Mental hospitals 115
Mental welfare in 1155
Miners convalescent home 53
Navy and Army Institute of Scottish Branch Annual meeting 32
Obituations to be notified 52
Obstetrical and Gynæcological Society of Scotland 955
Parish Royal Infirmary 555
Public health work 504
Rickets in 956
Robertson G M his success or 907
Scottish Department of Health Annual report 1029 1133 1155
Scottish Medical Secretary presentation to 954
Silicosis in Scotland 723
Stirling Royal Infirmary 504
Scorgie F Hector Investigation of a renal case 255 (O)
Scott G Laughton Drug addict in court 556
Scott P J L (editor) Gould's Medical Dictionary third edition rev 338
Scott S Gilbert Treatment of stiff joint 1—X ray dosage in malignant disease 147—The radiographic dissection of chronic rheumatic arthritis 275 (O)—Radiology in Relation to Medical Jurisprudence rev 474
Scottish Department of Health Annual Report 1029 1154 115—Conference on medical services in Scotland 1049
Scottish hospital services grouping of 723
Scottish Nurses for February on nursing the pro tanto case 315
Sedgwick G H Appreciation of George Brown Hillman 537
Sendlin Harald obituary notice of 950
Self the Use of 912 1039 1055 1149 1192
Semilunar cartilage operation on the 1042—See also Knee joint
Semon Henry C Treatment of erysipelas by mild injections 352
Sendall Lieutenant M awarded the Ronald Martin Prize 1014
Sentiment and reason conflict between (Sir Arthur Keith) 1154
Sepsis focal a predisposing factor in miners nystagmus (T O Sullivan) 611
Sepsis and subinvolution 128
Septic foci and normal labour (Helen Lerion) 550 (O)
Septicæmia serotherapy in 1191
Septum nasal splint for use after submucous resection of 198
Sequeira James H. The brain of the Ea t African native 581
Sergent Emil Report on his visit to Canada 48
Sero-positive syphilis See Syphilis
Serotherapy in septicæmia. See Septicæmia
Serum convalescent in prophylaxis of measles ch chen pox and mumps (William Gunn) 183 (O)
Serum convalescent human production of immunity by means of (A G Signy) 53
Serum in the prophylaxis of measles (J I Collier) 703 (O)
Serum treatment of cerebro spinal fever 5 0
Servant girl illegal detention of (parliamentary note) 357
Smallpox and vaccination (parliamentary note) 1035
Smith Grafton Elliot Treatment of dementia præcox rev 1121
Smith Lieutenant Alexander Simon obituary notice of 1155
Smith A C Cysts and tumours in the Head and Neck rev 1121
Smith Sir Thomas Peel Diphtheria and Scarlet Fever 1121
Smith Sir Thomas Peel Epidemiology and Vital Statistics rev 1121
Smith Sir Thomas Peel Infectious Diseases and their Prevention rev 1121
Smith Sir Thomas Peel Public Health and Preventive Medicine rev 1121
Smith Sir Thomas Peel Tuberculosis rev 1121
Smith Sir Thomas Peel Water Milk and Food Supplies

SERVETUS Michael title of Villa granted to the birthplace of 267
Services Medical Branches of the Committee on (parliamentary note) 915
Sewerage scheme Bangor 164
Sex cycle and ovulation (leading article) 108—Correspondence on 166 259 306
Sex equality 222
Sex hormones research on (F C Dodds) 148—Correspondence on 268—Review of book on 615 *See also* Hormones
Sexual offences examination of girls in (parliamentary note) 780
SEYMOUR Harold F Backache in women 526
SEZARY A *Dermatologie* rev 1038
SHACKLE J W (and Maurice CAMPBELL) Aortic valvular disease 328 (O)
SHACKLETON Wm W Acute appendicitis in children 1101
SHAHEEN Hassen Bey Treatment of rheumatoid arthritis 38
SHAKESBY A E High Court decision against 914 965 1060
[illegible]
of
ringworm 121—Cholecystography 567
SHARP A D Deaf mutism 290
SHARPEY SCHAFER Sir Edward Action of intracardiac injections of adrenaline in asphyxia 165 668
SHAW H Batty [illegible]
SHAW Maurice
SHAW Wilfred cle 166 306—Two specimens of early human ova 411 (O)
SHAW William Fletcher Colporrhaphy for prolapse 119 260 544
SHAW MACKENZIE J A Immunity and malignant tumours 260—Aetiology of cancer 773
Sheets vitella 296
SHELDON Stratford Internal cerebral haemorrhage [illegible]
See
Bill
the
the
Herbert and Fayrer Memorial Prizes 1014
SHERA Geoffrey (J N C FORD and Sir James PURVES STEWART) Fulminating meningococcal meningitis 558 (O)
SHERRINGTON Sir Charles Hughlings Jackson medal presented to 895 1000
Ship surgeons post graduate courses for 691 1051
Ships British sanitary condition of (parliamentary note) 1014
SHIPTON W to remain on the staff of the Devonshire Hospital Buxton for a further five years 871
SHIRLAW J Thomson Plumbism and peptic
6 11 8
f Prognosis and End-Results of Treatment fourth edition rev 663
SHORTALL C J Pancreatic sarcoma 989
SHRUBSALL F C (and A C WILLIAMS) *Mental Deficiency Practice* rev 990
SHRUBSALL W W Cramped footgear 591—The use *of self* 1150
Shuttleworth Samaritan fund 1057 *See also* Fund
SHUTE P G Induced tertian malaria 987
SIGERIST Henry E *Grosse Ärzte* rev 18—Appointed to the Chair of the History of Medicine in the Johns Hopkins University Medical School 1155
Sigmoidoscopic scoop 572
SIGNY A G Production of immunity by means of convalescent human serum with special reference to measles 334
SILCOCK F A E Shoe leather dermatitis 447
Silico anthracosis presenting curious bodies similar to those in asbestosis (W E Cooke) 656 (O)
Silicosis (parliamentary note) 638 870
v 814
into 723
control of (L G
[illegible] 653 (O)
SILLARS Joseph presentation to 1061
Silver catadyn 624
SILVERMAN S Treatment of chronic ulcers of the leg 1055
SIMSON Sir Henry Colporrhaphy for prolapse 166
SINCLAIR Meurice *Fractures* rev 335—Ambulat[illegible] 587
SINCLAIR [illegible] 597
SINCLAIR [illegible] notice of 406
SINDERSON Harry Chapman *O B E* conferred on 1097
SINGTON Harold Domestic sanitation 1105
SINTON Colonel J A Transmission of Leishmania infections 240
Sinus carotid vasovagal syncope and the mechanism of (Sir Thomas Lewis) 873 (O) *See also* Vasovagal
Sinusitis ethmoidal and frontal (Donald A D Macalister) 983
Sinusitis and exophthalmos 448
SISSON Marshall British sea coast resorts 478
Skiagrams of antrum *See* Antrum
Skin disease Ferri perchlor in 784
Skin *See also* Dermatology
SKINNER Major General Bruce Morland obituary notice of 915
SKOTTOWE Ian (and Gilbert I STRACHAN) Menstruation in mental disease 524
Skull fracture of *See* Fracture
Slander action by medical man for (Owen v Barham) 176
Sleeping sickness Gambian results of tryparsamide and combined treatment in (C C
development in the rection 456
Slum clearance (parliamentary note) 310 549 735 7[illegible]
Small
Small
and fatality of throughout the world 201
Small pox *See also* Lichen urticatus
SMART Commander Morton C V O conferred on 1097
SMEALL J F (and W R LOGAN) A direct method of typing pneumococci 188 (O) 305
SMITH A Hayes *Captain of the men of death* 352—Parenteral liver therapy 401
SMITH Benjamin I *—Diabetes Directions for Treatment by Insulin and Diet* rev 19
SMITH L C awarded the Langley Memorial Prize 315
SMITH Edwin Appreciation of Robert Matthew Bronte 637
SMITH F H Diet and dental disease 589
SMITH G Elliot Address at Anderson's College Glasgow 540—*The Search for Man's Ancestors* rev 889
SMITH G Francis A student in irons 631
SMITH Lieut Col Henry Glaucoma 78
SMITH H Edgar Testimonial to Sir Ashley Mackintosh 1110
SMITH J Fergu on Thallium treatment of ringworm 120
SMITH J Forest (and Donald PATTERSON) *Modern Methods of Feeding in Infancy and Childhood* third edition rev 197
SMITH K Shirley The simulation of heart disease 129 (O)
SMITH M I Standardization of ergot 109
SMITH R E Infection in the dormitory 802
SMITH R W Innes *English speaking Students of Medicine at the University of Leyden* rev 713 784—A correction 784
SMITH R Wayland Backache and the orthopaedic surgeon 711
SMITH Sydney (and C P STEWART) Diagnosis of drunkenness from the excretion of alcohol 87 (O)—Abortion Its social legal and ethical aspects 844
SMITH Theobald awarded the Manson medal 896
SMITH Walter George obituary notice of 406
SMITH Sir William Robert obituary notice of 592
Smoke abatement in France (Pierre Lamarque) 1043
and S
Thyselius Lundberg) 392
SMYLY H J Transmission of Leishmania infections 240—Hirschsprung's disease 757
SMYTH J A Thyroid extract and pulmonary *embolism* 862
SMYTHE H J Drew Uterine cannula 21
SMYTH G Spence Depressed fracture of the foetal skull 773
SNOW C P Artificial preparation of vitamin A 948
SNOWBALL L A H Treatment of tetanus 863 —*Disruption of the pelvis* 1076 (O)
Sobering up rate 37
Social services in Glasgow (A K Chalmers) 857
Société d'Hématologie founded in Paris 502
Société Nationale de Chirurgie awards its gold medal 1061
Society Aberdeen Medico Chirurgical Demonstration of cases 193—Ectopia vesicae 193—Chorea and mitral stenosis 193—Vagotonia 193—Diarrhoea of parenteral origin 193—Meningo encephalitis with hydrocephalus 193—Epituberculosis 193—Malignant tumour of the posterior end of a rib 193—Avulsion of all the extensor tendons of the right arm 194—Exhibition of films of several cases 194—Cortical extract in Addison's disease 525—Collapse therapy in phthisis 754—Anaesthesia in thoracic surgery 755—Calcium metabolism 939
Society Belgian of Preventive Medicine and Eugenics to establish centres of preventive medicine 586
Society Bradford Medico Chirurgical Obstetrics of a general practice in the last decade 625
Society Brighton and Sussex Medico Chirurgical Common gastric symptoms 192—Backache in women 526
Society Cardiff Medical Surgical treatment of diseases of the gall bladder and bile ducts 643
Society Chelsea Clinical Demonstration of
[illegible] 653
Society Edinburgh Dental Students Annual dinner 347
Society Edinburgh Medical Missionary Annual meeting 492—The training of medical missionaries 492
Society Edinburgh Obstetrical Prevention of
of preg
associated
istruation
of puer
peral sepsis 524—Law and ethics of abortion 844—*Transactions* vol ii rev 1038—Treatment of salpingitis 1029
Society of Endocrinology International formation of 221
Society Eugenics Sterilization in its medical legal and social aspects 1045
Society Exeter Medico Chirurgical Hyperthyroidism 63
Society Folkestone Medical Osteo arthritis 7 9
Society German for the Study of the Circulation *Proceedings* rev 153
Society German Dermatological Annual meeting (1932) postponed 691
Society German for Medical Tours Spring tour to Thüringen to *commemorate* the centenary of the death of Goethe 871
Society Glasgow Medical Recent work on the afferent control of the circulation in health and disease 457
Society Glasgow Medical Missionary Annual meeting 33
Society Harley Medical Inaugural meeting 785 803—The origin of tumours 803
Society Harveian of London Election of officers 150—The value of endoscopic methods 315 332 — Harveian Oration Pulmonary embolism 564—Annual dinner 1145
Society Hunterian of London Festival dinner 347—Gold medal awarded 409—Next award of *gold medal (1933)* 736
Society Italian of Experimental Biology Annual meeting Turin (1932) 455
Society Italian of Surgery of the Mouth and Dentofacial Orthopaedics Foundation of 251 —Congress of 361
Society Lincoln Medical Injuries about the elbow in children 739
Society Liverpool Medical Students Debating Annual dinner 31—Presentation portrait to Emeritus Professor Blair Bell 31
Society London and Counties Medical Protection Annual meeting and report 1097—Correspondence on 1193
Society London Jewish Hospital Medical Annual dinner 31—Maternal morbidity and
dical Treatment of
Surgery of the sym
diet clinic 568—The
radio sensitivity of tumours 937—The virus theory of cancer 938
Society Manchester Surgical Bladder healing after suprapubic cystotomy especially in prostatectomy 226
hology
logy 804
hyper
ned for
economic reasons 267—The syndrome of chron
allied
522—D
—Annual oration 901—Annual meeting 901—Fothergillian gold medal presented 934
Society Medical of the Mediterranean Littoral Easter voyage of 221
Society of Medical Officers of Health A plea for the legalization of voluntary euthanasia under certain conditions now published in pamphlet form 111—*Peter Hospitals Services Group* Some pre bacteriological views on infectious disease 241
Society Medical for the Study of Venereal Disease The age incidence of sero positive syphilis in females 749
Society Medical Superintendents Annual dinner 597
Society Medico Legal The liberty of the subject 241
Society North of England Obstetrical and Gynaecological Gynaecological tumours 61—Zondek Aschheim test in ectopic pregnancy 382—Prolapse of female urethra 382—Twisted hydrosalpinx 382—Fibroid with red and cystic degeneration 382—Carcinoma of the perineum 382—*Treatment of eclampsia* 613—Puerperal sepsis and toxaemia of pregnancy 1174—Diffuse endometriosis of the body of the uterus 1174—Chorian epithelioma of the broad ligament 1174—Carcinoma of Fallopian tube 1174—Three unusual cases of toxaemia associated with pregnancy 1174—Epithelioma of vulva 1174
Society Northern Medical The management of urinary calculi 513
Society Nottingham Medico Chirurgical *Cen*
Sc
Research

Society of Chemical Industry Annual Meeting and Annual Dinner 1132
Society of Chemical Industry, London Section—Meeting and Dinner 1132
Society of Dyers and Colourists—Meeting and Dinner 1132
Society of Medical Officers of Health—Meeting and Dinner 1132
Society of Pharmaceutical Chemists—Examinations and Certificates 1132
Society of Public Analysts—Meeting and Dinner 1132
Society of Tropical Medicine and Hygiene—Meeting and Dinner 1132
Society Portrait of Thomas Addison 1132
Society Portrait of Thomas Wakley 1132
Society Presentation to Dr. Hamilton Fairley 1132
Society Presentation to Mr. Dan McKenzie 1132
Society Presentation to Mr. Wilfrid Trotter 1132
Society Presentation to Sir Thomas Horder 1132
Society Presentation to Sir Thomas Lewis 1132
Society Presentation to Sir Walter Langdon-Brown 1132
Society Presidential Address—Dr. Graham Little 1132
Society Presidential Address—Dr. Hamilton Fairley 1132
Society Presidential Address—Dr. Leonard Hill 1132
Society Presidential Address—Dr. Lloyd Roberts 1132
Society Presidential Address—Dr. Wilfrid Trotter 1132
Society Presidential Address—Mr. Dan McKenzie 1132
Society Presidential Address—Mr. Wilfrid Trotter 1132
Society Presidential Address—Sir Thomas Horder 1132
Society Presidential Address—Sir Thomas Lewis 1132
Society Presidential Address—Sir Walter Langdon-Brown 1132
Society Presidential Address—Sir Wilmot Herringham 1132
Society Presidential Address—Sir Wilmot Herringham 1132
Society Presidential Address—Sir Wilmot Herringham

STOVE Hannah M (and Margaret SANGER editors) *The Practice of Contraception* rev 807
STONEY R Atkinson Transplantation of fibula 18—Mixed parotid tumour 18—Pyelography 335—Hirschsprung's disease 756—Hepatosplenography 1082
STOPFORD J S B (and E D TELFORD) Prognostic value of spinal anaesthesia in vasospastic diseases of the lower limbs 1116 (O)
STRACHAN Gilbert I (and Herbert T EVANS) —Thoracic metastases in ovarian carcinoma 519 (O)—(And Ian SKOTTOWE) Menstruation *in mental disease* 524
STRANDELL Birger *Pernicious Anaemia* 851
STRECHER E A Schizophrenia 994
Street traffic *See* Traffic
Streptococcal infections epidemiology of discussion at the Royal Society of Medicine 425
[illegible] *See* Meningitis and puerperal sepsis *also* Puerperal sepsis
Streptococci review of book on 570
STROE Dr A new eruptive fever 813
Stroke in high arterial pressure (H O Gunewardene) 180 (O)—Correspondence on 449
STRUMPELL Adolf *A Practice of Medicine* twenty ninth and thirtieth editions rev 102
STUART Low William Malignant disease of *pharynx and larynx* 912
Student in irons the curriculum (C M Wilson) [illegible] 550 587 630 680 Medical curricula
STUMPF R Deep *x* rays for breast cancer 569
STYAN Thomas George obituary notice of 593
Subarachnoid haemorrhage *See* Haemorrhage
Subinvolution and sepsis *See* Sepsis
SUCKLING E V Catadyn silver in water [illegible] Report of the [illegible] *Supply and Purification of Water* rev 1023
Sugar blood effect of smoking on (F and S Thyselius Lundberg) 392
Sugar and tea 968
SUHRAWARDY Lieut Col Hasan appointed an Associate Officer of the Order of St John of Jerusalem 83
Sulphur Bacteria rev 846
SUMMERS Beatrice given belladonna for syrup of figs 359
SUMMERSKILL Edith Preparation for marriage 819
Sunburn 872 918 1061 1156
SUNDAL A Results of a campaign against pediculosis in schools in Oslo 128 733
Sunday Performances Regulation Bill 638 733 1014
Suprarenal capsules in a child sudden death from haemorrhage into (J A Henderson and F Pettigrew) 14
Surgery excessive (Hamblen Thomas) 938
Surgery and gastric ulcer (leading article) 849
Surgery review of books on 152 431 528 529 663 759 1036 1130 1176
Surgery suction in 217 262 354 446
SUTCLIFFE A L Infection in the dormitory 802
SUTHERLAND Dr Silicosis regulations 814
SUTHERLAND D Sage Puerperal fever and pyrexia 801
SUTTIE Ian D Child guidance clinics and neo Hippocratism 123
SUTTON Richard L *Diseases of the Skin* eighth edition rev 527
SWAN Jocelyn Nephrostomy 842
Sweepstakes for hospitals in New South Wales 211
Sweepstakes and Sir Patrick Dun's Hospital 1099
SWELLENGREBEL N H Malaria in South Africa 895
SWEZY Olive Ovulation and the sex cycle 108
Switzerland Health reports and sanatoriums 211—Influenza in fatal cases 783—Leysin factory clinic 211
SWORN B R (and A S Dill RUSSELL) Spinal anaesthesia in acute obstruction 882 (O)
Sydney hospital finances 906 *See also* Australia
SYLVESTER N D Determination of aluminium in foods 1080
SYMONDS C P Otitic hydrocephalus a report of three cases 53 (O)
SYME DE Major General T H Indian Medical Service pensions 686
Sympathetic nervous system *See* Nervous
Syncope vagal and the carotid sinus mechanism (Sir Thomas Lewis) 873 (O)—Correspondence on 956 1016 1053
SYNGE Samuel Naevi and heredity 1156
Syntactic aphasia *See* Aphasia
Synthalin in the treatment of diabetes (A P Thomson R J Gittins and Garfield Thomas) 322 (O) [illegible] in
Syphilis sero-positive the age incidence of in females (J Ernest Nicole) 749 (O)
Syringe local anaesthetic 1038

T

Tabulae Biologicae Periodicae No 4 rev 714 First number of the second volume rev 1132—
Tachycardia paroxysmal associated with pregnancy (David Fyfe Anderson) 657 (O)
TAIT Lawson reminiscences of 476
Takayama's solution in the identification of blood stains (Aubrey V Greaves) 932 (O)
TAPIA Cancer of the larynx 620
Tartar removal of 1156
TATTERSALL Norman The origin of oleothorax treatment 773
T [illegible] and 737
T [illegible] of anatomy at Manchester University 407
TAYLOR Charles Joseph Gordon Genito urinary tuberculosis and the Ministry of Pensions 307 403
TAYLOR Dorothea Infection in the dormitory 802
TAYLOR Julian Cystic dilatation of the common bile duct 771
TAYLOR Richard W Two cases of vaccinia 424
TAYLOR V J Morcom Case of perforated diverticulitis 1124
Tea and sugar 968
Teeth normal bacteriology of (J B Davey) 333
Teeth and raw milk *See* Dental caries and milk
TELFORD E D (and J S B STOPFORD) Prognostic [illegible] so spastic
TELLYES
Temperature mean in non febrile hospital patients (D M Dyson and H L Wallace) 980 (O)—Correspondence on 1146 1193
Temperature normal 1146 1193
Temperature sensation electric fitting for testing 477
Tendencies in modern medicine *See* Medicine
Tendons extensor of right arm complete avulsion of (A Fowler) 194
TESSON René *death of* 126
Testes migration of the (Sir Arthur Keith) 435
TESTI Professor Gaetano Emiliani of Faenza the first ovariotomist in Europe 1090
Testimonials return of 1016 *See also* Vacancies *and* Courtesies
Tetanus treated by the method of phylaxis (René Cruchet) 85 (O) *See also* Neurotropic diseases
Tetanus treatment of (Leslie Cole) 743 (O)—Correspondence on 863
Thallium acetate in the treatment of ringworm of the scalp (John T Ingram) 8 (O)—Correspondence on 120 214
THAYER William Sydney *Osler and Other Papers* rev 847
THEOBALD G W Research on hepatic calcium 730
Therapeutic assessment 355
Therapeutics *See also* Treatment
Thevet André 440
THOMAS C [illegible] s 332 —Local an [illegible]
THOMAS M [illegible]rred on 1097
THOMAS Evelyn L Medical supplies for *missions* 355
THOMAS F Danford elected coroner for the City of London 585
THOMAS Garfield (A P THOMSON and R J GITTINS) Synthalin in the treatment of diabetes 322 (O)
THOMAS Hamblen Excessive surgery 938
THOMAS J W Tudor A device for preventing [illegible] 477
T [illegible] a Senior [illegible]trol 301
THOMMEN August A (Arthur COCA and Matthew WALKER) *Asthma and Hay Fever in Theory and Practice* rev 1035
THOMPSON A Ralph Simple prostatectomy 560 (O)
THOMPSON C J S A mediaeval poison cup made from the terra sigillata of Malta 73—*Poisons and Poisoners* rev 385
THOMPSON J E Transmission of Leishmania infections 240
THOMPSON Longstreth (and others) *Recent Advances in Town Planning* 1039
THOMPSON Richard E obituary notice of 782
THOMSON A P (R J GITTINS and Garfield THOMAS) Synthalin in the treatment of diabetes 322 (O)—Shoe leather dermatitis 352
Thomson Farquhar Lectures *See* Lectures
THOMSON Sir J Arthur *Scientific Riddles* rev 714
THOMSON Sir StClair Liberty of the subject 241—Miscr[illegible] [illegible]ommon cold 291—[illegible]preciation of Sir
THOMSON [illegible] nd the radium [illegible]orthern Ireland 706
TH[illegible] [illegible] n Nephrostomy 842
T [illegible] ovarian carcinoma [illegible]ilbert I Strachan) [illegible]519 (O)
Thoracic surgery anaesthesia in (J Ross Mackenzie) 756
THORP E Aseptic meningitis 544
THORPE Surgeon Rear Admiral V G The common cold 506 [illegible] notice of 1057 nd its relation to
Thrombo phlebitis migrans case of (Hugh Barber) 281 (O)
THROWER W R Simulation of heart disease 262
Thyroid extract and pulmonary embolus (Ian Fraser) 659—Correspondence on 774 862 908
Thyroid gland chemical assay of (G Middleton) 711 [illegible] book on 711 [illegible]tyran) 848 The effect of 392 [illegible]laimer 1156 [illegible] bump 79
T [illegible] [illegible] old 297—A conditions [illegible]ty College London conferred on 407—Non infective nephritis 522
TIMMIS Walter (editor) —*The Vegetative Nervous System An Investigation of the Most Recent Advances* rev 103
Tin foil and food poisoning (parliamentary note) 549
T [illegible] G H Percival) *See also* Ring
TIPPETT L H C *The Methods of Statistics* 300
Titles assumed by unqualified persons 309
Tobacco and thrombo angiitis obliterans 906
Tobacco smoke inhaling 918 1016
TODD A T Origin of tumours 910 1103
TODD Robert Henry Appreciations of 41 358—Obituary notice of 499—Memorial to 605
TOFT L Association of Bio-Physical Assistants 44
Tonsil écraseur 214
Tonsil enucleation an unusual method (E Brian Rayner) 564
Tonsil as a focus of infection (G Worms and J M Le Mée) 70 [illegible] potence 221 268 [illegible]thesia for (J W [illegible]pondence on 959 [illegible] o Obesity 44 fective endo- [illegible]carditis (Herbert H Brown) 795 (O)
Town and Country Planning Bill 266 915 1059 1107 1198
[illegible] on 1039 erial
Toxaemia of pregnancy *See* Pregnancy
Tracheal tug in normal person 221
Trachoma aetiology of prize awarded to various people for original work on 1015
Traffic in streets occupied by the medical profession (parliamentary note) 639
TRAIL Richard R (and George D STOCKMAN) Report on Sanatorium treatment at the King Edward VII Sanatorium Midhurst 300
Travancore anti malarial measures in 33
Treatment review of book on 243
Treatment *See also* Therapeutics
TRENTZCH T Schizophrenia 994
Trespass to the person negligence and breach of contract charge against hospital and surgeon (Cull v Royal Surrey County Hospital and H B Butler) 1195
TRETHOWAN W H Fractures of the spine 888
TREVES Barber T Henry Sclerosing solution for injection of varicose veins 143 316—Treatment of varicose veins 1190 [illegible] in relation to [illegible] (parliamentary [illegible]
Trinidad Cunha dental conditions in (Surgeon Lieutenant Commander W E A Sampson) 534 538 *See also* Diet *and* Dental caries
Tropical Diseases Bulletin note on 71
Tropical doctors review of book on 1038
Tropical fevers review of book on 616
Tropical Medicine Liverpool School of Dinner to those who obtained the D T M 43
Tropical Medicine London School of *See* Hygiene London School of
Tropical Medicine Prince Leopold Institute of at Antwerp 586
TROTTER G Clark Puerperal fever and pyrexia 801
TROTTER Wilfred —Appointed Sergeant Surgeon to the King 71—Hunterian Oration The commemoration of great men 317 (O)—Malignant disease of the hypopharynx and its treatment by excision 510 (O)—Cancer of the larynx 620—Presented with the Fothergillian gold medal 904
TROUNCE T R (and A H DOUTHWAITE) —Streptococcal (haemolytic) meningitis recovery 752
TROUP W Annandale The common cold 449
Trypan blue effects of vital staining with 917
Trypanosomes of Nagana (parliamentary note) 1060
Tryparsamide in Gambian sleeping sickness (C C Chesterman) 427
Tubal gestation *See* Gestation

Tuberculin treatment of disease in parliamentary report
Tuberculosis, lymph circulation in (Nathan Raw) 1077
Tuberculosis of lung, pneumothorax in (Hugh Cabot) 1077
Tuberculosis, bacillus found in blood in (Hugh Cabot) 1077
Tuberculosis, bacillus in milk in relation to (leading article) 1077
Tuberculosis, bovine, in man in relation to (leading article) 1077
Tuberculosis of abdominal lymphatic glands (A. J. Ireland) 1077
Tuberculosis, abortion induced in cases of (parliamentary note) 1077
Tuberculosis in animals (County) 1077
Tuberculosis, cavity in, treatment by filling with Bronbo—Bronchotomy and drainage in lung tuberculosis (A. Soul) 1077
Tuberculosis, bacillus, Koch's discovery of (Leslie Sanger) 1077 See also Tubercle bacillus
Tuberculosis, human, in relation to bovine (parliamentary note) 1077
Tuberculosis, bovine, in Great Britain (Parliamentary note) 1077
Tuberculosis, cervical, in children (John Stoddart)—(William Arthur) 1077
Tuberculosis, cervical, in children 1077
Tuberculosis, Committee of Inquiry (parliamentary note) 1077
Tuberculosis, Conference International Dairy (leading article) 1077
Tuberculosis Council, British, Report on improvement in tuberculosis service 1077—Report by Medical Research Council on pneumothorax in tuberculosis 1077
Tuberculosis, [illegible] in children 1077—Antituberculous [illegible] 1077
Tuberculosis in human and bovine (Nathan Raw) 1077
Tuberculosis, Institute of, Conference on Diagnosis 1077
Tuberculosis, International Union against, Organisation 1077—Proceedings—Address of President Calmette 1077—The Bulgarian Sanatorium 1077—Number under treatment in the British Empire 1077
Tuberculosis, organisation of, in rural districts (Geer) 1077
Tuberculosis, post-graduate course in 1077
Tuberculosis, Prevention of, National Association for, Annual conference 1077
Tuberculosis, pulmonary, in Leeds (Middleton Marsh) 1077—Conference on 1077
Tuberculosis, pulmonary, blood sedimentation rate in (Hilary Lovell) 1077
Tuberculosis, pulmonary, early diagnosis of 1077
Tuberculosis, remedy for (parliamentary note) 1077
Tuberculosis, relation of, to national health (Arthur Trumble) 1077
Tuberculosis, review of book on 1077
Tuberculosis scheme in Ireland 1077
Tuberculosis, scholarships in Rome 1077
Tuberculosis [illegible] 1077
Tuberculosis, [illegible] 1077
Tuberculosis, treatment of, by [illegible] 1077—Conference on 1077—London County Council and 1077 See also Tuberculin
Tuberculosis, survey of, in Warwickshire 1077
Tuberculosis, treatment, grants for (parliamentary note) 1077
Tuberculosis, Royal Victoria Hospital, Edinburgh, Annual meeting 1077
Tuberculosis, pericardial, See Pericardium
Tuberculous disease, mammary, in boy 1077
Tuberculous village, treatment of, for milk 1077
Tudor-Edwards (Lt.-Col.) 1077
Tuffier, Mary, Conference obituary notice on 1077
Tumour, abdominal (F. J. Morriss) 1077
Tumours of the ileal region and the gall (Graham Wilson) 1077
Tumour, malignant, of pituitary body and optic nerve (A. Mitchell) 1077
Tumour, obstructing labour (Ruth Nicholson) 1077
Tumour, parotid, mixed (J. C. McMillan) 1077
Tumour, cerebral, micro-cephalic differentiation of (J. G. Greenfield) 1077
Tumour, comparative study of (leading article) 1077
Tumour, gynaecological 1077
Tumours, intracranial, [illegible] (Sir John Bland-Sutton) Encephalography 1077
Tumours, [illegible] 1077
Tumours, radio-sensitivity of (R. Ralston Paterson) 1077
Tumours, review of book on 1077
Turner, [illegible] 1077
Turner, Thomas Hudson, obituary notice of 1077
Turner, C. E. H. The practitioner in romance 1077
Turner, Gray, Operation at advanced age 1077—Appreciation of (Sir David Drummond) 1077
Turton, P. H. J. (and C. F. Peckham), Case of malignant fever in Derbyshire 1929 1077
Tweedy, Lady, obituary notice of 1077
Typhoid carrier, treatment of 1077
Typhoid fever, See Fever, enteric
Typhus fever, See Fever

U

Ulcer, duodenal, aetiology of 1077
Ulcer, duodenal, pneumoperitoneum in (Lyell Wyndham) 1077
Ulcer, duodenal, perforated, stomach (H. Seward Morley) 1077—Correspondence on 1077
Ulcer, gastric, chronic, in a boy aged 1077 (Michael Oldfield) 1077
Ulcer, gastric, medical treatment of 1077
Ulcer, gastric, perforated (Lyell Wyndham) 1077
Ulcer, gastric, surgery and (leading article) 1077
Ulcer, peptic, haematemesis as a cause of death (Lyell Wyndham)—Correspondence on 1077
Ulcer, peptic, Pain in (L. F. Rochman) 1077—Perforated 1077
Ulcers of the leg, chronic, treatment of (Lyell Wyndham) 1077—Correspondence on 1077
Ulcer, [illegible] 1077
Ultraviolet irradiation 1077
Umbilical, Treatment of chronic ulcer of the 1077
Umbilicus, malignant, remarks on the (Sir Arthur Keith) 1077
Unemployed, Society for Assistance of, report 1077—Information for Committee 1077
Underwood, F. A., World Alcohol pamphlet on cholera 1077
Unilateral fever, See Fever
Unintended allegation (case of Harold Lee) (parliamentary note) 1077
United Friendly Insurance Company, Annual report 1077—Practice in the treatment of malaria 1077
United Hospital Benefit Company, Limited, Annual meeting 1077—Report 1077
United States of America, Cancer in, extent of, as seen by surgeon (Philip Bloom) 1077
Diphtheria, immunization in communities 1077
Ellsworth Post Fellowship in Cancer 1077
Fracture practice, a primer on 1077
Health service, [illegible] 1077
Lobar emphysema 1077
Medical [illegible] 1077
Pathologic [illegible] 1077
Pneumothorax [illegible] 1077
Typhoid [illegible] 1077

Universities, Germany, effect of recent [illegible] at some of them are to be considered 1077
University, Scottish, Conference on the extension of the medical curriculum 1077 1077 See also Medical curriculum
University of Aberdeen, Chair of surgery 1077—Angular Thomson Lecture 1077—Graduation ceremony 1077—Honorary degree 1077
University of Birmingham, Appointments 1077—Lectures 1077
University of Bristol, Degrees and passed list 1077
University of California, Research on dermomycosis to be carried out 1077

University of Cambridge, Degrees and passed list 1077 1077 1077

VAN GEYZEL Lieut Col John Lawrence obituary notice of 735
Van Slyke urea clearance test of renal efficiency (E Wordley) 334
Varicella and herpes *See* Herpes
Varicose veins *See* Veins
VASEY Deputy Inspector General Samuel William obituary notice of 310
Vaso ligation in prostatectomy *See* Prostatectomy
Vasospastic diseases spinal anaesthesia in *See* Anaesthesia
Vasovagal syncope and the carotid sinus mechanism (Sir Thomas Lewis) 873 (O)—Correspondence on 956 1016 1053
VAUGHAN Janet Treatment of anaemias 62—Megalocytic anaemias 709
VAUGHAN Lieut Col Joseph Charles Stoelke obituary notice of 310
VAUGHAN R C British sea coast resorts 478
VLAU Victor *Division Palatine* rev 195
Veins varicose ambulatory treatment of by combination of ligation and injection (A Dickson Wright) 934 (O)—Correspondence on 1054 1190
Veins varicose injection treatment of (Reginald Payne) 237
Veins varicose injection treatment of by sclerosing solution (T Henry Treves Barber) 143 316
Veins varicose oedema of ankle in 506 692
VELDEE M V *Typhoid fever in Ohio river cities* 159—Antitoxin treatment of scarlet fever 440
Venereal diseases clinics in London 724—Course of instruction to qualify for the Ministry of Health and Manchester University certificates 783
Ventilation and gas fires 1188
VERNON M D *The Experimental Study of Reading* 23
Vertebra fourth lumbar compressed fracture of showing reduction of compression (H J McCurrich) 421 *See also* Fractures of spine
Veterinary Surgeons (Irish Free State Agreement) Bill 548—Royal Assent to 638
VICKERS H A note on Urgency 176
Vicious circle another (fissura in ano) 316
Vicious circle vomiting *See* Vomiting
Vienna post graduate courses in 267 870
VIGNERON H *Manuel des Calculs de Labora toire* rev 943
Village settlements for the tuberculous *See* Tuberculous
Villanueva title of Villa granted to 267
VILVANDRE G *X* ray dosage in malignant disease 147—The syndrome of chronic toxic cholecystitis 287
Vincent's angina *See* Angina
VINT F W Brain and mind in East Africa 812
VIOLLE H *La Fièvre Ondulante* rev 528
Viruses filterable microscopy of (Conrad Beck) 798—Discussion 798
Viscera complete transposition of with aneurysm of the thoracic aorta (G Haridas) 236
Visceral tone low (D W Carmalt Jones) 10 (O)
Vision colour mechanism of (L C Martin) 1081
Vision and lighting (leading article) 200 *See also* Lighting
Vision peripheral report on (G C Grindley) 622

als
les (1931) 856—For land 115
—Registrar General's statistical review of England and Wales for 1930 (Text volume) 1187—For Scotland 442
Vitamin A artificial preparation of (F P Bowden and C I Snow) 948
Vitamin B crystalline how it is prepared 947
Vitamin B in cases of oedema use of (D W Carmalt-Jones) 374 (O)
Vitamin concentrate (Adexolin) 665
Vitamin concentrates of cod liver oil 378
Vitamin D crystalline (F A Askew R B Bourdillon H M Bruce R H Callow J St L Philpot and T A Webster) 144—A form now available for general clinical use 848
Vitamin D and rickets 769 862 912 1008
Vitamin potency of milk 590
Vitamins review of book on 64
Vivisection (parliamentary note) 502 870 916 1014 *See al o* Animals experiments on
Vivella sheets 296
VLASTO M Asthma and allied conditions 380—Local anaesthesia for tonsillectomy 1009
VOGT C I B Medical problems of contraception 1000
VOLHARD Professor *Zentralblatt für innere Medi in* for April dedicated to on his sixtieth birthday 1061
Voluntary hospitals *See* Hospitals
Vomiting vicious circle jejunostomy and Witzel's operation in treatment of (H Donovan) 600 (O)
VORHAUSER Willi death of 732

W

WADE Henry The significance of haematuria 177 (O)
WAGGETT E B Asthma and allied conditions 380—Fouling of footways by dogs in the Harley Street district 1057
WAGGETT Mr Mischiefs of motoring 252
WAGNER Richard (and Richard PRIESEL) *Zuckerkrankheit und ihre Behandlung im Kindesalter* rev 760
WAKELEY Cecil elected president of the Harveian Society of London 150
WALB Heinrich death of 732
WALKER C E Some aspects of cancer 783
WALKER George Charles obituary notice of 867 1013
WALKER H M Vitamin potency of milk 590
WALKER Kenneth The accidents of the male climacteric 50 (O)—Preparation for marriage 592 728—Fertility after prostatectomy 1148
WALKER P S Report on the Whiteabbey Sanatorium 164
WALKER Russell Ernest obituary notice of 81 218
Wall paper and arsenic 726 772
WALLACE H L (and D M LYON) The mean temperature in non febrile hospital patients 980 (O)
WALLACE Ottilie *Wayfaring in a Splint* rev 432
Wallasey Corporation slum clearance by (parliamentary note) 824
WALLER R G Chorea in three children

W *d Elec*

WALSH Lieut Col John Henry Tull obituary notice of 735
WALSHE F M R A warning 44
WALTERS F R Shoe leather dermatitis 456
WALTON A J The syndrome of chronic toxic cholecystitis 287
WALZ R Matthew (*Arthur* COCA and August A THOMMEN) *Asthma and Hay Fever in Theory and Practice* rev 1035
WARBURTON Surgeon Commander Llewellyn

W infection 1034
W
W *ry of Diabetes Mellitus* rev 19
Wasp stings 410 455 1061
Wassermann test 718
WASSON Valentine P Medical conditions in Soviet Russia 39
Water London in 1931 annual report on 1178
Water Pollution Research Board issues its January epitome of current literature relating to wa ter Las e a 17 nual re port 995
liver 624
index of 826

ailshes (parliamentary

WATSON Chalmers Reform of medical education 609—*Rickets and vitamin D* 769 1008
WATSON D Gonorrhoea and other cervical discharges 381
WATSON J K *Handbook for Nurses* ninth edition rev 475—*A Handbook for Senior Nurses and Midwives* second edition rev 475
WATSON Sir Malcolm Anti malarial measures 75—Synthetic anti malarial drugs 101
WATSON Lady (Olive) appointed a member of the Board of Trustees for the national galleries of Scotland 737
WATSON WILLIAMS E Illuminated direct laryngo pharyngoscope 432—The ear and referred pain 1125
WATSON WILLIAMS Patrick The common cold 291—The ear and referred pain 1125—Polypi 1126
WATT H J Intelligence and disease 206
WATT James C Genito urinary tuberculosis and the Ministry of Pensions 544
WEATHERLY Lion l —Mental medicine yester

W
W
—Modification of Berkeley's abdominal retractor 1177
WEBER F Parkes Essential hypertension 239—Polycythaemia rubra and achlorhydria 817—Basophilic hyperpituitarism (Cushing's endocrine pituitary syndrome) and basophilic hypopituitarism 935
WEBER Hilda Individual psychology 805
WEBSTER J H Douglas *X* ray dosage in malignant disease 147—The common cold 449—*Post operative x ray treatment of cancer* of the breast 1096
WEBSTER D 144
WECHSLE *of Clinical Neurolo*

The Week

1181
bicentenary of
Addison's disease treated by cortical extract 299
Adiposalgia 6 0
Adrenaline intracardiac injections of 668
Air Force Royal health of 69

The Week (*continued*)
Alcoholism and drug addiction 1013
Aluminium and health 576
Anaemia pernicious 851
Antitoxin treatment of scarlet fever 440
Antrum interpretation of skiagrams of the 1089
Applied physics *See* Physics
Bacillus Calmette Guerin trial at Lübeck 71 331 392 484
Balfour Sir Andrew *memorial to* 249
Biochemical aspects of bacteriology 537
Biological standardization recent advances in 481
Bio physical assistants roll of 896
Birmingham Medical School and the hospitals centre scheme 393
Birthday Honours 1098
Blind welfare of 70
Blindness prevention propaganda for 159
Body mechanics education and practice 852
Books old medical 26
Brain and mind in East Africa 812
British Industries Fair 301
British Post-Graduate Hospital and Medical School 343
British Social Hygiene Council 5 6
Budget a hope deferred 765
Cancer campaign 110 719
Cancer literature 669
Catadyn silver 621
Centenary Meeting Presidents of Sections 26

719
Coronary obstruction the syndromes of 391
Corporal punishment 159
Cox Alfred testimonial to 1137
Crabbe George the poet 202
Cremation in Great Britain 576
Criminal statistics 811
Criminal tendencies 1135
Dental profession numbers of the 441
Diphtheria communal immunization against 671
Dixon W F memorial to 577
Doyle Arthur Conan 25
Drugs narcotic the traffic in 110 813—Egypt 813

Fever a new eruptive 813
Food and drugs defective 440
Fracture practice a primer of 158
France and the French Canadian 484
French surgery two hundred years of 997
Gas coal domestic and clinical use of 483

Health services for the pre school child 342

f 247
4

Industrial psychology 482
Infantile paralysis in the United States of America 70
Insulin hypoglycaemia 1136
Intestinal disease and urinary complications 946

l by bulbo-
Koch's discovery of *Bacillus tuberculosis* 343 575
Laboratories the planning of 814
Lathyrism 203
League of Nations *Health Bulletin* 997—Health Committee of 622—And opium

L France 536
I ure 1136
Leverhulme research scholarships 1091
Lübeck trial *See* Bacillus
Lung abscess *See* Abscess
Medical education abroad 764
Malaria in South Africa 895
Manson medal 896
Margarine nutritive value of 1137
Marriage preparation for 1044
Measles from 1919 to 1931 1044
Medical education in the Sudan 301
Medical portraits at the Royal Academy 853
Medical presidents of the Royal Society 576
bt to 202
439

Mental hygiene world movement for 1181
Mental medicine Yesterday and to morrow 25

Myopia aetiology of 894
Narcolepsy and ephedrine 763
Navy health of in 1930 669
Newton the man 343
New Year honours 69
New York mortality rates 157
Nietzsche's mental breakdown 537
Old cultures for new 483

The Week 1, 57, 113, 169, 225, 281, 337, 393, 449, 505, 561, 617, 673, 729, 785, 841, 897, 953, 1009, 1065, 1121, 1177, 1233, 1289, 1345, 1401, 1457, 1513, 1569, 1625, 1681, 1737, 1793, 1849, 1905, 1961, 2017, 2073, 2129, 2185,

Y

YARROW Sir Alfred obituary notice of 203
YATES Lowndes Polypi 1126
Year Book New Zealand Official new issue 505
Year Book and Guide the South and East African thirty eighth edition rev 476
Year Book of the Scientific and Learned Societies of Great Britain and Ireland the Official rev 66
Yellow fever *See* Fever
YELLOWLEES Henry *Clinical Lectures in Psychological Medicine* rev 758
YORKE Warrington Synthetic anti malarial drugs 101—Gambian sleeping sickness 428—Elected a Fellow of the Royal Society 484
YOUNG C J (I BILLIG and W N WEST WATSON) The intravenous liver treatment of pernicious anaemia 273 (O)
YOUNG Sir E Hilton title of Honorary Fellow of University College London conferred on 437
YOUNG I H Chronic non tuberculous infection of the lungs in children 406 (O)
YOUNG James Maternity mortality 346—An evaluation of the incidence of and maternal disabilities following eclampsia and albuminuria 660—The chronic pelvic woman 683
YOUNG J C *Anorexia Nervosa* rev 20
YOUNG John Report of the Falkirk Royal Infirmary 679
YOUNG R A Diagnosis and treatment of lung abscess 287—British sea coast resorts 478
Young offenders Cost of (parliamentary note) 778—Observation centres for (parliamentary note) 869

Z

ZAMORA A M Local anaesthesia for tonsillectomy 1147
ZARDIS Zacharius Constantinou M B D conferred on 1097
Zeitschrift für Tuberkulose publishes a special Robert Koch issue 549
Zeitschrift für Vitaminforschung first issue of 691
ZERFAS The barbiturates in anaesthesia 438
ZIEGLER Otto death of 173
ZINSSER Hans *Resistance to Infectious Diseases* fourth edition rev 572
Zoin (ciba) 198
ZONDEK Ovulation and the sex cycle 108
Zondek-Aschheim reaction in the diagnosis of pregnancy (G F Wright) 333—(Gladys Dodds) 936
Zondel-Aschheim test in ectopic pregnancy (W W King) 382
Zondek Aschheim test in pregnancy *See also* Pregnancy
ZOUTENDYK A (and E GRASSET) *Immunological Studies in Reptiles and their Relation to Aspects of Immunity in Higher Animals* rev 891
ZUCKERMANN S *The Social Life of Monkeys and Apes* rev 160

LIST OF ILLUSTRATIONS

SPECIAL PLATES

PAGE

Abscess Tuberculous Cervical (Hamilton Bailey) inset between 26 27
Adenomatous Papilloma of the Duodenum (Andrew Fowler) facing 248
Aneurysm of Thoracic Aorta with Complete Transposition of Viscera (G Haridas) facing 249
Arterio venous Aneurysm of Superficial Temporal Vein (A H Morley) facing 27
Ascaris Removed from Common Bile Duct (J B G Muir) inset between 1088 1089
Bone Grafts and Fusion Operations for the Spine (S A S Malkin) facing 26
Bone Injury in a Child Unusual (William Hunter) facing 669
Brain Circulation Alteration of (N D Royle) inset between 1088 1089
Cerebral Aneurysm with Recurrent Leakage (R M J Harper) facing 27
Cirrhosis of Liver Atrophic Coarse in a Congenital Syphilitic (K C L Paddle) inset between 248 249
Compression Fracture with Comminution of Lumbar Vertebrae (H David Isaacs) facing 853
Contraceptive a (V B Green Armytage) inset between 26 27
Cystic Dilatation of Common Bile duct (James H Saint) facing 248
Duodenal Ulcer Types of Stomach (H Seaward Morley) facing 668
[illegible] inset between 668 669
[illegible]ier) facing 669
(Sidney B Radley) facing 853
[illegible]al (G S R Little) inset between 1088 1089
J McCurrich) facing 437
Fractures Recent Advances in the Treatment of (R Watson Jones) facing 1088
Gastric Ulcer Chronic (Michael Oldfield) facing 853
Haemorrhage into a Suprarenal Capsule (J A Henderson and F Pettigrew) facing 27
Hydatid Cyst in Lung (U P Basu) inset between 1088 1089
Hypoglycaemia Spontaneous (Albert Ramsbottom and Cyril G Eastwood) inset between 852 853
Intrathoracic New Growths Surgical Treatment of (A Tudor Edwards) facing 852
Lichen Urticatus (H D Chalke) inset between 26 27
Liver Necrosis with Epidemic Catarrhal Jaundice (G M Findlay and J I Dunlop) facing 669
Ova Early Human (Wilfred Shaw) facing 436
Pelvis Disruption of (L A H Snowball) inset between 1088 1089
Pneumothorax Artificial Right-Sided Complicated by Left Sided Spontaneous Pneumothorax (James D Macfie and A J P Alexander) inset between 1088 1089
Porencephalic Imbecility (R J A Berry and R M Bates) inset between 852 853
Radiography in Malignant Disease of the Lungs (Peter Kerley) inset between 436 437
Rectal Injury caused by Faulty Administration of an Enema (H H Rayner) facing 437
Renal Case Investigation of a (F Hector Scotson) inset between 248 249
Ringworm of Scalp Thallium Acetate in (J T Ingram) inset between 26 27
[illegible] (W E Cooke) facing 669
[illegible] Kyle) inset between 1088 1089
[illegible] facing 27
[illegible]n in (Eric Assinder) facing 249
[illegible] inset between 26 27

ILLUSTRATIONS IN THE TEXT

[illegible] 1177
[illegible] 12
[illegible] 296 714
[illegible]e Chest Apparatus for 451
848
[illegible]apubic Cystotomy (James B Macalpine) 358
228
154
[illegible] 1133
809

PAGE

Bone Graft and Fusion Operations for the Spine (S A S Malkin) 6
Brain Circulation Alteration of (N D Royle) 1064
Calvert James 172
Cannula Uterine 21 66
Carbon Dioxide Absorption Methods in Anaesthesia (Frankis T Evans) 931
Cheyne Sir William Watson 821
Circulation after an Endurance Test (F B Gunson and F Harold Pettit) 280
Climacteric Male Accidents of (Kenneth Walker) 52
CO Apparatus Portable 21
Cystoscope for Applying Diathermy to Bladder Growths 386
Deaf Persons Non electrical Aids for 529
Diverticulum of Duodenum Associated with Calculus Formation (V C I Harris) 1030
Drummond David 865
Drunkenness Diagnosis of (Sydney Smith and C P Stewart) 88
Ergot Preparations and the Puerperal Uterus (Chassar Moir and Sir H H Dale) 1120
Ergotoxine and Ergotamine Clinical Comparison of (Chassar Moir) 1023
Forceps Biopsy and Skin Graft 617
Forceps Craniotomy 296
[illegible] ed 198
760
848
809
Gestation Period Calculator 105
1085
College 720
453
27
dal 895
1150
Kinloch John Parlane 311
Koch Robert 575
Lamp Inspection and Hand Slit 1133
Laryngo pharyngoscope Illuminated Direct 432
Lichen Urticatus A Differential Diagnosis of Small Pox (Herbert D Chalke) 8
Liver and Spleen (J W McNee) 1021 1069
Malignant Disease of the Hypopharynx (Wilfred Trotter) 511
Ophthalmoscope an Electric 197
Opthalmoscopes Electric Device for Preventing Glare in 477
Parker Rushton 690
Pneumothorax Artificial Adhesion Cutting and Oleothorax (F G Chandler) 1118
Poison Cup Mediaeval made from the Terra Sigillata of Malta (C J S Thompson) 73
Porence [illegible] and R M Bates) 832
Pump 154
Radiogr[illegible]e Lungs (Peter Kerley) 416
Radium Tube for Oesophagus a Rubber 477
Road Traffic Signals 441
Robertson George Matthew 688
Scleral Marker an Accessory to the Igni puncture Treatment of [illegible] 943
Resection of Nasal Septum 572
198
198
[illegible] 781
Stomach Type of Predisposing to Duodenal Ulcer 817
Stroke in High Arterial Pressure (H O Gunewardene) 181
Suction Surgery 354 446
Syringe Local Anaesthetic 1038
Temperature Sensation Electric Fitting for Testing 477
Todd Robert H 906
Tonsil Ecraseur 244
Tonsil Haemostat 296
Tooth Canine Erupting Externally (Lewis S Robertson) 44
Varicose Veins Ambulatory Treatment of by Ligation and Injection (A Dickson Wright) 935
Wire Extension New Apparatus for 105
Worcester General Infirmary Board Room 205

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INDEX TO THE EPITOME FOR VOLUME I, 1932

READERS in search of a particular subject will find it useful to bear in mind that the references are in several cases distributed under two or more separate but nearly synonymous headings—such for instance as Brain and Cerebral Heart and Cardiac Liver and Hepatic Renal and Kidney Cancer and Carcinoma Epithelioma Malignant Disease New Growth Sarcoma etc Child and Infant Bronchocele Goitre and Thyroid Diabetes Glycosuria and Sugar Eye Ophthalmia and Vision etc.

The Figures refer to the Number of the Paragraph NOT the Page

A

Abdominal operation anæsthesia 22b
Abdominal operation anæsthesia
Abdominal wall chronic lymphatic œdema 37
Abdominal wall pregnancy *See* Pregnancy
Abdominal wall pregnancy
Abortion criminal 229
Abortion criminal intravenous saline 17b
Abscess cerebellar brachial monoplegia in 27
Abscess cerebral following typhoid 171
Abscess secondary following appendicitis 41b
Accommodation subnormal 52
Acetanilide effects of the cerebro-spinal fluid 59
Acetonæmia and the normal human 29
Achorion mycosis
Acrodynia 5
Actinomycosis treatment of 181
Acute abdomen *See* Abdomen
Adam T E Treatment of mammary carcinoma 37
Addison O Centennial obituary of female urethra 502
Addison's disease The suprarenal cortex in 25—Metabolism in 22b
Adenocarcinoma primary of the gall bladder 5
Adhesions peritoneal prevention of 6
Adler Alexandra Malaria therapy in pregnancy 119
Adrenaline and insulin influence of on carbohydrate metabolism
Adrenaline and the normal body tissues 3
Adson A W Sympathetic ganglionectomy in arthritis 333
Ageing changes mesenteral glands 278—Ovary tubercle in women 290
Agenesis of the spleen 55
Agrifoli A Typhoid cholecystitis 277
Allen Annie T Atropine sulphate in the gastric crises of tabes 357
Albuminuria in sodium deficiency 219
Alkalo sodium 123
Allen E V Disease of Raynaud's clinical aspect 332
Allergy cutaneous of emotional origin 508
Alopecia areata arsphenamine therapy in 2 2
Alvarez A C Aneurysm of the wall of the heart 2
Amberson W R pre-eclamptic 180
Amberson L Hourly variations in protein metabolism 2b
Amboceptor Bronchitis in hypertensive 5
Amidopyrine in rheumatic fever 5-7
Ammonia blood and renal insufficiency 15
Amoss H L Undulant fever 1-6 167
Amylolytic excretion of the renal syndrome in 2
Anæmia bothriocephalus 514
Anæmia destruction of heavy metals in
Anæmia primary complicated by miliary tuberculosis 3
Anæmia splenic excision and malaria 52
Anæmia in premature infant treatment of 29

Anaerobic bacteria *See* Bacteria
Anæsthesia arterial 2 2—Nitrous oxide combined 4
Anæsthesia carbon dioxide in 18b
Anæsthetic ether and nitrous oxide-oxygen 2
Anæsthesia general the question of 62
Anæsthesia local infiltration reduction 63
Anæsthesia nitrous oxide and avertin combined 5
Anæsthesia nitrous oxide oxygen in dental and oral surgery 2
Anæsthesia pulmonary 22b 229
Anæsthesia rectal by means of salts 457
Anæsthesia spinal block in peripheral production 19
Anæsthesia spinal in gynæcology 24 25—Carbon dioxide as an adjunct to 19
Anæsthetic adjuvant ether as an 19
Analgesia obstetrical
Anaphylaxis bodily in syphilis 1 2
Anaphylactic immunity in diphtheral 11
Anderson E D Undulant fever in children 1-b
Anderson G W Chronic typhoid carriers 510
Andresen P H Seasonal change in the mortality for diphtheria 55
Aneurysm popliteal infarction rupture of 5-2
Aneurysm of the wall of the heart 29
Angerer H Secondary abscess following appendicitis 415
Angina coronary 511
Angina pectoris recent experimental cause of 57b
Angina pectoris vasomotor in 229
Angioma of the middle ear 228
Angioma surgical treatment of 28
Anselmi Martin C Insulin and sugar in cardiac therapy 217
Antibody heterophile in infectious mononucleosis 3
Anti diphtheric serum administration of 4-4
Anti pest bacterial preparation of 53b
Anti pneumococcal vaccine intravenous injections of 453
Anti poliomyelitis serum in lethargic encephalitis 35b
Antitoxin diphtheria immunization by 55b
Anti typhoid bacteriophage 55b
Antivirus treatment of Acne *See* Acne
Antonetti H Post-operative nasal haemorrhage 269
Aortic syphilis *See* Syphilis
Aortitis syphilitic 51
Appendicitis secondary abscess following 415
Appendicitis complicating paratyphoid fever 35b
Appendicitis in infant 35b
Appendix in measles 335
Appendix rare lesions of 1e 81
Arce J Preliminary pneumothorax in intrathoracic surgery 4-3
Arieff-Doo C Atypical encephalomyelitis following revaccination 480 — Encephalomyelitis following measles 557
Armanet M Open fracture of the leg 55
Arsenobenzol therapy dangers in 111, 112
Arsphenamine treatment of early syphilis 42b
Arsphenamine toxicity of the 133
Arterial hypertension the mean 124
Arterial pressure effect of pain on 53
Arterial resection in arterial obliterans 33
Arterial tension and the suprarenal gland 98
Arterio sclerosis lipæmia in 59
Arteritis obliterans arterial resection in 33
Artery auditory internal spontaneous vasomotor contraction of 59
Artery carotid Haemorrhage from in children 317
Artery pulmonary chronic thrombosis of 458
Arthritis traumatic treatment of 37b
Arthritis of hip subacute infection 2b4
Arthritis rheumatic chronic two types of 5-0
Arthritis rheumatoid and acute rheumatic fever 5-2
Arthritis rheumatoid chronic vaccine therapy in 550
Arthritis rheumatoid prognosis in 5-9
Arthritis rheumatoid surgical treatment of 5-6
Arthritis sympathetic ganglionectomy in 333
Arthus and Schwartzman relation between the phenomena of 267
Artificial denture *See* Denture
Artificial pneumothorax *See* Pneumothorax
Aschheim-Zondek *See* Zondek
Asthma treatment of 175
Asthma bronchial treatment of 54
Atropine administration suspension of 52b
Atropine and pilocarpine combined in post-encephalitic state 121
Atropine sulphate in the gastric crises of tabes 357
Attal A Cutaneous manifestation of meningococcal infection 3 9
Auricular fibrillation 4-4
Autohæmotherapy in cutaneous disease 47b
Avertin anæsthesia. *See* Anæsthesia
Avertin in the treatment of delirium 5b
Avertin proposing sodium thiosulphate in 45b
Avian spirochætosis *See* Spirochætosis
Axobacmic encephalitis *See* Encephalitis

B

Babcock H L Mastoiditis in scarlet fever 2-6
Babcock W W Pulsion diverticulum of the œsophagus 58
Bacillus anæmia tuberculous clinical significance of 27b
Bacillus coli communis as an index of water purity 569 *See also* Journal index
Bacillus Calmette-Guerin vaccination of cattle with 2 71 273
Bacillus Calmette Guérin vaccination, parenteral 439
Bacillus coli faecal identification of in drinking water 5 b
Bacillus of dysentery Sonne's isolation of 538
Bacillus influenzæ purulent infection with 50
Bacillus propionicus infection fatal 518
Bacillus of tetanus intestinal carriers of 9b
Bacillus of tubercle avian in milk, 4-4
Bacillus of tubercle in the gastric contents 22-
Bacillus of tubercle human and bovine in tuberculous meningitis 2-2
Bacillus of tubercle living development of the tubercle and the fate of 228
Bacteria anaerobic filterable in the nose and throat 253

Bacterial antigens preparation of 508
Bacteriophage the anti typhoid 536
BADGER L F Transmission of typhus fever by infected flea faeces 251
BAKER B M Unusual gonococcal sequels 410—Auricular fibrillation 444
BALL R G The suprarenal cortex in Addison's disease 194—Myocardial infarction 368
BALMÉS A Insulin and sugar in cardiac therapy 217
BANG O Vaccination of cattle with B C G 28
BARBERA S Primary gangrene of the pharynx 90
BARCROFT J Action of the splanchnic nerves on the spleen 405
BARENBERG L H Prophylaxis of mumps 54
BARGELLINI D Early intervention in congenital muscular torticollis 128
BARGUES R Uraemia following the excessive elimination of chlorides 331
BARNES A R Myocardial infarction 368
Basal metabolism at puberty 404
BASU N K Adrenaline and the normal body tonus 346
Baths sunlight followed by bullous dermatitis 381
BATTLEY J C S Treatment of whooping cough by convalescent serum 114
BAUER E L Diphtheria prevention in Philadelphia 169
BEARSE C Gonorrhoeal salpingitis and perihepatic adhesions 250
BEHR E Agenesis of the spleen 558
BENEDETTI VALENTINI F Surgical emphysema 580
BENEKI R The etiology of acute yellow atrophy of the liver 162
BENGTSON B N Pituitary therapy in alopecia 242
BENHAMOU E Metastases from pancreatic cancer 304—The blood platelets in menstruation pregnancy and the puerperium 364
BERARD M Intrathoracic goitre 172
BERKOW S G The suprarenal glands in fatal burns 47
BERNARD J Administration of anti diphtheritic serum 454
BERNARD R Tuberculosis as a sequel of trauma 494
BERNSTEIN A Hypertrophic pyloric stenosis in adults 497
BERTHIER G Calcified ovarian tumour causing intestinal occlusion 290
BERTRAND G Demonstration of haemin crystals 161
BERTRAND I Evolution of the renal syndrome in amyloisis 438
BESSEMANS A Anaphylactic shock in syphilis 142
BEST P W Primary abdominal pregnancy 291
BEY M S Lenticular exfoliation 361
BIASOTTI A The suprarenal glands and arterial tension 98
BICKEL G Infarct of the heart 186
BICKEL L Rectal gonorrhoea 429
BIHLER R Epidemiology of influenza 206
BIJL J P *Br abortus* infections in Holland 141
BIRKELAND I W Bothriocephalus anaemia 514
Bismuth preparation a lipo hepato soluble 583
Bismuth therapy in cutaneous diseases 86
BISOXYL in dermatology 86
BJORN HANSEN H Focal treatment in rheumatism 546
Bladder infections oil instillations in 263
Bladder rupture of in fractured pelvis 150
Bladder sarcoma *See* Sarcoma
BLAISDELL J H Cutaneous allergy of emotional origin 568
BLAND P F Prognosis in angina pectoris and coronary thrombosis 299
BLASCO A N Blood pressure in pulmonary tuberculosis 236
Bleeding functional uterine 119 *See also* Haemorrhage
BLEULER M Heredity in schizophrenia 19—Hydatidiform mole with negative Zondek Aschheim reaction 66
BLOCH J C Calcified ovarian tumour causing intestinal occlusion 290
Blood ammonia and renal insufficiency 184
Blood cells red physical properties of 487
Blood cells red quantitative estimation of the resistance of 327
Blood cells red sedimentation of and leucocytosis diagnostic value of 406
Blood in diphtheria 507
Blood picture after operations 202
Blood platelets in menstruation pregnancy and the puerperium 364
Blood pressure and the Gerson diet 310
Blood pressure in pulmonary tuberculosis 236
Blood serum Hinton's test in 163
Blood transfusion fatality 352
Blood transfusion in typhoid fever 313
Body tonus normal adrenaline and 346
BOISSIN L Soft chancre 372
BOLAND B F Diathermy in gonococcal infections 44
BOLLIGER A Sodium thiosulphate in avertin poisoning 486
BOLTON C Acidity of the gastric juice 25
Bone fractures during pregnancy 531
Bone metastases in carcinoma of the uterus 485
petrous
ion 312
idrome
in amylosis 438
BOYER C E Intravenous injections of anti gonococcal vaccine 453
BRAASCH W F Intravenous urography 115
Brachial monoplegia in cerebellar abscess 267
BRAEUNING Early diagnosis of pulmonary tuberculosis 491
BRODNY M L Oil instillations in bladder in fections 263
Bromide intoxication 477
Bronchial asthma *See* Asthma
Bronchial carcinoma *See* Cancer
Bronchiectasis in children 42
Bronchitis chronic due to persistent naso pharyngitis 2
Bronchitis hypertension in 4
Broncho pneumonia fatal influenzal cyanosis in 297
Broncho pneumonia the mortality from 315
BROWN R K Lee Innervation of the renal capsule 274
BROUHA Adèle The biological diagnosis of pregnancy 182
BROWN G E Diagnosis of Raynaud's disease 353
BROWN R Graham Surgical treatment of chronic tonsillitis 110
BRUCE R D Umbilical diphtheria 471
Brucella abortus infections in Holland 141
Brucella abortus in milk and cheese destroyed by lactic fermentation 49
BRUNI A Tobacco smoke and phagocytosis 254
BRUUS regnancy 434
Bucky
BULLI
Bullous dermatitis *See* Dermatitis
BUNNELL W W Heterophile antibodies in infectious mononucleosis 349
BURCH J C The pituitary gland and ovulation 294
BURGESS N Autohaemotherapy in cutaneous diseases 476
BURKY E L Filterable anaerobic bacteria in the nose and throat 233
Burns fatal the suprarenal glands in 47
Bursitis acute iron cacodylate in 37
BUSQUET H Intestinal action of camphor 15—Effect of pain on arterial pressure 53
BUSSON A Acute yellow atrophy of the liver 75
BUTLER C S The relation of yaws to syphilis 135

C

CACCURI S Lipaemia in arteriosclerosis 508
Caesarean section cervical 45
Caesarean section followed by rupture of the uterus 225
Caesarean section high 460
Caesarean section indications for 120
CAFFEY J Diagnosis of meningococcaemia 68
CAFFIER P Hysterectomy after x ray sterilization 402
Calcium distribution in epilepsy 100
Calcium therapy in hypertension 113
Calculi prostatic 392
Calculous formation in gonococcal pyelitis 97
Calculus impacted with acute pancreatitis 446
CALDWELL R J Sporadic typhus fever 301
CALHOUN J A The effect of digitalis on cardiac dyspnoea 193
CAMERON A J D Oxygen therapy by mouth 82
CAMERON J D S Heart block complicating toxic goitre 207
Camphor intestinal action of 15
Cancer of antrum treatment of 339
Cancer of the breast Insulin and x ray treatment of 482—Radium treatment of 341 479—Surgical treatment of 479
Cancer of the bronchi primary 259
Cancer of the cervix radium therapy in 366
Cancer of the cervix simulated by foreign bodies 160
Cancer of cervix and syphilis 571
Cancer congenital multiple 185
Cancer cutaneous insulin treatment of 11
Cancer of the Fallopian tube primary 270
Cancer of the jejunum primary 129
Cancer of the lung primary 241
Cancer mortality among the insane 213
Cancer of ovary 462
Cancer of pancreas metastases from 304
Cancer of penis 581
Cancer and syphilis 467 571
Cancer of the urethra treatment of 10
Cancer of uterus 462—Bone metastases in 485
Cancer of the body of the uterus *Diagnosis* and treatment of 181—Early recognition of 433—Lymph gland metastases in 321
CANNON A B The arsphenamine treatment of early syphilis 423
CARAMAZZA P The acetic anhydride test of the cerebro spinal fluid 69
Carbohydrate metabolism influence of insulin and adrenaline on 99
Carbon dioxide As an adjunct to spinal anaesthesia 196—In anaesthesia 456
Carbuncle renal 79
41
Cardiac lesions associated with hypertension 209
102
CARNELLI R Rare lesions of the appendix 81
Carotene *in vitro* transformation of to vitamin A 70
Carotid artery haemorrhage in children 317
CARRASCO C Chronic miliary tuberculosis 408
CARROSSE Pernicious anaemia and malaria 52
CARTER I P Unusual gonococcal sequels 410
CARTER L J Treatment of persistent meno
of artificial
CASTEX M R Hypertensive heart failure 72
10
CEDER L F Transmission of typhus fever by infected flea faeces 251
Cellulitis treatment of 214
Cerebellar abscess *See* Abscess
Cerebellar symptoms in frontal lobe tumours 247
Cerebral abscess *See* Abscess
Cerebro spinal fever paralysis of the spinal accessory nerve in 489
Cerebro spinal fluid acetic anhydride test of the 69
Cerebro spinal fluid Hinton's test in 163
Cervical stricture 484
CÉSARI F The destruction of *Br abortus* in milk and cheese by lactic fermentation 49
CHAILLET Psychotic azotaemic encephalitis 567
CHALIFER J Ventricular fibrillation in diphtheria 516
CHARROL E Acute yellow atrophy of the liver 75
Chancre soft 372
CHARLEUX C Pa-
nerve in cerebro
CHASE Lilian A
CHASIS H Sulphi
tension 59
Cheese destruction of *Br abortus* in by lactic fermentation 49
CHEVRY G Abnormally shaped erythrocytes 488
CHESLEY H O Radiography of the urinary tract 480
CHEVALLIER P Acute ulcer of the vulva 292
Chicken pox epidemic in Spitzbergen 30
Chlorides uraemia following the excessive elimination of 331
Cholagogue action of sodium dehydrocholate 153
Cholecyst-gastrostomy In ulcer 35—For chronic pancreatitis 260
Cholecystitis typhoid 277
CHOPRA R N The nature of opium addiction 312
19
ute for
nerves
in diabetes 261
CIOFFI A Primary adenocarcinoma of the gall bladder 8
Cirrhosis of liver peritonitis in 512
CLARENBURG A Food poisoning due to pigeon
he tubercle
arthritis of
CLAWSON B J Vaccine therapy in chronic arthritis 550
CLAYSON C Displacement of the heart in pulmonary tuberculosis 370
COCCHERI P Spontaneous pneumothorax in early life 224
COCQ V High Caesarean section 460
COLE H L Toxicity of the arsphenamines 133
Colectomy total 7
COLEMAN G F Intestinal carriers of the tetanus bacillus 96
COLEY
Colitis
COLLONI of
the ge
iphigus 265
ectomy in frac
COMBY J Relapses and second attacks of infectious diseases 578
CONNERY J E Pregnancy in the course of leukaemia 384
Contact glasses 155
Convalescent serum *See* Serum
COOMBS Carey F Therapeutic alternatives in aortic syphilis 311

C[illegible] V S C [illegible]
C[illegible] A [illegible] The [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
C[illegible] C [illegible]—The [illegible]
[illegible]
C[illegible] V [illegible] Tetanus [illegible] with B C G
C[illegible] [illegible] treatment [illegible]
C[illegible] [illegible] Treatment [illegible]
C[illegible] V [illegible] Tetanus [illegible] with B C G
C[illegible] [illegible]
C[illegible] [illegible]
C[illegible] [illegible] Ethmoid [illegible]
C[illegible] [illegible] Cancer [illegible]
C[illegible] [illegible]
C[illegible] [illegible] Spinal [illegible]
C[illegible] [illegible] Acute [illegible]
C[illegible] [illegible]
C[illegible] [illegible] Spinal [illegible]
C[illegible] [illegible] Acute [illegible]
C[illegible] [illegible]
C[illegible] [illegible]
C[illegible]

Foshay L Serotherapy in tularaemia 452—Post mortem findings in tularaemia 595
Foulger M Post-mortem findings in tularaemia 595
Fowl leukaemia *See* Leukaemia
Fox E C Fatal iodide intoxication 60
204
63
0
Fractures of bone during pregnancy 531
Fractures of the lower radical epiphysis 560
Fractures multiple in a newborn infant 398
Fractures open of the leg 55
Fractures of the leg periarterial sympathectomy in 80
Fr[illegible] W Parasitic anaemia complicated 3
anaerobic bacteria in
Fried B M Primary carcinoma of the lung 241
Friedenwald J The leather bottle stomach 170
Friedlaender A The mortality from broncho pneumonia 315
Friedman E The spleen in measles 104
Friis J An epidemic of chicken pox in Spitzbergen 30
Fritz A R Renal carbuncle 79
Froment R Ventricular fibrillation in diphtheria 516
Frontal lobe tumours *See* Tumours
Froshang H The Gerson diet and the blood pressure 310
Fruhinsholz A Pregnancy pyrexia 200
Frumess G Tumours of the suprarenal gland 36
Furth J The nature of the agent transmitting fowl leukaemia 465

G

Gall bladder primary adenocarcinoma of the 8
Galli I Haemorrhagic cystitis in measles 127
Galliot A Prolonged treatment of syphilis 244—A lipo hepato soluble bismuth preparation 583
Gall stones operative treatment of 6
Galvan J M G Hypertension in gastro intestinal disease 107
Ganglionectomy sympathetic in arthritis 333
Gangrene gas from hypodermic injections 262
Gangrene pulmonary polyvalent serotherapy in 337
Gans A Surgery in syringomyelia 474
Garland H G Torsion spasm 428
Garner V C Treatment of early syphilis 38
Garside E Prevention of peritoneal adhesions 448
Gas gangrene *See* Gangrene
Gastric contents demonstration of tubercle bacilli in the 324
Gastric ileus intermittent 149
Gastric juice Acidity of 25—Nitrogen content of 231
Gastric ulcer *See* Ulcer
Gastric *See also* Stomach
Gastro intestinal disease hypertension in 107
Gatl J Intravenous injections of anti gonococcal vaccine 453
Gelli Acute hydramnios 23
General paralysis *See* Paralysis
Gentil F Treatment of cancer with insulin and *x* rays 482
Gerlach F B C G vaccination in cattle 71
Germain R J Unusual gonococcal sequels 412
Gerson diet *See* Diet
Gestation period evolutionary determination of the 22
Gestation *See also* Pregnancy
Gibier Rambaud G Focal infections in certain psychoses 17
Gierthmühlen F Hypotension in childhood 43
Gilbert N C Digitalis as a cause of anginal pain 338
Giraud P Treatment of kala azar in children 393
Girdlestone G R Tuberculosis of the knee 307
Glaessner K Pepsin injections in gastric and duodenal ulcer 336
Gland pituitary And ovulation 294 295—Significance of in parturition 435
Gland suprarenal tumours of the 36
Glands suprarenal In fatal burns 47—And arterial tension 98
Glandular fever *See* Fever
Glasses contact 155
Glaubersohn S A The Sklowsky symptom in varicella 103
Glazer A M Post-mortem findings in tularaemia 595
Glomerulonephr[illegible] 8
Glycosuria in
Goecke[illegible]rman[illegible] 380
[illegible] heart block 207
Gordon [illegible] A T Hypersensitiveness [illegible]unization 562
severe purpura 396
Gomez D M The mean arterial hypertension 124
Gonococcal infections diathermy in 44
Gonococcal pyelitis calculous formation in 97
Gonococcal sequels unusual 410 411 412
Gonorrhoea malaria therapy in 176
Gonorrhoea rectal 429
Gonorrhoeal ophthalmia 154
Gonorrheal salpingitis and perihepatic adhesions 250
Goodhart G W Acidity of the gastric juice 25
Goldring W Sulphocyanate therapy in hypertension 59
Gosselin L Congenital multiple carcinomata 185
Govaerts A The two types of chronic rheumatism 541
Govaerts J Treatment of uterine perforation 249
Grain Treatment of the mucosa of the inferior turbinates 179
Gratia A Relation between the phenomena of Schwartzman and Arthus 367
Graves s disease pathogenesis of 76
Gray J D Allan *B aerogenes* as an index of water purity 369
Greenberg B E Oil instillations in bladder infections 263
Greene C H The suprarenal cortex in Addison s disease 194—The metabolism in Addison s disease 325
Greenhill J P Cervical Caesarean section 45
Greppi E Quantitative estimation of red cell resistance 327
Griffith A S Relative incidence of human and bovine tubercle bacilli in tuberculous meningitis 252
Grimes E Albuminuria in iodine deficiency 210
Gross H Filterable staphylococcal haemolysin 230
Growth rate of in childhood 316
Grunberg L The anti typhoid bacteriophage 536
Gualdi A Blood ammonia and renal insufficiency 184
Gufst G M Juvenile nephrosclerosis 40
Guillain Influenzal parotitis 32
Gutman R A Radiology of the stomach 117
Gwathmey J T Obstetrical analgesia 94
Gwyn N B Subacute meningococcal endocarditis 330
Gynaecology Spinal anaesthesia in 24 287—Value of radiography in 432

H

Haemangioma cavernous injection treatment of 174
Haematoma perirenal spontaneous 78
[illegible]
Haemorrhage menopausal persistent treatment of 92
Haemorrhage nasal post operative 269
Haemorrhage post partum delayed 227
Haemorrhage subarachnoid diffuse spontaneous 235 556
[illegible]
355
Hagenbeck J H Pernocton anaesthesia 289
Hahnemann V Cancer mortality among the insane 213
Hair eating and pica in children 221
Harding V J Glycosuria in pregnancy 403
Hare C C Cerebellar symptoms in frontal lobe tumours 247
Harild S The sedimentation test in surgical tuberculosis in children 48
Harris F I Primary carcinoma of the jejunum 129
Harris M C Treatment of asthma 175
Harrison T R The effect of digitalis on cardiac dyspnoea 193
Harrop G A The hormone of the suprarenal cortex 387
Hartman F A Suprarenal cortex in Addison s disease 526
Hartma[illegible] H J Anterior poliomyelitis 300
Hartmann H Malaria therapy in pregnancy 118
Hasselblatt R Primary abdominal pregnancy 461
Hay fever vaccine treatment of 283
Healy W I Radium therapy in cervical carcinoma 366
Heart aneurysm of the wall of the 29 *See also* Aneurysm
[illegible]
510
Heart failure hypertensive 72
Heart infarct of the 186
[illegible]
e response to iron 309
Helgeschir H Irquet reactions in recruits 73
Hedblom C A Treatment of empyema 413
Heilbrofe N I Treatment of anaemia in
[illegible]
Helminths as a cause of meningitis 144
Helms O The age incidence of tuberculosis in women 390
Henderson M S Sympathetic ganglionectomy in arthritis 333
Henderson Y Inhalation therapy in pneumonia 422
Hepatic disease diathermy in 87
Hepatocholangitis typhoid 555
Hercus C E Vaccine treatment of hay fever 283
Heredity in schizophrenia 19
Herlitz C W The liver and recticulo endothelial system in infectious diseases 274
Hertz J Spontaneous perirenal haematoma 78
Hertz P Measures for reduction of infant mortality 502
Herzberg M The appendix in measles 335
Hess O Diffuse spontaneous subarachnoid haemorrhage 235
Heterophile antibodies *See* Antibodies
Heyers B Spiral deformity of the oesophagus 9
Heymann E Surgical treatment of angioma 282
Hilde H Avertin anaesthesia 459
Hill H Laceration of the pelvic diaphragm 248
Hill I G W Heart block complicating toxic goitre 207
Hindley Smith J D Chronic streptococcal toxaemia 492
Hinton s test in blood serum and cerebro spinal fluid 163
Hirschsprung s disease 503—Results of resection in 420
469
litis in 31—
the pituitary
Holzknecht K Eosinophilia in Hodgkin s disease 469
Hormone of the suprarenal cortex 387
Hornabrook R W The induction of general *anaesthesia* 62
Horowitz A Atropine sulphate in the gastric *crises of tabes* 357
Hudson G L Placental permeability to in
[illegible]
ling 119
arkinson
ism 12
Hydatid cyst of kidney 334
Hydatid disease diagnosis of 495
Hydatid of Morgagni torsion of the pedicle of the 375
Hydatidiform mole with negative Zondek Aschheim reaction 66
Hydramnios acute 23
Hyperemesis gravidarum Lugol s solution in 201
Hypersensitiveness following toxin antitoxin immunization 562
Hypertension arterial the mean 124
Hypertension bronchitis in 4
Hypertension calcium therapy in 113
Hypertension cardiac lesions associated with 209
[illegible]
Hypertrophic pyloric stenosis *See* Stenosis
Hypodermic injections causing gas gangrene 262
Hypoglycaemia diplopia in 256
Hypotension in childhood 43
Hypotension of pituitary *origin* 257
Hypothyroidism and essential pruritus 137
Hysterectomy after *x* ray sterilization 402

I

Iacono G Diathermy in hepatic disease 87
Ileus gastric intermittent 149
Immunization by diphtheria antitoxin 585
Infant mortality See Mortality
Infarct of heart *See* Heart
Infections influence of vitamins on the course of 275
Infectious diseases the liver and recticulo endothelial system in 234
Infectious diseases relapses and second attacks of 578
Influenza bacillus purulent infection with *See also* Bacillus

Infectious paralysis, Aetiology of 565
Infective meningitis 254 555 577—Antiserum in 577
Influenzal parotitis 560
Inhalation therapy in pneumonia 54
Injection treatment of varicose veins 215
Insulin and adrenaline, Influence of, on certain hydrates of carbon in blood 204
Insulin and sugar in cardiac therapy 217
Insulin treatment of cutaneous carcinoma 111
Insulin and x rays in treatment of cancer of the breast 562
Intestinal carriers of the tetanus bacillus 95
Intestinal occlusion caused by calculi (Foramen tumour) 290
Intestinal perforation, successful laparotomy for 150
Intestinal tumours. *See* Tumours
Intracranial forcign bodies, sequelæ of 565
Intrapulmonary medication 500
Intrathoracic goitre 172
Intrathoracic surgery, preliminary pneumothorax in 545
Intravenous urography. *See* Urography
Iodine ointment 54
Iodide in breast cancer, fatal 60
Iodine, inorganic, placental permeability to 564
Iodine deficiency, albuminuria in 210
Iodex 115
Iron and salicylate in acne 357
Iron content of human milk 563
Iron retained after removal of stomach 564
Isolin, Wound of the finger by 574

J

Jackson C. Pulsion diverticulum of the œsophagus 465
Jacob M. Intramuscular medication 500
Jayle H. Rheumatoid arthritis and acute rheumatism, fever 512
Jensen H. Rheumatism in Denmark 565
Jerusalem C. X ray pelvimetry 115
Jessen C. Acrocyanosis 565
Jewett H. G. Thyroglossal cysts and fistulæ 211
Jaundice, obstructive, cause of 1
Jaundice, post-operative 565
Jeanneney G. Hysterectomy for the haemorrhagic metropathia 565
Jeanneney M. Fracture of inflamed popliteal artery 562
Jeannin C. Multiple fracture in a newborn infant 565
Jejunum, cancer of. *See* Cancer
Jensen C. Diphtheral anatomical immunogenesis 121
Jirka, V. M. J. Poliomyelitis encephalitis in Holland 21
Joly F. Treatment of delirium by avertin 60
Jones, C. R. Acute pancreatitis 450
Jones, O. W. Chronic subdural haematoma 259
Jordan, E. O. Staphylococcus food poisoning 150
Jordan, Kathleen. Comparison of the Pirquet and Mantoux tuberculin tests 457
Jordan, G. H. W. Xanthoma tuberosum 97
Jorge, R. A water-borne outbreak of Weil's disease 260
Jump, H. D. Vincent's infection of pleura and vagina 272
Jundell, L. Vaccination of cattle with B.C.G. 29
Jungano, J. Cylindroma (cylindroma) of urethra 535
Junqueira Bittencourt, L. Evolution of the renal syndrome in amyloid 455

K.

Kairis, Z. Diagnosis of hydatid disease 495
Kamen, A. Combined antivirus and vaccine treatment in acne vulgaris 521
Kala-azar in children, treatment of 509
Kaplan, A. Chronic subdural haematoma 525
Kaplan, I. I. Pregnancy in the course of leukæmia 37
Kanczag, L. The triad syndrome in dysentery 229
Kaznelson, Marie B. The arsphenamine treatment of early syphilis 523
Kaznelson, P. Sarcoma of the uterus 100
Kaznelsohn, S. Calcium diffusion in epilepsy 100
Kealey, P. J. Primary carcinoma of the Fallopian tube 270
Kelly, R. A. The place of vaccine in clinical treatment 489
Keith, A. M. Sodium chloride in renal insufficiency 255
Kerastouri, Camille. Parenteral B.C.G. vaccination 429
Kerley, G. Radium treatment of carcinoma of the breast 341
Khanna, L. C. Action of the splanchnic nerves on the spleen 405
Kidney hydatid cyst of 554
Kidney. *See also* Renal
Kirkby, J. A. Sequelæ of intraocular foreign body 58
Kirkpatrick, G. The age incidence of venereal disease 279
Kline, B. S. Fatal *Bacillus pyocyaneus* infection 515
Klotz, H. Hypertrophic pyloric stenosis in adult 497
Knee tuberculosis of 507
Knight, R. R. Typhoid carriers 125
Knoll, V. Tennis elbow 95
Koford, S. F. Acetonuria and the acute abdomen 249
Kopp, S. A. Isolation of the Sonne dysentery bacillus 508
Kasser, Hildegard. Malaria therapy in gonorrhœa 175
Kotzebold, P. Rectal anæsthesia by magnesium salts 97
Kowlen. Treatment of pneumodic cough 213
Krause, A. Adult serum in infantile encephalitis 562
Krause, O. The Bucky rays in ophthalmology 580
Kretschmer, H. A blood transfusion fatality 565
Krocker, A. Operative treatment of gallstone 6
Kuczera, H. Simulation of cancer of the cervix by foreign bodies 160

L

Labbé, M. Evolution of the renal syndrome in amyloid 455
Labour induction of. By puncture of the membranes 21—By castor oil quinine and pituitary extract 85, 431—Complicated by fibroid tumours 522—Spontaneous delivery in an unfavourable face presentation 561
Labour, Prolonged in forceps case 491
Lachenaud, O. After-effects of ionic electrolysis 91
Lactic fermentation, de troying *Bacillus coli* in milk and cheese 449
La Haye, P. Acute pancreatitis with impacted calculus 450
Lain, E. S. Mouth lesion caused by artificial denture 25
Laird, D. A. Dietary treatment of nervousness in children 142
Landauer, E. Cultivation of the organism of avian spirochætosis 183
Landowski, P. The blood in diphtheria 507
Langenskiold, F. Albee operation for Pott's disease 559
Laplace, L. B. Auricular fibrillation 444
Laroche, G. Treatment of cellulitis 214
Larsson, L. Magnesium hyposulphite in maniacal paroxysms 525—Psychotic arteriosclerotic encephalitis 557
Laryngeal paralysis 89
Laryngeal tuberculosis, prognosis and treatment of 178
Laryngitis, oedematous, in scarlet fever, tracheotomy for 417
Lashley, F. H. Treatment of nephritic oedema 151
Lasley, H. C. A. Influence of vitamin on the course of infection 275
Laurent, L. J. M. Helminths a cause of meningitis 154
Lavenir, E. Uræmia following the excretive elimination of chlorides 551
Lazard, A. Prostatic calculi 292
Lazarus, J. A. Rupture of bladder in fractured pelvis 150—Osteomyelitis of the vertebræ 273
Lead poisoning, dwarfism due to 571
Leadbetter, J. R. Hirschsprung's disease 505
Leather bottle stomach. *See* Stomach
Leavell, H. R. Undulant fever 165 157
Lee, S. W. Sarcoma of the uterus 508—Creatinuria in the puerperium 572
Leg fracture, perarterial sympathectomy in 80
Leg, open fractures of 55
Leighton, W. E. Carcinoma of the penis 581
Le Hardouin, A. B. Carotid artery haemorrhage in children 517
Leibetseder, E. Active immunization against tetanus 527
Lenticular exfoliation 351
Lepine, P. Aetiology of lymphogranulomatosis inguinale 225—A pathogenic study of parasyphilis 456—Psychotic arteriosclerotic encephalitis 567
Lepp, C. R. Cholecysto-gastrostomy for chronic pancreatitis 250—Treatment of sprains and traumatic arthritis 570
Lermoyez's disease 89
Leucocytosis and red cell sedimentation diagnostic value of 505
Leukæmia, fowl nature of the agent transmitting 465
Leukæmia, pregnancy in the course of 384
Levaditi, C. Aetiology of lymphogranuloma inguinale 225—A pathogenic study of parasyphilis 456
Levitan, M. Dietary treatment of nervousness in children 139
Levy, G. An aetiological factor in Dupuytren's contraction 418
Levy, J. Digitalis therapy in juvenile morbus cordis 152
Lewit, I. Diagnosis of chorion epithelioma 319
Lewkowicz, Z. Transfusion in typhoid fever 313
Ley, J. Susceptibility of the male fœtus to syphilis 555
Light, S. F. Injection treatment of cavernous haemangioma 174
Limitis plastica 168
Linz, P. Relation between the phenomena of Schwartzman and Arthus 567
Lipæmia in old age 203—In arteriosclerosis 594
Lipo-hepato-soluble bismuth preparation 553
Lisa, J. R. Cardiac lesions associated with hypertension 209
Litt, K. B. Neo-natal curry 223
Liver cirrhosis of peritonitis in 512
Liver and reticulo-endothelial system in infectious diseases 254
Liver in scarlet fever 122
Liver, yellow atrophy, acute of the 75—Etiology of 182
Llorente, P. L. Treatment of experimental strychnine poisoning 424
Lombolt, E. Results of the modern treatment of syphilis 537—Incubation period of general paralysis 470
Lotheissen, G. Appendicitis in infant 305
Lugol's solution in hyperemesis gravidarum 201
Lumbar puncture, cardiac rhythm during 102
Lung, cancer of. *See* Cancer
Lung, Intrapulmonary medication 500
Lupus erythematosus, bismuth therapy in 85—Histological changes in 580
Lurie, M. B. Development of the tubercle and the fate of living tubercle bacilli 348
Lymph gland metastases in carcinoma of the corpus uteri 521
Lymphogranulomatosis inguinale, aetiology of 225
Lyon, B. B. Vincent Typhoid hepatocholangitis 555

M

McCann, D. C. Transformation in vitro of carotene to vitamin A 70
McEachern, D. Auricular fibrillation 444
McGee, W. B. Abruptio placentæ 157
Mack, C. B. Chronic typhoid carriers 510
MacKenna, R. J. R. Bismuth therapy in cutaneous disease 85
McLean, S. Diagnosis of meningococcæmia 65
Macpherson, D. G. Tracheotomy for œdematous laryngitis in scarlet fever 417
Mage, S. Perarterial sympathectomy in fractures of the lower extremity 80
Magnesium hypophosphite in maniacal paroxysm 523
Magnesium salts for rectal anæsthesia 457
Magnusson, H. Vaccination of cattle with B.C.G. 28
Manachville, M. Vaccine therapy in whooping cough 563
Mahon, L. The uterine tonus 3 5
Malaria, quinidine in 83
Malaria and pernicious anæmia 52
Malaria therapy. In gonorrhœa 175—In neurosyphilis 195 555 559—In pregnancy 118—Repeated 478
Malherbe, A. Protection of the infant's ears at birth 553
Malmejac, R. Parathyroid function in the puerperium 323
Maniacal paroxysms, magnesium hypophosphite in 523
Mantoux and Pirquet tuberculin test, comparison of 457
Mantini, C. The acetic anhydride test of the cerebro-spinal fluid 69—Gonorrhœal ophthalmia 154
Marañon, G. Staphylococcal septicæmia 449
Marie, A. Repeated malaria therapy 478
Marin, A. Treatment of rhinophyma 258
Martin, L. Nitrogen content of the gastric juice 231
Martinaud, Dental extractions in pregnancy 26
Maschke, A. S. Fatal *bacillus pyocyaneus* infection 513
Masser, A. M. Rheumatoid arthritis and acute rheumatic fever 542
Mastitis, non suppurative in typhoid fever 535
Mastoiditis in scarlet fever 256
Mathieu, A. Induction of labour 83
Matters, R. F. Pernoction in obstetrics 225
Mayer, A. Pre-eclamptic amaurosis 180
Maze, P. The deviation of *Bacillus abortus* in milk and cheese by lactic fermentation 49
Mazzacuva, G. Spur of the os calcis 281
Meakins, J. C. Coronary thrombosis 351
Measles, acute transverse myelitis in 238
Measles, appendix in 335
Measles followed by encephalomyelitis 557
Measles, haemorrhagic cystitis in 127
Measles, the spleen in 104
Melitin reaction, intradermal simplification of 35
Mellanby, E. Diet and degeneration of the spinal cord 16

Membranes puncture of for the induction of labour 21
MENARD O J Stramonium in Parkinsonism 12
Meningitis helminthic as cause of 144
Meningitis influenzal 74 350 577—And syphilis 577
Meningitis tuberculous relative incidence of bovine tubercle bacilli in 252
Meningoblastoma of the petrous portion of the temporal bone 529
Meningococcaemia diagnosis of 68
Meningococcal infections cutaneous manifestations of 389
Menopausal haemorrhage *See* Haemorrhage
Menstruation the blood platelets in 364
Mental defectives the position in the family of 18
MERCIER L Congenital multiple carcinomata 185
MESTRALLET A Magnesium hyposulphite in maniacal paroxysms 523
Metabolism in Addison's disease 325
Metabolism basal at puberty 404
Metabolism carbohydrate the influence of insulin and adrenaline on 99
Metabolism protein hourly variations in 26
Metals heavy action of in anaemia 466
Meteorological factors in rheumatic manifestations 545
Metritis decidual 533
METZGER M Delayed post partum haemorrhage 227
MEURS Lucienne Treatment of cellulitis 214
MEYER A Sporadic pellagra 440
MEYER J Tumours of the suprarenal gland 36
MEYER K A Intermittent gastric ileus 149
MEYER R Ovarian tumours and modified sex characteristics 138
MEYERDING H W Surgical treatment of chronic arthritis 548
MICHALLIS Therapeutics of scleroderma 13
Middle ear *See* Ear
MIHALOVICI I Calculous formation in gonococcal pyelitis 97
MIKULICZ RADECKI F v Treatment of carcinoma of the urethra 10
Miliary tuberculosis *See* Tuberculosis
Milk avian tubercle bacilli in 464
Milk destruction of *Br abortus* in by lactic fermentation 49
Milk human iron content of 593
MILLER F G Acute transverse myelitis in measles 238
MILLER J L The two types of chronic rheumatic arthritis 540
MINKEWITSCH J E Identification of faecal *B coli* in drinking water 386
MINOT G R The reticulocyte response to iron 309
MINTZ E R Sarcoma of the bladder in children 57
MITCHELL A G Juvenile nephrosclerosis 40
MITCHELL D R Urinary acidifiers 218
MILTNER L J Spinal complications of typhoid fever 413
MOE R J Vaginitis due to *Trichomonas vaginalis* 139
MOENCH L Mary Primary epithelioma of the vagina 199
MOFTAH S G Paralysis in rabies 208
MOINICHEN E The Gerson diet and the blood pressure 310
Mole hydatidiform with negative Zondek Aschheim reaction 66
MOLNÁR M Successful late operation for intestinal perforation 130
MOLTKE O The infectiousness of psittacosis 332
Mononucleosis infectious heterophile antibodies in 349
MONTGOMERY H Lupus erythematosus 380
MOORE H Achlorhydria 442
MOORE J H Mumps complicating pregnancy 228
MORALLS J M L The heart in thyroid insufficiency 509
Morbus cordis juvenile digitalis therapy in 152
MOREAU R Pulmonary syphilis 443
Morgagni's hydatid *See* Hydatid
MORRIS J H Torsion of the omentum 305
MORRISON T H The leather bottle stomach 170
MORROS Staphylococcal septicaemia 449
MORROW H Treatment of cutaneous epithelioma 190
Mortality infantile measures for reduction of 502
Mouth lesions caused by artificial dentures 258
MOZER J Infarct of the heart 186
MRÁZOVÁ TRI GERZVÁ Irena Extraction of senile cataract 586
Mucous of the inferior turbinates treatment of the 179
MULLER Hannah Basal metabolism at puberty 404
MULLER G P Empyema 147
M
of atropine
es 131
Sonne

N

NAESLUND J Renal tuberculosis and pregnancy 570
Nasal haemorrhage *See* Haemorrhage
Nasopharyngitis persistent causing chronic bronchitis 2
NATHANSON M H Coronary angina 511
NAUJOKS H Bone fractures during pregnancy 531
NAULLEAU J Subacute infectious arthritis of the hip 354
NEDELKOFF S I Prolonged staphylococcal septicaemia 561
NELIGAN A R The organization of treatment for industrial rheumatism 553
NELMOURS AUGUSTE Radiology of the stomach 117
Neosalvarsan in psoriasis 39
Nephritic oedema *See* Oedema
Nephritis urinary protein in 101
Nephrosclerosis juvenile 40
Nerve presacral late results of resection of the 272
Nerve spinal accessory paralysis of in cerebrospinal fever 489
Nerves splanchnic action of on the spleen 405
Nerves suprarenal in diabetes section of 261
Nervousness in children dietary treatment of 132
NETTER A Anti poliomyelitis serum in lethargic encephalitis 360—Role of the rat in the spread of endemic typhus 539

Nipple transplantation 67
NISHIMARU Y Action of the splanchnic nerves on the spleen 405
Nitrogen content of the gastric juice 231
Nitrous oxide anaesthesia *See* Anaesthesia
NOLLE H Diabetes mellitus and pregnancy 483
3
ua
this
393
NUSSBAUM S Erysipelas gangrenosa 394
NYE L J Jarvis Dwarfism due to lead poisoning 371—Achlorhydria 441

O

Obstetrical analgesia 94
Obstetrics pernocton in 226 289
Obstruction congenital of female urethra 501
OCHSEE B von Pernocton anaesthesia 289
OCHSNER A Prevention of peritoneal adhesions 448
Oedema nephritic treatment of 151
Oesophagus idiopathic dilatation of the 212
Oesophagus pulsion diverticulum of the 58
Oesophagus spinal deformity of the 9
OFFUTT Susan R Ovarian and uterine carcinoma 462
OGINO K Premenstrual sterility and family restriction 506
OLCOTT H S Transformation *in vitro* of carotene to vitamin A 70
Oil instillations in bladder infections 263
OLLP J A Treatment of coronary thrombosis 524
O'LEARY P A Malarial therapy of neurosyphilis 358
Omentum torsion of the 305
Onycholysis 379
Operations the blood picture after 203

Opotherapy renal the possibilities of 421
OPPENHEIM M Bullous dermatitis following sunlight baths 381
Oral surgery nitrous oxide oxygen anaesthesia in 286
ORY M Meteorological factors in rheumatic manifestations 545
Os calcis spurs of the 281
Osteomyelitis of the jaws in infants 240
Osteomyelitis of the vertebrae 373
OSTROFF J Prophylaxis of mumps 54
Otitis typhoid cerebral abscess following 191
OTTOW B Diagnosis and treatment of ureteral fistula 382
Ovarian cancer *See* Cancer
Ovarian tumour calcified causing intestinal occlusion 290
Ovarian tumours and modified sex characteristics 138
Ovary dermoid cysts of the 159
O
O

P

Paget's disease 189
PAGLIA A Tommasi's sign in uricaemia 106
PAIGE A Malaria therapy in neurosyphilis 195

Pain referred uteral origin of 463
PALMER R S Etiological factors in hyper tension 165
Pancreatitis acute 450—With impacted calculus 446
Pancreatitis chronic cholecysto gastrostomy for 260
Pancrine in scleroderma 13
P
J
period of 470
Paralysis in rabies 208
Parasyphilis a pathogenic study of 436
Parathyroid function in the puerperium 323
Paratyphoid fever *See* Fever
Paratyphoid infection pigeon food poisoning due to 574
Paratyphoid septicaemia purpura haemorrhagica in 125
PARK W H Parenteral B C G vaccination 439
Parkinsonism stramonium in 12
Parotitis acute suppurative 56
PARR L W A blood transfusion fatality 352
Parotitis influenzal 32
Parturition significance of the pituitary gland in 435
PASCALIS G Eserine as an anaesthetic adjuvant 198
PASCUAL W The coronary circulation 253
PAUCHET V Tumours of the kidney 521
PAUCOT Acute hydramnios 23
PAUFIQUE L Retrobulbar neuritis 587
PAUL J R Heterophile antibodies in infectious mononucleosis 349
PAUL M A Tumours of the small intestine 280
PAULIAN D Treatment of disseminated sclerosis 455—Atypical encephalomyelitis following revaccination 490 — Encephalomyelitis following measles 557
PEHU M Acrodynia 5—Treatment of bronchial asthma 564
Pellagra sporadic 440
Pelvic diaphragm laceration of the 248
Pelvic tumours *See* Tumours
Pelvimetry *x* ray 116
Pelvis fractured rupture of bladder in 150
Pemphigus colonic irrigation therapy in 265
Penis cancer of *See* Cancer
PENNINGTON G A Extramedullary *tumour of* the spinal cord 427
PENROSE L S The position in the family of mental defectives 18
Pepsin injections in gastric and duodenal ulcer 336
PÉRÈS M Treatment of dysmenorrhoea 65
Periarterial sympathectomy *See* Sympathectomy
Perihepatic adhesions and gonorrhoeal salpingitis 250
Perineal prostatectomy *See* Prostatectomy
Pernicious anaemia *See* Anaemia
Peritoneal adhesions prevention of 448
Peritonitis in cirrhosis of the liver 512
Peritonitis pneumococcal 393
Pernocton anaesthesia 226 289
Pernocton in obstetrics 226
PERONI A Cerebral abscess following typhoid otitis 191—Brachial monoplegia in cerebellar abscess 267
Pertussis *See* Whooping cough
PETIT DUTAILLIS P Evolution and treatment of vulval epithelioma 534
PETRÁNGI G Adult serum in infantile encephalitis 582
PFEILER R Pernocton anaesthesia 289
Pfeiffer's *B influenzae See* Bacillus
PFIFFNER J J The suprarenal cortex in Addison's disease 194
Phagocytosis and tobacco smoke 254
PHANEUF L E Puerperal inversion of the uterus 158
Pharyngitis pneumococcal pseudo membranous 527
Pharynx primary gangrene of the 90
Phenomena of Schwartzman *See* Schwartzman
Philadelphia diphtheria prevention in 169
PHILIP R Meningoblastoma of the petrous portion of the temporal bone 529
PHILIPP F Bone metastases in carcinoma of the uterus 485
Phlebitis thrombosis and embolism post operative 579
Pica and hair eating in children 221
Pigeon paratyphoid *See* Paratyphoid
Pilocarpine and atropine combined in post encephalitic states 131
PILOT I Sporadic septic sore throat 143
Pirquet and Mantoux tuberculin tests comparison of 437
Pirquet reactions in recruits 73
PITSORIS G Peritonitis in cirrhosis of the liver 512
Pituitary gland and ovulation 294 295
Pituitary gland in parturition significance of 435

Pituitary organ of internal secretion 2
Pituitary therapy in acromegaly 2
Pituitrin as oxytocic 1
Placenta, Abruptio placentae 177
Placental permeability to inorganic ions 347
Pleura and vagina, Visceral cleft lesion 1
Pleurisy, axillary 265
Pneumococcal peritonitis *See* Peritonitis
Pneumococcal pericarditis in bronchopneumonia, pharyngitis 527
Pneumonia in children, an hæmolytic streptococcal factor in 470
Pneumonia, influenza, serum therapy in 542
Pneumonia, lobar, and dementia 270
Pneumonia, lobar, jaundice in 1
Pneumonia, quinine intramuscularly in 1
Pneumothorax, artificial, complications of 109
Pneumothorax, chronic 19
Pneumothorax, preliminary, in tuberculous empyema 5
Pneumothorax, spontaneous, in early life 2
Polio, J. F., Undifferentiated fevers in children 1
Poisoning, arterial, sodium nitrite in 455
Poisoning, food, due to Bacillus paratyphosus infection 57
Poisoning, food, staphylococcal 1
Poisoning, lead, chronic, in children 271
Poisoning, mercury, hæmorrhagic stomatitis in 1
Poisons, Antidotes 222
Poliomyelitis, anterior 270
Poliomyelitis, preventive value of human convalescent serum in 1
Polyneuritis, acute, treatment by intravenous injection of glucose and insulin 5
Polyvalent antitoxin therapy in traumatic gangrene 357
Popliteal aneurysm *See* Aneurysm
Porter, L., Clinical and research observations on tuberculosis 279
Portmann, G., Surgical treatment of obliteration of the internal auditory artery 58
Portocaval shunt, the operation in cirrhosis of the liver and ascites 5
Portocholecystostomy, the operation of choice in cirrhosis and ascites 121
Portocholecystostomy *See* Cholecystostomy
Portocholecystostomy, technique of 1
Portopancreatic anastomosis *See* Hepatic cirrhosis
Portwine, Barbara, fever 1
Post-diphtheritic abscess, operation for 209
Potassium, benign tumours of the skin 519
Pratchett, A. D., Salpingolaparotomy and oöphorectomy 52
Precocious amaurosis 150
Pregnancy, abdominal, primary 241
Pregnancy, abdominal, clinical diagnosis of 31
Pregnancy, bone marrow changes in 1
Pregnancy, blood platelets in 354
Pregnancy complicated by nephritis 2.—Complicated by tuberculosis 200.—Complicated by fibroid tumour 200
Pregnancy, dextrotorsion in 200
Pregnancy and diabetes 452
Pregnancy, glycosuria in 200
Pregnancy in the course of leukæmia 38
Pregnancy, malaria therapy in 118
Pregnancy, pyelitis, severe in 200
Pregnancy, pyrexia 200
Pregnancy and renal tuberculosis 200 370
Pregnancy, toxæmia 85
Pregnancy, vomiting of hæmorrhagic crystals in 450
Pregnancy *See* Corpus Luteum
Premenstrual exhibition *See* Sensitivity
Prendergast, D. A., Unusual gynæcological sequelæ 411
Presacral nerve *See* Nerve
Prett, L., Jaundice in lobar pneumonia 281
Primrose, W. W., Chronic bronchitis, cure by per os vaccination 2
Prince, N. C., Early diagnosis of pulmonary tuberculosis 167
Procktor, J., Hinton's test in blood serum and cerebro-spinal fluid 165
Prolapse, colonic, pulmonary, arterial blood analysis in 197
Prostatic calculi 222
Prostatectomy, suprapubic 570
Prostatitis, non-specific 475
Protein metabolism, hourly variations in 20
Proteins, urinary, in nephritis 101
Pruritus, essential, and hypothyroidism 157
Pulmonary infection, new uses of 342
Pulmonary neosalvarsan 28
Pyelonephritis, focal infection in 17
Pyometra, intervention in the uterus 155
Puerperium, blood platelets in 354
Puerperium, parathyroid function in the 223
Pulmonary artery *See* Artery
Pulmonary circulation, the collateral 58
Pupil, S. F., Action of the splanchnic nerves on the spleen 25
Purpura hæmorrhagica in paratyphoid septic æmia 125
Purpura in scarlet fever 237
Purpura, severe, treatment of 290
Putnam, E., Lipæmia in old age 205
Pyelitis, gonococcal, calculous formation in 97
Pyelitis, severe, in pregnancy 200
Pyelography *See* Urography
Pyloric stenosis, congenital 72
Pyloric stenosis, hypertrophic, in adult 98 497
Pyocyaneus infection, fatal, bacillus 515
Pyrexia, pregnancy 200

Q

Quinidine in malaria, 88
Quinine in pneumonia, intramuscular injections of 14

R

Rabe, P., Early diagnosis in 208
Radiography, in gynæcology, value of 502—Of the urinary tract 260
Radiology of the stomach 117
Radium in adenomyxosis 481
Radium therapy in cervical carcinoma 365
Radium treatment of carcinoma of the breast 1
Rapi, F., Treatment of chronic suppuration by grave 534
Rawling, I., Post-operative phlebitis, thrombosis and embolism 570
Ray, C., Administration of anti-diphtheritic serum 5.—Active immunization against tetanus 557.—Immunization by diphtheria antitoxin 5
Rankin, F. W., Total colectomy.—Right sympathectomy 503
Rats and the prevention of endemic typhus 558
Ratcliff, P., Aetiology of lymphogranuloma inguinale 570
Ravina, J., Renal tuberculosis and pregnancy 221
Ray, H. B., Prevention and treatment of industrial lead poisoning 542
Rayner, D., Case of cirrhosis of liver 555
Reaction, Pirquet's, in tuberculosis 1
Rectal anæsthesia *See* Anæsthesia
Rectal gonorrhœa *See* Gonorrhœa
Red cell, variations in quantity and formation of 32
Red cell sedimentation and leucocytosis as aid to diagnosis 570
Reding, R., Acute pancreatitis with impaired calculus 40
Regnani, M. M., Diagnostic value of leucocytosis and red cell sedimentation 470
Reginek, H., Chronic thrombosis of the pulmonary artery 458
Reilly, J., Latent variolar infection 16
Reindorp, J. A., Acute cerebellar ataxia 200
Renal capsule, innervation of the 274
Renal carbuncle *See* Carbuncle
Renal insufficiency, Acid and blood ammonia in.—Early attacks of 22.—Sodium chloride in 200
Renal medicinal therapy, the possibilities of 21
Renal neurectomy, amplexus retractionis of 430
Renal tuberculosis *See* Tuberculosis
Renal Syndrome *See* Kidney
Renault, P., Syphilis and cancer 467
Renton, D. G., Carbon dioxide in anæsthesia 200
Reticulo-endothelial system and liver in infection and disease 2
Retinitis, Hæmorrhagic, in vomiting of pregnancy 250
Retrobulbar neuritis 387
Retrosternal goitre *See* Goitre
Reynolds, C., Meningococcal, Influenzal meningitis and syphilis 577
Rheumatic arthritis, chronic, the two types of 540
Rheumatic fever, acute, and rheumatoid arthritis 542
Rheumatic fever, aminopyrin in 547
Rheumatic fever, cardiac, Incidence of 54.—And rheumatic fever mistaken diagnosis of 51
Rheumatic heart *See* Heart
Rheumatism, chronic, the two types of 541
Rheumatism, focal, treatment in 545
Rheumatism, menace of, National control of 521.—Organization of, treatment for 55.—Prevention and treatment of 522
Rheumatism, the æsthenic factor in 545
Rheumatoid arthritis, prognosis in 549
Rheumatoid arthritis and acute rheumatic fever 542
Rheumatic arthritis, chronic, Surgical treatment of 5.—Vaccine therapy in 550
Rhinitis, atrophic, treatment of 214
Rhinitis membranous 177
Rhinoscleroma, treatment of 208
Rice, M. L., Low voltage cardiac conditions 15
Richards, T. R., Iron cacodylate in acute bursitis 37
Richet, C., jun., Treatment of delirium by aversion 55
Richey, G., Pneumococcal pseudo-membranous pharyngitis 527
Rieux, J., Pernicious anæmia and malaria, 52
Rimbaud, L., Insulin and sugar in cardiac therapy 217
Rivalier, E., Latent variolar infections 16.
Robb, G. P., Familial epidemic of glomerulonephritis 188
Robert, G. H., Spontaneous subarachnoid hæmorrhage 556
Roder, A., Serum treatment of typhoid fever 51
Roeder, C. A., Carbon dioxide as an adjunct to nasal spasm in 180
Roehm, H. E., *Staphylococcus albus* septicæmia, 573
Rollestone, J. D., Tracheotomy for œdematous laryngitis in scarlet fever 417
Rommel, Marianne, The possibilities of renal opotherapy 421
Roos, H., Intramuscular injections of quinine in pneumonia 14
Röper, Haemorrhagic typhoid fever 105
Rose, S. A., Paratyphoid fever complicated by appendicitis 570
Rosenbaum, M. G., Neosalvarsan in psoriasis 29
Rosenblum, H., Primary carcinoma of the epiploon 129
Rosenfeld, M. B., Oxygen therapy 590
Rosenfield, C., An aetiological factor in Dupuytren's contraction 411
Rosenthal, A., Prostatic calculi 592
Ross, A. G., Acute transverse myelitis in measles 240
Ross, J. W., Spontaneous pneumothorax in early life 224
Rossiter, R., The coronary circulation 253
Rothenberg, J. G., Dementia in epidemic encephalitis 515
Roubil, G., Torsion of the pedicle of the hydatid of Morgagni 575
Roussy, G., An aetiological factor in Dupuytren's contracture 418
Rowntree, L. G., The suprarenal cortex in Addison's disease 194
Roy, F., Influenzal meningitis 550
Ruelle, G., Bronchiectasis in children 42
Rugg-Gunn, A., Contact lesions 155
Rumpf, Ch., A., Transmission of typhus fever by infected flea fæces 251
Ruphli, K., Influenzal meningitis 7.

S

Safrazes, J., Non-suppurative mastitis in typhoid fever 535
Sacerdote, G., Fracture of epiphyses in growth anomalies 704
Sacral anæsthesia *See* Anæsthesia
Salolon, A. V., Severe varicella 77
Salpingitis, gonorrhœal and perihepatic adhesions 250
Salvadori, G., Membranous rhinitis 177
Sanders, J. P., Quinidine in malaria, 88
Sarcoma of the bladder in children 57
Sarcoma of the uterus 1.—2 569
Sarcoma of the vagina 271
Scarlet fever *See* Fever
Schamberg, J. F., Colon irrigation therapy in pemphigus 205
Schellong, F., Hypothesis of pituitary origin 257
Schick Bela, Parenteral B C G vaccination 4.9
Schiff, C., The feeding of school children 222
Schizophrenia, heredity in 19
Schmid, F., Hourly variations in protein metabolism 25
Schmidt, G. W., The ultravirus of tuberculosis 2
Schmidt, R., Aetiology of tetany 502
Schleifer, P., Acute general paralysis 555
Schneider, J., Prognosis in rheumatoid arthritis 547
Schoen, R., Aetiology of lymphogranulomatosis inguinalis 220.—A pathogenic study of parasyphilis 56
Scholz, T., Hypertrophic pyloric stenosis in adults 105
School children, feeding of 222
Schreiber, M., Exophthalmic goitre 171
Schultz, M. P., Amidopyrin in rheumatic fever 547
Schultze, K. W., Action of heavy metals in anæmia 50
Schwartz, S. P., Digitalis therapy in juvenile morbus cordis 152—Transient ventricular fibrillation 358
Schwartzman and Arthus, relation between the phenomena of 557
Scleroderma, therapeutics of 13
Sclerosis, disseminated, treatment of 555
Scott, J. M., Urinary acidifiers 218 219
Scudder, F. A. C., Idiopathic dilatation of the œsophagus 212
Scurvy, infantile, exophthalmos in 155
Scurvy, neonatal 200
Sears, W. Gordon, Progressive hypertrophic polyneuritis 250
Segmentation test in surgical tuberculosis in children 48
Serdoffr, J., Operations for the relief of sterility 502
Seminal vesiculitis in mumps 409
Septicæmia, parathyroid, purpura hæmorrhagica in 125
Septicæmia, staphylococcal, 449 561
Septicæmia, *Staphylococcus albus* 573
Serotherapy in tularæmia 52
Serotherapy, polyvalent, in pulmonary gangrene 357
Serum, adult, in infantile encephalitis 585
Serum, anti-diphtheritic, administration of 454
Serum, anti-poliomyelitic, in ethereal encephalitis 560
Serum blood Hinton's test in 163
Serum convalescent in the treatment of whooping cough 114
Serum treatment of typhoid fever 51
Severance, A. O., Pregnancy tests 95
Sex characteristic, modified and ovarian tumours 138
Shahin Pacha, Paralysis in rabies 208
Sharp, D. L., Glycosuria in pregnancy 403
Sharp, G. S., Paget's disease 183—Treatment of antral cancer 339
Shaw, W. Fletcher, Chronic abdominal pain 590
Shelley, H. J., Intussusception 447

Shock anaphylactic in syphilis 142
SHOOKHOFF C The heart in scarlet fever 1—Cardiac changes caused by diphtheria 41
SHULTZ Selma M Epidemiological factors in the pneumonia of children 400
SICHEL M S Induction of labour 93
SIGALAS M Post operative evisceration 518
SIGNY A G Umbilical diphtheria 471
Silicosis treatment of 378
SIMON G Rationalization of x ray exposures 340
SINGER H A Intermittent gastric ileus 149
Sinus thrombosis septic cavernous 34
SIPPE C Bromide intoxication 477
SIPPE C H Achlorhydria 441
Skin diseases *See also* Cutaneous *and* Dermatology
Skiodan 115
Sklowsky symptom in varicella 103
SLATTR S A Comparison of the Pirquet and Mantoux tuberculin tests 437
SLIOSBERG J Malarial therapy of neurosyphilis 359
SMITH D C
SMITH J
SMITH P E
295
Sodium amytal detoxifying properties of 284
Sodium chloride in renal insufficiency 285
Sodium dehydrocholate cholagogue action of 153
Sodium thiosulphate in avertin poisoning 486
SOLLIER N Simplification of the intradermal melitin reaction 348
Somnifen in treatment of experimental strychnine poisoning 424
Sonne dysentery bacillus isolation of the 538
Sore throat *See* Throat
SOUTHWOOD A R Typhoid carriers 126
SPECKMAN R N Low voltage cardiac conditions 145
SPENCER F M Acidosis and alkalosis 123
SPERLING S J Vincent's infection of pleura and vagina 414
Spina bifida 173
Spinal anaesthesia *See* Anaesthesia
Spinal complications of typhoid fever 413
Spinal cord Degeneration of diet and 16—Extramedullary tumour of the 426
Spinal medication in syphilis 220
Spirochaetosis avian cultivation of the organism of 183
Spitzbergen epidemic of chicken pox in 30
Splanchnic nerves *See* Nerves
Spleen action of the splanchnic nerves on the 407
Spleen agenesis of the 558
Spleen in measles 104
Sporotrichosis 136
Sprains treatment of 376
Sprue the diet in 377
STAHL J Hourly variations in protein metabolism 26
STALEY P A Essential pruritus and hypothyroidism 137
STANDER H J Haemorrhagic retinitis in vomiting of pregnancy 430
Staphylococcal haemolysin filterable 230
Staphylococcal septicaemia 449 561
Staphylococcus albus septicaemia 573
Staphylococcus food poisoning 168
STASSEN M Tuberculosis as a sequel of trauma 494
STEFANESCO V Latent variolar infections 164
STEFÁNIK S The prognosis in forceps cases 401
Stenosis pyloric congenital 472
Stenosis pyloric hypertrophic in adults 108 497
Sterility operations for the relief of 342 343
Sterility pre menstrual and family restriction 506
Sterilization x ray hysterectomy after 402
STERNER R F Cholagogue action of sodium dehydrocholate 153
STEWART C E Local anaesthesia in fracture reduction 63
STEWART M A Extramedullary tumour of the spinal cord 427
STEWART R W T H Indications for Caesarean section 120
Stillbirths Aetiology of 344—Prophylaxis of 322
STODEL G Polyvalent serotherapy in pulmonary gangrene 337
STOKES J H Treatment of early syphilis 38
Stomach the leather bottle 170
Stomach radiology of the 117
Stomach *See also* Gastric
Stone *See* Calculi
STOOKEY P F Essential pruritus and hypothyroidism 137
STOUT B F Septic cavernous sinus thrombosis 34
STOVIN J S Treatment of atrophic rhinitis 314
Stramonium in Parkinsonism 12
STRANDBERG O Prognosis and treatment of tuberculosis of the larynx 178
STRAUSZ I Dangers in arsenobenzol therapy 112
Streptococcal toxaemia chronic 492
Stricture cervical 484
STROM A Epidemic lobar pneumonia 205
STROUD W D Auricular fibrillation 444
Strychnine poisoning experimental somnifen treatment of 424
Subarachnoid haemorrhage spontaneous 235 55
SUERMONDT W F Surgery in syringomyelia 474
Sugar and insulin in cardiac therapy 217
Sulphocyanate therapy in hypertension 59
SUNDAL A The rate of growth in childhood 316
Sunlight baths followed by bullous dermatitis 381
Suppuration chronic treated by x rays 530
Suprarenal cortex in Addison's disease 194 526
Suprarenal cortex the hormone of the 387
Suprarenal gland tumours of the 36
Suprarenal glands In fatal burns 47—And arterial tension 98
Suprarenal nerves in diabetes section of 261
SUREAU M Multiple fractures in a newborn infant 398
Surgery intrathoracic preliminary pneumothorax in 445
Surgical tuberculosis *See* Tuberculosis
SVARTMAN J Angioma of the middle ear 528
SWANSON E E Detoxifying properties of sodium amytal 284
SWIFT G W The posterior fossa in epilepsy 245—Surgical treatment of epilepsy 496
SWINGLE W W The suprarenal cortex in Addison's disease 194
SYMON J Chronic miliary tuberculosis 408
Sympathectomy periarterial in fractures of the lower extremity 80
Syndrome renal in amylosis evolution of the 438
Syndrome striate in dysentery 329
Syphilis anaphylactic shock in 142
Syphilis aortic therapeutic alternatives in 311
Syphilis A cancer 467—And cancer of the cervix 571
Syphilis and influenzal meningitis 577
Syphilis early treatment of 38—By arsphenamines 423
Syphilis modern treatment of results of 397
244
ale foetus to
385
on of 135
urethra 303
Syringomyelia surgery in 474

T

Tabes gastric crises of atropine sulphate in 357
TADDEI D Abdominal pain of sympathetic origin 278
TAGLIAFERRO P Spinal anaesthesia for gynaecological operations 287
TARAN L M The heart in scarlet fever 1—Cardiac changes caused by diphtheria 41
TAUSSIG L Treatment of cutaneous epithelioma 190
TAVERNIER Benign tumours of the pelvis 519
TÉDENAT Dermoid cysts of the ovary 159
TEICHMANN T Treatment of tetanus 264
Teichmann's crystals demonstration of 161
TEISSIER P Latent variolar infections 164
TEMPLETON H J Oncholysis 379
Temporal bone *See* Bone
Tennis elbow 306
Testis undescended surgery of the 416
Tetanus bacillus intestinal carriers of the 96
Tetanus [active] immunization against 537
Tetanus treatment of 264
Tetany aetiology of 302
TEJOTTA T Preparation of bacterial antigens 508
THOLEN M H G A Pernocton anaesthesia 289
THOMAS E B Typhoid carriers 126
THOMAS W A The urinary protein in nephritis 101
THOMSON M S Etiology of pityriasis rosea 134
THOREK M Nipple transplantation 67
Throat filterable anaerobic bacteria in the 233
Throat sore sporadic septic 143
Thromboses chronic of the pulmonary artery 468
Thrombosis cavernous sinus septic 34
Thrombosis coronary 351—Prognosis in 299—Treatment of 524
Thrombosis phlebitis and embolism post operative 579
Typhoid carriers 126 510
foetus to
Tobacco smoke and phagocytosis 254
Tommasi's sign in uricaemia 106
Tonsillectomy after effects of 91
Tonsillitis chronic surgical treatment of 110
TOPPER Anne Basal metabolism at puberty 404
Torsion spasm 428
Torticollis congenital muscular early intervention in 128
TOURAINE A Syphilis and cancer 467—Syphilis and cancer of the cervix 571
TOURNEUX J P Lymph gland metastases in cancer of the corpus uteri 321
Toxaemia streptococcal chronic 492
Toxin antitoxin immunization hypersensitiveness following 562
Tracheotomy for oedematous laryngitis in scarlet fever 417
Trauma tuberculosis as a sequel of 494
Treponema anserinum cultural requirements of 183

s
demonstration of 324
Tubercle bacilli living development of the tubercle and the fate of 328
Tubercle bacilli human and bovine in tuberculous meningitis 252
Tubercle development of and the fate of living tubercle bacilli 328
Tuberculin tests Pirquet and Mantoux comparison of 437
Tuberculosis complicating pregnancy 365
Tuberculosis of the knee 307
Tuberculosis of the larynx prognosis and treatment of 178
Tuberculosis miliary chronic 408
Tuberculosis miliary complicating pernicious anaemia 3
Tuberculosis pulmonary age incidence of in women 390
Tuberculosis pulmonary blood pressure in 236
Tuberculosis pulmonary early diagnosis of 187 491
Tuberculosis pulmonary heart displacements in 370
Tuberculosis renal and pregnancy 320 570
Tuberculosis as a sequel of trauma 494
Tuberculosis surgical in children the sedimentation test in 48
Tuberculosis the ultravirus of 27
Tuberculous bacillaemia clinical significance of 276
Tuberculous endometritis *See* Endometritis
Tuberculous meningitis *See* Meningitis
Tularaemia Serotherapy in 452—Post mortem findings in 595
Tumour extramedullary of the spinal cord 427
Tumour of ovary calcified causing intestinal occlusion 290
Tumours fibroid complicating pregnancy and labour 432
Tumours of the frontal lobe cerebellar symptoms in 247
Tumours of the small intestine 289
Tumours of the kidney 521
Tumours of the ovary and modified sex characteristics 138
Tumours of the pelvis benign 519
Tumours of the suprarenal gland 36
Turbinates inferior treatment of the mucosa of the 179
TURLEY F C The effect of digitalis on cardiac dyspnoea 193
TURNER F D The position in the family of mental defectives 18
Typhoid carriers 126 510
Typhoid cholecystitis 277
Typhoid fever *See* Fever enteric
Typhoid hepatocholangitis 555
Typhoid otitis cerebral abscess following 191
Typhus fever *See* Fever

U

Ulcer gastric and duodenal pepsin injections in 336
Ulcer cholecyst gastrostomy in 35
Ulcer of vulva acute 292
Ulcus serpens corneae ultra violet treatment in 303
ULESKO STROGANOWA K Diagnosis of chorion epithelioma 318
Ultra violet treatment in ulcus serpens corneae 363
Ultravirus of tuberculosis 27
theria
elimination of
Ureter bilateral double 475
Ureteral fistula *See* Fistula
d
fever 493
Urography intravenous 115
Uroselectan in intravenous urography 115
Uterine cancer *See* Cancer
Uterine haemorrhage *See* Haemorrhage
Uterine perforation treatment of 249

Ul ...re rupture following Cae...rean ...tion 2...
Ulcer...tion ...5
Ulcer...pregnant ...full term ...termination ...229
Ul...ion ...menstrual interruption of ...le ...
Ul...m ...ian ...the ...

Va...ne ...g menstrual ...ravenous ...me...tion ...of ...
Vaccine and ...rum combined ...treatment ...ame...rrhage ...
Vaccine treatment ...O bay fever ...—In chronic ...arthri...—O...who ...ages ...
Vaccines ...me...ial treatment, ...they ...see ...
Vaginal ...mphangiectasis ...the ...of the ...
Vaginal ...ma, ...Vessel ...in ...
Vagina...ma ...See Sarcoma
Vaginitis ...to ...
Valves ...heart ...vegetations ...in human ...
Valvular ...A ...obstructive ...chry...rhoea in ...pregnancy ...
Vance J. Treatment of ...bone ...
Van Blarenberghe A. Ulcer ...rupture ...following Caesarean ...tion
Van Cleveld C. Treatment of ...anaemia ...premature ...ant...
Van Cleveld S. The ...ver ...fever ...
Van Dyke D. T. ...version ...the ...pelvic ...cartilages
Van der Horven J. ...Dr ...rium ...ment ...in ...Fe...and ...
Van der Horven H. ...Prophylaxis ...of ...still ...birth ...
Van der Horven N. ...Xanthoma ...tuberculosum ...
Vaquez H. The ...mean ...arterial ...hypertension ...
Varicella ...severe ...
Varicella ...Shown ...by ...exanthem ...
Varicocele ...in ...layers ...
Vas ...ion ...contraception ...hormone ...the ...internal ...secretory ...
Vella P. ...Carnage ...rhythm ...during ...lumbar ...puncture ...
Velichenkaia L. ...Treatment ...of ...
Venereal ...case ...the ...age ...
Ventricular ...of ...transplanted ...
Ventricular ...fibrillation ...prohibema ...
Vergely P. ...Syphilis ...
Vernix ...in ...
Vessel ...M. A. ...Radiography ...the ...urinary ...tract ...
Vimakovic S. ...Bilateral ...orchiectomy ...
Villaret L. ...Infra-renal ...
Vincent H. ...Polyvalent ...serotherapy ...
Vinsonneau ...
Virgin P. P. ...Primary ...bronchial ...carcinoma ...
Violet ...Stomach ...and ...treatment ...of cancer ...of the ...bowel ...the ...
Vitamin A ...Thermal ...in ...vitro ...of carotene ...
Vitamins ...influence ...of ...on the course of infec...tion ...
Vocke ...Spinal ...anaesthesia ...in gynaecology ...
Vomiting ...pregnant ...haemorrhagic retinitis ...
Vulva ...pilonidal ...cyst ...
Vulva ...

W

Waller R. Purulent infection with *B. influenzae* 50—Preparation of bacterial antigen 50
Wandell J. A. Spinal meningitis ...
Wagner-Jauregg ...
Wakefield E. G. ...
Walker C. P. G. Tumours of the small intestine 210
Wallgren A. The iron content of human milk 585
Walls W. Spontaneous ...
Walzel P. Chronic ...
Wang L. K. Spinal ...
Wangensteen O. H. ...
Warring E. V. ...
Water drinking, ...
Water purity *B. coli* ...
Watson B. P. ...
Watson T. L. ...
Watt M. V. ...
Webb A. M. ...
Weill-Stier R. ...
Weil ...
Weinstein A. ...
White E. C. ...
Whitsell A. ...
Wise S. ...
Wertenbaker W. ...
Wetherell J. ...
Whitehair M. ...
White M. R. ...

White P. D. ...
White W. E. ...
Whooping cough ...
Widenhorn H. ...
Wile U. J. ...
Wilensky A. O. ...
Willems R. ...
Willink J. W. T. ...
Wilson Virginia A. ...
White E. ...
Wolfe S. A. ...
Wolff S. ...
Wolters E. L. ...
Wood-Smith F. G. ...
Wright-Smith R. J. ...

X

Xanthoma ...
X-ray ...
X-ray ...
X-ray ...
X-ray ...
X-ray ...
X-ray ...

Y

Yaws ...
Yeomans F. C. ...

Z

Zanetti S. ...
Zernik H. ...
Zondek-Aschheim ...

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INDEX TO SUPPLEMENT FOR VOLUME I 1932

A

Abdominal dis ase (C H Crawshay) 69
Abortion criminal d tention of 01
ACHARYA B G S Hypersplenism 5
Ac a t ( ) (Dr Lochhe D 75
Air Force Royal Medical Servi e II 19 25 69 [illegible]
Air Force Royal Auxiliary Air Force Medical branch 5 311
Air Force Royal Air Force Pensions Medical practice 69 — 105 111 — 311
Alcock Ann 13 Pain in the right iliac fossa 105
Alimentary tract spinal affection of 1 ction on 119
Allergy (B H O 11)
Allergy and allergic diseases (V Lenghton Browne) 69
American Medical Association See Association
Anæsthetics administration of ether and ethyl chloride (H W Fletcher) 69
Anæsthetics Under Insurance Act See Insurance correspondence
Anæsthetics ether and mixtures of 103
Anæsthesia G A Intolerable effects of combined and sequential anæsthesia and Public Health Insurance benefits 105—A Scottish medical service 105
ANDERSON J S Acute intestinal obstruction 277
Anæsthetist Importance and training of (Dr Gray) 111
Appointment and dismissal (High Lorimer) 5
Appointments See also London Letter of Bishop Barrington 24—and 25
Appointments with appointment 42
Arm Fracture of Dislocation 111
Army British Medical Service 19 25 69 105 111 153 197 237 277 311 See also Journal Index
Army British Colonial Medical Service 19 69 105 111 153 197 237 277 311 See also Journal Index
Army British Dental Corps 111 See also Journal Index
Army British Regular Army Medical Corps Officers For Army Medical Corps 69 153 197 237 See also Journal Index
Army British Royal Naval Army Medical Corps 111 197 237 277 311 See also Journal Index
Army British Royal Naval Artillery 207
Army British Territorial Army Medical Corps 19 69 111 153 197 237 277 311 See also Journal Index
Army British Territorial Army Pensions of Officers—Royal Army Medical Corps 19 111 153 See also Journal Index
Army British Territorial Army—Royal Army Medical Corps 19 69 90 105 111 153 197 237 253 293 311 See also Journal Index
Arsenic Medical Secretary to the Association 69
Association American Medical Annual meeting (1932) New Orleans 49
Association British Medical Annual Meeting (1932) London See Centenary Meeting
Association British Medical Annual Meeting (1933) Winnipeg 25—Bronze tablet to commemorate 293
Association British Medical annual Representative Meeting 233—Matter referred to Division 233

ASSOCIATION BRITISH MEDICAL Centenary Meeting (1932) London
Academic re [illegible]
of [illegible]
ctor 25 306
Insomnia role [illegible] 49 97 167 229 305
Invention 25
Provisional p ogramme 29 12 257 285
Provisional time-table 128 242 304
Railway voucher reduced 105 129 205
Visitors an luncheon 305
Section 29 128
Temporary membership of clubs 306
Worcester pilgrimage 305

Association British Medical Charities Fund 281
Association British Medical Council Annual Report 161 213 313—Council elections 153—Proceedings of 27 1 8 289—Financial statement 213—Supplementary report 313
Association British Medical Annual Handbook 49 122
Association British Medical Handbook for recently qualified practitioners 9 122
Association British Medical Library 122 — Book [illegible] 11 [illegible] 13 20—Lending section of Lodon loan 205
Association British Medical Prize for essays by medical students and newly qualified practitioners
Association British Medical Scholarship and grant in aid of scientific research 205 [illegible] 0 — 7
Association British Medical local work of Association Canadian Medical Annual meeting Toronto (1932) 216 62
Associations of Insurance Committees Nature of Organisation 6—Fees charges to practitioners 6—See also Insurance
Atabrine new synthetic drug for treatment of malaria (Pickard Cecil) 281
Ayrshire Division Report of meeting 4 25 75

B

Backache and the bones (Percival C B Heard) 147
BADENOCH A G The induction of leprosy reaction by vaccination 103
BAILEY Hamilton Compression fracture of the vertebræ 5—Carcinoma of the pelvic colon 5—Cumulus of leg 5—Urban's birth palsy 5—Tuberculous kidney 5 Carcinoma of rectum 5
BALDRY A A State medical service 195
BARCLAY Radiography and Radium Division Report of meeting 5
BANKS Dr exhibits Angina Illustrating some modic affections of the alimentary tract 113
BANKS A R G Fibromyoma of ovary 5
BARBER Hugh Aperient and the colon 65
Barnet Division Report of meeting 119 155 281
BARRY Sir C J A State medical service 15 — The future of public medical services 25 [illegible]
BARTLETT H A Insurance practice as seen by a young practitioner 102
BEGG A Clarke Diabetic gangrene affecting the finger 63
BELL Jane Gordon diphtheria case of 205
BENNETT W G A State medical service 154
BENNETT-Cox S C Blackwater fever 5
BERRY Mr exhibits Cases of [illegible] 65
Bio-Physical Assay of Insulin (Society of Apothecaries of London) (May 11th in relation between 202 and 203)
Birmingham Branch Report of meetings 63 149 211
BLACKER C P Lunacy registration 205
Blackwater fever *See* Fever
Bladder condition Diagnosis and treatment of (W h Irvine) 10
Blyth Division Report of meetings 73 148
Bournemouth Division Report of meeting 3 25—Joint meeting with the Bournemouth Legal Society 5
BRACKENBURY Sir Henry P Development of National Health Service 153 [illegible]— The trend of communal health 202
Brain medicine of the 203
Bright's Bradshaw Substitution of the lens 75—Ability to refuse 211
Speech precipitation Management of (D Dougall) 149
BRENNAN J M The panel doctor and the patient 13—Reference to R M O 37
Brighton Division Report of meeting 109—Hospital services cheme in Sussex 101
Bristol Division Report of meeting 3 6
British Army *See* Army
British Guiana Branch Report of meeting 5—Annual dinner 3
British Post-Graduate School 83
Bromley Division Report of meeting 4 109 212 281
BROOMHEAD Mr Treatment of deformities of the feet 55
BROWN W Langdon Allergy and allergic disease 56 142
BROWNE F J The toxæmias of pregnancy 53
Buckinghamshire Division Report of meeting, 208
BURK Colonel G T High blood pressure with epistaxis and embolism of retinal artery 5— Tuberculous disease of the spine 5—Remittent pyrexia 5
BURRELL L S T Pneumonia 69

C

Camberwell Division Report of meeting 276
Camberwell practitioner meeting of 57
CAMPBELL H Diagnosis and treatment of some disorders in infancy and childhood 5
CAMPBELL J A P Septic infection of the hand 17—Treatment of gonorrhœa 281
Canadian Medical Association *See* Association
Cardiac arrhythmia (J Bruce Williamson) 19—(A Lindsay Leitch) 73
CARLING F Rolt Diverticulitis 212
CARTER Ronald Public health work and the general practitioner 64
Cash before delivery 305
CATHCART G C The modern treatment of cesarean
Cellona plaster demonstration of the application of 105
CHAMBERLAIN M Injection treatment of hæmorrhoids 55
CHANDLER F G Early diagnosis of pulmonary tuberculosis 25
CHARLES J The future of panel practice 102
CHASE J G Insurance medical practice 21
Chelsea diseases radiology in (J Duncan White) 105
CLEVERDON Report of Meeting 53
Chichester and Worthing Division Report of meetings 109 277
CHOYCE C C —Pneumothorax Its nature and effect in treatment 205
City Division Report of meeting 123
COCKSHOTT R W Certificates 69
Colin J A State medical service 195
Colonial Medical Services *See* Army British
Consett Division Report of meeting 141
Consultant services for members of contributory schemes *See* Insurance
COOKSON Dr The heart in goitre and its treatment 275
COPE D F Functional disorders of childhood 25

CORRESPONDENCE
Insurance correspondence *See* Insurance subheading
Medical research and the patent laws 209
Public medical services future of 250 [illegible] 57
Sweepstake and lotteries Royal Commission on 105

COTTON T F The clinical aspects of coronary disease —Heart failure 73

COUNCIL CONCERNING MEDICAL
British Pharmacopœia the new 259
Dental education and examination 205
Dispensary cases 259 285
Examination pre-registration 208
Executive Committee business 110 297
Finances and other business 237
Ophthalmia neonatorum instruction of students in 57
President address 258
Preventive medicine and the curriculum 65
Public Health Diplomas 276
Registration to *Dentists Register* 287

Coventry Division Report of meeting 33, 149
COWAN J A The Wassermann test in diagnosis 73
COX Alfred A confession of faith 93—Testimonial to 205—Portrait to 216
CRAWSHAW C H Abdominal disease 89
CRICHTON MILLER H The psychological outlook in general medical practice 55—The mental factor in the healing process 89
CROOKSHANK F G The individual psychology of Alfred Adler and the sexual problem 4— The psychological interest in general practice 75
Croydon Division Report of meeting 74
CULLINAN F R Hæmatemesis following peptic ulceration 277

Current Notes
American Medical Association Annual Meeting 53
Appointment with improvement 32
Archives of Disease in Childhood 34
Assistant Medical Secretary to the Association 63
Association's Annual Handbook 49 122
Association's handbook for recently qualified practitioners 49 122
B M A Charities Fund 281
Canadian Medical Association Annual Meeting 216 62

Current Notes *(continued)*
Capitation fee National Health Insurance 281
Cash before delivery 345
Centenary meeting Academic dress 344—Centenary dinner 344—Masonic welcome 43 97 107—Reduced railway vouchers 106—Rotarian luncheon 344
Consultants for voluntary organizations lists of 138
Council elections 139
Cox Dr Testimonial to 203—Portrait of 236
Hastings Fund bequest to 139
Hastings (Sir Charles) Memorial 203
Hastings Prize 203
Help to individual members 121
Indexes half yearly 16
Library of the Association 122—Retention of books on loan 236
Local work of the Association 236
Medical attendance with a pound of tea 118
Medical patents conference on 80
Medical posts abroad 16 122
Midland Medical and Surgical Reporter 97
Midwifery records 71
Ophthalmic practice and Approved Societies 236
Ophthalmic surgeons and association with bodies of unqualified persons 203
Ophthalmic treatment 138
Out-patient problem of the 16
Prizes for essays by senior students and newly qualified practitioners 344
Revue Internationale 80
Social life and the Association 121
Teeth importance of in general medical practice Prizes for essays 49
Treasurer's Cup Golf Competition 86
Winnipeg meeting (1930) 236

D

Dangerous drugs *See* Drugs
Darlington Division Report of meetings 4 54
Dartford Division Report of meeting 98
DAVIDSON J B Reference to regional medical officer 47
DAVIDSON J C The modern public health service and the general practitioner 142
DAVIES H Morriston Diagnosis of disease of lungs and pleura 89
DAVIS Ainsworth demonstrates the Canti film on cancer 119
DAWSON OF PENN Lord The British Post Graduate School 88
DEALY Dr Fractures treated in accordance with Bohler's methods 73
Dental Board Report of meeting 339
Derby Division Report of meeting 346
Derbyshire Bra 73
DERRY Dr patho
logical renal
DEVLIN James Francis Patrick disciplinary case of 285
DICKINSON J C G The future of panel practice 6 70 117
Doctor's dilemma 70 82 89 111
DONNELLY William Patrick disciplinary case of 285
Dorset West Division Report of meetings 4 53 108 204
DOUGAL D Management of breech presentations 140
Drugs Dangerous Bill Letter from the Home Office 78
Drugs dangerous withdrawal of authorization 111 285
Dumbartonshire Division Report of meeting 53
Dumfries and Galloway Division Report of meeting 346
DUNCAN Dr Cancer 109

E

EARLE Frank Cecil disciplinary case of 286
ECCLES W McAdam A State medical service 154
Edinburgh Branch Report of meeting 211
Edinburgh Division *See* South Eastern Counties Division
Edinburgh and Leith Division Report of meetings 98 284—Hospital and health services in Edinburgh 155
Elbow joint injuries to the (Alan H Todd) 18
Embolectomy pulmonary (T A Hindmarsh) 212
Endocrinology some recent aspects of (J Stanley White) 63
English and Scottish Law Trust Company Ltd Appointment with investment 32
Erion *See* Mebrin
Essex North East Division Report of meetings 53 119 205
Essex South Division Report of meetings 53 73 108 157
Essex South West Division Report of meetings 109 158 249
Eugenics and eugenic sterilization (C B S Hodson) 52—(C P Blacker) 205
EVANS D D Interstitial keratitis 108
EVANS Herbert T Coronary thrombosis 141
EVE Dr Chronic abdominal pain due to spasmodic neurosis 119
Eye Service national 18 33 137 138 *See also* Ophthalmic

F

FARQUHARSON A C The B M A and the Insurance Bill 117
FEATHERSTONE H W Importance of the choice of method in anaesthesia 63
Federated Malay States *See* Malay
Fees anaesthetic under the Insurance Act *See* Insurance Correspondence
Fees charged to insured persons *See* Insurance
FENTON James Public health work and the general practitioner 64—A State medical service 154
Fever blackwater (S C Bettencourt Gomes) 3
FIELD J W 109
Fife Branch
FINDLAY Lec in in
fancy 26
FLEMMING Percy Sites of early and mediaeval medical interest in London 141
Foetal mortality *See* Mortality
Food poisoning recent aspects of (E O Jordan) 140
FORRESTER BROWN M Spa treatment of insured persons 278
Fractures treated in accordance with Bohler's methods (Dr Deale) 73
Furness Division Report of meeting 275

G

German review of insurance problem 96
Gibraltar Branch Report of meetings 73 109
GIBSON Dr A State medical service 154 231
GILL Mr Obscurity of normal peristalsis 119
GILLIES Sir H Plastic operations for double hare lip and cleft palate for deformity of nose for underdevelopment of mandible and for severe injuries to face 89
Glasgow Division Report of meetings 53 88 260—Conference on private practitioners and hospitals 53
Gloucestershire Branch Report of meetings 140 260
GOFFE Dr Operation for imperforate anus 158
Golf medical Treasurer's Cup Golf Competition 86
GOODBODY F W State medical service 206
GOVER Frederick Percy Richard disciplinary case of 285
GRAHAM LITTLE Sir F A State medical service 153
GRANT Geary Demonstrations of the various diseases of the rectum and colon 141
GRAY Alan disciplinary case of 285
GRAY Arthur Ante natal supervision and treatment 141
GRAY Dr A State medical service 154
GRAY G exhibits clinical cases 204
GREEN Richard Recent researches on atebrin 261
GREGORY H I Anaesthetic fees under the Insurance Act 89
Greenwich and Deptford Division Report of meeting 249
GREENWOOD Major Jenner and afterwards 158
GRIFFITH T Wardrop Heart failure 5
GRIFFITHS Dr Case of Morvan's disease 73
Grimsby Division Report of meeting 158
GROVES E W Hey The formation of a radium centre 142
GUYMER Dr Fragilitas ossium 158

H

Haemorrhoids injection treatment of (Rodney Maingot) 53
Harrogate Division Report of meetings 100 142 277
Harrow Division Report of meetings 54 212 346
Hastings D 18 74 142
Hastings to 139
HASTINGS
Hastings
HASTINGS Somerville A State medical service 153
HEALD A F The future of insurance practice 97
HEALD C B Backache and the bonesetter 157
Healing process the mental factor in the (H Crichton Miller) 99
Health Ministry Inquiry into the conduct of an
to the
ion of
(H B
Blackenbury) 133
Heart failure (T Wardrop Griffith) 5—(T F Cotton) 74
HENRY R Wallace His bequest to the Sir Charles Hastings Fund 139
HILL W R The capitation fee 89
HINDMARSH T A Pulmonary embolectomy 212
HISCOCKS H F Pulsating epigastric tumour 108—Transposition of viscera 108
and the
unfit 5—
16
HOLMES Gordon Diagnosis of functional from organic disease 158
HORTON Dr Fifteen months with a patent
155
Hospital policy of the Association 257
Hospital 101
Hospitals
Hospitals
on 53
Hospitals nt of Report
by Joint ish Hospitals
Associati Association
77
HOWARTH C J Criminal abortion 101
HOWELL J B Public health work and the general practitioner 64
HUGO Lieut Col Cancer 109
HUNT Thomas Abnormalities of blood pressure 109
Hyderabad Branch Report of meeting 212
Hydrocele injection treatment of (Rodney Maingot) 53

I

Ichthyosis (David R Lewis) 63
Indexes half yearly 16
Indian Medical Service 7 19 59 90 111 131 159 207 251 263 279 287 *See also* Journal Index
Infections acute (J S Anderson) 277
INGRAM Dr Treatment of varicose ulcer and common skin diseases 55
Insulin for insured persons in Scotland 137
In
In
to insured persons 6

Insurance National Health
Capitation fee Correspondence with Chancellor of Exchequer and Minister of Health 116 156
Capitation fee 281—Emergency economy arrangements and the 70
Central Practitioners Fund reduction in amount of 70
Certification without examination 23—Disciplinary action against three practitioners 23
Consultant and specialist services for members of contributory and other similar schemes 136—Constitution of Board 137—Probable effect of as a National Health Insurance benefit (G C Anderson) 145 *See also* Correspondence below
Consultants to voluntary organizations lists of 138
Correspondence *See* Subheading below
Dental benefit inquiry Scottish 156
Eye Service National 137
Fees charging of to insured person 6
Inquiry into the conduct of an insurance practitioner 55 65 202
Insurance medical practice (R G Chase) 21
Insurance medical practice and approved societies 23
Insurance practice the future of (A F Heald) 97
Insurance practice in Scotland 45—Letter from Department of Health 45
Insurance problems abroad A German review 96
Medical benefit regulations 69—Deputation to the Minister of Health 69 110
National Health Insurance and Contributory Pensions Bill Deputation to the Ministry of Health 277
National Health Services development of (Sir Henry B Brackenbury) 133—Correspondence on 158
Ophthalmic practice and approved societies 236
Ophthalmic Treatment Board National 18 33 137 255
Range of service 249
Reference cases early completion of Forms R M 2 and R M 3 116

Insurance, National Health (cont.)
Panel Medical Staff duties of (Dr. Wilson) 29
Sea treatment for members of Friendly Societies 299 See also Convalescence below
Various methods and their treatment of incapacitated 23

Contents
Appointments of Panel Committees under the Act 55, 56, 57
Public Medical Service and the Insurance Act 111
Certification
Certificates for members of approved societies
Committees with whom to deal
Duties and terms 71, 72, 111
Employers' rights and liabilities
Examinations for medical certificates
Medical referees
Insurance practice, sale of goodwill
Medical benefit
Panel practice 71
Panel practitioners' relations with Local Medical and Panel Committees 111
Penalties 72
Pharmaceutical service 111
Sickness certificates
Sickness benefit 71, 111

Insurance Act Committee, Annual meeting of January meeting 15—Arbitration between approved societies and panel practitioners 15—Certificates and medical benefit 15—Contracts with chemists 15—Dentists, supply of appliances and the Act 15—Health Committees and the Act 15—Pensions, Ministry of Health circular 15—Penalties for breaches of regulations 15—Public Health Committees 15—Service men and the Act 15—Sickness benefit 15—Superannuation 15—Supplementary medical benefit 15—Transitional benefit 15—Unemployment benefit 15—Women's benefits 15—Work of the Committee 15—Appointments of Panel Committees 55—Certificates 55—Medical benefit 55—Pharmaceutical service 55—Public Medical Service 111—Penalties for breaches of regulations 111—Duties and terms of Panel Committees 111—Transitional benefit 111—Work of the Committee 111—Appointments of Panel Committees 55—Certificates 55—Medical benefit 55—Pharmaceutical service 55—Public Medical Service 111—Penalties for breaches of regulations 111—Duties and terms of Panel Committees 111—Transitional benefit 111—Work of the Committee 111—Dentists, supply of appliances and the Act 255—Pharmaceutical service 253—Public Medical Service 255—Sickness benefit 255—Appointments of Panel Committees 255—Certificates 255—Medical benefit 255—Penalties for breaches of regulations 255—Transitional benefit 255—Work of the Committee 255
Insurance Committee, Annual meeting of (Dr. C. C. Lewis) 299
Ireland, S. T. Tuberculosis of the abdominal wall 7
Irvine, W. A. Diagnosis and treatment of some rarer blood-stream infections 23
Isaac, Colonel Leonard S. Medical practice 55—The man of the moment 55—Abdominal surgery 55—Care of the teeth 55—Care of the sight 55—Medical Department, Report of the year 1931 55—Other topics 255
Irish Medical Committee, Annual meeting of 299
Irvine, C. C. Lecture on surgery 5
Irvine, S. T. Tuberculosis of the abdominal wall 7
Irvine, W. A. Diagnosis and treatment of some rarer blood-stream infections 23
Isaac, Colonel Leonard S. Medical practice 55—The man of the moment 55—Abdominal surgery 55—Care of the teeth 55—Care of the sight 55—Medical Department, Report of the year 1931 55—Other topics 255
Isle of Wight Division, Report of meeting 295

J

Jamaica Branch, Report of meeting 149
Jamaica, differential diagnosis of jaundice in patients suffering from (J. W. Hickey) 259
Jenning, Joseph, name of, reported to the Dentists Register 57
Jones, D. J. Ovarian tumour 55
Jones, Cecil A. Thyroidectomy and its treatment 71, 72
Jones, Major Crawford, Tuberculosis caused by bacterium 209
Jones, Robert, Intracapsular fracture of neck of femur, a question of ankylosis and phalanx sling 89
Jordan, H. O. Some recent aspects of food poisoning 149
Joy, H. C. V. Medical work in the Belgian Congo 55

K

Kent and Surrey Division, Report of meeting 5, 49, 111, 155, 205, 255, 305
Kerr, J. M. Munro, A National Maternity Service 155
Kerwin, Geoffrey, Thyroid problems in medical practice and surgery 199
Kidner, Pomfret, Plastic operations for injuries of the face and their bony basis 5
King Edward's Hospital Fund Committee, The continuing question 1, 15
Kingsbury, A., Some Laboratory diagnosis of small pox 209
Kingston-on-Thames Division, Report of meeting 89, 109, 199, 152, 262
Kirby, F. J. Reference to regional medical officer 7

L

Lane, H. A. Some bibliographical notes on cases of diphtheritic paralysis and paralysis following the administration of antitoxin 85
Lane, J. W. Some recollections on China of to-day and to-morrow 205
Lambeth and Southwark Division, Report of meeting, 2, 3
Lancaster Division, Report of meeting 4
Larkin, Arthur F. Payment of panel practitioners' fees under the Insurance Act 57
Law, Frank W. Ophthalmic problems in general practice 141
Lawson, Frank C. Early references and all that 2—Forms and procedure 23b—The Panel system 255
Layton, T. The dental and medical practice in the treatment of diseases of the ear 29
Leeds Division, Report of meeting 5, 49, 109, 255
Le Fleming, Dr. The law and medicine 4
Leith, Mr. The law and medicine 4
Leprosy and Tuberculosis Division, Report of meeting 4, 5
Lettsom, John Coakley, Memorial to, 17
Lewis, David, Influence of Listerism on surgical practice 55—Vesico-vaginal fistula 55—The surgical pitfall 235
Lewisham Division, Report of meeting 4, 5, 111, 255
Liberal Party, Health Committee of the, 17
Liverpool, Royal Infirmary, Annual meeting 15—Appointments 15—Staff changes 15—Surgical Instrument Department 15—Obituary 15—Medical Staff 15—Dispensary, new 15—The medical card 15—Work of the Staff 15—Pathological Laboratory 15—Carry on 15—The Old Dispensary 15—Treatment of abscess 115—Medical staff changes 115—Obituary 115—Report of Dispensary 115—Medical staff changes 255—Pathological Laboratory 255—Appointments 255—Staff changes 255—Annual meeting 255—Medical staff changes 255—Obituary 255—Report of Dispensary 255—Medical staff changes 255—Pathological Laboratory 255—Appointments 255—Staff changes 255—Annual meeting 255—Medical staff changes 255—Obituary 255—Report of Dispensary 255—Medical staff changes 255—Pathological Laboratory 255—Appointments 255—Staff changes 255—Annual meeting 255—Medical staff changes 255—Obituary 255
Liverpool Medical Institution, Annual meeting 15—Appointments 15—Obituary 15—Report of Council 15—Library 15—Medical Institution, Annual meeting 255—Appointments 255—Obituary 255—Report of Council 255—Library 255
Liverpool Panel Committee, Appointment of Chairman 1, 105—Appointments 4—Certificates 55—Chairman's address 55—Medical benefit 55—Pharmaceutical service 55—Sickness benefit 55—Unemployment benefit 55—Duties and terms 111—Appointments 111—Certificates 111—Medical benefit 111—Pharmaceutical service 111—Sickness benefit 111—Unemployment benefit 111—Duties and terms 111—Appointments 255—Certificates 255—Medical benefit 255—Pharmaceutical service 253—Sickness benefit 255—Unemployment benefit 255—Duties and terms 255—Appointments 255—Certificates 255—Medical benefit 255—Pharmaceutical service 255—Sickness benefit 255—Unemployment benefit 255—Duties and terms 255
Lloyd, Dr. Gall bladder and pancreas 55
Lloyd, Dr. Intestinal disease 55
Long, Dr. Appendicitis 55
Long, Joan, Aneurysm of right subclavian artery 105

M

McIlroy, Dame Louise, Foetal and neo-natal mortality 7
McIntosh, R. Obscure pathological fracture of the upper end of the femur 4
McIntyre, Donald, Industrial disability following injuries to shin bone 73
McKeown, Kathleen, Pemphigus neonatorum 109
McLachlan, T. S. Insulin treatment, 5
McNeil, J. Differential diagnosis in patient suffering from jaundice 259
McNeil, Michael, James, Withdrawal of authority to deal with dangerous drugs
McVicker, Major, Surgical case illustrated by radiograms 109
Maidstone Division, Report of meeting, 158
Maingot, Rodney, Injection treatment of varicose veins, haemorrhoids, hydrocele and other conditions 53—Tumour of breast, 108
Malaria, atabrin treatment of (Richard Green) 251
Malay States, Federated, Division, Report of meeting 109
Malaya, French, Report of meeting 251
Mallinson, Dr. Abortion and theism 308
Malta Artillery, Royal 209 See also Army, British
Manning, Mr. The law and medicine 4
Mansfield, salary of medical officer of health of 257
Manson, J. S. Royal Commission on sweepstakes and lotteries 143
Marylebone Division, Report of meeting, 141
Maternal disability following injuries in child birth (Donald McIntyre) 73
Maternity Service, a National (J. M. Munro Kerr) 255
Medical attendance with a pound of tea 118
Medical officer, salary (Mansfield) 257
Medical patent, conference on, 80 255
Medical research abroad 15 122
Medical research, See Research
Mellows, Dr. A State Medical Service 154
Mennell, Dr. Sexual maladjustment 109
Mental Deficiency Committee, report of 3 2
Mental factor in the healing process (H. Crichton Miller) 99
Middlesex, North Division, Report of meeting 109
Middlesex, South Division, Report of meetings 99, 207
Midland Medical and Surgical Reporter 97
Midlothian Panel Committee, Hospital letter 159
Midwifery record 71
Milk, supply to the public and regulation 73
Miller, Hugh, exhibits cases after gastrectomy—Neoplasm of undescended testicle—Unusual case of intestinal obstruction of the small intestine 5
Little, H. H. Public health work and the general practitioner 54
Moffat, H. H. Yet another doctor's dilemma 111
Morton, A. L. Common deformities of the foot in childhood and their treatment in general practice 54
Morwick Division, Report of meetings, 143, 144
Moynihan, Arthur, Operations for carcinoma of stomach, 5—Duodenal ulcer due to hydrochloric acid and pepsin 89
Murphy, Dr. The law and medicine 4
Mortality, foetal and neo-natal (Dame Louise McIlroy) 74
Morvan's disease (Dr. G. Mill.) 73
Mothers, Child welfare, Women in industry and medical aspects of legislation 105

N

Nash, Wickham, Dr. Five feet of small intestine removed for mesenteric thrombosis 109
Navy, Royal Medical Service 7, 11, 19, 2, 58, 79, 89, 111, 121, 143, 159, 207, 251, 259, 279, 287, 311 See also Journal Index
Navy, Royal, Royal Australian, Navy 111, 2, 7
Navy, Royal, Royal, Royal Volunteer Reserve, 19, 2, 58, 79, 89, 143, 111, 121, 159, 207, 251, 259, 279, 287, 311. See also Journal Index
Neurasthenia, modern views on (H. Crichton Miller) 199
Nicholson, Vincent Turnbaret, disciplinary case of 23
Nicholl, A. G. Future of public medical service 311
Nicholson, Tyne Division, Report of meeting 21
Nicholl, Capt. and F. S. Haemorrhoidal arthritis 5
Norfolk and Norwich Division, Report of meeting 17, 73
North of England Branch, A confession of faith 89
Northampton Shire Branch, Some recent aspects of biochemical therapy 89
Northern Counties of Scotland Branch, Report of meeting, 5, 141
Nutritional disease in infancy and its treatment (Leonard Findlay) 25
Nystagmus, miners (W. J. Pochin) 65

O

O'Brien, R. A. The serological and the practical relationship of his work to clinical medicine 142
O'Connor, Donald, M. Excessive prescribing and all that 45—An ethical doctor's dilemma 70, 89
Oldham, Dorothy, The law and medicine 4
O'Donovan, W. J. State Medical Service, 53—Common slum affections of the legs, 5—Some predisposing pathological reactions of the skin 212
Ogilvie, W. H. The orthodox and heterodox in surgery 54
Oliveiro, C. J. Anti-scorbutic value of local food (Malaya) 251
Ophthalmic practice and approved societies 23b. See also Insurance
Ophthalmic problems in general practice (Frank W. Law) 141
Ophthalmic surgeons and association with bodies of unqualified persons, 103
Ophthalmic Treatment Board, National 18 3b, 158, 255 See also Eye
Orbell, G. H. Allergy 4
Osmond, A. W. Ophthalmology in general practice, 158
Out-patient question, King Edward's Hospital Fund Committee 1—Letter from the Medical Secretary to the King Edward's Hospital Fund 15—Views of the London Public Medical Service 29

Current Notes *(continued)*
Capitation fee National Health Insurance 281
Cash before delivery 345
Centenary meeting Academic dress 344—Centenary dinner 344—Masonic welcome 43 97 107—Reduced railway vouchers 106—Rotarian luncheon 344
Consultants for voluntary organizations lists of 138
Council elections 139
Cox Dr Testimonial to 203—Portrait of 236
Hastings Fund bequest to 139
Hastings [Sir Charles] Memorial 203
Hastings Prize 203
Help to individual members 121
Indexes half yearly 16
Library of the Association 122—Retention of books on loan 236
Local work of the Association 236
Medical attendance with a pound of tea 118
Medical patents conference on 80
Medical posts abroad 16 122
Midland Medical and Surgical Reporter 97
Midwifery records 71
Ophthalmic practice and Approved Societies 236
Ophthalmic surgeons and association with bodies of unqualified persons 203
Ophthalmic treatment 138
Out-patient problem of the 16
Prizes for essays by senior students and newly qualified practitioners 344
[illegible] edical practice Prizes for essays 49
Treasurer's Cup Golf Competition 86
Winnipeg meeting (1930) 236

D

[illegible] 3 4 54
Davidson J B Reference to regional medical officer 47
Davidson J F The modern public health service and the general practitioner 142
Davies H Morriston Diagnosis of disease of lungs and pleura 89
Davis Ainsworth demonstrates the Canti film on cancer 119
Dawson of Penn Lord The British Post Graduate School 88
Deall Dr Fractures treated in accordance with Bohler's methods 73
Dental Board Report of meeting 399
Derby Division Report of meeting 346
Derbyshire Branch Inaugural meeting 73
Derry Dr Pyelograms illustrating pathological renal conditions 108
Devlin James Francis Patrick disciplinary case of 285
Dickinson J C G The future of panel practice 6 70 117
Doctor's dilemma 70 82 89 111
Donnelly William Patrick disciplinary case of 286
Dorset West Division Report of meetings 4 53 108 204
Dougal D Management of breech presentations 140
Drugs Dangerous Bill Letter from the Home Office 78
Drugs dangerous withdrawal of authorization 111 285
Dumbartonshire Division Report of meeting 53
Dumfries and Galloway Division Report of meeting 346
Duncan Dr Cancer 109

E

Earle Frank Cecil disciplinary case of 286
Eccles W McAdam A State medical service 154
Edinburgh Branch Report of meeting 211
Edinburgh Division *See* South Eastern Counties Division
Edinburgh and Leith Division Report of meetings 98 284—Hospital and health services in Edinburgh 155
Elbow joint injuries to the (Alan H Todd) 18
Embolectomy pulmonary (T A Hindmarsh) 212
Endocrinology some recent aspects of (J Stanley White) 63
English and Scottish Law Trust Company Ltd Appointment with investment 32
Erion *See* Atebrin
Essex North East Division Report of meetings 53 119 205
Essex South Division Report of meetings 53 73 108 157
Essex South West Division Report of meetings 109 158 249
Eugenics and eugenic sterilization (C B S Hodson) 52 (C P Blacker) 205
Evans I [illegible]
Evans [illegible] ([illegible]
Eve Dr Chronic abdominal pain due to spasmodic neurosis 119
Eye Service national 18 33 137 138 *See also* Ophthalmic

F

Farquharson A C The B M A and the Insurance Bill 117
Featherstone H W Importance of the choice of method in anaesthesia 63
Federated Malay States *See* Malay
Fees anaesthetic under the Insurance Act *See* Insurance Correspondence
Fees charged to insured persons *See* Insurance
Fenton James Public health work and the general practitioner 64—A State medical service 154
Fever blackwater (S C Bettencourt Gomes) 3
Field J W Racial dietetics of Malaya 109
Fife Branch Report of meeting 248
Findlay Leonard Nutritional disease in infancy 26
Flemming Percy Sites of early and mediaeval medical interest in London 141
Foetal mortality *See Mortality*
Food poisoning recent aspects of (E O Jordan) 140
Forrester Brown M Spa treatment of insured persons 278
Fractures treated in accordance with Bohler's methods (Dr Deale) 73
Furness Division Report of meeting 275

G

[illegible]
German review of insurance problem 96
Gibraltar Branch Report of meetings 73 109
Gibson Dr A State medical service 154 231
Gill Mr Obscurity of normal peristalsis 119
Gillies Sir H Plastic operations for double hare lip and cleft palate for deformity of nose for underdevelopment of mandible and for severe injuries to face 89
Glasgow Division Report of meetings 53 88 260—Conference on private practitioners and hospitals 53
Gloucestershire Branch Report of meetings 140 260
Goffe Dr Operation for imperforate anus 158
Golf medical Treasurer's Cup Golf Competition 86
Goodbody F W State medical service 206
Gover Frederick Percy Richard disciplinary case of 285
Graham Little Sir E A State medical service 153
Grant Geary Demonstrations of the various diseases of the rectum and colon 141
Gray Alan disciplinary case of 285
Gray Arthur Ante natal supervision and treatment 141
Gray D A State medical service 154
Gray G exhibits clinical cases 204
Green Richard Recent researches on atebrin 261
Gregory H L Anaesthetic fees under the Insurance Act 89
Greenwich and Deptford Division Report of meeting 249
Greenwood Major Jenner and afterwards 158
Griffith T Wardrop Heart failure 5
Griffiths Dr Case of Morvan's disease 73
Grimsby Division Report of meeting 158
Groves E W Hey The formation of a radium centre 142
Guimer Dr Fragilitas ossium 158

H

Haemorrhoids injection treatment of (Rodney Maingot) 53
Harrogate Division Report of meetings 100 142 277
Harrow Division Report of meetings 54 212 346
Hastings Division Report of meetings 18 74 142
Hastings [Sir Charles] Fund bequest to 139
Hastings [Sir Charles] Memorial 203
Hastings Prize *See* Prize
Hastings Somerville A State medical service 153
Heald A F The future of insurance practice 97
Heald C B Backache and the bonesetter 157
Healing process the mental factor in the (H [illegible]
Healt [illegible] the conduct of an insu
Health questions of the day deputation to the Minister of Health from the National Union of Societies for Equal Citizenship 57
Health services national development of (H B Brackenbury) 133
Heart failure (T Wardrop Griffith) 5—(T F Cotton) 74
Henry R Wallace His bequest to the Sir Charles Hastings Fund 139
Hill W R The capitation fee 89
Hindmarsh T A Pulmonary embolectomy 212
Hiscocks H F Pulsating epigastric tumour 108—Transposition of viscera 108
[illegible] alth work and the [illegible] of the unfit 5—Eugenics and eugenic sterilization 52
Holland Division Report of meeting 276
Holmes Gordon *Diagnosis of functional from organic disease* 158
Horton Dr Fifteen months with a patent Meckel's diverticulum 108
Horton R L exhibits clinical cases 204
Hospital and health services in Edinburgh 155
Hospital letters 130
Hospital policy of the Association 257
Hospital services scheme in Sussex 100 101
Hospitals Committee Report of meeting 257
Hospitals private practitioners and conference on 53
Hospitals visiting staffs of payment of Report by Joint Committee of the British Hospitals Association and British Medical Association 77
Howarth C J Criminal abortion 101
Howell J B Public health work and the general practitioner 64
Hugo Lieut Col Cancer 109
Hunt Thomas Abnormalities of blood pressure 109
Hyderabad Branch Report of meeting 212
Hydrocele injection treatment of (Rodney Maingot) 53

I

Ichthyosis (David R Lewis) 63
Indexes half yearly 16
Indian Medical Service 7 19 59 90 111 131 159 207 251 263 279 287 *See also* Journal Index
Infections acute (J S Anderson) 277
Ingram Dr Treatment of varicose ulcer and [illegible] Official record of proceedings 6—Fees charged to insured persons 6

Insurance National Health
Capitation fee Correspondence with Chancellor of Exchequer and Minister of Health 116 156
Capitation fee 281—Emergency economy arrangements and the 70
Central Practitioners Fund reduction in amount of 70
Certification without examination 23—Disciplinary action against three practitioners 23
Consultant and specialist services for members of contributory and other similar schemes 136—Constitution of Board 137—Probable effect of as a National Health Insurance benefit (G C Anderson) 145 *See also* Correspondence below
Consultants to voluntary organizations lists of 138
Correspondence *See* Subheading below
Dental benefit inquiry Scottish 156
Eye Service National 137
Fees charging of to insured person 6
Inquiry into the conduct of an insurance practitioner 55 65 202
Insurance medical practice (R G Chase) 21
Insurance medical practice and approved societies 23
Insurance practice the future of (A F Heald) 97
Insurance practice in Scotland 45—Letter from Department of Health 45
Insurance problems abroad A German review 96
Medical benefit regulations 69—Deputation to the Minister of Health 69 110
National Health Insurance and Contributory Pensions Bill Deputation to the Ministry of Health 277
National Health Services development of (Sir Henry B Brackenbury) 133—Correspondence on 158
Ophthalmic practice and approved societies 236
Ophthalmic Treatment Board National 18 33 137 255
Range of service 249
Reference cases early completion of Forms R M 2 and R M 3 116

Insurance, National Health *(continued)*
Regional Medical Staff divisions of the 309
Spa treatment for members of Friendly Societies 209 *See also* Correspondence below
Varicose veins injection treatment of referee's decision 2 9

CORRESPONDENCE
Anaesthetic fee payment of under the Act 57 60 70 82 89
British Medical Association and the Insurance Bill 117
Capitation fee the reduced 66 89 102 111 117 278
Certification 60
Consultant services for members of contributory schemes 7
Correspondence with approved societies 58
Doctor's dilemma 70 82 89 111
Early references and all that 60
Excessive prescribing and all that 96
Forms and procedures 206
Insurance practice as seen by a young practitioner 102
Panel doctor and the patient 10
Panel practice future of 6 70 102 117
Panel service 278
Regional medical officer reference to 7 6 111 347
Spa treatment of insured persons 278
State medical service 158 206 231

Insurance Acts Committee Report of January meeting 13—Articles or substances not ordinarily part of medical benefit 13—Certification and reference questions of 15—Emergency economy arrangement and the capitation fee 15—Minister of Health deputation to 15—Pensions for insurance practitioners 15—Range of service 15—Scottish Insurance Acts Subcommittee 15—Sickness benefit expenditure on 13—Report of March meeting 113—Capitation fee and the impending Budget 113—Defence Trust income 11—Grouping of areas rural practitioners statistic 114—Drugs and appliances 11—The medical card 11—Work of the Scottish Subcommittee 115—Early reference to the B M O 115—Treatment of insured seamen 115—Miscellaneous business 116—Report of May meeting 253—Remuneration of insurance practitioners 253—Schemes for inclusion of dependants 253—Anaesthetic fee 254—Reporting of medical service subcommittee case 254—Scheduled appliances 254—Insurance Acts administration in Scotland 254—Fehling's and Benedict's solutions 255—Medical card 255—Means of sustaining interest in the Defence Trust 255—Other business 255
Irish Medical Committee Report of meeting 18
Irwin C C Injuries in sport 54
Irwin S T Tuberculosis of the abdominal lymph glands 17
Irwin W K Diagnosis and treatment of some important bladder conditions 10
Isaac Colonel Leonard Some gastric cases 63—Fibroma of oesophagus 63—Fibromatosis of stomach 63—Carcinoma of rectum 63
Isle of Wight Division Report of meeting 235

J

Jamaica Branch Report of meeting 110
Jaundice differential diagnosis in patients suffering from (J W McNee) 260
Jennings Joseph name of restored to the *Dentists Register* 257
Johnstone R J Ovarian tumour 54
Joll, Cecil A Thyrotoxicosis and its treatment 54
Jones Major Cranford Rash caused by bismuth 109
Jones Robert Intracapsular fracture of femur fracture dislocation of ankle encephalitis lethargica 89
Jordan E O Some recent aspects of food poisoning 110
Joy H C V Medical work in the Belgian Congo 53

K

Kensington Division Report of meeting 54 89 115 151 202 208
Kerr, J M Munro A National Maternity Service 208
Keynes Geoffrey Thyroid problems in medicine and surgery 100
Killner, Pomeroy Plastic operations for lupus of nose and face
King The and Committee
King Edward's Hospital Fund for London
King Edward VII Sanatorium Beaconsfield Laboratory diagnosis of small pox 109
Kingston-on-Thames Division Report of meetings 29 89 100 102 151 202
Kirby, F J Reference to regional medical officer 7

L

Lake H A exhibits case of disseminated sclerosis and paralysis following a febrile attack 53
Lamb P W Some recollections on China of yesterday and to-day 176
Lambeth and Southwark Division Report of meeting 202
Lancaster Division Report of meeting 204
Larking Arthur E Payment of anaesthetic fee under the Insurance Act 57
Law Frank W Ophthalmic problem in general practice 141
Layton Frank G Early references and all that 29—Forms and procedure 206—The panel service 278
Layton T B Useful and useless practices in the treatment of diseases of the ear 309
Leeds Division Report of meeting 55 89 102 277
Le Fleming Dr The law and medicine 4
Lefroy Mrs The law and medicine 4
Leicester and Rutland Division Report of meetings 4 125
Levin J Acute mastoiditis 17
Lewis David R Ichthyosis 65—Xeroderma pigmentosa 65—Tinea capitis 205
Lewisham Division Report of meetings 4 54 141 205 212
Lincoln Division Report of meeting 204
Lincolnshire Branch Inaugural meeting 69
Lloyd-Williams Alice Cheiropompholyx 109
Lochhead Dr Case of diaphyseal aclasis 73
Lodge Mr exhibits ophthalmic case 55
London Insurance Committee Acceptance of fees for treatment 89—Anaesthetic fee under the Insurance Act 89—Farming out of insurance practice 56 229—Fines for excessive prescribing 205—Grave negligence 259—Insurance Committee finance 5—Practitioners fund 228—Terms of service failure to comply with 229
London insurance practitioner dinner and dance 120 156
London Panel Committee Anaesthetic fee payment 95—Appliance list of 259—Appointments 45—Capital on fee 130 230—Choice of doctor 82—Complaint against approved society 259—Hypodermic syringes 96—Insurance practitioner and out patient department 230—National Formulary 82 123—Paddington Medical Society 130—Permission to employ an assistant 130—Prescribing of a proprietary preparation 81—Varicose vein injection of 89 259
London Public Medical Service Views on the out patient problem 196
Lot ernes and sweepstake Royal Commission on 143
Lowry Dr Gall bladder contraction 73
Lucas, Dr Nystagmus for diagnosis 158
Lung disease diagnosis of (H Morris-Jones and Davies) 89
Lush Joan Aneurysm of right subclavian artery 106

M

McIlroy Dame Louise Foetal and neonatal mortality 74
McIntosh, R Obscure pathological practice of the upper end of the femur 4
McIntyre Donald Maternal disability following injuries in childbirth 73
McKeown Kathleen Pernicious anaemia 108
McLachlan T K Insulin treatment 68
McNeile J W Differential diagnosis in patient suffering from jaundice 260
McNiff Michael James Withdrawal of authority to deal with dangerous drugs 260
McVicker, Major Surgical case illustrated by radiograms 109
Maine one Division Report of meeting 158
Mangor Rosner Injection treatment of varicose veins haemorrhoids hydrocele and other conditions 53—Tuberculosis of breast 106
Malaria atebrin treatment of (Richard Green) 241
Malaya State Federated Division Report of meeting 109
Malaya Branch Report of meeting 241
Mallinson Dr Average annual birth rate 205
Malta Artillery *Royal* 257 *See also* Army
British
Manning Dr The law and medicine 4
Man held salary of medical officer of health of 257
Manson J S Royal Commission on sweepstake and lotteries 143
Marylebone Division Report of meeting 141
Maternal disability following injuries in childbirth (Donald McIntyre) 73
Maternity Service a National (J M Munro Kerr) 255
Medical at entrance with a pound of tea 115
Medical officer's salary (Maldon) 257
Medical patient reference on 89 260
Medical post abroad 16 122
Medical research *See* Research
Mellotte Dr A State Medical Service 154
Mennell Dr Spinal manipulation 100
Mental Deficiency Committee report of 202
Mental factor in the healing process (H Crichton Miller) 69
Middlesex North Division Report of meeting 109
Middlesex South Division Report of meetings 69 267
Midland Medical and Surgical *Reporter* 97
Midlothian Panel Committee Hospital letter 150
Midwifery record 71
Milk supply to the public discussion on 73
Miller Hugh exhibits cases after gastrectomy 5—Neoplasm of undescended testicle 5—Unusual case of acute obstruction of the small intestine 5
Mills H H Public health work and the general practitioner 67
Moffat H H Yet another doctor's dilemma 111
Moreton A L Common deformities of the foot in childhood and their treatment in general practice 54
Morpeth Division Report of meeting 125 141
Morris Arthur Osteitis fibrosa cystica osteomalacosis periostei Diabetic crisis due to hydronephrosis Raynaud's disease 89
Morse Dr The law and medicine 4
Mortality foetal and neonatal (Dame Louise McIlroy) 74
Morvan's disease (Dr Griffiths) 73
Mubbell Christine Women in industry medical aspects of legislation 165

N

Nash Wortham Dr Five fees of small intestine removed for mesenteric thrombosis 165
Navy Royal Medical Service 7 11 19 25 58 74 89 103 111 151 159 207 251 259 279 287 311 *See also* Journal Index
Navy Royal Royal Australian Navy 111 279
Navy Royal Royal Naval Volunteer Reserve 7 19 25 58 74 89 103 111 151 159 207 251 259 279 287 311 *See also* Journal Index
Nephritis modern views on (H Letheby Tidy) 170
Nesfield Vincent Blumhardt on diplomary case of 259
Nevell A G Future of public medical services 311
Nerve Isle of Tyne Division Report of meeting 212
Nigam Captain K S Haemophilic arthritis 5
Norfolk West Division Report of meeting 17 70
North of England Branch A confession of faith 65
Northampton Shire Branch Some recent aspects of biological therapy 69
Northern Counties of Scotland Branch Report of meeting 5 141
Nutritional disease in infancy and its treatment (Leonard Findlay) 26
Nystagmus miner (W J Roche) 65

O

O Brien R A The serological and the practical relationship of his work to clinical medicine 142
O Connor Donald M Excessive prescribing and all that 96—Another doctor's dilemma 70 89
Oddie Doris The law and medicine 4
O Donovan W J State Medical Service 53—Common hallucinations of the leg 54—Some predetermined pyrexia reactions of the skin 212
Ogilvie W N The orthodox and heterodox in surgery 5
Oliveiro C J Anti coli bacteriuric value of local foods (Malaya) 241
Ophthalmic practice and approved societies 259 *See also* Insurance
Ophthalmic problems in general practice (Frank W Law) 141
Ophthalmic surgeon and association with bodies of unqualified persons 83
Ophthalmic Treatment Board National 158 159 251 *See also* Eye
Orpen G H Allergy 4
Osmond A W Ophthalmology in general practice 158
Out patient question King Edward Hospital Fund Committee 1—Letter from the Medical Secretary to the King Edward's Hospital Fund 16—Views on the London Public Medical Service 229

P

Panel Conference date of meeting 277
Panel doctor and patient *See* Insurance correspondence
PARRY L A Criminal abortion 205
Patent law and medical research conference on 206 256
Patents medical conference on 80 253
PATERSON Donald The feeding of infants from 6 months to 2 years of age 119–Gives a clinical demonstration of cases 140
PATRICK Mr Autonomic nerve supply of the gut 119
Payment of visiting staffs to hospitals *See* Hospitals
Penang Division Report of meetings 17 73
PERRIN W S Cancer 109
PERROTT George Francis Donald on disciplinary case of 285
Pharmacopoeia British the new 263
PHILLIPS Leonard Gynaecological difficulties met with in general practice 158
PIMM A exhibits cases of chronic subacute rheumatism and phthisis treated by artificial pneumothorax 53
Pleural diagnosis of disease of (H Morriston Davies) 89
Port Elizabeth Division Report of meetings 26 74 93 276–Supper dance 26
Post Graduate School British (Lord Dawson of Penn) 88
POWELL Sir Allan Public health work and the general practitioner 64
POYNTON F J General problems of rheumatism and arthritis 109
Prescribing excessive *See* Insurance correspondence
Presentations 98
Preston Division Report of meeting 93
PRITCHARD Eric Infant feeding 261
Private practitioners and hospitals *See* Hospitals
Prize Hastings [Sir Charles] 03 210 247
Prizes for essays by senior students and newly qualified practitioners 341
Psychological outlook in general medical practice (H Crichton Miller) 55
Public health work and the general practitioner Report of discussion at the West London

R

Radiology in chest diseases (J Duncan White) 140
RAE R Finlay The relationship of eye disease to dental sepsis 4
RAIS L mond The clinical aspect of hysteria 141
RAIS J R Psychotherapy in general practice 205
Regional conference at Worcester 30
Regional Medical Staff divisions of 309
REID Dr Unusual case of haemolytic anaemia 5
RENSHAW Arnold Medical research and the patent laws 309
RENTON M W presentation to 98
Research medical and patent law conference
R contains venereal disease 80
RICHARDSON Mr Phrenic avulsion 55
Richmond Division Report of meetings 18 89 109 158 277
RICKETT G R Osteomyelitis and paraplegia 4
ROBERT E I Lower limb fractures and their treatment 261
ROBERTS Harry Anaesthetic fees under the Insurance Act 66 82
ROBERTSON Archibald MacNab disciplinary case of 286
Rochdale Division Report of meetings 88 140 205 261
ROCHE W J Miners nystagmus 63
ROMITTI Dr The treatment of trophic ulcer 3
ROSS Andrew T One reason for reference to R M O 111
ROWNTHAM S Recent advances in anaesthetics 100 109
Royal Air Force *See* Air
Royal Army Medical Corps *See* Army British
Royal Navy *See* Navy
Ruislip Division Report of meeting 73 248
RUSSELL James Advances in surgery related to general practice 4

S

St Albans Division Report of meeting 73
Salary medical officer s *See* Medical
SALMOND R W A The interpretation of x ray films 54
SALT Mr The law and medicine 4
SANCTUARY Dr exhibits case of ? primary lateral sclerosis or hysteria 53
SAVY Dr Pneumothorax complicated by a spontaneous rupture of an adhesion 5
SCHOLFIELD H Advantages of membership of the British Medical Association 262
Scotland insurance practice in 45–Letter from Department of Health 45 137–Insulin for insured persons in 137–Dental benefit inquiry 156
SHAW T Wilson The capitation fee 117
SHIPWAY Sir Francis Modern developments of anaesthesia 1 8
Shropshire and Mid Wales Branch Adjourned annual general meeting 5
SINGER Major exhibits clinical cases 109
SLADDEN A F S Industrial diseases 5
SLOT Gerald Public health work and the general practitioner 64–A State medical service 154
SMITH Clifford Cases of Kohler s disease 158
Society Paddington Medical a State medical service 153
with
insurance practice 97
Society West London Medico Chirurgical Public health work and the general practitioner 64
Somerset West Division Report of meeting 52
South Eastern Counties Division Report of meetings 157 275
South Eastern of Ireland Branch Report of meeting 346
Southern Branch Report of meeting 308
Southport Division Report of meeting 261
South Wales *See* Wales South
Spa Practitioners Group Conference 79
Spa treatment for members of friendly societies 209 *See also* Insurance
Spinal manipulation (Di Mennell) 100
Staffordshire North Division Report of meeting 275
Staffordshire South Division Report of meeting 141
STANSFIELD T Reference to regional medical officer 47
State medical service (Somerville Hastings) 153 —Discussion 153 *See also* Insurance correspondence
STEPHENS G Arbour The value of oxygenating milk 141
Sterilization of the unfit (C B S Hodson) 5 52–(C
STOKES
fees under the Insurance Act 70 89—A State medical service 154
205 262
Sweepstakes *See* Lotteries
Swindon Division Report of meetings 55 100 142

T

TAIT Adam The reduced capitation fee 68
TASKER H L Influenza 204
TATTERSON Arthur R Correspondence with Approved Societies 53
TAYLOR James Hip joint disease 25
TAYLOR Mary Incapacity to work 99
Teeth importance of in general medical practice Prizes for essays 49
TEVERSON Beatrice Splenic enlargement 101
THROWER Dr exhibits clinical cases 108 204
Thyrotoxicosis and its treatment (Cecil A Joll) 74
TIDY H Letheby Modern views in nephritis 100
TIPLADY Thomas Turnbull disciplinary case of 286
TODD Alan H Injuries to the elbow joint 18
Torquay Division Report of meeting 284
TREVANION Mr The law and medicine 4
TRUMPER Oscar B The panel service 278
Tuberculosis of the abdominal lymph glands (S T Irwin) 17
Tumours ovarian (R J Johnstone) 54
Tyrone Division Report of meetings 55 276

U

Ulster, North East Division Report of meetings 17 54 212
United Provinces Branch Report of meetings 5 206

V

Varicose veins *See* Veins
Veins varicose injection treatment of (Rodney Maingot) 53
VINING C W Tonsils and adenoids 109
Visiting staffs of hospitals *See* Hospitals

W

Wakefield Pontefract and Castleford Division Report of meetings 5 100 158 267—Heart failure 5
WAKELEY Cecil Cerebellar cyst tumour of left eighth nerve 89
Wales South and Monmouthshire Branch Report of meetings 63 141
Wales South West Division Report of meetings 5 55
Wandsworth Division Report of meeting 212
Warrington Division Report of meeting 99
Warwick and Leamington Division Report of meeting 73 248
Warwickshire Insurance Committee Conference on medical benefit 85
WATSON William Marwood withdrawal of authorization to deal with dangerous drugs 111
WEATHERHEAD H D The diagnosis of appendicitis 3
WEATHERLEY Lionel The law and medicine 3
WILPLY A A State medical service 154
West Bromwich Division Report of meetings 52 204
Westminster and Holborn Division Report of meeting 63
WHITE J Duncan Radiology in chest diseases 140
WHITE J Stanley Some recent aspects of endocrinology 63—Recent aspects of biological therapy 88 89 99 100
WHITEHEAD I C Consultant services for members of contributory schemes 7
WHITEHOUSE H Beel with Abortion 123
WHYTE A Hedley The role of surgery in diseases of the chest 141
WILTIE D I D Gall bladder disease and its sequels 248
Wiltesden Division Report of meetings 10 54 99 141 212
WILLIAMS Howell Tuberculosis in children 100
WILLIAMSON I Radium therapy 158
cases 3
Wiltshire Branch Report of meeting 346
Winchester Division Report of meeting 308
WINNING T W Obligations and duties of the medical practitioner with regard to legal proceedings 142
Winnipeg meeting (1930) 236
Women in industry Medical aspects of legislation (Christine Murrell) 105
WOODS W H Ogle Some epiphyseal disabilities 205
Woolwich Division Report of meeting 276
Worcester regional conference at 230
WOTHERSPOON Rona Lockhart disciplinary case of 285

X

Xeroderma pigmentosa (David R Lewis) 63

Y

Yorkshire East Branch Report of meeting 149
YUILL Pratt Public health work in the County of Fife 248

Z

ZEITLIN Dr A State medical service 154

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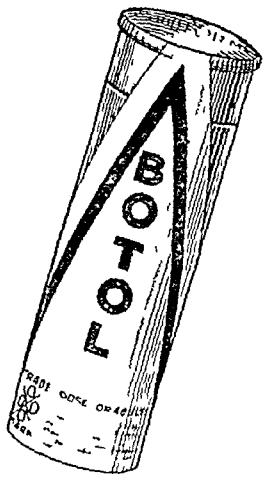
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CONTENTS

ORIGINAL ARTICLES

The Progress of Gastric and Duodenal Ulcer. By [illegible] (With Plate) — 1

Treatment of Dysmenorrhœa by Exercise. By [illegible] — 4

Bone Graft and Fusion Operations for the Spine. By [illegible] (With Plate) — 5

Lichen Urticatus. By [illegible] (With Plate) — 7

Thallium Acetate in Ringworm of the Scalp. By [illegible] (With Plate) — 8

Low Visceral Tone. By [illegible] (With Plate) — 10

Tuberculous Cervical Abscess. By [illegible] (With Plate) — 11

Cerebral Aneurysm with Recurrent Leakage. By [illegible] (With Plate) — 13

MEMORANDA

[illegible] — 15

Hæmorrhagic Streptococcal Conditions. By [illegible] — 16

Arterial Anastomosis in the Limbs. By [illegible] — 17

Spinal Fusion and Calipers. By [illegible] — 17

Hernia Zones with Special Reference to Cæcal Pain. By [illegible] — 18

Bronchial Pneumonia. By [illegible] — 18

CLINICAL PROCEEDINGS

Royal Hospital for Sick Children, Glasgow — 19

REPORTS OF SOCIETIES

West London Medico-Chirurgical Society — 19

Medical Society of London — 20

Liverpool Medical Institution — 21

Royal Academy of Medicine in Ireland — 21

REVIEWS

[illegible] — 22

LEADING ARTICLES

The Future of the Colonies — 23

Diabetes and Steels — 24

THE WEEK

[illegible] — 25

GENERAL ARTICLES AND NEWS

The First Hundred Years — 28

Medical Uses of Radium — 29

Notes et Vetera — 29

Preparations and Appliances — 30

Medical News — 32

CORRESPONDENCE

[illegible] — 33

LOCAL NEWS

England and Wales — 37

Scotland — 38

India — 38

OBITUARY

William Lee — 39

UNIVERSITIES AND COLLEGES

[illegible] — 39

LETTERS AND ANSWERS

[illegible] — 40

Vacancies — 41

The SUPPLEMENT contains

The Out-Patient Question

Current Notes

Annotations

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Correspondence

Abstracts

Appointments

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Cambridge University Press
Myers & Bartlett—
Experimental Psychology 4

Churchill J & A
5
5
5
5
5
5
5
5
5
Cawthorn T H —Hydrology
Yellowlee H —Clinical Lectures 5

Livingstone E & S
Bourne G —Medical History etc 4
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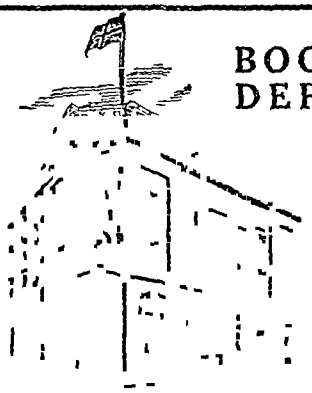
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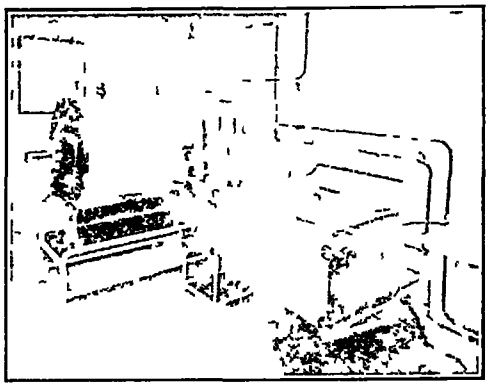
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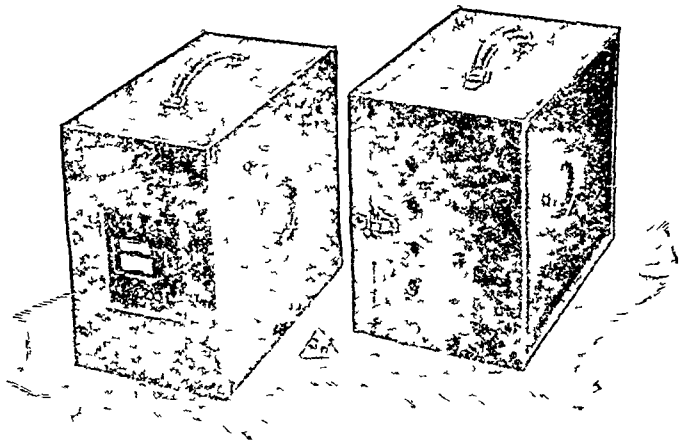
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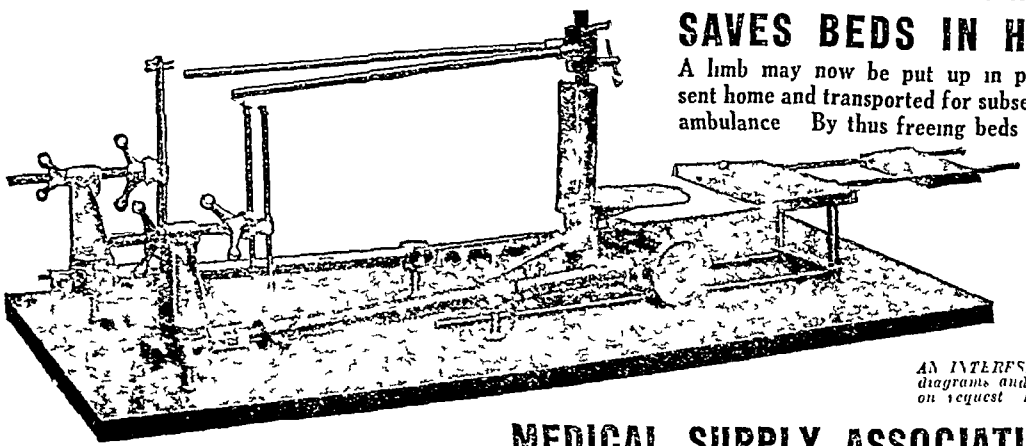
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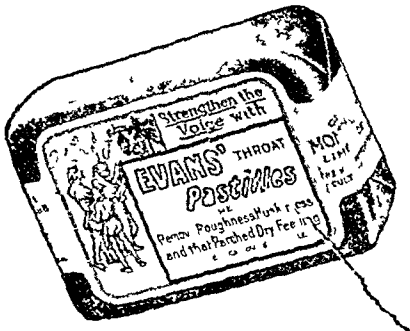
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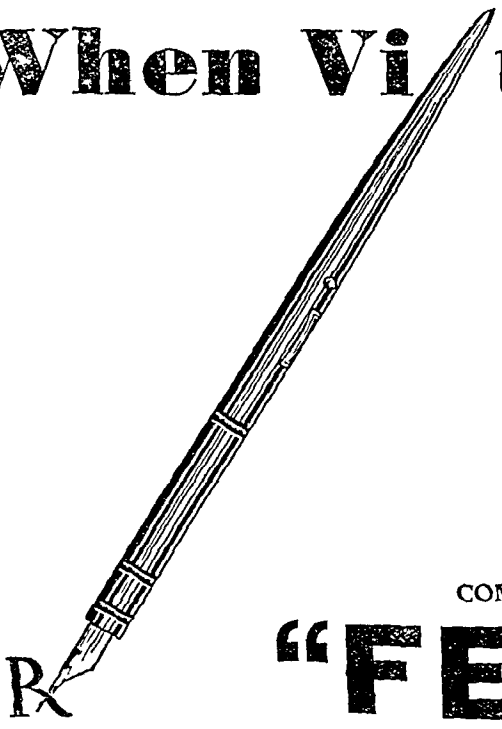
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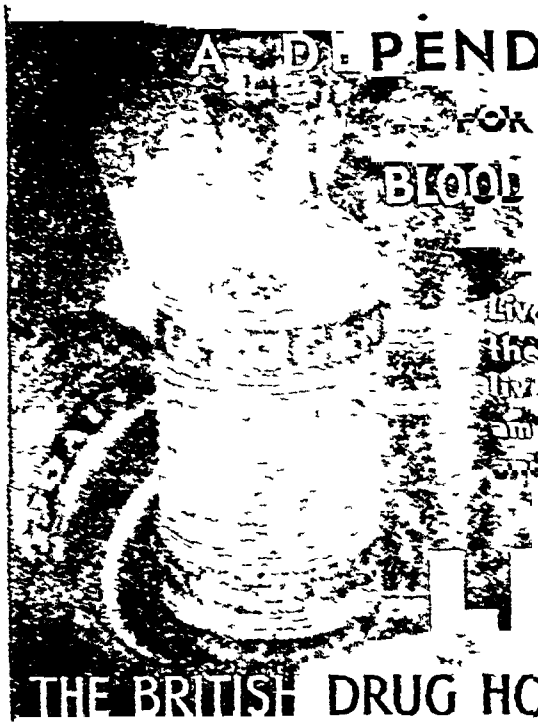
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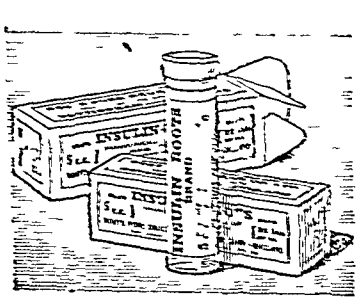
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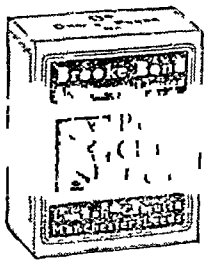
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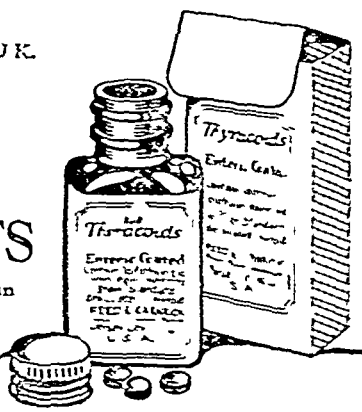
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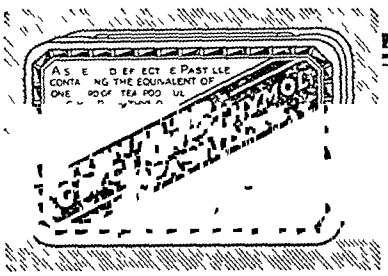
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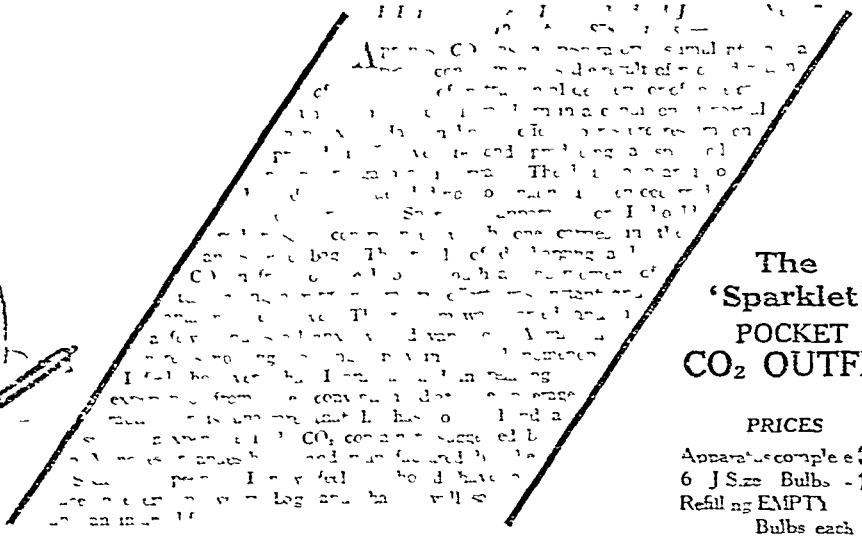
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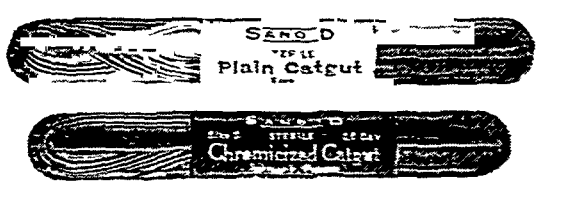
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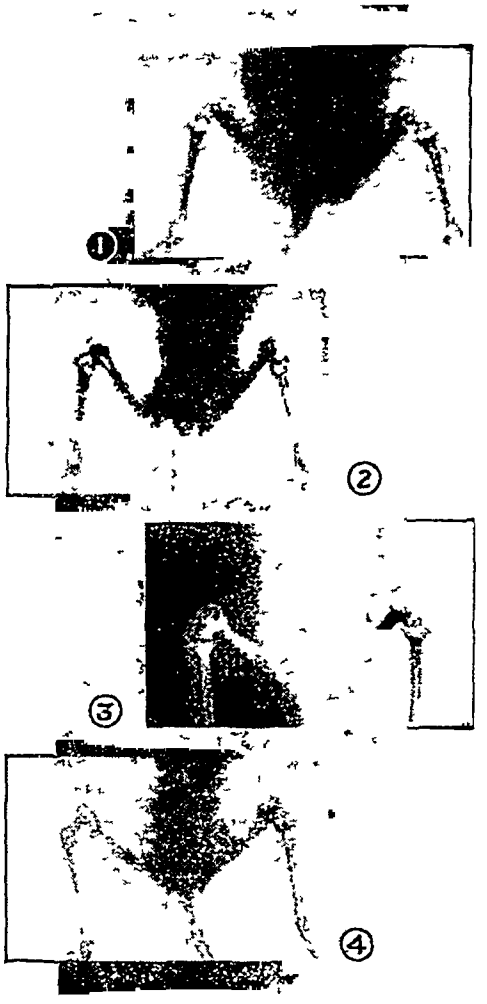
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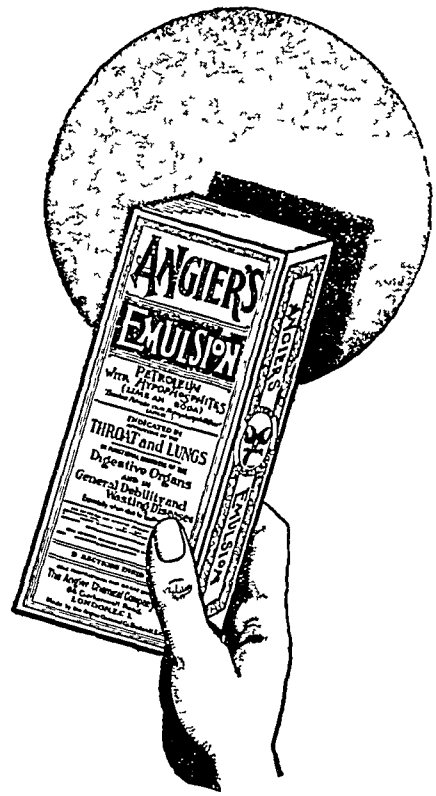
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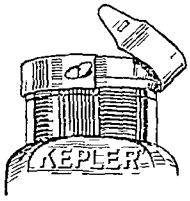


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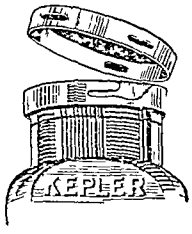
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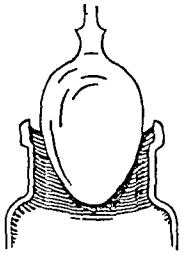


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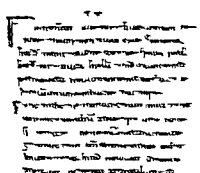
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PRESCRIPTIONS FROM AN ANGLO-SAXON MEDICAL MANUSCRIPT THE EARLIEST EXISTING EVIDENCE OF AN AWAKENING OF THE TEUTONIC MIND TO SCIENTIFIC THOUGHT —The Anglo-Saxons in England developed an eager spirit of enquiry towards the healing art—a new departure among the Teutons. The Anglo-Saxon physicians compiled a number of Leech-Books some of which have come down to us. It is not claimed that they discovered or invented anything of value in the domain of disease and medicine but they were real pioneers in the sense that they did begin to study their subject, to seek information from whatever literary



sources were open to them and to qualify themselves for their profession the existence of these books is evidence that leeches did exist and that they committed information to their own tongue. The Leech-Book of Bald and Cild is a mixture of folk-medicine pure Christianised of remedies drawn from the Later Greek medical authors and a small number of prescriptions taught by native Anglo-Saxon leeches. The treatment for 'Alf' (i.e., corpse) a portion of which is here reproduced, reads 'Work thus a drink against dust Take mugwort, seethe it in a copper kettle and boil it till it be very thick and let it be brought of fourteen mill-dust of everfern moss, bishop-wort, water agrimony pennyroyal, sagewort, set all in a vat, give to drink at the midday and forego sour and everything sick.'

DATE A.D. c. 950

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The following extract from a Practitioner's letter may prove of interest —

" . Some time ago, I resolved to try for the first time a vaccine in whooping cough and the results were so excellent, that I thought you would be interested to hear from me

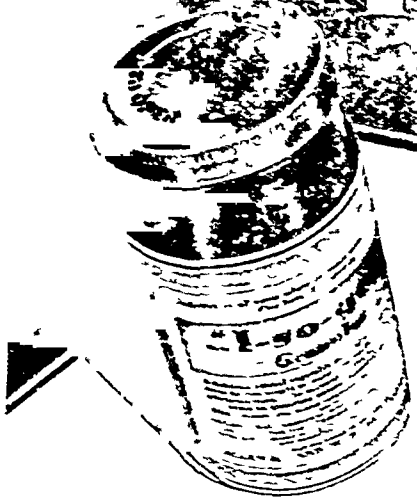
(*a*) Three children aged 3 years, 2 years and 8 months, were treated when the disease was about 10 days established, all were completely cured after the third injection—the mother described the effect to me as simply miraculous

(*b*) Two aged 6 years and $3\frac{1}{4}$ years, who had relapses, were well after they had got the 2nd injection

(*c*) An infant aged 8 months—the whoop disappeared after 1st injection The cough was gone after 2nd injection, and the mother, who had tried everything and despaired of the child's life, was exceedingly grateful and assured me it was simply wonderful to see how the child had slept for the first time for days and was able to retain its food and rapidly put on weight The Vaccine used was your Detoxicated Whooping Cough Vaccine Speaking for myself, I can only describe the effects as magical, as the children were worn out and emaciated from coughing, vomiting, and loss of sleep "

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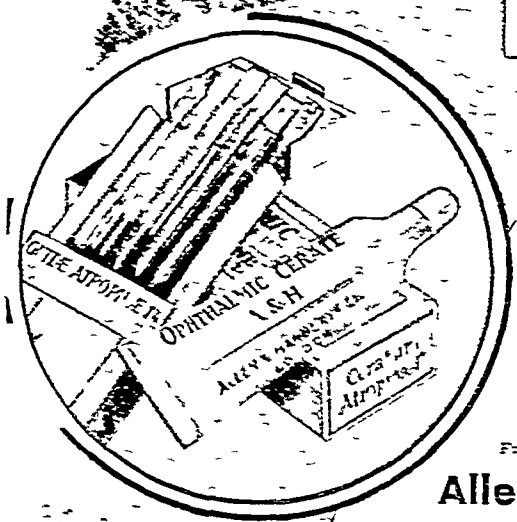
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THE

British Medical Journal

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION

LONDON SATURDAY, JANUARY 2nd 1932

A Lecture

THE PROGNOSIS OF GASTRIC AND DUODENAL ULCER*

BY

LORD MOYNIHAN OF LEEDS P.R.C.S.

It is [illegible] with regard [illegible] aspects of those diseases which results we are now to discuss we have [illegible] knowledge of certain facts of each and [illegible] conclusion. We have [illegible] course drawn [illegible] the various clinical [illegible] we can form some estimate [illegible] and [illegible] probable [illegible] and [illegible] the stage at which [illegible] develop [illegible] and [illegible] in their [illegible] career. But we [illegible] [illegible] gastric or duodenal ulcer we do not know enough of their causation [illegible] are at present not [illegible] and very accurate records [illegible] the effects of medical [illegible]. We obtain glimpses [illegible] these diseases at various stages of their development but we lack complete biological knowledge of their causes career and termination. We may nevertheless find it useful to pass in review some of the facts gleaned from clinical inquiry from the operation theatre from pathological examinations and from the post-mortem room.

Acute Ulcers

In our discussion we must not altogether lose sight of acute and chronic ulcers. The former [illegible] are clinically important though [illegible] upon the matter some of the results [illegible] acute [illegible] of chronic ulcers are often classed as examples of acute primary ulceration.

Acute ulcers it would appear to be certain are the clear and grave evidence of systemic infections. On the post-mortem table as my colleague Professor Stewart has clearly shown such diseases as acute appendicitis gangrenous [illegible] empyema [illegible] meningitis [illegible] septicæmia acute endocarditis and middle-ear disease are not seldom found as causative agents in cases of acute ulceration. Less severe forms of infection derived from teeth—more extraction may show that a latent [illegible] streptococcus lies at the apex of the root—from tonsil and from various surface lesions such as burns are all held on clinical grounds to be responsible for severe attacks of hæmatemesis and melæna caused by acute ulcer. These ulcers affect the mucosa only and heal rapidly in favourable circumstances and leave no visible scar but they may have serious and even fatal consequences. In Professor Stewart's series of post-mortem examinations it was found that in 245 cases of acute gastric ulcer there were 21 cases of severe hæmorrhage 17 of them fatal (8 per cent.). In 11 of these no other fatal malady was found the acute ulcer being directly and solely responsible for the patient's death. In 88 cases of acute duodenal ulceration there were 6 cases of fatal hæmorrhage in these there was no disease other than the ulcer which could have caused death. It is clear therefore that hæmorrhage is a serious and sometimes fatal disaster in connexion with acute ulceration.

Perforation is also frequent in acute ulceration. In a period of ten years at Leeds there were 61 deaths following upon perforation of a gastric ulcer in one case only was the ulcer cancerous. In 117 deaths from perforation of a duodenal ulcer during the same period there were eight in which the ulcer was acute. Both hæmorrhage and perforation are far more commonly in chronic than in acute ulcer. The important point which requires emphasis is that acute ulceration is preventable if the infection which causes it can be prevented or quickly removed and experience shows that to be often possible if not almost always obtainable.

Chronic Ulcers

Acute ulcers are multiple chronic ulcers usually solitary. What is it that converts an acute into a chronic ulcer. There is little doubt I think that the chronic ulcer is often if not always the late result of the acute ulceration. There are perhaps many conditions which help to prevent the usually rapid healing of an acute ulcer. The acid condition of the gastric juice is doubtless an important factor especially in the production of duodenal ulcer. Approximately 72 per cent. of cases of chronic duodenal ulcer suffer from hyperchlorhydria. High acidity is infrequent in cases of gastric ulcer. In my own cases the results of Rehfuss tests are shown in the following table:

	Gastric Ulcer	Duodenal Ulcer
	Per cent.	Per cent.
Achylia gastrica	13·1	5·5
Hypochlorhydria	43·7	7·1
Low normal	19·1	12·3
Normal	3·2	5·5
High normal	18·7	24·2
Hyperchlorhydria	2·1	45·5
	29·8	69·7

There is clearly as Hurst has indicated an ulcer diathesis—especially I think a duodenal ulcer diathesis—a hyposthenic type. In patients suffering from chronic duodenal ulceration there is generally a high acid content of the gastric juice they are men of vigour strength athletic habits and often some prowess. I have operated upon international football players cricketers lacrosse players and great runners suffering from duodenal ulcer. Such patients are often found to have small highly placed stomachs which contract eagerly and empty rapidly and the acid content of the gastric juice may be such that the ordinary chart cannot record it. Many years ago I called attention to spasm in the stomach of such degree as to produce the appearance of tumour. As soon as an ulcer involves the muscular coat spasm is aroused it is often considerable and in the stomach is always local—that is it is throughout confined to the same zone. When seen by the radiologists a notch is observed in the greater

* Delivered to the Fellowship of Medicine November 11th, 1931.

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BY
LORD MOYNIHAN OF LEEDS P R C S

It is unfortunate that with regard to many of the aspects of those diseases whose results we are now to discuss we have not the knowledge to enable us to reach an accurate conclusion. We are of course thoroughly familiar with their various clinical characteristics we can form some estimate of their etiology and are unhappily only too familiar with the tragedies which develop so swiftly and so mercilessly in their career. But we know little or nothing of the real frequency of gastric or duodenal ulcer we do not know enough of their causation to prevent them nor are there any very accurate records of the effects of medical treatment. We obtain glimpses of these diseases at various stages of their development but we lack complete biological knowledge of their causes career and termination. We may nevertheless find it useful to pass in review some of the truths gleaned from clinical inquiry from the operation theatre from radiological examinations and from the post-mortem room.

Acute Ulcers

In our discussion we must not fail to distinguish between acute and chronic ulcers. The former too are clinically important though confusion upon this matter sometimes results for the acute terminations of chronic ulcers are often classified as examples of acute primary ulceration.

Acute ulcers it would appear to be certain are the clear and grave evidence of systemic infections. On the post-mortem table as my colleague Professor Stewart has clearly shown such diseases as acute appendicitis general peritonitis empyema pneumonia meningitis puerperal sepsis acute endocarditis and middle-ear disease are not seldom found as causative agents in cases of acute ulceration. Less severe forms of infection derived from teeth—whose extraction may show that a haemolytic streptococcus has set up the mischief—from the tonsil and from various surface lesions such as burns are all held on clinical grounds to be responsible for severe attacks of haematemesis and melaena caused by acute ulcers. These ulcers affect the mucosa only but rapidly in favourable circumstances and leave no visible scar but in others may have serious and even fatal consequences. In Professor Stewart's series of post-mortem examinations it was found that in 2·5 cases of acute gastric ulcer there were 21 cases of severe haemorrhage 17 of them fatal (81 per cent.) in 11 of these no other fatal malady was found the acute ulcer being deemed responsible for the patient's death. In 98 cases of acute duodenal ulceration there were 6 cases of fatal haemorrhage in three there was no disease other than the ulcer which could have caused death. It is clear therefore that haemorrhage is a serious and sometimes fatal disaster in connexion with acute ulceration.

Perforation is very infrequent in acute ulceration. In a period of ten years at Leeds there were 61 deaths following upon perforation of a gastric ulcer in only one of which was the ulcer acute. In 117 deaths from perforation of duodenal ulcer during the same period there were eight in which the ulcer was acute. Both haemorrhage and perforation occur far more commonly in chronic than in acute ulcer. The important point which requires emphasis is that acute ulceration is preventable if the infection which causes it can be prevented or quickly removed and experience shows that to be often possible. Yet almost as often neglected.

Chronic Ulcers

Acute ulcers are ultimately chronic ulcers usually solitary. What is it that converts an acute into a chronic ulcer? There is little doubt I think that the chronic ulcer is often if not always the late result of the acute ulceration. There are perhaps many conditions which help to prevent the usually rapid healing of an acute ulcer. The acid content of the gastric juice is doubtless an important factor especially in the production of duodenal ulcer. Approximately 72 per cent. of cases of chronic duodenal ulcer suffer from hyperchlorhydria. High acidity is infrequent in cases of gastric ulcer. In my own cases the results of Rehfuss tests are shown in the following table:

	Gastric Ulcer	Duodenal Ulcer
	Per cent.	Per cent.
Anachlorhydria	12·1	5·5
Primary subacidity	15·7	4·1
Low normal acidity	7·1	1·5
Normal	9·2	5·5
High normal	15·7	9·2
Hyperchlorhydria	9·2	74·1

The X-ray chart as Hurst has insisted an ulcer matures especially I think a duodenal ulcer discloses an hypersecretor type. In patients suffering from chronic duodenal ulceration there is usually a high record content of the gastric juice they are men of vigour or strength athletic sports and often enough prowess. I have operated upon international football players cricketers lacrosse players and great runners suffering from duodenal ulcer. Such patients are often found to have a small highly placed stomachs which contract easily and empty rapidly and the acid content of the gastric juice may be such that no ordinary chart cannot record it. Many years ago I called attention to spasm in the stomach of such degree as to produce the appearance of tumour. As soon as an ulcer involves the muscular coat spasm is produced it is often considerable and in the stomach I always look—that is it is throughout confined to the same zone. When I was a student the radiologists approach was obtained in the great

* Delivered at the Royal Society of Medicine November 11th 1931

curvature causing a physiological hour glass stomach The relationship between appendicitis and gastric ulcer depends I think in part upon infection and in part upon the frequency with which severe and repeated gastric spasm is provoked by disease in the appendix This spasm is of so high a degree as to cause temporary but extreme and recurrent devitalization Behind the zone of the spasm the stomach undergoes overdistension which is sometimes considerable and is always a source of great discomfort There may also be a vasomotor spasm the result of changes of temperature or of the patient getting wet or being chilled These two forms of spasm alike produce anæmia in the gastric or duodenal walls and so prevent healing Of the evil effects of tobacco worry anxiety grief and of excessive physical fatigue I have often spoken These are some of the factors concerned not only in the creation and maintenance of chronic ulceration but also in its destiny Of the symptoms signs radiological appearances and chemical and infective conditions present in cases of chronic ulceration it is not now the time to speak

HEALING AND RECURRENCE OF ULCERS

Modes of treatment we must however consider and a careful scrutiny of claims is especially important because of the recent and as I believe exaggerated claims that have been made for a particular form of medical control In the first place it must be emphatically asserted that healing of an area of chronic ulceration in the stomach or duodenum is not only possible but in truth not infrequent This was first most clearly demonstrated by Professor M J Stewart Healed ulcers he has shown are found post mortem almost as frequently as open ulcers Perfectly healed ulcers rarely break down

Recurrence of ulceration is due to imperfect healing which leaves a still open surface free for re infection and extension of ulceration Acute ulceration is superimposed upon quiescent chronic ulceration We know by a considerable body of evidence that such quiescent ulcers may not arouse clinical recognition In the duodenum the ratio of chronic ulcers to scars in a series of 713 ulcers found post mortem was as 17 to 18 in the stomach among 322 lesions the ratio was as 11 to 12 It is true that these figures incline to favour ulcers rather than scars because of the large proportion of cases of perforation for in the Leeds post mortem room 35 per cent of patients with chronic gastric ulcer and 58 per cent with chronic duodenal ulcer have died of perforation Hart[1] found that 8 to 13 per cent of adult bodies on the post mortem table showed ulceration or scars in the stomach or duodenum the two occurring with almost equal frequency It is beyond doubt therefore that chronic ulcers both in the stomach and in the duodenum heal either spontaneously or under treatment

HÆMORRHAGE AND PERFORATION

Medical treatment is however so often perfunctory so imperfect or so brief that to its discredit a proportion—probably a large proportion—of the cases of haemorrhage and of perforation must be attributed In Leeds fatal hæmorrhage occurred in 7 per cent of all cases of chronic gastric ulcer coming to necropsy In the duodenum the incidence was 8 3 per cent and it was found that the posterior wall was involved far more often than the anterior the proportion being 14 5 per cent as compared with 0 5 per cent Perforation caused a rather larger proportion of deaths in cases of duodenal ulcer In all cases medical treatment may not have been tried for our records are silent in some of the fatal cases no opportunity having been given for the taking of a detailed clinical history It is certain however that treatment of a kind had been given in not less than 75 per cent of cases

ULCER CANCER"

Another catastrophe that may occur in connexion with gastric ulcer is carcinoma The frequency of 'ulcer-cancer' has been very variously estimated by different authorities the material used for the purpose of examination to decide the question is incomplete Post mortem specimens the parts removed at operation and clinical histories do not often afford evidence which can be usefully compared That ulcer cancer does occur in the stomach is indisputable In a series of 358 specimens of ulcer of the stomach removed by operation seventeen examples of ulcer cancer were found in that region of the stomach which chronic ulcer rather than cancer usually affects A chronic gastric ulcer in the pyloric region runs a heavier risk of cancer transformation than does an ulcer on the lower curvature One ulcer out of twenty on the lesser curvature shows carcinomatous transformation whereas one out of four ulcers in the pyloric region shows this change If the question is regarded from another aspect a different result is obtained Of 109 specimens of carcinoma of the stomach removed by operation seventeen (15 6 per cent) showed evidence of having originated in an antecedent simple ulcer

The conclusions that may be drawn from this evidence are that chronic ulcers of the stomach and duodenum do heal and may remain healed throughout the patient's life but that catastrophes of which the proportion to the total number of cases of the disease is quite unknown do occur in such numbers as to make necessary both the strictest attention to medical treatment and early recourse to surgical treatment when this has failed

INADEQUACY OF MEDICAL TREATMENT

I am accustomed to regard myself as a physician with surgical tendencies, and in this capacity I should like to call attention once more to the extreme inadequacy of medical treatment as ordinarily adopted in these conditions The position I admit is difficult The treatment by the general practitioner or physician to be really satisfactory must be strict and must be lengthy Radiological examination in cases of my own in which at operation I have had to be content with jejunostomy shows that the healing of a gastric ulcer is a slow process lasting for an ulcer the size of a shilling not less than six months Long before this time has elapsed a patient has lost all pain has experienced a return of appetite and has consequently but quite naturally become difficult The practitioner is hardly believed when he speaks of the need for continued care and a patient is apt to prove refractory or disobedient and may not willingly agree to the removal of teeth or tonsils or to other necessary measures to combat an infection which may stand in causal relation to the ulcer The number of cases coming under my own care for surgical treatment in which a really adequate medical treatment has been prescribed and honourably observed is very small Removal of all accessible sources of infection and diet drugs and absolute rest are very rarely combined in adequate degree and for a sufficient period So far as hospital patients are concerned their proper treatment is hardly possible owing to lack of beds

During the last four years encouragement has been given to those who practise medical treatment in a paper by Professor MacLean and others In this paper a series of eleven cases was examined and reports upon them were presented after varying periods of medical treatment The average length of observation was seven months—a period far too short for trustworthy conclusions My regret on reading this paper was that medical treatment was made to appear as a simple almost perfunctory, matter governed chiefly by the administration of a powder which in Leeds we had known for forty years or more as the triple carbonate On the results of this treatment

at St. Thomas's Hospital. Dr. B. E. Tompson has made an interesting report. In sixty-three cases of duodenal ulcer one third of the patients were cured, two-thirds continued to suffer or required operation. In sixty-five cases of gastric ulcer there were three deaths, three cases required operation later, two suffered again from haematemesis, eighteen continued to show symptoms, and twenty-two were relieved of symptoms and presented no radiological sign of disease. I should like to plead for a more rigid and more prolonged treatment of all early cases of chronic duodenal or gastric ulcer, and for greater attention to the removal of sources of infection. If such treatment is enforced and faithfully observed I do not doubt that fewer cases will need to be rescued by the surgeon. During the last two or three years I have returned approximately three patients out of ten referred to me with chronic duodenal ulcer in order that medical treatment might again be tried. In two of the three it has proved unsuccessful.

Surgical Treatment

If surgical procedures are followed what are we to expect? In cases of gastric ulcer the operation of choice is gastrectomy. We are rid of the ulcer then once for all, for I have never had a recurrence of ulceration after gastrectomy for gastric ulcer. The mortality in my hands is less than 2 per cent., and in respect of late results nothing could be better. It is the rarest event for a patient who has had this operation performed to return with any complaint relative to the stomach, but the operation cannot always be safely performed. If the ulcer is large and near the cardia gastrectomy is impracticable. In such cases I perform either gastro-enterostomy with transgastric jejunostomy or jejunostomy alone. Sometimes if the ulcer is small but so near the cardia that it cannot be removed without danger I perform Balfour's operation. The need for anything but gastrectomy is however rare. I have had only thirty-one cases in over 700 examples of gastric ulcer submitted to surgical treatment.

The local surgical treatment of duodenal ulcer centres round the two short-circuiting methods—gastro-duodenostomy or gastro-enterostomy—always with destruction of the ulcer and temporary closure of the pylorus. I do not practise resection. This is an operation which is unnecessary and dangerous and is attended by a risk of subsequent ulceration not less than that in short-circuiting operations. In my last 1,000 cases of operation for duodenal ulcer I have had one death. The frequency of gastro-jejunal secondary ulceration is 1·8 per cent. When this troublesome result occurs we may detach the anastomosis and restore the original passage or perform a new gastro-enterostomy or even gastrectomy. After such a gastrectomy a new jejunal ulcer may appear. I have dealt with seven such cases.

Every abdominal operation except those of grave urgency should begin with a general exploration of the abdominal cavity. In even quiescent cases I remove the appendix if it has not previously been removed and even sometimes when it has. It is impossible to tell from external examination whether the appendix is diseased or not. The appendix is certainly one of the sources of infection standing in causal relation to diseases of the stomach, duodenum, and gall-bladder, and is responsible also for high degrees of gastric spasm. In earlier cases I have many patients from whom I removed a carcinomatous stomach who, three and seven years previously, had had appendicitis. In my judgment it is more reasonable to leave the appendix even in a patient who has had appendicitis operated for and quiescent than to do so.

All patients upon whom any surgical procedure has been adopted must regard themselves as under treatment in respect of diet and drugs for not less than a year after operation, and in cases of duodenal ulcer tobacco must be scrupulously avoided because of the high increase in gastric acidity for which it is so often responsible. To all patients who have been operated upon for duodenal ulcer the following two charts are given:

Chart I.—Instructions

1. Have your teeth attended to by a dentist regularly every six months.
2. Eat slowly and chew your food well.
3. Avoid tobacco.
4. It is well to avoid all forms of alcohol. If you desire a small quantity of light wine or whisky diluted with soda water may be taken at meal times. Avoid all effervescing drinks. Avoid coffee.
5. Avoid all fruits which are acid. The skin of fruits to all fruit (whether raw, cooked, or in jam) should be removed. Avoid currants, raisins, lemon peel, nuts, figs. Orange juice with carbonate of soda sufficient to neutralise all acid may be taken occasionally.
6. Avoid all raw vegetables whether taken alone (even watercress) or in salads. Green vegetables must be passed through a sieve and mixed with butter in the form of a purée. Potatoes, also cooked, are made into the best oatmeal. Cream of wheat may be taken with cream and sugar. Sliced onions with plenty of salad oil may be taken twice or three weekly.
7. Avoid vinegar, lemon juice, sour fruits, pepper, mustard, curry, cayenne, new bread, rough meat, meat soups, underdone meat, salted fish or meat pies, made-up dishes, high game, cheese, fat meat soups. Salt if taken at all must be taken in small quantities only.
8. Take plenty of butter and cream as a dessertspoonful of oil or cream each meal is of value.

Typical Diet for First Few Months

Breakfast.—Cream of wheat, sugar, cream. Lightly boiled or poached eggs. Steamed bacon (not fried) with fat removed. Cabinet pudding. Marmalade or honey. Thin bread and butter. Bread or toast and butter, or toasted oatmeal biscuit browned. Fresh butter always.

10·0 a.m. to 11·30 a.m.—About 5 to 10 ounces of milk or Vichy water with a small teaspoonful of simple carbonate of soda.

Lunch.—Pint of soup of either milk vegetable soup. Fish as a dessert, but no salted, smoked, or fried fish. Some chicken, minced rabbit, or vegetables through sieve, minced fresh meat, or form of well-cooked milk pudding. Junket, custard pudding, Italian cream, rice. Bread and butter.

3·30 p.m. to 4·30 p.m.—As at 10·30 a.m.

5·30 p.m. to 8 p.m.—Tea. Weak China tea, cream, thin bread and butter, or rusk, sponge cake.

7.30 p.m. to 8.30 p.m.—Dinner. Light meal.

10·30 p.m. to 11 p.m.—As at 10·30 a.m., but a full tablespoonful of simple carbonate.

Between meals.—Milk, milk and lime-water may be taken as frequently as desired.

During the night.—Water may be taken as much as desired. Water should be taken at room temperature.

One further point of great importance in much of the literature concerned with gastric and duodenal ulcer deals with methods directed to two main considerations—the removal of infection and the local treatment of the ulcer by medication, extirpation, and so forth. To the consideration—often indeed necessary—given to the patient. It is not sufficient, we believe, that in these cases we should find a definite susceptibility to this disease, a habit of body, a condition of mind, a temperament, a mode of life which will not only prepare for the crisis of disease but greatly affect both our power to heal and the tendency to recurrence. Neither medical nor surgical treatment will produce their real effect until a wider conception as to their real responsibility is more adequately realised.

References

[illegible] Gastric Ulcer, Lancet, 1931, ii, 299.

TREATMENT OF DYSMENORRHOEA BY EXERCISE

BY

ALICE E SANDERSON CLOW M D B Sc B S

CHELTENHAM

In response to many inquiries evoked by a recent letter of mine in the *Journal* (August 22nd 1931) on the subject of the treatment of dysmenorrhoea I have been prompted to set down some details with regard to the method of dealing with that condition by means of exercise

I wish to make it clear that my remarks refer only to cases in which the general health is good and in which there is no evidence of appendicitis or of pathological conditions of the genital organs They include however variations in the size and shape of the body and cervix of the uterus the pelvic organs being in most cases examined per rectum Having ascertained that the patient is in good health and that the disability whether it be pain vomiting, nausea headache or malaise occurs *only* in association with the menstrual period I class it as a case of dysmenorrhoea and give advice to the patient which may be referred to under the headings of hygiene, exercise baths and drugs

Hygiene

I explain to the patient that menstruation is a natural function and should be as free from pain and internal discomfort as are the other functions of the body , that in the majority of women this is the case and that since her organs are healthy there is no reason why she should not overcome her disability during the period I insist that the normal routine of life should not be interrupted during menstruation The diet daily bath and action of the bowels should be as usual There should be no reduction in the amount of exercise taken at other times Active work is beneficial as are outdoor games such as tennis and hockey walking riding cycling and rowing No extra rest is necessary during the period it may even do harm as it is important to keep up a good circulation of the blood The sensation of fatigue felt by some on the first day of the period is in most cases quickly dispelled by a warming exercise whereas it is prolonged by rest although the recumbent position produces an initial feeling of relief

Exercise

The patient s history generally serves as an explanation of the cause of her dysmenorrhoea It is usually found that the age of its onset most commonly 16 to 19 corresponds with some change in the daily routine involving more restricted time for exercise and increased hours of work owing to study for an examination or entry to an office shop or factory With the first indication of menstrual trouble the inclination is to reduce the exercise still further and if possible to lie down during the time of malaise I therefore explain that to prevent or cure the pain the circulation of the blood must be stimulated by muscular exertion If there is not time or opportunity for sufficient exercise in the open air it should be supplemented by extra exercise done at home

I have selected a few movements as being specially effective for dysmenorrhoea and have had them printed on a single sheet which I give to the patient and tell her to do them for a quarter of an hour daily for a few days before the onset of the period and on no account to fail to do them on the first and second days of the period They should be done with enough vigour to promote a sensation of heat or a gentle sweat With few exceptions this practice prevents the onset of the disability and if the pain has already begun it is usually dispelled or at least relieved as soon as the feeling of warmth is experienced Some however especially patients over 30 have to repeat the exercises two or three times on the first day in order to keep themselves free from pain After continuing the treatment for six to twelve months many are able to leave it off altogether provided they are not engaged in sedentary occupations

*Table of Exercises**

1 *Floor Polishing*—Kneel on all fours Swing right arm with elbow stiff through a semicircle as if polishing the floor, reaching as far forward and as far back as possible Repeat swing ten times with each arm

2 (*a*) *Bending*—Stand with feet apart Stretch arms above head bend forward and touch ground with knees straight Return to first position Repeat slowly eight times (*b*) *Twisting*—Stand with feet apart Stretch arms to side on level with shoulders Twist trunk round until right arm points directly backwards Twist again until left arm points directly backwards Repeat vigorously ten times (*c*) *Swaying*—Stand with feet apart Stretch arms above head Sway body and arms to right then left Repeat slowly ten times

3 *Rowing*—Sit on floor with knees straight and feet pressed against wall Lean forward and touch wall with knuckles allowing knees to bend slightly Repeat rhythmically twenty times

4 *Right to Left and Left to Right*—Stand with feet apart Swing right arm up as far as possible Bend down bringing right arm over and touch left foot Repeat six times The same with the left arm and right foot

5 *Floor Patting*—Kneel sitting back on heels Twist body and tap floor with both hands four times on left side Kneel upright Twist body and repeat tapping on right side Repeat eight times each side

6 *Bean Picking*—Throw twenty small objects such as beans on the floor Pick up one at a time and place on a shelf above the head using hands alternately Do it as quickly as possible

I have found the printed sheets very useful They save much time in the consulting room and the patient is pleased to have definite instructions Incidentally the exercises help to regulate the action of the bowels Many patients for this purpose only or for the sense of well being they promote continue the exercises daily throughout the year

A considerable number of patients have no pain but suffer from nausea or vomiting and refrain from food during the first day of the period To them I give the same treatment and teaching as that already prescribed assuring them that the vomiting will not recur if the meals are taken as usual and the exercises are done as directed In addition however for these cases I usually prescribe a sedative to be taken on the day preceding and for the first two days of the period

Baths

Most patients are still under the impression that it is unsafe to take a bath during the period so they are told that in spite of old prejudices baths are not only harmless but beneficial The complete daily wash is a necessary hygienic measure but immersion in a warm bath at night is not only salutary but checks or helps to prevent the onset of aching and discomfort There is no harm in the continuation of the cold morning bath or cold sponge during the period For women subject to severe dysmenorrhoea, who are nervous or otherwise unfit for muscular exertion immersion of the whole body in a hot bath (100°F) for ten to fifteen minutes just as the period begins is a good prophylactic against pain and will often relieve a patient already in pain Its effect being quicker is more striking than that of exercise but it has relative disadvantages in that it must be followed by rest in bed for at least an hour and unless the patient can keep thoroughly warm afterwards, preferably by muscular effort the pain is apt to return

I have never understood the rationale of the sitz bath as a cure for dysmenorrhoea nor have I heard of any real

* Printed sheets can be obtained from H K Lewis and Co, Ltd 136 Gower Street W C 1

benefit derived from it. It strikes me as a useless and chilling performance. The universal hot water bottle, though comforting to the patient, must act merely as a counter-irritant and abdomens are sometimes scarred by its use in cases of extreme pain.

Drugs

For drugs I have little use in the treatment of dysmenorrhoea and since prescribing the remedial exercises in printed form I have been spared the reproachful look of disappointment from the patient when told that there was no prescription to take away. There are however a relatively few cases in which a nerve sedative or analgesic is useful while patients are learning to trust themselves to the new practices advised. I generally prescribe ammonol 5 to 10 grains according to the case thrice daily for three consecutive days beginning with the day preceding the period if possible. The tablets are however usually discarded before the third month. I never prescribe glandular treatment for dysmenorrhoea itself but sometimes find it indicated for other symptoms in the same patient.

It is sometimes necessary to correct the prevailing impression that aperients are contraindicated during the period and to insist that a constipated state must not be allowed. During menstruation the majority of women however experience a freer action of the bowels than usual. The exercises have a regulating effect for either condition. It cannot be too often repeated that alcohol and morphine which are still prescribed as a last resource for dysmenorrhoea by some practitioners should be absolutely condemned for use in a symptom occurring early in life and liable to recur monthly for many years especially as their action is generally ineffectual. I presume that the success of the small dose of alcohol is due to its action as a vasodilator and cardiac stimulant. The hot bath acts in the same way and more rapidly. For the analgesic effect of the larger doses less palatable drugs can be substituted. Morphine is also an example of a remedy which is worse than the disease.

Besides its other advantages I would point out that a printed table of exercises is a more economical method of prescribing than monthly doses of drugs for dysmenorrhoea and that it also serves in many cases instead of aperients and costs less.

Results of Treatment

There are still some members of the medical profession as well as the laity who see danger in the treatment of dysmenorrhoea by exercises and baths. In answer to these I can state that in my work among schoolgirls and training college students I have personally noted the effect of the practice of continuing games and other activities throughout the period on 2,300 girls. Six only of these have reported that games at the period did not suit them but in not one case out of the whole number have I heard of any ill effect noted either at the time or subsequently.

In nearly twenty years of practice I have had just over 400 cases of dysmenorrhoea of varying degrees of severity which have been cured or relieved by treatment with baths and exercise. Fourteen patients have complained that they felt worse after the exercises though no increase of disability persisted. But since three of the severest of these cases have through force of circumstances ultimately given themselves up to vascular exertion I have ceased to be discouraged by the failures. Very successful results of the treatment of dysmenorrhoea by special exercises in cases free from pelvic organic findings among college women in America are quoted in an interesting article by Drs. Margaret Bell and Elsie Parsons.[1]

To those who see risk in the remedial exercises I would ask what alternative treatment they would recommend. Rest and drugs must be regarded as merely palliative. Dilatation of the cervix is the only time-honoured medical cure. It sometimes has to be repeated and the risks involved are surely much greater. Of diathermy I have little experience but I recommend it to patients unwilling to adopt the usual treatment.

It is of course important to exclude appendix trouble before advising strenuous exercise but caution in this respect is just as necessary during the inter-menstrual period and applies equally to both sexes. I have not yet found a case of appendicitis in which abdominal pains occurred *only* during the period but owing to the greater impression made by the dysmenorrhoeic pain careful inquiry is sometimes necessary to elicit accurate information with regard to abdominal pain at other times.

For severe dysmenorrhoea the set exercises are generally necessary as a substitute for or in addition to any outdoor games or sports. They can be more easily regulated in time and amount to suit the needs of the patient.

Women in Industry

It is the freedom from risk in such treatment which has prompted Lady Barrett and myself in response to requests from social workers to publish a leaflet entitled *Advice to Young Women Concerning the Monthly Period* in which the hygienic measures described above are stated as simply and briefly as possible and the table of exercises is appended.

The advice given is on the same lines as that contained in the leaflet for schoolgirls issued by the council of the Medical Officers of Schools Association.

The main purpose of the leaflet is for distribution among healthy girls and women engaged in industrial occupations with the object of reducing the incidence of disability during the period. It seems that dysmenorrhoea severe enough totally to incapacitate workers is not common but a considerable proportion of women especially those with sedentary and standing occupations suffer minor pains and discomfort every month. With this unnecessary suffering there must inevitably be an unnecessary though unrecorded diminution in the output of work.

This leaflet can also be obtained from Messrs. Lewis and Co. I am finding it helpful too for private patients as it ensures a fuller understanding of the instructions given in the consulting room.

Reference

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BONE GRAFT AND FUSION OPERATIONS FOR THE SPINE*

BY

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(From the Spinal Unit)

Operations for spinal fixation in adult cases of tuberculosis are in the absence of certain contraindications widely advised as a useful adjunct to treatment. That there is no such unanimity as to the precise method of attaining fixation is shown by the fact that from time to time new methods or modifications of older methods are invented and described. It is because the relative merits of such methods have received little attention in our literature that this paper has been written. Its object is to consider some of these methods and to arrive at some conclusions as to which of them from simplicity and wide applicability is the best. It is recognized that all these operations have their origin in the methods

* From a paper read at a meeting of the British Orthopaedic Association at Newcastle-upon-Tyne, October 30th, 1931.

of Hibbs and of Albee I shall first describe briefly the essential points of these methods Both aim at fusing the posterior parts of the affected vertebrae together with two or three vertebrae above and below them In Albee's method this is done by splitting the spinous processes and placing in the groove so formed a graft taken from the shaft of the tibia, if the deformity is severe, flexion of the graft is obtained either by shaping it or by making saw cuts parallel to its long axis so that it can be bent Hibbs's method comprises fusing the laminae of the corresponding area into one solid mass To do this the ligamentum subflavum and all soft tissue attached to the laminae must be dissected away and the intervertebral articulations destroyed, bony bridges are then made by turning down small bone flaps from the laminae and finally the spinous processes, previously broken down are placed so as to assist in forming the bridge I had the opportunity some years ago of seeing both these operations performed by the originators in their own hospitals Under these conditions both look easy to perform and there is no doubt of their effectiveness when however one attempts to perform them oneself both present certain difficulties

Gibson of Winnipeg in a recent article mentioned some of the difficulties in the Albee operation The degree of development of the spinous processes varies considerably in different individuals—sometimes extreme flexibility makes it hard to split them and difficulty arises in gauging the depth of the groove which may easily be either too deep or too shallow Again when a lateral curve is associated with the usual kyphosis the spinous processes are not in line, and this may call for the very difficult task of cutting a graft curved in two planes Further there is a risk that the use of a mallet and chisel so near the infected area may cause the infection to light up Another danger is that the graft being relatively small may later be fractured particularly as a result of torsion of the body Hibbs's operation has this advantage over Albee's that the fusion is more general and the method can be used in all degrees of deformity in addition the removal of the prominent spinous processes improves the appearance and diminishes the risk of pressure both during the early post operative stages and later when a spinal support is applied It has however some disadvantages chief amongst which are the meticulous care required the time necessary to perform it and the consequent increased risk of post operative shock The operation is more difficult to perform in the lumbar than in the thoracic region In the latter region the laminae overlap to a greater degree there is consequently a smaller gap to be bridged and also they are more superficially placed For these reasons it is agreed that there are difficulties in both the operations and it is as a consequence of this that various modifications have been made I propose to mention three of these

1 Hey Groves has used a method in which two grafts are placed one on each side of the spinous processes and sutured or bolted together By this means a double thickness of graft is obtained and the strength of the spinous processes is not impaired

2 Gibson[1] of Winnipeg uses a method in which a solid graft with two clothes peg ends is cut from the tibia the spinous processes of the affected vertebrae are detached and the sides of the spinous processes of the two vertebrae above and below are cleared and made raw The graft is then applied over the raw surface of the bases of the detached processes while the two limbs of the clothes peg ends lie one on each side of the spinous processes above and below

3 In a third method grafts from the tibia are placed in the vertebral grooves of the laminae This operation consists in stripping with a large chisel the periosteum and muscles from the sides of the spinous processes and from the laminae, and freshening the surfaces so exposed When this has been done grafts from the tibia shaped or straight as need be, are placed in the grooves The grafts are then held in position by suturing the muscles over them after removing the prominent spinous processes This method has been strongly advocated by Wheeler, who however puts the graft on one side only He has shown that a graft so placed both survives and functions

While the methods of Hey Groves and Gibson have both been proved effective and advantageous they possess certain disadvantages It is obvious, on theoretical grounds, that when acute kyphosis is associated with lateral displacement they must be very difficult to perform In addition they both presuppose in the operator a manual dexterity which may not be present

The method of placing one graft in each vertebral groove is mechanically sound, combining as it does the advantages of the Hibbs and Albee operations It is easy

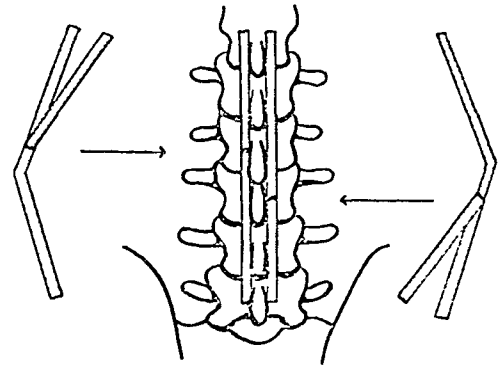


Diagram showing angular grafts cut from the tibia and broken to fit in acute kyphosis

to perform therefore causing less post operative shock it is adaptable to all types of deformity in the dorsal and lumbar regions In effect the graft is really a series of small grafts uniting adjacent laminae It thus follows that in a very angular kyphosis the graft can be broken without materially weakening it provided the fracture is made over the centre of a lamina and not at a corresponding point on each side In the case of a lateral deformity it may be that one graft only can be used—on the concave side of the spine It will readily be seen that although only tuberculosis has been referred to the method can be used equally for certain fractures of the spine and other conditions needing spinal fixation

Having considered the method of fixation reference should be made to one other point—the extent of the operation It has usually been taken for granted that the fixation should include two or three vertebrae above and two or three below those affected Indeed one great criticism of the operative treatment of tuberculosis is the resultant immobilization of a larger area of the spine than is actually affected by disease In the thoracic region this is not of so much importance as in the lumbar region where any unnecessary loss of mobility is a disadvantage This is especially the case where x rays show that the disease is limited to two or three vertebrae only The great risk to a patient successfully treated by conservative methods alone is that a sudden jar may strain a fibrous ankylosis and cause a recurrence of symptoms The effect of a spinal graft is to take the weight off the vertebral bodies and transfer it to the articular processes Theoretically therefore recurrence should be prevented by short grafts joining together the laminae of the affected vertebrae where the disease is very limited or where it is more extensive including one above and one below

During the last few years I have had to consider very carefully what is the best method of fusing the spine. After a trial of other methods I came to the conclusion that from a practical point of view the method of the double graft in the vertebral grooves was the soundest, the simplest, and the most generally applicable. During the last twelve months I have used it in eight cases of various type. While it is yet too early to speak of the final results in all cases I have found the method (sometimes slightly varied) uniformly satisfactory.

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LICHEN URTICATUS: A DIFFERENTIAL DIAGNOSIS OF SMALL-POX

BY

HERBERT D. CHALKE, M.A., M.R.C.S., D.P.H.

[illegible]

During an epidemic of small-pox, especially in its modified form, errors in diagnosis are common, and the rashes of other diseases are often mistaken for the variolous eruption. In the majority of cases of wrong diagnosis the patient is found to be suffering from chicken-pox, but measles, scarlet fever, specific eruptions, and drug rashes are also responsible for mistakes. Acne and impetigo may also cause confusion, while cases of pediculosis or mosquito bites have found their way to the small-pox receiving station on many occasions. In children, though not so often mentioned in the textbooks under the diagnosis of small-pox, lichen urticatus is responsible for many [illegible]. Fibulis referred to the possibility of its being mistaken for small-pox, but he was of opinion that differentiation between the two diseases should present little difficulty. A number of cases of lichen urticatus were examined during 1930 and 1931 in the Metropolitan Borough of Poplar. Many of them were brought under observation as a result of their being notified as cases of small-pox; others were visited at the request of the medical attendant, who considered the rash suspicious or the graver cases. On a few occasions the rash was mistaken for chicken-pox or measles. In all about forty cases were examined during fourteen months, sixteen being notified as small-pox or possible small-pox, and two as chicken-pox.

Lichen Urticatus

Lichen urticatus, or papular urticaria, is one of the commoner skin diseases of early life. It differs from other forms of urticaria because the characteristic lesion is a papule, rather than a wheal. The disease commences as an eruption of papules of measles, a quarter to one-half an inch in diameter, each arising a small papule at its centre. The papules rapidly [illegible] for minutes to an hour or so, and the [illegible] during [illegible] eruption, in many cases, persists. Fresh crops of lesions may appear at any time during the course of the disease. The papules soon assume the colour of the surrounding skin, and a complete disappearance of the [illegible] takes place in the same manner that it occurs in measles. Many of the papules are surmounted by minute vesicles, as in common forms of small-pox. Scratching is considered a common and disturbing result in the appearance of blood crusts. When the earlier stages are passed, the rash is distinguished from a papular [illegible] by the [illegible] stage. It is because the [illegible] stage is so short-lived that it is very often missed by the medical attendant. Indeed, it sometimes escapes the notice of the mother, who can only usually describe the rash as [illegible] mosquito bites or [illegible] bumps. Children up to 2 years of age are most susceptible, and in numerous instances a history of previous attacks may be obtained. Primary lesions, as a rule, [illegible] infancy, but cases have been described in which the first attack took place as late as the fourth year of life. Many authorities have noted that the lesions of prurigo show a preference for the limbs, especially the extensor surfaces, while [illegible] and flexor surfaces tend to escape. Hartzell is of opinion that the [illegible] of [illegible] [illegible] and strip [illegible] are [illegible] severe forms of [illegible]. Variations in the [illegible] of lichen urticatus. Macleod states that in age the [illegible] upper extremities than the [illegible] on the [illegible] parts, especially the lower part of the [illegible]. Wilson and Morris consider that the rash of lichen urticatus [illegible] a predilection for the trunk as opposed to that of prurigo, in which the lesions are spread on the [illegible] and on the flexor aspects of the limbs and [illegible] on the extensor aspects. According to Radcliffe-Crocker the distribution of lichen urticatus is [illegible] that of the eruption of small-pox.

Papula urticata—the occurrence of wheals as a result of scratching on the eczematous [illegible]—is considered in connexion with the rash of lichen urticatus, but by no means a constant phenomenon. In the cases examined [illegible] could not be noted, but this may be explained on the fact that often the eruption was of many days' duration when first seen. Nevertheless, only a few of the children are said to be the least [illegible] from this complaint, while prurigo is a common accompaniment of [illegible] and pruritus.

Records of Cases Examined

In thirty-eight children the ages at admission were as follows:

1 year	1	3 years	11	5 years	3	7 years	1
2 years	3	4 years	11	6 years	3	8 years	1
3 years	4	4 years	7	6 years	3	9 years	1
3 years	5	4 years	8	6 years	3	10 years	1
3 years	6	4 years	8	6 years	3	11 years	1
3 years	7	4 years	8	6 years	3		
3 years	8	4 years	8	6 years	3		
3 years	9	4 years	8	6 years	3		
3 years	10	4 years	8	6 years	3		
3 years	11	4 years	8	6 years	3		

The majority were visited during the months of April, May, June, and July, a few during September and the winter months. In 40 per cent. of the cases the rash was entirely popular at first examination and on subsequent visits. The remaining children showed an urticarial element in addition to the papular. The papules were usually small—pin-head size—but were sometimes much larger, reaching a diameter of a quarter of an inch. In a few cases the rash was represented by [illegible] and a few lesions, but these were exceptional. Some cases of extreme severity were encountered, where [illegible] the papules were almost [illegible]. In a few [illegible] the rash [illegible] a [illegible] [illegible] to small-pox. In 70 per cent. of the cases there was an excess of the lesions [illegible] the [illegible] [illegible] to them. In the great majority of cases the papules were [illegible] on the forearm and [illegible] and [illegible] and [illegible] and [illegible] on the extensor surfaces than on the flexor. When the [illegible] [illegible] was present, it usually [illegible] on the [illegible]. The face was affected in only a few children, and then to a [illegible] small extent, while [illegible] were [illegible] in the axillæ and [illegible]. In its preference for [illegible] and [illegible] of [illegible] at the expense of [illegible] [illegible] the eruption still [illegible] that of small-pox, but its [illegible] on the face was not in keeping with the distribution of [illegible]. Three of the children showed the [illegible] eruption on

the soles and in four cases it was also present on the palms, the papules being hard, firm and 'shotty' to the touch The rash was fairly symmetrically arranged on both sides of the body The disease persisted for periods varying from a week to two months the seat of the eruption being marked by slight pigmentation Rarely unless secondary infection occurred was there scarring Three patients had the lesions secondarily infected one of them a female of 18 months showing a severe moist, eczematous condition on the limbs and buttocks ten weeks after the commencement of illness This proved very resistant to treatment Another child 2 years of age was first examined after secondary changes had taken place The rash was composed of scabs an eighth to a quarter of an inch in diameter, and where these had been

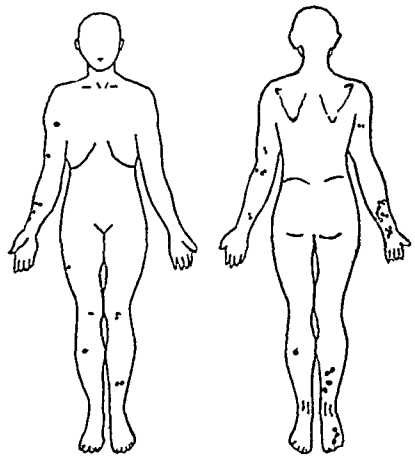


Fig 4.—Chart showing distribution of rash in a typical case

knocked off a moist oozing surface was exposed There were papules on the soles and a few fresh papules and macules in various situations This child was well nourished and appeared otherwise healthy In a number of cases it was possible to obtain a history of previous attacks tending to occur in warm weather The mother sometimes called the complaint hives teething rash or sugar rash Home conditions were usually far from satisfactory but the children themselves were on the whole clean and well nourished There did not appear to be any connexion between breast or artificial feeding and the incidence of the rash

Differential Diagnosis

There should seldom be any great difficulty in differentiating between small pox and lichen urticatus Mistakes are most liable to occur when the urticarial stage has passed and the rash is entirely papular simulating the papular stage of variola During an epidemic of modified small pox an eruption which predominates on the limbs —more especially on their extensor surfaces—may readily be misdiagnosed unless the individual lesions are carefully examined In every case in which the least doubt exists the eruption should be mapped out on a chart This in itself is generally sufficient to enable a correct diagnosis to be arrived at If the rash is moderately profuse on the limbs and absent or sparse on the face the evidence is against the disease being small pox Again whereas in lichen urticatus papules may be present on the upper and lower extremities at the same time the lesions of small pox are always at a later stage of development on the face and arms than on the legs One would therefore expect to find vesicles on the face when the rash on the legs was papular

As distinct from the papule of lichen which appears to be *on* rather than *in* the skin the lesion of small pox commences in the deeper layers These differences may readily be appreciated on palpation Although a modified small pox rash shows many superficial papules, *some* of them will always be deep whereas in lichen urticatus all are superficial The small pox lesion is inflammatory and passes through the stages of vesicle and pustule before desiccation takes place The lichenous papule is usually the colour of the surrounding skin and though often capped by a small vesicle or crust it remains papular unless there is much scratching and consequent sepsis This stage is not likely to be confused with small pox The discovery of one or two urticaria like lesions is a very valuable aid to the diagnosis of lichen urticatus These can hardly be confused with the areolae which so often surround the small pox papules, vesicles or pustules Severe pruritus, which does not occur in small pox may lead to an erroneous diagnosis of scabies but the absence of the characteristic burrows is sufficient to eliminate this ailment The varicelloid rash is heterogeneous and its papular stage very short-lived Vaccinal lichen two cases of which were reported on by the author [6] is almost indistinguishable from lichen urticatus It appears at about the eleventh day of successful vaccination and is not of common occurrence Unlike the infectious diseases lichen urticatus is not preceded by a period of pre eruptive illness but this is sometimes true of modified small-pox

Conclusions

Lichen urticatus frequently bears a striking resemblance to small pox in the distribution of its lesions The papules very often prefer the limbs to the trunk, and the extensor surfaces to the flexor The face receives little rash in the majority of cases

The lesions themselves differ markedly from those of small pox and this disease may be eliminated by careful examination

The illustrations reproduced on the Special Plate show an eruption of lichen urticatus before and after secondary changes had taken place

My acknowledgements and thanks are due to Dr W Allin Young D S O medical officer of health for the Metropolitan Borough of Poplar for permission to publish these notes and for valuable help in the collection of data

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THALLIUM ACETATE IN THE TREATMENT OF RINGWORM OF THE SCALP *

BY

JOHN T INGRAM M D M R C P

PHYSICIAN IN CHARGE OF THE SKIN DEPARTMENT THE GENERAL INFIRMARY LEEDS LECTURER ON DISEASES OF THE SKIN UNIVERSITY OF LEEDS

(*With Special Plate*)

The adventures of thallium acetate in the practice of medicine and particularly in relation to the treatment of ringworm of the scalp have never been too happy After its rejection by Sabouraud in the early part of the century little was heard of this drug until Buschke published his work in 1914 Subsequent reports from this author in 1926 together with the experiences of Cicero in Mexico published in 1918 and 1922 appeared to have established the use of the drug upon a sound basis but as further literature has been forthcoming doubts

* Read to the Section of Dermatology at the Annual Meeting of the British Medical Association Eastbourne 1931

have caused a human life. The point at present [illegible] must [illegible] and control of the [illegible]. Dr. [illegible] the disease and the [illegible] in [illegible] and [illegible] cases like Wright gave reasons why he preferred thallium acetate as [illegible] [illegible] to [illegible]. In December 1926 Lynch and Sewell [illegible] that thallium acetate should not be used as an ointment [illegible] in the treatment of ringworm of the scalp and as an alternative to the B. [illegible] they [illegible] that the [illegible] e. Eczema was almost intolerable to the in the treatment of ringworm in such [illegible] Gerundo and Pecora and later Pecora[illegible] used thallium acetate to a [illegible] [illegible] that [illegible] ways in the treatment of ringworm and [illegible] the views opposing the use of this drug.

At the same time [illegible] cases treated by the [illegible] salving of [illegible] and [illegible] have repeatedly come [illegible].

We [illegible] [illegible] sufficient about the [illegible] of cases of thallium acetate to inquire into the [illegible] [illegible] of the matter but such communications as I have put before you have call for some attention [illegible] of the literature as well as personal communications [illegible] to the belief that [illegible] with the greatest caution in the use of this drug in the treatment of ringworm of the scalp and to determine the limits of safety and the rule governing the use of the drug. It seems to me that it can be of no use unless the procedure is simple and can be pursued with [illegible] safety.

That the routine treatment of ringworm of the scalp demands some [illegible] [illegible] [illegible] will be generally accepted. There are only two such measures known to us [illegible] and thallium acetate. I think we can [illegible] admit that a more [illegible] [illegible] [illegible]

British Pharmacopoeia and are in daily use one merely needs to adhere to the correct dosage and method of administration

Routine Procedure

My own practice gradually formulated with increased experience is to have the child's urine examined If this is clear and clinical examination is satisfactory the child is weighed naked To render the procedure as simple as possible the weight in pounds is multiplied by four which gives the required dose of thallium acetate in milligrams This method appears to me simpler and safer than the usual practice of weighing in kilograms and varying the dose per kilogram as between eight and nine milligrams of thallium acetate The following points should also be observed

1 If the dose is *under* 200 mg treatment proceeds as in the case of ordinary out patients

2 If the dose is *between* 200 and 250 mg the over cautious may treat the case in bed but it is satisfactory to proceed as with cases of Group 1 as long as the child is kept under observation

3 *Between* 250 and 300 mg great caution is exercised and the case is treated in bed

4 More than 300 mg is never administered

The average age of a child requiring 200 mg is 7 years 250 mg 9 years 300 mg 12 years It will be seen that there is little danger in treating children up to the age of 9 years

It is therefore very difficult when these precautions are taken for a child to receive anything considerable in the way of an overdose even if slight errors are made in the calculations or the scales are inaccurate Any case demanding more than 200 mg goes under special observation

It is unwise to use solutions of the drug since this may lead to errors in dispensing Now that tablets of varying strength are dispensed in different colours there is little excuse for errors in dispensing this dangerous drug In my own cases the tablets are swallowed by the child who is subsequently given a drink of water There is less chance of the child not receiving the full dose if this practice is followed There is however, considerable room for further improvement in the wholesale dispensing I do not consider it wise to repeat the treatment should the measure be unsuccessful but in any case an interval of not less than three months should elapse

Local Treatment

The other matter to be considered in thallium treatment concerns the local measures employed An elaborate treatment involving skilled attention—the use of epilation forceps adhesive strapping collodion, etc —is not in my opinion likely to bring the measure into the realm of practical politics The parents the patient and the practitioner will soon find no time for such things It is necessary to get all the stumps removed as quickly as possible to prevent reinfection of the new hair which is already beginning to show at the end of three weeks If the whole scalp is painted *three times a day* with 2 per cent tincture of iodine *every day from the onset of treatment* this provides adequate anti parasitic action while at the same time a coarse desquamation of the scalp is effected reaching its height towards the end of the third week The scalp should not be washed during the first two weeks but should be washed once or twice during the third week The desquamation of the scalp brings away the infected hairs with it and the whole procedure is effected with a minimum of trouble to patient and doctor It is highly efficacious and simple I would emphasize that the *whole* scalp should be painted daily and that no other application should be used—particularly no ointment It is my practice to have these cases attending once a week for the first three weeks to see that the procedure is being carried out accurately After this they attend once a fortnight for a further six or eight weeks The treatment is stopped at the end of that time

Results

I believe these suggestions for routine treatment are perfectly safe and simple They have reduced the burden of the ringworm cases in my clinic to a negligible factor They have also reduced considerably the period during which observation is necessary In the past three years I have treated fifty one cases of ringworm of the scalp by *x* ray therapy with completely successful results I have treated one hundred and one cases with thallium acetate—ninety-four cases successfully and seven unsuccessfully In the earlier period I had three cases of severe toxaemia, but since then I have not seen anything that could be regarded as sufficiently severe to warrant the patient being kept in bed

Summary

1 There is no serious evidence against the use of thallium acetate in the treatment of small spore ringworm of the scalp if the drug is properly administered

2 Though toxic symptoms may occasionally be encountered they are seldom severe and the patient invariably recovers completely

3 There is no evidence whatever to suggest that thallium acetate affects the growth or development of the child or effects any permanent damage to any organ

4 A simple method of procedure has been described which, it is suggested is perfectly safe and brings the practice within the scope of the general practitioner

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LOW VISCERAL TONE

BY

D W CARMALT JONES D M F R C P.

DUNEDIN N Z

(With Special Plate)

Some years ago I was consulted by a lady of whose domestic circumstances I happened to be aware She was 47 years of age and had been a vigorous athletic woman she complained that everything was a trouble and that she was depressed miserable and lachrymose I found her development and nutrition fair but she was in a condition of general slackness her heart gave extra systoles her blood pressure was 90/60 her tongue was flabby and indented by the teeth and her right kidney was readily palpable I easily elicited the information that her life had been one of continuous anxiety on account of her family affairs

The physical slackness mental depression extrasystoles, low blood pressure thin tongue and visceroptosis appeared to make an easily comprehensible syndrome and I have found it in a good many cases since though not all of the items are always present The history and symptoms are generally very similar the extra systoles often occur at night and disturb sleep and sinus arrhythmia is often manifest The low blood pressure is not invariable I have tabulated the chief findings in

Case	Age	Symptoms	Nutrition	Tongue	B P	Digestive System	Heart	Nervous System	Duodenal Ulcer
1	47	Dyspnœa, faintness, pain in chest	Fair	Thin, flabby, no definite papillæ	90/60	—	Extrasystoles	—	—
2	43	General pain in chest, dyspnœa	Poor	Thin, flabby, no definite papillæ	85/55	—	Small pulse	—	—
3	36	Sore throat	Very thin	Large, flabby, indented	85	—	Slow arrhythmia	—	—
4	42	Pains in chest, dyspnœa, faintness, sore throat	Very thin, flabby, pale	Large, flabby	100/70	No abnormality found	Slow arrhythmia	—	—
5	—	Pain in chest	Thin	Flabby, indented	85/55	No abnormality found	—	—	Small ulcer
6	—	Dyspnœa, pain in chest, sore throat	Very thin, pale, flabby	Flabby	100/70	No abnormality found	Slow arrhythmia	—	Small ulcer
7	32	Dyspnœa	Thin	Thin, indented	85/60	No abnormality found	—	—	—

this and six other cases in the table. All the cases are in women and five out of the seven are married or are widows; two are aged between 20 and 30, two between 30 and 40, and three between 40 and 50. The symptoms have thus generally become obtrusive in early middle life.

Case 7 was under my care in Dundee Hospital and has been more fully investigated. Her symptoms were mainly dyspnœic, but the appearance of her tongue immediately directed attention to this syndrome. No gross lesions were detected. The results from the laboratories and x-ray department were as follows:

Barium meal and x-ray: gross ptosis of the stomach, practically 30 per cent delay in emptying, no organic lesion detected. Gastric analysis: HCl was absent from the stomach contents for the first hour and rose only to 20 during the experiment. 20 c.cm. of N/10 soda required to neutralise 100 c.cm. of gastric juice. Blood chemistry: total non-protein nitrogen 28 mg. per 100 c.cm., sugar 0.09 per cent. Basal metabolic rate +9 per cent.

Thus all functions appear to be carried out to a minimum standard, with the exception of the blood pressure, which is slightly higher than normal. Otherwise metabolism, secretion and peristalsis are all sluggish, though not to a positive pathological degree. No history of anxiety was obtained, but the facies of the patient was highly expressive of it. The most probable explanation of this case, and perhaps of them all, is functional insufficiency (Fernanand) of the suprarenal capsules from exhaustion. Emotion, as Cannon long ago demonstrated, stimulates the suprarenals with secretion of adrenaline into the blood, and when anxiety is long continued in any case the vigour of these glands is likely to be exhausted. This would account for the low—though not pathologically low—blood sugar. It would also account for the low blood pressure commonly found. Probably the suprarenal cortex is not affected alone, and the low basal metabolism suggests a similar trend. The low non-protein nitrogen in the blood is not so easily explained, but may be due to a sluggish action of the liver. All of these functions are only a little below normal, but together they produce a new depressing syndrome. In treatment of the last case the abdomen was supported on a double spica bandage on account of the visceroptosis; glucose drinks were given to increase the sugar intake, and also to stimulate the liver together with eggs to increase the blood nitrogen, and a tonic mixture to increase the metabolic rate. In cases where the blood pressure was low I have found spirochæta but that drug is not always well tolerated and sometimes causes nausea. The general condition improved considerably, and the patient gained 5 lb. in three weeks—5 st. 7 lb. to 5 st. 12 lb. The examinations were not repeated.

Similar cases could be cited as occurring in cases of chronic ulcer which have led to the diagnosis of the symptom-complex with spasm of the pylorus and consequent dilatation of the stomach, when that has not been present. The condition appears to me to be a great deal more frequent than spasm of the pylorus, and to be a true visceroptosis, affecting the whole alimentary tract and also the circulatory system. The tone is quite abnormally relaxed. The state of the tongue is most characteristic, and once that is observed one can feel sure of finding other morbid signs in the syndrome. It is usual to look at the tongue as a specimen of the mucous membrane of the alimentary tract; it is at least as important as a specimen of the muscle of the tract. The tongue in this condition is obviously of low tone; it is thin, almost like a dog's tongue; there is a little hump along the dorsum on each side of which there is a longitudinal groove, and the edges are curled up and indented by the teeth. It suggests a thin slice of cooked ham. Photographs rarely indicate it well, but something may be made of the figure reproduced in the Plate from a case in which the tongue is very typical in the flesh. In any case with such a tongue I should expect to find a floating kidney and visceroptosis is almost certain to be present. The low blood pressure, the sinus arrhythmia and extrasystoles often disturbing sleep seem to me to be explained in the same way.

No explanation is assumed for these observations. Professor Fernanand claims to have been the first to describe chronic intermittent hypotension in 1913, which he forecalls constitutional angeioparesis. He observed it to be due to functional insufficiency of the adrenal capsules. He describes [illegible] general weakness, vertigo and visceroptosis, but in his summary makes no mention of the tongue.

Summary

A series of cases is described in which parietal and emotional weakness are found with low blood pressure, visceroptosis, and a characteristic state of the tongue; a case more closely investigated showed low metabolism in a mild degree. The patients are women who have been subject to long-continued anxiety, and the condition is ascribed to functional insufficiency of the suprarenal capsules.

References

[illegible]

TUBERCULOUS CERVICAL ABSCESS

HAMILTON BAILEY, F.R.C.S.

[illegible]

The term cervical abscess [illegible] of the gross pathology of this condition see Fig. 2. Commonly it is most often associated with a [illegible] upper [illegible] chain of [illegible] glands. Fig. 1 or Plate [illegible] the [illegible] gland and the [illegible]. In this site it is necessary in the first instance to exclude the possibility of the swelling being a branchial cyst. Elsewhere I have drawn attention to the [illegible] to which the latter condition is [illegible] the former and indicated how a differential diagnosis can often be made. In this communication it is proposed to discuss the treatment of [illegible]

cervical abscess To my mind, the development of such an abscess while the patient is under observation is a cause for regret for had the breaking down gland been excised before the fascial erosion the pathological process could have been terminated abruptly Be that as it may *no one will question that if the superficial abscess is* allowed to break through the skin and a sinus appears this at any rate is an occasion upon which the observer might well say with Whittier What might have been!

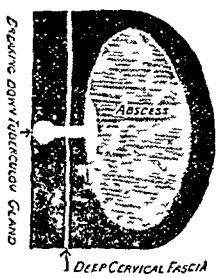


Fig 3

Aspiration of the Superficial Abscess

Repeated aspiration sometimes cures the condition It must be carried out every time the abscess cavity commences to fill a event which recurs until the ts of the gland or glands below extruded During this variable patient to be placed in the best ght is the most important of der constant observation (prefer tion through healthy skin at one the oblique method of Calot has It must be admitted however that slow and rather uncertain As I have seen is far from successful In one patient the needle has been introduced directly and the puncture hole is leaking In another the abscess has refilled more quickly than anticipated and the unobservant sufferer has failed to report the matter before the appointed day In a third the patient thinks he has knocked his neck At all events, the very thing which it has been the clinician's

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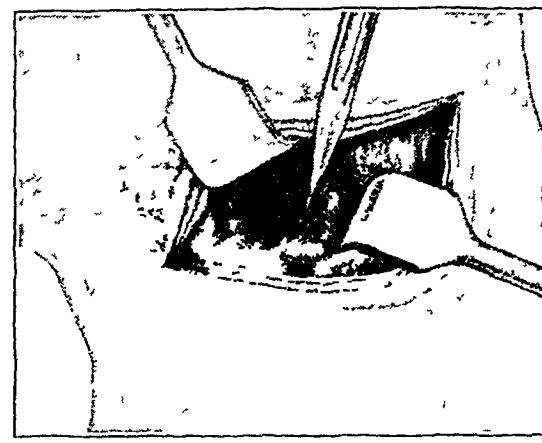
street to avoid is present—namely a patch of skin over excentre of the swelling sodden reddened and threaten m to break down (*Fig 2 on Plate*) It was in cases such w these that I first employed collar stud excision—ch merely scraping out but completely excising the pra ased group of glands beneath the deep fascia

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Excision of the 'Collar stud'

An oblique transverse incision is made over the swelling should there be a small area of unhealthy skin near the proposed line of incision this is excised elliptically To the skin edges moist gauze pads are accurately attached The anterior border of the sterno mastoid is now defined Special attention is directed to the character of this muscle for the following reason if it is flattened out over the swelling it is highly probable—in my experience certain—that one is dealing not with a tuberculous abscess but with an inflamed branchial cyst Even after the special trouble which I take to exclude the latter condition it was on three occasions only the sign of muscle flattening at this stage which indicated the true nature of the swelling These diagnostic humiliations were due to therapeutic aspiration which robs the branchial fluid of its characteristic cholesterol In one case tubercle bacilli as well were demonstrated in the fluid In collar stud abscess the exposed sterno mastoid feels stiffened and somewhat thicker than normal With a little dissection in front of this structure the abscess is opened and pale yellow pus exudes The cavity is emptied and mopped dry, and as one peers within a lining of soft dark red granulations called Volkmann's membrane is seen Here and there some inspissated material clings to the walls and cannot be wiped away These patches are dissected off and in the same way the sterno mastoid is cleaned until the whole cavity presents an even reddish hue A Watson Cheyne seeker is employed to find the tiny opening in the deep fascia as shown in the drawing reproduced below The opening is enlarged by stretching and the finger explores beneath By this method the diseased glands, which up to this time are not at all apparent can soon be found One now settles down to a careful dissection ligaturing


Fig 4.—After the abscess cavity has been emptied the hole in the deep fascia leading to the breaking down gland or glands is found by a Watson Cheyne seeker

bleeding points as they arise When dissection is completed it is quite easy to determine with the exploring finger if any enlarged gland in the neighbourhood has been overlooked Having dried the cavity, and been satisfied that no bleeding point has been missed gauze soaked in iodine is packed into the wound and left *in situ* for about two minutes A minute drainage tube is passed through a stab wound made with a tenotome through the back of the neck The object of the drain is to prevent a haematoma It is usually removed in twenty-four hours The platysma and superficial fascia are united by a running suture of the finest catgut and the skin is approximated with Van Heiff's *series fines* On the fourth day every other clip is removed and artificial sunlight treatment commenced

Collar stud Abscess in the Submaxillary Region

After the upper jugular chain the glands in the submaxillary region are most frequently attacked The following points concern excision of the 'collar stud' in this situation The incision is made three quarters of an inch below and parallel to the inferior border of the jaw An endeavour is made to avoid damaging the mandibular branch of the facial nerve—a branch more often severed by accident than is any nerve in the neck As in this part of its course the nerve lies just beneath the platysma we dissect and retract the lower cut edge of the skin in order that the platysma may be incised at a lower level The muscular sheet is then retracted upwards and with it the nerve Fortunately even if the nerve is damaged the resultant dropping of the corner of the mouth generally passes off in a few weeks As the skin incision lies in the shadow of the jaw the cosmetic results of the operation are particularly gratifying

Supraclavicular Triangle

In most of the cases which I have seen the skin has already become red and sodden over a large portion of the swelling If the posterior border of the fossa be chosen for the incision the necessary undermining imperils the vitality of the integument still further As the scar is of less importance here an oval shaped incision in the fossa itself is employed There is a convenient pad of

fat overlying Sibson's fascia and this provides an excellent plane in which the dissection can proceed once the opening in the deep cervical fascia has been enlarged.

These observations are founded upon twenty-six examples of collar-stud abscess treated by excision. Unfortunately attention occurred in all save two born of these being in the supraclavicular region and having advanced sinus involvement all the end-results have been satisfactory. I desire to make clear that in each case the glandular involvement was strictly limited. Indeed it has been my experience that the tuberculous process is usually circumscribed in this condition. In all cases artificial sunlight treatment was commenced soon after operation and where there were dental caries and diseased tonsils these received appropriate attention.

Finally it is submitted that for those who must be educated and reindered fit for the battle of life with as little delay as possible a complete excision of a collar-stud abscess is a form of treatment which cannot be bettered.

References
¹ Bulloch, Harold: *B. M. J.*, 1929, i, 1-29.
² Cal[illegible]

CEREBRAL ANEURYSM WITH RECURRENT LEAKAGE

BY

R. M. J. HARPER, M.A., M.D. Oxon.

ASSISTANT MEDICAL OFFICER, [illegible] DISPENSARY

(*With Special Plate*)

The patient, a single woman of 41, had enjoyed such exceptional health that except for an appendicectomy during the war she had never had to consult a doctor. Since October, 1929, she had complained of headaches before her menstrual periods, for which she took large doses of aspirin, although it is said by her family that her manner was strange at these times she carried on an active business life and never received medical attention.

March 7th, 1931.—Being in the pre-menstrual state she complained of severe headache. Later in the day her relatives hearing a fall found her unconscious on the floor. Seen by her doctor shortly afterwards she was semi-conscious, pale and collapsed. The power of speech was markedly affected, but there were no other paralytic signs. The reflexes were normal, the plantar response was flexor on both sides, the blood pressure was 150/90. A large bruise was present in the lower abdomen. The patient made steady progress and seemed likely to make a complete recovery.

April 1st.—She was getting out of bed and making her speech was improved greatly, but gave the impression that she talked with affectation.

April 2nd.—She complained of severe headache, but as she was again in the pre-menstrual state this was not unusual. She described the headache as being frontal and occipital in distribution. She had been sitting in her bedroom and later in the day she again fell, was found she had vomited and was lying unconscious on the floor. She was removed to a nursing home.

The patient on examination was found to be stuporous and unable to co-operate in any way. She had lost the power of speech and she had a bad right facial palsy. In the central nervous system the outstanding paralytic signs were signs of the right masseter and a right brachial monoplegia. In addition it was noted that the arm reflexes were normal, the legs equal in tone and the reflexes absent, the abdominal reflexes present, the plantar response was on both sides extensor, and ankle clonus was present. Kernig's sign was positive. The optic discs were of normal limits. The signs in the respiratory system suggested that a considerable quantity of vomitus had been inhaled into the right side of the chest. The temperature on admission rose a few hours later to 99.8° F.

In view of the possibility of the condition being due to subarachnoid haemorrhage a lumbar puncture was performed. The cerebro-spinal fluid which was under pressure was uniformly stained with fresh blood and on standing the supernatant fluid was distinctly yellow in colour. These characteristics of the fluid taken in conjunction with the above paralytic signs led to a diagnosis of leaking cerebral aneurysm and such lateralizing signs as there were pointed to the probability that the aneurysm was situated in the left Sylvian artery. On the assumption that the attack of March 7th had a similar origin the yellow staining of the supernatant fluid and the presence of altered blood pigments would be consistent with this explanation.

During the next few days the condition of the patient improved. She was able to understand simple commands but the power of speech and the right brachial monoplegia showed no improvement. The discs remained within normal limits although the veins seemed to be slightly engorged. The pulmonary condition was both slowly progressive and in spite of the condition of the central nervous system becoming more normal the patient died from broncho-pneumonia on April 10th, 1931.

FINDINGS AT NECROPSY

A post-mortem examination of the brain was carried out a few hours after death. There was some fresh blood in the main sulci and about a dessertspoonful round the base of the brain. Over the left Sylvian fissure could be seen a clot of blood about the size of a shilling. Without further examination the brain was allowed to harden in 10 per cent. formol saline. On dissection the circle of Willis was followed out along the left middle cerebral artery which lay in a clot of fresh blood about the size of a walnut. When this was scraped away there was revealed another rugged and more organized clot about a quarter the size of the other—obviously the result of an earlier haemorrhage. This second clot contained a small aneurysm at the origin of one of the branches from the middle cerebral artery. This aneurysm showed slight magnification represented on the Special Plate was spherical in formation and most probably of congenital type. A dissection of the other arteries of the brain showed that they were in a healthy condition and revealed no further aneurysms. In the plane indicated by a post-mortem will be seen in the wall of the aneurysm a small opening (not an artefact) through which the leakage evidently took place.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

A CONTRACEPTIVE

(*From Special Part*)

It is contended by some birth-control authorities that the absence of a Graafian ring would do all chances of pregnancy except, perhaps, that of extra-uterine gestation on account of the following case may be of interest and some use as a warning.

In February, 1931, Mrs. X, aged 37, married eight years but without children, consulted a London practitioner who as a prophylactic during coitus and was assured that she had a ring inserted into the uterus no other means of contraception were necessary. Under gas and oxygen a ring was inserted and was plainly felt in the uterus and a few days later the patient proceeded to India with her husband. Throughout the year's absence she suffered from irregular menstruation and prolonged menstrual periods. In August and September no periods were seen and there was constant low pain with much more marked pain in the abdomen. There was no vomiting but a constant nausea. The question of pregnancy had never entered her mind nor that of the medical attendant. But as per

cervical abscess To my mind the development of such an abscess while the patient is under observation is a cause for regret, for had the breaking down gland been excised before the fascial erosion the pathological process could have been terminated abruptly Be that as it may no one will question that if the superficial abscess is allowed to break through the skin and a sinus appears this at any rate is an occasion upon which the observer might well say with Whittier, 'What might have been!'

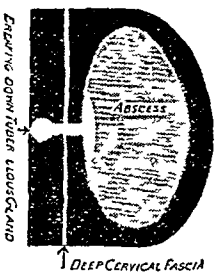


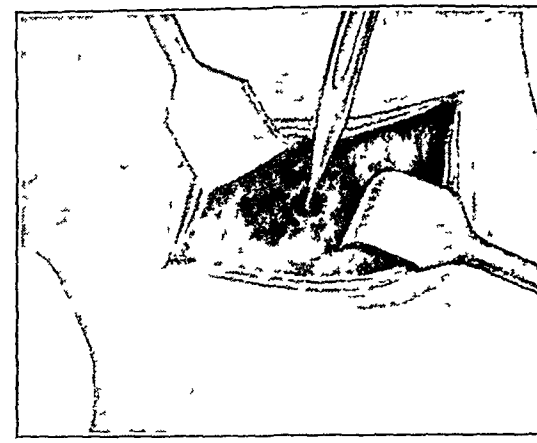
Fig 1

Aspiration of the Superficial Abscess

Repeated aspiration sometimes cures the condition It must be carried out every time the abscess cavity commences to fill event which occurs until the ts of the gland or glands below extruded During this variable patient to be placed in the best ight is the most important of der constant observation (prefer- ition through healthy skin at one the oblique method of Calot has It must be admitted however that low and rather uncertain As I have seen is far from successful In one patient the needle has been introduced directly and the puncture hole is leaking In another the abscess has refilled more quickly than anticipated and the unobservant sufferer has failed to report the matter before the appointed day In a third the patient thinks he has knocked his neck At all events, the very thing which it has been the clinician's object to avoid is present—namely a patch of skin over the centre of the swelling sodden reddened and threatening to break down (Fig 2 on Plate) It was in cases such as these that I first employed collar stud excision—which merely scraping out but completely excising the diseased group of glands beneath the deep fascia

Excision of the Collar Stud

An oblique transverse incision is made over the swelling should there be a small area of unhealthy skin near the proposed line of incision this is excised elliptically To the skin edges moist gauze pads are accurately attached The anterior border of the sterno mastoid is now defined Special attention is directed to the character of this muscle for the following reason if it is flattened out over the swelling it is highly probable—in my experience certain—that one is dealing not with a tuberculous abscess but with an inflamed branchial cyst Even after the special trouble which I take to exclude the latter condition it was on three occasions only the sign of muscle flattening at this stage which indicated the true nature of the swelling These *diagnostic* humiliations were due to therapeutic aspiration which robs the branchial fluid of its characteristic cholesterol In one case tubercle bacilli as well were demonstrated in the fluid In collar stud abscess the exposed sterno mastoid feels stiffened and somewhat thicker than normal With a little dissection in front of this structure the abscess is opened and pale yellow pus exudes The cavity is emptied and mopped dry and as one peers within a lining of soft dark red granulations called Volkmann's membrane is seen Here and there some inspissated material clings to the walls and cannot be wiped away These patches are dissected off and in the same way the sterno mastoid is cleaned until the whole cavity presents an even reddish hue A Watson Cheyne seeker is employed to find the tiny opening in the deep fascia as shown in the drawing reproduced below The opening is enlarged by stretching and the finger explores beneath By this method the diseased glands which up to this time are not at all apparent can soon be found One now settles down to a careful dissection ligaturing


Fig 4.—After the abscess cavity has been emptied a hole in the deep fascia leading to the breaking down gland or glands is found by a Watson Cheyne seeker

bleeding points as they arise When dissection is completed it is quite easy to determine with the exploring finger if any enlarged gland in the neighbourhood has been overlooked Having dried the cavity and been satisfied that no bleeding point has been missed gauze soaked in iodine is packed into the wound and left *in situ* for about two minutes A minute drainage tube is passed through a stab wound made with a tenotome through the back of the neck The object of the drain is to prevent a haematoma It is usually removed in twenty-four hours The platysma and superficial fascia are united by a running suture of the finest catgut and the skin is approximated with Van Horff's *sutures fines* On the fourth day every other clip is removed and artificial sunlight treatment commenced

Collar Stud Abscess in the Submaxillary Region

After the upper jugular chain the glands in the submaxillary region are most frequently attacked The following points concern excision of the 'collar stud' in this situation The incision is made three quarters of an inch below and parallel to the inferior border of the jaw An endeavour is made to avoid damaging the mandibular branch of the facial nerve—a branch more often severed by accident than is any nerve in the neck As in this part of its course the nerve lies just beneath the platysma we dissect and retract the lower cut edge of the skin in order that the platysma may be incised at a lower level The muscular sheet is then retracted upwards and with it the nerve Fortunately even if the nerve is damaged the resultant dropping of the corner of the mouth generally passes off in a few weeks As the skin incision lies in the shadow of the jaw the cosmetic results of the operation are particularly gratifying

Supraclavicular Triangle

In most of the cases which I have seen the skin has already become red and sodden over a large portion of the swelling If the posterior border of the fossa be chosen for the incision the necessary undermining imperils the vitality of the integument still further As the scar is of less importance here an shaped incision in the fossa itself is employed There is a convenient pad of

[illegible] Sounds fluid and this proves an excl[illegible] possible in which the diagnosis can be made only by opening in the deep cervical fascia has been incised

These observations are limited to a preliminary examination of cerebral oedema [illegible] Under better circumstances it will be possible to make [illegible] these brain in the supraorbital region and on the advanced stage of development. All the specimens have been sectioned. I desire to make clear that in each case the condition of the vessels was studied. Lastly I [illegible] Indeed it has been my experience that the [illegible] process is usually accompanied by this condition. In all cases artificial sunlight treatment was commenced shortly after operation and there have been definite cures and decided results that are proving appreciably effective

Finally it is submitted that for those who must be admitted and retained [illegible] in the hands of the surgeon Lister [illegible] as possible a complete exposure of a cerebral abscess is a form of treatment which cannot be [illegible]

Reprints

[illegible]

CEREBRAL ANEURYSM WITH RECURRENT LEAKAGE

R M J HARPER MA MD Cantab
[illegible]
(Late Surgeon RN)

The patient a single woman aged 41 was admitted into [illegible] hospital suffering from [illegible] an operation of the [illegible] the right side [illegible] to effect a cure. Since October 1928 she had complained of a constant [illegible] pain over the right eye which was to a large degree relieved by the administration of aspirin. She was [illegible] but the family history revealed nothing of importance. At these times she showed no definite [illegible] and [illegible] normal arteries

March 7th 1931—Being in the premenstrual state she complained of severe headache. Lying in the dark her head was [illegible] against a tall [illegible] and her temperature was 98 The first [illegible] but the [illegible] was subsequently [illegible] pale and collapsed. The [illegible] of speech was marked although there were no other gross signs. The reflexes were normal the plantar response was flexor on both sides the optic fundi were [illegible] a large [illegible] was present in the [illegible] The patient made steady progress and [illegible] home to make a complete recovery

April 1st—She was getting out of bed and walking but speech had improved greatly but [illegible] was [illegible] that she [illegible] with [illegible]

April 2nd—She complained of severe headache but as she was [illegible] the previous normal state the [illegible] normal She described the headache as being frontal and central in distribution She had been sitting in her bedroom and later in the day she [illegible] and had [illegible] and was [illegible] On the first She was removed to a nursing home

The patient on examination was found to be [illegible] and [illegible] [illegible] She had [illegible] the power of speech and the [illegible] with the left hand In the cranial nerves [illegible] the [illegible] pupil signs were regular of the [illegible] and [illegible] normal In addition it was noted that the arm reflexes were normal the [illegible] equal on the [illegible] was absent the [illegible] present the plantar [illegible] on both sides and all abdominal reflexes absent Kernig's sign was present The optic [illegible] were normal Lumbar The state of the [illegible] system suggested that a considerable [illegible] of [illegible] and [illegible] had [illegible] the right side of the chest The [illegible] lumbar being abnormal [illegible] a [illegible] brain [illegible] [illegible]

In view of the possibility of the condition being due to subarachnoid haemorrhage a lumbar puncture was performed The cerebrospinal fluid which was under pressure was [illegible] and with [illegible] blood after standing the supernatant fluid was distinctly yellow in colour These characteristics of the fluid taken in connection with the above general symptoms led to a diagnosis of leaking cerebral aneurysm and such localising signs as to be were pointed to the probability that the aneurysm was situated in the left Sylvian [illegible] On the assumption that the attack of March 7th had a similar cause the [illegible] staining of the supernatant fluid indicative of altered blood pigments would be consistent with this explanation

During the next few days the condition of the patient improved [illegible] she was able to understand simple commands but the power of speech and the right brachial monoplegia showed no improvement The optic remained within normal limits although the [illegible] was slightly raised The [illegible] reaction was somewhat progressive and in spite of the occasional [illegible] the central nervous system [illegible] more normal the patient died from [illegible] on April 10th 1931

Post-mortem Notes.

A post-mortem examination of the brain was carried out a few hours after death There was some fresh blood in the [illegible] and over a [illegible] round the base of the brain On the left Sylvian artery could be seen a clot of blood about the size of a shilling Without further examination the brain was allowed to harden in 10 per cent formol saline On dissection the circle of Willis was opened out and the left middle cerebral artery was found to contain a clot of fresh blood about the size of a walnut When this was scraped away there was revealed a small [illegible] and more proximal clot about a quarter the size of the other [illegible] the result of an earlier haemorrhage This second clot surrounded a small aneurysm at the point of origin of the striates from the middle cerebral artery The aneurysm above clearly measured [illegible] on the Sylvian Plate was [illegible] in outline and was [illegible] of [illegible] type A dissection of the other arteries of the brain showed that there was a [illegible] [illegible] and [illegible] no further aneurysms In the [illegible] caused by a [illegible] will be seen in the wall of the aneurysm a small opening [illegible] an attempt [illegible] made the leakage evidently took place

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

A CONTRACEPTIVE

(By a Special Pleader)

It is contended by some [illegible] authorities that the insertion of a Gräfenberg ring precludes all chance of pregnancy except perhaps that of extra-uterine gestation on account of the following case may be of interest and a [illegible] a number

In February 1931 Mrs X aged 36 married eight years but with no children consulted a London physician with a [illegible] of birth control and was assured that a [illegible] ring inserted into the uterus no other means of contraception [illegible] be necessary Under gas and oxygen a full-size Gräfenberg ring was placed in the uterus and a few weeks later the patient proceeded to India with her husband The [illegible] the early months of the year she suffered from [illegible] menorrhagia and backache with [illegible] during her menstrual periods In August and September no periods were seen and there was constant [illegible] with much [illegible] a pain in the left iliac fossa There was no vomiting but a constant [illegible] distress The question of pregnancy had not entered her mind nor that of the medical attendant but as her

symptoms increased especially the fever and pain, she was brought down to Calcutta

On examination I found she was about nine to ten weeks pregnant The radiogram by Dr Galstaun (reproduced on the Special Plate) explains itself Because of her symptoms and anaemia I advised that the patient s uterus should be emptied This was done and the ring was found embedded in the chorion presumably responsible for the pain discharge and fever The foetus appeared normal although it is a matter of speculation whether pregnancy to full term without disability to the mother or the foetus could occur in such a case This report and perhaps there are others of like nature unrecorded will perhaps curb enthusiasm

V B Green Armytage M D
Calcutta I R C P I C O G

SUDDEN DEATH FROM HAEMORRHAGE INTO THE SUPRARENAL CAPSULES IN A CHILD

(With Special Plate)

According to certain observers haemorrhage into the suprarenal capsules is extremely common in infancy Histologically haemorrhage into the suprarenal capsules can be demonstrated in nearly all newborn infants (Grulee s *Clinical Pediatrics*) Toxaemia and injury, particularly if there is asphyxia as in difficult and prolonged labour is the predisposing cause in most of the cases There is however a type in which there is no history of injury at birth or otherwise in which the 'apparently normal child goes into collapse and dies as in the case about to be described Thomson (*Diseases of Children*) says

> The most interesting type of the disease is that which occasionally sets in in children during the first year of life as part of a rapidly fatal illness The symptoms set in suddenly with severe abdominal pain high fever and sometimes vomiting and diarrhoea Scattered spots may appear over the surface of the body Convulsions are common and death may occur within twenty four hours

The following case belongs to this latter type although it differs from Thomson s description in that the child showed practically no symptoms previous to death

A female child about 7 months old was brought to the surgery by its father in the middle of the night On examination the child was dead having died in its father s arms on the way a matter of less than five minutes walk The most obvious thing noticed was a cluster of purpuric spots about the size of half a crown on the left cheek while all over the surface of the body on the buccal mucous membrane and soft palate were scattered discrete spots of the same type The child was rather poorly nourished and flabby but no evidence of rickets or other gross disease was observed

The story told by the father was that the child had been in its usual health until the day previous when it had been off colour and had vomited once The condition of the child at bedtime was not such as to cause the parents to seek medical advice During the night the mother s attention was called by the child s making a funny noise and when the light was turned on she noticed it was black in the face That appearance was due partly to the purpuric rash there was no question of asphyxia Thereupon the child was immediately brought to the surgery

Post mortem examination showed a poorly nourished underdeveloped child with purpuric spots as described Thorax abdomen brain and meninges disclosed nothing abnormal except that there were recent extensive haemorrhages in both suprarenal capsules as shown in the Plate

This case showed none of the several constitutional symptoms usually described It was the type that suddenly went into collapse and died The condition seems sufficiently rare to merit description

J A Henderson M B
Derby F Pettigrew M B Ch B

ARTERIO VENOUS ANEURYSM OF THE LEFT SUPERFICIAL TEMPORAL VEIN

(With Special Plate)

A Somali male aged about 35 came to hospital and gave the following history

As a result of a fight he was struck by a thick stick in front of the left ear two or three years previously There was much swelling and pain at the site of the injury but practically no bleeding At first he maintained that there was no bleeding at all but eventually acknowledged that there might have been not more than a tablespoonful After a week or two the swelling subsided completely except for a small pulsating area exactly where he was hit This then gradually extended over the scalp until the condition seen on admission was brought about

On admission he complained of throbbing and headache, especially in the occipital region

On examination there was a small scar about half an inch long at the site of the original injury and an obvious arterio venous aneurysm of the left superficial temporal vein and its anterior and posterior tributaries The photograph shows the condition fairly well The superficial temporal and posterior temporal veins were enlarged to two fingerbreadths and very tortuous At the site of anastomosis with the occipital vein the swelling was more saccular and the skull could be felt to be eroded beneath it—a depression about one inch in diameter The anterior temporal vein was less enlarged and gradually dwindled away towards the root of the nose The transverse facial vein was unaffected Pulsation was marked and a systolic thrill and a systolic bruit could be made out over the whole aneurysm Firm pressure in front of the ear allowed the veins to empty completely

Operation —An incision was made in front of the ear over the proximal portion of the aneurysm, and an attempt was made to dissect it out with a view to ligaturing the superficial temporal artery where it communicated with the aneurysm This could not be done owing to the thinness of the walls of the aneurysm and to the fact that it was adherent to the parotid fascia and zygoma completely covering the artery A small incision was therefore made about two inches higher up at the point marked L in the photograph and a ligature was applied there After operation the distal portion of the aneurysm disappeared entirely after a short rise of temperature accompanied by pain and tenderness a week later due to thrombosis taking place in it The portion proximal to the ligature slowly hardened and it now remains four months after operation as a smallish hard lump in front of the ear with pulsation just perceptible in it The headache giddiness, and throbbing have entirely disappeared

Commentary

The interesting points in this case seem to be (*a*) the fact that the condition was brought about not by a penetrating wound but by a crushing of the vessels against the zygoma—as shown by the nature of the injury and the small amount of external bleeding and (*b*) the considerable area of bone erosion in the occipital region and the pain produced thereby in spite of the fact that the occipito frontalis muscle lies between the vessels and the bone

A H Morley M B Ch B
Berbera Hospital Medical Officer

STERNAL FISSURE IN A CHINESE

(With Special Plate)

A Chinese boy 17 years of age came to the hospital complaining of occasional swelling of the feet this year (1931) When he was undressed it was at once obvious that he had a deep fissure of the sternum at the bottom of which the aorta could be seen to pulsate On inquiry he said that he had had this condition since birth At the bottom of the depression there was a small scar for which he could not account but which had probably been caused by needling by the native method Previous

illnesses and no history of tuberculosis. He has always been strong and during this year had come nothing but rest at home. There was a slight cough but he said he had no sputum.

Examination showed that the patient was a healthy-looking man with the exception of the right upper limb. On the right side of the chest there was marked wasting of the pectoral muscles and the right shoulder was somewhat depressed. The muscles could be felt to contract on the slightest effort, but there was no general tremor. The scapula and clavicle moved more or less normally during movements of the arm, but there was obvious limitation of movement at the shoulder joint. The head of the humerus could not be made out. The range of movement in the shoulder joint was very limited, but there was no pain or tenderness on manipulation. There was no evidence of tuberculosis elsewhere in the body. The heart and lungs were normal. The blood pressure was 120/80. The urine was normal. The Wassermann reaction of the blood was negative. The sputum was examined on three occasions and found to be free from tubercle bacilli. The radiograph showed the condition of the shoulder joint and a portion of the upper end of the humerus. There was no evidence of tuberculosis elsewhere in the body.

The interesting features of this case are: (1) that although on first examination the muscles of the deltoid region appeared to be extended at each end they were found to be fixed; (2) there was a primary extension of the arm during the examination.

I am indebted to Mr. [illegible] Brown, surgeon to the Queen Charlotte's Hospital, for permission to publish this case.

J. G. HASTINGS, M.C.
Senior Assistant Medical Officer, Queen Charlotte's Hospital.

HERPES ZOSTER WITH FACIAL PARALYSIS: CHICKEN-POX IN SAME HOUSEHOLD

On September 21st I attended a boy aged 13 years who complained of intense pain behind the right ear. Examination revealed a crop of vesicles over the mastoid region and the case was diagnosed as herpes zoster. On the next but two days later the patient was observed to have marked complete facial paralysis on the same side as the herpes. There was no other sign of involvement of the nervous system. When I saw the herpes had disappeared but the facial paralysis persisted. An additional point of interest is that the patient's two grandchildren, living in the same house, developed chicken-pox on September 17th, a fortnight after the grandfather's herpes began. There were no other cases of chicken-pox reported in the district. The herpes patient has been almost completely deaf in both ears for the last ten years. We know that the facial nerve sends a posterior auricular branch behind the ear, but this has not been proved to contain secretory fibres. The present case may account for this area coming from perineal nerves. Cases may be recorded in which herpes zoster has occurred in the neighbourhood of the external auditory meatus together with facial paralysis of the same side. I am not aware of a herpes zoster of the ear complicated by facial paralysis.

[illegible] G. H. H. BOOTH, M.B., Ch.B.

BREECH PRESENTATION

In view of the recent discussion on breech presentation which has been carried on in the *British Medical Journal*, the following case which occurred in Queen Charlotte's Hospital may be worth recording.

A primipara aged 18 was admitted on October 7th, 1931, in labour. She was a breech presentation with both legs and each arm extended. On October 7th version and extraction was attempted unsuccessfully. The patient continued in labour and was allowed to go on to labour spontaneously. Pains began at 1 a.m. on November 10th and the patient was admitted at 4.30 a.m. On examination the cervix was found to be the size of a shilling, membranes intact. At 10 a.m. the membranes ruptured spontaneously at 11.5 a.m. under general anæsthesia in the dorsal position a hand was found and both legs and the arm were delivered. The cervix was sufficiently dilated and the head brought down with a pair of Bland-Sutton's vectis applied over the occiput. The head was delivered with forceps and secondary traction. There was no excess of liquor amnii and the baby breathed at once.

The interesting features of this case are: (1) that although on first examination the muscles of the deltoid region appeared to be extended at each end they were found to be fixed; (2) there was a primary extension of the arm during the examination.

I am indebted to Mr. [illegible] Brown, surgeon to the Queen Charlotte's Hospital, for permission to publish this case.

J. G. HASTINGS, M.C.
Senior Assistant Medical Officer, Queen Charlotte's Hospital.

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

SOUTH MIDDLESEX DIVISION

Meeting at the Hall

At a meeting of the South Middlesex Division on November 25th with the chairman Dr. L. H. F. Walton presiding, Mr. Graham Mason delivered an address on minor injuries of the hand, including burns and scalds.

Mr. Mason said that in the case of incised wounds causing cut of more of the palmar digital tendons of the hand or fingers it was important to bear in mind the relationship of the synovial sheaths to a straight stiff finger was the result. The first action of the surgeon depended upon preserving the integrity of the parietal sheath between the two layers of the synovial or mucous sheath and the prevention of adhesions here. Suture was often difficult and should be performed as soon as possible after the accident. Following closure of the wound the part should be splinted in the position of least tension and movement be prohibited for two or three weeks. It was important to avoid causing the severed ends of the tendon and to unite them as early as possible with the adjacent structures. In long immobilization of the hand as also in cases of Colles's fracture the interphalangeal and metacarpophalangeal joints became progressively stiff. The contractures were unusually resistant to treatment and the sufferer after a few weeks of inaction might require many months of treatment. Active movement of the adjacent joints should therefore be started as soon as possible. The extensor tendons however from the base of the first phalanx downwards were devoid of synovial covering and on the dorsum of the fingers the tendon spread out into a broad fixed expansion division of which was not allowed by retraction on the splinting in a position of hyperextension had therefore to be maintained. Traumatic arthritis of an interphalangeal joint might be followed by long-lasting stiffness, pain and swelling. X-ray examination usually revealed no abnormality and the underlying factor being bruising of the articular cartilage. The best method of treatment was the application of hot gentle massage and movement. Fractures of the metacarpal bones were not as a rule accompanied

symptoms increased especially the fever and pain she was brought down to Calcutta

On examination I found she was about nine to ten weeks pregnant The radiogram by Dr Galstaun (reproduced on the Special Plate) explains itself Because of her symptoms and anaemia I advised that the patient s uterus should be emptied This was done and the ring was found embedded in the chorion presumably responsible for the pain discharge and fever The foetus appeared normal, although it is a matter of speculation whether pregnancy to full term without disability to the mother or the foetus could occur in such a case This report and perhaps there are others of like nature unrecorded, will perhaps curb enthusiasm

V B Green Armytage M D
I R C P I C O G
Calcutta

SUDDEN DEATH FROM HAEMORRHAGE INTO THE SUPRARENAL CAPSULES IN A CHILD

(With Special Plate)

According to certain observers haemorrhage into the suprarenal capsules is extremely common in infancy Histo logically haemorrhage into the suprarenal capsules can be demonstrated in nearly all newborn infants (Grulee's *Clinical Pediatrics*) Toxaemia and injury particularly if there is asphyxia as in difficult and prolonged labour is the predisposing cause in most of the cases There is however a type in which there is no history of injury at birth or otherwise in which the apparently normal child goes into collapse and dies as in the case about to be described Thomson (*Diseases of Children*) says

> The most interesting type of the disease is that which occasionally sets in in children during the first year of life as part of a rapidly fatal illness The symptoms set in suddenly with severe abdominal pain high fever and some times vomiting and diarrhoea Scattered spots may appear over the surface of the body Convulsions are common and death may occur within twenty four hours

The following case belongs to this latter type although it differs from Thomson s description in that the child showed practically no symptoms previous to death

A female child about 7 months old was brought to the surgery by its father in the middle of the night On exam ination the child was dead having died in its father s arms on the way a matter of less than five minutes walk The most obvious thing noticed was a cluster of purpuric spots about the size of half a crown on the left cheek while all over the surface of the body on the buccal mucous membrane and soft palate were scattered discrete spots of the same type The child was rather poorly nourished and flabby but no evidence of rickets or other gross disease was observed

The story told by the father was that the child had been in its usual health until the day previous when it had been off colour and had vomited once The condition of the child at bedtime was not such as to cause the parents to seek medical advice During the night the mother s attention was called by the child s making a funny noise and when the light was turned on she noticed it was black in the face That appearance was due partly to the purpuric rash there was no question of asphyxia Thereupon the child was immediately brought to the surgery

Post mortem examination showed a poorly nourished under developed child with purpuric spots as described Thorax abdomen brain and meninges disclosed nothing abnormal except that there were recent extensive haemorrhages in both suprarenal capsules as shown in the Plate

This case showed none of the several constitutional symptoms usually described It was the type that sud denly went into collapse and died The condition seems sufficiently rare to merit description

J A Henderson M B
F Pettigrew M B Ch B
Derby

ARTERIO VENOUS ANEURYSM OF THE LLI T SUPERFICIAL TEMPORAL VEIN

(With Special Plate)

A Somali male aged about 35, came to hospital and gave the following history

As a result of a fight he was struck by a thick stick in front of the left ear two or three years previously There was much swelling and pain at the site of the injury but practically no bleeding At first he maintained that there was no bleeding at all but eventually acknowledged that there might have been not more than a table-spoonful After a week or two the swelling subsided com pletely except for a small pulsating area exactly where he was hit This then gradually extended over the scalp, until the condition seen on admission was brought about

On admission he complained of throbbing and headache, especially in the occipital region

On examination there was a small scar about half an inch long at the site of the original injury and an obvious arterio venous aneurysm of the left superficial temporal vein and its anterior and posterior tributaries The photo graph shows the condition fairly well The superficial temporal and posterior temporal veins were enlarged to two fingerbreadths and very tortuous At the site of anastomosis with the occipital vein the swelling was more saccular and the skull could be felt to be eroded beneath it—a depression about one inch in diameter The anterior temporal vein was less enlarged and gradually dwindled away towards the root of the nose The transverse facial vein was unaffected Pulsation was marked and a systolic thrill and a systolic bruit could be made out over the whole aneurysm Firm pressure in front of the ear allowed the veins to empty completely

Operation —An incision was made in front of the ear over the proximal portion of the aneurysm and an attempt was made to dissect it out with a view to ligaturing the superficial temporal artery where it communicated with the aneurysm This could not be done owing to the thin ness of the walls of the aneurysm and to the fact that it was adherent to the parotid fascia and zygoma completely covering the artery A small incision was therefore made about two inches higher up at the point marked L in the photograph and a ligature was applied there After operation the distal portion of the aneurysm disappeared entirely after a short rise of temperature accompanied by pain and tenderness a week later due to thrombosis taking place in it The portion proximal to the ligature slowly hardened and it now remains four months after opera tion as a smallish hard lump in front of the ear with pulsation just perceptible in it The headache giddiness, and throbbing have entirely disappeared

Commentary

The interesting points in this case seem to be (*a*) the fact that the condition was brought about not by a penetrating wound but by a crushing of the vessels against the zygoma—as shown by the nature of the injury and the small amount of external bleeding and (*b*) the considerable area of bone erosion in the occipital region and the pain produced thereby in spite of the fact that the occipito frontalis muscle lies between the vessels and the bone

A H Morley M B Ch B
Medical Officer
Berbera Hospital

STERNAL FISSURE IN A CHINESE

(With Special Plate)

A Chinese boy 17 years of age came to the hospital complaining of occasional swelling of the feet this year (1931) When he was undressed it was at once obvious that he had a deep fissure of the sternum at the bottom of which the aorta could be seen to pulsate On inquiry he said that he had had this condition since birth At the bottom of the depression there was a small scar for which he could not account, but which had probably been caused by needling by the native method Previous

illnesses had no bearing on his condition. He has never been strong, and during this year had come nothing but rest at home. There was a slight cough, but he said he had no sputum.

Examination showed that the upper four sternebræ were separated by a complete fissure 1 mile from the manubrium downwards; there was normal union through the bone ridge was somewhat depressed. The unjoined sternal portions lined the sides of the deep depression, their lower ends in the central line. The sterno-hyoid and sterno-thyroid muscles arose from the edges of these plates about three inches below the normally developed clavicle. The sternal head of the sterno-mastoid muscle could not be made out. The skin at the bottom of the depression lay directly on the first part of the aorta and the upper part of the heart, and it pulsated violently with the movements of the heart.

Antero-posterior x-ray films showed the heart to be about normal in size and position, though slightly raised. The diaphragm was also more dome-shaped than is usual. No bony sequestra could be made out in the sternal plates. The rib cartilages sprang from the ribs at the usual sites.

The patient refused the offer of a restorative operation, and the matter was not pressed. The interesting point is the disability arising from the fact that the framework of the chest is not properly closed. The area which lies bare is depressed by inspiration, and by so much defeats the muscular efforts to produce a negative pressure in the thoracic cavity. The patient has rounded shoulders, produced in an effort of nature to reduce the gap. There is no other physical condition to account for the failure of the heart to meet the demands of normal exercise and work. The pulse-rate was about 80 per minute, and there was no dyspnœa while at rest. He was advised to take up sedentary work.

H. G. WYATT, M.B., Lond.

School's Memorial Hospital, Shanghai.

HERPES ZOSTER WITH FACIAL PARALYSIS: CHICKEN-POX IN SAME HOUSEHOLD

On September 3rd I attended an old lady, aged 73 years, who complained of intense pain behind the right ear. Examination revealed a crop of vesicles over the mastoid region, and the case was diagnosed as herpes zoster. On my next visit two days later the patient had developed a well-marked complete facial paralysis on the same side as the herpes. There was no other sign of involvement of the nervous system. Within a week the herpes had disappeared, but the facial paralysis persists. An additional point of interest is that the patient's two grandchildren, living in the same house, developed chicken-pox on September 17th, a fortnight after the grandmother's herpes began. There were no other cases of chicken-pox reported in the district. The herpes patient has been almost completely deaf in both ears for the last ten years. We know that the facial nerve sends a posterior auricular branch behind the ear, but this has not been proved to contain sensory fibres. The sensory distribution for this area comes from cervical nerves. Cases have been described in which herpes zoster has occurred in the neighbourhood of the external auditory meatus, together with facial palsy of the same side. I am not aware of a herpes *behind* the ear complicated by facial paralysis.

Heath's Range, N. G. H. BOOTH, M.B., Ch.B.

BREECH PRESENTATION

In view of the recent discussion on breech presentation which has been carried on in the *British Medical Journal*, the following case, which occurred in Queen Charlotte's Hospital, may be worth recording.

A primigravida, aged 18, was admitted on October 2nd, 1931, and remained at the Hospital for a breech presentation. The report on the x-ray picture was:

Breech presentation with both legs and one arm extended. On October 7th version without anæsthesia was attempted unsuccessfully. The patient continued to attend antenatal and was allowed to go into labour spontaneously. Pains began at 1 a.m. on November 10th, and the patient was admitted at 8.30 a.m. On examination the cervix was dilated to the size of a shilling, membranes intact. At 10 a.m. the membranes ruptured spontaneously. At 11.45 a.m. under general anæsthesia in the dorsal position a hand was introduced into the vagina, and both legs and one arm were felt flexed. The cervix was fully dilated, and the feet brought down. When the body had been born to the costal margin a hand was again passed up, and both arms, which were flexed over the chest, were delivered. The head was delivered by jaw flexion and shoulder traction. There was no excess of liquor amnii, and the baby weighed 7 lb.

The interesting features of this case are (1) that although on x-ray examination five weeks before delivery the legs were found to be extended at delivery they were found to be flexed; (2) there was a primary extension of one arm shown by x-ray examination.

I am indebted to Mr. Alec Bourne, senior obstetric surgeon to Queen Charlotte's Hospital, for permission to publish the case.

J. G. HASTINGS INCE

Senior Resident Medical Officer, Queen Charlotte's Hospital.

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

SOUTH MIDDLESEX DIVISION

Minor Injuries of the Hand

At a meeting of the South Middlesex Division on November 26th, with the chairman, Dr. L. H. F. WALTON, presiding, Mr. GRANT MASSIE delivered an address on minor injuries of the hand, including burns and whitlows.

Mr. Massie said that in the case of incised wounds dividing one or more of the palmar flexor tendons of the hand or fingers it was important to bear in mind the relationship of the synovial sheaths if a straight stiff finger was not to result. The free action of the tendon depended upon preserving the integrity of the potential space between the two layers of the synovial or mucous sheath, and the prevention of adhesions here. Suture was often difficult, and should be performed as soon as possible after the accident. Following closure of the wound the part should be splinted in the position of least tension, and movement be prohibited for two or three weeks. It was important to avoid bruising the severed ends of the tendon, and to interfere as little as possible with the adjacent structures. In long immobilization of the hand, as also in cases of Colles's fracture, the interphalangeal and metacarpo-phalangeal joints became progressively stiff. The contractures were unusually resistant to treatment, and the stiffness after a few weeks of fixation might require many months of treatment. Active movement of the adjacent parts should therefore be started as soon as possible. The expansor tendons, however, from the bases of the metacarpals downwards were devoid of synovial covering, and on the dorsum of the fingers the tendon spread out into a firmly fixed expansion, division of which was not followed by retraction; simple splinting in a position of hyperextension led therefore to rapid union. Traumatic arthritis of an interphalangeal joint might be followed by long-lasting stiffness, pain, and swelling. X-ray examination usually revealed no abnormality, and the thickening was manifestly paraarticular, the underlying factor being bruising of the articular cartilage. The best method of treatment was the application of near, gentle massage and movement. Fractures of the metacarpal bones were not as a rule accompanied

by much displacement and the normal concavity of the hand could be maintained by the application of a tennis ball splint reunion occurring in three or four weeks Fracture of the scaphoid did not always result in failure of union but immobilization for three to six months was necessary the most generally favoured method being encasement of the wrist in plaster, with the joint fixed in the dorsiflexed position, the hand slightly adducted and the fingers left free to move Such fixation would largely obviate the excavation of the bone which complicated non union and would prevent the disability of mechanical arthritis Removal of part or the whole of the fractured bone was disappointing and immobilization should first be tried even when the patient began treatment long after the original injury A dislocated semilunar bone should be removed since if the condition was allowed to persist the median nerve might be seriously compressed

Infections of the terminal phalanges might lead to necrosis since the distal blood supply was through the finger pulp A tourniquet should always be used for unless the individual structures were recognized the pus might not be detected and further extension of the sepsis might be promoted by the indiscriminate opening of uninfected spaces Rubber dam was the most suitable material for drainage and tubes should never be used Swelling of the dorsum being nearly always a secondary condition should not be opened In infections of the tendon sheaths Kanavel's technique had proved eminently satisfactory and the early restoration of function after drainage was of the utmost importance The early recognition of acute lymphangitis was essential since inopportune surgery might endanger the patient's life unless a local abscess developed in the lymphatic glands at the elbow or axilla surgical intervention was definitely harmful The employment of anti streptococcal serum and S U P 36 had not proved successful

The pyrexia of uninfected burns was due to the action of certain toxic bodies on the thermal heat centre The subnormal temperature convulsions delirium and coma which might appear as late as a week or twelve days after the burn had been attributed to protein shock In all cases the degree of primary shock should be ascertained and measures for relief be instituted such as morphine injections the electric light cradle and the intravenous administration of saline solution or glucose Immersion in a hot saline bath (110° F.) allowed the clothing to be removed without unnecessary injury to the painful areas and restored the body temperature to normal The exsanguination transfusion treatment of Robertson and Boyd had not been widely practised in this country even though there was some support for the view that the circulating toxin was carried by the erythrocytes One of the most important contributions to the treatment of burns was the tannic acid method formulated by E C Davidson of Detroit in 1925 The burned areas were covered by dry sterile gauze pads held in place by sterile gauze bandages and this dressing was then soaked in a 2½ per cent aqueous solution of tannic acid It must be freshly prepared before use It was more usual now to spray the burned areas with an atomizer at half hourly intervals until the surface became mahogany red in colour Extensive burns were coagulated in about sixteen hours but if the deeper layers were involved twenty four hours might elapse before the process of hardening was complete Exposure to air accelerated the tanning process and heat hastened the drying of the coagulum This method of spraying was particularly useful in burns about the face ears nose and mouth Tannic acid generally relieved the burning pain within half an hour of its application and prevented in some measure the absorption of toxins from the necrotic material Davidson had found that the application of moist boric acid dressings to the tanned area resulted immediately in the appearance of toxic symptoms The waterproof coagulum prevented the further loss of tissue fluid The dry, non absorptive covering of protein tannate protected the nerve endings and enabled the new epithelium to re form beneath it without necessitating daily dressings The resulting scar tissue was undoubtedly less marked than after any other method of treatment

Reports of Societies

NORMAL DEVELOPMENT IN THE YOUNG CHILD

At the December dinner meeting of the West London Medico Chirurgical Society a discussion took place on normal development in the infant and the young child Dr H H MILLS presided

Dr SIDNEY OWEN in opening contented himself with putting to the members a series of questions He asked why it was that so many premature infants faded away Was it because they were not given sufficient food? If so what amount of food should be given and how often should a premature baby be fed? What was the opinion with regard to breast feeding in the case of a mother suffering from chronic heart disease or lung trouble? Did the breast fed infant eventually reach adult life in a more healthy condition than an infant who had been bottle fed? Were not many failures attributed to patent foods due in the main to the fact that these foods were not suitably modified? Did the boiling and sterilizing of raw milk make it a really suitable food for infants? Turning to the question of sleep Dr Owen asked whether the nervous tired child was a product of recent times or had it always existed in one form or another? What advice was commonly given to a parent who complained that her baby would not sleep? As to rickets he did not believe that the last word had been said Could it be guaranteed that a child would never show signs of the disease even when it had been brought up in the most modern conditions which aimed at prevention? Finally what part did the clothing play in the development of the infant?

Professor H A HARRIS showed a series of lantern slides illustrating the growth laws of the bony nervous lymphoid genital and other systems He considered that it was a mistake to speak of any particular build of the body as essential to health Almost any build was compatible with a healthy life The foundations of teeth structure were determined long before the proportion of vitamins in the food could have any effect and a well-fed mother probably accounted for much more in the dental well being of her offspring than the child's absorption of vitamin D Dr VAUGHAN PENDRED strongly advocated cow's milk undiluted with water as a diet for the young child Another rule which ought to be observed was to insist upon a period of sleep or repose after feeding Dr BERNARD MYERS said that the ideal food for the infant was human milk, in the absence of that he would continue to use a certain mixture of milk and water and carbohydrates He had even found full cream condensed milk useful at times Dr JAMES FENTON (M O H Kensington) said that during the past ten or twelve years London milk had been pasteurized Had surgeons noticed during that period a positive decline in gland and joint tuberculosis? Dr A M COOKE on the subject of pasteurized milk said that he had recently seen a man of 55 suffering from gross scurvy the man had been living on shredded wheat and on the milk supplied by a well known London dairy The condition cleared up after the administration of vitamin D

Dr. RONALD CASTLE said that clinicians often did not understand the technique of breast-feeding. Many children were put off the breast because they were said to have constipation which on examination was found not to exist at all. We had not yet got clean milk in this country, and this would not come about until pasteurization was compulsory. Pasteurized milk was excellent if the process was properly carried out. Dr. J. F. HALLS DALLY said that pasteurization in big cities was more or less a necessity, though a pasteurized milk did not necessarily mean a clean milk. Dr. KINGSTON BROWN agreed with other speakers in emphasizing the importance of cow's milk provided it could be obtained pure and he believed that Grade A was in any case better than pasteurized milk in this respect. In his early practice he invariably found that the children who had perfect teeth had been breast-fed. The next best teeth were seen in children who had had cow's milk, while rickety teeth occurred in children fed on patent foods. Dr. GERALD SLOT commented upon the amount of sleep lost by young children in working-class homes owing to conditions of overcrowding and to the disturbance caused by the wireless. Dr. MARCUS found on some psychological problems affecting the child's mother, such as those resulting from the arrival of a new baby. Dr. MARGARET LOVEWELL found some psychological difference between breast-fed and bottle-fed children. The latter seemed more predisposed to psychological trauma. Dr. WHITEHOUSE HOWELL speaking as an orthopædic surgeon said that rickets and deformities were still very much in evidence and pleaded for more team work in the elucidation of the rickets problem.

Dr. H. H. MILLS in summing up the discussion drew attention to the way in which clinicians could help the nursing mother who was beginning to be fatigued by making the child feed at four-hour intervals instead of at shorter periods, and when breast-feeding was beginning to fail by supplementing with cow's milk and other foods.

INTRA-THORACIC NEW GROWTHS

At the December meeting of the Liverpool Medical Institution with the president Professor W. BLAIR-BELL in the chair, Dr. LESLIE CUNNINGHAM read a paper on Intra-thoracic new growths.

He said that the majority of cases of intra-thoracic tumour were carcinomata arising in the œsophagus. One case of sarcoma occurred in a series of seventeen primary growths, the remainder were mainly cases of carcinomata. These were subdivided into cases with (1) evidence of pleural effusion, (2) hæmoptysis, (3) evidence of localized infection of the lung, and (4) a variety of symptoms in which the diagnosis was not obvious on examination. Pain was a frequent feature, and the majority of the cases with pain eventually developed evidence of pleural involvement. Bosworth's sign of supraclavicular retraction was seen in some cases and constituted an interesting sign. Dr. CUNNINGHAM showed radiograms illustrating various cases particularly with reference to the differential diagnosis. One case closely resembled a primary growth but exploration showed it to be a sarcoma. Of those with secondary deposits in the lungs a large proportion of cases showed carcinoma of the breast. In these pleural involvement was the rule. One showed definite malignant cells in the effusion while the x-rays findings were negative.

The speaker said that intra-thoracic new growths were a difficult problem to surgeons, and he pleaded for more careful study than was accorded to it by the physicians of the day. The one most prominent symptom which was common was complete exhaustion. Certain manifestations of malignant disease in the lungs were sufficiently definite to call for a diagnosis at a tolerably early stage. Dullness with silence and paralysis of the left recurrent laryngeal nerve were signs which, even in the absence of other phenomena, should be regarded with the gravest suspicion.

In the discussion that followed the PRESIDENT said that lead therapy had been withheld in such cases owing to the belief that massive necrosis might occur. Only few had been so treated. He recalled, however, at least one case in which life had been greatly prolonged. He thought that, with the better preparations and methods now employed, it would be worth while considering the possibilities of lead therapy again, for there seemed otherwise to be no hope for these patients.

Mr. JOHN T. MORRISON urged that there was great need for still earlier diagnosis. Even in the case of tumours acknowledged to be malignant he pleaded for a more optimistic outlook. Radium treatment was still in its infancy; actual resection of such tumours was known to have resulted in cure in a few reported cases, and in certain cases of supposed unresolved pneumonia surgery alone could elucidate the diagnosis. For these reasons still earlier recourse should be had to the radiologist, and the surgeon should be called in to complete the team. Dr. CHAMBERLAIN spoke of the difficulty in the diagnosis of pulmonary neoplasms from inflammatory lesions, especially low grade types of pneumonia with purulent infiltration. Dr. T. B. DAVIE referred to the histological basis of the types of bronchial carcinoma described and stressed the fact that all these types were often represented in the same tumour. In most cases of oat-cell carcinoma, if sufficient blocks were cut from different parts of the tumour, some sections would reveal the presence of epithelioma with typical cell nests.

In a discussion arising from a note read by Dr. S. B. HEAD on two cases of attempted abortion the PRESIDENT called attention to the condition of pseudo-pregnancy. There was generally the fear of pregnancy with amenorrhœa. In these cases the corpus luteum of the preceding menstruation was persistent and large. Attempted abortion in such circumstances had come within Professor Blair-Bell's own experience, and the absence of pregnancy altered the medico-legal aspects of the case. He agreed that it was difficult always to believe that a woman, especially when nulliparous, could herself pass an instrument through the os uteri. He generally suspected that she was shielding someone else by her statement. He considered that all cases in which the practitioner was in doubt as to the correct course to pursue he should report the matter to the medical officer of health and throw the responsibility of action on him.

Dr. GLYNN WHITE read a paper on the present treatment of cancer.

TRANSPLANTATION OF FIBULA

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland with the president Mr. R. ARMISTEAD STONEY in the chair, Mr. F. GILL read notes on a case of transplantation of the fibula.

The patient, a girl aged 10, was admitted to hospital on November 27th, 1928, with a history of pain and swelling of the left thigh about one year previously. An operation had been performed in the country and she had attended a hospital for dressing of a sinus. On examination there was a [illegible] sinus [illegible] on the anterior aspect of the left thigh. There was loss of the greater portion of the shaft of the tibia and two discharging sinuses, one from the upper and one from the lower portion of the tibia. A skiagram was made on which two areas of rarefying [illegible] in the leg and marked muscular wasting of the thigh and calf. A skiagram showed an abscess cavity with a small sequestrum in the upper part of the tibia and a similar

by much displacement and the normal concavity of the hand could be maintained by the application of a tennis ball splint, reunion occurring in three or four weeks. Fracture of the scaphoid did not always result in failure of union but immobilization for three to six months was necessary, the most generally favoured method being encasement of the wrist in plaster with the joint fixed in the dorsiflexed position, the hand slightly adducted and the fingers left free to move. Such fixation would largely obviate the excavation of the bone which complicated non-union and would prevent the disability of mechanical arthritis. Removal of part or the whole of the fractured bone was disappointing and immobilization should first be tried even when the patient began treatment long after the original injury. A dislocated semilunar bone should be removed since if the condition was allowed to persist the median nerve might be seriously compressed.

Infections of the terminal phalanges might lead to necrosis since the distal blood supply was through the finger pulp. A tourniquet should always be used for unless the individual structures were recognized the pus might not be detected and further extension of the sepsis might be promoted by the indiscriminate opening of uninfected spaces. Rubber dam was the most suitable material for drainage and tubes should never be used. Swelling of the dorsum being nearly always a secondary condition should not be opened. In infections of the tendon sheaths Kanavel's technique had proved eminently satisfactory and the early restoration of function after drainage was of the utmost importance. The early recognition of acute lymphangitis was essential since inopportune surgery might endanger the patient's life unless a local abscess developed in the lymphatic glands at the elbow or axilla surgical intervention was definitely harmful. The employment of anti-streptococcal serum and S.U.P. 36 had not proved successful.

The pyrexia of uninfected burns was due to the action of certain toxic bodies on the thermal heat centre. The subnormal temperature convulsions delirium and coma which might appear as late as a week or twelve days after the burn had been attributed to protein shock. In all cases the degree of primary shock should be ascertained and measures for relief be instituted such as morphine injections the electric light cradle and the intravenous administration of saline solution or glucose. Immersion in a hot saline bath (110° F.) allowed the clothing to be removed without unnecessary injury to the painful areas and restored the body temperature to normal. The exsanguination transfusion treatment of Robertson and Boyd had not been widely practised in this country, even though there was some support for the view that the circulating toxin was carried by the erythrocytes. One of the most important contributions to the treatment of burns was the tannic acid method formulated by E. C. Davidson of Detroit in 1925. The burned areas were covered by dry sterile gauze pads held in place by sterile gauze bandages and this dressing was then soaked in a 2½ per cent. aqueous solution of tannic acid. It must be freshly prepared before use. It was more usual now to spray the burned areas with an atomizer at half-hourly intervals until the surface became mahogany-red in colour. Extensive burns were coagulated in about sixteen hours but if the deeper layers were involved twenty-four hours might elapse before the process of hardening was complete. Exposure to air accelerated the tanning process and heat hastened the drying of the coagulum. This method of spraying was particularly useful in burns about the face ears nose and mouth. Tannic acid generally relieved the burning pain within half an hour of its application and prevented in some measure the absorption of toxins from the necrotic material. Davidson had found that the application of moist boric acid dressings to the tanned area resulted immediately in the appearance of toxic symptoms. The waterproof coagulum prevented the further loss of tissue fluid. The dry non-absorptive covering of protein tannate protected the nerve endings and enabled the new epithelium to re-form beneath it without necessitating daily dressings. The resulting scar tissue was undoubtedly less marked than after any other method of treatment.

Reports of Societies

NORMAL DEVELOPMENT IN THE YOUNG CHILD

At the December dinner meeting of the West London Medico-Chirurgical Society a discussion took place on normal development in the infant and the young child. Dr. H. H. MILLS presided.

Dr. SIDNEY OWEN in opening contented himself with putting to the members a series of questions. He asked why it was that so many premature infants faded away. Was it because they were not given sufficient food? If so what amount of food should be given and how often should a premature baby be fed? What was the opinion with regard to breast-feeding in the case of a mother suffering from chronic heart disease or lung trouble? Did the breast-fed infant eventually reach adult life in a more healthy condition than an infant who had been bottle-fed? Were not many failures attributed to patent foods due, in the main, to the fact that these foods were not suitably modified? Did the boiling and sterilizing of raw milk make it a really suitable food for infants? Turning to the question of sleep Dr. Owen asked whether the nervous tired child was a product of recent times or had it always existed in one form or another? What advice was commonly given to a parent who complained that her baby would not sleep? As to rickets he did not believe that the last word had been said. Could it be guaranteed that a child would never show signs of the disease even when it had been brought up in the most modern conditions which aimed at prevention? Finally what part did the clothing play in the development of the infant?

Professor H. A. HARRIS showed a series of lantern slides illustrating the growth laws of the bony nervous lymphoid genital and other systems. He considered that it was a mistake to speak of any particular build of the body as essential to health. Almost any build was compatible with a healthy life. The foundations of teeth structure were determined long before the proportion of vitamins in the food could have any effect and a well-fed mother probably accounted for much more in the dental well-being of her offspring than the child's absorption of vitamin D. Dr. VAUGHAN PENDRED strongly advocated cow's milk undiluted with water as a diet for the young child. Another rule which ought to be observed was to insist upon a period of sleep or repose after feeding. Dr. BERNARD MYERS said that the ideal food for the infant was human milk; in the absence of that he would continue to use a certain mixture of milk and water and carbohydrates. He had even found full cream condensed milk useful at times. Dr. JAMES FENTON (M.O.H. Kensington) said that during the past ten or twelve years London milk had been pasteurized. Had surgeons noticed during that period a positive decline in gland and joint tuberculosis? Dr. A. M. COOKE on the subject of pasteurized milk said that he had recently seen a man of 55 suffering from gross scurvy; the man had been living on shredded wheat and on the milk supplied by a well-known London dairy. The condition cleared up after the administration of vitamin D.

Dr. ROLAND CURTIS said that clinicians often did not understand the technique of breast-feeding. Many children were put off the breast because they were said to have constipation which on examination was found not to exist at all. We had not yet got clean milk in this country, and this would not come about until pasteurization was compulsory. Pasteurized milk was excellent if the process was properly carried out. Dr. J. F. HALLS DALLY said that pasteurization in big cities was more or less a necessity, though a pasteurized milk did not necessarily mean a clean milk. Dr. KINGSTON BERTON agreed with other speakers in emphasizing the importance of cow's milk provided it could be obtained pure, and he believed that Grade A was in any case better than pasteurized milk in this respect. In his early practice he invariably found that the children who had perfect teeth had been breast-fed. The next best teeth were seen in children who had had cow's milk, while defective teeth occurred in children fed on patent foods. Dr. GERALD SLOT commented upon the amount of sleep lost by young children in working-class homes owing to conditions of overcrowding and to the disturbance caused by the wireless. Dr. MARCUS touched on some psychological problems affecting the child's welfare, such as those resulting from the arrival of a new baby. Dr. MARGARET LOVEWELD found some psychological difference between breast-fed and bottle-fed children. The latter seemed more predisposed to psychological trauma. Dr. WHITCHURCH HOWELL, speaking as an orthopaedic surgeon, said that rickets and deformities were still very much in evidence, and pleaded for more team work in the elucidation of the rickets problem.

Dr. H. H. MILLS, in summing up the discussion, drew attention to the way in which clinicians could help the nursing mother who was beginning to be fatigued by nursing the child feeding at four-hour intervals instead of at shorter periods, and when breast feeding was beginning to fail by supplementing with cow's milk and other foods.

INTRA-THORACIC NEW GROWTHS

At the December meeting of the Liverpool Medical Institution, with the president, Professor W. BLAIR BELL, in the chair, Dr. LESLIE CUNNINGHAM read a paper on Intra-thoracic new growths.

He said that the majority of cases of intra-thoracic tumours were carcinomata arising in the bronchi. One case of sarcoma and a series of seven primary growths which he regarded more mainly as cell carcinomata. These were subdivided into cases with (1) evidence of pleural effusion, (2) early haemoptysis, (3) evidence of localized pressure on the lung, and (4) a variety of symptoms in which the diagnosis was not obvious on examination. Pain was a frequent feature, and the majority of the cases with pleural effusion showed evidence of pleural pachymeningitis. Bronchoscopic or mediastinal confirmation was sought in all cases, and considered an increasing sign. Dr. CUNNINGHAM showed radiograms illustrating various cases, particularly with reference to the differential diagnosis. One case [illegible] a sarcoma. Other cases showed [illegible] lung, a large pressure [illegible] cases of pleural effusion. In these [illegible] were [illegible]. Other [illegible] effusion [illegible] large [illegible]

The [illegible] growth was [illegible] common [illegible] a [illegible] of [illegible] The [illegible] was [illegible] C. [illegible]

disease in the lungs were sufficient to define so as to call for a diagnosis at a tolerably early stage. Dulness with silence and paralysis of the left recurrent laryngeal nerve were signs which, even in the absence of other physical phenomena, should be regarded with the gravest suspicion.

In the discussion that followed the PRESIDENT said that lead therapy had been withheld in such cases owing to the belief that massive recrosis might occur. Only few had been so treated. He recalled, however, at least one case in which life had been greatly prolonged. He thought that with the better preparations and methods now employed it would be worth while considering the possibilities of lead therapy again, for there seemed otherwise to be no hope for these patients.

Mr. JOHN T. MORRISON urged that there was great need for still earlier diagnosis. Even in the case of tumours acknowledged to be malignant he pleaded for a more optimistic outlook. Radium treatment was still in its infancy; actual resection of such tumours was known to have resulted in cure in a few reported cases, and in certain cases of supposed unresolved pneumonia surgery alone could elucidate the diagnosis. For these reasons still earlier recourse should be had to the roentgenologist and the surgeon should be called in to complete the team. Dr. CHATTERLAIN spoke of the difficulty in the diagnosis of pulmonary neoplasms from inflammatory lesions, especially low grade types of pneumonia with purulent infiltration. Dr. T. B. DAVIE referred to the histological basis of the types of bronchial carcinoma described and stressed the fact that all these types were often represented in the same tumour. In most cases of oat-cell carcinoma, if sufficient blocks were cut from different parts of the tumour, some sections would reveal the presence of epithelioma with typical cell nests.

In a discussion arising from a note read by Dr. S. B. HEPD on two cases of attempted abortion the PRESIDENT called attention to the condition of pseudo-pregnancy. There was generally the fear of pregnancy with amenorrhoea. In these cases the corpus luteum of the preceding menstruation was persistent and large. Attempted abortion in such circumstances had come within Professor Blair Bell's own experience, and the absence of pregnancy altered the medico-legal aspects of the case. He agreed that it was difficult always to believe that a woman, especially when nulliparous, could herself pass an instrument through the os uteri. He generally suspected that she was shielding someone else by her statement. He considered that all cases in which the practitioner was in doubt as to the correct course to pursue he should report the matter to the medical officer of health and throw the responsibility of action on him.

Dr. GLYNN WHITTLE read a paper on the prevention of cancer.

TRANSPLANTATION OF FIBULA

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland with the president, Mr. R. ATKINSON STONEY, in the chair, Mr. F. GILL read notes on a case of transplantation of the fibula.

[illegible] 10 [illegible] 27 [illegible] of [illegible] of [illegible] An [illegible] On [illegible] On [illegible] of [illegible] of [illegible] small [illegible]

abscess cavity in the lower portion These cavities were opened cleaned out and packed and when they had healed the child was discharged from hospital with a request to return in six months

On readmission in August 1929 the upper part of the fibula was grafted into the upper part of the tibia A series of skiagrams showed the fibula in good position with new bone formation and increase in thickness

A walking caliper splint was fitted and the patient was discharged from hospital with a request to return in four months Unfortunately she did not return until May 1931 when she had outgrown the caliper and was walking with a marked varus deformity The only method of dealing with the present condition was to transplant the lower end of the fibula into the lower end of the tibia after the varus deformity had been corrected A series of skiagrams since then showed the lower end of the fibula in good position and bony union had taken place The fibula as a whole showed marked hypertrophy and its lower end was beginning to thicken At the end of November the leg showed two inches of shortening genu recurvatum was still present but the patient could walk well and the functional result would be very satisfactory

In his commentary Mr GILL said that several similar cases had been reported In 1906 Goldman of Freiburg reported a case of grafting of the upper end of the fibula after removal of the upper part of the tibia for sarcoma Stone in 1907 reported a case where there was a loss of eight inches of tibia He performed the operation in two stages the first was similar to that described the second consisted in splitting the lower end of the fibula and grafting the inner fragment to the lower part of the tibia Mr R A Stoney had reported a case in which the upper part of the tibial shaft was completely destroyed and a grafting of the upper part of the fibula was done, with excellent results

The PRESIDENT said that in his case there was not nearly such an extensive loss of bone It was extraordinary to watch the development of the fibula as time went on Mr W DOOLIN mentioned two cases of acute osteomyelitis on which he had recently operated and condemned the procedure of primary diaphysectomy Mr H STOKES said that if the tibia was taken out in a case of acute osteomyelitis non union always resulted He regarded diaphysectomy as quite unjustifiable Mr H F MACAULEY thought that a primary diaphysectomy should only be done when x rays showed periosteal involvement of the bone

Mixed Parotid Tumour

Mr J C MCMULLIN read notes on a case of mixed parotid tumour The outstanding features were (1) the marked slowness of growth (2) the pre operative facial paralysis (3) the repeated recurrence without metastases or glandular involvement

The patient was a woman 48 years of age who had contracted mumps in 1895 A small lump persisted in the parotid region which was removed three years later but recurred immediately It was again removed in 1901 but again recurred until in 1913 it gave rise to facial paralysis dysphagia dyspnoea and some pain for which surgical intervention was again sought It was not then thought possible to deal with the tumour successfully and it continued to increase in size until in 1924 it had become as large as a melon extending from the zygoma to the angle of the mouth over the lower border of the mandible pushing the ear upwards and backwards spreading deeply into the neck and enveloping the ascending ramus and temporo maxillary joint There were neither metastases nor glandular involvement Complete extirpation of the whole gland was done in December 1924 In the six years which have since elapsed there had been no recurrence

The PRESIDENT said that it was quite impossible to remove tumours such as this without the occurrence of facial paralysis He had a somewhat similar case at present and felt encouraged to operate when he saw Mr McMullin s good result

Reviews

GREAT DOCTORS

Professor HENRY E SIGERIST is proving himself a worthy successor to Dr Sudhof in the chair of the history of medicine at Leipzig In his present volume[1] he covers much ground in 292 octavo pages Beginning with Imhotep, who is claimed as an architect of the Great Pyramid he ends with Lister and Max Pettenkofer His plan has been to select the names of prominent writers at different periods of the world's history give a short but clear account of the place they held in contemporary knowledge and write a little biography of each introducing some characteristic anecdote or pregnant saying Thus of Galen s mother he reports that she was so passionate that she bit her maids and was so quarrelsome that her husband led a worse life with her than Socrates did with Xantippe Billroth he tells us used to say that a surgeon should only operate when there was some chance of success otherwise the noble art of surgery was prostituted and brought under suspicion both of the laity and of colleagues—a very true observation when brilliant surgery was the rule rather than the exception in the great teaching centres of Europe Wherever it has been possible Professor Sigerist has added a portrait and in the choice of these he has gone to original sources Many of the illustrations therefore, are new and he is to be congratulated upon the results They must have taken much time and labour to discover and they are admirably reproduced It is evident that Professor Sigerist has read widely He quotes in nearly every instance from the author himself and he adds a short and fairly complete set of references for those who wish to know more

It is remarkable as one reads how school of thought succeeded school of thought throughout the ages A great teacher would arise, sometimes remarkable for his personality sometimes for his ability as an experimenter sometimes merely for his power of expressing thoughts in words without any reference to facts—a mere theorist The pupils and imitators of each had their little day and after a few years or a few generations were replaced by those of another school The followers of Hippocrates and the Asclepiads were replaced by the Galenists and Paracelsus Harvey s work was continued and enlarged by Malpighi Santorio Van Helmont and Sylvius the immense personality of Boerhaave inspired Van Swieten de Haen and Haller Sydenham brought the student to the bedside , and Lister s work is still bearing good fruit in every part of the world

Professor Sigerist points out what different branches of medical science have dominated different centuries In the sixteenth century Harvey was experimenting and physiology was dominant being greatly aided by the introduction of the microscope in its later years In the eighteenth century the greater minds were concerned with pathology, and in England Hunter was the outstanding example During the nineteenth century theoretical medicine was falling into disrepute and clinical medicine was beginning to take its place The twentieth century is developing therapy on entirely new lines Medicine has always and necessarily, been dependent upon science for its progress Anatomy botany physics and chemistry have in turn aided We are rather inclined to underestimate the difficulties of earlier experimenters until we are told that Santorio when he counted the pulse had to make his own pulsilogium for the watches of the time had no second hand and no minute hand His

[1] *Grosse Arzte* Von Dr med Henry E Sigerist Munchen J F Lehmann 1932 (Pp 310 68 plates Paper cover M 8 bound M 10)

clinical thermometer was a glass ball which the patient held in his mouth connected by a graduated tube with an open mass of water.

There is still much we should like to know and there are questions that Professor Singer has left unanswered. How for instance did Vesalius write the seven books of the Fabrica by the time he was 27 and what did he mean by that pilgrimage to Jerusalem which ended so fatally for him. But perhaps it is fine asking with Sir Thomas Browne what song the Sirens sang. Professor Singer has produced a good book. He has chosen well and has not limited himself to any one age or country.

D'ARCY POWER

DIABETES MELLITUS

In his lecture *The Pathology of Diabetes Mellitus* Dr. SHIELDS WARREN has made use not only of material obtained from the post-mortem room but also of tissues removed surgically. The basis of his work rests on 300 autopsied cases definitely diagnosed as diabetes mellitus. Dr. Warren has produced a complete and exact histological account of the conditions found in this disease beginning with the pancreas itself and continuing with a short and beautifully illustrated chapter on the abnormal distribution of glycogen in the various organs and tissues. The histological evidence of abnormal deposition of lipoid material in the spleen and reticulo-endothelial system is discussed together with other signs of abnormal fat metabolism. The author makes an interesting digression on the relation of gall bladder disease to diabetes. He concludes that the well-known association of gall stones with diabetes is best explained by considering the stone as a result of disturbed lipoid metabolism dependent on the diabetes. Nevertheless he advocates cholecystectomy for all diabetic patients with evidence of gall-bladder disease. His views on coma are dogmatic and we believe worthy of attention. If by this is meant diabetic coma developing in a well-treated diabetic it practically always means infection. In a patient with diabetic coma dying in spite of treatment it is usually difficult for the pathologist to say which changes noted from the pathological-physiological changes that characterize coma. [illegible] coma by chemical determinations of carbon dioxide combining power of the blood. Of Dr. Warren's own experiments into the [illegible] he discusses the [illegible] of arteriosclerosis in the diabetic. He does not regard the high blood cholesterol [illegible] as a cause. Lipoids are not the first cause of arteriosclerosis. The greater incidence of coronary thrombosis [illegible] in the diabetic. The normal urine is not affected by [illegible]. High blood sugar content [illegible] in the normal ground substance [illegible] to the vessel wall [illegible] to the presence of lipoid material [illegible] to arteriosclerosis. 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A SYSTEM OF BACTERIOLOGY

Volume IX which completes this *System of Bacteriology* is devoted to technique. There is a bewildering choice of methods available for the practical bacteriologist and as the editors of this volume point out two courses are open to the compilers of a treatise on this subject. Either everything can be included or one method only of established repute can be described for the carrying out of any single operation. The latter policy has been adopted and we think the choice a wise one. And since the choice of a method is so often a matter of personal taste we feel that a reviewer would be well advised to follow the lead given by the editors and refrain from any attempt to adjudicate between the methods described in this volume and those omitted. The broad lines on which the book is planned and the field that it covers should be his principal concern.

The opening chapter is devoted to laboratory design and is confined to a description of two of the most up-to-date buildings in the country—the Sir William Dunn School of Pathology, Oxford, and the Department of Pathology, Cambridge. Plans and photographs [illegible] are given of the several departments. Following this we have chapters devoted to the microscope and demonstration of bacteria, the preparation of culture media, the determination of [illegible], the cultivation of [illegible] anaerobes, isolation from single cells and so on. A whole section is devoted to [illegible]. The chapter on [illegible] occupies [illegible] pages and [illegible] pages are given to [illegible]. We have here a wealth of information on [illegible] and many chapters of [illegible] from [illegible] of the various [illegible] with [illegible] commonly [illegible] will be found [illegible]

[illegible]

bacteriologists in the future, and might well be dealt with in subsequent editions

Undoubtedly some experienced workers will criticize this volume because they do not find described the methods to which they have given their affections and perhaps a great deal of their technical ingenuity, preference for a method is held almost as strongly as a religious belief! But the uninitiated desirous of knowing how to set about any piece of practical work in medical bacteriology will find what he wants clearly described The volume concludes with a general index for the whole *System* Some no doubt who only wish to purchase single volumes will deplore the fact that each volume has not a separate index and it is certainly a drawback The policy of having one general index and no more might possibly be reconsidered when new editions of the *System* become necessary

BOOKS ON PSYCHOPATHOLOGY

We have received two pamphlets which are published under the auspices of the Medical Society of Individual Psychology The editor Dr F G CROOKSHANK states that one objective held in view by this society—besides its primary intent to study and pursue the teachings of Alfred Adler—is the better acquaintance of the practitioner with the fruits of modern psychology and their applicability in the field of general medicine The hope is expressed that the appearance of a series of publications on individual psychology will go some way towards the furtherance of this aim The first pamphlet *The Case of Mrs A (the Diagnosis of a Life Style)* [5] gives some idea of the Adlerian method of interpretation in a concrete case of neurosis for it records the comments made by Dr Adler on the notes of a case presented to him for extempore consideration and impromptu interpretation This pamphlet will probably be most appreciated by those who are already familiar with Adlerian theory and practice and the second pamphlet which records a discussion on *Anorexia Nervosa* [6] is perhaps of more interest to the medical practitioner and general physician The discussion was opened by Dr Langdon Brown and thoroughly repays careful study for this disorder is by no means infrequent and there is every reason why it should be recognized in its early stages and the psychological factors involved in its development appreciated It is proposed to issue these pamphlets at least quarterly

Included in one volume is the translation into English of *Suggestion Therapy* by Dr Ernst Jolowicz and *Hypnosis and Hypnotherapy* [7] by Dr Gustav Heyer The analytical methods of treatment are now in the foreground and relatively little is heard of the methods with which the writers of this volume are concerned It would seem however that both suggestion and hypnosis have their value either alone or in combination with other methods Dr Jolowicz observes indeed that suggestive factors are involved in every form of psychotherapy though he does not hold the view that suggestion alone accounts for the successes in analytic methods of treatment This is an eminently practical book the technique of the psychotherapeutic methods advocated is given in detail and the authors maintain throughout a close touch with clinical realities The book is written with restraint is thoroughly readable and may be recommended as a useful introduction to the methods of treatment with which it is concerned

The Concentric Method in the Diagnosis of Psychoneurotics [8] is a translation of a series of lectures delivered by Dr M Laignel Lavastine Professor in the Faculty of Medicine of Paris The author's aim is to show the necessity in every case of psychoneurosis to apply what he terms 'diagnosis in depth' and not merely to be content with a superficial diagnosis The concentric method is carried out in its entirety in the diagnosis of psychoneurotics when the following five zones have been distinguished and as far as possible investigated first there is the peripheral psychic atmosphere then beneath this the nervous zone thirdly the endocrine zone then the visceral zone and lastly and innermost the central morbific kernel This is clearly a systematic method for investigating the individual as a whole in every case of neurosis and the informal and lucid lectures included in this volume admirably serve to demonstrate the writer's method of approach to his clinical material This book emphasizes the physiological aspects of the psychoneuroses which are liable to be overlooked or altogether neglected and it will certainly be read with advantage by those who are concerned with the treatment of psychoneurotic patients

INTERPRETATION OF DIAGNOSTIC AIDS

Laboratory investigations as aids to diagnosis and treatment make an ever advancing claim on the attention of the clinician and although experience teaches that here, as elsewhere the absolute proposition does not always stand secure no one nowadays questions the value of the contributions that can be made to practical medicine by the chemical bacteriological or x ray expert Naturally to be fully effective what is written in the laboratory must take its place beside the clinical facts and in addition must be intelligently interpreted when it reaches this position In the second volume of *Clinical Interpretation of Aids to Diagnosis* [9] the attempt is continued to secure this intelligent interpretation and we may say at once that the success of the first volume is here repeated If the complaint is sometimes made that experts are developing a special and technical vocabulary this is almost inevitable in a progressive art and it is clearly the clinician's interest or even his duty, to appreciate the findings which his laboratory colleague records This is one of the ambitions cultivated by the *Lancet's* volumes and the several contributors have set themselves to forward it Further advantages are to be found in indications of the circumstances in which laboratory tests may be useful in the kind of information they may give in their limitations and in the conditions to be observed in order to secure their maximum values When these general considerations are applied to sections—each written by an expert—dealing with such subjects as the diagnosis of acute food poisoning the microscopical examination of the faeces and of dermatological lesions bacterial blood cultures electrical reactions and dental and visceral skiagrams the range of service of the volume becomes evident Possibly here and there a practitioner may be stimulated to develop in some degree and fashion his own laboratory resources and thus the book excellent in itself may be also the cause of excellence in others In

[5] *The Case of Mrs A (the Diagnosis of a Life Style)* By Dr Alfred Adler Individual Psychology Publications Medical Pamphlets No 1 London C W Daniel Company 1931 (Pp 48 2s)

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Undoubtedly some experienced readers will consult this volume because they do not care to describe the methods to which they have given their attention and perhaps a great deal of their technical ingenuity for more than a minute as dull almost as strong as a religious book. But the principal desire of knowing how to set about any piece of practical work in medical psychology will find what he wants clearly described. The volume concludes with a general index for the whole Series. Some one doubtless will be found to purchase single volumes will deplore the fact that each volume has not a separate index and it is certainly a drawback. The merit of having one general index and no more must possibly be reconsidered when new editions of the Series become necessary.

BOOKS ON PSYCHOPATHOLOGY

We have received two pamphlets which are published under the auspices of the Medical Society of Individual Psychology. The editor Dr. F. G. Crookshank states that one objective held in view by this society is "to assist all practitioners to study and pursue the methods of Alfred Adler—to the better acquaintance of the practitioner with the study of modern psychology and their application in the field of general medicine." The hope is expressed that the appearance of a series of pamphlets on individual psychology will go some way towards the attainment of this aim. The first pamphlet, *The Case of [illegible]*, is a [illegible] on the Adlerian method of interpretation in a concrete case of neurosis. It records the comments made by Dr. Adler on the notes of a case presented to him for examination, consultation and improvised interpretation. The pamphlet will be read with interest by those who are already familiar with Adlerian theory and practice, and the second pamphlet, which records a discussion of Adler's [illegible] of more interest to the medical practitioner and general reader. The case discussed was reported by Dr. Langdon Brown and contains many useful suggestions. In this discussion the question of the relation of the psychological factors to the organic stages and the psychological factors involved in the development appeared. It is proposed to issue these pamphlets at least quarterly.

Included in the volume is the translation into English of *Spirits* by Dr. Ernst Jahrreiss, and *Hysteria* by Dr. Gustav Hertz. The articles on methods of treatment are next in the sequence and relate more to the methods with which the writers of this volume are concerned. It would seem however that these suggestions and criticisms have their value rather as [illegible] with other methods. Dr. Jahrreiss observes, indeed that suggestive factors are present in every form of psychotherapy though he does not find the word that suggestion alone accounts for the successes in whatever methods of treatment. This is an important point for the exchange of the psychotherapeutic methods advocated is given in detail and the authors maintain throughout a close touch with clinical practice. The [illegible] is worthy of serious study as is the [illegible] by Dr. Hertz. The latter is more theoretical and may be found useful by those who are interested in the [illegible] of the [illegible] of the neuroses.

[illegible] by Dr. M. Layton-Bennett. The [illegible] Methods. The author's aim is [illegible] a [illegible] of practical methods [illegible] in the [illegible] of the [illegible] and [illegible] contact with a [illegible]. The [illegible] methods [illegible] and [illegible] of [illegible] practice. Readers [illegible] have [illegible] [illegible] the [illegible] [illegible] the [illegible] [illegible] the [illegible] [illegible] and [illegible] [illegible] [illegible]

any event it is certain that the contributors to the *Lancet* series have well applied themselves to the task of bringing into a mutually helpful partnership the clinician and the laboratory expert and their articles in not a few instances show that they themselves by no means dwell in remote academic seclusion but that on the contrary the individual problems of practical medicine have come within the range of their personal experience

NOTES ON BOOKS

Three years ago under the presidency of Dr T H Jacob who had previously been in the chair in 1911 the Nottingham Medico Chirurgical Society celebrated its centenary and now has brought out a generously illustrated account[1] of its past and of some of the famous medical men of Nottingham such as Marshall Hall and Francis Sibson who afterwards became prominent in medical London Alexander Manson who in 1821 was a pioneer in the treatment of goitre by iodine apparently without any knowledge that this success had been published in the previous year by Coindet in France and W H Ransom who in 1845 by beating T H Huxley in the first M B London led as the latter stated to his entering the Royal Navy and so taking up science as his life's work Of the provincial medical societies the Nottingham Medico-Chirurgical Society is among the seniors coming after those of Warrington (1770) Colchester (1774) Gloucestershire (1788)—known as the Fleece Medical Society as it met at the Fleece Inn at Rodborough and famous for the papers Edward Jenner and Caleb Hillier Parry read there—Plymouth (1794) Leicester (1800) Halifax and District (1822) and St Helens (1826)

A genial idea of the energetic chief of the laboratory of pathological anatomy of the Pasteur Institute Professor A Peyron led to a systematic survey by Dr E Benech of the recorded association of parasites and cancers[11] The intimate etiological relation of nematode infestation with cancer of the stomach in the rat discovered by the genius of Fibiger gave a new significance to the sporadic occurrence of new growths in man and animals harbouring gross parasites Dr Benech's work is no mere enumeration of references to cases of this kind With carefully documented records of the association between neoplasms and the protozoan and higher forms of parasites he has considered their causal significance (if any) in the light of pathological and anatomical investigation of the material The original figures are reproduced from the majority of the better studied examples and in addition many new figures are included from material investigated by Dr Benech himself and from Professor Peyron's collection

Professor Peter Rona's Textbook of Practical Physiological Chemistry[12] has won the popularity it deserves and the second edition of the first part of it which deals with enzymes will be welcomed The various methods of preparation and isolation of the body ferments have been brought up to date and the latest suggestions in regard to laboratory technique have been incorporated Professor Rona approaches the subject from an unusual standpoint and the new edition of his book is a definite contribution to physiological chemistry

Egypt The Home of the Occult Sciences[13] by Dr T Gerald Garry is a short treatise on Imhotep whom Osler describes as "the first figure of a physician to stand out clearly from the mists of antiquity" The validity of this claim is examined by the author who gives some interesting information about the magical ceremonies and medical practice of ancient Egypt

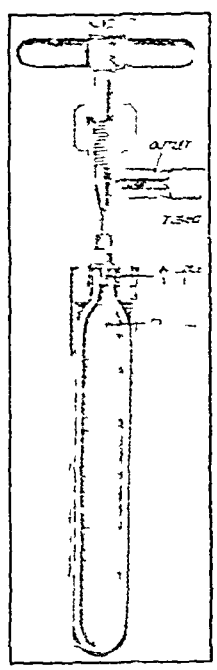
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[1] London C Allen and Unwin Ltd 1931 (Pp 170 6)
[11] London C Allen and Unwin Ltd 1931 (Pp 47 1s 6d)
[12] London C Allen and Unwin Ltd 1931 (Pp c. 2)

PREPARATIONS AND APPLIANCES

Portable CO Apparatus

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Uterine Cannula

Mr H J Drew Smythe M S F R C S (Clifton) writes The instrument shown in the accompanying figure was devised to render the intrauterine injection of glycerin a simple procedure without disturbing the patient too much It has the advantage over other instruments of like nature in that it is rigid and can be inserted by feeling for the open os



of the cervix with the cannula itself and there is no necessity for inserting a guiding finger or in the majority of cases even a speculum After inserting the cannula a Record or other syringe is fitted to the end containing two ounces of glycerin which is slowly injected into the uterus This cannula was made for me by Messrs Thackray of Leeds and later by Messrs Down Bros of London The instrument can be obtained from either firm

[1] *Centenary of the Nottingham Medico-Chirurgical Society March 7th 1928* Aldress by Sir Humphry Rolleston Bart G C V O K C B M D Nottingham Cooke and Vowles Ltd 1931 (Pp 96 22 plates)
[11] *Parasites et Cancer* Par Dr Édouard Benech Paris A Maloine 1931 (Pp viii + 167 36 figures 25 plates 50 fr)
[12] *Praktikum der Physiologischen Chemie* Erster Teil *Fermente* von Peter Rona Zweite Auflage Berlin J Springer 1931 (Pp xii + 420 107 figures R M 18 60)
[13] *Egypt The Home of the Occult Science* By T Gerald Garry M D M Ch M A O M R I London J Bale Sons and Danielsson Ltd 1931 (Pp viii + 63 7 6d net)

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Included in one volume is the translation into English of *Suggestion Therapy* by Dr Ernst Jolowicz and *Hypnosis and Hypnotherapy*[7] by Dr Gustav Heyer The analytical methods of treatment are now in the foreground and relatively little is heard of the methods with which the writers of this volume are concerned It would seem however that both suggestion and hypnosis have their value either alone or in combination with other methods Dr Jolowicz observes indeed that suggestive factors are involved in every form of psychotherapy though he does not hold the view that suggestion alone accounts for the successes in analytic methods of treatment This is an eminently practical book the technique of the psychotherapeutic methods advocated is given in detail and the authors maintain throughout a close touch with clinical realities The book is written with restraint is thoroughly readable and may be recommended as a useful introduction to the methods of treatment with which it is concerned

The Concentric Method in the Diagnosis of Psychoneurotics[8] is a translation of a series of lectures delivered by Dr M Laignel Lavastine, Professor in the Faculty of Medicine of Paris The author's aim is to show the necessity in every case of psychoneurosis to apply what he terms 'diagnosis in depth' and not merely to be content with a superficial diagnosis The concentric method is carried out in its entirety in the diagnosis of psychoneurotics when the following five zones have been distinguished and as far as possible, investigated first there is the peripheral psychic atmosphere then beneath this the nervous zone thirdly the endocrine zone then the visceral zone and lastly and innermost the central morbific kernel This is clearly a systematic method for investigating the individual is a whole in every case of neurosis and the informal and lucid lectures included in this volume admirably serve to demonstrate the writer's method of approach to his clinical material This book emphasizes the physiological aspects of the psychoneuroses which are liable to be overlooked or altogether neglected and it will certainly be read with advantage by those who are concerned with the treatment of psychoneurotic patients

INTERPRETATION OF DIAGNOSTIC AIDS

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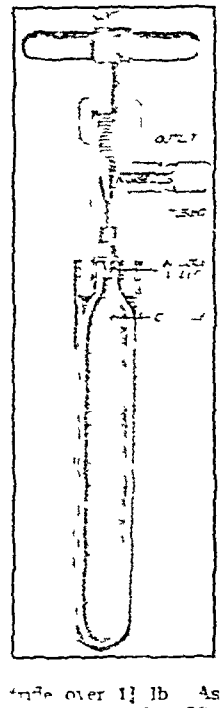
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Aluminium Cannula

Mr H J Dear's Mark VI F R C S Cannula The instrument shown in the accompanying figure has been devised to remove the temptation of giving a simple procedure a bad name by its too frequent performance It has the advantage over other instruments of this nature in that it is rigid and can be inserted by feeling for the opening

British Medical Journal

SATURDAY, JANUARY 2nd, 1932

THE FUNCTION OF THE COLON

While the completion of digestion and the absorption of the digestive products are some of the duties of the colon its principal function in the proximal part is the absorption of water The comparatively fluid chyme from the small intestine is dried in the colon leaving only a pultaceous or firm mass by the time the sigmoid and rectum are reached It is, however, in the excretion of waste products from the digestive tract, and their expulsion in defaecation, that the lower part of the colon finds its essential function The movements of the colon are apparently different from those of the small intestine Both the small and the large intestine show segmentation or pendulum movements, which bring fresh absorptive portions of mucous membrane into contact with the digesting contents of the bowel The peristaltic wave of the small intestine, characterized by a relaxation in front of a wave of contraction, is not so evident in the colon beyond the splenic flexure, though the proximal part of the colon tends to fill by the slow onward passage of material from the small intestine In addition, the colon shows a new form of movement in which a mass of contents is forced through a considerable length of the large bowel The longitudinal muscle of the colon appears to be mainly responsible for this mass movement and in order that it may occur in normal manner two conditions must be satisfied that the colon has been filled as far as the splenic flexure, and that having filled thus far the transverse colon is so relaxed that maximal filling of this part of the bowel takes place The mass movement then starting in the neighbourhood of the hepatic flexure, sweeps the contents of the transverse colon into the descending and sigmoid portions Defaecation may follow, or the ingesta may remain till the next mass movement propels them into the rectum This mass movement is often set up when fresh food enters the stomach and was described by Hurst as the result of a gastro colic reflex The details of the mass movement were observed by studying an opaque meal on the fluorescent *x*-ray screen and most of the observations on movements of the colon have been made by *x*-ray workers in the course of routine examination of patients suspected of gastro-intestinal disease It is probable that both the segmentation movements and the peristaltic waves are initiated in the nerve muscle mechanism of the wall of the bowel though external influences may exert control through the vagus and sympathetic nerves The chemical constitution and reaction of the bowel contents as well as the physical state as regards bulk and roughness form the adequate stimulus for starting the segmenting and peristaltic movements

Although the physiology of the colon is thus somewhat obscure a great deal of work has been done on the deranged colon Most of this is embodied in the experience of *x*-ray workers, appearing in their interpretation of radiograms obtained during routine examination of patients rather than in any treatise on the subject The Frankfort school has, however, endeavoured to classify the diseased function of the colon and a short summary of its work on the physiology and pathology of the movements of the colon has already appeared [1] It is rare to find a colon so flaccid and atonic that segmentation movements are entirely absent It is rather in the derangements of the "mass movement" that minor functional disorders of the colon occur The hurried movements of diarrhoea are less easily studied, and the largest advance in knowledge has taken place in the conditions underlying delay in the colon and constipation Several forms of disordered mass movement may occur (1) A complete absence of the normal mass movement so that the contents of the colon are slowly pushed on into the descending and sigmoid portions, giving rise to inspissation of the contents, delay of several days' duration and evacuation preceded or accompanied by colicky pain (2) Premature and insufficient mass movement may take place, before the transverse colon has been filled, the contents of the ascending colon remain therefore, *in situ* and delay of the ascending colon type is seen (3) In a condition of spasm of the colon, the mass movement may be unable to pass the spastic regions, in this way the contents are broken into pellets or cork-like portions, and evacuation is delayed (4) In elderly patients a mass movement may be delayed for thirty to thirty-six hours, owing to enfeeblement of the musculature of the bowel (5) It is possible too, that a primary form of constipation may follow too complete absorption of the ingesta, so that there is not sufficient stimulus to the nerve-muscle mechanism controlling the bowel movement

The purely anatomical position of the bowel can no longer be considered of importance nor can it be shown that disordered action of the colon is remedied by surgical procedures, involving stitching up and fixing dropped portions The living pathology of the bowel is much more concerned with its mobility, as expressed in its functional posture or tone, and its various types of muscular movement How the control takes place is not yet completely known, but it is dependent on the triad—bowel contents mucous membrane nerve-muscle mechanism Any one of these may be affected In a recent paper on functional disorders of the colon, Spriggs,[2] discussing the causation speaks of the importance of infections Toxic sources may be present in the bowel contents, as in dysentery, in the upper digestive tract, as in pyorrhoea and infected tonsils, or in adnexa of the alimentary tract, as maxillary antra, gall-bladder Bad food, food deprived of vitamins in its preparation, may have a deleterious effect Spriggs

[1] *Klin Woch* May 16th 1931 p 890
[2] *Quart Journ Med* July 1931 p 533

lays more emphasis however on the harmful effect of irritative elements which interfere with the rhythm of the body's swing up and downs and spasms. Prolonged use of such items must upset the normal nervous mechanism regulating the postural tone and allowing dilatation and relaxation of the colon.

READING AND SEEING

Most of us are conscious of variations in the pleasantness and readability of print but impressions need to be corrected by measurements that can be confirmed. Many such experiments have been made and Mr. M. D. Vernon in *The Experimental Study of Reading*[1] gives an interesting account of attempts to obtain some workable data. Some of the experiments and the apparatus devised have been most ingenious and not least are the very elegant tests performed by Mr. Vernon himself. One of the difficulties encountered is the disturbance caused by any attachment of a piece of apparatus to the eye itself which restricts the movements of the eye. On the other hand light beams projected upon the eye are apt to disturb vision. How these difficulties have been overcome is clearly set out by Mr. Vernon in his treatise.

Voluntary and reflex movements about the field of vision are in general inaccurate and erratic. To pass from one part of the field to another it is usually necessary to execute corrective movements interspersed with fixation pauses during which the eye so to speak reviews its position. Nor can the eye be maintained steadily in one fixation position for any length of time; there is a tendency for it to move away as the result of reflex stimulation from peripheral visual sensations. The movements of the two eyes are not always well integrated and they may differ from each other both in speed and direction. In the reading of the child the fixation pauses and movements to and fro along the printed lines are erratic and very numerous. In the reading of the mature adult a series of rhythmic backward and forward movements may be observed, the forward movements alternating regularly with fixation pauses of comparatively short and regular duration. This harmonious sequence of movement and pause is liable to be disturbed by any kind of mental struggle or conflict such as an effort to understand an obscure passage or to pronounce some difficult word, like perspiration, or translating one mental function to the reading of visual symbols. In such cases periods of [illegible] with a return to the regular [illegible]. [illegible] and more than a small part of the visual field [illegible] the conduct of [illegible] and [illegible] language and [illegible]. In [illegible] [illegible] [illegible]

Himalayan peaks are to be climbed at all, the use of such an artificial aid as oxygen should be dispensed with lest the noble sport of climbing be reduced to a mere laboratory experiment Quite apart from considerations of this kind comes the problem of oxygen in relation to acclimatization One school thinks that oxygen is of use to the unacclimatized , another that it is valuable both for acclimatized and unacclimatized persons Practical experience seems unable to settle the matter The no-oxygen ' adherents quote the fact that in 1924 some members of the expedition had reached such a pitch of acclimatization that no enhanced fatigue was experienced when, climbing at 26 000 feet they turned off the taps of the oxygen apparatus Again Mallory s party reached a point 26 900 feet above sea-level without using oxygen, and relied entirely on their inherent powers of acclimatization On the other hand, Finch and Bruce encamped at a height of 25 500 feet found considerable relief from oxygen, which enabled them to throw off a ' dead numbing cold ' and ' sleep well and warmly " Finch was sure that the oxygen saved their lives that night Moreover, the next day its use enabled them to climb at 900 feet an hour while another party without oxygen, but in better mountaineering condition attained a climbing speed of only 330 feet an hour in almost similar conditions Thus Dr Raymond Greene suggests that the necessity for acclimatization might be avoided if oxygen were used from low levels upwards This would call for an apparatus which delivered the gas constantly day and night and the danger of its sudden failure at a high altitude would be considerable The difficulties in designing such an apparatus—which must be light, simple efficient and thoroughly trustworthy—are obvious Dr Greene believes however, that should it be finally obtainable and placed in the hands of a young, well-drilled and well-organized party a successful assault on Everest would result Acclimatization to high altitudes presents a difficult problem its most important element being as he points out, the alkalosis resulting from the washing out of CO_2 from the lungs during deep breathing It is interesting to note that experiments in administering ammonium chloride to combat this alkalosis have already been made, and open a promising field for investigation

GASTROPHOTOGRAPHY

In his manual on gastrophotography[1] Dr Becart describes fully the methods of using and the results obtained with an instrument for taking direct photographs of the lining membrane of the stomach Preliminary notices of the use of the instrument advocated, the gastrophotor have been published in England by Professor Pannett and Mr Levi,[2] and by Dr Wyard [3] The apparatus consists of two cylindrical metal cameras separated by an ampoule containing a tungsten filament by means of which a flash of cold blue light of 20 000 candle-power is obtained Each camera has, instead of lenses eight pinholes arranged in pairs vertically the pairs facing directions at right angles to each other The single exposure thus enables eight stereoscopic pictures to be obtained of the whole circumference of the stomach The double camera is mounted at the end of an oesophageal tube for introduction into the stomach, and the apparatus is so constructed that the holes are not uncovered until the cameras are in place The minute pictures of the interior thus obtained are developed and enlarged before examination Dr Bécart's monograph is divided into two sections a simple and clear description of the gastrophotor and the technique required in its use , and, secondly a discussion of the results obtained in normal patients and in those suffering from various types of gastritis ulceration, and tumours of the stomach It is illustrated by a series of photographs of actual lesions and diseases of the stomach, as well as by control pictures of the normal appearances of the different parts of the mucous membrane In this generation much progress has been made in elaborating diagnostic methods Radiology has especially increased the knowledge of the viscera, but only a few organs, such as the throat, larynx bladder and rectum, can be brought under direct vision In the case of the stomach the gastroscope is an instrument that requires special care, and its field of vision is limited Photography of the stomach wall by the gastrophotor offers a useful addition to our diagnostic methods Though at present in the trial stage, its use may well become more general, and Dr Becart has provided a good introduction for those who think of taking up the subject

[1] *La Gastrophotographie* Par A Becart Paris N Maloine 1931 (30 fr)
[2] *Lancet* 1931 ii 174.
[3] Ibid 1931 ii 177

MEDICAL CINEMATOGRAPHY

The December meeting of the Chelsea Clinical Society was given up to a demonstration of medical cinematograph films Four of the five films shown, which occupied two hours in projection were of surgical or orthopaedic interest the remaining film being a biological study Film technique for scientific illustration has advanced far since the first instructional efforts were made some years ago, but the difficulties of medical subjects are quite special An operation on a patient cannot be prolonged or altered in its routine to suit the exigencies of the cinematograph camera It is inevitable also at times that the surgeon's hands or instruments should interfere with a clear view, and the light though adequate for the manipulations may not be the best for photography On the other hand, the film has obvious advantages for the student as compared with witnessing the actual operation for it can be stopped at any point turned into a still picture, and its detail examined, or a particular phase of operation may be repeated as often as necessary The demonstration at Chelsea was given by Mr Lawrence Abel, who was himself responsible for one of the films shown, a two-reel production illustrating the abdominal perineal (Miles s) operation for radical excision of carcinoma of the rectum an operation designed to extirpate the upward spread of the growth in addition to the lateral and downward spread This was a very graphic presentation, carrying the whole procedure through from the first preparation of the patient to the post-operative dressings and of special interest was the technique for restoration of the pelvic floor and the making of the colostomy Mr Abel in a foreword to the series of pictures, remarked that in this country, so far as he was aware, there was as yet only one medical talkie " though the Western Electric Company was starting a library of talking medical films The single

sound film was an American production illustrating an obstetric procedure and took an hour to project. The five films he showed were all silent, most if not all of them from the Kodak Medical Film Library. Naturally surgical and orthopaedic subjects lend themselves better to moving picture technique than do strictly medical subjects. The consultation room as distinct from the operating theatre awaits the sound film and Mr. Abel appeared to think that some day when the making of talkies becomes less expensive teaching centres or groups of medical men may be able to establish a studio where medical subjects can be taken. In America medical and surgical films for the hospitals where they are made are subsidized to some extent by firms which sell dental devices, infants' foods and the like, and in return some advertisement of the preparation is insinuated though not obtrusively into the film. The first of the films shown by Mr. Abel illustrated the setting of fractures of both legs as carried out by Mr. Watson Jones of Liverpool, and this was followed by a view of Continental practice from the Accident Hospital, Vienna, where Professor Lorenz Böhler was shown at work treating fractures of the humerus and devising splints of unusual character. Professor Böhler's films were described in these columns on the occasion of the visit of the Austrian surgeon to this country last year. The next film showed an operation by Mr. Norman Fleming for the removal of cataract, followed by some close-ups of eyes on which such operations had been performed. Another film showed the removal of tonsils by dissection as practised by Mr. J. R. Griffith. These relatively simple operations at short range were very successfully illustrated. Finally came a film of biological interest, the work of Professor K. Kopsch of Berlin, illustrating the development of the fertilized ovum of the axolotl. By arranging exposures at fixed intervals the picture was made to represent in a few minutes various stages of growth which actually occupied hours or days, so that the life-history of the subject was presented in a very vivid manner.

MENTAL MEDICINE YESTERDAY AND TO-MORROW.

In a note on Sir Humphry Rolleston's reminiscences of St. George's Hospital forty years ago[1] we suggested that it would be a good thing if other senior members of the profession put down on paper their recollections of bygone physicians and surgeons. A correspondent reminds us that just twelve months ago[2] Dr. Lionel Weatherly, who celebrates his eightieth birthday next month, published a short address on some leaders in psychological medicine with whom he had been associated during half a century of work among mental and nervous patients. Beginning with Sir John Bucknill (author with Daniel Hack Tuke of a textbook famous in its day) he mentioned in turn Rayner, David, Bower, Henry Maudsley (whose writings he devoured), the three great Scotsmen—Clouston, Yellowlees and Urquhart, Savage, Hayes Newington, Conolly Norman and Frederick Needham. Sir Clifford Allbutt (who as some of us forget was Commissioner in Lunacy for a time), Hood, Micklethwaite, Whitcombe and Spence and last but by no means least Charles Mercier, of whom Dr. Weatherly said: "Next to Maudsley I place him as our most brilliant writer on anything appertaining to mental diseases." Mercier's pungent pen was very familiar to readers of the *British Medical Journal* up to the time of his death in 1919. Turning from giants of the past to hopes and wishes for the future, Dr. Weatherly summed these up as follows: "I do wish for more enlightenment regarding the influence of endocrine secretions on mental disease. I desire more knowledge of the sympathetic nervous system and its power over emotional states and impulses in functional conditions of insanity. I want more clinical study in our mental hospitals, better classification of our patients, greater use made of psychotherapy, it by that is meant gaining the confidence of our patients and persuasion by logical reasoning to remedy morbid imaginings; and lastly, I look forward to a great extension of occupation therapy in the treatment of mental disease."

ARTHUR CONAN DOYLE.

The Rev. Dr. John Lamond's memoir of Sir Arthur Conan Doyle[3] who was a many-sided personality shows how much the biographer's view of his subject determines the presentation of the aspects of his subject and even suggests that in this and in some similar instances a really satisfactory account would be more likely to result from a combined authorship. To most people Conan Doyle was the creator of Sherlock Holmes and first and foremost a man of letters; to medical readers he has the additional attraction that he was a member of their profession and in some of his stories brought his special knowledge to bear with accuracy and dramatic effect. His activities included sport, oratory, politics, work as a war correspondent, history, poetry and spiritualism. It is the last aspect that seems to appeal most to his biographer and probably least to most of those who in the ordinary course would read this book. The volume is divided into two parts, the second and larger being mainly devoted to his spiritualistic propaganda. Conan Doyle came of an artistic family which numbered among its members Richard, familiarly known as Dicky, Doyle who designed the front cover of *Punch* and Conan Doyle might well have been an artist in colour instead of one in words. Born in 1859 in Edinburgh he was educated at Stonyhurst and began medicine in 1875 at the university in his native town, which the author naïvely remarks even at that period had a world-wide reputation as a centre of medical training. It will be remembered that Edinburgh always famous then had Lister at his zenith as a teacher. Conan Doyle came under the influence of Joseph Bell, the surgeon whom he immortalized as the prototype of Sherlock Holmes, and William Rutherford, professor of physiology, who was the model from whom Professor Challenger in *The Lost World* and later the provocative critic in *The Land of Mist* were drawn. Who was the original of Dr. Watson if indeed there was one is not revealed. In her pathetic epilogue Lady Doyle gives an interesting account of how when a man disappeared and the police failed to discover where he was the relatives appealed to Sir Arthur, who thereupon solved the mystery without leaving his study by indicating one or two towns hundreds of miles from the city in which

[1] [illegible]

[2] [illegible]

[3] [illegible] By the Rev. John Lamond, D.D. With an Epilogue by Lady Conan Doyle. London: J. Murray. 1931. (10s. 6d. net.)

the murder was supposed to have been committed Dr Lamond gives a graphic account of Conan Doyle's struggle with poverty for six years in medical practice at Southsea then follows him to Devonshire Place London where there was a brief interlude as a patientless ophthalmic surgeon and so to success as an author Conan Doyle took an active part in the South African war and the great war and later gave his energies to spiritualism in which he had become interested as far back as the eighties of last century

CENTENARY MEETING PRESIDENTS OF SECTIONS

The scientific and clinical work of the Centenary Meeting of the British Medical Association to be held in London next summer under the presidency of Lord Dawson of Penn, P R C P will be divided among twenty-four Sections meeting on Wednesday Thursday and Friday, July 27th 28th, and 29th We publish below a list of the Sections whose Presidents have been appointed The first six Sections will meet each on three days and the last three on one day, the remainder will meet on two days The full list of officers and Sections and further information about the meeting generally will appear in later issues

Medicine Sir Humphry Rolleston Bt M D F R C P
Surgery Lord Moynihan of Leeds M S F R C S
Obstetrics and Gynaecology Comyns Berkeley M Chir M D F R C P F R C S
Physical Medicine Sir Leonard Hill M B F R S
Public Health Sir George Newman M D F R C P
Oto Laryngology Sir StClair Thomson M D F R C P F R C S
Neurology Sir L Farquhar Buzzard Bt M D F R C P
Diseases of Children G F Still M D F R C P
Pathology Professor Robert Muir M D F R C P Ed F R S
Bacteriology Sir Almroth E Wright M D F R S
Pharmacology and Therapeutics Professor J A Gunn M D
Physiology and Biochemistry H H Dale M D F R C P F R S
Ophthalmology Sir J Herbert Parsons F R C S F R S
Orthopaedics Sir Robert Jones Bt Ch M F R C S
Radiology Stanley Melville M D M R C P
Dermatology and Venereal Diseases H W Barber M B F R C P
Anaesthetics Sir Francis E Shipway M D
Tropical Medicine Sir Leonard Rogers M D F R C P F R S
Mental Disorder Sir Maurice Craig M D F R C P
Tuberculosis Sir Robert Philip M D F R C P Ed
History of Medicine Charles Singer M D F R C P
Forensic Medicine Sir William H Willcox M D F R C P
Medical Sociology Sir Robert Bolam M D F R C P

OLD MEDICAL BOOKS

In a recent issue (December 12th, 1931, p 1103) it was mentioned in these columns that a copy of an early edition of Sir Thomas Elyot's "Castel of Helth" was to be sold a few days later at a London auction room and the phrase was added, not, of course, the first edition By a curious coincidence an actual copy of the hitherto unknown first edition of this celebrated book has at last come to light and is now offered for sale at £100 by The Salamander Bookshop, Ltd Silver Street Bloomsbury The *Dictionary of National Biography* contains the statement that one of the Harleian MSS is in the form of a dedicatory epistle to Thomas Cromwell which cannot be of later date than 1534 whence the inference has been drawn that the original edition must be of that year or previous to it This new find confirms the deduction as it is dated 1534 and is inscribed "Thomas Elyot knyght to the Right Honourable Thomas lorde Cromwell, lorde priuye seale" The title runs 'The Castell of Helthe, gathered and made by syr Thomas Elyot knyghte oute of the cheefe authors of phisyke, wherby euerye man maye knowe the state of his owne body the preseruation of helthe and how to instructe wel his physytion in syknes, that he be not deceyued" The last paragraph is, 'And of the erthe created medicyne, and the wise manne shall not abhore it Thus fare ye wel gentyl reders, and forget me not with your good reporte and praye to god that I be neuer waxe occupied" The same booksellers have also in stock other medical rarities For example a satirical medical play, published in London by Thos Harper in 1638, entitled, 'Cornelianum Dolium' by T R The sweating tub, also called Cornelius's tub was very much in vogue in the sixteenth century in the treatment of syphilis, and it is around this usage of the tub that the plot of the play revolves We are informed, however, that the author "has happily avoided mere ribaldry on the one hand, and pompous moral stricture on the other" The real authorship remains unsettled at various times it has been ascribed to Thomas Randolph, Richard Brathwait Thomas Riley and George Ruggle They have also a book by Daniel Becker of Leyden published in 1640 which describes a gastrotomy performed by the German surgeon Daniel Schwalbe for the recovery of a large knife which had been inadvertently swallowed by Andreas Grunheide a Prussian peasant Another exceedingly rare book (because most of the edition was burnt by order of the Inquisition) is T Campanella's "Medicinalium juxta propria principia libri septem" Lyons, 1635 notable for the description of rhinoplasty as practised by a Calabrian family of plastic surgeons There are several editions of the 'De Re Medica" of Celsus dated respectively 1516, 1528, 1549, 1566, 1625 Another valuable work is the first edition of Estienne's textbook of anatomy published at Paris in 1545 with sixty-two full-page illustrations this anatomist discovered the existence of the valves in veins and was also the first to trace blood vessels into the bones Finally there is a very early instance of what is usually nowadays called 'A System of —— by various writers" to wit, a treatise on syphilis by Peter Andreas Mattheolus, John Almenar Nicholas Massa, Nicholas Poll Benedict of Vittoria, and Angelo of Bologna all under the editorship of Joseph Tectander of Cracow Of these authors Massa was perhaps the most popular on this particular subject he advocated a combination of mercury and sarsaparilla This particular edition of the "Collectio Lugdunensis" was issued at Lyons itself in 1536 and is much rarer than the identical textbook published at the same time at Basel

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The eighteenth annual conference of the National Association for the Prevention of Tuberculosis will be held in the Great Hall of University College, London on July 21st 22nd and 23rd The occasion will be taken to celebrate the fiftieth anniversary of the discovery of the tubercle bacillus by Robert Koch

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We regret to announce the sudden death on Christmas Eve of Sir William H Bennett K C V O, consulting surgeon to St George's Hospital

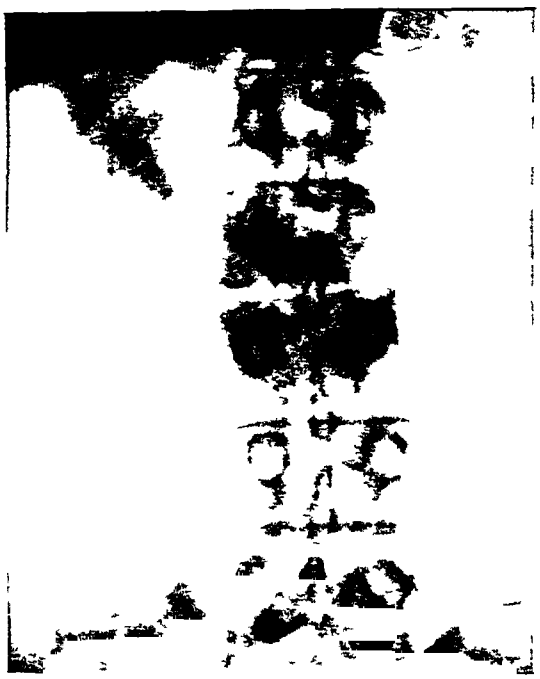


FIG. 1.—Tuberculosis of the second and third lumbar vertebræ.



FIG. 2.—The same as Fig. 1 but showing lateral grafts in position in vertebral grooves.



FIG. 3.—Tuberculosis of spine, lower dorsal region, marked kyphotic deformity.



FIG. 4.—The same as Fig. 3 showing the short lateral graft on the concave side.

H D CHALKE LICHEN URTICATUS



FIG 1.—Vaccinal lichen



FIG 2.—Lesions on forearm

H D CHALKE LICHEN URTICATUS



FIG 3.—Secondary infection of [illegible]

V B GREEN ARMYTAGE
A "CONTRACEPTIVE"



Gräfenberg ring in situ

J T INGRAM THALLIUM ACETATE IN RINGWORM OF SCALP



FIG 1.—Scaling from application of iodine in treatment by thallium acetate

D W CARMALT-JONES LOW VISCERAL TONE



FIG 1.—Characteristic tongue.

HAMILTON BAILEY TUBERCULOUS CERVICAL ABSCESS



FIG. 1.—"Collar-stud" abscess, connected with the upper jugular lymphatic glands.



FIG 2.—Repeated aspiration was performed in this case, and the skin over centre of swelling was commencing to break down.

R. M. J. HARPER. CEREBRAL ANEURYSM WITH RECURRENT LEAKAGE



J. A. HENDERSON & F. PETTIGREW. HAEMORRHAGE INTO SUPRARENAL CAPSULE



A. H. MORLEY. ARTERIO-VENOUS ANEURYSM OF SUPERFICIAL TEMPORAL VEIN



H. G. WYATT. STERNAL FISSURE IN A CHINESE



The First Hundred Years

NOTES ON THE HISTORY OF THE ASSOCIATION

THE British Medical Association founded at Worcester in 1832 by Sir Charles Hastings celebrates its centenary next July under the Presidency of Lord Dawson of Penn. In anticipation of this landmark in professional history the Council invited Mr E. Muirhead Little F.R.C.S. to undertake the task of annalist. We publish below the second of a series of advance extracts from the *History of the Association* which Mr Muirhead Little is preparing for publication at the time of the commemorative proceedings in Worcester and London.

SIR CHARLES HASTINGS

The founder and first secretary of the British Medical Association was born at Ludlow in Shropshire on January 11th 1794 the sixth son of the Rev. James Hastings rector of Butterley. The name of Hastings had long been a good one in and about Worcestershire and although the exact connexion between the rector and the great Warren Hastings of Daylesford cannot now be ascertained they were generally considered to be cousins and the two families were on friendly terms. Not long after the birth of Charles his father became rector of Madley near Worcester and there Charles was brought up. The school in the village appears to have had a good reputation attracting boys from a distance and at that school he received all his general education.



As a boy Hastings is said to have been devoted to an outdoor life and not to have been particularly studious but when his father broke down in mental health the large family found itself in some straits and Charles had to set to work. He was apprenticed to two surgeons Messrs. Jukes and Watson at Stourport Worcestershire who were well thought of in that neighbourhood and who with a view to his candidature for the house-surgeoncy of the Worcester Infirmary advised him to go to London for further instruction. He accordingly became a pupil at the celebrated Blenheim Street School of Joshua Brookes and attended lectures at Dr. John Taunton's private school besides those on medicine by Dr. Robert Hooper in Savile Row. It has been stated that he also received instruction from a Dr. Ager about whose activities we have been unable to learn anything. In the autumn of 1812 Hastings returned to Worcester. The contest for the post of house-surgeon in the Infirmary was severe but Hastings who was only 18 years old and had no diploma of any kind was successful by 184 to 168 votes notwithstanding the fact that his opponent was a much older and a well-qualified man. He justified his appointment by his care and diligence in taking notes and by his experimental work under Dr. A. P. Wilson Philip on the functions of spinal ganglionic and cerebral nerves. The results were communicated by Philip to the Royal Society and published in the *Philosophical Transactions*.

After three years of house-surgeoncy Hastings was advised to go to Edinburgh for a degree. There he soon joined the Royal Medical Society and took an active part in its discussions. He assisted in experiments on transfusion the results of which were published in the inaugural thesis of Dr. Leacock of Barbados. In the spring of 1817 he carried out an experimental inquiry into the action of the blood vessels in health and disease with a view more especially to demonstrate an independent contractile power inherent in the arterial capillary and venous systems. He was said to have been at that time the only student in the University who used the microscope in physiological and pathological investigation. In the same year he was elected president of the Royal Medical Society. In 1818 when he read an account of his study of the circulation in the frog's foot as seen under the microscope some speakers denounced such methods as useless and said that deductions drawn from experiments on the lower animals were very fallacious and that such investigations were indefensible in themselves.

While in Edinburgh Hastings attended Professor Jameson's lectures on natural history and the interest thus aroused in this subject never left him. He graduated in medicine in 1818 his thesis being *De vi contractili vasorum* and in the same year was elected physician to the Worcester Infirmary at the age of 24. This post he held for forty-four years resigning in 1862. He soon became and for long remained the leading physician in Worcestershire and in the surrounding counties.

From this short account it will be evident that Hastings was a man of considerable abilities some originality of mind and great industry. On his return to Worcester young as he was he seems to have been speedily accepted as a leader in medicine and in natural history. But he was not content to sink into the position of an ordinary country physician enjoying a large practice and that *otium cum dignitate* which he might so easily have obtained. His writings in the years between his establishment in Worcester and the foundation of the Association show that he was busy with his pen in setting forth his views on those topics in medicine and natural history which always interested him.

In 1828 with the view of raising the tone of provincial medical practice and supplying a medium for the interchange of opinion and the diffusion of knowledge Hastings started a quarterly journal *The Medical and Surgical Reporter and Topographical and Statistical Journal*. He had realized the need of a publication which

should make use of the valuable material available in provincial practice and more especially the clinical and pathological knowledge which was running to waste in the county infirmaries To this journal in the four years of its existence Hastings contributed freely The farewell address in the last number dated May 1832 stated on behalf of the editors that the great object of their arduous undertaking had been from the first not only the mutual instruction of the members of the profession but also the foundation of an association for the diffusion of medical knowledge

In 1832 Hastings called together a meeting at the Worcester Infirmary at which the establishment of the Provincial Medical and Surgical Association was decided upon He delivered an inaugural address at the first meeting and for many years he was secretary and the leading spirit of the Association skilfully guiding it through many difficulties At the meeting in Liverpool in 1839 a portrait in oils painted by Benjamin Rawlinson Faulkner which is now in the care of the solicitors to his eldest grandson at Worcester was presented to his wife The engraving of this portrait by S W Reynolds jun is fairly well known there is a copy of it in Martley Rectory and among others one signed by Hastings in the British Medical Association House in London From this portrait (reproduced herewith) the obverse of the Hastings medal and the medallion on the outer cover of the *British Medical Journal* is taken In 1843 Hastings resigned the secretaryship owing to its increasing duties and was appointed permanent president of Council and treasurer He was knighted in 1850 and when the General Medical Council was set up under the Medical Act of that year Hastings was appointed a member

His interest in public health was enduring He was president of the Section of Public Health at the York meeting of the Social Science Association When cholera was epidemic at Worcester he took a great part in removing the stricken poor to camps outside the city Sedentary occupations favoured the incidence of phthisis in Worcestershire and as early as 1820 he published *A Treatise on Inflammation of the Mucous Membrane of the Lungs* to which was prefixed an *Experimental Inquiry Respecting the Contractile Power of the Blood Vessels and the Nature of Inflammation* Hastings was an active member of the Worcester Natural History Society and assisted in founding and supporting the museum A portrait later than that by Faulkner hangs in the Victoria Institute Library and Museum Beneath it is the following inscription

Presented by Susanna Holvoake to the Worcestershire Natural History Society as a token of her regard for Dr Hastings one of the earliest and most zealous of its members and also as a mark of her respect and esteem for that useful and most honourable institution His book *Illustrations of the Natural History of Worcestershire* was published in 1834 and he subsequently published an account of the salt springs of the county a considerable part of which work was utilized by Sir Roderick Murchison in his *Silurian System*

Hastings did not share his family longevity he died at Barnard's Green near Malvern from carcinoma of the duodenum ending in perforation on July 30th 1866 aged 72 He had for many years been lame as the result of some injury to the hip sustained in a carriage accident but this lameness did not impair his professional activity He had married in 1825 the eldest daughter of Dr George Woodyatt physician to the Worcester Infirmary The issue of this marriage was an only son Mr G W Hastings who for some years was member of Parliament for East Worcestershire and acted as legal adviser of the Association on matters of medical reform With the consent of the trustees Mr Hastings generously placed the medical library of his father at the disposal of the profession in Worcester At a meeting held in October 1866 a cordial vote of thanks was passed by the members of the profession in the city and county the gift was accepted and it was determined to form a Medical Society The books were subsequently transferred to the library of the Association in London The bust of Sir Charles by Mr (afterwards Sir) Thomas Brock R A who was himself a native of Worcester was presented to that city by the Association at the Jubilee Meeting in 1882 and placed in the Victoria Institute Public Library The Sir Charles Hastings clinical prize for general practitioners of £50 was established by the Association in 1924 and was first awarded at the Annual Meeting at Nottingham in 1926

MEDICAL USES OF RADIUM

REPORTS FROM RESEARCH CENTRES

Reference was made in the *Journal* of December 12th 1931 to the Medical Research Council's publication on radium * The following account summarizes in greater detail the reports for 1930 from the Council's research centres and deals with the use of radium therapy in cancer and other malignant conditions as they occur in various sites in the body

CANCER OF THE BREAST

Forty cases have been treated with radium at the General Hospital Birmingham Keynes's technique being adopted in seven of the late cases The Marie Curie Hospital London has adopted the following methods of treatment for breast cancer (1) Radium alone needles under pectoralis major at base of tumour (with large tumours a second row above basal layer) treatment of wide surrounding zone with packs Glands surface irradiation or needle insertion with packs (2) Local excision with needle insertion at same operation Surface irradiation by packs before or after removal of needles (3) Radical operation and radium Needles into upper five intercostal spaces near the sternum at operation (4) Recurrence surface irradiation insertion plus packs x rays Seventy three cases treated since 1921 at the Middlesex Hospital show that the best results were obtained with radium used at as great a distance as 6 cm Considered as a local disease and treated in the early stages cancer of the breast appears to be usually responsive to suitably planned surface radium therapy An interesting case from the Royal Free Hospital illustrates the sterilization of a primary mass in the breast by insertion of radium needles Sections cut in a wide area four months after irradiation showed the tumour almost everywhere transformed into fibrous tissue Some microscopic areas of tumour cells were found on close examination to be necrotic At St Bartholomew's Hospital there has been a tendency to irradiate more widely around the breast tumour Follow up of cases suggests that patients who die of carcinoma die from distant metastases and that in almost all cases there has been great local improvement in or disappearance of the primary tumour

CANCER OF THE UTERUS

Cervix.—In the treatment of cervical cancer modifications of the Stockholm and Paris techniques have been used The Royal Infirmary Cardiff describes twenty five cases of fistula formation Expectation of life is longest in rectal next in vesical and least of all in double fistula At the London Hospital where technique conforms very closely with that of the Radiumhemmet deep x rays are only used for recurrence The Marie Curie Hospital finds that the use of supplementary external irradiation where the parametria are invaded and especially where there is fixation increases the number of five year cures obtained

* *Uses of Radium* Special Report Series No 160 H.M. Stationery Office (9d net)

should make use of the valuable material available in provincial practice and more especially the clinical and pathological knowledge which was running to waste in the county infirmaries To this journal in the four years of its existence Hastings contributed freely The farewell address in the last number dated May 1832 stated on behalf of the editors that the great object of their arduous undertaking had been from the first not only the mutual instruction of the members of the profession but also the foundation of an association for the diffusion of medical knowledge

In 1832 Hastings called together a meeting at the Worcester Infirmary at which the establishment of the Provincial Medical and Surgical Association was decided upon He delivered an inaugural address at the first meeting and for many years he was secretary and the leading spirit of the Association skilfully guiding it through many difficulties At the meeting in Liverpool in 1839 a portrait in oils painted by Benjamin Rawlinson Faulkner which is now in the care of the solicitors to his eldest grandson at Worcester was presented to his wife The engraving of this portrait by S W Reynolds jun is fairly well known there is a copy of it in Martley Rectory and among others one signed by Hastings in the British Medical Association House in London From this portrait (reproduced herewith) the obverse of the Hastings medal and the medallion on the outer cover of the *British Medical Journal* is taken In 1843 Hastings resigned the secretaryship owing to its increasing duties and was appointed permanent president of Council and treasurer He was knighted in 1850 and when the General Medical Council was set up under the Medical Act of that year Hastings was appointed a member

His interest in public health was enduring He was president of the Section of Public Health at the York meeting of the Social Science Association When cholera was epidemic at Worcester he took a great part in removing the stricken poor to camps outside the city Sedentary occupations favoured the incidence of phthisis in Worcestershire and as early as 1820 he published *A Treatise on Inflammation of the Mucous Membrane of the Lungs* to which was prefixed an *Experimental Inquiry Respecting the Contractile Power of the Blood Vessels and the Nature of Inflammation* Hastings was an active member of the Worcester Natural History Society and assisted in founding and supporting the museum A portrait later than that by Faulkner hangs in the Victoria Institute Library and Museum Beneath it is the following inscription

Presented by Susanna Holyoake to the Worcestershire Natural History Society as a token of her regard for Dr Hastings one of the earliest and most zealous of its members and also as a mark of her respect and esteem for that useful and most honourable institution His book *Illustrations of the Natural History of Worcestershire* was published in 1834 and he subsequently published an account of the salt springs of the county a considerable part of which work was utilized by Sir Roderick Murchison in his *Silurian System*

Hastings did not share his family longevity he died at Barnard's Green near Malvern from carcinoma of the duodenum ending in perforation, on July 30th 1866 aged 72 He had for many years been lame as the result of some injury to the hip sustained in a carriage accident but this lameness did not impair his professional activity He had married in 1825 the eldest daughter of Dr George Woodyatt physician to the Worcester Infirmary The issue of this marriage was an only son Mr G W Hastings who for some years was member of Parliament for East Worcestershire and acted as legal adviser of the Association on matters of medical reform With the consent of the trustees Mr Hastings generously placed the medical library of his father at the disposal of the profession in Worcester At a meeting held in October 1866 a cordial vote of thanks was passed by the members of the profession in the city and county the gift was accepted and it was determined to form a Medical Society The books were subsequently transferred to the library of the Association in London The bust of Sir Charles by Mr (afterwards Sir) Thomas Brock R A who was himself a native of Worcester was presented to that city by the Association at the Jubilee Meeting in 1882 and placed in the Victoria Institute Public Library The Sir Charles Hastings clinical prize for general practitioners of £50 was established by the Association in 1924 and was first awarded at the Annual Meeting at Nottingham in 1926

MEDICAL USES OF RADIUM

REPORTS FROM RESEARCH CENTRES

Reference was made in the *Journal* of December 12th 1931 to the Medical Research Council's publication on radium * The following account summarizes in greater detail the reports for 1930 from the Council's research centres and deals with the use of radium therapy in cancer and other malignant conditions as they occur in various sites in the body

CANCER OF THE BREAST

Forty cases have been treated with radium at the General Hospital Birmingham Keynes's technique being adopted in seven of the late cases The Marie Curie Hospital London has adopted the following methods of treatment for breast cancer (1) Radium alone needles under pectoralis major at base of tumour (with large tumours a second row above basal layer) treatment of wide surrounding zone with packs Glands surface irradiation, or needle insertion with packs (2) Local excision with needle insertion at same operation Surface irradiation by packs before or after removal of needles (3) Radical operation and radium Needles into upper five intercostal spaces near the sternum at operation (4) Recurrence surface irradiation insertion plus packs x rays Seventy three cases treated since 1921 at the Middlesex Hospital show that the best results were obtained with radium used at as great a distance as 6 cm Considered as a local disease and treated in the early stages cancer of the breast appears to be usually responsive to suitably planned surface radium therapy An interesting case from the Royal Free Hospital illustrates the sterilization of a primary mass in the breast by insertion of radium needles Sections cut in a wide area four months after irradiation showed the tumour almost everywhere transformed into fibrous tissue Some microscopic areas of tumour cells were found on close examination to be necrotic At St Bartholomew's Hospital there has been a tendency to irradiate more widely around the breast tumour Follow up of cases suggests that patients who die of carcinoma die from distant metastases and that in almost all cases there has been great local improvement in or disappearance of the primary tumour

CANCER OF THE UTERUS

Cervix.—In the treatment of cervical cancer modifications of the Stockholm and Paris techniques have been used The Royal Infirmary Cardiff describes twenty five cases of fistula formation Expectation of life is longest in rectal next in vesical and least of all in double fistula At the London Hospital where technique conforms very closely with that of the Radiumhemmet deep x rays are only used for recurrence The Marie Curie Hospital finds that the use of supplementary external irradiation where the parametria are invaded and especially where there is fixation increases the number of five year cures obtained

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Corpus—Out of twenty-five cases treated at Cardiff since 1923 only five are alive. The report of the Marie Curie Hospital is somewhat more encouraging. Technique has been recently altered, smaller intensive doses being given. Radon cylinders are placed in each commissure, radium tubes in tandem from fundus to internal os, and radium plaques in the fornices. X rays are given two weeks after treatment. Of forty-one cases treated since 1925 thirty-one are now living.

Mouth, Nasopharynx, Larynx, etc.

Mouth and Nasopharynx.—The Birmingham General Hospital, referring to the treatment of gland fields, notes that the date of appearance and extent of metastases bear no relation to the size of the primary growth. In cases where the glands are enlarged and inoperable the practice of removing part of an infected tissue in a large mass is present, followed by irradiation when the wound is healed, has been given up as useless. It is now found better to expose the growth by reflecting skin and subcutaneous flaps and to insert needles on a definite plan under the eye. One hundred and twenty-two cases have been treated since 1926, there being forty-three clinical cures, eight improved, seventeen not improved, and fifty-four deaths. Clinical cures have been obtained in the following percentages: (1) tongue (anterior two-thirds) 32, (posterior two-thirds) 24; (2) floor of mouth 15; (3) cheek and lip 52.

Larynx.—At Birmingham it has been found that the most hopeful sphere for radon seems to be in those very extensive septic inoperable growths of the pharynx and hypopharynx which tend to invade the larynx. Radon is preferred to radium needles owing to the retching and discomfort arising from the strings by which the latter are suspended. Radon seeds are inserted around the growth and a radium collar fitted carrying needles parallel to the sterno-mastoid muscle.

Oesophagus.—All cases of oesophageal cancer have been disappointing but one at University College Hospital showed improvement eight months after treatment.

Rectum, Bladder and Prostate.

Fifty cases of rectal cancer have been treated at the General Hospital, Birmingham, since 1926. Preliminary colostomy is carried out whenever possible. The usual technique is removal of the coccyx and lower part of the sacrum with insertion of needles around the growth, long needles being placed parallel to the meso-rectum. Unsatisfactory results are attributed to the fact that rectal cancer is much more radium-resistant than the squamous epitheliomata of the mouth. Further advice is sought late, there is a septic element, and the tumour is often inaccessible. The Marie Curie Hospital comments on the painful effects in some cases following the posterior barrage method of treatment. Out of fifteen inoperable cases this method was used in three, the remainder having surface application with or without local insertion of needles or seeds. Results are given in the comment. The majority have been improved, three for over two years. Thirteen are living, four are dead. At St. Bartholomew's Hospital, as a preliminary to excision of the rectum in inperitoneal radon is given to glandular areas at the time of colostomy. This is being adopted as standard treatment. Attention is drawn to a valuable new field for treatment—namely, the possibility of inoperable cases becoming operable as the result of radium therapy.

At St. Peter's Hospital out of fifty-eight cases of rectal cancer twenty-eight had insertion of radon seeds by proctoscope and thirty had open operation. As the extent of the growth cannot be determined by the proctoscope method this has now been dismissed as useless. In the open operation cases (a) probe, colostomy and barrel of needles; (b) patients did not benefit by the injection of 2 per cent. fluorescein into the tumour; (c) a combination of diathermy and radium has given immediate relief. None of the cases (all advanced) were cured, but there was relief of symptoms for six to eighteen months. It is interesting to note that a haemorrhage however severe can be controlled by a comparatively large dose of radiation of the whole malignant mass. For the prostate the technique of Herbst (suprapubic cystotomy and irradiation of bladder base and prostate from within) has been adopted, but it is early yet to give an opinion as to its value.

Brain Tumours.

The Royal Infirmary, Manchester, describes nine cases of hemispherical glioma treated during the last twelve months by external radiation. Two are in good health and able to work, two are dead, and one a complete invalid. It is concluded that gliomata are not very radio-sensitive, and that the accurate placing of needles is difficult, as is the avoidance of structurally important areas at the boundary of the tumour. The best method seems to be the combined use of radon and surface irradiation. At St. Bartholomew's Hospital experimental work on rabbits has disproved the old view that with large doses of radon any damage to cerebral tissue was secondary to thrombosis or haemorrhage. Though microscopical changes were visible after six hours' irradiation, and considerable damage was done to the cerebral tissue by the end of twenty-four hours, haemorrhage did not occur until this twenty-four hours period had been reached. Further experiments with radon seeds showed that though some damage to nerve tissue resulted, changes were neither so extensive nor so severe as to contraindicate the use of similar doses in healthy tissue in the vicinity of a cerebral tumour. It is assumed that the reactions of human brain tissue are similar to those of the animals.

Sarcoma and Lymphosarcoma.

Radium appears to have a useful place in the treatment of sarcoma. Of the thirty-three cases collected in 1931 there were 50 per cent. of good results in spindle-celled sarcoma, 41 per cent. in round-celled carcoma, and 23·5 per cent. in lymphosarcoma.

Nova et Vetera

A POPULAR PAMPHLET ON CHOLERA

In these days the outbreak of any new or uncommon disease is usually heralded by paragraphs in the daily press. In ancient times the priest was the natural vehicle of such information, since he was in close touch with his parishioners. Even in comparatively recent years, however, the rector of the parish was expected to be a guide to his flock in matters temporal as well as spiritual. The writer of this note has in his possession a pamphlet which was written by a clergyman to instruct his congregation in the *symptoms and methods of treatment* of the new disease, Asiatic cholera. The pamphlet is entitled:

Cholera Morbus. Precautions, Preventives & Remedies, compiled by a Clergyman for the use of his Parishioners.

It was printed in Doncaster and the preface is dated January 21, 1832.

Asiatic cholera had broken out for the first time in the British Isles in the autumn of 1831. The affected town was Sunderland, and the first death which was recognized to be due to true cholera occurred on October 26th. By the end of the year there had been 202 deaths from the disease in Sunderland, and shortly afterwards the disease died down there. On the Tyne, however, it had also broken out, and cases were numerous in this district. Other parts of England began to be affected in April, 1832. At Doncaster a fatal case occurred in a destitute tramping sailor in the beginning of January, but this led to no outbreak (Creighton). It seems very probable, therefore, that this pamphlet was inspired by the general perturbation occasioned by this fatal case.

The pamphlet consists of eight pages (about 2,500 words). It is bound in a paper cover. Apart from the preface the text may be divided into two sections. The

first section deals with precautions the signs of the disease and remedies This part is purely medical The second section of the text is theological and the thesis is supported by numerous Biblical references

The preface begins as follows

In collecting together the following Precautions Preventives and Remedies I have paid especial attention to the Circulars Reports &c which have been issued by the Boards of Health of London Other hints I have gathered from the Circulars of Local Boards from reports and remarks of Physicians and other papers to which I have had access The whole has been twice submitted to the inspection of an experienced medical friend to whom also I am indebted for many additional suggestions I had at first reference *to my own people only* but a friend expressed a wish that I would publish *for general information*

The first sentence of the preface refers to the Board of Health which was the outcome of cholera outbreaks abroad The disease had spread westwards into Europe and there had been severe epidemics in European Russia in 1829 and 1830 By the spring of 1831 it had reached Poland Hungary and the ports on the Baltic As a result a Royal Proclamation ordering various precautions was issued and on June 21st 1831, a Board of Health was gazetted in London Shortly afterwards several Local Boards of Health were formed voluntarily in different parts of the country

The section of the pamphlet which deals with precautions is especially interesting since it indicates the prevailing views on the etiology of the disease at a time when it was practically confined to one town in the North of England This section is quoted in full

The following *precautions* are especially addressed to the poor

1 —Have all nuisances such as manure *standing* and putrid water pig sties or anything which gives out an unpleasant smell *removed to a distance from your house* and keep all ditches and drains near you as clean as possible *My own people ought to know from sad experience how needful is this precaution*

2 —Limewash the inside of your houses *more frequently* than you are accustomed to do in times of general health This you know may be done at little expense and *it is of great service*

3 —Let your beds be filled with *fresh* straw and if you can procure another blanket

4 —When the weather is fine admit the air freely into your rooms

5 —Keep your houses yourselves and family as clean as possible changing your linen as often as you can *as often again as you used to do* and wash your feet once a week Cleanliness I do assure you cannot be too strictly attended to *it is of far more consequence than you in general suppose it to be and especially at this time*

6 —Avoid sudden chills be warmly clothed and be attentive to the strength of your shoes in order that your feet may be dry and warm *On no account sit down when your shoes and stockings are wet*

7 —Eat moderately and *if you value your lives* by all means *avoid spirituous liquors* and drink as little beer as possible Coffee morning and evening is better than tea Vegetables ought not to be eaten at all unless well boiled Greens may *not* be eaten turnips and potatoes may Tobacco and snuff are *not* preservatives against the cholera but rather *the contrary* the use of tobacco is indeed *extremely injurious* because it weakens the action of the stomach The use of broad flannel belts round the loins is strongly recommended also flannel waistcoats and petticoats

I now write not only for my *poorer* friends but for all and especially for those *who are far from medical aid* I am assured that if strictly and immediately attended to the means pointed out as remedies will by God's blessing prove successful

It is obvious that these precautions are wide of the mark so far as the real cause of cholera is concerned but they deal excellently with the predisposing factors In the three months during which the disease had been prevalent in Sunderland it had been shown that general sanitation played an exceedingly important part in the spread of the disease Writing of this Sunderland outbreak Creighton says The virus for all its opportunities showed a marked preference for, an almost exclusive selection of the lowest and least cleanly localities and a considerable preference for persons of drunken or negligent habits ' It was left to Sir John Simon to inaugurate the sweeping sanitary reforms which were to militate largely against any epidemic

The author of the pamphlet seems to be fairly near the truth when he states that vegetables ought not to be eaten at all, unless well boiled The qualifying statement— Greens may *not* be eaten turnips and potatoes may ' —shows however that the suggestion is really far from being accurate If we are to believe the statements he makes in his preface this opinion is probably a reasonable exposition of the scientific views of the time In point of fact although the part played by cholera infected water was not fully stated until 1849 when Snow published his pamphlet entitled ' The mode of communication of cholera ' at least one writer made a shrewd guess at the true mode of spread This writer (John Parkin) in a paper on the Cause nature and treatment of cholera, concluded that the disease was due to a poison generated in the earth this poison became diffused in springs and swallowing of the infected water produced the disease

The second section of the pamphlet— Signs of the disease ' —is as follows

Sudden loss of strength—the skin becomes cold and changes to a bluish colour—the voice is almost lost and becomes like a whisper—convulsions of the hands and feet take place—with frequent vomiting and looseness

For brevity and accuracy it would be difficult even to-day to better this description

The third section, which deals with Remedies is introduced by the following remarks

The objects to be gained are to make the sick person very warm to restore *the circulation of the blood* and *to get rid of a large quantity of bile which is on the stomach*

The author insists that the patient should be immediately wrapped in hot blankets and put to bed since the retention of the upright posture is liable to cause death The means advised for keeping the patient warm are rather heroic in the light of modern practice Poultices to the soles of the feet to the palms of the hands and to the stomach heated bricks bags of heated bran, corn or sand—these are some of the suggested methods

The giving of a large quantity of common salt in hot water as an emetic at the commencement of the illness is analogous to the modern method of washing out the stomach Where muscular spasms are in evidence the author recommends hot brandy and water or a teaspoonful of sal volatile in a cup of hot water repeated every quarter of an hour He adds naively I believe the last of these is the better It would be interesting to know whether his medical friends endorsed that opinion In severe cases laudanum is recommended as an addition to these remedies As a laxative for persons not affected with cholera he deprecates the use of salts or any cold medicines instead he recommends rhubarb and ginger or rhubarb peppermint and laudanum

Finally the author points out that the remedies which he has suggested are only intended to be used until a doctor is summoned

E Ashworth Underwood

England and Wales

Liverpool University Jubilee Celebrations

The formal celebration of the fiftieth anniversary of the foundation of the University College of Liverpool was held on December 18th 1931 the Chancellor (Lord Derby) presiding over the degree ceremony at St. George's Hall. An Address of Commemoration was delivered by the Vice-Chancellor (Dr. Hetherington) and the Principal (Canon Rendall) gave a formal recital of the long roll of nearly sixty benefactors to whom the College and the University owed so much of their material existence. In his address the Vice Chancellor said that Liverpool University could trace its real origin to the foundation of a medical school in the town in the earlier part of the eighteenth century. The school was able to conduct official examinations and there was certainly organized medical teaching in the city before 1800. By 1900 there were nearly 600 students and in 1903 when the College became an independent University it had 645 day students. The students now numbered 2,200 and the annual expenditure was over £200,000.

Professor Blair-Bell Presentation Portrait

The annual dinner of the Liverpool Medical Students' Debating Society was held at the Adelphi Hotel on December 16th 1931 when Emeritus Professor Blair-Bell was presented with his portrait in oils to mark his retirement from the chair of obstetrics and gynaecology. In acknowledging the gift Professor Blair-Bell said that he hoped the portrait would one day hang in a hall belonging to the medical students who formed such an important unit in the University. Mr. J. A. A. Berne the painter of the portrait also responded to the toast of "Our Guests." Mr. Frank Jeans replying to the toast of "The President and the Staff of the Medical School" said that the medical students had been the backbone of the University. On behalf of the Medical School staff Professor Leith Murray paid a warm tribute to Professor Blair-Bell's valuable work in connexion with the British College of Obstetricians and Gynaecologists.

London Jewish Hospital Medical Society

The third annual dinner of the London Jewish Hospital Medical Society took place on December 10th 1931. Lord Moynihan of Leeds was the guest of honour and the chair was occupied by the president Mr. Maurice Sorsby. Nearly 400 members and friends were present. In a witty and able speech Mr. H. S. Souttar proposed the health of Lord Moynihan. In his response Lord Moynihan recounted some of the fortunate accidents which started him in his surgical career. British surgery which was second to none had been almost unknown outside these islands and it was with the object of proclaiming its due merits to the world that he had initiated the *British Journal of Surgery*. He had also contributed to the break-up of provincialism in surgical practice by founding the Association of Surgeons of Great Britain and Ireland. Viscount Erleigh proposed the toast of "The London Jewish Hospital" which in his opinion compared very favourably with any London hospital of a similar size. He was convinced that the notable intellectual integrity of the Jew would impart him to a marked contribution to the development of medical science in this country. Dr. A. Goodman Levy in responding suggested the remarkable progress that the hospital had made in the seven years of its existence. Arrangements would shortly be made for the holding of post-graduate courses there and he thought that the hospital would provide opportunities for Jewish doctors in this country to equal the achievements of their illustrious brethren abroad in imprinting their names upon the history of medicine. He emphasized the mutual advantages accruing to hospital and doctor through the agency of the society. Dr. I. Barnard proposed the health of the visitors in an amusing speech. Professor H. Levy who responded pointed out the need for keeping reliable Jewish statistics and records if human knowledge was to benefit from the biological experiment which Jewish distinctiveness constituted. Mr. B. Horwitz proposed the toast of "The Society and its President" and Mr. Sorsby replied.

Non-residential Allowances to L.C.C. Medical Staff

The scales of salaries and conditions of service of whole-time subordinate medical staffs in hospitals under the London County Council provide that in addition to their cash salaries such officers should receive emoluments of board lodging and washing valued at £150 a year and that generally speaking all assistant medical officers should be required to be resident. In any case the question of an assistant medical officer being non-resident should arise the primary consideration should be the interests of the service. It has been decided to fix the amount of the allowance to be made in lieu of residential emoluments to medical officers. Such an officer not regularly required to sleep in the hospital is to be granted an allowance equal to the full cash value of his emoluments—that is £150 a year—but where a room at the hospital has to be reserved for him in order that he may regularly sleep there a deduction of £20 a year from the full value of the emoluments is to be made. It is also proposed that non-resident medical officers who are receiving allowances in lieu of residential emoluments shall pay for any meals taken at the hospitals in accordance with the charges at present operative. These proposals apply only to medical officers who accepted the new scale of salaries and conditions of service fixed on March 3rd last. Permission to live out will not be granted unless the accommodation is required or can be utilized for other purposes.

Medical Treatment of London School Children

The medical and dental treatment of school children under the arrangements made by the London County Council for the year commencing April 1st 1932 includes provision for 2,150 eye cases, 21,380 ear, nose and throat cases, 488 ringworm cases, 78,210 cases of minor ailments and 147,070 dental cases. This is a slight increase upon the number authorized for the present year but the total expenditure (£116,189) is about £1,000 lower. It is reported that there is a gradual elimination of ringworm cases amongst the school population justifying a further decrease in the annual provision under this head. The scheme under which children suspected of being rheumatic or requiring observation for rheumatism are dealt with at certain hospitals and treatment centres continues to be greatly appreciated by parents. Under the scheme for next year arrangements have been made for cases to be dealt with at seven hospitals and eight centres where the Council's assistant medical officers will attend. There are at present ten special ear centres where operation treatment of children suffering from discharging ears is carried out. Provision has been made for two additional centres. The standard charge made by the Council to parents in respect of medical and dental treatment is two shillings a case and for minor ailments one shilling. All children operated upon for tonsils and adenoids are now detained in the various centres as in patients and the cost to the Council averages 17s. per case but the parents have hitherto been asked only to pay two shillings. It is now proposed that their contribution shall be raised to five shillings.

Scotland

Edinburgh Health Exhibition

A health exhibition to be held in the Waverley Market Edinburgh in aid of the Royal Infirmary of Edinburgh Bicentenary Extension Appeal Fund will be opened on January 27th by Sir James Barrie The general organization of the exhibition is under the superintendence of Dr William Robertson former medical officer of health for Edinburgh and a surgical exhibit to include various interesting historical relics of surgery as practised by Lister and in pre Listerian days is being prepared under the supervision of Dr Logan Turner The radiological department of the Royal Infirmary is to have a large exhibit illustrating the work of the department it will include photographs of foreign bodies broken bones and disease processes and also appliances illustrating the method of using radium The Edinburgh Corporation Gas and Electricity Departments will exhibit model sickrooms with various lamps used in treatment

Obligations to Hospitals

At a bazaar in aid of the Edinburgh Royal Infirmary Extension Appeal Fund held recently at Cowdenbeath Fifeshire and opened by the Right Hon William Adamson late Secretary of State for Scotland the need for extended accommodation at the Royal Infirmary was emphasized Mr Adamson pointed out that the population of Fifeshire had a special obligation to support this institution There were in the county several local hospitals excellently equipped and staffed and as an outcome of the special effort made in West Fife last year £50 000 had been raised for the extension of the Dunfermline and West Fife Hospital by an extra forty beds This hospital and the local hospitals at Kirkcaldy and Wemyss were taxed to the limit of their capacity and despite these facilities the demand for beds in the Edinburgh Royal Infirmary by patients from Fifeshire continued One in seven of the patients treated in the Edinburgh Royal Infirmary came from Fifeshire the total number sent from this county being greater than that from any other county in Scotland and second only to that from the city of Edinburgh In the past year 2 248 of the patients treated came from Fife and it might be computed that these cost the institution for maintenance not less than £16 000 per annum The total subscriptions received from the county however from all sources in the course of the year amounted to £4 500 this averaged about £2 per patient while the cost to the institution had been not less than £8 per patient

Longmore Hospital, Edinburgh

At the annual meeting of subscribers to the Longmore Hospital for Incurables Edinburgh presided over by General Sir Robert Gilmour Bt, the chairman of the board of managers in moving the adoption of the report said that the average number of patients in the hospital during the past year had been 208 of whom many were completely helpless There had been a waiting list of 209 patients of whom it had only been possible to admit 126 and it was a sad fact that many of the applicants died before beds could be found for them The number of deaths during the year had been 103 of which between 50 and 60 were of patients who had been admitted that year It was satisfactory to note however that some cases had yielded to successful nursing and treatment and had been discharged as no longer requiring hospital treatment The most obvious need of the hospital was for increased accommodation for the treatment of cancer cases during the year 62 patients suffering from cancer had been admitted although the cancer wards contained only 27 beds Efforts had been made to effect economies of administration the cost per bed per annum had now been brought down to £90 but it appeared that little more saving could be effected consistently with efficiency Professor Edwin Bramwell in seconding the adoption of the report said that a hospital of this kind for incurable cases would probably always be needed, notwithstanding the fact that important discoveries in medicine were being made from day to day Tuberculosis was no longer the scourge that it had been and two diseases—pernicious anaemia and diabetes—which were at one time always fatal had within the last few years come under control It was therefore reasonable to hope that in the not far distant future some relief might be found for cancer and also for two diseases of which there were always a number of cases in hospital wards—namely disseminated sclerosis and rheumatic disorders This hospital was doing a great work for which the citizens of Edinburgh could not be too grateful

Health of Aberdeen

A report was submitted at the meeting of the Public Health Committee of Aberdeen County Council on December 11th which had been drawn up by Dr Rae chief medical officer of health and Mr H L Fraser county clerk of Aberdeenshire It contained a scheme for dealing with hospital provision in Aberdeen and suggestions for the better utilization of homes and hospitals in the counties of Aberdeen Angus Banff and Kincardine The chairman of the committee, Mr C W Sleigh in explaining the scheme pointed out that the suggested changes were highly desirable in view of the new powers which county councils possessed under the Local Government (Scotland) Act of 1929 It would have the effect of concentrating certain classes of cases in certain institutions instead of varied cases in each hospital or institution as at present It was agreed that in view of the general financial position at the present time the question of the arrangements which would ultimately be made for the care of adult mental defectives should be postponed It was also arranged that a conference should be held between representatives of the Aberdeen County Council and the Kincardine County Council to discuss the question as to whether provisional arrangements might be made with the object of ultimately enabling Maud Home and Stonehaven Combination Home to become 'one purpose' institutions providing for cases from both counties

District Nursing in Scotland

At the annual meeting of the Scottish Branch of the Queen's Institute of District Nursing the Countess of Mar and Kellie congratulated the Scottish branch on the great extension of its work which had taken place during the forty three years of its existence The branch began with two nurses and now it had 953 nurses working under its supervision These nurses carried an atmosphere of comfort and assurance into the homes which they visited and their work obviated the necessity for many thousands of beds in hospitals which were already full and often had large waiting lists The Countess of Minto delivered an address dealing with the Gardens Scheme organized in aid of the branch from which a sum of £1 100 had been derived during the past summer Owners of gardens throughout the country had permitted the public to visit their grounds on payment of a small fee which was handed over to the institution The scheme had been introduced into Scotland last April 263 gardens had been open to the public in this way and approximately 36 000 people had visited them A still more satisfactory result was expected next summer

Glasgow Medical Missionary Society

At the annual meeting of the Glasgow Medical Missionary Society held on December 10th Sir Steven Bilsland Bt presided and said that the society had carried on a most important work for the physical and moral welfare of the citizens of Glasgow The report showed that 41 384 patients had attended at the dispensaries during the year an increase of 2 095 on the previous year and that over 240 visits had been made by the superintendent and his assistant and over 600 by nurses Bible-women had also made 3 491 visits to the homes of sick persons while a large number of coal and food tickets received from the Sir Thomas Lipton Fund had been distributed among the poor The ordinary income of the society for the year had been £87 less than the expenditure and an appeal was made by the chairman for additional contributions

Miners Convalescent Homes

A set of ultra violet lamps has been installed at the Saltcoats Miners Convalescent Home This is the first convalescent home for miners in Scotland to make use of these lamps and it is proposed that similar facilities for ultra-violet ray applications should be installed at other convalescent homes pithead baths and similar places where miners who spend a large part of the day underground will be able to obtain this artificial substitute for sunlight It is also announced that the Miners Welfare Committee has under consideration the provision of a new convalescent home to accommodate 100 persons the present home at Saltcoats would then be used for miners dependents

India

Unlegalized Practice and Qualifications

The Government of India has under consideration a proposal to add a fresh section to the Indian Medical Degrees Act penalizing a practitioner who adds to his name letters or abbreviations which imply that he is qualified to practise any system or method of medicine other than letters or abbreviations indicating qualification which are recognized by any law for the time being in force in British India or in any part thereof and which have been granted by any authority recognized by the Act The fine to be inflicted for a first offence of this kind or for adopting indications of qualifications other than those actually possessed may extend to 500 rupees subsequent offences being punishable by a fine of up to 1 000 rupees At a meeting on September 26th 1931 the Bombay Medical Council resolved to inform the Government of India that while accepting this proposal it considered it to be only a half measure inasmuch as while penalizing persons assuming such titles it left these bogus institutions (even overseas institutions) which granted such titles or diplomas free to carry on their trade and so to deceive the public The Council added that unless and until the amendments drawn up in 1926 by the Legal Remembrancer to the Government of Bombay were embodied as additional amendments the existing unsatisfactory condition of unqualified and unlegalized practice would continue to prevail inflicting serious harm on the ignorant and even on the educated public and endangering health and lives It was stated also that the evil of which complaint was made in 1926-27 had become greatly aggravated in almost all the principal towns of India thus emphasizing the urgent necessity for amending the act along the lines suggested

Anti malarial Measures in Travancore

Lieut-Colonel W W Clemesha I M S has contributed to the November issue of the *Indian Medical Gazette* a further instalment of his account of the anti malarial work which is in progress on the estates of the Travancore Tea Companies in the Vandiperiyar Valley For four years anti gametocyte measures were adopted as regards the children en-quinine and thus being used until the end of 1929 In the two following years the children were found to be free from parasites and such measures were no longer necessary the few children with enlarged spleens were treated on these lines during the malaria season With the aid of a statistical table the value of the plasmoquine after-treatment is demonstrated Until the end of June 1929 the annual percentage of malarial cases was never less than about 20 per cent an annual figure of 45 per cent being often reached in spite of the initiation of anti-larval measures and the treatment of children Within twelve months of the introduction of the plasmoquine anti gametocyte after-treatment which was started in the autumn of 1929 the proportion of malarial patients throughout the year was in the neighbourhood of 10 per cent and within two years it had been still further reduced—sometimes to as low as 2 per cent In three out of five estates the maximum percentage malarial sick rate for the last year was under 3 even though highly infected gangs of coolies had been introduced from elsewhere without proper treatment on arrival at Travancore Colonel Clemesha insists that the proper way to stop infection from malaria is to lessen the anopheline population and the gametocyte carriers simultaneously and that the anti gametocyte after-treatment is a satisfactory and easily performed method of reducing to very small proportions the number of gametocyte carriers in any community

Government General Hospital Madras

In 1930 there were 88 299 new out-patients and 14 918 in-patients treated at the Government General Hospital Madras as compared with 76 711 and 13 595 respectively in the previous year the number of beds being only 554 of which 168 are reserved for women and paying patients there was always a condition of overcrowding especially on the Indian male side Clinical instruction was given to 358 medical students in the various departments of the hospital As is usual in the annual report of this institution considerable space is provided for records of cases of special interest Locomotor ataxia seems to be moderately common in Madras among Indians six cases were admitted during the period under review two of the patients having juvenile tabes A Hindu girl aged 8 was found to have congenital dislocation of the hip there was no history of antecedent syphilis Another patient aged 16 had had a right ischio-rectal abscess all his life which at any symptoms until an active endocarditis ended with a fatal termination Out of 182 cases of sepsis complicating pregnancy there were three of acute Bright's disease but this complication was not found in simple sepsis A duodenal ulcer of the post was discovered in one of the surgical wards prompt improvement followed the administration of anti-diphtheria serum Diathermy associated with radiant heat and ionization proved very effective in chronic polyarthritis of rheumatic origin In the Government Venereal Institute 71 000 patients were treated in 1930 as compared with 51 000 in 1926 though there was no change in the number of the staff The hospital is being remodelled and extended in view of the demand on its accommodation An administration block was constructed during 1930 and a pathological institute for the medical college The nursing staff quarters are being enlarged

Correspondence

OCULOGYRIC ATTACKS IN CHRONIC ENCEPHALITIS

SIR —I am grateful to Dr Ranyard West for his kind letter in the *Journal* of December 12th 1931 and for the interesting points which he has raised It is perhaps somewhat difficult to reconcile the distressing excitement which often accompanies an oculogyric attack with the peaceful calm of normal sleep but these are the two extremes The ocular attack may after a short and stormy onset pass into peaceful slumber whilst ordinary sleep after a quiet start may become anything but calm and restful

Dr West refers to the occasional attacks of complete immobility of various groups of muscles whilst performing some voluntary act and mentions a case in which these are accompanied by ocular crises Although coincident the two are probably distinct phenomena because similar ocular attacks occur in cases in which general muscular rigidity is minimal and immobility unknown whilst conversely many cases with extreme rigidity never have ocular attacks Further, the doings in the two sets of muscles concerned are not at all comparable The limbs become so to say frozen ' at a certain point in an uncompleted action whilst in an ocular attack the eye muscles act in a way unknown in ordinary vision It is no uncompleted action but a movement which so far exceeds normal that it prevents vision

It seems more probable that in Dr West s case the emotional excitement brought about by the immobility is the immediate cause of the ocular attack As a rule the comparative mobility of the eye muscles in Parkinsonians is in striking contrast with their general immobility in other parts but occasionally cases are seen in which the patient tells you that he gets his eyes fixed on an object and cannot move them These seem to belong to the same category as the attacks of immobility to which Dr West refers but they are quite distinct from oculogyric attacks Debove in 1878 described a similar thing in a case of paralysis agitans in which the woman could not get her eyes back to the beginning of the next line when she had read to the end of the preceding one whereas so far as I know there is not a single record of oculogyric attacks in paralysis agitans

As regards the question of ' active spasm of the lids I do not know whether Dr West refers to actual closure of the lids or merely a spasmodic fluttering If the former I have referred to it in detail in the lecture (*British Medical Journal* November 7th 1931 p 837) if the latter it is a very frequent accompaniment of the onset of attacks during the stage when excitation and inhibition are struggling for the mastery

He refers to the flexion of the neck in the patient with the eyes turned down It seems to be the rule in these attacks that the position of the eyes determines the position of the head When they are up the neck is extended when down flexed when to one side inclined laterally Also any combinations of these eye positions give rise to a corresponding obliquity of the head These seem to be associated muscular actions which are habitually called forth when the eyes are voluntarily turned in any given direction in ordinary life

Perhaps the difficulty in connecting these attacks with sleep may be less if the terms are more clearly stated If we accept Pavlov s views that sleep is generalized inhibition then normal or whole sleep is such a state of inhibition which has spread all over the cortex and such other parts of the nervous system as is necessary It stops short at a certain point it can be carried further by narcotics It can also be incomplete as in the various stages of going to sleep, waking deep and light sleep nightmares somnambulism and so forth If we accept Pavlov s theory, sleep and inhibition are synonymous terms and a localized inhibition is a localized sleep

The oculogyric attack may be such a local inhibition in those areas from which so long as the eyes are open stimuli should constantly be streaming forth to the extrinsic eye muscles In normal life the resulting tone in the eye muscles never ceases except when the lids are closed , when they close, it does cease, and it is absent throughout sleep Further as I have shown in my lecture during sleep the position of the eyeballs is as various and as bizarre as in any oculogyric attack, and this is a state of general inhibition when the muscles are at rest We do not close our eyes for any length of time except when going to sleep so that a change of activity in this hypothetical area or areas connected with eye closure and consequent rest of the eye muscles is not only intimately but one may say almost solely concerned with the acts of sleeping and waking In the sufferer from oculogyric attacks, that part of the area which controls the supply of tone to the eye muscles is too readily exhausted, and passes into a state of inhibition under all sorts of nervous disturbances whereas it should remain in full activity until such time as the closure of the lids inhibits it

In conclusion, may I point out that although Dr West puts " release phenomena ' in inverted commas it is not a quotation from my lecture because I was careful not to use the expression throughout —I am etc

Sheffield Dec 20th 1931 ARTHUR J HALL

THE SOURCE OF INFECTION IN AN OUTBREAK OF PUERPERAL FEVER

SIR —There is an important point in Dr Paine s interesting and valuable report of a small outbreak of puerperal fever (*British Medical Journal* December 12th 1931, p 1082) to which he himself does not draw attention

If as appears very probable, the haemolytic streptococci were transferred to Case II from the throat of Nurse C that transfer must have occurred *after delivery* since the records state that this nurse was not on duty till 6 a m and delivery took place at 4 a m

In discussions on the etiology of puerperal infection it is often assumed that in the case of normal confinements in which no vaginal examinations have been made—and especially in cases of precipitate labour when neither doctor nor nurse is present—the infection must necessarily have been an autogenous one—that is derived either from the patient s genital tract or from some other part of her body It does not occur to those who use this argument that infection may quite well take place after delivery In cases of precipitate labour where there is an element of emergency it must surely often happen that a well meaning but ignorant neighbour or relative commits just those sins against surgical cleanliness which serve to convey the seeds of infection

For many hours after delivery there is serous fluid oozing from the placental site so that the whole genital tract from fundus uteri to vulva affords a favourable breeding ground for haemolytic streptococci implanted at any point If that is agreed it surely constitutes a case for the use of masks by all nurses when changing pads passing catheters etc during the first three or four days of the puerperium —I am etc

Queen Charlotte s Hospital Research Laboratories Dec 20th 1931 LEONARD COLEBROOK

40 000 units intravenously and 40 000 units intramuscularly the intramuscular dose being repeated in twelve to eighteen hours Dr Grundy states that many dangers attend the intravenous method, and I may therefore add that in none of these cases did anxiety arise from its use Provided the needle be sharp and the technique satisfactory it is less painful and little more dangerous than the intramuscular route while it is supported by clinical experience and experimental evidence

One may agree that the dosage at Hospital A appears to be on the low side Nevertheless in my opinion percentage mortalities in the region of 2 66 are merely an indication that the disease is of a relatively mild character, and cannot rightly be attributed to the use of any particular system of dosage —I am etc

E JAMES,
Medical Superintendent Romford Isolation Hospital

December 22nd 1931

GENITO URINARY TUBERCULOSIS

SIR —In Professor Burgess s interesting and instructive J B Murphy Oration published in your issue of December 19th 1931 we read that in Murphy s opinion early renal tuberculosis can be cured by non operative measures prominent among which he placed the injection of tuberculin Murphy s views were based upon experience and I have practised and preached this method for thirty years In 1909 I wrote in my book on tuberculin (p 109)

In suspicious cases of chronic pyelitis or of renal trouble I have used the tuberculin test in diagnosis and am astonished that so many writers in discussing the diagnosis of renal tuberculosis overlook the tuberculin test Not only is tuberculin of very great value in the early diagnosis of renal tuberculosis which so often runs a latent course even for years but renal tuberculosis in my experience seems to be particularly amenable to tuberculin treatment This field is waiting to be exploited by the searchlight and touch of tuberculin

For nearly thirty years I have consistently used tuberculin as a remedy in many cases of genito urinary tuberculosis—all of them advanced cases with tubercle bacilli in the urine I have always used large doses about 1 c cm or more of the strong preparations and (except in one case of a young boy aged 12 who had had the disease for many years and ultimately died of anuria due to the extensive destruction of renal tissue) with uniformly good results In my book (p 315) I report

In November 1902 a case of genito urinary tuberculosis sent to me by Sir Herbert Maitland a man of 50 weight 11 st 5 lb Began in testis and spread to bladder and kidneys Lungs also affected Sir H M found by cystoscope numerous (six) ulcers on surface of bladder Urine Deposit of pus two inches in depth containing millions of tubercle bacilli—great dysuria—cannot hold urine an hour — lungs also affected Treated with T R — many reactions—103 4 102 (0 85 c cm T R)—then T E Treated for a year 1907 Urine absolutely clear no albumin—no pus but prostatic trouble causing obstruction Sir H M opened bladder and removed portion of prostate—saw the scars of old ulcers—weight 13 st Sir H M wrote to me—A living illustration of the value of tuberculin

Most of the patients have been treated at my clinic as ambulant cases—coming from various hospitals At present four such cases come regularly to the clinic for treatment In one case of combined renal tuberculosis (one kidney removed by Mr Hurry Fenwick) and phthisis of many years duration with numerous tubercle bacilli in the sputum first treated by me in 1911 the patient is still alive and active—and the sputum has ceased Indeed the results in the advanced cases of renal tuberculosis have been so striking that I am bold enough to think with J B Murphy that as in the case of tuberculosis of the testis removal of the organ for apparent unilateral renal tuberculosis will be found to be unnecessary as soon as it is realized that in early renal tuberculosis tuberculin alone will arrest the disease and do away with the necessity of extirpation One great advantage of tuberculin treatment is that if both kidneys are tuberculous tuberculin acts upon both kidneys and arrests the disease I venture to say that at any rate removal of one kidney is not wise or reasonable till tuberculin given ultimately in large doses, has had a thorough trial If good results can be obtained by means of tuberculin in late cases of renal tuberculosis it is relatively easy to arrest the disease in the early stages The following history speaks for itself

Dr M E Bowlby reported to me an extraordinary result in a case treated with tuberculin under my direction The patient had suffered long from renal tuberculosis The urine was thick with pus and contained vast numbers of tubercle bacilli She had been bed ridden for three months when I saw her and began treatment In 1922 nine years after treatment Dr Bowlby wrote thus 'For the past five years the patient has been wonderfully well considering both kidneys were affected and this year was taken ill in Switzerland and had to go into M Perret s clinique He would not believe that both kidneys were affected and intended to remove one but found on opening it that it was entirely cured—a thing that happens to one in a thousand'

—I am etc ,

London W Dec 21st 1931 W CAMAC WILKINSON, M D

VASO LIGATION IN PROSTATECTOMY

SIR —Professor Burgess in his interesting address Murphy and some principles of urinary surgery refers to the value of division of the vas deferens for the prevention of epididymitis following prostatectomy and states that he has carried out this technique since 1922 I believe I was the first surgeon in this country to perform vaso ligation as the routine procedure in prostatectomy as is shown by my hospital records for the year 1921 I certainly wrote the first article on this subject to appear in a British journal (vide *British Medical Journal* December 1st 1923) —I am etc

London W 1 Dec 21st 1931 CLIFFORD MORSON

RECOVERY OF VISION

SIR —Mr Norman Fleming s interesting case on 'Recovery of vision after twenty seven years' raises two questions which are very seldom possible of discussion in a Western country where cases of blindness are usually dealt with at an early stage but which are much more common in the East owing to the large number of blind people who either cannot or will not seek medical advice These are (1) the possibility of recovery of vision in late cases and (2) the method of recovery

Many years ago I removed two Morgagnian cataracts from a yogi of great sanctity in India He had been totally blind for thirteen years In one cataract the nucleus was a mere lamella in the other it was not found He recovered excellent sight and the effect in the district was profound but the sight took some days to come back At that time I was not fluent enough in Tamil to trace the steps of recovery but it was clear that the vision only came back by degrees getting more and more perfect as the days went by

Later in England in 1923 I performed iridotomy on an officer who had been totally blind for nearly six years as the result of the explosion in the breech of a machine-gun The case was published and commented on in the *British Medical Journal* of July 5th 1924 From stony blindness beforehand he passed through perception of light dim movement of objects and so on up to being able to read the daily press and to get about like the ordinary-sighted man To quote from my paper above mentioned

One is reminded of the way in which a foreign language learnt in childhood comes back gradually to a man when he revisits the country in which he learnt it The stored

impressions of earlier years gradually reawaken under the influence of the renewal of the old stimulations which originally evoked their storage in the cerebral cortex

In the eighth chapter of St Mark there is the account of the healing of a blind man whose first efforts resulted in his seeing men as trees walking and who later saw all men clearly The clinical record left by the New Testament writer is in accordance with all that modern observation from time to time reaches us of the gradual recovery of sight in long standing cases —I am etc

R H ELLIOT MD FRCS
[illegible] Late Lieut-Col IMS

INTRODUCTION OF LIPIODOL INTO THE LUNGS

SIR—I have read with interest Mr Philip Franklin and Mr Alexander Ortel's article on a simple technique for introducing lipiodol into the lungs which appeared in the *British Medical Journal* of November 7th 1931 I can hardly agree with Messrs Franklin and Ortel however concerning the disadvantage of the aspiration of lipiodol *after cocainization of the laringo-pharynx* It has not been my experience in over two thousand bronchographies that inevitable partial swallowing of the oil and the difficulty of a uniform distribution of oil throughout the bronchial tree occur if the bronchography is properly performed Possibly the reason that Mr Franklin has had difficulty in preventing swallowing of the oil is because the cocainization of the pharynx has been too extensive In my own series of cases I have limited the cocainization to the anterior surface of the anterior tonsillar pillar and with but few exceptions have had no difficulty in producing a satisfactory bronchogram The method is extremely simple and one which is not objected to by any patients The technique advocated by Messrs Franklin and Ortel however has a distinct advantage in those cases in which a filling of the upper lobe bronchi is desired because with the aspiration technique the filling of the upper lobe bronchi is extremely difficult —I am etc

[illegible] ALTON OCHSNER MD
[illegible]

ALLERGY AND THE PROTEOSE

SIR—I have read with much interest the letters of Dr Freeman Barber and Ortel on this subject as I have recently been investigating the urticarial proteose in skin cases under my care Since only few control investigations have been published by the authors of this work I determined to investigate a series of normal persons as well as those suffering from skin diseases in which an allergic factor may be suspected—such as chronic urticaria angioneurotic oedema eczema of internal origin Besnier's prurigo and asthma and psoriasis

In the first place I am studying the relative amounts of proteose excreted by the normal person and by patients suffering from these conditions It is admitted that some proteose is excreted in health but it has been stated that much more is found in cases of allergy By using a constant technique I have noted that although slight variations in amount are found in different persons and in the same person at different times the amount excreted by normal controls and allergic patients is the same In all cases twenty four hour specimens were used

With regard to tests for sensitization I was greatly interested in Dr Barber's work on intradermal sensitization and should like to know what dilution of peptone was used for the production of the patch test on the same arm I cannot but feel that it was unfortunate that Dr Freeman's difficulties were not due to an account of this work for as he states in his last letter all the claims of proof of the specific action of proteose have been based on the intradermal reactions and apparently Dr Ortel still bases his arguments on these tests Our work has so far been limited to the study of the intradermal reactions

In my cases intradermal injections of 0 1 c.cm. of a 1 in 1 000 solution of proteose (Merck) control injections of 0 1 c.cm. of normal saline (we give but recently I have used a 1 in 1 000 solution of peptone made up in the same way as the proteose solution With regard to the interpretation of the results of these tests (an alteration in size of the wheal made by the injection) has been used to determine the result of the reaction employing Ortel's glass slide technique A negative reaction is one which faces without any increase in size of the wheal and vice versa Of eleven normal persons investigated in this way ten gave negative reactions to proteose while one gave a strongly positive reaction In three cases where the peptone solution was used as a control each gave negative reactions also Of fifteen patients suffering from skin diseases in which allergy was believed to be present eleven gave positive reactions and four gave negative reactions Of the seven negative cases two controlled with peptone with the following results In three the peptone and proteose gave equally positive reactions in two the peptone gave a more marked reaction than the proteose in two the peptone and proteose both gave negative results while in one case the proteose gave a positive reaction and the peptone a negative In one case—a patient suffering from chronic urticaria—I found that 0 1 c.cm. of a 1 in 1 000 solution of proteose (Merck) gave a development of urticarial wheals over the injection of saline produced no effect I now find however that a similar reaction is produced by an injection of 0 1 c.cm. of a 1 in 1 000 solution of peptone and the reaction cannot therefore be recorded as a proof of the specific nature of the proteose as I had originally believed

It would appear from these results that many allergic patients are more sensitive to injections of proteose and peptone than normal persons but that further investigation before one can decide on the nature of the reaction I am treating some of my patients suffering from these conditions with proteose and hope at a later date to publish a comparison of this method of treatment with other methods of desensitization —I am etc

NORMAN BURGESS MA MD MRCP
Cuffley Herts Dec 29th 1931

THE SOBERING UP RATE

SIR—Dr Knowles Bond writing on this subject in the *British Medical Journal* of December 12th 1931 speaks of the bewilderment of police courts and clerks of the court on hearing the prosecution's evidence of the sobering up rate in alcoholic cases This is consistent In view of the generally accepted opinion that both mental and physical symptoms of alcoholic poisoning succeed both physical and psychical causes something more than a measurement of the alcoholic concentration is surely demanded There is nothing more misleading than measurements and statistics and it is now obvious that Professor Widmark would regard consideration of measurement of alcohol elimination being used in this way

The empirical evidence of specialists on the value of coffee the necessity for self-control are not to be lightly set aside Few doctors will have not seen the sudden almost alarming transformation in an alcoholic case after an accident The alcoholic elimination may occur at a fixed

rate but it would be vain to ask for a fixed rate of change in the disappearance of intoxication Animal experimentation has been observed under constants, and the observation regarding the associated variations has very limited and but general importance Such an observation is a frail structure on which to build a pronouncement that the variation of elimination and disappearance of intoxication are constants and is certainly not borne out by the experience we have of intoxication in man

In the meantime your correspondent is at an entire disadvantage until some datum level of intoxication is obtainable for man otherwise the pretence of scientific accuracy will be as unconvincing to your medical readers as it apparently was to bench police counsel and clerk of the court —I am, etc

Liverpool Dec 18th 1931 T G M

CONSTIPATION AND RIGHT-SIDED PTOSIS

SIR —Dr J V Fiddian's paper in the *Journal* of December 12th 1931 contains so many valuable and true matters that he will assuredly grant me the privilege of pointing out where I believe he has gone astray

He attributes the haggard faces and emaciated frames of the toxaemic subjects of stasis to their addiction to cascara! True the purgation habit irrationally indulged aggravates the toxaemia but the taking of purgatives such as cascara is no part of the approved treatment of stasis Dr Fiddian is right when he states that 'probably all civilized humans' have some degree of rectal accumulation (dyschezia) 'It would be highly inconvenient otherwise, he comments and adds that even domestic animals are trained by man to put the rectal reflex out of action But the conclusion that nearly all stasis occurs either in the rectum or in the caecum is opposed to all my experience, now covering twenty five years I know quite well how the fallacy arose It was usual, in hospital practice for patients to be prepared for the x ray room as for an operation the intestines were washed out by a purge and an enema and the stomach was empty Under these conditions a bismuth meal travelled rapidly through the intestines to the rectum and remained there Almost every case thus became a case of dyschezia If however there were much pyloric spasm with a large, low lying stomach there would be a gastric residue of bismuth and after the first portions of bismuth had completed the rush to the rectum the remaining portions would reach the caecum and stay there the colon being now wearied by its efforts

When x ray observations are carried out under less artificial conditions the results are very different and show that in stasis the delay is spread over the entire large intestine and it is usual to find the transverse colon still well filled with bismuth after forty eight seventy two or more hours while the rectum may or may not be full also In stasis the caecum and ascending colon are bound to remain full actually they become widely distended and far more capacious than they should be This habitual overloading of the caecum and ascending colon causes them to become ptosed unless fibrous bands fasten them to the parietal wall An overloaded and mobile caecum may drop to the bottom of the pelvis the ascending colon may follow and compel the caecum to curl back behind it till its fundus may face directly upward This constitutes the periwinkle caecum which I described in the *Practitioner* of February 1929 One of the consequences of this extreme ptosis and retroversion of the caecum is to produce torsion of the end of the ileum and severe ileal stasis

This brings me to an astounding assertion by Dr Fiddian

> The terminal portion of the small intestine contains highly toxic material Nearly all the valuable products of digestion have been absorbed and the residue abounds in chemical and bacterial poisons This toxic fluid is normally dealt with in the caecum and ascending colon where it is detoxicated by dehydration

Unless I miss Dr Fiddian's argument he regards this as normal I am convinced the exact opposite is the case normally the contents of the lower ileal coils are sterile, or nearly so whereas the large intestine harbours microbes whose function in health is to aid digestion and assimilation by breaking down the cellulose walls of vegetable cells taken as food In health these microbes are 'friendly,' and produce no toxins other than can be dealt with by the healthy organism In stasis with toxaemia however these microbes cease to be friendly, they become highly virulent and especially so when they invade the stagnant contents of the lower ileum Other microbes (for example streptococci) foreign to the healthy bowel join the invading army and convert the lower ileal coils into a veritable cauldron from which poisons are poured into the system with deadly effect on every tissue of the body So far from being detoxicated by dehydration 'I should like to assure Dr Fiddian that soluble poisons are absorbed into the blood stream from the intestines quite as freely as the water in which they are dissolved

It is impossible within the limits of a letter, to go into every aspect of stasis, but I think I am justified in summarizing the present discussion as follows Where Dr Fiddian's conclusions are at variance with the facts as I see them the reason is to be found in a difference of opinion as to what is normal If it is normal for the human race to be constipated to the extent of limiting itself to the convenient standard of one bowel evacuation daily and if it is normal for the small intestine to be teeming with virulent microbes then the consequences which he and I and all of us are accustomed to see are normal also I still look forward however to a day when the medical profession will aspire to a higher and nobler destiny for mankind and will no longer contemplate with equanimity a race degraded by the results of toxaemia—such as rotten teeth rheumatism colitis appendicitis, gastric and duodenal ulcer and cancer of the digestive tract and its appendages —I am etc

London W 1 Dec 12th 1931 ALFRED C JORDAN

TREATMENT OF RHEUMATOID ARTHRITIS

SIR,—May I bring forward the following clinical observation? In 1928 I published my results of cases of unrelievable and incurable dry middle ear diseases treated with intravenous injections of colloidal iodine Some of these cases were accompanied by symptoms of muscular rheumatism and of osteo arthritis These symptoms in every case either ameliorated or disappeared I therefore suggested this treatment to my medical colleagues who confirmed my observations Collosol iodine is now used in Egypt on a large scale and I feel sure that if physicians in England give it a trial for rheumatic affections they will have no cause for disappointment For dosage I refer colleagues to an article in the *Journal of Laryngology and Otology* (1929 p 625) by Dr Dan McKenzie, under the heading of The symptomatic treatment of deafness and to a letter of mine published in the same journal (p 799 of the same volume) —I am, etc

Cairo Dec 12th 1931 HASSEN BEY SHAHEEN M Ch Cairo M R C S Eng

rate but it would be vain to ask for a fixed rate of change in the disappearance of intoxication Animal experimentation has been observed under constants and the observation regarding the associated variations has very limited and but general importance Such an observation is a frail structure on which to build a pronouncement that the variation of elimination and disappearance of intoxication are constants and is certainly not borne out by the experience we have of intoxication in man

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When x ray observations are carried out under less artificial conditions the results are very different, and show that in stasis the delay is spread over the entire large intestine and it is usual to find the transverse colon still well filled with bismuth after forty eight seventy two or more hours while the rectum may or may not be full also In stasis the caecum and ascending colon are bound to remain full actually they become widely distended and far more capacious than they should be This habitual overloading of the caecum and ascending colon causes them to become ptosed unless fibrous bands fasten them to the parietal wall An overloaded and mobile caecum may drop to the bottom of the pelvis the ascending colon may follow and compel the caecum to curl back behind it till its fundus may face directly upward This constitutes the periwinkle caecum which I described in the *Practitioner* of February 1929 One of the consequences of this extreme ptosis and retroversion of the caecum is to produce torsion of the end of the ileum and severe ileal stasis

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> The terminal portion of the small intestine contains highly toxic material Nearly all the valuable products of digestion have been absorbed and the residue abounds in chemical and bacterial poisons This toxic fluid is normally dealt with in the caecum and ascending colon where it is detoxicated by dehydration

Unless I miss Dr Fiddian's argument he regards this as normal I am convinced the exact opposite is the case normally the contents of the lower ileal coils are sterile, or nearly so whereas the large intestine harbours microbes whose function in health is to aid digestion and assimilation by breaking down the cellulose walls of vegetable cells taken as food In health these microbes are friendly and produce no toxins other than can be dealt with by the healthy organism In stasis with toxaemia however, these microbes cease to be friendly, they become highly virulent, and especially so when they invade the stagnant contents of the lower ileum Other microbes (for example streptococci) foreign to the healthy bowel join the invading army and convert the lower ileal coils into a veritable cauldron, from which poisons are poured into the system with deadly effect on every tissue of the body So far from being detoxicated by dehydration I should like to assure Dr Fiddian that soluble poisons are absorbed into the blood stream from the intestines quite as freely as the water in which they are dissolved

It is impossible, within the limits of a letter to go into every aspect of stasis but I think I am justified in summarizing the present discussion as follows Where Dr Fiddian's conclusions are at variance with the facts as I see them the reason is to be found in a difference of opinion as to what is normal If it is normal for the human race to be constipated to the extent of limiting itself to the 'convenient' standard of one bowel evacuation daily and if it is normal for the small intestine to be teeming with virulent microbes then the consequences which he and I and all of us are accustomed to see are normal also I still look forward however, to a day when the medical profession will aspire to a higher and nobler destiny for mankind and will no longer contemplate with equanimity a race degraded by the results of toxaemia—such as rotten teeth rheumatism colitis appendicitis gastric and duodenal ulcer, and cancer of the digestive tract and its appendages—I am etc

London, W 1 Dec 12th 1931 ALFRED C JORDAN

TREATMENT OF RHEUMATOID ARTHRITIS

SIR—May I bring forward the following clinical observation? In 1928 I published my results of cases of unrelievable and incurable dry middle ear diseases treated with intravenous injections of colloidal iodine Some of these cases were accompanied by symptoms of muscular rheumatism and of osteo arthritis These symptoms in every case either ameliorated or disappeared I therefore suggested this treatment to my medical colleagues who confirmed my observations Collosol iodine is now used in Egypt on a large scale and I feel sure that if physicians in England give it a trial for rheumatic affections they will have no cause for disappointment For dosage I refer colleagues to an article in the *Journal of Laryngology and Otology* (1929 p 625) by Dr Dan McKenzie under the heading of The symptomatic treatment of deafness and to a letter of mine published in the same journal (p 799 of the same volume)—I am etc

Cairo Dec 12th 1931 HASSAN BEY SHAHEEN, M Ch Cairo M R C S Eng

Dr Ellingworth dwells on the advance in hygienic education he makes no mention of such aspects as the general scarcity of soap the inadequate bathing facilities and the overcrowding of residential quarters He finds an excuse for slovenly beds in the hospitals in the fact that the lower classes in their homes never make their beds but the authorities surely should set an example to the people and not take their standards from the masses besides pre war hospitals would not have occasioned this comment Dr Ellingworth describes some model sanatoriums I trust he does not forget that for ten years before the world war the Imperial Maternity Home of Alexandra Feodorovna in St Petersburg, with 3 000 beds was everywhere regarded as one of the model hospitals of Europe

Dr Hilda Stoessiger says medicine has gained much from State control and adds that medical research has been encouraged But does she not realize that under the old regime medicine was one of several branches of science in which Russia was doing brilliant research work? In some fields such as histology Russians were pre eminent and pre war Russian histologists to this day are instructing English French and American students The old time Russian general practitioner maintained a very high average standard in devotion to his profession and in the practical handling of diagnosis and treatment Russian medical students and doctors were imbued with an idealism an enthusiasm a spirit of sacrifice and service which would I am sure have impressed Drs Ellingworth and Stoessiger profoundly One striking feature of pre war medicine in Russia was the complete absence of the mercenary spirit it may interest your readers to know that the universal practice in Russia was for patients to pay what they chose to pay slipping the fee into the hand of the doctor as the latter left the house a doctor who would haggle over his fee was guilty of unprofessional conduct and would lose prestige

Neither Dr Ellingworth nor Dr Stoessiger discusses the standards of present day medical education in Russia where hardly literate proletarian peasants are being sent forth after a two year course to maintain the health of their communities armed perhaps with glorious enthusiasm but with less knowledge of medicine than is possessed in England by a pharmacist or an experienced nurse The truth is that the Revolution has gone far toward stamping out a brilliantly promising school of research workers non mercenary specialists and competent devoted general practitioners The hard won prosaic accomplishments of a noble medical tradition have been replaced by a dualism of infantile hopes and enthusiasm (sometimes embodied in show exhibits) on the one hand and an appalling chaos in actual achievement on the other —I am etc

VALENTINA P WASSON L R C P, M R C S

London N W 1 Dec 20th 1931

THE LAW AND ABORTION

SIR —In the *Journal* of December 19th 1931 (p 1143) Dr L A Parry states that abortion was punishable at Common Law *Would he state* where an indictment for abortion can be found or a report of a trial in a common law court? I do not mean an indictment for murder or manslaughter or grievous bodily harm but for abortion alone without any ill consequences The Common Law maxim is *Volenti non fit injuria* Termes de la ley has no mention of it and I have searched in vain Coke's *Institutes* and *Coke upon Littleton* I have always understood that this was an offence triable only in the Ecclesiastical Courts The contempt in which these courts were held in the time of Chaucer is known to all who have read the *Canterbury Tales* The Friar's quarrel with the Sumpnour and the Friar's tale of how the Devil carried away another Sumpnour show an utter indifference not merely to the methods of obtaining evidence but to common honesty As for the reply of the Sumpnour I fear you could not print it —I am etc,

GEORGE JONES M B,
Barrister at Law

Lewisham S E Dec 18th 1931

Obituary

WILLIAM LOUDON REID, M D F R F P S

Consulting Gynaecologist Western Infirmary Glasgow

The death took place on December 17th 1931 at his home in Cumbernauld in Lanarkshire of Dr William Loudon Reid in his day an obstetrician and gynaecologist of wide repute in Scotland, and a former president of the Royal Faculty of Physicians and Surgeons of Glasgow Dr Reid who was in his eighty seventh year retired from active practice about twenty years ago

He was born at Motherwell and from St John's Grammar School Hamilton went to study medicine at Glasgow University graduating M B C M in 1866 and taking the M D in 1869 It was a stimulating experience to be a medical student in the Glasgow of the sixties when Lister then Regius Professor of Surgery at the University was introducing and perfecting the antiseptic treatment of wounds Reid had the good fortune to gain two gold medals in Lister's surgery classes and to act for a time as Lister's dresser He started in general practice in Central Glasgow but soon began to specialize in obstetrics and gynaecology and his reputation in this branch of medicine quickly spread beyond the boundaries of the city In 1877 he was appointed outdoor physician-accoucheur to Glasgow Maternity Hospital and afterwards physician for diseases of women to the Western Infirmary This was followed by his appointment in 1883 as physician and lecturer on clinical obstetrics at the Maternity Hospital and six years later as professor of midwifery and diseases of women and children at the Anderson College of Medicine Glasgow In 1892 he became consulting physician to the Maternity Hospital and in 1894 physician and lecturer in clinical gynaecology at the Western Infirmary He had been made a Fellow of the Royal Faculty of Physicians and Surgeons of Glasgow in 1877 and was afterwards examiner in midwifery and diseases of women for that corporation and its president for a term His long association with the Faculty was crowned last year when with three other distinguished men—Professor Robert Muir of Glasgow, Professor Laurence Waddell of Calcutta and Professor Wenckebach of Vienna—he received the Honorary Fellowship In bestowing this mark of recognition the president Dr John F Fergus said that Dr Reid now in a venerable but serenely happy and even sprightly old age was a pioneer in the scientific development of obstetrics and gynaecology one who by his teaching and example had done much to raise the school of obstetrics and gynaecology in Glasgow to the high position which it now occupies By his skill and by the simplicity and integrity of his character he gained the confidence of a large circle of patients who regarded him as a trusted and able adviser and also of medical men who found in him a helpful and loyal colleague

In an earlier generation of medical society life in Scotland Dr Reid was a conspicuous figure He had filled the chair of the Glasgow Obstetrical and Gynaecological Society and of the Medico Chirurgical Society of Glasgow and was an honorary Fellow of the Obstetrical Society of Edinburgh He was a member of the Lanarkshire Division of the British Medical Association He had an inventive turn of mind and introduced new forms

UNIVERSITY OF LONDON

Dr O L V de Wesselow F R C P has been appointed as from December 1st 1931 to the University Chair of Medicine tenable at St Thomas's Hospital Medical School

UNIVERSITY COLLEGE

A course of six lectures on the physiology of reproduction will be given by Dr A S Parkes on Fridays January 15th 22nd and 29th and February 5th 12th and 19th at 5 p m Mr G P Wells will give a course of ten lectures on comparative physiology on Fridays January 15th 22nd and 29th February 5th 12th 19th and 26th and March 4th 11th and 18th at 5 p m Admission free

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The next series of eight lectures and demonstrations on tropical hygiene which are intended for men and women outside the medical profession proceeding to the Tropics will be given by Lieut Colonel G E F Stammers from January 11th to 20th These courses of instruction in addition to providing simple rules for guidance in regard to personal hygiene and preparation for life in the Tropics will also embrace a short account of some of the more common diseases with advice in regard to measures of protection and self treatment The synopsis and other particulars can be obtained from the secretary London School of Hygiene and Tropical Medicine Keppel Street Gower Street W C 1

UNIVERSITY OF DURHAM

At the convocation held on December 19th 1931 the following degrees and diplomas were conferred

M D FOR PRACTITIONERS OF FIFTEEN YEARS STANDING—O R McEwan D H Pennant J R B Robb F H Thomas

M B B S—M J Arnott R D Burn G S Clark Maxwell J A Forrest H L G Harrison J A Miller P N Rampal

B Hy—F C S Bradbury B A Dormer W L Hargreaves J H L Pankhurst

D P H—F C S Bradbury B A Dormer W E Hargreaves J H F Pankhurst

UNIVERSITY OF SHEFFIELD

The following candidates have been approved at the examinations indicated

CH M—G E Larks

FINAL M B CH B—(*Part II*) Margaret F Coveney (*Part I*) *A H Briggs I Colver H L Holling I A Jaffe R B Knowles J J C Ramsbury J M Ridyard D C Waddy R H Wheeler W H Young

* With distinction in Public Health

UNIVERSITY OF EDINBURGH

A graduation ceremonial was held in the Upper Library Hall on December 18th 1931 when the following degrees and diplomas were conferred

M D—F Allardice W K Blaclie G R Burnett J M Davidson †B G F Elmes †C H Touche †R M Hill *R Howarth K D Ililler G Ormiston *J H P Paton *G H Percival W Simpson W M Wilson C W Yow

* Highly commended for thesis †Commended for thesis

PH D (*Faculty of Medicine*)—T C Nanda

M B CH B—J R Anderson H Isobel Ashford M Brand A J R Brady I I Brooks J C Brownlee D R Climenlo A J D Ermco M Diamond R L W Diels H J Gibson I Goldowsky G M Goodwille W P Gracie J A de Gregory G L Grey W Hynd M L G Jones Gertrude C Kellar (nee Aitken) F L Ker H L Khosla F F Kortlucke A Lange A W Louw W M P McDonald G P M C Marshall D Nelson Alexandrina M M Parker H R Peel G Pickering R R Prosser W B Scott K C Scott I H M Seex A F Seif J Smiedt J G Thomson E Townsend A T Wallace W W Wildman

D P H—Mary Love F Sutherland

The Freeland Barbour Fellowship in the Faculty of Medicine has been awarded to Dr T N MacGregor

NATIONAL UNIVERSITY OF IRELAND

The following candidates have been approved at the examinations indicated

M D—J C Flood

M B T CH B A O—*J Duddy †D P Clahane †Columba M D Heathcote (nee O Carroll) G Bannan E F M Carther D C Cell F Jordan D P Kennedy J Lawlor J Phelan W T Turell J F R White Exempted from further examination in Pathology and Part II (Surgery Ophthalmology and Midwifery) W Cannins Exempted from further examination in Part I (Medicine and Pathology) J M Kerr Exempted from further examination in Pathology J J Kennedy J McDonnell Exempted from further examination in Midwifery F J Cluney P J O Doherty

DIPLOMA IN PSYCHOLOGICAL MEDICINE—T J Hennell

D P H—*Part II* * W P O Cullighan †H J Phillips C J Ellison J G O Reilly *Part I* Patricia M J Daly

*First class honours †Second class honours

UNIVERSITY COLLEGE DUBLIN

At a meeting of the Academic Council on Thursday December 17th 1931 an election of members to the Governing Body took place The following six members were re elected Professor James Drew Professor John J Nolan Professor Robert O Donovan Professor E P McLaughlin Professor Patrick Semple and Professor H C McWeeney This was the first part of the election which will last until January 31st when the present three year term of office will terminate

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

At a meeting of the Royal College of Surgeons of Edinburgh held on December 17th 1931 when the President Mr John Wheeler Dowden was in the chair the following twenty seven successful candidates out of 88 entered who passed the requisite examinations were admitted Fellows

W V Anderson A C Armstrong I A C L Dick J A Fraser E G Gibbs I S Hubbersty J L M Jeffares M B Lavery J G Leebody A M M Master A J M Melly A Miller R Oliver A D Polonsky D L Pow F Prasad W O Pye A F Quayle P C D Quinet W L Rowe C R Salfield I R Small A P Squire G G I Stening I D du T van Zyl A B Walker Smith K I D Waters

CONJOINT BOARD IN IRELAND

The following candidates have been approved at the examination indicated

FINAL PROFESSIONAL—P J Byrne E S Cooke R P S Lewer J A McGuinness P J McMahon F F Quigley I L Reilly I H Ryan J J Walsh

D P H (*Part I*)—L J O Keeffe

Medical News

At a meeting of the Section of Tropical Diseases and Parasitology of the Royal Society of Medicine to be held on Thursday January 7th at 5 p m Dr W Schulemann of Elberfeld, Germany will read a paper on synthetic anti malarial preparations He will discuss the various steps which led to the synthesis and discovery of plasmoquine and give a brief account of its use in tropical medicine

Dr F E Fremantle M P will give an address on the debt of the Empire to British medical research at a meeting of the Royal Empire Society, to be held at the Hotel Victoria London on Tuesday January 19th at 8 30 p m with Sir William Willcox M D in the chair Applications for tickets which are free should be addressed to the secretary of the Royal Empire Society Northumberland Avenue W C 2 A dinner will precede the meeting at 7 o clock and those wishing to be present at that also should forward 10s 6d in payment of each ticket required

At the opening of the second winter session of the Hampstead General and North West London Hospital Post Graduate School on January 6th at 4 p m Lord Riddell will deliver an address on The ethics of abortion sterilization and birth control

The next series of free weekly lectures at St Peter's Hospital Henrietta Street W C 2 will begin on Wednesday January 20th, at 3 p m when Mr Swift Joly will discuss the examination of urological patients The course will end on Wednesday March 9th when Dr Cuthbert Dukes will lecture on tumours of the upper urinary tract

The first of the twentieth series of Chadwick Lectures will be given by Dr J D Rolleston on February 18th at the Medical Society of London on Benjamin Ward Richardson his life and work Information about these lectures may be obtained from the secretary, Mrs Aubrey Richardson at the offices of the Chadwick Trust, 204 Abbey House Westminster S W 1

Intestinal Flatulence

Dr MARY G CARDWELL (Oldham) writes If 'Puzzled' advises the following treatment his patient will find the attacks of flatulence much improved Reduce carbohydrate intake very strictly especially with regard to bread Prescribe colonic lavage with saline or sulphur lotion twice weekly for four weeks and thereafter once a fortnight for at least three months Kaylene oil by the mouth three times daily should be taken over an extended period

Dr J R WILLIAMS (Penmaenmawr) writes I suggest that Puzzled (December 19th 1931 p 1163) should try alocol tablets (colloidal aluminium hydroxide) two or even three to be taken about half an hour before and the same shortly after each meal

Depopulation

Dr B DUNLOP (London S W) writes In the notes from your correspondent in France (December 19th 1931 p 1153) it is stated that a decline of its population would be a great danger This is sad because a reduction of its numbers seems necessary if the standard of living is to be further raised Must the French postpone this and endure their low wages and long hours until their neighbours have got rid of pressure of population?

Income Tax

Casual Earnings

E S holds a hospital appointment and from time to time earns casual fees as locumtenent and for assisting at operations Are such casual earnings assessable and if so on what basis?

*** They are assessable The appropriate basis is normally the amount earned in the year preceding the year of assessment but for the year when such work was commenced the basis would be the current year's earnings If no record has been kept of the sums earned the only course open to E S is to make an estimated return using such material—bank pass book diary etc—as he may have

Residence—Professional Use

A O in taking over a practice had to take a house which was too big for his requirements Of the twenty rooms the house contains nine are used for the practice alone and five for private use alone A O claims to be allowed two thirds but the inspector of taxes declines to allow more than one half of the rent rates etc

*** It would seem that the inspector of taxes may be looking at this case as if nine rooms are used professionally and eleven are used or are available for use privately If so we think that he overlooks a rather important factor—that is that the six unused rooms have probably no real rental value at all the house being of a type unsuitable for modern requirements and one by which a prospective tenant would be repelled rather than attracted by the six surplus rooms On that basis the rent to be divided between practice and domestic use is for the fourteen rooms actually in use and unless the professional rooms are inferior in situation etc to the others—the reverse is probably the case—our correspondent's claim to two thirds seems justified

LETTERS NOTES ETC

A Warning

Dr F M R WALSHE writes It has come to my knowledge that the managing director of a limited company is communicating with members of the profession in connexion with a scheme for appointing medical experts and referees in regard to a life insurance business which his company is trying to operate and in one instance which is known to me he has stated that he had been recommended by me and that I am one of his company's medical experts This is entirely untrue and is emphatically denied by me In the circumstances I consider it is my duty to warn members of the profession that I have never given authority for my name to be used by this gentleman under any circumstances whatever and to make full inquiry before entertaining any proposal he may make

Canine Tooth Erupting Externally

Dr LEWIS S ROBERTSON medical superintendent of Pretoria Hospital sends the photograph of a native boy reproduced in this column It will be seen that the left upper canine tooth has erupted near the antrum perpendicular to the jaw and has penetrated the upper lip J F Colyer (*Dental Surgery and Pathology* 1923) says that the canine is totally displaced from the arch more frequently than any other tooth but not many cases similar to Dr Robertson's case have been recorded The following are taken from *Anomalies and Curiosities of Medicine* by Gould and Pyle (1897) Roy in 1883 described the eruption of a canine in the nose of a Hindoo aged 14 and Hill in 1883 described a similar case in a girl with congenital syphilis Branch in 1884 reported a case of a negro boy with two large teeth in the nose At a meeting of the Medical Society of Christiania in 1895 a tooth was shown which had been removed from a woman aged 53 it resembled a milk canine and was situated in a small depression at the junction of the floor and external wall of the nasal cavity 22 mm from the external nares



Association of Bio Physical Assistants

Messrs E FORT and R J DEACON (London W 1) write Notices have recently appeared in some professional journals (but not the *British Medical Journal*) regarding a movement to form an association for bio physical assistants in which our names appear as members of the provisional organizing committee Our names are followed in the notices by the respective designation—member of the council of the Chartered Society of Massage and Medical Gymnastics and member of the General Purposes Committee of the Chartered Society of Massage and Medical Gymnastics We are asked by the secretary of the Chartered Society to make clear that this does not imply that we represent the Chartered Society in an official capacity on this committee Our purpose in adding the above mentioned designation was to make clear that the new movement is supported by persons of standing in the profession who even though closely associated with the Chartered Society realize that the new Association of Bio Physical Assistants is essential Our purpose was also to show that there is no possible antagonism between the new association and the Chartered Society and therefore that all Chartered Society members who are bio physical assistants should also join the new association

Replies to Drug Advertisements

The head of a well known firm of manufacturing chemists asks leave to suggest that medical men when writing to drug manufacturers etc in response to advertisements should put their qualifications after their names or in some other way convey that they are members of the medical profession This is done he adds a good deal in other countries We have the greatest difficulty sometimes in determining whether people who write to us are medical men at all Naturally we do not wish to overstep the mark by writing to members of the public as if they were doctors The suggestion seems most reasonable

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48 49 52 and 53 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 7

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

1 The Heart in Scarlet Fever

C. SNOOKHOFF and L. VAN TARIN (*Amer. Journ. Dis. Child.* September 1931, p. 554) record observations with the Cambridge portable electrocardiograph on 50 children aged from 5 to 13 suffering from scarlet fever, which was mild in 41 cases, moderate in 8, and severe in one. The results were as follows. The cardiac rate did not differ from that of normal children in the same age group. In children with fever the increase in rate was commensurate with the increase in temperature. A relative bradycardia, beginning in the second week and returning to normal at the end of the third week, was found in 25 per cent. Sinus arrhythmia occurred just as frequently as in normal children. No prolongations of the P–R interval were observed, and only minor changes in the T or R–T waves in 10 per cent., the changes returned to normal before the patient left hospital. An abnormal axial deviation during the course of the illness was noticed in 16 per cent., but with one exception the patient became normal again before discharge. These observations differ from those described in rheumatic fever in the comparative infrequency of electrocardiographic evidence of myocardial involvement in there being no tendency for abnormalities to persist, and in the absence of prolongation of the P–R interval.

2 Chronic Bronchitis due to Persistent Nasopharyngitis

W. W. PRIDDLE (*Canad. Med. Assoc. Journ.* October 1931, p. 441) reports three cases in which chronic bronchial infection was traced to chronic nasopharyngitis which had followed an acute infection such as influenza or whooping-cough. These occurred in a group of cases of the same kind in which no lesions were present in the accessory nasal sinuses or tonsils. The surface of the nasopharynx appeared swollen and congested, and there was a purulent or muco-purulent exudate on the mucous membrane. The bronchial signs indicated the presence of an intermittent infection, so 5 to 10 per cent. aqueous solution with 2 drachms to the ounce of 3 per cent. ephedrine hydrochloride was introduced into the nostrils by the dropper method, the head being well tilted back over the edge of the bed. When the mixture reached the pharynx the patient sat up and expectorated the excess. For the bronchial condition a combination of ephedrine, creosote, and a stimulating expectorant was employed early in the course of treatment, and the response to the two procedures was swift and satisfactory. Pridale is satisfied that a certain number of cases of chronic non-tuberculous disease are brought about by such a nasopharyngitis, and he has found that conservative medical treatment of the etiological focus as well as of the bronchial condition has produced uniformly good results.

3 Pernicious Anaemia complicated by Miliary Tuberculosis

W. FREEMAN (*Journ. Amer. Med. Assoc.* October 3rd, 1931, p. 996), who records a case in which tuberculosis occurred during the treatment of a negress aged 65 for pernicious anaemia, states that only nine cases of such an association have been recorded in the literature since 1898. Acute miliary tuberculosis is even less common as a complication. The severity of the pernicious anaemia in Freeman's case was demonstrated by the haematological examination, the weakness, loss of appetite, and the absence at first of any signs of tuberculosis. Liver therapy was started, and slow but definite improvement resulted as far as the blood condition was concerned. The onset of tuberculosis was at first insidious, but when the acute miliary process began the patient became rapidly worse, and death ensued. The original tuberculous focus was found in the peribronchial lymphatic glands, which showed complete destruction, a dense fibrous wall encapsulating caseous material. The miliary tubercles which studded the lungs, liver, spleen, and peritoneum were histologically typical, there being a definite absence of fibroblastic proliferation, lymphocytic infiltration, and giant cells. Caseation necrosis, infiltration by monocytes, and many acid-fast bacilli were demonstrated in both lungs. The usual post-mortem appearances of pernicious anaemia were present, with the exception of glossitis, subcutaneous and submucous haemorrhages, fatty degeneration of the myocardium, and atrophy of the gastric mucosa, while atypical conditions of the spleen, liver, and femoral bone marrow were noted. The author briefly reviews the literature in this connexion, and mentions that as regards the tuberculous symptoms there was no high evening temperature, herpes, or leucocytosis, which would be expected in the miliary type.

4 Bronchitis in Hypertension

According to A. DENIS and A. REID (*Arch. Int. Med.* September 15th, 1931, p. 281) chronic bronchitis frequently develops in hypertensive subjects. The chief functional symptom is a characteristic cough, occurring during the day or at night or only on waking. The expectoration, which is the main physical sign, may be scanty or very abundant, usually clear and serous, it may become viscous or even muco-purulent. Coarse rales are always heard sometimes over one base, sometimes at the apex; in the latter case tuberculosis may be erroneously suspected. In some cases the bronchitis is afebrile with subsistent rales over both lungs. The chief characters of this affection are its persistence, its tenacity, and its relation to vascular rather than expectorant medication. It may be an early complication of hypertension, but itself is most intense in the second or organic phase. It is noted in moderate as well as very advanced hypertensives. The bronchitis is frequently more marked when albuminuria appears; the two conditions then evolve concurrently. In a more advanced stage of hypertension bronchitis may be a sign of commencing cardiac insufficiency. This affection is probably due to troubles in the small circulation caused by the general hypertension. This point is discussed, as is also the frequency of symptoms of abortive pulmonary oedema. Treatment, both symptomatic and general, depends on the type of case. Cases with slight cardiac insufficiency should be given digitalis; iodides or various forms of specific treatment are indicated when there is a local cause.

5 Acrodynia

According to M. PERIC and H. JANICOT (*Presse Méd.* November 7th, 1931, p. 1890) loss of muscle tone is observed in the majority of cases of acrodynia; clonic contractions occur occasionally. The left upper eyelid and left halves of the upper and lower lips were thus affected in a child aged 7, while a 5-year-old child had marked clonic contractions in the right lower limb. Clonus has also been observed in the adult, and it is significant that it is generally a manifestation of encephalitis. Enlarged glands in the occipital, carotid, and inguinal regions, to about the size of a walnut, were noted in an infant of 6 months; they regressed with the other signs of the disease. Acrodynia is ushered in with a pyrexial period, but during the greater part of its course the temperature is normal. The cerebro-spinal fluid is generally not involved, but in certain cases cells and albumin are present. There may be a slight increase in the glucose; hyperglycaemia is definitely unusual. In attenuated forms the erythema may be vague or transient; it may be confined to the palmar surface of the fingers or even the tips only, without the palm or the dorsum of the fingers being

involved Even this slight degree of erythema is associated with intense pain not merely in the hypogastric region but in all the fingers and toes with loss of weight and of muscle tone and persistent tachycardia As regards the incidence of acrodynia during certain nerve diseases it has been observed to occur in the course of acute anterior poliomyelitis and acute epidemic encephalitis while acute encephalitis has developed during the course of acrodynia The pathological condition generally clears up in six to twelve months, nine necropsies are described in the literature Paterson and Greenfield have noted the disappearance of the myelin sheath in the peripheral nerve bundles, with a chronic inflammation of the medulla and the sensory nerves Other authors have described lesions in the basal and bulbar nuclei in the diencephalon in the endocrine organs and in the sympathetic system There is an upset of the vago sympathetic equilibrium hypertony of the vagus is evident from the apathy depression fatigue excessive sweating and salivation coldness of the extremities and urticaria while insomnia tremors tachycardia and arterial hypertension are due to hypertony of the sympathetic system From clinical analogy the disease would seem to be due to a neurotropic virus and there may be some association between acrodynia epidemic encephalitis and poliomyelitis Crookshank considers these three conditions to be due to the same cause—namely influenza involving the nervous system

Surgery

6 Operative Treatment of Gall stones

A KROGIUS (*Finska Lakaresallskapets Handlingar* September 1931 p 681) summarizes his own experience and that of others with regard to the surgery of gall stones While it would be deplorable if the operative treatment of gall stones were to become as popular a procedure as has appendicectomy in many quarters it is by earlier operative intervention that improvements in this field are to be effected The mortality from operations at every stage of the disease ranges from 4 6 to 10 6 per cent in the statistics of different surgeons whereas the mortality from early operations during the acute stage ranges only from 0 to 7 5 per cent the average being 4 per cent even though most of the statistics concerned include a certain proportion of neglected cases The operation mortality for uncomplicated cholecystectomy in a free interval is only 1 per cent and this operation in the hands of an experienced surgeon can therefore no longer be regarded as dangerous But the author does not recommend as a rule deferring an operation to a free interval On the contrary he believes that the path to better results lies in having recourse more frequently to operative intervention in the acute as well as in the early stage of the disease He supports this opinion with many pages of statistics and the experience of other surgeons

7 Total Colectomy

F W RANKIN (*Annals of Surgery* October 1931 p 676) reports six cases of total or subtotal removal of the colon Subtotal colectomy is the term used for the removal of the colon down to the juncture of the sigmoid with the rectum while colectomy consists of the complete exairesis of the colon sigmoid and rectum The two indications for total colectomy are a definite primary lesion such as polyposis and a secondary lesion such as complicated chronic ulcerative colitis with sequels Polyps in the colon may be of the type which is a true neoplasm or the result of an inflammatory reaction The neoplastic or congenital type may be present either as one or two discrete tumours or as discrete tumours which involve the entire mucosal surface of the bowel from the anal canal to the ileo caecal coil They occur usually in families and are very liable to undergo malignant change The diagnosis of congenital polyposis is made by digital or proctoscopic examination and may be confirmed by *x* rays Three cases of this type are reported, in each of which a three stage operation of ileostomy was performed, after partial colectomy the rectal stump was turned in and placed retroperitoneally and a posterior resection of the rectal stump was undertaken The result in two cases was good but the third patient died eleven months after the final operation Three further cases of total colectomy following chronic ulcerative colitis are reported These patients had all been suffering for some time from the effects of absorption caused by a useless infected foul large bowel containing pus with multiple arthritic lesions or fistulas It has been proved that chronic irritation of long duration initiates carcinomatous changes and therefore progressive ulcerative colitis is a factor in malignancy In all three of the cases reported a diffuse formation of polyps was found covering the entire intraluminary mucosa of the bowel In each instance total colectomy following partial colectomy was carried out with excellent results the patients making good recoveries The advantages of graded removal of the large bowel and rectum are emphasized as is also the necessity for early operation before malignant changes have ensued

8 Primary Adenocarcinoma of the Gall bladder

A CIOFFI (*Il Policlinico* Sez Chir October 15th 1931 p 541) who records an illustrative case states that primary cancer of the gall bladder was described at the Paris Anatomical Society in 1836 by Durant-Fardel who reported three examples The first important surgical study of the subject was made in 1894 by Heddaus of Czerny's Surgical Clinic Simple tumours of the gall-bladder—such as lipoma, fibroma and fibro papilloma, as well as primary sarcoma—are rare carcinoma being by far the most frequent occurring according to different observers in from 5 to 7 per cent of all necropsies It arises either in the gall bladder or in the bile ducts It is a disease of maturity being rare under 30 and over 80 It is four times more common in females than in males Its frequent association with cholelithiasis had been noted since 1849 When the tumour is circumscribed its most frequent starting point is the fundus of the gall bladder, then the walls and lastly the neck In many cases however, the whole organ is found to be involved so that the starting point is difficult to determine Histologically the growth may be a single carcinoma a cylindrical celled carcinoma or an adenocarcinoma with or without colloid degeneration Cioffi's case occurred in a woman aged 46 in whom the gall bladder tumour was found on laparotomy to be accompanied by metastases in the liver and stomach so that no further operation was performed No calculi were found Histological examination of a portion of the growth showed that it was an adenocarcinoma The issue of the case is not recorded

9 Spiral Deformity of the Oesophagus

B HEYERS (*Deut med Woch* November 6th 1931 p 1897) describes a case illustrative of the importance of radiographical examination in cases of oesophageal obstruction It has been proved that in a large number of cases the oesophagus is rotated throughout its entire length to the extent of 180 degrees and that slight stenosis is present the condition here recorded does not appear to have been noted hitherto A powerfully built man, aged 53 was admitted for sudden haematemesis Eighteen years previously he had contracted syphilis and was treated by inunctions He smoked and drank heavily In 1927 he had coffee ground vomiting but a skiagram revealed no abnormality, and he remained well until the day of admission to hospital Physical examination showed some chronic bronchitis and the occasional presence of extrasystoles He had no abdominal symptoms The left pupil was larger than the right and reacted better to light both reacted well for convergence The patellar and Achilles tendon reflexes were well There were traces of blood in the faeces The blood Wassermann reaction was negative After four weeks rest there was no recurrence of the pain Skiagrams

showed slight dilatation of the upper half of the oesophagus with a spiral constriction of the lower half peristaltic movements were deficient although the oesophagus became elongated on deep inspiration There was no evidence of cardiospasm of organic stenosis of the lower oesophagus or of the cardia The stomach and duodenum appeared to be normal In view of the possible presence of oesophageal varices from hepatic cirrhosis oesophagoscopy was not attempted The patient was discharged and ten weeks later he was in good health although the skiagraphic appearance was unchanged Heyers suggests that the condition may be due to oesophageal ulceration possibly syphilitic or to kinking elongation or dragging of the oesophagus or possibly to a defect of innervation of the oesophageal wall

10 Treatment of Carcinoma of the Urethra

F v Mikulicz-Radecki (*Zentralbl f Gynäk* October 3rd 1931 p 2922) publishes details of fourteen cases of carcinoma of the urethra treated at the Berlin Universitäts Frauenklinik during the past eighteen years The treatment recommended is excision of the inguinal and femoral glands on both sides together with radium therapy (a maximum of 2 000 mg hours) of the tumour Its results although disappointing are described as being less unfavourable than those of partial or radical excision In the case of more elderly patients treated by radium survivals of nine five and three years were noted of four patients recently treated by the combined method three have survived for three years without recurrence and with continence of urine

Therapeutics

11 Insulin Treatment of Cutaneous Carcinoma

S F Gomes da Costa (*Presse Méd* October 21st 1931 p 1541) reviews the literature dealing with the relations between the metabolism of cancers and carbohydrates Various workers have shown that cancerous tissue utilizes the carbohydrates often sixty-six times as much as do normal tissues and that this activity is due to glycolysis and not to oxidation Insulin has a similar action on these substances and its effects on cancer have been studied by numerous investigators The results have been contradictory but the insulin was always administered internally Da Costa believing that local application of insulin would cause a carbohydrate deficiency and thus create conditions unfavourable to the development of cancer has tried this method in twelve cases of cutaneous carcinoma three of which are here recorded as being illustrative of the advantageous results obtained The insulin always produced even in *recurrences* a rapid cicatrization of the cancer area commencing at the periphery in some cases this occurred in 3 to 4 weeks Microscopically a *marked regression* of the growth was revealed The technique of the treatment was as follows Insulin was dropped twice daily on the neoplasm so that the growth was *completely bathed* by it A sterile dressing moistened with a few drops of the solution was then applied

12 Stramonium in Parkinsonism

O J Menard and L M Hurxthal (*New England Journ Med* October 15th 1931 p 759) report cases illustrating their contention that stramonium datura in adequate dosage is a helpful drug in attempting to alleviate some of the distressing symptoms in Parkinson's disease or in post encephalitic Parkinsonism They think it should be tried in all cases being more effective than hyoscine preparations Atropine was employed in one of their cases but had to be discontinued in a few days owing to visual disturbances The authors state that in a few instances the mentally retarded bed ridden and helpless patients became active, alert and able to look after themselves other patients less severely afflicted attained variable degrees of improvement They used the powdered leaves only first in capsules and later in pill form the usually effective dose being 5 to 7 grains each day At first doses of 2 5 grains were given three times daily increases or reductions being made subsequently as thought fit It is recommended that the dosage should be raised to the maximum before the treatment is abandoned as unsatisfactory Some of the authors patients had been taking 15 grains each day and in one case the daily dose was 22 5 grains Dryness of the mouth and visual disturbance may occur at first but is usually transient and no other harmful effects have been noted The treatment almost invariably relieves the muscular rigidity and mental retardation often most strikingly The pill rolling type of tremor lessens and sometimes (though rarely) disappears Excessive salivation is always stopped but the marked faces and stare are rarely benefited Of 22 patients reported 6 experienced marked improvement 6 improved moderately 6 received slight benefit and 4 were unimproved

13 Therapeutics of Scleroderma

Michaëlis (*Bruxelles-Medical* October 25th 1931 p 1502) describes a method of treatment used by Sellei of Budapest who gives pastilles of pancreas (pancrine) and also the raw organ in soup reinforcing this with a diet poor in fats and with the administration of preparations of the mucous membrane of the stomach and duodenum Sellei claims to have obtained great benefit in the general condition without however influencing the accompanying sclerodactyly facial mask and Raynaud syndrome he believes that this partial failure shows that scleroderma and the Raynaud syndrome depend on a different pathology Michaëlis recalls his own publication in 1929 of a case of scleroderma successfully treated by massive doses of insulin not specially purified the course consisted of over 4 000 units in doses of from 60 to 120 units in this case the facies sclerodactyly and Raynaud syndrome were also cleared up Since insulin is not utilized by diabetics when given by the mouth Michaëlis concludes that Sellei's success is not due to any insulin content of the pancreatic substance moreover Sellei has investigated the sugar tolerance and diastatic indices in several cases where his treatment succeeded and found them to be normal Michaëlis doubts whether his method and that of Sellei depend on direct stimulation of the unstriated muscle of the skin and blood vessels by a number of different *hormones* In view of the difficulty experienced in getting *patients to tolerate* high doses of insulin he suggests that a combination of his own method with the pancreatic therapy of Sellei might prove better than either method alone Finally he considers that the occasional presence of achylia in cases of scleroderma gives some support to Sellei's use of gastric and duodenal extracts in addition

14 Intramuscular Injections of Quinine in Pneumonia

H Roos (*Finska Läkaresällskapets Handlingar* October 1931 p 778) traces the evolution of the treatment of pneumonia with injections of quinine since 1899 The favourable experiences of earlier workers are confirmed by the author who in December 1927 and throughout 1928 treated every other case of pneumonia admitted to his hospital with injections of quinine letting the alternate cases serve as controls The solution injected consisted of 2 parts of quinine hydrochloride 1 part of urethane and 20 parts of distilled water The usual dose was 5 c cm injected on the first second fourth and sixth days of the course of treatment Since the quinine was liable to form a precipitate at room temperature it was gently warmed before injection Among the 105 patients thus treated there were 9 deaths whereas among the 84 controls there were as many as 13 deaths The comparison between the two groups of cases was not however quite fair since only 15 per cent of the quinine-treated patients were over the age of 50 whereas this was the case with nearly 30 per cent of the controls The cases were accordingly re classified so that *only* the patients between the ages of 15 and 50 in both groups

and only those in the quinine treated group whose treatment began before the fifth day of the disease were included There were 56 quinine treated patients in this group with an average age of 28, and among them there were only two deaths The average age of the 59 controls was 30 and there were 7 deaths among them The clinical course of the cases in the two groups showed this remarkable difference—that while the temperature usually fell by lysis in the quinine treated cases, that of the controls most frequently fell by crisis The average duration of the fever was, however approximately the same Complications also were as common among the quinine treated patients as among the controls, and no striking improvement in the general condition after the injections was observed The author considers that his experience confirms the favourable reports of earlier workers on this treatment

15 Intestinal Action of Camphor

H BUSQUET and A JAUROU (*Bull Soc de Ther* October, 1931 p 259) state that the action of camphor on intestinal pain was first noted by Nicolas Alexandre in 1750 in his botanical dictionary and its constipating effects were described by Vitet in 1803 in his *Materia Medica* Graffenhauer in a monograph on camphor published in the same year emphasized its sedative action in colic Millot advocated its use in acute colitis in 1837 Since then however little attention was paid to the sedative action of camphor on the intestine until Busquet read a paper on the subject before the Société de Biologie in June 1930 In his recent Paris thesis Jaurou recorded 14 cases of diarrhoea due to different causes and usually attended by colic and fever which he had treated by camphor The use of this drug produced within the first few hours a diminution in the number of the stools a considerable relief of the colic and a fall of the temperature to normal The daily dose of camphor should not exceed 0 25 gram It is best prescribed in a watery solution with an appropriate syrup to correct the disagreeable taste

Neurology and Psychology

16 Diet and Degeneration of the Spinal Cord

E MELLANBY (*Brain* September 1931 p 247) reports a series of investigations showing that when diets containing a large amount of cereal (other than yellow maize) deficient in vitamin A or carotene are eaten by young puppies degenerative changes in the spinal cord in the form of demyelination of the nerve fibres can generally be observed if Marchi's method of staining is employed The addition to the diet of ergot or rye germ hastens and intensifies these changes which are prevented on the other hand by the presence of any rich source of vitamin A or of carotene even though ergot is being eaten Spinal cord degeneration of this type does not seem to develop until the reserves of vitamin A in the liver are used up The author comments on the possible bearing of these results on certain clinical conditions Demyelination of the cord fibres is such a characteristic change in pernicious anaemia that it may possibly be associated with failure of the liver to store vitamin A or with prevention of this substance from exerting its normal function on the central nervous system Subacute systemic lesions of the cord are also found in Addison's disease and cancer cachexia carotene and vitamin A might be remarked prevent or influence these changes Mellanby suggests that further investigation might bring to light some similar etiology in the degenerative cord changes in tabes dorsalis and general paralysis while the remissions in disseminated sclerosis indicate the possibility of there being some such preventive mechanism of the nervous system operating as is exerted by carotene and vitamin A Furthermore the partial deficiency of these preventive substances may be concerned with some of the slighter but more common abnormalities of the nervous system The author thinks that the beneficial effect of the malarial treatment of general paralysis might possibly be due to the liberation of large quantities of vitamin A and other preventive factors from the livers of patients infected with the malarial parasite, and that it might be worth while as a preliminary measure to place such patients on diets rich in this substance and in cod liver oil with a view to rendering the subsequent malarial therapy more regular and satisfactory in its effects

17 Focal Infections in Certain Psychoses

G GIBIER RAMBAUD (*Presse Med* October 10th, 1931, p 1479) records four cases of dementia praecox in all of which dental trouble was present amelioration, if not cure, followed extraction of the diseased teeth and vaccine treatment The vaccine was made from an anaerobic neurotropic *Streptococcus viridans* isolated from the teeth and in two cases from the tonsils as well Intestinal disinfection also was instituted at the onset of treatment, and continued during its course In these cases the streptococcus acting through its toxin on the nerve cells or neurinis was apparently the cause of dementia While admitting that the cases are too few on which to base dogmatic conclusions the author draws attention to the fact that acute infectious diseases may be accompanied by mental troubles and to the important part played by streptococci in acute rheumatism and endocarditis He believes that at the onset of all psychoses, infectious foci (such as those in the nasopharynx, tonsils teeth prostate and cervix uteri) should be looked for, and if found appropriately treated

18 The Position in the Family of Mental Defectives

L D TURNER and L S PENROSE (*Journ of Mental Science* July 1931 p 512) attempt to answer the question whether the place in the family occupied by a mentally defective child has any influence as a cause of the mental defect A questionary was issued and 1 455 replies were received but on the whole the results were disappointing owing to the failure to eliminate certain sources of error Despite these drawbacks the authors believe that the evidence obtained although weak points to the following conclusions In low grades of amentia (idiots) the first born child is somewhat more frequently affected than the other members of the fraternity In high grades of amentia the defectives are more frequently found among the later-born members Certain special groups of cases have their own peculiar distribution in the family mongols tend to come last and cases with a history of difficult labour are likely to come early The data give no support to Goddard's hypothesis that mental deficiency is due to a single recessive gene substitution

19 Heredity in Schizophrenia

M BLEULER (*Journ of Nerv and Ment Dis* October, 1931, p 393) records a study of 100 schizophrenic patients with special reference to the family, no fewer than 2 634 persons being included in the investigation Since the biological unity of the group of schizophrenias is not probable an attempt was made to discover whether familial influences were of equal importance in different forms of this condition Bleuler submits the following generalizations as conjectures Among schizophrenics without hereditary evidence one group is sharply distinguished clinically, the patients have severe dementia but are capable of a certain affective rapport (such as idiots have) their bearing and expression are apathetic Their illness began early ran a quick progressive course and showed no substantial remissions Physically they were obese dysplastics, before the psychosis manifested itself, they were not plainly schizoid but rather of good-natured bearing In families to which the formal pictures of the psychoses of two related members were very similar the author encountered cases referable as regards their symptoms to the manic depressive constellation He finds himself unable to assume a tendency to dementia from an appearance of it in a family for two cases ending in dementia rarely occurred in the same family Cases with a schizophrenic ancestral strain ran on the

average a somewhat milder course and in no instance was it more severe than in those without a schizoid heredity In the face of common contradictory experience the effect of selection has to be considered It was observed that the schizoid patient and the schizophrenic occurred among the children of parents who were not schizoid While the majority of the eccentrics among the relatives of the schizophrenics in Bleuler's series were typically schizoid the frequency of moral defectives was also striking Moreover he found persons in whom the schizoid state was only apparent during a certain period of their life He observed cases which exhibited mild uncharacterized disturbances in involution which left behind them a permanent character change without specific schizoid traits Instances of alternating personality were also present among the relatives An expectation of schizophrenia among the relations of schizophrenics was found to be no higher than 4 5 per cent

Obstetrics and Gynaecology

20 Uterine Haemorrhage

C F FLEMMING (*Journ Amer Med Assoc* September 5th 1931 p 694) records observations upon uterine haemorrhage in pelvic inflammatory disease in a series of 52 patients It had been noted from a recent statistical study that such conditions occurred in 16 per cent of those who had not passed the menopause Though the literature on the subject is meagre the experience of others indicates that such abnormal bleeding occurs in from 35 to 40 per cent of patients suffering from acute or chronic salpingitis From a detailed study of the author's series of 52 cases it was found that they fell into five clinical groups (1) menorrhagia—15 cases of profuse or prolonged periods with a 28-day cycle (2) polymenorrhœa—15 cases of too frequent periods (3) metrorrhagia—12 cases of atypical irregular bleeding (4) 2 cases in which an onset of continuous bleeding coincided with a normal period and (5) a period of bleeding in 8 cases the onset of which occurred between the eighth and eighteenth days of the cycle The main causative conditions concerned in the production of these various types of uterine haemorrhage associated with pelvic inflammatory disease are interference with the normal uterine contractions due to adhesions and malpositions pelvic hyperæmia endometrius disturbances of ovarian function such as deficiency owing to chronic peri-oöphoritis and hyperæmia and to corpus luteum abscess formation The author remarks that it should be borne in mind that the haemorrhage does not necessarily require specific treatment but that it is the complication of the main lesion in the adnexa which needs attention the incidence of endometritis points to the dangers attending injudicious curetting in such patients

21 Induction of Labour by Puncture of the Membranes

G FITZGIBBON (*Journ Obstet and Gynæcol of the Brit Empire* Autumn 1931 p 495) recommends a revival of one of the earliest methods of inducing labour Cephalic presentation having been proved or if necessary secured by version a moderately stiff swivel of a male catheter is guided by one finger in the cervix to a position 'overs the front of the head the membranes are scratched through by sharp movements and a thin trickle of liquor amnii comes away The head is now pushed up intermittently by the use of the finger in the cervix and an external hand so as to allow gushes of fluid to issue After the mobility of the head has become reduced the patient may be allowed to walk about Twelve hours later if labour has not started scopolamine and morphine are given In FitzGibbon's view the amniotic sac plays no part in dilatation of the cervix labour is induced by pressure of the presenting part on the nervous tissues of the parametrium To puncture the membranes high above the head is therefore a less speedy method of induction FitzGibbon does not hesitate to use his procedure in primiparæ among six primiparæ aged from 23 to 28 the average time required for onset of labour was 2½ hours and the average duration of labour 11½ hours For 17 multiparæ the respective average times were considerably greater The usual indications for induction were the prevention of disproportion or of pregnancy beyond term

22 Evolutionary Determination of the Gestation Period

F COLLORIDI (*Arch di Ostet e Ginecol* August 31st 1931 p 1037) has compared the dimensions of the maternal pelvis the weight of the fœtus and the duration of gestation in large groups of labours with average universally enlarged and universally restricted pelves and in groups of cases of moderately overgrown and giant fœtuses respectively In common with Alfieri and Vaccari he finds that in general the pelvic size the fœtal mass and the gestation time are directly proportional These findings are quoted in support of the theory of Schroeder and of Cuzzi which endeavours to explain on Darwinian lines the determination of the gestation period Stocks tending either to premature or to late labour also tend as the ages pass to die out Fœtuses expelled before the average end of gestation—280 days from conception—have easy birth but being relatively feeble are specially liable to succumb to the strain of extrauterine life Those expelled after 280 days although potentially stronger are apt not to survive their labour

23 Acute Hydramnios

PICOT and GELLE (*Bull Soc d'Obst de Gynécol et Paris* October 1931 pp 598 598) describe two cases of acute hydramnios The first patient a 1-para aged 21 suffered during the seventh month from acute abdominal pain and dyspnœa She was found to have a very large uterine swelling œdema of the legs vulva and hypogastrium and albuminuria with a blood pressure of 200 100 mm The membranes were punctured by a fine trocar and 750 c.cm were withdrawn The fœtal heart now became audible and labour commenced six hours later three litres of liquor amnii were collected The fœtus which died half an hour after extraction weighed three kilograms and showed generalized œdema The second patient a 1-para aged 30 had acute pain and great swelling of the uterus at the end of the ninth month œdema albuminuria and hypertension were absent however The pelvis was almost filled by a tumour which was regarded as a fibroma or ovarian cyst At laparotomy 4½ litres of liquor amnii were removed by trocar from the uterus which had undergone almost half a turn of axial rotation It then became possible to excise the pelvic tumour which proved to be a twisted partially necrotic pedunculated subserous fibroma

24 Spinal Anæsthesia in Gynæcology

According to E VOGT (*Zentralbl f Gynäk* October 31st 1931 p 3173) the difficulty which may occur in lumbar puncture in cases of kyphosis and scoliosis is minimized by (1) preliminary x-ray examination (2) the insertion of the needle in a higher situation—between the fourth and third or even the third and second lumbar vertebræ and (3) the use of a special slender needle In cases of advanced œdema of the back firm pressure will cause the swelling to disappear and the puncture is then as a rule exceptionally easy In vaginal operations aiding of the field by relaxation of the sphincter ani may be prevented by a preliminary tamponade of the rectum In the treatment of respiratory impairment intramuscular injections of lobeline and caffeine are valuable the inhalation of carbon dioxide is most effective and a bag under should always be ready at hand Headache which frequently follows spinal anæsthesia in gynæcological cases is exceptional in parturients W MERTENSEK (ibid p 3178) recommends the inhalation of carbon dioxide during spinal anæsthesia because it diminishes the danger of depression of the blood pressure the incidence of vomiting during and after the operation to 4 and 10 per cent respectively and post-operative meteorism He has not found that it prevents the headache which often follows spinal anæsthesia

Pathology

25 Acidity of the Gastric Juice

C BOLTON and G W GOODHART (*Journ Physiol* October 22nd 1931 p 115) have conducted experiments to determine the variations in acidity of the gastric juice as it flows from the whole stomach during a secretory period comparable with what occurs during the digestion of a meal to ascertain whether there are any variations in the acidity of the juice as it flows from the gastric glands to discover the effects of admixture with mucus and to find out the extent to which the unaided stomach is able to reduce the acidity of gastric juice continuously secreted as is the case in the condition of continuous hypersecretion in the human subject Cats were the experimental animals the whole stomach was used in every experiment the pyloric and cardiac orifices being occluded by ligature and a cannula tied in A fresh animal was used for each experiment decerebrated or anaesthetized with ether the results being precisely the same in either case The animals were fed on milk only for a few days and during the last twenty four hours were isolated from sight and smell of food The gastric glands were excited to secretion by pilocarpine or histamine The results were as follows The average acidity of normal gastric juice at the height of secretion is 0 134 *N* (0 49 per cent) and the inorganic chloride 0 07 per cent As the secretion is beginning the average acidity is 0 082 *N* (0 3 per cent) with a corresponding increase in the neutral chloride The low acidity is in some measure due to escape of neutral chloride at the expense of the acid There may be a slight fall in the acidity with again a corresponding increase in the neutral chloride, as the secretion is stopping When the wave of secretion induced by pilocarpine or histamine has ceased a slow after secretion of gastric juice continues for several hours Such small amounts of fluid are always strongly acid The flow of gastric juice does however stop in the strictly normal state of affairs and the mucous membrane becomes alkaline Mucus is secreted in varying amounts during the flow of gastric juice and is most in evidence at the end of the flow it has an alkalinity of about 0 039 *N* (0 14 per cent) and contains 0 28 to 0 36 per cent inorganic chloride The mucus both dilutes and neutralizes the acid of the juice but effects no great reduction in acidity until the flow of juice has actually stopped The unaided stomach has no means of lowering the acidity of the gastric juice secreted into it the gastric secretion continued with undiminished acidity although it was allowed to accumulate in the stomach

26 Hourly Variations in Protein Metabolism

L AMBARD F SCHMID and J STAHL (*Bruxelles Medical* October 18th 1931 p 1476) record the results of certain investigations into the hourly variations of protein metabolism The individuals under observation were kept without food for a period of 24 hours although not starving they were therefore not adding to their nitrogenous stores The first observations made were on the elimination of urea in the urine The usual curve of urea excretion consisted of two parts The first showed a gradual descent until a point was reached where the excretion became constant and the charted line correspondingly horizontal this marking the start of the second part It was observed that the moment of the change from the descending curve to the horizontal line was the time at which the individual *experienced hunger* When hunger was felt from the beginning of the period of observation it was noticed that the chart of the urea excretion was also on a level from the beginning The investigators suggest that hunger may be the means employed by the body to maintain the protein metabolism at an optimum level Since the urea excretion depends on the urea concentration of the blood which remains invariable a direct measurement of the protein metabolism is obtained when the line is horizontal The body tissues are depleted in order to keep the blood urea constant The descending curve of the urea excretion corresponds to the sum of two urea factors (1) the continuing manufacture of urea by the body and (2) the previous accumulation in the tissues By means of calculations the approximate amount of urea manufactured by the body in a given time can be estimated The authors conclude that during the hours when the urea excretion is variable an examination of the urinary urea alone is not a true indication of nitrogenous metabolism

27 The Ultravirus of Tuberculosis

G W SCHMIDT (*Zeit f Hyg u Infektionskrankh* November 1st 1931 p 90) has carried out a painstaking inquiry in an endeavour to confirm the findings of French and Italian workers with regard to the possible existence of a filterable stage in the development of the tubercle bacillus Preliminary experiments demonstrated a number of fallacies inherent in the use of the ordinary earthenware bacterial filters When precautions were taken to avoid these it was still found that isolated organisms in the test cultures of *B prodigiosus* could pass through Chamberland L1 candles Inoculation of guinea pigs with very small doses of virulent tubercle bacilli sometimes resulted in the production of a disease similar to that ascribed to the ultravirus—namely minimal glandular enlargement without any tubercle formation passage experiments from such animals resulted in the production of typical tuberculosis Schmidt's failure to demonstrate the presence of an ultravirus in filtrates leads him to suggest that the lesions ascribed to the ultravirus are in reality due to the presence in filtered cultures and tuberculous products of extremely small numbers of tubercle bacilli he concludes that no satisfactory evidence has yet been brought forward to prove the existence of the ultravirus

28 Vaccination of Cattle with B C G

O BANG I JUNDELL and H MAGNUSSON (*Ann de l Inst Pasteur* October, 1931 p 386) report the results of an investigation carried out to determine the protective value of B C G vaccination against tuberculosis in cattle Calves were used and the vaccinated animals received a single dose of 50 mg of B C G into the subcutaneous tissue of the dewlap These animals together with the unvaccinated controls were infected two to three months later by the intravenous inoculation of 1/100 to 1/50 mg of virulent bovine tubercle bacilli Of the nine control animals four died in five to six weeks of generalized tuberculosis two became ill about 9½ to 11 months after infection and when killed showed advanced lesions three were in good health 9½ to 11 months after infection but when killed they were found to have extensive lesions Of the 13 vaccinated calves six remained free from any tuberculosis as judged by macroscopic examination at necropsy 9½ to 11 months after infection three showed very slight lesions which during life gave rise to no symptoms of disease two when killed 9½ to 11 months after infection had severe lesions, one was killed after 11 months in very poor condition and was found to have very advanced lesions while one animal died of generalized tuberculosis in two months The authors conclude that calves vaccinated subcutaneously with *B C G often* acquire a considerable degree of immunity I JUNDELL and H MAGNUSSON (ibid p 408) record a similar experiment on pigs Eight newborn pigs were given 10 mg of B C G by the mouth on three successive days eight others were vaccinated subcutaneously with a single dose of 10 mg six others served as controls About two months after vaccination the first two groups and the control animals were infected by feeding with a purée of tuberculous tissue from the udder of a cow When killed four to five months later all the animals showed tuberculous lesions of greater or less extent There was no apparent difference in the health of the animals during life or in the severity of the post-mortem lesions between the control and the vaccinated groups The authors conclude that in their experiments there was no evidence of protection attributable to the vaccination

CAESAREAN TWINS

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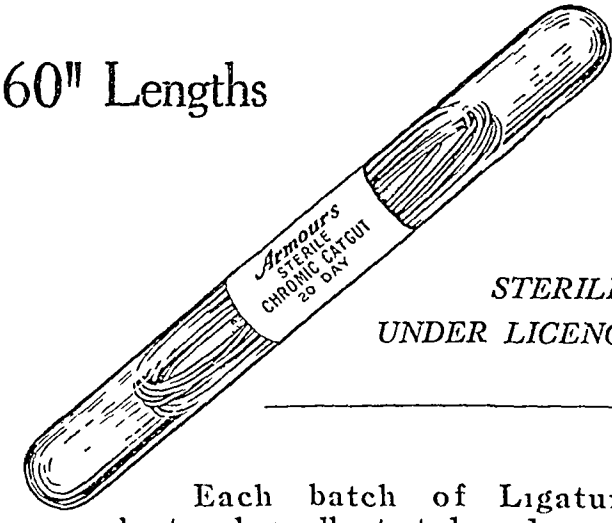
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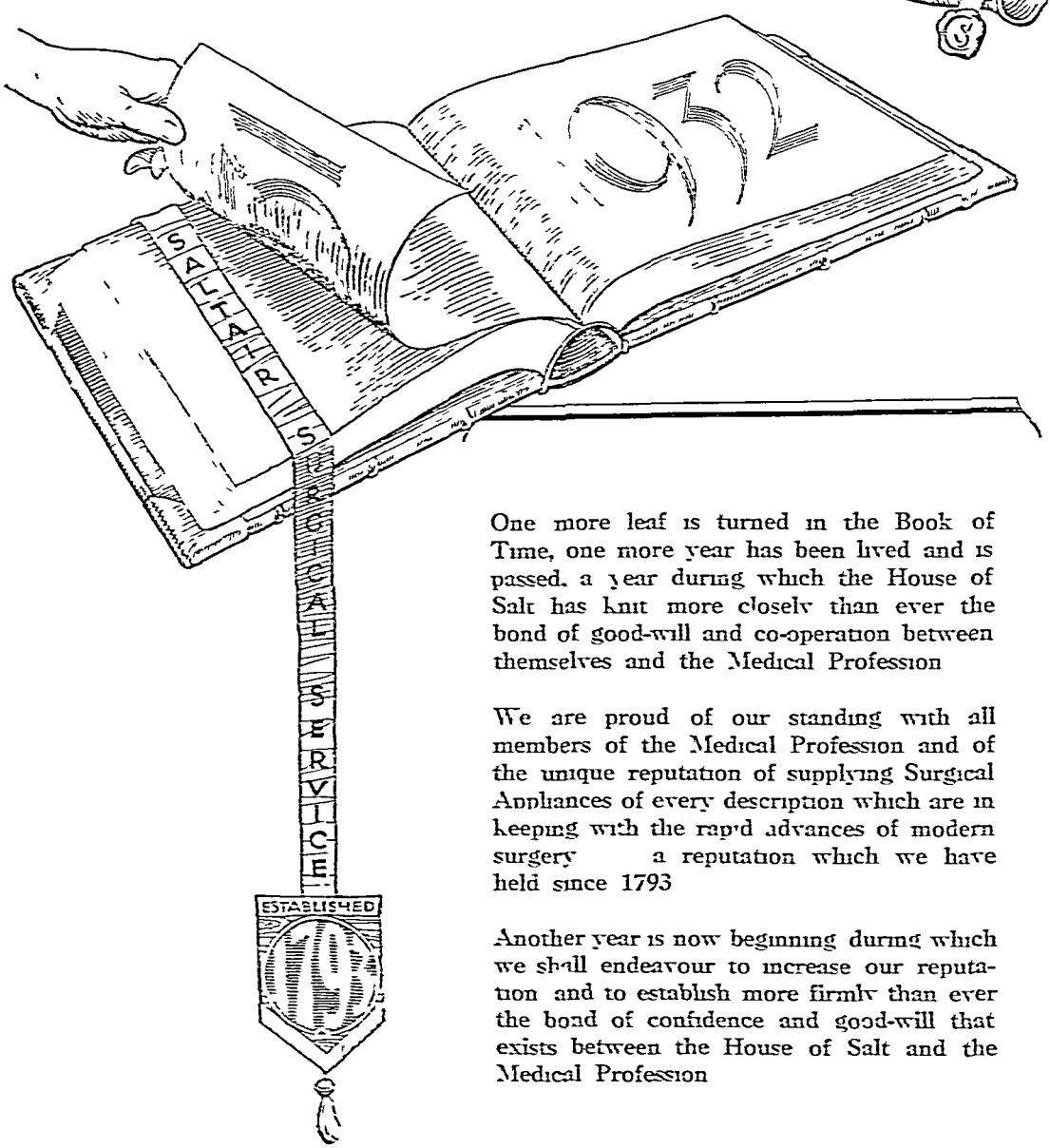
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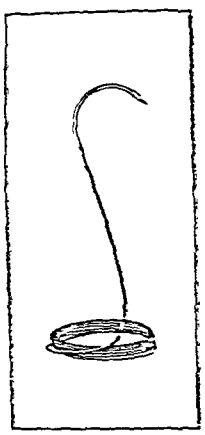
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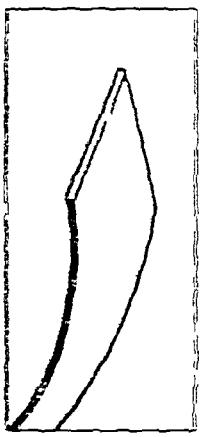
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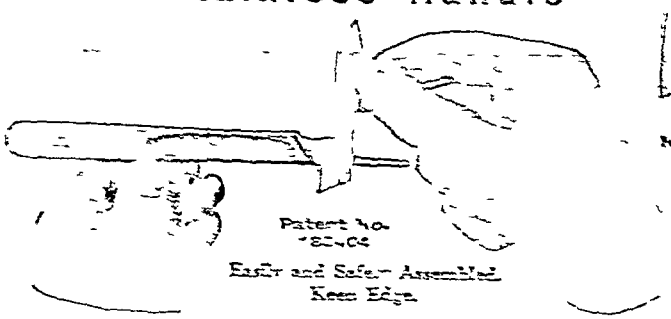
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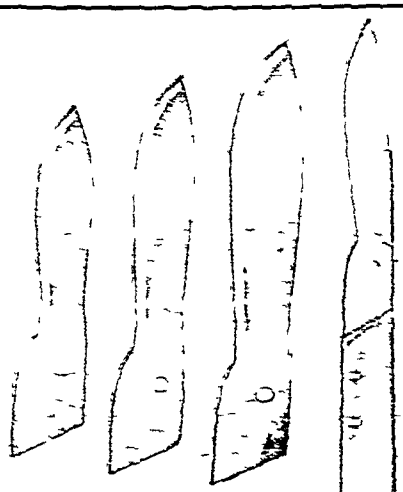
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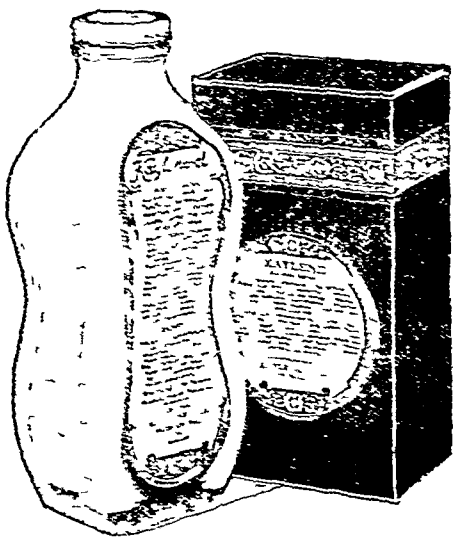
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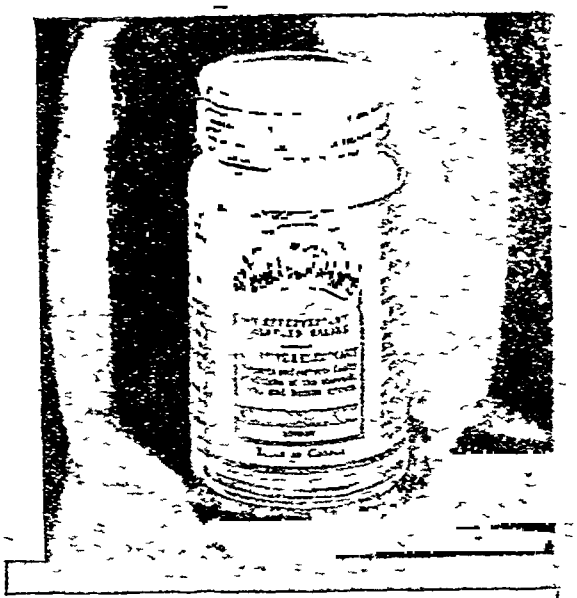
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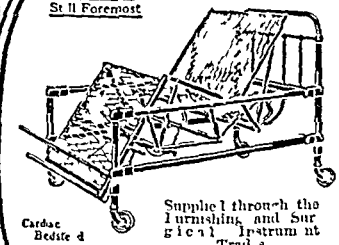
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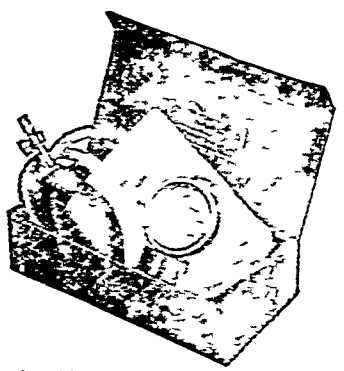
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The Corset-Belt is recommended and prescribed for all cases of Abdominal Ptosis, Post-operative Weakness, Relaxed Muscles, Rupture, Pregnancy, Obesity, Floating Kidney, Enteroptosis, Constipation, Indigestion, Backache, Sciatica, Lumbago, Neuralgia, Nervousness, Insomnia, Nervous Prostration, Hysteria, Neurasthenia, Anæmia, Debility, Rheumatism, Gout, Sluggish Circulation, Varicose Veins, Weak Ankles, Flat Feet, Weak Knees, Rheumatic Pains, Sprains, Strains, Bruises, Sciatica, Lumbago, Neuralgia, Nervousness, Insomnia, Nervous Prostration, Hysteria, Neurasthenia, Anæmia, Debility, Rheumatism, Gout, Sluggish Circulation, Varicose Veins, Weak Ankles, Flat Feet, Weak Knees, Rheumatic Pains, Sprains, Strains, Bruises.

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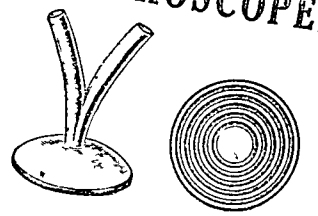
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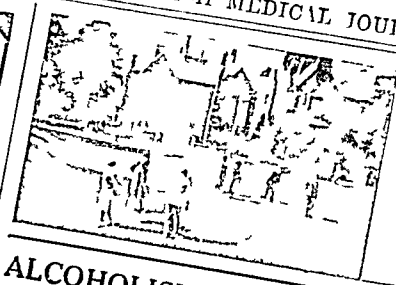
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For the treatment of Ladies and Gentlemen mentally afflicted Voluntary Boarders received
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At this beautifully situated country mansion residential treatment of the above afflictions is carried out on the most modern scientific principles both physical and psychological under the supervision of the Rev Med Supt Dr A J CAMPBELL M D D P H D I M
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A comfortable private HOME charmingly situated overlooking Torbay near Torquay Main line 3¼ hours from Paddington Both Ladies and Gentlemen admitted as voluntary patients The treatment is the outcome of many years experience and is said to remove all craving for drink and drugs it has a tonic action on the system and the general health is improved Alcohol and drugs reduced gradually without suffering FUNCTIONAL NERVOUS DISEASES AND NEURASTHENIA are also treated with excellent results Cases with insomnia depression etc do especially well Moderate inclusive terms Exceptionally good climate and ample and varied amusement Golf (Moor Park) tennis croquet bowls Private Car from STANFORD LAY M B Ch B Late Med Supt Bay Mount Paignton Prospectus etc from STANFORD LAY M B Ch B Late Med Supt Bay Mount Paignton

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For the treatment of GENTLEMEN under the Act and privately Total 1883 In Association tion of prominent medical men and others for the study and treatment of alcohol and drug abuse Large secluded grounds on the bank of the River Colne Full size billiards tennis croquet bowls Golf (Moor Park) Sandy Lodge) close by For particulars apply to—
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THE HARE NURSING HOME
is founded and established by the late Dr FRANCIS HARE for 20 years Med Supt of the Norwood Sanatorium and author of "ALCOHOLISM" etc for the treatment of Alcoholism Insomnia Neurasthenia other Drug Habits Functional Nervous Disorders
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Fees 5–10 guineas Ample amusements 25 bedrooms Annexe for mild cases Quiet and pleasant situation
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For prospectus etc write or phone WALTER D MASTERS M D M R C S D I H Barrister at Law (Hes Med Sup) Author of The Alcohol Habit
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CHEADLE ROYAL,
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This Registered Hospital for MENTAL DISEASES with the seaside branch Glan y Don Colwyn Bay is for the treatment and care of PRIVATE PATIENTS of the UPPER and MIDDLE CLASSES Voluntary and Temporary and Certified Patients received
For terms etc apply to the Medical Superintendent J A C HOY M B who may also be seen in Manchester by appointment
Telephone 2231 GATLEY

SPRINGFIELD HOUSE,
Near BEDFORD (Phone 3417)
For Mental Disorders with or without certificates
Resident Physician CEDRIC W BOWLER
Ordinary Terms Five Guineas per week
(Including Separate Bedrooms where suitable)
Interviews in London by appointment

THE GROVE HOUSE,
CHURCH STRETTON, SHROPSHIRE
A Private Home for the care of and treatment of a limited number of ladies mentally afflicted
Climate healthy and bracing
Medical Superintendent Dr McCLINTOCK

CITY OF LONDON MENTAL HOSPITAL
DARTFORD KENT
Ladies and Gentlemen received for treatment under certificates and without certification as either VOLUNTARY or TEMPORARY PATIENTS at a weekly fee of TWO GUINEAS and upwards

Doctor's Widow in North London having large house garden car good staff would like some PAYING GUESTS Terms moderate—Address No 371 B M A House Tavistock Square W C 1

The Devon Mental Hospital,
Exminster, near Exeter
The Committee of the above Hospital have accommodation for the reception of PRIVATE PATIENTS of both sexes in special wards which are healthily situated with extensive views of the Exe Valley and surrounding scenery The Hospital is fully equipped with Operating Theatre and X ray Departments and has facilities for Ultra violet Light treatment and modern Hydrotherapy
Charges £3 3s per week including all necessaries except clothing Apply to the Medical Superintendent
Tel Deepway Exeter Phone 3580 Exeter

STRETTON HOUSE,
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A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness including the allied disorders of Alcoholism and the Drug Habit All types of early Mental and Nervous cases are received without certificates Voluntary Patients and the provisions of the Mental Treatment Act 1930
Bracing Hill country Near Wenlock
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A HOUSE licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorder Both certified and voluntary patients received Approved for Temporary Patients This is a large country house with beautiful grounds and park five miles from Sheffield Railway Station Grange Lane LANE Railway Station Sheffield Telephone No 40030 Ecclesfield Resident Physician CUBITT MOULD LRCP MRCS

BOREATTON PARK,
BASCHURCH SALOP
A first class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted
Large gardens deer park private golf links fishing Ground extend to over 200 acres
Voluntary Boarders accepted
Apply for particulars to Dr SANKEY

THE MOAT HOUSE,
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Established 1816 For the TREATMENT of a few LADIES suffering from NERVOUS and MENTAL DISORDERS Voluntary patients received For terms apply to the Resident Medical Attendant Telephone Tamworth 108
Tel & Telegrams Haynes Brentwood 45

Littleton Hall, Brentwood, Essex
Large grounds 400 ft above sea HOME for ladies Mentally afflicted Voluntary Boarders received Station Brentwood and Shenfield 1 mile Liverpool St 26 min—Apply Dr HAYNES

ST. ANDREW'S HOSPITAL

FOR MENTAL DISORDERS,

NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON. THE MARQUESS OF EXETER, C.M.G., A.D.C.

Medical Superintendent DANIEL F. P. LEAKE, M.A., M.D.

This registered Hospital is situated in 100 acres of park and pasture grounds. Voluntary patients who are suffering from mental disorder, or who wish to prevent recurrence of same, should apply for immediate admission and consult the Superintendent. Patients may be received for temporary residence and examined and advised as to treatment. Careful clinical, bacteriological, and pathological examinations undertaken. Private rooms with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE

The Reception House and Hospital grounds, with a private entrance, by which patients can be admitted, is equipped with all the appliances for the most modern treatment of Mental and Nervous Disorders. It contains special departments for electric-light baths, including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electric bath, Massage, etc. There is an Operating Theatre and Dental Surgery, an X-ray Room, and Laboratory. Apparatus and a Dark Room for Diathermy and High Frequency treatment. Full occupation for both mental and bodily health is provided for patients.

MOULTON PARK

Two miles from the Main Hospital there are several branch houses, some detached and some in a park and farm of 600 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards. Moulton Park Occupation Farm is a feature of this branch, where patients are given every opportunity for occupying themselves in farming, gardening, and market gardening.

BRYN-Y-NEUADD HALL

The Mansion House of St. Andrew's Hospital, Northampton, and Park of 500 acres, is a Landmark and one of the finest scenery in North Wales. On the North-West coast between Harlech and Portmadoc. Pleasure Parties may visit the branch, a short train journey from Northampton. The Hospital has its own private fishing, boating, and bathing. There is tennis on the Park.

The Hall is the headquarters of the Hospital Farm, which includes arable and pasture grounds. Light manual work (grass and field cultivation) and gentle exercise are provided for patients. Ladies and gentlemen have their own gardens and grounds. Lawn tennis, bathing, boating, and fishing are provided.

Full particulars may be obtained on application to the Medical Superintendent (Telephone No. 80 Northampton) who can be seen in London by appointment.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is built and fully equipped on ground of an eminence at short distance from Nottingham, and combines a healthful position and comfortable surroundings with every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

Telephone [illegible] Telegrams, The Coppice, Nottingham.

HAYDOCK LODGE,

NEWTON-LE-WILLOWS, LANCASHIRE

[illegible]

For the reception of PRIVATE PATIENTS of the UPPER AND MIDDLE CLASSES requiring Care, Treatment, and Control. Certified Patients admitted in private houses and grounds in the neighbourhood. Separate Villas and Cottages in the Park. Voluntary Boarders received. Terms to suit the means of applicants. For further particulars apply to MEDICAL SUPERINTENDENT.

TYKEFORD ABBEY, NEWPORT PAGNELL,

BUCKS

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The House is situated on the [illegible] Grounds and Park [illegible] Private Suites of Rooms [illegible] Lawn Tennis, Croquet, Golf, Boating, Fishing, Riding, Motoring, Billiards, Dancing, Wireless, Gramophone, Library, Electric Light throughout. Private Bathrooms. Resident Physician. Trained Nurses. Massage, Electrical Treatment, Occupation, Recreation. Terms from Two Guineas per week. Apply to MEDICAL SUPERINTENDENT, Tykeford Abbey, Newport Pagnell.

COURT HALL, KENTON, EXETER,

SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Disorder. Illustrated Prospectus from Telephone Starcross 10

CHIEF MEDICAL OFFICER [illegible] Certified and voluntary cases received. Terms from 3½ guineas. The Hall is set in its own park of 30 acres. Tennis, croquet, golf, boating, fishing, riding, motoring, billiards, dancing, wireless, gramophone, library, electric light throughout. Private bathrooms. Resident physician. Trained nurses. Massage, electrical treatment, occupation, recreation. Terms from Two Guineas per week. Apply to MEDICAL SUPERINTENDENT, Court Hall, Kenton, Exeter.

CHISWICK HOUSE

A Private Mental Hospital for the Treatment of Certain Mental and Nervous Disorders [illegible]

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone PINNER 23

A number commencing 12 [illegible] with Meadow [illegible] including [illegible]

Terms from 10 guineas per week.

Voluntary Patients received [illegible] treatment.

Special provision for Temporary patients under the Mental Treatment Act.

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(20 minutes from London)

[illegible] for the Treatment of MENTAL ILLNESS [illegible] Private Patients. Country Mansion [illegible] Estate. Certified and Voluntary Cases [illegible] Terms [illegible] Telephone [illegible]

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[illegible] Private Suites [illegible] Fees 3 guineas [illegible] Particulars from the Secretary.

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[illegible] Private Hospital for the Treatment of Certain Mental and Nervous Disorders. Certified and Voluntary Patients received. Private Suites of Rooms. Lawn Tennis, Croquet, Golf, Boating, Fishing, Riding, Motoring, Billiards, Dancing, Wireless, Gramophone, Library, Electric Light throughout. Private Bathrooms. Resident Physician. Trained Nurses. Massage, Electrical Treatment, Occupation, Recreation. Terms from Two Guineas per week. Apply to MEDICAL SUPERINTENDENT.

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A PRIVATE HOSPITAL [illegible] Private Suites of Rooms. Lawn Tennis, Croquet, Golf, Boating, Fishing, Riding, Motoring, Billiards, Dancing, Wireless, Gramophone, Library, Electric Light throughout. Private Bathrooms. Resident Physician. Trained Nurses. Massage, Electrical Treatment, Occupation, Recreation. Terms from Two Guineas per week. Apply to MEDICAL SUPERINTENDENT, Bailbrook House, Bath.

FENSTANTON,

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[illegible] HILL [illegible]

A Private HOME [illegible] Certified and Voluntary Patients received. Private Suites of Rooms. Lawn Tennis, Croquet, Golf, Boating, Fishing, Riding, Motoring, Billiards, Dancing, Wireless, Gramophone, Library, Electric Light throughout. Private Bathrooms. Resident Physician. Trained Nurses. Massage, Electrical Treatment, Occupation, Recreation. Terms from Two Guineas per week. Apply to MEDICAL SUPERINTENDENT, Fenstanton, Christchurch Road, [illegible] Hill.

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REDUCTION OF FEES

In view of the present economic position, the inclusive fees at Ruthin Castle, formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance, all scientific investigations that may be needed, such as analyses, bacteriological cultures the ordinary x ray examinations and electrocardiograph readings, all treatment that may be prescribed such as special diets insulin, artificial sunlight, electrical treatment, baths, massage, nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x ray examination, or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches, that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

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BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg Tel Address Bethlem Beckenham *Telephone* *Springpark 1180—1181*

Station Eden Park (Southern Railway)

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This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm grounds
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With a view to early treatment voluntary or uncertified patients are admitted
Patients who can contribute 3 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise The Committee will also consider applications for admission at lower rates and in certain cases will be prepared to admit patients free of charge
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this Unit is found the X ray and Dental Departments and the Bio Chemical Pathological and Psychological Laboratories
Furthermore provision is made for Electro Therapy and Hydro Therapy to be carried out in all their forms
In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms
For forms and further particulars apply to the Physician Superintendent at the Hospital.

NORTHUMBERLAND HOUSE,

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Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts
Six acres of ground highly situated facing Finsbury Park
Private Suites Voluntary Patients and Temporary Patients received without certification
Convalescent Home Kearsney Court, Dover For further particulars, apply to the Medical Superintendent

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Telegrams Alleviated, London" Telephone Rodney 4741-4742

The above House which was established in 1926 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover, to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the y

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams PSYCHOLIA LONDON
FOR THE TREATMENT OF MENTAL DISORDERS
Telephone RODNEY 4731—4732

Also completely detached Villas for mild cases, with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts, Bowls Croquet Squash Racquets, and all indoor amusements including Wireless and other Concerts Occupational Therapy Physical Drill and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory, Dental Surgery, and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers, also resident and visiting Consultants An illustrated Prospectus may be obtained upon application to the Secretary

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THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH,

standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury Telephone 51.

TOR-NA-DEE SANATORIUM

MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson M D F R S E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J M JOHNSTON M B D P H (Cantab)

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK

MONTANA HALL, Montana, Switzerland.

Built 1929-1930 Opened October 1930.

For the Treatment of Tuberculosis (all forms) Diseases of the Chest Artificial Pneumothorax Surgical Treatment Medical Supervision and Artificial Sunlight

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

SPECIALLY REDUCED INCLUSIVE TERMS

For all particulars kindly write the Physician Medical Superintendent HILARY ROCHE, M D (Manch.) M R C P (Edin.) T Member Dental Board (Wales)

VALE OF CLWYD SANATORIUM

This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES. It is situated in the midst of a large area of park land at an height of 900 feet above sea level on the south west slope of mountains rising to over 1,800 feet which protect it from north and east winds and provide many miles of graduated walks with magnificent views. Average rainfall 29.57 per annum. Full day and night nursing staff. X ray plant. Every facility for Artificial Pneumothorax and for operations on the chest. Electric lighting. Central heating. Home farm. Clean milk from T T Herd. For particulars apply to Medical Superintendent H Morriston Davies M D M Ch Cantab F R C S Llanbedr Hall Ruthin N Wales

PENDYFFRYN HALL SANATORIUM

PENMAENMAWR

Established 1900 for the treatment of Tuberculosis. Miles of carefully graduated walks through pine-clad hills with sea and mountain views. Modern treatment including SANOCRYSIN ARTIFICIAL PNEUMOTHORAX etc. X ray plant electric light central heating wireless. Special milk supply from tuberculin tested herd. Full day and night nursing staff. On L M S Main Line to Holyhead 2½ hours from London. Resident Physicians Dennison Pickering M D (Cantab) J A Hennessey, M B Ch B. Matron Miss S A Eddy, S R N. Late Sister in Charge Royal Hospital Arrowe Sheffield.

For particulars apply to the Secretary, Pendyffryn Hall Penmaenmawr N Wales. (Phone 20)



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THE GRAMPIAN SANATORIUM.

Situated in the upper Spey valley and three miles from Kingussie. One of the best equipped institutions in Britain. The Swiss type of building. Free open air and dry mountain air climate. Well heated Sanatorium specially built with Open air Treatment of Tuberculosis in mind. Opened in 1900. Extensive grounds 840 feet above sea level. Electric lift throughout. Private rooms for patients. Central heating. Full equipment X ray Plant. All forms of treatment available including Artificial Pneumothorax and Ultra Violet Rays for surgical cases of Tuberculosis. Terms £3 3s 6d to £5 5s per week inclusive. No extras.

Medical Superintendent FELIX SAVY M D. For particulars apply to the Secretary.

THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925. On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and allied forms of Tuberculosis. Aspect S S W standing 700 feet and 800 feet above sea level. Pure bracing air. Special Treatment by artificial Pneumothorax (X ray controlled) Tuberculins Medicated Inhalations by means of the Apneu Inhalation Installation and Ultra Violet Rays is available when necessary without extra charge. X ray plant. Electric light. Radiators for hot and cold baths and Wireless in all rooms.

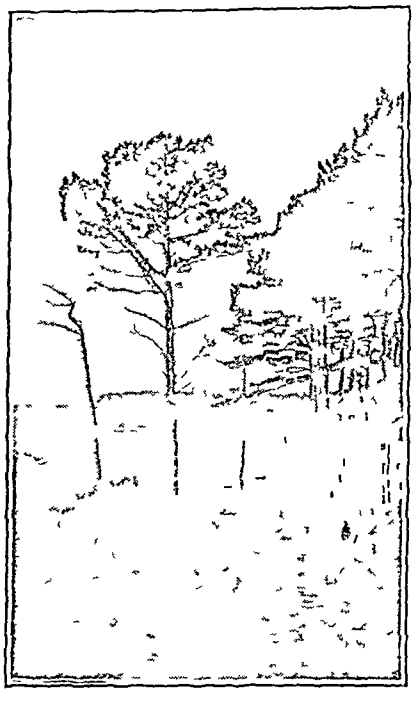
Physicians in charge GEOFFREY A HOBSON M D R A M B T Cantab and MARGARET A HARRISON M B B S Lond.

Apply The Secretary The Cotswold Sanatorium Cheltenham Glos Telephone Cheltenham 1 Telegrams "HOFFMAN CHELTENHAM"

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750 FEET ABOVE SEA-LEVEL

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MATLOCK

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The next Course will start on February 1st 1932 Instruction in Anatomy is given by Professor F WEALLS M B C M and the classes in Physiology are under the joint direction of Professor SAMSON WRIGHT Professor I C DODDS and Dr J H WOODGER This section of the Course includes General Physiology, Biochemistry and Histology
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Conducted by the Honorary Staff of the Hospital together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospital Lectures and Demonstrations every Tuesday and Thursday at 3 p m from October to March and four times weekly during May Clinics daily at 2 p m and 6 p m Saturdays 2 p m only Pathological Laboratory for Instruction or Research Work
For further particulars fees etc apply to J E M WIGLEY M B Dean

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A PUBLIC SCHOOL FOR BOYS
Boys are regularly prepared for the First A [illegible]sity Scholarships in C [illegible]red for the teaching o [illegible]any and Zoology containing [illegible]even laboratories two lecture rooms science library store rooms etc opened in September 1925
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The following Courses will begin in JANUARY: Dermatology (Part I); Evening Lectures on Endocrinology (Part II); Lectures; Medicine (Part II); £11 11s.

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Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post Graduates may enrol for any time from period from 1 week to 3 months—Special facilities for Study Leave and for those wishing to take a course preparatory to the Grant aided Scheme for Post Graduate Study by Insurance Practitioners—Lectures by the Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals.

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6.

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Preparation for the M.B. (Lond.) FINAL (SECOND PART) AND ALL MEDICAL EXAMINATIONS

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Short courses arranged on speech classes and lectures.

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An intensive Course in

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especially in its relation to Malignant Disease

will be held at the above School, commencing Monday, February 29th, 1932

The Course will be repeated on subsequent dates

Copy of the syllabus and full particulars may be obtained on application

In addition, periods of hospital practice can also be arranged

The Dean will be glad to see prospective entrants by appointment.

THOS. A. GARNER, Secretary

University of London

A Course of Six Lectures on *The Physiology of Reproduction* will be given by Dr. A. S. PARKES at UNIVERSITY COLLEGE, LONDON (Gower Street, W.C.1) on FRIDAYS, JANUARY 15th, 22nd, and 29th, FEBRUARY 5th, 12th, and 19th, at 5 p.m.

A Course of Ten Lectures on *Comparative Physiology* will be given by Mr. G. P. WELLS at UNIVERSITY COLLEGE, LONDON (Gower Street, W.C.1) on FRIDAYS, JANUARY 15th, 22nd, 29th, FEBRUARY 5th, 12th, 19th, 26th, MARCH 4th, 11th, and 18th, at 5 p.m.

Admission free, without ticket.

S. J. WORSLEY,
Academic Registrar.

Advanced Medicine Course

A Course in Clinical Medicine, Pathology, Morbid Histology, and Biochemistry, suitable for M.D. and M.R.C.P. examinations, will be given for six weeks in February and March.

Further particulars can be obtained on application to the Dean, King's College Hospital Medical School, Denmark Hill, S.E.5.

Sudan Government

WELLCOME TROPICAL RESEARCH LABORATORIES, KHARTOUM

Applications are invited for the post of BACTERIOLOGIST at an initial rate of pay £E.600 or £E.720 per annum (according to age and qualifications), with five or six biennial increases to £E.1,080, and thence after three years to £E.1,200. These rates of pay as well as the conditions of service are subject to Government rules and regulations from time to time in force. (£E.1 = £1 0s. 6d.)

Applicants must be unmarried and will be expected to take up their duties immediately.

Applications stating age, degrees, experience (with special reference to Pathology), and copies of testimonials should be sent to the Director, Wellcome Tropical Research Laboratories, Khartoum, Sudan.

Further particulars regarding this post may be obtained on application to the Controller, Sudan Government, London Office, Wellington House, Buckingham Gate, London, S.W.1.

The Board of Control (Lunacy and Mental Deficiency)

invite applications for the post of MEDICAL SUPERINTENDENT (male) of RAMPTON STATE INSTITUTION FOR MENTAL DEFECTIVES, near RETFORD, NOTTS. Salary, £1,000, rising by annual increments of £50 to £1,200, together with cost of living bonus which at present is £146 9s. on salary of £1,000. The emolument of a house or rent free is also allowed.

Candidates must be registered Medical Practitioners, must have had experience of the Institutional care and treatment of patients suffering from mental defect or mental disorder, and must conform to the Civil Service nationality rule. Post is pensionable under Civil Service Superannuation Act.

Forms of application with further particulars can be obtained from the Secretary, Board of Control, Caxton House West, Tothill Street, London, S.W.1, and must be completed and returned to him not later than Jan. 30th, 1932.

University of the Witwatersrand, JOHANNESBURG

SENIOR LECTURER IN ANATOMY

Applications are invited for the above post from medically qualified candidates. The teaching embraces Histology in addition to Gross Anatomy.

The salary at present offered is £516 per annum rising by annual increments of approximately £26 to £726 per annum, but these rates may be affected by the financial position of the country, and candidates who have applied will be informed of any reduction which may take place.

Participation in the University Teachers Provident Scheme is compulsory. This scheme provides for a contribution by the members of 6 per cent. of their basic salary (£450—£25—£650), the fund contributing the same amount. A higher commencing rate of salary may be approved in the case of a candidate possessing special qualifications or experience.

An amount of £60 will be allowed for travelling expenses, and half salary paid from the date of embarkation to the date of arrival in *Johannesburg*.

The appointment, which is a full time one, is subject to all the conditions and rules now in force, and duty is to be assumed as soon as possible after appointment, which will be communicated by cable.

Further particulars as to the conditions of service may be obtained from the Secretary, Office of the High Commissioner for the Union of South Africa, South Africa House, 73 Strand, London, W.C.2, from whom forms stating the particulars required may be obtained.

Applications in duplicate, accompanied by testimonials, should reach the High Commissioner's Office not later than Jan. 15th, 1932.

Surrey County Council

COUNTY SANATORIUM, MILFORD, SURREY (300 Beds)

Applications are invited from qualified and registered Medical Practitioners for the post of THIRD ASSISTANT RESIDENT MEDICAL OFFICER at this Sanatorium.

Candidates should be under 35 years of age and have held resident hospital appointments. Sanatorium experience is not essential.

The appointment is subject to the provisions of the Local Government and Other Officers' Superannuation Act 1922, and the successful candidate will be required to pass a medical examination. Termination of engagement will be at one month's notice on either side.

The salary is £350 per annum, together with board, lodging, and laundry. These emoluments are valued at £100 per annum for purposes of Superannuation.

This salary will be subjected to an emergency abatement of £15 per annum.

The appointment will be made in the first instance for a period of six months, renewable at the end of that period for a further six months.

The successful candidate will be required to devote his whole time to the services of the County Council.

Forms of application may be obtained from the County Medical Officer of Health, County Hall, Kingston-upon-Thames, to whom completed application forms must be returned, together with copies of three recent testimonials, not later than Saturday, January 9th, 1932.

DUDLEY AUKLAND,
Clerk to the Surrey County Council.

December 19th, 1931.

Chesterfield and North Derbyshire Royal Hospital

(220 Surgical and Medical Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post. There are five Residents.

Salary at the rate of £150 per annum with board, apartments, and laundry.

Applications stating age, together with copies of three recent testimonials, should be sent to the undersigned.

G. SUNNUCK,
Supt. & Secretary.

December 29th, 1931.

David Lewis Northern Hospital, LIVERPOOL

Applications are invited for the under-mentioned posts:—

FOR [illegible]
TW[illegible]

The [illegible] tenable for six months.

The s[illegible] to each post is £100 per annum together with board and residence.

Applications with [illegible] be sent to the [illegible]

T[illegible]

December [illegible]

City of Birmingham

SELLY OAK HOSPITAL

RADIOGRAPHER

Applications are invited from fully qualified Radiographers for the above whole-time appointment.

The scale of salary will be £200 per annum rising, subject to satisfactory service, by annual increments of £12 10s. to a maximum of £250 per annum.

The salary will be subject to the scale of voluntary Abatement accepted by the Council for a period of twelve months ending December 31st, 1932.

The appointment will be subject to the Birmingham Corporation's Superannuation Scheme and to the candidate passing a medical examination, and will be subject to one month's notice on either side.

Further particulars of the appointment may be obtained from the Medical Superintendent, R. P. S. KITMAN, Esq., M.B., Ch.B., F.R.C.S. (Eng.), L.D.(Edin.), to whom applications stating age, experience, and qualifications, accompanied by copies of recent testimonials and endorsed "Radiographer," should be forwarded by not later than January 13th, 1932.

I. H. C. WHITSHIRE,
Town Clerk.

The Council House,
Birmingham.

City of Birmingham

PUBLIC ASSISTANCE DEPARTMENT

DISTRICT MEDICAL OFFICER FOR THE DISTRICT OF PERRY BARR

Applications are invited for the above post from registered Medical Practitioners who must reside in the district and adjacent to the King's Standing Area. A map of the district can be seen at the Public Assistance Office, 102 Edmund Street, Birmingham.

The appointment is not a whole-time office.

The remuneration will be at the rate of £100 per annum. Drugs, dressings, and appliances will be supplied. No allowance for expenses will be made.

The duties of the District Medical Officer are prescribed by Orders and Regulations of the Ministry of Health, particulars of which can be obtained at the above address.

Application, stating age, qualifications and experience, accompanied by copies of three recent testimonials, should be forwarded so as to reach me not later than Wednesday, January 13th, 1932.

Canvassing in any form, oral or written, directly or indirectly, will be regarded as a disqualification, and applications and testimonials or copies thereof may be sent to the undersigned, but are not to be sent to members of the Committee or of the Council.

I. H. C. WHITSHIRE,
Town Clerk.

Council House,
Birmingham.
December 22nd, 1931.

County Borough of Sunderland

ASSISTANT MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE

Applications are invited from fully qualified men and women for the position of Assistant Medical Officer for Maternity and Child Welfare.

Applicants must be registered Medical Practitioners, have had at least three years' experience in Public Health work since qualification, and be able to show general experience in ultra-violet radiation treatment in diseases of children and in ante-natal work.

The possession of the D.P.H. will be an additional qualification.

Salary £550 per annum, advancing by annual increments of £25 to £700 per annum.

The appointment is subject to the provisions of the Local Government and Other Officers' Superannuation Act 1922, and to a medical test as required by the Council for the purpose of that Act.

Application, stating age, qualifications and experience in Maternity and Child Welfare work, together with not more than three recent testimonials, should be delivered to the undersigned not later than Saturday, January 16th, endorsed "Medical Officer."

Canvassing directly or indirectly, until after the first selection of candidates, will disqualify.

H. CRAVEN,
Town Clerk.

Town Hall,
Sunderland.
December 8th, 1931.

Royal Surrey County Hospital, GUILDFORD (182 Beds)

Wanted January 14th, HOUSE SURGEON. Salary £150 per annum with board, residence and laundry.

[illegible] essential particulars [illegible]ials to be sent to the [illegible] as early as possible.

ROYAL NAVAL MEDICAL SERVICE.

VACANCIES EXIST FOR MEDICAL OFFICERS IN THE ROYAL NAVY.

Candidates will be entered as Short Service Medical Officers and will be considered for transfer to the Permanent Service after 6 months service They must be registered under the Medical Acts and be under 30 years of age on date of entry

Medical Officers, R.N. are liable to serve in Naval Hospitals or Ships in any part of the world

Excellent opportunities exist for Clinical professional work both Medical and Surgical as well as for study and practice of Hygiene, Pathology Ophthalmology and other specialist branches.

Adequate provision is made for Post-Graduate Study.

OUTFIT ALLOWANCE of £50 is paid on joining

PAY —Pay from approximately £330 to £2070 a year according to length of service

ALLOWANCES —When in charge of Hospitals and Sick Quarters 10/- and 5/- a day

60 Specialists Allowances of 5/- a day

Flag Allowances 5/- and 2/- 6d a day

Provisional Allowance Lodging Allowance etc

PROMOTION —To Surgeon Lieutenant-Commander after 6 years service to Surgeon Commander after a total of 12 years service Promotion to Surgeon Captain Surgeon Rear-Admiral and Surgeon Vice-Admiral is by selection

Ante-date of seniority on account of civil hospital appointments and accelerated promotion can be gained

RETIREMENT —Gratuities are paid as follows —

Short Service Officers after 3 years service	£200
Permanent Officers after 4 years service	£300
" " " 6 years service	£450
" " " 12 years service	£1350
" " " 16 years service	£2250

Rates of Pension range from approximately £75 a year for all entered at early ages with 25 years service to £1000 a year for a Surgeon Rear-Admiral

Copies of the Regulations and Particulars as to Conditions of Service and Emoluments may be obtained on written or personal application to the Medical Director-General of the Navy, Queen Anne's Chambers, Tothill Street, London, S.W.1

Corporation of Glasgow

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF PATHOLOGIST

Applications are invited from duly qualified Medical Practitioners for the post of Pathologist to the Corporation General Hospitals. The salary attaching to the appointment is £800 per annum rising by biennial increments of £40 to a maximum of £1,000 per annum and the person appointed will be required to devote his whole time to the duties of the office and to act under the direction and control of the Medical Officer of Health.

The successful candidate will also be required to undergo medical examination and if under 45 years of age must join the Corporation Superannuation Scheme in respect of which deductions are made from salary at the rate of five per cent. per annum. The appointment will also be during the pleasure of the Corporation and subject to one month's notice on either side.

The appointment is also subject to the approval of the University Court as the person appointed by the Corporation will also be appointed an Honorary Lecturer to the University.

Applications stating age and qualifications and giving full details of previous experience together with copies of not more than three recent testimonials to be sent to the undersigned not later than Monday, February 1st, in envelopes endorsed "Application for appointment as Pathologist."

CITY CHAMBERS, GLASGOW. D. STENHOUSE, Town Clerk.
December 26th, 1931.

County Borough of Halifax

HEALTH COMMITTEE

ST. LUKE'S HOSPITAL

APPOINTMENT OF MEDICAL SUPERINTENDENT

Applications are invited from fully qualified registered Medical Practitioners for the appointment of Medical Superintendent at St. Luke's Hospital.

The Hospital has accommodation for 448 patients, mainly medical, surgical and maternity cases.

The salary will be £800 per annum, rising by biennial increments of £50 to a maximum of £950, with residence and emoluments valued at £150 per annum.

Experience in administrative hospital work is essential.

The person appointed will be required to devote the whole of his time to the duties of his office, and will not be allowed to engage in private practice.

Forms of application and further particulars of the duties and conditions of the appointment may be obtained from the undersigned.

Applications on the prescribed form accompanied by copies of three recent testimonials must be sent to me endorsed "Medical Superintendent," not later than January 12th, 1932.

Canvassing, either directly or indirectly, will disqualify.

Town Hall, Halifax. PERCY SAUNDERS, Town Clerk.
December 17th, 1931.

Norfolk and Norwich Hospital, NORWICH

Applications are invited for the following posts:

HOUSE SURGEON. Preference will be given to a candidate who has held a previous Hospital appointment.

CASUALTY OFFICER AND HOUSE SURGEON (with charge of 25 beds).

Salary for both posts £120 per annum with board, residence and laundry.

Candidates (male) who must possess registered qualifications, should forward applications, stating age, nationality, etc., together with copies of testimonials to the undersigned not later than first post on Tuesday, January 12th, 1932.

FRANK INCH, House Governor & Secretary.
January 2nd, 1932.

Leicester Royal Infirmary
(472 Beds)

HOUSE PHYSICIAN

Applications are invited for a House Physiciancy. Salary at the rate of £125 per annum. Applicants preferred who have held a resident Hospital post or had similar experience of Hospital work. The period of appointment will be to April 1st, when all the resident appointments are due to expire, but consideration will be given to an extension of the appointment for a further period of six months on approved service.

Early application to the House Governor & Secretary are desired.

December 21st, 1931.

City of Manchester

PUBLIC HEALTH DEPARTMENT

WITHINGTON HOSPITAL AND INSTITUTION

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer at the Withington Hospital (1,290 beds) and Institution (1,200 beds), Nell Lane, West Didsbury, Manchester.

Every applicant must be a registered medical practitioner and unmarried.

Preference will be given to applicants with previous Hospital experience.

The Hospital is a recognised Training School for Nurses and is equipped with all modern hospital requirements.

Salary £267 10s. per annum with board, residence and laundry, in addition, subject to the terms and conditions of the Manchester Corporation Grading Scheme, No. [illegible].

The appointment will be made in the first instance for a period of six months. The successful candidate however will be eligible for reappointment for a further period of six months at the end of that period.

Every application stating fully the training, qualifications and experience of the candidate and his age, with copies of three recent testimonials and endorsed on the envelope "Assistant Medical Officer, Withington Hospital," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, only, and not to members of the Committee or Council, and must be received by him not later than Thursday, January 7th, 1932.

The candidate appointed will be required to commence duty as soon as possible after January 17th, 1932, to devote the whole of his time to the duties of the position, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

J. L. WARBRECK HOWELL, Town Clerk.
Town Hall, Manchester.
December 28th, 1931.

County Borough of Southend-on-Sea

SOUTHEND MUNICIPAL HOSPITAL

JUNIOR ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the appointment of Junior Assistant Medical Officer at the Southend Municipal Hospital, Rochford, Essex.

Salary at the rate of £275 per annum with full residential emoluments, the salary and value of the emoluments being subject to deductions under the Local Government and Other Officers' Superannuation Act, 1922.

The appointment is for 12 months and is subject to one month's notice on either side.

Preference will be given to applicants with resident Hospital experience.

Further information relating to the appointment may be obtained from the Medical Superintendent, Southend Municipal Hospital, Rochford, Essex, to whom applications with full particulars and copies of three recent testimonials should be sent not later than Saturday, January 16th, 1932.

H. J. WOPWOOD, Town Clerk.
Town Clerk's Office, Southend-on-Sea. December, 1931.

Seamen's Hospital Society

The Committee of Management invite applications for the post of HONORARY [illegible] DREADNOUGHT [illegible] elected candidate will have care of in and out patients and will be appointed for twelve months but will be eligible for reappointment.

Candidates must be Doctors of Medicine of a University in the United Kingdom or Ireland or Fellows or Members of the Royal College of Physicians of London.

Applications to be sent in on or before January 22nd, 1932, to the undersigned from whom further particulars can be obtained.

By Order,
R. E. V. BAX, Secretary.
Greenwich, December 28th, 1931.

Royal South Hants and SOUTHAMPTON HOSPITAL, SOUTHAMPTON

CASUALTY OFFICER (male) required immediately, six months' appointment dating from January 1st. Salary £150 per annum with board, lodging and laundry. Applications accompanied by not more than three testimonials should be sent to the undersigned at once.

HY. TRUSSON, Secretary.

County Council of Middlesex

NORTH MIDDLESEX COUNTY HOSPITAL, London, N.18

RESIDENT ASSISTANT MEDICAL OFFICER

The County Council invite applications for the position of Resident Assistant Medical Officer at the North Middlesex County Hospital, Edmonton.

Candidates must be registered Medical Practitioners, male, unmarried, and must have held resident appointments in a General Hospital. The officer appointed will work under the control of the Medical Superintendent and will devote his whole time to his official duties.

Salary is at the rate of £400 per annum, rising by annual increments of £50 to £600 per annum together with board, lodging and laundry, subject to temporary abatement in view of the National situation as follows: First £150 per annum, no abatement; next £100 per annum, 2½ per cent. abatement; next £500 per annum, 5 per cent. abatement.

The successful candidate will be required to pass such medical examination as the County Council may direct, and unless subject to the Poor Law Officers' Superannuation Act, 1896, to contribute to the County Council's Superannuation Fund. The appointment will be held during the pleasure of the Council and subject to three months' notice on either side.

Applications stating (1) age, (2) qualifications and (3) experience, together with copies of not more than three recent testimonials, must be received by the undersigned not later than January 16th, 1932.

No special application forms are provided. Envelopes must be endorsed "Resident Assistant Medical Officer."

Canvassing, directly or indirectly, will be a disqualification.

N.B.—North Middlesex County Hospital is a modern General Hospital with accommodation for over 900 cases, chiefly acute. 230 beds in the adjoining Edmonton Institution also are under the care of the medical staff of the Hospital. In addition the Hospital possesses a Pathological Laboratory and X-ray Room, Deep therapy, Radium, Electro-therapeutic, Massage, Ear, Nose and Throat, Ophthalmic and Dental Departments.

ERNEST S. W. HART,
Clerk of the County Council.
Middlesex Guildhall, Westminster, S.W.1.
December 24th, 1931.

London County Council

Applications are invited for appointment to position of RESIDENT MEDICAL SUPERINTENDENT for duty at PRINCESS MAY'S HOSPITAL FOR CHILDREN, MARGATE (271 beds for surgical tuberculosis in children). Person appointed will be under direction of Medical Officer of Health and must assist at other establishments under control of Council if required. Salary £950 by £50 to £1,200 a year. Officer appointed may be required to act also as Medical Officer of Wanstead House Residential Open Air School, Margate. £25 a year extra is paid for these duties. Unfurnished house free of local rates, etc., will be provided, valued provisionally at £100 a year.

Candidates must be duly qualified Medical Practitioners of at least five years' standing and have held appointment of House Physician or House Surgeon in a public General Hospital and have experience of hospital administration.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Clerk of the Council, County Hall, S.E.1, must be returned by January 15th, 1932.

Canvassing disqualifies.

Royal Hampshire County HOSPITAL, WINCHESTER
(158 Beds)

HOUSE SURGEON (SECOND)

Applications are invited from fully qualified men for the above post to take up duties immediately. Six months' appointment. Salary £100 per annum with board, residence and laundry. Candidates who must be of British nationality to make application at once to the undersigned, enclosing copies of three testimonials.

HERBERT MASTEN, Secretary.

St. Mary's Hospital, W.2

POST OF ASSISTANT RADIOGRAPHER

Applications are invited from male candidates for the post of Assistant Radiographer. Commencing salary £3 10s. a week with lunch on and tea provided.

Apply immediately by letter to the Secretary, enclosing copies of testimonials (not exceeding three in number).

Further particulars of the appointment may be had on application.

W. PAPALS, Secretary.

APPOINTMENTS—Important Notice.

(a) British Islands

CONTRACT PRACTICE	CONTRACT PRACTICE	CONTRACT PRACTICE
		PUBLIC HEALTH

(b) Overseas

QUEENSLAND			

T H N B

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ASSISTANCIES

Wanted —Assistant (male), indoor with or without view Southern Coast Town Salary £300 Must be experienced in panel work and have knowledge of Skin diseases Principal is experienced Surgeon who wishes to develop that line Send fullest particulars — Address No 7708 B M A House Tavistock Square W C 1

Wanted — Assistant with view to Partnership later on in large mixed practice in S E Coast Resort H S single keen energetic Scot or Cambridge Graduate preferred Further particulars on application Interview Usual bond — Address No 7694 B M A House Tavistock Square W C 1

Wanted — Assistant for three months (Chadwell Heath district) with prospect of permanent engagement ex H S Scotsman preferred £300 (indoor) References essential —Address stating age and experience No 107 B M A House Tavistock Sq W C 1

Wanted, Assistantship, by Scot act 33 M B Ch B (Edin 1924) married Ex H P 6 year G I keen and well received References Own car Free as required —Address No 128 B M A House Tavistock Square W C 1

Wanted — Assistantship by South University Graduate M D married aged 27 Experienced hospital and private practice Own car Free January 7th —No 105 B M A House Tavistock Sq W C 1

Wanted — Assistantship by M B B Ch single male aged 30 ex H S and H P experienced in G I Can drive car Will travel —Address No 207 B M A House Tavistock Square W C 1

Wanted immediately — Indoor ASSISTANT (lady) in Country Practice Shropshire Able to drive car Work light very little night work Salary £200 per annum —Address No 112 B M A House Tavistock Square W C 1

Wanted immediately — Indoor ASSISTANT for private and panel practice with appointments Lancashire male Protestant £350 per annum —Full particulars to No 117 B M A House Tavistock Square W C 1

Wanted immediately — Indoor and Outdoor ASSISTANTS for Town and Country practice with and without view Good salaries State full particulars — BRITISH MEDICAL BUREAU 33 Cross Street Manchester

Wanted — Indoor Assistant, Newport Mon Private and Panel Practice Chauffeur and car kept Salary £300 per annum —Address No 124 B M A House Tavistock Square W C 1

Wanted — Assistantship by woman Scot F R C P 1926 experienced in general practice Free now —Address No 109 B M A House Tavistock Square W C 1

Wanted — Indoor Assistant, (male) Mixed Practice Suit recently qualified man £250 Usual bond —Apply M R ELLIS Union Street Bristol

Wanted — Outdoor Assistant, single in Country Town Practice North Wales Work light Able to drive car —Address No 7702 B M A House Tavistock Sq W C 1

Assistantship by M B, B S, seven years residential hospital experience capable of doing major surgery special experience children's diseases and orthopaedics would accept part time or week end work —No 119 B M A House Tavistock Sq W C 1

Evangelical Christian, aged 31, married seeks ASSISTANTSHIP with view to PARTNERSHIP with like minded Practitioner Experience H P H S and G P Free now — Address No 133 B M A House Tavistock Square W C 1

Outdoor Assistant, male, required in mixed panel Practice in London suburb Salary £300—£350 according to experience Living accommodation over Branch surgery with attendance provided — Address giving essential particulars to No 123 B M A House Tavistock Square W C 1

Part, or nearly whole-time, ASSISTANCE indoor London Area offered by experienced well received M A M B Ch B age 32 taking Post graduate course Own car Moderate remuneration Available Feb 14th— No 113 B M A House Tavistock Sq W C 1

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After Office Hours Epsom 9142

Wanted, position as Locum or ASSISTANT by experienced man full or part time Firms moderate Free now— Address No 120 B M A House Tavistock Square W C 1

PARTNERSHIPS

Wanted immediately, Partner for old established semi rural Practice in Sussex Applicant must be Graduate of Trinity Dublin Oxford Cambridge or London with some experience of G I Share of about £1 000 at first 2 years purchase cash House on rental to be taken over Preliminary Assistantship at good salary —Address No 137 B M A House Tavistock Square W C 1

Wanted — Partnership or ASSISTANTSHIP with view to medium sized Town on or near N F Coast Income about £1 000 Panel preferred Capital available Advertiser free Jan 10 yrs G P exp —No 106 B M A House Tavistock Sq W C 1

Midlands —Good opportunity for keen and capable Doctor to purchase ONE HALF SHARE IN PRACTICE in country town with pleasant surroundings Receipts over £4 000 per annum for past three years (audited) Panel over 2 400 Good house with garden for sale Price—Practice—14 years purchase —No 149 B M A House Tavistock Sq W C 1

Partner required for very large Practice in London E Panel of 4 000 Income £4 000—£5 000 p a Half share for disposal at 2 years purchase Excellent opportunity for right man —Address No 101 B M A House Tavistock Square W C 1

Woman Doctor requires Partner in good class general Practice in attractive residential seaside town Income £1 200 ONE THIRD SHARE for sale Unusual opportunity to develop Please give full particulars when applying —No 129 B M A House Tavistock Sq W C 1

Yorkshire —Semi-urban district, not industrially depressed — for Sale HALF SHARE in [illegible] established class PRACTICE [illegible] per annum and more [illegible] years purchase according to period of introduction Convenient house with garage Price £900— No 102 B M A House Tavistock Sq W C 1

MEDICAL POSTS DISPENSERS etc

Wanted — Lady Dispenser for S E London Practice to live in State experience and salary and enclose photo— Address No 210 B M A House Tavistock Square W C 1

A Lady Dispenser-Bookkeeper supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examination — Write wire or *phone* (*Park 0969*) Secretary 7 Westbourne Park Road W 2

Dispensing —Part-time Employment wanted in W or S W London district by lady lately in Hospital service Full certificate Reasonable remuneration —Address No 126 B M A House Tavistock Sq W C 1

Doctor's Daughter, well educated requires post as SECRETARY or SECRETARY RECEPTIONIST to Medical Man any district — Miss MCCINTOCK The Grove House Church Stretton Shropshire

Doctors requiring qualified Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 EXPERT LADY SUPPLY 15 Lindsay House 171 Shaftesbury Avenue London W C 2

Doctor seeks Engagement, unqualified (without midwifery) experienced panel private etc maintenance and little salary in or outdoor Motor driver Address No 130 B M A House Tavistock Square W C 1

Highly qualified married young man (Indian) with a wide all round experience of private and panel practice in London and the provinces is free now for ENGAGEMENT pref with view to PARTNERSHIP or SUCCESSION Capital available —Address No 139 B M A House Tavistock Square W C 1

Lady Dispenser-Bookkeeper (23) requires POST any district Fully qualified and experienced in both private and panel practices Cheerful and willing Excellent testimonials Disengaged now —Address No 204 B M A House Tavistock Square W C 1

Lady seeks Post, duly or otherwise with professional lady or gentleman W or S W London preferred Loyal and reliable worker slight nursing experience Wes etc domiciated —Address No 150 B M A House Tavistock Square W C 1

Literary — Position in London offered to recent Nurse or Fifth Year Student with literary ability State age medical training and give particulars of literary work —Address No 103 B M A House Tavistock Square W C 1

M B, Ch B, M R C S, L R C P ex H S H S R M O Locum Tenens good Anaesthetist Xray work married excellent tests duties salaried POST or ASSISTANTSHIP at home or pref abroad— No 131 B M A House Tavistock Sq W C 1

Nurse-Dispenser, qualified give night light treatment do housekeeping seeks POST with Medical Man Good reference —Address No 132 B M A House Tavistock Square W C 1

Nurse-Receptionist, young, state registered nurse matric S U I A C I desires POST Doctor or Surgeon London or Interview arranged —Address No 205 B M A House Tavistock Square W C 1

The Royal Army Medical Corps ASSOCIATION 85 Leicester Square S W 1 (Tel phone Victoria 2722) supplies qualified Dispensers Bookkeepers Laboratory Assistants Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dental Chair Orderlies Porters Caretakers etc without charge to prospective employers

Typewriting and Duplicating undertaken by Expert Testimonials Theses Legal Document Numerous letters of appreciation from Doctors —BEATRICE RANDOLPH (B) 341 Finchley Road N W 3 Phone Hampstead 6430 (any hour)

Woman Doctor (fully qualified) required for the Scottish Episcopal Church Mission Chanda Central Provinces India —For particulars apply to C W M A Secretary 15 Drumsheugh Gardens Edinburgh

PRACTICES

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County Borough of Sunderland

CLINICAL TUBERCULOSIS OFFICER

The Sunderland Council invite applications from duly qualified registered Medical Practitioners for the post of Clinical Tuberculosis Officer

Applicants should have held the appointment of Tuberculosis Officer with the approval of the Ministry of Health or subsequent to qualification should have had three years experience in the practice of their profession and have received a special training in the diagnosis and treatment of Tuberculosis including a practical knowledge of X-ray work and treatment by artificial Pneumothorax The possession of the D P H will be an additional qualification

The salary will be at the rate of £750 per annum advancing after three years satisfactory service to a maximum of £900 per annum

The person appointed will be required to devote his whole time to the duties of his office and work under the administrative control of the Medical Officer of Health

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to a medical test as required by the Council for the purpose of that Act

The appointment will be subject to determination by three months notice in writing on either side

Applications with copies of not less than three recent testimonials to be sent endorsed Tuberculosis Officer so as to reach me not later than Saturday January 16th 1932

Canvassing directly or indirectly until after the first selection of candidates will disqualify

Town Hall H CRAVEN
Sunderland Town Clerk
December 10th 1931

Urban District of Shipley

MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified gentlemen for the appointment of Medical Officer of Health of the Urban District subject to the provisions of the Public Health (Officers) Act 1921 and the Sanitary Officers Order 1926

The gentleman appointed will be required to perform all the duties imposed on a Medical Officer of Health to act as School Medical Officer Superintendent of the Maternity and Child Welfare Centre if required to act as Medical Superintendent of the Shipley and Bingley Joint Maternity Home and to carry out all such duties as the Council may with the consent (if necessary) of the Ministry of Health from time to time direct

He must reside in the district and devote all his time to the duties of the office and must not engage in private practice

The appointment will be subject to the approval of the Minister of Health and will also be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination

The salary to cover all the duties specified above will be £800 per annum with an addition of £40 per annum as car allowance

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials should reach the undersigned not later than January 12th endorsed Medical Officer

Canvassing either directly or indirectly will be a disqualification

Council Offices H BARNES
Shipley Clerk to the Council
January 1st 1932

Royal Northern Hospital,

Holloway N 7

Applications are invited for the post of HOUSE PHYSICIAN vacant on February 15th

T ...e months (six
mon ...d three months
as Salary at the
rate ...oard residence
and laundry

Applications with copies of testimonials should be sent by January 8th to the undersigned from whom forms of application and rules can be obtained

GILBERT G PANTER Secretary

Stroud General Hospital,

STROUD GLOS

HOUSE SURGEON required to commence duty on January 22nd 1932 Salary £150 per annum with board lodging and washing The appointment is tenable for six months but application may be made for an extension of the period Candidates must be registered according to the provisions of the Medical Act

Application stating age nationality etc to be sent with copies of three recent testimonials to be sent to the undersigned

C LORD SPENCER Secretary

The Victoria Hospital for

CHILDREN Tite Street Chelsea S W 3
(138 Beds)

The Committee of Management invite applications for the posts of

(a) HOUSE PHYSICIAN
(b) HOUSE SURGEON

both vacant February 1st The appointments are for six months Salaries at the rate of £100 per annum with board lodging and washing

(c) OUT PATIENT ANAESTHETIST To attend on Tuesday and Friday mornings A payment of 10/6 per attendance will be made

Candidates for these posts must attend the Hospital for the purpose of an interview at 4 30 p m on Friday January 15th (No travelling or other expenses will be paid)

Applications with copies of three recent testimonials should be sent to the Secretary not later than first post on Wednesday Jan 13th

By Order
D ST JOHN BAMFORD
Secretary

The Victoria Hospital for

CHILDREN Tite Street Chelsea S W 3
(138 Beds)

The Committee of Management invite applications for the post of HONORARY SURGICAL REGISTRAR Candidates are expected to call on members of the Honorary Surgical Staff The appointment is for one year renewable for a second year Applications, with copies of three recent testimonials should be sent to the Secretary not later than Saturday Jan 16th

By Order
D ST JOHN BAMFORD
Secretary

Derbyshire Royal Infirmary,

DERBY
(General Hospital—347 Beds)

Applications are invited for the post of HOUSE PHYSICIAN Candidates must be qualified and registered under the Medical Acts Salary will be £150 per annum with apartments board etc

Applications with copies of testimonials to be sent to the undersigned

WALTER BANKS
December 28th 1931 Supt & Secretary

East Ham Memorial Hospital,

Shrewsbury Road E 7 (100 Beds)

Applications are invited for the post of PHYSICIAN in charge of the SKIN DEPARTMENT which is about to be formed

Candidates must hold a University degree in Medicine and Surgery and be Fellows or Members of the Royal College of Physicians of London and engaged solely in dermatological practice

Applications should reach the undersigned on or before January 9th 1932

REGINALD PERRY Secretary

East Ham Memorial Hospital,

Shrewsbury Road E 7 (100 Beds)

Applications are invited for the post of HONORARY SURGEON to the ORTHOPAEDIC DEPARTMENT which is about to be formed Applicants must be Fellows of the Royal College of Surgeons of England and engaged solely in Orthopaedic Surgery

Applications should reach the undersigned on or before January 9th 1932

REGINALD PERRY Secretary

Leigh Infirmary, Lancashire

Wanted a RESIDENT HOUSE SURGEON male single for Hospital of 82 beds Salary £175 with rooms full attendance and board The position is vacant on February 1st 1932 for six months with Must be good Anaesthetist Ear and Throat work desirable

Applications to be addressed to Mr J A SMITH Secretary 3 Silk Street Leigh Lancs

Westminster Hospital,

Broad Sanctuary S W 1

... for a HOUSE ...nt is for three ... The salary ... of £100 per annum Applications should be submitted to the undersigned not later than Saturday January 9th 1932

C M POWER Secretary

The Royal Liverpool Children's Hospital

APPOINTMENT OF HONORARY ASSISTANT SURGEON

The Council invite applications for the position of Honorary Assistant Surgeon to the Hospital vacant on February 1st 1932 Applications (with copies of testimonials) must be in writing and addressed to the Chairman Royal Liverpool Children's Hospital Myrtle Street Liverpool by Thursday January 14th 1932 A candidate may send copies of his application and testimonials to members of the Council but personal canvassing of any member will be a disqualification

R A CAMENISCH Chairman

The Royal Hospital,

WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required January 12th The Hospital contains 240 beds includes the usual special departments and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice

Candidates must be registered under the Medical Acts and unmarried

The appointment is for six months Salary at the rate of £100 per annum board furnished rooms and laundry provided

Applications with copies of testimonials to be forwarded to the undersigned forthwith

Wolverhampton W H HARLER
Dec 29th 1931 House Governor

Hospital for Consumption and

DISEASES OF THE CHEST
Brompton S W 3

The Committee of Management invite applications for the post of HOUSE PHYSICIAN (for which there are three vacancies) The duties include work in the Out patient Department as well as in the Wards The appointment is for six months commencing on February 1st with an honorarium of £50

Applications with copies of testimonials must reach the undersigned not later than Saturday January 16th

Brompton FREDERICK WOOD
December 1931 Secretary

Royal Devon & Exeter Hospital,

EXETER (225 Beds)

Appointment of (a) HOUSE PHYSICIAN (b) HOUSE SURGEON

Applications invited from qualified and registered candidates for each of the above appointments

Engagement for six months candidate being eligible for subsequent appointment.

Salary at the rate of £150 per annum with board residence and laundry

Applications with copies of testimonials should be sent to the undersigned on or before January 4th 1932

S S COLE
Secretary & Manager
December 18th 1931

Bury Infirmary, Lancashire

Applications are invited for the post of THIRD HOUSE SURGEON who must have both Medical and Surgical qualifications The appointment is for six months at a salary at the rate of £150 per annum with board residence and laundry The successful applicant will be required to commence duties early in January

Applications stating age qualification and nationality with copies of three recent testimonials to be sent to the undersigned not later than January 9th

Particulars of duties may be had on application

ALEX W MAITLAND
Honorary Secretary

Queen's Hospital, Birmingham

Applications are invited for the post of THIRD SURGEON for Out patient

Candidates must be Fellows of the Royal College of Surgeons of England Edinburgh or Ireland

Honorarium £50 p a

Further particulars may be obtained from the undersigned to whom application must be sent not later than Saturday January 16th stating experience qualifications and date of birth together with Diplomas evidence of registration and copies of recent testimonials

Birmingham G HUTFORD
Dec 22nd 1931 House Gov & Sec.

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MALE OR FEMALE

TRAINED NURSES FOR MEDICAL SURGICAL AND MATERNITY CASES

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AND
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(ESTABLISHED BY J A REASIDE IN 1893)

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CHESHIRE —Near Coast —Small G P with excellent scope for expansion situated in working class and residential district Receipts £600 Panel 900 Suitable house available Premium 1½ years purchase Excellent scope for keen and energetic man

NORTHANTS —Old established Country PRACTICE situated in charming locality Hunting and sport of all kinds Highly suitable to semi-retired Practitioner Splendid house in own ground to rent or purchase Central heating electric light etc Receipts £500 Panel 400 Premium £550

LONDON W —PARTNERSHIP in suburban middle class G P situated in rapidly developing locality Suitable modern house to rent Receipts £2 750—£3 000 Panel approx 2 000 Fee 2/6 up Premium for 1/3 share 2 years purchase Excellent scope for young and energetic man

LONDON W 10 —Cash and Panel PRACTICE situated in middle and working class locality Suitable accommodation available to rent at £76 p a inclusive Fees 2/6 up Midwifery 2 gns up Panel 1 300 Books audited Receipts £385 Premium £600 or near offer

GLOS —Mixed Town PRACTICE Receipts over £1 800 p a Panel 2 146 Fees 2/6 up Three Hospital Good School Scope for increase Alternative accommodation available Premium for Practice £3 640 or near offer Further inspection invited

BERKS —PARTNERSHIP —Country Rural Practice in sporting district Receipts average nearly £1 150 Panel nearly 600 Fee 2/6 up Short preliminary Assistantship 1/3 share to 1/2 share for dispersal at 1½ year purchase Suitable to experienced man British aged 27 upwards

SOUTH COAST —Small PRACTICE in popular seaside resort Receipts nearly £400 Small panel Fee 5/ up Excellent house (5 beds) available to rent Other accommodation available Premium for quick sale £350

LONDON E —Suburban middle class G P Medium sized house to rent on lease at the low rental of £30 p a Fees 2/ Average receipts £516 Panel 330 Excellent scope for young man Premium for Practice and lease £1 050 cash or near offer

LONDON W —PARTNERSHIP in West End Practice Receipts over £3 600 Panel nearly 4 000 Premium for 1/3 share £3 000 Suitable opening for man with good address and experience preferably aged about thirty

MIDDLESEX —PARTNERSHIP in rapidly developing district situated within 12 miles of London Receipts about £1 600 Panel nearly 1 900 Suitable small house available Cottage Hospital Excellent scope Premium for 2/5ths share with view to 1/2 share 2 years purchase

YORKS —JUNIOR PARTNERSHIP after Preliminary Assistantship in well established mixed Practice Panel 1 700 Suitable only to one with Surgical experience Premium 1/4 share at 1½ year purchase with view to larger share Suitable accommodation available to rent

LIVERPOOL —Well established G P Medium sized house (7 beds) Receipts approx £1 100 Small select panel Fees 3/6 up Midwifery not undertaken Several appointments Premium for Practice and house £2 000 payable £1 500 down and balance by instalment

MIDDLESEX NORTH —Rapidly increasing mixed G P situated within 10 miles of London in residential locality Suitable modern house available Receipts nearly £1 100 Panel 425 Premium 1½ years purchase Excellent scope

ESSEX —Seaside Resort —Good mixed class G P with scope for increase Excellent modern house to rent or lease or for sale Fees 3/6 up Appointments over £200 Receipts over £1 000 Small select panel Premium £1 150 to include drugs

LONDON W 10 —NUCLEUS Local up-to-date practice situated in working class locality Living accommodation for bachelor if desired Receipts between £5 and £6 per week Panel 100 Premium 1 years purchase or near offer

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known country town Receipts approx £6 000 Select equitable panel Medium sized house to rent Premium for 1/4 share 2 years purchase This Practice has been known to the Vendor for many years and is highly recommended It is central that the incoming Partner shall hold the D P H and be aged about 30 Appointment to Hospital Staff

YORKSHIRE —Well established mixed rural PRACTICE Suitable house available (4 beds) Receipts approx £1 000 Panel 620 Fee 3/6 up On appointment Premium 1 year purchase

YORKS —PARTNERSHIP in busy rapidly increasing town Practice Receipts £2 300 Panel 1 500 Suitable house available 1/3 share with view to succession 2 years purchase

SURREY —14 miles London —Excellent corner detached house (6 bed) Receipts nearly £400 Panel nearly 250 Appointments Premium for Practice £500 House £2 100

EAST MIDLANDS —Better middle class Practice 10-roomed house nearly £2 000 Fees 3/ up to date gery Premium 1/3 share with view to larger share £1 300

LONDON NW —Well established mixed PRACTICE mainly better-class with excellent house situated on main thoroughfare Receipts approx £900 Panel over 420 Fees 3/6 up No midwifery One appointment Part of house sublet if desired Vendor has developed better class of Practice at good fees Premium £1 300 cash

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(Bond Street Station) *Telephone* Mayfair 6941

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1 DEATH — South Wales £1 400 p a Panel 1 500 Appointments £50 p a Good house with nice garden to rent Premium 1½ years purchase

2 LONDON W — General PRACTICE non-panel fees 10/6 to £1 1s Receipts for last 2½ years £2 352 Price £500 cash Good flat in good neighbourhood Rent £170

3 ESSEX —Coast Town near London —PRACTICE average £950 p a Appointments £210 Excellent house Great scope Small premium quick sale

4 DEVONSHIRE — Seaside Town — Doctor's house 93 years with small Practice at reduced Vendor retiring Details on application

5 CARDIFF — Industrial PRACTICE over £600 p a Panel 800 Good house Premium £600

6 MONMOUTHSHIRE — Old-established Country PRACTICE over £1 600 p a Third share at 2 years purchase with total succession Good house to rent Scope for surgery No colliery

7 WESTERN CITY — Half share of £1 600 Practice rapidly growing Panel 710 Appointments £400 Retiring Practitioner's house for sale

8 OXFORDSHIRE —Old established unopposed Country PRACTICE over £1 150 p a Price 1½ year purchase Good house

9 COUNTY TOWN — PRACTICE £900 p a Panel 1 145 and increasing with good scope in Carmarthen 1 years purchase House in good repair £550

10 NEAR GLOUCESTER — Third Share in Practice in growing country town Up to half share Receipts last three years £1 735 £1 507 £1 707 Panel 1 250 Price £1 200 inc drugs etc

11 DEVONSHIRE —Seaport Town —In growing district £480 in last 16 months Panel 300 Good house to rent Premium £500 Great scope Selling owing to ill health

12 WANTED —PRACTICES and PARTNERSHIPS and PURCHASERS waiting

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1 LANCASHIRE — Old established and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent

2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non-dispensing Panel and private PRACTICE Receipts £874 Good house for sale Garage etc

3 — Well established PRACTICE Receipts house 5 bedrooms to rent or for sale Garden and garage

4 NORTH OF ENGLAND —Panel *Colliery and* Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 *Good* house to rent Considerable scope for energetic man

5 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

6 LANCASHIRE — (Large Town) — Non-dispensing non-panel largely surgical PRACTICE established over 4 years Receipts average £1 179 p a and unlimited scope Good house etc

7 BERKS (Country Town) —PARTNERSHIP 2/5 share with short prelim Assistantship and ultimate Succession Receipts over £1 200 Panel 550 and good scope Appts. worth about £250 Good fee and house

FINANCIAL ASSISTANCE afforded to approved applicants for the purchase of Practices or Partnerships on very reasonable terms Full particulars on application.

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LOCUM TENENS and ASSISTANTS supplied free of charge to principals

FOR SALE

1 CLAM — DEATH VACANCY — Old established PRACTICE Receipts average over £1 400 a year Panel 1 500 Nice house rent £100 Premium 1½ years purchase

2 Old established Cash and Panel PRACTICE in London Receipts averaging £1 600 a year panel 2 200 about Nice house rent £100 lease Premium to be arranged

3 Five minute Marylebone NW — Well established non-panel PRACTICE Receipts average £900 p a good fee Nice flat rent £170 p a Premium only £500 Selling for health reason

4 Nice Seaside Town 60 miles from London — Old-established PRACTICE Receipts average nearly £1 000 p a including Panel Nice house to be sold with Practice Combined price £2 900

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6 LONDON (near Stratford Broadway) —Well established cash and panel PRACTICE Receipts average £550 p a panel 575 House on lease £75 p a Premium £600 Vendor going abroad

7 SUSSEX —Nice Seaside Town —Well established small PRACTICE Receipts last 12 months £400 Little panel Nice house with garden Rent £150 p a Premium £300

8 CORNWALL — Old established unopposed PRACTICE Receipts average £920 p a including panel 550 Good house can be had on rental Premium £1 150

9 Nice SEASIDE TOWN (40 miles from London) — Mixed class PRACTICE Receipts last year £1 050 panel 100 Good house nice garden etc Premium £1 150 Scope for increase

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3 SUSSEX — Country Practice between £1 200 and £1 300 p a in delightful part No panel Large residence (9 bedrooms etc) garage and garden of four acres to rent on lease Premium £2 000

4 LONDON, W —Non-dispensing Practice in the West End Receipts last year nearly £1 000 No panel or midwifery Rent of flat £170 p a Premium £500 cash

5 EASTERN COUNTIES — Partnership in Practice of about £3 650 p a in country town No panel Suitable house available Good educational facilities Premium one half share £2 500

6 NORFOLK — Partnership in Practice in agricultural district Receipts last year nearly £3 000 (average about £2 300 p a) Panel 1 500 Very nice house available Sport of most kinds Premium one third share 2 years purchase Preliminary Assistantship

7 LONDON, S W —Partnership (after Preliminary Assistantship) in rapidly increasing Practice in growing outlying suburban district Receipts 1931 about £2 700 (average £2 450 p a) Panel 1 700 House (4 bedrooms) to rent Premium two fifths share 2 years purchase

8 SURREY — Partnership in increasing middle class Town Practice of £2 300 Panel over 1 200 Modern detached corner house (5 bedrooms) garage and garden for sale Partner should be 26 30 and have held Hospital appointment Share of £1 000 p a at 2 years purchase

9 CORNWALL — Partnership in sound Country PRACTICE of over £2 400 p a including £800 from panel Very nice house (4 bed and dressing rooms) garden and garage to rent Premium one half share £2 000 cash

10 DEVON — Partnership in Practice averaging £3 000 p a in small beautifully situated town Panel 800 House with 4 bedrooms and attics garage and garden to rent Cottage Hospital Premium one third share 2 years purchase

11 GLAMORGANSHIRE — Partnership in Practice over £3 000 p a in small town Panel 2 500 Good house with nice garden to rent Premium one half share 1 years purchase or even less for very quick sale

12 N OF ENGLAND — Partner required in increasing Practice in beautiful city Receipts last year £5 000 Panel 4 000 Applicants should be proficient in minor surgery anæsthetics and obstetrics Share of four fifteenths at 2 years purchase

13 S W OF ENGLAND —Partnership (after preliminary Assistantship) in Practice about £3 500 p a in small industrial town Panel nearly 900 Considerable scope for increase One third share to suitable man at 1½ years purchase

14 LONDON, N W —Non-dispensing Practice over £950 p a in good residential district No panel Ten roomed house with garage and large garden Rent £200 p a Premium 1½ years purchase

15 N MIDLANDS —Partnership in Practice, about £3 000 p a in country district near two important towns Panel over 1 600 Small house (3 bedrooms etc) available to rent Great scope as district is growing rapidly Premium one third share 2 years purchase

16 DEATH VACANCY —ESSEX —Nucleus of Practice bringing in about £250 p a in small coast town Panel over 50 Well situated house (3 bedrooms etc) for sale or rent Ample scope for increase

17 EAST ANGLIA —Partnership in good-class non dispensing Practice of about £3 000 p a in favourite Seaside Resort Partner should be a Varsity man about 30 years of age experienced in Medicine and Anæsthetics Good up to date Hospital Premium for one third share 2 years purchase

18 MIDDLESEX — Start[illegible] Practice past 15 months £600 Panel 500 (4 bedroom etc) for sale Very good scope for increase Cottage Hospital Premium £700

19 SUSSEX — Country Practice averaging £900 p a in beautiful part easy distance of coast Panel 640 Large detached house with three quarters of an acre of garden for sale Premium 1½ years purchase

20 W OF ENGLAND —Practice about £800 p a in first rate City Panel 1 524 Well built house (4 bed and dressing rooms) to let Excellent scope Premium £1 450

21 S E COAST — Easily worked Practice in exclusive part of seaside town Receipts last year £1 050 including appointments over £200 fees from resident patients and small panel Large modern house with beautiful garden to rent Ample scope Premium £1 150

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22 CARMARTHENSHIRE.—Increasing Practice of £2,000 p.a. in pleasant Market Town. Population 3,500. Well established. Present Principal retiring. Long Lease. Modern House and Premises. £2,000 or near offer.

23 S. MIDLANDS.—Partnership in Practice and £800 p.a. Principal desires to retire. Suitable for young man. Practice Collections £1,800. House and Surgery available. £1,500 or near offer.

24 LONDON, N.W.—Practice (carried on by Medical Woman) showing £600 p.a. Principal retiring. Part can be taken by Lady Assistant. Good connection. Premium £200.

25 S. OF ENGLAND.—Partnership in good Practice. Principal retiring. Present Collections over £5,000. Modern House and Premises. Premium £2,000. Practice increasing. Principal remaining.

26 LONDON, W.—Steadily increasing Practice, showing £750 p.a. Lease. Surgery. Part can be taken by Lady. Well established. Collections £1,000. Premium £600.

27 LONDON, S.W.—Small non-dispensing PRACTICE of nearly £400 p.a. close to the West End. Small part can be taken by Lady. Collections will soon be increased. Premium 1½ years purchase of net profits.

28 STAFFS.—Practice averaging £2,300 p.a. in Market Town. Population 4,000. Very fine well-built House (5 bedrooms). Garage. Stable. Premium at 2 years purchase.

29 S. COAST.—Favourite Resort.—Practice of £500 p.a. Population 3,000. Large area. Collections £1,250. Modern House and Premises. Premium £200.

30 DURHAM.—Practice of over £500 p.a. in mining and colliery district. Large town. Population 30,000. Surrounding villages. Modern House and Premises. Premium £700.

31 LONDON, W.—Medical-cum-Practice averaging £700 p.a. Principal wishes to retire. Part can be taken by Lady. Well-appointed House and Premises. Premium £400 cash.

32 NEW ZEALAND.—NORTH ISLAND.—Partnership in PRACTICE of £1,000 p.a. in Town of 5,000. Population of district 15,000. Principal wishes to retire. Good House and Premises. Premium £1,000.

33 BIRMINGHAM.—Practice of about £1,000 p.a. Collections 6 months. Small part can be taken by Lady. Good House (5 bedrooms) and Premises. Garage. Premium 2 years purchase.

34 NORTH OF ENGLAND.—Small Seaside PRACTICE of £600 p.a. Collections 6 months. Modern House and Premises. Principal wishes to retire. Part can be taken by Lady. Premium £500.

35 YORKSHIRE (W.R.).—Partnership in Practice. Principal retiring. Present Collections £2,000 p.a. Modern House and Premises. Premium £1,000. Practice increasing. Principal remaining. Part can be taken by Lady. Good House and Premises available.

36 EAST ANGLIA.—Partnership in Practice of £1,500 p.a. Principal wishes to retire. Present Collections £2,000. Modern House and Premises. Premium £1,000. Practice increasing. Principal remaining. Part can be taken by Lady. Good House and Premises available.

37 WESTERN AUSTRALIA.—Practice over £1,000 p.a. in Town and District of 5,000. Modern House with electric light, garage, etc. Principal wishes to retire. Short Handing. Premium £600.

38 MIDDLESEX.—Partnership in increasing Practice. Present Collections £2,000 p.a. Modern House and Premises. Premium £1,000. Part can be taken by Lady. Good House and Premises available.

39 SOUTH AFRICA.—Easily worked Country PRACTICE of £1,000 p.a. Collections £1,000. Modern House and Premises. Principal wishes to retire. Part can be taken by Lady. Premium £1,000.

40 S. OF ENGLAND.—Practice averaging over £1,000 p.a. in Small Residential Town. Excellent opening. Modern House and Premises. Premium £1,500.

41 KENT.—Country Practice of over £800 p.a. in beautiful part. Part can be taken by Lady. Modern House (5 bedrooms). Garage. Large garden. Good Premises. Premium £1,000.

42 S. OF ENGLAND.—Partnership in Ophthalmic Practice about £1,000 p.a. in small Residential Town. Collections £1,000. Modern House and Premises. Premium 2 years purchase.

43 LONDON, W.—Practice (400 approx.) in suburban district. Principal retiring. Present Collections £1,000. Modern House and Premises. Premium £500.

44 HOME COUNTIES.—Partnership in exceptional Practice. Principal wishes to retire. Part can be taken by Lady. Collections £1,000. Modern House and Premises. Premium £1,000. Practice increasing. Principal remaining. Part can be taken by Lady. Good House and Premises available.

45 SHROPSHIRE.—Practice £850 p.a. in small Town. Population 5,000. Modern House (5 bedrooms). Garage and Premises. Principal wishes to retire. Part can be taken by Lady. Premium £1,000.

46 KENT.—Country Practice of about £850 p.a. Population 850. Good House and Premises. Premium £1,000.

47 MIDLANDS.—Country Practice of nearly £1,000 p.a. Collections 6 months. Modern House and Premises. Principal wishes to retire. Part can be taken by Lady. Good House and Premises available. Premium £1,000.

48 SOMERSET.—Practice averaging £850 p.a. Collections 6 months. Modern House and Premises. Principal wishes to retire. Part can be taken by Lady. Good House and Premises available. Premium £1,000.

49 LONDON, S.W.—Practice (nearly) £500 p.a. Collections 6 months. Modern House and Premises. Principal wishes to retire. Part can be taken by Lady. Good House and Premises available. Premium £1,000.

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9. LONDON NORTH-WEST.—Well-established middle-class non-dispensing PRACTICE averaging for the past three years £840, including appt. worth about £300 p.a., and panel of 120. Fees 3/6 to 21/-. Large house with thirteen rooms, in addition to professional accommodation, etc. Price for freehold £3,200; £2,000 on mortgage. Premium £1,250.

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11. MIDDLESEX.—Rapidly increasing PRACTICE in developing neighbourhood estimated to produce about £600 in the last 12 months. Panel 500. Fees 3/6 to 12/6. Midwifery 3 to 25 gns. Good house with 2 reception, 4 bedrooms, etc., and separate entrance to professional rooms. Good garden. Garage. Price for freehold £2,000, part on mortgage. Premium £700.

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14. NORTH WALES.—Very old-established good mixed-class PRACTICE averaging £880 p.a., including panel of 433. Fees 2/6 to 10/6, medicine extra. Suitable house with 2 reception, 6 bedrooms, etc. Can be rented on lease at £50 p.a. Good sport. Premium £1,200, part down and balance by instalments. Ill-health reason for sale.

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20. MIDWIVES.—Agricultural District.—Mixed-class PRACTICE producing about £880 p.a., including small panel of 130. Fees 3/6 to 21/-. Small house with 2 reception, 3 bedrooms, etc. Price £500. Fishing, shooting and other sport. Premium 1 year's purchase.

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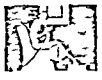
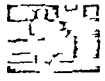
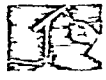
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CONTENTS

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ORIGINAL ARTICLES

The Present and the Future of the Science and Art of Obstetrics and Gynaecology

Accidents of the Male Climacteric

Otitic Hydrocephalus: A Report of Three Cases

Treatment of Adolescent Coxa Vara

A Case of Brachial Embolectomy

Etiological Factors in Hyperpyrexia

Treatment of Hyperpyrexia

MEMORANDA

CLINICAL PROCEEDINGS

REPORTS OF SOCIETIES

REVIEWS

LEADING ARTICLES

The Improved Standard Wage

Present Appointment

THE WEEK

GENERAL ARTICLES AND NEWS

Factors in the Problem of Tuberculosis

Nova et Vetera

The New Year Honours

Appointments and Appointments

OBITUARY

UNIVERSITIES AND COLLEGES

THE SERVICES

CORRESPONDENCE

LETTERS AND ANSWERS

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible classes will for the most part be found on the pages indicated

Advertisements of the following

PUBLISHERS

Churchill J & A
Bull's Form —
Diseases of the Kidney 3
Bjorkten E — Gymnastic 3
Clark A J — Applied Pharmacology 3
Clayton Wm — Food Chemistry 3
3
3
3
Yellowlees H —
Psychological Medicine 3

Constable & Co Ltd
Dodd & Hathaby — The Laboratory in Surgical Practice 4
Paterson & Smith —
Feeding in Infancy 4
Sinclair M — Fractures 4
Warburg O —
Metabolism of Tumours 4

Lewis H K & Co Ltd
Elliot R H —
Couching for Cataract 4
Glaucoma 4
Martindale W H — Pharmacopoeia 4

Murray John
MacLeod A C —
Some Radium Cases 4

Oxford Medical Publications
Elliot R H —
Care of Eye Cases 4
Treatise on Glaucoma 4
Tropical Ophthalmology 4

ASSURANCE COMPANIES—
Century Insurance Co Ltd 51
Medical Insurance Agency 33

BOOTMAKERS &c —
Holland & Son — Foot Support 34

BRASS NAME PLATES &c —
Cooke's Name Plates 35
Herd S J & A — Name Plates 35
Lewis & Co Ltd — Name Plates 4
Osborne F & Co — Name Plates 35

SURGICAL APPLIANCES—
Aeroplane Co Ltd — Nose Spray 30
Allen & Hanburys Ltd —
London Hospital Catgut 28
Bailey W H & Son —
Surgical Instruments 29
Curtis & Son — Support 32
Dent Ardente Stethoscope 34
Domen Surgical Belt 34
Hillhard's New Absorbent Bag 35
Holborn Surgical Instrument Co Ltd —
Surgical Instrument 5
Medical Supply Association Ltd — 5
Band 5
49
Millikin & Hawley — 35
9
31
30
30

FOOD PREPARATIONS—
Benger Food 26
Brooke Bond & Co Ltd —
Chimpex Cover ii
Cow & Gate Ltd — Milk Food Cover iii
Fattet & Johnson Ltd —
Animal Beef Beverage 9
Hardman Bros & Lindsay Ltd —
Doctor Chimet Tea 17
Valentine Meat Juice 11
Wander & Ltd — Ovaltine 15

HOUSE AGENTS—
Always & Partners 49

CHEMISTS &c —
Allen & Hanburys Ltd —
Bile Salts Mixture 24
Calophyllate 25
Cod Liver Oil 19
Lubricene 26
Luminal Elixir 24
Iodolein 18
Pituitrin 8
Vapo Cresolene 9
American Apothecaries Co —
Salvitae 10
Anglo French Drug Co Ltd —
Elixir Bromo Valerianate Concentrated
Boots Products 13 14
British Drug Houses Ltd —
Vitamin Products 19
Burroughs Wellcome & Co —
Emetin Cover iv
Liver Extract 27
Coate & Cooper — Diphthamin 16
Continental Lab Ltd —
Vemotrope 15
Crookes Laboratories — Collosol 21
16
Ltd —
22
35
10
Evans Sons Lescher & Co — Bi Carn 29
Hommel's Haematogen & Drug Co Preparations 8
Martindale W —
Iodo Ray Shpule 9
Methyl Aspirodine 20
Sterules 11
Tolysin 12
May & Baker Ltd — Soneryl 13
Mond Staffordshire Refining Co —
Monsol 14
Newbery & Sons Ltd —
Haemorrhoidal Suppositories 12
Leat Products Ltd — Sphagnol 8
Pharmaceutical Corporation Ltd —
Novatox 23
Roberts & Co — Diamenol 11
Saccharin Corporation Ltd —
Novocain 20
Sandoz Chemical Works —
Veramone 33
Stimeo Ltd — Mistol 19
Wyleys Ltd —
Elixir Bromo Valerian Co 10

DEBT COLLECTION—
British Medical Protection Society 4

MOTOR CARS TYRES &c —
Lodge Sparking Plugs 34
Mann Egerton & Co Ltd —
Motors Cover i
Second hand Motors for Sale 49

PRINTING & STATIONERY—
Anderson & Son — Account Forms 50
Barlock & Barlet Typewriters 4
Taylor Typewriters 35

TAILORING & UNDERCLOTHING—
Burberry Ltd — Style 35
Hall H Medical Service Dress 30
Miller I & Co Ltd — Tailors 35

TOBACCO & CIGARETTES—
Player's No 3 32

TRANSLATIONS TYPEWRITING—
Radford B — Typewriting etc 49

VACCINES & CULTURE MEDIA—
Laboratories of Pathology & Public Health 35

X RAY & ELECTRO MEDICAL APPARATUS—
7
X Ray Reaction Camera 6
Medical Supply Association Ltd —
Diathermy Apparatus 32
Tilley Lamp Co — Tilley Radiator 34

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE —
RESIGNATIONS 1

HOSPITAL &c VACANCIES—
Ashford Hospital Kent 44
Barnsley Beckett Hospital 50
51
44
50
47
47
50
50
50
47
44
51
44
45
44
45
44
47
45
43
46
51
50
50
51
46
43
47
50
45
43

BATHS SPAS &c —
Bridge of Allan Spa 41
British Spas Federation 41

HOTELS & HEALTH RESORTS—
Bournemouth 49
Clifton Hotel 41
Torquay 49

HYDROS & PRIVATE HOSPITALS—
Bournemouth Hydro 41
Harrogate Investigation Clinic 37
41
38
41

INEBRIETY—
Bay Mount Paignton 37
Caldecote Hall near Nuneaton 37
Dalrymple House Richmond 37
Old Hill House Chislehurst 37
Rendlesham Hall Woodbridge 37

SCHOOLS &c —
Colthurst House School Warford 35
Paton — Schools for Boys & Girls 42
Taunton School 42

HOMES & ASYLUMS—
Burwood House Clayton 39
Hollies House Hoole 36
City of London Mental Hospital 37
Clarence House Clapham Park 37
Haydock Lodge Lancashire 6
Highfield Hall St Albans 36
Lawn Lincoln 38
Littleton Hall Brentwood Essex 37
Manor View Hospital S E 5 36
Normanhill Teddington 37

MEDICAL SCHOOLS &c —
City of London Maternity Hospital 43
College of Preceptors 43
Guy's Hospital Medical School 43
West London Hospital 42

SANATORIA—

TUTORS & LECTURERS—
Exams — Med Correct College 42
I R C S Edin Classes — H C Orrin 41
I R C S Ed Classes — C Whittaker 42
London University 43
Manchester Tutorial College 41
Stamm'rm — Miss L Behnke 41
University Exam Postal Institution 42

TRANSFER AGENTS—
Brit
Lee
Man
Lew
The
Yarn
We

ASSISTANTS PRACTICES &c —
Assistancies Wanted and Vacant 43
Dispenser Medical Post &c 43
Locum Wanted and Vacant 43
Partnerships Wanted and Vacant 4
Practices Wanted and Vacant 48 49

NURSING INSTITUTES—
Cavendish Nurses 52
New Mental Nurses Co Operation 52
Nurses Association 52

MISCELLANEOUS—
Consulting Room &c to Let 49
Income Tax Consultant — Hardy 49
Income Tax Specialists — Kilner 49
Medical Defence Union 1
Miscellaneous Sales etc 49 50

It must be understood that the acceptance by the British Medical Association of an Advertisement does not imply a recommendation, and that no responsibility is accepted with regard to the accuracy of the statements therein contained.

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Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following class will for the most part be found on the pages indicated

PUBLISHERS

Churchill J & A
B P S Exam —
Diseases of the Kidney 3
Bioelectric Emanation 3
Clark A J —Applied Pharmacology 3
Clayton Wm —Food Chemistry
3
3
3
3
ies 3
Psychological Medicine 3

Constable & Co Ltd
Dodd & Whitby—The Laboratory in Surgical Practice 4
Paterson & Smith—
Edington Infancy 4
Sinclair M —Fracture 4
Warburg O —
Metabolism of Tumours 4

Lewis H K & Co Ltd
Elliot R H —
Cataract 4
Glaucoma 4
Martindale W H —Pharmacopœia 4

Murray John
MacLeod A C —
Some Pulmonary Cases 4

Oxford Medical Publications
Elliot R H —
Cases of Eye Cases 4
Treatise on Glaucoma 4
Tropical Ophthalmology 4

ASSURANCE COMPANIES—
Century Insurance Co Ltd 51
Medical Insurance Agency 35

BOOTMAKERS &c —
Holland & Son—Foot Support 54

BRASS NAME PLATES &c —
Cook Name Plate 35
Henry S J A Name Plate 35
Lewis & Co Ltd —Name Plates 4
O'Brien T & C —Name Plate 35

SURGICAL APPLIANCES—
Allen & Hanbury Ltd —Nose Spray 30
Allen & Hanbury Ltd —
Lister Catgut 28
Bailey W H & Son—
29
32
34
34
35
Ltd
5
—
Vaughan Elastic Plaster Band 5
Medical Surgical Sundries —
Instruments Apparatus 49
Mitchell & Hawkes—
35
Shin 9
Silk 31
Wool 30
Other 30

FOOD PREPARATIONS—
Benger Food 26
Brand & Co Ltd—
Chemical Food Cover iii
Cadbury Ltd —Milk Food Cover iii
Hall & Sons Ltd —
Ammonated Beef Essence 9
Hanbury Barclay & Lind Ltd —
Doctor China Tea 17
Valentine Meat-Juice 11
Wander & Ltd —Ovaltine 15

HOUSE AGENTS—
Alway & Harmer 43

CHEMISTS &c —
Allen & Hanbury Ltd—
Beef Juice 24
Caloplast 25
Cod Liver Oil 13
Ephynal 25
Ephynol Elixir 24
Iodolysin 18
Pituitrin 8
Vapo Cresolene 9
American Apothecaries Co —
Salvitae 10
Anglo French Drug Co Ltd —
Elixir Bromo Valerianate Coverii
Boots Product 13 to 14
British Drug Houses Ltd —
Vitamin Products 19
Burroughs Wellcome & Co —
Emmin Coverii
Lavet Extract 27
Coates & Cooper—Diuliphamin 16
Continental Lab Ltd —
Neinotrope 15
Crooke Laboratories —Collosol 21
16
td —
22
36
10
29
8
9
20
11
Tolysin 12
May & Baker Ltd —Soneryl 13
Mond Stafford Shire Refining Co —
Monsol 14
Newbery & Son Ltd —
12
8
—
Robert & Co —Dimenol 29
Saccharin Corporation Ltd — 11
Novocain 20
Sandoz Chemical Works —
Pelamine 17
Stamco Ltd —Mistol 19
Wyleys Ltd —
Elixir Bromo Valerian Co 10

DEBT COLLECTION—
British Medical Protection Society 4

MOTOR CARS TYRES &c —
Lodge Sparking Plugs 34
Mann Egerton & Co Ltd —
Motors Coverii
Second hand Motor for Sale 49

PRINTING & STATIONERY—
Anderson & Son—Account Form 50
Barclod & Barclet Typewriters 4
Taylors Typewriters 35

TAILORING & UNDERCLOTHING—
Burberry Ltd —Suits 35
Hall H Medical Service Dress 30
Miller B & Co Ltd —Tailors 35

TOBACCO & CIGARETTES—
Players No 3 30

TRANSLATIONS TYPEWRITING—
Radford B —Typewriting etc 49

VACCINES & CULTURE MEDIA—
Laboratories of Pathology & Public Health 35

X RAY & ELECTRO MEDICAL APPARATUS—
7
X Ray Reduction Camera 6
Müller & Sons
Dh 32
Tilley 34

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
REPLIES 41

HOSPITAL &c VACANCIES—
Alford Hospital Kent 44
Barnsley Beckett Hospital 50
51
44
59
47
46
47
Brighton Royal Sussex Co Hosp 50
Bristol Royal Hosp for Children 50
59
1
47
44
51
47
49
45
44
47
45
43
46
Hospital
8
9
20
11
12
8
29
11
20
17
19
10
45
47
59
47

BATHS SPAS &c —
Bridge of Allan Spa 41
British Spas Federation 41

HOTELS & HEALTH RESORTS—
Bournemouth 40
Clifton Hotel 41
Torquay 40

HYDROS & PRIVATE HOSPITALS—
41
37
41
38
41

INEBRIETY—
Bay Mount Paignton 37
Coldecote Hall near Nuneaton 37
Dalrymple House Rickmansworth 37
Old Hill House Chislehurst 37
Rendlesham Hall Woodbridge 37

SCHOOLS &c —
Colthurst House School Warford 35
Paton—Schools for Boys & Girls 42
Taunton School 42

HOMES & ASYLUMS—
Barnwood House Clinic for 39
Bishop tonge House Bedford 36
Court Hall Exeter 36
Fen tanton Sim Hill 36
Grove near Tottenham 36
Grove House Stretton 37
Haydock Lodge 36
Highfield House 36
Lawn Lincoln 36
Littleton Hall 36
Maudsley Hospital 36
Normanfield Teddington 36
Wye House Buxton 37

MEDICAL SCHOOLS &c —
4

SANATORIA—
—

TUTORS & LECTURERS—
Exams —Med Corresp College 49
F R C S Edin Classes —H C Orton 41
F R C S Ld Classes —C Whittaker 49
London University 3
Manchester Tutorial College 41
Stammering —Miss E Behnke 41
Universities Exam Postal Institution 4

TRANSFER AGENTS—
Boyal Medical Agency Ltd 6
British Medical Bureau 50
Lee & Martin Ltd 52
Manchester Medical School Assoc 51
Laycock & Hadley Ltd 51
The Medical Agency 52
Turner J Ltd 49 51
Western Medical Agency Bristol 52

ASSISTANTS PRACTICES &c —
Assistance Wanted and Vacant 43
Dispenser Medical Post &c 43
Locum Wanted and Vacant 43
Partnerships Wanted and Vacant 43
Practices Wanted and Vacant 43 43

NURSING INSTITUTES—
Cavendish Nurses 52
New Mental Nurses Co Operation 52
Nurses Association 52

MISCELLANEOUS—
1

It must be understood that the acceptance by the British Medical Association of an Advertisement does not imply a recommendation, and that no responsibility is accepted with regard to the accuracy of the statements therein contained

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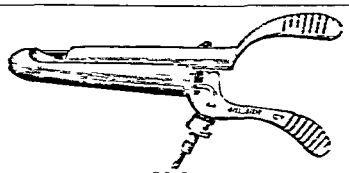
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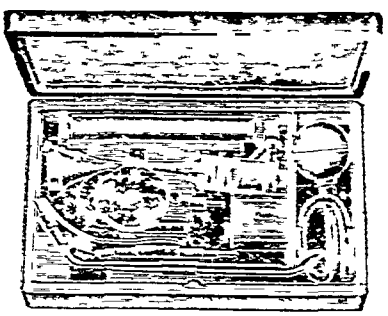
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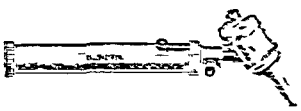
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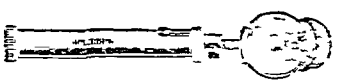


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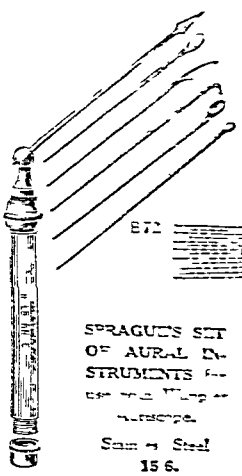
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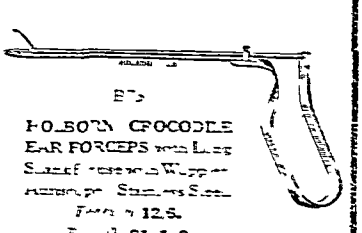
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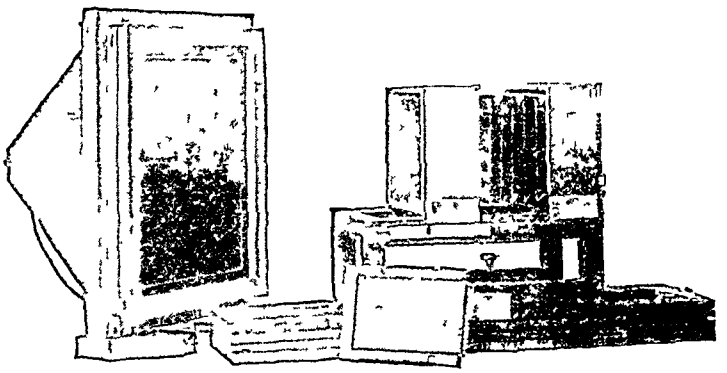
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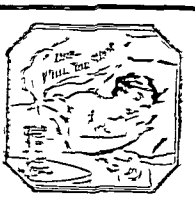
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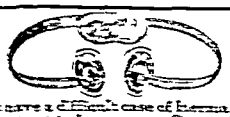
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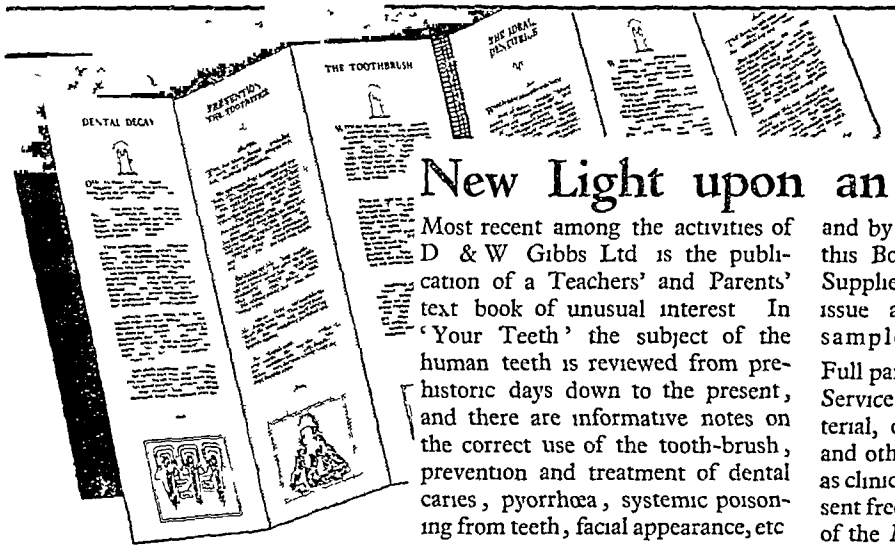
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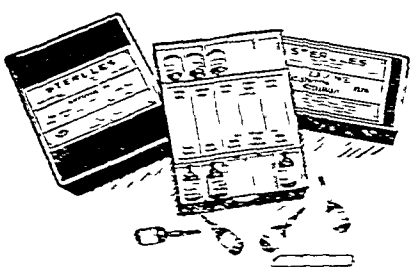


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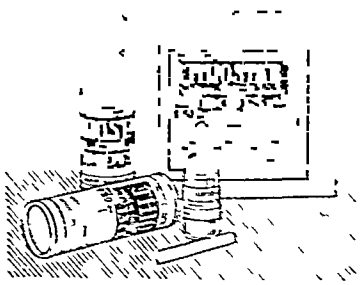
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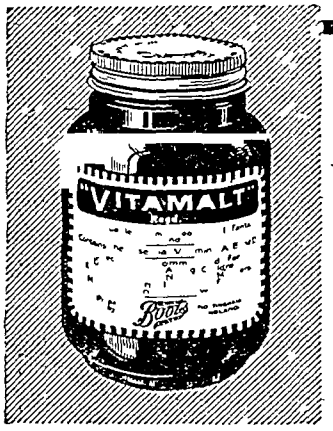
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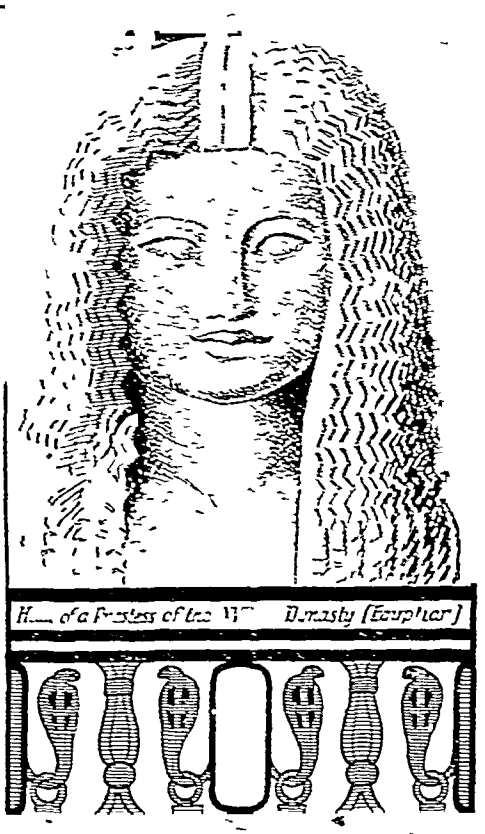
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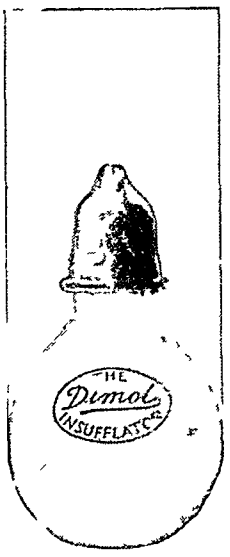
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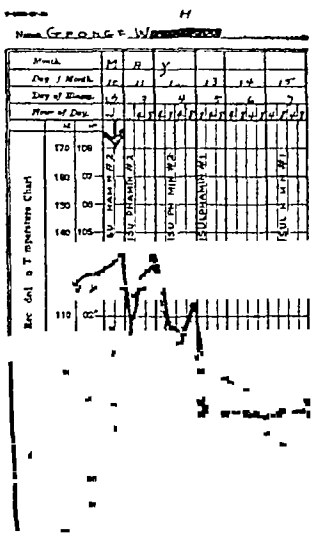
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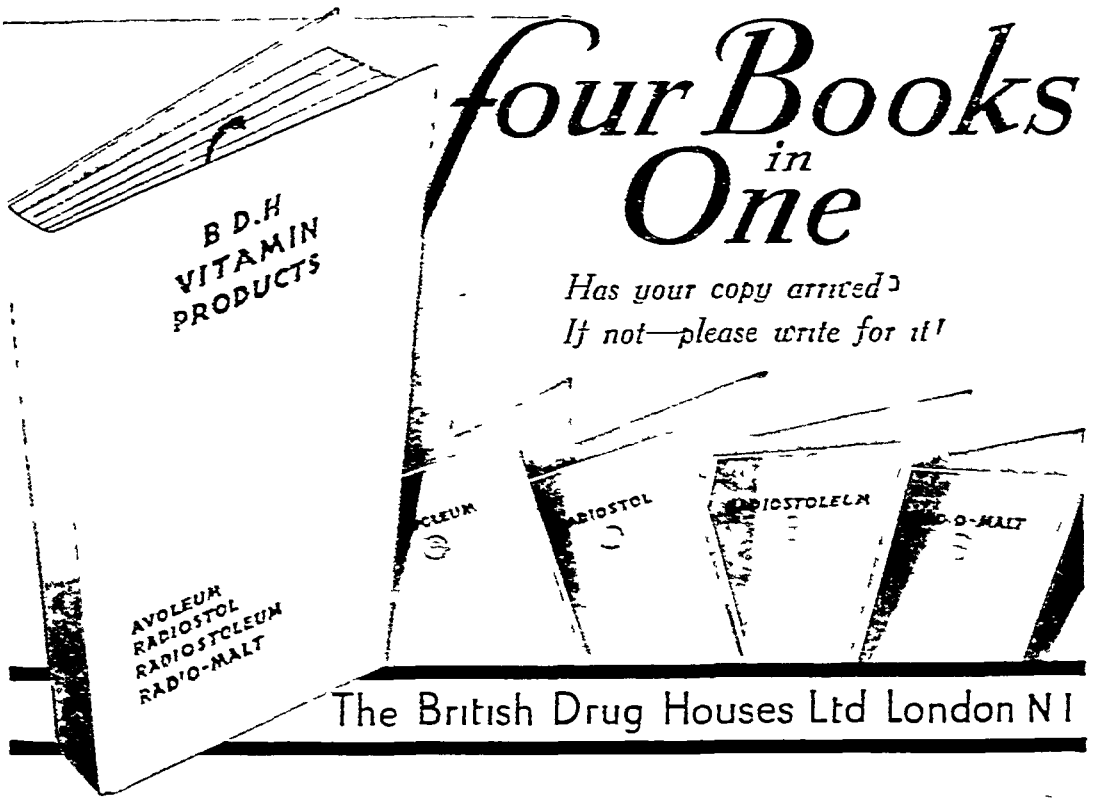
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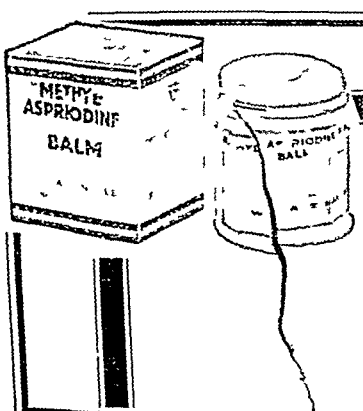
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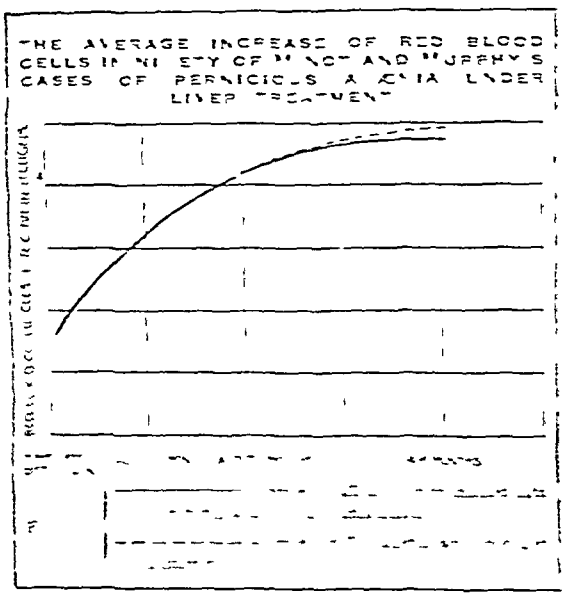
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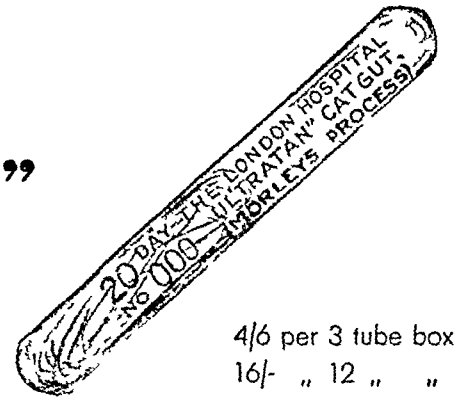
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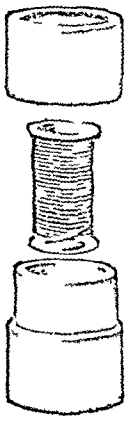
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treated scientifically rather than empirically If we look closely into this development we recognize at once that it has been largely due to the realization that the genital organs and functions are not limited to the pelvis, but are in fact in intimate correlation with all the regulators of metabolism, as Noel Paton has called the ductless glands, and with their influences It was to this fascinating question that I was first attracted over twenty years ago From it such important matters as the final differentiation of sex, the mechanism of menstruation the physiology of conception and the phenomena of the menopause have passed into everyday knowledge and teaching This widening of our sphere has brought us into the closest touch with general medicine and surgery

Many interesting examples of advances along these lines of investigation might be quoted For instance the gynaecologist is sometimes the first to diagnose pituitary dysfunction as the result of his investigation of a case of amenorrhoea whereas, when many of us were students such patients received myrrh, aloes, and iron! Again Aschheim and Zondek have fruitfully exploited our knowledge of the correlations between the pituitary ovary, and placenta, and have shown that in the urine of pregnant women a biochemical substance which can be identified by simple biological tests is excreted This culmination of scientific endeavour has given to the world one of the most beautiful diagnostic reactions ever placed in the hands of the profession I believe too that it will be the precursor of many tests based on metabolic interactions both in normal and abnormal states It is in fact not a late comer but a forerunner Yet even this discovery has left unsettled various problems in connexion with it The most important of these is the question Why cannot prolan B be identified in the urine of pregnant lower animals? Here is what appears to be a not very difficult investigation and one that might lead to interesting developments * Furthermore of the general metabolic studies of ourselves and others we have not been slow to take advantage The importance of the calcium metabolism in respect of the genital functions in normal and in abnormal states is now universally recognized So too knowledge of the influences of the vitamins due chiefly to the researches of the biochemist Gowland Hopkins has led to a great improvement in the management of pregnant women Indeed it appears likely that if obstetricians of the rising generation will seize the chances awaiting them along these lines their efforts may lead to the disappearance of all the grosser malformations of the pelvis and of certain metabolic disturbances with which we are confronted to day But above all it seems to me that the tremendously successful outcome of long trials of scientific endeavour with their dramatic and immediate clinical applications must fire the imagination and ambition to excel in many of our younger colleagues This it is true is a preventive era but prevention necessitates action as well as masterly inactive measures We cannot make the sun shine but we can remove obstructions to its rays and even utilize artificial sunlight Here we have an illustration of the beautiful simplifications that follow in the wake of abstruse science so well exemplified in the recognition of the fact that the essential vitamins are constituents of our common food stuffs A great enlightenment this for it confirms our belief in Nature and in the naturalness of the phenomena of life growth and health with which our science is connected in a most intimate way

I have just tried to indicate in the manner of my telling that the clinical application of discoveries —shall I call them?—often takes a very simple form for we find that many errors of metabolism can be avoided or rectified by the use of natural materials and processes We can prevent and treat rickets for instance, by ensuring that the individual leads a sunlit lactivorous, vitaminous life So much, then, for our present kind of knowledge I have made no attempt to do more than illustrate the way in which it has been acquired and should be utilized, and to indicate how the vast amount of scientific work done of recent years is bringing our knowledge, obtained in different fields of inquiry along convergent lines to clinical foci This means that he whose mental accommodation is swift and sure will so align the rays of light that they fall upon and illumine what was hitherto obscure But for this careful preparation is necessary It is essential that we organize our methods and our means both individual and environmental So called 'genius' as is well known lies not so much in great natural aptitude as in the capacity for taking infinite pains to ensure that good results shall follow the operations of the mind The vision to foresee the equipment and facilities required, and the knowledge of how best to order our own thoughts and the thoughts of those who follow after us, constitute the fundamental attributes behind human endeavour and progress

* In this connexion reference may be made to the statements contained in a letter published since this lecture was set up in type Laquer L *British Medical Journal* 1331 ii 1165

TEACHING AND LEARNING

Principles of Teaching

As we look around the country we notice that medical teaching schools attached to universities have come into being in every large city This means that everywhere teachers have appeared whose guidance is sought by many students who in older times would never have taken up the most difficult, and owing to the variable factors concerned the most intimate and personal of all sciences The whole gamut of human attributes is drawn upon for the perfection of the medical scientist and every practitioner is or should be a medical scientist whether he appreciates his position or not His sensibilities his memory, and his higher faculties of analysis and judgement imagination and creation are constantly called into action This is *recognized* by all teachers who take the trouble to study their responsibilities not but that in the days long past the great teachers who were then so few in number must by some intuitive method have taught as though they had given much thought to the manner of so doing We are, however, very reticent about these matters we feel when we discuss if ever we do abstractions of this kind that we are treading on holy ground, and that the subject is one for personal contemplation rather than for public consideration Yet I am convinced from what I have seen that the teaching of obstetrics and gynaecology in these islands is generally speaking more idealistically (in the philosophical sense) practised than is that of the kindred subjects of medicine and surgery The reason for this lies undoubtedly in that happy blending of science practice and service to the frailties of womanhood which forms the environment in which we obstetricians and gynaecologists have our being By these perhaps crudely expressed thoughts I want to convey the view that in teaching our students and nurses —our colleagues to be—we should strive to make them thought conscious rather than self-conscious and self sufficient With the vast growth in our knowledge of the scientific aspects of our branch of medicine with the different nature of primary and secondary teaching as contrasted with the classical and philosophical education to which practically all of us were apprenticed in the nineteenth century and with the somewhat different material psychologically considered that is committed to our charge we must all the more inculcate the necessity for right ways of thinking and for discipline of the mind

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treated scientifically rather than empirically If we look closely into this development we recognize at once that it has been largely due to the realization that the genital organs and functions are not limited to the pelvis but are in fact in intimate correlation with all the regulators of metabolism as Noel Paton has called the ductless glands, and with their influences It was to this fascinating question that I was first attracted over twenty years ago From it such important matters as the final differentiation of sex the mechanism of menstruation the physiology of conception and the phenomena of the menopause have passed into everyday knowledge and teaching This widening of our sphere has brought us into the closest touch with general medicine and surgery

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retentive memory is not all that is required in a student even though it enables him to shine in examinations. More and more from our teaching experiences we recognize that if we can fix the attention and interests of our pupils and demonstrate to them that *learning is understanding* not only will they not forget—and we have all noticed that students never forget the unusual and curious—but also by proper appreciation of principles lucidly explained they will acquire the habit of thinking and finding out for themselves. Yet among the army of teachers even teachers of obstetrics and gynaecology there cannot but be some who confine themselves to the teaching of facts alone and so produce an index type of mind. They evoke no gleam of mental satisfaction in the backward such as comes to those on whom the truth of some hitherto difficult problem has dawned. Some understanding of modern psychology is of the greatest value to every teacher as it is to every practitioner.

Preliminary Scientific Training

At this point perhaps a few words may be said about the teaching of the preliminary sciences in relation to medicine. This has been ably discussed in recent years by Professor J. A. Milroy (1929),[6] Professor R. J. S. McDowall (1931),[7] and others. It is a difficult subject first because the time factor in the medical curriculum has to be considered secondly because there is the question of how and how much of the fundamental sciences should be taught. In regard to the first difficulty what may be called essential knowledge has increased with great speed not only in the fundamental sciences but also in their application to clinical practice. Further purely clinical and pathological knowledge has progressed so far in every direction that the lengthening of the time of the medical curriculum alone has been unable to meet the situation. How then can the ordinary student be expected even step by step throughout his course to become really proficient in all? He cannot possibly be expected to do so. What is the alternative for it is generally admitted that a useful knowledge both of the preliminary sciences and also of medicine is necessary. At the same time it must not be forgotten that we are obliged to cater for students of average ability and not for the few brilliant men.

It does not seem to help us much to dwell on the growing independence of the sciences in relation to what McDowall terms "vocational sciences"—in our case medicine—unless our object be to show that this is at the root of the trouble that has arisen. It is of more importance for us to find a way out of our difficulties and it would seem that this can only be by way of simplification. So it is borne in upon us that from the practical as well as *from* the psychological standpoint the teaching of detail should be curtailed as far as possible and the teaching of principles expanded. Too detailed knowledge is positively harmful to those with retentive memories for such students become walking indices relying on the efforts of other brains instead of using their own. It is far better to teach students the underlying principles and to show the relation of these to the more important details in order that they may fill in the rest for themselves. For this reason all the preliminary sciences—and I differ from those who would exclude botany—should be taught in such a way that the application of them to principles of medicine would be made so clear and interesting that they could not fail to become fixed in the student's mind. If I may be permitted to touch on my own experience I may say that I have found my own interest in human and comparative morphology physiology and pathology of much assistance in teaching students for they are always greatly interested in the relationship between evolutionary and other biological principles and their human studies and that is why in my *Principles of Gynaecology* comparative anatomy and physiology receive consideration. If the teaching of the preliminary sciences were concentrated in this way and unnecessary detail avoided our students would come to their final studies knowing how to think understand and apply and we should not have our curriculum overcrowded by the unending enumeration of facts that must be memorized. Naturally if most anatomists and physiologists regard their subjects as the most important they aim at making all students acquire a comprehensive and much too detailed knowledge of them. As a result in some medical schools physicians and surgeons have been appointed to teach applied physiology and anatomy in order to alleviate the mental indigestion caused. This attempt at correlation can hardly be considered a satisfactory solution. We obstetricians and gynaecologists however since we have been compelled ourselves to work at the preliminary sciences which have a bearing on our vocational science have been better fitted than our colleagues in other branches of medicine to teach our students the essential principles of morphology and physiology in relation to our subject indeed had we not been they would never have learned them elsewhere. This is one of the chief reasons why we should continue to do scientific work in connexion with obstetrics and gynaecology.

Arrangements for Teaching Obstetrics and Gynaecology

The application of the methods of teaching to which attention has been called should receive serious consideration. Yet it is important that the main features should not be obscured by disputations concerning local arrangements which after all are chiefly related to individual preferences to different estimates of the aptitude of students generally and to the facilities obtaining in various university centres. Every teacher for example should be allowed to teach his students by the methods from which he obtains the best results. Some men can create interest by lecturing others by class instruction and so on. Consequently it should be ordained in the future that a university syllabus shows only the times allotted to theoretical and practical teaching and not to the methods. To make a poor lecturer lecture is to invite imperfect and ineffectual teaching. This seems common sense just as does the fact that if there are only 200 maternity cases available for each rota of twenty students only ten cases can be personally delivered by each but it can also be insisted that each student shall be present at and closely observe fifty deliveries. In other words while adhering to a general desideratum we should allow of elasticity in the manner by which it is reached. It is nevertheless wonderful how much uniformity does exist at the present time when we remember that it is not many years—not more than about ten—since the teaching requirements in obstetrics and gynaecology were ridiculously inadequate and were even then evaluated by non-fulfilment without compensation for example compliance with the regulation that each student should personally deliver twenty maternity cases was in many places impossible. At last a movement is in progress to secure that the *time* of the student allotted to obstetrics and gynaecology shall be at least as long as is possible under the present period of medical study. It will be our duty to see not only that this is well applied but also that we have the proper facilities for the purpose. Until there is uniformity in the facilities in each teaching centre in proportion to the average number of students it will be very hard to obtain standardization in regard to the manner in which the general requirements are carried out. At the same time we cannot forget that it is the duty of every teaching school to turn out highly efficient practitioners whatever may be the ultimate conditions of practice.

Material Facilities—There is little doubt that both for our own efficiency in regard to scientific and clinical work and for educating the student a suitable environment, with all the necessary facilities is most desirable In this country we have never in a general way organized our teaching school and research arrangements in the thorough manner some of our European and American colleagues have done I know of only two university departments worthy of the name in Great Britain and one of them is in this city These go far beyond anything that has been attempted by the physicians and surgeons There are I am glad to say one or two more in embryo the growth of which we shall all watch with interest On the other hand so far as arrangements and facilities for purely clinical teaching are concerned most of us by personal endeavour have secured satisfactory clinical departments and operating theatres This has not always been easy when the improvements necessary have been advocated in general hospitals under the often jealous eyes of our surgical colleagues for we have not yet completely established to their satisfaction our right to be regarded as their equals

The recognition of the advantages which have been set out elsewhere - of having large obstetrical and gynaecological departments in general hospitals need not be reiterated here but apart from the wider outlook and the increased facilities for teaching thereby afforded, this arrangement tends more than anything else to place gynaecology and obstetrics on the same footing as that of medicine and surgery for it brings the gynaecologist and obstetrician away from his isolated position in a special hospital to close work and co operation with his other colleagues It is to be hoped therefore that the future will see the gradual disappearance of special hospitals

There are one or two aspects of clinical teaching to which some reference is necessary It has rightly been held that whereas the general practitioner is not expected to perform the major operations of general surgery (although he often does so) he may be called upon to deal with a major complication of labour This is the present state of affairs but is it one of which we really approve? Is it not rather one which we condone? Does the training advocated now by the most importunate of us—that is four months of clinical obstetrics (two of which shall be spent in residence) and two months of clinical gynaecology—does this make every student fit to conduct a major obstetrical operation? Few of us would agree that it does so although it may be enough for the occasional brilliant student It could on the other hand well be argued that it gave a confidence which might lead to dire results The inwardness of my remarks will be clear to all teachers who know how little operative work such students can obtain under present conditions It can be estimated then that while the teaching arrangements soon to come into force almost everywhere in this country will give students as good a training as they obtain in medicine and surgery it certainly will not fit them to become either obstetrical specialists—which is what the public seems to demand—and still less gynaecological experts It is said that obstetrical complications are emergencies They used to be but with proper ante natal care this is only occasionally the case to day So without going into particulars it may be stated that in the immediate future we must establish an adequate maternity service staffed by properly trained men and if the organization is to be efficient it must be allied to and dependent on the teaching units It must not be a national service within the public health service - The time may come when all practitioners undertaking maternity work in such a service will be required to possess a diploma or a higher qualification in obstetrics and gynaecology after an adequate period of post graduate study This should be one of our immediate aims

Post graduate facilities are rare and hard to secure in this country though in Manchester as we know there is an excellent scheme for post graduate obstetrical work Such courses should be more general, more continuous more in demand, and the practical work conducted by the post-graduate student himself should be more extensive and varied The development of post graduate teaching and the facilities for practical experience under university control is an urgent problem to day and it is being seriously undertaken in a few centres only Yet we can not expect a very great demand for post graduate courses in the present circumstances of practice in this country The heavy financial burden thrown on the practitioner by absence from his practice while undertaking post graduate study, and the exacting nature of this course in obstetrics will require careful consideration The possibility of some form of compensation such as a diploma is the least that should be offered

EXAMINATIONS

The whole system of examining—the system of mental tests—that we apply to our students is causing anxious thought to many Just as our methods of teaching—established long ago by and for the few who were educated in a more formal and classical age—are not always congenial to the modern teacher so it is that our methods of examination which have endured for a century may not be altogether suitable to modern requirements It is true that all scientific men must have a theoretical as well as a practical training This was recognized by the Brahmins several centuries B C

> He who is trained only in theory and is not experienced in practice knows not what he should do when actually dealing with a patient on the other hand a surgeon who is educated in practice alone and knows nothing of science will not earn the respect of better men

It is desirable that all doctors should show that they have had a good general education Facility of expression is an important indication of brains ' So we test the theoretical knowledge and the powers of analysis and expression in good English by means of papers This is a right method and should be retained The results, however are often lamentable in regard to arrangement grammar, punctuation methods of expression and legibility of handwriting putting aside the question of knowledge displayed I fear that we are all too lenient in regard to this part of the examination and perhaps do not realize all we should look for in such a mental test If the assessment were rigid I imagine that only about 10 per cent of candidates at the very most would be found to write papers that could be regarded as satisfactory But in some measure this is our own fault How many students in the whole of their medical careers receive instruction in the proper methods of demonstrating their knowledge on paper and at viva voce examinations? Recognizing this for a number of years I have given to my students one or more lectures on how to learn and how to utilize knowledge and I have constantly discussed these matters during class instruction I hope the future will see a development along these lines and that students will be taught this important aspect of learning early in the curriculum

The clinical examination if properly conducted is most valuable but it would probably be better if more time were spent on it The difficulty lies in the short duration of the whole examination Any large number of students can of course be engaged at one and the same time in writing answers to the questions set in the papers but if two or three hours were to be devoted to the

clinical examination of each student in the two or three days allotted to the whole examination an army of examiners would be required. The same applies to the viva voce examination in pathology which should be concerned only with the relation of pathological appearances and lesions to the signs, symptoms, and progress of disease. In Sweden there is no formal final examination at the end of the seven or eight years medical course. The student is taken by the professor for a couple of hours or possibly for one-half of a day and is questioned orally only. He is called upon to examine and to discuss the diagnosis and treatment of cases, the pathological findings and so on. If the professor, who already knows his man, is satisfied, the candidate is passed in that subject. In most university centres in Sweden, with its small total population of about 6,000,000 persons, the number of students is not very large and with no definite time or date for the examination of each student, it is not difficult for the professor who has no external examiner to consider to manage matters satisfactorily. It has been suggested in this country that in addition to the ordinary examinations the record of each student in regard to his clinical work in the wards should be fully described by his teacher and submitted to the examiners at the final examination in evidence of the candidate's practical capacity and fitness or the reverse. I believe that this arrangement has been adopted in some places. Most teachers and examiners would welcome an extension of the practice if it properly controlled, accepting such evidence in the place of the less complete method of clinical examination now employed.

It appears then that the student should receive definite instruction early in his career as to how to use his hands and to express himself. This would enhance the value of the teaching he subsequently received. It would enable him to do his examinations better and to become a more efficient practitioner. The examination should consist first of a clinical test conducted by two of his teachers between the completion of the candidate's clinical course and the examination proper. If the student fail in this clinical part he should be relieved from competing the examination, for it is a sad waste of time in most universities that a student sadly pass the clinical examination regardless of his paper. This would save the examiners time and they could devote more to the examination of the candidates whose clinical work had been satisfactory. The second part of the examination for these would comprise written answers to the papers and a viva voce test in pathology.

With regard to the examination of post-graduates for the higher degrees and certificates the case is somewhat different. At most universities and colleges in this country conduct these examinations on exactly the same lines as those for students wishing to qualify. This does not seem to be right. If a man enters for the final Fellowship examination in surgery at any Royal College of Surgeons he is desirous of obtaining one of the highest surgical certificates and in many cases intends to follow a surgical career. There should be much more demand therefore for his personal surgical record not only in respect of the resident and other posts he may have had but also of the actual surgical work he has done. For this provision is made in the regulations governing the membership of the British College of Obstetricians and Gynaecologists. Before a candidate can enter for the first examination which consists only of a three hours examination of one hour's duration on any aspect of obstetrics and gynaecology he must submit a record of the posts he has held—a certain minimum being required—together with a record of a certain number of obstetrical cases and gynaecological operations conducted by himself. Moreover an obstetrical and also a gynaecological thesis on some of the cases must be submitted. It is only when these records are accepted that the candidate is examined in the way described.

Clinical Practice

In this sphere we have already attained a very high level of accomplishment. It is not so very long since gynaecologists were regarded as accoucheurs trying to do surgery and obstetricians as midwives. Everyone knows that in certain London hospitals there were until the present generation forbidden to attempt major surgery. We also know how the stunting blight has long remained and indeed has not yet been entirely removed from the gynaecological practice that was so unfairly afflicted. Lawson Tait with his courage and dominance, Alexander with his regard for physiological principles and Donald with his tact, technical skill and wider acceptance and application of scientific advances took prominent parts in the emancipation of gynaecological surgery as we know it to-day and played a part in a critical era of technical perfection. The present generation of gynaecologists old and young has completed the triumph. Among them are men known the world over as craftsmen in surgery no less competent than the most expert general surgeons of the time. Yet we must beware lest we become self-satisfied for there is still too wide a gap between the best and the worst. There is also ample room for improvement among the most proficient and this is related chiefly to perfection of technique and the application of correct procedure all of which require thought and then further thinking.

The greatest advances in gynaecological surgery have been not so much in the technical improvement of radical operations which unhappily are still sometimes necessary as in the development of conservative and reparative procedures. With the latter I have recently dealt and to them I need not again refer but I should be failing in my duty were I not to mention the progress that has been made in the treatment of obstetrical injuries which so often lead to prolapse later. In this campaign Manchester has led the way. It is not for me to say how much credit is due to Doyle, how much to Fothergill or to others but for the Manchester school has spoken with one voice and the rest of the gynaecological world has responded. That obstetrical technique and the prevention and alleviation of therapeutic measures of the disorders associated with childbirth have not advanced at the same rate is to some extent intangible for gynaecological surgery has simply followed the trend of all surgical procedures while obstetrical practice has not had similar opportunities. So it is that many have tried quite wrongly to separate the two parts of our subject, instead of bringing their mental and manual efficiency to the standard required of the Complete Gynaecologist—the man competent to deal with all aspects of the science and art of our comprehensive subject.

Spirit of Obstetrics and Gynaecology

Most of us recognize that what we as a country have done, and so may be during the last half-century that we have not had another time for opportunity only to consolidate our present position and as we have seen there has been a danger of our losing part of our territory. Those who have real interests must press them to their uttermost possibilities that we take ourselves and our subjects seriously and that we are pressing for more than is our just portion. As we have stated gynaecology and obstetrics represents in a way which no other branch of medicine can do the practical side of biology so far as the human subject is concerned. Scientific speaking medicine, surgery and the specialties both in their preventive and curative aspects are extensions of that

branch of gynaecology and obstetrics which concerns child welfare It should not be necessary therefore to establish our own status for we freely grant the acquired status of the daughter branches of our subject, but it seems that it is necessary for in the future we must have our house in order our privileges recognized and our facilities for progress ample and secure There now exists a British College of Obstetricians and Gynaecologists In this institution lies I believe the future of British gynaecology and obstetrics The rapid progress of our College in two years towards the fullest recognition and usefulness may be traced to the fact that all the details of its formation projects and possibilities and the means and performances necessary to bring these to fruition, were fully realized in advance The College has progressed according to plan and not to chance

The younger men who will take the places of those of us who have been concerned in the formation and policy of the College and in establishing its traditions and ceremonies should fit themselves for the task that awaits them Each should accustom himself to envisage not *only his own or immediate local development* but the development of gynaecology and obstetrics generally It should become the firm resolve of all to make our College the guardian in this country of our branch of medicine It should constitute our central organization, both for teaching and applying mental tests to individuals and for assisting and encouraging research, remedying social anomalies within our province, and improving the practice of our art The declaration which all members of the College are required to sign well expresses this ideal

It is always easier to speak of the future which is on the lap of the gods, than to analyse the present, which is before everyone as an actual experience Nevertheless, provided we are capable of framing sound judgements from our experiences and have enough imagination and constructive ability, we should be able to plan to model and to build an edifice, imposing useful, and capable of expansion in the future

That for which we are striving—the recognition of all we are and mean in the advance of medical science—will be consummated if we continue to follow our ideals

[Professor Blair Bell's lecture concluded with a section entitled 'Conditions of practice in the future']

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THE ACCIDENTS OF THE MALE CLIMACTERIC

BY

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The title of my paper requires some explanation No such condition as a male climacteric is recognized by orthodox medicine In man as opposed to woman there is no well-defined termination to the reproductive function and examples could be given of men who have retained their capacity to procreate in advanced old age Recently I appeared as an expert witness in the law courts in a suit which turned on whether a man of 83 could be the father of a child We won our case not only because the collateral evidence was strong but because I could quote many instances of spermatogenesis in the testes of men of 80 and even of 90 Metchnikoff actually cites the case of a man of 103 in whose testes spermatozoa were found And if examples are required of the retention of sexual passion we have only to think of Goethe who at the age of 74 fell so desperately in love with a girl of 17 that when his suit went badly he was prostrated with grief and no longer desired to live Indeed it was this episode in his life and a previous one in which he had been more successful that suggested to him the theme of *Faust*

But despite these examples of individual men who have retained their sexual capacity in old age I still think that it is possible to talk of the male climacteric The idea is not a new one for long ago Arab and Greek mystics wrote of the grand climacteric which they placed at the age of 63 In medical literature the notion of a critical age for man has also found a place although such eminent authorities as Kraft Ebbing and Vinay have denied that there is any psychological evidence to support it But it was to the term male menopause that Kraft Ebbing was chiefly opposed and as Gregorio Maranon says in his excellent work on the climacteric such an expression as menopause implies an initial error By the word menopause is meant a cessation of the menstrual flow and to use it in reference to the male is manifestly wrong The term climacteric is less linked with the idea of menses and therefore greatly to be preferred but in order to avoid any possible confusion Maranon has selected the paraphrase critical age

Before entering into a description of this period of man's life it is necessary to point out certain essential differences that distinguish it from the corresponding age in a woman First it should be remembered that the female menopause is primarily a genital episode having secondary reactions on other systems and organs In the case of man the climacteric has a different significance Man's critical age is as Maranon has expressed it a stage of organic evolution in whose centre the extinction of active genital life stands out prominently although this is not the axis on which it turns As adolescence marks his passage from childhood to maturity so does the climacteric represent his descent from maturity to old age The biological foundation on which it rests is genital decadence and secondary neuro endocrine reactions

We need not be surprised that the climacteric is less noticeable and less defined an event in the life of man than in that of woman or that it is less closely linked with the extinction of the genital function Although reproduction is an act in which both male and female play a part that played by the female is immeasurably greater than the part allotted to the male Nature has expended all her ingenuity in fitting woman for her role as major partner in the work of carrying on the race Whilst in man other activities have been considered in woman she has allowed herself no latitude in her planning and has sacrificed everything to the end in view Whether it be pleasing or not to her political aspirations it is a fact that everything in woman is sacrificed to the reproductive function But she can at any rate console herself with this arrived at a certain age she is once and for all relieved of the chief disabilities from which she has previously suffered The menstrual cycle ceases the organs of reproduction involute and she can enjoy her rest For man on whom the task of reproduction places no burden this definite and sudden change is totally unnecessary Procreation is for him an activity that makes small demands on his resources, he can carry the burden of

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the reproductive function ever under its physical powers are on the wane. So it happens that involution of the reproductive system occurs at a later date in the male than in the female, and in certain exceptional cases may be postponed to ripe old age. In the majority of men however we find signs of involution beginning in the organs of generation during the later part of the fifth decade and the beginning of the sixth—the age of the Greek grand climacteric. The cause of the involution is imperfectly understood but as we know that the ovaries play an important part in the involution of the female genitalia so we can be certain that the testes exert a controlling influence on the involution of the reproductive system in man.

But testicular insufficiency is introduced with less abruptness than is the ovarian insufficiency that marks the female menopause. In the case of woman the ovaries pass from full activity to complete cessation of function in the course of a few months. In man the process of genital extinction may be spread over several years. As a result the increase in thyroid activity which characterizes the female menopause is less marked in the case of the male. The disturbance of his endocrine balance is gradual rather than sudden and he is exempt from the violent flushings of heat, the palpitations and the tachycardia that so commonly reveal thyroid dysfunction in the female. When hyperthyroidism occurs in the man it usually reveals itself only in a gradual loss of weight and in a mild degree of psychic irritability.

The menopause is a physiological process and in the perfectly healthy female is accompanied by only two symptoms, the cessation of the menstrual flow and the occurrence of certain vasomotor crises commonly known as flushings. Unfortunately there are comparatively few individuals who can be regarded as perfectly healthy and more often than not the menopause is associated with various symptoms of ill-health. Not only is it a period of endocrine instability but we find that just as constitutional weaknesses tend to manifest themselves at the time of adolescence so do they show a disposition to return at the period of involution. Moreover the work of involution of the reproductive system is not always accomplished without the occurrence of some accident. For example we find that in the female such diseases of the breast as menstrual mastitis, mammary cysts and neoplasms are particularly likely to develop at this time. Later I will describe some of the accidents that are likely to occur during the process of involution of the male reproductive system. First however it will be convenient to consider certain changes of a constitutional character that occur at the time of his climacteric.

Changes in External Appearance

Just as the woman who has passed the menopause tends to put on weight and assume the rounded curves of the matron so does the man at the time of his climacteric show a disposition to become fat. It is not so much that he becomes generally obese but that he accumulates fat both within and on the walls of the abdomen. Indeed abdominal adiposity may be seen in a man who otherwise remains thin. When this accumulation of fat is excessive various minor disturbances of health may be produced. Circulatory embarrassment is the commonest. The patient because he feels short of breath after exertion stops all exercise and muscles still more rapidly in the direction of old age. Next to the circulation the digestion is most prone to suffer. Flatulent dyspepsia is a common sequel and with the increase in intra-abdominal pressure due to his meteorism there is produced a further embarrassment of the circulation. The patient catches up in this vicious circle of his abdomen resigns himself to his armchair and his newspaper.

Another result of this tendency to abdominal adiposity is a inability to develop exercise. Increased abdominal pressure and weakening of the abdominal walls produce just the conditions which are necessary for this and it is to the male climacteric that the truss makers owe half of their business. Even when no bulging can be detected in the region of the inguinal canals symptoms may occur which point to an equal weakness in a stretching of muscles. Not infrequently a patient whose abdominal walls have suffered as a result of his progressive and underexercise will complain of a pain that is only relieved by lying down. His trouble can be dealt with by the use of a light truss or a well-padded belt. But in many cases the change in external appearance may be towards thinness rather than fat. Certain women who have struggled up to the time of the menopause with a disposition to put on weight find that at last they can eat what they like without any anxiety about their figure. So too in rare cases men who show that they have reached the climacteric by a loss of mass. The reason is the same in both sexes—overaction of the thyroid.

While an alteration in weight is a common feature of the climacteric it can by no means be regarded as essential. A man may conserve his figure and maintain his weight and only when his friends look at him through some subtle difference which they find difficult to put into words. He looks older, they say, and by this they imply that he has moved not gradually but suddenly in the direction of old age. In this his friends are right, for it is an undoubted fact that our progress through life is not so much a steady continuous movement, as a motion which can best be described as a series of jerks. The boy suddenly becomes a child, the child an adolescent, the adolescent a man, and in the downward course the mature man passes quickly into the climacteric and finally, if he survives it, he is plunged into senility. As physical science has found that changes in the orbit of the electrons occur in jumps and so suggested that variations appear suddenly as sports, we doctors should realize that our journey through life is by a series of abrupt steps rather than by an even progress from the cradle to the armchair. Perhaps when we understand better the laws under which we live we shall discover some basic rhythm underlying these changes, but in the meantime we must be content meekly to record as did that greatest of observers Shakespeare when he gave us his classical description of the seven ages of man. But the upset of the endocrine balance and the metabolic changes marking the climacteric do not reveal themselves only in an alteration of external appearance. There are sometimes more definite disorders in a change in the patient's character. These psychological features of the climacteric will now be discussed.

Changes in Psychology

In man's social relations and in his business or professional activities two opposing sets of forces may be said to be at work—the native of ambition and the passion of combat. In youth the former predominates, for youth is characterized by its submission to impulse, its disregard for consequences, its lack of self-criticism and its fondness for the new adventure. These are the forces that lead to great discoveries in art and science and to achievements in general. With advancing age these active forces play a progressively smaller part in the life of the individual while inhibitions prevail increasingly. The work of a man who has reached the climacteric is stripped of the audacities and aggressive character of youth and he moves in the direction of conservatism. This is the normal course of mental evolution but as exceptions to this general law we find many examples of artists statesmen and scientists who have accomplished their best

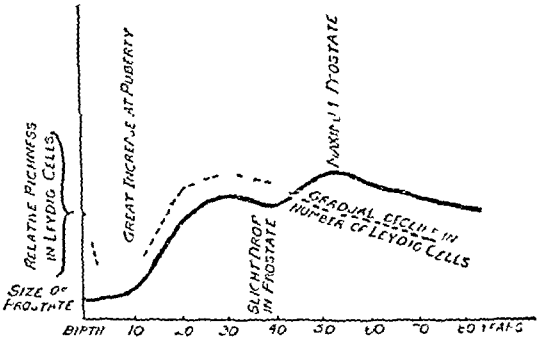
and most revolutionary work after the age of 50 What is of great interest from the standpoint of this paper is the fact that almost without exception these unusual men who have retained their power to innovate have also retained their sexual activity

But just as we find few women who pass through the climacteric without giving evidence of some emotional disturbance so there are few men in whose psychology the endocrine readjustments of the period are not reflected As a rule this shows itself in nothing more marked than a certain degree of emotional instability, but in certain cases greater deviations from the normal may appear Not infrequently these disturbances have a sexual character The critical age is often associated with a sudden flare up in the dying embers of desire Novelists have made good copy out of the dangerous age in woman In man the corresponding phenomenon has because in general it is less marked received little attention As a rule it is productive of nothing more sensational than a conflict between desire and the capacity to achieve—a conflict that may in some cases be the starting point of a neurosis But sometimes this increase of sexual urge has graver consequences especially when it takes a somewhat abnormal form The most frequent of these abnormal forms is what has been termed the gerocomic tendency '—that is the desire of an elderly man for very young girls At times this urge reaches an intensity that is definitely pathological and brings the victim into conflict with the law It must surely be apparent to the most unimaginative of magistrates that the eminent and elderly gentleman arrested in Hyde Park for indecent behaviour should be treated as an invalid rather than as a criminal A man who has led a highly respectable life for sixty years does not suddenly run counter to all his habits and indulge in indecency unless he is the victim of a compulsion that is stronger than his will His exhibitionism is as certainly the psychological consequence of an upset of the endocrine balance as is the sudden infatuation of a woman in the mid forties for a youth of half her age It is possible that he may always have harboured certain latent and unsatisfied fantasies but it is the neuro endocrine instability of the climacteric in its excitable phase that has resulted in his surrender to what had previously been inhibited Fortunately these manifestations of a disordered psychology are comparatively rare and in the majority of instances the change in mentality associated with the climacteric is reflected in nothing more serious than say a disposition on the part of a previously cautious business man to gamble or in an alteration in the character of pictures that an artist paints or novels that a novelist writes Interesting as these speculations are it is with the local manifestations of involution rather than with the constitutional and psychological that I as a genito-urinary surgeon am chiefly concerned and with these local changes I shall now deal

Changes in the Reproductive System

Of [illegible] importance on account of the difficulties it [illegible] possible to talk otherwise than the changes that affect us not a new one for long was first drawn to the idea wrote of the grand climacteric years ago when I was the age of 63 In medical literature the causes and nature of age for man has also found a place although was struck by the authorities as Kraft Ebbing and Vinay have sections of an there is any psychological evidence to support the process of was to the term male menopause that I distension of was chiefly opposed and as Gregorio Marañon the formation excellent work on the climacteric such an I found that menopause implies an initial error By impressed by this phrase is meant a cessation of the menst it in some of his prostatic enlargement there are to be found signs of regression and degeneration not only in the prostate but also in the whole of the genital tract, more especially in the testes and the seminal vesicles The changes in the prostate are only part of a general involutionary process affecting the whole of the reproductive system But even if we are right in regarding enlargement as an accident occurring during the course of prostatic involution, we are still faced with the difficulty of explaining this accident Why does one prostate undergo shrinkage after active sexual life has ceased, whilst another not only fails to shrink but actually enlarges?

If we examine the prostate at various periods throughout life we find that it increases in size up to the age of 30 and then, diminishing slightly reaches its maximum between 50 and 60 After this, in a healthy man who has passed satisfactorily through the ' menopause it falls steadily so that in old age it has shrunk to perhaps half its previous size The following figure shows graphically the changes in the prostate from childhood to old age



The curve has been constructed from Lowsley's paper dealing with the *average* weight of the prostate at different times of life so that it includes the normal with the pathological We are ignorant of the factors that determine whether or not a gland undergoes successful involution Ciechanowsky believed that there was no actual increase of glandular tissue in cases of enlargement but that the swelling resulted from obstruction in the prostatic ducts causing distension of the acini It is certainly true that the enlarged prostate is full of distended glands for if we incise it a milky opalescent fluid exudes and a microscopical section of the gland reveals the presence of many distended acini Whether this alone will explain enlargement I am doubtful and I have at any rate never been able to establish any relationship between the size of the prostate and the degree of distension of the glands But overloading of the glands with secretion certainly plays a part in enlargement and it is probably on this account that prostatic *massage* frequently relieves the symptoms in early cases of obstruction

Ciechanowsky considered that the occlusion of the prostatic tubules was the result of surrounding inflammation followed by fibrosis and subsequent contraction If the inflammation is in the neighbourhood of the ducts, the result will be distension of the acini and general enlargement of the gland On the other hand if it is situated in the neighbourhood of the acini general shrinkage takes place with the production of a small fibrous prostate But from my own personal observations although I have found a clear connexion between previous attacks of inflammation and the production of a fibrous prostate I have never been able to establish any relationship between an enlarged gland and a history of old infections For this reason I am unable to accept Ciechanowsky's inflammatory theory as a satisfactory explanation of the etiology of enlargement Even less

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can be found to support other theories that have advanced such as that enlargement is the result of sexual excesses or sexual starvation or that it is in the nature of a compensatory hypertrophy The same is true of the observation that prostatic enlargement is a disease which has a definite geographical or to be more exact ethnographical distribution If we could explain why it is so exceedingly rare amongst Mongolians we should be in possession of a valuable key to its etiology

Accidents Affecting the Testicle

Next to the prostate the part of the genital tract that is most likely to suffer during the course of involution is the testicle It is during this period of life that hydroceles are particularly liable to develop Such hydroceles have up to the present been termed idiopathic since no satisfactory explanation of their etiology can be given In my opinion a better term would be degenerative as they are almost always secondary to degeneration in the testicle itself It has of course long been recognized that the testicle associated with a hydrocele in elderly men is often hard and a microscopical examination of the gland invariably reveals fibrosis associated with degenerative changes in the tubules and ducts These changes are patchy in distribution that is to say one finds areas that are comparatively normal and adjoining areas where the epithelial cells are degenerating or have even disappeared When we consider the testicle rather than its coverings we find that the epididymis is more likely to suffer during this period of involution Clinically this is shown by the development of multiple retention cysts due to stenosis of the epididymal canal and vasa efferentia from the contraction of surrounding fibrous tissue Mr Ogier Ward states that in a study of cases of multiple epididymal cysts he found the average age at which they occurred was 55 a fact which in my opinion points to their being degenerative phenomena They may indeed be considered analogous to the cysts so commonly found in the ovary at the time of the menopause As a rule they cause only a trifling discomfort to the patient but since they result in an increase in size of the testicle they are not infrequently the cause of unnecessary anxiety The simplest method of treatment if treatment be required is tapping but if this only produces temporary relief excision may be carried out

Although the seminal vesicles show marked signs of degeneration in cases of prostatic enlargement any symptoms for which they may be responsible are so often complicated with and overshadowed by the symptoms resulting from prostatic disease that they are negligible Sometimes as a result of obstruction in the ejaculatory ducts the vesicles become distended or pouched and subsequently more dilated and are often the site of a chronic inflammation Occasionally a stone is formed from the deposition of lime salts round a nucleus of epithelial cells and spermatozoa These calculi or concretions may give rise to such symptoms as pain in the pelvis ejaculation pain on defaecation and haematuria Their chief importance however is in the fact that they may be mistaken for malignant disease and thus lead to an error in diagnosis

Treatment of Disturbances at the Climacteric

The treatment of the male climacteric consists in dealing separately with the various disturbances to which it gives rise In the case of a woman it is otherwise for not only is her menopause definite in character but we are fortunate in possessing various extracts of a [illegible] etic nature It is doubtful whether even if we possessed them similar benefits would result from the use of particular extracts in man I have observed no [illegible] after attempts to increase the supply of testicular [illegible] by tying the vasa nor have such bland efforts as [illegible] therapy as the giving of prostatic extract to cases of enlargement borne any fruits If not nothing I have seen leads me to believe either that the prostate has any internal secretion of its own or that its enlargement is associated directly with changes in any of the endocrine hierarchy other than the testis Until therefore we understand more fully the factors responsible for prostatic enlargement and until we are able to postpone in man the arrival of his critical age we shall be compelled to deal with the various accidents that accompany it by the crude but nevertheless successful methods of the surgeon

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(Translated by Gould 1907)

OTITIC HYDROCEPHALUS A REPORT OF THREE CASES

BY

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In each of the following cases the clinical evidence suggested up to a point the presence of a cerebral abscess secondary to otitis media The question at issue when the patients were first seen by me was whether an exploratory operation should be undertaken In all cases the application of certain criteria led to the diagnosis of otitic hydrocephalus symptoms of increased intracranial pressure were relieved by lumbar puncture and the patient made a complete recovery

Of the pathological basis of otitic hydrocephalus we have no precise knowledge It is a condition in which otitis media—with or without such complications as a preliminary meningitis extradural abscess or lateral sinus thrombosis—is associated with an excess of normal cerebro-spinal fluid under excessive pressure The clinical symptoms are those of increased intracranial pressure—headache vomiting and papilloedema—and in this respect are similar to those caused by a cerebral abscess There are however certain points of clinical distinction between the symptoms of otitic hydrocephalus and cerebral abscess upon which the differential diagnosis may provisionally be made at the bedside When this stage has been reached the diagnosis must be confirmed by appropriate investigation of the cerebro-spinal fluid The main points of clinical importance are as follows

1. The most striking feature of otitic hydrocephalus is swelling of the optic discs This with haemorrhage and exudate frequently amounts to several dioptres In cerebral or cerebellar abscess on the other hand the optic discs commonly show no more than a slight venous engargement Such a degree of swelling as is met with in otitic hydrocephalus is rarely seen in a case of abscess and is then usually accompanied by extreme drowsiness

2. In striking contrast to the appearance and symptoms in otitic hydrocephalus is the general appearance of the patient the deformity of Bezold as the seat of origin and as painless as a [illegible] and [illegible] The patient then comes under observation [illegible] loss of function consequent to the deformity The condition may be considered as a feature of the [illegible] which has ended in faulty alignment and this faulty alignment has altered the arc

3 The common situations for abscesses are temporal and cerebellar By the time symptoms of increased intracranial pressure are evident, a cerebellar abscess will have given rise to definite localizing signs, of which the most important are nystagmus towards the site of the abscess, and incoordination in the use of the upper limb on the same side A left temporal abscess also (in the case of a right handed person) will almost certainly have produced localizing signs in the form of word forgetfulness Weakness of the opposite face and a homonymous defect in the opposite visual field are also signs of localizing value in temporal lobe abscess A right temporal abscess however is relatively silent and the differential diagnosis from otitic hydrocephalus is more difficult

If on the basis of these clinical points of distinction the condition of hydrocephalus is suspected, lumbar puncture should be done a manometer such as Greenfield's being employed The characteristic features in hydrocephalus are a high pressure and a normal fluid—that is *no* excess of cells or protein Fluid from a case of cerebral abscess is also likely to show a high pressure but this is not so high as in hydrocephalus Taking the average normal pressure as 150 mm H O, the pressure in abscess may be from normal up to 250 while in hydrocephalus it is more commonly in the neighbourhood of 300 Finally so far as I am aware the fluid in a case of cerebral abscess is never normal Usually there is a small excess of cells (mainly lymphocytes with a few polymorphs), always there is an excess of protein

The diagnosis being settled by these means the condition of otitic hydrocephalus will clear up if treated by lumbar puncture Enough fluid should be removed on each occasion to bring the pressure to normal and the procedure should be repeated so long as evidence (symptomatic or manometric) of increased pressure persists Any local condition such as mastoiditis or lateral sinus infection should be treated on its own merits but the existence of hydrocephalus is not in itself an indication for operative intervention The conclusions thus stated were reported more fully in a paper by the writer in *Brain*[1] of this year The cases now to be related have been encountered since that time

CASE I

Doris S aged 5 Under the care of Mr T B Layton Guy's Hospital Seen September 13th 1931

The patient was admitted with symptoms of right sided mastoid infection three weeks ago Mr Layton operated next day and found dense bone with a bead of pus in front of the lateral sinus At this time some neck stiffness was noted but disappeared later The temperature settled down but has gradually risen again There has been a good deal of complaint of frontal headache Yesterday the patient had a rigor

Examination—Child alert fretful but later co operated excellently Right handed No speech defect Optic disks show papilloedema 4 dioptres on right 1 dioptre on left Visual fields—full to rough tests Cranial nerves—no defect No incoordination or weakness Deep reflexes—present Abdominal—present and equal Plantar responses—flexor No [illegible] stiffness Heart and chest—normal

Provisional Diagnosis—Lateral sinus thrombosis and otitic hydrocephalus

Lumbar Puncture—Clear fluid Pressure between 250 and [illegible] is not wrote of [illegible] H O Examination No cells Protein 0 02 per [illegible] the age of 65 [illegible] eration the same day showed lateral sinus thrombosis dealt with [illegible] age for man has [illegible] 931—Papilloedema subsiding Child better authorities as Kraft [illegible] [illegible]—Condition excellent Temperature there is any psychological Papilloedema [illegible] Pre right was to the term male menopause recovery complete distens was chiefly opposed and as Gregor [illegible] no the formation excellent work on the climacteric such an I found that menopause implies an initial error By depressed by this phrase is meant a cessation of the menstrual in some of his [illegible] that in cases of

* A lecture delivered to the Sunderland Division of the British Medical Association November 1931

May 21st 1931 Mastoid operation by Mr Layton Extensive bony disease Dura and lateral sinus normal May 24th 1931 Sudden rise of temperature to 104° Further operation showed lateral sinus partially thrombosed Jugular vein tied Anti streptococcal serum given Subsequently temperature gradually subsided and after June 15th 1931 remained normal General condition good but patient complained of severe bifrontal headache on waking in the morning and of failing vision

June 24th 1931—Mentally clear Speech normal Optic disks—4 dioptres of papilloedema right and left with haemorrhages and exudate Visual fields—full Cranial nerves—slight weakness of peripheral type right face (ascribed to operation) No other defect No weakness or incoordination Deep reflexes—present and equal Abdominals—present and equal Plantar responses—flexor

Provisional Diagnosis—Otitic hydrocephalus

Lumbar Puncture—Clear fluid Pressure 312 mm H O Examination No cells Protein 0 02 per cent Further lumbar punctures were done at increasing intervals of time until the pressure became normal

July 11th 1931—Papilloedema less Occasional slight headache Left hospital later recovered

CASE III

Winifred B aged 18 Under the care of Mr Nicol Rankin Central London Throat Nose and Ear Hospital Seen March 12th 1931

History—Admitted February 24th 1931 with a story of right otorrhoea for two months and complaint of headache for the past week with vomiting after every meal Tender area over right mastoid antrum February 25th 1931 Operation by Mr Rankin—right Schwarzte mastoid operation March 10th 1931 Rigor followed by rise in temperature Right sided tinnitus and occasional twitching right side of face

March 12th 1931—Mentally clear and co operative Speech normal Right handed Optic disks—papilloedema 5 dioptres right and left with haemorrhages and exudate Visual fields—full to rough tests Cranial nerves—nystagmus elicited on conjugate deviation to left Slight weakness right orbicularis palpebrarum Other cranial nerves normal No weakness or incoordination All deep reflexes present and equal Abdominals—present and equal Plantar responses—flexor No neck stiffness No signs elsewhere

Provisional Diagnosis—Otitic hydrocephalus associated with lateral sinus thrombosis and labyrinthitis

Operation by Mr Rankin the same day revealed lateral sinus thrombosis which was dealt with

Lumbar Puncture—Clear fluid Pressure not measured Examination No increase of cells or protein

The patient made an uninterrupted recovery and was reported by Mr Rankin on May 3rd as perfectly well

There are two points in the story of these cases which deserve further comment One is the occurrence in all three of lateral sinus thrombosis It has been suggested by Leidler arguing from the experience of a single case in which the same association was observed, that hydrocephalus may result from lateral sinus thrombosis on account of obstruction to the venous outflow from the cranium Against this hypothesis it may be said that if it were true hydrocephalus should be a frequent instead of a rare accompaniment of venous thrombosis Moreover among the cases of otitic hydrocephalus that have so far been published there have been several in which no evidence of lateral sinus thrombosis has been present The second point of interest is the age in the second case described above It would appear from the cases so far recorded that otitic hydrocephalus is rarely met with in adults

prosta[illegible] thanks are due to Mr T B Layton and Mr Nicol relatio[illegible] for inviting me to see their patients and for permission old in[illegible]

Cerebral [illegible]

explana[illegible]

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TREATMENT OF ADOLESCENT COXA VARA*

BY

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Adolescent coxa vara needs little introduction to this Section. Briefly, it is a condition arising about puberty in girls and boys in which from some unknown cause the head of the femur becomes separated from the neck of the femur. This separation takes place at the epiphyseal line and is thus different from the so-called displacement of an epiphysis due to trauma in which the line of cleavage does not entirely follow the epiphyseal line but passes for some distance through the metaphysis. This separation may be complete or incomplete and may occur rapidly or gradually causing a variety of clinical types demanding a variety of treatments. We may consider the following types:

MINOR INCOMPLETE SLIPPING

With strenuous use of the hip-joint—for example during a game or a romp—the epiphysis may slip just a trifle. The patient has some pain and a limp. These symptoms may be transient, lasting a day or two, and insufficient to bring the patient under the observation of a doctor. If however the doctor does make an examination he finds at the hip-joint some limitation of movement in all directions and would diagnose the condition as a sprain of the joint but for the radiogram. The radiogram reveals the diagnosis a fact which emphasizes the importance of taking a radiogram after every suspected injury and of comparing the damaged joint with that of the opposite side. This incomplete separation it is impossible to reduce, nor is reduction necessary, as the slight anatomical abnormality gives rise to no disability. Treatment consists in resting the hip-joint until the head of the femur has become firmly re-attached to the neck. It goes without saying that this treatment must be efficient, and if a crutch is placed on the weight-relieving calliper care should be taken that weight is indeed relieved.

RECURRENT INCOMPLETE SLIPPINGS

The original slipping may be neglected by the patient or its importance may not be appreciated by the doctor. The patient resumes his normal life and may have no further trouble. There may however be a recurrence of symptoms and after several such the x-ray change becomes unmistakable. This displacement is incomplete and it is not possible by manipulation to reduce an incomplete displacement. I repeat this statement for emphasis and to challenge contradiction. It is not possible by manipulation to reduce an incomplete displacement, for although a considerable force can be exerted on the neck fragment with the leg the capital fragment can not meanwhile be held immobile and the force is expended on the capsule of the hip-joint and not on the epiphyseal line. This is an important fact and its lack of appreciation accounts in part for much faulty treatment. It is true that under anæsthesia it is possible to actually to rotate the leg fully and to abduct the leg fully, but only at the expense of damaging the capsule and with subsequent loss of movement at the hip-joint. This accounts for the paradoxical statement based on follow-up reports that untreated cases of adolescent slipped epiphysis do better than treated cases.

Treatment for an incomplete slipping should therefore be to rest the hip-joint until the head and neck have become firmly re-united in their new position. Then if the epiphyseal coxa vara deformity due to the malunion between the head and the neck warrants an osteotomy of the femur, so it should be undertaken. Attempts have been made by surgeons who have recognized the impossibility of reduction by manipulation to reduce the displacement at open operation by osteotomizing the neck close to the epiphyseal line after exposing the hip-joint and opening the capsule. Wilson of Boston advocated this. We have done it once; the result was complete destruction of the joint following an aseptic necrosis of the head of the femur. The necrosis was solely due to the surgical intervention, but whether preventable or not I do not know. This one experience has precluded for us a further trial of the method.

RAPID COMPLETE SLIPPING

It sometimes happens that the separation takes place rapidly and is complete. The symptoms then resemble those of a fracture of the neck of the femur and immediate complete loss of function is usual. In this type closed reduction is possible and is the correct treatment. The closed reduction may be done gradually or rapidly. The rapid method is associated with the name of Whitman. Under anæsthesia traction is exerted on the leg to pull it down, then the leg is forcibly internally rotated and finally adducted, and is held by a plaster spica in that position. My own preference is for the gradual method of reduction by means of prolonged traction on the leg, and I prefer skeletal traction to skin traction. A Kirschner wire or a Steinmann pin is inserted through the ankle of the femur, two cords extending from it run over pulleys fixed to the end of the bed, and are attached to 20 to weights. Counter-traction is by body weight, the foot end of the bed being raised 12 in. or more. This method is simple to apply even in a private house. The hip is not held rigidly immobile, and the muscles of the knee and the ankle can be exercised gently to prevent stiffness at those joints. The leg may be cradled in a Thomas knee splint, but that is a refinement. The traction is sufficient of itself to reduce the displacement; no additional and complicated splinting is necessary to overcome the adduction and external rotation of the leg.

Apart from its simplicity the gradual traction method of treatment has another and more important advantage. I have stated that if the slipping is gradual no method of reduction is of avail, but that if the slipping is rapid and complete reduction should be attempted. Now while as a rule it is possible to diagnose without hesitation every patient to one or other of these groups difficulty sometimes arises and one is uncertain whether reduction should be attempted or not. In such a quandary the gradual traction method has the advantage that any movement of reduction can be made which even if a fracture will not damage the hip-joint. Several times I have sent for an x-ray photograph at the end of that time will show whether the pull is taking place at the line of separation between the head and neck or is being exerted solely on the capsule. If reduction is not taking place the traction is discontinued and the patient treated as in Type 2 (incomplete slipping).

COXA VARA: THE RESULT OF SLIPPING

The slipping may be so gradual that at no time gives rise to symptoms and there develops the deformity of coxa vara as it does in its origin and as painless perhaps as genu valgum. The patient then comes under observation for the loss of function consequent to the deformity. The condition may be considered as a fracture of the cervical neck which has united in faulty alignment and this faulty alignment has altered the arc

* [illegible] Annual Meeting of the British Medical Association, London, 1931.

of movement at the hip joint—that is increasing the external rotation and adduction and diminishing (even abolishing altogether) internal rotation and abduction Should the diminution in abduction and in internal rotation be sufficient to cause disability, then the arc of movement at the hip joint can be restored to its normal by a subtrochanteric osteotomy of the femur—that is the malunion at the junction of the neck and head, brought about by nature can be counterbalanced by a second malunion of the femur in its upper third brought about by the surgeon

In this group come not only those patients who present themselves with a coxa vara without previous symptoms but also those patients seen at or soon after the occurrence of slipping and in whom closed reduction by gradual traction has failed or has been deemed inadvisable

Persistent Arthritis of the Hip Joint

Yet a final group remains in which persistent arthritis of the hip follows a slipping of the epiphysis In these patients one assumes that the blood supply of the head has been permanently damaged so that the head of the femur undergoes partial or complete necrosis We are familiar with this in the case of a transcervical fracture of the neck of the femur in which it happens more commonly because the blood channels in the ligamentum teres are more likely to be still patent in the adolescent than in the adult Complete separation of the epiphysis must one argues cause necrosis of the head unless the ligamentum teres vessels are still patent and escape damage The importance of preserving this remaining source of blood supply is a further argument in favour of the gradual method of reduction in preference to the rapid I have said that persistent arthritis of the hip may follow a slipping of the epiphysis Perhaps it would be more correct to say that it may be the sequel to a slipped epiphysis that has been treated for it is just as likely that the remaining vascular supply to the isolated head is damaged by the forcible manhandling of the limb by the surgeon at the attempt at its reduction as that the damage is done at the time of the slipping The slipping can only destroy the blood supply originating from the neck the forced manipulations of the surgeon may destroy in addition the vessels of the ligamentum teres

Persistent arthritis of the hip is easy to recognize clinically and the x ray photograph shows in old slipped epiphysis with consolidation between the epiphysis and the displaced head diminution of the joint space and increasing deformity and destruction of the head of the femur Arthrodesis of the hip joint is recommended as the best treatment

Summary

Treatment for a slipping of the upper epiphysis of the femur may be summed up as follows

1 When the slipping is gradual and incomplete relief of weight bearing must be maintained until the new position has been consolidated

2 When the slipping is rapid and complete gradual correction should be done by skeletal traction followed by relief of weight bearing until the new position is consolidated

3 When the sequel to the consolidation in the new position is an alteration in the arc of movement at the hip leading to loss of function a subtrochanteric osteotomy is necessary

4 When the sequel is a persistent arthritis of the hip, the hip joint should be arthrodesed

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A CASE OF BRACHIAL EMBOLECTOMY

BY

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A general labourer aged 66 was admitted to the East Suffolk and Ipswich Hospital with a double hydrocele His cardiovascular condition previous to operation was noted as unsatisfactory The apex beat was in the sixth interspace outside the nipple line, a soft systolic mitral murmur and occasional extrasystoles were present at the aortic area a systolic murmur and prolonged second sound Marked arteriosclerosis Corrigan pulse Blood pressure systolic 220 diastolic 85 The patient said he had been under treatment for heart trouble several years before but had not noticed anything wrong lately beyond slight shortness of breath although his work was strenuous

Radical operations were done under spinal anaesthesia On the morning of the ninth day he complained of numbness and loss of power in the right forearm and hand with pain just above the bend of the elbow The hand and distal two thirds of the forearm were pale and cold, with a dusky ring of injected capillaries at the upper end The radial pulse was absent but normal pulsation could be felt in the brachial artery just above the elbow

Operation.—Under local anaesthesia a four-inch incision ending at the elbow crease was made along the line of the artery, and the vessel gently mobilized two small lateral branches being carefully preserved A light intestinal clamp was placed on the artery two inches above the bifurcation and an opening one centimetre long was made one inch above the latter There was no flow *from the lower end* A *pair of fine curved sinus forceps* was passed down into the distal end and an embolus three quarters of an inch long with rounded ends was fished up A little leakage then occurred from the lower end of the vessel which was gently milked upwards in case any further clot were present although this seemed unlikely from the character of the embolus and the short time elapsing between onset and operation The artery was sutured with fine thread soaked in liquid paraffin interrupted sutures piercing all the coats were used On releasing the clamp excellent pulsation was immediately felt in the radial at the wrist and under the suture line During the operation the parts were soaked with 1 per cent citrate solution from time to time The wound was closed with one layer of silkworm gut sutures in the usual way and a light splint applied to immobilize the elbow, the hand being left free

The radial pulse remained full and regular and the arm warm and of normal colour The splint was removed in a few days and the elbow gently moved only after the tenth day When seen two months later the hand and arm were normal and pulsation could be clearly felt along the whole of the exposed length of artery Beyond a little shortness of breath his heart was not giving any trouble and he was doing his ordinary work

Some General Remarks

Arterial emboli are less common in the upper than in the lower extremity fewer than half of the recorded cases being axillo brachial In Danzis's collected series of twenty eight embolectomies five were brachial and five axillary The proportion is much the same in a series of cases published by Emrik Key - to whom and his Swedish colleagues we owe the pioneer work on this subject Two interesting cases of brachial embolectomy are described by Lerman Miller and Lund[2] illustrating some special points in connexion with this operation in the arm

Jeffe on's case was the first published in England and [illegible] of persist. He draws attention to the causative role of heart disease in the recorded cases. But C. Ollo estimates that in 80 per cent. of all cases there is a diseased heart the aortic valve being the usual source of the embolus. These emboli are often multiple necessitating more frequent surgical operations.

In placing the site of the embolus it is well to remember that it tends to lodge either at the bifurcation of the brachial artery or at the junction of a large branch—for example the profunda—with the main trunk. The exact site of the initial pain is a very important guide. Occasionally a lump may be felt in the course of the artery at the end of the pulsating area.

The general operative technique follows the usual lines of arterial surgery. The operation is best done under infiltration anæsthesia. The utmost gentleness in manipulation and the careful preservation of any small branches are essential. The wound is kept moist with 1 per cent. citrate solution to prevent coagulation. If the embolism is at the bifurcation the incision in the artery (which need not be more than one centimetre long) must be made above the embolus if thought to be at the junction of the profunda branch the incision would be placed below it and the embolus and any clot extracted distally. It may become awkward on releasing the clamp or it may require to be milked out or extracted with forceps. In a late case secondary thrombosis may be extensive and the radial artery difficult to clear. In one such case the radial at the wrist was opened a cannula inserted and the vessel flushed through with a syringe and 2 per cent. citrate solution. A continuous suture is probably better than interrupted sutures but in a small artery like the brachial more labile tension or [illegible] gaping is observed. Fine silk or thread is the ideal suture.

Prognosis

As regards prognosis the time element is the crucial factor. Key states that three-quarters of all brachial or axillary emboli dealt with operated on within two hours of onset. Early operation means less secondary thrombosis. In bifurcation emboli the arm should be immobilized in comfortable extension for a few days the hand being left free. The further outlook depends on the origin of the embolus or the grade of the heart disease. Secondary limb emboli have occurred in cases already successfully operated on for the same condition. A study of the literature shows as might be expected that the most favourable cases are those following operation and without grave heart disease the patient being still under observation—conditions ideal for early diagnosis and treatment.

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[illegible] [illegible] [illegible] [

What is the cause of this arteriolar contraction? Diathesis psychic factors overwork sedentary occupations obesity endocrine changes circulating pressor bases have all had their advocates Their very number is a confession of our ignorance There is no doubt that high blood pressure is often familial Lord Dawson found a percentage of school children had pressures above the normal - but it is as yet too early to say whether any of them will eventually develop true hyperpiesia Nervous causes and overwork certainly raise the pressure but many men overwork and never suffer from hyperpiesia and neurotic people often have low pressures Sedentary occupations are blamed for many things hyperpiesia is only one of them Hyperpiesia and overweight may coexist but it is doubtful whether the majority of obese persons have high pressures There is no reason why circulating pressor bases should not be eliminated since it is known that the kidneys remain normal until their arterioles become affected with those of the rest of the body

Hyperpiesia will probably be found to be a deficiency disease As noted by Ismail[2] it has something in common with diabetes In both diseases the usual time of onset is in early middle age both run a prolonged course have a certain familial tendency and are frequently found together As in diabetes hyperpiesia is much more severe when it occurs in young people and its course is more rapid the so called malignant hypertension of Keith and Wagener[3]

A certain tension of the arterioles is necessary for everyone This tension is unlikely to be maintained by the sympathetic nervous system which is usually reserved for the rapid changes called for by the external environment By analogy with other systems of the body it is probable that a chemical agent is responsible It may well be that this substance or substances derived from protein, is normally present in excess and the fine adjustment is made by a hormone which converts it into something that can be excreted by the kidney This view would accord with the work of Bain[4] and Major[5] who have both found in normal urine substances with a pressor action these were absent or reduced in the urine of those suffering from high blood pressure If the hormone is inadequate the arterioles will be over stimulated and the blood pressure will have to be raised to maintain the circulation through the capillaries According to the extent of the hormone deficiency, various grades of hyperpiesia will result Overwork and worry are important secondary factors which will aggravate still further a state which is already abnormal

Whether this view is correct time will show Hyperpiesia is a malady for which we have at present no cure it will inevitably run its course The potential hyperpietic however demands active treatment to prevent if possible the condition becoming established In the later stages also much can be done to mitigate the disease both by countering the secondary factors of overwork and worry and by intensive courses aimed at relieving temporarily the stress upon the overburdened cardiovascular system

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TREATMENT OF HYPERPIESIA*

BY

W EDGECOMBE M D, F R C P F R C S

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The treatment of hyperpiesia must be based on our conception of the cause and the mode of production of the disease Of the causes diathesis—the inherent often familial tendency to the affection—cannot be removed Psychical causes such as overwork anxiety mental stress and worry are more or less amenable to modification and must be remedied when possible Inactive metabolism accompanying obesity and sedentary occupations is susceptible to suitable treatment Endocrine factors—hyperadrenalism subthyroidism and disturbances of ovarian secretion as at the menopause—can be partially controlled though not with any great certainty except in the case of myxoedema Of the pressor bases concerned in the production of hyperpiesia we have little exact knowledge Believing them to arise in the alimentary canal and to be derived from protein we endeavour to control them by reducing the protein intake and by promoting active elimination of waste products by the bowel kidneys and skin Aperient and diuretic mineral waters and intestinal lavage by the *Plombieres* douches are valuable means to this end In illustration of the relation between intestinal infection and hyperpiesia the following two cases are of interest

CASE I

Male aged 49 when seen in 1913 had a blood pressure of 140 90 and was found on examination to have a large swelling in the region of the ascending colon which was diagnosed as a diverticulitis In January of the following year he was operated upon for suspected cancer of the bowel the growth was found inoperable, and the abdomen was closed In June his blood pressure was 145/95 In 1915 it had risen slightly to 150/95 in 1916 it was 160/100 reduced after a course of baths to 150/95 He was lost sight of until August 1923 when he reappeared with a blood pressure of 230/130 and symptoms of slight weakness and dragging of the left leg The swelling in the abdomen had almost disappeared but was still just palpable In seven years his blood pressure had risen from 160/100 to 230/130 A course of baths reduced it to 200/124 In 1924 his blood pressure was 220/125 reduced after a course to 200/105 and he died of cerebral haemorrhage in 1925 It is not unreasonable to infer that the chronic infection of the bowel was the cause of the hyperpiesia

CASE II

Male aged 48 in 1915 now aged 64 The records of his blood pressure date from 1916 and are seen to have gradually mounted year by year without any cause being discovered Each year he had a short course of spa treatment Between 1928 and 1929 there was a sharp rise for which no explanation could be found His blood pressure in May 1929 was 230/110 before and 180/110 after a course of baths In June 1929 he had an acute perforation of the bowel which was found on operation to be from a ruptured diverticulum He made a good recovery In December 1929 his blood pressure was 190/100 An x ray examination after a barium enema disclosed extensive diverticulitis of the large bowel Since then he has remained in good health

Consideration of the mode of production of hyperpiesia points the way to physical methods of treatment The primary fault lies in the peripheral circulation it is the narrowing of the arterioles and capillaries and the consequent diminution of the total channel area available to the blood stream that determines the high blood pressure the enlargement of the heart is a secondary resultant phenomenon Any measures that dilate the vessels and

* Read to the Section of Hydrology and Climatology at the Annual Meeting of the British Medical Association Eastbourne 1931

...ned in the course of a year with the progress of the ...ase not disease and relapse temporarily and it is ... ...ed For this purpose drugs such as the nitrites ... ...ous system and the salicylates luminal ... ...are evacuation of the intestine and the ... ...important measures and in the management of the ... ...cases are of little avail as permanent remedies ... ...is no more drug that will effectively prevent the ... ...opment of the disease Vaso-dilatation of a more ... ...ced and lasting character can best be effected ... ...al modes of treatment Immersion baths of ... ...at or above bed temperature effervescent ... ...or carbonic baths massage douches Arc or ... ...massage electrical procedures such as the high frequency ... ...and especially diathermy will produce a pro... ...eral vaso-dilatation and a fall of blood pressure The ... ...is not merely transient but causes a true ... ...and is cumulative over a series of baths To ... ...the effect it is assumed that not only are existing ... ...channels opened up in the peripheral circulation ... ...which is as it were destroyed are called again into ... ...and it may be that new anastomoses are developed ... ...whether the action the effect is certainly more pro... ...than that produced by drugs

Many potential cases of hypertension can be cured or ... ...by timely treatment by physical methods It ... ...course impossible to say whether a given case of ... ...hypertension would have comparatively developed ... ...no treatment been adopted Here is a case typical ... ...which it is not unreasonable to assume that ... ...was effected (All the cases quoted below were ... ...to be examples of true essential hypertension that ... ...the very numerous cases of permanent high diastolic ... ...secondary high blood pressure all of them private ... ...and observation for a considerable period of years

Case III

A ... man aged 35 in 1914 had a normal pressure ... ...110 but ... ...ing of the ... ...budget ... ...and ... ...massage douches and alternating current baths ... ...In ... ...In 1915 after a ... ...course the figures ... ...175 Some treatment was given at intervals of one or ... ...years up to 1919 during ... ...and ... ...and ... ...to 170 and 180 to 150 ... ...

Another case which has been under observation for ... ...years may be referred to as an example of arrest of ... ...by physical methods

Case IV

A woman aged 48 in 1906 ... ...110 ... ...Nauheim baths ... ...105 in 1907 ... ...105 ... ...11 95 ... ...1910 having ... ...and Nauheim baths ... ...140 to 210 ... ...160 95 ... ...170 ... ...

As an example of ... ...which ... ...that may be ...

Case V

A ... aged ... ...1910 ... ...of 160 ... ...

... ...

Year	...	...	...
...	150	...	...
...	155	...	...
...	...	...	...
...	...	...	...
...	150	...	...
...	...	...	...
...	...	...	...
...	...	...	...

... ...

That an annual course of spa treatment will afford ... ...is indicated by the following examples The patients were women aged 64 and 58 respectively

Case VI

...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

... ...

Case VII

...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

... ...

The ... ...

The following is another account of a case that we believe was prolonged by ... ...

Case VIII

... ...

...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

... ...

Advanced cases require careful watching while under bath treatment If the pressure falls rapidly and considerably symptoms of lassitude, fatigue and breathlessness may supervene and the patient feels worse rather than better This is an indication that the reduced head of pressure is insufficient to maintain an adequate circulation that heart failure is impending and the treatment should be stopped at once If as the pressure falls, the heart rate slows or does not increase and the patient feels relieved all is well and the treatment may be continued A rise in heart rate with a fall in pressure is a danger sign Also a considerable fall in the systolic without a corresponding fall in diastolic pressure—that is a reduced pulse pressure—is an ominous sign of a failing left ventricle

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

CATARRHAL INFECTION AND FORMALIN VAPOUR

The prevalence of catarrhal conditions in schools especially during the early months of the year is I presume one of the main problems which confront every medical officer The loss of school time the overcrowding of the school sanatoriums and the strain imposed upon the nursing arrangements are harassing to masters and doctors alike I would suggest that systematic spraying punctiliously carried out on the plan laid down has a marked effect in cutting down the incidence of catarrhal conditions and in mitigating the virulence of the infection

Some four years ago with a badly infected boarding school of 140 boys it was decided that the school should be sprayed and a technique was evolved by the sister in charge (for which I can take little or no credit) which has been systematically carried out ever since The spray solution is 10 per cent formalin used in a sovereign metal spray The method which is as follows is carried out daily All class rooms and studies are sprayed including the tops of the desks the backs of all pews in the chapel, the heads of all the beds and spaces between the beds in the dormitories tooth mugs bathrooms corridors door handles and dining tables The spray which is a fine one is of course carried over a far larger area than the actual object on which it is directed The time taken over this work is about one and a half hours a day

I will now give the comparative figures of the numbers admitted to the sanatorium with catarrhal infection before and after this routine was established In this group of

Before Spraying		After Spraying	
Year	Admissions	Year	Admissions
1925	90	1929	30
1926	59	1930	15
1927	78	1931	31
3 years	227	3 years	76

The year 1928 has been omitted [illegible] beginning of the year and the [illegible] hyperpiesis not instituted at the standardized

infections I have included [illegible] influenza bronchitis and the pneumonias [illegible] excluded admissions from other causes

The figures tend rather to mislead in that one is far more prone to admit the slighter cases into the sanatorium when there is no pressure for space I have not given the number of days occupied in hospital for a similar reason—namely, that when there is little pressure the tendency is always to retain cases longer These figures are incomplete in a very important particular—that of the numbers who only attend the school surgery for the treatment of these conditions Such figures I do not possess, but their number is also stated to have been markedly reduced

There is no doubt in my mind nor in those of the sister and of the school authorities that the formalin spraying has been of very marked benefit Further, this improvement has coincided with the institution of spraying and has continued for too long a period to be a mere coincidence An interesting point is that for a short time the work was deputed by the sister to others Soon after an outbreak of colds and coughs started to spread through the school It was discovered that the work had been very perfunctorily carried out

I am less convinced of the efficiency of the spray in certain other infective conditions, such as follicular tonsillitis which would appear not to be controlled As to the exanthemata I am not in a position to express any definite opinion Their occurrences have only been slight during the period under review

In conclusion I would emphasize the apparent necessity for a punctilious routine and I should be delighted to receive information of the experience of others along similar lines

Banbury C J L WELLS M B B Ch Oxon

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

NORTH EAST ULSTER DIVISION

Tuberculosis of the Abdominal Lymphatic Glands

At a meeting of the North East Ulster Division on December 11th 1931 with the chairman, Dr BOYLAN presiding Mr S T IRWIN M Ch F R C S read a paper on tuberculosis of the abdominal lymphatic glands

Mr Irwin discussed first the incidence of tuberculous infection and the arguments for and against the main portal of entry being the abdominal lymphatic glands He described the work of Calmette in this connexion and emphasized the importance of this probability as regards the diagnosis and prognosis in abdominal diseases In the category of acute emergencies, especially in childhood lymphadenitis occupied a prominent place but he was not sure that this term was quite satisfactory for all the types of this disease were not of definitely inflammatory origin and in many cases no palpable swelling was present Mr Irwin then submitted a comprehensive summary of the literature which indicated that these cases of lymphadenitis were due to the absorption of low grade infections caused not only by tubercle bacilli but also by other organisms

Anatomical investigations showed that the lymph vessels of the abdomen were grouped round the main arterial trunks with glands situated at intervals and that normally in all cases the largest glands in any group were placed proximally Three groups were of special pathological importance the one which accompanied the ileo colic artery and drained the lower six inches of the ileum the ileo caecal valve the caecum and the appendix the one surrounding the superior mesenteric artery and draining the jejunum and the upper part of the ileum and the group which converged upon the coeliac axis

and removed lymph from the stomach duodenum and gall bladder. The tubercle bacillus could pass through intact mucous membrane without leaving any trace but when ulcerous ulceration of the intestine occurred it would be found in 85 per cent. of cases in (1) the lower six inches of the ileum (2) in that part of the caecum which the stream of contents from the ileo-caecal valve impinged upon it (3) in the ileo-caecal valve itself. Mr Irwin remarked that the statement by Cameron—that enlargement of the hilar glands was much more common in the right pulmonary root than in the left while cervical enlargement was more common on the left side—might be correlated with the facts that the main thoracic duct began in the receptaculum chyli where it was situated on the right crus. It then ran up behind the root of the right lung and turned obliquely to the left opposite to the body of the fifth dorsal vertebra to enter the root of the neck on the left side where it joined the left innominate vein.

Mr Irwin then discussed the pathological changes in glands. He thought it could be argued that the route of infection in the superior mesenteric area was different from that in the ileo-caecal area. With gross glandular enlargement there developed abnormal irritability of the intestine so that even gentle handling of the gut produced spasmodic contractions especially of the circular muscle coat. These contractions tended to occur irregularly and were quite unlike the orderly passage of a normal peristaltic wave. The pain in these cases might be attributed to such contractions but Cornioley had suggested a vascular cause. Most of the glandular enlargements in the ileo-caecal area were of tuberculous origin the infection usually occurring in infancy or early life and the vehicle being milk. Although involvement of a single gland might follow ulceration of the small intestine it was much more usual to find a moderate but generalized glandular enlargement with the proximal glands more intensely affected. The cause might be and often was tuberculosis brought by the blood stream or it might be a *B. coli* or streptococcal infection referable to the appendix or the glands might be the seat of hyperplasia.

Such a survey of the anatomy and pathological variations of the mesenteric lymph glands as occurred with consideration of the nature and routes of infection led to the conclusion that a definite clinical entity was concerned although the symptomatology was diffuse and the findings at operation were manifold. Excluding cases in which a palpable lump could be detected and those in which intestinal obstruction was caused by adhesions or ulceration into the gut three classes of cases could be defined (1) those due to acute lymphadenitis of the ileo-caecal group seen during the acute stage (2) those due to chronic lymphadenitis subsequent to a previous acute attack and (3) those chronic glandular enlargements with no history of an acute attack. The first class closely simulated acute appendicitis and the differential diagnosis could only be made after a detailed history had been obtained and a thorough clinical examination had been carried out. Acute appendicitis especially in early life had in all these cases a glandular basis often gave a history of previous attacks of pain, tenderness and retching but the disease had occurred during one of the remissions and was associated with some degree of pyrexia. In glandular cases more often there was no consecutive set of symptoms as occurred when the appendix was first attacked and any perforation ruptured through a localized wall of inflammation to the peritoneal cavity. Mr Irwin thought that he had operated most often at night sided though Cameron had drawn attention to the sudden and generalized lasting pain in the epigastrium associated by prostration or heat and tenderness simulating abdominal. The pain in the appendix and the pain in the gland were similar and the pain in the gland was more and more. The superficial glands were usually enlarged but the mesenteric so. The adhesion was generally soft and easily broken down and the lymph nodes were the high right fossa as referred to the middle line as often was in early appendix cases. There was no limitation of the high movement. The progress was as a rule favourable and the disease was a self limiting one. No operation was usually necessary or desirable.

In the second group of cases (chronic lymphadenitis) there were frequent exacerbations with pain pyrexia and quick pulse. The infection was likely to spread and the glandular enlargement was generally unilateral but as a rule caseation or calcification would be found in some glands while others remained soft and fleshy. The enlargement might affect the ileo-caecal group alone or might be generalized involving the whole group also. Diagnosis in such cases was particularly difficult. The patient had gastric symptoms often including pain one to three hours after food with hyperacidity nausea loss of appetite and constipation. They were easily exhausted by overwork and confinement. They were almost invariably tender in the right iliac fossa though the tenderness was above and internal to McBurney's point. Test meal and radiological examinations might reveal high peracidity and delay in emptying the stomach. The patients were often thought to have the so-called lymphatic dyspepsia. The treatment was that of tuberculosis elsewhere with special attention to avoiding overfatigue and confinement.

The third group was less clearly defined. The symptoms were very vague suggesting at one time a disordered gall bladder at another a duodenal ulcer and sometimes a chronic appendicitis. Yet the clinical picture was at no time quite complete. There was no rise of pulse or temperature and various surgical procedures were tried in vain in case after case owing to the faulty diagnosis that were made. Mr Irwin had found about 275 such puzzling cases. 82 had been proved by operation to be cases of appendicitis 140 of duodenal ulcer and 53 of enlarged lymph glands. Much more histological and bacteriological investigation was necessary to clear up the etiological problem thus presented.

Reports of Societies

GYNAECOLOGICAL TUMOURS

At a meeting of the North of England Obstetrical and Gynaecological Society held in Liverpool on November 27th 1931 Professor Leslie Murphy showed a specimen of endothelioma of the ovary and all of the organs

The patient had had a history of pain and bleeding for three years. She had been operated on twice for fibroids of the uterus. Her complaint was of excessive pain and bleeding at the menopause. On examination a fungating growth was found on the anterior vaginal wall occupying the cervix. The uterus was adherent to the bladder and rectum. Removal was impossible. A piece was removed for microscopic examination and found to be a mucous Round cell sarcoma. Radium was applied to the growth. Subsequently the patient developed a vesico-vaginal fistula. The growth had not regressed and there had been a complete cessation of the bleeding. Section proved the tumour to be a typical adenocarcinoma. Sections through one of the lymph glands showed the squamous epithelium and pearl at the edge. This was not an infiltration and

Mr N L EDWARDS (Derby) showed an endometrioma in an abdominal scar following Caesarean section

The patient aged 33 had had a previous Caesarean section in 1923 In November 1929 Mr Edwards again delivered her by the same route through a left paramedian incision A portion of each tube was resected and the stumps buried and the right ovary being cystic was removed The scar discharged serum from the eleventh to the thirteenth day Recovery was afebrile Seen ten months later the patient said that she had noticed a black looking discharge from the upper end of the scar and that during the last seven periods there had been no pain A small purplish nodule was found at the point of the discharge with the uterus adherent to the anterior abdominal wall behind it This was confirmed when the nodule was excised two months later At the same time the abdomen was opened and the uterus was removed by subtotal hysterectomy along with the remaining ovary which was now cystic and adherent The nodule showed endometrial tissue but no connexion could be found between the endometrium of the nodule and the uterus

Of the two probable theories of origin—implantation during operation and metaplasia of peritoneal endothelium—Mr Edwards favoured the second in this case

Professor LEITH MURRAY described a dermoid cyst of the left ovary weighing over 29 lb and containing fatty balls and pellets

The patient a virgo intacta aged 52 had passed the menopause five years previously She had been aware of the tumour for fifteen years and at the time of operation the abdomen measured 73 inches at the level of the umbilicus A three inch incision was made in the abdomen and adhesions to the anterior abdominal wall were swept away with the hand Attempts at tapping having failed the cyst was incised and five and a half pints of greenish fluid containing several thousands of fatty pellets were evacuated These varied in size from a split pea to an almond but seven were found almost completely rounded and of much larger size The rest of the contents consisting of a fatty pultaceous putty like material was expressed through the incision the whole cyst being finally removed The inner and outer surfaces of the cyst wall were smooth and the only suggestion of a germinal node was a linear thickening about five inches long Examination showed this to be a channel lined by several layers of transitional epithelium with some suggestion of goblet cells There was also a narrow layer of involuntary muscle fibre The sebaceous glands discovered were mainly situated round this area as was also a hair follicle A ray examination was negative Some fine hairs were found in the fluid and in some of the balls examined An examination of the fatty material showed a large proportion of free fatty acid and non saponifiable matter which explained the fact that the fat was solid at body temperature

Dermoids of this type are extremely rare and Professor Leith Murray thought that by reason of its size the specimen was probably unique An account of previously reported cases was given and was followed by a highly technical and very full description of the various examinations of the specimen made by Mr Jeffcoate

Miss RUTH NICHOLSON showed an unusual tumour obstructing labour

The growth was removed seven months after the patient had been delivered by Caesarean section Previous to this she had had four normal labours On this occasion she was seen after she had been in labour for twenty eight hours with good pains The head was still high and a mass was felt in the pelvis to the right obstructing delivery A lower segment Caesarean section was performed by Mrs Dobbin Crawford during which the tumour was seen to be separate from the uterus lying on the right side of the pelvis and retroperitoneal about the size of a kidney The child's head showed marked moulding and a large caput At the second operation the tumour was found to lie between the layers of the right broad ligament and shelled out easily It had no connexion with the uterus It now measured 3 by 2 by 1½ inches and microscopically proved to be a fibromyoma with a preponderance of muscle elements

A case of chancre of the cervix was described by Mr J ST GEORGE WILSON

The patient, a multipara aged 48 complained of smarting and irritation of the vulva with a copious and occasionally blood stained offensive discharge of two months duration The cervix was enlarged and soft, and bled on palpation A diagnosis of carcinoma of the cervix was made and a piece of the growth removed for examination after which radium was applied Section showed lymphocytic infiltration and the Wassermann reaction was then found to be strongly positive

Mr Wilson said that the idea that chancres in this position were rare which he had previously held in common with the older writers, was proved to be erroneous by T A Davies of the St Thomas's Hospital venereal diseases clinic who showed the cervix to be the commonest site

Dr P MALPAS gave an interesting demonstration of the efficacy of gauze packing in maintaining radium containers *in situ* by means of a series of x ray photographs The films were taken, in each case, four and twenty two hours after insertion of the radium and showed no alteration The variety in the distribution of the containers according to the shape and extent of the growth was shown and it was suggested that a large number of different appliances would be required to meet every case

TREATMENT OF ANAEMIAS

At a meeting of the London Branch of the Medical Women's Federation on December 15th 1931 Dr JANET VAUGHAN read a paper on the treatment of anaemias

Knowledge of the etiology, and, therefore of the treatment of anaemias she said had advanced rapidly during the last few years since something was known to day of the factors controlling haematopoiesis Normal haematopoiesis was dependent upon adequate supplies of iron and copper of at least two substances present in whole liver of vitamin C, of some complex of vitamin B and of thyroxine A deficiency of one or more of these factors might be brought about by faulty diet digestion absorption, or distribution or by excessive strain placed on the normal storage depots by haemorrhage or pregnancy Dr Vaughan classified as iron deficiency anaemias (1) idiopathic microcytic (or hypochromic) anaemia including the Plummer Vinson syndrome, (2) anaemia following acute and chronic haemorrhage and (3) the simple or nutritional anaemia of infancy In idiopathic microcytic anaemia faulty absorption due to achlorhydria played a part in some instances since typical cases occurred with normal gastric acidity but she did not consider that lack of acid was the sole cause any more than it was in pernicious anaemia Failure of distribution through damaged blood vessels occurred in some cases since arterio sclerotic patients responded less well to iron than patients with normal vessels The history usually obtained from such patients also pointed to the importance of faulty diet The influence of iron poor diet was illustrated by the after histories of a series of patients with gastric haemorrhage A small group of such patients treated with massive iron dosage showed a more rapid gain of both haemoglobin and red cells than a control group which did not receive iron Quoting Mackay's work, Dr Vaughan emphasized the importance of iron intake in the anaemia of infancy In the treatment of the microcytic anaemias large doses of iron—60 to 120 grains of Blaud's pill or of iron ammonium citrate a day—were essential It was still difficult to assess the value of

Reviews

RADIOGRAPHY OF BONE

[illegible]

coxa vara are put near to the rachitic coxa vara and the coxa vara due to fractures Rare bone lesions which are more or less medical curiosities are omitted, as their practical importance is small compared with tuberculous lesions to which considerable space is allotted Further more radiography contributes to the differential diagnosis of tuberculosis of bone and assists the clinician in deciding on the correct treatment since it gives him a guide as to the stage of the disease The authors state that the diagnosis of a tuberculous lesion of bone is made by radiography which besides indicating the gravity of the case allows its progress to be followed All works of this kind have their limitations, and if these are recognized by the student he will not fall into the error of thinking he can obtain a knowledge of radiology by looking at reproductions (however good) of *x* ray films Such books are of use in so far as they provide excellent illustrations with diagrams wherever necessary to make plain the lesions of typical bone injuries and diseases They do not teach the student how to interpret *x* ray pictures or how to correlate pathological changes with radiographic appearances In other words this atlas does not provide an easy method of acquiring a knowledge of radiology, but is useful as a work of reference The radiographs are numerous and of a uniformly good quality Where because of the nature of the lesion there is difficulty in obtaining a clear reproduction—this in itself often being a diagnostic point—the accompanying diagram adequately serves its purpose

A SURVEY OF TUBERCULOSIS

The Results of the Investigation on Tuberculous Disease [2] by a number of German authors is a storehouse of information of an eminently practical character, which will be found as valuable and deserving of study by the general practitioner as by the scientific worker Two volumes have already been issued and were referred to in these columns on October 11th, 1930 (p 603) and on May 16th 1931 (p 850) The third volume, now published contains eight extensive articles on the pathological anatomy of pulmonary tuberculosis at puberty the clinical aspect of pulmonary tuberculosis at puberty the significance of heredity and constitution pulmonary tuberculosis and pregnancy primary abdominal tuberculosis in childhood pneumonoconiosis and tubercle general treatment and the Government control of tuberculosis

Lack of space precludes an adequate review of these articles every one of which is deserving of consideration, but the general conclusions of the first two may be briefly referred to The course taken by a primary infection of the lung naturally varies in different cases but statistics have shown that a very frequent type is that in which an infection in childhood becomes quiescent for some years and is followed by renewed activity of the disease at the time of puberty Statistics point to a marked sudden increase in the rate of incidence at puberty and in these cases which appear to be the starting point of the majority of cases of adult pulmonary tuberculosis the quiescent focus of an earlier infection dating from childhood is usually to be found Cases of this type may be said to exhibit two stages—that of the primary infection and that of exacerbation at puberty The question discussed by the authors—an important one from the point of view of prophylaxis—relates to the cause of the exacerbation at puberty The opinion commonly held that a feeble constitution and an innate disposition to tuberculosis cause a breakdown of the resisting powers at a time when the constitution is suddenly taxed with the onset of sexual development is probably misleading

[2] *Ergebnisse der Gesamten Tuberkuloseforschung* Herausgegeben von H Assmann H Brützke H Braeuning St Engel Band iii Leipzig G Thieme 1931 (Pp 695 143 figures M 64)

It has been observed that the majority of these patients are of a healthy and flourishing type and it has also been noticed that some cases apparently become worse instead of better under sanatorium treatment The theory put forward by the authors, and supported by reasoning of much cogency, is that the main cause of the exacerbation at puberty is an increased activity of the vegetative processes of the body, induced by the new hormones thrown into the system at that time—that the primary focus of childhood is reactivated by these and, in addition, is generally reinforced by a superinfection with tubercle bacilli from without Treatment directed towards increasing the resisting power by endeavouring to improve the general health is, therefore, probably of little use and modification of the secretion of hormones is beyond our power The obvious indications are to adopt all possible measures to prevent infection in childhood, and to protect the subject at the time of puberty from exposure to sources of reinfection While it would be Utopian to suppose that complete success in eliminating the exacerbation of tubercle at puberty is to be obtained by these means the authors contend that as the disease can be brought under observation in an early stage in these cases, it can be submitted to *modern methods* of treatment which, in that stage, have been attended with a considerable degree of success

THE LITERATURE ON VITAMINS

A review of the literature on vitamins [3] by Dr ETHEL BROWNING is a comprehensive monograph published by the Pickett Thomson Research Laboratory whose publications hitherto have been devoted to bacteriology The scale of the work is indicated by the fact that it contains 432 pages of letterpress and 90 pages of bibliography and the first point that impresses the reviewer is the enormous amount of labour that has been put into its preparation One of the chief obstacles to the study of vitamins is the literature of the subject This literature the total bulk of which is enormous consists chiefly of short papers scattered through a wide variety of journals Examination of the volume under notice shows that the author has ransacked this heap of printed matter very thoroughly We have not noted any omissions of importance, the literature down to the end of 1930 has been covered and there are even references to work published in the current year

The first question about such a survey is whether it covers the evidence fully but there is a second question equally important—namely, whether the evidence has been digested properly This is a very difficult task in the case of a subject like vitamin research because the evidence is most contradictory, and also of very varying merit The uncritical accumulation of references results only too often in the information that about an equal number of workers voted either for black or for white while the remainder favoured varying shades of grey Dr Browning however has worked up her material with care and judgement and indicates clearly her opinion of the relative value of the evidence presented A pleasing feature of the volume is that it goes as fully into the physiological as into the biochemical properties of vitamins So much attention has been paid of late years to the investigation of the chemical nature of vitamins that the primary problem of the actions they can produce on the living body has been somewhat neglected In particular the author discusses carefully the evidence regarding various problems of fundamental physiological importance—for example the relation between vitamins

[3] *The Vitamins* By Ethel Browning M D Monographs of the Pickett Thomson Research Laboratory Vol i London Baillière Tindall and Cox Baltimore The Williams and Wilkins Company 1931 (Pp xxx + 575 42s net)

... and ... and ... The introduction has ... of ... and ... and ... and

The September number of the *Annals of Medical History* bears on its cover a portrait of Erasmus Darwin (1731–1802) of Lichfield grandfather of Charles Darwin and Francis Galton His various activities, and especially his views on evolution and heredity are described by Dr E B Krumbhaar Theodore Kocher of Berne whose portrait forms the frontispiece, is shown by Drs E R Wiese and J B Gilbert to have had artistic abilities, and, next to Billroth to have done probably more than anyone else to make gastro intestinal surgery a science Dr C Elgood of Teheran gives a translation of the earliest Persian monograph on syphilis dating from the sixteenth century In a scholarly and well illustrated article entitled From Epidauros to Galenos Dr A P Cawadias traces the evolution of Greek medical thought and prefers on etymological grounds to use the name Galenos in preference to the usual and shorter one In describing the origin of the name Alopecia areata Dr D W Montgomery draws attention to the clinical history of this remarkable affection Dr William Browning's article on the relation of physicians to early American geology contains a list of a hundred medical men who thus justified the definition of medicine as the mother of the sciences Dr R P Parsons gives a most attractive picture of the 'adventurous Joseph Goldberger who was born in 1874 and died about three years ago he was prominent in the Public Health Service and famous for his investigations in pellagra Dr Robert Wilson of Charleston South Carolina gives an account of J C Nott of Mobile, Alabama who as long ago as 1848 came to the conclusion that yellow fever was transmitted by mosquitos and other insects In an article on Phineas Fletcher and his poem *The Purple Island* (1633) Dr Samuel W Lambert of New York shows that this non medical author's anatomy was fairly in accord with that of Vesalius but that his physiology was that of Galen

Professor GODBOLE'S monograph on butter fat[8] deals chiefly with methods of detecting impurities in ghee He points out that vast quantities of ghee are consumed in India and that it forms a most important item of the diet of large sections of the population It is freely adulterated at the present time with cheaper vegetable fats and while the author does not seem to suggest that these have deleterious effects on the consumer it is evident that the practice enables the vendor to make quite unfair profits Professor Godbole reviews the current chemical and physical methods for estimating the constituents of mixtures of fats he finds them all unsatisfactory and proposes a method of his own depending on the use of a refractometer It seems difficult to see how it is possible to distinguish between vegetable fats added to the butter in the process of manufacture of ghee and those added as it were *in vivo* by feeding the cows on oil cake etc Would the latter be classed as adulterants?

The forty eighth edition of *The Official Year Book of the Scientific and Learned Societies of Great Britain and Ireland*[9] for the session 1930–31 is a much slimmer volume than its predecessors and can be purchased for about half the price While the abridgement and economy in price have been achieved by omitting the Lists of papers read hitherto a feature of the *Year Book* readers are reminded that secretaries of societies will always supply full particulars of papers read and of those published and available for purchase All other customary information is returned so that in its new form the *Year Book* constitutes a convenient and authoritative guide to the numerous scientific and learned societies The medical section which contains lists of publications issued by the Ministry of Health the Medical Research Council the British Medical Association and the Royal Society of Medicine, is similar in arrangement to that of its predecessors and there is a classified list of medical societies other than those respecting which information is given in the body of the book

The third edition of the Natural History Museum's pamphlet on *Rats and Mice as Enemies of Mankind*[10] has recently appeared There are a number of minor corrections and additions especially in relation to the re-establishment of the black rat in many places in the past few years, to the Rats and Mice (Destruction) Act of 1919 and to the Rodier system for rat extermination The pamphlet keeps to the same general plan followed in previous editions, and it continues to give a very useful account of the economic and medical importance of rats and mice

The Smoke Abatement Handbook[11] is a useful summary of up to date information on all aspects of this problem There are notes on smoke and health, smokeless fuels atmospheric pollution, and on Scots and English law relating to the emission of smoke Lists are also given of the principal books on the subject and of the local authorities affiliated to the Smoke Abatement Society As the handbook is designed for ready reference we suggest that future editions should be printed in larger type

[8] *Annals of Medical History* New Series vol iii No 5 September 1931 New York Paul B Hoeber Inc London Baillière Tindall and Cox (Subscriptions in Great Britain £2 5s per volume of six numbers)

[8] *Butter fat (Ghee)* By Professor N N Godbole and Sadgopal B Sc Benares Department of Industrial Chemistry Benares Hindu University 1930 (Pp 43 4s)

[9] *The Official Year Book of the Scientific and Learned Societies of Great Britain and Ireland* Compiled from official sources Forty eighth annual issue London C Griffin and Co Ltd 1931 (Pp xii + 171 10s net)

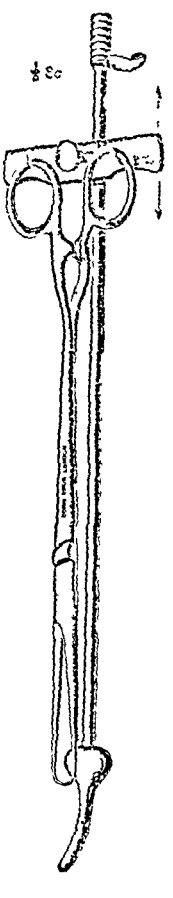
[10] *Rats and Mice as Enemies of Mankind* By M A C Hinton Third edition British Museum (Natural History) Economic Series No 8 London British Museum (Natural History) Milford Oxford University Press 1931 (Pp vi + 70 6 figures 2 plates 1s)

[11] *The Smoke Abatement Handbook* Manchester The Service Guild 45 Deansgate Arcade 1931 (Pp 47 6d post free)

PREPARATIONS AND APPLIANCES

UTERINE CANNULA FOR THE RUBIN TEST

Major W C SPACKMAN FRCS Ed IMS (civil surgeon Poona India) writes



The uterine cannula here illustrated has been made for me by Down Bros Ltd (St Thomas's Street London S E) and has proved very effective in use It is designed to be used for the rubin test for patency of the Fallopian tubes with any of the inflation methods Its special feature is the sliding bracket to take the finger holes of the vulsellum The latter is applied as usual to get a good grip of the cervix on its vaginal aspect in the anterior fornix The cannula is now passed in the usual manner (it is of such a size that no dilatation is needed as a rule) till the acorn is firmly pressed into the external os The handle of the vulsellum is now applied on to the two hooks of the bracket which is firmly braced outwards by two fingers of the right hand against the pressure of the thumb of the same hand on the thumb grip on the outer end of the cannula When by this means the tension of the acorn against the cervix is deemed to be adequate the bracket is fixed by the finger screw provided The cannula and vulsellum are thus easily controlled by one hand while the inflation is carried out

British Medical Journal

SATURDAY JANUARY 9th 1932

THE APPROVED SOCIETIES VALUATION

The report by the Government Actuary Sir Alfred Watson on the third valuation of the assets and liabilities of approved societies has now been presented to Parliament by the Minister of Health A synopsis was given in the *Supplement* to our issue of December 26th 1931 (p 338) What has become the usual sequence of events occurred Prior to the valuation somewhat alarming rumours were allowed to get into circulation Officials of approved societies permitted it to be said or understood that their funds were in a very serious state of depletion that the valuation is about to disclose results which are most disquieting and that the consequence of additional benefits or lower contributions will in most cases be impossible Next comes the valuation which is hailed apparently with relief that the results are going to prove less disastrous than had been supposed though they will be far from satisfactory Then when the valuation is complete the results are found in general to be very good and for a large proportion of the insured population not only can additional benefits be granted but contributions actually be increased even though a large percentage of the ascertained surpluses are required to be placed to the contingency fund The threatened bankruptcy of the insurance funds is once more averted A small number of the approved societies are found to be in a bad financial condition and certain complex and even vicious features are discovered whereupon the officials of important societies point to these facts as justifying the accumulation of still larger reserves and the piling up of still more balances That are not the views in the world though caution seems often to be carried to excess In these circumstances it is desirable to understand what exactly the valuation is and what are broadly its main results and to consider those features which disclose the need for some reconsideration of parts of the national health insurance system

The process of valuation is applied to insurance benefits to ascertain on the future contributions of the present members of the approved societies and the future contributions which will be required to provide the benefits of future members of the approved societies The valuation is made by comparing the present value of the future benefits with the present value of the future contributions plus the present assets of the funds The present value of future benefits is found by multiplying the amount of each benefit which will be payable in each future year by the probability that a person of the age in question will be in receipt of that benefit in that year and by the present value of a pound due in that year The present value of future contributions is found by multiplying the amount of the contribution payable in each future year by the probability that a person of the age in question will be paying contributions in that year and by the present value of a pound due in that year The present assets of the funds are taken at their book value [illegible] The valuation is made as at December 31st 1929 and the results are brought forward to December 31st 1931 by taking account of the transactions during the intervening two years Here [illegible] the present value of future benefits [illegible] the present value of future contributions [illegible] the present assets [illegible] the valuation [illegible] the valuation [illegible] the valuation

calls urgently for the reduction of the rate of their disablement benefit to one half of that of their sickness benefit as in the case of men In the third place, the position of married women within the insurance scheme, requires immediate consideration It appears that in their case no increase in contributions which would be socially tolerable could provide for the benefits to which they are at present entitled So far as the cash payments during sickness and disablement are concerned, it should be recognized that they are, in fact, an uninsurable proposition, at any rate within certain age limits in ordinary circumstances

In conclusion it is necessary to emphasize the protest of the medical profession against the false logic of the penultimate paragraph of the report Though the position is there set out with more moderation than has sometimes been the case it is certainly untrue, except to a very limited extent that " it is conclusively shown by the results of the late survey of a sample of the claims that causes of excess which are definitely controllable have been in operation " These alleged causes are stated to be laxity in medical certification and in the supervision of claims by societies There are a number of societies whose administration is unsatisfactory and there has from the beginning been a small proportion of cases in which medical certificates have been given without full regard to the requirements of the insurance scheme but there is no reason to suppose or suggest that either of these things has varied with the exigencies of the economic situation The general health of the population must be in some degree affected by this situation but it should by this time be abundantly clear that the main factor which does vary in accordance with economic stringency is the number of legitimate claims which the insured population make This and this alone is sufficient to explain the increase of claims to sickness and disablement benefit during the period of the great coal strike and during recent years of industrial depression

HENRY MAUDSLEY

" Testimonied in his own bringings-forth ' It was a singularly happy thought that led Sir Hubert Bond to choose these words as the text and subtitle of his recent Maudsley Lecture before the Royal Medico-thin its pri Association Maudsley himself had half the price ' the title of his essay on Shakespeare, price have been ach papers read hitherto a le-been an ardent and lifelong ire reminded that secretaries of -that passage in *Measure* full particulars of papers read and of the the calumnies available for purchase All other customa- is retained so that in its new form the *Yo*, who was stitutes a convenient and authoritative guy in you, '

Annals of Medical History New Series vol iii No 1 stream of 1931 New York Paul B Hoeber Inc Ltd must upon Tindall and Cox (Subscriptions in Great Britain of six numbers) roclamation Let

Butter fat (Ghee) By Professor N N gings-forth B Sc Benares Department of Industri Hindu University 1930 (Pp 43 4s) the lecturer kept

The Official Year Book of the Scientific Henry Maudsley's *of Great Britain and Ireland* Compile- the business he had Forty-eighth annual issue London C 1931 (Pp viii + 171 10s net)

helmed was often enough fraught with difficulties, but with difficulties which later were proved to be blessings in disguise, and bearing testimony to the numerous bringings-forth of Maudsley's productive genius, his philosophical and psychiatrical writings, his sociological prescience, and his liberality

The psychiatrist has perforce to be a student of human nature, and cannot afford to neglect such profound psychological studies as are delineated in the works of Shakespeare With that great mind Maudsley had an intuitive correspondence, and Sir Hubert Bond rendered a timely service to Maudsley's memory in urging upon his hearers the perusal of Maudsley's two Shakespearean essays the *Essay on Hamlet*, published in 1865 at the outset of his professional career, and his *Essay on Shakespeare* which appeared more than forty years later The lecturer referred to these essays as of arresting interest and merit, and as affording lessons of the highest value to those whose work in the treatment of mental disorder may require for its success an ability to analyse character Among the difficulties which beset the business Maudsley " helmed " not the least was the exasperating delay in the creation of the Maudsley Hospital This postponement of the fruition of his plan for the treatment of early cases of mental disorder led however, to unforeseen benefits The delays attendant on its creation had caused Maudsley no little disappointment, but Sir Hubert Bond reminded his hearers that, but for such delays the Maudsley Hospital might never have started its career as part of the 4th London General Hospital during the war and therefore might never have accomplished the fine piece of work it did for the neurasthenic and ' shell-shock " cases among the soldiers Moreover, but for the valuable therapeutic administrative and legal lessons that had been learned, the inauguration of treatment of mental illness in its early stages might have had to encounter many handicaps In paying tribute to the fertile conception of Henry Maudsley's mind, and to the excellence of the work undertaken at the Maudsley Hospital Sir Hubert Bond reminded all concerned that there is now in operation the Mental Treatment Act, and that under that Act the provision of other hospitals with functions analogous to those of the Maudsley Hospital is not only permitted but encouraged especially in conjunction with voluntary general hospitals and in particular, among the latter, with those associated with medical schools

To the majority of persons Maudsley's fame will reside in the hospital named after him in the fertility of imagination which gave birth to the project for the treatment of early cases of mental disorder, in the persistence with which he pursued it, and the self-denying ordinance whereby it became possible Others prefer to ascribe Maudsley's entitlement to fame to his contributions to scientific philosophy, and especially to his upholding of the essential unity of the human organism Maudsley's absorption in metaphysical problems is perhaps the reason for the present-day neglect of his writings other than the *Pathology of Mind* by

psychiatrical students. His philosophical approach to the subject seemed at times to obscure it, but a closer reading never fails to bring out the deeper truths to which his mind is ably tended. With the exception we have just mentioned, Maudsley's writings are too little known to the present generation, and not the least of Sir Hubert Bond's services in his appreciation of Maudsley has been to re-create an interest in his writings both as a source of knowledge and as a means of mental discipline. But neither in the hospital which stands as a memorial to Maudsley's vision and benevolence nor in his philosophical contributions does the Maudsley lecture consider Maudsley's claim on posterity to be exhausted; and not the least interesting and stimulating part of his discourse was his portrayal of Maudsley's uncanny presence of mind of our current scientific and religious views and of our economic distresses. Sir Hubert Bond instanced as a hint at modern conceptions of the universe that passage where Maudsley considers the effect of transcending the present by accumulating in thought those conditions or generalizations of human perception which are called space and time; and quoting from Maudsley's *Organ to Himself* reminded his hearers of the warning that "Decay in the body politic tends to disease and death as unremedied tends to death" nor did he feel it to be inconsistent with Maudsley's prophecies to declare that in some sections of the community it was an actual decline in religion that lay at the root of most of our present troubles, difficulties and perplexities.

NEW YEAR HONOURS

The New Year Honours announced on January 1st include the names of sixteen members of the medical profession. Dr. Walter Elliot's services to the State in various Ministerial capacities are appropriately rewarded with a Privy Councillorship. Sir Leonard Rogers, president of the India Office Medical Board, receives the further honour of K.C.S.I. Sir James Kingston Fowler, a member of the Colonial Advisory Medical Committee and for many years honorary secretary of the Beit Memorial Fellowship for Medical Research, is promoted K.C.M.G. and Dr. John Weir, K.C.V.O. Dr. [illegible], Medical Officer of Health of the London County Council, is created K.B.E., and the honour of D.B.E. is conferred on Dr. [illegible], who went to India forty years ago [illegible] for the Indian Zenana Mission [illegible] Dr. [illegible] Dr. [illegible] K.C.S.I. [illegible] Dr. D. J. Hasbi[illegible] [illegible] 1927 [illegible] 1925. Mr. [illegible] [illegible] Dr. [illegible] Dr. [illegible] [illegible] Dr. [illegible] [illegible] [illegible]

and 29 from disease The incidence rate was 4 2 per 1,000, showing a slight increase, from 3 4 in 1929 Of the total deaths from injury, flying accidents accounted for 66 per cent , compared with 56 per cent in 1929 68 per cent in 1928, 70 per cent in 1927, and 73 per cent in 1926 Invalids to the number of 121 were transferred from commands abroad to the United Kingdom the chief causes being disease of the nervous system and brain 22, digestive system 18, injuries 18, and diseases of the respiratory system 18 The incidence rate of 12 8 per 1,000, and the final invaliding rate from the Service of 5 8 per 1 000 are the lowest on record The report concludes with some informative details of the Service, among which are particulars of the Central Medical Establishment the physical efficiency of serving officers and airmen pilots of the Royal Air Force and the medical examination of recruits Other items of interest concern the transfer of casualties by air and the formation of the Royal Air Force dental branch in July, 1930 The importance of dentistry is fully appreciated to day and many will sympathize with the natural desire of the Royal Air Force to possess its own dental service The practical economist, however, in a time of financial upheaval may regard it as an unnecessary expenditure having in mind that this departure would eventually mean an increased administrative staff and that dentistry, although an important branch of medicine, plays no part in tactical operations during active service The units of the Royal Air Force are comparatively small, and are at times fairly widely scattered in the Mediterranean littoral and Iraq If their personnel are to receive proper dental attention the Royal Air Force dental officers will either have to travel considerable distances at frequent intervals thus incurring additional expense, or hand over their cases to the nearest naval or military dental officer Here was an opportunity to experiment in the formation of an imperial dental department for all the fighting Services

WELFARE OF THE BLIND

Since 1868, when Dr T R Armitage brought into being the British and Foreign Blind Association, and introduced into England the Braille system of reading and writing public interest in the welfare of the blind steadily increased until in 1902 the association was transformed from a semi-private undertaking into an incorporated society In its report for the year ending March 31st 1931 gratitude is expressed for the warm sympathy that has been extended on all sides to the Institute the requirements of which are however, still in excess of the support received The total sum bequeathed to it during the period under review amounted to over £20 000 and it is hoped that in spite of the persistent financial depression the great needs of the blind will not be forgotten An account is given of the various sides of the work carried on by the National Institute and mention is made of the success that has attended the training of blind masseurs The institute s rotary press is the latest type of Braille printing press it can print 16 000 pages an hour as compared with the 3 000 pages an hour of the Institute s other presses During the year the number of books and periodicals published was as follows bound volumes and general literature, 27 000 pamphlets 15 000 magazines, 234 000 newspapers 345 000 , and stereotyped plates for books, magazines, and newspapers, 22,000 There has been a notable increase in the number of bound volumes produced due mainly to the installation of the rotary press The subcommittee on technical research has been actively engaged in providing apparatus for educating the blind, and securing them access to museums and other educational centres

INFANTILE PARALYSIS IN THE U S A.

The 1931 epidemic of poliomyelitis according to a recent bulletin issued by the Metropolitan Life Insurance Company, New York, was the most extensive and destructive which has visited the United States since 1916 Nineteen States with an aggregate population of over 80 million persons, yielded a total of 13 091 cases (a sickness rate of 21 per 100 000 population) The highest sick rate reported in 1931 was in Connecticut, with 78 9 per 100,000, while other States with case rates above the average were New Jersey (26 2 per 100,000), New York (55 3 per 100,000), Massachusetts (37 4 per 100,000), Michigan (37 4 per 100 000), Minnesota (31 per 100 000), Rhode Island (28 9 per 100 000), Vermont (29 3 per 100,000), and Wisconsin (28 7 per 100 000) Nevertheless the case mortality from poliomyelitis in 1931 was much lower than in 1916, as is illustrated by the fact that the total of 404 deaths from this cause among children in the Metropolitan Life Assurance Company during the first forty-three weeks of 1931 was 81 per cent below the number which would have occurred if the death rate had been the same as in 1916 There also appears to have been a lower incidence of crippling

According to a cable from New York, published in the *Times* of January 2nd the results of recent work by Dr Frederick Eberson assistant professor of medicine in the University of California Medical School on the infective agent of infantile paralysis were presented by him to the American Association for the Advancement of Science on December 31st, 1931

THE TONSIL AS A FOCUS OF INFECTION

Dr G Worms and Dr J M Le Mee have written an important monograph on the tonsil as a focus of infection [1] It is based on the information derived from an elaborate questionary addressed to a large number of laryngologists throughout Europe and America The replies have been classified and moulded into an orderly report with remarkable judgement and sense of values The authors have achieved this by not allowing their own opinions and conclusions to be obscured by a mass of detail, although they render full credit and acknowledgement for the help they have received The recognition of the tonsil as an important focus of septic infection does not in itself imply what a vast field of inquiry can spring from this limited area and it needs such a work as this to indicate how wide and remote are the possible effects The authors have realized fully the possibilities latent in their undertaking and were naturally prepared for a great diversity and shading of opinion The survey includes the influence of tonsillar infections in septicaemia, the various forms of rheumatism endocarditis nephritis gastro-intestinal and hepatic disorders their effect on the thyroid gland

[1] *Les Foyers Amygdaliens* Par G Worms et J M Le Mee. Paris Imprimerie Chantenay

FACTORS IN THE PROBLEM OF TUBERCULOSIS

BY

J MIDDLETON MARTIN M D

COUNTY MEDICAL OFFICER OF HEALTH GLOUCESTERSHIRE

In the following numbered paragraphs I have set out what appear to me to be salient facts in the consideration of the problem of tuberculosis all of which must have due weight in our conclusions for administrative purposes They could be extended considerably but those given seem to cover the essential aspects

1 It is generally accepted that tuberculous infection is almost universal in this and some other countries—for example 90 per cent of children under the age of 15 in large towns in Europe and America react to tuberculin tests [1] In a study of post mortem records Vining showed that 50 per cent of 563 children between the ages of 5 and 15 had tuberculous lesions, and that in the case of 103 deaths from accidents 14 (13 5 per cent) showed such lesions

2 Between 1838–42 and 1911–15 the pulmonary tuberculosis death rate in England and Wales fell steadily from 3 78 per 1 000 to 1 05 It has been suggested that the fall has been more rapid since treatment schemes were adopted In support of this Sir Robert Philip[2] quoted Birmingham figures (tuberculosis all forms) showing a percentage decrease ' of 4 15 between 1883 87 and 1898–1902 and a similar decrease between 1903–7 and 1918–22 of 24 24 This was indicated also by the report of the Registrar General for 1920 In England and Wales for the years (as nearly as possible) taken by Sir Robert Philip for Birmingham the figures for the pulmonary tuberculosis death rate are

1881–1885	1 83	1901–1905	1 22
1896–1900	1 32	1921–1925	0 86
Fall	0 51	Fall	0 36
Decrease per cent	27 8	Decrease per cent	29 5

Had the figure for 1916–20 (1 10) been taken instead of that for 1921–25 the fall for the interval of fifteen years (taken by Sir Robert Philip) would have been only 9 9 per cent

3 The numbers of persons in Gloucestershire at any given time known to have had illness leading to notification as suffering from tuberculosis are about 2 000 for pulmonary tuberculosis and about 1 000 for non pulmonary tuberculosis—a total of 3 000 or about 1 per cent of the population This implies that some 99 per cent of the population have been infected in early years of life but at no time have presented signs of illness which were attributed to tuberculosis

4 In some countries illnesses from tuberculosis are exceedingly acute [1] For example in the case of Indians of the Canadian plains tuberculosis was almost epidemic from 1884 to 1904 and then subsided gradually Even now the death rate among Indians is about 8 per 1 000 or nearly twenty times that of the surrounding white population Ferguson (Saskatchewan) reported that 90 per cent of school children reacted positively to tuberculin In French equatorial Africa the primitive races show severe and rapidly progressive forms (Vassal)

5 The incidence of bovine tuberculosis in cattle in this country is indicated by the following figures 40 per cent of cows react to tuberculin and 7 per cent of milk is tuberculous

6 Only a small proportion of children can be or can have been in close association with known cases of human tuberculosis yet of 229 bone and joint cases among children under 10 years of age reported by A Stanley Griffiths [6] the organisms in 164 cases (71 6 per cent) were regarded as due to the human type in 59 (25 7 per cent) as due to the bovine type and in 6 (2 6 per cent) as atypical

7 On the other hand most children have the opportunity of drinking cow's milk 7 per cent of the samples of which are reported to be infected with the bovine form of the bacillus

8 As children grow older, the proportion of cases of bone and joint tuberculosis attributed to the bovine organism is reported to fall as follows [7]

Under 5 years	32 8 per cent
5 to 9 years	24 5 "
10 to 15 years	12 1 "
16 to 24 years	10 5 "
25 years and over	0 "

9 The type of organism reported in cases of pulmonary tuberculosis is almost invariably the human form but occasionally it is described as the bovine type Thus B Lange[8] reports four such cases in one the bovine were mixed with human bacilli

10 To account for the discovery of the human type of organism in pulmonary tuberculosis the explanation (originating it is believed in the United States) put forward is infection later in life by a new bacillus of the human type though it is more or less generally accepted that immunity more or less complete is afforded by early infection Massive doses are regarded as leading to the reinfection Presumably such massive infection could obtain no more effectually than between husband and wife but there is little evidence of conjugal infection [9] In his Lady Priestley Memorial Lecture to the National Health Society on November 29th 1912 Professor Elie Metchnikoff related his own experience attributing his immunity to infection from a tuberculous wife to non pulmonary trouble early in life

At the age of 23 he married a woman of the same age who was so ill with pulmonary tuberculosis that she had to be carried in a chair up the few steps leading to the church She died from tuberculosis four years afterwards He passed the greater part of that time by her side in the greatest intimacy without taking any precaution against the contagion His explanation of his immunity was that he suffered from ophthalmic scrofula when young and at the time of speaking had ganglia in the neck ' very probably of bacillar origin

11 In view of the facts (*a*) that it is rarely that pulmonary tuberculosis occurs in a person with marked evidence of non pulmonary lesion (*b*) that there is little if any evidence that even such massive infection as is possible under conjugal conditions produces pulmonary tuberculosis, and (*c*) that tuberculous infection in early life is almost universal in this country and illness due thereto is exceptional the conclusion would appear to be that pulmonary tuberculosis in later life occurs in members of the population who have not had much active tuberculous infection when young and in whom marked immunity by such tuberculous infection has not been produced

12 The explanation at the present time of the occurrence of pulmonary tuberculosis in later life is reinfection (see 10) and the necessity for such an explanation appears to be the character of the organism found—mainly the human type as contrasted with the ' bovine type

13 The distinction between these two main types is based on cultural and virulence characteristics of rather a refined nature Ordinarily an organism conforms generally to one or other of the main types but this is not always the case For example Dr Stanley Griffiths[10] observes in his note on the second series of 261 cases

No difficulty was found in classifying the cultures from 251 cases There remain 10 viruses the cultures from which did not conform exactly either to the human or bovine type Eight of the ten were designated ' dysgonic human the remaining two atypical ' viruses are more difficult to classify Finally—for reasons which he sets out—he concludes the combination of characteristics justifies in my opinion the classification of these two viruses as attenuated bovine

14 This difficulty is further evidenced in the recent investigation of the Lubeck catastrophe following the use

a whitish unbaked clay answered to the same test as the terra sigillata of Malta which was famous in the Middle Ages as an antidote to poisons and for counteracting the effects of the bites of venomous reptiles

The story of how St Paul came to be associated with this clay taken from a cave on the shores of Malta is recorded in the New Testament

About the year 60 A.D. the apostle Paul after appealing to the Emperor to be permitted to come to Rome embarked in a ship from Alexandria in the charge of Julius the centurion. Storms and rough weather were encountered and the vessel was wrecked the passengers being washed ashore on an island which proved to be Malta. They were received with kindness by the people who gave them shelter in a cave from the cold and rain.

When Paul had gathered a bundle of sticks and laid them on the fire, continues the text, there came a viper out of the heat and fastened on his hand. And he shook off the beast into the fire and felt no harm. To the amazement of the onlookers. Howbeit they looked when he should have swollen or fallen down dead suddenly but after they had looked a great while and saw no harm come to him they changed their minds and said that he was a god.[1]

According to a later tradition Paul when he landed in Malta endowed the earth of the island with the power of curing the bites of venomous beasts and rendered harmless all snakes and scorpions for ever. Some of these when taken to Sicily immediately became venomous again while on the other hand poisonous reptiles introduced into Malta suddenly became harmless.

There was a common belief among the Maltese that persons born on January 25th the anniversary of the conversion of St Paul were immune from the effects of poisonous bites and stings and that the simple act of licking or sucking the part was sufficient to cure them. It is said that in the Middle Ages charlatans who pretended that they were descendants of St Paul's followers perambulated the island claiming that their origin protected them from poisonous snakes.

The cave in which St Paul is said to have taken refuge is near the parish church at Rabat about eight miles from Valetta and a statue of the apostle which now stands within it was erected by the Grand Master Pinto. The superimposed Collegiate Church dedicated to St Publius was rebuilt in 1692.

The chalky earth or clay which is supposed to have the property of resisting poisons was formerly called St Paul's Grace and as it was gradually removed from the sides and floor of the cave to be stamped and made into tablets it was said to be miraculously replaced. Like the sacred sealed earth or terra sigillata from the island of Lemnos it acquired a reputation throughout Europe and such was the demand for it in the fifteenth century that the Grand Masters of the Knights of Malta took official charge of its collection and distribution and had it stamped or impressed with certain seals seventeen varieties of which are known. Olaus Worm gives representations of several of the stamps used in 1655. One bears the Cross of Malta on one side and on the reverse a figure of St Paul holding a staff around which a serpent is entwined. In another the apostle is represented in a kneeling position in adoration before the Pascal Lamb. Others depict him in the act of preaching while holding the staff with the serpent or show his head surrounded by a halo and a snake below. The reverse of most of the tablets bears the Maltese Cross or the arms of the Grand Masters of the Order of St John.

The earliest of the seals appears to have been the one representing St Paul holding the staff entwined with a serpent identical with that depicted on the base of the cup in the British Museum which clearly shows that it was originally made from the chalky earth or clay from the cave of St Paul at Rabat. The curious pale orange coloured stones embedded in the base were known in Malta as serpents eyes and were believed to have been fashioned by nature to perpetuate St Paul's miracle. To them also was attributed the property of averting the effects of poisons and their addition to the cup was no doubt due to the idea that they would thus render it more powerful as an antidote to any poisonous liquid that might be placed in it. They are probably the fossil teeth of a fish and vary in colour from a pale orange-brown to grey. Owing to the alexipharmic properties attributed to them they were regarded as of considerable value.

An inventory of jewels that belonged to King Henry V of England includes a number of serpents eyes garnished in gold. They were sometimes set in bracelets and in the seventeenth century there is a record that one of the Grand Masters of the Order of St John had a serpent's eye set in a ring which he wore to preserve him from colic. In 1925 Wickersheimer published the text of a pamphlet that he found in a collection formed about 1788 now in the library of the University of Strasbourg. In this the writer alludes to the precious tongues and eyes of serpents which are found in the Island of Malta and states that

> The glorious Apostle Paul when he stayed three months on the island and converted it to the faith of Christ took the poison from all the serpents that were in it rendering them harmless and inoffensive as though they were of stone at the same time giving great privileges to the rocks and soil.
>
> The virtue of the stone and of the said tongues and eyes are marvellous for they are of avail against every sort of poison and the bites of poisonous animals not only to prevent them from hurting but also to cure anyone after having taken poison or been stung or bitten by a poisonous animal.
>
> They are also helpful in many other diseases as has been experienced in the Isle of Malta and elsewhere.

The methods of using them are said to be as follows:

> The were worn in rings set with the eyes as gems so that they touch the skin.
>
> The tongues worn round the neck or arm or if infused in water for some time the liquid equired the power of rendering poisonous bites harmless.

An account of the Stone of St Paul appears in a pamphlet printed in Italian and French in Malta in 1643. It states that the Stone or Earth of St Paul also called Earth of Malta or Gratia S. Pauli is one of those clays used in medicine by reason of their absorbent astringent and sudorific qualities which are marked with a seal to testify their name of terra sigillata.

> The white earth of which we are treating here was said to come from the Grotto of St Paul over which was placed a church under the patronage of the saint. This grotto is situated at Rabatto a suburb of Civitavechia and is about eight miles from Valetta.
>
> It is very white in colour and images cups medals vases and other things are made of it.

As late as the last century the earth from St Paul's Cave was used as a febrifuge and absorbent by the Maltese, and was said to possess the same properties as magnesia. Tablets made from the dried clay were sometimes worn suspended round the neck as amulets to prevent the stings of insects. In an account of St Paul's Cave published a few years ago it is stated that in spite of the rock called St Paul's Grace having been dug away for the faithful to be kept as relics and memorials and antidotes against fevers and bites of poisonous animals it is found to have perpetually the same dimensions. From recent inquiries made by Sir Themistocles Zammit of the museum at Malta the clay from St Paul's Cave at Rabat is no longer used locally for its medicinal or supposed miraculous properties from which it would appear that the belief in its value as an antidote and alexipharmic has now died out.

C. J. S. Thompson, M.B.E.

Royal College of Surgeons of England,
Lincoln's Inn Fields.

[1] Acts xxviii. 1-6.

THE NEW YEAR HONOURS

The List of New Year Honours was issued on January 1st as a supplement to the *London Gazette* of December 29th. It included the names of the following members of the medical profession on all of whom we offer our congratulations.

For Civil Service

Walter Ernest Fasnacht Fox MC DSc LLD MB ChB MP Emeritus Professor of Tropical Medicine, Liverpool. 1931

KCSI

Major General Sir Leonard Rogers CIE MD FRCP FRCS FRS IMS (retired) Indian Medical Service.

KCIE

Sir Lewis Knightley Dolland CVO CIE MD FRCP Member of Council, Medical Commission

KCVO

John Weir CVO MB ChB Physician to the Household in Scotland

KBE

Alexander Morse Davies MB ChB Director of Medical Services, Northern Ireland

Hermann Norton Kay Moynihan MD FRCPE FRSEd DPH Consulting Surgeon, London Clinic

DBE

Miss Ethel Mary Bedford Lloyd Lloyd MD ChB Inspector, Women's Branch, Ministry of Health

CBE

George Buchanan Bantock MB ChB FRCS Late Lecturer in the Principles and Practice of Surgery, Birmingham University

Percy Lewis Evans MB ChB FRCS Late Surgeon, Royal Infirmary, Manchester

Henry Edward Kaye MB ChB FRCP Deputy Chief Medical Officer, Ministry of Health

Harold Scott MC MB ChB 1915 Late Senior Medical Officer, Ministry of Health

CSI

Colonel John Dunlop Graham CIE IMS Indian Medical Service

CIE

Lieutenant Colonel Walter Lindsay Webb IMS Director, Bacteriological Laboratory, Kasauli

CVO

Major Thomas Alexander Lauchlan Lees TD MRCS Late Physician to the Household in Scotland

CBE

Stanley Dickinson Kelly MRCS DTM DPH Superintendent Medical Officer, Wandsworth

Percy Evans Evans-Jones MD MAMS Late Officer of Health, Gwent

Air Force Medal

Wing Commander Noel Dudley Pemberton MB ChB Principal Medical Officer, Air Defence of Great Britain Command

Flight Lieutenant Frederick Arthur Dawson MB ChB Medical Officer, Royal Air Force, Mount Batten

Queen's Police Medal

Superintendent Frederick Charles Wensley Metropolitan Police

Colonial Police Medal

Lieutenant Colonel Alexander Lamb MB ChB Commissioner of Police, Kenya

Order of the British Empire

Civil Division

CBE

Major Thomas Johnston Horsley MC MB ChB Late Consulting Physician, Ministry of Health

OBE

Edward Wyndham Kaye MRCS DTM DPH Late Superintendent Medical Officer, Wandsworth

Frederick Evans Evans-Jones MD MAMS Late Officer of Health, Gwent

Military Division

CBE

Colonel Andrew Leitch FDS Late Consulting Dental Surgeon, Ministry of Health

OBE

Major Douglas Lamb MB ChB Late Medical Officer, Ministry of Health

Correspondence

ANTI-MALARIA MEASURES

SIR,—In view of the [illegible] I hope you will allow me to call attention to the fact that the Malaria Committee of the Royal Society of Tropical Medicine and Hygiene has been in existence for over twenty years, and has published a number of reports on the subject of malaria and its prevention. The Committee has always been ready to give advice to any who have applied to it, and has frequently done so. The Committee has also published a number of papers on the subject of malaria and its prevention in the Transactions of the Society. The Committee has also published a number of papers on the subject of malaria and its prevention in the Journal of Tropical Medicine and Hygiene. The Committee has also published a number of papers on the subject of malaria and its prevention in the Journal of the Royal Society of Tropical Medicine and Hygiene. The Committee has also published a number of papers on the subject of malaria and its prevention in the Journal of the Royal Society of Tropical Medicine and Hygiene. The Committee has also published a number of papers on the subject of malaria and its prevention in the Journal of the Royal Society of Tropical Medicine and Hygiene.

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Yours faithfully,

Colonel C [illegible]

Secretary, Malaria Committee, Royal Society of Tropical Medicine and Hygiene

FRS B [illegible]

[illegible]

P [illegible] I [illegible]

[illegible]

Co [illegible]

the anti larval work had not been efficiently carried out (facts which had already been reported to the directors by Mr Cantlay who was in charge of all the estates at the time of my visit) and that on some an insufficient area was being controlled—for example on one side of a group of buildings oiling was done for half a mile (40 chains) and on the other for 5 chains or even less I have my notes written at the time before me as I write now, they describe what I found and what my recommendations were

In order to put the anti larval work on a more satisfactory basis it was necessary to decide at once what area should be controlled At sea level in Malaya where malaria persists throughout the whole year, I had found that half a mile was adequate The same area has been found sufficient in certain parts of India at or near to sea level In the Travancore area malaria disappears at an elevation of about 3 500 ft The tea gardens referred to in this report ranged from 2 500 ft to 4 000 ft They were therefore near to the uppermost limit of malaria The problem which confronted me was to decide what was the probable area which would eliminate malaria completely and keep it permanently eliminated by anti larval measures alone I decided that a circle with a radius of 20 chains or a quarter of a mile should be tried If it were found insufficient it could be increased My recommendation was adopted and I have here beside me plans of all the estates showing the areas controlled by anti larval measures When I saw Colonel Clemesha in Ceylon about a month later I told him that I had found the anti larval control unsatisfactory in places and also that I had standardized the area of anti larval work to 20 chains Colonel Clemesha's report contains nothing of this so he has evidently forgotten it Yet it is of vital importance if we are to understand the reason for the improvement of health which took place in 1929

The adoption of plasmoquine after treatment was therefore not the only difference between 1928 and 1929 and in view of the facts that I have stated it cannot be regarded as the factor responsible or even mainly responsible for the improvement of health The improvement in health is what might be expected from, and did in fact follow the better organization of the anti-larval work introduced by Mr Cantlay partly on his own initiative and partly on my advice on all the estates in May 1929 and since continued by Mr Sylvester The greatest credit is due to Mr Sylvester and to Mr and Mrs Cantlay for the work they have done In giving credit to them I am in agreement with Colonel Clemesha I find myself in agreement with Colonel Clemesha on one other point It is the value of euquinine and sweetened condensed milk treatment for children He calls it a new weapon I used it more than twenty years ago as Colonel Clemesha will find by referring to the first edition of my *Prevention of Malaria in the Federated Malay States* published in 1911

Finally I would like to make it quite clear that this letter is not an attack on plasmoquine or any other anti malarial drug They have a more or less important place in *all campaigns against malaria* and I have employed them and all other methods extensively in the past and sought to determine their values and limitations as my books and papers show In some regions drugs should be used to supplement the anti larval measures until the anti larval measures by themselves are thoroughly organized and are able to prevent the further spread of the disease In other regions drugs will not be supplemental to anti larval measures they will be the method of choice and anti larval measures will not be used The dividing line between the two regions has still to be determined and I hope it will be my privilege to take part in this research Here I wish to take the opportunity of acknowledging the courtesy of Dr Schulemann director of Messrs Bayer's research department the inventors of plasmoquine when I visited him at Elberfeld in Germany and with whom I am in close communication in the researches now being carried out at the Ross Institute But what I wish to bring out now is that Colonel Clemesha's report is misleading both in what it states and in what it omits and so it does not help us to get nearer to the truth about the value or limitations of either plasmoquine or anti larval measures —I am etc,

Ross Institute Putney S W Jan 2nd — MALCOLM WATSON, Director of Tropical Hygiene

THE SOURCE OF INFECTION IN AN OUTBREAK OF PUERPERAL FEVER

SIR —Dr Leonard Colebrook does well to call attention to the fact, sometimes overlooked, that external infection may take place during the puerperium Dr Charpentier[1] gives an example fort remarquable occurring in the wife of one of his colleagues where everything had gone well up to the seventeenth day

On that day the husband on his return from treating a patient affected with a diffuse phlegmon of the thigh had the fatal idea to examine his wife to see if the uterus had returned to its normal state Next day the woman had a violent rigor and we saw unroll before our eyes the phenomena characteristic of purulent infection to which the patient succumbed on the thirty third day of her lying in

—I am etc

London W Jan 2nd — HERBERT R SPENCER

THE GRAFENBERG RING

SIR —Colonel Green Armytage's memorandum in your last issue prompts me to record the following case

Some months ago I was asked to see in consultation a lady aged 40 who complained of a slightly offensive blood stained vaginal discharge of a few months duration A Grafenberg ring had been inserted into the uterus twelve months previously, and for six months nothing untoward had happened Curettage was performed but exploration of the uterus failed to detect the presence of any foreign body The patient was told that the ring could not be found and that it had escaped from the uterus at some time or other—probably during a menstrual period The blood stained discharge persisted however and after some weeks the patient again consulted a doctor who asked me to see her

I decided to explore the uterus as I felt certain the ring must still be present An x-ray photograph would have confirmed my opinion but I did not think it was really necessary I dilated the cervix but on exploring the cavity of the uterus in the usual way with long uterine forceps and curette I could not find any trace of the ring It was only on very firm pressure with the curette that I felt it embedded in the uterine wall Removal was effected by gouging it out of the uterine wall with the curette and I was able to demonstrate the ring to the doctor with pieces of uterine muscle adherent to it The patient left the nursing home in a week's time completely cured

Discussion of this case with my colleagues brought to light the occurrence of other accidents such as acute pelvic peritonitis following the use of the Grafenberg ring and my own experience has convinced me that this is a dangerous contraceptive —I am etc

London W 1 Jan 4th — TREVOR B DAVIES M D, M R C P F R C S

[1] *Traite Pratique des Accouchements* 1893 ii 896

another group sensitive to a different type of antigen In ten normal cases no reaction was obtained Work is proceeding along these lines and it should be possible to answer these difficult questions in the near future — I am etc

London W 1 Jan 4th G H Oriel M D

ASTHMA STATISTICS

Sir —Dr Alexander Francis writes in your issue of December 26th 1931 that the value of the skin tests is limited to their power of disclosing certain irritants which are capable of disturbing the stability of the vasomotor system and upon which depends the asthmatic condition I entirely agree with this but why then does he do his best to belittle the value of such skin tests? A very short time has passed since both asthma and hay fever were considered to be nervous manifestations Then the fundamental fact was realized that the hay fever patient always gives a skin reaction to pollen and the horse asthmatic to horsehair From these premisses the long list of proteins for testing purposes has been prepared

For many reasons the skin tests often fail or appear to fail A certain London asthma specialist saw a child and sent home with the child's nurse a box of proteins with directions for their use ! As the child was found by her nurse to be sensitive to all the known foods further advice was sought When properly tested the child gave no reactions to any foods but a large one to cat hair not included as a test in the previous list The removal of the cat cured the child but it may not always do so This does not mean that the positive reaction to cat hair is fallacious but that the child is probably sensitive to something else perhaps house dust and so the search continues

I do not see why we should expect people to be able to correlate the results of the cutaneous tests with their experiences and beliefs as to the cause of their attacks They often do so it is true but they come to be tested to find out if possible what is the cause of their asthma, which in fact they do not know Some people are too uneducated to correlate anything A man was sent to me by his board of guardians He was found to be sensitive to feathers and the removal of the feather bed gave him three years freedom Then the asthma returned and he was sent to me again This stupid fellow was again sleeping on a feather bed

Lastly it is important to be certain that the proteins used for the skin tests are reliable A few years ago there was a set on the market which gave a reaction to fish on most arms Scores of patients were uselessly forbidden all fish on that account with of course no benefit to their symptoms Other sets are so very carefully prepared and sterilized that no protein remains in them and they are thus entirely inert as antigens Used properly the skin tests are at times very valuable and although they afford assistance in only a very small part of the problem of asthma they are a fundamental and reliable factor — I am etc

London W Dec 28th 1931 Frank Coke

GLAUCOMA

Sir —Colonel Elliot's article in the *Journal* of December 26th 1931 raises issues with which many of us would not agree It is professedly a compromise between those who treat glaucoma entirely by myotics and massage and those who treat it by operation He advocates a compromise and a compromise of this sort to me implies the best of both worlds Myotics [illegible] measures [illegible] to have the first place and operation the last How often have we seen the patient and his general practitioner go on with myotics and massage much too long before operation, thus not giving operation a fair chance! *This is the danger* Besides an iridectomy properly done in the early stage is eminently satisfactory why delay it? It is one of the simplest of operations in skilled hands, and practically devoid of risk

Many of us would not agree with his physiology He says This timing is important for, (*a*) rises in pressure occur frequently during sleeping hours owing to the withdrawal of the pumping action on the canal of Schlemm exerted by the ciliary and iris muscles What is the evidence for this statement? There is no evidence that the mechanism which circulates the aqueous is withdrawn from operation during sleep in other words that it is not automatic in the same way as respiration and the circulation of the blood is automatic The 'pumping action again we question No pumping mechanism has yet been discovered in connexion with the aqueous a sluice mechanism there is —I am etc

Henry Smith C I E
Sidcup December 27th 1931 Lieut Colonel I M S (ret)

CHLOROFORM IN LABOUR

Sir —One may suppose that ether at the Rotunda Hospital is administered without naked lights Under the usual conditions of a general practitioner's midwifery the presence of an adequate supply of ether, in close association with an *open fire paraffin lamp* or candle is to ask for a verdict of manslaughter —I am, etc ,

W J Burns Selkirk
Erdington Birmingham Dec 29th 1931

Sir —I have been in general practice for forty five years and have attended well over four thousand cases of midwifery—generally single handed I have used chloroform always and have only lost one patient over forty years ago, under chloroform The patient had been in labour two days before I was sent for had taken no food and had been given spirits She died suddenly before she was under sufficiently for me to touch her It was one of the few times that I had a skilled assistant to give it Ether is impossible, as it wants a second person to administer it

I am *strongly of opinion* that any danger there may be in administering chloroform is to be measured by the length of time the patient has been allowed to linger on in labour In private practice this very rarely occurs as the public will not have it Two *or three days in labour* is most unusual One does not hear how long cases are allowed to be in labour in public institutions —I am etc

Wallington Jan 1st A Z C Cressy

A SUBSTITUTE FOR CALAMINE LOTION

Sir —In view of the present call for economy in prescribing—a call which is not only constantly reiterated in the out-patient departments of our voluntary hospitals but which is repeated *sotto voce* in our consulting rooms by patients who have but little money to meet large chemists bills—may I remind your readers of a substitute for calamine lotion which although it is much used on the Continent and in America is not yet widely known in the British Isles? I refer to liquor aluminii acetici which when diluted to form a 1 per cent solution is as effective a substitute for calamine lotion as one could desire and may in certain cases produce a better and quicker therapeutic result

Liquor aluminii acetici is said to be non toxic and non-irritant, it certainly is very astringent The following formula gives approximately a 1 per cent solution the indications for which are precisely the same as those for calamine lotion liq aluminii acetici ʒj aq ad ʒj M fiat

in such a sort to procure abortion or non conception after the foetus shall have been already endowed with life is by law a homicide)

Section 11 —Et similiter qui dederit vel acceperit venenum sub hac intentione ne fiat generatio vel conceptio (And in like manner whoever shall have given or taken drugs to the intent that no generation or conception may take place)

Section 12 —Item facit homicidum mulier quae puerum animatum per potationem et hujus modi in ventre dejecerit (Also the woman commits homicide who by potions and drugs of that sort shall have destroyed her animate child in her womb)

Thus it will be seen that the Common Law of 600 years ago was very similar to the Statute Law of to day Mr Justice Darling in the case of Reg *v* Brown 1889 made this statement

If a woman takes a substance which is in fact harmless believing it to be a noxious thing with intent to procure her miscarriage she is guilty of the *Common Law misdemeanour* of an attempt to procure abortion (The italics are mine)

Dr Jones states that it is a Common Law maxim that there is no crime if the other party consents This is so But here although one party (the abortionist and his victim) consent the State (the other party) does not consent and so the maxim does not apply Anyone sufficiently interested in the subject will find the matter more fully dealt with in a book by me on criminal abortion which is to be published this month —I am etc

Hove Jan 3rd L A PARRY

MEMBERS OF THE ROYAL COLLEGE OF SURGEONS

SIR — Brevity is the soul of wit —but not always The three lines that announce the decision of the Council of the Royal College of Surgeons of England not to grant the extremely moderate request of the Members of the College for a representation of two Members on its council out of a proposed 26 are neither witty nor wise Two things were uppermost in my mind when I came away from the annual meeting (1) When addressing the Members in his final speech the President stated, The strongest argument you have is the moral one This was a fine admission a great admission and one cannot but respect and admire the President who in the face of the memorable 24 made this fearless declaration It is this ethical principle at the back of everything that has kept this very question persistently vital for over forty years and will continue to do so till justice is established (2) The President also stated We have statutory duties to fulfil May I ask Sir what is the exact value of a statute? Surely it is an Act of Parliament instituted for the well being of any institution that has been granted a Charter for the benefit of that institution until another and a better one takes its place

Consider for a moment what would be happening at the present time had not certain statutes been rescinded or been ignored by custom Many of us would be still paying a fourpenny fine for not attending church on Sundays Again a man bearing a red flag would still be walking in front of our steam rollers and even nowadays of our motor cars! Progress means the alteration of statutes for better ones as necessary reforms are created The Royal College of Surgeons has had to alter its Charter on more than one occasion and once be it remembered it was altered for the sake of making H R H the Prince of Wales (later King Edward VII) an honorary Fellow of the College If such can take place for a single personage of royal blood it does not require a great stretch of the imagination to conceive that the same process might be repeated for the benefit of 18 000 men even if not a single one of them could boast of anything more than a plebeian ancestry —I am etc

London W 8 December 21st 1931 T WILSON PARRY

Obituary

SIR WILLIAM BENNETT K C V O F R C S

Consulting Surgeon St George's Hospital

The sudden death of Sir William Bennett at his house 3 Hyde Park Place on Christmas Eve removes one of the rapidly diminishing group of surgeons very prominent in London practice about the beginning and early years of the century and a personality with rather unusual characteristics and interests

William Henry Bennett was like some other St George's men of distinction—Sir Benjamin Brodie Thomas Tatum the surgeon and Fielding Blandford the alienist—a Wiltshire man and was born in 1852 as the son of William Francis Bennett of Chilmark near Salisbury After working for a year with an able general practitioner in the country he entered the Medical School of St George's Hospital on September 16th 1869, the school buildings of which had in the previous year been removed from Kinnerton Street to their present site His career as a student was marked by gaining the Henry Charles Johnson prize for anatomy in 1871 which carried with it the paid post of demonstrator of anatomy in the winner's third year the Treasurer's prize and the third year proficiency prize in 1872 the Treasurer's prize again in 1873 and the William Brown £100 exhibition in 1875 In 1871 he was one of a number of St George's men who started the short-lived *London Students Journal* edited by another St George's man Qualifying as M R C S and L R C P in 1873 he obtained the F R C S in 1877 in which year he succeeded J H Morgan as surgical registrar to the hospital and had a consulting room at 5 Savile Row then a select professional address Isambard Owen his colleague as medical registrar was knighted in 1902 the year after Bennett became Sir William

On the resignation of the late E C Stirling then assistant surgeon who went to South Australia and subsequently became a Fellow of the Royal Society and a knight Bennett was elected in his place in July 1880 thus defeating his senior J H Morgan (1847–1924) who in that year was elected assistant surgeon to Charing Cross Hospital After the retirement of Sir Prescott Hewett from London in 1883 Bennett who had the greatest admiration for his former chief and learnt from him two points of the greatest practical importance—namely how to talk to a private patient and the value of gentle manipulation—took his house 1 Chesterfield Street where he remained for about thirty five years of his active surgical life He worked in the out patient department for seven years, and then on December 25th 1887 after the resignation of Timothy Holmes he became full surgeon to the hospital he was thus more fortunate than his immediate junior colleague Clinton Dent who elected assistant surgeon five weeks after him served for fifteen years in the out patient department Bennett resigned from the hospital in 1905 two years before the twenty years tenure as full surgeon would have been completed and was duly elected consulting surgeon For many years until 1917 he was a member of the weekly board and of its continuation the house committee and with Sir Isambard Owen vigorously advocated the renovation of the hospital In the Medical School he lectured on surgery from 1887 to 1899 As a member of the Court of Examiners of the Royal College of Surgeons of England he examined in anatomy for the Conjoint Board and the first fellowship examinations for many years he was inspector of anatomy for the metropolis his senior colleague the late T Pickering Pick for some years holding the similar office for England and Wales For a time he examined in surgery at Cambridge

A course of three lectures with lantern illustrations on the reactions between drugs and cells will be given at University College on February 26th and 29th and March 1st at 5 15 p m by Dr A J Clark F R S professor of materia medica University of Edinburgh

UNIVERSITY OF ST ANDREWS

During the commemorative ceremonies at University College Dundee next month the honorary degree of LL D is to be conferred on Dr R C Buist honorary consulting gynaecologist Dundee Royal Infirmary and on Mr David M Greig F R C S Ed Conservator of the Museum of the Royal College of Surgeons of Edinburgh

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly business meeting held on January 1st the following were elected Honorary Fellows of the College Sir Almroth Edward Wright K B E C B M D Sc D LL D, F R C S I and Edward Francis Stephenson F R C S I D P H

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

SURGERY —G A Dickson W Hertzog W B Mattar C Morgan P Rivlin

MEDICINE —F Crowther H T Giblin R F Hawke W W Parry S Ramarao B Shapiro E Teplitzky E O Watson H A F Wells

FORENSIC MEDICINE —J H Beale F Crowther H T Giblin J Irger V R O Lahiruni R Perkins H A T Wells

MIDWIFERY —G A Dickson R N Gillespie R F Hawke A A Kahn E J Littledale A J McBrearty J I Moohalaparacl el

The diploma of the Society entitling them (upon registration under the Medical Acts) to practise medicine surgery and midwifery has been granted to Messrs H T Giblin S Ramarao R N Gillespie E O Watson C Morgan and H A T Wells

The Services

HONORARY SURGEON TO THE KING

The Air Ministry announces that the King has approved the appointment of Air Vice Marshal John McIntyre *M C* M B B Ch, as an Honorary Surgeon to His Majesty (vice Group Captain Henry Cooper D S O who vacates the appointment on retirement from the Royal Air Force)

PROMOTION EXAMINATION

The following officers of the R A M C were approved at the examination (in written subjects) held at home stations in October last with a view to promotion Majors R E Barnsley M C W Bird J F Bourke M C T L Henderson R H C Pryn J A C Kidd F G L Dawson W O Holst Captain F C Hilton Sergeant Lieutenant J M Officer

DEATHS IN THE SERVICES

Lieut Colonel Daniel Maurice Corbett O B E R A M C died in the Royal Herbert Hospital Woolwich on December 14th 1931 aged 49 He was born on August 17th 1882 and was educated at Dublin University where he graduated as B A M B B Ch and B A O in 1905 Entering the R A M C as lieutenant on July 30th 1906 he attained the rank of lieutenant colonel on September 17th 1930 He served throughout the war of 1914-18 when he was mentioned in dispatches in the *London Gazette* of July 21st 1917 and was given a brevet majority on June 3rd 1917 and also the O B E He was stationed at Woolwich having recently returned from a tour of foreign service at Bermuda

The death in India of Lieut Colonel Zainoor Allee Ahmed Bengal Medical Service (ret) is reported without date in the Indian Army List of October 1931 He was born on July 19th 1848 and was educated in the Universities of Calcutta and Glasgow taking the L M S Calcutta in 1871 the M B Glas in 1872 and the M D in 1873 also the L F P S G and the L R C P Lond in 1872 Entering the I M S as assistant surgeon on October 1st 1872 he became surgeon on July 1st 1873 when the rank of assistant surgeon was abolished surgeon lieutenant colonel after twenty years service was placed on the selected list for promotion on April 3rd 1899 and retired with an extra compensation pension on July 19th 1903 He served on the North West Frontier of India in the Hazara campaign of 1891 (medal with clasp) on the Malakand in 1897-98 including operations in Bajaur and in the Mohmand country, was mentioned in dispatches in G G O No 178 of 1898 (medal with clasp) and in the Tirah campaign of 1897-98 with the operations in the Bara Valley (clasp) He also rejoined for service in India during the war of 1914-18

Lieut Colonel Alexander Simpson Rose R A M C (ret) died after a long illness in a London nursing home on December 12th 1931 aged 75 He was born on October 3rd 1856 and was educated at Edinburgh where he graduated as M B and C M in 1880 and as M D in 1883 Entering the Army as surgeon on February 5th 1881 he became lieutenant colonel after twenty years service and retired on May 26th 1909 He served in the Egyptian war of 1882 receiving the medal and the Khedive's bronze star and in the Sudan campaign of 1884 and in that of 1885 at Suakin receiving for each a clasp to the Egyptian medal He also served throughout the South African war of 1899-1902 going through the operations for the relief of Ladysmith including the actions of Colenso Spion Kop and Vaal Krantz where he was severely wounded and the final relief of the besieged force He was mentioned in dispatches in the *London Gazette* of February 8th 1901 and received the Queen's and King's medals with two clasps to each

Medical News

The Fellowship of Medicine and Post Graduate Medical Association announces that on Mondays and Fridays from January 11th to 29th Dr W Langdon Brown will deliver a series of six lectures on endocrinology at the Medical Society of London 11 Chandos Street Cavendish Square at 8 30 p m the fee for the course is £3 3s or 12s 6d a lecture payable at the lecture room The first of a series of nine lectures on treatment to be given on Wednesdays at 4 p m, at 11 Chandos Street will be delivered on January 13th by Dr E H R Harries these are free to members of the Fellowship, to non members the fee is £1 1s for the series or 5s a lecture Free demonstrations in medicine and surgery at various hospitals will begin on January 18th An evening course for the M R C P is being arranged to begin on February 22nd it will consist of six clinical and two pathological evenings four lectures one ophthalmic demonstration and one laboratory demonstration and will take place on Mondays Wednesdays and Fridays for four weeks The number of graduates is limited to twenty-five and they *must be members of the Fellowship fee for the course* £12 12s An evening course for the Final F R C S will take place on Tuesdays from April 5th to May 10th and on Thursdays from April 7th to May 12th open only to members of the Fellowship there are a few vacancies left Applications for all the above courses should be made to the Fellowship of Medicine 1 Wimpole Street W 1

The ninth Congress of the International Society of Surgery will be held at Madrid from March 15th to 18th At the same time there will be an exhibition of surgical instruments orthopaedic apparatus and pharmaceutical preparations, under the organization of Dr F Coca, Lagasca 38 Madrid

At the meeting of the British Institute of Radiology to be held at 32 Welbeck Street on January 14th at 8 30 p m the adjourned discussion on Dr Ffrangcon Roberts's paper "Some criticisms of the international protection recommendations will be continued by Drs Stanley Melville J Duncan White G W C Kaye and others

A course of lectures on maternity and child welfare for health visitors nurses midwives superintendents of infant welfare centres etc will be given in the Lecture Hall Carnegie House 117 Piccadilly on Mondays at 6 30 p m from January 11th to March 14th Particulars may be obtained from the secretary National Association for the Prevention of Infant Mortality 117 Piccadilly, W 1

Proportion of Rent etc for Professional Use

B N used to be allowed two thirds and later one half of the rent and similar expenses incurred by him as applicable to his professional use of his premises Recently the inspector of taxes has contended that one third would be sufficient

*** This is one of those questions where so much turns on the precise circumstances of each case that advice is difficult and may be misleading On the face of it one third hardly seems adequate especially if the waiting and consulting rooms are not used privately and if the total rent covers the use of a garage for the professional car Two points which may be mentioned are (1) that the ground floor has a much larger rental value than any other and (2) that a fair test of the proposed professional proportion can sometimes be obtained by comparing the amount of the balance left for private use with the actual accommodation available and the probable cost of that accommodation in the immediate neighbourhood

Assistant Tax not Applied for

A P M X has been in receipt of emoluments sufficient to create liability to tax since 1928–29 inclusive but has not received any income tax demand How does he stand legally and what should he do?

*** The emoluments are assessable (Schedule E) and there is no legal liability to make a return under that schedule until called upon to do so by a notice served on the recipient of the emoluments When the liability comes to light however as presumably it will sooner or later—for example through the accounts or statutory returns of the employer— A P M X will be assessable for the then current and the six preceding years On the whole it would seem desirable on general grounds for A P M X to inform the local inspector or collector of taxes that he is receiving a taxable salary if neither of them then raises the question of earlier years having regard to the voluntary disclosure so much the better for our correspondent

Appointment under the Crown Free Quarters

J S R holds a departmental appointment which carries with it the right to occupy certain free quarters Is he liable to account for income tax on the annual value of such quarters?

*** Yes—under Schedule A No VII If the employer were a private person he would be liable to account for tax on the value of the whole premises As it is the Crown is exempt but J S R has to pay on the portion occupied by him

Employment in India Emoluments

H B W is employed in India as a resident hospital physician receiving *inter alia* (*a*) free quarters (*b*) mess allowance and (*c*) servant's allowance Are these items liable to be included in computing the amount of Indian income tax payable?

*** The answer is Yes

LETTERS, NOTES, ETC

Treatment of Dysmenorrhoea

Correction

Dr ALICE E SANDERSON CLOW (Cheltenham) writes I notice with regret a misprint in my article on the treatment of dysmenorrhoea published in the last issue of the *Journal* which unfortunately confuses the import of most of a paragraph Under the heading Drugs the statement is printed is It cannot be too often repeated that alcohol and morphine should be absolutely condemned for use in a symptom occurring early in life and liable to recur monthly for many years especially as their action is generally *ineffectual* etc Whereas it is because they are *effectual* that their use is so undesirable in this particular condition

CO_2 in Resuscitation

Mr ERNEST MASSINGTON FRCS (London N 10) writes In the early hours of December 29th I had to deal with a troublesome case of asphyxia neonatorum following breech delivery Not having a cylinder of CO_2 with me I emptied half a siphon of soda water into a basin and held the baby over it Breathing commenced at once and continued with perfect regularity This treatment is so simple and efficacious that I think it is worth recording

Local Novocain and Splanchnic Anaesthesia

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The Automobile Association sends the following suggestions for preventing damage during periods of frost (1) When a car is out of use drain radiator cylinder jackets and pump casing It is not enough on many cars to drain radiators only (2) In the absence of sufficient heating of the garage an electric or other heating apparatus of sufficient power should be employed Where these are placed under the bonnet the latter and radiator should be covered with a rug A muff is also helpful and prevents thermal waste (3) With a car in daily use introduce into the water circulating system one of the various compounds available for lowering the freezing point The A A has recently carried out refrigerator experiments to determine the best proportions of such compounds to ensure safety and information on this subject can be obtained from any of its offices

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Medicine

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Proportion of Rent etc for Professional Use

B N used to be allowed two thirds and later one half of the rent and similar expenses incurred by him as applicable to his professional use of his premises Recently the inspector of taxes has contended that one third would be sufficient

*** This is one of those questions where so much turns on the precise circumstances of each case that advice is difficult and may be misleading On the face of it one third hardly seems adequate especially if the waiting and consulting rooms are not used privately and if the total rent covers the use of a garage for the professional car Two points which may be mentioned are (1) that the ground floor has a much larger rental value than any other and (2) that a fair test of the proposed professional proportion can sometimes be obtained by comparing the amount of the balance left for private use with the actual accommodation available and the probable cost of that accommodation in the immediate neighbourhood

Assistant Tax not Applied for

A P M N has been in receipt of emoluments sufficient to create liability to tax since 1928–29 inclusive but has not received any income tax demand How does he stand legally and what should he do?

*** The emoluments are assessable (Schedule E) and there is no legal liability to make a return under that schedule until called upon to do so by a notice served on the recipient of the emoluments When the liability comes to light however as presumably it will sooner or later—for example through the accounts or statutory returns of the employer— A P M N will be assessable for the then current and the six preceding years On the whole it would seem desirable on general grounds for A P M N to inform the local inspector or collector of taxes that he is receiving a taxable salary if neither of them then raises the question of earlier years having regard to the voluntary disclosure so much the better for our correspondent

Appointment under the Crown Free Quarters

J S R holds a departmental appointment which carries with it the right to occupy certain free quarters Is he liable to account for income tax on the annual value of such quarters?

*** Yes—under Schedule A No VII If the employer were a private person he would be liable to account for tax on the value of the whole premises As it is the Crown is exempt but J S R has to pay on the portion occupied by him

Employment in India Emoluments

H B W is employed in India as a resident hospital physician receiving *inter alia* (*a*) free quarters (*b*) mess allowance and (*c*) servants allowance Are these items liable to be included in computing the amount of Indian income tax payable?

*** The answer is Yes

LETTERS, NOTES, ETC

Treatment of Dysmenorrhoea

Correction

Dr Alice E Sanderson Clow (Cheltenham) writes I notice with regret a misprint in my article on the treatment of dysmenorrhœa published in the last issue of the *Journal* which unfortunately confuses the import of most of a paragraph Under the heading Drugs the statement as printed is It cannot be too often repeated that alcohol and morphine should be absolutely condemned for use in a symptom occurring early in life and liable to recur monthly for many years especially as their action is generally *ineffectual* etc Whereas it is because they are *effectual* that their use is so undesirable in this particular condition

CO_2 in Resuscitation

Mr Frank Mannington L R C S (London N 10) writes In the early hours of December 29th I had to deal with a troublesome case of asphyxia neonatorum following breech delivery Not having a cylinder of CO with me I emptied half a siphon of soda water into a basin and held the baby over it Breathing commenced at once and continued with perfect regularity This treatment is so simple and efficacious that I think it is worth recording

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J. FRIIS (*Tidsskrift f. d. Norske Laegefor.*, October 1st, 1931, p. 797) gives an account of an epidemic of chicken-pox which throws some light on the problems of its source and incubation period. In a colony of about 500 persons, including about 40 children, in the coal-mining settlement in Advent Bay in Spitzbergen, which is completely cut off from the rest of the world for seven to eight months in the year on account of darkness and ice, an epidemic of chicken-pox broke out at the end of December, 1930, in a family with four children. The date on which the last boat had left for Norway was October 21st. Three of the four children showed the characteristic chicken-pox rash in various stages of development when first examined on December 29th. The mother had noticed a rash on December 27th, but had taken the children to a Christmas party on this date. Spread of the infection was therefore to be anticipated, although the first three patients were isolated from December 29th. Two days later two children belonging to a second family became ill and were in their turn isolated. There was now an interval of eleven days *without any new cases*. From January 10th and during the following week eleven new cases cropped up, and if it is assumed that they were all infected on December 27th, the incubation period ranged from 13 days in the earliest case to *21 days in the latest case*. After a free interval of five days there was a third crop of new cases with an incubation period of 12 to 13 days. The children who first *became ill had come* from Norway on September 24th, and *it seems highly* improbable that they had been infected *before this date*. The children who fell ill in the second family had not been in Norway since the summer of *1928*, and *it is* therefore probable that the source of the original infection must have been in Advent Bay itself. Since the author took medical charge of the colony in June, 1930, three cases of herpes zoster came to his notice, the first developing on August 28th, and the second one day before the last two cases of chicken-pox developed. A case of herpes labialis occurred on September 22nd, and another on October 13th.

31 Post-vaccinal Encephalitis in Holland

According to N. M. J. JITTA (*Bull. Office Internat. d'Hyg. Publ.*, October, 1931, p. 1804) from 1924 to May, 1931, 836,100 vaccinations were performed in Holland and were followed by 186 cases of encephalitis, which is equivalent to 1 case of encephalitis to every 4,656 vaccinations. A special commission appointed to examine each case classified them in four groups—namely, (1) undoubted cases, (2) almost undoubted cases, (3) doubtful cases, and (4) very doubtful cases. In the statistics drawn up by the Inspector-General only the first two groups were considered. Among about 62,000 children vaccinated in the first year of life there were only three cases of encephalitis, and among 137,000 children between the ages of 1 and 2 years only five cases, or one case among 25,000 vaccinations in children under 2 years of age. All these patients recovered without sequels. Among 660,000 children between 2 and 11 years there were 159 cases, or 1 in 3,570. 55 of these died, a proportion of one death to 15,749 vaccinations. In 1930, 5 cases occurred among 27,131 vaccinations, or one case among 5,426 vaccinations. There has been a great decline in the number of vaccinations after the small outbreak of small-pox in the second half of 1929, and as compulsory vaccination at school age has been temporarily suspended no case has occurred since May, 1930, and May, 1931, although between 24,800 and 25,000 vaccinations were performed during that period.

32 Influenzal Parotitis

M. VILLARET and GUILLAIN (*Gaz. des Hop.*, October 21st, 1931, p. 1563) record three cases of influenza in adults complicated by suppurative parotitis and pulmonary congestion. The pus in each case contained pneumococci in large quantities, associated in one instance with staphylococci. Two of the patients made good recoveries, but the third died a month after his discharge with symptoms of acute pulmonary tuberculosis which had supervened on the attack of influenza.

Surgery

33 Arterial Resection in Arteritis Obliterans

R. FONTAINE (*Bull. et Mem. Soc. Nat. de Chir.*, October 24th, 1931, p. 1184) reports a case of obliterative arteritis in both lower limbs in which cure followed resection of the femoral arteries. This is considered further proof that an obstructed artery can be resected without hesitation, and that the operation should be performed when vasomotor troubles exist in the periphery of the limb. By this procedure an ideal resection of a disordered sympathetic plexus, the cause of the peripheral trouble, is actually performed. During the war Leriche advocated resection in cases where the arterial trunks had been destroyed and sclerosed by wounds. Discussing this case, Moure states that resection of permeable vessels or of those recently thrombosed is of slight use, and that favourable results can be obtained only if the peripheral circulation remains permeable. He believes that the good effects are due not only to a suppression of the periarterial sympathetic, but also to an arrest of the thrombosing process.

34 Septic Cavernous Sinus Thrombosis

B F STOUT (*Journ Lab and Clin Med* October 1931 p 28) believes that acute infectious cavernous sinus thrombosis is possibly more common than the few cases reported indicate and records two further cases In one of these recovery ensued, it is particularly interesting since it indicates the possibility of recovery in this condition with septicaemia and meningitis the possible sterilization of a heavy blood infection by intravenous bacteriophage therapy and the control of a staphylococcal meningitis by intraspinous bacteriophage injections The Schilling index also faithfully indicated the clinical facts The starting point of the disease in both cases was a small facial furuncle Staphylococci were isolated from the blood and lesions In the case of the patient who recovered the bacteriophage was first administered locally and subcutaneously then intravenously and finally intraspinally Stout believes that this patient survived because of the early and vigorous treatment and that the other patient who was in a hopeless condition when first seen might also have recovered if similarly early treatment had been possible Success in the one instance shows the possible efficacy of this treatment in staphylococcal septicaemia from other foci The bacteriophage in association with any necessary surgical measures should be used locally subcutaneously and intravenously Single doses up to 5 c cm can be given subcutaneously and 1 to 2 c cm doses intravenously with safety

35 Cholecyst gastrostomy in Ulcer

It is claimed by some authors that cholecyst-gastrostomy, by introducing a constant flow of bile into the stomach prevents or hinders ulcer formation others have shown that free hydrochloric acid and normal peptic digestion may continue despite this operation A case of anastomotic ulcer and another of perforation following cholecyst gastrostomy have been recorded P WALZEL (*Zentralbl f Chir* October 24th 1931 p 2679) records the case of a man aged 32 in whom abdominal pain and obstructive jaundice suggested pancreatic carcinoma An operation revealed enlargement of the pancreas which was thought to be malignant with complete obstruction of the bile duct and dilatation of the gall-bladder A cholecyst gastrostomy was performed and also a gastrojejunostomy with entero anastomosis since the swelling appeared to be invading the duodenum The jaundice disappeared and the patient recovered Two and a half years later he complained of pain in the upper part of the left side of the abdomen A test meal showed bile stained stomach contents the free acid figure was 27 and the total acid figure was 54 A second operation was performed at which a large perforating peptic ulcer was found at the site of the anastomosis The cholecyst gastrostomy condition was working perfectly the pancreas was still enlarged and completely occluded the bile duct A partial gastrectomy was successfully performed The case is considered by Walzel to be of particular interest since there was no doubt about the correct functioning of the cholecyst gastrostomy or that the ulcer developed after that operation had been performed

36 Tumours of the Suprarenal Gland

J MEYER and G TRUMESS (*Arch Int Med* October 1931 p 611) discuss tumours of the suprarenal gland with special reference to carcinoma of the cortex They report the case of a girl aged 13 who complained of pain in the chest and abdomen and had an acneform dermatitis of the face and trunk of about five months duration with indigestion epileptiform attacks and cessation of the menses Well developed and nourished she appeared to be older than her age she had a negroid facies which was accentuated by hirsuties The liver was increasing in size and the epigastric fullness and pain became worse one week after admission there was rapid exacerbation of the symptoms intra abdominal haemorrhage and subsequent death The pubic hair was abnormal in growth with a distinct tendency to masculine distribution At the post mortem examination a large primary carcinoma of the left suprarenal gland was found with metastases in the pleurae and liver, and the formation of peritoneal and mediastinal nodes The sexual alterations produced in the female by hypertrophy of the suprarenal cortex proceed towards the adult male type they are accompanied by enlargement of the clitoris atrophy of the uterus and breasts amenorrhoea abnormal growth and masculine distribution of the pubic hair, with loss of erotic feelings and of the sense of modesty The prognosis depends upon the character of the growth the degree to which it has infiltrated adjacent structures and the extent and accessibility of its metastases Successful removal has been effected in three cases with complete return of the sexual characteristics to normal

Therapeutics

37 Iron Cacodylate in Acute Bursitis

Unexpected good effects on a bursitis in a patient who was being treated for boils with injections of iron cacodylate led T K RICHARDS (*New England Journ of Med* October 22nd, 1931 p 812) to try this method on other patients Accordingly this treatment was given to approximately 70 cases of acute bursitis subacromial subscapular and infrapatellar The salt was injected intravenously with striking results immediate lessening of the acute symptoms occurred within three to four hours after the first injection and most of the patients were able to resume their normal activities in ten to twenty one days Both iron arsenite and cacodylate have been tried but the latter salt is preferred since it causes less severe reactions The initial dose is not more than 3 c cm (3/5 grain) of the cacodylate on the third or fourth day 5 c cm (1 grain) are given and this dose is repeated every three or four days until the symptoms have disappeared While there was no radiological evidence that the absorption of lime deposits in the bursae was hastened Richards believes that this method surprisingly relieves the acute symptoms by making the movements painless it prevents the formation of periarticular adhesions and thus averts distressing complications Three case histories illustrating the effectiveness of this treatment of bursitis are appended

38 Treatment of Early Syphilis

V C GARNER and J H STOKES (*Med Journ and Record* October 21st 1931, p 369) believe that the effective treatment of early or acute syphilis must comprise the prolonged simultaneous administration of an arsphenamine and a heavy metal given in a conservative dosage, and without any rest intervals They ascribe failures in efficiency to the fact that such smoothness of treatment has not been secured The medical practitioner is not generally familiar with the therapeutic shock or Herxheimer reaction he aerates (and thereby renders toxic) neoarsphenamine in its preparation and insists upon its speedy administration thereby provoking complications The authors prefer bismuth arsphenamine sulphate (bismarsen) which contains 23 to 25 per cent bismuth with 12 to 15 per cent arsenic it is given as intramuscular injections There is said to be no therapeutic shock reaction and fewer complications ensue in the skin and viscera than accompany intravenous administration A dose of 0 2 gram is given twice a week to a total of forty to sixty injections followed immediately by two or three courses of bismuth the rest interval being omitted with a consequent 5 per cent diminution of the incidence of relapse The authors add that if sulpharsphenamine is employed it should be injected only into the muscles Its use seems definitely associated however with a greater incidence of exfoliative dermatitis and with the fatal complication of aleukaemia haemorrhagica They urge that the conception of the short abortive course for cure when the infection is detected in the sero negative primary stage is no longer tenable A spinal fluid examination is essential between the sixth and twelfth months of treatment and even if completely negative as regards the cell

count Wassermann reaction presence of globulin and the colloidal curve should not prevent the treatment being continued for at least one year from the time when the blood became finally Wassermann negative

39 Neosalvarsan in Psoriasis

M G ROSENBAUM (*Derm Woch* October 31st 1931 p 1697) records two illustrative cases of obstinate psoriasis in a man aged 48 and a woman aged 27 in each case the disease had lasted for many years but recovery ensued in a few weeks after three injections of neosalvarsan He alludes to the work of older writers especially the British dermatologists Erasmus Wilson Taylor and Anderson who held that psoriasis was a late and modified form of syphilis Although such a view is now considered to be quite unfounded arsenic is still regarded by many authorities as the sovereign remedy for psoriasis and Rosenbaum concludes that the excellent results obtained from the use of neosalvarsan afford corroboration of this view

Disease in Childhood

40 Juvenile Nephrosclerosis

Using the term nephrosclerosis A G MITCHELL and G M GUEST (*Journ Amer Med Assoc* October 10th 1931 p 1045) record a study of chronic interstitial nephritis in childhood Owing to the lack of sufficiently accurate data the etiology of the condition is difficult to define A familial and hereditary predisposition is present intrauterine renal disease or nephritis in very early life may occur Acute bacterial infections especially streptococcal may cause renal injury resulting in chronic disease but a history of previous infection is no proof that chronic nephritis is its direct sequel Syphilis focal infections and exogenous and endogenous poisons are seldom etiological factors High protein diets are not causative agents hence too great protein restriction in children is not warranted and their diet should meet the usual normal requirements The symptomatology and examination of nephrosclerotic children are summarized many of the symptoms and signs are the same as in adults Of special interest are the peculiar bone changes simulating infantile rickets which occasionally arise and the undernutrition and dwarfism which commonly accompany chronic renal disease in childhood The authors consider that further studies of the total mineral metabolism are necessary to explain these disturbances

41 Cardiac Changes caused by Diphtheria

C SHOOKHOFF and L M TARAN (*Amer Journ Dis Child* October 1931 p 811) made electrocardiographic studies of 50 children aged from 5 to 14 years during the course of mild diphtheria with the following results The average cardiac rate was found to be higher than in normal children or in children with scarlet fever of the same age group 56 per cent of the patients showed sinus arrhythmia No abnormal prolongations of the P–R interval were observed In 16 per cent a slurring of the descending limb causing a widening of the QRS time was noticed indicating disturbance in the intraventricular conduction 46 per cent of the children with abnormalities in the ventricular portion of the electrocardiogram showed a persistence of these symptoms up to the time of discharge Only seven of the children who showed abnormalities in the electrocardiogram indicating myocardial disease presented clinical symptoms of such involvement The authors conclude therefore that children convalescing from diphtheria should not be pronounced out of danger without such an investigation Electrocardiographic abnormalities in diphtheria are similar to those in scarlet fever in the following points they occur in a high percentage of even mild cases they tend to persist and they may be found in the absence of clinical signs of myocardial involvement They differ however in the absence of disturbance in the auriculoventricular conduction in mild cases

42 Bronchiectasis in Children

G RULLIE (*Bruxelles Medical* October 4th 1931 p 1427) maintains that this condition is more common than is generally believed it follows the subacute bronchopneumonias which complicate measles influenza and especially whooping cough He describes three cases in children aged 4 9 and 13 years respectively The features common to them all were the good general condition of the child the absence of fever and of tubercle bacilli in the sputum with the presence of pulmonary sclerosis and of the classical pulmonary signs Dullness and moist sounds are most often present at the base but may be detected higher up or in the axilla Characteristically the signs vary from day to day The moist abundant and coarse rales indicate bronchial dilatation diminution of the respiratory murmur is the sign of pleural thickening and thoracic retraction of pleural adhesions From time to time there may be an exacerbation due to a simple coryza or to some intercurrent malady Radiography after the intratracheal injection of lipiodol confirms the diagnosis this may induce a temporary deterioration of the condition The treatment comprises sunlight and pure air the administration of balsams ergotin and strychnine the institution of remedial exercises and the injection of autogenous vaccines Artificial pneumothorax has been very successful in some cases but must not be left until too late when the pleural thickenings and adhesions have become marked

43 Hypotension in Childhood

F GIERTHMUHLEN (*Munch med Woch* November 20th 1931 p 1957) states that the blood pressure in childhood is lower than in adult life owing to the relatively small size of the child's heart the width of the vessels and their lack of resistance In the newborn the average systolic pressure is 43 mm this rises to 80 mm at the end of the first year and increases by 2 mm each year up to puberty It then rises more rapidly until it reaches the normal adult level between the 16th and 18th year Systematic examination of about 200 school children aged between 10 and 11 years showed that while the majority had a systolic pressure of about 100 mm Hg in a certain number it was between 75 and 60 mm In some of these children the hypotension was found to be due to tuberculosis but the majority appeared to be perfectly healthy although they showed evidence of an asthenic constitution indicated by pallor and lack of muscular tone Such symptoms need give rise to no anxiety since the expectation of life in these children is good but the essential hypotonus can be effectually treated by ultraviolet light and the administration of atropine and strychnine

Obstetrics and Gynaecology

44 Diathermy in Gonococcal Infections

B F BOLAND (*New England Journ of Med* November 5th 1931 p 903) discounts the value of diathermy in active gonococcal infections of the female genitalia though it is useful in latent cases such as chronic endocervicitis where smears are negative as a means of stimulating the cervical discharge Moreover it is a helpful adjunct to the treatment of inflammation of the glands of Skene and Bartholin He records a series of investigations in which it was shown that one exposure to diathermic heat of 110° to 113° F did not kill the gonococcus while through and through body heating did not raise the uterine temperature to over 100° F Although some patients received ten or more cervical applications the cultures taken subsequently remained positive Boland adds that the correct diagnosis must be established before any form of diathermy is tried Pregnancy must be considered a contraindication in view of the risk of abortion Excessive local heat will also cause haemorrhage if a fibroid is present An acute inflammation which is just subsiding will flare up again if heat is applied too early

45 Cervical Caesarean Section

J P GREENHILL (*Surg Gynecol and Obstet* October 1931 p 547) records a series of 108 consecutive cervical Caesarean sections and 9 Porro operations after laparo trachelotomy in which there were no maternal deaths Of these patients 58 were primiparae and 59 were multiparae The chief indications for the operations were disproportion of the pelvis and foetal head 47 per cent previous Caesarean section with test of labour 6 8 per cent previous sections without test labours 12 8 per cent toxaemia without convulsions 7 7 per cent eclampsia 1 7 per cent placenta praevia 6 per cent placental detachment 4 3 per cent cardiac disease 4 3 per cent and the dystocia dystrophia syndrome 3 4 per cent The membranes were ruptured in 26 5 per cent of the cases at the time when the operation was performed and the time interval ranged from half an hour to seventy-one hours Direct infiltration anaesthesia alone was used in 64 1 per cent of all cases in an additional 6 8 per cent a general anaesthesia was associated with local anaesthesia ether was employed in 24 8 per cent and ethylene was given in 4 3 per cent A temperature of 100° F or more was noted in 49 6 per cent of the cases due to such conditions as infected wound (9 6 per cent) pyelitis and cystitis (5 1 per cent) and bronchitis (2 6 per cent) In 59 8 per cent of the cases the patients left the hospital within 14 days and in 83 8 per cent within 18 days The total foetal mortality was 4 3 per cent but three of the five deaths occurred before the operation was performed In most instances the wounds of the cervical Caesarean sections healed very well as was proved by the microscopical examination of pieces of scar tissue removed at the time of repeated laparo trachelotomies

46 Dental Extractions in Pregnancy

MARTINAUD (*Journ de Med de Bordeaux* October 10th 1931 p 840) states that dental extractions can and should be undertaken in pregnant women when desirable There are very few exceptions to this rule When possible a local or regional anaesthetic should be given Adrenaline has some action on the uterine muscle but is not necessarily contraindicated Septic conditions of the mouth and teeth constitute a more serious risk to the normal progress of pregnancy than does a surgical operation which is in itself benign Even a general anaesthetic can be employed without hesitation

Pathology

47 The Suprarenal Glands in Fatal Burns

S G BERKOW (*Med Journ and Record* October 21st 1931 p 386) discusses the part played by the suprarenal glands in connexion with the symptoms and late death from extensive superficial burns Excision of both glands in animals has been shown to produce asthenia hypotension loss of body heat glycosuria acute gastric and duodenal ulcers and sudden death after a latent period of apparently satisfactory progress Such adrenalectomized animals react in a characteristic manner not observed in any other condition except that which ensues after extensive burns and scalds of the skin The cause of the sudden onset of fatal symptoms resulting from suprarenal insufficiency is not known but a plausible theory appears to be that the initial shock in cases of extensive burns and scalds stimulates an outpouring of the suprarenal medullary secretion which is responsible for the alertness and lack of clinical evidence of shock so often seen after such extensive injuries Congestion and haemorrhage into both the cortex and medulla almost immediately follow the resulting interference with their function being responsible for the predominant symptoms which occur later The actual way in which such suprarenal insufficiency acts is unknown although the relative importance of the cortex and medulla is obscure the view predominates that the cortex is the more essential to life Berkow considers that treatment by the oral administration of whole suprarenal gland or the hypodermic injection of suprarenal medullary extract has been sufficiently encouraging to warrant more extensive clinical trial being undertaken

48 The Sedimentation Test in Surgical Tuberculosis in Children

S HARILD (*Ugeskrift for Laeger* October 1st 1931 p 987) states that at the Surgical Department of the Finsen Institute in Copenhagen the rate of sedimentation of the erythrocytes has been investigated during the past two and a half years in all the out patient as well as in patient cases In 41 cases of uncomplicated tuberculosis of the bones and joints of children between the ages of 2 and 14 the sedimentation test was performed 106 times In a group of 12 cases there were as many as 6 in which the test and the clinical evidence were at variance the former being normal while the latter indicated active tuberculosis It would seem therefore that the sedimentation test is of no value in the diagnosis of diseases of the bones and joints for not only may a normal test be associated with active tuberculosis but an increased rate of sedimentation does not in itself necessarily indicate the presence of tuberculosis In the course of treatment however the behaviour of this test may in conjunction with the clinical evidence be helpful and the test is of some prognostic value It is nevertheless far from being so reliable that its evidence can be the basis for deciding when to discharge a patient from hospital

49 The Destruction of Br abortus in Milk and Cheese by Lactic Fermentation

P MAZE and E CLSARI (*C R Soc de Biologie* November 13th 1931 p 610) report experiments made to ascertain the longevity of *Br abortus* in milk and cheese which are undergoing lactic fermentation A thick suspension of *Br abortus* was made in sterilized milk which was then inoculated with a small quantity of a lactic ferment commonly used in cheese manufacture The ferment developed normally and coagulated the milk at laboratory temperature in 24 hours the acidity at the end of 48 hours was equivalent to 0 9 per cent lactic acid—the same value as in control cultures containing no *Br abortus* Starting from 48 hours after the commencement of the experiment subcultures were made from suitable dilutions on to Martin's agar medium Colonies of the lactic ferment appeared in 24 hours colonies of *abortus* did not become visible for five days Three sets of observations were made in which the number of *abortus* to the number of lactic organisms was about 50, 500 and 5 000 All three experiments gave the same results *Br abortus* was killed by the acid in the medium in less than 48 hours from the time of inoculation Since cheeses made in this manner are not consumed for five or six days after the original inoculation of the milk the authors conclude that there is no danger of *abortus* infection occurring from their consumption Other workers have obtained more or less similar results with Roquefort cheese made from ewe's milk and with Saint Marcellin cheese made from goat's milk in these cheeses *Br melitensis* lives only five days

50 Purulent Infection with B influenzae

E WAALER (*Norsk Mag f Laegevid* July 1931 p 715) records two cases of pyogenic infection due to Pfeiffer's *B influenzae* The first patient was a male infant aged 20 months who was taken ill with symptoms of a feverish cold and later developed a painful swelling of the left knee joint and symptoms of meningitis Death took place a month after the onset A pure culture of *B influenzae* was obtained from the pus in the knee joint and also from the blood The second patient was a male adult who had suffered from inflammation of the nasal sphenoidal and ethmoidal sinuses for the last fifteen years An almost pure culture of *B influenzae* was obtained from the nasopharynx A favourable result followed treatment by anti catarrhal vaccine

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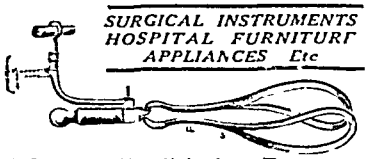
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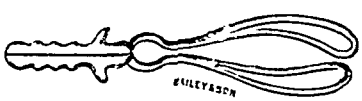
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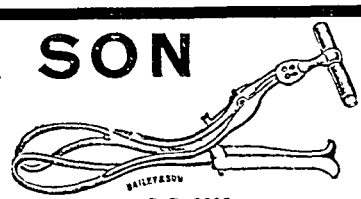
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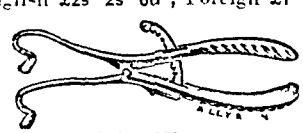
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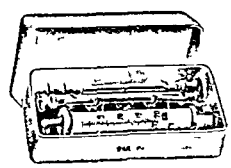
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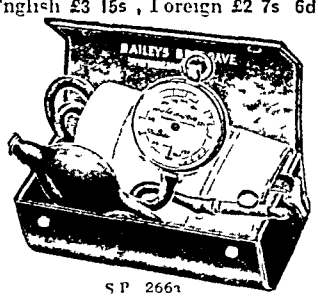
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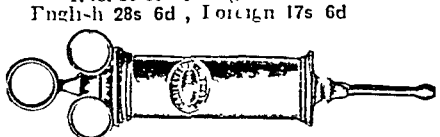
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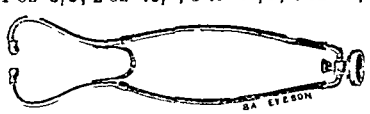
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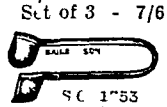
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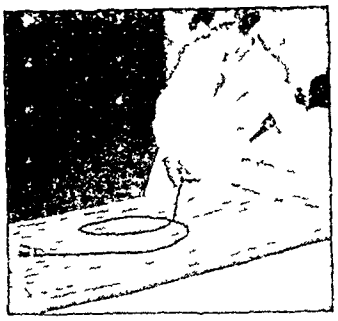


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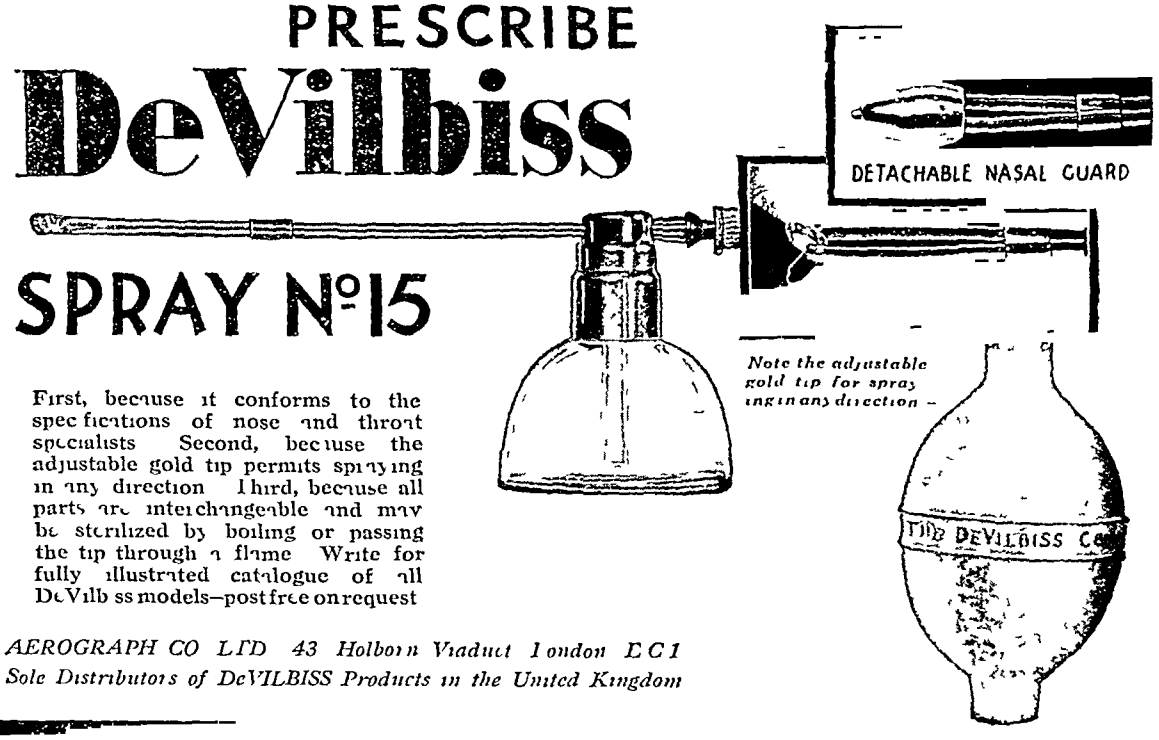
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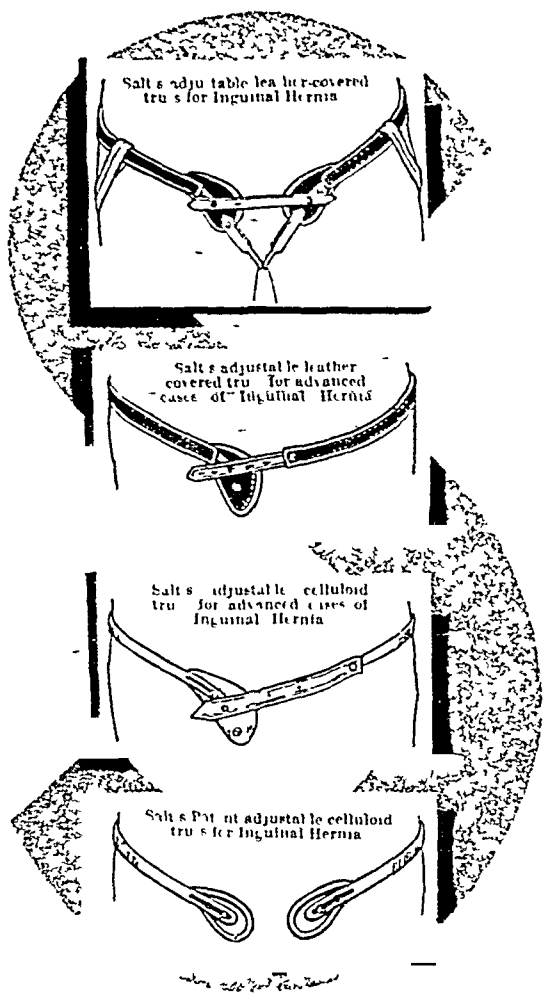
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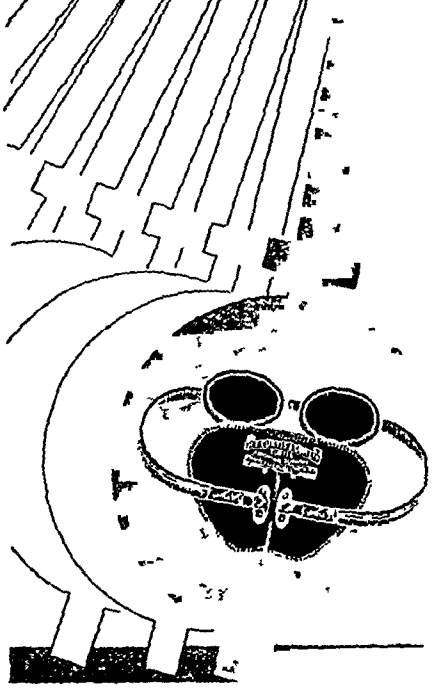
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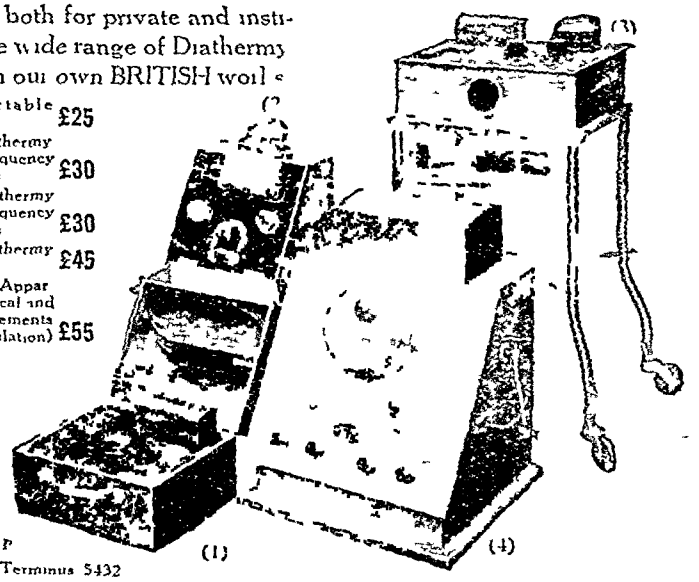
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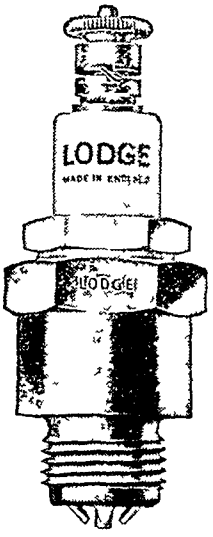
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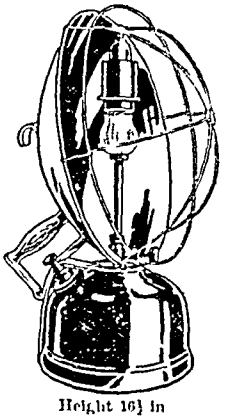
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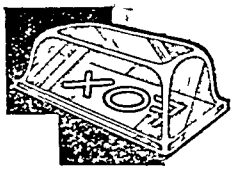
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BURBERRYS Ltd (D pt 62) HAYMARKET S.W 1

EPILEPSY.

Attendance at school is a necessary part of the satisfactory treatment of Epilepsy in Children

COLTHURST HOUSE SCHOOL
meets all the requirements of children of middle class parentage Extensions made necessary by the success of the school have created several vacancies

Only bright and intelligent boys and girls are eligible for admission

Apply to the Medical Supt , Colthurst House School, Warford Alderley Edge

THE GRANGE,
near ROTHERHAM

A HOUSE licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorders Both certified and voluntary patients received Approved for Temporary Patient This is a large country house with beautiful grounds and park five miles from Sheffield Station Grange Lane L & N E Railway Sheffield Telephone No 40030 Ecclesfield Resident Physician GILBERT E MOULD L R C P M R C S

BOREATTON PARK,
BASCHURCH SALOP

A first class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted

Large gardens deer park private golf links fishing Grounds extend to over 200 acres Voluntary Boarders accepted

Apply for particulars to Dr SANKEY

STRETTON HOUSE,
Church Stretton Shropshire

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness including the allied disorders of Alcoholism and the Drug Habit All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act 1930 Bracing Hill country See *Medical Directory* p 2138 —Apply to Medical Superintendent Phone 10 P O Church Stretton

CHALET PLANCRET, GRYON SUR BEX
SWITZERLAND
Altitude 1 100 metres

English lady would receive 2 or 3 DELICATE GIRLS under 14 years Terms moderate Sunny position Excellent references

ST. ANDREW'S HOSPITAL
FOR MENTAL DISORDERS,
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON THE MARQUESS OF EXETER C M G A D C

Medical Superintendent DANIEL F RAMBAUT M A M D

This registered Hospital is situated in 120 acres of park and pleasure grounds Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble temporary patients and certified patients of both sexes are received for treatment Careful clinical biochemical bacteriological and pathological examinations Private room with special nurses male or female in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided

WANTAGE HOUSE

This is a Reception Hospital in detached grounds with a separate entrance, to which patients can be admitted It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders It contains special departments for hydrotherapy by various methods including Turkish and Russian baths the prolonged immersion bath Vichy Douche Scotch Douche Electrical bath Hombieres treatment etc There is an Operating Theatre a Dental Surgery an X ray Room an Ultra violet Apparatus and a Department for Diathermy and High Frequency treatment It also contains Laboratories for biochemical bacteriological and pathological research

MOULTON PARK

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres Milk meat fruit and vegetables are supplied to the Hospital from the farm gardens and orchards of Moulton Park Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming gardening and fruit growing

BRYN-Y-NEUADD HALL.

The seaside house of St Andrew's Hospital is beautifully situated in a Park of 350 acres at Llanfairfechan amidst the finest scenery in North Wales On the North West side of the Estate a mile of sea coast forms the boundary Patients may visit this branch for a short seaside change or for longer periods The Hospital has its own private bathing house on the seashore There is trout fishing in the park

At all the branches of the Hospital there are cricket grounds football and hockey grounds lawn tennis courts (grass and hard courts) croquet grounds golf courses and bowling greens Ladies and gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry etc

For terms and further particulars apply to the Medical Superintendent (Telephone No 56 Northampton) who can be seen in London by appointment

HAYDOCK LODGE,
NEWTON-LE-WILLOWS, LANCASHIRE.

Phone 11 Ashton in Makerfield

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES either voluntarily or under Certificate Patients are classified in separate buildings according to their mental condition

Situated in park and grounds of 400 acres Self supported by its own farm and gardens in which patients are encouraged to occupy themselves Every facility for indoor and out door recreation For terms prospectus etc apply MEDICAL SUPERINTENDENT

COURT HALL, KENTON, EXETER,
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For the care and treatment of Ladies suffering from Mental Diseases Limited to eight patients Telephone Starcross 19

CLIFFDEN TEIGNMOUTH in connection with Court Hall for early and convalescent cases Cliffden is a large well appointed house with lovely views of the South Devon Coast It is beautifully situated in grounds of 19 acres The gardens are very attractive and there is a private road to the beach

Resident Physicians BERTHA M MULES M D B S ANNIE S MULES M R C S L R C P
Telephone Teignmouth 289

THE COPPICE, NOTTINGHAM.
HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment It is beautifully situated in its own grounds on an eminence a short distance nd from its singularly healthy position and comfortable every facility for the relief and cure of those mentally nd Temporary Patients received

Tel 64117 *For terms etc. apply to the Medical Superintendent*

TYKEFORD ABBEY, NEWPORT PAGNELL,
BUCKS
FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES.

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical interest standing in 9 *acres of* garden and grounds and is situated 14 miles from Northampton and 12 miles from Bedford on the main London to Northampton Road fifty miles from London Both sexes are accommodated Psycho-Therapeutic Treatment is used extensively in suitable cases Radiant Heat X Ray and Ultra violet Light Diathermy and Foam Baths Billiards tennis etc Fees from five gns per week.

Apply Dr D L M DOUGLAS MORRIS *Telephone* Newport Pagnell 121

The MAUDSLEY HOSPITAL
DENMARK HILL, S E 5

Telephone RODNEY 4841—2

A CLINIC *instituted by the London County Council for Treatment of* NERVOUS *and* CURABLE MENTAL DISORDER *Voluntary patients ONLY RECEIVED*

OUT PATIENTS—2 p m MEN—Mondays and Thursdays WOMEN—Tuesdays and Fridays

IN PATIENTS (*a*) 207 beds (both sexes) in wards or separate rooms (*b*) 13 private rooms (for ladies) with special sitting rooms garden and dietary

TERMS

(*a*) £5 a week but in case of patients with a legal settlement in the County of London a less sum may be charged according to means.

(*b*) £6 6s a week.

Terms include (with rare exceptions) all forms of treatment for which unusual facilities exist —there being a staff of consultant specialists and the central laboratory of London County Mental Hospitals being attached to the Hospital

Inquiries of EDWARD MAYOTHER M D, F R C P I R C S Medical Superintendent

CHISWICK HOUSE.

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both sexes

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX.

Telephone PINNER 234

A modern country house 12 miles from Marble Arch in beautiful and secluded grounds

Fees from 10 guineas per week

Voluntary Patients received for treatment

Special provision for 'Temporary' patients under the new Mental Treatment Act

DOUGLAS MACAULAY M D D P M

BARNWOOD HOUSE,
GLOUCESTER

A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS Within two miles of the G W Railway and L M & S Railway Stations at Gloucester the Hospital is easily accessible by rail from London and all parts of the United Kingdom It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 280 acres Voluntary boarders of both sexes are also received for treatment

Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE which has its own private grounds and is entirely separate from the main Hospital

For particulars as to terms etc apply to— ARTHUR JOANSEND M D Medical Supt.
Telephone No 7 Barnwood

ST. ALBANS, HERTS.
(20 miles from London)

Ladies suffering from all forms of MENTAL ILLNESS received for treatment at the Herts County Mental Hospital Hill End Convalescent and mild cases can be treated in a delightful country mansion with extensive grounds known as

"HIGHFIELD HALL,

situate about a mile away from the Hospital

Fees 3 guineas weekly

Particulars from the MEDICAL SUPT

FENSTANTON,
CHRISTCHURCH ROAD,
STREATHAM HILL S W 2

A Private HOME for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients Large Mansion with 12 acres of ground (*See Medical Directory* p 2234) Apply, F H EARLS M D Resident Physician Telephone Streatham 8430

Bishopstone House, Bedford.

PRIVATE HOME for MENTALLY AFFLICTED LADIES Ten only received Apply Medical Officer or Mrs LEPLE *Telephone* 2708

THE RESIDENTIAL TREATMENT OF ALCOHOLISM & DRUG ADDICTION

RENDLESHAM HALL

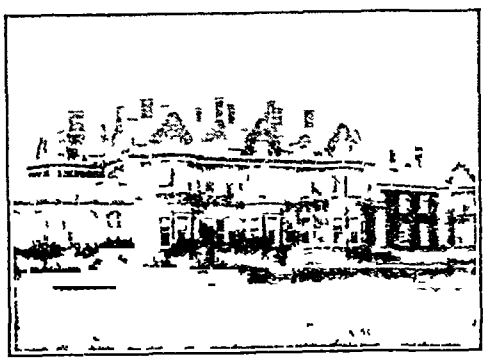
(Postal Address)—WOODBRIDGE, SUFFOLK

Rendlesham Hall, which is open to receive patients is essentially a Sanatorium Its daily life and routine are that of an ordinary comfortable holiday or health resort or of a large country house Each patient has all the privileges of a guest consistent with the prescribed medical treatment

Rendlesham Hall has 45 bedrooms and about 450 acres of gardens and park It has also a private nine-hole golf course, tennis and croquet lawns and bowling green

Illustrated booklet, giving particulars as to terms, etc. can be had on application to the RESIDENT MEDICAL SUPERINTENDENT

Telegrams and Telephone Wickham Market 16 (*Toll Call from London*)



RENDLESHAM HALL.

To those desiring to be near London—

The Mansion, Beckenham Park, Beckenham,

as carried on for the last twenty years is available Booklets and particulars from the Resident Medical Superintendent

Telephone BECKENHAM 1648 *Telegrams* NOROTORIUM BECKENHAM

Proprietors The Norwood Sanatorium, Limited



ALCOHOLISM & NEURASTHENIA

CALDECOTE HALL Nr NUNEATON

At this beautifully situated country mansion residential Treatment of the above afflictions is carried out on the most modern scientific principles both physical and psychological under the supervision of the Res Med Supt Dr A E CAMPLI M D D P H D P M

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ALCOHOLISM, DRUG HABIT, NEURASTHENIA, etc

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ESTABLISHED 1922 *Phone* PAIGNTON 5110

A comfortable private HOME charmingly situated overlooking Torbay near Torquay Main line 3½ hours from Paddington Both Ladies and Gentlemen admitted as voluntary patients The treatment is the outcome of many years experience and besides removing all craving for drink and drugs it has a tonic action on the system and the general health is improved Alcohol and drugs reduced gradually without suffering

FUNCTIONAL NERVOUS DISEASES AND NEURASTHENIA are also treated with excellent results Cases with insomnia depression etc do especially well

Exceptionally good climate and ample and varied amusement Moderate Inclusive terms Prospectus etc from STANFORD PARR M B Ch B Res Med Supt Bay Mount Paignton

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For the treatment of GENTLEMEN under the Act and privately Estab 1883 by an Association of prominent medical men and others for the study and treatment of alcohol and drug abuse Large secluded grounds on the bank of the River Colne Full sized billiards tennis croquet bowls Golf (Moor Park Sandy Lodge) close by For particulars apply to—F S D HOGG M R C S &c Resident Medical Supt Telephone 16 RICKMANSWORTH

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Specially adapted for the investigation of ARTHRITIS and ALLIED RHEUMATIC DISEASES DIABETES JAUNDICE GASTRO INTESTINAL DISORDERS RENAL & other complaints which require skilled Chemical Bacteriological and Radiological investigation

Brochure from the Secretary - DUCHY HOUSE 9 QUEEN'S ROAD

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Situated in 3 acres of secluded gardens

HOME FOR TWELVE MENTAL PATIENTS (LADIES)

Well appointed private house Home comforts and Trained Nursing Staff Eminent Mental Specialist Visiting Physician

Station *Telephone* Brixton 0494

Clapham Common Tube Apply MISS THWAITES

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Near BEDFORD (Phone 3417)

For Mental Disorders with or without certificates

Resident Physician CEDRIC W BOWER

Ordinar Terms Five Guineas per week

(Including Separate Bedrooms where suitable)

Interviews in London by appointment

ALCOHOLISM & OTHER DRUG HABITS

THE HARE NURSING HOME

As *founded and established by the late* Dr FRANCIS HARE for 20 years Med Supt of the Norwood Sanatorium and author of Alcohol 1 m etc for the treatment of ALCOHOLISM other Drug Habits Insomnia Neurasthenia Functional Nervous Disorder

THE OLD HILL HOUSE CHISLEHURST KENT

Fees 5—10 guineas Ample amusements 25 bedrooms Annexe for mild cases Quiet and pleasant situation

Ladies and gentlemen admitted for treatment

For prospectus etc write or phone WALTER E MASTERS M D M R C S D P H Barrister at Law (Res Med Sup) Author of The Alcohol Habit

Phone Chislehurst 451 *Telegrams* Masters Chislehurst

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For the treatment of Ladies and Gentlemen mentally afflicted Voluntary Boarders received Situated 1 200 ft above sea level facing S 14 acres of ground —For terms apply to the Resident Medical Superintendent W W HORTON M D Nat Tel 130

THE GROVE HOUSE,

CHURCH STRETTON, SHROPSHIRE

A Private Home for the care and treatment of a limited number of ladies mentally afflicted Climate healthy and bracing

Medical Superintendent Dr McCLINTOCK

Tel & Telegrams Havne Brentwood 45

Littleton Hall, Brentwood, Essex

Large ground 400 ft above sea HOME for ladies Mentally afflicted Voluntary Boarders received Station Brentwood and Shenfield 1 mile Liverpool St 26 min —Apply Dr HAYNES

CITY OF LONDON MENTAL HOSPITAL DARTFORD KENT

Ladies and Gentlemen received for treatment under certificate and without certification as either VOLUNTARY or TEMPORARY PATIENTS at a weekly fee of TWO GUINEAS and upward

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REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle, formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed, such as analyses, bacteriological cultures the ordinary x ray examinations and electrocardiograph readings all treatment that may be prescribed such as special diets insulin artificial sunlight, electrical treatment, baths, massage, nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales *Telegrams* CASTLE RUTHIN *Telephone* RUTHIN 66

WOODSIDE NERVE HOSPITAL

WOODSIDE AVENUE MUSWELL HILL LONDON N 10

Chairman THE RIGHT HON LORD BLANESBURGH G B E Opened November 8th 1930

Fully equipped with every modern appliance for the diagnosis and treatment of

FUNCTIONAL NERVOUS DISORDERS

Private Rooms Broad Verandahs Electrotherapy and Hydrotherapy X ray and Dental departments, Laboratories for investigation and research For terms and particulars apply to the Physician in charge at the Hospital Telephone Tudor 4211

NORTHUMBERLAND HOUSE,

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Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts
Six acres of ground highly situated facing Finsbury Park
Private Suites Voluntary Patients and Temporary Patients received without certification
Convalescent Home Kearsney Court, Dover For further particulars, apply to the Medical Superintendent

PECKHAM HOUSE, 112, Peckham Road, London, S E 15.

Telegrams "Alleviated London Telephone Rodney 4741-4742

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases apart from the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent.

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E 5.

Telegrams PSYCHOLIA LONDON FOR THE TREATMENT OF MENTAL DISORDERS *Telephone* RODNEY 4731—4732

Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Bowls Croquet Squash Racquets and all indoor amusements including Wireless and other Concerts Occupational Therapy Physical Drill and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers also resident and visiting Consultants An illustrated Prospectus may be obtained upon application to the Secretary

HOVE VILLA BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury Telephone 51

NORMANSFIELD

For Mental Defectives of all ages
Under private management
Apply to Dr Langdon Down

Normansfield Teddington

CHEADLE ROYAL,

CHEADLE, CHESHIRE

This Registered Hospital for MENTAL DISEASES with the seaside branch Glan y Don Colwyn Bay is for the treatment and care of PRIVATE PATIENTS of the UPPER and MIDDLE CLASSES Voluntary Temporary and Certified Patients received

For terms etc apply to the Medical Superintendent J A C ROY M B who may also be seen in Manchester by appointment

Telephone 2231 GATLEY

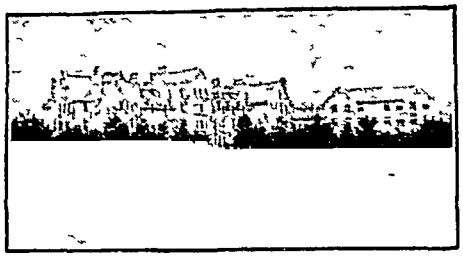
THE LAWN, LINCOLN.

This Registered Hospital situated in large grounds near the Cathedral receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders including Post Encephalitic conditions in adults Special facilities for Psychotherapy in co operative cases

All particulars may be obtained from the Resident Medical Superintendent

Dr MARY R BALLAS M D D P M

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson, M D, F R S E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J M JOHNSTON M B D P H etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK

MONTANA HALL, Montana, Switzerland.

Built 1929 1930
Opened October 1930

For the Treatment of Pulmonary (all forms) Diseases of the Chest Asthma For patient requiring rest in the Alps under strict medical supervision and for medical conditions in which sun and air bathing are indicated

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

SPECIALLY REDUCED INCLUSIVE TERMS

For further particulars kindly apply to the Resident Medical Superintendent HILARY ROCHE M D (Melb) M R C P (London) Tuberculous Diseases Diploma (Wales)

PENDYFFRYN HALL SANATORIUM
PENMAENMAWR

Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine clad hills, with sea and mountain views Modern treatment including SANOCRYSIN ARTIFICIAL PNEUMOTHORAX etc X ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L M S Main Line to Holyhead 4½ hours from London Resident Physicians Dennison Pickering, M D (Cantab) J A Hennesey, M B Ch B, Matron Miss S A Eddy, S R N Late Sister in Charge Royal Hospital Annexe Sheffield

For particulars apply to the Secretary, Pendyffryn Hall Penmaenmawr N Wales (Phone 20)

LINFORD SANATORIUM,
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Established 1898 for the treatment of Tuberculosis Radiators and Electric Light throughout Hot and cold water and shower bath in nearly all rooms Powerful X ray Plant Ultra violet Rays Full Nursing Staff All forms of treatment available Farm of 120 acres including 40 acres of wood Herd of Tuberculin tested Guernsey cows kept Resident Physicians—Arthur de W Snowden, M D B Ch (Cantab) A G E Wilcock, M R C S L R C P Colin Cassidy, M B, B Ch (Cantab)

NORDRACH-UPON-MENDIP SANATORIUM

FOR THE TREATMENT OF TUBERCULOSIS, was opened in January, 1899, by ROWLAND THURNAM, M D

All modern forms of treatment are available There are X ray and ultra violet ray installations Full nursing staff The Sanatorium stands in gardens and private grounds of 65 acres at an altitude of 862 feet above sea level surrounded by woods and moorland All rooms are heated by hot water pipes and electrically lighted

Fees 4 5, and 6 guineas per week

CYRIL FRANCIS ASHBY M R C S, L R C P, Certificate of Sanatorium Stephani Switzerland *Resident Medical Supt*

For full particulars apply to *The Secretary* Nordrach upon Mendip Blagdon Bristol *Telegrams* Nordrach Blagdon *Telephone* Blagdon 23

THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect S S W sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by artificial Pneumothorax (X ray controlled) Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra Violet Rays is available when necessary without extra charge X ray plant Electric light Radiators hot and cold basins and Wireless in all rooms

Full day and night Nursing Staff

Resident Physicians GEOFFREY A HOFFMAN B A M B T C Dub and MARGARET A HARRISON M B B S Lond

Apply The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 41 WITCOMBE *Telegrams* HOFFMAN BIRDLIP

"THE VICTORIA," BRITISH SANATORIUM
DAVOS-PLATZ, SWITZERLAND

ALTERED AND MODERNISED IN SUMMER 1930

SPECIALLY REDUCED TERMS

The Board of Management is desirous of meeting the difficulty of the exchange in every possible way and until this improves is willing to cash English Pounds at the uniform rate of Frs 18 50 as far as the actual Sanatorium bill is concerned

The Board hopes that this will meet with approval

Medical Supt

BERNARD HUDSON M D Cantab M R C P Lond Swiss Federal Diploma

GRAMPIAN SANATORIUM,
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Specially built for the Open air Treatment of Tuberculosis and opened in 1901 Bracing mountain air Elevation 860 ft above sea level Sheltered situation in pine wood Graduated walk Electric and in shelter ped X ray Plant for patient —24 all night Terms £4 7s 6d to £6 6 p w inclusive No extras Med Supt —FELIX SAVY M D

For particulars apply to the Secretary



TORQUAY

ENGLAND'S MARINE SPA

STRONGLY RECOMMENDED BY THE MEDICAL PROFESSION
FOR WINTER RESIDENCE OR HOLIDAYS

Extract from the Health Resorts Section 'Medical Directory' for 1931 —
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TORQUAY offers every facility for a Winter Cure Modern Spa Establishment, where all the best treatments are available as at famous resorts abroad, including "Vita" Sun Glass Lounge for ultra-violet radiation

Torquay natural mineral water—of same type as Evian and Vittel.

Travel by the Torbay Limited leaving Paddington at 12 noon week days—the epitome of speed and luxurious comfort Enquire at Railway Stations and Offices for details of train services fares etc from all parts

OFFICIAL GUIDE and all information free from PUBLICITY DEPARTMENT, 2, Baths Offices, TORQUAY

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When satisfactory convalescence from pulmonary disorders depends on a healthy invigorating atmosphere Bournemouth offers the ideal winter residence Long hours of sun shine sheltered situation and the resinous perfume of the many pine trees combine to expedite the successful recovery of normal health and strength.

The centre of health and sun-shine





The new Illustrated Guide and Letter of Hotels together with any other information desired will be gladly sent on application to the Town Clerk Room 109 Town Hall Bournemouth

BOURNEMOUTH

"Where Summer Winters"

Pine Vapour and Swimming Baths all of SEA WATER at suitable temperature are available at the Pier Approach Baths during the Winter

BRIDGE OF ALLAN SPA STIRLINGSHIRE



Inhalation Treatment with vaporized Mineral Water, highly recommended for Bronchitis Asthma etc

Full particulars apply to The Spa Director

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In the winter garden of Scotland facing the sun 600 feet up Iomic air beauty in every land cape from sheltered balconies Dancing winter garden swimming bath tennis bad minton golf fishing Fully licensed Modern baths installation Physiotherapeutic massage electrical treatment ultra violet radiation Physician in attendance Write for prospectus

Among the Pine-clad Border Hills
PEEBLES HYDRO PEEBLES SCOTLAND

A comfortable London Hotel convenient for Harley Street and Nursing Homes

THE CLIFTON HOTEL,

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gives comfort service and cuisine equal to larger Hotels at le s cost A visit will prove thi Bedrooms with hot and cold water and telephones Centrally situated *close to Harley Street and Nursing Homes*

Grams Cliftinton Lond *Tel* Welbeck 6881

BOURNEMOUTH HYDRO,

with Vita gla s Sun lounge and Marine Balcony on the South Coast

Every kind of Bath Hombiere Lavage
Every kind of Ma age Ultra violet Light
Every kind of Electricity Diathermy
Every kind of Diet
High Frequency Electric Lift

Prospectus from Secretary *Tele* 341
Resident } W JOHNSTON SMYTH M D
Physicians } I T ROSE HUTCHINSON M D

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BEHNKE METHOD Estab 1882 Cases non resident treated at 39 Earl s Court Square S W 5 and in residence in the Summer holi days at Miss BEHNKE S house on the Chilterns

STAMMERING CLEFT PALATE SPEECH LISPING 3/9
of Miss BEHNKE 39 Earl s Court Sq S W 5

SOCIETY OF APOTHECARIES OF LONDON

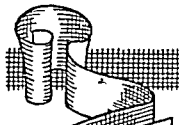
MASTERY OF MIDWIFERY

Examinations will be held beginning Monday May 17th and Monday November 21st 1932 For regulations apply to the Registrar Water Lane E C 4

Advanced Medicine Course

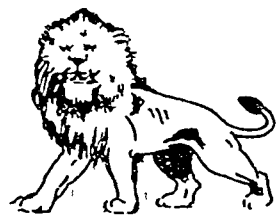
A Course in Clinical Medicine Pathology Morbid Histology and Biochemistry suitable for M D and M R C P examinations will be given for six weeks in February and March Further particulars can be obtained on application to the Dean, King s College Hospital Medical School Denmark Hill S E 5

Convalescents needing care, rest, good food and air taken into woman doctor s modern house Chiltern Village Oxford —Address No 329 B M A House Tavistock Square W C 1



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HARROGATE
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LLANDRINDOD WELLS
STRATHPEFFER
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Send your Patient to a British Spa



BRITISH SPAS *are BEST*

NO Country in the world offers such a variety of natural mineral waters and Spa treatments as are available in your own Country The medical profession is assured of individual attention being given to their patients at the hands of trained staff

Hotel tariffs are cheaper during the winter, and special diet can be arranged without extra charge

Handbook and tariff charges with list of accommodation will gladly be sent on application to the Hon Secretary British Spas Federation Pump Room Leamington Spa or the Manager of any of the Spas here mentioned

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Prospectus from the DEAN, West London Hospital, Hammersmith, W.6

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Diploma in Ophthalmology — Diploma in Public Health
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Special Preparation for all Surgical Qualifications—F.R.C.S.Engl. and F.R.C.S.Edin. and L.R.C.S.Ireland. M.S.London. M.C.Cantab. and all the Higher Surgical Degrees and Diplomas.

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Medical Prospectus gratis, along with list of Tutors, etc., on application to the Principal, Mr. F. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: Holborn 6313.)

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

(University of London)

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Dates of the Courses, 1931-32

(Each part can be taken independently.)

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January 4th—March 24th, 1932.

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SECTION B (TROPICAL HYGIENE).—A 2 months Course.

January 18th—March 18th, 1932.

April 18th—*June* 17th, 1932.

FEES (inclusive)

Section A £25. Section B £15.

DIPLOMA IN PUBLIC HEALTH

(University of London)

Course of Study (nine months for those working whole time) commencing at end of September. Inclusive fee 54 guineas.

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(University of London)

Course of Study (whole time one academic year) commencing in October. Inclusive fee £47 15s.

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Special three monthly Advanced Courses. Inclusive fee 7 guineas.

For Prospectus and Synopsis of Lectures, etc., apply to the SECRETARY, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, Keppel Street (Gower Street), London, W.C.1.

MIDDLESEX HOSPITAL MEDICAL SCHOOL

LONDON, W.1

(University of London)

PRIMARY F.R.C.S. EXAMINATION

The next Course will start on February 1st, 1932. Instruction in Anatomy is given by Professor T. YALTLS, M.B., C.M., and the classes in Physiology are under the joint direction of Professor SAMSON WRIGHT, Professor J. C. DODDS and Dr. J. H. WOODGER. This section of the Course includes General Physiology, Biochemistry and Histology.

FEE for the whole Course, Twenty Guineas.

For further particulars apply to R. A. FOLLY, I.C.C.S., School Secretary, Middlesex Hospital, London, W.1.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, W.2

(University of London)

PRIMARY F.R.C.S. COURSE

A Course of Instruction for the June Examination will begin on Tuesday, February 2nd, 1932, in the following subjects:

ANATOMY AND EMBRYOLOGY.
PHYSIOLOGY AND HISTOLOGY (with Practical Classes).

The classes are conducted by the Professors and Demonstrators in the respective subjects.

Fee for the Course £16 16s. or £9 9s. for either section separately. This fee includes membership of the Students' Club during the period covered by the Course.

For further particulars apply to the School Secretary.

F.R.C.S. (Edin.)

CLASSES with Museum and Anatomical Exam. will commence work at any time. WRITTABLE F.R.C.S. Edinburgh.

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The Course will be repeated on subsequent dates

Copy of the syllabus and full particulars may be obtained on application

In addition, periods of hospital practice can also be arranged

The Dean will be glad to see prospective entrants by appointment

THOS A. GARNER, Secretary

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(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D.T.H. must possess the D.T.M. of this University)

For particulars apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool

LONDON HOSPITAL MEDICAL COLLEGE.

Primary Fellowship Examination

A COURSE OF INSTRUCTION for the above Examination will begin on Monday, Feb. 8th. The Fee for the Course is 15 guineas. Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., Dean, Mile End, E.1.

GUY'S HOSPITAL MEDICAL SCHOOL

M.R.C.P. COURSE

February—March 1932

A Course in preparation for the Examination for the Membership of the Royal College of Physicians of London will commence on Monday, February 1st and will continue for a period of eight weeks. Fee for the Course £21. A limited number of vacancies is available and application for admission to the Course should be made immediately to the Dean, Guy's Hospital Medical School, London Bridge, S.E.1.

T. B. JOHNSTON, Dean.

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September and December. For Regulations apply to the Secretary, College of Preceptors, Bloomsbury Square, London, W.C.1.

University of London

A Course of Eight Lectures on *The Use of X Rays in Physiological Investigations* will be given in the PHYSIOLOGICAL THEATRE (GUY'S HOSPITAL (Borough, S.E.1) at 5 p.m. as follows:

JANUARY 18th and 25th, by Prof. J. M. W. MORISON, M.D., C.M., F.R.C.P.

FEBRUARY 1st and 8th, by Prof. H. A. HARRIS, M.B., B.S., D.Sc.

FEBRUARY 15th and 22nd, by Dr. A. E. BARCLAY, O.B.E., M.A., M.D.

FEBRUARY 29th and MARCH 7th, by Dr. A. F. HURST, M.C., M.D., F.R.C.P.

Admission free without ticket.

S. J. WORSLEY, Academic Registrar.

University of London

A Course of Six Lectures on *The Physiology of Reproduction* will be given by Dr. A. S. PARKES, at UNIVERSITY COLLEGE, LONDON (Gower Street, W.C.1), on FRIDAYS, JANUARY 15th, 22nd and 29th, FEBRUARY 5th, 12th and 19th, at 5 p.m.

A Course of Ten Lectures on *Comparative Physiology* will be given by Mr. C. P. WILLIS, at UNIVERSITY COLLEGE, LONDON (Gower Street, W.C.1), on FRIDAYS, JANUARY 15th, 22nd, 29th, FEBRUARY 5th, 12th, 19th, 26th, MARCH 4th, 11th and 18th, at 5 p.m.

Admission free without ticket.

S. J. WORSLEY, Academic Registrar.

University of London

A Course of Three Lectures on *Serological Studies on Vaccinia* will be given by Prof. W. J. TULLOCH, O.B.E., M.D. (Professor of Bacteriology in the University of St. Andrews) in the Governor Hall, ST. THOMAS'S HOSPITAL (Albert Embankment, S.E.1), on JANUARY 18th, 19th and 20th, at 5.30 p.m. At the first Lecture the Chair will be taken by Professor F. S. DUDGEON, C.M.G., C.B.E., F.R.C.P., Professor of Pathology in the University, Lantern illustration.

Admission free without ticket.

S. J. WORSLEY, Academic Registrar.

Leprosy Research

Wanted for LEPROSY RESEARCH WORK in India a Medical Man with adequate qualifications and experience to work under the British Empire Leprosy Relief Association (Indian Council) in collaboration with the Calcutta School of Tropical Medicine and the All India Institute of Hygiene. Graduates of the first class college with experience and aptitude for research work will be preferred.

Salary between Rs. 1 000 to Rs. 1 200 per mensem according to qualification. Selected candidate must be ready to join with little delay and will be on probation for six months and thereafter will continue for another 4½ years if found satisfactory; leave on full pay two months after 10 months service or equivalent proportion. Return passage P. & O. First class B or equivalent.

Apply stating age, nationality, qualifications and experience with copies of testimonials and references by the end of February to the Honorary Secretary, British Empire Leprosy Relief Association (Indian Council), Talkatora Road, New Delhi.

The Welsh National School of MEDICINE

Applications are invited for the post of DEMONSTRATOR IN PATHOLOGY AND BACTERIOLOGY. The tenure of the appointment will be for one year. The salary is at the rate of £250 per annum.

Further particulars may be obtained from the undersigned by whom six copies of application and testimonials must be received on or before January 21st, 1932.

D. BRYNMOR ANTHONY, Acting Secretary, University Registry, Cathays Park, Cardiff.

Hertford County Hospital

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary £150 per annum with board, residence and laundry. The appointment is for six months in the first instance.

Applications with copies of three recent testimonials should be sent to the undersigned not later than Monday, January 18th.

PERCY G. BROOKS, Secretary.

M.D. THESIS

Advice and legitimate assistance by an expert in preparation of Theses. Also postal tuition for M.R.C.P. London and similar examinations.—No. 1001, B.M.A. House, Tavistock Sq., W.C.1.

London County Council

Applications invited for appointment to positions of ASSISTANT MEDICAL OFFICER (men only) at undermentioned Hospital. The persons appointed will be required to carry out such duties as may be assigned by the Medical Superintendent and should occasion arise to assist at any of the other establishments under the control of the Council. Successful candidate will be required to live in the Hospital.

Salary £350 rising annually by £25 to £425 a year with board, lodging and washing. Candidates must be qualified Medical Practitioners of at least one year's standing and have held a resident appointment in a General Hospital for at least six months.

(1) MILE END HOSPITAL, Bancroft Road, Mile End, E.1.

(2) ST. MARY'S HOSPITAL, 48 Vanbrugh Hill, Greenwich, S.E.10. For this appointment candidates should have special experience in medicine.

(3) ST. JOHN'S HOSPITAL, St. John's Hill, S.W.11. Preference will be given to candidates who possess the Diploma of Psychological Medicine. Psychiatric experience is essential.

Applications also invited for the following position:

ST. MARY ABBOT'S HOSPITAL, Marloes Rd., Kensington, W.8. ASSISTANT MEDICAL OFFICER (woman). Salary £250 a year together with board, lodging and washing. Candidates must have held a resident appointment in a General or Maternity Hospital. The appointment will be for six months in the first instance. The duties will include the administration of anæsthesia in maternity cases.

The salary mentioned is subject to temporary reduction.

Forms of application obtainable (stamped addressed foolscap envelope) from Medical Officer of Health (Staff Division S.D.4a), County Hall, Westminster Bridge, S.E.1, and must be returned by January 29th. Canvassing disqualifies. Further inquiries should be addressed to the Medical Superintendent at the Hospital.

London County Council

Applications are invited from registered Medical Practitioners (men and women under 45 years of age) for inclusion in the panel for the year 1932-33 for filling vacancies for TEMPORARY ASSISTANT MEDICAL OFFICERS for School Medical work. Rate of pay is 30 a session of 2½ hours but this rate is subject to review and to temporary reduction. Except in special circumstances married women are ineligible.

Special experience of the medical examination of children necessary. Employment will depend upon the needs of the work but normally practitioners will work three sessions a week during school terms.

Applications must be made on the official form (containing full particulars) obtainable by sending a stamped addressed foolscap envelope to the Medical Officer of Health (S.D.5), The County Hall, Westminster Bridge, S.E.1. Forms must be returned by January 25th.

London County Council

Applications are invited for the position of RESIDENT for the HOSPITAL FOR [illegible] beds for surgical tuberculosis in children). Person appointed will be under direction of Medical Officer of Health and must assist at other establishments under control of Council if required. Salary £950 by £50 to £1 200 a year. Officer appointed may be required to act also as Medical Officer of Wanstead Hous[e] Residential Open Air School, Margate. £25 a year extra is paid for these duties. Unfurnished house free of local rates etc. will be provided valued provisionally at £100 a year.

Candidates must be duly qualified Medical Practitioners of at least five years' standing and have had appointment of House Physician or House Surgeon in a public General Hospital and have experience of hospital administration.

Application form obtainable (stamped addressed foolscap envelope necessary) from Clerk of the Council, County Hall, S.E.1 must be returned by January 15th, 1932.

Canvassing disqualifies.

Papworth Village Settlement,

near CAMBRIDGE for the treatment of all forms of Tuberculosis. Over 350 beds (male and female).

Applications are invited for the post of THIRD ASSISTANT MEDICAL OFFICER. Salary at the rate of £200 per annum with board, lodging and laundry.

Applicants who should be male and unmarried should send their application accompanied by copies of not more than three references to the Medical Director, Papworth Village Settlement, Cambridge.

County Borough of Sunderland

CLINICAL TUBERCULOSIS OFFICER

The Sunderland Council invite applications from duly qualified registered Medical Practitioners for the post of Clinical Tuberculosis Officer

Applicants should have held the appointment of Tuberculosis Officer with the approval of the Ministry of Health or subsequent to qualification should have had three years experience in the practice of their profession and have received a special training in the diagnosis and treatment of Tuberculosis including a practical knowledge of X-ray work and treatment by artificial Pneumothorax The possession of the D P H will be an additional qualification

The salary will be at the rate of £750 per annum advancing after three years satisfactory service to a maximum of £900 per annum

The person appointed will be required to devote his whole time to the duties of his office and work under the administrative control of the Medical Officer of Health

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to a medical test as required by the Council for the purpose of that Act

The appointment will be subject to determination by three months notice in writing on either side

Applications with copies of not less than three recent testimonials to be sent endorsed Tuberculosis Officer so as to reach me not later than Saturday January 16th 1932

Canvassing directly or indirectly until after the first selection of candidates will disqualify

Town Hall H CRAVEN
Sunderland Town Clerk
December 10th 1931

Corporation of Glasgow

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF PATHOLOGIST

Applications are invited from duly qualified Medical Practitioners for the post of Pathologist to the Corporation Central Hospitals The salary attaching to the appointment is £800 per annum rising by biennial increments of £40 to a maximum of £1 000 per annum and the person appointed will be required to devote his whole time to the duties of the office and to act under the direction and control of the Medical Officer of Health

The successful candidate will also be required to undergo a medical examination and if under 45 years of age must join the Corporation Superannuation Scheme in respect of which deductions are made from salary at the rate of five per cent per annum The appointment will also be during the pleasure of the Corporation and subject to one month's notice on either side

The appointment is also subject to the approval of the University Court as the person appointed by the Corporation will also be appointed an Honorary Lecturer to the University

Applications stating age and qualifications and giving full details of previous experience together with copies of not more than three recent testimonials to be sent to the undersigned not later than Monday February 1st in envelopes endorsed Application for appointment as Pathologist

City Chambers D STEVENHOUSE
Glasgow Town Clerk
December 26th 1931

County Borough of Sunderland

ASSISTANT MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE

Applications are invited from fully qualified men and women for the position of Assistant Medical Officer for Maternity and Child Welfare

Applicants must be registered Medical Practitioners have had at least three years experience in Public Health work since qualification and be able to show special experience in ultra violet irradiation treatment in diseases of children and in antenatal work

The possession of the D P H will be an additional qualification

Salary £550 per annum advancing by annual increments of £25 to £700 per annum

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to a medical test as required by the Council for the purpose of that Act

Applications stating age qualifications and experience in Maternity and Child Welfare work to be with not more than three recent testimonials should be delivered to the undersigned not later than Saturday January 16th endorsed Medical Officer

Canvassing directly or indirectly until after the first selection of candidates will disqualify

Town Hall H CRAVEN
Sunderland Town Clerk
December 8th 1931

City of Birmingham

SELLY OAK HOSPITAL

RADIOGRAPHER

Applications are invited from fully qualified Radiographers for the above whole time appointment

The scale of salary will be £200 per annum rising subject to satisfactory service by annual increments of £12 10s to a maximum of £250 per annum

The salary will be subject to the Scale of Voluntary Abatement accepted by the Council for a period of twelve months ending December 31st 1932

The appointment will be subject to the Birmingham Corporation's Superannuation Scheme and to the candidate passing a medical examination and will be subject to one month's notice on either side

Further particulars of the appointment may be obtained from the Medical Superintendent R P S KITMAN Esq M B Ch B L R C S (Eng & Edin) to whom applications stating age experience and qualifications accompanied by copies of recent testimonials and endorsed Radiographer should be forwarded by not later than January 13th 1932

J H C WHITSHIRT
The Council House Town Clerk
Birmingham

City of Birmingham

PUBLIC HEALTH DEPARTMENT

LITTLE BROMWICH HOSPITAL FOR INFECTIOUS DISEASES

JUNIOR ASSISTANT MEDICAL OFFICER (Male)

Junior Assistant Medical Officer (male) required Candidates must be single and have held previous resident posts in General or Children's Hospitals

Salary at the rate of £300 per annum together with board etc This appointment is limited to twelve months and is subject to one month's notice on either side The salary and emoluments will be subject to the voluntary abatement approved by the Council in respect of its officers

The officer appointed will be required to pay to the Council all fees allowances and emoluments (other than the foregoing) received by him

It is not feasible to attend classes for Part I of the D P H in conjunction with this appointment

Forms of application may be obtained from the Acting Medical Superintendent Little Bromwich Hospital Birmingham and should be returned to him on or before Saturday January 23rd

J H C WHITSHIRT
The Council House Town Clerk
Birmingham

Somerset County Council

ASSISTANT MEDICAL OFFICER

The Committee invite applications from qualified Medical Men for the post of Assistant Medical Officer In addition to school medical work the duties will include some maternity and child welfare and venereal treatment work Experience in the modern methods of diagnosis and treatment of venereal diseases is necessary Salary £500 by annual increments of £25 to £700 less temporary 5 per cent reduction The appointment will be made subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

Canvassing will disqualify Applications by January 23rd to the undersigned from whom all particulars and an application form can be obtained

County Health Dept W C SAVAGE
Boulevard County Medical Officer
Weston super Mare of Health

St John's Hospital, Lewisham, S.E.13

Applications are invited for appointments as RESIDENT MALE HOUSE PHYSICIAN and RESIDENT MALE HOUSE SURGEON for a period of three and six months from Feb 1st remuneration £100 per annum Applications with copies of testimonials should reach the undersigned not later than January 16th

J C CHIBERT Secretary Superintendent

House Surgeon required, male or female British nationality for ASH LODGE HOSPITAL KENT Salary £150 per annum There is slight experience and qualifications Candidates must be unmarried and under 35 years of age Duties to commence March 1st Applications with three recent testimonials to be sent to the Hon Secretary on or before February 1st

County Council of Middlesex

NORTH MIDDLESEX COUNTY HOSPITAL
London N 18

RESIDENT ASSISTANT MEDICAL OFFICER

The County Council invite applications for the position of Resident Assistant Medical Officer at the North Middlesex County Hospital Edmonton

Candidates must be registered Medical Practitioners male unmarried and must have held resident appointments in a General Hospital The officer appointed will work under the control of the Medical Superintendent and will devote his whole time to his official duties

Salary is at the rate of £400 per annum rising by annual increments of £50 to £600 per annum together with board lodging and laundry subject to temporary abatement in view of the National situation as follows First £150 per annum no abatement next £100 per annum 2½ per cent abatement next £500 per annum 5 per cent abatement

The successful candidate will be required to pass such medical examination as the County Council may direct and unless subject to the Poor Law Officers Superannuation Act 1896 to contribute to the County Council's Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) age (2) qualifications and (3) experience together with copies of not more than three recent testimonials must be received by the undersigned not later than January 16th 1932

No special application forms are provided Envelopes must be endorsed Resident Assistant Medical Officer

Canvassing directly or indirectly will be a disqualification

N B—North Middlesex County Hospital is a modern General Hospital with accommodation for over 900 cases chiefly acute 230 beds at the adjoining Edmonton Institution also are under the care of the medical staff of the Hospital In addition the Hospital possesses a Pathological Laboratory and X-ray Rooms Deep therapy Radium Electrotherapeutic Massage Ear Nose and Throat Ophthalmic and Dental Departments

ERNEST S W HART
Clerk of the County Council
Middlesex Guildhall Westminster S W 1
December 24th 1931

Urban District of Shipley

MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified gentlemen for the appointment of Medical Officer of Health of the Urban District subject to the provisions of the Public Health (Officers) Act 1921 and the Sanitary Officers Order 1926

The gentleman appointed will be required to perform all the duties imposed on a Medical Officer of Health to act as School Medical Officer Superintendent of the Maternity and Child Welfare Centre if required to act as Medical Superintendent of the Shipley and Lingby Joint Maternity Home and to carry out all such duties as the Council may with the consent (if necessary) of the Ministry of Health from time to time direct

He must reside in the district and devote all his time to the duties of the office and must not engage in private practice

The appointment will be subject to the approval of the Minister of Health and will also be subject to the provisions of the Local Government and Other Offices Superannuation Act 1922 and the successful candidate will be required to pass a medical examination

The salary to cover all the duties specified above will be £800 per annum with an addition of £40 per annum as car allowance

Applications stating age qualification and experience accompanied by copies of not more than three recent testimonials should reach the undersigned not later than January 12th endorsed Medical Officer

Canvassing either directly or indirectly will be a disqualification

Council Offices H BARNES
Shipley Clerk to the Council
January 1st 1932

Chesterfield and North Derbyshire Royal Hospital

(220 Surgical and Medical Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post There are five Residents

Salary at the rate of £150 per annum with board apartment and laundry

Application stating age together with copies of three recent testimonials should be sent to the undersigned

G SUNNUCK
December 29th 1931 Joint Secretary

ROYAL ARMY MEDICAL CORPS.

TWENTY FIVE permanent COMMISSIONS in the ROYAL ARMY MEDICAL CORPS will be offered in January, 1932 Applications should reach the War Office not later than January 18th, 1932.

Candidates will be selected for Commissions without competitive examination, and will be required to present themselves in London for interview and medical examination towards the end of January They must be under 28 years of age on February 1st, 1932, and registered under the Medical Acts

Officers of the R A M C are liable to serve in any part of the world where British Troops are quartered

Ample opportunities exist in the Army for clinical professional work, both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology, and all the special branches

The cost of Post-Graduate study, which is compulsory, is met from Army Funds

Pay and Allowances—From £476 to £2,000 a year according to rank and length of service

Candidates who have held a full-time house appointment in a recognised civil hospital before appointment to a permanent Commission in the R A M C may, subject to certain conditions, be allowed to count the period of service in such an appointment, up to a maximum of 12 months, as Army service for promotion and increase of pay

Gratuities on Retirement.—After 7 years' service £1,000
„ 15 „ „ £2,800
„ 18 „ „ £3,500

Current rates of retired pay range from £352 10s per annum normally earned by a Major after 20 years' service, to £890 per annum, the maximum for which a Major-General is eligible The rates of pay and retired pay are subject to periodical variation consequent on fluctuation in the cost of living

Outfit Grant—An officer on joining receives £50 as outfit allowance.

Marriage Allowances—Officers of 30 years of age and over who are married are entitled to draw special rates of allowances

A Voluntary Widows' and Orphans' Fund exists for officers of the Corps.

A certain number of temporary Commissions will be offered at the same time under the same conditions as regards age and qualifications as those required of candidates for permanent Commissions

All particulars may be obtained by application, in writing or personally, to the Under Secretary of State, The War Office (A M D 1), Whitehall, London, S W 7

London Homoeopathic Hospital

(Incorporated by Royal Charter)
Great Ormond Street and Queen Square
Bloomsbury W C 1
(A General Hospital—172 Beds)

RESIDENT MEDICAL OFFICER required (one of three) male or female the appointment being for twelve months Four months as Medical and Casualty Officer four months as House Surgeon and four months as Medical and Gynaecological Officer with salary at the rate of £100 per annum and board apartments and laundry Candidates must be legally qualified and registered Candidates will be required to attend a meeting of the Medical Committee

Applications stating age with thirty five copies of application and thirty five copies of testimonials may be sent to the Secretary as soon as possible

Successful candidates are required to take the Hospital course of instruction in the principles and practice of Homoeopathy

EDWARD A ATTWOOD
Secretary

Northampton General Hospital

(246 Beds)

The Board of Management invite applications for the appointment of additional HONORARY OPHTHALMIC SURGEON

Candidates must be Fellows of the Royal College of Surgeons of either England or Edinburgh or hold a recognized diploma in Ophthalmology and must agree to confine themselves to their specialty They shall not be connected with any dispensary nor engaged in panel practice

Full particulars of the appointment may be obtained from the undersigned to whom applications stating age qualifications and experience and copies of testimonials should be sent on or before Wednesday January 20th

H ST JOHN WOOD
Dec 29th 1931 Secretary Supt

The Victoria Hospital for CHILDREN

Tite Street Chelsea S W 3
(138 Beds)

The Committee of Management invite applications for the posts of

(a) HOUSE PHYSICIAN
(b) HOUSE SURGEON

both vacant February 1st The appointments are for six months Salaries at the rate of £100 per annum with board lodging and washing

(c) OUT PATIENT ANAESTHETIST To attend on Tuesday and Friday mornings A payment of 10/6 per attendance will be made

Candidates for these posts must attend the Hospital for the purpose of an interview at 4 30 p m on Friday January 15th (No travelling or other expenses will be paid)

Applications with copies of three recent testimonials should be sent to the Secretary not later than first post on Wednesday Jan 15th

By Order
D ST JOHN BAMFORD
Secretary

The Victoria Hospital for CHILDREN

Tite Street Chelsea S W 3
(138 Beds)

The Committee of Management invite applications for the post of HONORARY SURGICAL REGISTRAR Candidates are expected to call on members of the Honorary Surgical Staff The appointment is for one year renewable for a second year Applications with copies of three recent testimonials should be sent to the Secretary not later than Saturday Jan 16th

By Order
D ST JOHN BAMFORD
Secretary

East Ham Memorial Hospital,

Shrewsbury Road E 7 (100 Beds)

Applications are invited for the post of PHYSICIAN in charge of the SKIN DEPARTMENT which is about to be formed

Candidates must hold a University degree in Medicine and Surgery and be Fellows or Members of the Royal College of Physicians of London and engaged solely in dermatological practice

Applications should reach the undersigned on or before January 12th

REGINALD PERRY Secretary

East Ham Memorial Hospital,

Shrewsbury Road E7 (100 Beds)

Applications are invited for the post of HONORARY SURGEON to the ORTHOPAEDIC DEPARTMENT which is about to be formed Applicants must be Fellows of the Royal College of Surgeons of England and engaged solely in Orthopaedic Surgery

All applications should reach the undersigned on or before January 14th

REGINALD PERRY Secretary

Warrington Infirmary and DISPENSARY

The Board of Management invite applications for the post of SENIOR HOUSE SURGEON (male unmarried) Applicants who must be duly qualified Medical Practitioners with previous Hospital experience

Salary £225 per annum with board apartments and laundry Applications stating age and qualifications with copies of three recent testimonial should be sent in not later than January 15th to the undersigned

The post will become vacant at the end of January and is due to the termination of time limit

By Order
HENRY L BOOT
January 4th 1932 Supt and Secretary

Warrington Infirmary and DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male unmarried)

Applicants who must be of British nationality must be duly qualified Medical Practitioners

Salary £175 per annum with board apartments and laundry Applications stating age with copies of three recent testimonials should be sent in at once to the undersigned

The post will become vacant at the end of January and is due to the termination of time limit

By Order
HENRY L BOOT
January 4th 1932 Supt and Secretary

Hospital for Consumption and DISEASES OF THE CHEST

Brompton S W 3

The Committee of Management invite applications for the post of HOUSE PHYSICIAN (for which there are three vacancies) The duties include work in the Out patient Department as well as in the Wards The appointment is for six months commencing on February 1st with an honorarium of £50

Applications are also invited for the post of HOUSE SURGEON The appointment is for six months commencing on February 1st with an Honorarium of £50

Applications with copies of testimonials must reach the undersigned not later than Saturday January 16th

FREDERICK WOOD
Brompton Secretary
December 1931

Norfolk and Norwich Hospital,

NORWICH

Applications are invited for the following posts

HOUSE SURGEON Preference will be given to a candidate who has held a previous Hospital appointment

CASUALTY OFFICER AND HOUSE SURGEON (with charge of 25 beds)

Salary for both posts £120 per annum with board residence and laundry

Candidates (male) who must possess registered qualifications should forward applications stating age nationality etc together with copies of testimonials to the undersigned not later than first post on Tuesday January 12th 1932

FRANK INCH
January 2nd 1932 House Gov & Sec

Royal Edinburgh Hospital for SICK CHILDREN

Wanted for this Hospital TWO HONORARY PRESIDENT HOUSE SURGEONS and THREE HONORARY RESIDENT HOUSE PHYSICIANS One of the latter shall have charge of both a medical ward and an ear and throat ward The appointments shall commence on April 1st and shall be for a period of six months In formation as to duties etc can be obtained from the ordinary physicians and surgeons at the Hospital Forms copies of applications and relative testimonials to be lodged on or before February 26th with Messrs HENRY C SCOTT W S 56 Frederick Street Edinburgh No applications will be received after that date

The Queen's Hospital for CHILDREN

Hackney Road London E 2

The Committee invite applications for the post of SURGEON for the Ear Nose and Throat Department with charge of beds Attendance required on Monday and Thursday mornings An honorarium to cover travelling expenses will be paid Candidates must be Fellows by examination of the Royal College of Surgeons England

Applications with copies of three recent testimonials which may be printed or typewritten should be sent on or before February 13th to the undersigned from whom further particulars may be obtained

CHARLES H BISSELL
January 1st 1932 Secretary

The Royal Infirmary, Sheffield

(500 Beds)

The Weekly Board of Management invite applications for the post of OPHTHALMIC HOUSE SURGEON

The appointment is tenable for six months from January 1st with salary at the rate of £80 per annum with board and residence

The Resident Staff numbers 14 and after six months service, salary is at the rate of £100 per annum

Applications with copies of testimonial to be sent to the undersigned forthwith

JNO W BARNES FCIS
Board Room Gen Supt & Secretary
December 30th 1931

The Royal Infirmary, Bradford

RESIDENT SURGICAL OFFICER (male) required to supervise the work of four House Surgeons and be generally responsible for the surgical work of the Hospital

Candidates must be single legally qualified have had previous hospital experience and be prepared to enter on duty at the beginning of March 1932 Salary £225 per annum with board residence and washing There are 215 beds and six resident officers Applications stating age qualifications and previous experience with copies of not more than three recent testimonials to be received by the undersigned not later than Thursday January 14th

J J BARRON Secretary Supt

Eastbourne Princess Alice MEMORIAL HOSPITAL (116 Beds)

Applications are invited for the post of HOUSE SURGEON (male) Salary at the rate of £130 per annum with board lodging and laundry There are two Residents and the appointment is for six months commencing on February 1st.

Candidates must be unmarried fully qualified and registered

Applications stating age qualifications etc accompanied by copies of not more than three testimonials (one of which should be from Medical School) should be sent to the Secretary to reach him not later than Monday Jan 18th

Hampstead General and North-West London Hospital

Haverstock Hill N W 3

APPOINTMENT OF HOUSE PHYSICIAN

Applications are invited from unmarried Medical Men for the appointment of House Physician vacant on February 1st next The salary will be at the rate of £100 per annum together with board residence etc and the term will be for six months

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on January 20th next

The Liverpool and Samaritan Hospital for Women

The Committee of Management invite applications for the appointment of HONORARY ASSISTANT SURGEON to the Liverpool and Samaritan Hospital for Women Candidates must hold the Fellowship of the Royal College of Surgeons of England Edinburgh or Ireland or a Master in Surgery Degree of a recognized University of the United Kingdom

Applications with copies of testimonial must be forwarded to the Hon Secretary of the Liverpool and Samaritan Hospital for Women 21 Water Street Liverpool not later than January 18th

Stroud General Hospital,

STROUD GLOS

HOUSE SURGEON required to commence duty on January 22nd 1932 Salary £150 per annum with board lodging and washing The appointment is tenable for six months but application may be made for an extension of this period Candidates must be registered according to the provisions of the Medical Act

Applications stating age nationality etc together with copies of three recent testimonials to be sent to the undersigned

C FOLD SPENCER Secretary

Leigh Infirmary, Lancashire

Wanted a RESIDENT HOUSE SURGEON Married single for Hospital of 82 beds Salary £175 with rooms fire attendance and board The position is vacant on February 1st 1932 The appointment is for six months with eligibility for re election Must be good anaesthetist Knowledge of Ear and Throat work desirable

Applications to be addressed to Mr J A SMITH Secretary 3 Silk Street Leigh Lancs

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens Edinburgh

(a) British Islands

Town or District	Town or District	Town or District
GENERAL POST OFFICE *(Assistant Medical Officer—Woman)*	**CONTRACT PRACTICE** *(contd)*	**CONTRACT PRACTICE** *(contd)*
CONTRACT PRACTICE	LLWYNYPIA CLYDACH VALE PENYCRAIG GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*
EBBW VALE MON *(Workmen's Medical Society)*	MARDY GLAMORGAN *(Workmen's Medical Scheme)*	**PUBLIC HEALTH**
CILFYCH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE *(Workmen's Medical Scheme)*	BUCKS COUNTY COUNCIL *(Medical Officer Amersham Institution)*
LOWESTOFT MEDICAL INSTITUTE *(Medical Officer)*	NEATH AND DISTRICT *(Medical Aid Association)*	DEVON COUNTY COUNCIL *(School Medical Inspector—Male)*
	OAKDALE MON *(Medical Officer for Medical Aid Association*	FULHAM BOROUGH COUNCIL *(Assistant Medical Officer—Woman)*

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	**SOUTH AUSTRALIA** *(Lodge Appointments)*	Secretary South Australian Branch B M A House 206 North Terrace Adelaide	**WELLINGTON NEW ZEALAND** *(Contract Practice Appointments)*	Dr G F WANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	**VICTORIA** *(All Institute or Medical Dispensaries)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria	**WESTERN AUSTRALIA** *(Contract and Lodge Practice)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St George's Terr Perth Western Australia.

January 6th 1932 By Order of the Council ALFRED COX Medical Secretary

Bolingbroke Hospital,
Wandsworth Common S W 11
(121 Beds)

HOUSE PHYSICIAN (male) required The appointment is for six months commencing on February 1st 1932 Salary £120 per annum with board residence and laundry

Candidates must be fully qualified and registered

Applications stating age qualifications and experience with copies of not more than three recent testimonials should be sent to the undersigned on or before January 15th 1932

W S RANDOLPH BISS
Secretary Superintendent

The Central London Ophthalmic
HOSPITAL Judd St St Pancras W C 1

There are vacancies for the posts of SENIOR and JUNIOR HOUSE SURGEONS Salaries at the rate of £120 and £100 per annum respectively with board and residence in the Hospital

Application with testimonials from duly qualified candidates must be sent to the undersigned on or before January 9th

H R S DRUCE Secretary

Worthing Hospital

Applications are invited for the post of RESIDENT MEDICAL OFFICER now vacant The appointment is for six months renewable (determinable by three months notice on either side) Salary at the rate of £150 per annum with board lodging and laundry

Application giving age qualifications and experience with copies of three testimonials to be sent to the Secretary at once

Huddersfield Royal Infirmary
(200 Beds)

Male RESIDENT SURGICAL OFFICER required for six months only to commence duty immediately Salary at the rate of £225 per annum with board residence and laundry

Applications accompanied by not more than three recent testimonials to be addressed to the undersigned

H E G HALL Secretary

National Hospital, Queen Sq,
for the Relief and Cure of Diseases of the Nervous System including Paralysis and Epilepsy W C 1

HONORARY SURGICAL ASSISTANT

The Board of Management invite applications from Fellows of the Royal College of Surgeons for the appointment of Honorary Surgical Assistant The post is tenable for one year and the holder is eligible for re election for a second year

Applications should be sent to the undersigned on or before January 23rd 1932 The rules of the appointment will be forwarded on request

GODFREY H HAMILTON
National Hospital Secretary
Queen Square W C 1

West Norfolk and King's Lynn
GENERAL HOSPITAL
(75 Beds)

The Board of Management of the above Hospital invite applications for the post of HOUSE PHYSICIAN (male or female) Duty to commence as soon as possible To have charge of Medical and Ophthalmic beds Also to act as Casualty Officer and Resident Anæsthetist The post which is for six months in the first instance offers valuable experience in both in patient and out patient work Salary £150 per annum

Applications stating experience and full particulars to be sent as early as possible to—

JOSEPH E SPARJEANT
House Governor & Secretary

Bridgwater General Hospital,
SALMON PARADE BRIDGWATER SOMERSET

Applications are invited for the post of HOUSE SURGEON Commencing salary £130 per annum with board residence and laundry

Applications to be sent to the Secretary not later than January 14th 1932 stating age qualifications nationality recent experience and copies of three testimonials

Duties to commence on January 25th 1932

The Children's Hospital,
SHEFFIELD (107 Bed)

Applications are invited for the following posts vacant on February 1 1932

HOUSE PHYSICIAN Salary £200 per annum with board residence and laundry The appointment is for six months afterwards the holder is eligible for the senior post of Resident Medical Officer (salary at the rate of £150 per annum)

HOUSE SURGEON AND CASUALTY OFFICER (THIRD RESIDENT) Salary £80 per annum with board residence and laundry The appointment is for six months and afterwards the holder is eligible for the post of House Physician (salary at the rate of £100 per annum)

Candidates (female and unmarried) must be fully qualified and registered

Application stating age etc together with copies of three recent testimonials to be forwarded to the undersigned as soon as possible

I H G GARTLAND Secretary

David Lewis Northern Hospital,
LIVERPOOL

Applications are invited for the undermentioned posts

FOUR HOUSE SURGEONS
TWO HOUSE PHYSICIANS

The appointments will be tenable for six months from April 1st 1932

The salary attached to each post is £100 per annum together with board and residence

Forms of testimonial to be sent immediately

GIBSON M A
Secretary Supt

Royal Surrey County Hospital,
GUILDFORD (182 Beds)

Wanted January 14th HOUSE SURGEON Salary £150 per annum with board residence and laundry

Application stating essential particulars with copies of testimonials to be sent to the Secretary Superintendent as early as possible

(Appointments continued on p 50)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQ LONDON W.C.1
T/A ARTICULATE WESTCENT LONDON
Tel MUSEUM 9861 (4 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) **9s**
Each Additional Line 1s 6d
(1 line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

Wanted —Assistant (male), indoor with or without view Southern Counties Salary £300 Must be experienced in panel work and have knowledge of Skin diseases Principal is experienced Surgeon who wishes to develop that line Send fullest particulars — Address No 7708, B.M.A. House Tavistock Square W.C.1

Wanted —Assistant, with view to Partnership later on in good Practice in rapidly growing suburb of Ilford H.S. who is capable and fond of surgery State essential particulars Previous experience of G.P. not necessary Applications with two testimonials —No 322 B.M.A. House Tavistock Sq W.C.1

Wanted — Junior Assistant by Partners in industrial Practice in Western City No dispensing nor bookkeeping £300 p.a. indoor ex resident preferred a man from an English or Scottish school — Address with photograph and particulars No 319 B.M.A. House Tavistock Sq W.C.1

Wanted — Assistantship, with view to Partnership or Succession by M.R.C.S. L.R.C.P. Guys married age 29 Own car Experience H.P. H.S. and G.P. South of England —Address No 303 B.M.A. House Tavistock Square W.C.1

Wanted — Assistant, indoor Salary £275 Young energetic man required for industrial Practice in Midlands Must be able to drive car Some experience of panel practice desired — Address No 331 B.M.A. House Tavistock Square W.C.1

Wanted now —Indoor Assistant in industrial Practice near Manchester Single male Protestant British £300 per annum Work light Photo and full particulars —Address No 315 B.M.A. House Tavistock Square W.C.1

Wanted — Young, male Assistant (indoor) to start February 1st in Manchester City Practice Salary £240 p.a. to start State age references and testimonials —Address No 342 B.M.A. House Tavistock Square W.C.1

Wanted —Assistantship, preferably with early view by M.R.C.P. Young Ex H.P. and H.S. general and special experience —Address No 335 B.M.A. House Tavistock Square W.C.1

Wanted immediately — Indoor and Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars — BRITISH MEDICAL BUREAU 33 Cross Street Manchester

Wanted immediately, Assistant, Indian preferred Usual bond Indoor Interview desired — Address No 302 B.M.A. House Tavistock Square W.C.1

P[illegible] teriological ...NTS ASSOCIA... ...ologists requir... LABORATORY ...mmunicate with ...re 10 Holbeck ...er No fees

Woman Doctor, Scotch, requires ASSISTANTSHIP outdoor or part time in London Six years experience G.I. and hospitals Own car Moderate remuneration — Address No 336 B.M.A. House Tavistock Square W.C.1

LOCUMS

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4, ADAM ST, Strand London W.C.2
Teleg Epsomian Lond After Office Hours
Phone Temple Bar 9011 Epsom 9142

PARTNERSHIPS

Wanted — Partnership, M.B. Edin. aged 29 married 5 years hosp. and gen. exp. experience home and abroad share £1 000 upwards Ample capital Free for interview now *Own car* — *Address* No 341 B.M.A. House Tavistock Square W.C.1

Wanted — Partnership or ASSISTANTSHIP with view in medium sized Town on or near N.E. Coast Income about £1 000 Panel preferred Capital available Advertiser free Jan. 10 yrs. G.P. exp. —No 106 B.M.A. House Tavistock Sq. W.C.1

Wanted —Partnership or Assistantship with view London W. or S.W. by M.B. B.S. (Lond.) 2½ years Hospital exper. (Lond.) age 28 male drive car Highest testimonials keen reliable conscientious — No 316 B.M.A. House Tavistock Sq. W.C.1

Wanted, by thoroughly experienced woman Doctor Scottish Graduate PARTNERSHIP or PRACTICE Capital available —Address No 320 B.M.A. House Tavistock Square W.C.1

London, E — Two-fifths Share for Sale of old established cash and panel PRACTICE Total receipts over £2 000 p.a., panel 2 780 Premium for share 2 years purchase —Apply PEACOCK & HADLEY LTD 19 Craven Street Strand W.C.2

Manchester —Partnership in old-established Practice Receipts £1 600 yearly Good house garden garage £40 per annum Excellent scope Panel 1 500 Price £1 200 half share part deferred —MANCHESTER MEDICAL & SCHOLASTIC ASSOC. 6 Brown St.

Midlands —Good opportunity for keen and capable Doctor to purchase ONE HALF SHARE PRACTICE in country town with pleasant surroundings Receipts over £4 000 per annum for past three years (audited) Panel over 2 400 Good house with garden for sale Price—Practice—1½ years purchase — No 149 B.M.A. House Tavistock Sq. W.C.1

Partner required for very large Practice in London F. Panel of 4 000 Income £4 000—£5 000 p.a. Half share for disposal at 2 years purchase Excellent opportunity for right man —Address No 101 B.M.A. House Tavistock Square W.C.1

Partnership wanted by M.D., M.R.C.P. (Lond.) exceptionally experienced in all branches in good class Practice in nice residential district Income £2 500 upwards Scope for physician —Address No 309 B.M.A. House Tavistock Square W.C.1

Yorks — Partnership in good Practice with receipts of £2 300 Panel over 1 500 rapidly increasing Good house available Price 1/3 share (to commence) £1 000 —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

Yorkshire —Semi-urban district, not industrially depressed — For Sale HALF SHARE in busy old established mixed class PRACTICE returning about £3 400 per annum and increasing Premium 1½ to 2 yrs purchase according to period of introduction Convenient house with garage price £900 — No 102 B.M.A. House Tavistock Sq. W.C.1

MEDICAL POSTS DISPENSERS etc

Wanted —Part-time work near Liverpool by highly qualified Doctor well experienced in every branch of medicine —Address No 310 B.M.A. House Tavistock Square W.C.1

A Lady Dispenser-Bookkeeper supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W.2

Wanted — Part-time work by experienced Doctor in London Good references Doing Post Graduate work (Cambridge man) — Address No 314 B.M.A. House Tavistock Square W.C.1

Doctor's Daughter, well educated requires post as SECRETARY or SECRETARY RECEPTIONIST to Medical Man any district — Miss MCCLINTOCK The Grove House Church Stretton Shropshire

Doctors requiring qualified Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W.C.2

Doctor's widow, with son (public school boy aged 26) urgently requires POST Doctor's house Trained nurse very capable cooking housekeeping etc son drives any make car —Apply JENNY Broad Oaks Combe Martin North Devon

Lady Dispenser, knowledge of bookkeeping can drive car seeks PART TIME POST with Medical Man preferably North London —Address No 333 B.M.A. House Tavistock Square W.C.1

Lady Dispenser (Hall) requires POST with Doctor Bookkeeping car typing Country preferred —Address No 325 B.M.A. House Tavistock Square W.C.1

Male Dispenser-Bookkeeper (43) desires POST Thoroughly experienced private and panel quick and accurate worker Good references Moderate salary At liberty — DISPENSER, c/o 28 Marchmont St W.C.1

M.D., London, experienced traveller, useful languages would ACCOMPANY INVALID or PARTY —Address No 330 B.M.A. House Tavistock Square W.C.1

Pathologist, 14 years' experience teaching research routine laboratory work requires EMPLOYMENT at moderate salary Expert draughtsman Refs testimonials if required —Address No 308 B.M.A. House Tavistock Square W.C.1

R.A.M.C. Officer, M.R.C.S., L.R.C.P. aged 33 has kept up professional work contemplating early retirement wishes to hear of suitable permanent EMPLOYMENT £1 500 capital available —Address No 304 B.M.A. House Tavistock Sq. W.C.1

The Royal Army Medical Corps ASSOCIATION 85 Eccleston Square S.W.1 (Telephone Victoria 2722) supplies qualified Dispensers Bookkeepers Laboratory Assistants Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dental Clerk Orderlies Porters Caretakers etc without charge to prospective employers

Typewriting and Duplicating undertaken by Expert Testimonials Theses Legal Documents Numerous letters of appreciation from Doctors —BEATRICE PADFORD (B) 341 Finchley Road N.W.3 Phone Hampstead 6450 (any hour)

Well-educated young lady desire SECRETARIAL post to West End Surgeon or Physician Shorthand typing Thorough knowledge of medical terms Several years Secretarial experience Excellent testimonials including one from Doctor —Box 76 ALDRIDGE'S ADVERTISING SERVICE 34 Paternoster Row E.C.4

Woman Doctor (fully qualified) required for the Scotch Episcopal Church Mission Chanda Central Provinces India —For particulars apply to C.W.M.A. Secretary 13 Drumsheugh Gardens Edinburgh

PRACTICES

Wanted by M.B., B.S., with higher medical qualifications non dispensing PRACTICE or PARTNERSHIP in Scotland (preferred) or England Wide experience Hospital and G.P. Age 32 Interested in Medicine Anaesthetics and Obstetrics —Address No 339 B.M.A. House Tavistock Sq. W.C.1

Wanted by M.D., aged 33, PRACTICE or PARTNERSHIP with early view succession In or near large town Midlands or North of England Good panel Income £1 500 upward Capital available — No 105 B.M.A. House Tavistock Sq. W.C.1

Wanted immediately, by experienced Practitioner small PRACTICE £400—£600 p a Industrial district House 3—4 bedroom — Address No 306 B M A House Tavistock Square W C 1

Wanted — Practice, South or Midlands some panel £800 to £1 100 House to rent No agents—Address No 334 B M A House Tavistock Square W C 1

For Sale —A Panel and Private PRACTICE combined Former 1 600 rising Private practice about £1 000 Price one year and a half s purchase Purchaser shall have to buy residence (£1 500) terms can be arranged The above Practice is in a large Provincial Town in Ulster—Address No 338 B M A House Tavistock Square W C 1

For Sale —Practice, over £1,000 per annum panel over 1 300 for Sale to anyone taking over capital liabilities easy payments, and paying £350 cash Domestic reasons for sale Opportunity for energetic man with little capital Every investigation Manchester—Address, No 307 B M A House Tavistock Square W C 1

For immediate disposal, excellent general and panel PRACTICE in rural district Scotland £1 050 p a scope House sale or lease Very reasonable terms for quick sale as Vendor has appointment in view — No 343 B M A House Tavistock Sq W C 1

Glam — Death Vacancy —Old-established PRACTICE Receipts average over £1 400 a year panel 1 500 Nice house rent £100 Premium 1½ years purchase — Apply PEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

Hants — Nice Seaside Town — Old established non panel PRACTICE Receipts average £1 000 p a House on lease £150 Illness cause of selling Any reasonable offer considered Suit lady or gentleman — Apply PEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

Leicester — Panel and private PRACTICE wanted Income £1 000—£1 500 Capital available—Address No 328 B M A House Tavistock Square W C 1

Liverpool —Practice of £900 or over for disposal Good panel Nice district No midwifery Small house to sell or rent Premium £1 350 cash—Address No 327 B M A House Tavistock Square W C 1

London, N W —Practice, working class £700 p a Panel 300 Large corner house garden and garage Good position and lease £750 for quick cash sale—Address No 337 B M A House Tavistock Square W C 1

North Wales — Practices for Sale country industrial and seaside Welsh essential Also two PRACTICES Liverpool area Incomes £900 to £1 400— CHEMICALS 40 Hamilton St Hoole Chester

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Consulting Room to Let, Welbeck Street Entrance floor front Newly furnished and decorated Constant hot water £100 p a including plate telephone attendance etc Less for part time—Address No 332 B M A House Tavistock Square W C 1

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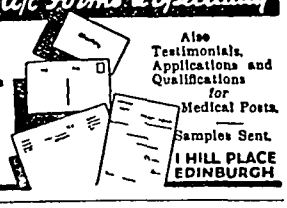
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JUNIOR ASSISTANT MEDICAL OFFICER required about 1st week in January

Applicants must be registered practitioners male unmarried not over 30 Salary £350 per annum rising by four annual increments of £25 per annum to £450 together with the usual emoluments valued for Superannuation purposes at £100 per annum such salary is subject to temporary reduction owing to National Crisis £50 additional on obtaining D P M The appointment to be subject to two months notice on either side

Applications stating age qualifications religion etc together with copies of three recent testimonials to reach the undermentioned by January 20th

THE MEDICAL SUPERINTENDENT

The Royal Liverpool Children's HOSPITAL

The Committee invite applications for the post of SECOND RESIDENT MEDICAL OFFICER at the HESWALL BRANCH of the Institution (240 beds) for the period ending March 31st Salary at the rate of £120 per annum Applications with copies of recent testimonials to be sent to the Secretary Royal Liverpool Children's Hospital Myrtle Street Liverpool on or before Friday January 15th

Royal Hospital for Sick Children AND WOMEN ST MICHAEL'S HILL BRISTOL

Applications are invited for the position of HOUSE PHYSICIAN Salary £125 per annum with board room attendance and laundry Applicants should state age qualifications experience and submit testimonials to the undersigned not later than January 16th

REGINALD C THOMAS Secretary

City and County of Kingston-upon-Hull

ANLABY ROAD INSTITUTION (HOSPITAL)

ASSISTANT MEDICAL OFFICER

The Corporation of Hull invite applications from registered Medical Practitioners under the age of 40 years for the appointment of Assistant Medical Officer (single) at the above named Hospital for a term not exceeding one year and not renewable

Salary is at the rate of £300 per annum together with an allowance at the rate of £150 per annum for board and residence out of the Hospital *The salary is subject to any deduction which the City Council may authorise in connection with economic measures*

The Hospital Section contains 540 beds and is equipped with modern X Ray and Radium Departments

A form of application together with conditions of appointment and a list of duties may be obtained from the undersigned to whom completed applications should be returned not later than 10 a.m. on Monday January 18th

Health Dept NICOLAS CRIBB M D
Guildhall Hull Medical Officer of
January 4th 1932 Health

Hospital of St Cross, Rugby (114 Beds)

Applications are invited for the post of THIRD MALE RESIDENT MEDICAL OFFICER qualified

Salary at the rate of £100 per annum with full board etc

Six months appointment and eligible on completion of service for extension or other resident's posts

Candidates must be prepared to commence duties on January 18th

The practice of the Hospital offers excellent opportunities for wide experience

Certificates and other fees shared by R M O's

Applications stating age nationality and full details with copies of three recent testimonials to be sent to the undersigned

(Signed) W COCKBURN
Superintendent & Secretary

City and County of Newcastle-upon-Tyne

NEWCASTLE GENERAL HOSPITAL

RESIDENT MEDICAL ASSISTANTS (Male or Female)

Applications are invited for the above posts The salary in respect of each of the appointments which are tenable for six months is at the rate of £150 per annum with board lodging etc

Applications stating age and qualifications together with copies of not more than three recent testimonials to be addressed to the Medical Officer of Health Town Hall Newcastle upon Tyne

January 5th 1932

Royal Sussex County Hospital, BRIGHTON (Beds—246)

HOUSE SURGEON (male) required end of January with charge of beds part casualties and anaesthetics Salary £150 per annum with board residence and laundry

Candidates must hold Medical and Surgical qualifications of the British Empire and be duly registered under the Medical Acts They must be unmarried and when elected under thirty years of age

Applications with copies of testimonials should be sent immediately to the undersigned

I L W LANCASTER GAYE
Secretary Superintendent

Huddersfield Royal Infirmary (200 Beds)

Wanted LADY HOUSE SURGEON to commence duty on 1 February 1st Duties mainly in Eye Ear Nose Throat and Medical Departments with Obstetrics Salary £150 per annum with board residence and laundry

Appointment for six months subject to renewal for a similar period

Applications accompanied by copies of three recent testimonials to be addressed to the undersigned immediately

H E G HALL Secretary

Southend Victoria Hospital, ESSEX (96 Beds)

JUNIOR HOUSE SURGEON (male) required February 1st Six months appointment Salary £150 per annum board residence and laundry Apply stating age qualifications previous experience with copies of three recent testimonials to the Secretary on or before January 25th

Wilts County Council

APPOINTMENT OF AN ASSISTANT SCHOOL DENTIST (Male)

The Wilts County Council invite applications for the appointment of an Assistant School Dentist (male) to work in the Department of the County School Medical Officer at a salary of £450 per annum subject to a deduction of 5 per cent for superannuation under the Local Government and Other Officers Superannuation Act 1922 and to a temporary deduction during the present financial crisis of 2½ per cent from the first £220 and 5 per cent from the remainder of the salary The successful candidate will be required to pass a medical examination

Travelling and subsistence allowance in accordance with the County scale will be paid If own car used a mileage allowance to be approved by the Council will be paid for certain journeys

The officer appointed must be duly qualified and registered and will be required to reside in or near Marlborough He will be required to devote his whole time to the service of the Council

Applications on forms to be obtained from the undersigned and accompanied by copies of not more than three recent testimonials must be delivered in envelopes marked School Dentist not later than the first post on Saturday January 23rd

Canvassing either directly or indirectly will disqualify

County Offices W I BOWN
Trowbridge Wilts Clerk of the
January 5th 1932 Council

The Board of Control (Lunacy and Mental Deficiency) invite applications for the post of MEDICAL SUPERINTENDENT (male) of RAMPTON STATE INSTITUTION FOR MENTAL DEFECTIVES near RETFORD NOTTS Salary £1 000 rising by annual increments of £50 to £1 200 together with cost of living bonus which at present is £146 9s on salary of £1 000 The emolument of a house rent free is also allowed

Candidates must be registered Medical Practitioner must have had experience of the Institutional care and treatment of patients suffering from mental defect or mental disorder and must conform to the Civil Service nationality rule Post is pensionable under Civil Service Superannuation Acts

Forms of application with further particulars can be obtained from the Secretary Board of Control Caxton House West Tothill Street London S W 1 and must be completed and returned to him not later than Jan 30th 1932

The Board of Control (Lunacy AND MENTAL DEFICIENCY) invite applications for the post of FOURTH MEDICAL OFFICER (male) at RAMPTON STATE INSTITUTION FOR MENTAL DEFECTIVES near RETFORD NOTTS Salary £400 rising by annual increments of £20 to £600 together with cost of living bonus which at present is £105 7s on salary of £400 Emoluments are free furnished quarters and laundry Board and service are provided on payment of actual cost

Candidates must be registered Medical Practitioners unmarried or widowers and must conform to the Civil Service nationality rule Post is pensionable under Civil Service Superannuation Acts

Forms of application with further particulars can be obtained from the Secretary Board of Control Caxton House West Tothill Street London S W 1 and must be completed and returned to him not later than Saturday Feb 6th

Birmingham Maternity Hospital

Applications are invited for the post of RESIDENT MEDICAL OFFICER AND REGISTRAR to commence duties on March 1st next The appointment is made for one year at least and can be renewed if desirable Salary £200 per annum

Applicants must have had previous experience in Obstetrics and be reading for Higher Examinations

Applications and copies of testimonials to be sent to Mr HUGH C ASTON 45 Newhall Street Birmingham not later than January 29th

Beckett Hospital & Dispensary, BARNSLEY (152 Beds)

CASUALTY OFFICER required to deal with the injuries and fractures Capability to perform emergency operations a recommendation

Salary £250 per annum together with board residence and laundry

Applications stating age qualifications and experience (Ophthalmology desirable) accompanied by testimonials should be sent to the undersigned immediately

ARTHUR L BOURNE
January 5th 1932 Secretary Supt

Bethlem Hospital, Monk's ORCHARD EDEN PARK BECKENHAM KENT

Wanted one PESIDENT HOUSE PHYSICIAN (gentleman unmarried) recently qualified in Medicine and Surgery The term of residence is *for six months from* February 1 t apartment complete board and laundry being provided and an honorarium at the rate of £150 per annum will be paid for the first three months rising if commendable service be given to the rate of £200 per annum for the second *period of three months*

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to be forwa
at the Hosp
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JOHN L WORSFOLD Clerk &c
Bethlem Hospital Office
14a New Bridge Street E C 4
January 1932

Hove Hospital (Cun-Burton MEMORIAL) Sackville Road HOVE

A RESIDENT MEDICAL OFFICER (male) is required who must be unmarried and under 40 years of age The Hospital contains 24 bed

The appointment affords excellent opportunity for surgical experience and for acquiring knowledge of Radium Treatment Salary £200 per annum with board apartments and laundry Expense not exceeding one guinea will be paid to any applicant invited to attend for interview

Applications must be received by the undersigned not later than January 16th

H AUBREY FROGGATT
General Secretary

Leicester Royal Infirmary (472 Beds)

HOUSE PHYSICIAN

Applications are invited for a House Physiciancy Salary at the rate of £125 *per annum* Applicant preferred who have held a resident Hospital post or had similar experience of Hospital work The period of appointment will be to April 1 t when all the resident appointments are due to expire but consideration will be given to an extension of the appointment for a further period of *six months* on approved service

Early applications to the House Governor & Secretary are desired

December 21st 1931

Derbyshire Royal Infirmary, DERBY (General Hospital—347 Bed)

Applications are invited *for the post of* HOUSE PHYSICIAN *Candidates must be qualified* and registered under the Medical Acts The appointment is tenable for 12 months Salary will be £150 per annum with apartments board etc

Application with copies of testimonials to *be sent to the undersigned*

WALTER BANKS
December 28th 1931 Supt & Secretary

St Peter's Hospital for Stone, ETC Henrietta Street Covent Garden W C 2

The Committee of Management desire to appoint an additional ANAESTHETIST who will be required to attend the Hospital on Tuesday afternoons at 2 p m An honorarium of £25 *per annum* is attached to the office

Applications from registered Medical Practitioners *accompanied* by copies of testimonials will be received by the undersigned on or before Monday January 18th

BFECHEN ROGERS Secretary

St Mary's Hospitals, Manchester

Two HOUSE SURGEONS for the WHITWORTH STREET WEST *HOSPITAL* (Maternity) and two for the WHITWORTH PARK *HOSPITAL* (one Children's Department and one Gynaecological Department) each for a period of six months from February 1 t next Salaries at the rate of £50 per annum with board and residence

Applications with copies of three testimonial to be sent to the undersigned on or before the 19th instant

R RATCLIFFE Secretary

St Mary's Hospitals, Manchester

JUNIOR ASSISTANT MEDICAL OFFICER for the Children's Out patient Department (non resident) Salary at the rate of £50 per annum The appointment is for *a period* of six months commencing February 1 t and is *suitable* for Graduate work for higher qualifications Applications with copies of three testimonials to be sent to the undersigned on or before the 19th instant

R RATCLIFFE Secretary

Seamen's Hospital Society

The Committee of Management invite applications for the appointment of HONORARY DERMATOLOGIST at the DREADNOUGHT HOSPITAL, Greenwich The elected candidate will have care of in and out patients and will be appointed for twelve months but will be eligible for re appointment

Candidates must be Doctors of Medicine of a University in the United Kingdom or Ireland or Fellows or Members of the Royal College of Physicians of London

Applications to be sent in on or before January 22nd 1932 to the *undersigned from* whom further particulars can be obtained

By Order
Greenwich R E V BAX
December 28th 1931 Secretary

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London, N W —Estab 3 yrs, about £650 p a Panel 300 and working class Visits 3/6 up Surgery 2/ up Large corner house good position 6 bed 2 recep, and surgery etc Rent £120 p a on lease Premium £250 for quick sale —No 8966

Death Vacancy — South Wales Coast —About £1 400 p a Panel 1 500 P O £50 Clubs etc Fees 5/ and 6/ incl medicine Large house with 3 recep and 8 bedrooms good waiting room surgery and dispensary and large garden Rent £100 p a —No 8963

London, West End —Over £900 a year Non panel non dispensing middle class PRACTICE Fees 10/6 to £1 1s Flat with consulting and waiting room 2 living rooms kitchen and bathroom to rent at £170 p a on short lease Premium only £300 each —No 8964

South Midlands --Country --Share worth £1 500 net and free of tax Fees 5/ to 10/6 Good panel and appointments Choice of residence Premium only £3 750 — No 8958

Middlesex —Nucleus Earning £840 p a *Panel* 500 *Good fee* Free hold corner house Good class residential district —No 8965

Sussex, favourite part on high ground about £1 300 p a Non panel non dispensing Little or no midwifery Visiting *fees* 5/ to 21/ Large house with 9 bed 3 recep and conv rooms and 4 acre to rent at £200 Smaller house at £120 p a with conv room 2 recep and 4 bedroom Premium £2 000 each —No 8954

Midlands —£3,000 a year Old-established Same hands over 30 year Partner 5 years One third share for sale now more later at 2 years purchase House available to rent Station close Fees 7/ to 21/ Extensive district very little opposition Panel 1 600 Personally known and recommended — No 8952

Eastern County —£3,000 a year A third share after a short preliminary Assistancy is offered to a suitable Partner for 2 years purchase Practice in one of 50 years standing in a favourite residential and agricultural district on line of rail with ample scope for increase No immediate opposition Good house and grounds available for partner Personally visited and recommended —No 8951

Surrey —700 feet above sea-level Over £600 p a Panel about 440 No opposition in village Appt about £50 p a 12 confinements p a Fee 2 to 5 gns Visiting fees 3/6 to 10/6 Detached house with 6 to 7 bedroom 2 recep rooms waiting room and Surgery with separate entrance and garage built on Water and electric light Price freehold £1 600 or might rent Premium for goodwill 1½ years purchase Ideal place for resident partner —No 8950

Radiol Practice in County Town within an hour of London £1 200 p a Applicants must hold *DMRE* —No 8948

South Africa —£200 per month Well established special PRACTICE Centrally situated consulting rooms to rent —No 8775

Manchester —Woman's Practice £500 p a Panel 400 *Scope for* more Visits 5/ Good house 5 bed to rent or buy —No 8945

West of England Town —About £850 p a Panel 1 32- Ample scope Medium house low price or will rent —No 894-

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LONDON, W.—Excellent NUCLEUS Suburban Practice with splendidly situated corner house. Receipts approx. £500 scope. Premium for house and practice £3,000 or near offer.

LONDON, S.W.—Near West End.—Cash and panel PRACTICE (Tool up). Shop fronted surgery held on lease at £70 p.a. part sublet. Receipts average approx. £400. Panel 517. Excellent scope for one giving whole time and undertaking midwifery. Premium 1½ years purchase or near offer.

CHESHIRE.—Near Coast.—Small G.P. with excellent scope for expansion, situated in working class and residential district. Receipts £600. Panel 900. Suitable house available. Premium 1½ years purchase. Excellent scope for keen and energetic man.

NORTHANTS.—Old established Country PRACTICE situated in charming locality. Hunting and sport of all kinds. Highly suitable to semi-retired Practitioner. Splendid house in own grounds to rent or purchase, central heating, electric light, etc. Receipts £500. Panel 400. Premium £550.

LONDON, W.—PARTNERSHIP in suburban middle class G.P. situated in rapidly developing locality. Suitable modern house to rent. Receipts £2,750—£3,000. Panel approx. 2,000. Fees 2/6 up. Premium for 1/3 share 2 years purchase. Excellent scope for young and energetic man.

CLOS.—Mixed Town PRACTICE. Receipts over £1,800 p.a. Panel 2,146. Fees 2/6 up. Three Hospitals. Good school. Scope for increase. Alternative accommodation available. Premium for Practice £3,640 or near offer. Partnership considered.

BERKS.—PARTNERSHIP.—Country Rural Practice in sporting district. Receipts average nearly £1,150. Panel nearly 600. Fees 2/6 up. Short preliminary Assistantship 1/3 share to 1/2 share for disposal at 1½ year purchase. Suitable to experienced man. British, aged 27 upwards.

SOUTH COAST.—Small PRACTICE in popular seaside resort. Receipts nearly £400. Small panel. Fees 5/- up. Excellent house (5 beds) available to rent. Other accommodation. Area for quick sale £350.

LONDON, E.—Suburban middle class G.P. Medium sized house to rent on lease at the low rental of £30 p.a. Fees 2/-. Average receipts £516. Panel 350. Excellent scope for young man. Premium for Practice and lease £1,050 cash or near offer.

MIDDLESEX.—PARTNERSHIP in rapidly developing district situated within 12 miles of London. Receipts about £1,600. Panel nearly 1,900. Suitable small house available. Cottage Hospital. Excellent scope. Premium for 2/5ths share with view to 1/2 share 2 years purchase.

YORKS.—JUNIOR PARTNERSHIP after Preliminary Assistantship in well established mixed Practice. Panel 1,700. Suitable only to one with Surgical experience. Premium 1/4 share at 1½ yrs. purchase with view to larger share. Suitable accommodation available to rent.

LIVERPOOL.—Well established G.P. Medium sized house (7 beds). Receipts approx. £1,100. Small select panel. Fees 3/6 up. Midwifery not undertaken. Several appointments. Premium for Practice and house £2,000 payable £1,500 down and balance by instalments.

MIDDLESEX, NORTH.—Rapidly increasing mixed G.P. situated within 10 miles of London in residential locality. Suitable modern house available. Receipts nearly £1,100. Panel 425. Premium 1½ years purchase. Excellent scope.

ESSEX.—Seaside Resort.—Good mixed class G.P. with scope for private. Excellent modern house to rent on lease or for sale. Fees 3/6 up. Appointments over £200. Receipts over £1,000. Small select panel. Premium £1,150 to include drug.

LONDON, W.10.—NUCLEUS. Tool up situated in working class locality. Living accommodation for both for if desired. Receipts between £5 and £6 per week. Panel 100. Prem. 1 years purchase or near offer.

YORKSHIRE.—Well established mixed rural PRACTICE. Suitable house available (4 beds). Receipts approx. £1,000. Panel 620. Fees 3/6 up. One appointment. Premium 1½ years purchase.

YORKS.—PARTNERSHIP in busy rapidly increasing town Practice. Receipts £2,300. Panel 1,500. Suitable house available. 1/3 share with view to succession. 2 years purchase.

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1. DEVON.—Unopposed Country PRACTICE. Last year £675. Panel 250. Scope for increase. M.O. £71. Rent £32 p.a. Prem. 1½ years purchase. Suit for man or woman.
2. NEAR GLOUCESTER.—Third Share in rapidly growing country town. Up to half share later. Receipts last three years £1,393, £1,507, £1,777. Panel 1,250. Chance of h. Prem. £1,200 inc. drugs etc.
3. DEVON.—Seaport Town.—In growing district. £480 in last 16 months. Panel 300. Good house to rent. Prem. £500. Great scope. Selling owing to ill health.
4. DEATH VACANCY.—Industrial PRACTICE. South Wales. £1,400 p.a. Panel 1,500. App. £50 p.a. Good house with nice garden to rent. Premium 1½ years pur.
5. COUNTRY TOWN.—PRACTICE £900 p.a. Panel 145 and increasing with good scope in Carmarthen. 1 years purchase. House in good repair £550.
6. LONDON, W.—General PRACTICE, non-panel fees 10/6 to £1 1s. Receipts for last 2½ year £2,352. Price £500 cash. Good [illegible] £170.
7. [illegible] unopposed [illegible] p.a. Price 1½ years purchase. Good house.
8. CORNWALL.—Unopposed Country PRACTICE near North Coast Health resort. Over £900 p.a. Good scope. Premium £1,100.
9. MONMOUTHSHIRE.—Old estab. Country PRACTICE, over over £1,600 p.a. Third share at 2 year purchase with total succession. Good house to rent. Scope for surgery. No collieries.
10. DEVON.—Seaside Town. Doctor's house 23 years with small PRACTICE attached. Vendor retiring. Details on application.
11. CARDIFF.—Industrial PRACTICE over £600 p.a. Panel 800. Good house. Premium £600.

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NORTH STAFFS.—Old established PRACTICE Average cash receipts £2 076 p.a. Panel 1 930 Exceptional detached house 4 reception 5 bedrooms Garage and garden Premium 1½ years purchase.—No 314

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YORKSHIRE (W.R.).—PARTNERSHIP in sound Practice Average cash receipts £4 017 p.a. Panel 4 600 Modern house available 2 reception 5 bedrooms Premium—one third share—1½ years purchase part by arrangement.—No 311

LANCS TOWN near MANCHESTER.—Sound old established PRACTICE offering surgical scope Cash receipts last year £2 084 Panel 1 350 Excellent living and professional accommodation Local Hospital Good opportunity for young Surgeon Premium 1½ years purchase.—No 313

CHESHIRE TOWN.—Old established PRACTICE Average cash receipts £1 420 p.a. Panel 2 000 Good scope Nice house 3 reception 5 bedrooms Garage and garden Premium—Practice—£2 200.—No 293

NORTH WEST COAST.—SEASIDE RESORT.—Old established middle class PRACTICE Average cash receipts £1 062 p.a. Panel and appointments £360 p.a. Excellent large and detached house in best part of town Long Partnership introduction given Preliminary Assistantship if desired.—No 312

600 Much scope Excellent house 2 reception 4 bedrooms garage and good garden to be sold or may be rented for a period on lease Premium 1 year's purchase Vendor retiring.—No 246

NEAR LIVERPOOL.—PARTNERSHIP in good class Practice Cash receipts approx £3 000 Good house available Premium—one third share—2 years purchase.—No 309

MEDICAL WOMAN'S PRACTICE.—SEASIDE TOWN.—Cash receipts last year £632 Panel 465 Excellent rooms at £56 p.a. Premium £850 or near offer.—No 274

MANCHESTER.—RESIDENTIAL SUBURB.—Middle class PRACTICE Suitable for two in Partnership (one a good surgeon) Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses with ample accommodation Premium 1½ year purchase part by arrangement.—No 277

NEAR PRESTON.—PRACTICE offering scope Cash receipts 1930 £626 Panel 300 Good house 2 reception 4 bedrooms Rent £70 p.a. Premium £800.—No 254

MANCHESTER.—PARTNERSHIP in Practice of about £1 600 p.a. Panel 1 550 House available to rent Premium—half share—1½ years purchase.—No 303

LANCS TOWN.—Old established PRACTICE Receipts £2 500 Panel 1 850 Scope Appointment £120 Good house 2 reception 4 bedrooms Premium 1½ years purchase.—No 168

SPECIAL NOTICE

For the convenience of Practitioners, Branch Offices have been opened as under—

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28, Exchange Street East, Liverpool
(Tel. Central 1970 Grams. Legal Liverpool)

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72, High Street, Belfast
(Tel. 7636/7 Grams. Vouch Belfast)

YORKSHIRE.—Pleasant City.—TWO ASSISTANTS required with view to early Partnership Cash receipts over £5 000 p.a. Panel 4 000 Preliminary salary £300 p.a. all found and car allowance.—No 41

LARGE LANCS TOWN.—Sound Industrial PRACTICE Cash receipts last year £1 003 increasing Panel 1 440 Good house 2 reception 4 bedrooms 3 professional room Garage To rent on lease Premium £1 450 (including debts).—No 310

MANCHESTER.—Old established PRACTICE Cash receipts 1930 £688 Panel 578 House on main road 2 reception 5 bedrooms and garage Premium—Practice—1½ years purchase.—No 294

NORTH WEST COAST.—POPULAR SEASIDE RESORT.—PRACTICE Cash receipts last year £863 Panel 434 Excellent house to rent on long lease 6 bedrooms 2 reception rooms Garage and garden Premium £1 150.—No 308

BIRKENHEAD.—PRACTICE with great scope Cash receipts about £700 p.a. Panel 900 Good house 3 bedrooms garden Premium—Practice—£800 or near offer.—No 285

MANCHESTER.—PLEASANT RESIDENTIAL SUBURB.—Old established PRACTICE Average cash receipts £685 p.a. Panel over

MANCHESTER INDUSTRIAL PRACTICE Cash receipts last year £889 Panel 721 Plenty of scope Good house 2 reception 5 bedrooms Rent £50 p.a. Suit R.C. Premium—best offer.—No 190

LIVERPOOL.—Small PRACTICE of £621 p.a. consisting mainly of transferable appointments (£520 p.a.) Excellent house 4 reception 7 bedrooms Garage Rent £75 p.a. Premium 1½ years purchase.—No 302

LANCS TOWN near Country.—Old established PRACTICE Cash receipts last year £1 125 Panel 1 085 Excellent house 3 reception 6 bedrooms Garage and large garden Premium—Practice and house—any reasonable offer.—No 291

LIVERPOOL.—Old established middle class PRACTICE Cash receipts over £2 000 p.a. Panel 900 Excellent house 2 reception 7 bedrooms garage and garden to rent.—No 276

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LOCUMTENENTS (male and female) SHOULD REGISTER AT ONCE FOR IMMEDIATE ENGAGEMENTS

All communications to be addressed to the Branch Manager BRITISH MEDICAL BUREAU 33 CROSS ST MANCHESTER

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)

(FOUNDED 1880)

12, Stratford Place,

Oxford Street, W 1

Telegraphic Address Triform Wesdo—London

Telephone Mayfair 1782 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending its members to consult Mr A V SIORLY, the General Manager, in all transactions requiring the services of a Medical Agent

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The business undertaken by the British Medical Bureau is divided under the following heads —

TRANSFER OF PRACTICES, PARTNERSHIPS, etc

Medical Practitioners wishing to dispose of Practices or desiring to take Partners are advised to negotiate the business through the British Medical Bureau Vendors may depend upon receiving introductions only to eligible and bona fide purchasers All information is treated in strictest confidence Full and trustworthy information regarding Practices Partnerships etc, for disposal supplied gratis to Purchasers

ASSISTANTS AND LOCUM TENENS

Assistants and Locum Tenens can be secured at short notice It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out

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Medical Men wishing to receive Resident Patients should enrol their names on the books of the British Medical Bureau A large number of Patients are placed yearly through this medium

ACCOUNTANCY

The British Medical Bureau has its own staff of qualified Accountants wholly engaged on medical work—i e Investigation of Practices for purchasers, Income Tax, Auditing Accounts, etc

Practices and Partnerships for Disposal — Full particulars sent free

1 EAST COAST — Partnership (after preliminary Assistantship) in Practice in popular seaside resort Applicant should be aged 25—30 and have held H S appointment Good scope and opportunities for surgery Share worth about £1 000 p a at 2 years purchase Hospital

2 DEATH VACANCY — GLAMORGANSHIRE —PRACTICE averaging over £1 400 p a in seaport town Panel 1 500 Very nice house (8 bedrooms) with large garden to rent on lease

3 EAST ANGLIA — Partnership in good-class Practice in residential seaside resort Panel about 1 000 Suitable house to rent Applicant should be aged 28/35 preferably Oxford Cambridge or London man Premium for share worth approximately £1 000 p a —£2 000

4 SUSSEX — Country Practice between £1 200 and £1 300 p a in delightful part No panel Large residence (9 bedrooms etc) garage and garden of four acres to rent on lease Premium £2 000

5 LONDON, W —Non-dispensing Practice in the West End Receipts last year nearly £1 000 No panel or midwifery Rent of flat £170 p a Premium £500 cash

6 EASTERN COUNTIES — Partnership in Practice of about £3 650 p a in country town No panel Suitable house available Good educational facilities Premium one half share £2 500

7 NORFOLK — Partnership in Practice in agricultural district Receipts last year nearly £3 000 (average about £2 300 p a) Panel 1 500 Very nice house available Sport of most kinds Premium one third share 2 years purchase Preliminary Assistantship

8 LONDON S W —Partnership (after Preliminary Assistantship) in rapidly increasing Practice in growing outlying suburban district Receipts 1931 about £2 700 (average £2 450 p a) Panel 1 700 House (4 bedrooms) to rent Premium two fifth share 2 years purchase

9 SURREY — Partnership in increasing middle-class Town Practice of £2 300 Panel over 1 200 Modern detached corner house (5 bedrooms) garage and garden for sale Partner should be 26 30 and have held Hospital appointments Share of £1 000 p a at 2 years purchase

10 CORNWALL — Partnership in sound Country PRACTICE of over £2 400 p a including £800 from panel Very nice house (4 bed and dressing rooms) garden and garage to rent Premium one half share £2 000 cash

11 DEVON — Partnership in Practice averaging £3 000 p a in small beautifully situated town Panel 800 House with 4 bedrooms and attics garage and garden to rent Cottage Hospital Premium one third share 2 years purchase

12 N OF ENGLAND — Partner required in increasing Practice in beautiful city Receipts last year £5 000 Panel 4 000 Applicants should be proficient in minor surgery anaesthetics and obstetrics Share of four fifteenths at 2 years purchase

13 LONDON, N W —Non-dispensing Practice over £950 p a in good residential district No panel Ten roomed house with garage and large garden Rent £200 p a Premium 1½ years purchase

14 N MIDLANDS —Partnership in Practice, about £3 000 p a in country district near two important towns Panel over 1 600 Small house (3 bedrooms etc) available to rent Great scope as district is growing rapidly Premium one third share 2 years purchase

15 EAST ANGLIA —Partnership in good-class non dispensing Practice of about £3 000 p a in favourite Seaside Resort Partner should be a Varsity man about 30 years of age experienced in Medicine and Anaesthetics Good up to date Hospital Premium for one third share 2 years purchase

16 SUSSEX — Country Practice averaging £900 p a in beautiful part easy distance of coast Panel 640 Large detached house with three quarters of an acre of garden for sale Premium 1½ years purchase

17 W OF ENGLAND —Practice about £800 p a in first rate City Panel 1 324 Well built house (4 bed and dressing rooms) to let Excellent scope Premium £1 450

British Medical Bureau

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(FOUNDED 1880)

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Practices and Partnerships for Disposal (continued)

18 S.E. COAST.—Easily worked Practice in exclusive part of seaside town. Receipts last year £1,050 including appointments over £200, fees from resident patients and small panel. Large modern house with beautiful garden to rent. Ample scope. Premium £1,150.

19 CARMARTHENSHIRE.—Increasing Practice of £900 p.a. in pleasant Market Town. Panel 150. Well situated house (non basement) with 3 bedrooms for sale. Cottage Hospital. Premium one year's purchase.

20 S. MIDLANDS.—Partnership in Practice about £8,000 p.a. in residential country district. Suitable house to rent or purchase. Cottage Hospital. Share worth about £1,500 net p.a. at 2½ years' purchase on net cash receipts.

21 LONDON, N.W.—Practice (carried on by Medical Woman) doing about £280 p.a. in main thoroughfare. Panel 125. Shop fronted house to rent on lease. Good scope for increase. Premium £300.

22 S. OF ENGLAND.—Partnership in good middle class Town Practice over £5,300 p.a. No panel. Suitable house to purchase. Premium one fourth share £2,000. Preliminary Assistantship.

23 LONDON, W.—Steadily increasing Practice doing about £750 p.a. mostly from Local up Surgery. Panel about 500. Well-situated corner residence (3 bedrooms) to rent. Premium £900.

24 LONDON, S.W.—Small, non-dispensing PRACTICE of nearly £400 p.a. close to the West End. Select panel about 417 with scope. Corner house with ample accommodation to rent on lease. Premium 1½ years' purchase or near offer.

25 STAFFS.—Practice averaging £2,300 p.a. in manufacturing town. Panel 1,100. Very nice well built house (6 bed and dressing room) for sale. Scope for increase. Premium 1¼ years' purchase.

26 S. COAST.—Favourite Resort.—Practice of £600 p.a. Panel 50. *House contains 5 bedrooms.* Garage and garden. Rent £150 p.a. Scope for increase. Premium to effect quick sale only £300.

27 DURHAM.—Practice of over £500 p.a. in residential and colliery district near large towns. Panel 360. Substantially built 9 roomed house for sale. Scope for increase. Premium £725.

28 LONDON, W.—Middle-class Practice averaging over £700 p.a. in outlying residential suburban district. No panel. House with 4 bedrooms and fair sized garden to rent. Good scope. Premium £700 cash.

29 NEW ZEALAND.—NORTH ISLAND.—Non dispensing PRACTICE about £1,800 p.a. in first rate Town. Modern detached house (4 bedrooms etc.) garage and garden for sale. Equable climate. Good educational facilities. Premium *only £1,250.*

30 BIRMINGHAM.—Practice of about £1,000 p.a. in one of the best residential suburbs. Small panel and very little midwifery. Well situated house (6 bedrooms) *good garden* and garage for sale. Good scope. Premium 1¼ years' purchase.

31 NORTH OF ENGLAND.—Small Seaside PRACTICE in Inland Health Resort capable of increase by one practising all the year round. Receipts about £150. No panel or midwifery. House in own grounds with 6 bedrooms etc. Price—house and Practice—£1,250.

32 YORKSHIRE (W.R.).—Partnership (after Preliminary Assistantship) in Practice about £2,650 p.a. in manufacturing town. Panel 1,640. House available. *Applicant with* surgical experience preferred. Premium one third or one fourth share 1½ years' purchase.

33 EAST ANGLIA.—Partnership in Practice over £4,500 p.a. in beautiful country district, easy access of important town. Panel 3,000. Nice detached house (7 bedrooms) garage etc. garden and grounds of 10 acres for sale. Sport of most kinds. Considerable scope. Premium two thirds or four ninths share 2 years' purchase.

34 WESTERN AUSTRALIA.—Practice over £1,100 p.a. in Wheat and Sheep district. Seven roomed house with electric light, garage etc. for sale or rent. Ideal climate. Sport. Hospital. Premium £600.

35 MIDDLESEX.—Partnership in increasing Practice of nearly £2,700 in Town about 10 miles from London. Panel 1,460. House (5 bedrooms) garage and nice garden for sale. One third share for disposal.

36 SOUTH AFRICA.—Easily worked Country PRACTICE in healthy district (elevation 2,000 ft.) in Cape Colony. Cash receipts year ended June 1931 over £1,000. Sport of all kind. Well built house. Premium—house and Practice—£1,225.

37 S. OF ENGLAND.—Practice averaging nearly £1,000 p.a. in small seaside resort. Eight roomed house for sale or rent. Excellent educational facilities. Sea fishing etc. Premium £1,500.

38 KENT.—Country Practice of over £800 p.a. in beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms) central heating, ground of 2½ acres orchard etc. for sale. Sport. Premium 1½ years' purchase.

39 S. OF ENGLAND.—Partnership in Ophthalmic Practice about £1,300 p.a. in small but delightful resort. Considerable scope to one able to operate. Premium one half share 1 years' purchase.

40 LONDON, W.—Panel of 400 for transfer in suburban district. Rent of Lock up Surgery £65 p.a. Premium to include furniture and drugs £500.

41 HOME COUNTIES.—Partnership in exceptionally good and rapidly increasing Practice about £6,000 p.a. in delightfully situated Country Town every distance of City. Attractive house (4 bedrooms) to rent. Partner must hold the FRCS. and be aged about 30. Appointment on Hospital Staff. Premium for one sixth to one fourth share 2 years' purchase. Preliminary Assistantship.

42 SHROPSHIRE.—Practice £800 p.a. in market town. Panel 170. House (5 bedrooms) garage and garden to be sold or let. Premium 1½ year's purchase.

43 KENT.—Country Practice of about £850 p.a. Panel 550. Good house and garden for sale. Prem. £1,100.

44 MIDLANDS.—Country Practice of nearly £900 p.a. in beautiful district. Panel over 700. House contains 6 bedrooms and dressing room etc. electric light, beautiful garden with greenhouse for sale. All kind of sport. Premium £1,200.

45 SOMERSET.—Practice averaging £870 p.a. in country town. Panel under 200. House with 6 bedrooms garage and small garden to rent or purchase. Scope for increase. Premium £1,300.

46 LONDON, S.W.—Practice about £500 p.a. in suburban district. Panel 650. No midwifery. Semi detached corner house (6 bedrooms) for sale. Scope. Premium 1½ years purchase.

47 WITHIN 12 MILES OF LONDON.—PARTNERSHIP in rapidly increasing each Practice about £1,600 p.a. in developing industrial district. Panel nearly 1,950. Small house available. Large cottage hospital. Two fifth or one half share 2 years' purchase.

48 LONDON, S.W.—Increasing Practice in outlying suburb. Booking for year £890. Panel about 800. Modern house (3 bedrooms). Premium £1,000.

49 GLOUCESTERSHIRE.—Partnership in Country Practice of £1,000 p.a. Panel [redacted]. Premium one half share 1½ years' purchase.

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1 SUFFOLK—FAVOURITE COAST TOWN—PARTNERSHIP—A one third share (with increase later) is offered in an old established chiefly better class Practice averaging for the past three years £2 766 including panel of 941 Lowest fee 5/ Midwifery 2 gns upwards about 36 cases Choice of houses Excellent social sporting and educational facilities Premium for half £2 000

2 WITHIN 80 MILES OF LONDON—PARTNERSHIP—A one third share (with increase later) is offered in a very sound and old established better-class Practice situated in a good residential town within a few miles of the sea Average gross cash receipts for the last three years £3 253 (last year £3 600) Ample scope for increase Panel of 850 Fees from 3/6 to 2 guineas Not much midwifery from 2 gns upwards Suitable modern house with surgery attached Can be rented or purchased Excellent social amenities shooting yachting golf etc Ingoing partner should be experienced, aged about 28 to 35 Premium for share £2 000

3 SUSSEX—PARTNERSHIP—A one fourth share (with increase up to one third and subsequently up to one half) is offered (after a preliminary assistantship at a salary of £500 p a with unfurnished house) in an exceptionally sound well established Practice situated in desirable residential district near the sea Gross cash receipts for the last twelve months are approximately £3 700 Panel of about 1 700 and appts worth £200 p a Premium 2 years purchase Ingoing partner must be married experienced Graduate have held Hospital appts and not over 35 years of age

4 MIDLANDS—Old established good mixed class unopposed PRACTICE situated in an attractive country town with beautiful surroundings Average gross cash receipts for last 3 years £1 584 including panel of 374 Good appts worth nearly £200 p a Fees from 3/6 Very nice house with 3 reception 6 bedrooms separate entrance to professional rooms Good garden with tennis lawn etc Garage for 2 cars Price for freehold £1 850 of which a good proportion could remain on mortgage Excellent sporting and social facilities and schools Premium 1½ years purchase

5 good middle and better class p a including panel of about midwifery Good house with 2 reception 6 bedrooms etc Large garden Price for freehold £2 500 Premium £3 000

6 WITHIN 60 MILES OF LONDON near County Town—Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p a and offering good scope Selected panel of about 170 and appts worth £160 p a Fees 2/6 to 10/6 Very little mid Exceptionally nice house with beautiful garden containing 3 reception 4 bedrooms etc Separate entrance to professional rooms Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

7 OUTLYING RESIDENTIAL SUBURB — PARTNERSHIP — A third Partner is required in an old established good mixed class Practice averaging just over £10 000 p a gross A small share (to commence with) with ultimate increase by instalments to one third share would be offered to a suitable partner (preferably a young married man with experience of general practice) Good house with ample accommodation can be purchased or rented Premium 2 years purchase

8 YORKS — LARGE TOWN—PARTNERSHIP — A one fourth share is offered after Preliminary Assistantship in an old established mixed class Practice averaging for the last three years £2 600 p a Panel of 1 700 Lowest fee 5/6 Suitable accommodation available Premium 1½ years purchase Good scope for surgery

9 NORTH MIDLAND Two Partners are required to take over (with increase later) in a very sound Practice in desirable town producing rate of over £5 500 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

10 LIVERPOOL—Old established middle class PRACTICE, producing for the last 12 months over £1 100 Good appointments Selected panel of 50 Fees 5/ to 21/ No midwifery Suitable house with 4 reception 7 bedrooms bathroom etc Price for freehold £1 200 Premium £800

11 LONDON NORTH WEST—Well established middle class non dispensing PRACTICE averaging for the past three years £840 including appts worth about £300 p a and panel of 120 Fees 3/6 to 21/ Large house with thirteen rooms in addition to professional accommodation etc Price for free [illegible] 250

12 SOUTH WEST OF three fifths share is offered at attractive district near two good towns Gross cash receipts for last 12 months over £2 500 Panel of 1 500 Fees from 2/6 to 10/6 Not much midwifery Exceptionally nice house specially built with all modern conveniences 7 [illegible] bedrooms beautiful garden Price for freehold £3 0[illegible] on mortgage Premium 2 years purchase Hunting fishing and good schools within reach Up to date Hospital and excellent surgical scope

13 LONDON—OUTLYING RESIDENTIAL SUBURB—PARTNERSHIP—A one third share to commence is offered in a good middle class Practice having large scope Cash receipts for last 12 months about £2 700 including panel of 1 500 Suitable house can be purchased for £1 750 part on mortgage Premium 2 years purchase

14 NORTH WALES—Very old established good mixed class PRACTICE averaging £880 p a including panel of 433 Fees 2/6 to 10/6 medicine extra Suitable house with 2 reception 6 bedrooms etc Can be rented on lease at £50 p a Good sport Premium £1 200, part down and balance by instalments Ill health reason for sale

15 WEST OF ENGLAND—LARGE TOWN—Well established PRACTICE producing nearly £900 p a including panel of over 1 300 Suitable house in excellent position Price £700 or can be rented at £60 p a Premium £1 450 Good scope for increase

16 ESSEX—COAST TOWN—Increasing PRACTICE situated in good residential district and producing over £1 000 p a including selected panel of 100 and good appts worth about £110 p a Large modern house with beautiful garden can be rented or bought Premium £1 150

17 DEATH VACANCY—ESSEX—COAST TOWN—Small PRACTICE offering large scope for energetic worker Receipts for the past 12 months £220 including panel of 54 Visits 3/6 to 5/ medicine extra Suitable house with 2 reception 3 bedrooms etc and professional rooms Garden Garage Price freehold £1 100 or can be rented on lease at £75 p a Very good sport and schools Offers invited

18 LONDON S W—Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for leasehold (94 years to run) £1 200 part on mortgage Premium £1 050

19 MIDLANDS—PARTNERSHIP—A one third share is offered in a very sound middle and working class Practice held by the senior partner for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Prem 2 years pur

20 MID WALES—Agricultural District—Mixed class PRACTICE producing about £680 p a including small panel of 130 Fees 3/6 to 21/ Small house with 2 reception 3 bedrooms etc Price £550 Fishing shooting and other sport Premium 1 years purchase

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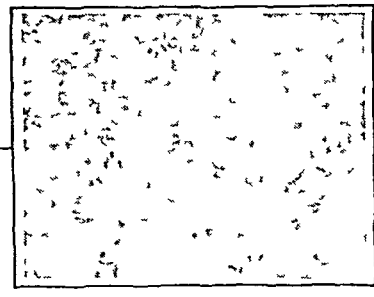
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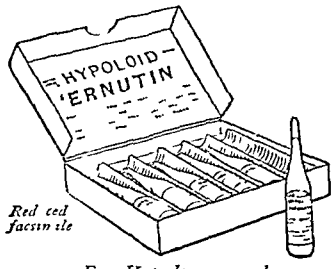
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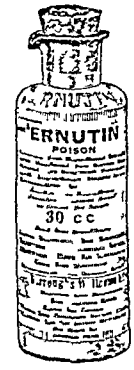
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CONTENTS

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ORIGINAL ARTICLES

Treatment of Neurotropic Diseases by the Method of Phylaxis By RENÉ CRUCHET, M D — 85

Diagnosis of Drunkenness from the Excretion of Alcohol By SYDNEY SMITH, M D and C P STEWART M D (With Charts) 87

Ear Complications of Influenza By J I O'MALLEY F R C S 90

Diseases of the Hip joint and its Immediate Neighbourhood By JAMES E BRAILSFORD M D 92

Epidemiology of Tinea Capitis By G H PERCIVAL M B F R C P Ed (With Charts) 93

Puerperal Sepsis and Prophylactic Vaginal Antisepsis By C L SOMERVILLE M D 94

Undulant Fever in Northern Ireland By JAMES S BAXTER B Sc M B 97

Spectrophotometric Curves of Blood Pigments By WILFRID MARSHALL B Sc M D 98

MEMORANDA

Survival for Seven Days After Rupture of Aortic Aneurysm By N McFARLANE M B 98

Teratomatous Cyst of the Ovary Discharging via the Umbilicus By RUTH LOCOCK M I C S 99

A Case of Cow pox or Vaccinia By DAVID M CATHIE M B Ch B 99

REPORTS OF SOCIETIES

ROYAL SOCIETY OF MEDICINE
Synthetic Anti malarial Drugs 100

REVIEWS

A German Textbook of Medicine 102
Midwifery by Ten Teachers 102
The Nature of Genius 105
The Vegetative Nervous System 105
Diseases of the Gums and Oral Mucous Membrane 103
Chemistry of Nucleic Acids 104
Notes on Books 104

OBITUARY

Hugh S David on M P F P C S Ed 125
Nicol Macnicol Tunkin M B 125
John Richardson Armstrong M D 125

LEADING ARTICLES

AURAL COMPLICATIONS OF INFLUENZA 107
OVULATION AND THE SEX CYCLE 103

THE WEEK

Standardization of Ergot 109
Retinoscopy 109
The Traffic in Narcotic Drugs 110
The Cancer Campaign 110
New Conquests for Physics 110
The Jewish Health Organization 111
Dr George H Simmons 111

GENERAL ARTICLES AND NEWS

New Light on Workmen's Compensation The German Code By Sir THOMAS HORDER M D 112

Ethics of Abortion, Sterilization, and Birth Control Address by Lord RIDDELL 106

Alcohol and Mental Defect Address by Dr NORWOOD EAST 113

PREPARATIONS AND APPLIANCES (Illustrated) 105

MEDICAL NEWS 127

CORRESPONDENCE

Notification of Industrial Diseases By John C Bridge F R C S Ed 118

Medical Treatment of Gastric Ulcer By Geoffrey Bourne M D F R C P 118

Colporrhaphy for Prolapse By Wm Fletcher Shaw M D 119

The Problem of Tuberculosis By Esther Cailing M D 119

Catarrhal Infection and Formalin Vapour By Graham Grant L R C P 120

Oxygen and Everest By Sir Leonard Hill M B F R S 120

Thallium By J Ferguson and S Cochrane Shanks M B 120

Glaucoma By R H Elliot M D F R C S 121

Child Guidance Clinics and Neo Hippocratism By Arthur J Brock M D and Ian D Suttie M D 122

Treatment of Anthrax By George C Dorlin, F R C S 123

Chloroform in Labour By Helen Y Stoddart M B 124

Medical Centenarians by D G Crawford M B Lieut Col I M S ret 124

Medical Condition in Soviet Russia By F G Clemow M D 124

Mr Punch's Hump By Hugh S Stannus M D F R C P and Tom Hare M D 124

The Law and Abortion By George Jones M B 125

LOCAL NEWS

NEW ZEALAND—
Vital Statistics 115
Hospital Administration 115
New Zealand Cancer Campaign 115

SCOTLAND— 115
116
116
Chalmers's Hospital Edinburgh 116

IRELAND—
Public Health in the Free State 116
Cost of Belfast Health Services 117
Education of School Children 117

ENGLAND AND WALES—
Public Health in Newcastle 117
Society for Relief of Widows and Orphans of Medical Men 118
King Edward's Hospital Fund 118
London Ambulance Service 118

UNIVERSITIES AND COLLEGES

University of London 126
University of Liverpool 126
Royal College of Surgeons of England 126

THE SERVICES

Deaths in the Services 126
(For Naval, Military and Air Force Appointments see SUPPLEMENT)

LETTERS AND ANSWERS

Obstinate Urticaria 128
Income Tax 128
Result of a Campaign against Pediculosis in Schools 128
Ectopic Kidney 128
Sepsis and Subinvolution 128
Capitals and Italics 128

VACANCIES 128
(See also page 19 of SUPPLEMENT)

The SUPPLEMENT contains

Insurance Acts Committee
REPORT OF THE JANUARY MEETING

SCHOLARSHIPS AND GRANTS IN AID OF SCIENTIFIC RESEARCH

CURRENT NOTES
Problem of the Out Patient
Half Yearly Index
Annual Meeting of the Canadian Medical Association

IRISH MEDICAL COMMITTEE REPORT OF MEETING

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Bale Sons & Danielsson Ltd
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Broderick T W — Pyorrhœa Alveolaris 4
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Dingwall E J — 4
Ede 4
Figue C H —The Acute Abdomen 4
Fairweather S D —Flatfoot 4
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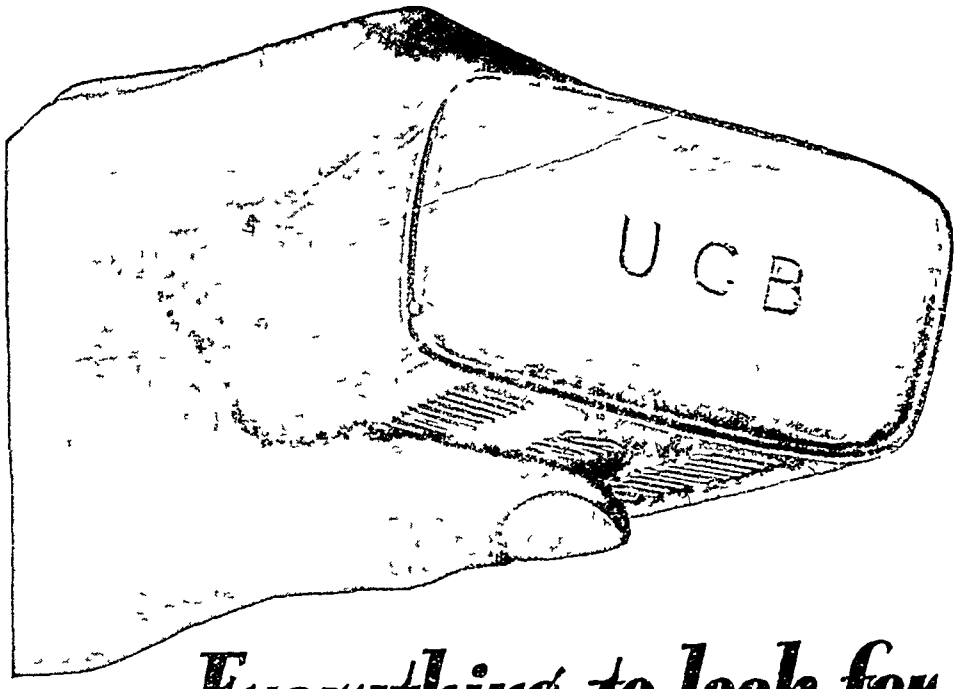
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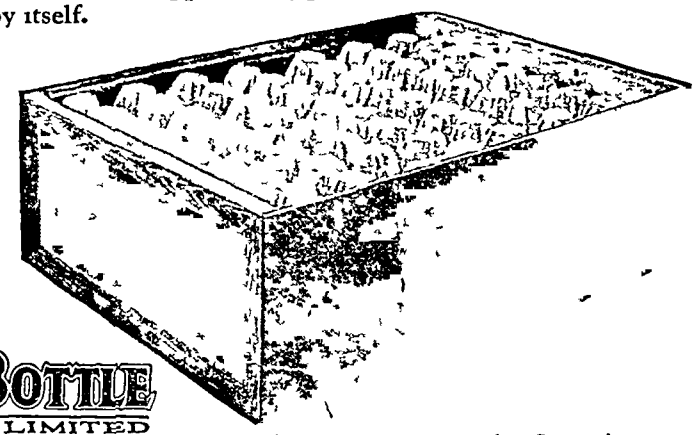
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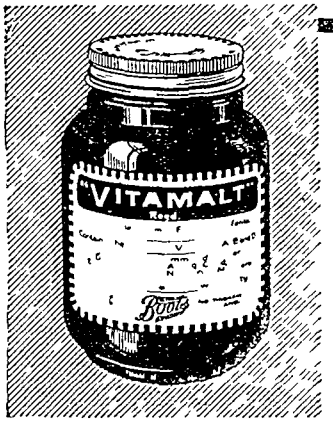
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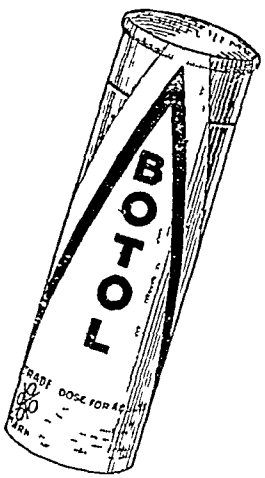
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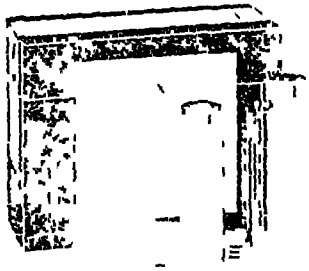
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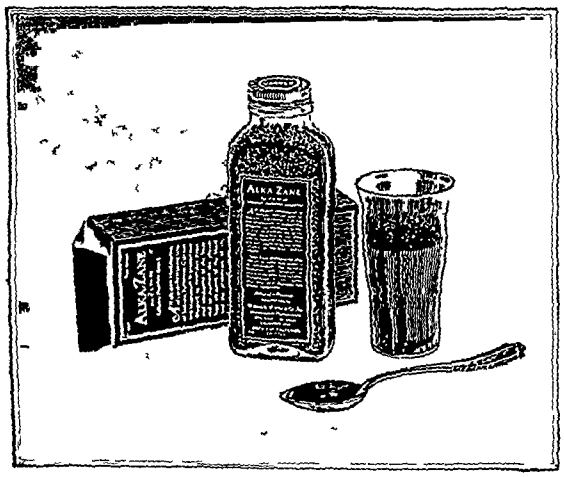
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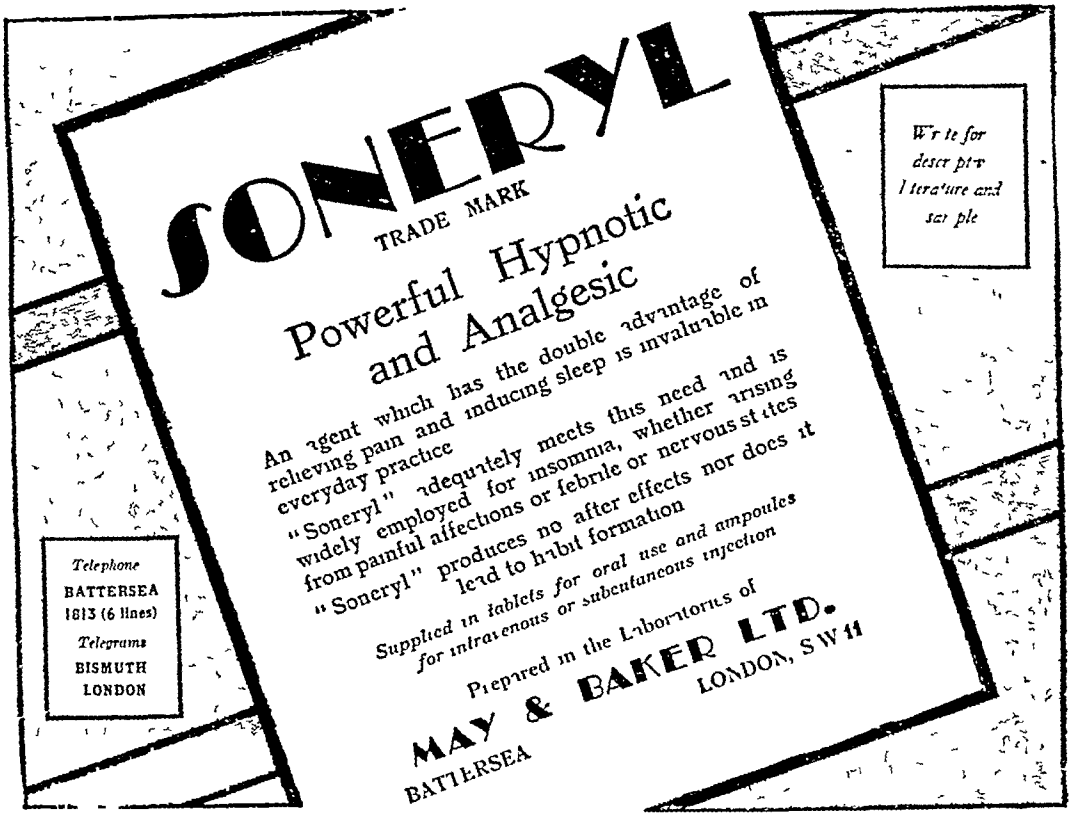
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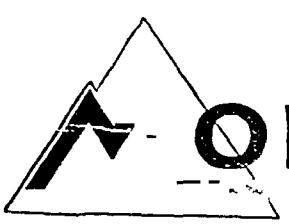
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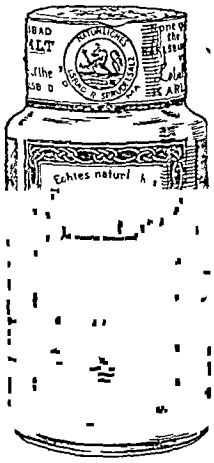
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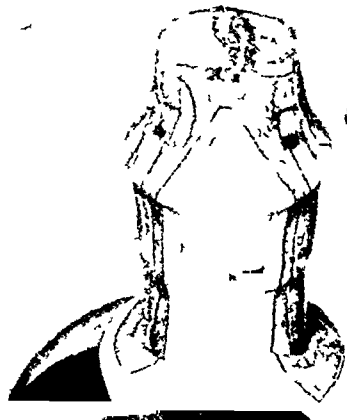
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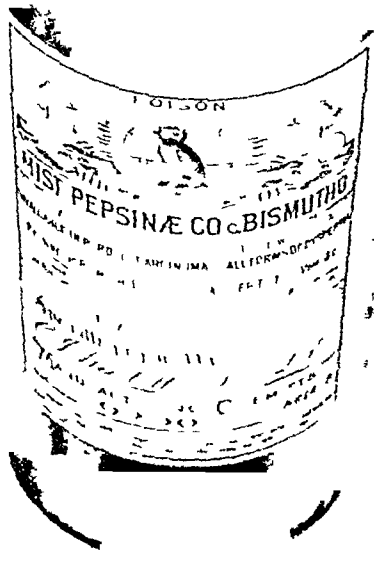
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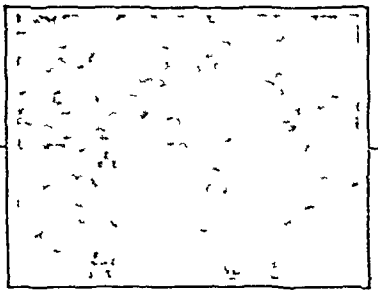
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Microphotograph of normal faeces of breast fed infant

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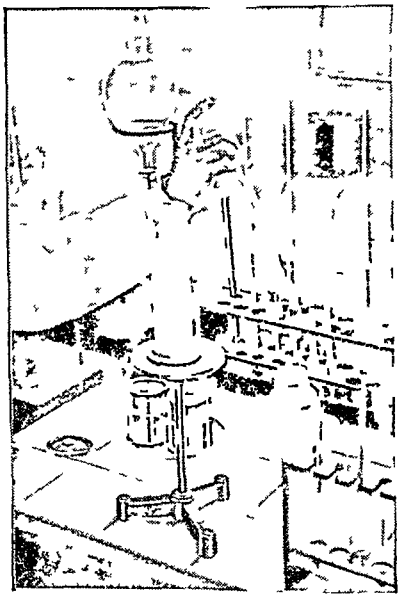
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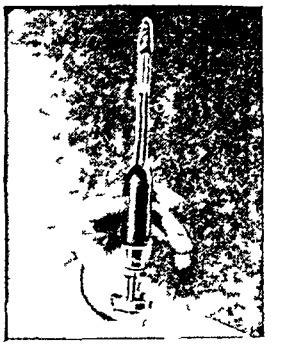
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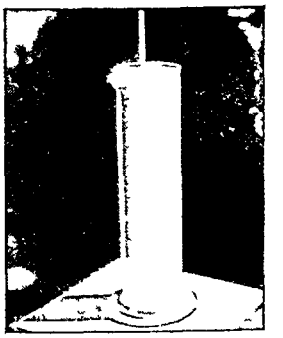
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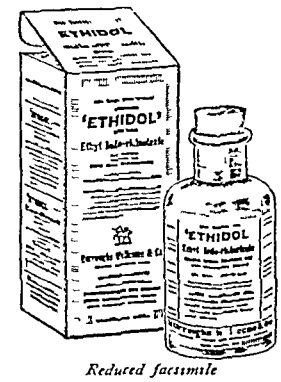
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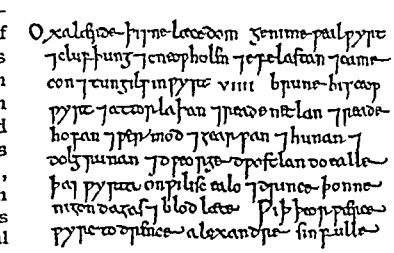
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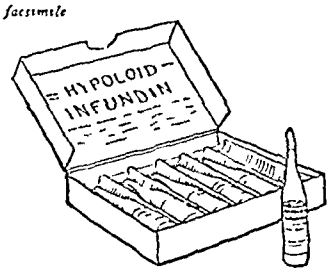
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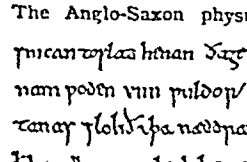
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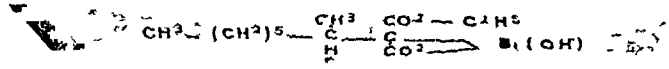
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References —Communications to the Societe de Dermatologie et de Syphilographie (July 1928)
Etude experimentale du Bismuth lipo soluble par M C Levaditi en collaboration avec M V Sanchis Bayarri et Mlle R Schoen (pour la partie experimentale et histologique) Mlle Y Mannin (pour la partie chimico analytique)

Traitement de la Syphilis par le Bismuth lipo soluble par MM L Fournier L Guenot Schwartz and Yovanovitch

Les Bismuths Lipo solubles par Rene Mignot *La Presse Medicale* No 95 (27th Nov 1929)

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Le Traitement d Attaque de la Syphilis par le Bismuth Lipo soluble par A Schwartz *La Presse Medicale* (3rd June 1931)

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Remarks
ON THE
TREATMENT OF TETANUS, DIPHTHERIA, AND OTHER NEUROTROPIC DISEASES BY THE METHOD OF PHYLAXIS
BY

RENE CRUCHET M D
PROFESSOR OF CLINICAL MEDICINE AT THE UNIVERSITY OF BORDEAUX

The interesting and suggestive work published by Dufour a few years ago on the value of chloroform anaesthesia in the treatment of tetanus has not perhaps attracted the attention it deserves This has probably been due to its apparent lack of general application although as will be seen below such is not really the case Dufour[1] in 1925 showed that if anti tetanic serum is administered under chloroform anaesthesia to a case of tetanus unusually good results are obtained This technique was originally adopted by Dufour in order to facilitate intrathecal injections a procedure otherwise difficult of application in contracture and especially if opisthotonos is present

THE VALUE OF SEDATIVES IN THE TREATMENT OF TETANUS

The suggestion of treating tetanus by inhalations of chloroform is not actually original, as Eschallier house physician to Velpeau employed this method as far back as 1847 Chloral later came to be used for the same purpose and was given by mouth subcutaneously or intravenously

Ore who first suggested the intravenous administration of chloral—a method which attracted much attention—did not favour giving the drug by mouth not only because its action then became uncertain but also because of the large doses necessary to produce an effect and of the difficulty if not the impossibility of such large amounts being absorbed He at first greatly preferred the subcutaneous route but in 1872 as the result of his early experiments abandoned this method In 1875 he returned to the subject and came to the following conclusions

> Chloral may be given subcutaneously in one of two ways —either in a weak or in a concentrated solution If the weak solution is used it is ineffective and therefore useless while a concentrated solution produces abscesses and sloughs at the point of injection with unpleasant and even dangerous consequences These facts have been amply confirmed both by animal experiment and in the treatment of patients suffering from tetanus

RESULTS OF INTRAVENOUS CHLORAL

Ore therefore unhesitatingly recommended the direct injection of chloral into the veins This new treatment was first used in November 1872 and in February 1873 on two patients suffering from tetanus The first patient was given nine intravenous injections within the course of three days receiving in all 28 grams of chloral hydrate He died nine days later but as he was moribund at the time of the first injection therapeutic results could hardly be expected The second patient was given a daily intravenous injection of 10 grams of chloral dissolved in 10 c cm of water for three consecutive days He gradually began to improve and within seventeen days (that is twenty four days from the onset of the disease) his convalescence was assured

Ore was of the opinion that the *continuous* anaesthesia produced by chloral allowed time for the *elimination* of the morbid element of the disease In this way the disease became less virulent and passed into the more chronic and therefore more curable stage

In spite of these striking results and of many others obtained in the domain of general surgery intravenous chloral anaesthesia was soon given up So far as tetanus was concerned a cure was rarely obtained Thus in Ore's book[2] published in 1877 out of eleven cases reported only two survived Moreover the intravenous injection of chloral demanded a certain dexterity as any effusion of the drug into the cellular tissue outside the vein was certain to give rise to an abscess Even practised surgeons such as Cruveilhier Tillaux and Lanelongue (of Bordeaux) recorded cases of coagulation of the blood and of thrombosis and phlebitis following the use of this method

RESULTS OF SUBCUTANEOUS CHLORAL

For some time in spite of Ore's view the subcutaneous route was preferred but although successes were reported by Laun (1874) Salter Ribelle Bouchardat Purefoy and others the method was soon abandoned The use of concentrated solutions of chloral was almost invariably followed by abscess and sloughs or by deep cellulitis In 1900 I first suggested that isotonic solutions would possibly avoid these complications and recommended the use of 5 grams of chloral dissolved in 250 c cm of distilled water When first used in a case of tetanus the method worked perfectly and no local complications were observed Injections of anti tetanic serum were given at the same time but the doses employed were small (10 to 30 c cm daily) and were given subcutaneously The results obtained in this case[3] were comparable with those recorded by Ore The attacks of contracture rapidly ceased the patient slept quietly and remained asleep for forty eight hours He then however had a further convulsive attack and died within a few minutes asphyxiated before another injection of chloral could be given

I have on several occasions since had recourse to subcutaneous injections of isotonic chloral for the treatment of tetanus but obtained my most interesting results in 1915 during the war While with the 5/68 Ambulance Service of a great number of wounded I had occasion to treat eight cases of tetanus—three at Tusey near Vaucouleurs and five at Toul three of these patients recovered Acting on the advice of G Canuyt, who was pharmacist to the ambulance and who unfortunately died later in the Flying Corps I used a 1 per cent solution of chloral which though a little more concentrated than the isotonic solution caused no unpleasant local symptoms whatsoever Two to three injections were given daily making a total of 5 grams of chloral in the twenty four hours As the condition improved the dose was diminished until the patient was taking 4 3 2 and 1 gram or less daily In the case of R G which ended in complete recovery chloral was given for the whole period between April 15th and May 14th 1915 In the case of P. who also recovered chloral was given from March 13th to March 30th 1915 beginning with a daily dose of 5 grams and ending with a dose of 0 5 gram I often combined the treatment with a little morphine (1/5 to 1/4 grain in the twenty four hours) and with subcutaneous injections of anti tetanic serum in doses of 10 to 30 c cm daily Occasionally the serum was given intravenously but never in larger doses than 10 c cm Although the treatment failed in five of our cases complete muscular relaxation was obtained life was definitely prolonged some four to eight days and death at least was rendered peaceful and free from the agony of body and mind that otherwise is almost invariably present Moreover these patients were already gravely ill with septicaemia (two had had amputations performed under very bad conditions) before developing tetanus

INTRODUCTION OF CHLOROFORM INTO TREATMENT

We now know that the doses of anti tetanic serum used were too small Much larger doses are now given (Etienne and Benech have injected as much as two to three litres) We have also since learned, in cases of necessity to employ the subarachnoid route with the result that the mortality rate of tetanus has definitely diminished

Certain patients were nevertheless found to be refractory to this intensive treatment and solely with a view to facilitating intraspinal injection of serum certain observers again had recourse to chloroform anaesthesia Remarkable results were sometimes obtained which were assumed to be due to the anti tetanic serum until Dufour raised the question as to whether the chloroform itself might not have some beneficial action in tetanus On investigation this seemed indeed to be the case but for some time nothing further was done These facts however demand an explanation and it is with this aspect of the problem that I now propose to deal

PHYLACTIC ACTION OF CHLOROFORM

Billard the late professor of physiology at Clermont Ferrand was the first to give an original and convincing explanation of the value of chloroform anaesthesia in tetanus Certain other workers had already attacked the problem but none had envisaged it so completely or had seen in it an expression of a universal law It was Billard who first established this conception and who after innumerable experiments first described the phenomenon of phylaxis

With regard to this matter, Billard[5] wrote as follows

> Profoundly convinced of the essential importance of lipoids in the production of phylactic phenomena I wondered whether anaesthetics generally which had already been shown by Nicloux to have an affinity for the central nervous system and in particular whether chloroform which had enabled Overton to establish the existence of lipoids did not have the power of so modifying lipoid equilibrium *in vivo* as to render animals either more sensitive or more refractory to neurotoxins

EXPERIMENTAL EVIDENCE

Experiments with guinea pigs in this direction gave the following results (1) The injection into a guinea-pig of a lethal dose of tetanus toxin produced no reaction if the animal had been anaesthetized for about three minutes twelve to fifteen minutes before the injection An anaesthetized guinea pig is therefore refractory to tetanus toxin (Billard) (2) If the lethal dose of toxin is given some ten to fifteen minutes before the chloroform anaesthesia the animal dies more rapidly than by the injection alone Therefore chloroform anaesthesia administered subsequently to the toxin increases the virulence of the toxin (3) If in the second example, an injection of anti tetanic serum is given either just before or just after the chloroform anaesthesia the amount of serum used being 0 5 c cm per 100 grams of weight, the animal survives It follows therefore that anti tetanic serum administered just before or during chloroform anaesthesia has the effect as in the first case of nullifying the action of tetanus toxin

The above experiments relate to tetanus but Billard's work suggests that similar conclusions might be drawn with regard to other toxins which have a special affinity for the nervous system and particularly to diphtheria Under similar experimental conditions identical results were obtained in cases of poisoning by sparteine and by the venene of the viper here chloroform anaesthesia gave the same successful results as with tetanus toxin

THEORETICAL CONSIDERATIONS

Billard was of the opinion that the beneficial action of chloroform was an example of what he called "phylaxis The preliminary anaesthesia by chloroform impregnated the lipoids of the nervous system in such a way as to render it impossible for the toxins mentioned above to become fixed In other words chloroform acted as a protective or phylactic agent (φιλασσις, protection) This phylactic property has not the same force when neurotropic toxins are already fixed in the nerve centres Chloroform because of its affinity for lipoids does indeed displace toxins already fixed to the lipoids of the nerve cells and exercises therefore, its phylactic action but as the body is by this time considerably weakened it cannot alone manufacture the antibodies necessary for its defence The nervous system by fixing these toxins in its own substance serves to limit and neutralize their action When, because of the greater affinity of chloroform for lipoids these toxins are set free it is in a body incapable of further resistance The problem becomes quite different however if an antitoxin in the form of a serum is supplied at the same time The toxins in circulation are at once neutralized and the infection is cured

In conclusion, it would seem that when a patient is gravely ill from some neurotoxin such as tetanus or diphtheria, the best method of phylaxis is to inject large doses of antitoxin under chloroform anaesthesia

TECHNIQUE AND RESULTS

Tetanus.—As we have seen above the earliest cases reported were those of Dufour and his pupils who applied the method in the treatment of tetanus Similar cases have since been published by Rivina Archambault and Friedman Feissier and Coste Bernard (of Lille) Pagniez, Guillain and de Sèze by Brulé and Lenegre Maurice Villaret and Haguenau

We have personally treated five cases of tetanus in children by the phylactic method of chloroform anaesthesia in our wards at the Clinique Médicale des Enfants Three of the children recovered I have also treated two other cases in men with complete success In two cases in children the contractures gradually disappeared, the patient lost his pain and trismus and became quiet and drowsy life was prolonged but death finally ensued In other words the disease ran the same course as it has been observed to do when chloral is given in large doses

Nevertheless we are convinced that this method will give still better results if it is practised according to the following rules although we must admit we have not always followed them ourselves (1) The injections of anti-tetanic serum should be given either immediately before or during chloroform anaesthesia When utilizing the intraspinal route subcutaneous injections of 50 80, or 100 c cm should also be given from the start In fulminating cases the serum should be given intramuscularly or even intravenously The treatment should end with a subarachnoid injection of 10 to 30 c cm according to the severity of the case It is sometimes necessary to repeat the treatment a second time within the twenty four hours but as a rule it need only be given once daily (2) The mistake that is most frequently made is to postpone the phylactic treatment too long to give it in the last and final resort It should on the contrary, be commenced at the onset of the disease, before the nervous system is too much involved and when the body has some power of resistance still left

Diphtheria.—The nervous sequelae of diphtheria which have long been described have of late years become increasingly and unusually severe Hitherto the phylactic

method of chloroform anaesthesia has not been applied to diphtheria in spite of the suggestive experiments of Billard in this connexion. Since February 1930 we have tried the method in six cases, four without any success. We must frankly admit however that the treatment was applied only when the patients were *in extremis* so that no really satisfactory conclusions can be drawn from these cases.

It is absolutely necessary to intervene early if the method is to be applied at all. As soon as nervous complications begin to appear chloroform anaesthesia should be at once combined with the administration of large doses of anti-diphtheritic serum following the same technique as for tetanus and giving the serum subcutaneously intramuscularly or even in the hypertonic cases intravenously. The intraspinal route might also be employed although this to our knowledge has not yet been tried in diphtheria. Such are the general indications which we advise and which we shall ourselves follow in the future.

Encephalomyelitis and Poliomyelitis.—The phylactic method of chloroform anaesthesia might by analogy be used in encephalitis and poliomyelitis but it would be necessary to have at our disposal corresponding specific serums. As far as poliomyelitis is concerned Petit's anti-poliomyelitis serum might well be employed in this way and may possibly give far better results than those obtained hitherto.

Against encephalomyelitis there is as yet no specific serum but it is interesting to note that urotropine which was quickly found to have a favourable therapeutic effect in this condition probably acts in the same phylactic way as chloroform. Urotropine becomes decomposed in the tissues and gives rise to formaldehyde which displaces the toxins from the nerve centres and becomes fixed to the lipoids of the cells. Billard's experiments with urotropine suggest this conclusion. As with chloroform similar results were obtained if urotropine is injected into a guinea pig some fifteen minutes after the administration of a toxin (tetanus anatoxin) the animal dies more rapidly. But toxins differ among themselves and it is possible that if the toxins of encephalitis were liberated in the blood stream the body would be better able to deal with them than when they are fixed in the central nervous system.

Other Indications.—Although so far we have only discussed the more common neurotropic diseases it is evident that the phylactic method might quite well be applied to other infections having a particular affinity for the nervous system. Among these are certain cases of influenza typhoid fever herpes zoster varicella[6] typhus sleeping sickness and of poisoning by strychnine phalline snake bite the botulinus bacillus curare etc.

Conclusions

For purposes of simplification we have confined our attention to the use of *chloroform alone* as a phylactic agent though as we have seen urotropine may act in the same way. We must add however that Billard in experiments of the highest ingenuity has shown that sparteine sulphate gardenal and especially certain mineral waters possess the power of similarly protecting the nerve centres. Further research may discover yet other phylactic substances. Although Billard considered his discovery of phylaxis to be of theoretical interest only it has nevertheless been shown by later workers to have practical implications of the highest order and to offer therapeutic possibilities of the greatest value.

This short memoir which Professor Achard read for the first time at the Academie de Medecine of Paris is written solely with a view to giving an indication of the results that can be achieved by phylaxis of showing that we have now in our hands a method of wide application capable in the future of leading to considerable advances in the treatment of the neurotropic diseases.

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DIAGNOSIS OF DRUNKENNESS FROM THE EXCRETION OF ALCOHOL

BY

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As part of a more extensive study we have carried out a number of experiments on the excretion of alcohol by human subjects. In all these experiments the excretion both by the lungs and by the kidneys was measured and the condition of the subjects with respect to intoxication was observed by various psychological tests and by the routine methods of examination used by police surgeons. It seemed to us desirable in view of the fact that estimation of alcohol in the breath[1] and urine has been recommended as a test of drunkenness that our experiments should be separately reported especially as they do not support the use of this method of diagnosis.

The subjects of our experiments were all young healthy men and were all light or moderate drinkers. The experiments all commenced at about the same time three hours after a light lunch. Except in one or two cases when gin was used the alcohol was given in the form of whisky the same brand being used throughout and was diluted with an equal volume of soda water. Drinking water or soda water was allowed during the experiment. Samples of air and urine were collected before the alcohol was ingested and periodically afterwards. Psychological and routine tests were made at regular intervals the examination in a number of experiments being carried out by a police surgeon Dr. Cameron to whom our thanks are due.

For the estimation of alcohol in the expired air the subjects blew air through a solution of potassium bichromate and sulphuric acid the delivery tube being terminated by a disk of Jena sinter glass in order to ensure the formation of small bubbles and consequently the complete absorption of alcohol. The air then passed through a flow meter placed with a dial facing the subject who was instructed to stop when the required volume of air—usually five litres—had passed through. Control experiments with air saturated with alcohol vapour showed that at the rate of blowing adopted the alcohol was completely absorbed. The amount of alcohol absorbed and oxidized by the bichromate was determined as usual by the addition of potassium iodide in excess and titration with sodium thiosulphate. The quantities and concentrations of the solutions used were those recommended by Southgate[2] for the estimation of alcohol in urine. The analysis of the urine was carried out by the method and with the apparatus described by Southgate.

In the air analysis a fallacy may be introduced by the difficulty of obtaining strictly comparable samples If the expiration is complete the air analysed will include a larger amount of alveolar air with a relatively high alcohol content than if the breathing is shallow Control of the breathing throughout the experiments is difficult but most of our subjects have produced the complete sample of five litres in five or six breaths As intoxication increases, however deep breathing appears to become difficult, at any rate, there is a strong tendency to shallow breathing The danger is illustrated in Fig 1 In that experiment the subject on each occasion of air sampling attempted to produce the five litres required in as few breaths as possible and gradually reduced the number from ten to three As a result the later samples contained more alveolar air than did the earlier ones and the entirely fallacious curve shown in the figure was obtained

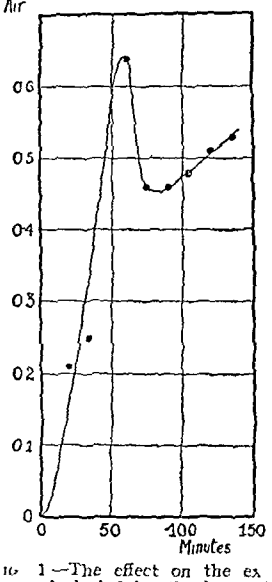


Fig 1—The effect on the excretion of alcohol by the lung of altering the depth of breathing

RELATION BETWEEN THE ALCOHOL CONCENTRATION OF THE BREATH AND THAT OF THE URINE

According to Bogen[3] analysis of the expired air offers a convenient means of ascertaining the alcoholic concentration of the blood since the quantity of alcohol in the expired air bears a definite relationship to that in the urine and therefore to the amount in the blood Our results entirely fail to confirm this statement The curve showing the course of excretion through the lung is of the same general shape as that for kidney excretion (Fig 2) but the maximum concentration in the breath is usually reached much earlier than it is in the urine In Fig 2 we have plotted a series of curves showing the alcohol concentration in the breath of a number of individuals after ingestion of 216 c cm of whisky and Fig 4 shows the alcohol concentration in the urine in the same and other experiments Examination of these curves shows that there is no constant ratio between the concentration of alcohol in the breath and in the urine Thus forty minutes after the ingestion of the alcohol C_1 is excreting three times as much by the lung as is G (not charted) but only twice as much by the kidney after ninety minutes the relative amounts in the breath remain approximately the same while in the urine G is excreting slightly more than C_1

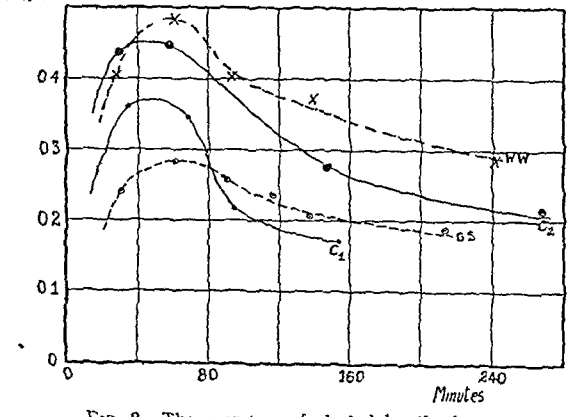


Fig 2—The excretion of alcohol by the lung

In the experiment with W W the ratio between the concentration of alcohol in the breath (per litre) and that in the urine (per c cm) is 0 34 0 31, 0 31 and 0 41 in the different pairs of samples in that with G S the ratio is 3 4 0 36, 0 25, 0 27, and 0 32 and in that with C it is 2 25 0 65, 0 34 and 0 26 Even if the first ratio in each series be excluded these figures show too great a variation to justify the claim of a quantitative relationship between the concentrations of alcohol in the breath and urine

EXCRETION OF ALCOHOL BY THE KIDNEY

It has repeatedly been stated that there exists a definite relationship between the alcohol concentration of the blood and that of the urine Thus Southgate and Carter give the ratio as 1 to 1 35, and other workers have obtained similar though not identical figures It seems to us however that in calculating these ratios, insufficient attention has been paid to the fact that whereas a sample of blood shows the concentration of alcohol in the blood at the moment of withdrawal of the sample a sample of urine shows merely the average concentration of alcohol in the kidney secretion during a period of time Hence it appears that the exact ratio found experimentally will depend on the frequency with which urine samples are collected and compared with the blood Thus if, as seems possible * the true ratio is unity and the concentration of alcohol in the blood at a given moment is equal to the concentration in the urine secreted at that moment it is to be expected samples of both fluids being collected at the same time that

1 If urine is collected at the end of a period during which alcohol is being absorbed and the blood concentration is increasing the concentration of alcohol in the urine will be less than that in the blood

2 If the time during which the urine sample has been secreted covers the peak of alcohol absorption the concentration of alcohol in the two fluids will be approximately equal

3 If the urine sample covers a period during which the concentration of alcohol in the blood has been falling the concentration of alcohol in the urine will be greater than that in the blood The shorter the periods during which urine is allowed to collect in the bladder the closer will be the approximation of the curves of blood and urine alcohol concentration

A second result which is to some extent dependent on the same factor—the time interval between the successive samples of urine—is the shape of the urine alcohol concentration curve This is true in fact not only of urine, but also of blood The longer the interval between samples, the smoother will be the curve a fact which is illustrated in Fig 3 Here the curve with black dots is obtained by plotting the results of half hourly samples of urine The curve with circles is obtained from the same experiment by combining pairs of analyses to give the concentration of alcohol in hourly samples If the rate of excretion of alcohol by the kidney is a true reflection of the concentration of alcohol in the blood, a curve of the black dotted type is more probable than one of the shape found by Mellanby[4] and by Southgate and Carter[2] The curves given by these authors indicate a constant rate of disappearance of alcohol from the blood and therefore since the actual

* This supposition which implies a simple filtration of alcohol through the kidney is supported by the fact that while the *concentration* of alcohol in the urine follows a regular curve the *amount* does not In other words the concentration does not depend on the volume of urine passed Experiments of our own on animals indicate that with urine collected over very short periods the ratio between blood and urine alcohol concentrations is approximately unity

amount excreted by the kidney is negligible a constant rate of oxidation of alcohol no matter what the concentration in the blood Now this is contrary to experience with other types of foodstuff and even in the case of alcohol it is not supported by any evidence save the shape

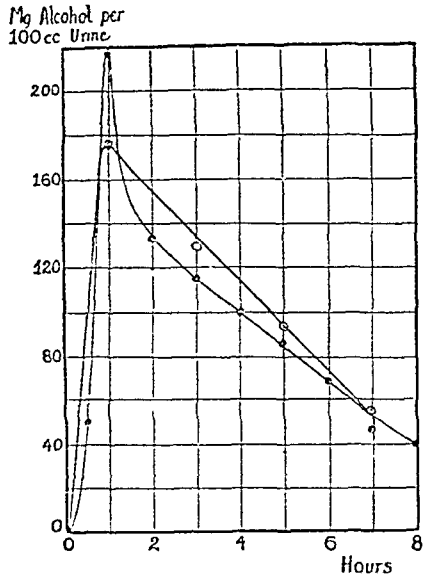


FIG 3—The influence of the interval between successive samples of urine on the shape of the kidney excretion curve

of the urine excretion and blood concentration curves as found by Mellanby The metabolism experiments carried out by him show that alcohol can be metabolized at the average rate of 10 c cm per hour not that it is metabolized at that rate in all circumstances The excretion curves we have obtained from samples of urine collected at short intervals fit in with this view for though they indicate that the rate of oxidation of alcohol is to some extent dependent on the concentration in the blood they show that the time required for the complete removal of alcohol from the body is roughly proportional to the amount ingested

MEDICO LEGAL VALUE OF DETERMINATIONS OF ALCOHOL IN THE URINE AND BREATH

Except as showing that the suspected person has or has not consumed alcohol within a short time of the test estimation of alcohol in the breath appears to be valueless Since as we have shown there exists no constant relationship between the amount of alcohol in the breath and that in the urine (or therefore that in the blood) it is not possible to draw from analyses of the breath valid conclusions as to the amount of alcohol consumed As to the diagnosis of drunkenness the arguments set out below apply to expired air as well as to urine

So far as the urine is concerned determination of the alcohol content can be of value in the diagnosis of drunkenness if

1 The concentration of alcohol in the urine bears a constant relationship to the concentration in the blood
2 The concentration in the blood bears a constant relationship to the concentration in the tissues
3 The concentration in the blood and tissues is an index of the degree of intoxication

Leaving aside for the moment the question of the degree of intoxication it does seem that the first two factors are satisfied sufficiently closely to allow of urine analysis giving an idea of the minimum amount of alcohol consumed For it appears that at the moment of secretion urine contains about the same concentration of alcohol as the blood, though in actual practice the relation departs somewhat from this simple one since the urine actually obtained is secreted over a period of time during which the concentration of alcohol in the blood is changing There is also evidence that the tissues at any given moment contain approximately the same concentration of alcohol as the blood the term tissues being taken as including all the large organs and the skeletal muscle but not the bones and fat deposits which are almost alcohol free Thus from the blood concentration—and less exactly from the urine concentration of alcohol—it is possible to calculate the approximate total amount of alcohol in the body at any given time and therefore the minimum amount consumed In this calculation allowance must be made for the weight of the skeleton and adipose tissue which together normally account for about a third of the total body weight Hence the minimum amount of alcohol taken is equal to (about) 2/3 × body weight × percentage of alcohol in blood Closer approximation can be made if one knows the time that has elapsed since the ingestion of alcohol since that allowance can be made for the amount metabolized The crudity of the calculation however renders such refinements dangerous

The amount of alcohol calculated from the blood concentration is strictly a minimum but inspection of certain of our experimental results shows the danger of attempting to go further and to calculate the actual amount consumed The variation in the rate of excretion in the time between ingestion and maximal blood concentration and the possible variation in the rate of metabolism not only among different individuals but in the same individual on different occasions all tend to make such extrapolations unsafe A study of our curves shows very

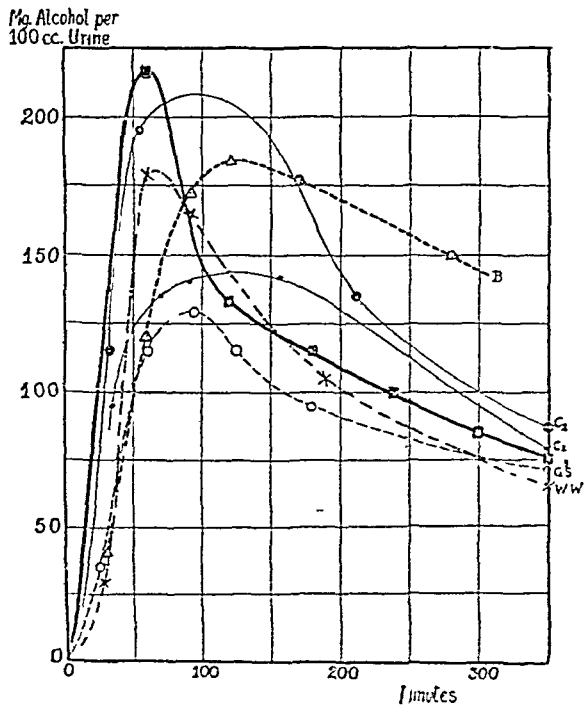


FIG 4—The excretion of alcohol by the kidney in different individuals who have taken the same dose

clearly that this danger is not imaginary and that the differences in the alcohol concentration of the urine found in different experiments with the same consumption of alcohol in similar circumstances cannot be correlated either with body weights or with the habits of the subjects in regard to the drinking of alcoholic liquors Thus in Fig 4 G S who is practically teetotal and weighs 12 st,

a matter of common experience that the occurrence of inflammatory ear complications in any given exanthematous case is far more likely in childhood than in adult life

The reason for this is not clear but is usually alleged to be due to the presence of adenoids in the child and the cleaner nose and nasopharynx in the adult Although this explanation may hold good for exanthematous cases, it is noteworthy that persons who have frank intranasal suppuration such as ethmoiditis and atrophic rhinitis are not apparently more prone to acute otitis media, during influenzal epidemics than those with clean noses Some modern immunological investigations suggest that some localized tissue immunity is conferred by the presence of chronic sepsis and if this is so it may explain why these cases resist the acute infection

Nasal obstruction appears to be a factor in favouring the incidence of otitis media though I am of opinion that persons who have a little or only partial structural obstruction are more prone to acute ear trouble than those who are marked mouth breathers at all times and have practically no physiological nasal function

Nose breathers are quickly obstructed to some degree by the swelling of the turbinates and mucous membrane consequent on the acute catarrhal infection of the airway and efforts to breathe through the nose or to clear it for this purpose are a potent mechanical factor in carrying infection to the middle ear I believe that a patient whose nose becomes quickly occluded by an infection of the upper airway would be wise to avoid all efforts at attempting to clear it and accept the role of mouth breather for the time being until the turgescence gives way just as patients should do for the first two or three days following a nasal operation There is however a popular belief that mouth breathing is a stigma and persons holding this view strongly will continue to make violent efforts to clear the air passages

The greatest danger to the ear arises not during the turgescent stage of acute rhinitis in influenza, but in the subacute stage when the stuffy swollen feeling has given way to a serous secretion and the latter is passing into a muco purulent form of discharge The patient begins then to find the airway clearing and delights in blowing his nose vigorously to establish breathing and nasal comfort but is unfortunately inflating his middle ears and may finally succeed in forcing some septic material into a tympanic cavity not yet infected This seems to be the correct mechanical interpretation of what so frequently happens in these cases and the natural corollary as to the line of treatment would appear to be obvious—namely to avoid blowing the nose with both nostrils occluded The use of the handkerchief would be wisely limited to wiping away any secretion which escaped from the nostrils and any secretion falling on the soft palate from the posterior nares should be sniffed into the pharynx and expectorated

Local treatment to the nose in any liquid form is contra indicated and is likely to be harmful Vapours such as those of menthol and benzoin co may be soothing and are certainly harmless The skin and bowels should be kept acting freely to eliminate as quickly as possible the toxins which course of the nasal turgescence and infection To general shape as the and almost continuous free action maximum concentration should be carefully covered from much earlier than it is in has disappeared This is a plotted a series of curves showing importance I have tested in the breath of a number of individuals 2·16 c cm of whisky and Fig 4 concentration in the urine in the to treat the ear experiments Examination of these curves myringotomy there is no constant ratio between the concentration of alcohol in the breath and in the urine The trying strengths of from 2 to 10 per cent, and await the subsidence of the inflammation or the rupture of the membrane with suppuration, should no mastoid complications supervene

If the treatment is by early *myringotomy*, this is done on the plea that it relieves pain and tension The old indication for incision of the membrane was a bulging drum head hence the name of paracentesis as applied to the operation but from what I can hear nowadays there is a new school which incises practically every inflamed membrane This is a grievous mistake and will yield the most uncertain and doubtful if not positively harmful results Routine surgery is bad surgery and there is no need for it if we take the trouble to study our physiological guide and ask what Nature is trying to do by means of *vis medicatrix naturae*

All these acute middle ear infections are either streptococcal or pneumococcal, or both and the pyrexial reaction is considerable and only subsides when some degree of immunity has set in which usually takes two or three days

To inflict any type of trauma even surgical upon inflamed tissues during this period of active reaction is to impair the chances of rapid recovery if not to damage them seriously but when the reaction has subsided owing to the establishment of immunity the position becomes entirely changed As a matter of fact when we see a bulging drum head we have practically arrived at the latter stage

If the primary airway infection has caused a sharp pyrexia which has subsided and this is followed by a middle ear inflammation with only a mild reaction an early myringotomy may be done (should indication for its performance such as bulging drum head pain and tension be present) with the expectation of a satisfactory result but if the earlier airway reaction was mild and the middle ear one severe (perhaps in the latter due to a new or more virulent organism) then time must be allowed for the establishment of some immunity as evidenced by the fall in temperature before inflicting even a surgical trauma on the inflamed tissues in short never operate in the hot stage and it may become unnecessary in the cold

DISEASES OF THE HIP-JOINT AND ITS IMMEDIATE NEIGHBOURHOOD *

BY

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For the diagnosis of most diseases a careful correlation of the clinical laboratory and radiographic findings must be made but these individual means of diagnosis are not always of the same value There are diseases the diagnosis of which rests almost entirely upon the clinical or the laboratory or the radiographic findings In the diagnosis of hip joint disease the radiographic appearances are of the first importance because a number of different pathological conditions give almost identical signs and symptoms Frequently the radiograph is diagnostic and reveals a pathological condition of much graver significance than the clinical findings suggest In the adult for example radiographs have revealed fractures of the femoral neck in patients who have been treated for weeks or months for sciatica following a trauma so slight that the clinician has apparently not thought of the possibility of fracture Again it is not infrequent for the radiograph to show the typical appearance of Paget's disease or

* Abstract of paper delivered in Belfast to the Ulster Medical Society

secondary carcinoma of the bone in cases which have been regarded as chronic sciatica

An examination of the radiographs of hip joints during the past five years at the Royal Orthopaedic Hospital the Warwickshire Orthopaedic Hospital the Queen's Hospital and the Carnegie Infant Welfare Centres Birmingham has shown the following pathological conditions

In Persons under 20

Congenital dislocation of the hip joint	88	Syphilis	4
Tubercle	60	Tumours	4
Perthes's disease	43	Fracture of femur neck	3
Septic arthritis	27	Dislocation of hip joint	3
Slipped epiphysis of femur	26	Myositis ossificans	3
Infantile coxa vara	15	Osteochondrodystrophy	2
Rachitic coxa vara	15	Cyst in femur neck	2
		Haemophilic changes	1

In Persons over 20

Osteo-arthritis	130	Secondary carcinoma	8
Chronic arthritis	73	Sarcoma	3
Septic arthritis	30	Cyst of femur neck	2
Fracture of femur neck	30	Syphilis	2
Paget's disease	12	Charcot's disease	1
Dislocation of hip joint	10	Hydatid	1

For success in the treatment of most of these conditions particularly those occurring in the child early diagnosis is essential While it can be said that certain cases of tubercle of the hip joint do not show radiographic changes in the very early stages one should not be deterred from having a radiograph taken as this often reveals greater destructive changes than are suggested by clinical examination The radiographic findings prove that the earlier a congenital dislocation is detected and treated the better the final result The condition of infantile coxa vara has been diagnosed from a radiograph in a child of 7 months This condition shows some of the features of Perthes's disease in that the bone of the femoral neck becomes fragmented softened plastic and yielding to pressure As a general rule the active phase passes after a few years normal bone is laid down and a sound femur produced retaining however the deformity caused by pressure on the disorganized structure during the active phase The radiographic appearance of this and Perthes's disease suggests that if the plastic bone were put at rest and freed from pressure little deformity would result Slipping of the femoral epiphysis usually occurs without any marked trauma Injuries which result in separation of epiphyses show on the radiograph that the lesion is not confined to the displacement of the epiphysis but that fragments of the diaphysis are carried with it Injuries near the end of bones not uncommonly result in fractures above the epiphyseal line leaving the latter intact Fracture of the femoral neck in children is relatively rare but when it does occur the epiphysis is not usually displaced When the epiphysis is displaced it is frequently impossible to get any history of trauma and the radiographs do not show detached fragments of the femoral neck The condition being frequently bilateral radiographic appearances suggest that it is due to a shearing strain on a disorganized metaphysis Deformities of the pelvis seen in children who have had rickets show remarkable improvement after orthopaedic treatment marked coxa vara being almost completely restored to the normal Radiographs of the adult show that a large proportion of fractures of the neck of the femur (about 50 per cent) fail to unite and that pronounced bone changes often occur in and around the hip joint after dislocation Early and obvious osteo-arthritic changes are not unusual These factors have a very important bearing in compensation cases

Paget's disease of bone is a much commoner condition than is usually taught Its presence is often revealed by a radiograph of the pelvis years before the bending of the long bones might have caused the clinician to suspect it Simple cysts in the neck of the femur may develop to such a size that fracture results from slight trauma but some of them having reached a certain size cease to develop and ultimately become surrounded by sclerosed bone calcification of the contents occurring Hydatid cysts of the bone may remain undiagnosed for ten or more years and eventually lead to the patient's death The first indication of malignant disease may be seen in the radiographic examination of a patient with persistent sciatica erosion of the bone near the hip joint resulting from secondary deposits

A NOTE ON THE EPIDEMIOLOGY OF TINEA CAPITIS

BY

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The clinical appearances of microsporon and trichophyton infections of the scalp and the varying distribution of the causative fungi according to geographical localization are common knowledge As less is known regarding the infectivity of the disease and its occurrence in epidemic and endemic form a study of its incidence amongst Edinburgh school children for the past eighteen years may be of interest During this period 2,701 cases of tinea capitis have been treated in this school population

In Edinburgh all children attending education authority schools who are found to be suffering from ringworm of the scalp during routine school medical examination are segregated in a special school This system has been in operation since 1912 Here in addition to teaching local treatment is carried out daily though the children do not reside in the school X ray or thallium treatment is given at the Skin Department of the Royal Infirmary Edinburgh the local treatment being also supervised there As has been reported in a previous paper on the treatment of scalp ringworm with thallium acetate the period of isolation at the special school is about 135 days when epilation has been produced by x rays and 113 days when thallium acetate has been used The parents are told how to carry out local treatment at the week ends and are warned of the risk of infection to other children

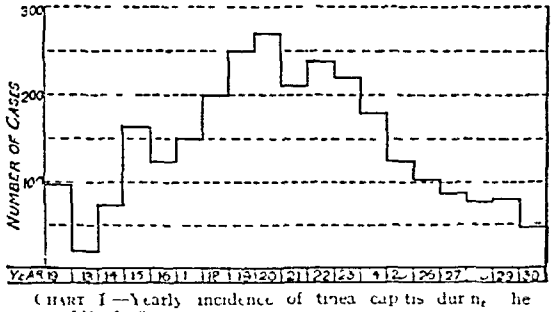


CHART I.—Yearly incidence of tinea capitis during the years 1911–1930

During vacations treatment is entirely in the hands of the parents but is still supervised at fortnightly intervals in the Skin Department of the Royal Infirmary

The medical inspection of schools is conducted throughout each term and is not concentrated on any particular part of a term In addition to cases discovered during routine school medical examination a small number of cases are first seen in the Skin Department and are referred from there to the special school

The curve of yearly incidence of tinea capitis (Chart I) shows that the disease remains endemic in spite of strict medical inspection and supervision of treatment There appears to have been a wave of increased endemicity during

the years 1918–24 This may be more apparent than real The figures from 1912 to 1917 may well undervalue the actual numbers for the system of isolation was during the earlier part of that period an innovation whilst school medical inspection was less rigorous during the war than

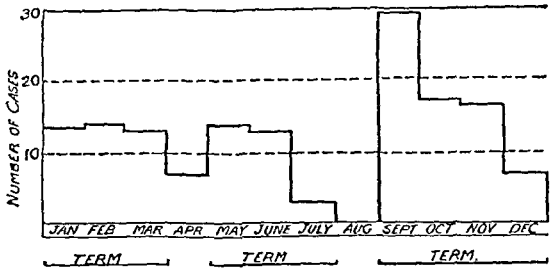


CHART II—Average monthly incidence of tinea capitis during the period 1912–1930

afterwards Owing to the possibility of a naturally occurring periodicity in the case incidence (apart from the effect of isolation and supervision) it cannot be concluded that the decreasing incidence during the years 1925–30 indicates the slow elimination of the disease as a result of

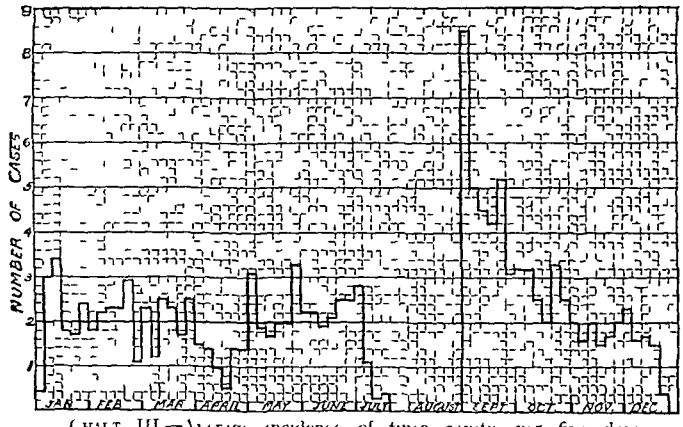


CHART III—Average incidence of tinea capitis per five days during the period 1912–1930 (One small square=five days)

preventive measures The explanation may rest in a lower virulence of the infecting fungi or in a combination of both these factors As far as the available figures show the disease is exactly comparable to scarlatina or diphtheria as regards its occurrence over a period of years

The monthly and five day incidence charts (Charts II and III) show clearly that the isolation of cases as they occur has a beneficial influence on the case incidence or the number of contact infections during the school terms This holds good in spite of the fact that most of the children are highly infectious for at least a few days before they are isolated and when the lesions are developing to recognizable dimensions The highest figures of incidence are reached at the commencement of the school terms—that is following a period during which fresh cases probably escape detection for a longer time than is the case in term time when the children are subjected to routine medical inspection The magnitude of the rise in case incidence after a vacation seems to vary directly with the length of the vacation It is recognized that in a given community of children infection may be acquired from outside sources during a vacation as a result of temporary changes of abode or of temporary changes in the distribution of the general population Infections acquired in such a manner cannot however account for more than a small increase in case incidence in any one school population and the increase noted can only be attributed to the natural spread of the disease in the school locality as a result of the absence of any controlling measures to deal with new cases during the vacation period This fact raises the question whether infection is more readily acquired in home surroundings than at school The curve of incidence can be to a *great extent accounted for by the former hypothesis*

The average number of cases recognized during the first five days of September over a period of eighteen years was 8·5—the highest incidence of the whole year Each of these cases had a greater or less opportunity to infect others before they themselves were recognized and isolated If school contact offers ample opportunity for several children becoming infected from one child when there is a limited period during which infection can occur then an abrupt rise in incidence might be expected during the second third or even fourth five day period of September This however does not occur and there is a steady diminution in case incidence during the remainder of the term It suggests that tinea capitis spreads slowly and that a sudden rise in case incidence does not take place when infection is first introduced into a non infected population The endemicity is due to a slow spread of infection and to the occurrence of infected cases which are overlooked for a considerable period The disease is not characterized by sudden sharp epidemic While variations in the virulence of the infecting *fungus may account for the fall in case incidence* during the past six years it cannot account for the variations in the monthly and five day incidence calculated from figures taken over a period of eighteen years

That cases of tinea capitis already under treatment do not act as potent sources of infection is shown by the decrease in case incidence during school terms This occurs despite the fact that the children are only segregated during school hours

On account of the epidemiological characters of the disease it is doubtful whether any system capable of being put into operation under existing conditions where supervision throughout the entire year is impossible would be able to eliminate the disease completely from a large school population

PUERPERAL SEPSIS AND PROPHYLACTIC VAGINAL ANTISEPSIS

BY

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It has always seemed to me that the ordinary conduct of a simple forceps delivery was a contradiction of all the rules and axioms of surgical procedure It is well recognized that the vagina contains organisms in every case Recent work has shown that in the apparently normal woman staphylococci are present in about 60 per cent, streptococci in 42 per cent and the deadly *S haemolyticus* in 2·7 per cent while other organisms such as *Bacillus coli* are also present In the simple forceps case the operator sterilizes the skin of the patient's perineum his own hands, his gloves and instruments and then straightway passes them through the bacteria laden mucus of the vagina into the uterus—over a surface and through a medium that no general surgeon would tolerate for one moment It is true that the vagina may be scrubbed out with ether soap but this is

impossible when the head occupies most of the pelvic cavity I am safe in saying that most forceps operations are conducted without any treatment of the vagina whatever Yet we expect these cases to remain afebrile!

No amount of ante natal care will obviate the introduction of forceps into the tired exhausted uterus nor an adherent placenta requiring manual removal We know that the bacterial flora of the vagina is rich and yet we go on performing these operations realizing that we are inevitably infecting the uterus

Let me present another aspect what occurs just before 'crowning' of the foetal head takes place? The foetal head has been driven down on to the perineum and is bulging through the vulva in the intervals between the pains it retreats out of sight into the vagina There is a to and fro motion of the foetal head and the foetal body—down into the vagina to be smeared with bacteria-laden mucus back into the uterus to deposit its burden of infection there What occurs just before crowning also occurs in a lesser degree throughout the second stage of labour from the time when the cervix is sufficiently dilated to allow the head to protrude through and the sac of membranes has ruptured It follows therefore that we must entertain a new conception—namely *that every woman has her uterus infected from her own vagina during the normal natural course of delivery*

I am well aware that recent work on cultures from the interior of the uterus after labour shows a great proportion as sterile but I suggest first that no cultural proof is required and secondly that the cultural methods of some of the investigators are not calculated to show up this point

There is no dispute about the existence of the flora of the vagina hence if the sterile foetus is dipped into the vagina it becomes infected If the infected foetus is withdrawn into the sterile uterus the latter is infected It is axiomatic and no further proof is required I believe there is considerable confirmatory evidence of my views in the following facts known to all—namely the increased morbidity in cases of (1) early rupture of the membranes—since this allows the foetus to come into contact with the vaginal walls for a much longer period than when the foetus is enclosed in the intact sac until late on in labour and is so prevented from touching the actual vaginal walls (2) Portions of membrane being retained I do not believe that if the pieces of membrane were really sterile they would be in the least likely to promote sepsis The amount of catgut used in haemostasis and suture of a laparotomy wound must in its original unspun form exceed the size of any portions of membrane usually left behind yet clean laparotomy wounds do not become septic The correct explanation is that the retained membrane is not sterile but is infected as I have shown (3) Cases of so-called dry labour where there is no liquor amnii left to flush out the sac of membranes after the expulsion of the foetus (4) When the placental site is in the lower uterine segment—that is nearer the route of extension upwards from the vagina through the open cervix There is the least likelihood of a morbid temperature when the placenta separates by Schultze's method Here the placenta and sac of membranes are turned completely inside out and no part of the infected foetal surface touches the uterine wall In Duncan's method of separation the membranes are often torn off from a part of the edge of the placenta this allows infected material from the interior of the sac to escape into the uterus

Another unconsidered detail is the movement of the umbilical cord—for example in premature and ineffectual attempts to express the placenta The cord in these cases can be seen to come down a couple of inches and recede again This is not of no importance What surgeon would allow an umbilical cord covered with discharges and vaginal mucus to be dipped into a patient's abdomen? We all know what would happen if it were

Then again during the first stage when the cervix and lower uterine segment are dilating the membranes cannot stretch equally well and the vertical split in the membranes is frequently demonstrable when the after birth is expelled I mention this to show that a portion of the uterine wall is frequently exposed to the rubbing action of the foetus during pains and that organisms are consequently deposited not simply in the sac of membranes but on the uterine wall If we consider these points then those cases of virulent sepsis in normal labours with no vaginal examinations whatever will not seem so inexplicable Why should we in these cases try to find a scapegoat in infected teeth or tonsils or bowels? People with much dirtier teeth and just as infected tonsils and bowels are subjected daily to major operations as also are patients debilitated from long illnesses profoundly shocked blanched from loss of blood all these reproduce varying conditions after labour and yet their clean operation wounds do not become septic Which of us removes an adherent placenta without misgiving? Yet I maintain there is no physical reason why a gloved hand could not be introduced into the uterus without carrying with it any infection except from the patient's own vagina

The natural corollary of these beliefs is that we should make some attempt to sterilize the vagina as soon as possible in labour because when the head occupies the pelvic cavity a great portion of the vagina is out of our reach Even if it were possible to sterilize the vagina we are still confronted with the problem of the cervix A large percentage of women—multiparae especially—have leucorrhoea Most of the discharge in leucorrhoea is from an infected cervix, where the organisms are buried in the deep racemose glands Sometimes when introducing bougies for inducing labour I have grasped the lip of a patulous os with a fenestrated sponge forceps instead of a vulsellum and have remarked the plugs of yellow caseous matter squeezed out of the gland orifices just as caseous secretion can be squeezed out of tonsil crypts in tonsillectomy The difficulties should not deter us however if we believe the principle correct and I hope to show that a very definite decrease in morbidity can be attained I should like to add how illogical it seems for us to take up the attitude that we should not meddle with the vagina during labour when we consider what we do in gynaecological operations such as dilatation and curetting or inductions of labour Every attempt is made in these to sterilize the vagina by swabbing with such antiseptics as iodine and I would cite the success of these operations as measured by freedom from serious after infection It is extraordinary that one and the same man will take precautions for a dilatation and curetting or an induction and will deprecate them for a forceps delivery If they are essential for the one they are equally so for the other

Assuming that all women are infected in the way I have described it is necessary to explain why the great majority have a more or less afebrile puerperium I regard the main safeguards as (1) the natural resistance of the patient herself to infection (2) the nature of the infection—mainly saprophytes but sometimes deadly organisms like anaerobic and haemolytic streptococci (3) the fact that the infection is introduced not into the actual uterus but inside the sac of membranes which is shortly going to be expelled and (4) the rush outwards of liquor amnii—if any remains—after the birth of the child which washes out infection from above downwards

Attempts to sterilize the vagina in midwifery have of course been made many times previously but usually

the results have been worse than when no antiseptic was used at all The work in connexion with the present experiment was undertaken at the Leicester and Leicestershire Maternity Hospital in Leicester during the past twelve months At first 10 c cm of plain glycerin were instilled into the vagina as soon as possible after the patient's admission A short series of cases, however, showed temperatures to be more common than when nothing whatever was done Next were tried pessaries of dimol they also were discarded after being used in fifty cases for rises of temperature were again more frequent than when nothing was used The pessaries also took an appreciable time in melting—about one or two hours after melting a little they became very slippery and frequently were extruded during a pain

Next was tried a 2 per cent solution of mercurochrome in glycerin 5 c cm of this were introduced into the vagina as soon as possible after the admission of the patient and before any vaginal examination had been made The technique is very simple and easy A short length of rubber catheter is inserted as high as possible in the vagina with due aseptic precautions the mercurochrome and glycerin is introduced by attaching a 5 c cm syringe filled with the solution A sterile diaper is applied to the vulva and the patient is kept lying in bed for at least one hour (in those cases not yet advanced in labour) The mercurochrome is repeated each following morning unless delivery is over No irritant effects whatever were observed and there is no danger to the infant's eyes in fact the Eye Department of the Bristol Infirmary has been using a 2 per cent mercurochrome for the past four years to the exclusion of other antiseptics (except in gonorrhoeal ophthalmia)

The investigations of Dr Leonard Colebrook in this country Schottmuller in Germany Schwarz and Dieckman and Harris and Brown in America have shown that the anaerobic group of streptococci is responsible for a large amount of uterine sepsis and that this group is present in the vagina in a considerable number of cases before labour Their work to a large extent discounts the conclusions at present generally accepted as to the harmless character of vaginal organisms present before labour and their non relation to those occurring in the uterus in puerperal sepsis Cultures grown under anaerobic conditions present an entirely different picture They show in a very large proportion of cases a definite relationship between the organisms responsible for severe uterine sepsis and those present in the vagina before labour They provide the bacteriological proof of the necessity of dealing with the vaginal flora Schottmuller in 1923 recorded 72 fatal cases of puerperal infection following delivery due to anaerobic streptococci from a total of 231 fatal cases

Harris and Brown use the following mixture in 7 c cm doses repeated every twelve hours if labour is prolonged mercurochrome crystals 15 grams half strength tinct iodi 5 c cm glycerin 500 c cm They began to try this antiseptic in September 1926 and the reduction in mortality from puerperal sepsis is shown in the following table

	Deliveries	Deaths	Per cent	
July 1924–Sept 1926	1 913	5	0 261	No mercurochrome
Sept 1926 Jan 1930	4 494	4	0 089	Mercurochrome used

This is the reduction in morbidity

	Admissions	Infections	Per cent	
July 1924–Sept 1925	2 194	45	2 05	No mercurochrome
Sept 1926–Jan 1930	5 385	67	1 24	Mercurochrome used

In my own series I used as controls all the cases delivered in hospital during the months of July August September 1930 There were 162 of these and they were in no way selected Mercurochrome in glycerin was given in the next 200 cases and the results are appended

	Temp never above Normal	Above Normal but not 99	Temp 99 but not above	Between 99 and 100°	100 but not above	Above 100° but not Notifiable	Notifiable	Notifiable in uterine origin
Controls (162 cases)	21	48	20	39	10	13	11	8
	12 9 %	29 6	12 3 %	24 0 %	6 1 %	8 0 %	6 7 %	4 9 %
Mercurochrome (200 cases)	55	50	36	23	10	13	13	9
	27 5	25 %	18 %	11 5 %	5 %	6 5 %	6 5	4 5 %

From the preceding figures the outstanding facts are that of the patients who never had a temperature in the puerperium higher than 99° there were 54 4 per cent among the controls and 70 5 per cent among those who had mercurochrome or an increase of 16 per cent for the better When we consider the total number of days that each patient had a temperature the figures are even more striking In each class the patients receiving mercurochrome had a temperature above normal for about half the length of time of the control patients

Table showing Total Number of Days above Normal Temperature for Each Class of Case and the Average number of Days for Each Patient

	Above Normal but not 99	99	Above 99 but not 100	100°	Above 100 but not Notifiable	Notifiable	Uterine Notifiables	Total Days excluding Non uterine Notifiable
Controls (162 cases)	190	111	236	67	89	106	88	781
Average	3 9	5 5	6 0	6 7	6 84	9 6	11	4 8
Mercurochrome (200 cases)	128	125	95	69	77	156	89	581
Average	2 56	3 4	4 1	6 9	5 9	12	9 88	2 93

There is an amazing reduction in the number of days total morbidity for a whole year's working of the hospital as the result of this one addition to the technique Nothing else was changed in the treatment of patients during the time of the experiment and the nursing personnel remained practically the same as during the time of the control cases The procedure is simple and safe requires only a short time to perform and can easily be carried out single handed by any midwife with no addition to her equipment other than a 5 c cm syringe I commend the idea to medical officers of health and maternity hospitals It is far from perfect, but I suggest that if work on these lines were conducted on a national scale and the results were pooled something of very great value would undoubtedly be evolved

Following a recent article in the *British Medical Journal* on the relative bactericidal values of different antiseptics acriflavine in 0 1 per cent solution in glycerin has been used in the next series of cases The results have been notably different as shown in the table below

1 in 1 000 Acriflavine	Temperature never above Normal	Above Normal but not 99°	Temperature 99 but not above	Above 99 but not 100°	100 but not above	Above 100 but not Notifiable	Notifiables	Notifiables in uterine origin
300 cases	48	74	58	71	10	30	9	6
Percentage	16 0	24 6	19 3	23 6	3 3	10 0	3 0	2 0

Here we have 180 cases in which the temperature in the puerperium never exceeded 99° giving a percentage of 60 as against 70 5 with mercurochrome There is however a marked decrease in the notifiable cases of uterine origin only 6 out of 300 or 2 per cent as against 4 5 per cent for mercurochrome All these cases were slight the average number of days each patient had a

temperature above normal being only 9 1 from start to finish with acriflavine and 9 88 with mercurochrome The complete figures are shown in the following table

Table showing Total Number of Days above Normal Temperature for Each Class of Case and the Average Number of Days for Each Patient

1 in 1 000 Acriflavine	Temperature above normal but not 99	99 but not above	Above 99° but not 100	100 but not above	Above 100 but not Notifiable	Notifiable	Notifiable Non uterine Conditions Included	Total Days Non Uterine Excluded
300 cases	230	235	418	69	255	85	55	1,243
Average	31	40	5 88	69	78	94	91	41

Taking 550 cases as the normal year's working figure the following facts emerge The total number of days in the year when patients had a temperature above normal, excluding notifiables of non uterine origin was no antiseptics 2 651 days mercurochrome 1 597 days acriflavine 2 278 days Mercurochrome thus shows a decrease of 39 7 per cent in temperature days, and acriflavine a decrease of 14 per cent

UNDULANT FEVER IN NORTHERN IRELAND

BY

JAMES S BAXTER B Sc M B B Ch

BELFAST

It has been stated by Bigger[1] that undulant fever due to *Brucella abortus* is rare in Ireland only three cases having been reported for the whole country and he infers from this that the strain of *Br abortus* infecting Irish cattle is probably of low virulence for man The following list of cases is published to show that in Northern Ireland at any rate the disease is not so rare as might be inferred from this statement

Within the past two years there have been eight cases of the disease and one of experimental infection The diagnosis of these cases has been made from the clinical features and from the result of agglutination reactions In none of them do we possess the absolute proof of the disease which isolation of the Brucella would have afforded but so far as I am aware in only one case in the British Isles has this been accomplished -

The main features of the cases and the result of the agglutination reactions are here shortly summarized

Case 1 —November 26th 1929 Male boot merchant Headache nausea constipation and pyrexia for three weeks flatulence offensive motions no enlargement of liver or spleen Widal reaction negative for T A B *Br abortus* 1 in 500 (+)

Case 2 —February 2nd 1930 Male aged 42 farm labourer History of headache abdominal pain diarrhoea and fever for four weeks spleen enlarged and tender Widal reaction negative for T A B and C *Br abortus* 1 in 1 250 (+) (Case published in *British Medical Journal* [2])

Case 3 —April 9th 1930 Male aged 47 bank official Ill for six weeks with pyrexia and pulmonary symptoms abdomen distended liver enlarged spleen not palpable Widal reaction negative for T A B *Br abortus* 1 in 5 000 (+)

Case 4 —August 5th 1930 Male aged 45 shipyard official History of headache loss of energy constipation and intermittent pyrexia for one month occasional night sweats spleen palpable well marked relative lymphocytosis (small lymphocytes 38 per cent) Widal reaction negative for T A B *Br abortus* 1 in 5 000 (-)

Case 5 —November 4th 1930 Male druggist History of headache nausea vomiting constipation and typical undulant pyrexia for six weeks pain and tenderness in right iliac fossa Widal reaction negative for T A B *Br abortus* 1 in 250 (-)

Case 6 —April 4th 1931 Male aged 27 motor mechanic History of anorexia abdominal pain constipation and pyrexia of three weeks duration Abdominal tenderness right basal congestion no enlargement of liver or spleen Widal reaction negative for T A B *Br abortus* 1 in 5 000 (+) Temperature fell to normal and has remained so after two injections of normal horse serum intramuscularly

Case 7 —June 19th 1931 Male aged 32 farmer History of headache profuse sweating pain in the neck muscles constipation and pyrexia for a fortnight Rigidity of neck tendon jerks increased Cerebro spinal fluid under pressure but no increase in cells or globulin Widal reaction negative for T A B *Br abortus* 1 in 1 250 (-)

Case 8 —September 16th 1931 Female aged 50 clergyman's wife History of encephalitis seven years ago with apparent perfect recovery Headache malaise pains in legs and pyrexia for about one month spleen not palpable Blood culture under 10 per cent CO_2 was sterile Widal reaction negative for T A B and C *Br abortus* 1 in 2 500 (-)

Dr W Carson of Belfast while carrying out some experimental work with *Br abortus* infected himself with a culture of the porcine type and immediately developed undulant fever of a severe nature In this case the symptoms and fever disappeared after the administration of solganol 0 1 gram intravenously on three occasions

COMMENTARY

In reviewing the salient features of the above cases one is struck by the frequency with which headache constipation and more or less generalized gastro intestinal disturbance are found in this disease One feels sure that a large number of these cases occur unrecognized and pass under the label of gastritis gastric influenza or the like The great preponderance of males over females in this series is also noteworthy

While this list of cases was being compiled an opportunity was afforded me of re examining the agglutination reaction of the serum of some of them The results, although few are given here as they may be of some value in interpreting positive reactions in low dilution found in the routine examination of serums

Case 1 —1 in 25 (-) 1 in 50 (-) 1 in 125 (-) 1 in 250 (-) Twenty one months after illness

Case 2 —1 in 25 (C) 1 in 50 (++) 1 in 125 (+) 1 in 250 (-) Twenty months after illness

Case 6 —1 in 25 (++) 1 in 50 (C) 1 in 125 (C) 1 in 250 (tr) Six months after illness

Case 7 —1 in 25 (-) 1 in 50 (++) 1 in 125 (C) 1 in 250 (++) 1 in 500 (tr) Four months after illness

In one of these cases (Case 1) no agglutination was given This was nearly two years after the illness and the serum during the illness did not agglutinate the organism in a higher dilution than 1 in 500 The other three at varying times less than two years after illness gave very definite agglutination in a dilution of 1 in 125 or higher Case 7 would have been missed if the reaction had not been carried out in higher dilutions than 1 in 25 owing to the presence here of a pro agglutinoid zone

In performing these reactions two sets of dilutions were set up In the first of these the serum as received was used while in the second the serum was first heated to 56° C for thirty minutes to eliminate non specific agglutination Heating the serum had the effect of lowering the titre slightly in each case and the figures given above are all for the heated serum The suspension of *Br abortus* used was the Oxford standard

Note —Since the foregoing was written two further serums have been examined *Case 3* 1 in 25 (C) 1 in 50 (++) 1 in 125 (-) 1 in 250 (-) nineteen months after illness *Case 8* 1 in 25 (C) 1 in 50 (C) 1 in 125 (C) 1 in 250 (++) two months after illness These figures refer to the agglutination performed with the heated serum The unheated serum in each case gave agglutination in a higher dilution

My thanks are due to those physicians of Northern Ireland who have permitted me to include their cases in this list and also to Dr T B H Haslett who kindly performed the agglutination reactions

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REMARKS ON SPECTROPHOTOMETRIC CURVES OF BLOOD PIGMENTS *

BY

WILFRID MARSHALL M.A., B.Sc., M.D.

SIDMOUTH

Photographs of blood spectra owing largely to the varying sensitivity of plates to different wave lengths of light give an inadequate idea of the spectrum as a whole. Anyone who has attempted to photograph a mixture of methaemoglobin and oxyhaemoglobin or a so-called neutral solution of methaemoglobin will have recognized the difficulties. The spectrophotometer, which gives accurate measurements of absorption in different parts of the spectrum, would seem provided certain constants are maintained to be free from objection. The curves obtained however, do not represent the blood spectrum seen by the eye and in this respect at least are disappointing. In view of the increasing use of the spectrophotometer as an instrument of precision in analysis and research some observations made in the course of other investigations may not be without interest.

THE INSTRUMENT

The spectrophotometer employed consisted of a Hilger large model constant deviation wave length spectrometer and a Nutting polarization photometer giving a triple field. The large model spectrometer is less convenient to use than the small model, but owing to the greater dispersion it is more delicate, especially for the observation of absorption towards the red end of the spectrum. Its average accuracy over the visible spectrum is about one Angstrom unit. The light source was a 100 c.p. pointolite lamp 63 cm. from the collimator slit. The width of this slit which controls resolution and affects the height and to some extent the width of the absorption bands in the curves should be as narrow as the light source will allow. In most of my experiments it was 0·05 mm. The ocular slit was 0·1 mm. wide and covered wave lengths of 2·1 $\mu\mu$ in the yellow and 1·2 $\mu\mu$ in the blue. The internal diameter of the cells used was 1 cm.

TECHNICAL DIFFICULTIES

When a convenient solution of blood showing well separated oxyhaemoglobin bands is examined spectroscopically the blue of the spectrum appears clear and on *diluting the solution the* α band is the last to go, but when a curve of the absorption coefficients of the solution is plotted the β band of the oxyhaemoglobin appears to be denser than the α band and the limb of the β band towards the blue does not reach zero and is followed by increasing absorption as the violet is approached. The whole curve presents a somewhat tilted appearance. This relative increase in absorption towards the violet is not wholly natural and is difficult to explain. It is obtained with solutions of crystallized haemoglobin and other blood pigments even when these are plotted against dilute serum, but it is not seen in spectrophotometric curves of substances of low molecular weight such as potassium permanganate or even eosin. It was at first thought to be due to the increased scattering of light of diminishing wave length by the large molecules of haemoglobin. But this explanation is not wholly satisfactory. The graphs of absorption coefficients of particulate matter such as suspensions of micrococci or a mastic emulsion are straight lines the inclination of which varies with the concentration, whereas the haemoglobin absorption increases more towards the violet end than visual observation indicates. It may possibly be due to the residual yellow colour of blood solutions. Ordinary colour screens are not sufficiently labile to counteract this effect. Silver colloid solutions which show increasing absorption towards the violet, are more serviceable and I have found dilutions of electrargol especially useful as a control in the spectrophotometry of blood pigments. By using a dilution which will give zero at λ 500 $\mu\mu$ against an oxyhaemoglobin solution a spectrophotometric curve is obtained which presents fairly accurately the blood spectrum seen by the eye.

METHAEMOGLOBIN IN NORMAL BLOOD

Most of my work has been done on ox blood crystallized or more or less purified but near the end of my researches three experiments were made on human blood and these illustrate the value of curves of this type. Blood was obtained from the ears of three different persons in the usual way and was diluted to a convenient concentration for examination. To 5 c.cm. of the dilution was added one drop of strong ammonia solution and to another 5 c.cm. one drop of water. The two solutions were straightway placed in identical cells, the ammoniacal dilution was put in the beam of the polarized light and the neutral solution in the non-polarized beam of the spectrophotometer. The difference in the absorption coefficients was then taken. On plotting the curve showed slight rises in the red and in the position of the two oxyhaemoglobin bands. From an analysis of the curves of oxyhaemoglobin and of acid and alkaline methaemoglobins it is difficult to avoid the conclusion that in these three individuals a trace of methaemoglobin is normally present in the blood. Whether this is universally the case further research for which I have not at present the opportunity will show. There seems however, no obvious reason why oxyhaemoglobin and methaemoglobin should not normally exist in a balanced state and a minute concentration of methaemoglobin be *in equilibrium with the oxyhaemoglobin of normal blood*.

* A communication to the Section of Pathology and Biochemistry at the Annual Meeting of the British Medical Association, East Bourne, 1931.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

SURVIVAL FOR SEVEN DAYS AFTER RUPTURE OF AORTIC ANEURYSM

Rupture of an aneurysm of the aorta is not a common occurrence but survival for seven days thereafter must be very rare. Only the post-mortem findings in the following case could have led me to believe that such a happening was possible.

The patient a man aged 65 years first consulted me on October 15th, 1931, complaining of pain radiating down the inner aspect of the left thigh from the vicinity of the saphenous opening. This I diagnosed as an anterior crural neuritis and treated it with sodium salicylate and potassium iodide therewith affording considerable relief.

On October 22nd I was called to see the patient who informed me that as he was strolling round his room he suddenly sat down on the floor. He felt no sensation of discomfort but in view of the fall he felt alarmed and went to bed. Two days later it was evident that he had had an enormous haemorrhage into the tissues of his left abdominal wall. The skin from the spine to the mid-axillary line and from the crest of the ilium to the scapula was black with effused blood. The left iliac fossa was occupied by a tense mass which stretched up under the costal margin. The only symptom referable to the abdomen was a troublesome hiccup which persisted till the end. He survived till October 28th (seven days) when he died suddenly after some slight movement in bed.

Post-mortem I found in the abdominal cavity a large quantity of serous fluid and a lesser though considerable

quantity of free blood Just above the bifurcation of the aorta was a small aneurysm containing fibrin deposit to a depth of three quarters of an inch Through a small rent in its postero lateral wall the finger could be passed over the psoas muscle into an enormous mass of blood clot occupying the whole of the iliac fossa and extending upwards to the diaphragm displacing the heart to a position practically in the mid line This mass was extraperitoneal and my conclusion was that death only occurred when under the strain of some exertion the peritoneum gave way and blood escaped freely into the abdominal cavity

South Ockendon Essex N McFARLANE M B

TERATOMATOUS CYST OF THE OVARY DISCHARGING VIA THE UMBILICUS

A multipara aged 41 was admitted to St Columba's Hospital Hazaribagh India on October 14th 1931 complaining of abdominal discomfort and discharge from the umbilicus The patient said that she had had a lump for a month and a discharge from the navel for a week otherwise she was well

On examination a yellow semi fluid discharge was seen to be coming from the umbilicus Midway between the pubis and the umbilicus a swelling of cystic consistency was palpable It was the size of two fists The tumour appeared to be attached to the deeper layers of the abdominal wall The general condition of the patient was fairly good and examination revealed no other abnormality The temperature was 98 2° F and the pulse 86

About an hour after examination of the abdomen a large amount of discharge resembling thickly curdled egg and milk was passed via the umbilicus On the day after admission the patient began to run a temperature fluctuating from 98 4° to 101 6° and the pulse rate increased to 110–120 She had little pain Within the course of the next week the discharge lost its curdled appearance and became fetid and haemorrhagic

OPERATION

On October 28th operation was performed A median subumbilical incision was made and was then carried upwards so as to encircle the umbilicus The peritoneum was exposed and a probe was then passed along the umbilical fistula The probe appeared to go down to the pelvis On incision of the peritoneum a yellowish white walled cyst was exposed the upper part of which was adherent to the peritoneum of the abdominal wall The probe was felt to be passing down towards the pelvis in a plane posterior to the cyst The omentum which was very adherent to the cyst was freed after some difficulty and it then became apparent that the cyst was of pelvic origin for the Fallopian tube was to be seen stretched across part of the tumour

The cyst was rotated and partially expressed through the abdominal wound It was then found that there was a second cyst lying posterior to and below the first one The probe passed posterior to the first one down to the second Both cysts had burrowed between the layers of the right broad ligament and though lying adjacent to *each other* did not intercommunicate The broad ligament was divided and the two cysts rotated upwards The track leading from the umbilicus to the lower cyst was then traced from below upwards It was about three and a half inches in length It was found to be a fibrous canal within a sheath of omentum the lower two inches in posterior to the first cyst the upper one and a half inches were firmly adherent to the peritoneum of the anterior abdominal wall This portion of the peritoneum had to be removed with the canal and the umbilicus The uterus was small and the left ovary and tube were normal Apart from the omental adhesions in the region of the cysts there were *no* other signs of previous peritonitis

On examination of the cysts the anterior one was found to contain a bundle of black hair cartilage and thick sebaceous yellow material The posterior one contained a mass of white hair bone cartilage and a quantity of haemorrhagic fouls clotted

St Columba's Hospital Hazaribagh India RUTH BOCOCK

A CASE OF COW-POX OR VACCINIA

On October 1st 1931 a farmer's wife visited me complaining of some water blisters on her fingers with swelling of her hands She said that six days before she noticed little red spots on her fingers which within the next day or two became pimples Three days before I saw her she had noted the pimples changing to water blisters which gradually increased from pin point size until they were about the size of a threepenny piece At this time she attended the surgery The patient also said that she had been picking brambles a week before the blisters appeared and had scratched all her fingers especially those of the right hand This had not prevented her attending to the milking of the cows one of which had some blisters and crusts on its teats The latter she treated by removing the crusts with olive oil and gently milking After this attention to the cow she was always careful to cleanse her hands thoroughly for fear of anything infectious

On examination the patient was flushed temperature 100° F tongue was dry and furred She complained of feeling shivery and cold with sweating at night There was headache loss of appetite nausea and constipation altogether she looked and felt out of sorts and had been so for the past four days Both hands and forearms were oedematous and reddened up to the elbows On the fingers of each hand (most marked on those of the right hand) were groups of vesicles varying in size from a pin point up to about the size of a threepenny piece Some of these the older vesicles had burst and were exuding serum The vesicles were surrounded with dark red areolae with erythema beyond this The blisters were most marked on the forefingers of each hand Papules also varying in size were present on the other fingers on the posterior aspect of the upper arms and on the calves of the legs This eruption was very itchy There was a faint generalized erythema over the body Of the larger intact vesicles some were filled with a greyish jelly like material while older ones were beginning to dry and get black in the centre Adenitis was present in the glands at the bend of the elbow and in both axillae

The patient was advised to go to bed to keep on a light diet and to pay attention to the bowels Spirit dressings were applied to the vesicles on the fingers She was given a soothing lotion to apply to the erythematous papular part of the eruption—that is on the hands forearms arms and legs etc The temperature remained above normal till three days later oscillating between 99° and 100 5° By that time October 5th the erythematous papular part of the eruption had faded with absorption of the oedema in the left hand and forearm (the lesser affected) while the oedema in the right hand and forearm had greatly lessened There were no new lesions to be seen The vesicles were now drying up and crusting had appeared on the older ones—that is those on the right forefinger The ante cubital and axillary adenitis had abated On October 7th the temperature was normal and all febrile symptoms had disappeared The patient was allowed up and when seen on October 9th all the vesicles had crusted and darkened There was no oedema in the right hand or forearm Within the next few days the crusts began to be shed and at a final visit on October 14th there were no crusts to be seen and all the lesions had healed

COMMENTARY

The above no doubt was a true case of cow pox The woman had prepared her fingers for inoculation by the scratching caused by bramble gathering The treatment of the sores on the teats of the cow expressed lymph on to the fingers resulting in infection with extremely successful multiple vaccination The general febrile symptoms now followed as a sequel The sores on the teats of the affected cow consisted of numerous vesicles some of which were oozing serum while others had crusted In conclusion I should state that the woman had never been vaccinated

DAVID M CATHIE M B Ch B
Assistant to M O H for Arran

Reports of Societies

SYNTHETIC ANTI MALARIAL DRUGS

At a meeting of the Section of Tropical Diseases and Parasitology of the Royal Society of Medicine on January 7th, with Professor J G Thomson in the chair Professor W Schulemann director of the pharmaceutical laboratory of the dye industries at Elberfeld, Germany, lectured on synthetic anti malarial preparations

After an account of the early work on quinine and the testing out of salvarsan and stovarsol as anti malarial drugs, Professor Schulemann said that in 1924 he, with two colleagues, Schonhoff and Wingler carried out certain experiments on methylene blue and later applied some of the experience gained with this substance to the quinoline group Amino quinoline was found to have a marked influence on protozoal infection in canaries This knowledge was made the basis of further work and by full co operation between chemists and physicians these beginnings were developed the position of the amino groups in the chemical constitution was changed side chains were varied and much other work was done He showed a large number of diagrams illustrating the chemical formulae The action of the compounds was tested out in animal experiments and what was now known as plasmoquine with the formula $C_{19}H_{29}ON_3$ and molecular weight 315 was selected for practical clinical investigation The formula compared with that of quinine $C_{20}H_{24}O_2N_2$ and the molecular weight of quinine was 324 Plasmoquine was at first only found effective in malaria induced in general paralytics (Sioli, 1925), and this work had not led to the production of a substitute for quinine Plasmoquine was a synthetically prepared anti malarial drug differing from quinine in its therapeutic properties The first clinical experiments with pure plasmoquine and plasmoquine combined with quinine were carried out by Muhlens by Manson Bahr in this country and by others elsewhere The parasites of tertian malaria reacted more strongly to quinine than did those of quartan malaria while quinine had hardly any effect on the parasites of subtertian malaria These variations indicated that the parasite in its different stages reacted to drugs in different ways and this was confirmed by the investigations carried out with plasmoquine He instanced the work of Sinton Knowles Wallace and others on the relapse rate following plasmoquine treatment It had been shown that with plasmoquine alone or combined with quinine the relapse rate in tertian malaria could be reduced to between 2 and 5 per cent in subtertian malaria the results appear to have been quite so satisfactory, [illegible] also there seemed to be [illegible] relapse rate [illegible] blue does not reach zero as did not sulphomethosing absorption as the violets although here whole curve presents have been a certain reduction in the relative me[illegible] Plasmoquine had practically no effect on wholly [illegible] but it definitely destroyed the [illegible] tertian schizonts but it definitely destroyed the gametocytes after a few days The early view that plasmoquine could inhibit the formation of gametocytes had not been confirmed on the other hand the work of Barber Komp Newman Roberts Jansen and others went to show that even minimal doses of plasmoquine which were too small to cause the subtertian gametocytes to disappear nevertheless sufficed to render them incapable of infection This action of plasmoquine naturally raised the question of the possibility of malaria control by sanitary measures whether by means of plasmoquine it was possible to prevent the anopheles from becoming infective by giving the drug to the human host Barber had written to him a short time ago from West Africa stating that he had succeeded in putting this theory into practice and intended to publish his results in the near future In actual practice of course one must never lose sight of the fact that this control would only be possible in exceptional conditions but rarely could a whole population be treated so effectively by means of drugs that every gametocyte carrier would be included, and thus render it impossible for the mosquito to become infected from the human

Professor Schulemann went on to say that the only property of quinine was to suppress the symptoms of infection, not to prevent its occurrence The latest work of James, on the other hand had shown that plasmoquine, in doses of 0 06 gram daily for a period of six days, might be considered as a chemoprophylactic The scientific importance of this work had already been definitely established because it had drawn attention to many new aspects of the problem which revealed the way to further investigation It ought to be possible to discover new drugs, differing both from quinine and plasmoquine which might attack at other points the cycle of development of the malarial parasite Recent work in the experimental laboratories at Elberfeld went to show that these considerations were justified Two experimental chemists there had succeeded in forming a new compound to which the name of 'erion' had been given This substance differed in its action from plasmoquine in spite of certain chemical relations It was believed that it would be effective against the schizonts in the same way as quinine Supplies of the substance had been placed in the hands of a number of workers in the Tropics and sub Tropics, and the reports so far obtained showed that it was effective against malaria acting on the schizonts, but having no effect upon the gametocytes It seemed to offer advantages in respect of dosage and duration of treatment, and also appeared capable of materially reducing the number of relapses after treatment

In conclusion, Professor Schulemann made grateful acknowledgement of the help he had received from workers in various parts of the British Empire this had been a constant stimulus

Discussion

Sir Henry Dale said that the lecture represented a real addition to the knowledge of most of those present They had known more or less what plasmoquine was but until that evening they had naturally supposed that the investigation on this synthetic preparation started with the attempt to build up something more or less like quinine They now learned that, on the other hand it had really started with work on methylene blue Professor Schulemann with the most admirable modesty, had put forward a small list of substances which had been tried out in arriving at plasmoquine, but if instead of giving them a short list [illegible] of AQRTIC ANEURISM the whole series of Rupture such as that, he had given the compounds which must have been tested at Elberfeld before plasmoquine was reached a larger room than the one in which they were meeting would have been necessary for the display of his diagrams Professor Schulemann had not suggested that this research proceeded in a perfect logical progression he knew that all such researches had to proceed, to a large extent by mere trial and error Ehrlich was ready to admit that in this work on chemotherapy there was a certain element of luck but there was much more than luck and those present that evening had appreciated what real scientific enterprise could do, the kind of patient careful work which did not claim too much at any stage and which in the end arrived at success

Colonel S P James said that plasmoquine was the first effective anti malarial remedy which had been prepared synthetically in the laboratory and Professor Schulemann's decision to come to England and explain to the Royal Society of Medicine the exact history of its discovery was a friendly gesture which would be widely appreciated The discovery was noteworthy not only because plasmoquine was a new and very potent anti malarial weapon but because an observation of its action on the different stages of the malarial parasite had led to an important

change in the ideas and aims regarding the chemotherapy of malaria Formerly it was generally believed that the chemotherapeutic problem of malaria was a single problem that all that it was necessary to do was to find a drug which would act more effectively than quinine in curing malarial attacks It was now realized that the chemotherapeutic problem of malaria included four separate phases of research each of which must be considered as quite distinct The first was the problem of the sporozoites the second the problem of the asexual parasite the third that of the sexual forms and the last the problem of the forms responsible for relapses Perhaps in the future a single drug would be found which would act equally well on all these stages of the parasite but so far as was known at present the conclusion which must be stated from the action of quinine and plasmoquine was that for each of these separate stages a different drug might be found For destroying the sporozoites plasmoquine was the only known drug to be effective and even plasmoquine for this purpose was not entirely satisfactory According to the latest experiments at Horton in an intensely malarious place in order completely to protect oneself by taking plasmoquine it would be necessary to take a daily dose of 4 cg and this if prolonged over a considerable period would produce toxic symptoms in certain cases With regard to the asexual parasites quinine was already available In the sexual forms plasmoquine acted excellently and in doses much smaller than those effective against the sporozoites Finally with regard to the forms which were responsible for relapses unfortunately up to the present no known drug had any real effect in the prevention of relapses Professor Schulemann had mentioned some reports in which it was stated that the relapse rate after a course of plasmoquine was less than after a course of quinine He could not help feeling however that the observations recorded in those reports were open to another interpretation and it was quite certain that as regards malignant tertian malaria at any rate plasmoquine was not more effective for preventing relapses than was quinine Colonel James showed a chart illustrating five cases of malignant tertian malaria which had been treated at Horton In all these cases a course of plasmoquine either given alone or combined with quinine failed entirely to prevent them from relapsing The chief difficulty in assessing the value of new antimalarial drugs was that in each of the species several different varieties or strains had to be considered some of which must be described as being quite virulent while others were mild Up to the present at Horton seven strains had been studied—two from India one from West Africa one from Sardinia and three from Rome Quinine in very small doses availed against the Indian strain without any difficulty and in moderate doses against the West African strain But in the case of the Sardinian and Roman strains the results were quite different These were refractory to quinine in very large doses Before venturing to say that a new antimalarial remedy possessed remarkable curative properties one must ascertain whether or not the cases in which it was being tried were infected with a strain of the parasite which could perhaps be as easily cured with moderately small doses of quinine In the future what seemed to be needed for chemoprophylaxis was a drug with the same action as plasmoquine but less toxic and for chemotherapy a drug which in moderate therapeutic doses for a short period would not only cure the attacks of the disease but effectively prevent all relapses He gathered that one or more new drugs might issue from Elberfeld and one looked forward to these with great interest

Professor WAKEFIELD YORKE contested Professor Schulemann's statement that quinine had no action upon the gametocytes He had been very much interested in Colonel James's remarks because he had held the view for a long time that if any really substantial advance in chemotherapy were to be made the biological side of the question must not be burked It should not be forgotten that in quinine they probably had one of the most remarkable drugs ever known and it did not reflect great credit upon them that at this late stage in the history of the subject so little was known of its action and of the factors whereby its action was governed

Sir MALCOLM WATSON spoke of mosquito control in tropical and subtropical areas and said that as early as 1909 quinine in his hands had proved to be a broken lance The researches of Professor Schulemann had given workers in the Tropics great encouragement but for his own part he would have more faith in a drug which destroyed the schizonts than in one which acted simply on the gametocytes

Dr P H MANSON BAHR mentioned that he had read the first paper on plasmoquine in this country at the Royal Society of Medicine five years ago Plasmoquine acted in a different manner on the three species of malarial parasite as they produced their clinical effects in man But it was necessary to beware of drawing inferences from clinical work in a temperate climate as to what would happen under the enervating conditions of a tropical one He had been using plasmoquine perhaps *ad nauseam* for the last five years and he had had more gratitude from his patients for using plasmoquine than in the case of any other drug this referred mostly to people infected with benign tertian malaria He considered plasmoquine was highly specific for the *Plasmodium vivax* It was much less specific for the merozoites of the subtertian It had its most remarkable action on the gametocytes There were other clinical applications of these new compounds One of the great difficulties of quinine administration in the Tropics was its bitter taste Plasmoquine was practically tasteless Children tolerated it better than adults and in children it did not so readily provoke cyanosis and other toxic symptoms The second great clinical application of plasmoquine was in pregnancy He had had five cases of pregnancy in women who had been sent home because of the inadequacy of quinine to cure their infection two of them were infected with subtertian malaria and were in a very critical state He had treated two of the subtertian cases two of the benign and one of the quartan all at about the sixth month of pregnancy Not only had these women not had any more relapses but they had borne perfectly normal children He also referred to the use of plasmoquine in blackwater fever where it appeared to have a useful effect in the convalescent stages As time went on it did not appear necessary to give such large doses of plasmoquine as was generally thought There was undoubtedly an idiosyncrasy to plasmoquine as to quinine What constituted this idiosyncrasy it was difficult to say Professor ROBINSON touched on some aspects of the new work which were of interest to chemists and Dr M A ARAFA gave an account of some experiences in Cairo where he had used plasmoquine intravenously he had found this method disadvantageous intravenous medication producing quite an appreciable fall in blood pressure

Professor SCHULEMANN in reply mentioned that about 12 000 different preparations had been studied in the course of the research on this problem Methylene blue had been taken as the starting point because it offered the possibility of changing relatively easily the chemistry of the preparation whereas the chemistry of quinine was very hard to work upon He did not know of any near relation between chemical constitution and therapeutic effect He thought a very exact distinction must be made in the number and percentage of relapses as between the tertian and subtertian conditions

Reviews

A GERMAN TEXTBOOK OF MEDICINE

The thirtieth edition of Strumpell's famous work on the *Special Pathology and Therapy of Internal Disease*, revised since the author's death in 1925 by Professor SEIFFARTH, has now been translated into English by C. F. MARSHALL and C. M. OTTLEY under the title of *A Practice of Medicine*.[1] It runs into three volumes, and covers the whole field of medicine, including tropical diseases and neuroses but not mental diseases or dermatology. There is an appendix on poisons.

Although it has in one sense two authors, the work has essentially the qualities, and to some extent the weaknesses, of a one-man book. Throughout its pages we have the benefit of the knowledge, experience, and point of view of a great physician. The note throughout is clinical: the descriptions of signs and symptoms defy criticism, and are especially stimulating to read as an antidote to the modern medicine of blood tests, cerebro-spinal fluid examinations, and gastro-photography. Although we agree that medical diagnosis must always rest on clinical knowledge, which can never be replaced by laboratory technique, yet some of the more important recent advances which have proved their value are, in our opinion, inadequately referred to. Especially is this the case in the section on kidney disease, in which the methods of blood-chemistry receive only the barest mention. The chapter on irregularities of the heart is particularly weak, and leaves the reader with only a vague impression as to the modern views on their mechanism, classification, and treatment. In other sections also, there is too much loose talk of "irregularity" and "arrhythmia," which, as every modern student knows, may mean anything or nothing, though those with a knowledge of German will realize that the latter term is often used as an abbreviation for arrhythmia perpetua. On the other hand, full credit is given to the value of radiological methods, and many sections are well illustrated by reproductions from x-ray photographs.

We have already mentioned the excellent clinical descriptions, and in this respect the sections on fevers, on diseases of the chest, and on diseases of the nervous system (the third volume is entirely devoted to the last-mentioned) are of outstanding merit, while tropical diseases are described with detail rarely found in a textbook of medicine. The illustrations throughout are abundant and excellent. The German point of view is not so prominent as to lessen the value of this work to English users, though there is a tendency towards a firmer belief in the pharmacopoeia than is common among modern British physicians.

The translation has been well done in the sense that the English throughout is good, fluent, and readable, but there are words which, though not incorrect in this language, are hardly ever used, and might have been rendered more freely. For instance, arrhythmia perpetua is used as including auricular flutter and fibrillation, angina is used in a general sense for all inflammatory conditions of the tonsils and palate, and *Reststickstoff* is literally translated as *residual nitrogen* instead of *non-protein nitrogen*—the usual English and American equivalent. Perhaps this is because both the translators are surgeons.

Typhus for typhoid on page 35 is of course a slip of the pen arising from the different use of the words in the two languages.

While we welcome, therefore, the translation of this truly remarkable and universally recognized German text-book, we cannot but regret that all its sections have not been brought equally up to date, and must admit, however reluctantly, that the days of single authorship of textbooks of medicine are passing or have passed. That it may need several writers to revise in 1931 a textbook written by one author in 1883 should be looked upon as a sign of advance rather than retrogression.

MIDWIFERY BY TEN TEACHERS

The fourth edition of the popular *Midwifery by Ten Teachers*[2] will be welcomed by all who are interested in the teaching of obstetrics in this country. Previous editions have served the useful purpose of preparing students for their examinations, and the new edition is a great improvement upon the old. The book deserves its wide popularity, for it is permeated with an atmosphere of sincerity, and we feel that the authors all have the welfare of students at heart. One advantage of having a number of contributors to a book of this kind is that there can be no violent prejudice if the contents represent the considered judgement of ten experienced teachers. On the other hand, with such a galaxy of talent, the present edition might perhaps have been made much more ambitious, and there is no reason why, with modification and adjustment, the next should not rival the Continental and American standard works. At present the book falls short of this. The general arrangement might be bettered. Normal pregnancy, labour, and lactation should be at the beginning of the book. To place abnormal pregnancy with the description of such conditions as icterus gravis gravidarum and ectopic gestation, before normal labour gives a wrong outlook on obstetrics to the beginner, who should have impressed upon him, above all things, that pregnancy and labour are usually physiological processes. Intermittently there are outcries against meddlesome midwifery, and one of the surest methods of combating this acknowledged evil is to instil into students the essentially physiological nature of pregnancy and parturition. The first chapter on menstruation and embryology has not been revised with sufficient care: there is no mention of the recent specimens of early human ova, so that some of the statements are not only obsolete but inaccurate. This chapter requires thorough overhauling for each edition.

Some of the old blemishes reappear. The same definition of the ammonia coefficient of the urine remains, and the explanation of the rotation to the front of the occiput of the after-coming head of the breech is as unconvincing as ever. The arrangement of the material in the chapter on the diagnosis of pregnancy is disjointed. In the description of the treatment of heart disease complicating pregnancy no distinction is drawn between the different cases of primigravidae and multigravidae. In the former, every effort should be made to allow a living child to be born at term, in the latter termination of pregnancy should be practised more often, particularly if decompensation developed in previous pregnancies. Chorea gravidarum is described as related to rheumatic fever, the modern view is to deny any such association. One of the chief defects of the book is the inadequate consideration of deep transverse lie of the head, a condition which has never received sufficient recognition in this country; it is included under occipito-posterior presentations, though in most cases the occiput is originally anterior. The condition might well be emphasized by separate

[1] *A Practice of Medicine*. By Professor Adolf Strumpell. Twenty-ninth and thirtieth editions by E. Seyfarth, D.Med. et Phil. Authorized translation from the thirtieth German edition by C. F. Marshall, M.Sc., M.D., F.R.C.S., and C. M. Ottley, B.M., F.R.C.S. Vols. i., ii., and iii. London: Bailliere, Tindall and Cox. 1931. (Pp. xxiv + 2,356; 395 figures; 17 plates in the three volumes. £5 5s. net.)

[2] *Midwifery by Ten Teachers*. Under the direction of Comyns Berkeley. Edited by Comyns Berkeley, J. S. Fairbairn, and Clifford White. Fourth edition. London: E. Arnold and Co. 1931. (Pp. xi + 740; 297 figures, 4 plates. 18s. net.)

description for it often gives rise to delay in the second stage of labour The use of a hot lysol douche to stimulate a sluggish uterus in the first stage of labour will not be generally accepted and it is more exact to administer pituitrin in unit doses rather than in cubic centimetre doses

Some chapters are very well written Particular mention should be made of the chapter on the management of labour with disproportion the author deserves special praise for the article is an admirable piece of work which should be read by all who practise obstetrics The new *Ten Teachers* will continue to assist students in getting through their examinations for this edition is better than the last Nevertheless the senior editor might with advantage arm himself with autocratic powers and insist upon a more drastic revision for the next edition

THE NATURE OF GENIUS

A book which is at the same time both interesting and irritating is *The Psychology of Men of Genius*[3] by ERNST KRETSCHMER professor of psychology and neurology in the University of Marburg translated from the German by Dr R B Cattell It is interesting because it attempts to elaborate still further the thesis (set out in the author's previous work *Physique and Character*) that there is an intimate and inevitable relation between human form and human nature and character and to establish that this thesis holds true in a special field and also because many of the individuals he chooses as the subjects of analysis are persons whose lives have a curious fascination It is irritating because in the pursuit of his argument the author constantly uses the two sophistical devices of begging the question and of special pleading If a man first carefully rigs his definition of what he means by a person of genius and then proceeds to exclude whole classes of persons who would appear to come within the definition because they do not happen to suit his purpose or about whom he simply states that he has not enough information and if further among those who are left he chooses his examples arbitrarily and even with regard to these states that he will not accept their biographies as material but will read beyond the specious phrases in which the facts are dressed up he can of course seem to prove anything It is unfortunate the translator admits from the point of view of the psychologist that he has omitted fully to set out the raw material of his statistical conclusions and has not set off his results against a control group of normal persons The conclusions broadly are that genius is closely allied to insanity in its two main forms that different kinds of genius are intimately associated with the several varieties of bodily form feature and physique and that it is the mixture of the Nordic and the Alpine races of mankind which is predominantly concerned in its production

The author's standpoint and some of his methods are peculiarly German It is quite natural and proper that his two chief analyses should be those of Goethe and Schiller But it is strange that while there is an extended consideration of Holderlin as an inspired poet Shakespeare is mentioned only once (and that quite incidentally), and that an equally elaborate analysis is made of Robert Mayer's character as that of a man of science while Newton's name occurs just once (and then in a list of eminent men who were mentally diseased!) and that Charles Darwin is in the text not mentioned at all though his portrait appears among those of the masters at the end of the volume Professor Kretschmer has certainly rendered service to psychiatry by some of the distinctions he has drawn and the suggestions he has made but whatever basis of truth may ultimately be found to lie below the conclusions of this volume those conclusions cannot be accepted as established by his presentation of the case therein

[3] *The Psychology of Men of Genius*. By Ernst Kretschmer Translated with an introduction by W B Cattell London Kegan Paul French Trubner and Co Ltd New York Harcourt Brace and Co 1931 (Pp xxiv + 250 illustrated by nine)

THE VEGETATIVE NERVOUS SYSTEM

The ninth volume of the series of research publications issued by the Association for Research in Nervous and Mental Disease consists of a group of papers on *The Vegetative Nervous System*[4] read at the meeting held in December 1928 It is a pity that these volumes do not appear within a more reasonable time from the actual reading of the papers The book is divided into six sections which vary somewhat in their interest The first is a well balanced retrospect by Dr Timme whose name is sufficient to guarantee its accuracy The second section is devoted to morphology and deals with the development of the autonomic nervous system the central representation of the sympathetic nervous system and the innervation of the muscle spindle etc The third section is concerned with physiology The chapter on the somatic and visceral connexions of the diencephalon is one of the best in the book if not the best our knowledge of the nuclei of the thalamus and their connexions has advanced considerably during the last twenty years The fourth section discusses the experimental point of view and deals with the parasympathetic control of muscle tonus the regeneration of the sympathetic nerve fibres the nerve supply of the cerebral blood vessels and the cerebral circulation The fifth section deals with clinical aspects of the vegetative nervous system In discussing the emotions and the clinical manifestations in the involuntary nervous system some space might well have been given to the relation of emotional dulling in schizophrenia to disorder of the involuntary nervous system (apart from the emotional upsets in the anxiety states) and to the lack of correspondence between the emotional display in hysteria and the psycho galvanic reflex manifestations thereof In the same section we find chapters devoted to the cortical influence over the sympathetic system the relation of the vegetative nervous system to hyperthyroidism tumours of the vegetative nervous system and diencephalic autonomic epilepsy The final section is on treatment and it includes a consideration of the effects of sympathectomy in angina pectoris and the relief of pain in angina by paravertebral alcohol block of the upper dorsal sympathetic rami Generally speaking the work is so well done that we have little but praise for it

[4] *The Vegetative Nervous System*. By Dr Timme MD Horatio E Davis MD and others. Association for Research in Nervous and Mental Disease. The Williams and Wilkins Company Baltimore. 1931 (Pp xxxix + 852 and 152 figures. $12)

DISEASES OF THE GUMS AND ORAL MUCOUS MEMBRANE

In his preface to the fourth edition of his work on *Diseases of the Gums and Oral Mucous Membrane*[5] Sir KENNETH GOADBY reminds us that focal sepsis is now blamed for wellnigh every variety of infection while not long since it was practically disregarded The truth he thinks lies midway and to emphasize the point cases showing the danger of drawing conclusions from incomplete investigation are cited The cases indeed add

[5] *Diseases of the Gums and Oral Mucous Membrane*. By Sir Kenneth Goadby Fourth edition Edited by P Ward Wilson DPH Manchester Oxford University Press 1931 (Pp 252 figures £2 2s net)

greatly to the value of what we think the most important part of the book—namely, the exposition of the author's methods of clinical and laboratory investigation in elucidating the part that dental sepsis may be playing in any particular case. Perhaps the most striking point in this connexion is the value placed by the author on the use of polymorphonuclear differentiation in deciding the existence of chronic forms of infection. In Sir Kenneth Goadby's opinion the further study of vitamins and deficiency diseases has fully corroborated the theory that dental caries and 'pyorrhoea alveolaris' are primarily deficiency diseases, but frankly, we do not find that this conception has greatly modified his views. In criticizing nomenclature, he pertinently suggests that if we use "odontalgia" for "toothache" we ought to substitute "periodontalgia" or "alveolalgia" for the homely Saxon 'jawache'. He is not always clear in his diction and, as an instance we fail to grasp his point when (p. 417) he says 'a limited number of apical "radiographic holes" prove to be quite other than cavities, and are hard bone," and refers us to a discussion at page 136, which we confess we cannot follow.

This work answers fully to its title. We think there is no disease of the gums or oral mucous membrane that is left undescribed, and most are illustrated, but its chief value is as an epitome of a life's work on dental sepsis.

CHEMISTRY OF NUCLEIC ACIDS

Dr. P. A. Levene is one of the most tireless and, at the same time, one of the most accurate workers in the field of biochemistry. His name is associated particularly with two fields of research—investigations of the chemistry of the nucleic acids and of the lipoids. The monograph by LEVENE and BASS entitled *Nucleic Acids*[6] must therefore command respect as an authoritative statement, by a master, of the present position in his own field of research. Levene's work has dealt with the static rather than with the dynamic side of biochemistry—with the establishment of chemical constitution rather than with the study of the changes which substances undergo in the living cell. Such work of course is necessary to make the study of cell dynamics even possible.

The nucleic acids have an interest even for the least chemically minded medical man, in that they are the parent substances of uric acid and that among the purine bases are the drugs caffeine and theobromine. Levene and Bass's monograph is a comprehensive survey of the work so far done in this field—much of which was performed by Levene himself—and will be welcomed by all workers who are even remotely interested in nucleic acid chemistry.

NOTES ON BOOKS

A work entitled *Communicable Disease Control*[7] represents the report of a committee of the Public Health Section of the White House Conference on Child Health and Protection summoned by President Hoover. The purpose of the report as stated in the preface is, first, to point out the importance of communicable diseases in children, secondly to review the current control practices, thirdly to recommend those practices which seem most valuable and fourthly to suggest the fields in which further studies are most urgently needed. Tables are given showing (1) the communicable diseases which accounted for the greatest number of deaths among persons under 20 years of age in 1926, 1927, and 1928 in the registration area of the United States, (2) the annual incidence of the ordinary contagious diseases reported by the State health officers from 1919 to 1928 and (3) their seasonal prevalence. A brief account of the specific therapy or prophylaxis in some of the large cities of the United States is followed by the procedure recommended for the control of individual diseases, which has been based on consultations with more than fifty experts throughout the country.

The well illustrated and well produced account of comparative dental pathology entitled *Abnormal Conditions of the Teeth of Animals in their Relationship to Similar Conditions in Man*[8] is the outcome of a series of four lectures by Sir Frank Colyer delivered last year in Liverpool, Glasgow, Birmingham and London. They deal with injuries to the teeth and jaw, caries and hypoplasia of the teeth, progressive destruction of the tooth sockets and positional variations of the teeth. The author has amassed a very large series of examples from all parts of the world and drawn from a large number of different species of mammals—wild, captive and domesticated. *The result is that the volume is a treasure house of facts* not only for the dentist and those directly interested in dental problems but for the zoologist and the comparative pathologist as well.

The second volume of *Contemporary Thought of Germany*[9] which was anticipated in our notice of the first (March 21st 1931, p. 501) shows the illuminating qualities of its predecessor—exceptional lucidity, a masterly grip of the subject, and remarkable power of condensation (there are only about 200 pages). In this volume Dr. TUDOR JONES attempts to give a synoptic view of the most important contributions of the schools of scientific, philosophical, and sociological thought in Germany to-day represented among others, by Rickert, Husserl, Vaihinger, Jung, and Max Weber. There is a chapter on the philosophy of life and another on the philosophy of religion. The chief impression left by this survey is that with the decline in speculative metaphysics many German scholars are meditating on the reconciliations necessary to a new religion consistent with the verified conclusions of the sciences.

In *The Scientific Detective and the Expert Witness*[10] which is the second edition of a shorter one entitled *The Expert Witness* published in 1923 Dr. C. AINSWORTH MITCHELL, editor of *The Analyst*, not only describes how evidence should be given but how it should be obtained by scientific methods. Thus an account is given of finger-prints, handwriting and chemical analysis. Many cases are quoted throughout and in the last chapter on the application of expert evidence to history the identification of Mary Queen of Scots' handwriting is lucidly discussed by the author who, from his examination of the 'Casket letters'—so called because they were said to have been taken from a casket left by Bothwell—concludes that this unfortunate Queen did not write them, and ought not to have been condemned on the evidence stated to be contained in them. Students of medico-legal medicine will find these pages both pleasant and profitable reading.

The *Transactions* of the Eighth International Congress of the History of Medicine held at Rome last September (see *Journal* 1930, ii, 609) have recently been issued under the editorship of the president, Professor Pietro Capparoni, to members of the congress. They form a fine volume of nearly 600 pages, limited to 350 numbered copies.

[6] *Nucleic Acids*. By P. A. Levene and Lawrence W. Bass. American Chemical Society Monograph Series. New York: The Chemical Catalog Company, Inc. 1931. (Pp. xii + 277; 14 figures. 21s. 3d.)

[7] *Communicable Disease Control*. Report of the Committee on Communicable Disease Control, George H. Bigelow, M.D., Chairman, White House Conference on Child Health and Protection. New York and London: The Century Company. London: D. Appleton and Co. 1931. (Pp. xv + 243. 8s. 6d. net.)

[8] Dental Board of the United Kingdom. 1931. (Pp. xi + 167; 217 figures. 8s. net.)

[9] *Contemporary Thought of Germany*. By W. Tudor Jones, M.A., D.Phil. Vol. ii. The Library of Contemporary Thought. London: Williams and Norgate, Ltd. 1931. (Pp. x + 198. 5s. net.)

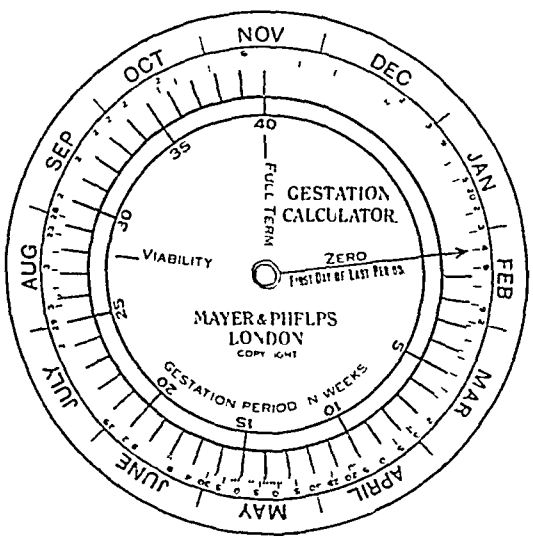
[10] *The Scientific Detective and the Expert Witness*. By C. Ainsworth Mitchell, D.Sc., F.I.C. Revised and enlarged edition. Cambridge: W. Heffer and Sons, Ltd. 1931. (Pp. xii + 242; 64 figures, 3 plates. 3s. 6d. net.)

PREPARATIONS AND APPLIANCES

A GESTATION PERIOD CALCULATOR

Professor DANIEL DOUGAL (Manchester) writes: We are all familiar with the obstetric tables which show at a glance the expected date of delivery and are based on Naegele's method of counting 280 days from the first day of the last menstrual period. In practice they are seldom used as it is quite easy and sufficiently accurate to do a small sum in mental arithmetic by counting back three months from the commencement of the last period and then adding seven days. The small inaccuracy of this simple method is due to the fact that when certain months are included in the period of gestation only four, five or six and not seven days require to be added in order to make up a total of 280 days. In routine ante-natal work the expected date of delivery is usually determined by the method just described but a good deal of time is wasted in calculating the number of weeks the patient is pregnant at the time of examination and it is here that some form of gestation period calculator comes in useful.

The illustration shows one which Messrs. Mayer and Phelps have made to my design. No originality is claimed for it as I have since found that similar calculators are already in



existence, notably one distributed to the profession by a well known firm of infant food manufacturers. The gestation period calculator gives the expected date of delivery with the same accuracy as the ordinary obstetric tables already referred to, but—and this is the important point—it also gives the period of gestation in weeks on any required date or conversely the date on which any period of gestation will be reached. This information so readily available must lead to a saving of time by eliminating tedious calculations and to greater accuracy in describing the progress of pregnancy by encouraging those engaged in ante-natal work to refer to the period of pregnancy in weeks instead of in months as is the more common custom at present. The calculator works like a slide rule and consists of two scales, one engraved on an outer fixed rim, the other on an inner revolving dial. The outer scale has 365 divisions representing days in the year, the months and every fifth day being clearly indicated. The inner scale has forty divisions representing weeks, each division being equal to seven of the small divisions on the outer scale. There are only forty divisions on the inner scale because the usual duration of pregnancy is forty weeks. At zero on the inner scale is an arrow marked "First day of last period" and opposite twenty-eight and forty weeks respectively are printed "Viability" and "Full Term." To use the calculator it is only necessary to rotate the dial until the arrow points to the date on the outer scale corresponding to the first day of the last menstrual period and then to compare the two scales. It will now be possible to read off the date of expected delivery, the date when the child will be viable, and the period of gestation in weeks on the date of examination or on any other date. As illustrated the calculator is small and compact and can be easily carried in a waistcoat pocket, but it is possible to have a larger model suitable for hanging on the walls of ante-natal clinics. One hesitates to add further to the mechanical devices with which obstetrics is already burdened, but I feel that the one just described will supply a real want and be useful to all those engaged in obstetric practice, whether they be specialists, general practitioners or nurses.

NEW APPARATUS FOR WIRE EXTENSION

Mr. H. S. SOUTTAR, F.R.C.S. (London, W.) writes:

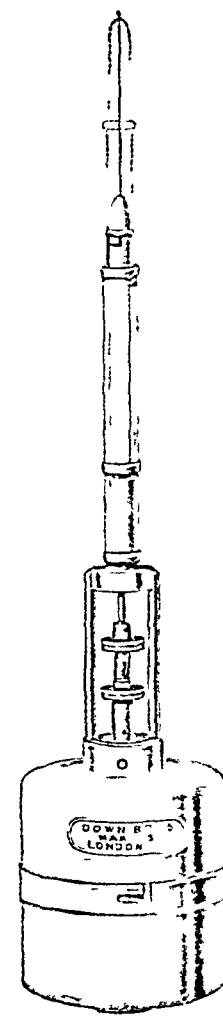
The wire extension method of Kirschner is generally admitted to be far superior to all other methods of applying extension to the long bones. It has however suffered from the defects that the apparatus required was cumbersome and expensive. The devices I am about to describe are simple, effective and inexpensive.

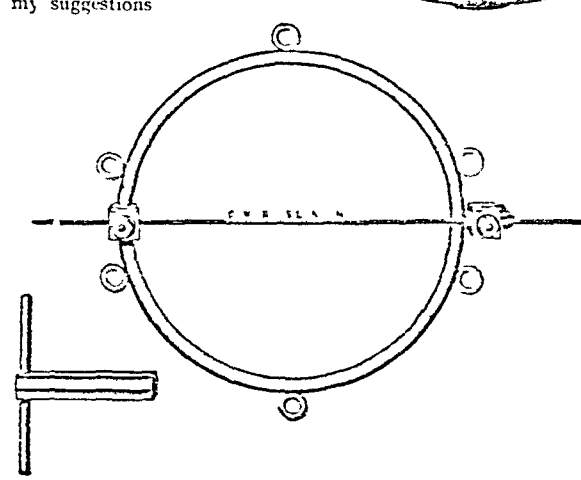
For the support of the wire during its insertion a telescope arrangement of three tubes is provided and this can be attached to either a hand or motor drill. Supported by these attachments the finest piano wire can be drilled through any bone in a straight line.

A circular steel ring of suitable size is slipped over the limb and the wire is attached to it by two small clamps so that it lies across a diameter of the ring. One of these clamps can be moved outwards by a small screw so as to place on the wire any tension that may be required. The bone is thus supported on a wire stretched tightly across the diameter of a substantial steel ring.

The ring itself is so arranged that it can be slung from any form of Balkan beam, whilst extension cords may be attached to the ring at the ends of the wire. Fragments of bone are thus completely controlled by the ring and may be rotated or extended as may be required.

The whole apparatus is readily sterilized, is extremely simple to manipulate and is quite inexpensive. I am most grateful to Messrs. Down Bros. for the care with which they have carried out my suggestions.





ETHICS OF ABORTION, STERILIZATION, AND BIRTH CONTROL

ADDRESS BY LORD RIDDELL

At the opening of the second winter session of the Hampstead General and North West London Hospital Post Graduate School on January 6th an address was delivered by Lord RIDDELL, who took as his subject "The ethics of abortion, sterilization, and birth control."

Lord Riddell said that the much discussed subject of abortion raised questions of supreme difficulty. The practice was one which few of the ancients before the Christian era seriously condemned. Certain Greek philosophers, notably Plato and Aristotle, expressed themselves directly in its favour. Abortion was not expressly prohibited by the Mosaic law and the New Testament was silent on the subject. The Christian Fathers declared that "one identical life principle exists from conception to death" and that consequently abortion at any stage was murder. That was still the Roman Catholic view. The Jews on the contrary regarded abortion as justifiable when performed to protect the mother.

THE LAW AND ABORTION

In England abortion had been a crime for some 600 years but the first statutes prohibiting it were not passed until the early nineteenth century. The existing law was comprised in the Offences Against the Person Act 1861, which provided that any person who unlawfully used any instrument or drug with the intent to procure a miscarriage should be guilty of a felony. It was agreed by lawyers and doctors that a miscarriage might be lawfully procured when the object was to save the mother's life or to avoid serious injury to her health; the essence of offence was guilty intent. Lord Riddell went on to refer to the startling criticisms of the administration of the law recently made by Mr Justice McCardie. There was no doubt that the learned judge had performed a public service in directing attention to the subject, but he had created a most difficult situation for if a prisoner came before Mr Justice McCardie or some other judge who shared his views he might expect lenient treatment if it could be shown that the abortioner was trying to help a woman in distress; on the other hand if the case was tried before a judge with more conventional views a drastic sentence might be expected. Abortioners of course, usually plied their trade for money not to relieve distress. To the average mind there was a vast difference of opinion between abortion at an early stage in the development of the foetus and at a later stage, and the early statutes of 1802 and 1828 drew a distinction between a woman quick with child (quickening being supposed to occur about the eighteenth week) and one not quick. It seemed highly desirable that the law should be altered, or that there should be an agreement between the judges as to the principle on which these cases were dealt with. Parliament was not likely to change the law without strong pressure from public opinion.

This was largely a woman's question, and in Germany where abortion was more prevalent than in any other country the subject had been actively taken up by women. There was ample evidence that failure to reduce maternal mortality was largely due to the influence of abortion and attempted abortion. An early solution could not be hoped for as the subject was tangled up with tradition, religion, sentiment, false modesty and the like. It could only be hoped that temperate discussion would enable a way to be found out of the difficulty.

CONTRACEPTION

Turning to birth control Lord Riddell traced this movement back to the doctrines of Francis Place in 1822. Certain sections of the community—Roman Catholics and numerous members of other religious bodies—were bitterly opposed to contraception and there was a certain amount of criticism based on hygienic reasons. The official view of the Church of England was set forth in the resolution of the Lambeth Conference of 1930, which laid stress on abstinence while admitting that there did exist moral situations which might make it obligatory to use other methods. "Each couple must decide for themselves as in the sight of God after the most careful and conscientious thought and if perplexed in mind after taking competent advice both medical and spiritual." The exponents of birth control held that there was no divine or human law prohibiting this practice that practised in moderation it exercised a hygienic moralistic influence, inasmuch as it facilitated marriage prevented the ruin of women's health by too frequent pregnancies, enabled parents to moderate their families in proportion to their means and thus to maintain and educate their children in comfort. In short, the birth control party claimed with much vehemence that the subject should be dealt with on purely utilitarian principles. After pointing out the dilemma in which these controversies placed the ordinary man or woman and noting one helpful passage in the recent Encyclical of the Pope in which it was admitted that in matrimony as well as in the use of matrimonial rights there were secondary ends, Lord Riddell said that perhaps the answer would be best provided by the verdict of the majority and the birth rate figures in all European countries and in America showed the views of the majority in unmistakable fashion.

STERILIZATION OF THE UNFIT

Turning to the subject of sterilization Lord Riddell said that it was generally agreed that lunacy and mental deficiency were serious menaces to the national well being, also that these were largely hereditary diseases. The segregation of mental deficients was incomplete as the patients were usually allowed out on parole for short periods. Social reformers alleged that voluntary sterilization surrounded by numerous precautions would go far to prevent the propagation of more mental defectives, also that much needed economies might be effected and the lives of many of these unfortunate people be made happier as they would be able to reside with their relatives. The objection to the proposal was threefold. The religious objection as in the case of abortion did not lend itself to argument. Another objection was on the ground that it would infringe individual freedom but to this it was replied that the operation would only be performed with the consent of the patient or of his or her relatives and that the sanction of an independent judicial body would also be required. There was a third a sentimental objection which might be expressed in the words of the Bishop of Exeter when dealing with birth control. If life has been sweet to us why should we deprive others of the privilege we value and enjoy? The exponents of birth control however characterized the sentimental objection as absurd.

It was easy said Lord Riddell in conclusion to appreciate the arguments against abortion and birth control among the normal but from a logical ethical and economic point of view it seemed to him that the arguments of those who demanded sterilization of the mental defective were unanswerable.

The ninth conference of the International Federation of Eugenic Organizations was held at Farnham, Dorset, in September 1930 and a report of the proceedings has now been published in pamphlet form. Copies may be obtained from the honorary administrative secretary, Mrs C. B. S. Hodson, 406 Fulham Road, S.W.6. The contents include a note on blood group researches in Holland by Dr Van Herwerden, a report by Mrs Bosanquet on American research on mental measurement, papers on hemilateral asymmetry by Mr C. J. Bond, on inherited variability in corneal size and refractive index by Dr P. J. Waardenburg, and on heredity of eye colour by Dr G. P. Frets, and Sir Arthur Keith's address on the urgency of eugenic reform.

British Medical Journal

SATURDAY, JANUARY 16th 1932

THE AURAL COMPLICATIONS OF INFLUENZA

The paper read at Eastbourne by Mr J. T. O'Malley and published in this issue of the *British Medical Journal* draws attention to some interesting features of the otitis media which is likely to attack many sufferers during the present epidemic of influenza. It has been a general rule during past epidemics that in the early weeks otitis media is mild and relatively infrequent, becoming more severe and more frequent towards the end of the winter and the beginning of the spring. As recent years have provided experience of which the significance is not always appreciated it is appropriate to take stock of the position to-day. The removal of adenoids and tonsils, doubtless responsible in part for the much diminished incidence of chronic otorrhœa, has not proved so effective a prophylactic against this form of acute otitis as was expected, and it seems as though sometimes in young children the removal of lymphoid tissue has actually impaired the defensive mechanism of the individual. The statistics of Dr. Albert Kaiser[1] obtained from two groups of 2,200 children (noticed in our issue of November 1st, 1930, p. 743) are convincing. He shows that for the first three years after operation the average incidence of otitis media is reduced, though over a period of ten years it is not much influenced, but from the standpoint of the individual this is probably of minor importance.

The influenzal type of otitis media has often a sudden onset and rapid course, so that if paracentesis of the membrana tympani is to be of benefit in arresting spread of the infection and damage to the tympanum it must be performed early, before the intratympanic pressure has risen very much. Mr. O'Malley in the paper appearing at page 90 protests against the indiscriminate performance of this operation—a conservative attitude which must receive general approval. On the other hand, too rigid an adherence to the principles which he lays down would in many cases allow the favourable moment to pass. This difficulty however can be surmounted by repeated examination of the patient at intervals of a few hours. An increasing congestion in the postero-superior quadrant of the membrana tympani, even without persistent pain, calls for paracentesis. The delay in its performance until the whole membrane is bulging has been responsible for much of the discredit brought upon the operation by many cases in the past when it has failed to prevent the need for a mastoid operation later on. Mr. O'Malley discusses the subsequent infection of the mastoid process as either streptococcal or pneumococcal, but aural surgeons are aware from their own experience that when mastoid complications arise they fall into two groups which have been lucidly described and differentiated by Kopetzky—the coalescent mastoiditis in which the bony framework of the mastoid cells is gradually destroyed, and the acute haemorrhagic mastoiditis associated with infection by the haemolytic streptococcus. In the first variety operation should be delayed for several days because resolution occurs in some cases, and after an interval the operation is performed with greater safety from further complications when a local immunity has been established. The haemorrhagic variety calls for operation as soon as the diagnosis is certain.

The introduction of bipp by Rutherford Morison made possible the suture of many infected wounds with primary union, the conditions being adequate excision of damaged tissue and the obliteration of all dead spaces beneath the line of sutures. The world-wide influenza epidemic at the end of 1918 provided a large number of cases of acute mastoid disease in which this method was applied, but although primary union may apparently be obtained in the course of a few days a dead space is often left enclosed by the rigid walls of the mastoid process. The late result of this form of surgery has been that a subsequent attack of otitis media causes the formation of an abscess in the dead space, and the patient presents himself usually at another hospital with the post-aural scar bulging from a collection of pus beneath, whilst a row of stitch marks on either side tells clearly the history of the case. On reopening the wound a cavity is found with ragged overhanging edges and filled with pus and soft granulation tissue. This short cut to healing as applied to the mastoid process has not, in the long run, proved a success, and where the cavity left by the operation is large it is best kept wide open to granulate or at any rate only partially sutured. The cases suitable for primary suture are those in which the knee of the lateral sinus projects far forward close up to the posterior meatal wall, and where (as is usually the case) the middle fossa is low. In such circumstances even if an extradural abscess has formed the cavity may be obliterated by blood clot which soon forms fibrous tissue, according to the method proposed many years ago by Blake and Reik. This process may be assisted by turning a slip of pericranium into the cavity.

The lesson to be learnt from the foregoing considerations may be summed up in a few sentences. Paracentesis is required early, before the pressure rises much in the tympanum, and its unnecessary performance may be avoided by repeated examinations at short intervals. If a mastoid operation appears necessary the surgeon should determine to which group the case belongs before deciding when to operate. In the majority of cases the post-aural wound should be left wide open.

[1] [illegible] *Journal of the [illegible]* September 30, 1930.

[illegible] Surg., London, 1931.

[illegible] *Diseases of the Ear*, 252, London, 1931.

The Carrel-Dakin method of dressing is generally more suitable, and gives a firmer scar than the method of primary suture, although the convalescence is longer There is one more point At this season it is not rare for an old otitis media, of which the patient was unaware, to be wakened into activity, and the misleading history may give rise to a serious mistake in the management of the case

OVULATION AND THE SEX CYCLE

In a communication shortly to be published in the University of California Memoir Series (of which we have received an abstract), Professor Herbert M Evans, who is well known for his work on the hormones of the pituitary, in co-operation with Dr Olive Swezy, puts forward a number of results which appear to throw new light on the biology of the reproductive cells of the ovary [1] The authors have investigated the genesis and growth of ova in a number of mammalia, and the relation of this process to the normal sex cycle of the animals They have found that ovogenesis occurs throughout the whole of sexual life in a rhythm fundamentally related to the ovulation cycle The ova arise by proliferations from the germinal epithelium in the form of invaginations or cords forming groups of epithelial cells which are cut off from the epithelium and pass through the tunica albuginea Follicles are formed and grow rapidly, until one or more of them ovulate A striking phenomenon is then witnessed, for the final maturity and ovulation of a selected group of follicles or of a single follicle involves the destruction of all remaining follicles This occurs, to some extent, at all periods of the sex cycle but reaches its maximum at anoestrus or pro-oestrus, extending into the next cycle Even during pregnancy the rhythm of the follicular cycle is not obliterated Thus the old concept that in mammalia the ova are all formed before birth and remain quiescent until sexual maturity appears to be no longer tenable On the contrary it is shown that the ova of adult life are being constantly produced and just as constantly destroyed

The question whether the follicular cycle and ovulation bear any temporal relation to the period of ovarian hormone secretion is of great importance and has been studied by the authors It has been found that in the rat guinea-pig and dog the follicular cycle normally coincides with the oestrous cycle Ovulation then, presumably occurs during the period of secretion of the α-hormone (oestrin) by the ovary In man the conditions are to a great extent different ovulation seems to occur at approximate intervals of twenty-eight days But both in the human subject and in the monkey the follicular cycle has no necessary relation to menstruation and ovulation takes place at any time during the menstrual cycle This question of the time of ovulation in primates has been the object of a good deal of controversy it is intimately connected with our conception of the mechanism responsible for menstruation and the relation of the latter to pregnancy Recent work has led to a new point of view concerning the significance of the menstrual phenomenon It seems to indicate that the corpus luteum is responsible for the proliferation of the endometrium of the uterus in the period preceding menstruation What part the α-hormone (oestrin) plays in this proliferation in the human subject remains at present, undetermined although it is significant that as Zondek has recently shown the urine content of gonadotropic hormone (follicular maturation hormone) rises during the intermenstrual period, and is highest during the premenstrual period If conception takes place then the activity of the corpus luteum continues and menstruation of course does not occur In the absence of conception, however, the luteal secretion ceases The proliferated uterine endometrium is then no longer subject to the action of luteal hormone, and consequently degenerates This degeneration of the proliferated endometrium constitutes the process of menstruation

The point of view outlined above is strongly supported by the work emanating from the Graz Clinic, where a method for determining the period of activity of the corpus luteum has recently been elaborated Working in the first instance on the rabbit Professor Knaus showed that the uterus of pregnant and pseudo pregnant animals give no response to pituitrin, and that the hormone of the corpus luteum was actually responsible for this inhibition of the normal uterine reactivity [3] These findings have been confirmed and amplified by a number of observers The reactions of the normal human uterus to the active principle of the posterior lobe at various stages of the menstrual cycle, were then determined It was found that in the early stages of the post-menstrual period the intravenous injection of pituitrin caused contraction of the uterus, in the later stages (after about the sixteenth day) pituitrin had no such effect The absence of the uterine reactivity prevailed until the end of the intermenstrual period, then pituitrin again caused contraction These experiments which have been confirmed by a number of observers, have led to the conclusion that the corpus luteum exercises its secretory activity from the sixteenth day to the end of the intermenstrual period, and, consequently that ovulation occurs some time between the fourteenth and sixteenth day after the *beginning* of menstruation (this only applies to a menstrual cycle of twenty-eight days) If this is actually the case then conception can only occur for a limited period of time (at the most probably from the eleventh to the seventeenth day of the menstrual cycle) A number of clinical experiments recently published by Knaus appear to confirm this point of view [4]

That ovulation should occur independently of ovarian hormone secretion seems to be quite possible, and would find support in the hypothesis recently advanced by Leonard on the basis of his experimental findings, that

[1] Evans H M and Swezy O *Mem Un Calif* ix 119

[2] Zondek *Klin Woch* 1931 xlvi 2121

[3] Knaus *Arch f Gynal* 1930 140 181 374 395

[4] Knaus *Munch med Woch* 1931 ix 344

the ovulation principle of the pituitary is different from the follicular maturation and luteinizing hormones[1] Ovulation is however followed by formation of the corpus luteum One line of evidence reviewed above strongly suggests that ovulation occurs at a definite stage in the menstrual cycle and is followed by a period of luteal activity It is, as yet, too early to arrive at a definite conclusion on this matter but the data so far available make it highly desirable that further inquiry should be undertaken in this subject

STANDARDIZATION OF ERGOT

The subcommittee on ergot appointed by the Pharmacopoeia Commission has now issued a report The biological method of standardization developed by Broom and Clark was based on the power of ergotoxin to inhibit the motor response produced by adrenaline in the isolated uterus of the rabbit This estimated the ergotoxin content of ergot but unfortunately it was difficult to carry out with accuracy After making an extensive series of comparative tests in different laboratories the subcommittee concluded that the error was unlikely to be less than 25 per cent and might be very much greater It next examined a variety of colorimetric tests and found that one described in 1930 by Dr M I Smith gave results in fair concordance with those obtained by the biological method Further research showed that this test was not strictly specific because it estimated not only the therapeutically active alkaloid ergotoxin but also the biologically inert alkaloid ergotinine which constitutes from 25 to 50 per cent of the total alkaloid content of ergot The subcommittee was faced with the choice between two methods of standardization the biological which was laborious inaccurate but specific and the chemical which whilst far simpler was not specific Deciding that in practice the chance of error with the two methods was approximately equal it chose the easier chemical method The ergot preparations in the current *Pharmacopoeia* are unstandardized moreover by an unfortunate accident the method prescribed for the preparation of the liquid extract results in a product which is therapeutically inert The introduction of any method of standardization will therefore represent a very great advance on past practice It is to be hoped that the introduction of active pharmacopoeial preparations of ergot will result in the rescue of this useful drug from the somewhat undeserved neglect into which the prevalence of inert preparations has thrown it but at the same time it should be remembered by clinicians that active ergot preparations are powerful drugs with a well marked cumulative action The subcommittee recommends that the strength of the liquid extract should correspond to 0·03 per cent of ergotoxin A higher strength than this (0·05 per cent) was first considered but it was believed that this might prove dangerous A further recommendation is that powdered dusted ergot be recognized by the *Pharmacopoeia* This is a useful innovation for it has been shown that such a preparation is reasonably stable whereas the liquid preparations of ergot deteriorate fairly rapidly on storage

[1] Lancet, Journ. Physiol., 1931, lxxii, 406

RETINOSCOPY

Few who practise ophthalmology can realize the contrast between the assurance given by modern methods of examining refraction and that of a decade by the old subjective tests Retinoscopy was unknown until 1873 when Dr Cuignet of Lille published his first paper on keratoscopy in the *Recueil d'Ophtalmologie* It is true that fourteen years earlier Sir William Bowman had to all intents and purposes discovered the method of examination of the refraction in certain ocular conditions for in his paper on conical cornea in *Ophthalmic Hospital Reports* for 1859–60 he wrote

> Soon after the immortal invention of Helmholtz I found the ophthalmoscope very useful in detecting high degrees of conical cornea For this purpose the concave mirror is to be used without a convex lens On turning the mirror so as to throw the light at different angles the side of the cone opposite to the light is darkened Probably everyone is now familiar with this test Professor Donders told me last year that he himself observed it It is a very useful one in discriminating the cases of slight defects of vision somewhat resembling myopia and hitherto deemed anomalous I have seen many such cases

No one thought of trying to vary the effect of this reflex until Cuignet put lenses before the eye under examination and found that he could modify the reflex at will, and thereby determine the focus of the eye But his knowledge of optics was so poor that his description of the phenomena he observed was almost unintelligible and the value of the method was undetermined until Parent of Paris had the curiosity to go to see what the bother was all about Since then many have written books long and short on this method of examination of the eye and described variations of mirrors and lens equipment The latest of the kind is a little work by Dr Margaret Dobson[1] It is curious that even to-day the errors of the original discoverer should still be perpetrated Dr Dobson continues to write of the "shadow test" It is true that this test was first discovered because of the curious dark shadow seen in gross error of refraction but for the vast majority of cases the essential visible feature is the light shining out of the eye Many have maintained that it should be properly described in positive terms—namely in terms of light as the "light test" Landolt insisted upon this The point is practical and not merely pedantic if the student is taught to look for the light he is more certain to appreciate the meaning of the phenomena and as a consequence master the method more readily Dr Dobson gives a general description of some of the reactions of retinoscopy and follows this with an account of muscular imbalance accommodation and convergence The epithet dynamic seems rather fantastic as applied to so old a branch of investigation but it is copied from a paper by the Dr A Y Cross of New York who directs the retinoscope while the patient was looking and concentrates the eyes upon the point at which the surgeon was working so that some objective measure of the ophthalmic accommodation and convergence might be obtained The method has some limited value

[1] Dynamic Retinoscopy. By Margaret Dobson, M.D. Oxford: Vol. II. Physiology Lectures. Medical Publications. 1931. (5s. net)

THE TRAFFIC IN NARCOTIC DRUGS

At the last meeting of the Permanent Central Opium Board of the League of Nations it was noted that although the Geneva Convention had received a larger number of ratifications than any other of the League's numerous conventions, many of the Latin American countries failed to supply the required statistics that Turkey and China had furnished no figures in regard to the production and export of raw opium, and that the French Government had been dilatory in the dispatch of statistics in respect of its colonies It was also noted that the consumption of coca leaf was higher in 1930 in France than in any other country In the course of the conference on opium smoking at Bangkok the United States Government has through its representative, declared emphatically against Governmental monopoly in opium holding that the use of opium for other than medical and scientific purposes should be *regarded as illegitimate* *It continues to press for the* early suppression of opium smoking, as contemplated by Chapter 2 of the Hague Convention of 1912, and concurs in the view that the limitation and control of poppy cultivation are eminently desirable At the last Assembly of the League a resolution was adopted requesting the Advisory Committee on the Traffic in Opium and other Dangerous Drugs, and the secretariat of the League, to collect material which would serve as a basis of discussion at a future conference on the limitation of the production of opium, and the cultivation and harvesting of the coca leaf

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THE CANCER CAMPAIGN

At the quarterly meeting of the Grand Council of the British Empire Cancer Campaign, held on January 11th with Sir John Bland-Sutton in the chair, Mr C H Fagge was elected a member The following grants were approved £3 000 to the Middlesex Hospital towards the maintenance of its cancer research work for six months, £1 500 to the Cancer Hospital for research work for six months £150 to Dr Thomas Lumsden in connexion with his serum work at the London Hospital £75 to Miss Goulston B Sc, and £17 10s to Dr H P Bayon of Cambridge A report was received from the joint committee of representatives of the Campaign and the Mount Vernon Hospital, nominating Dr A E Barclay lecturer in medical radiology and electrology at the University of Cambridge, to the radiological research fellowship founded by Sir William Morris, at the Mount Vernon Hospital The Council was informed that Dr Barclay hoped to begin his new duties as soon as he can complete the present work connected with his examinerships A memorandum from the National Radium Commission was submitted to the Council wherein the Commissioners expressed a desire for the co operation of the British Empire Cancer Campaign in helping forward a policy of confining radium treatment only to those radium centres in provincial hospitals which have been selected and approved by the Commission It was reported that a recent questionary drawn up by the Central Bureau of Hospital Information on behalf of the Campaign showed that there are three principal groups dealing with radium at the present time King Edward VII Hospital Fund administering radium to the hospitals within the London area, the National Radium Commission, administering radium outside the metropolitan area, and an independent group of over one hundred centres, established in hospitals of fifty beds and upwards in England Scotland, and Wales controlling approximately 16 8 grams Apart from these three groups there is also a considerable quantity of radium owned privately by surgeons The Council resolved to co operate as far as practicable in helping the National Radium Fund with the policy of radium distribution, so that every part of the country shall be adequately served, and that the use of radium for therapeutic purposes shall be in the hands only of those well qualified to use it

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NEW CONQUESTS FOR PHYSICS

The realm covered by physics and optics is continually extending and the annual exhibition of the Physical and Optical Societies—*the twenty second of which has* just been held at the Imperial College of Science—affords a means of measuring this steady conquest The exhibition is divided into two principal sections one dealing with the products of commercial firms in the way of scientific apparatus, and the other with researches and experiments carried out in national laboratories But there is no clear line of demarcation, and it is evident that much useful research is being conducted under commercial auspices Every year the scientific apparatus gathered together at South Kensington appears more ambitious in the facilities it offers for the measurement and even the control of natural phenomena It is interesting also to trace in complicated apparatus the long descent from some simple contrivance serving a domestic use The alarm clock, for example might itself feel alarmed on beholding its prodigious offspring in the form of a programme clock—a clock which carries through a predetermined programme for the day, ringing bells, sounding hooters switching furnaces on and off and maintaining the routine of processes in the factory Another marvel is the multi-recorder, whose moving finger records the actual time of occurrence or duration of events, the time of opening and shutting of valves, switches, gates, or doors, the duration of machine operations, the time of burning fuses, of the flight of shells, of the operation of the automatic telephone not to mention physiological reaction times Then photo electric spectrophotometers for measuring easily and quickly the ozone in the upper layers of the earth's atmosphere were exhibited together with many precision thermometers and humidity indicators and instruments connected in one way or another with meteorological science An artificial ear was another wonder, used by the Post Office for testing telephone receivers, and having exactly the same reactance and resistance as the human organ of hearing Then there was a host of optical devices new lenses and microscopes and an epidiascope embodying a new system of illumination and ventilation, enabling the most delicate and valuable specimens to be shown without fear of damage by heat On the physiological side some photographic records by Professor A V Hill of heat production in muscle twitch and during nerve stimulation were of interest Professor E W Scripture of Vienna again showed some apparatus for the study of speech, and curves obtained

in recording spoken vowels and consonants and in an exhibit from the speech laboratory of the West End Hospital for Nervous Diseases the typical curves for the articulation of the normal person were compared with those indicative of the laryngeal ataxia associated with disseminated sclerosis and cerebellar lesions The record of the sound *ah* in the normal person for example consists of a series of regular waves but in a patient with disseminated sclerosis there are two or three distinctly irregular waves at the beginning or end of the vowel sound Each wave registers a puff from the larynx and the irregular waves illustrate the ataxic action of the laryngeal muscles Many examples were given of the speech form in the epileptic condition which is said to be specific not capable of imitation by the normal person, and to afford an infallible diagnostic test

THE JEWISH HEALTH ORGANIZATION

Few societies in recent years have shown more enterprise and perseverance than the Jewish Health Organization of Great Britain In the short period of seven years the work of the organization in regard to child guidance health education, and medical research has become well known and its value has been recognized by central and local authorities The report for 1929–30 which is issued on behalf of the executive committee by Drs Redcliffe Salaman and A H Levy deserves careful attention because it elucidates with much insight some of the practical issues that confront the social worker in a complex community Among the subjects discussed is the recently instituted dental clinic for adolescents established in November 1930 in order to make adequate provision for juveniles who had left school but were not yet eligible for national insurance benefit The clinic has a permanent clientele and works along with other centres in regular contact with the young Every member is inspected dentally at least once a year and given necessary treatment and advice Educational propaganda emphasizing the importance of periodical examinations and early preventive treatment is conducted at the time of the inspection and talks on oral hygiene are arranged at clubs and similar institutions The scheme provides that patients must contribute towards the cost of their treatment and that only necessitous cases shall benefit Provisionally the affiliation fee charged to each member is is a year payable through the institution to which he belongs with a minimum of £2 a year per institution To facilitate concentration on conservative treatment and to save time for educational and minor dental work members joining at the earlier ages after leaving school receive precedence thus reducing the amount of operative treatment At present sessions are held at the clinic on two evenings a week after normal working hours The organization feels that the dental clinic has made an auspicious start and hopes in a future report to publish figures which will prove that it is taking a useful place in the health services of the country Progress is also recorded in the work of the Child Guidance Clinic where greater continuity and co-ordination have been effected by the appointment of additional staff From November 1927 to December 1930 the total number of cases seen at the clinic was 200 nearly all the patients being between the ages of 5 and 14 So far the desire expressed in a former report that more children of pre-school age would be sent to the clinic has not been fulfilled and the suggestion is made that this may be due to a misconception of its aims The point about child guidance is to have cases brought to the clinic before parents are likely to consider it worth while consulting a doctor The part therefore which school teachers health visitors and care committee workers can play, by bringing under medical observation difficulties in educational progress, signs of erratic behaviour, or conditions of mental strain and worry is obvious We are convinced from our results that the early cases are the most profitable "

DR. GEORGE H SIMMONS

On January 2nd Dr George Henry Simmons emeritus editor of the *Journal of the American Medical Association* celebrated his eightieth birthday at his home on the sea coast of Florida Dr Simmons was born at Moreton-in-Marsh Gloucestershire and went to the United States at an early age graduating at the General Medical College and Rush Medical College of Chicago He practised for a time in Nebraska and founded the *Western Medical Review* In 1924 on his retirement after twenty-five years as editor and general manager of the *Journal of the American Medical Association* he was entertained at a banquet and presented with his portrait at the annual meeting of that Association when Dr Harvey Cushing Dr William S Thayer and Dr William Mayo expressed the appreciation of all their colleagues for the outstanding services rendered by Dr Simmons to medical literature to medical education to medical organization to science and to the general public welfare An account of the proceedings with a reproduction of the portrait appeared in our issue of September 13th 1924 (p 481) During the past seven years Dr Simmons has spent much of his time in travel and has often visited this country, renewing old friendships We look forward to seeing him at the centenary celebrations of the British Medical Association next summer

The vacancy among the Crown nominees on the General Medical Council caused by Sir Edward Hilton Young's appointment as Minister of Health is now filled by Mr Douglas Hewitt Hacking M P who has held a number of Ministerial posts during the past ten years and was chairman of the Home Office committee on compensation for silicosis

The Hunterian Oration before the Royal College of Surgeons of England will be given by Mr Wilfred Trotter F R S on Monday February 15th at 4 o'clock

Dr C Killick Millard's presidential address to the Society of Medical Officers of Health entitled A plea for the legalization of voluntary euthanasia under certain conditions has now been published in pamphlet form (The C W Daniel Company 2 net) with some additional matter including the text of a proposed Bill and expressions of opinion from medical men and others A report of the address appeared in these columns on October 24th 1931 (p 754)

NEW LIGHT ON WORKMEN'S COMPENSATION

THE GERMAN CODE

Wide and far reaching as the German Federal Insurance Code of 1911 was it failed to place occupational diseases on the same footing as accidents The reason for this seeming anomaly was that most cases of poisoning recovered within the twenty six weeks during which they came under the sickness insurance law entitling them to sick pay and medical and surgical treatment[1] After the lapse of that time, however practically no further relief was obtainable in cases of poisoning or disease involving incapacity partial or total nor in the case of death was any sum recoverable by the dependants Power, however, was conceded to rectify this A beginning was made in 1925 and with additions in 1929 twenty two industrial diseases forms of poisoning and injuries have now been selected for compensation on the same lines as accidents just as thirty three are scheduled under the Workmen's Compensation Act in Great Britain

SCHEDULED DISEASES AND FORMS OF POISONING RECENTLY BROUGHT UNDER THE GERMAN FEDERAL INSURANCE CODE*

Number of Cases Reported and Number Compensated in 1929

	Industrial Disease	Number of Reported Cases	Cases Compensated for the First Time		
			Number	Total Cases Compensated	Reported Cases
				Per cent	Per cent
	Poisoning due to				
1	Lead and its compounds	3 456	421	21 38	12 18
2	Phosphorus	3	—	—	—
3	Mercury and its compounds	91	10	0.51	10 99
4	Arsenic and its compounds	67	14	0 71	20 90
5	Manganese and its compounds	17	11	0 56	64 71
6	Benzol and its homologues†	323	14	0 71	4 33
7	Carbon bisulphide	53	4	0 20	7 55
8	Sulphuretted hydrogen	102	—	—	—
9	Carbon monoxide	426	22	1 12	5 16
	Other diseases as follows				
10	Effects of x rays and radio active substances	22	6	0 30	27 27
11	Chronic and recurrent skin diseases from galvanic processes	260	10	0 51	3 85
12	Chronic and recurrent skin disease from foreign woods	29	5	0 25	17 24
13	Chronic and recurrent skin disease from soot paraffin tar anthracene pitch and allied substances	202	25	1.27	12 38
14	Disease of muscles bones and joints from use of pneumatic drills	331	31	1 58	9 37
15	Disease of deeper air passages and lungs from basic slag	36	9	0 46	25 0
16	Severe disease of the lung due to dust (silicosis or tuberculosis accompanying silicosis) in (*a*) sandstone quarrying and dressing, (*b*) grinding of metals (*c*) pottery works (*d*) mining	14 482	1 209	61 40	8 35
17	Schneeberg lung disease	7	1	0 05	14 29
18	Deafness or hard hearing bordering on deafness from noise (in metal work)	148	14	0 71	9 46
19	Cataract	179	113	5 74	63 13
20	Anklostomiasis	18	—	—	—
21	Tropical diseases spotted fever scurvy (among seamen)	181	3	0 15	1 66
22	Infectious diseases (in hospital and public health workers laboratory assistants etc.)	681	47	2 39	6 90
	Wrongly reported	1 144	—	—	—
	Total	22 258	1 969	100 00	—

* The table is taken from the *Amtliche Nachrichten fur Reichsversicherung* 1930 Heft No 12 For much information the writer is indebted to the article Die Versicherung der Berufskrankheiten in Deutschland by Dr Ludwig Teleky in *Le Assicurazioni Sociali* No 3 May–June 1930

† Including nitro- and amido derivatives of the aromatic series

[1] This explains the discrepancy in the table between the number reported and the much smaller number receiving compensation for the first time on account of incapacity lasting more than twenty six weeks.

A COMPARISON WITH GREAT BRITAIN

The method of investigation and report by specially appointed surgeons is very much the same in Great Britain and Germany but a comparison of their respective schedules of industrial diseases reveals some interesting resemblances and differences Fourteen diseases are common to both of the thirteen or fourteen in the British list not found in the German at least twelve are excluded for the fairly obvious reasons that they are either very rare or are normally curable within the twenty six weeks allowed under the sickness insurance law The conspicuous omission from the German list of miners nystagmus, however is only explicable on the score of the probable expense that would be incurred by scheduling it since in Great Britain the cost of compensation comes to about £1 000 000 yearly The German Government may also have been influenced by fears as to the inclusion of a malady into which a psychological factor enters so largely An effort ought however to have been made at any rate to schedule total incapacity from this cause

The narrowness of the terms under which chronic eczematous conditions (excluding even so common a cause as chrome eczema) are scheduled in Germany is in striking contrast to the wide comprehensiveness of our dermatitis and ulceration of the skin produced by dust and liquids Similarly the limitation in the classes of industry to which severe disease of the lung due to dust (silicosis or tuberculosis accompanying silicosis) applies makes it much less comprehensive than the most recent Silicosis Schemes (1931) in this country The very large number reported in Germany in the first year (14 482) represents an accumulation of cases, in view of the slow development of this malady the German Government wisely permitted claims to be lodged in respect of a period dating back to 1920 Moreover I am informed that the figure includes a large number of cases of miners suffering from any lung condition attributable to dust of which 80 to 90 per cent had nothing to do with silicosis This accounts for the comparatively small number—1 209—awarded compensation

Of the seven in the German list not included in ours—sulphuretted hydrogen poisoning carbon monoxide poisoning lung disease due to basic slag effects from pneumatic tools boilermakers deafness tropical diseases among sailors and infectious diseases among nurses and laboratory assistants—six stand out as having particular interest Cases of carbon monoxide and sulphuretted hydrogen poisoning generally develop suddenly and can be traced to a particular moment They are accidents and compensation should be obtained for them as such this is the principal reason why these forms of poisoning do not appear in our list In carbon monoxide poisoning however, serious after effects are occasionally observed—mental impairment, paralysis and liability to succumb to pneumonia—and with the development of the internal combustion engine and the presence of quantities of carbon monoxide in the exhaust gases much is now heard of chronic gastric and cardio vascular trouble among bus drivers bus conductors and others Considering the widespread use of gases developing a high percentage of carbon monoxide (blast furnace gas power gas) the number of cases reported in Germany and still more the number compensated for the first time are surprisingly small

Since the report of the First Committee on Compensation for Industrial Diseases (of which the present Home Secretary was chairman) the development of the viscose process in the manufacture of artificial silk which is entirely dependent for its success on the use of carbon bisulphide has led to much distress among spinners, minute traces of sulphuretted hydrogen setting up an irritation of the eyes Both these forms of poisoning have been referred by the Secretary of State to the Committee on Industrial Diseases now sitting for consideration as additions to the list of scheduled diseases

Out of three hundred and thirty one cases reported in Germany of diseases of the "muscles bones and joints

[2] Flanders dinitrophenol dope poisoning tetrachlorethane nickel carbonyl poisoning by African box wood compressed air illness miners beat hand knee and elbow telegraphists writers, and twisters cramp

from the use of pneumatic drills thirty one were compensated as disabled after the lapse of the twenty six weeks treatment received under the Sickness Insurance Act According to Dr Maria Sevring (*British Medical Journal* 1930 ii 1013) the maladies affecting pneumatic drill workers are angioneurosis of the capillary vessels of the fingers leading to Raynaud's disease atrophy of the muscles of the thenar and hypothenar eminences and interossei supplied by the median radial and ulnar nerves the biceps and infraspinatus and injury to the elbow joints and shoulder joints *Mutatis mutandis* similar conditions are found among the comparatively few men employed on pounding up machines (for removing creases in the leather when the upper is fixed to the insole the machine vibrating 16 000 times to the minute) The German figures make out a case for inquiry into this form of injury not only to ascertain the extent of the disability but also to stimulate engineers to find a means external to the workman for carrying out this process

The Home Office Committee of 1907 heard evidence from Middlesbrough about slag cough and described it as a slight chronic inflammation of the bronchial tubes induced by the extremely fine state of division into which basic slag has to be ground This illness has some distinguishing features and may be held to be specific to the employment but it cannot be included in the schedule for the reason that the evidence shows that it does not incapacitate for more than one or two days" No further evidence in this country has been advanced questioning the correctness of this view which is, however in striking contrast to the experience in Germany both before and since the above opinion was expressed The reason no doubt is that in comparison with Germany the preparation of basic slag in this country is on a very small scale In years past I had been mystified by the number of cases of pneumonia referred to in the German Factory Inspectors Reports from inhalation of basic slag dust Thus a report on basic slag works made by an official of the Imperial Health Office stated that in 1892 in eighteen works 91 1 per cent of the workers became ill 56 4 per cent of the cases were diseases of the respiratory organs and of twenty four deaths nineteen were due to respiratory diseases Again in 1893 in twenty one works sickness amounted to 108 9 per cent 54 5 per cent of the cases were due to respiratory diseases and of twenty two deaths eighteen were due to such diseases As a consequence statutory regulations requiring monthly examination of all persons employed in basic slag works were enacted Improvement by meticulous locally applied exhaust ventilation must have followed as the figures of cases reported thirty six and of those first compensated nine in the table for 1929 are reassuring

Boilermakers deafness is referred to by the 1907 Committee as unquestionably an injury due to employment and as widely prevalent among men working in incessant noise of the shipbuilding yard or the boilermakers shop It does not however prevent a man from continuing at his trade and cannot therefore give rise to claims for compensation on the grounds of incapacitation but may it not lead to inability to secure work on the reopening of yards or shops after a temporary closing down? And here the German list shows one hundred and forty eight referred and fourteen included in the list of the more or less permanently incapacitated Dr Thomas Barr from an examination of one hundred boilermakers and a comparison of their power of hearing with that of a similar number of iron moulders and postmen in Glasgow found that no one engaged in boilermaking for any length of time escapes impairment of hearing and that three fourths of the number could either not hear at all at a public meeting or only with difficulty The deafness is due to atrophy of the sensitive membrane in the cochlea and the organs of Corti which constitute the receiving board of impressions of high pitched notes

Tropical diseases spotted fever and scurvy contracted by sailors is a remarkable exclusion and though the numbers (181 and 1 respectively) are small they show it to have been worth while Seamen are altogether excluded from our code as the machinery set up (a certificate from the certifying surgeon of the district in which the person was employed) is inapplicable

Lastly infectious ailments contracted by nurses laboratory assistants disinfectors and the like stand third and fourth respectively in the German list of cases reported and compensated for the first time The possibility of including such cases was discussed in the 1907 Committee's report It was held that while in individual cases—as for example that of a disinfector contracting small pox—the evidence in favour might be strong, yet neither the wording of the Act nor the character of the Third Schedule in its present form nor the discussion of the Bill in Parliament gives any indication that our legislation on workmen's compensation contemplates cases of ordinary illnesses contracted by chance through exposure to infection while in an employer's service

The boldness therefore of the German Code despite its apparent significant shortcomings justifies my title of New light on workmen's compensation A word—even an apology—may be expected from me as one who signed the 1907 Committee's report the Committee was tied as it thought by the quotation above and the corollary that before a malady could be scheduled it must last more than a week must be gradual in its onset and not an accident and must be so specific to the employment as to enable the disease to be established in individual cases Intimate acquaintance with industrial disease since then makes me think these tenets should be revised and that instead of demanding as essential only some clear cut distinguishable sign more weight should be given to well recognized cumulative effects on workpeople in the occupations

The German figures with the exception of silicosis are likely to increase for some years as knowledge about the maladies becomes more widely disseminated already a steady rise each year has occurred in practically all those diseases which have been scheduled for the four years The increase in the list was deferred so it has been suggested owing to the ignorance of medical practitioners about industrial diseases the truth of this is shown by a decrease year by year in the number of cases marked wrong diagnosis This reproduces the experience of a gradual increase from year to year of not a few of the scheduled diseases in our list with the increasing knowledge of the conditions of compensation gained by workpeople and medical practitioners

T M Legge

ALCOHOL AND MENTAL DEFECT

ADDRESS BY DR NORWOOD EAST

The following is an abstract of a paper read by Dr W Norwood East one of H M Commissioners of Prisons in opening a discussion on on mental defectiveness and alcohol and drug addiction at a meeting of the Society for the Study of Inebriety held on January 12th

The distinction between the mentally defective person and the subnormal inefficient is empirical and mental disorder may become superimposed upon mental defect it has therefore seemed undesirable to restrict the observations to defectives who are certifiable under the Mental Deficiency Acts It has been stated that an increase in the number of mental defectives has taken place during the twenty years preceding 1929 Official statistics show that since 1915 the convictions for drunkenness have greatly decreased and in 1929 (51 966) were less than half the convictions in 1915 (135 811) It appears therefore that the diminution in drunkenness is not reflected in the number of defectives I may be allowed experience in this matter is comparable to that of Norway where it was found many years ago that a great diminution in drunkenness was reported without any decrease in the number of boys

There is little evidence to show that [illegible] as a direct cause of mental defect [illegible] the occurrence of the latter term is used in the present [illegible] It is recognized that the effects of alcohol [illegible]

in young people but they seldom become so addicted to alcohol before reaching the age of 18 years as to produce the arrested or incomplete development of mind referred to in the Mental Deficiency Act, 1927 Nevertheless intoxication in this country is not uncommon in adolescence and in the three months October to December 1925 487 cases of drunkenness in persons under 21 were dealt with by courts of summary jurisdiction in England and Wales and 114 of these were in persons under 18

It is clear from the Report of the Royal Commission on the Care and Control of the Feebleminded the Departmental Committee on the Inebriate Acts and other publications, that the term "mental defectiveness," prior to the Act of 1913 was frequently used in a general sense only From 30 to 70 per cent of the inebriates were said to be mentally defective Recently I found that of 698 persons convicted of various offences during the ten years 1921–30, and certified in prison under the Mental Deficiency Acts 7·4 per cent were, or had been convicted of drunkenness Dr Douglas Turner found at the Royal Eastern Counties Institution less than 2·25 per cent of adult defectives were intemperate Dr Rees Thomas at the Rampton State Institution, found only 3·5 per cent of the defectives could have been called at any time heavy drinkers, and Dr A E Carver approaching the subject as superintendent of an institution for alcoholism and drug addiction found that in 432 adult male inebriates less than 1 per cent were certifiable under the Mental Deficiency Acts The Central Association for Mental Welfare also made inquiries for me of the local associations throughout the country Of twenty-seven areas which sent in replies eighteen were unaware of any cases of alcoholism among the ascertained defectives and in other areas the number was negligible The Central Association itself reported only one case Clearly these results are in marked contrast to the earlier conclusions

The Mental Deficiency Act 1927 extended the conception of mental defect defined in the 1913 Act and some workers consider it extended the use of the term mental defectiveness too far There are others however, who desire to extend the use of the term still further I suggest that to do so would effect a return to the confusion of thought which was apparent before 1913 and also hamper medico-social research

If it is agreed that the association of alcoholism and mental defectiveness is infrequent it becomes a matter of interest to ascertain the reasons Defectives are often seclusive—if not their companions generally are younger than themselves and as impecunious both factors tend to diminish convivial drinking Intemperance is often the result of a complex habit but many defectives, although suggestible lack the powers of attention receptivity retention and association of ideas which enable a particular stimulus to be followed by an elaborate habitual reaction Defectives may be aware of their inferiority and may drink to rid themselves of this disharmony but it is probably true that the outlook of the adult defective towards the community leads him to consider that its units are superior to himself rather than to emphasize his inferiority in regard to them

Defectives live for the most part in the present free from past disappointments unencumbered by imagination and untroubled by the prospect of future hardships They neither censure themselves nor anticipate the disapproval of others The main reason for their sobriety appears to lie in the fact that their personalities are little affected by antagonistic complexes Further the observations of many years on delinquent defectives lead me to believe that as a class they are less homosexual than their fellows although sexual offences are next in frequency to crimes of acquisition If in fact the alcoholist releases repressed homosexual tendencies by his addiction the defective may be seldom an alcohol addict for this reason

Experience of delinquent defectives delinquent inebriates and inebriates who are not delinquents leaves me in no doubt at all that the mental defective as we see him in this country to-day is seldom an alcoholist that if he becomes an addict this is incidental to the mental defect and that the past estimates of the association of alcoholism and mental defect were excessive

The part played by alcohol as a direct cause of entry to the social problem group of subnormals is complicated by the fact that the alcoholist is frequently the subject of other inherent causes of social inefficiency—a psychopathic make-up or asocial or temperamental limitation Only broad suppositions seem justified in our present state of uncertainty concerning the types of case to be included in the group

Prostitutes are a fairly well-defined subgroup of the social problem group and Sanger has shown that 23 per cent of the parents of 2,000 cases were intemperate It is reasonable to assume that many of the daughters were mentally unstable and perhaps their careers were influenced in consequence Alcoholism may be also a direct cause of prostitution but I have no reason to doubt the statements made to me by many prostitutes during eight years' work among this class of prisoner that they were entirely abstemious before they became public women and of others that they were obliged to drink before they had sufficient assurance to accost possible clients

A large number of subnormals lack will-power and force of character, are temperamentally unstable indifferent incompetent and peculiarly liable to solve their conflicts by alcohol A tendency to addiction is also manifest in the cycloid temperament and Kretschmer discussing the schizoid temperament considers its indifference is a common variant of affective insensibility and that from the ranks of the indifferents are recruited the unstable the gamblers drinkers harmless criminals prostitutes tramps and others It is particularly true of this group that in many of its units a vicious circle is easily induced Alcohol restricts their inherent mental limitations and impels them to counteract this by further intoxication It is also true that from among this group are recruited the majority of the alcoholists who appear repeatedly before the criminal courts charged with offences connected with drunkenness, many exhibit both intolerance to the action of alcohol and constitutional imbalance of the instincts and emotions

There seems to be general agreement that it is a difficult matter in our present state of knowledge to assess the importance of alcohol as a direct cause of insanity The general figure given 10 per cent according to some authorities may be less The Alcohol Investigation Committee of the Medical Research Council presented figures which indicate that the changes in the prevalence of alcoholism in women during the years 1913–18 had no observable relation to the number of cases of certifiable insanity The convictions for drunkenness among women showed a continuous fall from 35,765 in 1913 to 7,222 in 1918 but the number of first admissions of women to lunatic asylums showed no such change in 1913 it was 9,372, and in 1918 there was a slight rise to 9,726

Alcoholism is both a symptom and a cause of mental disorder in many patients General paralysis of the insane is a notable exception and many paralytics drink to excess after the disease is declared and before they come under care Alcohol taken in excess also by delusional patients by manic depressives in the exalted or depressed phases of the disorder by epileptics and by demented persons sometimes leads to charges of drunkenness in the criminal courts Although it is perhaps true to say of many insane persons that they are easily affected by alcohol I am inclined to believe that some of the insane and introverted cases which come before the criminal courts show considerable tolerance of the drug

Influence of Drug Addiction

The literature suggests that the estimation of the number of drug addicts is almost impossible to determine with any degree of accuracy in many countries Perhaps mainly because the narcotic is administered in secret its effects may escape public notice and facts are likely to be obscured at least temporarily if a different method of using the same drug comes into vogue and if one drug is replaced by another It is also extremely difficult to ascertain with any degree of precision, the importance of ancestral drug addiction on the mental condition of the offspring Chopra has come to the conclusion that heredity

does not play any part in inducing drug addiction Seleth and Kuh as a result of experience gained in the treatment of 5 000 cases of morphinism state that they have never seen an addict born an addict because his mother was an addict

In this country drug addiction is admittedly infrequent and its influence as a direct cause of mental defectiveness subnormality or insanity for all practical purposes is negligible This appears to be the case also in Egypt India and British Malaya The Indian Hemp Drug Commission as the result of a searching inquiry, considered that only 7 3 per cent of the admissions to mental hospitals in British India were attributable to hashish Chopra was unable to obtain any evidence to show that opium by itself was responsible for mental derangements in India and Samuel at the Central Mental Hospital at Tanjong Rambutan considered that opium as a cause of insanity was negligible

There is however a large body of opinion in America England France Germany, and elsewhere which considers that drug addiction is a sign of an inherent neurotic personality The cases may be divided into two main classes accidental addicts who develop the habit after the drug has been taken medicinally and those forming a larger group who take narcotics because they possess psychopathic personalities In some cases one drug is followed by another or by other extravagances during the course of the disorder

New Zealand

[FROM OUR CORRESPONDENT IN WELLINGTON]

Vital Statistics

For the past year the general death rate was 8 56 per 1 000 mean population which is believed to be the lowest in the world The birth rate was higher than in the previous year but the natural increase was only 1 per cent Diseases of the heart and arteries were responsible for the highest number of deaths approximately one third of the total being due to such diseases Cancer was the next principal cause of death The number of deaths from tuberculosis continued to decrease New Zealand in comparison with other countries having the lowest death rate from this cause While infant mortality had slightly increased the increase was to be found in the number of deaths of infants under 1 month Septicæmia was the chief cause of maternal mortality

Hospital Administration

Mainly as a result of the criticism of Dr Campbell Begg the board of trustees of Wellington Hospital has adopted the principle of decentralizing the administration by appointing four standing committees with subcommittees to attend to matters of detail Each standing committee has a clearly defined sphere of responsibility but the four are co ordinated on a basis that should prevent them from developing into water tight compartments and should promote efficiency and economy If the scheme operates successfully it may be given a wider application and so result in national as well as local economy Apart from the General Purposes Committee and the Fees and Relief Committee there are a Medical Committee and a Nursing Committee The Medical Committee subject to the approval of the board defines the sphere privileges and responsibilities of the different medical and surgical divisions and subdivisions considers reports from their representatives and co ordinates their requirements It considers requisitions for new medical and surgical equipment and arranges staff meetings at which the professional work of the hospital post mortem findings specimens removed at operations and clinical cases presenting difficulties are considered The Medical Committee also advises the board in regard to the standard of nursing service and service given by house surgeons and if requested advises upon the suitability of applicants for medical and surgical appointments In conjunction with the House Committee and the medical superintendent it controls the clinical work of the hospital chiefly with a view to the harmonious co operation of the senior and assistant honorary staff with the stipendiary and nursing staff It is a question whether a detailed constitution such as the foregoing with rules and regulations is to be preferred to reliance on a good understanding as between the sections of the staff of a large hospital but there is no evidence that the two are incompatible and it can be said with truth so far as New Zealand hospitals are concerned that hitherto the honorary staffs have had no proper status and little or no direct contact with the board of management The medical superintendents in the larger hospitals are now to be mainly administrative officers

New Zealand Branch, British Empire Cancer Campaign

Research work is being carried on in the laboratories of the Otago University under Dr Begg and a biochemist has recently been included in the staff The cancer clinics at the larger hospitals are doing excellent work and valuable records are being obtained Radium has been purchased in various instances where necessary and in suitable form and the branch is co operating with the Department of Health to ensure that radium is available only at suitable centres, and its use confined to those who are properly qualified in this branch of radiotherapeutics The response of the people generally to appeals for financial help has been good despite bad times and many other claims and £50 000 is in hand to this has to be added a further sum of £16 500 The intention of the branch is to build up a capital sum of £100 000 as an endowment for the cancer campaign in New Zealand This branch was established at the time of Mr Sampson Handley's visit to this country and has done much already to improve the diagnosis and treatment of cancer cases and to cause the public to take an intelligent but not an alarmist, interest in the campaign against cancer

Scotland

James Mackenzie Institute

The twelfth annual report of the James Mackenzie Institute for Clinical Research St Andrews expresses indebtedness to the Medical Research Council for continuing the grant of £400 towards the upkeep of children's records and also its grant for special research work Expenditure during the year exceeded income by £75 and a strong appeal is therefore made for the raising of an endowment fund if the financial position of the Institute is to be secured and its important work continued During the past year 97 new cases and 1 150 additional notes were added to the files 795 specimens were examined in the bacteriological and chemical laboratories and 472 films were exposed in the radiology department Further progress was made in the inspection and indexing of the records of the Institute At the end of the year 64 5 per cent of the records were found to be complete in that notes had been added in steady sequence 13 per cent needed to be brought up to date and 22 5 per cent were incomplete largely because patients had been lost sight of From a review of 584 records much valuable information was extracted and the committee charged with this duty has been impressed by the abundance of material available in the files of the Institute Its use of the records being now for the most part [illegible] the committee proposes to investigate certain groups of

in young people but they seldom become so addicted to alcohol before reaching the age of 18 years as to produce the arrested or incomplete development of mind referred to in the Mental Deficiency Act 1927 Nevertheless intoxication in this country is not uncommon in adolescence and in the three months October to December 1925 487 cases of drunkenness in persons under 21 were dealt with by courts of summary jurisdiction in England and Wales, and 114 of these were in persons under 18

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The Mental Deficiency Act 1927 extended the conception of mental defect defined in the 1913 Act and some workers consider it extended the use of the term mental defectiveness too far There are others however who desire to extend the use of the term still further, I suggest that to do so would effect a return to the confusion of thought which was apparent before 1913, and also hamper medico-social research

If it is agreed that the association of alcoholism and mental defectiveness is infrequent it becomes a matter of interest to ascertain the reasons Defectives are often seclusive—if not their companions generally are younger than themselves and as impecunious both factors tend to diminish convivial drinking Intemperance is often the result of a complex habit but many defectives, although suggestible lack the powers of attention receptivity retention and association of ideas which enable a particular stimulus to be followed by an elaborate habitual reaction Defectives may be aware of their inferiority and may drink to rid themselves of this disharmony but it is probably true that the outlook of the adult defective towards the community leads him to consider that its units are superior to himself rather than to emphasize his inferiority in regard to them

Defectives live for the most part in the present free from past disappointments unencumbered by imagination and untroubled by the prospect of future hardships They neither censure themselves nor anticipate the disapproval of others The main reason for their sobriety appears to lie in the fact that their personalities are little affected by antagonistic complexes Further, the observations of many years on delinquent defectives lead me to believe that as a class they are less homosexual than their fellows although sexual offences are next in frequency to crimes of acquisition If in fact the alcoholist releases repressed homosexual tendencies by his addiction the defective may be seldom an alcohol addict for this reason

Experience of delinquent defectives delinquent inebriates and inebriates who are not delinquents leaves me in no doubt at all that the mental defective as we see him in this country to-day is seldom an alcoholist that if he becomes an addict this is incidental to the mental defect, and that the past estimates of the association of alcoholism and mental defect were excessive

The part played by alcohol as a direct cause of entry to the social problem group of subnormals is complicated by the fact that the alcoholist is frequently the subject of other inherent causes of social inefficiency—a psychopathic make-up or asocial or temperamental limitation Only broad suppositions seem justified in our present state of uncertainty concerning the types of case to be included in the group

Prostitutes are a fairly well-defined subgroup of the social problem group and Sanger has shown that 23 per cent of the parents of 2,000 cases were intemperate It is reasonable to assume that many of the daughters were mentally unstable and perhaps their careers were influenced in consequence Alcoholism may be also a direct cause of prostitution but I have no reason to doubt the statements made to me by many prostitutes, during eight years work among this class of prisoner that they were entirely abstemious before they became public women and of others that they were obliged to drink before they had sufficient assurance to accost possible clients

A large number of subnormals lack will-power and force of character are temperamentally unstable indifferent incompetent and peculiarly liable to solve their conflicts by alcohol A tendency to addiction is also manifest in the cycloid temperament and Kretschmer discussing the schizoid temperament considers its indifference is a common variant of affective insensibility and that from the ranks of the indifferents are recruited the unstable the gamblers drinkers harmless criminals prostitutes tramps and others It is particularly true of this group that in many of its units a vicious circle is easily induced Alcohol restricts their inherent mental limitations and impels them to counteract this by further intoxication It is also true that from among this group are recruited the majority of the alcoholists who appear repeatedly before the criminal courts charged with offences connected with drunkenness many exhibit both intolerance to the action of alcohol and constitutional imbalance of the instincts and emotions

There seems to be general agreement that it is a difficult matter in our present state of knowledge to assess the importance of alcohol as a direct cause of insanity The general figure given, 10 per cent, according to some authorities may be less The Alcohol Investigation Committee of the Medical Research Council presented figures which indicate that the changes in the prevalence of alcoholism in women during the years 1913–18 had no observable relation to the number of cases of certifiable insanity The convictions for drunkenness among women showed a continuous fall from 35 765 in 1913 to 7 222 in 1918 but the number of first admissions of women to lunatic asylums showed no such change, in 1913 it was 9 372 and in 1918 there was a slight rise to 9 726

Alcoholism is both a symptom and a cause of mental disorder in many patients General paralysis of the insane is a notable exception and many paralytics drink to excess after the disease is declared and before they come under care Alcohol taken in excess also by delusional patients by manic depressives in the exalted or depressed phases of the disorder by epileptics and by demented persons sometimes leads to charges of drunkenness in the criminal courts Although it is perhaps true to say of many insane persons that they are easily affected by alcohol I am inclined to believe that some of the insane and introverted cases which come before the criminal courts show considerable tolerance of the drug

Influence of Drug Addiction

The literature suggests that the estimation of the number of drug addicts is almost impossible to determine with any degree of accuracy in many countries Perhaps mainly because the narcotic is administered in secret its effects may escape public notice and facts are likely to be obscured at least temporarily if a different method of using the same drug comes into vogue and if one drug is replaced by another It is also extremely difficult to ascertain with any degree of precision the importance of ancestral drug addiction on the mental condition of the offspring Chopra has come to the conclusion that heredity

does not play any part in inducing drug addiction Seeleth and Kuh as a result of experience gained in the treatment of 5 000 cases of morphinism state that they have never seen an addict born an addict because his mother was an addict

In this country drug addiction is admittedly infrequent, and its influence as a direct cause of mental defectiveness subnormality or insanity for all practical purposes is negligible This appears to be the case also in Egypt India and British Malaya The Indian Hemp Drug Commission as the result of a searching inquiry considered that only 7 3 per cent of the admissions to mental hospitals in British India were attributable to hashish Chopra was unable to obtain any evidence to show that opium by itself was responsible for mental derangements in India and Samuel at the Central Mental Hospital at Tanjong Rambutan considered that opium as a cause of insanity was negligible

There is however a large body of opinion in America England France Germany and elsewhere which considers that drug addiction is a sign of an inherent neurotic personality The cases may be divided into two main classes accidental addicts who develop the habit after the drug has been taken medicinally and those forming a larger group who take narcotics because they possess psychopathic personalities In some cases one drug is followed by another or by other extravagances during the course of the disorder

New Zealand

[FROM OUR CORRESPONDENT IN WELLINGTON]

Vital Statistics

For the past year the general death rate was 8 56 per 1 000 mean population which is believed to be the lowest in the world The birth rate was higher than in the previous year but the natural increase was only 1 per cent Diseases of the heart and arteries were responsible for the highest number of deaths approximately one third of the total being due to such diseases Cancer was the next principal cause of death The number of deaths from tuberculosis continued to decrease New Zealand in comparison with other countries having the lowest death rate from this cause While infant mortality had slightly increased the increase was to be found in the number of deaths of infants under 1 month Septicæmia was the chief cause of maternal mortality

Hospital Administration

Mainly as a result of the criticism of Dr Campbell Begg the board of trustees of Wellington Hospital has adopted the principle of decentralizing the administration by appointing four standing committees with subcommittees to attend to matters of detail Each standing committee has a clearly defined sphere of responsibility but the four are co ordinated on a basis that should prevent them from developing into water tight compartments and should promote efficiency and economy If the scheme operates successfully it may be given a wider application and so result in national as well as local economy Apart from the General Purposes Committee and the Fees and Relief Committee there are a Medical Committee and a Nursing Committee The Medical Committee subject to the approval of the board defines the sphere privileges and responsibilities of the different medical and surgical divisions and subdivisions considers reports from their representatives and co ordinates their requirements It considers requisitions for new medical and surgical equipment and arranges staff meetings at which the professional work of the hospital post mortem findings specimens removed at operations and clinical cases presenting difficulty are considered The Medical Committee also advises the board in regard to the standard of nursing service and service given by house surgeons and if requested advises upon the suitability of applicants for medical and surgical appointments In conjunction with the House Committee and the medical superintendent it controls the clinical work of the hospital chiefly with a view to the harmonious co operation of the senior and assistant honorary staff with the stipendiary and nursing staff It is a question whether a detailed constitution such as the foregoing with rules and regulations is to be preferred to a limited one on a good understanding as between the sections of the staff of a large hospital but there is no evidence that the two are incompatible and it can be said with truth so far as New Zealand hospitals are concerned that hitherto the honorary staffs have had no proper status and little or no direct contact with the board of management The medical superintendents in the larger hospitals are now to be mainly administrative officers

New Zealand Branch, British Empire Cancer Campaign

Research work is being carried on in the laboratories of the Otago University under Dr Begg and a biochemist has recently been included in the staff The cancer clinics at the larger hospitals are doing excellent work and valuable records are being obtained Radium has been purchased in various instances where necessary and in suitable form and the branch is co operating with the Department of Health to ensure that radium is available only at suitable centres and its use confined to those who are properly qualified in this branch of radio therapeutics The response of the people generally to appeals for financial help has been good despite hard times and many other claims and £50 000 is in hand to this has to be added a further sum of £16 500 The intention of the branch is to build up a capital sum of £100 000 as an endowment for the cancer campaign in New Zealand This branch was established at the time of Mr Sampson Handley's visit to this country and has done much already to improve the diagnosis and treatment of cancer cases and to cause the public to take an intelligent but not an alarmist interest in the campaign against cancer

Scotland

James Mackenzie Institute

The twelfth annual report of the James Mackenzie Institute for Clinical Research St Andrews expresses indebtedness to the Medical Research Council for continuing the grant of £400 towards the upkeep of children's records and also its grant for special research work Expenditure during the year exceeded income by £78 and a strong appeal is therefore made for the raising of an endowment fund if the financial position of the Institute is to be secured and its important work continued During the past year 97 new cases and 1 180 clinical notes were added to the files 798 specimens were examined in the bacteriological and chemical laboratories and 472 films were exposed in the radiology department Further progress was made in the respective analyses of the records of the Institute At the end of the year 64 5 per cent of the records were found to be complete in that none had been added in steadily decreasing 13 per cent needed to be brought up to date and 22 5 per cent were incomplete largely because patients had been lost sight of From a review of 884 records nine valuable information was extracted and the committee charged with this duty has been supplied by the Board of Control material available in the files of the Institute It is hoped of the records being now fully prepared the committee proposes to undertake certain [illegible]

cases in furtherance of the principles defined by Sir James Mackenzie in relation to his visceromotor and viscero sensory reflex theory Weekly clinical meetings were held throughout the session, when cases were discussed and views exchanged by the staff The report of work in the children s department states that apart from its value as a means of investigating the primary causes of ill-health the scheme of continuous observation of children is of immediate practical use as it ensures through the co operation of the family doctors, treatment in the earliest stages of illness

Scottish Mental Hospitals

In the annual report for 1930 of the General Board of Control for Scotland it is stated that the average yearly number of mental patients in Scotland is steadily growing, and that the available accommodation is severely taxed At the beginning of 1931, exclusive of patients maintained at home by their natural guardians there were in Scotland 19 241 insane persons of whom the Board had official cognizance These included the inmates of training schools for imbecile children who had not been certified under the Mental Deficiency Act and of the criminal lunatic department of Perth Prison Of these 2 947 were maintained from private sources 16 221 from the rates and 73 at the expense of the State It is evident from the report that the use of restraint and seclusion is diminishing to vanishing point Emphasis is laid on the increasing development of hospital care and nursing and on the greater attention paid to physical rehabilitation and healthful occupation The advantages resulting from the introduction of female nursing of male patients in the hospital wards of mental institutions—a practice which is now almost universal in Scotland—are stressed. Infectious diseases, like tuberculosis and dysentery are now no more prevalent in asylums than in general hospitals The steady increase in the number of persons who enter mental hospitals voluntarily at an early stage of their trouble is referred to in the report and the extension of this practice in the case of rate aided patients is welcomed The number of escapes from Scottish institutions in 1930 was 132 of these patients 54 were brought back within twenty four hours and 98 within a week Accidents numbered 147 which is 7 more than in the previous year 14 ended fatally death in 8 cases being due to suicide Dr George Gibson reporting on the visitation of boarded out patients says that an interesting cause of unrest and one that is a commentary on present day conditions, is that some defectives knowing that their relatives are in receipt of relief are anxious to be 'on the dole themselves A satisfactory report on the feeding of boarded out patients is given by Dr Kate Fraser

Rickets in Glasgow

In view of the gradual disappearance of rickets Dr A K Chalmers s historical survey in the November issue of the *Glasgow Medical Journal* is of much interest particularly since he gives statistical evidence of the [illegible] in the prevalence of this disease and its sequels observed [illegible]gow between 1877 and 1930 It will be recalled [illegible]me to [illegible]9 a report was published in the *British Medical* than the [illegible] of a collective inquiry undertaken by a committee frequency [illegible]ish Medical Association with Sir Isambard Owen alcoholist re[illegible] into the incidence of certain affections addiction the [illegible] for this reason[illegible]sets in the United Kingdom special refer-

Experience [illegible] to Glasgow where the conditions in this [illegible]ebrates and [illegible]ity bad According to Dr Chalmers the [illegible]me in no doubt [illegible]es produced by rickets reached their see him in this [illegible] of intensity and prevalence in Glasgow that if he becomes[illegible]arter of the last century, that for at thereby they have been undergoing amelioration, and that the degree of amelioration may be expressed by the enlargement of the conjugate diameter of the smaller pelves from 2 5 to 3 5 cm Meanwhile the general death rate had fallen from 24 to 15' The hygienic environment of a large part of the Glasgow population gradually deteriorated during the middle third of last century, and was made worse from time to time by recurring periods of trade depression Dr Chalmers shows that systematic resort to osteotomy for lessening the rickety deformities of the lower limbs and to Caesarean section for contracted pelves arose in the generation which was born between 1850 and 1875 The need for these forms of surgical intervention has now remarkably decreased but an interesting contrast is presented as Dr Chalmers remarks, " by the long drawn out character of a movement in disease produced by the conditions which arose during the unregulated growth of a city on the one hand and the sudden acute outbreak which occurred in Vienna as the result of war conditions and grave shortage of food The cause of rickets is now considered to be threefold a lack of certain accessory food factors, an unbalanced mineral content in the dietary, and lack of sunlight In Vienna where the theory of infectivity had found some degree of acceptance, the general increase, during the war of deficiency diseases affecting bony structures was held by some to have confirmed this view The disease came to an end in Vienna at any rate the grosser forms of hunger osteomalacia among adults, with some abruptness in 1920 Dr Chalmers s comparison of the degree of skeletal deformity formerly associated with this disease with the very obvious improvement in recent years is accompanied by reference to changing views on etiology which have been brought about in some measure by the swing over from clinical to laboratory methods of diagnosis

Chalmers's Hospital, Edinburgh

Plans have been adopted for the addition of a new wing and the modernizing of the existing buildings at Chalmers s Hospital Lauriston Place Edinburgh and the hospital will be closed for several months in order that these alterations may be effected The new wing will comprise an operating theatre anæsthetic and x ray rooms and accommodation for the resident medical staff and nurses In the present building the electrical sanitary and heating fittings will be renewed and the total cost of the work will amount to some £13 000

Ireland

Public Health in the Irish Free State

The annual report for the year 1929–30 of the Department of Local Government and Public Health in the Irish Free State comprises details of local finance general administration and the health of the people [1] The death rate for 1929 (14 59 per 1 000) shows a slight increase on that for 1928 (14 17), but it is below that for the preceding decade (14 84) Decreases in mortality were found in cancer tuberculosis, measles enteric scarlet fever and in diseases associated with pregnancy and child birth The highest rates of mortality were registered in Waterford Cork Dublin and Limerick county boroughs, the lowest in Kerry Mayo Galway and Cork counties Of the infectious diseases typhus showed a decline in incidence there being no serious outbreak during the year under review It appears that the disinfestation organized in Kerry in the spring of 1929 has been effective in checking typhus in that county Notifications of

[1] Government Publications Sale Office 5 Nassau Street Dublin (2s 6d net)

diphtheria exceeded those in the preceding year Toxin antitoxin immunization schemes are in operation in areas where diphtheria has been prevalent and it is anticipated that the growing appreciation of the fact of danger from and obvious benefits of the injections will cause an increased number of children to present themselves for treatment at the clinics

There has been a substantial decrease in the maternal death rate which with the figure of 4 10 per 1 000 has now reached the lowest record registered in the country The infant mortality rate is 70 per 1 000 accounted for mainly by broncho pneumonia and pneumonia School medical inspection reveals a high rate of dental caries enlarged tonsils or adenoids and defective vision and a survey extending over two years of 25 000 Dublin children shows the percentage affected with these conditions to have been respectively 50 17 and 12 On the whole the result of the year s examination of school children fails to confirm the alarming views that have been given publicity in respect of the extent of surgical tuberculosis attributable to tuberculous milk School hygiene and sanitation are on the other hand in a backward condition especially in rural districts Light heating ventilation and playground accommodation are often inadequate while in many cases there are dirty floors and windows defective desks and lack of water supply drinking utensils and drying rooms Improvements however are already taking place Progress is also being made in the provision of school meals this is now in force in thirty five districts 167 schools participating The downward trend in the mortality from all forms of tuberculosis has been maintained and during the year 1929 reached the low level of 1 32 per 1 000 Conflicting reports on the efficacy of sanocrysin have been received from tuberculosis officers Approved arrangements for the diagnosis and treatment of venereal disease are now in operation in three county boroughs and twelve counties The supervision of food supplies the mental hospitals housing public assistance and other problems are dealt with in the report

Cost of Public Health Services in Belfast

The Belfast Public Health Committee has given notice that its estimates for the year ending March 31st 1933 will be under consideration at an early meeting The estimated expenditure for the service of the public health department municipal laboratory disinfecting station superannuations port sanitary Purdysburn Fever Hospital meat inspection treatment of venereal diseases and miscellaneous amounts to £57 921 as against an estimated outlay of £59 896 for the year 1931–32 and an actual outlay in 1930–31 of £54 233 The sum of £15 808 is allocated for salaries as compared with £15 750 for the current financial year and in actual expenditure in 1930–31 of £15 813 Fees for analyses are estimated at £1 00 the actual amount spent for a like purpose last year having been £541 £500 is provided for clothing disinfectants and medical notification fees as against an estimated expenditure this year of £1 030 and an actual cost last year of £1 492 The net sum apportioned for the service of the municipal laboratory is £936 as compared with the current year s estimate of £984 while the actual cost last year was £1 040 The disinfecting station will require £1 237 net—£225 less than the estimated net cost for the current financial year Under the heading port sanitary the expenditure for 1932–3 is put at £859 from which has to be deducted £160 leaving a net service of £699 as against £740 this year and an actual expenditure last year of £664 The committee s estimate for Purdysburn Fever Hospital is £3200 compared with £2 [illegible] in 1931–32 and £2 803 11 in 1930–31 Payments in respect of maintenance of patients [illegible] and [illegible] receipts should produce £1 810 reducing the cost of the hospital to £30 220 Expenditure on the treatment of venereal diseases is calculated at £6 500 towards which there is a Government grant of £5 175 and £1 00 from county councils

Education of School Children

At a recent meeting in Belfast of the Northern Ireland branch of the New Education Fellowship Dr Olive Anderson said there were many matters about which parents and teachers ought to give personal instruction to children Children should never be coddled They should be allowed to run about a minimum of clothes and plenty of fresh air kept them fit A child s ailments should not be discussed in his presence nothing was more injurious Great harm was done by paying too much attention to the child and also by parents or teachers paying too little attention to their own motives and attitudes A child should never be allowed to shirk a duty because he did not want to do it It was for those in charge of the child to set an example Referring to the problem of sex Dr Anderson stated that children should be told the truth individually It was almost criminal to allow a boy or girl to grow up without sex knowledge as lack of it caused a great deal of physical and mental ill health

England and Wales

Public Health in Newcastle upon Tyne

In his last annual report Dr Harold Kerr medical officer of health for the city and county of Newcastle upon Tyne refers to the satisfactory slight decrease in the maternal mortality rate in the city during 1930 (5 36 as compared with 5 85 in the preceding year) The infant death rate also established a new record at 74 per 1 000 births being 11 per 1 000 less than in the previous year there were fewer stillbirths and premature births Three new maternity and child welfare centres were opened during the year and have supplied a great need in the new housing areas A training course was established for additional members of the staff of these centres and the growth of this work was reflected in the improved infantile mortality rate There was a substantial increase in the attendance at the centres and especially of expectant mothers and pre school children The death rate from pulmonary tuberculosis was 1 05 which is equal to the lowest recorded hitherto and for the non pulmonary form 0 24 per 1 000 which has not previously been equalled The new sanatorium ward block in the City Hospital for Infectious Diseases was continuously occupied by tuberculous patients but proved inadequate to meet the conditions resulting from the transfer of Poor Law hospital cases and one of the temporary wards belonging to the fever section of the hospital had to be set aside for tuberculosis Dr Kerr points the necessity of installing an x ray plant at the tuberculosis dispensary since only 60 per cent of the dispensary patients who require radiographic examination receive it at present In part explanation of the delay in notifying tuberculosis the prevalence of this disease in the North East of England is stated In view of the financial difficulties of the hospital the Royal Victoria Infirmary had undertaken the establishment of a contributory fund for Northumberland and Durham under which regular payments of small sums [illegible] contributors to Hospital treatment for themselves and their families

Society for Relief of Widows and Orphans of Medical Men

A quarterly court of the directors of this society was held on January 6th with the president Mr V Warren Low in the chair A vote of condolence on the death of Sir William Bennett senior vice president of the society was carried The death of one of the widows was reported she had been in receipt of grants since 1897 and had received a total sum of £3 100 Her late husband was elected a member in 1856 and died in 1897 having paid in subscriptions £52 10s A sum of £1,695 was voted for the half yearly grants, to be distributed among the forty nine widows and six orphans in receipt of grants and a further sum of £112 10s as special grants to five orphans who were over the age of 16 at which age the ordinary grants cease to enable them to continue their education and help them in studying for a profession The expenses of the past quarter were £88 2s 6d It was decided that at the next court the best means of making the society better known should be thoroughly discussed as many medical men are apparently unaware of its existence Membership is open to any registered medical man who at the time of his election is resident within a twenty mile radius of Charing Cross The annual subscription ranges from £2 2s to £4 4s according to the age of the member at the time of his election Relief is granted only to the widows and orphans of deceased members The secretary will forward particulars of membership to any medical man desirous of joining The offices of the society are at 11 Chandos Street Cavendish Square W 1 and the secretary attends there every Wednesday and Friday between 3 and 4 p m

King Edward's Hospital Fund

At a meeting of the General Council of King Edward's Hospital Fund for London held at 7 Walbrook, on January 5th the order of appointment signed by the Prince of Wales as president of the members of the General Council members of committee and officers for the year 1932 was read It was reported that His Royal Highness had appointed the following new members of the Hospital Economy Committee the Hon Margaret Bigge Dr Hugh Thursfield and Commander Alfred Williams A resolution was adopted expressing regret at the death of Sir William Bennett who had done good service to the King's Fund and the hospitals during many years On the motion of Lord Ebbisham seconded by Dr H Morley Fletcher the resolutions providing for the work of the Fund for 1932 which were approved at the meeting of the President and General Council held on December 11th 1931 were formally adopted including the terms of reference to the special committee appointed to inquire into the out patient question

London Ambulance Service

In December 1930 a circular was issued by the London County Council describing the facilities afforded by the London ambulance service and giving instructions for obtaining its help Under the conditions set out in this leaflet ambulances are supplied by the Council free of cost for the conveyance of patients to hospitals or private residences and to the council's hospitals for infectious diseases Ambulances and ambulance omnibuses are also provided at fixed charges for private patients within and beyond the administrative County of London Medical practitioners in London who desire to have a copy of the circular should apply to the medical officer of health for the metropolitan borough in which they practise Last month a new ambulance station was opened at Mount Nod Road, Streatham, supplementing the day and night South Western (Accident) Station in Landor Road Stockwell

Correspondence

NOTIFICATION OF INDUSTRIAL DISEASES

Statutory Requirements

SIR,—Many medical men are, I am afraid, unaware of their statutory obligation to notify certain industrial diseases I may quote two recent examples in regard to toxic jaundice one a series of cases due to tetrachlorethane, and the other a series due to arseniuretted hydrogen Only one of the cases was notified by a medical practitioner In the series due to arseniuretted hydrogen notification of the earliest case would have led to the adoption of measures which might it is anticipated have prevented the occurrence of subsequent cases including two deaths This serious result alone seems to be ample justification for asking you to allow me to draw the attention of the profession to the very important statutory requirement of notification of industrial poisoning under the Factory and Workshop Acts 1901–20 and Lead Paint (Protection against Poisoning) Act 1926

Every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from any of the following—

- Lead poisoning
- Phosphorus poisoning
- Arsenical poisoning
- Mercurial poisoning
- Carbon bisulphide poisoning
- Aniline poisoning
- Chromic benzene poisoning
- Anthrax
- Toxic jaundice
- Epitheliomatous ulceration or
- Chrome ulceration

} contracted in any factory or workshop

is required by Section 73 of the Factory and Workshop Act 1901, under penalty to notify the case forthwith to the Chief Inspector of Factories, Home Office London S W 1 and by Section 3 of the Lead Paint (Protection against Poisoning) Act 1926 he is also required to notify lead poisoning contracted by any person employed in, or in connexion with the painting of any building whether or not that building is a factory or workshop unless it has already been so notified and he is entitled to a fee of 2s 6d for so doing Forms for notification will be supplied on application to the Chief Inspector of Factories Home Office, S W 1 —I am etc,

JOHN C BRIDGE
H M Senior Medical Inspector of Factories

January 11th

MEDICAL TREATMENT OF GASTRIC ULCER

SIR,—Lord Moynihan's lecture on the prognosis of gastric ulcer published in your issue of January 2nd, is interesting to physicians owing to the light it throws upon the failure of medical treatment as commonly undertaken

Medical treatment fails from three chief causes (1) relief of pain is taken to mean cure of the lesion, (2) sufficient stress is not placed upon the necessity for complete rest during treatment (3) the improper but unavoidable treatment of patients with gastric ulcer as out patients inculcates into students and house physicians the idea that such a measure is adequate The widespread nature of such a belief was revealed to me during a recent M B examination when students from several London schools replied that out-patient alkali treatment was adequate

Rest is an essential in the treatment of any lesion which heals with difficulty, and this can be obtained for the

stomach in a variety of ways. The routine followed by myself is as follows:

1. Rest in bed until the ulcer has healed, the criterion of healing being three negative occult blood tests upon successive feeds and the recovery on examination of both deformity and local tenderness.
2. Half a drachm of a standard alkali powder after each feed.
3. Strict Lenhartz diet. If healing is delayed a second course is given, starting from the third day of the diet.
4. Belladonna is prescribed being given in full pharmacological dose—that is just below the level of tolerance. The tolerated dose often is high as [illegible] drops per diem of tincture belladonnæ.
5. Olive oil 3ss nocte. This both inhibits gastric secretion during the night and produces some laxative effect.

The total duration of such a course may be as long as ten weeks. This routine or one of equal severity is necessary before any group of cases can be regarded as having undergone adequate medical treatment, and no statistical information as to the value of medical treatment of gastric ulcer can be trustworthy unless based upon similarly treated groups of cases. Relief of pain and apparent healing can be obtained by less stringent means, but relapse is common.

A point of great importance arises if the above premisses be granted—namely, that treatment on these lines would soon result in the overfilling of the beds of general hospitals with cases of chronic gastric ulcer. It would therefore seem that the disease will not receive thorough treatment until there is available a large hospital whose whole activities are directed to this form of therapy upon a mass scale. To such an institution the surplus cases could be referred from general hospitals. Only in this way will the out-patient departments be freed from the reproach of inadequately treating patients with chronic gastric ulcer who are awaiting admission. At present their only means of obtaining adequate therapy are by producing a haematemesis, by suffering a perforation, or by prolonging an interminable existence dependent upon the doubtful vagaries of a long waiting list.—I am, etc.,

London, W.1, Jan. 5th. GEOFFREY BOURNE.

COLPORRHAPHY FOR PROLAPSE

SIR,—I was much interested in the article in the *Journal* of December 26th, 1931, on displacements of the uterus and the pelvic floor by Dr. S. Gordon Luker, and so pleased to find that he advises the operation of colporrhaphy as the treatment for prolapse of the uterus. Thanks to the pioneer work of my old chief, Professor A. Donald, this operation was firmly established in Manchester for the treatment of prolapse when I first entered the ranks of gynæcology twenty-seven years ago, and so good are its results that I have never employed any other.

I am sorry to see that Dr. Luker flirts with the idea of combining a ventral suspension operation with the colporrhaphy, and I am especially sorry to see the reason he gives for this combination. He considers it to be unnecessary in old people because the vagina can be made much tighter in the operation than in young or married women, and apparently he looks upon the tightness of the vagina as a factor in the cure of the condition. This I think is quite wrong, and whether the patient is old or young we do not consider an over-tight vagina to be an indication of manipulation on the part of the operator, and our endeavour is always to cure the prolapse by first suturing the deep structures without removal of an excessive amount of vaginal tissue. The only type of case in which ventral fixation might be necessary is the elderly virgin—the only other type being one in which there is advanced destruction of the pelvic floor. Even in this type of patient there is usually sufficient muscular tissue to make a good pelvic floor. [illegible] years of gynæcological practice [illegible] found it necessary to combine the operation with [illegible] than three or four occasions.

My chief reason for writing is to call attention to Dr. Gordon Luker's statement that it is [illegible] for a woman to have another child after [illegible] prolapse has been done as the [illegible] will be lessened and prolapse recur. There is a chance of recurrence whenever a woman has a child after colporrhaphy, just as there is with every parturient; and I do not think the percentage of recurrences is greater in these cases than that of the original prolapse in the other. I recently published in the *Proceedings of the Obstetrical Section of the Royal Society of Medicine* (Jan. 1932) quoted eighteen patients who went through labour after colporrhaphy was performed, and in only five (27.8 per cent.) was there any degree of recurrence.

Quite naturally we prefer to operate upon patients who have completed their families, but in the case of a young woman who has considerable discomfort from a prolapsed uterus after one child it is not necessary to consider [illegible] necessary treatment for [illegible] long period of years or to consider sterilization along with the operation of colporrhaphy. Colporrhaphy is an operation with a very low risk, and such a patient can have a colporrhaphy performed and be made quite comfortable with the knowledge that any further labour has no more risk of producing a recurrence than had the original labour, and that the difficulty of the labour itself is not increased.—I am, etc.,

W. FLETCHER SHAW, M.D., F.R.C.O.G.

Manchester, Jan. 6th.

THE PROPHYLAXIS OF TUBERCULOSIS

SIR,—Dr. Middleton Martin's interesting collection of salient facts (published in your issue of January 9th) seem to me to lead to other conclusions than the author draws from them. His final sentence reads: "Our aim should be to reduce the infection to the minimal protective dose—for example, by the commercial pasteurization of milk," etc.

In an earlier paragraph (7) he says: "7 per cent. of the samples [of cow's milk] are reported to be infected with the bovine form of the bacillus," and later: "it is more or less generally accepted that immunity more or less complete is afforded by early infection." If an early bovine infection safeguards against adult developments, why neutralize so benign a possibility by pasteurizing milk? Another conclusion [illegible] states: "Tuberculosis schemes do not appear to have had appreciable results in reducing the amount of tuberculous illness." Surely if that is true, undue expenditure going on all over the country by municipal, county service both residential and domiciliary, except [illegible] as he claims have an indirect effect to stimulate health living among the general population.

Present economic stringency calls for careful scrutiny of all public spending, and the fact that tuberculosis has a particularly harsh distribution of public funds allotted to it for certain definite purposes should call any modification of these reasons to be considered with special care. The arguments set forth in Dr. Martin's paper might reasonably suggest certain curtailments or alterations and conservations of the [illegible]. If, for instance, we can believe (*a*) that the fall of the death rate from tuberculosis is likely to proceed independently of our campaigning, (*b*) that the factor of direct personal infection has been unduly emphasized, and (*c*) that the commercial pasteurization of milk would lessen the toll of childhood tuberculosis, there surely a new orientation of outlook is definitely called for.

How may we best reduce infection to the protective minimal dose ? In discovering the right answer to this question much of our present work may be found of doubtful value but the 'problem of tuberculosis' is still a sufficient burden to demand a revised investigation in the light of fresh knowledge and accumulated experience —I am etc ,

Peppard Common Oxon Jan 9th ESTHER CARLING

CATARRHAL INFECTION AND FORMALIN VAPOUR

SIR —The memorandum by Dr Wells on the above subject in the *Journal* of January 9th, recalls to my mind an instructive and perhaps interesting incident which occurred during the war but it is now so many years ago that I cannot pledge myself to more than the substantial accuracy of the facts I state

We were experiencing a sudden and severe epidemic of influenza in the camp at Wimbledon to which I was senior medical officer and the men were disabled by the score—this of course threw a great strain on my medical officers and we decided to disinfect with formalin Regarding the matter as urgent I got into a light ambulance next morning and was driven to—let us say—Depot A ' where I indented for one gallon of formaldehyde They were sorry they had run out of it no doubt if I would go to Depot B I would be supplied but it would be wise to ask for three gallons The courteous officers at Depot B were in the same position , but I would certainly get it at Depot C provided I did not ask for less than ten gallons At Depot C I was told that it would be delivered that afternoon I got back to camp feeling very ill with influenza unable to eat any luncheon and only fit for bed to which I betook myself About 3 o clock my sergeant woke me to say that a lorry had delivered twenty gallons of formaldehyde what was he to do? My only reply was Disinfect and be —— , and here I fell asleep The next minute as it seemed to me I wakened coughing spluttering and feeling half suffocated Jumping out of bed I discovered my sergeant in much the same condition as myself vigorously scrubbing the floor with a stable broom which he was dipping in a pail of pure formaldehyde Postponing for the moment any observations I wished to make I rushed out for the fresh air when soon to my astonishment I began to feel much better I dined in mess that night I was well next day and taking the hint less heroic but equally effective from the sergeant s method we cleared the camp of influenza in less than a week —I am etc

GRAHAM GRANT

London W C Jan 11th Lieut Col R A M C T (ret)

OXYGEN AND EVEREST

SIR —Mr Odell in a letter to *Nature* of December 19th 1931 re emphasized conclusions drawn from the Everest expeditions as to the value of oxygen breathing apparatus and upheld the importance of acclimatization He stated that acclimatization at 27 000 to 28 000 feet should be aimed at and then oxygen used for the last 1 000 feet of ascent As it takes weeks for the party to reach 27 000 feet experiments in pressure chambers conducted on normal men for a few hours duration are of no significance We know however that natives do not go and live in the summer months above 18 000 feet and the question arises whether it is the altitude or the extent of the pastures which sets this limit

It was on account of this that Dr Argyll Campbell carried out many experiments with animals while I was in charge of the Department of Applied Physiology at the National Institute for Medical Research He used monkeys, cats rabbits, guinea pigs rats and mice enclosing these animals almost continuously in chambers for many weeks either the oxygen partial pressure or the barometric pressure being lowered gradually to resemble the conditions on the mountains In the latter case use was made of a chamber at Messrs Siebe Gorman s works His results have been published, and clearly show that at 20 000 to 29 000 feet the oxygen tension in the tissues is not kept at normal, but is markedly subnormal further, there result pathological changes particularly in the heart liver and brain Also he found that breathing oxygen at normal pressure for one hour daily did not help these animals materially

Thus in the so called acclimatization at these great altitudes the members of the expeditions will be deteriorating continuously that they did so in the past expeditions is proved, by the facts both that climbing became most difficult and that they all lost weight and appetite The climbers who persevered at 28 000 feet or above all came to grief

Another expedition of the same type is likely to end similarly unless other precautions are taken Dr Campbell found that out of more than a hundred healthy animals only about ten could tolerate the low oxygen partial pressure which pertains at 29 000 feet for any length of time A few animals survived for eight days—a record—under this pressure and recovered their health again when put under normal conditions

It is obviously very difficult to pick men able to tolerate such a low oxygen pressure for such a prolonged period as is necessary on the mountain The climbing party should be increased in numbers and thus the chance of one of them carrying on after 28 000 feet with or without the use of oxygen breathing apparatus will be increased All the evidence from the expeditions and from these experiments on animals leads to one conclusion —namely that above 28 000 feet deterioration is rapid and excessive and no acclimatization prevents this If the climbers were continuously supplied with oxygen at normal pressure they could, of course proceed straight up to the summit Some day perhaps a liquid oxygen apparatus will be established at the 18 000 feet level and Everest thereby conquered in safety —I am etc

Chilfont St Peter Jan 7th LEONARD HILL

THALLIUM TREATMENT OF RINGWORM

SIR —I have read with interest the article on thallium acetate in the treatment of ringworm of the scalp by my friend Dr J T Ingram in your issue of January 2nd and am in general agreement with what he writes At the same time I think that he dismisses a little too lightly the possibility of serious toxic effects even when errors of dosage have been eliminated I could have recorded a series of 100 consecutive cases treated by this method without a single alarming sequel and with a very high percentage of cure but I have since had one patient a boy of 8 who almost died and took many months to return to normal as I have recorded elsewhere (*Glasgow Med Journ* 1931 cxvi 57) The case recorded by Twiston Davies and Andrews (*British Medical Journal* 1927 ii 1139) also gives food for thought I believe with Dr Ingram that those who have condemned this method have done so without full and fair trial The very slight risk of poisoning no more than balances the risk of permanent alopecia following x rays the latter being a real one in clinics where only an occasional epilation is undertaken Possibly the ideal method will be found in a combination of thallium and x rays—that is 5 mg thallium per kilo and 1/2 Sabouraud—as suggested

by Manterro (*Giorn. Ital. di Derm. e Sifilo.* 1930, lxxi, 775; abstract in *British Journ. Derm. and Syph.* December 1931, p. 655).—I am, etc.,

CLIVE, Jan. 5th. J. JEFFESON SMITH.

SIR,—Dr. Ingram raises again the thorny problem of irradiation *versus* thallium acetate in the treatment of ringworm of the scalp, and comes to the conclusion that there is no serious evidence against the use of thallium acetate as a remedy for that condition *if the drug is properly administered*. (The italics are mine.)

I wish strongly to urge that x rays be the method of choice in *all* cases of ringworm of the scalp for the following reasons. Even granting that in expert hands, such as Dr. Ingram's, thallium is a safe remedy, there is no guarantee that it will be used with the same expert care by others, and disastrous overdosage is a possibility which could not be ruled out if the method came into general use. This is particularly so if, as Dr. Ingram suggests, it be used as an ordinary procedure in general practice. Again, is it really certain that no serious results can accrue from the drug used in the accepted doses? The desired therapeutic effect, depilation, proves the drug to be a toxic one, and it does not appear unreasonable to predict that odd cases of idiosyncrasy to it will crop up if it is used generally in place of x rays.

If there were no other remedy, then there would be reason to accept the above possible risk; but when x ray depilation is available with no fatal risk whatsoever, one would require other advantages in the thallium method over x rays to outweigh the risk of a fatal accident. Do these advantages exist? I have a very limited experience of the results of thallium acetate, and accept Dr. Ingram's figures as representing the optimum. Out of 101 cases, 7 were unsuccessful—approximately 7 per cent. During the past ten years I have treated 2,400 cases with x rays, with 30 cases of imperfect defluvium and persistence of infection—a proportion of 1.2 per cent. Again, the management of a normal case after irradiation is simple: daily unction of the scalp with 1 per cent. ammoniated mercury ointment and daily washing of the scalp after the first fortnight until the hair comes out. Dr. Ingram advises painting the scalp with 2 per cent. tincture of iodine three times a day for three weeks—a relatively more drastic treatment. The early regrowth of the hair after thallium acetate is a definite disadvantage. The newly growing hair may be visible at the third week, and in existence in the follicle at an earlier stage. Opportunity for reinfection is therefore present.

It is said that thallium acetate is the only method available in children of 3 years or younger. By suitable restraint of the patient, as described by me, children of all ages can be easily and safely irradiated. X ray treatment is a difficult procedure, requiring skill and experience, but this at least ensures that the patient shall be treated at a dermatological centre. The occasional treatment of a case either by x rays or thallium by those with slight experience in ringworm of the scalp is strongly to be deprecated in my opinion. I have had no liking of the dangers of x rays—those of overexposure and incomplete regrowth of hair. These have occurred in the past, but with a modern valve transformer apparatus, hot cathode tubes, information about such as the Mekapon, and due attention on the part of the operator, overexposure can be confidently excluded.

Even if thallium be a correct technique, an overdose is given the worst that can happen is a very bare, while at best possibly through accidental overdosage a case of the death of a patient with thallium acetate.—I am, etc.,

[illegible] CONRAN SHAW, M.B., B.Ch.

[illegible]

GLAUCOMA

SIR,—I have read Colonel Henry Smith's [illegible] so great a feeling of surprise that I am [illegible] if I have misunderstood him; but if I have [illegible] not intentional, for I have read it time [illegible]. He accuses me of a compromise between medical and surgical methods, and seeks to find in it the best of both worlds. What I actually [illegible] beginning of my article was: The [illegible] generally [illegible] view of to-day is a compromise in which both [illegible] are made use of, each [illegible] being judged on its own merits. I then went on to add: It may be said without fear of challenge that no case should be allowed to go to operation if the use of miotics, the employment of massage, and attention to the patient's general health suffice to arrest the course of the disease and keep the case *in statu quo*, and towards the end of the paper:

It is very important that he [the surgeon] should not be in a hurry, but it is essential that he should not delay a day longer than necessary once he has satisfied himself that non-operative treatment is failing to hold the disease in check. I feel confident that in this I shall have the support of a very great majority of ophthalmic surgeons in all countries.

I agree with Colonel Smith that a number of cases are allowed to go without operation much longer than they should be, and indeed I probably see more of these than most people, for I have these desperate cases referred to me far too late from every part of the world. This does not in the least affect my position as stated above. An extreme line of conduct is equally to be deplored, whether it is in favour of medical treatment or of operative. Does Colonel Smith suggest that every case of glaucoma should be treated by iridectomy? I have under my care a number of patients who, with medical treatment and massage, have been able to hold their own for [illegible] years. Some patients have actually died at advanced ages [illegible] at over 90 without ever requiring an operation. A number of others have been referred to me by surgeons who are adopting a like line of treatment, and who have asked my opinion on whether they are right in continuing it. Would my surgeon advocate operative treatment for such cases?

Colonel Smith says: Besides an iridectomy properly done in the early stage is *entirely satisfactory* (the italics are my own); why delay it? It is one of the simplest of operations in skilled hands, and practically devoid of risk. I have dealt with iridectomy fully in my *Treatise on Glaucoma* (second edition, 1922), and the many references in the index will show how [illegible] important that I would ask your permission to make a very few observations on it.

(1) I was led many years ago to look for a less severe operation for glaucoma just as Lagrange was led to look for a very large number of cases separate [illegible] both found the result *utterly unsatisfactory* [illegible] congestive cases. I have for many years [illegible] the profession my strong opinion that [illegible] only of value when [illegible] acutely [illegible] early cases. I found that the [illegible] which [illegible] held soundly did not [illegible] [illegible] which it [illegible] [illegible] held did so. (2) How [illegible] What [illegible] answer the question [illegible] [illegible] a patient if he could [illegible] [illegible] He would feel that to do so would be [illegible] [illegible] [illegible] confused [illegible]. The [illegible] surgeon may have [illegible] [illegible] Indeed [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] a different attitude [illegible] [illegible] glaucomatous [illegible] [illegible] [illegible]

fronted in European practice or even in the large Indian centres like Calcutta Madras or Bombay This is a side issue which does not concern us when discussing the rules for Western countries I do not deny Colonel Smith's contention that iridectomy is a simple operation in skilled hands but I hold most strongly that *in so serious a condition as glaucoma no operation is without risk* be the surgeon who he may We are not dealing with a healthy eye and though I believe that sclero corneal trephining is the safest of all operations for glaucoma and safer far than iridectomy, I would never undertake it or any other procedure without carefully impressing on the patient that definite risks are involved I have seen most bitter disappointments follow the neglect of this rule by others (3) There is another point I have among my patients a number of those on whom an iridectomy had been performed by others and who still complain most bitterly of the dazzling due to a wide coloboma They say that the iridectomized eye gives them constant inconvenience while the trephined eye enables them to see with comfort I am sorry to disagree with Colonel Smith so totally but my indictment of iridectomy in chronic glaucoma is that it is useless that it is mischievous that like all other operations in this dangerous condition it is not free from risk and that in any case neither it nor any other operation should be done so long as a careful routine examination shows that the patient is holding his own all round

Colonel Smith says he does not agree with my physiology and asks for the evidence on which my statement is based The views he condemns are not mine but those of Professor Arthur Thomson of Oxford They were originally set out fully in the *Ophthalmoscope* (1911, ix 470) and they are dealt with at length in my book already referred to on pages 73 to 80 97 and 98, and 171 to 173—thirteen pages in all It is obvious that space will not permit me to restate them here Thomson drew his deductions from observed anatomical facts supported by such laboratory experiments as he was in a position to make Clinical observation filled in the deduction from his hypothesis and explained in a most interesting way the known rises of pressure met with in glaucomatous patients during sleep which before that time had been a stumbling block to all those of us who knew the remedial value of sleep in glaucomatous attacks —I am etc

London W 1 Jan 11th R H ELLIOT M D, F R C S

CHILD GUIDANCE CLINICS AND NEO HIPPOCRATISM

SIR —A great many of the discussions in your valuable paper are largely old discussions under a new name and I think it would be well if the relations between certain of these were from time to time pointed out Thus in the discussion headed 'Child Guidance Clinics' we are mainly back at the subject of neo Hippocratism so ably introduced by Dr Robert Hutchison in his Harveian Oration and discussed in your correspondence columns in November The whole problem is What is the natural and proper position of the general practitioner in modern medicine with special reference in the present case to paediatrics preventive and curative?

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Dr Hutchison in his Harveian Oration called for 'bridge builders between clinicians and laboratory workers But at Dr Crichton Miller's establishment there is obviously needed a bridge builder between the different varieties of clinicians themselves Dr Crichton Miller tells us that no one member of his trinity would venture to poach upon the preserves of another Who then will have the temerity to poach on the preserves of all three and to act as an arbiter among their respective claims? Is this moderating function carried out by the director of the clinic? If so it can only be by virtue of a claim on his part to a greater knowledge of some kind than that possessed by all his subordinates together What is this knowledge? Simply the knowledge characteristic of the best type of general practitioner—the knowledge first that every individual is not only a physical but also a psychical and a social being and secondly the knowledge of the relative importance of these three aspects (for they are only aspects) in any particular case Dr Crichton Miller does not take the potentialities of the general practitioner seriously enough To the extent that he as director directs his clinic effectively he is a glorified general practitioner himself—and let him be proud of the fact

But why should all these child welfare clinics be called for and why is the family doctor no longer looking after the children as he used to do? In my opinion it is very largely because he is now being called upon to do so much extraneous work Instead of being left to use his great practical gifts natural and acquired in the treatment of sick people his day is more and more taken up with trivial duties such as those of attaching conventional labels (diagnosing as it is called) prescribing stock mixtures filling up schedules etc A lot of this is not doctor's work at all It is taking the heart out of many doctors who feel themselves capable of much better things

Dr Fothergill clearly sees the potentialities of the general practitioner and he knows as all genuine neo Hippocratists know that medicine needs the general practitioner badly *Without efficient* general practitioners to guide them the multitudinous specialists of our day are like sheep without a shepherd Dr Fothergill is hopeful that legislation may provide an efficient domiciliary medical service for the child Then as he says the home doctor selected by the family would take command and use when and how he considers fit these numerous specialists as his assistants Excellent! But why think it necessary to invoke legislation for this purpose? Is it

not conceivable that we have already too much rather than too little legislation and that if a lot of the existing legislation were scrapped and the medical practitioner left alone a great deal more they would soon revert to their central and dominating position in the medical world? If we believe that the family is doomed—and with it of course the family doctor—then child guidance clinics represent an advance in social evolution. Otherwise they are at best a *pis aller* until social sanity returns. But do not let us expect that the State is going to restore us to unity in this or in any other matter. The State is lifeless: it is only a machine. We must regain sanity by our own individual efforts.—I am, etc.

ARTHUR J. BROCK.

North Queensferry, Fife, Dec. 28th, 1931.

SIR,—In this correspondence misunderstanding seems to be arising through the use of the term "mass treatment" in two different senses: (*a*) as the treatment of single patients by teams (masses?) of specialists, and (*b*) as the stereotyped treatment of masses of patients. It would be a pity if the confusion obscured the interesting fact that in championing the family physician against official or institutionalized practice Dr. Lothergill is really upholding the cause of psychological treatment against the tendency to an impersonal objective purely technical approach to the patient. Thus he points out that teams of experts can never establish the same personality relationships with the family and the patient that the family physician enjoys. Since this relationship is *the* vital factor in psychological investigation and treatment he protests with reason against the family physician being supplanted by a social worker on whose reports a second-hand judgement will be based by someone in an office.

Dr. Lothergill claims in effect that too many cooks spoil the broth, and that the responsible physician should be in direct personal touch with his concrete problem. He might legitimately have gone further and claimed that in psychology (*a*) no vital information can be got by formal interrogation, (*b*) no valid judgement of a psychological situation can be formed on verbal—that is conceptual—descriptions (reports) unless these are produced by a skilled psychologist or with the insight of the great literary artist, (*c*) nothing could be more absurd than the attempt to construct or extract from a number of reports by different observers from different points of view any unified comprehension of the whole individual and his environment—no correlation of summary independent opinions can ever approach in value a personal appraisement formed in favourable rapport with the patient, (*d*) no effective influence can be exerted on psychopathological situations except through the medium of such personal confidence and esteem as is never given to a strange official.

Of course in this country the institutionalization of medicine (with its consequent elimination of personal rapport between doctor and patient as a factor previously universally established) is [illegible] In the actual objectives of his argument Dr. Lothergill would have the sympathy of his opponents. Dr. Crichton-Miller's argument is that the general practitioner has neither the time nor the training to deal with psychological problems—that is, the removal of personal responsibility of individual and directive relationship. We think that the whole question [illegible] will be decided by the [illegible] time and all other [illegible].

I would [illegible] with Dr. Lothergill's plea for [illegible] necessary [illegible] as far as possible in family [illegible] physician. I [illegible] responsible [illegible] interest that the administrative [illegible] largely responsible [illegible] time to [illegible] that would ultimately reduce [illegible] to the role of [illegible] and specialist clinics. The [illegible] thoroughly specialized [illegible] to be stated.

I must however point out that medical [illegible] *not* trained to deal with [illegible] I think it could be shown that the medical curriculum is the worst imaginable preparation for psychological [illegible] It is notorious how much the student has to [illegible]—and unlearn—before he can undertake even the humblest [illegible] general practice. But this psychological training is not sufficient in itself to enable him to deal with [illegible] problem child. The specialist does [illegible] opportunity to acquire the necessary knowledge.—I am, etc.,

[illegible] W. I. JAMESON. IS. D. SUTTIE, M.D.

TREATMENT OF ANTHRAX

SIR,—Having read your review of the annual report of the Chief Inspector of Factories referring to [illegible] made in the treatment of anthrax by serum injection instead of excision, and having studied the subsequent correspondence advocating, possibly rightly, [illegible] anthrax, I would like to mention our experience [illegible] with local injections of carbolic acid.

In this hospital we see from seven to eight cases per year of malignant pustule mostly from [illegible] skins and furs. They are all treated by injection of 5 per cent. carbolic acid both with and around the pustule. Usually 1 to 2 c.cm. is sufficient; a second injection is rarely necessary. All except the most severe cases are treated as outpatients. No serum nor vaccine nor other general treatment or operative measures are employed.

In the course of nine years only two deaths have been recorded both in late cases. During the last seven years seven cases. All made a complete recovery. It is dramatic to see how the gland enlargement and oedema subside in the first twenty-four hours following the injection. In five cases the fly was [illegible] the back of the neck and in one the thigh. The [illegible] interesting, as occurring on a part of the body not much exposed. Twenty days previously the patient might in an unsleeping moment have put [illegible] Twenty later the pustule began. On the outer side of [illegible] was a large typical anthrax pustule with [illegible] gangrenous centre and vesicles on the edge [illegible] surrounding area. The inguinal and external [illegible] markedly enlarged. He was [illegible] temperature of 102 F. Around and [illegible] 15 c.cm. 5 per cent. carbolic [illegible] next day the [illegible] were decidedly smaller. Within [illegible] perature was normal. The [illegible] oedema [illegible].

This patient [illegible] I would like to [illegible] do. Might also [illegible] the [illegible] they are cured [illegible] [illegible] [illegible]

fronted in European practice or even in the large Indian centres like Calcutta Madras or Bombay This is a side issue which does not concern us when discussing the rules for Western countries I do not deny Colonel Smith's contention that iridectomy is a simple operation in skilled hands but I hold most strongly that *in so serious a condition as glaucoma no operation is without risk* be the surgeon who he may We are not dealing with a healthy eye and though I believe that sclero corneal trephining is the safest of all operations for glaucoma and safer far than iridectomy I would never undertake it or any other procedure without carefully impressing on the patient that definite risks are involved I have seen most bitter disappointments follow the neglect of this rule by others (3) There is another point I have among my patients a number of those on whom an iridectomy had been performed by others and who still complain most bitterly of the dazzling due to a wide coloboma They say that the iridectomized eye gives them constant inconvenience while the trephined eye enables them to see with comfort I am sorry to dis agree with Colonel Smith so totally but my indictment of iridectomy in chronic glaucoma is that it is useless that it is mischievous that like all other operations in this dangerous condition it is not free from risk and that in any case neither it nor any other operation should be done so long as a careful routine examination shows that the patient is holding his own all round

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But why should all these child welfare clinics be called for and why is the family doctor no longer looking after the children as he used to do? In my opinion it is very largely because he is now being called upon to do so much extraneous work Instead of being left to use his great practical gifts natural and acquired in the treatment of sick people his day is more and more taken up with trivial duties such as those of attaching conventional labels (diagnosing as it is called) prescribing stock mixtures filling up schedules etc A lot of this is not doctor's work at all It is taking the heart out of many doctors who feel themselves capable of much better things

Dr Fothergill clearly sees the potentialities of the general practitioner and he knows as all genuine neo Hippocratists know that medicine needs the general practi tioner badly Without efficient general practitioners to guide them the multitudinous specialists of our day are like sheep without a shepherd Dr Fothergill is hopeful that legislation may provide an efficient domiciliary medical service for the child Then as he says the home doctor selected by the family would take command and use when and how he considers fit these numerous specialists as his assistants Excellent! But why think it necessary to invoke legislation for this purpose? Is it

not conceivable that we have already too much rather than too little legislation and that if a lot of the existing legislation were scrapped and the medical practitioners left alone a great deal more they would soon revert to their central and dominating position in the medical world? If we believe that the family is doomed—and with it of course the family doctor—then child guidance clinics represent an advance in social evolution Otherwise they are at best a *pis aller* until social sanity returns But do not let us expect that the State is going to restore us to sanity in this or in any other matter The State is lifeless it is only a machine We must regain sanity by our own individual efforts—I am etc

ARTHUR J BROCK

North Queensferry Fife Dec 28th 1931

SIR—In this correspondence misunderstanding seems to be arising through the use of the term mass treatment in two different senses (*a*) as the treatment of single patients by teams (masses!) of specialists and (*b*) as the stereotyped treatment of masses of patients It would be a pity if this confusion obscured the interesting fact that in championing the family physician against official *or institutionalized* practice Dr Fothergill is really upholding the cause of psychological treatment against the tendency to an impersonal objective purely technical approach to the patient Thus he points out that teams of experts can never establish the same personality relationships with the family and the patient that the family physician enjoys Since this relationship is *the* vital factor in psychological investigation and treatment he protests with reason against the family physician being supplanted by a social worker on whose reports a second hand judgement will be based by someone in an office

Dr Fothergill claims in effect that too many cooks spoil the broth and that the responsible physician should be in direct personal touch with his concrete problem He might legitimately have gone further and claimed that in psychology (*a*) no vital information can be got by formal interrogation (*b*) no valid judgement of a psychological situation can be formed on verbal—that is conceptual—descriptions (reports) unless these are produced by a skilled psychologist or with the insight of the great literary artist (*c*) nothing could be more absurd than the attempt to construct or extract from a number of *reports* by different observers from different points of view any unified comprehension of the whole individual and his environment—no correlation of summary independent opinions can ever approach in value a personal appraisement formed in favourable rapport with the patient (*d*) no effective influence can be exerted on psychopathological situations except through the medium of such personal confidence and esteem as is never given to a strange official

Of course in this country the institutionalization of medicine (with its consequent elimination of personal rapport between doctor and patient) is as yet rather a pressing danger than an established evil In the essential implications of his argument Dr Fothergill would have the sympathy of his (apparent) antagonists Dr Crichton-Miller's argument is that the general practitioner has neither the time nor the training to deal with psychological problems—that is those involving the mental adaptations of individuals and affective relations between them The same kind of question arises as between the general practitioner and all the other specialists

I would agree with Dr Fothergill's plea for better domiciliary treatment (as a service performed by the family physician) It is neither equitable nor in the public interest that the administrative authorities which are so largely responsible for the general practitioner's lack of time should use this artificial disability to excuse a policy that would ultimately reduce the general practitioner to the role of scout or jackal to the hospitals and specialist clinics The intrinsic impossibility of a thoroughly specialized medical profession should not need to be stated

I must however point out that medical students are *not* trained to deal with personality or family problems I think it could be shown that the medical curriculum is the worst imaginable preparation for psychological work It is notorious how much the graduate has to learn—and unlearn—before he can undertake even the human side of general practice But this psychological training is not sufficient in itself to enable him to deal with the problem child The specialist alone has the opportunity to acquire the necessary knowledge—I am etc

London W 1 Jan 5th IAN D SUTTIE M D

TREATMENT OF ANTHRAX

SIR—Having read your review of the annual report of the Chief Inspector of Factories referring to advances made in the treatment of anthrax by serum injections instead of excision and having studied the subsequent correspondence advocating neosalvarsan as a specific for anthrax I would like to mention our experience here with local injections of carbolic acid

In this hospital we see from seven to ten cases a year of malignant pustule mostly from factories dealing in skins and furs They are all treated by injection of 5 per cent carbolic acid both with and round the pustule Usually 1 to 2 c.cm is sufficient a second injection being rarely necessary All except the most severe cases are treated as out patients No serum neosalvarsan or other general treatment or operative measure is employed

In the course of nine years only two deaths have been recorded both in late cases During the last seven years I have seen seven cases All made a complete recovery It is dramatic to see how the oedema and erythema subside in the first twenty four hours following the injection In five cases the face was affected in one the back of the neck and in one the thigh The latter is interesting as occurring on a part of the body not usually exposed Twenty days previously the man had spent a night in an inn sleeping in a sheepskin coat Ten days later the pustule began On the outer side of the thigh was a large typical anthrax pustule with a black gangrenous centre and vesicles in the acutely inflamed surrounding area The inguinal and external iliac glands were markedly enlarged He was a very sick man with a temperature of 102° F Around and beneath the pustule 15 c.cm 5 per cent carbolic acid was injected The next day the swelling was considerably less and the glands were decidedly smaller Within thirty six hours the temperature was normal The central sloughing was removed and he was discharged on the eleventh day

This treatment is simple cheap and painless and I would like to know if others find it as dependable as I do All the above cases were Chinese and I have found that there is some racial significance in the severity they are cured Squamous cases In some cases the infection runs a milder course However the treatment is often if not always fatal The disease this disease well and dreaded as a certainty to —I am etc

GEORGE C DONALD FRCSE

The [illegible]

CHLOROFORM IN LABOUR

SIR —I think that Dr Solomons comes to the crux of the matter when he states in his letter, published on January 2nd that 'where junior assistants are giving the anaesthetics deaths do occur" About a decade ago when I in company with other Glasgow students did our cases at a famous Dublin maternity hospital we were horror stricken at the manner in which chloroform was administered by the junior house surgeons I remember vividly the discussions we had concerning this Since then I have conducted a very large number of confinements and have without exception always employed chloroform My cases have been often in unfavourable circumstances without adequate assistance yet I have never lost a patient nor like your other correspondents had a moment's anxiety As cock sure students we came to the conclusion that the teaching of chloroform administration was only done properly in Scotland where the anaesthetic had its original home! —I am etc

Glasgow Jan 5th H Y STODDART

MEDICAL CENTENARIANS

SIR —In the *Journal* of December 19th, 1931 (p 1141) the reviewer of Mr Forbes Gray's book *I've Score* expresses surprise that diligent search in many likely quarters had failed to reveal more than one medical man who reached the hundred year mark—Sir Henry Pitman Many medical men must have passed the century In the Bengal Medical Service three men have done so in the past thirty five years As they were all medical officers of the Bengal Army the dates of their births and deaths have all been officially recorded They are (1) John Bowron born February 1799, died at Hove, March 3rd 1899 (2) Henry Benjamin Hinton born March 7th 1813 died at Adelaide May 14th 1916 (3) Thomas Lambert Hinton born May 1st 1808 died at St Leonards June 10th 1908 T L Hinton only spent a few years in India but the other two put in full service of a quarter of a century or more in that country The two Hintons though contemporaries were not related to each other During the last few years of H B Hinton's life there were I remember several references to him in the *Journal* He reached the age of 103, the other two barely passed the century by a month —I am, etc

Laling Dec 27th 1931 D G CRAWFORD

MEDICAL CONDITIONS IN SOVIET RUSSIA

SIR —Will you allow me to endorse to the full the observations of your correspondent Dr V P Wasson on this subject published in the *British Medical Journal* of January 2nd?

I have no first-hand knowledge of present day conditions in Russia but my knowledge of pre war conditions in that unhappy country and particularly of those connected with the study and practice of the medical arts and sciences was close and intimate and enables me to speak with no uncertain voice on this question If those whose object it is to depict in rose colour the actual state of medicine in Russia are driven to support their claims by giving a grotesquely untrue picture of pre Bolshevik conditions their case must be a weak one indeed At the time of the Twelfth International Medical Congress held in Moscow in 1897 I published in the form of a 32 page supplement to the *Lancet*[1] a fairly complete account of Medicine past and present in Russia (Owing to an unfortunate misunderstanding, the essay was published without my name and appeared as the joint work of several authors, which was not the case) I cannot do better than quote the closing words of that essay

> Of the medical institutions of Russia it may truly be said that they are worthy of the great country which has given them birth of the great people by which they are supported and of the great profession which has brought them to their present admirable state of development

That statement was unquestionably true of the conditions prevailing a generation ago whether it could with equal truth be made of the conditions prevailing to day I am not in a position to say —I am etc

Ealing W 5 Jan 11th T G CLEMOW

[1] *Lancet* 1897 ii 342

MR PUNCH'S HUMP

SIR —Many like Dr Tidy, must have speculated upon what manner of man Mr Punch's prototype may have been All must have wished they had been present to witness Dr Tidy in the guise of Sherlock Holmes pursuing his quarry He suggests that the original Mr Punch was an achondroplasic dwarf, basing this thesis partly upon his mental attributes and partly upon his physical configuration and he would explain the hump as a sartorial artefact Mr Punch of our beloved journal it is true wears a perpetual smile and would certainly seem to see the amusing and bright side of life but it must not be forgotten that the same gentleman, in the more domestic surroundings of the puppet show, is a wife beater and is depicted as a rather sinister figure more akin to some other historical hunchbacks On the physical side save that he is a dwarf I would suggest that Mr Punch shows no other characteristics of achondroplasia Many dwarfs and indeed non dwarfs present a rather marked paunch at the same age Again though two types of achondroplasia are recognized—the pug dog type with squat nose and the dachshund type with long nose—in the case of the latter the nose is long but straight rather than of Wellington type One other characteristic is I think of interest Mr Punch shows a long curved sweep of the jaw line without marked angle a feature I believe to be characteristic of the face of persons with deformity following Pott's disease and which gives rise to what the French might call a *facies pottique*— I am etc

London W 1 Jan 11th HUGH S STANNUS

SIR —I wonder whether Dr Letheby Tidy would have reached another conclusion as to the nature of Mr Punch's hump had he studied Toby There is little difficulty in defining the prototype of Toby as we see him careering with Mr Punch in the Summer Almanack or dancing in the Epilogue There Toby is a typical canine achondroplasic But each week he reveals as he sits for his portrait the facies of canine hyperthyroidism and the coarse limbs which doubtless he derived from his father Incidentally out of respect for his feelings I suggest that the identity of Toby's father be unnamed Mr Punch, whatever his mood remains an achondroplasic, but Toby appears to take delight in revealing his catholic ancestry I find only one hypothesis to fit these facts—that Toby's prototype was a dog of the Never-Never Land contemporary with the cat who walked by himself and with the elephant's child when the camel got his hump

Consequently I should suggest to Dr Tidy that Mr Punch's artists are not at fault we know that they invariably interpret the truth of life but sometimes they see life far beyond the limited range of biologists Where and when Mr Punch's artists saw the prototypes of Mr Punch and Toby only they can reveal but I suspect they visited the Never Never Land It was there I

suggest that Correggio saw Cupid with wings considerably atrophied since the day of Giotto's cherubim two hundred years previously and it was there Mr Punch's artists may have seen the achondroplasic descendant of cupids and cherubim After all both the time interval and the consanguinity enforced upon such a select company would permit of a mutation such as achondroplasia and of its becoming fixed

I respectfully disagree with Dr Tidy's conclusion I suggest that Mr Punch's bathing dress conceals the vestiges of a pair of wings and that an hypothesis based upon the palpation of a mere man is untenable since Mr Punch and Toby are of the angels —I am etc

Royal Veterinary College NW1 Jan 11th TOM HARE

THE LAW AND ABORTION

SIR —In my day at Oxford they still taught the mediaeval logic One of the fallacies was the *ignoratio elenchi* —avoiding or passing over the exact point to be proved Dr Parry stated that abortion was punishable at Common Law This would mean that it was triable at assizes I asked for an indictment or a case and he replies with quotations from Fleta and Bracton—authors only too familiar to Coke and the great Common Lawyers of the seventeenth century Darling J must have had the words of the Act in his mind for good and accurate as was his memory he had no need to go outside the statute Those who care to see the real value of the Common Law as against the Canon Law should read *The Common Law* by Oliver Wendell Holmes J (son of the physician) or Pollock's little book *Our Lady the Common Law* —I am etc

London S1 Jan 8th GEORGE JONES

Obituary

HUGH S DAVIDSON OBE MB CHB FRCSED

Gynecologist Royal Infirmary Edinburgh

Dr H S Davidson gynaecologist to the Royal Infirmary physician to the Royal Maternity and Simpson Memorial Hospital and lecturer on clinical gynaecology and midwifery in the University of Edinburgh died with startling suddenness on January 5th at the Edinburgh Ice Rink where he had been curling His tragic death when he was apparently in good health and in the full vigour of an active and useful life cast a gloom over medical circles in Edinburgh and has been as deeply deplored by his many friends outside the city

Hugh Stevenson Davidson was born at Melrose and was educated at the Edinburgh Institution His student career was outstanding and he graduated at Edinburgh University in 1903 with first class honours After acting as resident physician at the Royal Infirmary he became clinical assistant at the Samaritan Free Hospital London and thereafter spent a period of study in Prague and Vienna Returning to Edinburgh in 1906 he was appointed house-surgeon and later private assistant to the late Dr J W S Haultain a happy association which exerted a profound influence on Davidson's subsequent career Soon afterwards he received appointments to the staff of the Deaconess and Chalmers Hospitals and from that time onwards his progress was rapid and may be said to have culminated two years ago in his election as president of the Edinburgh Obstetrical Society His term of office as president which closed last November was highly successful—a tribute to his enthusiasm and geniality

As a surgeon of sound judgement and exceptional manual dexterity Davidson enjoyed the confidence of numerous family doctors and had earned the gratitude of a wide circle of patients He was a popular teacher who liked to dwell on the practical side of his subject His war record was a distinguished one and he attained the rank of lieutenant colonel in the Royal Army Medical Corps A true son of the Borders he had a great love and aptitude for outdoor sports He played Rugby football for the University fifteen at a time when it was a force to be reckoned with in Scottish football He was a good shot a keen golfer and a more than useful tennis player He represented Scotland at curling on several occasions His nickname of Dainty stuck to him throughout life Altogether he was a peculiarly lovable personality and many happy memories will always be associated with him

NICOL MACNICOL RANKIN *MC* MB CHB

Surgeon Central London Throat and Ear Hospital

Dr DAN MCKENZIE writes

The death of Nicol Rankin on December 11th 1931 at the early age of 47 will be mourned by all who knew him not only as the cutting short of a promising career on the verge of fulfilment but also as the disappearance of a man of sterling worth and ability A graduate of Glasgow University of 1908 Rankin soon afterwards came to London and proceeded to specialize in oto laryngology attending the Central London Throat Nose and Ear Hospital where he filled the usual junior appointments that serve as stepping stones to the staff But the outbreak of war interrupted the normal course of events and Rankin lost no time in taking his place in the army Attached to the Buffs he soon earned the highest respect of officers and men an honour which was fixed for all time by the gallant and humane deed that won him the Military Cross As Captain Gordon Lindley *MC* a fellow officer writes Those who were wounded on that day (August 18th 1916) and were attended to by him under a heavy barrage with blood streaming down his own face from a shrapnel wound were delighted to see subsequently that he had been awarded the Military Cross When the war came to its close Rankin resumed touch with the Central and soon afterwards was appointed to the surgical staff In that post his quiet efficiency his diligence the kindly interest he took in his patients and all the outward manifestations of his own earnest yet gentle personality won the regard of every member and official of the hospital and his loss will be long and deeply lamented Much sympathy is felt for his widow and her young family

We regret to announce the death of Dr JOHN RICHARDSON ARMSTRONG which took place at Treorchy Glamorgan on December 20th 1931 Born on April 19th 1872 the eldest son of Charles Armstrong of Lockerbie Dumfries Dr Armstrong was educated at Edinburgh University where he graduated MB CM in 1893 proceeding to the degree of MD in 1896 For the past thirty five years he had practised at Treorchy and at the time of his death was surgeon to Pentwyn Hospital and to Treherbert Hospital He had extensive experience in general practice and was one of the first practitioners to record the advantages of anti diphtheritic serum in 1899 he published an article in the *Lancet* on The use of diphtheria antitoxin in general practice with results of treatment in 122 cases of diphtheria He was a member of the committee of the local Branch of the British Medical Association and of the Rhondda Medical Society as a family practitioner Dr Armstrong had a large and influential practice being highly esteemed for his professional skill and outstanding personality His death has been a great loss to the community and to his medical colleagues

The following well known foreign medical men have recently died Professor EDUARD KAUFMANN emeritus professor of pathology at Gottingen author of a textbook on morbid anatomy aged 71 , Geh Med -Rat FERDINAND KLAUSSNER extraordinary professor of special surgery at Munich and author of a work on bandaging for students and practitioners aged 74 Dr WALTHER SCHMITT an eminent gynaecologist of Essen, aged 42 , Dr GUSTAVE LE BON of Paris aged 91 author of works on crowd psychology evolution of matter philosophy of history, and many other books Dr RENE TESSON, professor of clinical surgery at the Angers school of medicine , Dr GEORGES FERRY head of the surgical clinic at the Strasbourg Faculty of Medicine , Dr G MAHOUDEAU of Paris professor at the Ecole aged 80 Dr J RAYMOND MOLINIE, a aged 61 and Professor ELISEO CANTON founder of the obstetrical and gynaecological clinic at Buenos Ayres in 1900 aged 70

Universities and Colleges

UNIVERSITY OF LONDON

UNIVERSITY COLLEGE

A course of six public lectures on chemotherapy will be given by Mr H R Ing M A D Phil on Tuesdays at 5 p m beginning January 19th The lectures are open without fee or ticket to students of the University and others interested in the subject They will be delivered in the Physiology Theatre (entrance Gower Street)

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The following honorary appointments to the staff of the London School of Hygiene and Tropical Medicine are announced Dr James Fenton medical officer of health for the borough of Kensington to be an additional lecturer on public health administration and practice Mr L W G Malcolm M Sc conservator of the Wellcome Historical Medical Museum to be a lecturer on racial hygiene

ST BARTHOLOMEW'S HOSPITAL MEDICAL COLLEGE

A course of three lectures illustrated by lantern slides on the feeding and nutritional disease of the infant will be given by Dr Leonard Findlay at St Bartholomew's Hospital Medical College E C on February 8th 9th and 12th at 5 30 p m Admission to the lectures which are addressed to the students of the University and to others interested in the subject is free without ticket

BEDFORD COLLEGE

Professor S J Cowell will give a course of four lectures on modern aspects of nutrition in the physiological department of Bedford College Regent's Park N W on Wednesdays February 3rd 10th 17th and 24th at 5 15 p m Admission to the lectures is free without ticket

UNIVERSITY OF LIVERPOOL

The following candidates have been approved at the examination indicated

D P H—A Ashworth Elizabeth M Harding R I McMorris J S Mather W J Pierce J H Pottinger (with distinction) A J Walsh

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Lectures

The first course of lectures for 1932 at the Royal College of Surgeons includes six lectures by Sir Arthur Keith on January 18th 20th 22nd 25th 27th and 29th on malformations of the human body considered from a new point of view Professor J P Hosford will lecture on some factors in the causation of hydronephrosis on February 1st Professor Reginald T Payne on February 3rd on excretion urography Professor A Remington Hobbs on February 5th on puerperal sepsis Professor J A Ryle on February 8th on the natural history of duodenal ulcer Professor H A Harris on February 10th and 12th on the comparative anatomical aspect of pre natal infantile and adult disease in man and animals with special reference to bone growth Professor W E Le Gros Clark on the structure and connexions of the optic thalamus on February 17th and 19th and Professor A J E Cave on February 22nd on the morphological and functional anatomy of the human cervical spine The lectures will be given at the College at 5 p m The Hunterian Oration by Mr Wilfred Trotter will be delivered on Monday February 15th at 4 p m

The Services

The King has approved the appointment of Mr Walter Rowley Bristow as orthopaedic consultant at King Edward VII's Convalescent Home for Officers at Osborne Isle of Wight

DEATHS IN THE SERVICES

Lieut Colonel Arthur Bowdich Cottell F R C S Ed R A M C (ret) who died on January 1st aged 76 years was educated at Blundell's School Tiverton and at St George's Hospital London Having passed the examination for membership of the English College of Surgeons in 1879 he entered the Royal Army Medical Corps and after a short term of service at home was sent to Hong Kong There he was in medical charge during 1882-83 of the hospital ship *Menes* which was moored in the harbour After his return he was stationed at Chatham then Gibraltar and Colchester until on the outbreak of the South African war he was appointed to command the 11th Bearer Company and sailed with it and the 10th Hussars in the s s *Ismore* The ship went ashore and became a total wreck near the Cape of Good Hope but no lives were lost Major Cottell succeeded in landing his medical stores and was proud of the fact that he was thus able to feed all the shipwrecked troops until relief arrived He took part in French's famous ride and relief of Kimberley and was present at the actions of Driefontein and Paardeberg Like so many others he fell a victim to typhoid fever and after being dangerously ill was sent home in June 1900 After a year's sick leave he was invalided out of the Service with the rank of lieutenant colonel On the outbreak of war in August 1914 he offered his services and was appointed to medical command on Mr Lofflin's steam yacht *Albion* which transported wounded between Boulogne and Southampton as Hospital Yacht No 9 from October 1914 to the end of January 1915 when the authorities discontinued the service After a short rest he started on a number of lecturing tours on venereal disease These lectures were addressed to troops at home and were much appreciated but his health giving way he was forced once more to retire and was finally invalided He held the South African war medal with three bars and the three medals for the great war Cottell was ever proud of his corps and it was a great grief to him to have to leave it in 1900 on account of a dilated heart In the then state of medical knowledge the prognosis in his case was very grave but he recovered enough to play golf with considerable effect to take several voyages to the East and to Australia and South America and finally to withstand the strain of many stormy passages in a comparatively small vessel between Southampton and Boulogne till the strain of the lecture tours proved to be the last straw He was an active member of the R A M C Benevolent Association and local committees on which he served until his final illness prevented his attendance

Lieut Colonel George John Gibson R A M C (ret) died on October 28th 1931 aged 87 He was born on December 27th 1843 was educated at Queen's College Cork and graduated M D and M Ch in the Queen's University of Ireland in 1866 Entering the Army as assistant surgeon on October 2nd 1866, he attained the rank of lieutenant colonel after twenty years service and retired on October 21st 1891 In the old regimental days he served in the 2nd Foot now the Queen's Own West Surrey Regiment once known as Kirke's Lambs and must have been one of the last survivors of the medical officers who served as regimental officers He served in the Afghan war of 1878-80 was present at the action of the Peiwar Kotah was mentioned in dispatches in the *London Gazette* of November 7th 1879 and received the medal with a clasp

Lieut Colonel John Thomas Carey R A M C (ret) died at Saumarez House Guernsey on December 31st 1931 aged 80 He was the last surviving son of Thomas Carey of Frogmore Guernsey and of Alicante Spain and was born at Alicante on October 17th 1851 He was educated at Guy's and at Aberdeen where he graduated M B and C M in 1875 after taking the M R C S in 1874 and the L S A in 1875 Entering the Army as surgeon on February 4th 1877 he became lieutenant colonel after twenty years service and retired on May 25th 1904 After retirement he was employed on the retired list at Manchester in 1904-8 He served in the Afghan war of 1878-80 when he took part in the assault and capture of the Peiwar Kotih was mentioned in dispatches and received the medal with a clasp and in the Egyptian war of 1882 gaining the medal and the Khedive's bronze star

Medical News

The first meeting of the Royal Society of Tropical Medicine and Hygiene in its new hall will be held at Manson House 26 Portland Place, W on Thursday next January 21st Dr C M Wenyon will read a paper at 8 15 p m on Leishmaniasis and the problem of its transmission A demonstration to illustrate the subject of the paper will be given at 7 45 p m

At the annual meeting of the Royal Microscopical Society to be held at B M A House Tavistock Square W C on Wednesday January 20th at 5 30 p m, Professor R Ruggles Gates F R S will deliver his presidential address on Nuclear structure

At the meeting of the Medico Legal Society to be held at 11 Chandos Street W 1 on Thursday January 28th, at 8 30 p m Dr Lionel Weatherly will read a paper on 'The liberty of the subject from the medico legal aspect a discussion will follow

A meeting of the University of London Medical Graduates Society will be held on Thursday, January 21st at 4 p m at the London School of Hygiene and Tropical Medicine Demonstrations and films will be shown and tea will be served All medical graduates of the University of London whether members of the society or not are invited Admission will be by ticket only for which application should be made before January 18th to the honorary secretaries University of London Medical Graduates Society, 11 Chandos Street Cavendish Square W 1

The next monthly clinical meeting for medical practitioners at the Hospital for Epilepsy and Paralysis Maida Vale W 9 will be held on Thursday January 28th at 3 o'clock Dr E Blake Pritchard will demonstrate clinical varieties of muscular weakness Tea will be provided and it will be a convenience if those intending to be present will notify the secretary

The Fellowship of Medicine and Post Graduate Medical Association announces that Dr W Langdon Brown will deliver two further lectures on endocrinology on January 18th and 22nd These will be given at 8 30 p m at the Medical Society of London 11 Chandos Street Cavendish Square fee 12s 6d each lecture payable at the lecture room On January 20th at 4 p m at the same place the series of lectures on treatment will be continued by Mr Victor Bonney speaking on cancer of the uterus This lecture is free to members of the Fellowship of Medicine to non members the fee is £1 1s for the series or 5s a lecture payable at the lecture room The syllabus for the forthcoming evening course for the M R C P examination will be ready shortly this course will continue from February 22nd to March 18th and will be open only to members of the Fellowship, on payment of the requisite fee Other courses open to members are gynæcology at the Chelsea Hospital for Women February 1st to 13th ante natal treatment at the Royal Free Hospital February 5th to 26th diseases of the chest Brompton Hospital February 8th to 13th medicine surgery and the specialties at the Prince of Wales's Hospital February 15th to 27th A course in dermatology open to non members will be given at St John's Hospital January 25th to February 20th Free clinical demonstrations in medicine and surgery will begin on January 18th Syllabuses may be obtained from the Fellowship of Medicine 1 Wimpole Street W 1

A new Sunday post graduate course will open at Charing Cross Hospital Medical School on January 17th at 10 45 a m when Dr W J Adie will deal with the early symptoms of common nervous diseases and at 11 45 Mr L R Brosser will discuss head injuries The course will be continued on succeeding Sundays until March 20th

A post graduate course in oto rhino-laryngology is being opened at Milan University under the direction of Professor U Calamida Further information can be obtained from the secretary of the Medical Faculty Corso Roma 10 Milan

The *National Medical Journal of China* has now been amalgamated with the *China Medical Journal* and the new combined monthly publication will be known henceforward as the *Chinese Medical Journal* The *China Medical Journal* was started in 1887 by medical missionaries while the *National Medical Journal* founded in 1915 had no special connexion with missionary work The National Medical Association of China has now acquired headquarters in Shanghai which include a large hall a library secretarial offices and committee rooms The new journal is issued from this building and it is now the only medical periodical in the English language published in China

The issue of *Zentralblatt für Chirurgie* for January 2nd is dedicated to Professor Heinrich Braun emeritus professor of surgery at Leipzig on the occasion of his seventieth birthday

The January issue of *Revue de Laryngologie* now entering on its fifty third year contains an introductory note by its founder Professor E J Moure with his portrait

At a meeting of the Academie de Medecine on December 22nd Dr F Mesnil delivered an address on Sir David Bruce who was a foreign corresponding member The issue of the *Münchener medizinische Wochenschrift* for January 1st also contains a eulogy of him by Dr G Olpp of Tübingen editor of the recently published biographical dictionary of tropical physicians

Amongst the latest contributions to King Edward's Hospital Fund for London is the sum of £1 000 being the annual subscription of His Majesty the King Patron of the Fund and £105 from the Queen

The rumour current in the lay press that the German Chancellor intended to close several universities particularly Giessen Greifswald and Rostock has been officially denied

Professor Bruynoghe of Louvain has been awarded the quinquennial medical science prize of 50 000 francs for his published work during the period 1926–1930

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

Prolonged Drug Treatment of Migraine

66 has suffered from migraine all his life The attacks are now less definite and more frequent Nausea — he says might add like the migraine—has taken its place an attack of neuralgia will last a week or ten days and then perhaps recur a week Among remedies phenacetin has been of as good as any Change will be made and a course of this—say 10 grains twice a week—will be tried in the hope that it may stave off the attacks Would there be any objection to the prolonged use of luminal—a dose of 1 or 2 grains

Obstinate Urticaria

Dr E T TISON (Salisbury) asks for advice in the case of a patient who has been suffering for the past twelve months from urticaria of the most intense type Treatment he says has included varied diet vaccine therapy with a streptococcus isolated from stools dental extraction on account of sepsis desensitization by peptone injections auto haemotherapy I A B injections to cause protein shock intestinal antiseptics by mouth and lavage of the bowel Rest in bed combined with the taking of bromide and valerian has also been tried All the above measures have failed to ameliorate the condition though adrenaline injections kill the rash for about four hours

*** We suggest thorough search for an offending protein with an attempt to exclude any possible irritant from animal or other sources A complete change of surroundings would be advantageous both for diagnosis and for treatment Calcium and parathyroid therapy might also be tried Of the shock treatments whole blood injections are generally the most successful

Income Tax

Colonial Appointment Liability of Bonus

J C C has been in the Colonial Service for eight years during which his wife and family were maintained and boarded in this country In April 1931 he returned permanently to the United Kingdom and his contract of service ceased on August 31st 1931 He has received a bonus for service amounting to £800 Is this assessable?

*** For 1931–32 it is clear that J C C is a British resident and the emoluments of his office would be assessable as income arising from possessions out of the United Kingdom under Rule V of Schedule D—the possession being the rights given to our correspondent by his contract of service On that basis he would be liable to assessment in respect of all sums remitted to or received in the United Kingdom We fear that unless there is some departmental concession to modify the apparent hardship J C C will have to account for tax on the £800

Income from Property

D L had a little property which he transferred to his mother in October last Is he liable to pay income tax thereon for 1931–32 and how will it affect his professional assessment?

*** He is liable to account for tax for the proportion of 1931–32—that is for the period April 5th 1931, to the date of transfer He is entitled to have £175 (and no more) of his taxable income charged at the 2s 6d rate if therefore the income from the property for that period say £x is charged at 2s 6d the amount chargeable at 2s 6d on his professional income will be £175–£x (The two notices received with regard to the property no doubt relate to the same assessment but come from different offices)

LETTERS, NOTES ETC

Results of a Campaign against Pediculosis in Schools

Dr A SUNDAL has recently published an account of the measures taken against pediculosis in the schools in Oslo after the school health work had been reorganized and centralized in 1918 In 1920 an arrangement was made whereby discovery of pediculosis by a teacher or school nurse led to the dispatch of a notice in a sealed envelope to the child's home This notice included a short account of the measures to be taken to de louse the child at home and an intimation that if after eight days the child was not clean the school medical officer would let the school nurse treat the child at school But in practice the system adopted when the child proved to be still infected about a week later was for the nurse to make a personal visit to the home and to speak to the mother If this visit was fruitless the de lousing was performed at school The school nurse examined every child for lice twice a year (spring and autumn) and her finds were recorded It was thus possible to keep a louse register of the schools in Oslo during the past ten years and to publish lists of the schools in the order of merit as judged by their degree of lousiness In the list for the first half of 1931 there was only one school heading the list without a single lousy pupil Second in the list came a school with a lousiness of 0·05 per cent At the bottom of the list came a school with a louse incidence of 7 per cent In 1920 among 24 768 school children the incidence of pediculosis was nearly 8 per cent By 1930 this incidence had been reduced to a trifle over 1 per cent While in 1920 there were some 2 000 lousy school children in Oslo in 1930 this number had been reduced to 300 Dr Sundal (whose report is printed in *Tidsskrift f d Norske Laegeforening* December 1st 1931) believes that this residue comes from homes which are never likely to be thoroughly freed from vermin so long as de lousing is only a voluntary operation the execution of which cannot be enforced by the health authorities

Ectopic Kidney

Mr IAN FRASER (Belfast) writes The following case of an ectopic kidney lying in the hollow of the sacrum and forming a tumour which bulged into the posterior rectal wall is of sufficient rarity to warrant a report especially in view of a somewhat similar case described by Mr Llewellyn Davies in the *Journal* of December 5th 1931 Miss N aged 38 had had marked ascites since August 1931 and a large smooth swelling projecting into the rectum was readily felt by the examining finger An alternative diagnosis of carcinoma of the ovary with secondaries in the peritoneum or retroperitoneal sarcoma was made when she was first seen in Canada and the condition was considered inoperable She was advised to sail for home An operation was performed on December 6th A mid line subumbilical incision was made and the abdomen drained of twelve pints of ascitic fluid A matted mass presumably responsible for the free fluid was found in the pelvis Liver portal fissure and upper abdomen were normal On freeing the uterus from its adhesions the rectum was felt with a tumour lying behind it The tumour smooth and encapsuled was at first thought to be a lipoma When exteriorized however it was seen to be the left kidney—an ectopic kidney lying in the hollow of the sacrum Nephrectomy was performed and the patient has so far had an uneventful recovery The case is of interest in showing how the two conditions ascites and tumour although of different origins so closely simulated advanced malignant disease that operation had been considered inadvisable

Sepsis and Subinvolution

Dr F W INMAN (Wallasey) writes In a recent article on Failed forceps Dr Stacey stresses the frequent ill results of mild sepsis in causing subinvolution It has been my experience that this can be largely obviated by the administration of liquid extract of ergot two drachms in an eight ounce bottle one tablespoonful every three hours given about the third day whenever there is any reason from manipulation or otherwise to fear sepsis The temperature in the vast majority of cases immediately becomes normal and the subsequent involution goes on satisfactorily Even when there are signs of severe sepsis such as a rigor there is rarely any more trouble For many years when called to a case of sepsis I have immediately ordered ergot in this way and have found it much better than the old fashioned douching and uterine examination During the last year I have also given a capsule of S U P 36 when the symptoms have appeared to be serious and have been much struck by the effect in many cases Usually two capsules on successive days have proved sufficient This substance undoubtedly raises the resisting power of the patient and is much handier than raw carrots

Capitals and Italics

Medical writers who recognize the desirability of following the modern practice adopted by technical journals of good standing and who wish to give the least trouble to editors and printers should read an article on the use and abuse of capital letters and italics which appeared in the *Indian Medical Gazette* for August 1931 The broad principles laid down therein are not difficult to follow or to remember To put the matter very shortly we advise authors when in doubt to avoid beginning words with capitals Italics should in general be reserved for titles of books and periodicals for side headings to paragraphs for words and phrases in foreign languages which have not yet become anglicized and for the proper names of micro organisms as *B coli communis* Italics for emphasis should be used very sparingly indeed more often than not they defeat the author's purpose

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 44 45 46 47 50 and 51 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 48 and 49

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 19

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

51 Mistaken Diagnosis of Rheumatic Heart Disease and Fever

E WARELDS (*Ugeskrift for Laeger* October 15th 1931 p 1031) advances statistical evidence in support of his thesis that heart disease is often diagnosed when it is non existent and that such diseases as gonorrhoea are largely responsible for the far too numerous diagnoses of rheumatic fever Returns for the examination of recruits in Denmark show that between 1919 and 1929 the number of cases of heart disease diagnosed per thousand has ranged from 53 to 86 This figure was 52 9 in 1919 and 71 4 in 1928 Before the war only about 25 per thousand recruits were rejected on account of alleged heart disease The author quotes various observations in favour of his conviction that the cases of rheumatic fever in Denmark are far too few to have yielded such an imposing crop of diseased hearts in early adult life and he maintains that the wide oscillations in the heart disease rate from time to time in men undergoing a medical examination for army service coincide with fluctuations in the clinical standards and conceptions of the medical examiners With regard to the confusion of rheumatic fever with gonorrhoea he reproduces a chart showing the comparative frequency of the two diseases in men and women separately Between 1890 and 1910 the incidence of rheumatic fever was much higher among males than females This difference became gradually less ceasing to exist in 1917 since when rheumatic fever has been more frequent in females than in males This comparative rise in the incidence of rheumatic fever in females has coincided with the very pronounced rise in the incidence of gonorrhoea in women in the years of the war and later

52 Pernicious Anaemia and Malaria

J RIEUX CARROSSE and M DELVATTE (*Rev de Med*, October 1931 p 581) fully describe a case which ended fatally of complicated malaria and pernicious anaemia The various interpretations of the curative action of liver treatment in the latter disease are briefly discussed These, and the findings in the present case confirm the previous conclusion of the authors that malaria is not an etiological factor in pernicious anaemia their pathological actions are dissimilar Logically in the majority of cases malarial anaemia should be a simple anaemia more or less intense transient and curable Only in exceptional cases in which the malarial infection supervenes on conditions favourable to the development of pernicious anaemia, can the two diseases occur simultaneously

53 Effect of Pain on Arterial Pressure

Great disagreement exists as to the changes produced in arterial pressure by pain H BISQUET (*C R Soc de Biologie* November 20th 1931 p 712) records a study of 60 patients who without anaesthesia underwent short painful operations such as the lancing of whitlows and teeth extraction In 21 of these the pressure remained unchanged In 38 it was raised the rise did not exceed 5 cm of mercury was of a short duration of one to five minutes and the pulse showed no marked change In 6 the pressure was lowered slightly (2 to 4 cm of mercury below its primary level) this lowering lasted only three to four minutes The unchanged pressure in the first group was due to the fact that the cardiac slowing caused by reflex excitation of the pneumogastric nerve counterbalanced the effect of the vaso-constrictor reflex in the second group the latter existed alone or predominated with a resultant rise in pressure in the third group cardio inhibition predominated and the pressure fell Thus the tensional reaction is the algebraic sum of two factors each of which has a different value according to the individual These observations and experiments on anaesthetized dogs show that short sharp pain has no deep or lasting effect on blood pressure and except in cases of very friable vessels does not predispose these to rupture

54 Prophylaxis of Mumps

L H BAPENBERG and J OSTROFF (*Amer Journ Dis Child* November 1931 p 1109) record their observations on 180 children aged from 1½ to 3 years susceptible to mumps 55 were treated during an epidemic of mumps by serotherapy to reduce the incidence or to attenuate the disease At the onset of the epidemic 44 received 12 c cm of whole blood from convalescent patients and 11 the same amount of blood from an adult who had had mumps in childhood The injections were given intramuscularly within twenty four hours of collection In seven wards comprising 139 children about half the children received prophylactic injections while the remainder served as controls those in two other wards were not given specific treatment In the untreated wards the incidence of mumps was 49 5 per cent while in the other seven wards it was 26 6 per cent The average incidence of mumps for the treated children was 15 per cent as compared with 39 per cent in the untreated children The attack of mumps in those who contracted the disease in spite of inoculation was markedly attenuated The results from injection of blood from an adult who had had mumps were not so favourable as those of cases in which the blood of convalescents from the disease was employed Serotherapy produced a definite shortening of the epidemic—namely from a period of about six months in previous epidemics to about two months in the outbreak under consideration

Surgery

55 Open Fractures of the Leg

J CREYSSEL and M ARMANET (*Rev de Chir* October 1931 p 582) point out that open fractures are most common and most dangerous in the leg The position of the tibia is such that trauma is more likely there than in any other bone and being superficial the tibia is exposed to perforation of the skin by bony fragments The presence round it of important muscles renders the possibility of infection a grave danger Open fractures of the leg are difficult to treat and results are often disappointing Thirty three cases are reviewed and are grouped in three classes those which healed quickly with consolidation in a few weeks and with good functional result those which healed slowly but without complications giving after some time fairly good after results and those severe cases in which the limb remained painful the articulations more or less ankylosed and the possibility of chronic osteomyelitis was present An even more severe type of case occurs in which owing to age or the extent of the trauma acute infection or gangrene may ensue and render amputation or even the death of the patient inevitable In the series under review 23 cases required a simple cleaning of the soft parts following the reduction of the bony fragments Of these cases 14 obtained good results 4 were fairly good 3 had secondary osteitis 5 had secondary amputations and one patient died In ten other cases the cleaning of the soft parts was followed by the insertion of a metal plate Of these eight made a good recovery one was mediocre two had secondary osteitis one had secondary amputation and one patient died The results obtained in this series of cases lead the authors to emphasize the necessity for a

systematic cleansing operation such as was found essential during the war Owing to the risk of infection the immediate closing of the skin and soft parts is strongly condemned In the majority of cases it is possible to obtain a satisfactory reduction by manipulation, followed by immobilization in plaster In cases of severe injury amputation may be necessary to save the life of the patient

56 Acute Suppurative Parotitis

Two opinions are held concerning the pathogenesis of acute suppurative parotitis Most authorities maintain that the invading organism ascends through the ducts secondarily invading the gland tissue, others believe that the source of infection is haematogenous R P CUSTER (*Amer Journ Med Sci* November 1931 p 649) records with the post mortem findings two fatal cases of this disease In one patient the affection occurred during the course of amyloid nephrosis with haemorrhagic enteritis A staphylococcus appeared to be the causal organism The etiology of the enteritis was apparently non-bacterial and the clinical picture was not that of staphylococcal septicaemia The other case presented a complication of the disease with erysipelas of the leg, the bacteriological findings in the gland and leg were dissimilar In both cases the infectious process in the gland centred about the ducts, the blood vessels showed no damage and neither thrombotic nor embolic lesions were noted The literature on acute suppurative parotitis is reviewed and evidence in favour of each of the conflicting etiological theories is presented the anatomical bacteriological and clinical findings in the present cases favour that of the occurrence of an ascending infection A L BERNDT R BUCK and R P CUSTER (ibid p 639) record the results of an experimental study, which show that this malady can be produced by injection of bacteria into Stenson's duct or into the nutrient artery of the gland Of the two methods the first is the easier

57 Sarcoma of the Bladder in Children

E R MINTZ (*New England Journ of Med* October 15th 1931 p 756) who records a fatal case in a boy aged 5 years states that approximately 55 authentic cases of sarcoma of the bladder have been reported in children under the age of 5 The etiology is obscure Haematuria is usually not a prominent symptom but frequency dribbling acute retention, and bed wetting are common Recurrences are usual and early metastases are not uncommon The course is invariably fatal and operations such as partial excision of the bladder wall excision of the tumour and diathermy appear to hasten death

58 Pulsion Diverticulum of the Oesophagus

W W BABCOCK and C JACKSON (*Surg Gynecol and Obstet* November, 1931 p 667) describe the single stage operation for pulsion diverticulum of the oesophagus carried out without division of any important structures the resulting disability lasts only for a week or ten days and the procedure does not necessitate any subsequent passage of bougies or further treatment of any kind Primary union without infection and only an inconspicuous scar is the rule and the sac is removed with a precision and accuracy that is difficult of attainment with a multiple stage operation Aided by an oesophagoscope (with a terminally situated source of light) which is introduced through the mouth into the sac the diverticulum is exposed through a short transverse incision on the left side of the neck at the level of the cricoid it is easily recognized by a reddish glow in the depth of the wound Having been grasped by forceps and isolated from the surrounding tissues the sac is aspirated and is then guided by a previously swallowed thread into the oesophagus The neck of the sac is divided and the opening in the oesophagus is accurately closed by a continuous fine black silk suture During this procedure the aspirating canal of the oesophagoscope maintains a dry field free from pharyngeal secretion and prevents undue constriction of the oesophagus in suturing thus rendering the later passage of bougies unnecessary

Success depends mainly upon very accurate closure of the oesophagus should infection or leakage from the pharynx occur the wound must be freely opened, swabbed with iodine and thoroughly drained In the experience of the authors no serious complications from the single stage operation have been encountered

Therapeutics

59 Sulphocyanate Therapy in Hypertension

W GOLDRING and H CHASIS (*New York State Journ of Med* November 1st, 1931, p 1322) record a series of 50 patients who were subjected to 74 different trials of sulphocyanate therapy In 69 cases the hypertension was of the 'essential' type while in 5 it was associated with chronic diffuse glomerulo nephritis Of the 74 trials 44 were conducted in an out patient clinic and 30 with the patients confined to bed in hospital The dose found to be the most effective in lowering the blood pressure and least often attended by toxic manifestations was 5 grains of either the potassium or sodium salt given daily over a period of 14 to 76 days In thirteen cases toxic manifestations developed and two patients died as a result of sulphocyanate poisoning The fall in blood pressure the occurrence of toxic manifestations and death were found to be unrelated to the amount of residual sulphocyanate in the body In some patients there seemed to be little or no margin of safety between the toxic and therapeutically effective dose In the 74 trials the treatment effectively lowered the blood pressure in 32 4 per cent, the incidence of toxic manifestations was 17 per cent The usual order of appearance of toxic symptoms was muscular fatigue accompanied or followed by nausea vomiting disorientation and mental confusion, motor aphasia hallucinations of sight and hearing and (in the two fatal cases) progression to delirium convulsive twitchings, coma and death At the first indication of toxic effect the drug must be immediately discontinued and also when there is a distinct fall in the blood pressure The authors add that the administration must not be started again until the addition of ferric chloride to the acidified urine indicates that the salt has been entirely excreted If the blood pressure does not show a satisfactory reduction after 5 grain doses have been taken daily for 80 days they doubt whether it is worth while continuing the treatment

60 Fatal Iodide Intoxication

J J ELLER and E C FOX (*Arch Derm and Syph*, November 1931 p 745) report a fatal case of iododerma in a man aged 31 with macules papules tubercles rupioid lesions and fungating and granulomatous ulcerations The eruption commenced a few weeks after the administration of potassium iodide had been begun, the patient dying from profound iodide intoxication four months later Large quantities of iodides were found, during the month preceding death in the urine and at the post-mortem examination in the skin liver, and kidneys With the exception of an attack of renal colic the patient's health had been good until a year previously when brownish slightly scaly patches appeared on the legs without any subjective symptoms For four months he had received three doses daily of 5 grains of potassium iodide with 1/60 grain of arsenic small bright red papules and nodules appeared then on the trunk and extremities for several years however he had been taking iodized salt with his food For about ten days following discontinuance of the iodides no fresh lesions occurred and those present were undergoing involution when from time to time eruptions of dark red macules appeared some of which underwent involution while others increased in size A fortnight before death the whole skin was covered with the large vegetating ulcerating and rupioid lesions Various therapeutic measures such as intravenous injections of saline solution blood transfusion, and the administration of sodium thiosulphate and glucose, were ineffective Microscopically a peculiar inflammatory

process in some stages suggestive of a neoplasm was revealed It is suggested that by the ingestion of iodized salt for some years the patient had become so sensitized as to develop a fatal iododerma after taking a tonic containing potassium iodide Since there are other recorded cases of eruptions following the use of iodized salt the authors conclude that the laity should be warned against its indiscriminate use

61 Serum Treatment of Typhoid Fever

A RODET (*Lyon Med* August 23rd p 201 and August 30th 1931 p 225) has collected information about 297 further patients treated by his serum In 13 out of 27 in which the serum therapy was started within the first five days and the diagnosis of typhoid fever was confirmed by bacteriological examination the temperature became normal before the end of the first fortnight and in 5 others before the end of the third week In a previous report he had shown that the average duration of stay was longest in cases in which the treatment had been applied late (after the eleventh day) much less in those treated between the sixth and eleventh days and least in those treated earlier still In the present series although the disease was of very short duration relapses were frequent 11 having occurred among 26 cases in which the temperature had become normal early 8 among those in whom the temperature became normal on the 20th day and 6 among 13 in whom it became normal on the 13th day Two deaths occurred among the 27 cases treated early one from sudden cardiac failure in the course of a relapse and the other from a subphrenic abscess After excluding 15 cases of paratyphoid fever and 7 in which the bacteriological result was negative Rodet distinguished two groups of cases in the present series the first consisted of 169 cases in which the diagnosis of typhoid fever was confirmed by bacteriological examination and the second of 106 cases in which no bacteriological examination was made though the disease was probably typhoid fever The total number of deaths in the two groups was 26 a death rate of 9·4 per cent 19 deaths (11·2 per cent) occurring in the first group The most striking effect of the serum appeared to be the effect on the general condition disappearance of the toxic symptoms ensuing and a state of euphoria being induced The chief cause of failure of the serum was a superadded infection with the staphylococcus enterococcus *B pyocyaneus* or malaria

Anaesthetics

62 The Induction of General Anaesthesia

R W HORNBROOK (*Anesthesia and Analgesia* November-December 1931 p 241) who has made between 200 and 300 personal experiments with anaesthetics during twenty five years states that the handling of a patient before and during induction is almost a more important matter than the question of the duration of the administration Too rapid induction is a grave fault Hornbrook always uses open ethyl chloride sparingly or a few drops of chloroform on a thin mask held well away from the patient's face at first When tranquillity is achieved ether may be added to complete the induction The head and shoulders are kept well raised and the eyes are always bandaged throughout the operation Another fault is overdosage many anaesthetists appear to endeavour to ascertain the maximum instead of the minimum quantity Ether is the anaesthetic of choice if used correctly it gives better relaxation than any other general anaesthetic except chloroform Overdosage causes rigidity from partial asphyxia post operative vomiting and broncho pneumonia Analgesia is more prolonged under chloroform and ether than in the case of the more modern inhalation anaesthetics which are too rapid in action to yield good analgesia If a preliminary injection of 1/8 grain morphine and 1/150 grain atropine is given surgical anaesthesia may be maintained even in abdominal operations with regularity of respiration and good relaxation and without any anaesthetic being required during the last thirty or forty-five minutes of the operation When the eye bandages are removed the patient can open his eyes or even answer questions he then sleeps peacefully with good pulse and respiration Basal narcotics such as amytal luminal avertin and paraldehyde are dangerous because they render the respiration shallow and promote a tendency to pulmonary congestion and broncho pneumonia Avertin should never be used as an anaesthetic *per se* The routine practice of endotracheal anaesthesia especially when the tube is passed through the nares is strongly condemned Septic mucus may be conveyed to the trachea and the ciliated epithelium is damaged

63 Local Anaesthesia in Fracture Reduction

C E STEWART (*Med Journ of Australia* September 12th 1931 p 330) records four cases illustrating the simplicity and efficacy of local anaesthesia in the reduction of fractures He injects 15 c.cm of adrocain around the broken bone ends this abolishes pain and muscular resistance rendering the correct apposition and fixation of the fragments easy The injection takes about twenty minutes to achieve its effect The most scrupulous asepsis is essential and the finest and sharpest needle must be used This procedure renders it possible to perform reduction by the roadside in the case of an accident to transport the patient to hospital without risk of complicating the injury further and thus to ensure a final completely satisfactory adjustment in the best possible conditions The dangers and after effects of general anaesthesia are avoided prolonged muscular relaxation is obtained less assistance is required and the patient's full co operation in any manipulation is ensured

64 Combined Avertin and Nitrous Oxide Anaesthesia

DESMAREST (*Bruxelles Medical* November 1st 1931 p 1) advocates avertin (tribromethylalcohol) combined with nitrous oxide as being the most perfect method of general anaesthesia although the anaesthesia is not so profound as that obtained by ether or the use of a spinal anaesthetic it is amply sufficient for all abdominal operations Avertin alone should never be used as a general anaesthetic but should be combined with ether or nitrous oxide the latter is preferable since its hypertensive action counterbalances the hypotensive effects of avertin The preparation of the avertin solution employed is described The technique is as follows The evening before the operation the bowels are evacuated with a laxative enema One hour and a half before the operation morphine or pantopon is given and an hour later—that is half an hour before operating—the avertin is administered It should be introduced slowly into the rectum with a small Nelaton sound which is closed with a forceps and retained *in situ* Sleep supervenes in about ten minutes and the anaesthesia is completed with nitrous oxide The patient usually sleeps for two or three hours after the operation The treatment of possible slight after effects (agitation on waking a tendency to apnoea too prolonged sleep) is briefly described The advantages of and contraindications to this method are discussed Desmarest evidently considers the latter of slight import

Obstetrics and Gynaecology

65 Treatment of Dysmenorrhoea

M PERLS (*La Gynecol* September 1931 p 538) advocates the use of indirect radiotherapy in the treatment of dysmenorrhoea and the associated disorders Sympathetic radiotherapy as defined by Gouin and Bienvenue who have been using this method for some years has an action on the vegetative nervous system itself giving results in the parts supplied by the sympathetic nerves this method of treatment is indirect as compared with the more usual one when local effects are required When this sympathetic treatment is applied to a patient with dysmenorrhoea the region irradiated comprises that part between the twelfth dorsal and the second lumbar vertebra The effects on the utero endocrine dysfunction are specific The technique employed by Perls is a C.G.M.D.

or Pierquin tube functioning at 3 amperes on the primary and giving in the secondary a current of intensity 0 6 or 0 7 milliampères The field to be irradiated is the median vertebral zone between the two named vertebrae the dose is 3 to 4 units and the filtration 20 to 40/10 Al The date of the treatment is of importance the optimum time being eight to ten days before menstruation When there are no associated disorders one application generally proves sufficient If the dysmenorrhœa is associated with other circulatory troubles of the extremities such as Raynaud's syndrome or certain eczemas this localized treatment would be insufficient and regional radiotherapy must be given In addition The rays are directed to different areas in which the vasculo nervous system commands the affected part such as Scarpa's triangle the popliteal space the axilla bend of elbow Such radiations constitute regional sympathetic therapy The treatment may be followed by general and local reactions of slight degree The results obtained from sympathetic radiotherapy are comparable with those seen after sympathectomy Since the irradiation is superficial neither the ovary nor the suprarenal gland is affected

66 **Hydatidiform Mole with Negative Zondek Aschheim Reaction**

M BLEULER (*Zentralbl f Gynak* November 21st 1931 p 3370) describes a case of hydatidiform mole which is noteworthy for the following reasons The mole was retained for thirteen and a half lunar months expulsion usually takes place however before the tenth month and many hydatidiform moles which are retained longer are the site of haematoma formation Bleeding was absent until the eighth month it was then intermittent and insignificant until a severe haemorrhage occurred for which laparotomy and hysterotomy were performed The Zondek Aschheim reaction was negative this is considered surprising since in most instances the reaction is more marked in cases of mole than in those of normal pregnancy In most of the previously described cases of hydatidiform mole with negative Zondek Aschheim reactions the mole has been found loosened from the wall of the uterus or separated from it by a layer of fibrin The ovaries were macroscopically normal the absence of luteïn cysts may be correlated with the negative reaction and the return of the menses thirteen days after operation A positive reaction does not appear to have been recorded in hydatidiform moles of longer duration than ten months so that a negative reaction is not a contraindication of a diagnosis of retention of such a mole

67 **Nipple Transplantation**

M THOREK (*Med Journ and Record* November 18th 1931 p 474) records histological verification of the efficacy of free transplantation of the nipple indicating how it becomes grafted in its new position and is vascularized and embodied in the surrounding tissues By meticulous removal of the subareolar tissues and carefully avoiding removal of the highly specialized tissues of the nipple a satisfactory transplantation and vascularization is obtained By a supra areolar convex incision over the anterior hypertrophied and pendulous gland with a second incision beneath the mass sufficient glandular and adipose tissue is removed from between the incision as will secure a satisfactory result Through a circular superficial incision the nipple and areola are then dissected and are freely implanted to a bed prepared in the normal site of the nipple the subdermal tissue being carefully safeguarded In the majority of cases a good cosmetic result was obtained without any clinical doubt regarding the vitality of the freely grafted tissue A recent opportunity to examine histologically such a transplantation showed that the nipple and areola had become vascularized and incorporated in the new site as normal living tissue proving the practicability of the procedure when carried out with a proper technique The author is satisfied that such a plastic and cosmetic operation on the pendulous and hypertrophied female breast is therefore eminently justifiable

Pathology

68 **Diagnosis of Meningococcaemia**

S MCLEAN and J CARTY (*Amer Journ Dis Child* November 1931 p 1053) who record their observations on 32 cases of meningococcal bacteriaemia with purpura in patients aged from 46 days to 12 years come to the following conclusions Among 18 cases meningococci were found in smears from the purpura in 15 or 83 per cent In four out of 32 cases (12 5 per cent) of meningococcal bacteriaemia with purpura no inflammatory changes were detected in the cerebro spinal fluid The mortality in bacteriaemia of this type with purpura was 50 per cent All patients under the age of 6 months died and the mortality in the first year of life was 66 6 per cent In three cases haemorrhage of the suprarenal gland was found and in seven cases enlargement of the thymus and hyperplasia of the lymphoid tissue of the intestine were present at the necropsy

69 **The Acetic Anhydride Test of the Cerebro spinal Fluid**

C MANZINI and P CARAMAZZA (*Il Policlinico Sez Prat* November 23rd 1931 p 1733) record their observations on this test which was introduced by J G Greenfield and E A Carmichael in 1927 and studied later by G K Piotrowski (see *Journal* 1929 ii 457) The test consists in adding 0 3 c cm of acetic anhydride to 1 c cm of cerebro spinal fluid and after shaking the test tube so as to mix the two fluids pouring in drop by drop 0 8 c cm of pure sulphuric acid When the reduction is positive a violet colour appears The present writers found that the test is of value in the diagnosis of acute inflammatory processes of the meninges and especially in revealing the presence of affections of a degenerative and haemorrhagic character in the neural axis They attribute the reaction to the products of cellular disintegration in the group of lipoids and possibly also in that of the amino acids

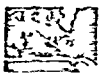
70 **Transformation in Vitro of Carotene to Vitamin A**

H S OLCOTT and D C MCCLAY (*Science* October 23rd 1931 p 414) argue that if the transformation of carotene to vitamin A (demonstrated in rats by T Moore and N S Capper and in the fowl by Capper) is enzymatic it should be possible to secure it *in vitro* Preliminary experiments indicated that carotene was destroyed and that vitamin A appeared with its characteristic band at 325 $\mu\mu$ in the absorption spectra of ether extracts of such mixtures Following up this work the present authors describe their later investigations which they claim have verified the supposition of an enzyme being responsible The livers of rats which had ceased to grow on a vitamin A free diet were examined A simple ether extract was shown to contain no vitamin A but when carotene was added and the mixture was incubated for 36 hours the carotene disappeared and the vitamin A band in the spectrum appeared When however the liver extract was previously boiled for one minute it lost the power to transform carotene The authors suggest that this enzyma which is destroyed by heating should be termed carotenase

71 **BCG Vaccination in Cattle**

F GERLACH (*Ann de l Inst Pasteur*, November 1931 p 475) as the result of experiments made on several thousand laboratory animals and of a critical examination of the literature comes to the conclusion that BCG vaccine is absolutely harmless On his recommendation the vaccine was introduced into Austria for the prophylaxis of tuberculosis in cattle During the last five years more than 9 000 cattle have been vaccinated with very encouraging results No actual figures are given but the author is of the opinion that by its use it has frequently proved possible to rear animals in grossly infected herds in which previously nothing but failure had been encountered He recommends now that the method should be adopted on a large scale

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1 Card Linen Thread
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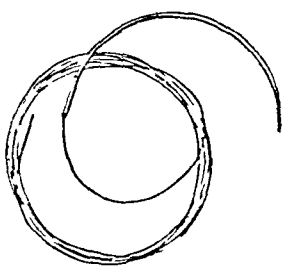
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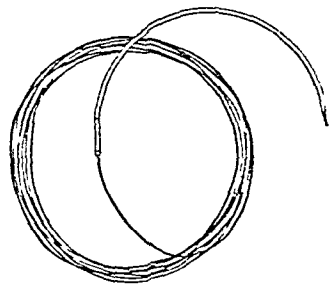
London Hospital Eyeless Needles

WITH LH CATGUT

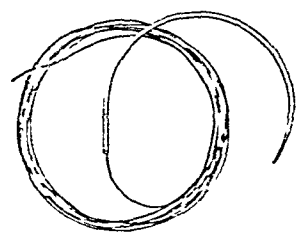
The London Hospital Eyeless Needles have been specially designed to avoid the doubling of the suture necessary in using needles with pierced eyes. They are fitted with tubular ends into which the sutures are firmly fixed thus enabling the needles to be used with single strand. These needles are finely ground sharp pointed and packed sterile in tubes for immediate use. Special precautions are taken to avoid any rusting of the needle after it has been packed.



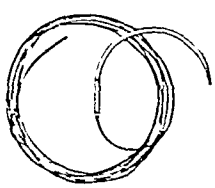
Curved Needle (Keith or Bantock) 3 de cutting edge. Sizes 0 ?0 0 1 2 3
In boxes of 3 tubes, 4/6



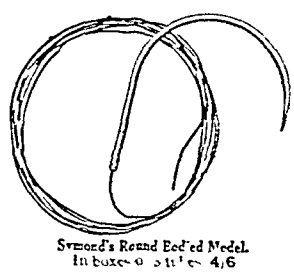
Curved Mayo Robson Stomach Needle. Sizes 4/0 0 ?/0 0 1 2 3. In boxes of 3 tubes 4/6



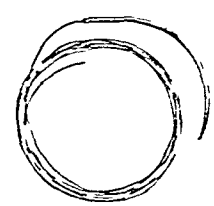
Mowlam's Model. In tube box 4 6



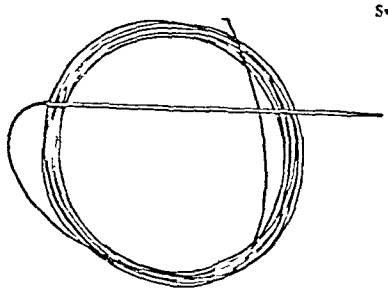
Small Curved Intestinal Needle
Size 0 In box of 3 tubes 4/6



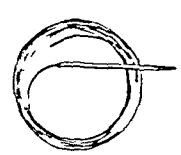
Symond's Round Edged Model.
In boxes of 3 tubes 4/6



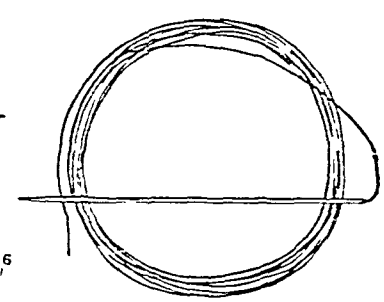
Curved Ophthalmic Needle (as for [illegible] Size 0)
In boxes of 3 tubes 4/6



Straight Stomach Intestinal Needle Sizes 0/0 0 00 [illegible]
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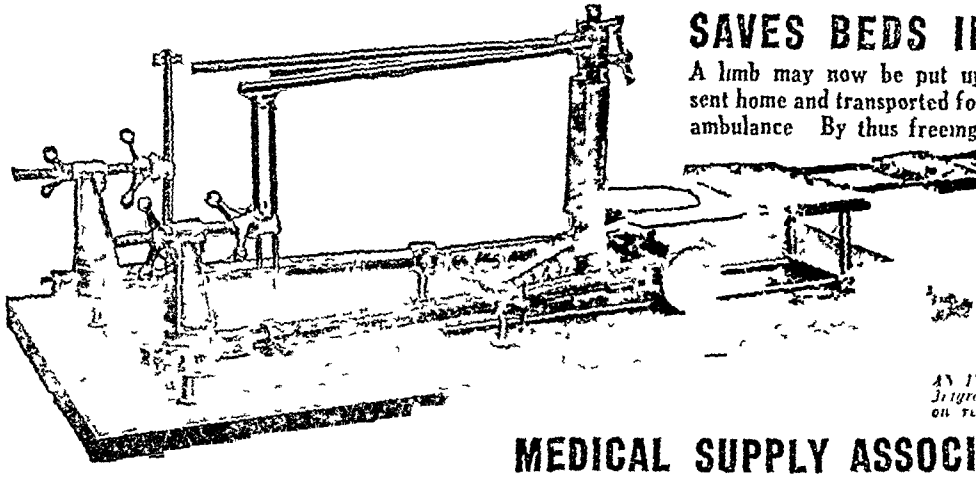
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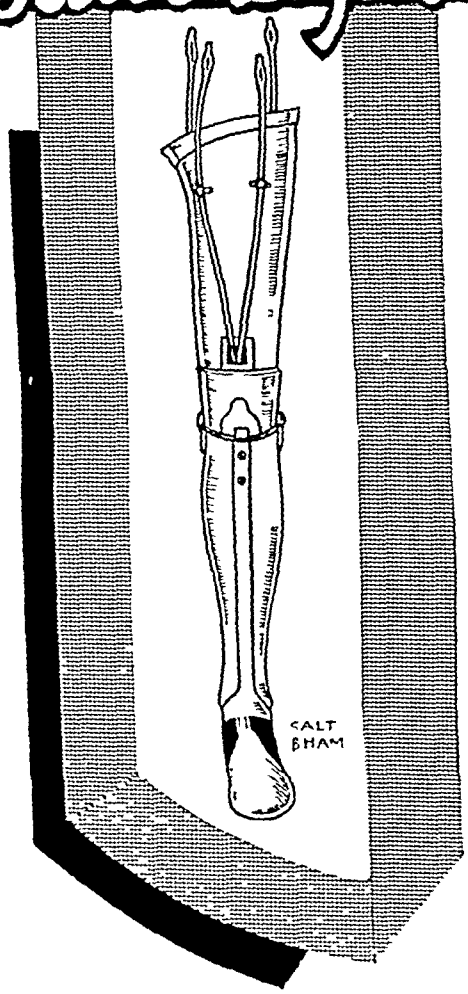
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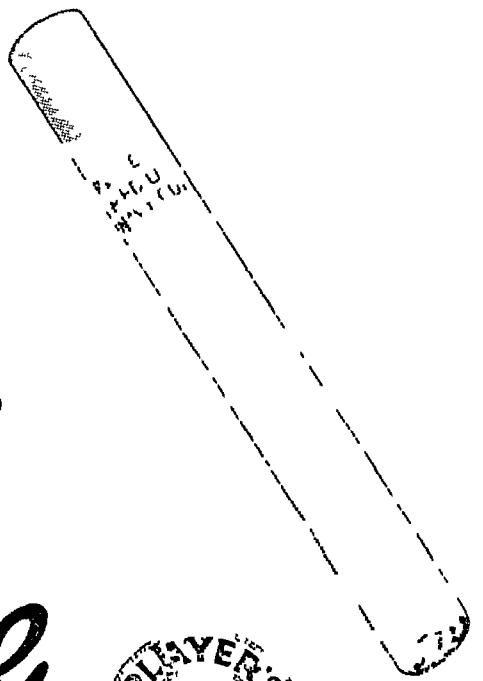
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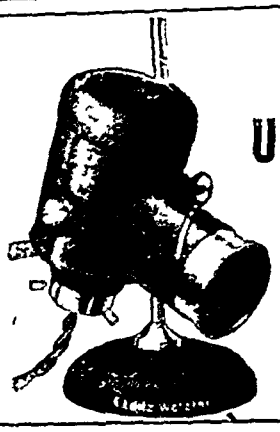
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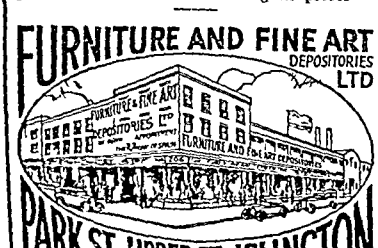
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The treatment is the outcome of many years experience and besides removing all craving for drink and drugs it has a tonic action on the system and the general health is improved Alcohol and drugs reduced gradually without suffering
FUNCTIONAL NERVOUS DISEASES AND NEURASTHENIA are also treated with excellent results Cases with insomnia depression etc do especially well
Exceptionally good climate and ample and varied amusement Moderate inclusive terms. Prospectus etc from STANFORD LARK M B Ch B Res Med Supt Bay Mount Paignton

INEBRIETY

DALRYMPLE HOUSE, RICKMANSWORTH, HERTS

For the *treatment of GENTLEMEN* under the Act and privately Established 1883 by an Association of prominent medical men and others for the study and treatment of alcohol and drug abuse Large secluded grounds on the bank of the River Colne Full sized billiards tennis croquet bowls Golf (Moor Park Sandy Lodge) close by For particulars apply to—
F S D Hoge M R C S &c Resident Medical Supt Telephone 16 RICKMANSWORTH

ALCOHOLISM & OTHER DRUG HABITS

THE HARE NURSING HOME

As founded and established by the late Dr FRANCIS HARE for 20 years Med Supt of the Norwood Sanatorium and author of Alcoholism etc for the treatment of ALCOHOLISM other Drug Habits Insomnia Neurasthenia Functional Nervous Disorders

THE OLD HILL HOUSE CHISLEHURST KENT

Fees 5—10 guineas Ample amusements 25 bedrooms Annexe for mild cases Quiet and pleasant situation
Ladies and gentlemen admitted for treatment
For prospectus etc write or phone WALTER L MASLIN M D M R C S D P H Barrister at Law (Res Med Sup) Author of The Alcohol Habit
Phone Chislehurst 451 *Telegrams* Masters Chislehurst

CHEADLE ROYAL,

CHEADLE, CHESHIRE

This Registered Hospital for MENTAL DISEASES with the seaside branch Glan y Don Colwyn Bay is for the treatment and care of PRIVATE PATIENTS of the UPPER and MIDDLE CLASSES Voluntary Temporary and Certified Patients received
For terms etc apply to the Medical Superintendent J A C ROY M B who may also be seen in Manchester by appointment
Telephone 2231 GATLEY

THE LAWN, LINCOLN

This Registered Hospital situated in large grounds near the Cathedral receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders conditions In Psychotherapy in

All particulars may be obtained from the Resident Medical Superintendent
Dr MARY P BARNES M D D P M

BOREATTON PARK,

BASCHURCH SALOP

A first class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted
Large gardens deer park private golf links fishing Grounds extend to over 200 acres Voluntary Boarders accepted
Apply for particulars to Dr SINKE

THE GROVE HOUSE,

CHURCH STRETTON SHROPSHIRE

A Private Home for the care of and treatment of a limited number of [illegible] mentally afflicted Climate healthy and bracing
Medical Superintendent Dr McCLINTOCK.

STRETTON HOUSE,

Church Stretton Shropshire

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness including the allied disorders of Alcoholism and the Drug Habit All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act 1930 Bracing Hill country S *Medical Directory* p 2138—Apply to Medical Superintendent Phone 10 P O Church Stretton

FENSTANTON,

CHRISTCHURCH ROAD,

STREATHAM HILL S W 2

A Private HOME for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients Large Mansion with 12 acres of ground (See *Medical Directory* p 2254) Apply J H EARLS M D Resident Physician Telephone Streatham 8430

THE GRANGE,

near ROTHERHAM

A HOUSE Licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorders Both certified and voluntary patients received Approved for Temporary Patient This is a large country house with beautiful grounds and Park five miles from Sheffield Station Grange Lane L & N E Railway Sheffield Telephone No 40030 Ecclesfield Resident Physician GILBERT E MOULD L R C P M R C S

SPRINGFIELD HOUSE,

Near BEDFORD (Phone 3417)

For Mental Disorders with or without certificates
Resident Physician CEDRIC W BOWER
Ordinary Terms Five Guineas per week
(Including Separate Bedrooms where suitable)
Interviews in London by appointment

CLARENCE LODGE,

CLAPHAM PARK, LONDON

Situated in 30 acres of secluded gardens
HOME FOR TWELVE MENTAL PATIENTS (LADIES)
Well appointed private house Home comforts and Trained Nursing Staff Eminent Mental Specialist Visiting Daily
Station Clapham Common Tube *Telephone* Brixton 0054 Apply Miss THWAITES

THE MOAT HOUSE,

TAMWORTH STAFFS

Established 1816 For the TREATMENT of a few LADIES suffering from NERVOUS and MENTAL DISORDERS Voluntary patients received For terms apply to the Resident Medical Attendant Telephone Tamworth 108

CHISWICK HOUSE.

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both sexes

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone PINNER 234

A modern country house 12 miles from Marble Arch, in beautiful and secluded grounds

Fees from 10 guineas per week

Voluntary Patients received for treatment

Special provision for Temporary patients under the new Mental Treatment Act

DOUGLAS MACAULAY M.D. D.P.M.

BARNWOOD HOUSE,

GLOUCESTER

A LICENSED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester. The Hospital is easily accessible by road from all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 200 acres. Voluntary boarders received for treatment.

Special accommodation for Lady Voluntary Boarders is provided at the MANOR HOUSE which has its own private grounds and is entirely separate from the main Hospital.

For particulars as to terms etc. apply to—
ARTHUR TOWNSEND M.D. Medical Supt.
Telephone No. 7 Barnwood

EPILEPSY

Owing to extensions there are at present a few Vacancies at the

DAVID LEWIS COLONY

for Ladies and Gentlemen who have Epilepsy, but are of good intelligence and sound mind

Colony life gives to most people who have epilepsy the best chance of happiness and contentment

Apply to the Medical Superintendent,

The David Lewis Colony, Warford, Alderley Edge

ST ALBANS, HERTS

(20 miles from London)

Ladies suffering from all forms of MENTAL ILLNESS receive skilful treatment at the Herts County Mental Hospital Hill End. Convenient for Hemel Hempstead. Beautiful country near. Private grounds known as

HIGHFIELD HALL

situate about a mile away from the Hospital. Fee 3 guineas weekly.

Particulars from the MEDICAL SUPT.

BAILBROOK HOUSE,

BATH

PRIVATE HOME for the care and treatment of [illegible]

[illegible]

Medical Director [illegible]

Resident Physician [illegible]

Terms [illegible]

Telephone [illegible]

HOME FOR FEEBLE-MINDED,

BRUNTON HOUSE, LANCASTER

[illegible] Private [illegible]

[illegible]

[illegible]

[

WELLWOOD NURSING HOME,
CULTS, ABERDEENSHIRE.

Physician Superintendent R DODS BROWN, MD, FRCPEd — *Matron* MISS BERTRAM (late of The Retreat, York)

This Home which has been recently established is equipped for the treatment of those suffering from early mental and nervous disorders, and is under the charge of the Physician Superintendent, Aberdeen Royal Mental Hospital.

The Home is situated on Deeside, three miles from Aberdeen, amidst delightful surroundings of garden, park, and woodland, attractively laid out for the occupation and recreation of those resident. It is beautifully decorated and comfortably furnished. Rest and privacy are assured, and all forms of treatment are available.

The patients may be attended by their own physician, or by the Physician Superintendent.

The minimum charge is £4 4s a week.

For further particulars application should be made to the PHYSICIAN SUPERINTENDENT Royal Mental Hospital, Aberdeen or to the MATRON Wellwood Nursing Home, Cults, Aberdeenshire. (Telephone No. 31 Cults.)

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,
Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Reg Tel Address Bethlem Beckenham — *Telephone* Springpark 1180–1181

Station Eden Park (Southern Railway)

President LORD WAKEFIELD OF HYTHE CBE LLD
Treasurer SIR HENRY LAUDER PHILLIPS Bart
Physician Supt J G PORTER PHILLIPS MD FRCP

This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm grounds. Applications can be considered on behalf of patients of the educated classes in a presumably curable condition. With a view to early treatment voluntary or uncertified patients are admitted.

Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise. The Committee will also consider applications for admission at lower rates and in certain cases will be prepared to admit patients free of charge.

Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit. In this Unit is found the X-ray and Dental Departments and the Bio-Chemical Pathological and Psychological Laboratories.

Furthermore provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms.

In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required. The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms.

For forms and further particulars apply to the Physician Superintendent at the Hospital.

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds — Detached Villas — Chapel — Garden and dairy produce from own farm — Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods

Illustrated Brochure on application to the Medical Superintendent, The Old Manor Salisbury — Telephone 51

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams PSYCHOLIA LONDON — FOR THE TREATMENT OF MENTAL DISORDERS — *Telephone* RODNEY 4[illegible]

Also completely detached Villas for mild cases with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Bowls, Croquet, Squash Racquets and all indoor amusements including Wireless and other Concerts. Occupational Therapy, Physical Drill and Dancing. Clinic, X-ray and Actino-therapy, Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician Dr. Hubert James Norman, assisted by three Medical Officers, also resident and visiting Consultants. An illustrated Prospectus may be obtained upon application to the Secretary.

HOVE VILLA, BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

NORTHUMBERLAND HOUSE,
GREEN LANES, FINSBURY PARK, N.4

Telegrams SUBSIDIARY LONDON — *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses.
Conveniently situated four miles from Charing Cross. Easy access from all parts.
Six acres of ground highly situated facing Finsbury Park.
Private Suites. Voluntary Patients and Temporary Patients received without certification.
Convalescent Home Kearsney Court, Dover. For further particulars apply to the Medical Superintendent.

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams Alleviated London — **Telephone** Rodney 4741-4742

The above House which was established in 1826 is an Institution for the cure and treatment of persons suffering from mental diseases and nervous disorders. Both certified patients and voluntary boarders are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis courts. Entertainments, dances and indoor amusements held throughout the year.

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent.

RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological culture the ordinary x ray examinations and electrocardiograph readings all treatment that may be prescribed such as special diets insulin artificial sunlight electrical treatment baths massage nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales *Telegrams* CASTLE RUTHIN *Telephone* RUTHIN 66

TOR[illegible]E SANATORIUM

MU[illegible]DE ABERDEENSHIRE

Medical Director David Lawson M D, F R S E

EQUIPPED WITH EVERY MODERN
FOR THE DIAGNOSIS AND
T OF ALL FORMS OF
VED DISEASES

MATRICULATION

CHILDREN

SE," KLOSTERS

AND 5,000 ft above sea level
from five guineas weekly
cases taken All particulars
Dr B HUTTON (above address)

F R C S (Edin)

with Materia and Anatomical
Exam will commence
For pr[illegible] work at any time
CHAS WESTMACOTT F R C S
Hall Edinburgh

all School — Some twelve
SCHOLARSHIPS [illegible] between
[illegible] 14 of March [illegible] are value
CAUTION [illegible] will be awarded
[illegible] March 1st 1932
[illegible] all [illegible] London—
[illegible] all School Festival
[illegible] staff on and the Ordering of
hospital Central [illegible] £8 8s for 10 1 sons—
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[illegible]ding the [illegible]
[illegible] Taylor &

[illegible]ow in North London
[illegible] EMIA GUESTS [illegible]
[illegible] EMIA House
W C 2

GRADUATE STUDY

The Medical Correspondence College provides ample facilities under highly qualified tutors for oral practical and clinical instruction in preparation for the various higher qualifications and for Post Graduate study irrespective of any examination

Diploma in Psychological Medicine
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Diploma in Radiology
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Diploma in Public Health
Diploma in Tropical Medicine
F R C S Eng, and all higher Surgical Examinations
M R C P Lond and all higher Medical Examinations
M D Thesis of all Universities

[illegible] by our [illegible]

Write at once stating your requirements to the Secretary, MEDICAL CORRESPONDENCE COLLEGE, 19 Welbeck Street W 1

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Preparation for the above and also for Medical Preliminary and for all examinations leading up to M R C S L R C P M B of various Universities also for D P M D M S D T M D L O D C O D M R E M S A L M S S A etc Numerous successes

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MEDICAL PROSPECTUS (48pp)

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LONDON HOSPITAL MEDICAL COLLEGE.

Primary Fellowship Examination

[illegible] OF INSTITUTE [illegible] Full [illegible] The Entrance [illegible] Examination [illegible] Fee [illegible] Part [illegible] Fee [illegible] F R C S [illegible] M B [illegible] D S [illegible] L R C P

NORTH-EAST LONDON POST-GRADUATE COLLEGE

[illegible] OF MEDICINE [illegible] HOSPITAL

[illegible] Full [illegible] Part [illegible]

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NATIONAL POST-GRADUATE SCHOOL OF RADIOTHERAPY.

The Mount Vernon Hospital and Radium Institute Riding House Street London W 1

Dean - Sir CUTHBERT WALLACE, KCMG, CB, FRCS,

An intensive Course in

RADIOTHERAPY

especially in its relation to Malignant Disease

will be held at the above School, commencing Monday, February 29th, 1932

The Course will be repeated on subsequent dates

Copy of the syllabus and full particulars may be obtained on application

In addition, periods of hospital practice can also be arranged

The Dean will be glad to see prospective entrants by appointment.

THOS A GARNER, Secretary

MIDDLESEX HOSPITAL MEDICAL SCHOOL

LONDON W 1
(University of London)

PRIMARY F R C S EXAMINATION

The next Course will start on February 1st 1932 Instruction in Anatomy is given by Professor T YLATES MB CM and the classes in Physiology are under the joint direction of Professor SAMSON WRIGHT Professor I C DODDS and Dr J H WOODGER This section of the Course includes General Physiology Biochemistry and Histology

FEE for the whole Course Twenty Guineas

For further particulars apply to R A FOLEY FCCS School Secretary Middlesex Hospital London W 1

TAUNTON SCHOOL, TAUNTON

A PUBLIC SCHOOL FOR BOYS

Boys are regularly prepared for the First M B Examinations University Scholarships in Chemistry Biology etc

Special facilities are offered for the teaching of Chemistry Physics Botany and Zoology

New Science Buildings containing seven laboratories two lecture rooms science library store rooms etc opened in September 1925 Prospectus from Head Master

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D T H must possess the D T M of this University)

For particulars apply to the Hon Dean, Liverpool School of Tropical Medicine Pembroke Place Liverpool

CITY OF LONDON MATERNITY HOSPITAL, CITY ROAD E C 1

MIDWIFERY TRAINING SCHOOL

MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical emphasis Monthly or Fortnightly Course

LADIES TRAINED as Midwives and Monthly Nurses in accordance with C M B regulations

PRIVATE WARDS for paying patients

MATERNITY NURSES sent out to private cases

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL

(University of London)

LECTURES IN PATHOLOGY

The following Lectures will be given on TUESDAYS at 5 15 p m in No 1 Lecture Theatre of the Medical School University Street Gower Street W C 1

January 19th and 26th—Dr R A O BRIEN (Wellcome Foundation) *The preparation testing and use of antitoxin*

February 2nd—Dr I W FISH (Royal Dental Hospital) *The pathology of dentine and the dental pulp*

February 9th and 16th—Professor A J BOYCOTT F R S *Hypertrophy and atrophy*

February 23rd and March 1st—Dr DOROTHY RUSSELL (London Hospital) *Intracranial tumours*

March 8th and 15th—Professor C C OKELL *Anaphylaxis*

Admission free to Medical Students and Graduates

A M H GRAY Dean

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL

(University of London)
DENMARK HILL S E 5

ADVANCED MEDICAL COURSE

A Course in Clinical Medicine Pathology Morbid Histology and Biochemistry suitable for M D and M R C P examinations will be given for six weeks in February and March Further particulars can be obtained on application to the Dean King's College Hospital Medical School Denmark Hill S E 5

STAMMERING, SPEECH DEFECTS

BEHNKE METHOD Estab 1882 Cases non resident treated at 39 Earls Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns

Prerequisite success in the education and treatment of — Times — Fluent and perfectly effective

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Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric and Prelims
Chemistry Physics and Biology Labs
MANCHESTER TUTORIAL COLLEGE
327 Oxford Road Manchester

Somerset County Council

ASSISTANT MEDICAL OFFICER

The Committee invite applications from qualified Medical Men for the post of Assistant Medical Officer In addition to school medical work the duties will include some maternity and child welfare and veneteal treatment work Experience in the modern methods of diagnosis and treatment of venereal diseases is necessary Salary £500 by annual increments of £25 to £700 less [illegible] reduction The appointment will be made subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

Canvassing will disqualify Applications by January 23rd to the undersigned from whom all particulars and an application form can be obtained

County Health Dept Boulevard Weston super Mare — W C SAVAGE County Medical Officer of Health

City and County of Newcastle-upon-Tyne

NEWCASTLE GENERAL HOSPITAL

RESIDENT MEDICAL ASSISTANTS (Male or Female)

Applications are invited for the above posts The salary in respect of each of the appointments which are tenable for six months is at the rate of £150 per annum with board lodging etc

Applications stating age and qualifications together with copies of not more than three recent testimonials to be addressed to the Medical Officer of Health Town Hall Newcastle upon Tyne

January 5th 1932.

University of London

A Course of Eight Lectures on *The Use of X Rays in Physiological Investigations* will be given in the PHYSIOLOGICAL THEATRE GUY'S HOSPITAL (Borough S E 1) at 5 p m as follows

JANUARY 18th and 25th by Prof J M W MORRISON M D C M F R C P

FEBRUARY 1st and 8th by Prof H S HARRIS M B B S D Sc

FEBRUARY 15th and 22nd by Dr A F DARCEY O B E M A M D

FEBRUARY 29th and MARCH 7th by Dr A J HURST M A M D F R C I

Admission free without ticket

S J WORSLEY
Academic Registrar

University of London

A Course of Three Lectures on *Serological Studies on Leprosy* will be given by Prof W J TAYLOR O B E M D (Late or of Laboratories in the University of St Andrews) in the Governor's Hall ST THOMAS'S HOSPITAL (Albert Embankment S E 1) on JANUARY 18th 19th and 20th at 5 30 p m At the first Lecture the Chair will be taken by Professor F S DUDEON C M G C B E F R C P Professor of Pathology in the University Lantern illustrations

Admission free without ticket

S J WORSLEY
Academic Registrar

Wilts County Council

APPOINTMENT OF AN ASSISTANT SCHOOL DENTIST (Male)

The Wilts County Council invite applications for the appointment of an Assistant School Dentist (male) to work in the Department of the County School Medical Officer at a salary of £450 per annum subject to a deduction of 5 per cent for superannuation under the Local Government and Other Officers Superannuation Act 1922 and to a temporary deduction during the present financial crisis of 2½ per cent from the first £220 and 5 per cent from the remainder of the salary The successful candidate will be required to pass a medical examination

Travelling and subsistence allowance in accordance with the County scale will be paid If own car used a mileage allowance to be approved by the Council will be paid for certain journeys

The officer appointed must be duly qualified and registered and will be required to reside in or near Marlborough He will be required to devote his whole time to the service of the Council

Applications on forms to be obtained from the undersigned and accompanied by copies of not more than three recent testimonials must be delivered in envelopes marked School Dentist not later than the first post on Saturday January 23rd

Canvassing either directly or indirectly will disqualify

County Offices Trowbridge Wilts January 5th 1932 — W L BOWN Clerk of the Council

Corporation of Glasgow

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF PATHOLOGIST

Applications are invited from duly qualified Medical Practitioners for the post of Pathologist to the Corporation Central Hospitals The salary attaching to the appointment is £800 per annum rising by biennial increments of £40 to a maximum of £1 000 per annum and the person appointed will be required to devote his whole time to the duties of the office and to act under the direction and control of the Medical Officer of Health

The successful candidate will also be required to undergo medical examination and if under 45 years of age must join the Corporation Superannuation Scheme in respect of which deductions are made from salary at the rate of five per cent per annum The appointment will also be during the pleasure of the Corporation and subject to one months notice on either side

The appointment is also subject to the approval of the University Court as the person appointed by the Corporation will also be appointed an Honorary Lecturer to the University

Applications stating age and qualifications and giving full details of previous experience together with copies of not more than three recent testimonials to be sent to the undersigned not later than Monday February 1st in envelopes endorsed Application for appointment as Pathologist

City Chambers Glasgow — D STENHOUSE Town Clerk

December 26th 1931

City of Manchester

PUBLIC HEALTH DEPARTMENT

WITHINGTON HOSPITAL

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invite applications for the appointment of a Medical Officer at the Withington Hospital, at a salary of £250 per annum, rising by annual increments of £25 to £300 per annum (first increment January 1, 1933), subject to the Provisions of the Local Government Superannuation Act, 1922.

Candidates must be duly registered Medical Practitioners, and must have had experience in Medicine, Surgery, Midwifery and Infectious Diseases.

The appointment will be subject to the Regulations of the Council as to Conditions of Service, and to the Rules of the Withington Hospital, and will be terminable by one month's notice on either side.

Applications, stating age, qualifications, and experience, together with the names of three persons to whom reference may be made, must be delivered to me at the Town Hall, Manchester, not later than Thursday, January 28th, 1932.

The successful candidate will be required to enter upon his duties as soon as possible after his appointment has been confirmed by the Council.

Canvassing, either directly or indirectly, will be a disqualification.

E. J. WARBRICK HOWELL,
Town Clerk.

Town Hall,
Manchester, January 11th, 1932.

City of Manchester

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Public Health Committee invite applications for the appointment of an Assistant Tuberculosis Officer at a salary of £300 per annum, rising by annual increments of £25 to £350 per annum (first increment January 1, 1933), subject to the provisions of the Local Government Superannuation Act, 1922.

Candidates must be duly qualified Medical Practitioners, and must have had experience in Medicine, Surgery, Midwifery, and Tuberculosis, and should possess the Diploma of Public Health.

Applications, stating age, qualifications, and experience, together with the names of three persons to whom reference may be made, must be delivered to me at the Town Hall, Manchester, not later than Thursday, January 28th, 1932.

The successful candidate will be required to enter upon his duties as soon as possible after his appointment has been confirmed by the Council.

Canvassing, either directly or indirectly, will be a disqualification.

E. J. WARBRICK HOWELL,
Town Clerk.

Town Hall,
January 11, 1932.

The Radium Institute

MANCHESTER

ASSISTANT MEDICAL OFFICER [illegible]

DEMONSTRATOR IN THE DEPARTMENT OF RADIOLOGY AT THE DEFAINCOURT HOSPITAL [illegible]

London County Council

Applications are invited for appointment to the following ASSISTANT MEDICAL OFFICER (Grade II.) at the undermentioned Hospitals. The person appointed will be required to carry out such duties as may be assigned to him by the Medical Superintendent, and generally to assist in the care of the other establishment and in the control of Council Cases. Candidates will be required to live in the Hospital.

Salary £350 per annum, rising annually by £25 to £425 a year, with board, lodging and washing. Candidates must be qualified Medical Practitioners of at least one year's standing, and must have held a resident appointment in a Central Hospital for a least six months.

(1) MILE END HOSPITAL, Bancroft Road, Mile End, E.1.

(2) ST. ALEECE'S HOSPITAL, 48 Vanbrugh Hill, Greenwich, S.E.10. For this appointment candidates should have special experience in midwifery.

(3) ST. JOHN'S HOSPITAL, St. John's Hill, S.W.11. Preference will be given to candidates who possess the Diploma of Psychological Medicine. Psychiatric experience is essential.

Applications are invited for the following position:

ST. MARY ABBOTT'S HOSPITAL, Marloes Road, Kensington, W.8. ASSISTANT MEDICAL OFFICER (woman). Salary £250 a year, together with board, lodging, and washing. Candidates must have held a resident appointment in a General or Maternity Hospital. The appointment will be for six months in the first instance. The duties will include the administration of anæsthetics in maternity cases.

The salaries mentioned are subject to temporary reduction.

Forms of application (foolscap size) from Medical Officer of Health (Staff Division S.D.24), County Hall, Westminster Bridge, S.E.1, and must be returned by January 29th. Canvassing disqualifies. Further inquiries should be addressed to the Medical Superintendent of the Hospital.

London County Council

Applications are invited for appointment to the position of SENIOR ASSISTANT MEDICAL OFFICER (Grade III.) at the undermentioned Hospital. The person appointed will be required to carry out such duties as may be assigned to him by the Medical Superintendent, and shall assist in the care of the patients and in the control of the establishment under the control of the Council. Candidates will be required to live in the Hospital. In the case of a married person the terms of the appointment will be subject to the Council's Superannuation Fund Act, 1922, and the Deed of Service.

Canvassing, either personal or written, directly or indirectly, is prohibited.

E. J. WARBRICK HOWELL,
Town Clerk.

Town Hall,
Manchester, January 11th, 1932.

City of Manchester

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Public Health Committee invite applications for the appointment of an Assistant Tuberculosis Officer at a salary of £300 per annum, rising by annual increments of £25 to £350 per annum (first increment January 1, 1933), subject to the provisions of the Local Government Superannuation Act, 1922.

Candidates must be duly qualified Medical Practitioners, and must have had experience in Medicine, Surgery, Midwifery, and Tuberculosis, and should possess the Diploma of Public Health.

Applications, stating age, qualifications, and experience, together with the names of three persons to whom reference may be made, must be delivered to me at the Town Hall, Manchester, not later than Thursday, January 28th, 1932.

The successful candidate will be required to enter upon his duties as soon as possible after his appointment has been confirmed by the Council.

Canvassing, either directly or indirectly, will be a disqualification.

E. J. WARBRICK HOWELL,
Town Clerk.

Town Hall,
January 11, 1932.

Seamen's Hospital Society

The Committee of Management of the HONORARY DERMATOLOGIST to the DEPARTMENT OF DISEASES CONTRACTED IN WARM CLIMATES at the Dreadnought Hospital, Greenwich, will be vacant on the 31st March next. The appointment is for two years, and the honorary holder will be eligible for re-election for a further period of two years. Candidates must be Members of the Royal College of Physicians of London, and must have had experience in Dermatology. Applications, with copies of three testimonials, should be sent to the undersigned not later than February 29th next.

[illegible]

London Temperance Hospital

[illegible]

City of Birmingham

PUBLIC HEALTH DEPARTMENT

HOLLYMOOR HOSPITAL FOR INFECTIOUS DISEASES

JUNIOR ASSISTANT MEDICAL OFFICER (Male)

Junior Assistant Medical Officer (male) required. Candidates must be registered Medical Practitioners, and have had experience in the Medical Charge of Children in Hospital.

Salary at the rate of £200 per annum, rising by annual increments of £10 to £250 per annum, with board and lodging. The appointment will be subject to the Conditions of Service and Rules of the Hospital, and to the Superannuation Act, 1922, and will be terminable by one month's notice on either side.

The officer appointed will be required to pass the Council's Medical Examination (or such other medical examination as may be approved by him).

Applications, which must be received not later than Monday, January 25th, 1932, should be addressed to the Medical Superintendent, Hollymoor Hospital, Northfield, Birmingham, and endorsed "Junior Assistant Medical Officer."

F. H. C. WILTSHIRE,
Town Clerk.

Town Hall,
Birmingham.

The Board of Control (Lunacy and Mental Deficiency)

The Board of Control (Lunacy and Mental Deficiency) invite applications for the post of FOURTH MEDICAL OFFICER (male) at HAMPTON STATE INSTITUTION FOR MENTAL DEFECTIVES, HEATHFIELD, NOTTS. Salary £400, rising by annual increments of £20 to £500, with board, lodging, and washing. Candidates must be registered Medical Practitioners, unmarried or widowers, and must have had experience in the Certification and Treatment of Mental Defectives.

Forms of application, with further particulars, can be obtained from the Secretary, Board of Control (Lunacy and Mental Deficiency), Caxton House, West Block, Tothill Street, London, S.W.1, and must be returned to him not later than Saturday, January 23.

Cardiff Royal Infirmary

(Affiliated with the Welsh National School of Medicine)

Number of available Beds—90

Applications are invited for the undermentioned posts:

HOUSE PHYSICIAN.
HOUSE PHYSICIAN—Medical Unit.
HOUSE SURGEON.
HOUSE SURGEON—Surgical Unit.

Salary at the rate of £50 per annum, with board and residence.

Applications, stating age, qualifications, and experience, together with the names of two referees, should be sent to the Secretary, Royal Infirmary, Cardiff, not later than January 23rd, 1932.

J. M. STRACHAN,
Secretary.

January 9, 1932.

Eastbourne Princess Alice Memorial Hospital

[illegible]

Popworth Village Settlement

CANDIDATE [illegible]

[illegible]

THE [illegible] ASSISTANT MEDICAL OFFICER [illegible]

City Mental Hospital, Humberstone, Leicester

SECOND ASSISTANT RESIDENT MEDICAL OFFICER (Single Male British under 30)

Applications are invited for the above post Salary £400 a year rising by annual increments of £50 to £500 together with board lodging washing and attendance valued for purposes of superannuation at £100 per annum Previous Mental Hospital experience not necessary

Candidates must have held a Resident House appointment in a recognised teaching Hospital for at least six months

Preference will be given to those holding a University degree The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909

Applications marked "MO" giving particulars of general and professional education and copies of not more than three testimonials to be sent to the Medical Superintendent

The Queen's Hospital for Children, Hackney Road, London, E.2

The Committee invite applications for the post of SURGEON for the Ear Nose and Throat Department with charge of beds Attendance required on Mondays and Thursdays mornings An honorarium to cover travelling expenses will be paid Candidates must be Fellows by examination of the Royal College of Surgeons of England

Applications with copies of three recent testimonials which may be printed or typewritten should be sent on or before 13th January 1st 1932 to the undersigned from whom further particulars may be obtained

CHARLES H BESSELL Secretary

Western Ophthalmic Hospital, Marylebone Road, N.W.1

Applications are invited for the post of SENIOR RESIDENT HOUSE SURGEON The salary is at the rate of £150 per annum and the appointment is for three months

The elected candidate will be required to take up duties early in February

Applications accompanied by copies of three testimonials should reach me by January 29th

H W BURLEIGH Honorary Secretary

Victoria Central Hospital, Wallasey

Applications are invited for the position of JUNIOR HOUSE SURGEON (male) Salary at the rate of £120 per annum with board and residence and laundry with prospects of appointment to Senior House Surgeon in six months time at a salary of £150

Candidates who would be appointed for six months

Applications with copies of testimonials to be sent to the Secretary

City of London Hospital for Diseases of the Heart, Victoria Park, E.2

(Bus Tram and Rail Cambridge Heath L N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on March 1st Six months appointment Salary at the rate of £100 per annum with board residence and laundry provided

Applications with copies of three testimonials should be sent to the undersigned on or before Friday February 12th

CLOUGH WATTS Secretary

Harrogate Infirmary

Applications are invited from British subjects (male) for the post of SENIOR HOUSE SURGEON for the period commencing February 27th and terminating July 31st Salary at the rate of £150 per annum with board and lodging

Applications to be made on official form to be had from the undersigned should be sent in as early as possible

The Infirmary GEO BALLANTINE Harrogate Secretary

Harrogate Infirmary

Applications are invited from British subjects (male) for the post of HOUSE PHYSICIAN for the period commencing July 31st and terminating July 31st Salary at the rate of £150 per annum with board and lodging

Applications to be made on official form to be had from the undersigned should be sent in as early as possible

The Infirmary GEO BALLANTINE Harrogate Secretary

South London Hospital for Women, Clapham Common, S.W.4

General Hospital for Women and Children (120 beds) including Medical Surgical Tuberculosis Nose and Throat Ophthalmic Skin Urological and other Special Departments

Applications are invited from fully qualified Medical Women for the undermentioned appointments

SURGICAL REGISTRAR Half time duty appointment for a period of one year with eligibility for re-appointment to a maximum of three years Honorarium 50 guineas per annum

SURGICAL REGISTRAR Half time duty appointment for a period of six months from March 1st Salary at the rate of £100 per annum with board residence and laundry

ANAESTHETIST For duty on Friday mornings Honorarium 10/6 per attendance

Candidates are requested to call on Monday January 30th by which date applications and copies of testimonials must reach the Secretary at the Hospital

Worcester General Infirmary

Voluntary Hospital (132 Beds)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER

Candidates must be fully qualified and duly registered and prepared to commence duties on March 1st Salary at the rate of £120 per annum with board residence and laundry

The Hospital is equipped with modern X-Ray Department Orthopædic Clinic etc and offers excellent opportunities for wide experience

Applications stating age qualifications together with copies of three recent testimonials to be sent to the undersigned

LUCY V CLASS B Sc (Vict) General Secretary

Swindon and North Wilts Victoria Hospital, Swindon

(80 Beds)

RESIDENT MEDICAL OFFICER is required (male) Salary £125 per annum with board residence and laundry Candidates must be registered under the Medical Act Applications stating age etc and accompanied by copies of not more than three recent testimonials should be sent at once to the undersigned

KENNETH KNAPP Secretary

Royal West Sussex Hospital, Chichester (111 Beds)

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON to commence early in March Salary £150 per annum with board residence and laundry

Applications stating age with three recent testimonials should reach the undersigned not later than January 26th

HERBERT S WILMOTT Secretary

King Edward VII. Hospital, Windsor (181 Beds)

HOUSE SURGEON required for six months from February 3rd Applicant must be fully qualified and registered

Salary at the rate of £100 per annum together with board residence and laundry

Applications stating age qualifications and experience accompanied by testimonials should be sent to the undersigned not later than January 25th

ARTHUR E CHURCHER Secretary

King Edward Memorial Hospital, Ealing (109 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON (2 vacancies) vacant on February 1st Salary £150 per annum with usual residential allowances

Applications stating age experience and qualifications together with copies of two recent testimonials to be sent to the undersigned immediately

R A MICKLEWRIGHT Secretary Superintendent

The Wen Hospital, Grove Rd., Balham, S.W.12

JUNIOR RESIDENT MEDICAL OFFICER (male unmarried) required Candidates must be fully qualified and duly registered Salary £150 per annum with board residence and laundry

Applications with copies of testimonials to be sent to the Secretary from whom further information may be obtained

West London Hospital, Hammersmith Road, W.6

(234 Beds)

Applications are invited for the post of HONORARY OPHTHALMIC REGISTRAR for a period of one year The successful candidate will be eligible for re-election annually for a total period of not more than 3 years

Registrar's Report for the preparation of the Ophthalmic Records of cases The appointed must be available as a substitute for the Surgeon and Assistant Surgeon for Diseases of Women and for emergency operations when required and prepared to undertake such nursing for the Post-graduate College as the Board may approve

Candidates are required to be registered under the Medical Act to send applications to reach me not later than Tuesday 16th February and to attend the Medical Council Meeting on Friday February 19th at 4.30 p.m and prior to that date to call upon and send copies of application and testimonials to each Member of the Board from Canvassing but nevertheless to attain from canvassing but nevertheless to send copies of application and testimonials to each Member of the Board of Management at whose Meeting on Tuesday February 23rd at 5 p.m selected candidates must be in attendance

H A MADGE Secretary

West London Hospital, Hammersmith Road, W.6

(234 Beds)

Required a NON-RESIDENT CASUALTY OFFICER (male) The appointment is for one year from March 1st or as soon thereafter as possible One month's notice on either side The appointed candidate will be eligible for re-appointment for two further periods of one year Salary at the rate of £250 per annum with lunch and tea daily

Candidates must be duly qualified registered Medical Practitioners and preference will be given to those who have held a Resident appointment in a General Hospital

Applications (which must be made on prescribed forms obtainable from me) must reach me not later than Thursday February 18th Selected candidates will be required to call upon such members of the Medical Staff as directed and to be in attendance at a meeting of the Medical Council at 4 p.m on Friday February 25th and the House Committee Meeting at 4.45 p.m the same day when the appointment will be made

H A MADGE Secretary

Liverpool Stanley Hospital, Stanley Road, Liverpool

There will be vacancies on April 1st next for ONE MALE HOUSE PHYSICIAN TWO MALE HOUSE SURGEONS and ONE FEMALE HOUSE GYNÆCOLOGICAL SURGEON Salary in each case at rate of £100 per annum with board laundry etc Candidates must be on the *Medical Register* and submit their applications with copies of three recent testimonials addressed to the undersigned by January 27th

I W OSBORN Secretary

The General Hospital, Birmingham

Applications are invited for the following Resident appointments

ANÆSTHETIST (vacant February 1st) Salary £120 per annum

HOUSE PHYSICIAN (vacant February 15th) Salary £70 per annum

Applications giving full details of qualifications and accompanied by testimonials (if desired) should reach the undersigned by January 25th

January 11th 1932 A H LEAFE House Governor

Bristol Royal Infirmary

Applications are invited for the post of HONORARY GYNÆCOLOGICAL ASSISTANT

Candidates who must be duly qualified and registered to send in their applications together with copies of not more than three testimonials to the undersigned on or before January 23rd

ELLIS C SMITH F.C.I.S Secretary & House Governor

House Surgeon required, male

of female British nationality for 151 bed FOUNDLING HOSPITAL DEPARTMENT Salary £150 per annum Plastic experience and qualifications Candidates must be unmarried and under 35 years of age Duties to commence March 1st Applications with three recent testimonials to be sent to the Hon Secretary on or before February 1st

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh

(a) British Islands

Town or District	Town or District	Town or District
CENTRAL POST OFFICE (Medical Officer—Bolton)	**CONTRACT PRACTICE** (contd)	**CONTRACT PRACTICE** (contd)
CONTRACT PRACTICE	LLWYNYPIA CLYDACH VALE PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Rhondda Urban Medical Aid Society) (Workmen's Medical Scheme)
EBBW VALE MON (Workmen's Medical Society)	MARDY GLAMORGAN (Workmen's Medical Scheme)	**PUBLIC HEALTH**
CILFACH COCH GLAMORGAN (Workmen's Medical Scheme)	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE (Workmen's Medical Scheme)	BUCKS COUNTY COUNCIL (Medical Officer Maternity and Infancy)
LOVESTOFT MEDICAL INSTITUTE (Medical Officer)	NEATH AND DISTRICT (Medical Aid Secretary)	DEVON COUNTY COUNCIL (Selected Medical Inspector—Male)
	OAKDALE MON (Medical Officer for Medical Aid Society)	FULHAM BOROUGH COUNCIL (Assistant Medical Officer—Bolton)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (All Institute Society Appointments)	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	SOUTH AUSTRALIA (Adjudicating Authority)	Secretary South Australian Branch B M A House 20b North Terrace Adelaide	WELLINGTON NEW ZEALAND (Contract Practice Appointments)	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 150 Wellington New Zealand
QUEENSLAND (Contract Practice Appointments) (Temporary Appointments for Medical Officers for Mines Institutes)	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	VICTORIA (All Institute or Medical Dispensaries)	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria	WESTERN AUSTRALIA (Contract and Locum Practices)	Hon Sec Western Australian Branch British Medical Association 6 Bankcell NSW Chambers St Georges Terrace Perth Western Australia

January 14th 1932 By Order of the Council ALFRED COX Medical Secretary

Bethlem Hospital Monks Orchard Eden Park Beckenham Kent

Wanted on RESIDENT HOUSE PHYSICIAN (male unmarried) recently qualified in Medicine and Surgery The term of office will be for one year from 1st February next at a salary at the rate of £150 per annum with board lodging and laundry Candidates must have had experience of Midwifery and will be required to pass the first M B examination within twelve months from the date of appointment A bonus of £6 6s will be given on the successful completion of the term of office

Applications with testimonials and references to be sent to the Superintendent not later than January 20th 1932 Duties to commence on February 1st 1932

JOHN I WOLSTOLD Clerk to the Governors

Bethlem Hospital 14 New Bridge Street E C 4

January 14th 1932

St Mary's Hospitals Manchester

THE HOUSE SURGEONCY of the WHITWORTH STREET WEST HOSPITAL (MEDICAL and SURGICAL) and of the WHITWORTH PARK HOSPITAL (Gynæcological and Obstetrical) becomes vacant on March 1st 1932 The appointment is for six months and is open to graduates of any British University who have had experience of Midwifery

Applications with copies of testimonials to be sent to the undersigned not later than January 23rd 1932

E HAMILTON Secretary

St Peter's Hospital for Stone

National Hospital, Queen Square, for the Relief and Cure of Disease of the Nervous System including Paralysis and Epilepsy W C 1

HONORARY SURGICAL ASSISTANT

The Board of Management invite applications from fellows of the Royal College of Surgeons for the appointment of Honorary Surgical Assistant Applicants must have had experience of the diseases dealt with in the hospital

Applications should be sent to the undersigned not later than January 23rd 1932 In the application should be stated whether the applicant will be available for election

CORNELIA H HAMILTON National Hospital Queen Square W C 1 Secretary

Hampstead General and North-West London Hospital Haverstock Hill N W 3

APPOINTMENT OF HOUSE PHYSICIAN

[illegible]

St Mary's Hospital Manchester

[illegible]

E HAMILTON Secretary

Northampton General Hospital (200 Beds)

[illegible] HONORARY OPHTHALMIC SURGEON [illegible] ASSISTANT HONORARY OPHTHALMIC SURGEON [illegible] Applications [illegible] January 23rd 1932 [illegible]

H STEPHEN WARD Secretary

Royal Edinburgh Hospital for Sick Children

[illegible] RESIDENT HOUSE SURGEON [illegible] HONORARY ASSISTANT PHYSICIANS [illegible]

Hospital [illegible]

[illegible]

(Appointments continued on p 50)

British Medical Journal,
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ASSISTANCIES

Wanted — Assistantship, with or without view well qualified and Edinburgh man Excellent testimonials 1st 32 7 years experience Capital available Just sold own Practice Locums considered Free immediately Salary offered — Address No 464 B M A House Tavistock Square W C 1

Wanted — Well-qualified and Married ASSISTANT to manage Practice in industrial area in Midlands Hospital and midwifery experience essential Roof stint and abstinence Salary £600 p a with 1 2 meals & quarters allowance — No 454 B M A House Tavistock Sq W C 1

Wanted — Assistant, with view to Partnership later on in good Practice in rapidly growing seaside resort Must be capable and fond of surgery State essential particulars Previous experience of G I work necessary Applications with two testimonials —No 322 B M A House Tavistock Sq W C 1

Wanted — Assistantship immediately by London experienced general Practitioner Must be active drive ride cycle motor cycle drive motor Pleasant outdoor Keen and willing gynæcology Numerous recommendations Any position in or outdoor Terms easy —No 427 B M A House Tavistock Sq W C 1

Wanted, Assistant, with ultimate view to Partnership or Succession by first class Practice Large private good class Practice small panel Excellent opportunity for good all round man Englishman essential — Address No 417 B M A House Tavistock Square W C 1

Wanted, Assistantship, with view to Partnership or Succession by Jewish Doctor aged 29 4 years varied hospital experience and 1½ years of general practice Keen and reliable — Address No 459 B M A House Tavistock Square W C 1

Wanted — Assistant, with Hospital and general experience £360 p a (indoor) State exp ht and capital (if with view) Easy terms Send photo Suitable for married man — Address No 453 B M A Hons Tavistock Square W C 1

Wanted — Indoor Assistant, with view to Partnership Salary £300 p a Young single and Protestant Loyal bond until partnership is settled Lady or gentleman — Address No 468 B M A House Tavistock Square W C 1

Wanted — Energetic, male British QUALIFIED ASSISTANT for Practice with good Hospital Industrial from £325 p a Salary rising attendance and car allowance Applications to be addressed — No B M A Hou

Wanted — Assistant, recently qualified for industrial Practice Must be free to motor (copies) £250 and Almost no night work — Address No 419 B M A House Tavistock Square W C 1

Wanted — Assistant male, single Must be well qualified and free to motor Salary £300 with board and lodging Must be free to start at once Apply with full particulars and copies of testimonials to — Address No 463 B M A Hou Tavistock Sq W C 1

Wanted — Indoor lady Assistant by country Doctor North of England Duties light — Address with photo stating age experience etc No 426 B M A Hous Tavistock Square W C 1

Wanted — Assistantship, outdoor by Scots Graduate 35 married Conscientious and reliable Available at once Appointment view if desired — Address No 438 B M A House Tavistock Square W C 1

Wanted — Assistantship or LOCUMS by L R C P & S Ed (Lady) experienced in C I Drive car Excellent testimonials Moderate salary — Address No 452 B M A House Tavistock Square W C 1

Wanted immediately — Indoor and Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars — BRITISH MEDICAL BUREAU 33 Cross Street Manchester

Wanted — Indoor Assistant, male for private and panel Practice in Lancs English or Scotch Salary £300 — Address No 466 B M A House Tavistock Square W C 1

Wanted — Assistantship, with view by M B Ch B (Scot) age 27 single Lic C H S and C I Interne foreign experience — Address No 436 B M A House Tavistock Square W C 1

Wanted — Outdoor Assistant, male single for country district work £400 p a outdoor Knowledge of anæsthetics and midwifery essential — Address No 405 B M A House Tavistock Square W C 1

Required — Assistant, reliable £450—£500 p a with possibilities of early Partnership to good man Car supplied Little night work No midwifery — Address No 425 B M A House Tavistock Square W C 1

Temporary Assistantship or Locum Wanted in or near Glasgow preferred Advertiser is M B (Glas) age 30 3 years hospital experience all branches Motorist C P Experienced Free now — Address No 439 B M A House Tavistock Sq W C 1

PARTNERSHIPS

Wanted for N Midlands industrial Practice permanent paid ASSISTANT indoor male unmarried Salary £400 Car and dispenser Dept Must be capable of taking entire charge if necessary Only capable conscientious keen workers between 28 and 35 years apply with particulars references Partnership for suitable man arrangements might be made later for share on easy terms but this is not promised — Address No 420 B M A House Tavistock Square W C 1

Wanted by M B Camb, age 30, with view to PARTNERSHIP or ASSISTANTSHIP Medium sized town South preferred 5 years experience in hospitals and C P Capital available — Address No 460 B M A House Tavistock Square W C 1

Anglo-Indian, 32, F'ship E'boro, Conjoint Lond 6 yrs abroad 2 yrs general and panel Liverpool Panel of 4 000 PARTNERSHIP or PRACTICE area desires gery Part premium available — Address No 418 B M A House Tavistock Square W C 1

Partner required for very large Practice in London E Income £4 000—£5 000 p a Half share for proposal at 2 years purchase Excellent opportunity for right man — Address No 101 B M A House Tavistock Square W C 1

Partnership — Share Worth £3 000—£3 500 p a required in sound General Practice London or within 30 miles Client well qualified and under 40 prepared to pay 2 3rds purchase — Apply in strictest confidence PERCIVAL TURNER LTD 4 Adam St Strand W C 2

Surgeon required to take Share producing £2 000 per annum Must be experienced in major surgery Well equipped Hospital Favourable terms to suitable man — Address No 410 B M A House Tavistock Square W C 1

X-Ray Practice — Wanted, Partner, qualified and all to do dental radiology — Address No 451 B M A House Tavistock Square W C 1

LOCUMS

FOR LOCUM TENNS APPLY TO PERCIVAL TURNER, Ltd the oldest and only Agent who for 30 years has supplied substitutes at short notice without fee to principals 1 ADAM ST Strand London W C 2
Telg Ipsomian Lond Phone Temple Bar 9011
After Office Hours Ipsom 9142

MEDICAL POSTS DISPENSERS etc

Wanted — To London Doctors If so can you use a young man aged 21 London matric R S A Bookkeeping certificate SECRETARY BOOKKEEPER CHAUFFEUR odd job man dom the work or any other capacity In return for his keep or any other London Hospital as a Medical Missionary — K 1 SCOTT 70 Foulser Rd S W 17

Wanted — Part-time Work in London by Doctor (St Thomas's) and 26 ex H P C O in large London Hospital Experienced anæsthetics private and panel practice Doing L C work Good references — No 413 B M A House Tavistock Sq W C 1

Wanted — Whole or part time Woman M R C S L M D H 5 years experience Can start shall Free now in town Interview arranged — Address No 416 B M A House Tavistock Sq W C 1

Wanted by M B, Ch M, not 31 PART TIME ANÆSTHETIST SURGEON'S ex H P and H S also experience in midwifery ten nervous mental T D and C I — Address No 421 B M A House Tavistock Sq W C 1

Wanted by M B, B Ch, doing Lost graduate course experience in panel and private practice PART TIME WORK in London — Address No 457 B M A Hou Tavistock Square W C 1

A Lady Dispenser-Bookkeeper qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

Chauffeuse, refined, twelve years' experience splendid references clean licence seven years last post left through death Clean car etc — I Cox 4 Hall Road St John's Wood London N W 8

Dispensers supplied to Doctors at short notice without fee Qualified and experienced in private and panel practice Practice management and part time Bookkeepers Dispensers Secretaries Dispensers Nurse Dispensers Chauffeuse Dispensers — Write wire or phone Central 3679 THE RELIANCE BUREAU FOR DISPENSERS 12 Holborn Viaduct E C 1

Doctor's daughter, with Apothecaries Hall certificate desires POST as DISPENSER or DISPENSER CHAUFFEUSE Experienced driver Free at the beginning of January Would take Locum work — Address No 437 B M A House Tavistock Sq W C 1

Doctor doing Post-graduate work in London is available to do PANEL and SURGERY for moderate remuneration — Address No 403 B M A House Tavistock Square W C 1

Doctors requiring qualified Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W C 2

Fully qualified dispenser and midwife C M B desires post Good Locality Driver and receptionist Nine years experience Accustomed surgery routine dressings etc Capable and willing Free now — Miss CASE Bannington Hall Aylsham Norfolk.

Lady Dispenser - Bookkeeper [illegible] RECEIVE [illegible] Address No 402 BMA House Tavistock Square WC1

Lady Dispenser - Bookkeeper [illegible] Address No 422 BMA House Tavistock Sq WC1

Lady Dispenser (Hall), desires POST with Doctor experienced with [illegible] Address No 402 BMA House Tavistock Square WC1

Lady Dispenser, M P S, desires POSITION with Doctor or Firm preferably within reach of Midlands Excellent references Moderate salary At liberty Disengaged c/o 20 Marchmont St WC1

Lady Doctor desiring change offers SERVICES in return for hospitality and small remuneration — Address No 406 BMA House Tavistock Square WC1

London Area — Morning or evening SESSIONS wanted No [illegible] Dr Jones Erdington 2209

Male Dispenser-Bookkeeper (43) desires POST Thoroughly experienced private and panel, quick and accurate worker Good references Moderate salary At liberty Disengaged c/o 20 Marchmont St WC1

M.D., London, [illegible] useful languages would ACCOMPANY INVALID or LADY —Address No 330 BMA House Tavistock Square WC1

North Borneo — Government DISTRICT SURGEON required for Interior Residency Agreement for 4 years [illegible] Applicants must be unmarried — Further particulars on application to the British Medical Bureau 1a Stratford Place London W1

Pathologist, 14 years' experience teaching research routine laboratory work requires EMPLOYMENT at moderate salary Expert diagnostician Highest testimonials if required —Address No 368 BMA House Tavistock Square WC1

Secretary - Receptionist requires ENGAGEMENT (Dental Surgeon's Daughter) expert shorthand Typist knowledge of [illegible]ping — Correspondence Epoch Local Control

The Royal Army Medical Corps ASSOCIATION 55 Lincoln's Inn Square WC2 (Telephone Victoria 2722) supplies qualified Dispensers Bacteriologists Assistants Sanitary Assistants Masseurs Nurses Medical and Special Treatment Orderlies Dental Clerks Clerks Porters Caretakers etc without charge to efficient employers

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Will companionable Gentle- [illegible] Address No 410 BMA House Tavistock Square WC1

PRACTICES

Wanted — M.B., B.S. (Lond.), [illegible] PRACTICE SHARE [illegible] Address No 434 BMA House Tavistock Square WC1

Wanted by experienced Grad- [illegible] PRACTICE [illegible] Address No 436 BMA House Tavistock Square WC1

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Wanted, a good country Prac- TICE turning about £1 600 p a with nice house and ground Near City Yorkshire preferred not essential Cash available—Address No 432 BMA House Tavistock Sq WC1

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Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from February 12th (first two months in Casualty and Out Patient Department) Salary at the rate of £120 per annum with board and residence
Applications stating age experience and qualifications accompanied by copies of four testimonials to be sent to the undersigned not later than January 25th from whom rules and other particulars can be obtained
By Order of the Committee of Management
W H SIDNELL
Jan 5th 1932 Secretary Supt

The Children's Hospital, SHEFFIELD (107 Beds)
Applications are invited for the following posts vacant on February 1st 1932
HOUSE SURGEON AND CASUALTY OFFICER (THIRD RESIDENT) Salary £80 per annum with board residence and laundry The appointment is for six months and afterwards the holder is eligible for the post of House Physician (salary at the rate of £100 per annum)
Candidates (female and unmarried) must be fully qualified and registered
Applications stating age etc, together with copies of three recent testimonials to be forwarded to the undersigned as soon as possible
T H G GAPTLAND Secretary

David Lewis Northern Hospital, LIVERPOOL
Applications are invited for the undermentioned post
FOUR HOUSE SURGEONS
TWO [illegible] SURGEONS
The tenable for six months
The salary attached to each post is £100 per annum together with board and residence
Applications with copies of testimonial to be sent to the M S
December ry Supt

The Liverpool and Samaritan HOSPITAL FOR WOMEN
The Committee of Management invite applications for the appointment of HONORARY ASSISTANT SURGEON to the Liverpool and Samaritan Hospital for Women Candidates must hold the Fellowship of the Royal College of Surgeons of England Edinburgh or Ireland or a Master in Surgery Degree of a recognized University of the United Kingdom
Applications with copies of testimonials must be forwarded to the Hon Secretary of the Liverpool and Samaritan Hospital for Women 21 Water Street Liverpool not later than January 18th

The Royal Infirmary, Sheffield (500 Beds)
The Weekly Board of Management invite applications for the post of OPHTHALMIC HOUSE SURGEON
The appointment is tenable until June 30th with salary at the rate of £80 per annum with board and residence
The Resident Staff numbers 14 and after six months service salary is at the rate of £100 per annum
Applications with copies of testimonial to be sent to the undersigned forthwith
JNO W BARNES FCIS
Board Room Central Superintendent
January 6th 1932 & Secretary

The Liverpool Eye and Ear INFIRMARY Myrtle Street
Applications are invited for the post of OPHTHALMIC HOUSE SURGEON to the Ophthalmic Department of the above Institution Salary £120 per annum with board and lodging
Applications stating age and qualifications together with copies of not more than three recent testimonials should be sent in not later than mid day January 26th to—
CHARLES W WRIGHT Esq
9 Harrington St Liverpool.

City of Birmingham Mental Hospital.

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SENIOR ASSISTANT MEDICAL OFFICER AND DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the above appointment from gentlemen not exceeding 35 years of age who are duly qualified and registered Medical Practitioners with several years' experience in Mental Hospital Practice and possessing the D.P.M. A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification.

The successful candidate should be a good Anaesthetist.

He will be required to reside in the hospital.

The commencing salary will be £550 per annum plus the actual residential emoluments valued for Superannuation purposes at £120 per annum. The salary and emolument will be subject to a temporary deduction in accordance with the Scale of Temporary Abatement from salaries approved by the City Council amounting to £22 10s. per annum. The salary is inclusive of the D.P.M. and of all fees received in respect of attendances at inquests, post-mortem examinations, etc. Fees received must be accounted for and paid into the hospital account.

The appointment is a whole-time one and the person appointed will not be permitted to engage in any other work.

The appointment is subject to the candidate passing satisfactorily a medical examination and will be terminable by three months' notice on either side. The appointed candidate will be required to join the Asylum Officers' Superannuation Scheme and to reserve in any institution belonging to the Mental Hospitals Committee.

Application, stating age, full particulars of qualifications, experience and appointments held, accompanied by copies of three recent testimonials, to be addressed to the undersigned not later than February 15th.

Canvassing in any form, oral or written, direct or indirect, will be regarded as a disqualification.

F. H. C. WHITSHIRE,
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Applications are invited for the post of THIRD MALE RESIDENT MEDICAL OFFICER, *qualified*.

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(Signed) W. COCKBURN,
Superintendent & Secretary.

Hospital for Women at Leeds

HOUSE SURGEON required to commence duties on February 1st next. Salary at the rate of £100 per annum, together with board, quarters and laundry. The appointment is for *six months*. Applications, together with copies of testimonials, should be addressed to the undersigned and must be received not later than Tuesday, the 19th inst.

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2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Garage etc

3 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

4 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

5 LANCASHIRE — (Large Town) — Non dispensing non panel largely surgical PRACTICE established over 4 years Receipts average £1 150 p a and unlimited scope Good house etc

6 BERKS (Country Town) —PARTNERSHIP 2 5 share with short prelim Assistantship and ultimate Succession Receipts over £2 000 Fees 2/6 Good scope Appts worth about £250 Good fees and house

FINANCIAL ASSISTANCE afforded to approved applicants for the purchase of Practices or Partnerships on very reasonable terms. Full particulars on application.

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1 DEVON —Seaport Town —In growing district £520 in last 15 months Panel 300 Good house to rent From £500 Great scope Selling owing to ill health

2 ESSEX — Seaside Town —PRACTICE over £950 p a Easily worked Small panel Excellent house with good garden Appts £210 Price £1 150 incl drugs

3 CARDIFF — Industrial PRACTICE over £600 p a Panel 800 Good house Premium £600

4 BEDFORDSHIRE — Country PRACTICE about £500 p a Good house to buy or rent From £300

5 DEVON —Unopposed Country PRACTICE Last year £675 Panel 250 Scope for increase M O £71 Rent £32 p a From 1½ years purchase Suit for man or woman

6 MONMOUTHSHIRE — Old estab Country PRACTICE over over £1 600 p a Third share at 2 years purchase with total succession Good house to rent Scope for surgery No collieries

7 NEAR GLOUCESTER — Third Share in rapidly growing country town Up to half share later Receipts last three years £1 393 £1 507, £1 777 Panel 1 250 Choice of use Prem £1 200 inc drug etc

8 COUNTY TOWN — PRACTICE £900 p a Panel 145 and increasing with good scope in Carmarthen 1 years purchase House in good repair for sale £550

9 OXFORDSHIRE —Old established unopposed Country PRACTICE over £1 150 p a Price 1½ years purchase Good house

10 LONDON W — General PRACTICE non panel fees 10/6 to £1 1s Receipts for last 2½ years £2 352 Price £500 cash Good flat in good neighbourhood Rent £170

11 WESTERN CITY —Panel of 465 and club returning over £250 p a together for sale Cottage

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FOR SALE

1 10 mins GRAYS INN ROAD W C —Old established cash and panel PRACTICE with Branch Receipts £1 100 p a panel about 1 600 House on Lease £56 p a Premium £2 000

2 10 mins PADDINGTON — Old established PRACTICE Receipts £1 600 p a panel 2 177 Nice house to rent £100 p a Premium little over 2 years purchase

3 LONDON W — Small but well established PRACTICE Capable of being greatly increased Receipts (cash) £5 per week all panel 150 Nice surgery Premium £300 or near offer

4 20 mins BAKER STREET —Rapidly developing part —NUCLEUS with excellent scope Receipts now £6 per week and small panel Nice house £72 p a Vendor having bought another Practice will sell for £50 premium

5 HANTS — Nice seaside town — Old established non panel PRACTICE Receipts over £1 000 p a House on lease £150 Illness cause of selling Any reasonable offer considered Suit lady or gentleman

6 LONDON N — Old established mixed class PRACTICE Receipts £600 p a panel 317 Part of house sublet Vendor going abroad Premium £1 000

7 SCOTLAND — Old established PRACTICE held 55 years by Vendor now for sale on account of age and ill health Receipts have been about £800 p a (recently dropped) panel 700 Nice house rent £70 Any reasonable offer considered

8 LONDON E —Two fifths share for sale of old established cash and panel PRACTICE Total receipts over £2 000 p a panel 2 780 Premium for share 2 years purchase

9 NEAR HAMMERSMITH BROADWAY — Well established cash and panel PRACTICE Receipts average £1 650 p a including panel 650 Nice house to be sold Premium £2 700 payable only £1 500 down

No charge to purchasers or for enquiries

NORTHERN BRANCH

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MANCHESTER.—Sound PRACTICE of £1 000 p.a. Panel 1 100 Scope Good house 2 reception 3 bedroom Rent £75 p.a. Premium £1 600.—No 316

LANCS TOWN near MANCHESTER.—Sound old-established PRACTICE offering surgical scope Cash receipts last year £2 084 Panel 1 350 Excellent living and professional accommodation Local Hospital Good opportunity for young Surgeon Premium 1½ years purchase.—No 313

NORTH STAFFS.—Old-established PRACTICE Average cash receipts £2 076 p.a. Panel 1 930 Exceptional detached house 4 reception 5 bedroom Garage and garden Premium 1½ years purchase.—No 314

Near MANCHESTER.—Pleasant Town.—Old-established PRACTICE Average cash receipts £995 p.a. Panel 902 Excellent detached house (freehold) 3 reception 5 bedrooms Garage and garden Premium—Practice—1½ years purchase.—No 234

CHESHIRE TOWN.—Old-established PRACTICE Average cash receipts £1 420 p.a. Panel 2 000 Good scope Nice house 3 reception 5 bedrooms Garage and garden Premium—Practice—£2 200.—No 293

NORTH WEST COAST — POPULAR SEASIDE RESORT — PRACTICE Cash receipt last year £863 Panel 434 Excellent house to rent on long lease 6 bedroom 2 reception rooms Garage and garden Premium £1 150.—No 308

MANCHESTER.—PLEASANT RESIDENTIAL SUBURB.—Old-established PRACTICE. Average cash receipts £685 p.a. Panel over 600 Much scope Excellent house 2 reception 4 bedrooms garage and good garden to be sold or may be rented for a period on lease Premium 1 years purchase Vendor retiring.—No 246

YORKSHIRE.—Pleasant City.—TWO ASSISTANTS required with view to early Partnership Cash receipts over £5 000 p.a. Panel 4 000 Preliminary salary £300 p.a. all found and car allowance.—No 311

MANCHESTER.—PARTNERSHIP in Practice of about £1 600 p.a. Panel 1 550 House available to rent Premium—half share—1½ years purchase.—No 303

LARGE LANCS TOWN.—Sound Industrial PRACTICE Cash receipts last year £1 003 increasing Panel 1 400 Good house 2 reception 4 bedroom 3 professional room Garage To rent on lease Premium £1 450 (including debt).—No 310

NORTH WEST COAST — SEASIDE RESORT — Old-established middle-class PRACTICE Average cash receipt £1 062 p.a. Panel and appointment £360 p.a. Excellent large and detached house in best part of town Long Partnership introduction given Preliminary Assistantship if desired.—No 312

MANCHESTER.—Old-established PRACTICE Cash receipts 1930 £688 Panel 578 House on main road 2 reception 5 bedrooms and garage Premium—Practice—1¼ years purchase.—No 294

YORKSHIRE (W.R.).—PARTNERSHIP in sound Practice Average cash receipts £4 017 p.a. Panel 2 500 Modern house available 2 reception 5 bedroom Premium—one-third share—1½ years purchase part by arrangement.—No 311

MANCHESTER — RESIDENTIAL SUBURB.—Middle-class PRACTICE Suitable for two in Partnership (one a good surgeon) Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses with ample accommodation Premium 1½ years purchase part by arrangement.—No 277

LIVERPOOL.—Old established middle class PRACTICE Cash receipts over £2 000 p.a. Panel 900 Excellent house 2 reception 5 bedroom garage and garden to rent.—No 295

MANCHESTER INDUSTRIAL PRACTICE Cash receipts last year £889 Panel 721 Plenty of scope Good house 2 reception 5 bedroom Rent £50 p.a. Suit R.E. Premium—best offer.—No 190

LANCS TOWN near Country.—Old established PRACTICE Cash receipt last year £1 125 Panel 1 085 Excellent house 3 reception 6 bedroom Garage and large garden Premium—Practice and house—any reasonable offer.—No 291

NEAR LIVERPOOL.—PARTNERSHIP in good-class Practice Cash receipts approx £3 000 Good house available Premium—one-third share 2 years purchase.—No 309

LANCS TOWN.—Old-established PRACTICE. Receipt £2 500 Panel 1 850 Scope Appointment £120 Good house 2 reception 4 bedroom Premium 1½ years purchase.—No 168

LIVERPOOL.—Small PRACTICE of £621 p.a. consisting mainly of transferable appointments (£520 p.a.) Excellent house 2 reception 3 bedroom Garage Rent £75 p.a. Premium 1½ years purchase.—No 302

NEAR PRESTON.—PRACTICE offering scope Cash receipts 1930 £625 Panel 300 Good house 2 reception 4 bedroom Rent £70 p.a. Premium £800.—No 254

MEDICAL WOMAN'S PRACTICE. — SEASIDE TOWN — Cash receipts last year £632 Panel 465 Excellent rooms at £56 p.a. Premium £850 or near offer.—No 277

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(FOUNDED 1880)

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The Manchester Medical Agency, lately under the control and management of the Manchester Medical Committee, has now been taken over by the British Medical Bureau as their Northern Branch.

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1. SURGEON — Exceptional opening for highly qualified Surgeon in first-rate residential town. Suit best a Surgical Registrar or Junior Surgeon.

2. S. COAST — Non-dispensing Practice in residential town and seaside resort. Earnings past 18 months £1,720. No panel. Good house in one of the best positions (4 bedrooms and 2 boxrooms) to rent on lease. Clients of copy for incoming. Premium £1,150.

3. HOME COUNTIES — Private Home for Borderland Patient (male only) standing in own grounds with cottage and exceptionally good outbuildings. Price £5,500.

4. N. WALES — Steadily increasing Town PRACTICE of £875 p.a. in beautiful part. Small panel. Good house (6 bedrooms), garage and nice secluded garden to rent. Educational facilities. Premium 1½ years' purchase.

5. LONDON, N.W. — Practice in suburban district. Receipts 1931 £700. Panel 300. Corner house (5 bedrooms), garage and garden to rent on lease. Premium £750.

6. EAST COAST — Partnership (after preliminary Assistantship) in Practice in popular seaside resort. Applicant should be aged 25—30 and have held H.S. appointment. Good scope and opportunities for surgery. Share worth about £1,000 p.a. at 2 years' purchase. Hospital.

7. DEATH VACANCY — GLAMORGANSHIRE.—PRACTICE averaging over £1,400 p.a. in seaport town. Panel 1,500. Very nice house (8 bedrooms) with large garden to rent on lease.

8. SUFFOLK — Partnership in good-class Practice in residential seaside resort. Panel about 1,000. Suitable house to rent. Applicant should be aged 28/35, preferably Oxford, Cambridge or London man. Premium for share worth approximately £1,000 p.a.—£2,000.

9. SUSSEX — Country Practice between £1,200 and £1,300 p.a. in delightful part. No panel. Large residence (9 bedrooms, etc.), garage and garden of four acres to rent on lease. Premium £2,000.

10. EASTERN COUNTIES — Partnership in Practice about £3,500 p.a. in country town. No panel. Suit lady or gentleman. Good educational facilities. Premium one-share £2,500.

11. SURREY — Partnership in increasing middle-class Town Practice of £2,300. Panel over 1,200. Modern detached corner house (5 bedrooms), garage and garden for sale. Partner should be 26/30 and have held Hospital appointments. Share of £1,000 p.a. at 2 years' purchase.

12. DEVON — Partnership in Practice averaging £3,000 p.a. in small beautifully situated town. Panel 800. House with 4 bedrooms and attics, garage and garden to rent. Cottage Hospital. Premium one-third share, 2 years' purchase.

13. N. OF ENGLAND — Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgery, anæsthetics and obstetrics. Share of four-fifteenths at 2 years' purchase.

14. LONDON, N.W.—Non-dispensing Practice over £950 p.a. in good residential district. No panel. Ten roomed house with garage and large garden. Rent £200 p.a. Premium £1,200.

15. N. MIDLANDS—Partnership in Practice, about £3,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms, etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share, 2 years' purchase.

16. EAST ANGLIA—Partnership in good-class non-dispensing Practice of about £3,000 p.a. in favourite Seaside Resort. Partner should be a Varsity man, about 30 years of age, experienced in Medicine and Anæsthetics. Good up-to-date Hospital. Premium for one-third share, 2 years' purchase.

17. SUSSEX — Country Practice averaging £900 p.a. in beautiful part, easy distance of coast. Panel 640. Large detached house with three-quarters of an acre of garden for sale. Premium 1½ years' purchase.

18. W. OF ENGLAND—Practice about £800 p.a. in first-rate City. Panel 1,324. Well-built house (4 bed and dressing rooms) to let. Excellent scope. Premium £1,450.

19. S.E. COAST — Easily worked Practice in exclusive part of seaside town. Receipts last year £1,050, including appointments over £200, fees from resident patients and small panel. Large modern house with beautiful garden to rent. Ample scope. Premium £1,150.

British Medical Bureau

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Practices and Partnerships for Disposal (continued)

20 CARMARTHENSHIRE.—Increasing PRACTICE of £900 p.a. in pleasant Market Town. Panel 150. Well situated house (non basement) with 3 bedrooms for sale. Cottage Hospital. Premium one year's purchase.

21 S. MIDLANDS.—Partnership in Practice about £8 000 p.a. in residential country district. Suitable house to rent or purchase. Cottage Hospital. *Share worth about £1 500 net p.a. at 2½ years purchase on net cash receipts.*

22 LONDON, N.W.—Practice (carried on by Medical Woman) doing about £280 p.a. in main thoroughfare. Panel 125. Shop fronted house to rent on lease. Good opening for increase. Premium £300.

23 S. OF ENGLAND.—Partnership in good middle-class Town Practice over £5 300 p.a. No panel. Suitable house to purchase. Premium one fourth share £2 000. *Preliminary Assistantship.*

24 LONDON, W.—Steadily increasing PRACTICE doing about £750 p.a. mostly from Lock up Surgery. Panel about 500. Well situated corner residence (5 bedrooms) to rent. Premium £900.

25 LONDON, S.W.—Small, non-dispensing PRACTICE of nearly £400 p.a. close to the West End. Select panel about 417 with scope. Corner house with ample accommodation to rent on lease. Premium 1½ years purchase or near offer.

26 S. COAST.—Favourite Resort.—Practice of £600 p.a. Panel 50. House contains 5 bedrooms. Garage and garden. Rent £150 p.a. Scope for increase. Premium to effect quick sale only £300.

27 DURHAM.—Practice of over £500 p.a. in residential and colliery district near large towns. Panel 360. Substantially built 9 roomed house for sale. *Scope for increase.* Premium £725.

28 LONDON, W.—Middle class Practice averaging over £700 p.a. in outlying residential suburban district. No panel. House with 4 bedrooms and fair sized garden to rent. Good scope. *Premium £700 cash.*

29 NEW ZEALAND.—NORTH ISLAND.—Non-dispensing PRACTICE about £1 800 p.a. in first rate Town. Modern detached house (4 bedrooms etc.) garage and garden for sale. Equable climate. Good educational facilities. Premium only £1 250.

30 BIRMINGHAM.—Practice of about £1,000 p.a. in one of the best residential suburbs. Small panel and very little midwifery. Well situated house (6 bedrooms) good garden and garage for sale. Good scope. Premium 1½ years purchase.

31 NORTH OF ENGLAND.—Small Season PRACTICE in Inland *Health Resort* capable of increase by one practising all the year round. Receipts about £150. No panel or midwifery. House in own grounds with 6 bedrooms etc. Price—house and Practice—£1 250.

32 YORKSHIRE (W.R.).—Partnership (after *Preliminary* Assistantship) in Practice about £2 650 p.a. in manufacturing town. Panel 1 640. House available. Applicant with surgical experience preferred. Premium one third or one fourth share 1 years purchase.

33 EAST ANGLIA.—Partnership in Practice over £4 500 p.a. *in beautiful country district easy access of important town.* Panel 3 000. Nice detached house (7 bedrooms) garage etc. garden and grounds of 10 acres for sale. *Sport of most kinds. Considerable scope.* Premium *two-thirds or four-fifths share 2 years purchase.*

34 WESTERN AUSTRALIA.—Practice over £1 100 p.a. in Wheat and Sheep district. Seven roomed house with electric light garage etc. for sale or rent. Ideal climate. Sport. Hospital. Premium £600.

35 MIDDLESEX.—Partnership in increasing Practice of nearly £2 700 in Town about 10 miles from London. Panel 1 460. House (5 bedrooms) garage and nice garden for sale. One third share for disposal.

36 SOUTH AFRICA.—Easily worked Country PRACTICE in healthy district (elevation 2 000 ft.) in Cape Colony. Cash receipts year ended June 1931 over £1 000. Sport of all kinds. Well built house. Premium—house *and Practice*—£1 225.

37 S. OF ENGLAND.—Practice averaging nearly £1 000 p.a. in small seaside resort. Eight roomed house for sale or rent. Excellent educational facilities. Sea fishing etc. Premium to effect quick sale £1 000 or possibly even less.

38 KENT.—Country Practice of over £800 p.a. *in beautiful part.* Panel nearly 400. Very attractive residence (5 bedrooms) central heating. Ground of 2½ acres orchard etc. for sale. Sport. Premium 1½ years purchase.

39 S. OF ENGLAND.—Partnership in Ophthalmic Practice about £1 300 p.a. *in small but delightful resort.* Considerable scope to one able to operate. Premium one *half* share 1½ years purchase.

40 HOME COUNTIES.—Partnership in exceptionally good and rapidly increasing Practice about £6 000 p.a. in delightfully situated Country Town. Easy distance of Court. Attractive house (4 bedrooms) to rent. Partner must hold the F.R.C.S. and be aged about 30. Appointment on Hospital Staff. Premium for one sixth to one fourth share 2 years purchase. Preliminary Assistantship.

41 SHROPSHIRE.—Practice £800 p.a. in market town. Panel 170. House (5 bedrooms) garage and garden to be sold or let. Premium 1½ years purchase.

42 KENT.—Country Practice of about £850 p.a. Panel 550. Good house and garden for sale. Prem. £1 100.

43 MIDLANDS.—Country Practice of nearly £900 p.a. in beautiful district. Panel over 700. House contains 6 bedrooms and dressing rooms etc. electric light. Beautiful garden with greenhouse for sale. All kind of sport. Premium £1 200.

44 SOMERSET.—Practice averaging £870 p.a. in country town. Panel under 200. House with 6 bedrooms garage and small garden to rent or purchase. Scope for increase. Premium £1 300.

45 LONDON, S.W.—Practice about £500 p.a. in suburban district. Panel 650. No midwifery. Semi detached corner house (6 bedrooms) for sale. Scope. Premium 1 years purchase.

46 WITHIN 12 MILES OF LONDON.—PARTNERSHIP in rapidly increasing each Practice about £1 600 p.a. in developing industrial district. Panel nearly 1 950. Small house available. Large cottage hospital. Two fifths or one half share 2 years purchase.

47 LONDON, S.W.—Increasing Practice *in outlying suburb.* Bookings last year £890. Panel about 400. Modern house (3 bedrooms). *Premium £1 000.*

48 GLOUCESTERSHIRE.—Partnership in Country Practice of £1 000 p.a. Panel 870. Premium one half share 1½ years purchase.

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All communications to be addressed to Mr. A. V. STOREY, General Manager

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No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 YORKSHIRE — COAST TOWN —Old established mixed-class PRACTICE in attractive seaside and holiday resort offering good scope for increase and medical work Average gross cash receipts for last three years over £1 900 Panel of 500 Fees from 5/ to 21/ Mid from 2 to 5 gns Exceptionally nice labour-saving house specially built with 2 reception 6 bedrooms etc Garage Tennis court Light Garden Separate entrance to professional rooms Electric light Central heating Up to date Hospital Premium £2 300 Ill health sale at valuation

2 NORTH WALES — Residential town near coast —Well established mixed class PRACTICE in beautiful surroundings averaging between £900 and £1 000 p a Panel of 123 and appts worth £450 p a Fees from 3/6 to 21 Not much midwifery Good house with 2 reception 6 bedrooms etc and professional rooms Garden and tennis court Rent or have £82 10 p a Hunting excellent fishing Educational facilities Premium 11 years purchase Ill health sale

3 SUFFOLK —FAVOURITE COAST TOWN—PARTNERSHIP —A one-third share in this old established and thoroughly first-class practice averaging for the past three years £2 766 including panel of 941 Lowest fee 5/ Midwifery 2 gns upward about 36 Choice of hours Excellent social sporting and educational facilities Premium for share £2 000

4 WITHIN 80 MILES OF LONDON —PARTNERSHIP —A one-third share (with increase later) is offered in a very sound and old established better-class practice situated in a good residential town within a few miles of the sea Average gross cash receipts for the last three years £3 253 (last year £3 600) Ample scope for increase Panel of 850 Fees from 3/6 to 2 guineas Not much midwifery from 2 gns upwards Suitable modern house with surgery attached Can be rented or purchased Excellent social amenities shooting yachting golf etc Ingoing partner should be experienced aged about 28 to 35 Premium for share £2 000

5 MIDLANDS —Old established mixed class unopposed PRACTICE situated in an attractive country town with beautiful surroundings Average gross cash receipts for last 3 years £1 584 including panel of 974 Good appts worth nearly £200 p a Fees from 3/6 Very nice house with 3 reception 6 bedrooms separate entrance to professional room Good garden with tennis lawn etc Garage for 2 cars Price for freehold £1 850 of which a good proportion could remain on mortgage Excellent sporting and social facilities and schools Premium 11 years purchase

6 WITHIN 60 MILES OF LONDON near County Town —Very old established and delightful country district averaging approximately £800 p a and offering good scope for increase Panel of about 170 and appts worth £160 p a Fees 2/6 to 10/6 Very little mid Exceptionally nice house with beautiful garden containing 3 reception 4 bedrooms etc Separate entrance for professional room Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

7 OUTLYING RESIDENTIAL SUBURB — PARTNERSHIP — A Partnership is required in an old established good mixed Practice averaging just over £10 000 p a gross A small share (to commence with) with ultimate increase by instalments to one third share would be offered to a suitable partner (preferably a young married man with experience of general practice) Good house with ample accommodation can be purchased or rented Premium 2 years purchase

8 YORKS — LARGE TOWN —PARTNERSHIP — A one fourth share is offered after Preliminary Assistantship in an old established mixed class Practice averaging for the last three years £2 500 p a Panel of 1 700 Lowest fee 5/6 Suitable accommodation available Premium 1½ years purchase Good scope for surgery

9 NORTH MIDLAND CITY — PARTNERSHIP — Two partners are required to take over a four fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town producing for the last 12 months at the rate of over £5 500 Panel of about 4 000 No clubs and very little night work Fees from 5 Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

10 LIVERPOOL —Old established mixed class PRACTICE producing for the last 12 months over £1 100 Good appointments Selected panel of 50 Fees 5/ to 21/ No midwifery Suitable house with 4 reception 7 bedrooms bathroom etc Price for freehold £1 200 Premium £800

11 LONDON NORTH WEST —Well established middle class non dispensing PRACTICE averaging for the past three years £840 including appts worth about £300 p a and panel of 120 Fees 3/6 to 21/ Large house with thirteen rooms in addition to professional accommodation etc Price for freehold £3 200 £2 000 on mortgage Premium £1 250

12 SOUTH WEST OF ENGLAND —PARTNERSHIP —A two third or three fifths share is offered in a well established PRACTICE in particularly attractive district near two good town Gross cash receipts for last twelve months over £2 500 Panel of 1 500 Fees from 2/6 to 10/6 Exceptionally nice house specially built with Architect's advice 3 receptions 6 bedrooms beautiful garden Price for freehold £3 000 half on mortgage Premium 2 years purchase Hunting fishing etc and good schools within reach Up to date Hospital and excellent surgical scope

13 LONDON —OUTLYING RESIDENTIAL SUBURB —PARTNERSHIP — A one third share to commence is offered in a good middle class Practice having large scope Cash receipts for last 12 months about £2 700 including panel of 1 500 Suitable house can be purchased for £1 750 part on mortgage Premium 2 years purchase

14 NORTH WALES —Very old established good mixed class PRACTICE averaging £880 p a including panel of 433 Fees 2/6 to 10/6 medicine extra Suitable house with 2 reception 6 bedrooms etc Can be rented on lease at £40 p a Good sport Premium £1 200 part down and balance by instalments Ill health reason for sale

15 WEST OF ENGLAND —LARGE TOWN —Well established PRACTICE producing nearly £900 p a including panel of over 1 300 Suitable house in excellent position Price £700 or can be rented at £60 p a Premium £1 450 Good scope for increase

16 ESSEX —COAST TOWN —Increasing over 1 000 p a including residential district and producing over £210 p a Large selected panel of 100 and good appts worth about £210 p a Large modern house with beautiful garden can be rented or bought Premium £1 150

17 DEATH VACANCY —ESSEX —COAST TOWN —Small PRACTICE offering large scope for energetic worker Receipts for the past 12 months £220 including panel of 54 Visits 3/6 to 5/ medicine extra Suitable house with 2 reception 3 bedrooms etc and professional rooms Garden Garage Price freehold £1 100 or can be rented on lease at £75 p a Very good sport and schools Offers invited

18 LONDON S W —Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for leasehold (14 years to run) £1 200 part on mortgage Low mum £1 050

19 MIDLANDS —PARTNERSHIP —A one third share is offered in a very sound middle and working class Practice held by the senior partner for 30 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Garage Sport of all kinds and very good school within reach Premium 2 years purchase

20 MIDWIFES —Agricultural District —Mixed class PRACTICE producing about £880 p a including small panel of 130 Fees 5/6 to 21/ Small house with 2 reception 3 bedrooms etc Price £600 Fishing shooting and other sport Premium 1 years purchase

21 WOMAN DOCTORS PRACTICE —YORKS —LARGE TOWN —Established eight years easily worked and producing nearly £700 p a Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns Compact house with 2 sitting 2 bedrooms 4 attics etc Garden Garage Rent on lease £42 10s p a Prem 1½ years purchase or near offer

22 CHESHIRE —NEAR COAST —Old established middle and working class PRACTICE averaging for the past three years over £1 300 Panel of 550 Fees from 3/6 Good house with 3 reception 7 bedrooms etc Price for freehold £1 200 part on mortgage Premium 2 years purchase

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CONTENTS

JANUARY 23, 1932

ORIGINAL ARTICLES

The Simulation of Heart Disease By K Shirley Smith M D 129

Occupation and Neurosis By A D Gillespie M D 132

A Note on Urinary 'Proteose' By R M Murray Lyon M D M R C P Ed and G H Percival M D F R C P L I and C P Stewart M Sc Ph D 136

Acute Aseptic Meningitis By Adam D K Rankin M D D P H Ed 138

A Case of Pyrexia of Obscure Origin By Chetwynd J P Crosthwaite M A M B and A H Douthwaite M D (With Chart) 139

Control and Treatment of Arthritis By C W Buckley M D M R C P 140

The Etiology of Dysidrosis By C B Dowling M D M R C P 142

MEMORANDA

Sclerosing Solution for Injection of Varicose Veins By J Henry Tebbs By Arbuthnot Lane M D 143

REPORTS OF SOCIETIES

Royal Society Crystalline Vitamin D 144

Royal Society of Medicine
Uses of Oxygen and CO in Medicine 144
New Drugs in Malignant Disease 146
Research on Sex Hormones 148

Edinburgh Obstetrical Society
Prevention of Puerperal Sepsis 148

West London Medico Chirurgical Society Cancer Treatment 150

REVIEWS

Tumours of the Breast 151
A Textbook of Embryology 151
Mental Nursing 152
Emergency Surgery 152
Digitalis and its Congeners 153
Gout 153
Notes on Pool 153

OBITUARY

James Calvert M D F R C P (With Portrait) 172

T Hyla Greve M D F R C P 173

THE SERVICES

Death in the Services 174
(For Naval Military and Air Force Appointments see SUPPLEMENT)

LEADING ARTICLES

Juvenile Rheumatism 155

The London County Hospitals 156

THE WEEK

Meteorology and Health 156

New York Mortality Figures 157

Prophylaxis against Typhus Fever 158

A Primer of Fracture Practice 158

Typhoid Fever in Ohio River Cities 159

Corporal Punishment 159

Propaganda for Prevention of Blindness 159

GENERAL ARTICLES AND NEWS

Sir Charles Hastings Memorial Fund Fourth List of Contributors 160

London County Council Hospitals History of the Transfer 160

"Wintering in England" Proposed British Coast Resorts Association 162

Medical Congresses 1932 163

Preparations and Appliances (Illustrated) 154

Medical News 175

CORRESPONDENCE

Colporrhaphy for Prolapse By Sir Henry Simson F R C P 166

Ovulation and the Sex Cycle By Wilfred Shaw M D F R C S 166

Maternal Mortality By Louis F Peech M B 167

Child Guidance Clinics By D Noel Hardcastle M P C S 168

Early Myringotomy in Otitis Media By V Acherson L R C S 168

Face Masks and Forged Spectacle By E Lawton Moss M R C S 169

Medical Conditions in Soviet Russia By Sir L Armstrong Jones M D F P C P and W A Brend M D 169

Late Results of Cholecystectomy By Jame H Saint M D F P C S 170

Hyperpnœa By V Pines M B 170

Phylaxis By Frank Podmore M B 170

A Case of Compound or Vaccinia By Tom Hare M D 171

Unsuspected Foreign Body in a Bronchus By Victor Lambert M B 171

Cervical Herpes with Facial Palsy By W Clifford Nash F P C S 171

Shoe-leather Dermatitis By T A Blair M D 171

The Tuberculosis Problem By William S Steven M P C V S 172

Research on Cortex By J P Young M D 172

LOCAL NEWS

Ireland—
Mental Hospital in the Free State 164
Bangor Sewerage Scheme 164
The Whitebabbey Sanatorium Belfast 164
Limerick Hospital 164

England and Wales—
Medical Society of Individual Psychology 164
Central Midwives Board 165

Scotland—
Action of Adrenaline 165
Edinburgh Royal Infirmary 165
Central Midwives Board 166
Action against Glasgow Royal Infirmary 166

UNIVERSITIES AND COLLEGES

University of Cambridge 174

University of London 174

National University of Ireland 174

Royal College of Surgeons of England 174

Royal College of Surgeons Edinburgh 174

MEDICO LEGAL

Action by Medical Man for Slander 174

LETTERS AND ANSWERS

Income Tax 176

The Training of a Specialist 176

Miners' Cramp 176

Priority in the Acetic Anhydride Test 176

A Note on Urethrex 176

A Warning 176

Vacancies 176
(See also page 27 of SUPPLEMENT)

The SUPPLEMENT contains

National Health Insurance
Lecture on Insurance Medical Practice by Dr R G Chase
Certification Without Examination
Insurance Medical Practice and Approved Societies

Association Notices
Proposed Goole Selby and Thorne Division
Table of Date

Correspondence Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible classes will for the most part be found on the pages indicated

Bailliere Tindall & Cox
Irwin W H Urinary Surgery 4

Churchill J & A
Ball & Evan Dis of the Kidney 3
Barton Wright E —Plant Physiol 3
3
3
3
3
Brain & Strauss—Neurology 3
Bray G W —Allergy 3
Burn J H —Materia Medica 3
Burrell F S J —
Pulmonary Tuberculosis 3
Cade & Radium Treatment of Cancer 3
Connor & Surgery in the Tropics 3
Culpin M —The Psychoneuroses 3
Dorling & Surgical Nursing etc 3
Devine H —Psychiatry 3
Dible J H —Bacteriology 3
Duke Elder W S —Ophthalmology 3
Fast & Bain—Cardiology 3
Evans C L —Physiology 3
Findlay G M —Chemotherapy 3
Clayton S —Physical Chemistry 3
Gwathmey Anaesthesia 3
Haslam J L C —
3
3
3
3
3
3
3
3
3
3
3
3
Surgical Emergencies 3
Rowlands & Turner's Operations of Surgery 3
Smith & Glaister—Forensic Med 3
Williams Minor Surgery 3
Woollard's Advances in Anatomy 3

Kimpton H
Bertwistle A P —
Atlas of Radiographs 4

ASSURANCE COMPANIES—
Century Insurance Co Ltd 49

BOOTMAKERS &c —
Dowie & Marshall—Bootmakers 28

BRASS NAME PLATES &c —
Cooke's Name Plates 34
Herd S J & A —Name Plates 34
Lewis & Co Ltd —Name Plates 34
Osborne F & Co —Name Plates 4

DEBT COLLECTION—
British Medical Protection Society 33

SURGICAL APPLIANCES—
Clarkson's—Microscopes 4
Curtis & Son—Supports 29
David on F & Co —
Cover iv
28
32
4
—
23
nd 23
43

CHEMISTS &c —
Allen & Hanburys Ltd —
Beef Juice 22
Bynin Amara 32
Calophyllt 23
Lanarc o 23
Lanalerol Elixirs 22
Pitibulin Cover i
Vapo Cresolene 30
American Apothecaries Co —
Salvitae 31
Angier Chemical Co Ltd —
Angier's Emulsion 20
Benger's Ltd —Leo Inulin 27
Boots Product 12 16
British Drug Houses Ltd —
S U P 36 11
Burroughs Wellcome & Co —
Empirin Products 24
Kepler Cod Liver Oil 2
27
13
14
21
15
18
Secrums 30
Viodar 4
May & Baker Ltd — Cardenal 13
Mond Stafford Lime Refining Co —
Monsol 10
Oppenheimer Products 19
Peat Products Ltd —Sphagnol 31
Pharmaceutical Corporation Ltd —
Novatox 17
Saccharin Corporation Ltd —
Novocain 18
Sharp & Dohme Ltd —
12
39
Cover ii
39
30

FOOD PREPARATIONS—

MINERAL WATERS—
Ingram & Royle Ltd —
Vichy Celestins 14

MOTOR CARS TYRES &c —
Lodge Sparking Plugs 3
Second hand Motors for Sale 43

PRINTING & STATIONERY—
Anderson & Son—Account Form 43
Barlock & Barlet Typewriters 43
Lewis's Card Index System 4
Taylor's Typewriters 34

TAILORING & UNDERCLOTHING—
Burberrys Ltd —Sale 34
Hall H —Medical Service Dress 43

VACCINES & CULTURE MEDIA—
Laboratories of Pathology & Public Health 34

X RAY & *ELECTRO* MEDICAL APPARATUS—
5
6
Kodak Ltd —
7
29
6
37

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE —
RE APPOINTMENTS 42

HOSPITAL &c VACANCIES—
42
43
osp 43
43
p 43
45
43
43
43
43
43
44
42
44
43
4
43
43
43
43
43
43
44
43
43
44
43
43
43
43
43
43

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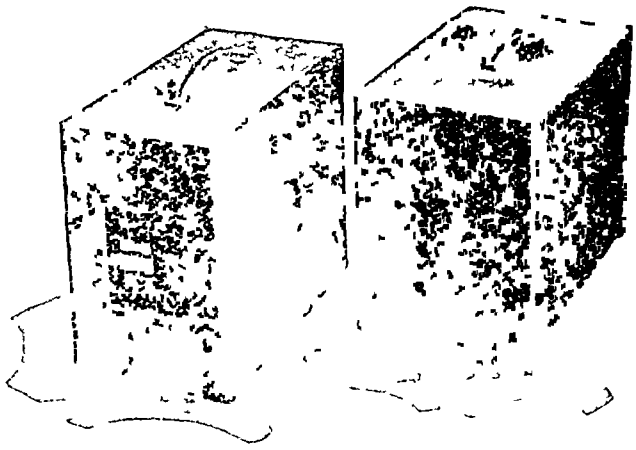
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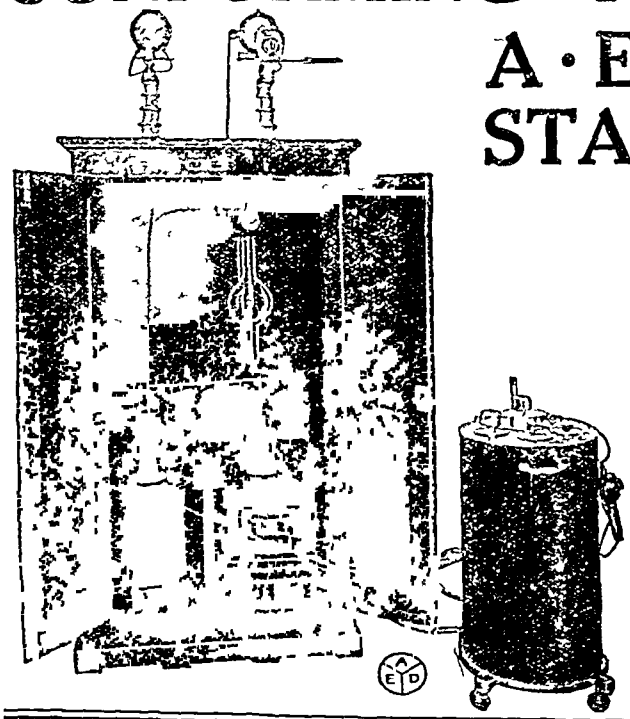
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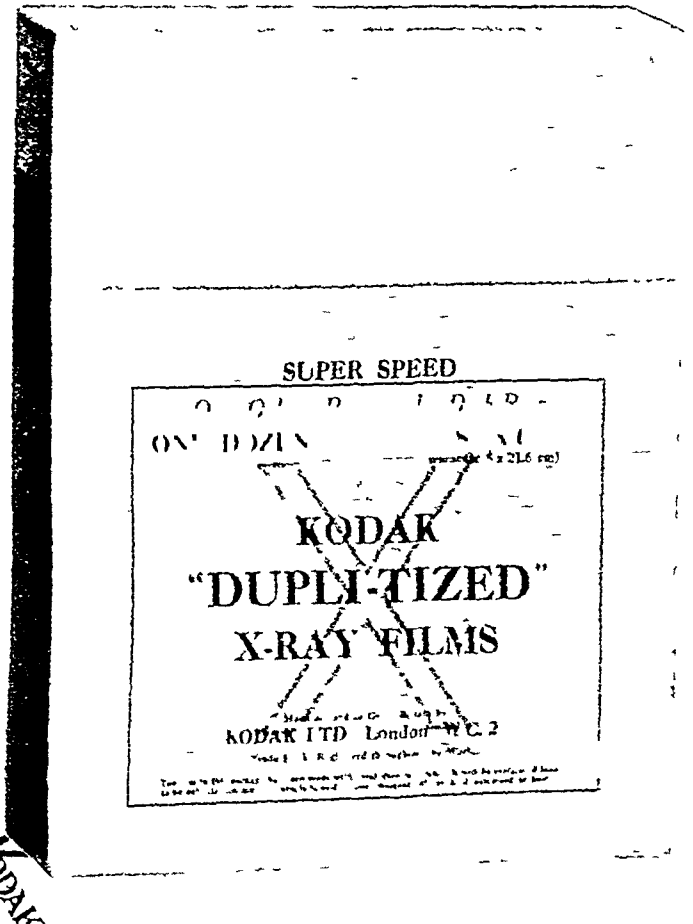
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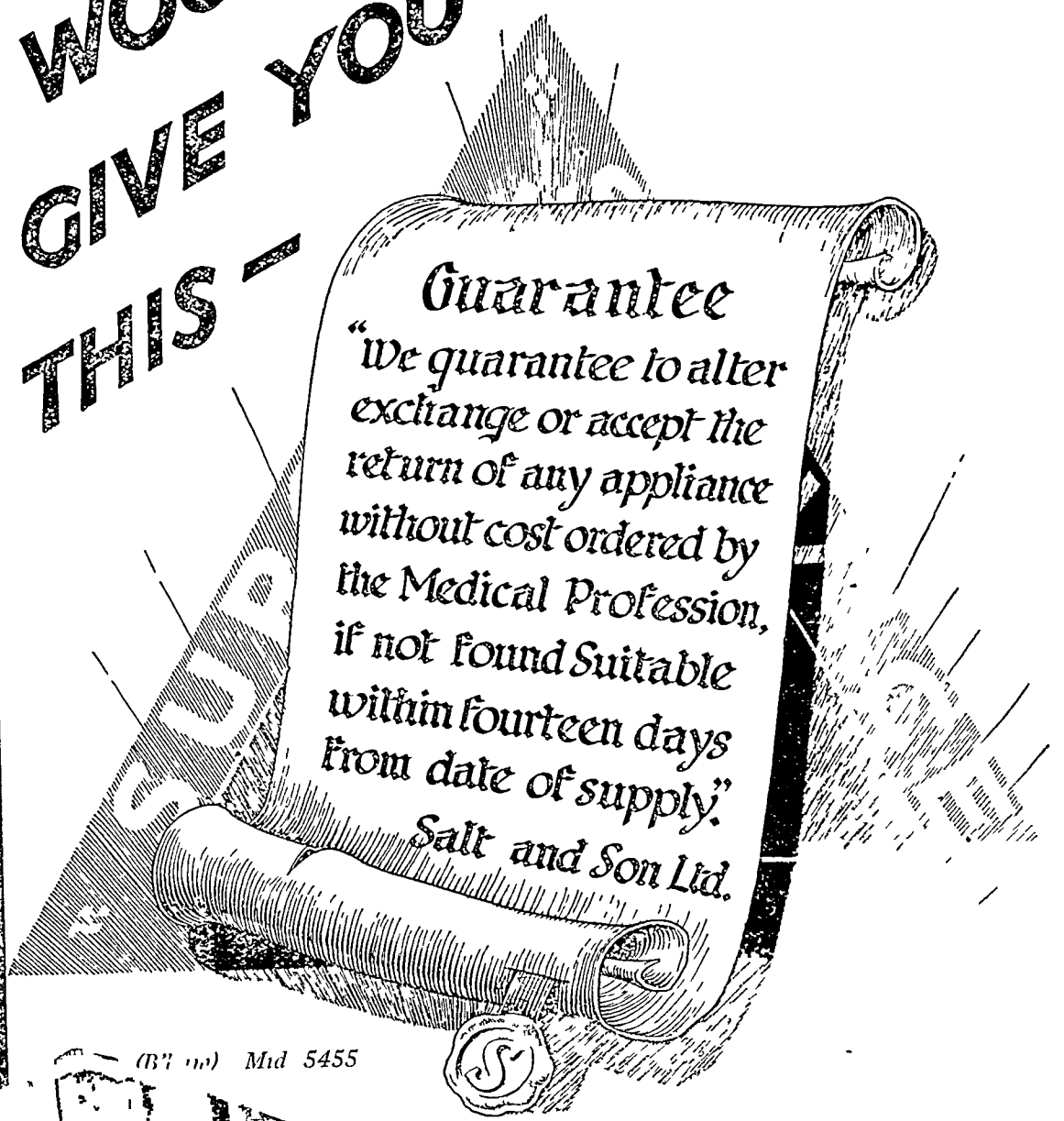
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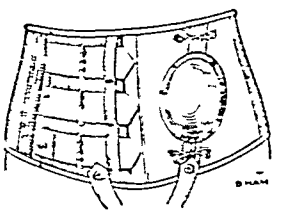
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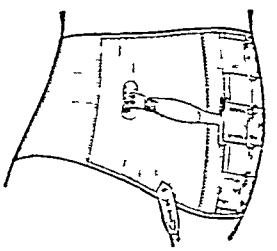


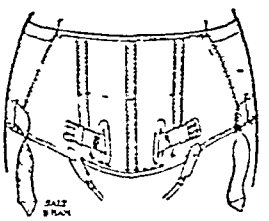
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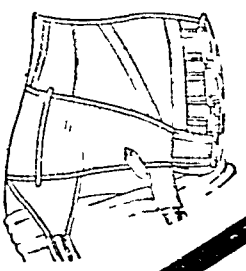
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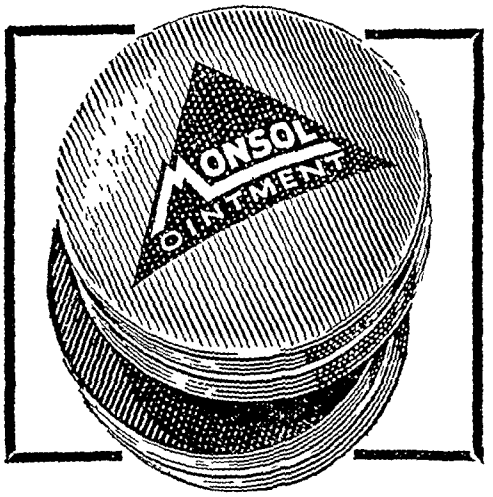
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for the treatment of

LACERATED, CONTUSED or SEPTIC WOUNDS —

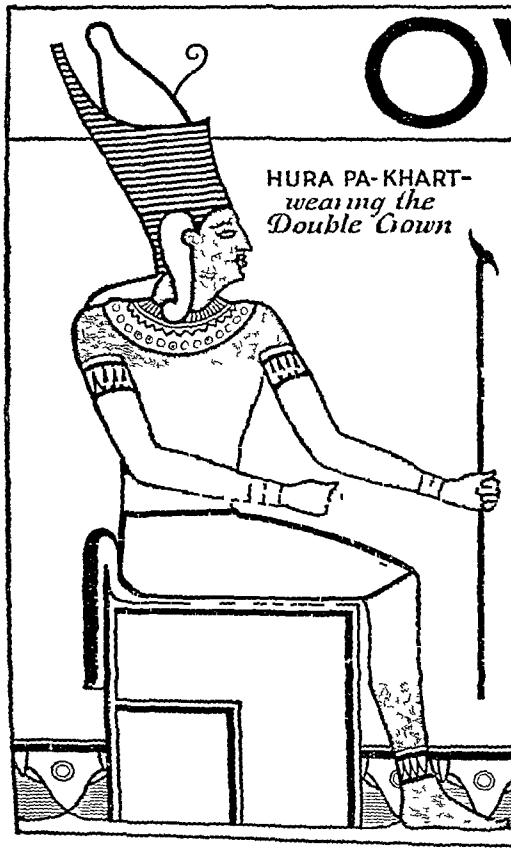
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FOR HEALTHY NUTRITION.

In every condition in which the need of a nutritious and easily digested food is indicated the advantages of "Ovaltine are definite and many In no case need the physician hesitate to order its liberal use

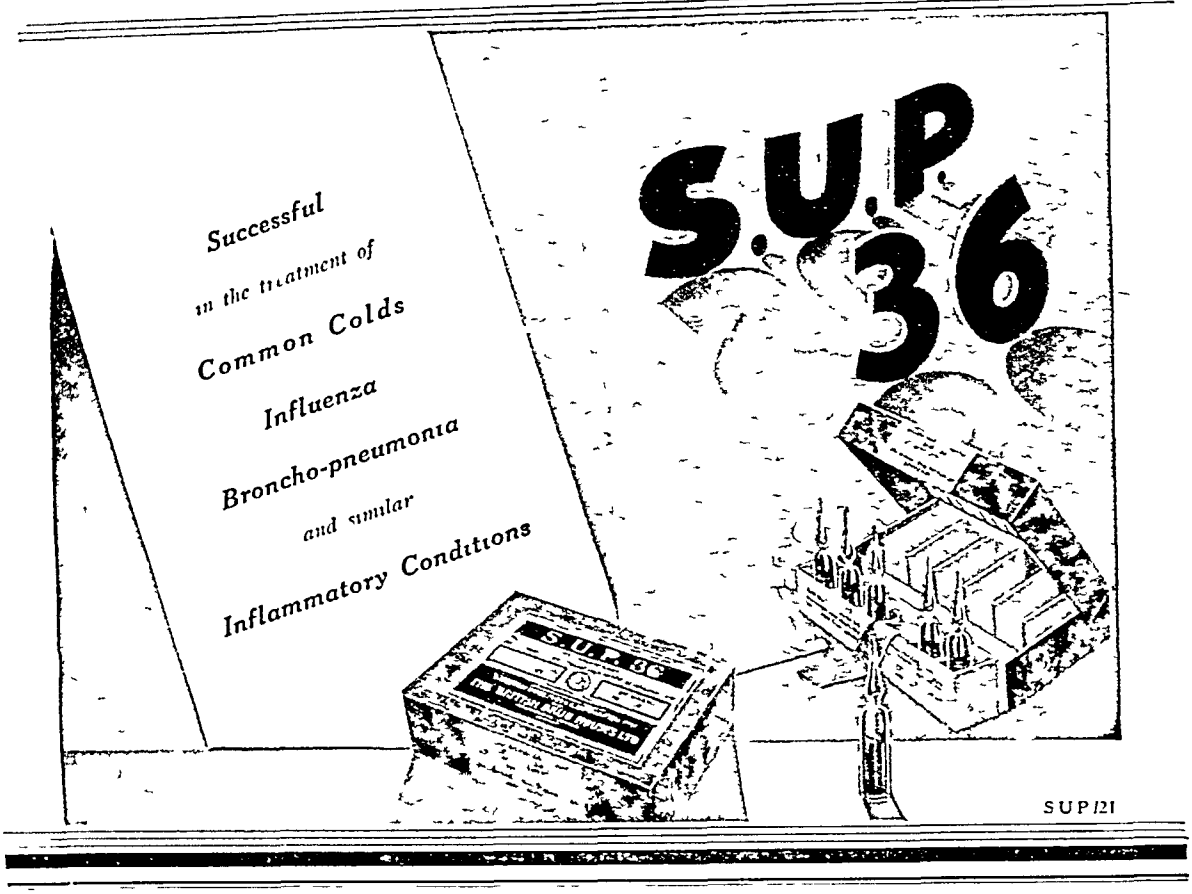
"Ovaltine is a highly concentrated extraction of malt, milk, and eggs It is almost completely absorbed by the system, and because of its complete absorption and because it is a form of nourishment complete in every respect, "Ovaltine tones strengthens, reinforces and reinvigorates the whole body

"Ovaltine is purin-free Its use neither aggravates the tendency to arterio-sclerosis nor favours the accumulation of uric acid in the system This delicious food beverage sustains life ideally by promoting the healthy activity of the bodily functions

A liberal supply for clinical trial sent free on request

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For Influenza and Post-influenzal Debility

It is recognised that the severe debility, especially of the heart and digestive organs which follows influenza yields most readily to a dietary rich in vitamins The simplest way to secure this condition is by augmenting the ordinary diet with BEMAX

BEMAX is a natural vitamin food prepared from the de toxicated embryo of selected cereals It is the richest known source of Vitamin B and contains also Vitamins A and D with valuable salts of Phosphorus

Both as a preventative of influenza during times of epidemic and as a restorative food during convalescence BEMAX has proved to be invaluable Definite improvement is usually observed soon after its use

BEMAX is a pleasant food to take very easy to assimilate and digest It will be taken readily even in those influenza cases where gastric symptoms predominate

Laboratory reports on BEMAX and a clinical sample for personal trial will be sent to any medical man on receipt of his professional card



BEMAX

THE NATURAL VITAMIN TONIC FOOD

Unlike many products which are widely advertised in the lay press Bemax depends for its continued success exclusively on the recommendation of the medical profession

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ACRIFLAVINE (BOOTS)

ONE of the most potent of modern antiseptics, physiologically pure and extremely soluble in water ACRIFLAVINE (BOOTS) kills organisms in a concentration of 1 in 100,000 Its potency is actually increased in contact with serum Now recognised as the routine preparation for irrigations in the treatment of Gonorrhœa Ideal for suppurating wounds and all septic conditions

Supplied in 5 gm and 20 gm bottles and in Solution Tablets for external use (gr 1 75 and gr 2 187)

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Is specially prepared for internal use (per os) in the form of enteric-coated tablets

Supplied in 5 gm and 20 gm bottles in Solution Tablets for external use (gr 1 75) and in enteric coated tablets (gr ½) for internal use (per os)

BOOTS PRODUCTS
ARE OBTAINABLE THROUGH ALL BRANCHES of BOOTS The CHEMISTS



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In your next burn case

use this remarkable antiseptic dressing

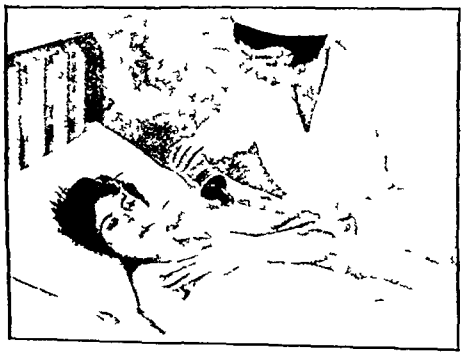
- ANALGESIC — Quickly relieves the pain
- GERMICIDAL — Prevents infection

Clinical reports from physicians stress the value of Hexylresorcinol Solution S T 37 in the treatment of Burns and Scalds

The technique is simple cover the affected area with a thin layer of absorbent cotton or gauze saturated with Hexylresorcinol Solution S T 37, and bandage lightly to keep it in place Keep the dressing wet with full-strength solution In a short time the pain and burning will subside

Leave the dressing on for 24 hours Then note how dry, clean and relatively insensitive the affected area has become Continue the use of the wet dressings until healing starts usually two or three days Then use dry dressings, simply moistening the denuded area with Hexylresorcinol Solution S T 37 daily to prevent infection

Keep the dressing wet with full strength solution



SOLUTION S.T.37

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EPILEPSY

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(3) Lactic ferments which hinder putrefaction
(4) Hyperactived porous coal which fixes alimentary and microbian toxins
(5) Extract Lam Flex which hydrates the intestinal medium and increases muscular contractions

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Clinical samples gladly sent on request

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Nearly 80% of temporary headaches are of liver or intestinal origin—and can be relieved by a brisk saline or small doses of mercury—followed by a course of

DIMOL PULVERETTES

to prevent further intestinal fermentations and toxic absorption

Below is a letter—from our file of clinical testimonials to the value of Dimol—which will illustrate the therapeutic constancy of the potent non-toxic preparation

I have used your Dimol in a severe case of colitis attended by excessive intestinal fermentation and persistent headache due to toxic absorption The headaches rapidly abated and the fermentation subsided after about a week After a course of 300 pulverettes the patient was so much better that the treatment was stopped Headaches returned in about six weeks, but ceased after three days resumption of the Dimol

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- Hypopepsia and apepsia—Dyspepsia arising from disturbance of neuro motility
- Intermittent pyloric stenosis, not of organic origin

SECONDARY DYSPEPSIAS
- Arthritic dyspepsia
- Toxic dyspepsia (gastro hepatic)
- Dyspepsia due to enteroptosis

HEPATIC

- Congestion due to excessive or improper feeding
- Congestion due to cirrhosis (before the cachetic stage)
- The diathetic congestions of diabetic, gouty, and obese persons
- Congestion due to poisoning (mercury, morphine, etc)
- Toxic congestion (influenza, typhoid fever, etc.)
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DIATHESIS

The diabetes of fat people — Arthritic obesity — Uricæmia and gout — Rheumatic gout

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Sample and particulars free on request from the Manufacturers of 'Karo" and "Dextrosal' Brand Dextrose

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Supplied in 12-oz bottles

'Zymine' Peptonising Tubes

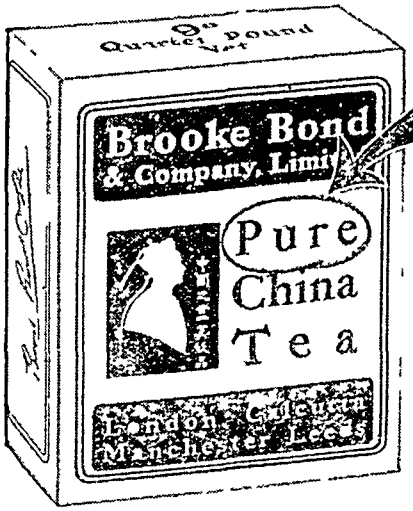
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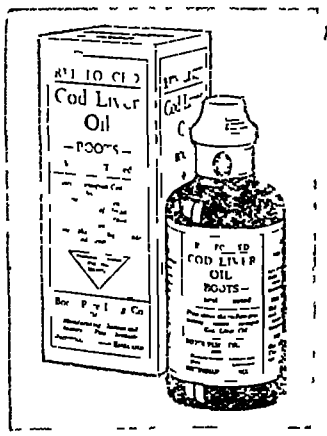
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If you advise patients to drink China tea, take the precaution of reminding them to see the word *pure* on the packet they buy

Brooke Bond *pure* China tea can safely be recommended because it is pure China

Brooke Bond *pure* China Tea 3/- lb

(Any grocer can easily get it)



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NOVUTOX BRAND LOCAL ANAESTHETIC

is not classed under the Dangerous Drugs Act and does not contain cocaine

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2 *Promotes quick and clean healing*

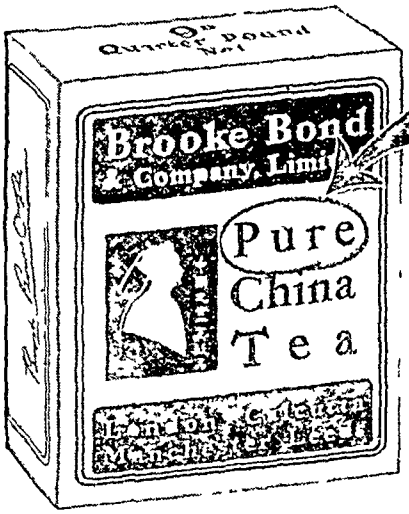
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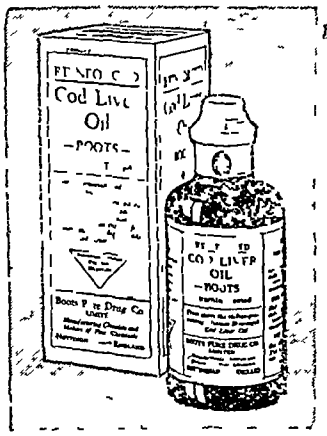
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Brooke Bond *pure* China tea can safely be recommended because it is pure China

Brooke Bond *pure* China Tea 3/- lb

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3 *Ensures freedom from post-operative pains*

4 *Gives deep and lasting anaesthesia*

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Typical Case

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D E, aged 60 years

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Does not contain Cocaine, and does not come under the Dangerous Drugs Act

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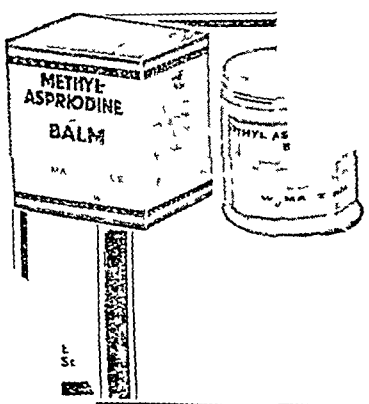
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A single definite Chemical Compound of a Methyl derivative of Aspirin and Iodine, of undoubted value in the treatment of rheumatic affections Supplied in the form of

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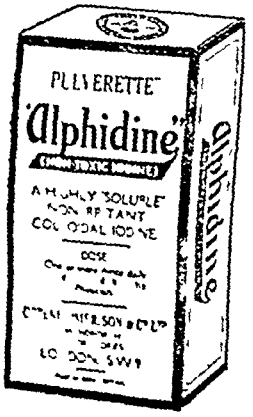
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FULL PARTICULARS, SAMPLES AND LITERATURE

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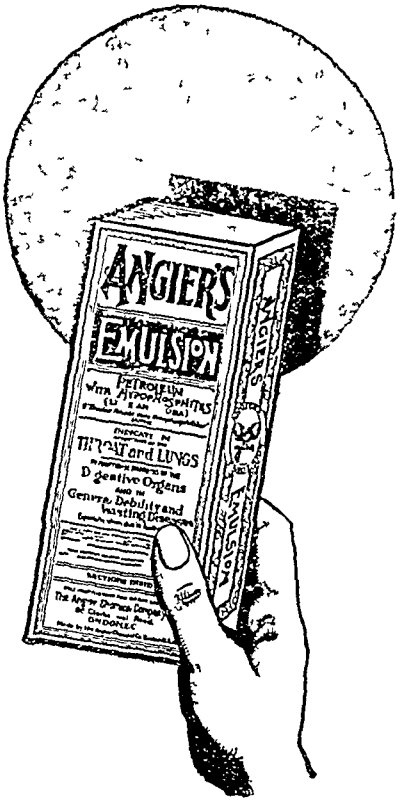
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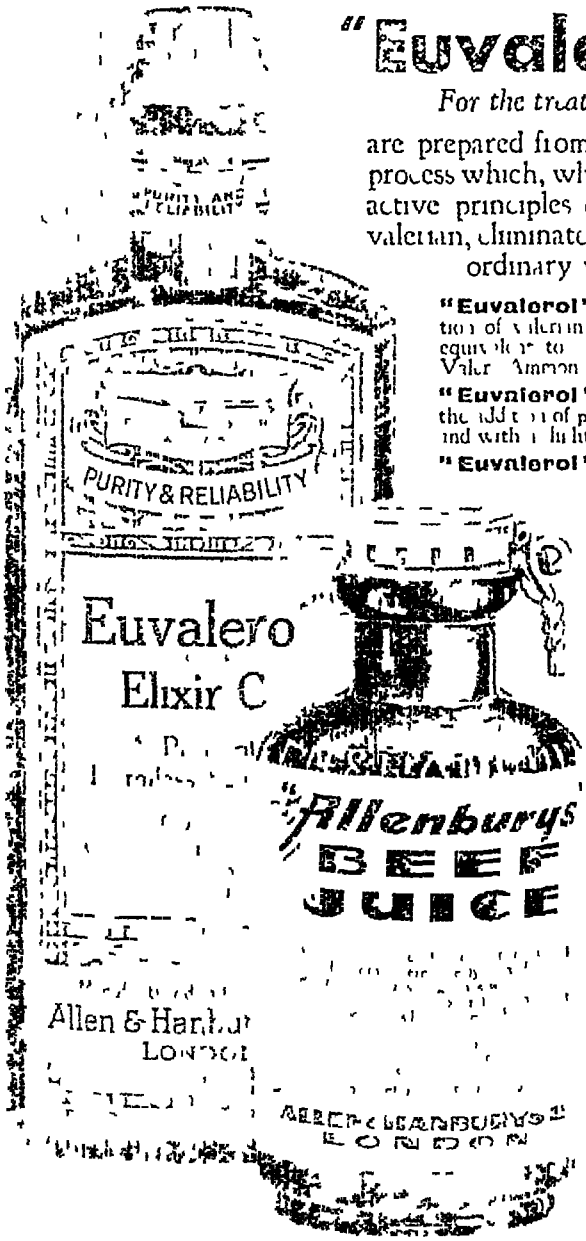
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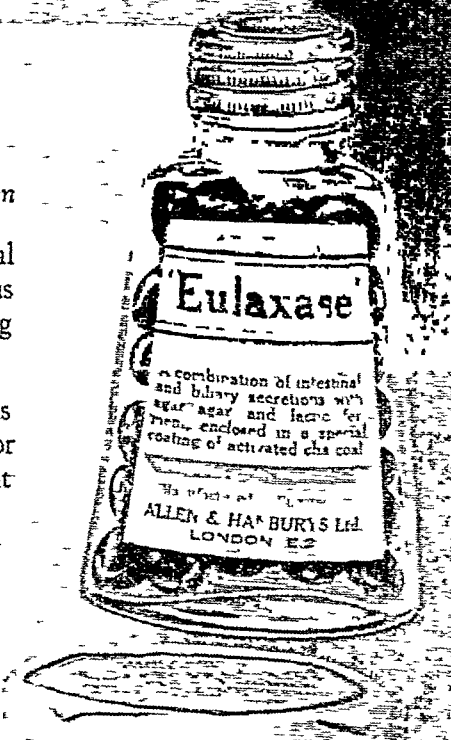
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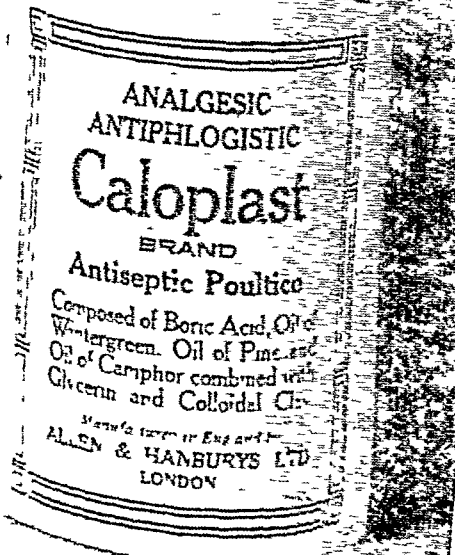
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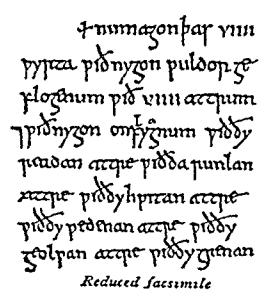
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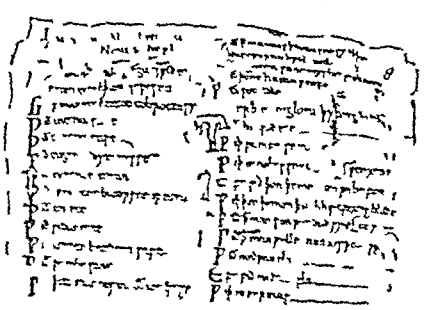
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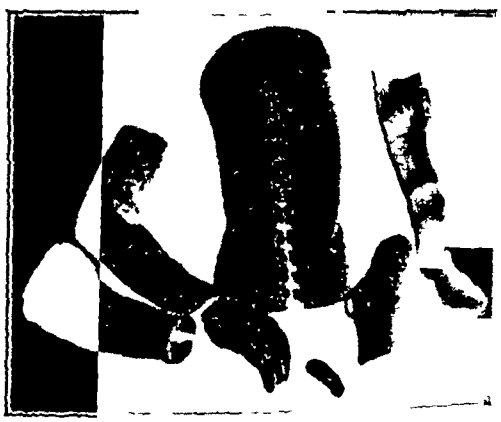
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Observations on THE SIMULATION OF HEART DISEASE

By SHIRLEY SMITH M.D. B.Sc. M.R.C.P. Lond.

[illegible] of heart disease are as variable and [illegible] heart disease. Many individuals who [illegible] cardiac symptoms believe erroneously that they are the victims of heart disease and their [illegible] confirmed by the non-committal [illegible] of [illegible] heart or pericarditis. Such [illegible] from all grades of ill health from the [illegible] and [illegible] to the serious degrees [illegible] and [illegible]. Moreover it must be the [illegible] that a very large bulk of disability in [illegible] arises from the disorders of the circu[illegible] which produce the symptoms of heart [illegible] but not the signs. Because a disorder of the [illegible] the action of the heart and [illegible] system generally held to be the basis [illegible] causing heart disease the term [illegible] asthma is best reserved to include [illegible]

[illegible] recognized as the cardinal symptom of [illegible] heart disease the presenting symptom [illegible] [illegible] but it is not usually difficult [illegible] to differentiate between true and spurious heart [illegible] [illegible] patients with dyspnoea actually of [illegible] very few if any supporting signs of [illegible] and this occasionally may be difficult to [illegible]. Further the subject of organic heart [illegible] arises from some degree of neuro circula[illegible] which occasionally happens that a patient [illegible] characteristic of one or other form [illegible] asthma is ultimately declared [illegible] electro-radiographic possible by the turn of [illegible] presence of serious organic heart disease [illegible] and therefore that much difficulty may [illegible] the determination of the true state [illegible] usually it is of fundamental importance [illegible] diagnosis this in general may be an [illegible] put it suffers from heart disease [illegible] or that neurotic [illegible] existing organic disease of the heart [illegible] of the neuro circulatory mechanism [illegible] for long count. Wilfred believes [illegible] a primarily psychological depending [illegible] conception of the heart as the hub of [illegible] and refers to the Arts [illegible] as the emotionalism' [illegible] part in the production of many [illegible] the existence of a psychological [illegible] disorder of the heart and holds [illegible] supported by increased activity [illegible] of exercise or exaggerated [illegible] reactivity of the visceral nervous [illegible]. He further cites the [illegible] [illegible] disorders and [illegible] [illegible] of heroes that [illegible] [illegible] [illegible]

in the history or on physical examination If no such infective cause is evident from these sources it becomes unlikely that infection is at the root of the trouble

Just as the diagnosis of angina pectoris implies liability to sudden death so a recognition of the effort syndrome should imply the danger of invalidism Confinement to bed should therefore be no part of the treatment of this disorder Lewis aptly summarized this point when he wrote The bed treatment of cases showing the effort syndrome is deplorable The patients deteriorate in health they become undisciplined and hospitalized, it becomes ever more difficult to disabuse them of the notion that their hearts are diseased The inevitable tendency of bed treatment is to exaggerate the complaints and to render them more persistent The following case serves as an illustration of this danger

A M aged 33 was a young woman living with her husband and her mother in law There was a history of rheumatic fever in childhood but there had been no other serious illnesses She complained of palpitation and breathlessness sometimes together sometimes separately feelings of dizziness and faintness and occasional pains across the left breast These symptoms were related usually to effort or excitement She had been twice in hospital during the past three years and the disorder had been looked upon as due to cardiac disease Courses of vaccine treatment directed against oral sepsis and infection of the colon had been given without improvement Courses of acetylcholine nitrites and digitalis had likewise been tried without avail and the patient had been bedridden for nine months when she first came under observation

At this time she was pale with moist skin variable tachycardia at 130 and bouts of tachypnoea and precordial distress She was admitted to Charing Cross Hospital where complete investigation of the cardiovascular system revealed no evidence of disease The patient was put on a system of graduated effort first sitting out of bed then standing and walking and lastly climbing the stairs The increasing stages were insisted upon regardless of plaints of palpitation faintness etc and the patient then returned home where under the relentless observation of her local doctor she ultimately became able to resume indoor and outdoor household duties

The psychological basis of this case is interesting Before the onset of her illness the patient had been obliged to overwork on account of her mother in law's illness It became evident that the resort to bed was in part and subconsciously a measure of retaliation and a ruse to transfer the burden of duties upon the mother in law

LEFT MAMMARY PAIN

A syndrome of which dull aching or gnawing pain under the left breast is the principal factor is generally known as left inframammary pain It has been studied of late years by Parkinson [7] who has stressed the common association of this pain and left subscapular hyperalgesia He found that patients complaining of this symptom were as likely to be free from any disease as afflicted with cardiovascular disease Studying a larger consecutive series of 332 patients attending a cardiac clinic Baker[8] observed that 42·3 per cent of patients presenting no evidence of cardiovascular disease complained of this symptom whereas among those afflicted with organic disease it appeared in only 22 per cent of patients Further statistical evidence was forthcoming from this study to show that a patient suffering this type of pain is more likely to be normal than the subject of hypertension or mitral stenosis—the two most common cardiovascular diseases

In assessing the significance of this symptom of left inframammary pain it must be realized that pain in this situation very often occurs in association with heart failure especially if fibrillation has supervened The writer[9] has shown that such pain was experienced by 21 patients out of 27 in whom pain or discomfort attended congestive failure Of 16 consecutive patients with auricular fibrillation 13 complained of left inframammary pain The presence of such pain in heart disease does not necessarily mean that the disease is complicated by a superadded form of neuro circulatory asthenia since there may be complete absence of all other elements of the characteristic syndrome Further the presence of chronic left inframammary pain in association say with hypertensive disease, scarcely modifies either prognosis or treatment

The subject of chronic left inframammary pain often suffers from respiratory troubles These may include breathlessness on exertion but the complaint is more usually of inability to take a deep breath or of a stifling or choking sensation or it may be noticed that the patient takes at intervals deep sighing respirations All these manifestations occur independently of effort often being relieved by it Thus, in these patients the respiratory symptoms commonly show an inverse relationship to effort being less rather than more noticeable with moderate effort Herz [10] describing the association of this symptom with palpitation and mammary pain termed it 'phrenocardia' and remarked that it was particularly apt to occur in women with genital disorders or sexual neuroses Gallavardin[11] has shown by radiography that these sighing or yawning respirations are associated with a restricted action of the diaphragm from weakness or spasm

A host of collateral symptoms frequently accompany left inframammary pain Exhaustion may be a salient complaint the capacity for effort being much greater on some days than on others Very often the patient states that her nerves are bad and she may further be troubled by pains all over by fainting attacks trembling fits and insomnia While these manifestations are principally subjective they are sometimes far from trivial and occasion great physical distress and mental agitation

Left inframammary pain in the absence of cardiovascular disease seldom afflicts men and when it does it is generally the sequel to over smoking When tobacco is the cause the pain is apt to be paroxysmal and this syndrome will be referred to below Etiological factors among women are principally a highly strung temperament hyperthyroidism and menopausal or other genital disturbances It has been seen above how phrenocardia is specially frequent in those syndromes accompanying sexual disorder The following case serves to illustrate the relation of menstrual function to this group of disorders

A widow of 35 had no ill health until eighteen months ago when she began to experience attacks of palpitation with throbbing in the neck and vague pains about the left breast These symptoms have persisted until the present time but they have become more continuous and in addition she now has exhaustion and variable dyspnoea on effort Deep sighing respirations are taken at intervals and the patient feels that she never has enough air All the symptoms become more severe and distressing during the ten days preceding menstruation and also during the five days that this lasts Maximal relief is experienced in the intermenstrual period Physical examination has revealed no evidences of heart disease and the x ray and electrocardiogram are normal Ventricular extrasystoles are frequent at times A fine tremor of the fingers is present but there are no other signs of hyperthyroidism During the last two months in which an exacerbation of the symptoms has occurred the periods have been noticeably scanty

The relationship of the severity of symptoms to menstruation the recent suggestive diminution of the menses and the phrenocardia all point in this case to endocrine imbalance of pelvic origin as the basis of the functional malady

trifling kind There were finally in these secondary school boys as might be supposed at that age, the ambitious and the idealistic types of choice determinant The desire for power and fame seems to be more common at the school-boy age than at any rate, the desire for riches though the more apparently altruistic professions, such as Medicine and the Church appeal to some boys

The numbers who in choosing an occupation were confessedly following the father's wish, plus the numbers electing to follow the father's occupation, were together second only in amount to those having a fancied liking for the work This gives some plausibility to the remark of one pupil, that the majority of men are not what they preferred to be but what other people preferred them to be The father's influence is more marked before the age of 14 after which it declines The mother's influence declines still more rapidly about the same age It is a matter of interest and curiosity that the influence of the school teacher was hardly ever mentioned

This systematic investigation by Valentine and Ritchie bears out what we suspect not only in secondary school boys but in persons much older and possessing greater advantages—namely that the factors that determine the choice of a calling are very varied and many of them are very far from relevant Clinical experience shows some of the disasters of such a method Is it possible to lay down systematic rules which should be followed in nearly every case? It is true on the whole that genius will out, and that a person of superior ability no matter in what line of work he is placed will usually make a success of it In England nowadays, not many Miltons remain mute and inglorious exceptional ability seldom wastes its sweetness on the desert air There are of course some tragic non fulfilments The notion that superior ability will always find itself is limited by the range of ability in an individual, and by the limitation of his capacity for expression in a given field There are not many who are endowed at one and the same time with such diverse aptitudes as those involved in mathematics, languages, biological studies music and painting to take a widely ranging group This question of the existence of a generalized ability in an individual has been much argued and is of importance for our problem It has been held that ability in each particular direction is compounded of a general factor and a specific one For convenience the general factor has been labelled g and each specific factor s_1 s_2 etc A person with considerable g will be more or less above the average in every direction with special talents where the g is reinforced by s Such a person will tend to excel at any task but will be especially likely to distinguish himself if he strikes upon an occupation which involves one of his s abilities as well The opposing view is that there is no general ability in the sense of something probably energy available in any direction but only group abilities—that is abilities of a localized type available for groups of subjects more or less closely allied A person furnished with group ability well above the average in one direction may nevertheless be almost stupid in others Ordinary every day observations would suggest that there is much in support of both views If the second view is the true one then a careful assessment of abilities is all the more necessary in advising upon a suitable career as utter misfits are in this view possible on the grounds of ability alone It may be thought that no one could be so muddle headed as to choose a life's work for which he was completely lacking in the appropriate ability But it has to be remembered that we are dealing with average people most of the time in whom neither capacity for achievement nor the lack of it occurs glaringly and in whom therefore it is not impossible to miss the presence or the absence of a special aptitude

TEMPERAMENT AND INTELLIGENCE

How are such abilities, general and special, best detected, and are they the only factors of importance? There are many ways of detecting their presence some of them highly elaborated of recent years but there remain other considerations of equal and often greater importance not so susceptible of accurate estimation—considerations which can be summed up under 'temperament' There are those who declare that intelligence using that term in a general sense to cover all kinds of ability, is the most important single asset that an individual can possess in modern life Intelligence as one writer puts it, has the greatest survival value under the conditions of a civilized community of all the assets that an individual may possess But perhaps this claim is made because to intelligence is more easily assigned a numerical value than to temperament

'It is pretty certain that temperament is far more important than intelligence in the determination of social status In the right environment an ounce of pushfulness may be more effective than a ton of learning and tact will often go higher up the ladder than cleverness Of course there is a relation and perhaps a strongly positive relation between the two but we do not know enough about this and are not likely for a long time to come to be able to deduce a man's temperamental qualities from his intellectual performances After all if we cut out the extreme top and the extreme bottom the intellectual differences between one man and another are comparatively slight and even relatively big intellectual differences appear to be of less social significance than slight diversities of temperament (F C Bartlett)

Since intelligence is more readily assessed than temperament let us first turn to the means by which it may be measured The time honoured method is by scholastic examination and most schoolmasters can give an approximate notion of the capacities of the pupils under their care But the examination is only in the limited field of school subjects and depends greatly on things other than intelligence It is notorious that the prize winner at school may be undistinguished in later life (though I suspect that this happens less often than is supposed) but the reflection is consoling for many One of the principal fallacies in the system as an index of ability, apart from the fact that it takes little account of temperament, is that the school examination is primarily a method of eliciting information Nevertheless the amount of information which anyone has acquired along a given line furnishes an indirect indication of one temperamental factor—namely, the degree of perseverance

Intelligence tests of a more direct kind than the scholastic examination are available in the shape of the Binet-Simon tests of intelligence These are supposed to measure inborn intelligence rather than the extent of acquired information and they possess the advantage of giving a uniform scale which can be applied at any age Moreover since it has been found that throughout the period of development the ratio of a given individual's intelligence to his age remains fairly constant it is possible to use these tests as a basis of prediction of future attainments The application of this to our problem of the choice of a career is obvious One can even classify the various occupations with fair accuracy according to the degree of intelligence required for them If the matter were so straightforward as this it would be simple to assess a young person's intelligence at say the age of 12 and having done so present him with a list of scheduled occupations saying This and this you are capable of and which would you prefer to follow? The choice of an appropriate occupation within a group would then depend largely on extrinsic factors—special opportunity, such as the offer of a job special prospects of promotion, cost of training facilities for training and the like Here,

[illegible] scientific [illegible] recorded [illegible] [illegible] [illegible] by Scott [illegible] [illegible] [illegible] [illegible] The [illegible] [illegible] [illegible] [illegible]

this group are well known. There is no definite evidence that they are pathogenic in the sense that the paratyphoid bacilli are pathogenic, but they are often associated with intestinal diseases.

July 7th.—Polymorphs 57 per cent., lymphocytes 33 per cent., monocytes 9 per cent., eosinophils 1 per cent.

July 14th.—Leucocytes 2,600 per c.mm.

August 11th.—Leucocytes 3,200 per c.mm.

September 15th.—Normal blood picture.

The treatment given was simply that for typhoid, with the exception of a vaccine made from the stools. This was followed in a few hours by a rigor and temperature of 104° and thereafter the fever abated in the course of a few days and the disease came to an end. As however, the patient was clearly working up for a pyrexial wave at the time the effect of the vaccine, if any, is not proved.

The points of interest in the case lie in (1) the three waves of fever, (2) the clinical signs suggestive of typhoid, (3) the absence of agglutination reactions, (4) absence of abdominal or any other symptoms except initial constipation, and (5) a swing of the differential count towards normal when the temperature was rising for its last and highest wave. (Unfortunately the effect of the patient's serum on the non-lactose fermenters was not investigated, but it seems highly probable (*vide infra*) that agglutination would have occurred.)

Two very similar cases have subsequently been seen by one of us (A. H. D.) in which a slow pulse, leucopenia, relative lymphocytosis, palpable spleen, and continued fever have pointed to the diagnosis of typhoid or paratyphoid fever. In both, the agglutination tests were completely negative to the entire food-poisoning group, though carried out by independent pathologists on three occasions. In both atypical organisms of the type mentioned were found in the stools, and these were in fact agglutinated by the patient's serum in dilution of 1 in 400.

CONTROL AND TREATMENT OF ARTHRITIS *

BY

C. W. BUCKLEY, M.D., M.R.C.P.

PHYSICIAN, DEVONSHIRE HOSPITAL, BUXTON

Under this title I wish to discuss the conditions of living favouring the development of rheumatic diseases and the general measures which may help to lessen their frequency and severity, more particularly in the case of arthritis. It is obvious that the first step must be to correct those errors of living and defects of environment which act as causes. Prevention and treatment must therefore be along the same lines. As all forms of arthritis do not spring from the same causes a simple classification is first necessary. I prefer to group the various types under three main heads: (*a*) infective or proliferative arthritis (often called rheumatoid), (*b*) degenerative arthritis (osteo-arthritis), (*c*) metabolic arthritis (mainly gout, a disease with which this paper is not concerned). While mixed forms are not uncommon it is not generally difficult to put cases under one or other of these headings. There is still a great deal to be learnt about all three, but the trouble is not so much lack of knowledge as prevalence of error. One [illegible] is the other and error firmly rooted in the mind [illegible] one of the chief obstacles to be overcome.

The pathology of tuberculosis [illegible] work for [illegible] history of progress in its treatment during the [illegible] ate ability [illegible] entury forms a valuable analogy. The idea was [illegible] implanted that the sufferer from tuberculosis must be [illegible] warm, over-clothed, and with windows firmly closed to exclude draughts. With the patient's resistance thus weakened the development of the tubercle bacillus promoted, and its dissemination favoured by the absence of fresh air and sunlight, the consequence was that the death-rate rose steadily. Rheumatic diseases are more common to-day than were tuberculous diseases at any time, and, though less deadly, the toll they exact from industry is far greater. It is therefore urgent that the problem should be tackled in the same way, and the first step in prevention must be the correction of prevalent errors and habits. The same factors are at work as in tuberculosis—namely, a micro-organism widely distributed and harboured at one time or another by every one of us without obvious ill effect, until there comes into play one of many factors reducing the specific resistance of the tissues to it. Among the more important of these factors are (*a*) Hereditary predisposition—the arthritic diathesis, an inherited susceptibility to all forms of rheumatic disease, which may show itself by hypertrophied tonsils, by an abnormal susceptibility to variations in meteorological conditions (especially temperature and humidity), and by some forms of endocrine deficiency. Hereditary factors cannot be prevented, but if recognized early they may be contested. (*b*) Unfavourable conditions of living. The effect of damp houses in predisposing to rheumatic fever applies equally, I believe, to arthritis, but to the evil results of damp must be added those of light deficiency, especially in respect of the resultant shortage of vitamin D. In this direction much can be done. In our country it is impossible to secure the conditions which seem to favour a high resistance to rheumatism. Wyatt has shown that in Arizona the climate with its combination of heat, low humidity, and much sunshine renders arthritis practically unknown, despite the fact that bad teeth and other septic foci are quite as prevalent there as anywhere else. What is the effect on the organism of these three climatic factors? Heat renders it unnecessary to wear much clothing. What is worn is loose fitting and permits the air to circulate freely over the skin of the whole body. Heat plus low humidity leads to free skin action and to an active cutaneous circulation. Ample sunshine through its ultra-violet constituents favours the development of vitamin D, and probably as a consequence a full degree of calcium retention in the tissues, especially in the bones. To these factors should, as likely as not, be added an active open air life and a diet in which uncooked fruit and vegetables take a leading part. As such a climate is unattainable for the vast majority of the people of this country—though if it were it might have serious drawbacks in other respects—we must consider how far its effects can be obtained here.

PHYSICAL FACTORS IN ARTHRITIS

The first essential appears to be the maintenance of the skin functions in fullest activity. The most important of these is the capacity of the skin to accommodate itself to variations in temperature by dilatation or contraction of its capillaries—a function which in the variable climate of this country is of the utmost importance. The first step in this direction is to wear reasonably light and loose fitting clothes. An apparent illustration of this is that the women of the present day, despite the scantiness of their clothing compared with that of twenty years ago, seem far freer from rheumatic diseases and can bear changes of temperature far better than men. In my own experience it is those who are heavily clothed and whose bodies are constantly bathed by a hot humid atmosphere inside their clothing who suffer most from rheumatic fibrositis and arthritis. Further, the materials of which much of women's clothing is at present made are permeable to ultra-violet rays.

* Read to the Section of Hydrology and Climatology at the Annual Meeting of the British Medical Association, Eastbourne, 1931.

I submit that one of the first steps in fortifying the system against rheumatic diseases generally is a style of dress promoting the vasomotor functions of the skin and maintaining to the highest efficiency its power of adaptation to temperature changes This object will also be promoted by simple hydrological methods—cold baths in the robust and in those who cannot stand such procedures warm baths of short duration followed by brief cold affusion over the neck and shoulders at least Prolonged or habitual hot baths without tonic cold splashes or rubbing with a cold wet towel afterwards will have the contrary effect and tend to weaken the cutaneous power of reaction

Dilated capillary circulation is a noteworthy feature in the pathology of arthritis and diminished blood supply to the joints is one of its effects though whether this is causal or secondary has not yet been settled In any case it is a definite factor in producing pathological effects through interference with the nutrition of joint structures Hydrological measures massage and suitable exercises are well adapted for the treatment of these conditions and tend equally to prevent them There are other physical methods which help to promote the circulation in the joints and I have been struck with the effect produced by applying Bier's bandage above an affected joint Within a short period after its removal a rise in body temperature can be demonstrated which appears to me to be due to auto inoculation from toxic products washed away from the joints into the general circulation

The modern tendency to regard heat as a sovereign remedy in rheumatism is I feel sure a mistake Local heat is comforting and often beneficial but general heating without subsequent measures to tone up the relaxed skin vessels is apt to leave the patient more susceptible than before and should if adopted at all be used only in short courses and under careful supervision It is interesting to note that in Elizabethan days the tepid waters of Buxton gained great repute for the treatment of rheumatism At that time there was no means of heating the water or applying heat in any form except by an ordinary fire yet the poor people flocked there in such numbers that an Act of Parliament was passed to restrain them No advertising of spas was possible beyond the testimony of those who had found benefit there and their advantages must obviously have been great There is a popular idea that exposure to the direct rays of the sun is curative in arthritis but this again cannot be accepted without qualification Many sufferers from arthritis have told me that they cannot tolerate exposure to the sun for long and even the robust feel exhausted and often ache all over if exposed to strong sunlight for any length of time unless acclimatization has been gradual Whether this heat is due to some endocrine over activity or to excessive development of vitamin D is a matter worthy of investigation

Influence of Diet and Occupation

Dietetic factors are of great importance the essential being a properly balanced vitamin supply Deficiency in this respect is one of the principal factors in inducing a lowered state of resistance to rheumatic infection For baby the sparing use of milk in the dietary of children and young adults is a most important thing Definite antipathy to milk is by no means uncommon and must be overcome Soft white bread and cooked farinaceous foods tend to bad teeth from want of stimulus to mastication while vitamin B deficiency and constipation are associated with this diet May not the constipation so common in the female sex from girlhood onward have a predisposing effect to streptococcal infection when the type of food is taken Pembrey's researches indicate that there is commonly a lowered sugar tolerance in rheumatic subjects and therefore carbohydrate restriction is desirable provided that weight can be maintained and nutrition improved by other foods Meat is essential to combat anaemia in the arthritis of the young (though this does not apply in the metabolic forms) The popular prejudice against red meat in these conditions is absolutely without any justification as it increases vigour and stamina In the same way to prohibit or even to limit fruit from some imagined idea of acidity is ridiculous Ample supplies of both fruit and vegetables—as far as possible in the uncooked state—should be given to prevent constipation and supply essential vitamins The fluid intake should not be less than three pints a day Wholemeal bread is preferable to white Eggs cream and butter all of which are desirable articles of food in the arthritic will help to counteract any tendency to lose weight through carbohydrate limitation Regular weighing is desirable

Occupational causes are important and dark stuffy workshops and monotonous tasks tend to lower resistance Where these factors cannot be entirely avoided attention to adequate exercise and recreation is vital Standing for long periods conduces to flat foot especially if the diet is unsuitable and adequate exercise is not taken Weakened ankles and knees result and the soil is prepared for infection There are other factors less easy to identify I have been struck by the frequency of arthritis in teachers approaching middle age—arthritis definitely of the infective type though possibly preceded by degenerative changes This is difficult to account for since they work as a rule in light and well ventilated rooms and have ample opportunity for recreation Psychical and endocrine factors may have an influence Long nursing or attendance on invalid relatives may predispose while shock due to bereavement or other causes is not an infrequent precursor of arthritis In this case I believe the endocrine factor is suprarenal deficiency which may play a more frequent part than is suspected Low blood pressure is common in the acute infective types of arthritis but in the degenerative and especially in the climacteric types it is often much above normal Ovarian and thyroid disorders may have a considerable influence but I am very sceptical as to the value of a good deal of the modern therapy on these lines

The points so far considered may in the first instance predispose to arthritis and when it is established favour its progress Attention to them will improve the general resistance and aid the patient in his fight against the disease Is it possible to increase the specific resistance to the causal micro organisms?

Bacteriological Aspects

There is reason to believe that by long continued absorption of toxins from septic foci or by other means the joints may become sensitized to these microbes Further it would seem that an organism growing in a septic focus in some particular type of tissue acquires a special affinity for that tissue and tends to spread to similar tissues in other parts of the body While this has yet to be proved it is a fact that streptococci from the mouth seem to have an affinity for the pericardium Their importance of thorough attention to the state of the mouth is so universally recognized as to need no further mention This is one weapon in the fight against the specific infective agent It is probable that next to the policy of attempting to eradicate foci of infection no line of treatment has been more generally practised in recent years than the use of vaccines While admitting that excellent results appear sometimes to have been obtained I believe that irreparable damage has often been done by their use in inexperienced hands In many cases resistance instead of being increased has been still further

reduced and the last state has been far worse than the first This has not been so strikingly evident as in the case of tuberculin but the principle has been the same Dosage has been far too large and the reactions have not been studied with sufficient care The programme has been issued by the bacteriologist in the laboratory, and not by the doctor in charge of the case—another example of the dangerous modern tendency to exalt the laboratory worker and depreciate the clinician In many cases the failures have passed out of sight and the bacteriologist has only seen the successes Without embarking upon a general discussion as to the value of vaccines I would say that they are worthy of a trial especially in the more acute cases in young people It is essential however to start with minimal doses I prefer to try 100 000 at first, and to increase or diminish in accordance with the reaction obtained I insist on a chart being kept of the temperature taken twice daily while it is also desirable to record on the same chart the daily variations in local and general symptoms By this means the effect of vaccines and of other measures can be watched and controlled and by such a system alone can the treatment of arthritis be properly carried out I do not deny that good results have been obtained by the old method of heavy dosage but in such cases I believe the principle has been one of protein shock on a modified scale This ought to be abandoned as too dangerous for use in any but the most expert hands

The discussion of other methods of treatment is outside the scope of this paper It must be admitted that the scantiness of our knowledge of the etiology and treatment of arthritis is a reproach which calls urgently for remedy, and I believe it would be a considerable blessing to all classes and especially to the industrial if this great Association would undertake the organization and co ordination of research into this subject

THE ETIOLOGY OF DYSIDROSIS*

BY

G B DOWLING M D M R C P

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Dysidrosis signifying difficult sweating was the name given by Tilbury Fox in 1873 to a condition which he defined in the following way

The disease is characterized especially by the retention in the follicles of the skin of sweat rapidly and freely secreted The follicles are much distended and the retention of the sweat and the distension of the follicles are followed secondarily by congestion of the sweat follicles by the formation of bullae maceration of the epidermis and it may be more or less dermatitis The disease bears the same relation in fact to the sweat follicles as does acne to the sebaceous follicles In its slightest form it is confined to the hands occurring in the interdigits over the palm and along the sides of the fingers and on the palmar surfaces some or all of these parts The eruption makes its appearance in those who habitually sweat freely and generally in the summer but oftentimes in the winter and the patients attacked complain of feeling weak and depressed The eruption is made up in the first instance of minute vesicles deeply embedded in the skin The vesicles are at first isolated They do not readily burst and when they have existed for a few days the affected part is just as though a number of boiled sago grains were embedded in the skin There is always some itching and a good deal of burning present with the eruption Eventually the vesicles run together into the form of aggregated masses of small or large bullae If the vesicles and bullae be left undisturbed the fluid is partly absorbed the cuticle then peels off leaving a non discharging reddened exposed derma but the cuticle especially about the roots of the fingers may become sodden like wet chamois leather

He goes on to say that the eruption may be complicated by a rash more or less general over the body

This eruption is similar to that of lichen tropicus or miliaria it is hyperæmia of the sweat follicles It is very itchy The same state of things is exists in the hands may be present in the feet In some cases when the outpoured sweat goes red dry slightly scurfy painful sometimes awfully painful surface is left behind and becomes chronic Patients in whom this occurs are thin pale anxious looking depressed and so on The disease lasts ten days or so in some cases but in others for two or three weeks

As the cause Tilbury Fox supposed a disturbance of the innervation of the sweat glands which might lead to a sudden influx of sweat the flow being so rapid that it dilated the sweat duct and blocked it by pressure from below the spiral portion of the duct Three years later (1876) Jonathan Hutchinson described, in his *Illustrations of Clinical Surgery* a condition which he named cheiropompholyx This was plainly identical with that already referred to by Tilbury Fox as dysidrosis He did not consider it to be connected with the sweat apparatus There followed a rather heated discussion between Tilbury Fox and Hutchinson in the *Lancet* and *British Medical Journal* into which others including Thin Liveing Radcliffe Crocker and Cummings of Edinburgh were drawn The last named claimed that the condition had been known to him for thirty years, and attempted to settle the divergence of opinion by stating that dysidrosis was plainly a manifestation of gout

The first histological examination was made by A R Robinson in 1877 In this the sweat glands were found to be perfectly normal and there was no distension whatever of their ducts The process was found to consist of an escape first of serum and later of serum and white corpuscles from the blood vessels of the papillae The serum pushing its way upwards among the cells of the rete Malpighii and pressing them aside collected in the form of vesicles either in the upper part of this layer or between the rete and the corneous layer The subcutaneous tissue was found to be normal, but a considerable round cell infiltration was found in the upper part of the corium

A further careful histological study of dysidrosis was made by Winklereid Williams who as he suffered from the condition himself, had ample material to work upon He made several hundred serial sections from five portions of skin In no case was any connexion observed between the sweat pores and the vesicles The appearance in several sections might have suggested that the vesicle was a dilatation of the sweat duct but serial examinations proved that there was no communication between the coil and the vesicular cavity In the majority of cases the sweat pores and ducts were at some distance from the vesicles The changes Williams pointed out were those of vesicular eczema A histological investigation by Darier also failed to demonstrate a direct implication of the sweat apparatus

In 1919 Darier published in the *Lancet* an article setting forth his views on this question He regarded dysidrosis simply as a vesico bullous dermatitis later on squamous in type having as its essential character the limitation to the hands and feet When they were not artificial, professional or medicamental dermatoses the dysidrosiform eruptions were mostly and probably always of mycotic nature and due to the epidermophyton Thus Tilbury Fox's view of the anatomy of dysidrosis would appear to have been disposed of particularly as he made no histological study of the condition and appears to have based his opinion purely upon naked eye appearances and association with hyperidrosis Sabouraud and

* Paper read to the Section of Dermatology at the Annual Meeting of the British Medical Association Eastbourne 1931

Procq however both disagreed with Darier's views on dysidrosis and in 1924 Sicoli a pupil of Sabouraud attempted by histo-pathological investigation to reaffirm Tilbury Fox's contention. Some of his sections exhibited dilatation and rupture of the intra-epidermal portion of an occasional sweat duct in cases of dysidrosis the dermal portion of the duct and the coil glands were however undamaged. In these cases microscopical and cultural examinations had failed to reveal the presence of fungus of any kind and the author regarded them as examples of true dysidrosis. It may however be argued that the intra-epidermal portion of the sweat duct would naturally be involved in the general disorganization of the epidermis that occurs in vesicular eczema and this investigation cannot be said to have proved anything except perhaps the existence of a non-mycotic variety of dysidrosis.

To-day there are many who like Darier decline to admit the existence of true dysidrosis believing that the condition is merely a special aspect of a number of well-known dermatoses. Of these by far the most important is mycotic infection. The fungus is almost always the epidermophyton which has a predilection for moist surfaces especially moist intertriginous surfaces and which is extremely prevalent in England nowadays. The inter-digital spaces of the toes are very commonly attacked and the infection may be present in that situation for years without causing much annoyance. The spaces are generally though not always lined with tough dead white sodden epidermis particularly between the little and fourth toes. This is sometimes regarded by patients as a normal state of affairs unworthy of notice but they quite often seek advice for a dysidrosiform eruption of the hands of the feet or of the hands and feet. Microscopical examination in liquor potassae of a scraping of sodden epidermis from an interdigital space or of the roof of a vesicle on the foot reveals the presence of mycelium often in abundance but sometimes difficult to find. Conversely a search for fungus in the hand is often unsuccessful. It has been demonstrated by experiment in the human subject that the epidermophyton secretes an endotoxin which entering the blood stream can give rise to a dysidrosiform eruption on the palms fingers and soles—an epidermophytid. The eruption on the palms and fingers however may like that of the feet be due to direct infection. Ringworm infection disposes of a very large proportion of the cases of dysidrosis in fact the fungus has been found in every case of dysidrosis that I have seen this summer. In one of these the interdigital spaces of the toes were quite normal. The thrush fungus (*Monilia albicans*) and other varieties of monilia are also capable of causing dysidrosis. The fungi are rather difficult to see in a direct examination and though they may appear in cultures it is generally recognized that they are capable of thriving on dermatoses that they have not themselves created. Further work will be necessary to establish the role of fungi of the monilia group in dysidrosis.

Various irritants may produce a condition objectively identical with dysidrosis of the hand. The subject of such trouble is often one who suffers from hyperidrosis of the palms and soles. Again it may be a manifestation of seborrhoeic eczema. It is well recognized that seborrhoea of the scalp and other parts may be accompanied by eruption of the palms and soles identical with dysidrosis. Dysidrosis may complicate eczema of the hands—for example lichenified eczema of any part of the hands eczema of the fingertips and with eczematization of the skin generally by the products of tissue breakdown derived from the primary focus. Dysidrosis may complicate seborrhoeic or seborrhoeic with pityriasis of the scalp. Here the important factor would appear to be the hyperidrosis which generally accompanies this state.

Having thus considered the cases of dysidrosis complicating other dermatoses it is necessary to inquire whether any cases may be regarded as idiopathic or true dysidrosis. Evidently the conception of Tilbury Fox must be completely abandoned for it has been demonstrated beyond reasonable doubt that dysidrosis is vesicular eczema. Nevertheless the fact remains that there are many who in the apparent absence of any of the causes already mentioned develop dysidrosis regularly every summer or at intervals throughout the year. The only obvious cause would appear to be hyperidrosis from which the patients invariably suffer. Mild cases affecting only the lateral aspects of the fingers are more common than severe cases. In some the vesicular phase is lacking and here the early lesions resemble air bubbles some of which become confluent to form polycyclic figures.

The association of dysidrosis with hyperidrosis and the occurrence of the attacks at times when sweating is particularly profuse suggest that the sweat itself is perhaps the causal irritant. Patients may conceivably become sensitized to their own sweat. Unfortunately owing perhaps to the difficulty of collecting sweat in adequate quantity its composition in pathological disturbances of the skin such as dysidrosis has not yet been the subject of research. Future study will no doubt determine the precise relation of the sweat to the condition which we now regard as idiopathic or true dysidrosis.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

SCLEROSING SOLUTION FOR INJECTION OF VARICOSE VEINS

A number of solutions are to-day being used for sclerosing varicose veins some of them are dangerous and have caused serious and even fatal after-results. The safest injections for the purpose and perhaps the most effective of all are the NaCl solutions pure they have a marked proclivity to sloughs should any of the fluid become perivascular otherwise they are perfectly safe in any reasonable amount.

THE SOLUTION

For over a year I have been using a 2·0 per cent. NaCl combined with an active material from saponified cod-liver oil. It is free from the disadvantages of pure NaCl solutions and is most effective in sclerosing the veins. In salting out special solutions from various unsaturated fatty acids the filtrate invariably had a low surface tension. Eventually the solution was standardized to a surface tension of approximately 0·80 as ascertained by the drop method. The *p*H of the solution lies between 9 and 9·3 and there is present a small quantity of a substance which appears to be the sodium salt of some resinous compound the amount of the latter is only about 0·15 per cent.

RESULTS

I have now given some 2,000 injections with the solution and have yet to record a single case of local or general complication either immediate or remote. These results may be accounted for by the fact that the solution is almost a physiological one containing as it does less than 0·2 per cent. of the sodium resin referred to above. This small amount is however enough to change the physical and chemical properties of ordinary salt solutions. It has a

would probably agree that in spite of pleurisy and pain in breathing the patients did not look as if their breathing was shallow The respiratory rate was often doubled or trebled The total ventilation was also increased but the increase was not proportional The total air in the lungs might be actually sometimes a little higher in pneumonia certainly in the early stage than in the normal and in all the cases he had so far measured he had not seen one in which the total air was reduced by more than half He sometimes wondered whether other factors besides shallow breathing were allowed for in the causation of anoxaemia It looked as if these factors were at work if in these cases of pneumonia the breathing was not shallow enough to under-ventilate the alveoli Dr Hilton was of opinion that as a routine in every case of pneumonia one should at once give the patient the benefit of the nasal catheter if nothing better was at hand He also showed for different rates of respiration what he had ascertained to be the relative volume of nasal and oral ventilation At the rate of about twenty respirations a minute perhaps half the total volume of air was through the nose and half through the mouth but in the higher rates the proportion through the mouth increased very greatly

Dr C G DOUGLAS said that he approached the subject from the point of view rather of the physiologist than of the clinician His experience of clinical cases was very small but such as it was it had certainly interested him very much and had made him hope that better clinicians than himself might perhaps take up the subject seriously There were many cases—pneumonias and so forth—in which it was quite obvious that oxygen was doing good but one of the difficulties of those who wished to give oxygen was the lack of a suitable apparatus The doctor could not very well carry an oxygen chamber about with him The great advantage of the instruments shown that evening was their portability There were patients who would as Dr Hilton had said fight against the mask but he wondered whether one need be so pessimistic In the few cases with which he (Dr Douglas) had been concerned a little gentle persuasion had resulted in getting the patients to tolerate the mask and keep it on continuously The advantage of an instrument of that kind was that the oxygen could be given at whatever rate was found necessary and that the nurse could be directed what to do The question of oxygen supply was bound to be a difficult one In a normal person using the apparatus exhibited two litres of oxygen per minute would rather more than double the alveolar oxygen If that was sufficient to remove cyanosis a 60 foot cylinder of oxygen if full to start with would last with continuous administration for twelve to fourteen hours and a 60 foot cylinder was about the largest which it was convenient to handle The administration of carbon dioxide opened up a new and interesting sphere He was interested in the possible use of carbon dioxide in the treatment of general pneumonic conditions It seemed to him that various possibilities had to be envisaged One might by this means wake up a failing respiratory centre through the increase of what was after all the normal stimulus Then there was the question whether one might not run the risk of getting deficiency of oxygen in the body owing to shallow breathing The work of Haldane and others went to show that the distribution of air through the lung must in ordinary circumstances be somewhat irregular some areas of alveoli were relatively over ventilated and some under ventilated and this irregularity of distribution would be very much emphasized in cases where breathing became shallow On the average of all the alveoli there might be an oxygen concentration very near to the normal but notwithstanding that it was quite possible that there were tracts of alveoli in a lung which were very ill ventilated and the failure of the blood to be properly oxygenated could not be compensated by the parts of the lung where the ventilation was better One could not tell from mere measurement either of the total air of the lung or even of the alveolar air what was the actual distribution of air in the different parts of the lung Assuming that in some pulmonary complaints reduced ventilation of the lungs might be an important factor there would possibly be a clear indication for increasing the depth of the breathing by some natural means such as giving CO mixture There was another possibility Supposing one had a patient in bed whose breathing was somewhat depressed—not very rapid or shallow but depressed as one found it in a condition of complete rest in serious illness Was it not true that one of the dangers that were always to be feared in such cases was that there might be some stagnation in certain parts of the lung and collapse of those parts? Could not such a risk be entirely obviated by increasing at intervals the volume of the breathing by a natural process? He was not sure for how long one could keep a person on CO and oxygen with comfort A patient might not tolerate his breathing being increased for long periods but if he was cyanosed and one could clear him up and improve his condition with oxygen the speaker would feel inclined to try giving CO and air at intervals five or ten minutes at a time and then putting the patient back on the oxygen Of course if the patient would tolerate the method of increasing his breathing by means of CO that might be the better way

The PRESIDENT mentioned what he described as the simplest apparatus of all from the clinical point of view for giving oxygen in a suitable case—namely an ordinary gas mask and big balloon He related a case of severe bronchitis and heart failure in which the inhalation of pure oxygen given by this method for a quarter of an hour was sufficient to bring about restoration

X RAY DOSAGE IN MALIGNANT DISEASE

At the meeting of the Section of Radiology of the Royal Society of Medicine on January 15th with Professor J WOODBURN MORISON the president in the chair a discussion was held on some physical and medical aspects of x ray dosage in malignant disease

Mr W V MAYNEORD opened with a paper on the measurement of penetrating radiations in therapy He said that the physicist from whose point of view he spoke had a very limited outlook on malignant disease because normally he thought only of the primary growth Dosage might be defined by the physicist as the energy absorbed per unit volume during the radiation It by no means followed that the same doses of different radiations produced the same effect either qualitatively or quantitatively Discussing the time spacing of radiations the speaker suggested that the time factor probably accounted for much of the discrepancy between the observed results with x rays and with gamma rays He also stressed the necessity for frequent standardization of output Measurements ought to be made fairly regularly if advantage was to be taken of the improvement that the unit made possible From the standpoint of physics less progress had been made with gamma rays than with x rays and much more information was wanted as to the distribution of radium through the tissues It was essential to keep a constant check on radium needles the distribution of the element in very long needles was often most unsatisfactory

Dr F HERNAMAN JOHNSON said that the limits of advance by single course methods which involved severe local and general reactions had been reached or nearly reached Radiation effected its cures principally by

stimulating local and general tissue resistance To use a dosage whereby permanent damage was done to the health parts surrounding the tumour was justifiable only in desperate cases In the case of breast cancer results could be improved only by continuous efforts to maintain the patient's resistance against possible metastases It was particularly important therefore that the initial doses should not be of such intensity as to make the future response to x-ray treatment impossible Dr Hernaman-Johnson putting forward the evidence in favour of an indirect rather than a direct action advocated a scheme of treatment whereby repeated doses of moderate intensity were given He was aware that against this could be urged the argument that tumour cells acquired radio-immunity but the ultimate failure to respond might also be called staleness on the part of the surrounding tissues or exhaustion of their powers of response What he contended for was a recognition that the chief action of radiations was to stimulate the resisting powers of the body and that methods of treatment which aimed at conserving tissue resistance alone were sound in principle

Dr N S Finzi said that in his practice the main principle in treating any form of malignant disease had been to give a sufficiently large dose to every malignant cell It was now agreed by the majority of radiologists that the alliance of the recuperative powers of the body with the depressing effect of the rays on the malignant cells should be the aim in view That part of the body outside the treated areas should receive as small a dose as possible If the dose was applied during the course of a few hours its biological effect was very different from that of the same dose spread over days or weeks The whole area that was likely to be invaded should be treated particular attention being paid to the possibility of lymphatic spread Great care must be taken to get an even radiation throughout this region by means of cross fire distance size of field and so on Somehow a deep-seated tumour never seemed to receive as large a dosage as was calculated probably owing to the effect of filtration The combination of x rays and radium used on the surface was said to make possible a larger equivalent dose than could be given with each agent used separately Where sepsis was present the growth was less sensitive to radiation In many throat cases the treatment had failed because the teeth had not received proper attention If the patient was in poor condition he would not respond so well to radiations In addition treatment was a severe strain during which the patient always lost weight In nearly every tumour there occurred a stage when the growth became insensitive to radiations Dr Finzi said that he absolutely disbelieved the statement so frequently made that one full dose of radium immunized the growth against future action of the rays It was true that the second dose often had less effect than the first because of the later stage of the disease and the diminished resistance of the patient or because the condition of the skin and subcutaneous tissues forced one to give a smaller dose Yet he had had many patients who had lived for years after the second treatment and who would not have survived if this second treatment had not been given In the future of x rays in malignant disease the most important thing would be to investigate the value of the shorter wave lengths

Dr J H Douglas Webster said he believed that the small dose of x rays—one fifth of an erythema dose—was in many cases the best dose to give in view of the fact that it could be done in three fractions The smaller dose of treatment necessitated a longer time in a case where he had been given one minute in a case of cancer of a curve of radium in a tumour with a concentration of a long rod In the Rockefeller Institute it had been shown that the application of small doses of x rays to animals increased the number of lymphocytes and the immunity of the animals to implants of new growth Dr Webster described one case of his own—a patient with a recurrence after breast cancer—in which very small doses (about one eighth of an erythema dose) to twelve areas in all had resulted in great improvement

Dr Gilbert Scott said that the all important problem to him was whether the beneficial effects on the tumour cell were direct or indirect In other words, was the pathological cell destroyed by direct action or by the stimulus of natural defence? He maintained that the control over such generalized conditions as malignant disease would not be increased so long as local treatment alone was given and the only way to advance was to enlarge the radiation field and work within the medium wave length scale which had not so far been explored Radiologists had jumped from the long wave to the short wave and had left the medium wave alone Until radiation could prevent and destroy metastases then at best it could be considered only as a palliative agent

Professor F R Hopwood dealt with certain physical problems and quoted authorities to show that the effect of radiation on normal tissue was a direct action He said that if the action of radiation on tissue was indirect then one would naturally expect conclusive evidence of some definite mechanism for the spontaneous cure of cancer On the question of small doses he mentioned that one-twentieth of the erythema dose produced a marked effect on the rate of division of the cells in a tissue culture Yet a lethal dose was something like a hundred times as much Dr A Burrows said that the unequal distribution of the element in radium needles was sometimes such as to alter the position of maximum intensity With regard to spontaneous cures in which some people disbelieved it was the experience of them all to see a nodule disappear there was therefore some mechanism in the body sufficient to clear away a nodule though not sufficient as a rule to clear away a whole tumour No tumour cell could exist without something to nourish it and therefore it must have supporting tissue but if one destroyed the supporting tissue one might also be destroying something which offered resistance to the tumour cell Dr C Gouldesbrough referring to the use of the fluorescein method said that it was suggested to him in a case of breast cancer which he had treated by painting one half of the breast and irradiating the whole of the tumour with a moderate radiation He found to his surprise that the tumour in the part which had been painted disappeared in the other part it did not Fluorescein undoubtedly was a very important agent but he had certainly found it effective Apparently to produce the effects the radiation must be of only moderate penetration He believed there was a great future particularly in the attack upon secondary growths in the use of rays of this quality Dr J E Lynham said that in malignant disease it was impossible to be sure of results and like cases did not respond in like fashion Even if a local result was obtained the patient might die from recurrences In estimating the efficacy of dosage one should not depend on skin effects because they were so far as he could judge harmful rather than beneficial Dr G Vilvandré said that at the London Hospital during the last eighteen months or so the use of x rays of long wave length had been entirely abandoned in favour of short wave length and personally he found the results much better than they used to be Dr W M Levitt said that Dr Hernaman Johnson had condemned massive doses on the ground that the effect on the surrounding tissues was damaging For his own part he considered that both in theory and in practice the use of small doses was contra-

indicated, and he believed that the effect on the surrounding tissues produced by massive doses was beneficial

Dr FINZI in replying said that some speakers had suggested that the carcinoma cell was killed by the radiations, it was not killed, but gradually absorbed by the surrounding tissues With regard to fluorescein his own results had not been satisfactory He had treated a number of cases—it was true at rather higher voltages than those used by Dr Gouldesbrough—but he had not seen any results worth describing

PREVENTION OF PUERPERAL SEPSIS

At a meeting of the Edinburgh Obstetrical Society, on December 9th 1931, with the president, Dr JAMES YOUNG in the chair Dr LACHLAN GRANT read a paper entitled Puerperal temperatures and their prevention'

Dr Grant said that it was realized that, to improve the quality of the race we must begin with the child To that end a happy healthy, enlightened, and safe motherhood was the first consideration No longer should there be so many shameful conditions that made maternity a martyrdom and childhood a tragedy The mothers must have the best that science could offer in addition to any material adjuncts to a safe and efficient discharge of the greatest of all human duties Every practitioner undertaking obstetric work should be familiar with the various etiological factors which might cause febrile attacks in the puerperium Further it was advisable to consider from time to time whether or not it was necessary to alter or revise any part of the practitioner's supervising work or any details of his operative technique Dr Grant compared the average surgical operation with the obstetrical one stating that, in both blood vessels were opened up and direct channels suddenly exposed to external or internal infection The conditions and nature of the maternity operation, however, differed greatly from those present in ordinary surgery Ante natal care was necessary, but it should be agreed to by the patient and carried out by the patient's own medical attendant supplemented by specialist obstetrical assistance in any difficult or doubtful diagnosis Things could then be prearranged for the labour and for dealing with likely emergencies In this way many difficult cases with their possible rises of temperature would be avoided In addition to insanitary and poverty stricken crowded tenements there was the ever present danger of infection which could be avoided only by the most careful aseptic and antiseptic cleansing and sterilizing methods by nurses and physicians in attendance The usual armamentarium for surgical cleanliness was not readily available At a 'home' case several basins—enamel or porcelain—were usually produced These might be boiled scrubbed out or flamed with spirit Thereafter, an unmeasured quantity of disinfectant (generally lysol) was poured into an unmeasured quantity of water and the lotion was supposed to be ready for immediate use The interiors of the receptacles were rendered slightly more sterile by this means but the difficulty to be contended with was that the basins were apt to be contaminated *anew* owing to the cleansing swabbing and rinsings Frequently no gravitation water was laid on and owing to the contamination of the lotions and basins in use it was almost impossible to keep these receptacles perfectly sterilized The completely sterile basin could be produced only by constantly subjecting it to steam heat or by keeping it in contact with a suitable chemical solution—in both instances for a certain length of time—in order to make sure of destroying all living bacteria Steam at 130° C for thirty minutes gave absolute security As regards chemical solutions contact for from five to ten minutes in for example perchloride or biniodide of mercury 1 in 1 000 was required In consequence any microbes deposited in even freshly prepared lotions made it necessary for that period of time to elapse before the solution was sterile and safe for further use Otherwise there was undoubtedly risk of infection It was most important to note this fact as it would appear to be one of the likely sources of infection, and yet one which could be largely overcome by simple aseptic cleansing and sterilizing methods One of the most effective methods to adopt both in the home and in institutions was some form of elevated water flushing apparatus The same type of faucet used in operating theatres was required By this means contact with the bacteriologically unclean sides of the basin was avoided In maternity work the importance of pure uncontaminated flowing water did not require emphasizing There was no reapplication of any micro organisms for these were actually carried away and not precipitated on the walls of a basin

Dr Lachlan Grant then demonstrated a portable spray and described how difficulties could be overcome with the use of this and suitable reservoirs

RESEARCH ON SEX HORMONES

At a meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on January 15th with the president MR VICTOR BONNEY in the chair Professor E C DODDS opened a discussion on the bearing of recent research on the sex hormones on clinical obstetrics and gynaecology

Professor Dodds said that it had long been known that the removal of the ovaries was attended with cessation of the periods but it was mainly through the work of Professor C R Stockard in New York that the changes characteristic of the rutting and oestrus of rodents had been investigated In these animals at the height of oestrus, a vaginal smear showed cornified cells with no nuclei while in the intermediate periods the cells disappeared and leucocytes were present Allen and Doisy more recently had studied the clinical properties of the ovarian hormone It was possible to re establish the sexual cycle in castrated rats by the injection of an alcoholic extract of ovary Later still it was found that a substance capable of causing oestrus in rodents was present in the placenta and in the urine of pregnant women American and German workers had also shown that a transplant of adult anterior pituitary lobe was capable of producing premature puberty in the mouse Extract of corpus luteum injected subcutaneously had been found to produce in the uterus changes characteristic of early pregnancy Considerable confusion had arisen in regard to the terminology of these hormones The present view as to their action seemed to be that the hormone produced by the anterior lobe of the pituitary controlled the periodicity of the oestrous cycle and stimulated the ovary causing ripening and rupture of the follicles with the formation of the corpus haemorrhagicum and later of the corpus luteum The name for this hormone was prolan some observers regarded it as being composed of two substances—prolan A, which was responsible for the ripening and rupture of the follicles and the formation of the corpus haemorrhagica, and prolan B which brought about the formation of the corpus luteum Except in theory, however prolan A and B had never been separated The ovary was believed to secrete a hormone oestrin which acted on the uterus and vagina causing cornification of the vaginal epithelium and changes in the uterine endometrium The corpus luteum secreted a hormone progestin which gave rise to the formation of the decidua Various other names were in use for all these hormones If the ovaries were removed definite changes (associated with the appearance of castration cells) occurred in the anterior lobe of the pituitary on the injection of

oestrin these cells disappeared so that there was evidently an intimate balance between the ovary and the pituitary German and American workers explained the periodicity of the oestrous cycle by a theory of which so far no proof existed According to this hypothesis the anterior lobe of the pituitary began at puberty to secrete prolan which stimulated the maturation and rupture of follicles in the ovary and the ultimate formation of the corpus luteum The corpus luteum in turn secreted progestin which depressed the secretion of prolan With the reduction in the output of prolan the stimulus to the ovary died away and the corpus luteum gradually ceased to produce progestin The anterior lobe of the pituitary then began to secrete prolan afresh and the cycle recurred

The standardization of these hormones for clinical use offered several difficulties Coward and Burn had found that if oestrin was injected into large numbers of castrated mice the number showing oestrus increased up to a certain point in proportion to the increase of dosage With higher doses however the curve showing the number of animals affected became flatter In response to one dose in the series 50 per cent of animals showed oestrus and 50 per cent did not It was clear therefore that large numbers of animals must be used in attempting to standardize dosage There was evidence moreover that the purity of the extract and the method by which it was given—whether in single or in serial doses—affected the development of oestrus Little was known of the composition of prolan beyond the fact that it contained nitrogen Oestrin had been used in the treatment of every sort of gynaecological condition and in other disorders such as endarteritis obliterans and haemophilia Prolan had been tried in addition for Fröhlich's syndrome and baldness It had been maintained that menorrhagia and habitual abortion could be controlled by progestin but he found it difficult to believe that the small doses given could have had the effect ascribed to them Cases in which it was desired to try the effect of prolan should be chosen with discretion as this hormone could produce almost complete luteinization in animals Little was to be learnt by the use of indiscriminate small doses of the sex hormones on any patient suffering from amenorrhoea So far the Aschheim Zondek test for pregnancy was the only practical outcome of research on these hormones

Professor PARKES said that it was impossible at the present time to measure units of prolan or the corpus luteum hormone but the oestrus producing hormone could probably be standardized within about 10 per cent The dose required to produce cornification in a vaginal smear varied in different animals If the same number of doses were given over the same period of time the rat required ten times as much oestrin as the mouse The dose needed to produce full oestrus was much larger Complete oestrus in the ovariectomized mouse could not be achieved with less than 200 mouse units—a unit being the amount of oestrin necessary to produce cornification In a baboon weighing 10 kilograms 100 000 mouse units were required to produce oestrus It might be assumed that in a human patient the same result could not be achieved with less than half a million mouse units The cost of such dosage would be prohibitive With preparations of oestrin at present on the market a course say of 12½ million units by oral administration would cost about £9 000 which together with consultant's fees would be beyond the means of most patients Some revision of the present ideas of dosage was required if useful results were to be obtained

Dr H GARDINER-HILL quoted the results he had obtained by using oestrin preparations in cases of amenorrhoea He agreed that the dosage used was inadequate but in a certain number of cases positive results appeared to have followed the injection of oestrin In a group of women with primary amenorrhoea who had reached the age of 19 or 20 without menstruating (owing to previous wasting illnesses such as tuberculous peritonitis or to glandular defects) oestrin appeared to have had no effect In a second group of patients in whom menstruation had never been properly established but had occurred only at long intervals and irregularly one-third of those treated showed some change usually in the form of an increase of the frequency with which the menses appeared In a third group of patients with secondary amenorrhoea some changes followed the use of oestrin where the cause was simple such as amenorrhoea following pregnancy or miscarriage change of climate or shock In two such cases women who had previously appeared to be sterile became pregnant He thought it possible that in amenorrhoea of simple origin oestrin might have some effect even in small doses

Mr G F MARRIAN said that since the discovery by Zondek and Aschheim of oestrin in the urine of pregnant women Funk had shown in 1928 that oestrin had some of the properties of a phenol In 1929 Butenandt in Germany Laquer in Holland and Doisy in America had isolated a hydroxyketone ($C_{18}H_{22}O_2$) which they had believed to be oestrin He himself had isolated a compound containing three hydroxyl groups ($C_{18}H_{24}O_3$) and shortly afterwards Butenandt had shown that both compounds were present in the urine of the pregnant woman and that $C_{18}H_{24}O_3$ could be converted into $C_{18}H_{22}O_2$ by distillation with potassium bisulphate The compound first discovered ($C_{18}H_{22}O_2$) had a greater physiological activity and a shorter latent period than the other and it was therefore important when speaking of the dose of oestrin to state which compound was being given A pure crystalline preparation of one compound or the other should be used to avoid confusion between the two types of response

Dr J M ROBSON referred to the mechanism of the menstrual cycle In its latter half there was a building up of the uterine endometrium which continued until the menstrual flow began and there was some evidence that this process was due to the action of progestin Recent experiments showed that under the action of the corpus luteum hormone the uterine muscle did not respond to the action of pituitrin Pituitrin injected up to about the fourteenth day of the cycle in the region of which time ovulation was believed to occur produced contraction of the uterine muscle but later in the cycle had no effect presumably because of the action of the corpus luteum hormone Experiments made by Professor Johnstone during the past eighteen months on sixty patients seemed to show that there was no danger in the use of oestrin The chief positive effect appeared to be in the relief of spasmodic dysmenorrhoea

Mr T C CLARE thought the deductions made from the known facts in regard to these hormones might sometimes be fallacious It seemed probable that a hormone which had been used would become fixed like an antitoxin and consequently if large quantities of oestrin appeared in the urine during pregnancy this might indicate either that it was being produced in excess or that the tissues which normally made use of it were requiring it in a lesser degree Mr G F MARRIAN thought there was a fallacy in Mr Clare's argument He inferred that if a hormone had performed its function it must be fixed There was no evidence to show that this was the case Hormones might behave like catalysts helping to produce effects while remaining unchanged themselves

The PRESIDENT said that it lay in the hands of the biochemists to decide whether or not the ovary performed a useful function after hysterectomy In cases of vesicular mole there was a marked degree of luteinization in the ovary and it should therefore be possible to obtain the

luteinizing hormone in large quantities from such moles He advised those who came across such cases to send them to Professor Dodds for investigation

CANCER TREATMENT

At a meeting of the West London Medico Chirurgical Society held at the West London Hospital on January 8th the subject for discussion was 'The treatment of carcinoma The chair was taken by the president, Dr H H MILLS

Mr MALCOLM DONALDSON pleaded for the setting up of a number of diagnostic centres all over the country to secure the early recognition of cancer It might be suggested that the establishment of such centres would increase the number of neurasthenics but for his own part he had very strong views on that subject believing that the more malignant disease was talked about the less would people be frightened of it There ought also to be treatment centres but these instead of being scattered, should be few and concentrated It was essential if advance was to be made in the treatment of cancer, to segregate the cases and bring them together in comparatively few places where special team work could be undertaken One of the most important parts of such centres would be a follow-up department Patients should be seen at least once a month in the first year and touch kept with them three or four times yearly for the rest of their lives Dealing with the two methods of cancer treatment surgery and radiotherapy Mr Donaldson said that in gynaecology the chief malignant condition was carcinoma of the cervix and the vast majority of gynaecologists now (certainly in other countries and increasingly in this country) believed that radiotherapy was the treatment to be preferred When it came to carcinoma of the body of the uterus surgery undoubtedly showed better results than radiotherapy though in cases unsuitable for the knife radiotherapy gave a fair prospect of prolonging the patient's life Carcinoma of the vagina was a very radio sensitive growth and should be treated by the latter method Malignant disease of the ovary seldom gave rise to symptoms before it was past all hope of relief by operation

Dr A PINEY thought that the problem of cancer treatment was ultimately a chemotherapeutic one Recently a considerable amount of work had been done on the injection of various colloidal dyestuffs which appeared to be stored in the tumour cells to a greater extent than in the cells of normal tissue and exercised a destructive action There had also been many attempts to introduce into the tumour cells solutions of heavy metals with the idea that the tumour might then be better treated with *x* rays None of these methods had as yet proved successful even in experimental animals but they pointed the way to ultimate rational treatment of the malignant cell The problem was not the treatment of carcinoma *qua* carcinoma but of the destruction of the malignant cell The malignant cell and the normal cell were not very different and clearly any method of destroying the malignant cell was peculiarly likely to destroy the normal also It appeared to him that at present the role of surgery in the treatment of malignant disease must inevitably be of enormous importance for removal of tumour cells must be preferable to destruction *in situ*, in view of the possibility that some of them might receive a stimulating growth of rays There was no doubt that tumour cells sometimes grew fast when their neighbours had been destroyed

Mr DUNCAN FITZWILLIAMS declared that the better results which had been obtained in cancer during the last forty years were due solely to early diagnosis and not in the least to the increased range of the operation During the last thirty or forty years there had been in the medical profession a complete revolution in respect of the treatment of tumours In the old days it was a case of "wait and see' Now the young practitioner who saw a tumour realized that that tumour should be regarded as malignant until it was proved innocent and that the onus of proof was on himself A good deal could be done by educating the lay public not to ignore bodily ailments of which they knew nothing but to go to their doctor and get advice The Americans untrammelled by the traditions which bound us had instituted cancer weeks" in different towns and the extraordinary effect of this propaganda could hardly be overstated During these 'periods' it was a point of honour for every person in the town to go to his medical practitioner and be examined thoroughly and if he could not afford the fee which the practitioner charged payment was made by the local cancer committee An enormous number of immature or early tumours were found in this way Dealing with radium treatment Mr Fitzwilliams said that this treatment was not yet seven years old Radium treatment was worth nothing earlier than seven years ago and was not really introduced into this country previous to the Cancer Congress of 1928 Radium was now gradually assuming its rightful place and the limits within which it might be used were beginning to be understood He thought it was axiomatic that radium would never have a chance of effecting a cure in any site that was inaccessible

Sir JAMES DUNDAS GRANT was convinced that where a malignant disease was removable it ought to be removed When he was in general practice the cervix uteri used to be removed and in many cases the cure was permanent He believed in the combination of surgery and radio therapy and felt that this would be more and more developed

Dr J F MCCANN thought that they had not profited by the lesson which had been staring them in the face for so long in the case of occupational cancers These could almost without exception be prevented by taking the necessary precautions Most people now believed that cancer was in the beginning a local disease He held the contrary opinion He believed that that idea had been fostered through laboratory experiments but he preferred to make his judgement on the human being and if any of those present had the advantage of seeing very early cases they would find that there was always in early cancer a certain departure from health the 'primary cachexia' of former writers In some cases it might be slight and escape notice in others it was extreme

Dr MONCKTON COPEMAN spoke as one who had been a member of the committee on cancer set up by the Ministry of Health From the investigations of that committee it was apparent that about 50 per cent of cancer cases never underwent treatment of any kind whatsoever One curious circumstance now apparent was that many patients who went to the infirmaries lived for an exceptionally short time after admission Whatever success was obtained he did not think that there would be seen in the lifetime of the older men present any great difference in cancer mortality He mentioned favourably the chemotherapeutic method involving the use of the dye substance fluorescein irradiated by *x* rays or radium

Dr J E LYNHAM disagreed with Mr Fitzwilliams's remark that the history of radium began only seven years ago There were a number of people working effectively on radium as early as 1911 He pleaded for a medical, rather than a surgical conception of radiology in this disease

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Mr Cecil Wakeley has been elected president of the Harveian Society of London Dr G de Bec Turtle treasurer and Mr R Cove Smith and Professor Tom Hare honorary secretaries

Reviews

TUMOURS OF THE BREAST

CHEATLE and CUTLER'S beautiful volume on *Tumours of the Breast their Pathology Symptoms Diagnosis and Treatment* [1] happily blending in a single work the features of atlas and treatise, is the product of thirty five years of study on the normal and abnormal conditions of the breast Probably no such intensive study of the subject has hitherto been made and doubtless the undertaking has been greatly facilitated and rendered less liable to misinterpretation by the constant employment of whole microscopical and serial sections of the entire gland The book contains many new ideas which are propounded in a manner that arrests interest it is singularly free from dogmatism and is accompanied by evidence in the form of illustrations of a quality which leaves no room for questioning the accuracy of the deductions A leading conception of the authors and one that runs through the whole book is that there exists a close connexion between the conditions of hyperplasia and neoplasia Thus epithelial hyperplasia benign neoplasia and malignant neoplasia may be found constituting a chain of events in the order named and a similar observation may be made with regard to conditions in which the connective tissues of the gland predominate As far as the complications of the subject permit Sir Lenthal Cheatle and Dr Cutler make this conception the basis of their classification, and a detailed description of the hyperplasias is taken to be an essential preliminary to a proper understanding of the neoplasms of the breast and of the process of tumour-formation

The authors recognize two forms of epithelial hyperplasia—namely mazoplasia (a new term which they have with apologies felt constrained to introduce) and cystophorous hyperplasia The former is characterized by a slight increase in the epithelial cells of the terminal ducts and acini without the formation of cysts associated with a marked increase of the connective tissue of the gland and a moderate new formation of acini The condition has hitherto been mistakenly regarded as a form of chronic mastitis but it is now shown to arise through the persistence of anatomical changes which take place as a normal physiological process in infants at birth at the onset of puberty and during pregnancy—changes which in normal circumstances disappear in the intervals between these events Mazoplasia may be present in association with other changes in the breast but the authors are of opinion that it is incapable of initiating any other lesion with the exception of fibro adenoma It is the underlying cause of the so called painful breast, and they have made the interesting observation that relief appears to follow the administration of ovarian residue—that is ovarian tissue from which the corpus luteum has been removed Cystophorous hyperplasia as compared with mazoplasia is a more serious condition because benign tumours and eventually carcinoma may be superimposed upon it Like mazoplasia it is commonly described as a cystic form of chronic mastitis In it there is a proliferation and desquamation of the epithelium of the terminal ducts and acini with the formation of clear colostrum like cells which in the early stages may fill the lumen With these changes is associated a distension of the acini or terminal ducts in the form of cysts, and in addition the over activity of the breast tissue may lead to marked hyperplasia of the connective tissues of the gland Clinically the disease assumes three forms a single cyst multiple cysts and in the early stages a localized nodularity In the two former cases local removal with microscopical examination for carcinoma is recommended while the nodular form should always be treated as carcinoma

By restricting the term 'chronic mastitis' as the authors appear to do to conditions in which a definite inflammatory exudate is demonstrable, and by differentiating the two types of epithelial hyperplasia they seem to have solved the long standing problem of the relation of chronic mastitis to carcinoma Cystophorous hyperplasia is stated to be responsible for 20 per cent of the cases of carcinoma mazoplasia may possibly, through the intermediate stage of fibro adenoma lead to carcinoma but the transformation is so rare as to be virtually negligible The authors discuss at considerable length the practically important question whether it is possible to make a histological diagnosis of carcinoma before infiltration into the surrounding tissues has occurred Little more can be said on this head than that the cells may look malignant which means that they bear some resemblance to cells which have already infiltrated the tissues probably a histological instinct analogous to the clinical instinct comes into play in this connexion In dealing with the question of the prognosis after operation for carcinoma the authors refer to the unsatisfactory character of existing statistics due to lack of precise definition of the stage which the disease has reached at the time of operation The general adoption of some uniform plan of grouping is needed before any reliable deductions can be obtained and that of Jungling is suggested as one which is objective and therefore likely to be accurate and suitable for statistical purposes—namely (1) no fixation of the tumour to surrounding tissues and no disease in the glands (2) fixation of the tumour but the glands free from growth (3) fixation and the glands involved

The volume contains a very fine series of seventeen cases of Paget's disease illustrated by whole microscopical sections of the glands The several theories as to the nature of the disease are discussed but it cannot be said that much additional light is thrown on the problem Case 6 is of particular interest as an early case the gland itself being free from carcinoma and the lesion limited to a small area of the skin of the nipple which shows the usual loosening of the epithelium and the presence of Paget cells The authors consider that these cells are of epidermal origin and are degenerative forms but are not prepared to deny that they may become malignant The fibro-adenomata are for convenience placed by them among the connective tissue tumours and their relation to the several connective tissue strata of the normal gland resulting in the formation of the two types of tumour the intra canalicular and the peri canalicular are clearly demonstrated The transformation of the benign growth into a sarcoma is only occasionally observed but it appears to be less rare than the direct development of a sarcoma without the intermediation of a fibro adenoma

[1] *Tumours of the Breast their Pathology Symptoms Diagnosis and Treatment* By Sir G Lenthal Cheatle K C B C V O F R C S and Max Cutler B Sc M D London E Arnold and Co 1931 (Pp viii + 596 466 figures 50s net)

A TEXTBOOK OF EMBRYOLOGY

The *Manual of Embryology* by Professor J E FRAZER is in several respects a notable production In the first place it is from cover to cover as regards both text and illustrations the work of one author—no mean achievement in these days of specialism It is further distinctly original not merely in that it is independent of any previous textbook but also by reason of the manner in which the subject is treated the author having preferred the topographical to the systematic method of presentation His object is to give the student a mental regional

[2] *A Manual of Embryology* By J E Frazer F R C S University Series London Baillière Tindall and Cox 1931 (Pp viii + 486 252 figures 30 net)

picture of portions of the developing embryo rather than a series of descriptions of developing organs No doubt the embryo should be regarded as a single entity, and the ideal textbook of embryology would, in our opinion present a picture of the developing embryo week by week Professor Frazer in his book, makes some approach towards this ideal Another welcome feature is the association of the account of development with an account of the relevant morphology as, for example, in the chapter dealing with the development of the skull We have always thought that as far as possible ontogeny and phylogeny should proceed *pari passu* and hand in hand Yet another feature is the added interest given to the subject from the effort to explain embryologically various curious anatomical arrangements as, for instance, the course and relations of the hypoglossal nerve

In reviewing a textbook of embryology, the critic naturally turns to those parts of the subject which as a rule present special difficulty to the student such as the formation and separation of the pleural cavity the development of the anterior part of the skull the fate of the rhinencephalon, the separation of the cavities of the heart and the migration of various parts of the alimentary canal We are glad to say that Professor Frazer, both in his text and by his illustrations has paid particular attention to these matters and has given a more complete and at the same time a clearer exposition of them than is to be found in any other textbook with which we are acquainted This is not to imply that Professor Frazer has said the last word on these intricate subjects certain of the views he expresses will no doubt require some revision in the future What we appreciate particularly is that he is not afraid of being at times heterodox that he has everywhere shown the courage of his convictions and that his statements are based upon his own skilled and personal observations The only adverse criticism we have to offer is on a minor matter a more complete legend should be supplied to certain of the diagrams, much time is lost in searching through the text for the identification of structures insufficiently labelled We have no hesitation in recommending this book to our readers as a clear interesting and instructive exposition of a fascinating subject

MENTAL NURSING

MISS ELIZABETH L MACAULAY has written a *Textbook for Mental Nurses*[3] the purpose of which is to convey in the simplest language possible the essential points in the bedside nursing of psychotic patients and to provide the material necessary for the preliminary and final nursing certificates Such a book as this written by a nurse for nurses would seem to supply a definite need because the mental nurse in addition to a knowledge of her special branch is now expected to be versed in the technical methods of general nursing In contrast to the general nurse the mental nurse can only obtain a relatively limited experience of sick nursing during her period of training and she has therefore to gain much of her knowledge of general nursing from practical class demonstrations rather than from daily contact with those who are physically ill Among the subjects dealt with in this volume are hospital etiquette general rules for bed making admission of patient to hospital administration of medicines and hypodermic injections catheterization enemata rules for giving baths sickroom cookery the theatre and surgical technique lotions urine infectious and other diseases, and the last offices We can recommend this practical little book to those for whom it is written

MISS MARY CHADWICK'S book entitled *Nursing Psychological Patients*[4] is written primarily for the general rather than for the mental nurse though no doubt the latter would find it helpful Its object is to provide the nurse with sufficient knowledge to enable her to understand what lies behind the manifest symptoms of psychological disorders so that she may help her patients and find the work less tedious and worrying The book is written on the basis of psychoanalytical teaching and the author (herself a member of the nursing profession) is thoroughly conversant with her subject The considerable incidence of the psychoneuroses as well as the fact that the physically sick patient is peculiarly liable to exhibit symptoms of neurotic origin makes it very desirable that the nursing profession as a whole should acquire understanding and insight into psychological disturbances This book conveys in a simple and readable style the information a nurse should possess when a 'nervous' patient is entrusted to her care

DR NAPIER PEARN who has had much experience in the teaching of mental nurses supplies in *Mental Nursing (Simplified)* a useful guide to the probationer in a mental hospital in preparing for her examinations Many mental nurses—and no doubt general nurses as well—are unaccustomed to examinations, and find great difficulty in acquiring retaining and expressing in speech or writing the knowledge with which they are now expected to be equipped The book is not intended to take the place of the official *Handbook for Mental Nurses* but is rather an attempt to help nurses to study the official volume by treating the same subjects in a shorter and simpler way Two chapters entitled "How to pass examinations" and "What you are likely to be asked" indicate its practical nature

EMERGENCY SURGERY

In the second volume of *Emergency Surgery*[6] MR HAMILTON BAILEY has called in two collaborators MR WATSON WILLIAMS contributes the sections on oto-rhino-laryngology, and MR HUMPHREY NEAME the chapter on the eye This has to a certain extent upset the uniformity of style observed in the first volume which was reviewed in these columns on February 28th 1931

In the present volume the emergency surgery of the thorax spine head neck and extremities is described The first few pages are devoted to the steps that should be taken to combat impending death under anaesthesia they are full of sound information and the principle of an assistant calling out the minutes while remedial measures are being performed is one that might always be applied The section on the thorax describes the usual operations but rather too much space would appear to be taken up with a description of the operation for pulmonary embolus The chapter on the head is well done but not everyone will agree that the dura should be sutured after operation for decompression for subdural haemorrhage, and in abscess of the brain the pathological condition of the cerebro-spinal fluid is given in consider-

[3] *Textbook for Mental Nurses* By Elizabeth L Macaulay O B E R R C London The Scientific Press Faber and Faber Ltd (Pp 466 6s net)

[4] *Nursing Psychological Patients* By Mary Chadwick S R N Foreword by David Forsyth M D D Sc F R C P London G Allen and Unwin Ltd 1931 (Pp 256 10s net)

[5] *Mental Nursing (Simplified)* By O P Napier Pearn M R C S L R C P London Bailliere Tindall and Cox 1931 (Pp viii + 304 22 figures 5s net)

[6] *Emergency Surgery* vol ii By Hamilton Bailey F R C S Bristol J Wright and Sons Ltd London Simpkin Marshall Ltd 1931 (Pp xvii + 415 754 figures 25s net)

able detail whereas the subnormal temperature, that is so often noticed in these cases is not mentioned In the section on the neck much valuable guidance is given for an emergency and although there are some controversial points this chapter is one of the best in the book It is followed by a practical description of operations on the blood vessels in which the author has wisely departed from the usual textbook descriptions Alternative methods of blood transfusion are fully described both in adults and in children although the more dangerous *longitudinal sinus route* might well have been omitted A chapter has been given to compound fractures and acute periosteomyelitis the author rightly considering that there are many excellent books dealing with simple fractures The last chapters are concerned with urgent amputations and with local pyogenic infections of the hand and elsewhere and these are admirably done

The volume is a good one Though less readable than the first it will prove invaluable to those surgeons for whom the work is primarily intended It is fully and clearly illustrated

DIGITALIS AND ITS CONGENERS

The Proceedings of the fourth meeting of the German Society for the Study of the Circulation are very largely devoted to a full consideration of the therapeutic and pharmacological properties of digitalis and its congeners following the apparent custom of the society of keeping the subject-matter at each meeting relatively limited The subject is very fully discussed but while many of the alleged therapeutic effects of digitalis tend to be rather unduly stressed the well established influence on the conducting bundle in cases of auricular fibrillation appears in danger of being obscured by a mass of detail There can be no doubt that the pharmacology of digitalis as yet has a limited application in therapeutics—on the one hand because the doses are on a different scale and on the other hand because especially in this case healthy and unhealthy tissues are not affected in the same way Digitalis is still nearly always used empirically and opinion is not undivided on even such a broad issue as its possible value in cardiac failure with normal rhythm Many of the allied drugs of this group are referred to in some detail

GOUT

A melancholy fact attaches to the French monograph on Gout its Mechanism and Treatment[1] in that the author Dr DANIEL CRITZMAN died before it was completed Dr Jacques Forestier has been responsible for its publication and the result is a very interesting volume The value of the book lies however almost entirely in the past and no opportunity for extensive testing of the author's theories is likely to arise in this generation He has paid special attention to the renal factor in the production of gout which may be summed up in the statement There is no gout without uric acid With uric acid there is no gout without chronic nephritis The clinical aspect of the subject obtains the usual clear description customary in French publications (though the author was a Rumanian) and in treatment all the stress is laid on diet For those interested here are 240 small pages of excellent critical wisdom and a good summary of the whole subject

[1] *La Goutte son Mechanisme et son Traitement* Par Daniel Critzman Édition posthume recueillie et mise au point par Jacques Forestier Collection des Actualités Médicales Pratique Paris G Doin et Cie 1931 (Pp 240 1 portrait 25 fr)

NOTES ON BOOKS

Surgical Pathology of the Genito Urinary Organs[1] forms one of Dr A E HERTZLER'S series of monographs on surgical pathology The fact that the author is a general surgeon as well as a pathologist is undoubtedly an advantage to the average reader The pathological conditions under survey are described from the point of view of the practical surgeon rather from that of the pure pathologist The relation of pathology to prognosis and treatment is well brought out and should be of particular use to those surgeons who have passed to surgery through the anatomy schools rather than through the laboratory and the museum The pathology of the genito urinary organs has been presented from the standpoint of the general surgeon Perhaps this is no disadvantage since it ensures that the reader will not be bothered by unnecessary complications or refinements The work like most other medical books emanating from American publishing houses is lavishly illustrated by means of excellent plates

The *Fundamentals of Dermatology*[2] by Dr A SCHALEK is a small introductory textbook of skin diseases which is neither better nor worse than a good many other similar productions but the fact that it has attained a second edition seems as the author says to justify it Perhaps the most original feature is a collection of dermatological aphorisms all of which are sound and may be usefully borne in mind by those whose skin patients form only a small fraction of their clinical material One or two of these aphorisms deserve attention even from the specialist The illustrations are numerous and on the whole satisfactory none are coloured One notable omission is the absence of any mention of varicose ulceration Does not this condition occur in the author's home town Omaha Nebraska?

The temptation to preserve in print personal views on the feeding of infants faces every paediatrician and Professor G B FLEMING has now yielded to it very charmingly and simply in *Notes on Infant Feeding*[3] After stating in the preface the usual claim for the easiness of the methods advocated he takes us without difficulty through the paths of breast- and bottle feeding and only becomes hard to follow when the under nourished and ill baby has to be brought into the scheme As this is where most methods depending upon some arithmetical rule break down it is a matter for congratulation that Professor Fleming gets us past this point with a minimum of mental discomfort There are fewer than fifty pages in this little book and the views advocated are strikingly free from the prejudice often met with in this branch of medicine Students and doctors will all find it useful but they should not believe the statement on page 29 that a teaspoonful of orange twice a week is sufficient to prevent scurvy where boiled milk is being used—not at any rate outside Glasgow

The third volume of the forty first series of *International Clinics*[4] which forms the Festschrift to Dr Lewellys F Barker in honour of his sixty fourth birthday contains eulogies of Dr Barker by Dr W S Thayer and Dr Fielding Garrison of Baltimore followed by a description of a case by Dr Barker and clinical papers by various writers on diseases of the heart and blood diseases of the lung diseases of the brain and diseases caused by bacteria The following articles call for special attention The relation of acute rheumatic fever to cardiac

[1] *Surgical Pathology of the Genito-Urinary Organs* By Arthur E Hertzler MD Hertzler's Monographs on Surgical Pathology London J B Lippincott Company 1931 (Pp xvii + 256 222 figures 21s net)

[2] *Fundamentals of Dermatology* By Alfred Schalek MD Second edition thoroughly revised Philadelphia Lea and Febiger 1931 (Pp xi + 247 88 figures 3 dollars net)

[3] *Notes on Infant Feeding* By G B Fleming MD FRFPS Glasgow J Smith and Son (Glasgow) Ltd 1931 (Pp 44 1 figure 2s 6d)

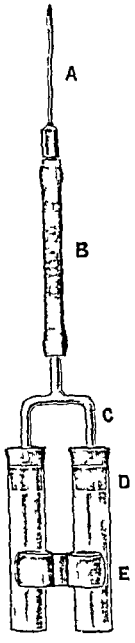
[4] *International Clinics* Edited by Henry W Cattell MD Philadelphia Vol iii Forty first series London J B Lippincott Company 1931 (Pp viii + 26 illustrated 12s 6d net)

disease by Harlow Brooks of New York, 'Bundle branch block a clinical study of fifty nine cases by John T King of Baltimore, The relapsing type of agranulocytosis by George Blumer of New Haven Conn Chronic non tuberculous disease of the lungs," by F N Pottenger of Monrovia Cal 'A haemolytic jaundice family by Dr T Parkes Weber of London, The diagnosis of chronic pancreatic disease by Joseph H Pratt of Boston Dupuytren s contracture and the unconscious manic depressive psychosis in childhood by Albert M Barrett of Ann Arbor 'Rat bite fever in the United States by Stanhope Bayne Jones of Rochester N Y The general problem of respiratory disease as illustrated by comparative data' by Theobald Smith of Princetown, N J An epidemiologic study of spontaneous and induced streptococcus disease in guinea-pigs by the same author and The malarial therapy of paresis by William A White of Washington, D C

PREPARATIONS AND APPLIANCES

BLOOD COLLECTING APPLIANCE

Dr CLEMENT LOVELL (Bethlem Royal Hospital) writes The accompanying illustration shows an improved arrangement for collecting blood samples which we have found most convenient in use



Most complete pathological investigations require a sample of citrated blood as well as the usual non citrated specimen By this method it is possible to obtain both samples from one puncture and also to avoid the inconvenience of changing the tubes while the needle remains in the vein

A is the ordinary collecting needle
B is a short length of corrugated rubber tubing
C is a two way tube of tough glass
D comprises two blood tubes one being citrated
E is a spring clamp to hold the tubes

The needle having been inserted with the usual precautions and held firmly the stream of blood can be directed into either tube at will by rotating C D E

The corrugations of the tube B prevent kinking during torsion At the conclusion E is slipped off the tubes are removed from C and solid rubber stoppers inserted The apparatus was made up for me by the Holborn Surgical Instrument Company

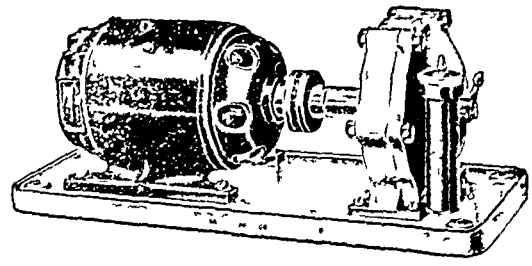
ELECTRIC SUCTION OR PRESSURE PUMP

Drs A J SCOTT PINCHIN and H V MORLOCK (London) write

The use of the bronchoscope for investigation of the lower respiratory tract and for the treatment of any pathological state found particularly suppurative conditions requires as its first essential a satisfactory suction apparatus Extended inquiries and trials in this and other countries failed to reveal a suitable pump which was at the same time reasonable in size and effective in action The objection to most suction pumps [illegible] nurse uum may be attained the instrument that although a vacuum is brought of sick pressure falls to *nil* destroy the vacuum on has therefore seemed impossible present effective suction on nursing from disease must inevitably from daily contact Company removal of tumour cells must the subject completely new *in situ* in view of the possibility the general effective in might receive a stimulating growth of a simple no doubt that tumour cells sometimes grew negative their neighbours had been destroyed ston

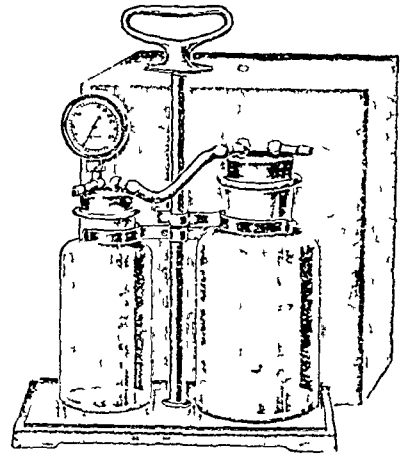
Mr DUNCAN FITZWILLIAMS declared that the better results which had been obtained in cancer during the last forty years were due solely to early diagnosis and not in the least to the increased range of the operation During the last thirty or forty years there had been an

moved outwards and pressure when moved towards the centre The reciprocal movement of the piston is caused by rotating the cylinder block and the four pistons within an eccentric track The outward movement of the pistons is by centrifugal force the inward movement by virtue of the eccentric position occupied by the track in relation to the cylinder block The amount of eccentricity determines the stroke of the piston The cylinder block rotates on a spindle provided with two ports inlet and outlet which communicate with the exterior of the pump At the base of each cylinder is a duct communicating with the ports in the spindle each



time the block is turned through an angle of 180 degrees All rotating parts are enclosed in a light airtight aluminium case which is filled with a certain quantity of oil The pistons cylinders and driving spindles are thereby constantly lubricated The pump is directly coupled to a small electric motor

Although chiefly designed for suction positive pressure can be obtained up to 20 lb per square inch The positive pressure port communicates with the outside through an oil trap Owing to the constant splash lubrication of the pistons it is unavoidable that a thin oil film passes gradually through the positive pressure ports and is ejected in the form of an atomized spray This spray is caught in an oil trap in which an antiseptic filter may be interposed so that only purified air free from all contamination is injected The suction bottle used in conjunction with the pump is mounted on a suitable stand with aluminium base and carrying handle It is usually of 40 ounce capacity although a smaller one will be found sufficient for bronchoscopic aspiration To



prevent the bronchial secretions from reaching the pump in case of overflow a second bottle fitted with a vacuum gauge and regulating valve is interposed The maximum negative pressure desired can be predetermined by means of the valve and may be anything from 5 to 26 inches of mercury For bronchial aspiration high vacuums are necessary owing to the constricted lumen of the aspirating tubes The diameter of these is so small that when aspirating air a negative pressure of 5 inches is registered on the gauge which rapidly rises to 20 inches or more when pus or blood clot is encountered The dimensions of the instrument in its case are [illegible] 8 × 8 inches the total weight being 33 lb

Harvey [illegible]mp is known as the Victoria Park Rotary Cylinder [illegible] be obtained from the Genito Urinary Company treasurer and [illegible] at W 1 honorary secretaries

British Medical Journal

SATURDAY, JANUARY 23rd, 1932

JUVENILE RHEUMATISM

In a recent paper[1] Dr J D Rolleston has done justice to a famous French physician Bouillaud and has in particular recalled to us his claim to recognition as a pioneer in the investigation of cardio-vascular disease In 1835 Bouillaud published a *Traité des Maladies du Cœur* in which he described the endocardium confuting sceptics who declared that there was no such structure following this a year later with a monograph on 'Nouvelles recherches sur le rhumatisme articulaire aigu In the latter he enunciated his 'law of coincidence' saying that in the great majority of cases of acute generalized febrile articular rheumatism there exists a variable degree of rheumatism of the fibrous tissue of the heart' Though almost a hundred years have passed since this bold statement was made it still holds good, especially if the fibrous tissues of the heart' be held to include that within the muscle as well as that which clothes it In an age which is almost as intent on celebrating centenaries as it is on establishing records we might truly do worse than join our French colleagues in some commemoration of this great clinician in 1936 Since his day both in this country and elsewhere much has been built up from the foundations that he helped to lay Britain may perhaps claim an honourable share in this First in London especially at Great Ormond Street (witness the illustrious names of Sturges Barlow Cheadle Lees Garrod and Poynton) and later in many provincial cities—Belfast, Birmingham Bristol, Glasgow and now also in Cardiff—work has been done by which our knowledge of this disease has been progressively enriched

One of the principal difficulties has been that of nomenclature The short article which Dr C J McSweeney[2] deputy medical officer of health for Cardiff has recently contributed to the *Archives of Disease in Childhood* employs the phrase juvenile rheumatism proposed by Dr Reginald Miller and emphasizes the outstanding etiological fact that this disease begins in childhood Dr McSweeney's experiences collected from four years of work in a clinic for rheumatic children afford a number of valuable data These are generally in harmony with work done in other cities in this country and elsewhere For example he finds little to support the belief in contagion If juvenile rheumatism is catching it is almost imperceptibly so On the other hand there is some evidence of the same kind as that brought forward in this country by Sheldon Collis Schlesinger, Bradley and others, and in New York by Coburn in support of the view that in a rheumatic child streptococcal tonsillitis whether epidemic or sporadic may re-awaken lesions lying dormant in the cardiac tissues He also notes the connexion between scarlet fever and juvenile rheumatism, generally admitted nowadays, but finds that his post-scarlatinal patients develop a less severe carditis than the average rheumatic child Apart from this information which bears directly on the nature of the provocative agent Dr McSweeney has collected many facts and figures which serve to elucidate the complex etiology of the disease For example he finds that in 44 7 per cent of 279 separate family histories investigated the parents of juvenile rheumatics had themselves suffered from some form of acute rheumatism In addition many patients had rheumatic brothers and sisters This corresponds closely with the experience recorded more than thirty years ago by Cheadle, who, in 180 cases of juvenile rheumatism seen in private practice found evidence of a familial factor in 103 other series yielding similar results

Among environmental agencies the seasonal incidence—high in the winter—corresponds with that prevailing throughout Northern Europe The social status shows an interesting correspondence with that recorded in Bath by Coates and Thomas since both sets of figures support the view that it is those whose parents have a struggle to make ends meet while not suffering from the effects of privation, who are particularly affected The general incidence of the disease in Cardiff is not very dissimilar from that recently presented by Savage in his interim report of the West of England research in respect of the neighbouring city of Bristol[3] In Cardiff there are 5 82 per 1 000 of the elementary school children affected while in Bristol the corresponding figure is 7 72 So far as it goes the damp-house theory finds little support though the facts are admittedly difficult of access Inquiries as to diathesis the influence of dental caries and the effect of tonsillectomy in checking the disease, also met with no success

It might seem therefore that from the strictly preventive point of view the Cardiff experiment has been sterile Dr McSweeney does not claim that it has been fruitful in this direction but he is clearly impressed by the value of the work done in drawing attention to the disease especially in its early phases so that treatment may begin betimes Perhaps the most valuable part of his paper is that which refers to hospital treatment It is found that Cardiff needs about one bed for every 1 000 of its elementary school population This is rendered necessary by the fact that the children have to be kept in bed over long periods rigid rest being enjoined in early stages It is clear from the details given that by these means applied to cases selected on the ground that the cardiac lesions are early a percentage of recovery is secured which would be unattainable otherwise and it is to these measures together with the regular medical supervision of rheumatic children that Dr McSweeney looks, in the hope that they may prevent or at all events substantially reduce the incidence of that 'rheumatism of the heart' of which Bouillaud wrote nearly a hundred years ago

[1] *Proc Roy Soc Med* (Section of History of Medicine) 1931 xxiv 1253

[2] *Arch Dis Child* 1931 vi

[3] *British Medical Journal Supplement* July 8th 1931

THE LONDON COUNTY HOSPITALS

The first report of the medical officer of health for the County of London on the work of the hospitals and institutions transferred to the Council of that county and placed under the direction of the Central Public Health Committee as from April 1st, 1930, is an important document We give a synopsis, with some comments, at page 160 of this issue Its importance lies, not so much in the mere volume of facts it contains, though that is impressive enough, as in the indications and suggestions it gives of developments and policies which may be carried into effect in the immediate or more distant future Such developments and policies will have a pronounced effect upon the future of hospital provision and service, not merely in London, but throughout the country, and that is why the medical profession should give the report careful and critical attention It will be read, on the whole, with some amazement and with considerable satisfaction The amazement will be caused by the very large figures—the number of institutions, of beds they provide and of staff by whom they are run, which were transferred to the County Council from the various boards of guardians and the Metropolitan Asylums Board—and also by the administrative achievement of effecting the smooth transfer of so huge a machinery and personnel, and of providing an efficient organization for its conduct and growth as a unified service from the appointed day Sir Frederick Kay Menzies the medical officer of health, is to be congratulated

Satisfaction may be expressed at what appears to be the general attitude of the Medical Officer's Department towards problems of great complexity and difficulty and at the very full consideration which has been given, and is now being given, to many different opinions, arrived at from diverse points of view, before decisive action is taken or policy finally settled The medical officer of health is evidently holding himself open to consult anyone who can help him, and has received advice from a number of committees which he appointed to consider specific aspects of the matters to be determined An even wider consultation than this would however be desirable The position of the whole medical profession may be in some degree affected by the action taken by the L C C in connexion with its hospitals and general medical services, and private practitioners both specialist and general are vitally interested in such action and are greatly concerned that their services should be utilized as far as possible, and their co operation in public health matters secured by the local authority and its officers There would be advantage therefore in the medical officer of health keeping in close touch with general medical opinion through its representative organizations and not feeling that enough has been done when the help of his own professional colleagues has been secured wide as the administrative and clinical experience of those officers may be

Among the matters dealt with in the report three at least are the subject of much thought and considerable anxiety at the present time These are the method of staffing of the County hospitals, the relation of out patient departments thereto, and the position and duties of district medical officers On each of these three questions the British Medical Association has a declared policy or definite opinion, which has been arrived at after prolonged consideration There is nothing in the report to indicate that action will be taken by the London County Council, its Central Public Health Committee, or its medical officer of health, which is distinctly opposed to such policy or opinion The medical staffing of the County hospitals is not at present to be confined to any one method, because this matter is regarded as being in an experimental stage but there are indications that the appointment of visiting consultants with some responsibility for beds is not being encouraged or welcomed to the extent that appears desirable The suggested policy with regard to out patients agrees entirely, or almost entirely with that set forth by the Association The position of district medical officers is still under examination and it is uncertain what action the Council may take with regard to this service It is necessary to watch developments in this direction very carefully, for there are, in the London area, a few such officers who were employed by boards of guardians on a whole-time basis, and who continue to be so employed In the opinion both of the British Medical Association and of the Society of Medical Officers of Health, this method of providing domiciliary attendance is most undesirable in the public interest and should be strongly opposed It is much to be hoped that the policy of the London County Council will be developed in these matters on lines which the general body of the medical profession can approve

One further point may be touched on here It seems rather odd that no mention is made in this report of any meeting of the statutory committee set up under Section 13 of the Local Government Act, 1929, representative both of the governing bodies and of the medical and surgical staffs of the voluntary hospitals serving the County which the County Council is bound to consult with reference to the provision and use of hospital accommodation Such a committee has been set up and it would have been interesting to hear whether consultation with it had taken place and with what results

METEOROLOGY AND HEALTH

Boswell tells us of Johnson that he had until very near his death a contempt for the notion that weather affects the human frame 'I never felt any difference upon myself' he said, "from one kind of weather rather than another' Johnson would be gratified to have discovered how far his opinion was substantiated by modern meteorology, as expressed by Dr G C Simpson director of the Meteorological Office, in his address to the Section of Physical Medicine of the Royal Society of Medicine on January 15th Dr Simpson at least seemed to hold the view that very many of the effects ascribed to the weather are psychological rather than physical The weather is a subject peculiarly

liable to the fallacy whereby, if the origin of a particular effect is not obvious something unknown or mysterious is invoked as the cause Changes of barometric pressure, said Dr Simpson are ordinarily so slow as to have no effect on health A man rapidly going up a mountain or down a mine is affected by change of pressure but that is not a weather change Temperature, of course, has an effect on human well-being, and yet the body can stand large variations of temperature without ill effect if the air is calm Dr Simpson described how in the Antarctic he had got up and gone out at night in some improvised covering to watch an aurora, and although the temperature was 50° below zero he felt no undue cold thanks to the absence of wind Of the three factors—temperature, humidity, and wind—concerned with changes of body heat wind is of the greatest importance It is wind, in Dr Simpson's view, which determines whether a climate is bracing or relaxing The health resorts on the south coast have much the same mean temperature in exposed places but they vary in the amount of protection they afford from the wind , the exposed resorts are bracing while those sheltered by cliffs, so that the wind does not blow right across where the visitors promenade, are relaxing The idea that sea air is rich in ozone dies hard Dr Simpson declared that the ozone contained in the air of towns especially industrial towns, is probably higher than that in the air of the sea coast As for fog it was difficult to see why a clean fog should be accounted unhealthy The air was no different after a fog was formed and there was no more water in a cubic metre of the same air Dirty fogs of course were a different matter The meteorological conditions which made the fog were the same as those which caused the atmospheric pollution to remain stationary the smoke as it left the chimneys cooling down to the temperature of the air and failing to rise With regard to radiation Dr Simpson discussed its effects under three heads thermal, chemical and psychological All radiation he said had the characteristic in common that when absorbed it was heat producing So far as heating was concerned the long-wave radiation from the ground and the atmosphere was as important as the short-wave direct solar radiation Unlike solar radiation, the terrestrial radiation was absorbed independently of colour Snow and tar at the same temperature, emitted exactly the same amount of long-wave radiation In the Tropics it did not matter from the point of view of coolness what was the colour of one's evening dress—white drill or black cloth—though the colour mattered a good deal under the sun Sunstroke was more liable to occur in the Tropics than in the temperate zone with the solar radiation the same in both regions because in the Tropics—in India especially—the air temperature and humidity were so high and there was often an absence of wind all of which tended to keep up the body temperature There was also the radiation from the ground which had almost as great an intensity as the solar radiation All this led to a derangement of the mechanism for keeping the body cool The chemical action of radiation varied with wave length the shorter wave lengths having the larger action Dr Simpson felt that radiation must be treated as a drug analysed, and prescribed in doses Owing to the layer of ozone in the upper atmosphere there was very little ultra-violet in solar radiation, and Nature seemed to have found it necessary moreover to protect the animal surface by pigmentation from such active chemical rays as got through What he could not understand was why it was considered good to get all the ultra-violet radiation possible out of sunshine, when Nature herself declared unmistakably that it was not good for us Dr Simpson ended with a few words on atmospheric electricity a subject around which many misconceptions had gathered Atmospheric electricity he said, could have no direct physical effect on health but thunderstorms generally occurred when the atmosphere was still warm, and damp, which conditions were in themselves often unpleasant

NEW YORK MORTALITY FIGURES

Dr Shirley Wynne, Commissioner of Health for New York City, in his report for the year 1931 states that despite a number of unfavourable factors such as a marked increase in the prevalence of measles and an extensive outbreak of influenza and poliomyelitis the health of the city as a whole was remarkably good the death rate being only slightly above the figure for 1930—namely 10 92 as against 10 86 The infant mortality rate—56 deaths per 1 000 live births—was the lowest in the history of the city The outbreak of poliomyelitis, which affected a considerable part of the Eastern United States, resulted in 4 087 cases in New York City of which 490 ended fatally Deaths from diphtheria numbered only 185 the lowest ever reported During the ten years before the toxin-antitoxin campaign began in 1929 the average number of diphtheria deaths was over 750 a year Not only has there been a large saving of life but there has been a marked reduction in the number of persons ill with diphtheria During the decade 1919–28 the average number of cases was over 11 000 a year in 1931 only 4 008 cases occurred How well the city has benefited by the campaign against diphtheria is well shown by the following calculation based on the report of the contagious disease hospitals Diphtheria patients treated in 1927 numbered 3 248 in 1931 they were 1 474 The total number of patient days in 1927 was 51 111 in 1931 it was 21 110 The striking fall in the number of diphtheria cases and deaths is attributed to the intensive educational campaign carried on to promote the immunization of children with toxin-antitoxin The propaganda work of the Diphtheria Prevention Commission having been so successful this is now to be carried on as a routine activity of the Department of Health Despite the prolonged economic depression the death rate from pulmonary tuberculosis during 1931 was only 61 64 per 100 000, the lowest ever recorded the total number of deaths was 4 373 as against 4 457 in 1930 In New York City during the past ten or fifteen years all the even-numbered years have been marked by a high prevalence of measles Thus 1930 was a measles year over 23 000 cases having been reported as against 2,500 in 1929 Contrary to all expectations 1931 also showed a high prevalence 26 516 cases being reported, with 134 deaths The actual number of deaths due to measles is however three times greater than the figures indicate because for every death reported as resulting from measles two deaths are reported as due to bronchopneumonia following measles A sharp outbreak of

influenza prevailed at the beginning of 1931, more than 5 500 cases being reported during the five weeks embraced in the outbreak During the same period 528 deaths were notified as due to influenza, but many deaths in which influenza played a part were registered under pneumonia and other causes Altogether the outbreak resulted in about 2 000 deaths above the normal expectation for that period The total number of deaths reported as due to influenza in 1931 was 954, as against 483 in 1930 The outbreak of poliomyelitis, which began in the borough of Brooklyn early in July, and gradually spread to all parts of the city, attracted wide attention In compliance with regulations promulgated by the Board of Health, almost all the patients were treated in hospitals During the course of the outbreak, as previously mentioned, 4,087 cases were reported, with 490 deaths In the 1916 epidemic of poliomyelitis there were 9 023 cases, with 2,448 deaths Deaths due to motor car accidents numbered 1,302

'Despite the great amount of careful attention given to the control of street traffic by the police department despite excellent and well administered traffic regulations, despite effective co operation by the courts in the punishment of those who violate the regulations the number of thoughtless and reckless individuals is still so large that deaths from automobile accidents in this city are more numerous than deaths from typhoid fever measles scarlet fever diphtheria whooping cough cerebro spinal meningitis and deaths of mothers in childbirth, all combined

Throughout the United States the death rate from diabetes is increasing In New York City the number of deaths in 1931 was 1,921, compared with 1,784 in 1930 Deaths from cancer in 1931 numbered 8 333, an increase of 208 over the figures for 1930 This represents a rate of 117 5 per 100 000 of population, the highest ever recorded in the city

PROPHYLAXIS AGAINST TYPHUS FEVER

An outstanding feature of the last annual report of the Institute for Medical Research at Kuala Lumpur[1] is the account of an investigation into typhus fever conducted by Dr L Anigstein The conclusions he has reached are summarized by Dr A Neve Kingsbury, director of the Institute, and would appear to be of much practical importance since they have already resulted in the preparation of a prophylactic vaccine from formolized cultures of the micro organisms Dr Anigstein has shown that the urban 'type of tropical typhus corresponds serologically with European typhus, in which agglutination of the "O" strain of *B proteus* X 19 is almost a specific reaction During his work the transformation of the 'K' type of tropical typhus into the 'W" type seemed to have occurred in the course of a series of experimental transmissions This observation suggests that serological variation of the virus similar to that produced experimentally may take place in nature as the result of passage through some animal other than the one primarily infected Evidence was obtained of the antigenic specificity of some of the cultures in one group the titre rose to 1 in 250 although the organisms had no *proteus* characteristics Confirmatory evidence was obtained from the feeding of body lice obtained from Europe The pathogenic properties of virus cultures differed widely the minute coccal form which is regarded as a Rickettsia type proved to be the most virulent The rat is the most important reservoir of typhus in Malaya, and the vector is almost certainly a mite, but preventive anti-rat campaigns cannot be organized in the plantations on a scale large enough to be of any real value Attention has therefore been directed to the individual prophylactic immunization of persons working in areas where the disease is endemic Cultures were selected from experimentally infected rats, which had given a strongly positive Weil-Felix reaction, and their antigenic power in human subjects was decisively demonstrated A vaccine containing three strains was then prepared, two of these being serologically related to *B proteus* X 19 The vaccine was injected into 370 labourers with most encouraging results as regards prophylaxis, although it is admitted that the numbers are at present too small for any definite conclusions to be drawn It is nevertheless clear that the work of Dr Anigstein has gone far to elucidate some aspects of the very complicated problem of the cause and spread of tropical typhus, and his lines of research appear to have therapeutic possibilities

[1] Federated Malay States Government Printing Office Kuala Lumpur 1931

A PRIMER OF FRACTURE PRACTICE

A year ago we published a notice of the illustrated primer on fractures issued by the Co-operative Committee on Fractures of the American Medical Association, the second revised and re-edited edition of which has now reached us[1] An accompanying letter tells us that the demand for this primer exceeded expectations to such an extent that the first printing of the second edition was all taken up in six weeks For the benefit of those readers who may not have seen our original notice, it may be as well to recapitulate the objects which the committee set before it in publishing the primer Chief of these was the satisfaction of a widespread demand for some permanent guide to and record of the demonstrations of approved methods of fracture treatment given at successive meetings of the American Medical Association These objects have been achieved by the publication in the primer of a number of plates, each one of which illustrates, by simple line drawings the treatment of one particular type of injury Around the patient and his attendants the walls of the supposititious operating theatre are hung with placards which express in terms succinct and clear the most important maxims in each case The first plate, however, is entirely concerned with how to make and store plaster-of-Paris bandages and depicts or rather delineates an attractive nurse seated at a table and busy rolling bandages with the minimum of apparatus The appropriate injunctions are

Roll your own plaster of-Paris bandages
Store your plaster of Paris bandages in tin boxes Keep in dry place
The best gauze for making plaster bandages is 32 mesh crinoline gauze
Use slow setting plaster of Paris Dental plaster
Wrap plaster of Paris bandages in paper napkins
Fill meshes of crinoline with plaster Roll smoothly
Tear crinoline into proper strips Pull out loose threads from edges

But why does the storage tin bear the misleading legend 'Bread"? We reproduce the legends of this first plate in full in order to impress the spirit of the

[1] *Illustrated Primer on Fractures* Prepared by the Co operative Committee on Fractures Chicago American Medical Association (1 dollar)

primer on the reader More than half the illustrations appearing in the first edition have been modified or redrawn for this one, and the legends have been re-edited, and in a few instances redrafted Four new topics have been included in this edition, to some of which we called attention in our notice of the first These topics are compression fracture of the spine, fracture of the skull, active movements in the treatment of fractures and massage during treatment of fractures In regard to the last mentioned we venture to think that a rather more explicit warning of the objections to massage near certain fractures in childhood would have been useful But we have, in general nothing but praise for the primer As we remarked a year ago such an aid to first-aid and emergency treatment would probably be welcomed and would certainly be useful in this country as a very valuable practical guide for the practitioner and those in charge of cottage hospitals We cannot pretend to be satisfied with the average results of treatment of fractures in the country generally when we have it on the authority of Sir Robert Jones that 'the treatment of fractures in this country leaves much to be desired and a crusade of practical instruction would be of great service'

TYPHOID FEVER IN OHIO RIVER CITIES

Dr M V Veldee[1] of the United States Public Health Service has recently made an interesting epidemiological study of typhoid fever in the six Ohio River cities of East Liverpool, Steubenville Ironton, Portsmouth, Wheeling and Ashland The history of the public water supply of each of these cities is essentially the same For years the consumer was supplied with water drawn from the river and delivered direct to him without any form of artificial purification Of recent years however sanitary improvements have been gradually introduced so that at the time that Veldee's report was published the water supplies of all six cities were treated by coagulation-sedimentation-filtration and disinfection with chlorine Prior to this installation the incidence of typhoid fever in each city was uniformly very high in every month of the year, but after the installation it fell to a low rate comparable to those in other cities on the Ohio River watershed possessing safe water supplies and the seasonal distribution changed so as to give rise to a definitely summer and autumn disease A study of the cases of typhoid fever which had occurred in these six cities in 1927 and 1928 has failed to produce any evidence that the public water supply is in any way a vehicle for the transmission of the disease

CORPORAL PUNISHMENT

The Howard League for Penal Reform has recently published a pamphlet entitled 'Corporal Punishment an Indictment' which is worthy of the careful attention of medical practitioners and of sociologists It contains an article on Flogging the law and practice in England by Mr George Benson, late Member of Parliament for Chesterfield one on The psychopathology of flogging, by Dr Edward Glover and some illuminating tables setting out the law and practice of the Dominions and other countries in respect of flogging, compiled by Miss Cecily M Craven The pamphlet is not concerned with what may be called domestic or scholastic corporal punishment, though some of the considerations adduced have a direct bearing upon this It deals with flogging as a punishment for crime or for offences against prison discipline It is shown that this has fallen into disuse in Ireland and Scotland and is abolished in most European countries, but that it survives in Australia, India and Canada, and, above all, in England, where, in fact, the yearly average of floggings has actually increased during the last decade It is claimed that a punishment is only justified (*a*) if it is a deterrent to crime, and (*b*) if no milder form of penalty is equally effective as a deterrent, and that flogging does not satisfy these conditions but is merely a savage survival from an outworn code This thesis is logically and successfully maintained The brutal nature of the punishment in spite of accompanying medical precautions, is described and it is shown that brutality often breeds brutality In general flogging proves to be no deterrent, even when applied to cases of breach of prison discipline The psychological reasons for this failure and for the survival of flogging as a punishment, and for its effects on those who inflict undergo or witness it, or even on those who merely tolerate it, are examined in the article by Dr Edward Glover which he well describes as "a study in the motivation of penal methods This article which is of much interest is written from the point of view of a Freudian psycho-analyst and some of its contentions will not be universally accepted It applies to questions of penal law and custom of a wider scope than corporal punishment, and appears perhaps sometimes to prove too much But even if the symbolic significance of beating instruments in relation to primitive sexual instincts be not granted Dr Glover will be held by most of those who carefully consider his argument to have established that flogging is 'an antiquated and conservative form of treatment which blocks the way to understanding the pathology of crime' and that 'punishment by flogging repeats the crime"

PROPAGANDA FOR PREVENTION OF BLINDNESS

There has been issued under the auspices of the International Association for the Prevention of Blindness which has its headquarters in Paris a journal entitled *L Amateur des Temps Nouveaux*[1] under the editorship of M Louis Forest In this booklet of twenty-four pages we find a number of terse statements on the value of eyesight the manner in which the eyes work, the stresses that various types of work involve and the risks to sight from careless dirty, and wilful habits which are often directly accountable for blindness caused by accidents and contagious diseases Each page deals with one subject and each subject is illustrated by one or more sketches in bold line drawing Even the type has been made to serve a demonstrative purpose, for it is so disposed that the gist of the page stands out sharply before the reader's eye This journal is a most effective piece of propaganda perhaps the best of its kind we have seen, and it might well be reproduced in its original form for this country and for the Dominions

[1] Washington U S Treasury Department Reprint No 1486 from the Public Health Reports

[2] Howard League Parliament Mansions Victoria Street S W (6d)

[1] *L Amateur des Temps Nouveaux* Louis Forest fondateur 1931 37 Rue de Liege Paris

SIR CHARLES HASTINGS MEMORIAL FUND

This Fund has been instituted with the object of providing a memorial to the founder of the Association which will take the form of a plaque on the house in Worcester where he lived and practised and a window in Worcester Cathedral The amount required is not less than £600 and up to the present only £159 15s 6d has been received Contributions of an amount not exceeding £1 1s will be gratefully acknowledged by the Financial Secretary and Business Manager B M A House, Tavistock Square W C 1 and it is believed that many members will wish to support a project which must appeal to the sentiment of every member who is proud of the history of the Association

The following have subscribed since the last list was published in the *Journal* of November 21st 1931

Dr P V Anderson
Dr M A Archdale
Bournemouth Division
Dr R Cochrane Buist
Dr C W Charsley
Dr M Connon
Dudley Division
Dr A Forbes
Mr A Fowler
Dr C Frier
Dr J P V Gabb
Hartlepools Division
Dr P Hickey
Dr P Howie
Dr T D Laird
Dr D P Levack
Dr J C Loughridge
Mr N Maclaren
Newcastle upon Tyne Local Medical and Panel Committee
Northants Division
Dr W G Parker
Dr J H Saunders
Dr F K Smith
Dr W C Souter
Dr J A Stephen
Dr A Stevenson
Dr W Thompson
Mrs E Tytler
Dr V M M Watson

LONDON COUNTY COUNCIL HOSPITALS

HISTORY OF THE TRANSFER

The fourth volume of the Annual Report of the London County Council for the year 1930[1] is concerned with the hospitals and general medical services under the control of the Public Health Committee of that Council It is written or compiled by Sir Frederick Kay Menzies the county medical officer of health and there is scarcely one of its two hundred pages which does not contain something of interest to the medical profession in London and elsewhere It is the record of the first part of a transition stage in hospital control and administration and if as such it must here and there appear a little confused it is none the less of great importance For though the conditions in London differ in various ways from those obtaining outside the metropolis experiments tried and arrangements (however provisional and temporary) made therein may influence very widely and permanently the future of hospital usage and administration

The magnitude of the work and services transferred to the London County Council on April 1st 1930 the day on which the Local Government Act 1929 came fully into operation is difficult to realize No fewer than 70 hospitals and institutions containing over 42 000 beds and a staff of nearly 20 000 then came under the control of the Public Health Department of the Council During the previous six months the head office of that department had been preparing for the transfer and development of the new work The staff had been strengthened by the appointment of three principal medical officers and of a matron in chief and a number of departmental committees advisory to the medical officer of health but without executive powers had been set up The report expresses legitimate pride in the fact that the transfer was effected with absolute smoothness and probably without any of the inmates of the institutions being aware of it

The constitution of and reference to, each of the departmental committees are set out and their conclusions and recommendations given They had to advise upon (1) hospital standards (that is the general standards to be adopted for the structure equipment and maintenance including staffing of the public hospitals and the hygienic standards for institutions homes and Poor Law schools) (2) tuberculosis (3) pathological laboratories (4) forms and records, (5) ambulance service (6) medical supplies (the supply and distribution of drugs dressings and medical requisites to hospitals and the standards to which contractors must conform), (7) the staffing of transferred institutions (both medical staff and stewards and clerical staff) and (8) district medical work The report of the last named committee was only presented in May 1931 and does not therefore come within the scope of this volume but it is clear that the recommendations and suggestions of the other committees which are summarized in the report must be—as in fact they are—of great interest even though they may not all have been actually adopted or carried out

LABORATORY SERVICES

In the section dealing with pathological laboratories we find it stated that the committee kept in view the ultimate aim of providing in every hospital for acute cases a fully equipped and fully staffed laboratory It was realized however that such an objective could only be attained by a gradual process of development and the committee concentrated attention upon the best means which could be devised to supply the nucleus of a service which would be capable of expansion For this purpose it was suggested that every general hospital should be provided with a laboratory in which routine pathological examinations could be carried out and that for the more specialized work group laboratories should be established at five convenient centres to serve the hospitals in their respective areas

With regard to staff it was suggested that to each of the group laboratories there should be attached a whole time pathologist of experience and subsequently assistant pathologists as required In order to assist the pathologist of each group laboratory it was considered that it would be necessary to appoint some four technicians of varying grades as well as the necessary clerical help and cleaning staff In hospital laboratories for the present it was thought that the services of a single technician working under the direct control of the medical superintendent and of a visiting pathologist from the group laboratory would be sufficient Stress was laid upon the importance of close co operation between the pathologists and the clinicians and of frequent consultations between the pathologists themselves and with pathologists of teaching and research centres

Among the recommendations the following may well be noticed

That as soon as possible the system of employing part time pathologists be dispensed with in favour of a whole time service

That arrangements be made under which the medical officer of health may have on his staff a pathologist whom he can consult on matters of laboratory technique and on all pathological questions on which he may desire an opinion

That the work now done by Poor Law hospital laboratories on behalf of metropolitan boroughs and smaller voluntary hospitals be continued subject to the concurrence of the boroughs and hospitals concerned and that a scale of charges be fixed in due course

That steps be taken as opportunity is afforded for co operating with the pathologists of the voluntary hospitals teaching schools and research institutes

[1] London County Council Public Health—General and Special Hospital London P S King and Son Ltd or through any bookseller No 2575 (2s 6d)

METHODS OF STAFFING HOSPITALS

Probably the two departmental committee reports which are of most general interest to the medical profession are those on ambulance service and on the medical staffing of the Council hospitals. The former is too detailed to summarize but it makes suggestions for the reorganization as a completely unified service of all the available resources which are held to be sufficient for the required purposes. The latter after setting out various methods of staffing which had been under consideration proceeds:

There was a consensus of opinion that the services of consultant staff should be freely available for the patients in the Council's hospitals and the committee considered it unwise to lay down a definite policy in regard to the best method of employment of such staff as the Council had not had sufficient experience to enable it to decide which system was the best. The committee recommended that for the present at any rate the arrangements should not be stereotyped but should be left elastic so as to allow of a trial being made of the different methods according to the varying conditions in the different hospitals. It is desirable that every general hospital should have on its permanent staff in addition to the medical superintendent medical officers (one or more according to its size) with special qualifications either in medicine or surgery and if much maternity work is done one with obstetrical experience. It was recommended that they should be graded as senior assistant medical officers and at the larger hospitals that one of them should rank as deputy medical superintendent. Next in rank there should be assistant medical officers and subordinate to them house physicians, house surgeons and clinical assistants where possible.

In order to secure that there shall be fluidity of staff to the extent which may be considered desirable and to meet emergencies there should be included in the general conditions of appointment of all whole time medical officers house physicians and surgeons and clinical assistants a condition that the appointment shall be made to the Council's hospital service and not to an individual hospital. Appointment to the service should be deemed to include liability to be called upon if necessary for consultation and/or to perform an operation on a particular case at another hospital.

DIFFICULTIES OF THE APPOINTED DAY

On the appointed day (April 1st, 1930) the transferred powers and duties of the County Council were subject to (1) the administrative scheme prepared in accordance with Section 4 of the Local Government Act 1929 and approved by the Minister of Health, and (2) the Poor Law Order 1930 made to consolidate previous Poor Law Orders with adaptations consequent upon the passing of the Local Government Act. It may be remembered that the draft Poor Law Order gave rise to a good deal of controversy and that largely owing to representations by the British Medical Association and the Society of Medical Officers of Health this draft was modified in important respects before it became operative. Even so it was found to be in a number of its provisions in conflict with the London County Council's organization and with arrangements which the Council had already made and representations were made to the Minister that portions of the Order should not apply to the L.C.C. and that other portions should be modified in their details. In consequence the Minister later in the year issued an Instrument modifying the Order as far as London was concerned thus making it less unworkable and more acceptable. In its administrative scheme the Council had included a general declaration that it was its intention that as soon as circumstances permitted all assistance which could be provided either by way of poor relief or by virtue of any special Act other than the Maternity and Child Welfare Act, 1918 should be provided exclusively by virtue of the appropriate special Act and not by way of poor relief. The exception of the special Act named was necessitated by the fact that the Metropolitan Borough Councils and the City Corporation are authorities under that Act, so that special arrangements had to be made, and further consideration is needed before the matter can be finally settled. As with so many other local authorities the only specific declaration that could be made of immediate action otherwise than through the Poor Law was with respect to the domiciliary assistance to blind persons. As regards hospital provision and treatment however the matter was carried considerably further by the decision in December 1930, of the L.C.C. to appropriate as from April 1st 1931 certain of its hospitals for the reception of the sick under powers given it otherwise than by the Poor Law. A list of these hospitals is given. It includes not only the large Poor Law infirmaries (as they formerly were but now mostly under new names) but certain associated institutions now allocated to provide accommodation for the 'chronic sick' and nine children's hospitals and convalescent homes some of them situated outside the county boundaries.

In connexion with these appropriated hospitals, the following facts must now be remembered:

In place of the methods of recovery of the cost of maintenance of patients specified in the Poor Law Act 1930 the Council's duties and powers in this respect in relation to patients in appropriated hospitals are laid down in Section 16 of the Local Government Act 1929. While admission to the appropriated hospitals will not necessarily be through the agency of the relieving officers all admissions will be notified to the public assistance department for the purposes of recovery of the cost of treatment in whole or in part (except in respect of infectious disease) as required by Section 16 of the Local Government Act 1929.

GENERAL HOSPITAL SERVICE

The general hospital service of the Council as at December 31st 1930 comprised 27 acute hospitals 13 hospitals and institutions for chronic cases (also in the majority of cases partly occupied temporarily by able-bodied) 2 convalescent hospitals and 2 colonies for sane epileptics. Even at that date and certainly as taken over nine months earlier from the Poor Law guardians these institutions varied very much in character.

There were considerable divergencies in the policy pursued by the various boards of guardians much variation in the character and quality of work a considerable amount of overlapping and inevitably wide differences in the size and suitability of the different institutions. Thus the hospitals themselves vary in size from 1 500 to 222 beds. Some of them are modern buildings well equipped in every way while others are antiquated in design and were found to be deficient in equipment. Again in some of the hospitals the staff were actively engaged in major operative surgery and the care of patients who were acutely ill while in others little surgical work had been done and the majority of patients were suffering from chronic diseases.

Generally so far as the acute hospitals are concerned it may be said that they suffer from noisy surroundings insufficiency of isolation wards and lack of adequate means for classifying patients into convenient groups. Ultimately there is no doubt that some of the existing hospitals will have to be replaced by more modern buildings. It must be further recognized that considerable advances are taking place every year in medical science and that it is becoming more and more difficult for advantage to be taken of these developments except in hospitals specially equipped for the purpose. The urgent need for more adequate provision of hospital accommodation of the so-called middle class is too well known to require any further emphasis. It is merely mentioned here as one of the many factors which must be taken into consideration in connexion with the question of hospital accommodation.

An interesting classification of the persons found in the sick wards of Poor Law hospitals and of the variety of provision that has to be made for them is given and it is stated that a comprehensive survey of the accommodation and classification of patients and inmates in

public health and public assistance institutions is in progress and it is hoped that during the ensuing year a scheme for making better use of the accommodation will have been evolved

District Medical Services

A little later in the report there is a very important section which deserves the careful and critical attention of all those concerned This deals with district medical services (including domiciliary nursing) dispensaries, and out patient departments at the Council hospitals and the relation of these services to one another Altogether there are 126 medical relief districts in the county, for each of which there is a district medical officer In 108 districts this officer is a part time general practitioner, in fifteen he is a medical officer of the hospital acting under the supervision of the medical superintendent, in two other districts the medical officers are whole time officers acting under the medical superintendent but not officers of the hospital while the district medical officer for Stepney is engaged whole time but acts also as medical officer to a Poor Law institution The observations on the out patient problem in this connexion are timely and on the whole reasonable and it is not unsatisfactory that the conclusion arrived at is that

Provision should be made in out patient departments in the Council's general hospitals for (1) casualties accidents and other emergencies (2) continuation or after care treatment of former in patients requiring further treatment after discharge (3) consultation concerning patients referred by any duly authorized medical officer of the Council (4) ante natal and post natal examination and treatment (5) patients entitled to outdoor medical relief (6) special examination and/or treatment of cases or classes of cases authorized by the medical officer of health

Miscellaneous

The synopsis so far given covers not much more than the first fifty pages of the report but of the remaining 150 pages a large number are occupied by information and valuable lists and tables concerning the staffing accommodation and work of the hospitals and institutions under the control of the Central Public Health Committee of the L C C with detailed descriptions of the position and character of certain of these There is a statement about the relatively small maternity accommodation in the general hospitals ranging from a fully equipped block with 36 beds and 3 labour wards (St Andrew's Poplar) to quite primitive conditions and about the Orders relating to contributions to voluntary associations providing maternity and child welfare services The remaining pages are devoted to the Council's special hospitals as transferred from the Metropolitan Asylums Board being mainly a historical survey of the activities of that Board from its establishment in May 1867 to the day when it ceased to exist under the Local Government Act 1929 The institutions whether for cases of small pox of other infectious diseases of ophthalmia neonatorum of children suffering from contagious diseases of the skin and scalp of children requiring special treatment during convalescence or the benefit of seaside air" or of mentally deficient children or juvenile offenders or for the treatment of tuberculosis taken over from a hospital authority of this long standing and varied experience were of course on a different footing and in a quite different condition from many of those transferred from the Poor Law guardians and therefore the questions of change development and policy have not arisen in the same urgent and acute way with regard to them Nevertheless this survey of their activities and possibilities is of considerable interest and emphasizes once more the very wide field of work for which the London County Council and especially its Central Public Health Committee and its official medical staff are now responsible

"WINTERING IN ENGLAND"

Proposal to Form a British Coast Resorts Association

A meeting in furtherance of the movement to promote 'wintering in England was held last week at No 28 Portland Place, under the chairmanship of Lord Riddell supported by the Earl of Dundonald Lord Meston Sir Humphry Rolleston Colonel R H Elliot and Dr R Fortescue Fox The large attendance included many representatives of municipalities of sea coast towns The purpose of the meeting was stated to be to form an organization to be called for the present the British Coast Resorts Association A memorandum placed in the hands of each person at the meeting outlined certain ambitious aims for the new association—namely to formulate and make known the medical value of British marine health resorts in the prevention and cure of disease to differentiate on a scientific basis the various regions of the coast to encourage the due provision of medical requirements (for example baths open air shelters improved hotel accommodation), to co ordinate and assist the progress already effected by municipal authorities and local medical associations on the coast to consider the formation of a medical organization to link together medical practitioners in marine resorts to co operate with other organizations representing spas to arrange for regional conferences which would bring together in different areas the medical and other representatives and finally to establish in due course in London a central bureau for advice and information on the subject

Lord Riddell said that the meeting was called in order to initiate an important movement—namely to persuade the British public to utilize their own health resorts In 1930 800 000 people entered France temporarily from Great Britain 600 000 of them made a stay of over a fortnight and spent in that season £30 000 000 The object was to induce their fellow countrymen to spend a considerable part of that amount in this country The support of leading members of the medical profession had been obtained

Sir Humphry Rolleston in moving that such an association be formed said that there was another powerful body which looked after the interest of health resorts both inland and coast but at the present moment it was the coast resorts which required perhaps a greater amount of help It was to be hoped that in time the two bodies would absorb each other The new association would do all it was allowed to do to confer with and advise health resorts in order that they might be made more attractive to the invalid and to other prospective visitors

Dr Fortescue Fox said that this was the second step in a rather important movement A statement on the whole subject was issued a few weeks ago (*British Medical Journal* December 19th 1931 p 1150) and had excited a considerable amount of public interest British health resorts might be divided into three categories There was an inner circle of ten localities ably administered by the British Spas Federation then an intermediate ring of non-federated watering places and climatic resorts and finally a large outer ring of health resorts on the coast This outer circle had no effective organization He thought that the new body would proceed with the good will of those concerned more particularly with the development of spas He had had a letter from the British Spas Federation thanking the Medical Committee for what it had done and projected and the secretary of the Spa Practitioners Group of the British Medical Association had written assuring the new organization of the cordial good wishes of spa practitioners The British coast said Dr Fox was really unique in Europe The

6 000 miles of coastline included a variety of scenery and climate which was certainly unsurpassed

Colonel R H ELLIOT recounted the different stages of this movement since Lord Snowden's suggestion last year that people should winter in England The Medical Advisory Committee which included some of the most honoured names in the profession had been extremely helpful and he had been astonished at the possibilities of this movement Those who initiated it had never expected such a large amount of co-operation and help from outside sources As time had gone on, their ideas had expanded they were no longer thinking of the present winter alone but an association which might grow to embrace all the health resorts of the British Isles all the year round and for all time He added that they were not in opposition to any other society nor to the health resorts of any other country but they felt that too little had been said in favour of Britain whilst foreign resorts had been very actively advertised

Lord MESTON spoke on the need for convincing the British public of the excellence of the sea-coast resorts, where there were health-promoting factors as good as any which the wealthy found abroad Lord DUNDONALD also contrasted the south coast of England with the Mediterranean to the disadvantage of the latter

APPOINTMENT OF COMMITTEE

When it came to the putting of several resolutions which were before the meeting a certain spirit of criticism developed among representatives of the municipalities Notwithstanding the assurance that the new organization would co-operate with all and compete with none several speakers from the coast showed that they were jealous for the prestige of the organizations already in the field, notably, the Travel Association and the National Health and Pleasure Resorts Association A representative of the latter body spoke of the dangers of overlapping and mentioned that the two organizations just named had already in the shaping a central bureau of information An amendment to the principal resolution was proposed by a representative of Great Yarmouth to the effect that instead of a British Coast Resorts Association being formed at that meeting a committee should be formed with the object of considering the setting up of such a body, and this was seconded from Blackpool and agreed to by the chairman As ultimately carried the resolution read

> That there be formed a committee to consider the advisability of creating a British Coast Resorts Association with aims as set out in the memorandum [summarized above] and that such association co-operate with existing institutions in particular with the Travel Association the British Spas Federation and the National Health and Pleasure Resorts Association

Another resolution on the agenda was that the executive committee to be appointed should consist of eight medical and eight municipal members representing the various regions of the coast of Great Britain and Ireland two representatives of the British Spas Federation and those who had so far constituted the Provisional Committee with power to add to their number

The question was raised as to how the medical and municipal members were to be chosen The CHAIRMAN suggested that it should be left to the British Medical Association to nominate the eight medical members but in the result a proposal was adopted that the Medical Advisory Committee which was set up at the previous meeting held on December 9th should be asked to select these eight It was also proposed that the municipal representatives should be chosen at regional conferences to be arranged on the coast in each area in the early part of 1932 but several of those present at the meeting urged the claims of the National Health and Pleasure Resorts Association, which is holding its annual conference shortly and it was eventually agreed that that body should elect eight members to the committee and that certain other representatives should be obtained for Scottish, Irish, and Welsh areas

In view of the fact that the intention of the meeting had been in some respects altered so that only a committee was formed instead of the actual association, certain other resolutions on the agenda to the effect that regional conferences should be arranged and that a central bureau should be set up in London were held over for further consideration

MEDICAL CONGRESSES, 1932

The following congresses and conferences on medical and allied subjects have been announced for 1932 Particulars are given below in the following order date name of organizing body place of meeting name of person to whom inquiries should be addressed More detailed information about these meetings is given from time to time as it becomes available in the news columns of the *British Medical Journal*

February —German Association for Occupational Hygiene Nuremburg Secretary of Association Platz der Republik 49 Frankfort on Main

March 15-16 —International Society of Surgery Madrid Dr L Mayer 72 Rue de la Loi Brussels

April 11-14 —German Society for Internal Medicine Wiesbaden

April —German Society for Urology Vienna

May 9-13 —American Medical Association New Orleans Secretary of Association 535 North Dearborn Street Chicago

May 10-15 —Royal Institute of Public Health Belfast Secretary of Institute 37 Russell Square W C 1

May —International Union of Local Authorities England Mr G M Harris Ministry of Health Whitehall S W 1

June —British Hospitals Association Liverpool Secretary of Association 12 Grosvenor Crescent S W 1

July 9-16 —Royal Sanitary Institute Brighton Secretary of Institute 90 Buckingham Palace Road S W 1

July 26-30 —British Medical Association Centenary Meeting London Medical Secretary B M A House Tavistock Square W C 1

July —Congress on Paediatrics Geneva Secretary of Save the Children International Union Geneva

August 15-18 —International Congress on Light Copenhagen Dr Kissmeyer Finsens Lysinstitut Strandboule varden Copenhagen

September 6-9 —International Union against Tuberculosis The Hague Secretary of Union 2 Avenue Velasquez Paris VIII

September 12-17 —International Congress of Tropical Medicine Amsterdam Professor E P Snijders Institute of Tropical Medicine Mauritskade 57 Amsterdam

September 20-25 —International Congress of Mediterranean Hygiene Marseilles Dr Violle 40 Allées Leon Gambetta Marseilles or Dr Broquet 195 Boulevard St Germain Paris VII

October —French Congress of Stomatology Paris

1932 —International Congress of Oto-rhino-laryngology Madrid

1932 —Italian Congress of Urology Bari

1932 —Pedagogic Medical Congress Rome

1932 —German Dermatological Society Vienna

1932 —Society for the Study of Diseases of Digestion and Metabolism Vienna Professor von den Velden Bamberger-strasse 49 Berlin W 30

1932 —International Conference on Tuberculosis Davos Secretary Medical Society Davos Platz Switzerland

to be recorded—a sum of £21 867 having been received from that source An appeal is made to the country districts to make their contribution more commensurate with the expenditure involved in the treatment of country cases The total ordinary expenditure amounted to £155 766 an increase of £4 000 The average cost per patient per day works out at 8s 9d , which is 2½d greater than in 1930 Extraordinary expenditure was £14 043 The amount received in response to the extension appeal is approximately £220 000 which, in view of the financial difficulties of the time is considered satisfactory Reference is made to the inclusion of a clause relating to paying beds in the Infirmary in the Provisional Order which it is intended to promote in connexion with the winding up of the trust of the present Maternity Hospital The Infirmary extension scheme includes the erection of a new maternity block In view of the position of the Infirmary as a national radium centre it has been decided to reconstruct the property at Beachmount Murrayfield, to provide 40 beds for the accommodation of patients requiring radium treatment The unsatisfactory wording of the clause in the Road Traffic Act dealing with the refunding of expenses incurred by hospitals in the treatment of road accident cases is emphasized The managers, in thanking all those who have supported the Infirmary during the past year state that they look forward to the future with confidence

Central Midwives Board

Reporting on its work during the year ended March 31st 1931 the Central Midwives Board for Scotland states that the enrolments numbered 529 bringing the total enrolments to 9 271 of whom 5 748 have passed the examination of the Board and 3,523 have been admitted in virtue of certification under Sections 2 and 11 of the Midwives (Scotland) Act 1915—that is through holding recognized certificates or in respect of having been in *bona fide* practice at the passing of the Act The number of practising midwives is approximately 5 000 There are sixteen institutions in Scotland at which midwives may be trained of which three are Poor Law institutions The number of candidates who appeared for the examination last year was 552 of whom 508 passed The Board is pleased to be able to record that the pass marks secured by the successful candidates average 64 per cent of the possible marks During the year under review three midwives were cited to appear before the Board under its penal powers to answer charges of malpraxis negligence and misconduct As a result of the hearing of the charges one name was removed from the roll one woman was reprimanded, and in the third case the midwife was admonished

Action against Glasgow Royal Infirmary

A decision of considerable importance to hospitals and their staffs was given in a recent action before the Second Division of the Court of Session at Edinburgh The action had been brought by Mrs Mary Anderson or Lavelle against the Glasgow Royal Infirmary for £500 as damages for alleged serious and extensive burning injuries said to have been sustained at the infirmary while attending for ultra violet ray treatment of neuritis The plaintiff stated that she was in the charge of a nurse and was not informed how long she was to remain exposed to the rays that she remained exposed for about three quarters of an hour when she left of her own accord and that as a result of over exposure she sustained the burning injuries The defendants denied fault and stated that the nurse in charge had given the patient instructions when to dress and had warned her not to approach too near the lamps further that the slight burning received was due either to her having approached too near the lamps or to an abnormal reaction of her skin to an average application of the rays Lord Hunter in giving judgement for the defendants, said that at a previous hearing they had pleaded that they were not responsible for the actions of the nurse and that the action should be dismissed The court had upheld this view, but on appeal to the House of Lords the case had been remitted back to allow of inquiry into the facts alleged The Lord Justice Clerk said he had no hesitation in affirming that the plaintiff had failed to prove the nurse was negligent and that her negligence was the cause of the injuries If however, this view of the facts had been wrong a question of law immediately arose—namely whether the defendants were liable for the negligence of a nurse in their employment The position of a physician and that of a nurse were in marked contrast to one another The physician exercised an uncontrolled direction in the treatment of his patients , he was not the servant of any master he was subject to no interference in short he was independent The position of a nurse was otherwise since she was not necessarily a skilled or experienced person as a surgeon was and at every point she was controlled by the superintendent, by the matron and by the doctors The relationship of master and servant therefore existed between the defendants and the nurse and if she were proved to be negligent and the negligence caused the plaintiff injuries the defendants would be responsible for that negligence

Correspondence

COLPORRHAPHY FOR PROLAPSE

SIR —About twenty years ago I performed ventrofixation on a nulliparous patient 18 years of age who had a completely prolapsed virgin uterus Two years later she returned with the fundus still firmly attached to the abdominal wall but the cervix protruded from the vulva and a sound passed six inches Anterior and posterior colporrhaphy were then performed with complete success This taught me the lesson which has been so admirably expounded by Professor Donald of Manchester and his brilliant successors—that prolapse of the uterus can be cured by support from below but not by suspension from above

Very occasionally in elderly women the supporting operation may not be sufficient and in these cases a supravaginal hysterectomy should be performed and the round ligaments stitched to the cervical stump By this means support is given to that part of the uterus which is attached to the vaginal vault and what one really does is to support the uterus from below—even though the body has been removed —I am etc ,

London W 1 Jan 16th HENRY SIMSON

OVULATION AND THE SEX CYCLE

SIR —The author of the article on ovulation and the sex cycle in your issue of January 16th does not seem to be aware of the modern work on the physiology of menstruation in the human subject for he states that it is too early to arrive at a definite conclusion as to whether ovulation occurs at a definite stage in the menstrual cycle

As long ago as 1911 Robert Meyer showed that ovulation was limited to the intermenstrual phase of the cycle, and this conception was confirmed by himself and Rugo in 1913 by Schroder in 1914 by Novak in 1916 and by myself in 1925 Moreover the later work proved that ovulation was limited to about the fourteenth day of the cycle and this point of view has been completely and

convincingly established by Allen's successful isolation of human ovarian hormone by washing out the Fallopian tubes during abdominal operations performed about the fourteenth day of the cycle. Consequently almost all workers on the human ovary regard the time of ovulation as being restricted to about this phase of the menstrual cycle. I think that my friend Professor Knaus will be amused to learn that his admirable research is being regarded as establishing the time of ovulation in the human ovary, for he is well acquainted with the work that has been done on the histological side, and his own experiments deal rather with the secretory function of the corpus luteum than with the dating of ovulation.

Similarly researches on human material showed fairly convincingly that the corpus luteum controlled the premenstrual hypertrophy of the endometrium long before active principles were extracted from it. As regards the follicular cycle, Schroder established by histological examination of the endometrium the difference between proliferative and secretory phases, and by correlating the findings in the edometrium with those in the ovaries showed that the proliferative phase was probably determined by the activity of ripening follicles. This work was published several years before Allen and Doisy's successful isolation of the oestrin hormone.

The view put forward in the article that the degeneration of the premenstrual endometrium during menstruation is due to the cessation of the luteal secretion was suggested by Robert Meyer before the war, and has recently been somewhat severely criticized as the result of Corner's work on the macaque monkey, and of the investigation of cases of metropathia haemorrhagica. In the macaque necrosis of the endometrium has been demonstrated during the absence of corpora lutea from the ovaries, and in cases of metropathia haemorrhagica a comparable state of affairs exists.

Workers on animal reproduction frequently do not keep in touch with the efforts gynaecologists make to elucidate the problems of the menstrual cycle, and they are apt to regard this work with suspicion. I remember some years ago being severely rebuked by a distinguished worker on animal reproduction when I told him that I had demonstrated ectopic decidual cells in the ovary during the late premenstrual phase of the cycle, in the absence of pregnancy, and it was not until after Smith and Engle's work on the pituitary that the experimentalists paid any heed to the question of ectopic decidual cells.

Gynaecologists are unlikely to be sympathetic towards the plea that further inquiry should be undertaken on the time relations of ovulation and menstruation. They are well able to offer fertile suggestions for further researches on the experimental side.—I am, etc.

London, W.1, Jan. 16th. WILFRED SHAW.

MATERNAL MORTALITY

SIR,—I make no excuse for rising once more the perennial subject of maternal mortality. During the last few years I have listened to interminable discussions and read papers thereon *ad nauseam*. Nowhere have I seen the problem presented completely, intelligently, and concisely.

The fact that the maternal death rate has not been reduced in the course of many years is prima facie evidence that all the measures hitherto attempted in an effort to check the scourge have been futile and valueless in spite of great advances in knowledge. Not only is this the case, but far too much attention has been paid to mortality to the almost complete exclusion of morbidity, whereas the two must be considered together when methods are evolved for their prevention. There is a finality about death, but the surviving victims of injury and sepsis (of whom there must be many thousands) are an ever present reproach upon us the members of a so-called civilized society.

Let us briefly survey the ground upon which we stand at present. There are three distinct units in the practice of midwifery: (1) the State in the form of ante natal and post-natal clinics and arrangements for emergency, (2) practising midwives, and (3) medical practitioners. These three, instead of being woven into one harmonious whole, are entirely distinct. Their work overlaps as it is bound to do, and a considerable amount of friction arises as a consequence. Regarded separately the reasons for their failure become obvious.

(1) Ante natal clinics are useful as far as they go, which is not far enough. The functions of the medical officers in charge cease before the onset of labour, and they have no opportunity of following patients into the puerperium and thus cannot profit by their errors. They can never learn by the greatest of all teachers—namely, experience—and they become slaves to a monotonous routine.

(2) The great majority of practising midwives are women of barely twelve months training with no previous experience of nursing. It seems incomprehensible that the most difficult form of nursing, and that which demands the greatest skill, should be relegated to these insufficiently trained women. The reasons for this are that the work is arduous, often unpleasant, and very unremunerative, and hence does not attract the type of women who by reason of their education and experience are most fitted for it. Ante natal examinations are conducted by them, and they are not compelled to refer their patients either to an ante natal clinic or to a doctor. It is common knowledge among those who practise the art of midwifery that to summon a doctor in doubt or emergency is considered by a midwife to be a reflection on her capabilities. As a result the number of ruptured perineums that remain unsutured, and the number of minor gynaecological ailments that remain untreated when treatment would be most efficacious, must be appalling.

(3) The poor general practitioner bears the brunt of everything. Insult upon insult is publicly heaped upon his head until he is too cowed to turn and denounce his traducers. Should anything go wrong in the practice of the clinic or the midwife he is always present and ready to give his aid and shoulder the responsibility. The system is such that he is called upon at a moment's notice to deal with a sudden emergency in a patient whom he has never previously seen or examined. He probably knows nothing of the previous state of the patient's health, nothing of her previous confinements (if any), and nothing of her pelvic measurements, and he acts to the best of his ability under the worst possible conditions. Thus it comes about that the person who is eventually responsible for a safe delivery is in the invidious position of having to deal with a possibly grave situation in complete ignorance of any preceding circumstance which might aid him—this in spite of ante natal clinics, maternity nurses, consultants, and the rest of the paraphernalia! Should his efforts not entirely succeed the vultures, the armchair practitioners, devour him with their slanderous statements.

The whole system from beginning to end is completely unsatisfactory, and must be revised if our efforts are to bear fruit. The State must admit its failure in practical interference, and cease multiplying useless ante natal clinics of the present type. Students must undergo a more prolonged and more thorough training, and those who dislike the practice of midwifery must cease to meddle with it. Those who are eventually responsible in emergencies should have charge of all pregnant women from the very commencement. Midwives should have a complete training in general nursing, and a subsidy from the State to augment their slender and uncertain incomes

They should act in conjunction with practitioners, who would conduct all ante natal examinations and at least one post-natal examination

I am convinced that if a comprehensive system were developed on these broad lines (and the development must of necessity be gradual) our goal would eventually be reached —I am etc

Dagenham Jan 10th LOUIS F BECCLE

CHILD GUIDANCE CLINICS

SIR —Dr Moodie's letter in the *Journal* of November 28th 1931 which gives a brief account of the personnel of a child guidance clinic and the way it attempts to provide the ideal observation of children, as portrayed in the editorial on Sir George Newman's report on the health of the school child (*British Medical Journal* 1931 ii 913) seemed to me to be quite adequate, and did not appear to call for the torrent of severe criticism which Dr Rowland Fothergill metes out

What is really bothering Dr Fothergill? He asks What is wrong with the general practitioner? The answer is Nothing except that he has neither the time nor the training for this work but he could be trained if he had the time so it is entirely a question of time and the corollary of time—finance

Dr Moodie possibly made the initial mistake in his letter in not describing in detail the work undertaken individually by each member of the triad The clinics which are now being started in England are founded more or less upon the American plan I came to the United States two and a half years ago to learn child guidance work and have spent all my time at the Philadelphia and Los Angeles clinics The procedure is roughly this a child is referred to the clinic by the parent either because one or other of the parents may find some abnormality of behaviour or the school principal may have advised such a step on account of some difficulty at the school—this may range from social behaviour to failing or irregularity in school work When the case has been accepted a social worker visits the home and sees both parents and gets them to tell her all that they can about the child She may make two or three such visits before she has obtained all the material she requires each visit may last an hour or longer her entry into the home is as a friend of the family and not as an investigator and this is why so much time is required to obtain the necessary information The worker also almost invariably visits the school sees the child in school and then later hears what the teacher has to say about him

After sufficient data have been obtained in this way the child visits the clinic and is seen by the psychologist who may spend two or three hours on the case often necessitating more than one visit the same occurs with the psychiatrist I usually make a practice of seeing the child once before I read the psychologist's and the social worker's reports and once after Also frequently but not as a routine the child is seen by a paediatrician

After this a staff conference is held between the psychiatrist the social worker the psychologist and anyone else interested in the child—if the family has a general practitioner he would be invited to attend First the social worker gives her report on the family in general—the parents relation to each other to the child in question and to other children in the family—and presents the teacher's report on the child's behaviour in school and towards his playmates The psychologist submits his report on the intellectual developmer that the child his scholastic attainments his reactiuctions school worl and any particular aptitudes roach too may show The psychiatrist gives his ing received this is an observation on the behavi too near the child at the clinic his opinion of himself and his attitude towards his environment, any physical or nervous abnormalities are noted and the findings of the paediatrician, if any, are interpreted A tentative diagnosis of the trouble is then made and a programme of work detailed This may be work with the parents either by the social worker or by the psychiatrist and/or work with the child by the psychiatrist, and/or special educational work with the child by the psychologist—this may mean two or even three visits a week to the clinic by the child or by the worker to the home lasting occasionally six months or even longer

This may seem very complicated but in practice it works out quite simply As far as the children are concerned the majority of them enjoy their visits to the clinic and want to come again this is due almost entirely to the way in which they are handled As to their personality being irredeemably ruined by being submitted undefended to this triad I cannot say, but there are no records of behaviour having been made worse nor have other vicious tendencies been noted as a result of clinic attendance Usually the parents or the school tell us that there has been an improvement in the child's behaviour Dr Fothergill need not fear that the child guidance clinics will produce either gangsters or sissies" because the aim and object of these clinics is to develop as usefully as possible, the social potentialities of the child

As to the training of the various individuals in the triad the social workers are all taken from a well educated group and have graduated from college before taking their social work course and they will have been in this special training for about two years before they are eligible to undertake case work by themselves The psychologists will also have had college education and they will be thoroughly versed in educational psychology intelligence testing and vocational guidance The psychiatrist should have a thorough background of psychiatry and a working knowledge of most of the modern theories of psychological medicine in addition he should be conversant with present day trends of thought with regard to child training etc

I fear that it does sound very much as though I have been trying to sell a synthetic preparation after all but at least I have given the formula for it and it can be prepared by any other firm —I am etc

Los Angeles California Dec 29th 1931 D NOEL HARDCASTLE MRCS, LRCP DPM Camb

EARLY MYRINGOTOMY IN OTITIS MEDIA

SIR —The paper by Mr J F O'Malley in the *Journal* of January 16th is timely in its appearance in view of the prevalence of influenza This affects the ear by producing —often within twenty four hours—a fulminating haemorrhagic otitis media in which the local picture is one of intense injection with bulging and desquamation of the superficial tissues of the tympanic membrane Such a drum requires immediate myringotomy—the correct term for this procedure though usage has endowed the term 'paracentesis with its meaning

Mr O'Malley's remarks about early myringotomy call for some comment In children earache with a temperature above 101° is an indication for prompt myringotomy as it means that the condition is a suppurative one Alexander of Vienna propounds this view Further he states that if the patient is seen some days after the onset of the attack and there is only a mild pyrexia (for in 19[illegible] 99°) but the fact is elicited that at some time myself nperature was 101° then the process is a suppurative one and myringotomy is indicated In infants and cyclegs children it is very common to find pus deep to a

tympanic membrane which displays a normal white colour with some slight bulging or perhaps only a slight loss of lustre attention being drawn to the ear by the infant handling the ear or by earache Only recently I observed an infant 1 day old with a temperature of 103° and examination revealed a slightly bulging drum and only slight injection yet incision permitted the escape of frank pus In another case (of an infant with diarrhoea and vomiting) the only departure from the normal appearance of the tympanic membrane was loss of the highly reflecting sheen yet myringotomy again exposed frank pus

At the children's hospital with which I am associated the casualty officers incise the drum in all cases of acute otitis media in the early stage and the results are gratifying I have not yet had occasion to regret an early myringotomy the procedure is one that cannot produce any hindrance to recovery of the ear

Your leader in the same issue (*British Medical Journal* January 16th p 107) strikes the right note by stating

The delay in its performance until the whole membrane is bulging has been responsible for much of the discredit brought upon the operation etc Early myringotomy—and when necessary repeated myringotomy—will prevent the spread of infection outside the confines of the tympanum which may be looked upon as the aural appendix Early myringotomy in acute suppurative otitis media is as great a matter of urgency as early removal of the appendix in appendicitis Influenza affects the ear in another way—as otitis externa haemorrhagica with which condition blood blisters form anywhere in the meatus and outer layer of the tympanic membrane More than one may be present and lead to a blood stained aural discharge It is associated with much pain and even mastoid tenderness symptoms which subside with the puncturing or bursting of the bullae The condition may complicate an influenzal otitis media and be the cause of the persistent pain which leads to the suspicion of mastoiditis—I am etc

London W 1 Jan 16th N ASHERSON

FACE MASKS AND FOGGED SPECTACLES

SIR—It is not uncommon to see surgeons and obstetricians operating with their noses protruding over their face masks because their glasses become fogged by their breath when the nose is covered

The real necessity for covering the nose as well as the mouth has been demonstrated many times bacteriologically If any reader is not convinced of this I would refer him to the exhaustive reports by Watson and McKenzie on an outbreak of puerperal sepsis at the Sloane Hospital New York (*Amer Journ Obstet and Gynecol* 1928 xvi) Haemolytic streptococci are frequently found in the noses and throats of surgeons and nurses In the above mentioned report one nurse harboured in her nose haemolytic streptococci identical with the organisms that were isolated from the blood of several of the cases

A simple way of overcoming the difficulty is to place two of the ordinary gauze masks one over the other sandwich fashion and put a simple knot on the tapes at the upper corners cutting off the tapes from the lower corners Apply the double mask in the usual way with tapes under the lobes of the ears and over the head but slip the nose over the upper edge of the inside mask Three thicknesses of gauze instead of four will do Fogging of the glasses does not then occur from the breath The head veil preferred by many operators can be adapted in much the same way by the addition of a short flap attached to the corners of the lower edge of the aperture for the eyes The various preparations for smearing on the glasses to prevent dimming are in my experience unsatisfactory

If we take it that the case is definitely proved that spray or droplet infection may and does occur it is time that midwives throughout the country were definitely instructed to adopt this precaution In any case those attending confinements should have swabs taken from nose and mouth periodically if haemolytic streptococci are present treatment can easily be carried out Masks need not be sterilized and should be put on before sterilized gloves otherwise spray infection of the gloves may take place

We know that the haemolytic streptococcus is the cause of the most serious cases of puerperal sepsis we know also that the only place where it is likely to be present in the labour room is in the nose or throat of someone who is present and that it can easily be sprayed by talking over the hands of the attendant or on to the perineum of the patient We know the death rate from sepsis and the prolonged suffering from septic infections that do not terminate fatally Is it too optimistic to expect the sepsis rate in obstetrics to be halved by efficient masking?—I am etc

E LAWTON MOSS C M G M C O G

London W 1 Jan 11th

MEDICAL CONDITIONS IN SOVIET RUSSIA

SIR—I should be gratified to be allowed to support the claim of Dr F G Clemow to express an opinion upon the study of the medical arts and practices in Russia as he says a generation ago for in 1889 I visited and commented upon the condition of some nine lunatic asylums in Russia a country then under the sovereignty of the Imperial Tsar It was through Dr Clemow's valuable assistance whilst he was the physician to the Hon the Russia Company at Kronstadt and also that of the Foreign Office that I was enabled to witness the treatment of the insane both rich and poor in St Petersburg Moscow Nijni Novgorod towards Kazan and also in Warsaw My impressions were afterwards communicated to the *Journal of Mental Science* and published in full in the number for April 1890 Dr Clemow's great interest and his wide influence made my visit to the mental hospitals of Russia both pleasant and instructive I entertain a vivid recollection of his courtesy and authority—I am etc

London S W 5 Jan 18th ROBERT ARMSTRONG JONES

SIR—As a visitor to the International Medical Congress at Moscow in 1897 I should like to support Dr F G Clemow and Dr V P Wasson in their remarks on medicine in Tsarist Russia

In the *Journal* of December 5th 1931 Dr Clifford Ellingworth is reported to have said that

> It was of no use trying to understand medical conditions in that country to-day without having regard to the conditions under the Tsarist regime It would be unfair to judge present standards in Russia by those obtaining in England Compared with English conditions the state of affairs in Russia was not wonderful but when the dreadful conditions of the past were remembered the mighty effort which had been made by the Russian people to set their house in order was wonderful indeed

If Dr Ellingworth will read the article by Dr Clemow in the *Lancet* (1897 ii 342) perhaps he will alter his opinion on the dreadful conditions at that time Among the members of the congress I found everywhere admiration for the magnificent hospitals and clinics provided under the Tsarist regime When I compared the conditions of hospitals and their work in Moscow with those in England I was compelled to admit that the Moscow clinics were far in advance of those in my own country and in any European country known to me at that

was a prominent symptom in the two cases quoted The rhus poison is capable of producing a profound general disturbance of the whole body of a very serious nature I know a gentleman who has lost completely the sight of one eye due to rubbing the eyelids with the finger after handling the sumach In the two cases reported the shoes were unlined and possibly the stockings worn were thin The needful precautions are obvious more especially if the skin be unduly sensitive, or the feet prone to perspiring freely Sumach is too good a material to be discarded by tanners and probably a poisonous variety of sumach was used for tanning in this instance through carelessness or ignorance —I am etc

Stroud Jan 13th J A BLAIR D Sc M D

THE TUBERCULOSIS PROBLEM

SIR —The article by Dr Middleton Martin in your issue of January 9th shows a revolutionary light on the problem of the origin of tuberculosis infection in the human subject The conclusions he arrives at appear to be against the general opinion held by the medical profession during the last twenty years at least Although the transmutation of the tubercle bacillus was suggested some years ago it was generally denied by bacteriologists However if Dr Martin's article is read in conjunction with Memorandum No 63 of the Ministry of Health, taking special notice of Table III therein the figures given confirm his conclusions to a very large extent Table III of this memorandum gives 84 per cent as the proportion of bovine type of infection of the cervical gland in children under 5 years old and of lupus 50 per cent bovine origin in human beings of all ages

Let us not however be led into counsels of despair by adopting as a way out pasteurization which is one of the alternative remedies suggested by the author of the article Effective pasteurization of large bulk quantities of milk at a temperature sufficient to kill tubercle bacilli is at present a difficult and almost impossible commercial proposition although so called pasteurization is being practised at the moment it is mainly used to prevent the milk souring whilst being handled True pasteurization is I believe seldom achieved as the milk is underheated in one part of the vessel and overheated in another

May I suggest the importance of frequent medical examination and control of all those whose business it is to handle milk from the farm hand onwards not forgetting the cows themselves also the elimination of tubercle from our milch cattle so that milk may be produced free from contamination —I am etc,

WILLIAM S STEVENS M R C V S

London S W Jan 11th

RESEARCH ON GOITRE

SIR —The American Association for the Study of Goiter will hold its annual meeting on June 14th 15th and 16th at the Hamilton Ontario Canada Members of the psychiatrist from Great Britain and continental Europe are one else interested practitioner he would attend and to enter into the discussion will be in English only An social worker gives her report offered for the best essay the parents relation to each other especially in question and to other children in the presented presents the teacher's report on the child's reading in school and towards his playmates The psychologist submits his report on the intellectual development that the child his scholastic attainments his reactions school work and any particular aptitudes teach too may show The psychiatrist gives his findings received this is an observation on the behaviour near the

Obituary

JAMES CALVERT, C B E, M D, F R C P

Consulting Physician to St Bartholomew's Hospital and the Royal Hospital for Diseases of the Chest

St Bartholomew's men in many parts of the world will learn with feelings of personal regret that Dr James Calvert died suddenly in London on January 13th after an attack of influenza

He was born in 1856 at Stonerigg, Cumberland, and had a distinguished student career, graduating B A at the University of London in 1881, B Sc in 1883, and M B with first class honours in 1885 In the following year he proceeded to M D and obtained the M R C P diploma His success in junior posts at St Bartholomew's led to his appointment as assistant physician to the Royal Hospital for Diseases of the Chest at Victoria Park, and in 1895 he was elected a Fellow of the Royal College of Physicians For some years he was warden of the residential college at St Bartholomew's and lecturer on materia medica pharmacology and therapeutics in the medical school Living in the warden's house within the hospital precincts Dr Calvert became a familiar figure in the Bart's world and his kindly disposition and massive common sense won him friends among students of all ages In those days promotion on the senior staff was very slow and he had to wait long for the vacancy among the assistant physicians to which he was elected in 1902 He became full physician shortly before the war and on attaining the age limit of 65 was elected consulting physician and a governor of the hospital



At the outbreak of war in August 1914 Dr Calvert took up duty at the 1st London General Hospital in Camberwell with the rank of lieutenant colonel R A M C (T F) and served there for many months as physician in charge of wards and chairman of the medical board In recognition of this work he was created C B E in 1919 He was a censor of the Royal College of Physicians in 1924–25 and had acted as examiner in medicine for two periods of four years He was also for some time examiner in pharmacology for the University of London and in medicine for the Universities of London and Liverpool At the Annual Meeting of the British Medical Association at Carlisle in 1896 he held office as honorary secretary of the Section of Medicine

Dr Calvert wrote no book but he contributed the article on prescribing to Hutchison and Collier's *Index of Treatment* and a number of papers on pulmonary diseases published in the *Bholomew's Hospital Reports* and the *Transactions* Clinical Society and the Royal Medico Chirurgical His elder daughter married Sir Eric S T d baronet, whose father Sir Frederick Tay an to Guy's Hospital, was President of the lege of Physicians from 1910 to 1915

Dr H MORLEY

As one who was ntes years I should wish e of Dr Calvert for many in 1910 had good work for a tribute to his memory myself in the medical pital as physician and as one and my teacher He was a sound clinician cycleg children it is ve kindly sympathetic way,

with a quiet touch of humour will be long remembered by all who came in contact with him In his earlier days he was fond of cricket, and later was a very regular golf player His club was at Mitcham and there he played every week with the late Sir Thomas Smith and Sir Anthony Bowlby though after they had gone he played little or not at all He was a delightful colleague always reliable and trustworthy, with a very strict sense of honour His genial personality will be greatly missed by the many friends to whom he had endeared himself

A memorial service was held in the Hospital Church of St Bartholomew the Less on January 18th, the Rev J L Douglas Vicar and Hospitaller and Canon Hopkins officiated There was a large attendance of relatives and friends and of representatives of the different organizations with which Dr Calvert had been associated

[The photograph reproduced is by Elliott and Fry London]

E HYLA GREVES M D F R C P

Honorary Physician Royal National Sanatorium Bournemouth

We regret to record the death on January 12th of Dr Edwin Hyla Greves a leading member of the medical profession in Bournemouth He was born at Bromsgrove and from Shrewsbury School went to study medicine at the University of Edinburgh graduating M B and C M with honours in 1879 at the age of 23 In 1885 he proceeded to M D receiving the gold medal for his thesis in 1889 he obtained the M R C P diploma and in 1922 was elected a Fellow of the Royal College of Physicians of London While in Edinburgh he served as demonstrator of anatomy at the University and was resident house surgeon at the Royal Infirmary he then became senior demonstrator of anatomy at University College Liverpool medical registrar and pathologist to the Liverpool Royal Infirmary and physician to the Liverpool Infirmary for Children To his keen regret he had to give up work in that city for reasons of health and settle on the South Coast A man of his ability and experience soon acquired consulting work in Bournemouth and its neighbourhood and with improving health Dr Hyla Greves steadily widened the sphere of his activities Among the many posts he held were those of honorary physician to the Royal National Sanatorium Bournemouth visiting physician to the Dorset County Asylum visiting physician to the Dorset Red Cross Convalescent Home for Children Swanage and to the Lymington and District Cottage Hospital and honorary medical referee to the National Hospital for Consumption Ventnor He had long been a member of the Bournemouth Division of the British Medical Association and held office as president of the Dorset and West Hants Branch in 1905

A senior member of the Bournemouth Division sends the following appreciation

The death of few men could have created a greater loss to Bournemouth than that of Edwin Hyla Greves—more especially to those of his colleagues who have had the privilege and pleasure of being intimately associated with him in his professional work Greves came to Bournemouth to die and he took a macabre pleasure in possessing a certificate stating that he was suffering from general miliary tuberculosis Fortunately for this town and district he did not die but lived to do an amount of work that few men however strong could have exceeded He had a wonderful knowledge not only of his profession but of men and matters and this accounts for the exception ally successful career and the premier position in his profession which he quickly attained and held unchallenged up to the day of his death His services as a consultant were eagerly sought by his professional brethren over a large area in the surrounding neighbourhood not only for their patients but for themselves and their families To his colleagues he was loyal urbane and resourceful To his patients though direct he was sympathetic and always inspired them with a feeling of confidence No man is essential in his profession but it will be a long time before we find such another as Edwin Hyla Greves

A colleague writes

No one could come into contact with Dr Hyla Greves without realizing that he possessed something besides great intellectual attainment and a high sense of duty It must have been this quality—faith vision, personality or something of all three—which enabled him to remain so alive to new impressions alert for new ideas and able to meet the physical demands of his enormous practice in spite of advancing years and recently, obviously failing health Another reason was that while there was work to be done he never wasted time or allowed anyone to waste it for him He hated insincerity in any shape or form either in colleague or patient and, when he met with it dealt with it with characteristic brusqueness In the presence of real illness or distress of mind his charm and kindliness knew no bounds He combined great clarity of thought and expression with a very retentive memory and a great sense of humour This made him a born teacher and it was impossible to be with him even for a few minutes without learning something Very modest about his own attainments he was quick and generous to recognize ability in others His loyalty and sincerity made him the best of friends He found pleasure and beauty in simple things He enjoyed his short holidays to the full It would have been impossible to imagine him ever bored or at a loss for occupation even had he retired As it was he died in harness having literally spent himself to the last ounce in the service of his fellow men

Dr L A Weatherly writes

In his skill in diagnosis in his clinical knowledge and use of the most up to-date therapeutics Hyla Greves my junior by five years was in many ways I feel the equal if not the superior of the giants of our younger days of whom we often talked—George Burrows William Jenner James Paget William Gowers William Broadbent Lauder Brunton and David Ferrier I must recall a personal experience In the bitter winter of 1916 and 1917 I was attacked for the fourth time with double pneumonia When Greves came to see me I was in a semi conscious state He quickly diagnosed a typhus pneumonia with purpura haemorrhagica My windows were at once thrown wide open and nail and snow drove into my bedroom Turpentine and white of egg were poured down my throat and after many weeks of the greatest care and attention by my colleague I was up and about again He had saved my life Not only in Bournemouth where he had practised for over forty four years but throughout Hampshire Dorset Wilts and Somerset Hyla Greves will be greatly missed as a consultant and his place will be difficult if not impossible to fill He was a devoted friend and a truly great physician and during the short time I may have to live I shall ever mourn his loss

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The following well known foreign medical men have recently died Professor Paul Heims-Heymann editor of an important textbook on laryngology and rhinology San Rat Alfred Schaltz an eminent Dresden orthopaedist aged 63 Dr Karl Thoyes a prominent surgeon of Speyer Professor Otto Ziegler honorary professor of the Hanover medical faculty aged 51 Dr Savas professor of hygiene and bacteriology at the Athens medical faculty Professor Keizo Dohi formerly director of the dermatological clinic at Tokio, and Professor Alphous Jakob of Hamburg author of works on syphilis and the central nervous system

resulting in some cases 2 c cm of the preparation have been given twice a week with commensurate benefit MacKenna thinks that the era of intravenous bismuth therapy is near and will have a marked effect on the treatment of tuberculosis since bismuth is excreted in the urine and faeces in the proportion of about 8 to 1 it might well be tried in renal tuberculosis He records various laboratory and clinical investigations in support of his views and believes that bismuth preparations will win increasing popularity in the hands of the dermatologist and the tuberculosis specialist

87 Diathermy in Hepatic Disease

G IACONO (*Il Policlinico* Sez Prat November 2nd, 1931, p 1617) records two cases of cirrhosis of the liver in a man aged 62 and a woman aged 50 complicated by ascites in which treatment by diathermy produced absorption of the fluid On the other hand this treatment was unsuccessful in a woman aged 53 with syphilitic cirrhosis and a woman aged 65 with Laennec s cirrhosis The mechanism of the anti ascitic action of diathermy is not easy to explain but it probably consists in producing changes in the circulation This accounts for the treatment being successful in the first two cases in which the disease was comparatively recent and ineffective in the other two which were of old standing

Laryngology

88 Laryngeal Paralysis

J I FARRELL (*Arch of Otolaryngol* August 1931 p 166) reports an experimental study which was undertaken to determine why adduction instead of abduction of the vocal cords follows section of the inferior laryngeal nerves and to define the methods to pursue in its treatment Various points are discussed such as the musculature and nerve supply of the larynx the theoretical explanation of abductor paralysis previous experimental work the effect on bilateral paralysis of anastomosis of various nerves and the influence of drugs on the laryngeal muscles While the larynx has a dual innervation through the vagus and thoracic sympathetic nerves the two are not antagonistic in their action and that cervical sympathectomy causes no change in the motor activity of the cords Experiments in anastomosing various nerves to the recurrent laryngeal nerves were uniformly unsuccessful and demonstrate the slight value of this operation in human beings Drugs known to act on one division of the autonomic system do not cause any predictable change in the action of the cords Atropine does not paralyse the cranio sacral sympathetic fibres and adrenaline also fails to stimulate the cords by acting on the cervical sympathetic fibres

89 Spasmodic Vasomotor Contraction of the Internal Auditory Artery

G PORTMANN (*Rev de Laryngol d Otol et de Rhinol* August 1931 p 467) under the name of Lermoyez s disease describes an auditory symptom complex which he believed to be a morbid condition of the internal auditory artery similar in every way to Raynaud s brought to the arteries of the extremities The clinical which filled the s A patient with good hearing becomes extremely painful on rapidly very deaf and the hearing taken and released a quadrat Then there ensues a odour This was followed by a mand vertigo which is fragments of a white substance simrecovery of hearing chyma These were evacuated and lavage ms is different with drainage and irrigation of the renal area the first the patient appeared to be making a good recovery ab after the 15th day further discharge of a similar nature ensued a new tumour was felt in the lumbar region and the patient died Necropsy disclosed a sarcoma of the kidney with areas of necrosis and haemorrhagic suffusion It is suggested that in cases such as the two reported cases of Ménière s disease is the reverse sudden vaso dilatation being the first event Portmann adds that it seems probable that the essential pathology of both conditions is some dysfunction of the vago sympathetic system

90 Primary Gangrene of the Pharynx

S BARBERA (*Arch Ital di Otol Rinol e Laringol* September 1931 p 413) records four illustrative cases of primary gangrene of the pharynx one of which was in a girl and the rest in adults aged from 29 to 45 All the patients had previously been healthy Except in one case, in which it started in the gum the initial lesion appeared in the tonsillar tissue and was accompanied by considerable prostration oral fetor was a constant symptom In the first case the bacteriological findings consisted of diplococci a few chains of streptococci and Vincent s organisms recovery followed the administration of large doses of anti streptococcal serum In the next two cases the bacteriological findings were similar except that streptococci were more numerous No benefit however, was derived from large doses of anti streptococcal serum and death ensued In the fourth case bacteriological examination revealed *B perfringens* and Vincent s organisms Improvement at first followed local applications of neosalvarsan and trepol but subsequently the condition grew worse in spite of intravenous and intramuscular injections of neosalvarsan and trepol Two injections of polyvalent anti gangrene serum were then employed and rapid recovery resulted

91 After effects of Tonsillectomy

In view of the widespread opinion that tonsillectomy often has bad effects in the form of increased liability to respiratory infections atrophic pharyngitis and affections of speech E WIRTH and O LACHENIT (*Munch med Woch* November 6th 1931 p 1898) invited 200 patients who had undergone the operation in the Heidelberg throat clinic to submit to a further examination the ninety two who accepted the invitation were thoroughly pleased with the result of the operation and almost all expressed their willingness to undergo the operation again were it necessary About 20 per cent complained of various symptoms such as a tendency to catarrh and a feeling of dryness in the throat or of interference with speech or singing but in none of these patients could these symptoms be attributed with certainty to the tonsillectomy In many cases the trouble had existed before the operation while in others the symptoms were found to be due to changes in the nose and nasopharynx

Obstetrics and Gynaecology

92 Treatment of Persistent Menopausal Haemorrhage

L J CARTER (*Canadian Med Assoc Journ* November 1931 p 582) commends x-ray treatment for aggravated and persistent uterine haemorrhage especially when occurring at about the menopause and the possibility of malignant disease has been definitely excluded In 100 consecutive cases of uterine haemorrhage and fibromyomatosis the subsequent histories of 85 patients were traced and it was found that complete success had resulted in all except three instances of malignant disease The haemorrhage varied in degree but was mostly of the excessive type with sudden and profuse exacerbations Apart from fibroid changes the uterine conditions responsible included subinvolution and chronic inflammatory alterations in the adnexa Special training in radiotherapy is essential for treating this kind of case and small doses spread over a considerable time are preferable to large doses there is less consequent depression of the patient and more allowance is made for the natural recuperative recuit of the patient to play its part The patient should in good nd that a severe haemorrhage not infrequently after operatiotf series of x ray applications and occasion respectively the second series Associated pelvic

inflammatory conditions do not contraindicate this treatment as they may do in the case of radium but rays should not be employed when there are urgent pressure symptoms from a large or incarcerated fibroid tumour necessitating surgical intervention Carter agrees that radiation destroys the immature and rapidly growing fibroid cell securing its replacement by connective tissue An endarteritis is also produced locally thus shutting off the tumour blood supply and reducing the engorgement of a subinvoluted bleeding uterus Moreover there is a direct action on the ovary the Graafian follicle is destroyed or undergoes cystic degeneration The corpora lutea and the internal ovarian secretion are depressed but not abolished when the proper dosage is given The author adds that the artificial menopause following radiotherapy does not appear to differ in kind or degree of severity of symptoms from the normal climacteric

93 Induction of Labour

A MATHIEU and M S SICHEL (*Surg Gynecol and Obstet* November 1931 p 676) record observations upon the use of castor oil quinine and pituitary extract in the induction of labour and submit conclusions based on an analysis of 320 consecutive cases in private practice Of these 309 (96 6 per cent) were successful there was no increase in the maternal or foetal mortality or morbidity The procedure was found to be most successful when the head was engaged the cervix effaced and the os admitting a finger The original method was to administer two ounces of castor oil and 10 grains of quinine sulphate early in the morning this was followed in exactly two hours by a hot soapsuds enema The dose of quinine was eventually reduced to 5 grains and during the last 120 inductions the drug was omitted altogether without apparently affecting the results As the enema is about to be expelled 3 minims of pituitary extract are injected hypodermically and repeated every half an hour until labour commences Occasionally the administration of the enema starts the labour rendering it unnecessary to proceed further but if eight hours pass without any sign of success the procedure is stopped and is attempted again in 24 or 48 hours later after the patient has been given a sedative and has had some rest She should lie on her back and not be allowed to walk about during the induction There was never any evidence through out the series that the use of pituitary extract caused separation of the placenta In 23 of the cases (7 2 per cent) the temperature rose to 100 4° upon two different days exclusive of the day of delivery but in no instance did the morbidity appear to be due directly to the induction The authors consider that the method of induction saved much maternal morbidity and many foetal lives

94 Obstetrical Analgesia

J T GWATHMEY (*Anesthesia and Analgesia* November–December 1931 p 256) records conclusions based on a study of more than 20 000 cases in which obstetrical analgesia was induced His technique now comprises three intramuscular injections of magnesium sulphate each amounting to 2 c.cm of a 50 per cent solution an injection of 1 4 grain morphine sulphate given with the first injection of magnesium sulphate only and a rectal instillation of the following mixture Quinine alkaloid gr xxx alcohol mxl ether ad̄s and either liquid petrolatum or olive oil ad ℥iv Gwathmey finds that magnesium sulphate *prolongs the action* of morphine and increases its effectiveness by 200 to 500 per cent It also decreases the amount of ether necessary for general anæsthetization In 90 per cent of cases definite relief is obtained and the progress of labour is not delayed Occipito posterior positions rotate about as often as in cases not so treated post partum haemorrhage is less than when inhalation anæsthesia has been employed The use of forceps is not more necessary *and the infant* is born in full consciousness and with no depression of the circulatory or respiratory system No foetal deaths attributable to the anæsthesia have occurred The author adds that there need be no fear in using the technique in cases of contracted pelvis or disproportion between the pelvis and the foetal head where a trial labour is indicated for many normal deliveries will ensue If such is not the case the patients will be left with much more reserve strength to withstand the strain of forceps delivery or Cæsarean section There is less post-partum fatigue and consequently less morbidity Those who take the trouble to explain the procedure to the patient and thus secure her co operation will obtain even better results than others who administer the drugs in a mechanical manner

95 Pregnancy Tests

M R WHITE and A O SEVERANCE (*Journ Amer Med Assoc* October 1931 p 1275) have compared the Aschheim Zondek Brouha Friedman Bercovitz and Manoilov pregnancy tests on the same specimens of urine as far as possible and record their conclusions as follows In 191 Aschheim Zondek tests there were 20 instances in which the result did not agree with the final diagnosis there were 5 false positive reactions among 60 control patients who were not pregnant In a group of ectopic pregnancies and incomplete abortions 14 out of 29 were negative but in only one case of pregnancy was this reaction negative The Brouha reaction (in which male mice are used and enlargement of the seminal vesicles occurs in positive cases) was uniformly positive in a group of 60 normal pregnancies 10 ectopic pregnancies and 9 incomplete abortions but there were 10 false positive reactions in a series of 29 non gravid women four of these last having endometrial hypertrophy three menstrual irregularity and one tuberculous salpingitis The Friedman test was tried in 32 normal pregnancies and non gravid controls there was one error a negative result being returned in a pregnant woman on the 32nd day after the last menstrual period Of four ectopic pregnancies two gave positive and two gave negative reactions There were four incomplete abortions three of which gave positive results In the authors experience the serum test of Manoilov and the pupillary test of Bercovitz proved to be of little value as diagnostic aids They believe that the false positive reactions to the Aschheim Zondek and Brouha tests are attributable to endocrine disturbance and they add that consideration of the history will usually prevent confusion In cases of suspected normal pregnancy the Brouha test possesses distinct advantages over the Aschheim Zondek procedure in that the results are determined macroscopically and nearly mature test animals may be used The advantages of the Friedman test are that only one test animal is required and that the readings may be made macroscopically at the end of 24–48 hours The authors consider this test a dependable biological reaction and a suitable laboratory procedure

Pathology

96 Intestinal Carriers of the Tetanus Bacillus

G E COLEMAN (*Amer Journ Hygiene* November 1931 p 515) has endeavoured to confirm Tenbroeck and Bauer's work on the immunity of intestinal carriers of the tetanus bacillus to tetanus These workers found that 34 7 per cent of persons examined in Peking excreted stools containing tetanus bacilli that the serum of 26 intestinal carriers of the tetanus bacillus examined contained antitoxin and that guinea-pigs fed on tetanus spores freed from *adherent toxin* by washing not only became intestinal carriers (74 per cent of animals) but might also *develop antitoxin* and type specific agglutinins The present author has carried out a number of experiments on *guinea pigs* and finds that they neither become permanent carriers nor develop antitoxin or agglutinins Animals fed on spores *do not* appear to develop any immunity to tetanus they are as susceptible as control animals to the intramuscular inoculation of spores These experiments therefore lend no support to the view that intestinal carriers develop an acquired immunity to tetanus

97 Calculous Formation in Gonococcal Pyelitis

Quoting various authorities in support of his premisses I MIHALOVICI (*Journ d Urol* October, 1931 p 305) states that the formation of renal calculi requires the following predisposing conditions There must be a surface on which colloids can flocculate it may be a foreign body such as a fragment of bone or projectile parasites or eggs of parasites epithelial desquamations clot of blood precipitate of fibrin or a piece of detached mucus Any denuded surface produces pathological exudations which conduce to the precipitation of colloids Under the influence of colloids any crystalloid substance in normal or pathological urine changes its form into spheroids and finally forms calculi Microbic infection produces the same changes in the formation of crystals Rabbits fed on sodium oxalate have produced an oxaluria in octahedral form Injections of *B coli* changed the octahedra into spheroids which by agglutination formed calculi The most important predisposing cause in the formation of calculi is any retention which hinders the elimination of sediment A case is quoted of a man aged 24 who came to hospital with a gonorrhoeal discharge After 19 days of local treatment he complained of pain over the left lumbar region dysuria and slight haematuria These symptoms directed attention to the possibility of a calculus lodged in the ureter He was treated by daily injections of Gobey's uroformine and belladonna suppositories At the end of five days he passed a calculus the size of three quarters of an olive stone After this the urine which still contained gonococci gradually cleared until after 62 days the patient was cured This case according to Mihalovici appeared to fulfil all the necessary conditions except retention Two months later pyelography revealed the left ureter with an ampullary dilation just after it left the renal pelvis it gradually diminished for about 15 mm and then it became normal in size and changed its direction Ureteral catheterization revealed a stenosis at the level corresponding to the change of direction of the ureter In this case the gonococci had apparently provoked an alteration in the renal tubules which had upset the colloidal equilibrium of the urine and thus had produced the transformation of the crystals into microliths These by agglutination had produced the calculus Probably this formation took place in the upper dilated portion of the ureter

98 The Suprarenal Glands and Arterial Tension

A BIASOTTI (*Rev Sud Amer de Med et de Chir* September 1931 p 881) after reviewing the contradictory results of previous work on the suprarenal glands decided to study the subject anew with the additional precaution of only performing experiments under strictly physiological conditions Observations on the animals were not made when in a state of anaesthesia and they were postponed as long as possible after surgical interventions Only quiet dogs were used and the pressures were estimated by the pulse and the mercury manometer It was found that unilateral and bilateral denervation of the abdominal sympathetic and both splanchnic nerves produced very little result There was a slight fall of the arterial tension in some of the bilateral cases Extirpation of one gland or removal of its medulla produced insignificant effects but excision of the second gland after two or three weeks caused a marked early fall which gradually settled down at about 50 to 70 mm Hg Most of the dogs were dead on the fourth day Dogs deprived of one gland and of the medullary part of the other side showed a preliminary fall to about 30 to 40 mm Hg but after three or four weeks the pressure rose again to normal level If these dogs were then bled to 1·5 per cent of their weights the pressure fell lower and persisted longer at the low level than in normal and similarly bled control dogs Asthenia and hypotension of the vasomotor system with diminution of the normal functional capacity were also noticed After denervation of the abdominal sympathetic system and demedullization of the glands the arterial tension fell about 50 to 40 mm Hg where it remained for three to four weeks before again rising to the normal In these dogs the adrenaline content of the remaining glandular substance was found to be 40 to 50 times less than in normal glands

99 The Influence of Insulin and Adrenaline on Carbohydrate Metabolism

A B CORKILL (*Med Journ of Australia* October 17th 1931 p 477) describes a series of experiments on young rabbits, in which the percentage of liver glycogen was found to be very constant after twenty four hours' starvation Insulin injection causes deposition of the liver glycogen and depletion of the muscle glycogen adrenaline can produce identical effects In view of the work of Cannon and others who have shown that insulin hypoglycaemia leads to accelerated adrenaline output Corkill suggests that the deposition of liver glycogen following insulin injection is due to a secondary output of adrenaline He defines a hypothetical "cycle" adrenaline administration is followed by breakdown of the muscle glycogen into lactic acid and this is converted again into glycogen in the liver becoming available as glucose in the blood In the experimental work the administration of any insulin to a normal animal constitutes an overdose hence the apparently contradictory finding of insulin and adrenaline producing similar effects can be explained if it is assumed that hypoglycaemia calls at once for increased adrenaline production

100 Calcium Distribution in Epilepsy

S KATZENELBOGEN (*Journ Nerv and Ment Dis* November 1931 p 636) discusses the calcium distribution between the blood and spinal fluid in epilepsy and also the carbon dioxide content of the blood His conclusions are based on the study of 117 patients and do not support the view of there being any basic relation between epilepsy and tetany Thus the alkali reserve determined in 41 patients ranged between 54 and 74 the extreme normal limits the blood calcium figures were also normal and the spinal fluid calcium figure fell within 4·3 to 5·8 mg per cent It was below normal in one case and above it in two out of the 86 cases examined The spinal fluid and blood calcium ratio fell within the limits 46 to 65 ratios which might be considered high normals were found in seven instances and ratios distinctly above the normal in four No relation could be traced between these calcium findings and the mental state of the epileptic patients nor were these findings influenced apparently by the incidence and frequency of convulsions in so far as the fits occurred within two days before the blood and spinal fluid were withdrawn The high spinal fluid/blood calcium ratios in 11 out of 86 cases and the absence of any cases with low ratios suggest that there is in epilepsy a tendency to an increased permeability to calcium of the barrier between the blood and the cerebro spinal fluid

101 The Urinary Protein in Nephritis

W A THOMAS (*Journ Amer Med Assoc* October 10th 1931 p 1055) considers that the old view of the role of the kidneys in nephritis must be modified and that these organs stand in a secondary relation to the tissues in this disease The clinical picture of nephritis is due largely to generalized and specialized tissue damage and to disturbance in tissue metabolism and mineral balance rather than to lack of renal function and retention of waste products and water The kidney normal or diseased exerts a selective action on the blood proteins retaining those normal to that body and excreting those foreign to it Experimental nephritis and uraemia may be produced in dogs by the intravenous injection of 5 per cent sodium chloride solution The urinary protein in these experimental uraemias is at first pure tissue protein recently the protein has been split to a toxic stage With [illegible] combined with serum protein which combination [illegible] foreign protein and is excreted as such The [illegible] protein in the urine is a detoxicating

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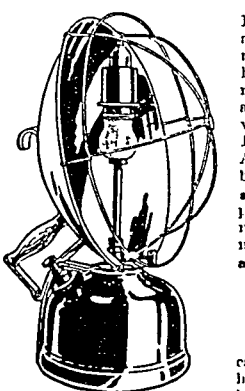
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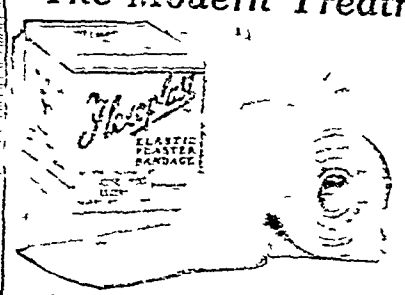
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British Medical Journal

CONTENTS

JANUARY 30, 1932

ORIGINAL ARTICLES

The Significance of Haematuria By Henry Wade, M.D., F.R.C.S.Ed. 177

The Stroke in High Arterial Pressure By H. O. Gunewardene, M.B., L.S. (With Charts) 180

Convalescent Serum in Prophylaxis of Measles, Chicken-pox, and Mumps By William Gunn, M.B. 185

Lead Poisoning as a Cause of Peptic Ulcer By David R. Lewis, M.D. 185

Gangrene Due to Embolus of Inferior Mesenteric Artery By P. P. Brown, M.R.C.S., and M. M. Den, M.B. 186

Immediate Pneumococcal Typing By R. R. Armstrong, M.D., F.R.C.P. 187

A Direct Method of Typing Pneumococci By W. R. Logan, M.D., F.F.C.P.I., and J. F. Smeath, M.B. 188

MEMORANDA

Gas Gangrene Complicating Obstructed Labour. By J. E. Church, M.R.C.S. 189

Subarachnoid Haemorrhage with Glycosuria and Hemiplegia. By A. C. S. Coupe, M.D. 190

Meningitis Due to *B. anthracis*. By W. K. Dunscombe, M.D. 190

REPORTS OF SOCIETIES

Royal Society of Medicine—Raw Milk and Dental Caries 190

Liverpool Medical Institution—Reticulo-Endothelial System 191

Brighton and Sussex Medico-Chirurgical Society—Common Cutaneous Symptoms 192

British Institute of Radiology—Protection for X-Ray Workers 192

Aberdeen Medico-Chirurgical Society—Demonstration of Cases 193

Royal Academy of Medicine in Ireland—Solitary Renal Cyst 194

REVIEWS

Etiology of Cancer 194

[illegible] 194

[illegible] 195

The Nature of Disease 195

Notices of Books 195

LEADING ARTICLES

Instrumental Methods in Cardiology 199

Lighting and Vision 200

THE WEEK

Diagnosis of Malignant Prostate 201

Small-pox 201

George Crabbe—the Poet 202

The Empire's Debt to Medical Research 202

Lathyrism 203

Vitamin and Radium Protection 203

Sir Alfred Yarrow 203

GENERAL ARTICLES AND NEWS

The First Hundred Years Notes on the History of the Association *(Illustrated)* 204

Intelligence and Disease: A Survey of Glasgow Children 206

International Public Health 207

Certification of Blindness: Report of the Prevention of Blindness Committee 208

Preparations and Appliances (Illustrated) 197

Medical News 220

LOCAL NEWS

New South Wales—Royal Prince Alfred Hospital 210

Metropolitan Hospitals Contribution Fund 210

The State Lotteries 211

Switzerland—The Levsin Factory Clinic 211

Health Resorts and Sanatoriums 211

England and Wales—Colston Research Fellowship 211

Coast Resorts Conference 212

Scotland—The Medical Curriculum 212

Edinburgh C[illegible] 213

Edinburgh 213

Opening of [illegible] 213

Glasgow Victoria Infirmary 213

Farquhar Thomson Lectures 213

OBITUARY

Frederick Pichard Fisher, F.R.C.S. 218

[illegible] E. Walker, F.R.C.S.Ed. 218

[illegible] S. Elli, M.R.C.S. 219

MEDICO-LEGAL

Medical Man Acquitted on Charge of Manslaughter 219

CORRESPONDENCE

Ear Complications of Influenza. By John F. O'Malley, F.R.C.S. 214

Treatment of Scalp Ringworm. By Edward Freeman, M.D., F.F.C.P.I., and E. Dudley Grigsby, M.B. 214

Asthma Statistics. By H. C. Crum, M.D. 215

Undulant Fever in the British Isles. By Sir W. Dalrymple Champneys, D.M. 215

Vaccinia in Dairy Workers. By J. Norman Cruickshank, M.D. 216

Colporrhaphy for Prolapse. By E. Heketh Roberts, F.R.C.S.Ed. 216

Suction Surgery. By P. J. Clausen, M.B. 217

Child Guidance Clinic. By C. J. C. Earl, M.I.C.P.I. 217

The Tuberculosis Problem. By W. Camac Wilkinson, M.D., F.F.C.P. 217

Deaths Associated with Anæsthesia. By Bessie E. Cook, M.B. 217

Imhotep. By T. Gerald Garry, M.D. 217

Medical Conditions in Soviet Russia. By P. H. Elliot, M.D., F.R.C.S. 218

UNIVERSITIES AND COLLEGES

University of Oxford 220

[illegible] 220

[illegible] 220

Ireland 220

LETTERS AND ANSWERS

Income Tax 222

Treatment [illegible] 222

Goethe and [illegible] 222

Sex Equality 222

Silver Wire as Drain in Cerebral Abscess 222

An Obstetric Calculator 222

VACANCIES 222

(See also page 35 of SUPPLEMENT)

The SUPPLEMENT contains

British Medical Association—Centenary Meeting: London Officers of Sections

National Eye Service—National Ophthalmic Treatment Board: List of Service Centres

Current Notes—Appointments with Investment: Annual Meeting of the C.M.A.

Association Notices: Vacancies and Appointments: Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Churchill J & A
Ball & Evans—Dis. of the Kidney 3
Bjorksten F —
Gymnastic for Women & Girls 3
Brig G W —Allergy 3
Burn J H —Materia Medica 3
Cameron A T —Biochemistry 3
Cam 3
Clar 3
Clay 3
Con 3
Dible J H —Bacteriology 3
Duke Elder W S —Refraction 3
Fonweather F S —
Clinical Chemical Pathology 3
Gla tone S —Physical Chemistry 3
Harrison G A.—Clinical Medicine 3
Hawk & Bergeim—
Physiological Chemistry 3
Holder J T —Histol Technique
for Animal & Plant Tissues 3
3
3
Blood Diseases 3
Rogers & Megaw—Tropical Med 3
3
3
3
3

Constable & Co
Sinclair M —Fractures 4

ewis H K & Co Ltd
Clinical Journal 4

Wright & Sons Ltd
Short A R —Index of Prognosis 4

ASSURANCE COMPANIES—
Medical Insurance Agency 49

BANKS—
Midland Bank 34

BOOTMAKERS &c —
Holland & Son—Foot Support 36

BRASS NAME PLATES &c —
36
32
4
36

SURGICAL APPLIANCES—
Aerograph Co Ltd —Nose Spray 33
Allen & Hanburys Ltd —
Lond Hospital Catgut 30
Armour & Co Ltd —Ligatures 19
Arnold & Sons—
32
36
32
Ferri J E Ltd —
32
36
32
32
33
33
43
34
5
31
25

CHEMISTS &c —
Allen & Hanburys Ltd —
Byno 24
Castor Oil 4
Eulaxase 23
Insulin A B 7
Boots Products 9 11
British Drug Houses Ltd —
Insulin A B 7
Radiostoleum 11
Burroughs Wellcome & Co —
Benutin 27
Carnrick G W Co —
26
6
29
6
Anonal 15
Hough Hopkinson & Co Ltd —
Formasal & Arthritone 10
Kaylene Ltd —Kaylene oil 16
Martindale W —
Preparations 6
Sternles 17
Matthews Labs Ltd —Sterilla 34
May & Baker Ltd —
Planocaine 8
Soneryl 21
Menley & James Ltd —Pyridium 12
Newbery & Sons Ltd —
Coverall 9
13
7
17
14
13
10

DEBT COLLECTION—
British Medical Protection Society 32

FOOD PREPARATIONS—
Lactogen 20
Trufood Ltd —Humanised Trufood 7
Valentine's Meat-Juice 14

PRINTING & STATIONERY—
Bar lock & Barlet Typewriters 48
Hamiltons—Medical Stationery 4
Taylor's Typewriters 32

TAILORING & UNDERCLOTHING—
Burberrys Ltd —Sale 4
Gamages—Sale 35
Hall H —Medical Service Dress 48
Regent Dress Co —Tailors 32

TOBACCO & CIGARETTES—
Player's Navy Cut 35

TRANSLATIONS TYPEWRITING—
Radford B —Typewriting etc 47

VACCINES & CULTURE MEDIA—
Allen & Hanburys Ltd —
Vaccine etc 22
Duncan Flockhart & Co —
Vaccines 12
Laboratories of Pathology & Public
Health 36

X RAY & ELECTRO MEDICAL APPARATUS—
Portable X Ray Ltd —
X Ray Car Service 4

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
APPOINTMENTS 43

HOSPITAL &c VACANCIES—
Ashford Hospital 43
43
44
43
45
43
44
43
43
44
43
43
43
43
44
43
43
43
43
44
44
44
44
44
43
43
43
43
44
43
43
43
43
44
44
43
45
43
43
44
43
43
43
44
44
43
42
45
43
44

HOSPITAL &c FURNITURE—
Furniture &c Depositories Ltd —
Second hand Furniture 34

HOUSE AGENTS—
Bedford & Co 48
Elliott Son & Boyton 47

MOTOR CARS TYRES &c —
Second hand Motors for Sale 48

HOTELS & HEALTH RESORTS—
Clifton Hotel 36
Cora Hotel 36
Margate 40

HYDROS & PRIVATE HOSPITALS—
38
38
39
38
38

SANATORIA—
Cotswold Sanatorium 40
40
40
40
40
40

HOMES & ASYLUMS—
47

INEBRIETY—
Bay Mount Paignton 53
Caldecote Hall near Nuneaton 53
Dalrymple House, Rickmansworth 53
Old Hill House Chislehurst 53

MEDICAL SCHOOLS &c —
City of London Maternity Hospital 42
42
41
43
41
41
43
41
42
41
41
43
41
43
41
43

J. & A. CHURCHILL

NEW BOOKS

DISEASES OF THE KIDNEY
E. W. GILLINGHAM, F.R.C.S., Surgeon, St. Bart's Hosp., and GEOFFREY EVANS, M.D., F.R.C.P., Physician, St. Bart's Hospital. 8 Col. Pl. and 159 Text figures. 36s.

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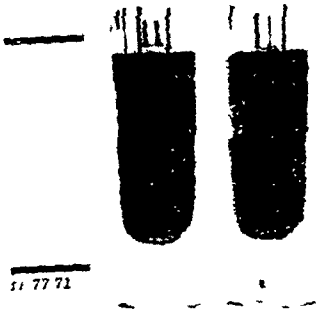
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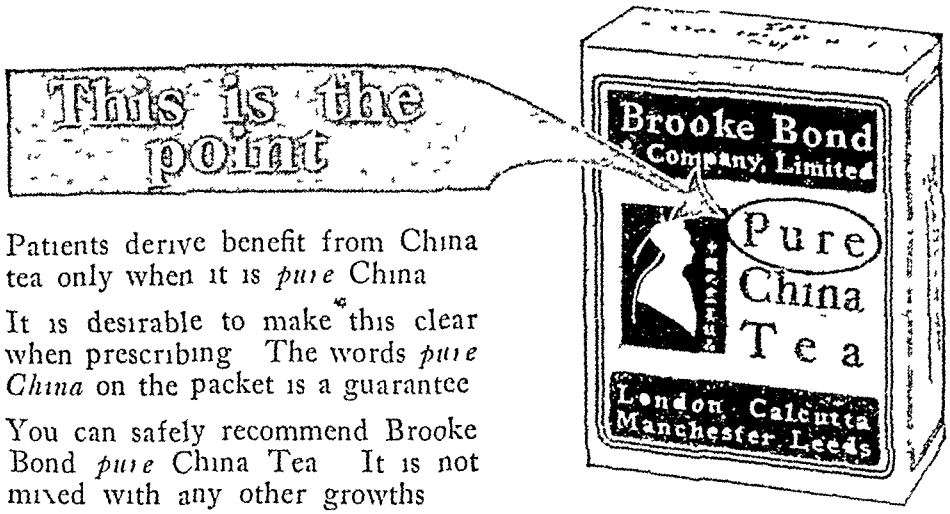
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Congestion Causes Pain

* * * * Congestion causes pressure and pressure causes pain That is what brings the patient to the doctor

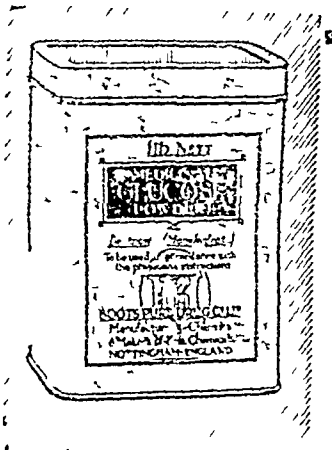
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Rheumatoid Arthritis, Fibrositis, Muscular Rheumatism, and Neuritis

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(SULPHARSPHENAMINE)

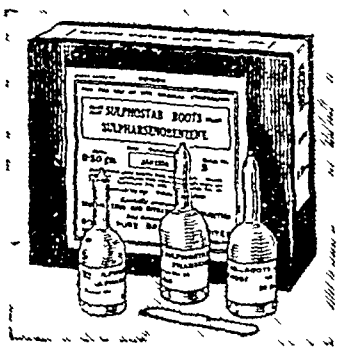
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In seasonal epidemics

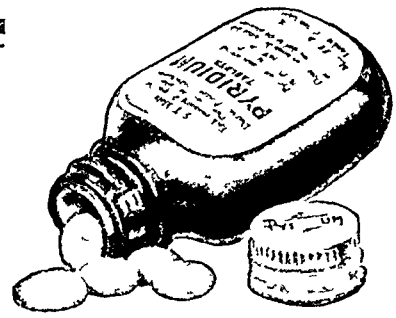
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PYRIDIUM has all the qualifications of an ideal urinary antiseptic it is chemically stable, it is non-toxic and non-irritating, it exerts an antiseptic action in high dilution in either acid or alkaline urine, it is easily and gradually eliminated in the urine in sufficient concentration to exert a continuous local antiseptic action, it is administerable by mouth Pyridium exerts more than a local effect—it penetrates the tissues, reaching the submucous areas ordinarily inaccessible to therapeutic agents

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FOR PROPHYLACTIC AND THERAPEUTIC USE

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Prophylactic
3 doses

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It remains perfectly sterile and stable under adverse conditions

It is the ONLY anaesthetic which can be injected into infected areas

Its Bactericidal Potency destroys bacteria rapidly

It is absolutely NON-TOXIC and NON-IRRITATING

It gives rapid and lasting anaesthesia

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It is economical in use

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Contains 50% recently refined Cod-Liver Oil of high vitamin content

Maximum vitamin efficiency ensured by freshness of preparation every week

Fresh eggs used in the making enhance nutrient value

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IN the Treatment of Weak Babies, in the Gastric and Enteric Troubles of Infants and in the Wasting and Febrile Diseases of Children, the Ease of Assimilation and Power of Valentine's Meat-Juice to Sustain and Strengthen has been Demonstrated in

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The quickness and power with which Valentine's Meat-Juice acts, the manner in which it adapts itself to and quiets the irritable stomach, its agreeable taste, ease of administration and entire assimilation recommend it to physician and patient

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and Respiratory Diseases

In the treatment of respiratory diseases in young or old Doctors will find HORLICKS MALTED MILK a valuable dietetic aid

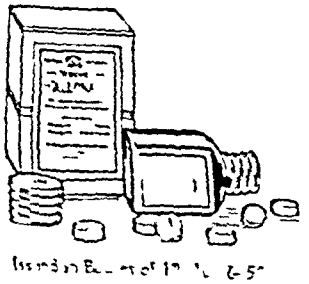
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'allonal' Analgesic and Hypnotic

for Pain & Insomnia!



Sedative —1—2 Tablets.

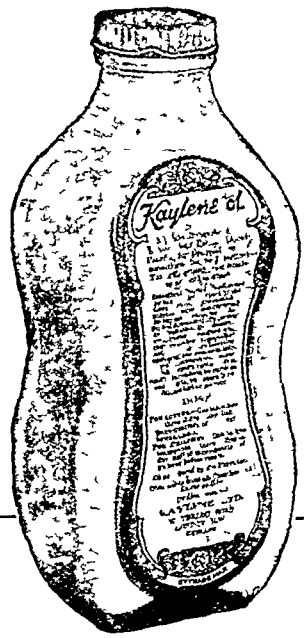
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Kaylene-ol detoxicates the saliva and discharges inevitably swallowed when the local lesion is in the nose or throat.

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DINNEFORD'S is immensely useful in the n
mixed with infants' food it prevents many of t
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Ample supplies of Novocain are available for the use of Surgeons at all the chief Hospitals Specify "Novocain" for your next operation.
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LITERATURE ON REQUEST

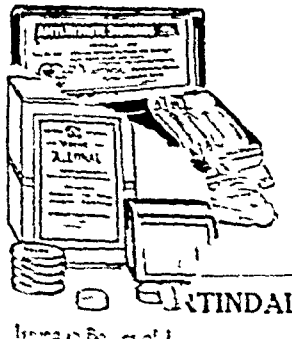
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FOR HYPODERMIC, INTRAMUSCULAR AND INTRAVENOUS USE AND FOR INHALATION.

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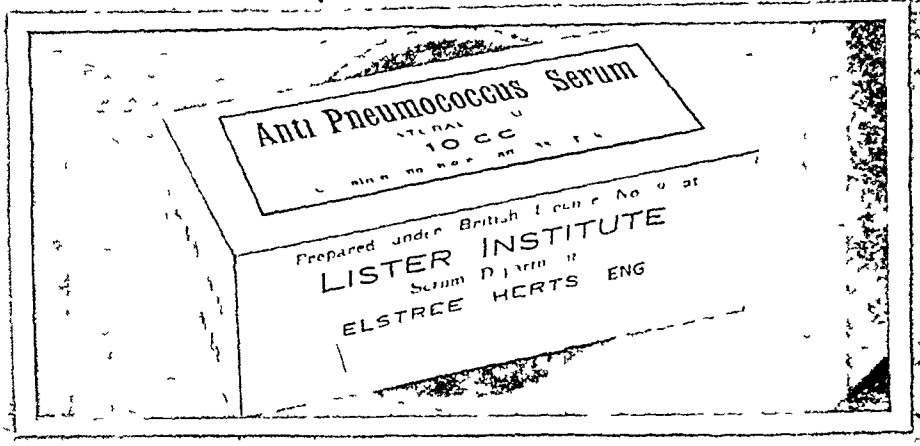
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Composed of Staphylococcus Aureus and Bacillus Acnes
1 c.c phials supplied in various strengths.

Anti-Dysentery Serum (Multivalent)
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In phials containing 235, 470 940 and 1 880 million organisms per c.c.

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In phials of 500 1 000 2,000 4 000 6 000 8,000 and 10 000 units

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In phials of 1 000 3 000 10 000 16 000 and 20 000 units (1 000=500 U S A. units)

Staphylococcus Vaccine (Mixed)
(Aureus, Citreus and Albus)
In phials containing 500 1 000 and 2,000 million organisms

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In phials containing 500 1 000 and 2,000 million organisms

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A descriptive pamphlet, issued under the Authority of the Governing Body of the Lister Institute, will be sent on request

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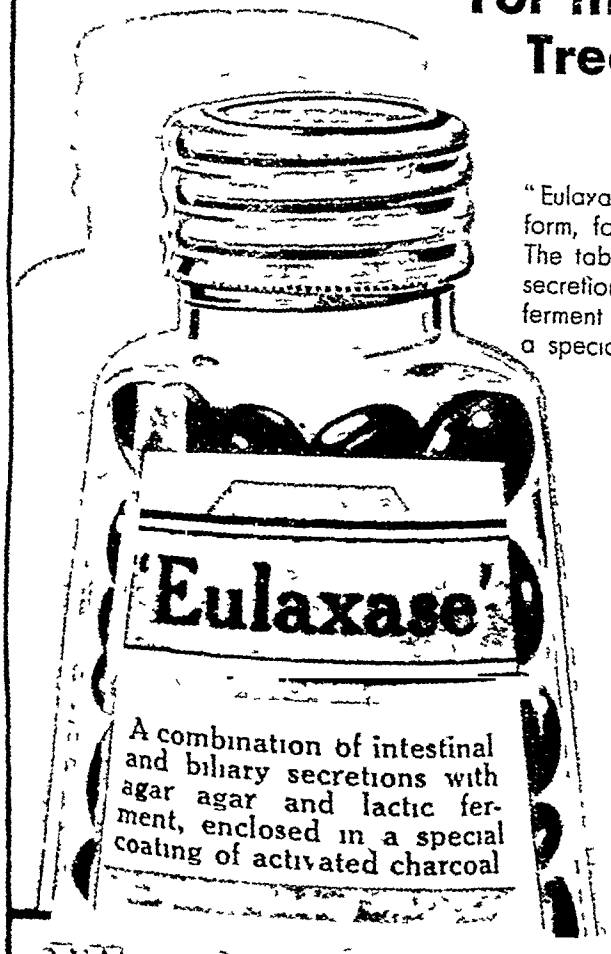
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"EULAXASE"

For the Rational Treatment of Constipation



"Eulaxase" is a new preparation, in tablet form, for the treatment of constipation The tablets contain biliary and intestinal secretions, with agar-agar and lactic ferment (bacillus acidophilus), enclosed in a special coating of activated charcoal

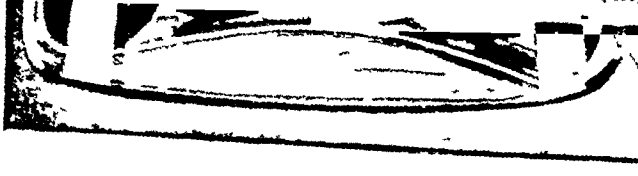
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In bottles of 60 tablets for prescribing, and 600 tablets for dispensing

Descriptive leaflet and clinical trial sample will be sent on application

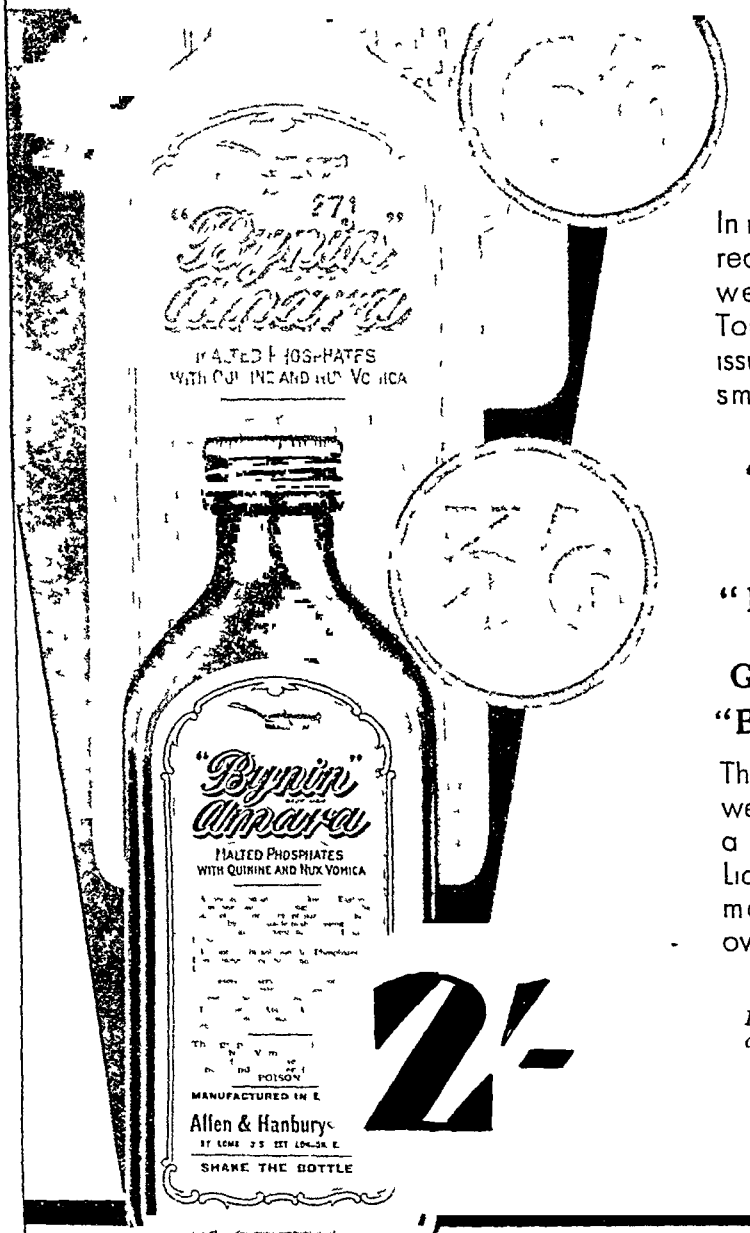
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In bottles containing 60 tablets 2/6

A New Size "BYNO"



2/-

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"Bynin" Amara
"Byno" Hypophosphites
"Byno" Phosphates
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These tonics consist of well-tried formulæ with a basis of "Bynin" Liquid Malt, which has marked advantages over the syrups often used as vehicles

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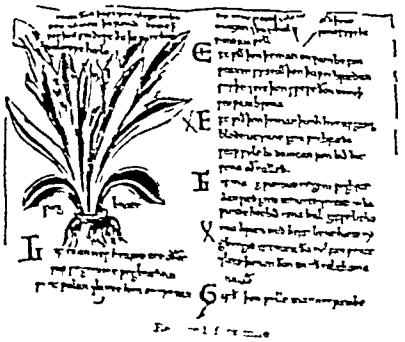
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THE SIGNIFICANCE OF HAEMATURIA*

BY

HENRY WADE M.D. F.R.C.S.ED.

SURGEON TO THE INFIRMARY EDINBURGH

When blood is seen in the urine it is not wise to belittle its presence. Its cause may be simple and its cure easy, but on the other hand it may ultimately end in the patient's death after a period of extreme misery and suffering.

When your patient asks you what the bleeding is due to tell him frankly you do not know. At the same time you can reassure him that after further examination for which no anaesthetic general or local, will be required and during which no serious discomfort will be felt by him an exact diagnosis can be made followed by appropriate treatment. Refuse to treat any patient for haematuria from an unknown cause and also resist the temptation to reach a diagnosis by an incomplete examination as by a simple *x* ray examination the analysis of the urine or by other means.

IMPORTANCE OF CLINICAL HISTORY

At the outset get permission for a complete and full investigation in every case. Later I will suggest a scheme of examination but at present I wish to emphasize that although you employ these exact methods their use does not diminish the importance of a most careful clinical investigation by which it is often possible to obtain a provisional diagnosis which will frequently prove to be accurate.

Let the patient tell his story. If blood has appeared in the urine suddenly painlessly and profusely in one who was previously in perfect health it is safe to assume that the cause is a villous papilloma of the bladder. I have a letter from a patient in which he says: *I drove over rocks in a jolting farm cart for half an hour yesterday with the result that my urine was full of blood the colour of port. It became normal in a few hours but I suppose this means that I have stones in my bladder.* Further investigation proved his clinical diagnosis to be correct and later he was successfully operated on for vesical calculi.

Sometimes the story the patient gives appears to be typically that associated with a villous papilloma of the bladder. He claims that previously he has been in perfect health and suddenly painlessly and profusely haematuria develops from no apparent cause. On examination however you will find that he is about 50 years of age shows evidence of early arterio-sclerosis and has a high blood pressure: the cause is ultimately found to be spontaneous rupture of a blood vessel within the bladder wall.

The source of the bleeding can be inferred not infrequently from the clinical examination. If the patient's linen is blood-stained observe whether blood clot is present at the meatus urinarius and inquire whether the bleeding occurred independently of the act of micturition. If so it is urethral in origin. When this occurs the patient is naturally alarmed. Although I have observed several such cases I have never yet had one that proved serious. I have noticed it in the healthy male young man who on it was found to be due to the congestion of the vein o trauma. In the old the male I have also seen it where it was p to take it on, and subsided naturally. It is important to discover if the bleeding occurs at the

* Delivered at the Newcastle-on-Tyne Branch, November 10th 1931.

end of micturition or is present throughout the entire act if at the end it occurs when the bladder base is being compressed and is frequently due to a localized inflammation of that part (a trigonitis) or comes from the ulcerated surface of a prostate which is the site of intravesical herniation. Examine the urine for the presence of clots and if thin pencil clots are present these having been formed in the ureter there is a strong suspicion that the primary haemorrhage has been renal—possibly a hypernephroma exists.

Malignant disease of the bladder never gives rise to painless haematuria whereas innocent tumours produce characteristic painless bleeding. The bleeding in malignant disease is usually associated with suprapubic discomfort and perineal uneasiness. It is scanty in amount persistent intermittent and is accompanied by frequency. Bleeding due to stone in the bladder occurs especially after exercise. It is thus more evident in the evening and absent in the morning urine. If the bleeding becomes profuse after a bimanual examination, the presence of a malignant ovarian tumour adherent to the roof of the bladder is suspected. When a patient suffers from tuberculous disease of the kidney he seldom seeks advice until the bladder is involved. The initial complaint in over 75 per cent. of more than 200 cases I have examined has been frequency of micturition. Occasionally the initial complaint may be haematuria.

The association of renal colic and haematuria usually indicates the presence of a mobile renal calculus and the larger the stone the fewer the symptoms. The fixed arborescent renal calculus may cause renal neuralgia but not colic. Vigorous exercise in such a case however, may demonstrate occult blood when the urine is examined microscopically. It is customary to assume that renal colic in the absence of haematuria is due to intermittent hydronephrosis but this is not an invariable rule. Occasionally intermittent hydronephrosis may be associated with severe haematuria. If blood in the urine first appears painlessly and later is associated with mild renal colic the latter may be caused by the presence of clotted blood in the renal pelvis and this may be due to a tumour or more probably to a hypernephroma. In such a case examine very carefully for pencil-like clots in the urine. Renal haemorrhage may also be caused by a villous papilloma of the renal pelvis or may be accounted for by essential haematuria. The possibility of renal infarction or tumour of the ureter as the source of bleeding has to be borne in mind. Haemorrhage is also occasionally met with in the later stages of congenital multiple cystic disease.

PHYSICAL EXAMINATION

When the patient has told his story the physical examination is proceeded with and further valuable information about the source of the bleeding is often obtained. If one kidney is made out to be palpably enlarged what does this signify? Perhaps he has only one functioning kidney a condition which in my experience occurs in one in every hundred persons. The other kidney may be diseased and the enlarged kidney may be healthy—the site of compensatory hypertrophy. The enlargement may be due to tumour or to other diseases that cause bleeding.

The commonest cause of bilateral enlargement is congenital multiple cystic disease a condition in which the kidneys are enlarged by many cysts. The amount of renal tissue is however markedly diminished and the renal reserve perilously low. In these cases haematuria sometimes occurs or even bleeding from the bowel may take place and the surgeon in attendance may be tempted to perform a hasty operation without complete examination. Even an exploratory operation in such cases may be followed by fatal consequences.

OTHER METHODS OF EXAMINATION

The routine side room examination is now carried out Is it possible to determine the presence of a tumour or even its nature from the examination of a cellular deposit present in the urine? I have never known this prove a success except where a portion of a villous papilloma has been detached after instrumental examination

Although it is wise in every case of urinary disorder to commence the examination by taking a plain x ray photo graph of the entire urinary tract this very seldom indicates the source of the bleeding when haematuria is present Its origin can only be recognized by using the cystoscope an examination which if carefully carried out should cause the patient no appreciable discomfort and be devoid of all risk In my experience the best anaesthetic is to employ an instrument of a small enough calibre to give no discomfort when it is being passed into the bladder

HAEMORRHAGE FROM THE BLADDER

Villous Papilloma—If a simple villous papilloma is present there is observed a structure closely resembling a small oak tree growing from the healthy mucous mem brane of the bladder It has a squat and sturdy stem with branches from which delicate villi hang waving in the clear fluid In such a case you can confidently promise cure You can tell the patient that this can be obtained without the use of an anaesthetic without causing pain and without the loss of a day's work It will be effected by fulguration or the destruction of the growth by high frequency d'Arsonval current Two or possibly three treatments may be required and a routine follow up of his case should be insisted on In carrying out the treat ment remember that the growth itself is insensitive but that the adjacent mucous membrane is tender There are however cases of villous papilloma where the solution of the problem is not so simple In some of them careful inspection round the base of the growth may reveal an area of granular congestion From this "brushwood" area daughter tumours readily spring In such a case I would recommend that the treatment be carried out under a general anaesthetic and the brushwood area fulgurated and the tumour destroyed

The observation of a simple villous papilloma on the bladder wall does not necessarily prove that it has been the source of the bleeding and this emphasizes the impor tance of investigating the case where possible when the bleeding is active Examine also the ureteral orifices care fully and see if blood stained urine is escaping from either channel if so it is probable that the tumour observed in the bladder is a secondary implantation from a primary villous papilloma in the renal pelvis

Sometimes in an older patient a tumour is seen where the stalk is more sessile and the villi are fused to form a crocodile-hide like surface In this case a malignant papilloma is present It may appear wise in such circum stances to remove a portion for examination to confirm the diagnosis this is easily done The portion obtained however is usually from the summit and histologically it may be innocent as the malignant changes are first evident at the base of the growth In such a case I would recommend the operation of cystotomy and careful removal of the growth care being taken to avoid implant ing tumour cells and further fulguration of its base

Lastly in cases of villous papilloma you may be tempted to achieve too much by transurethral fulguration if the growth is very large or if there are numerous tumours If it is large and is destroyed at one treatment the slough which results if not voided readily forms the nucleus for a vesical calculus If the growths are numerous the patient's endurance may be tried unduly by the number of treatments necessary Open cystotomy followed by fulguration gives the best results in these cases Similarly if the small tumours form a ruff round the vesical outlet, their destruction by transurethral treatment is most difficult and in these cases I would also recommend cystotomy

When the haematuria is due to a ruptured vein on the bladder wall, this is observed as a stream of blood passing like smoke into the clear medium filling the bladder cavity In such a case a natural arrest of haemor rhage may be confidently anticipated saline or boric lotion, at a haemostatic temperature is helpful

Malignant Tumour—The appearance of a primary malignant tumour of the bladder is characteristic, and is exactly comparable to that seen in a malignant tumour of the bowel when laid open for inspection The observa tion of such a growth within the bladder indicates the necessity of operative treatment The nature and the extent of that treatment however I am not prepared to determine until the bladder is opened If the growth should be observed on the summit of the bladder there is a possibility that it may be due to invasion from a tumour originating within the abdominal cavity such as a growth in the bowel A subsequent barium enema examination is indicated in such cases It is only when the bladder is opened that the extent of invasion can be accurately determined by touch and the degree and nature of infiltration of the neighbouring parts estimated If neither ureter is involved, a partial cystectomy is performed if one ureter a hemicystectomy If both are implicated, a serious problem presents itself for it is probable that both kidneys are damaged in con sequence of the involvement of the lower end of the ureters in the spread of the growth along the cellular tissue outside the bladder If nothing is done the patient is condemned to a life of increasing misery and ultimately an extremely painful death Radium so valuable in treating malignant disease in other regions of the body has been tried in these cases It is not a cure it does not afford relief The palliative operation of ureteral trans plantation might be assumed to give relief, in fact it has been advocated with this object in view I regret to say it does not relieve the patient from the recurring painful spasmodic vesical contractions for these are not due to the presence of urine in the bladder cavity but to nature's effort to expel the tumour invading its wall To obtain relief the ureteral transplantation must be followed by total cystectomy an operation I have per formed successfully in a number of cases in three stages A single stage operation is the ideal we are aiming at but so far it has not been achieved Lastly in those cases where even total cystectomy is impossible there still remains the question of alleviating the patient's suffering by sympathetic denervation of the bladder This operation is being tried out, and I am sure will be freely employed in the near future I am hopefully and con fidently looking to Learmonth's work in this direction

Prostatic Hypertrophy—In cases of simple prostatic hypertrophy bleeding is not uncommon It is usually due to an ulcerating patch on the summit of an intravesical herniation of the gland, but not always It may be due to an associated villous papilloma or result from the presence of a stone It may even be renal in origin This last cause was illustrated in a most dramatic manner in a case that came under my care The patient was 64 years of age with a history of simple prostatic hyper trophy Recently he had suffered from occasional haematuria A cystoscopic examination was carried out 6 ounces of residual urine was found to be present and the prostate gland showed marked intravesical herniation but no ulceration over the projection of the summit of the gland into the bladder cavity Over this mound the ureteral orifices could just be seen and careful observa tion showed the escape of slightly blood stained urine

from that on the right side. Ureteral catheterization was carried out with considerable difficulty owing to the intravesical protrusion. Pyelographic examination showed on the right side, signs of an early carcinoma involving the middle of the kidney, and naturally this was first of all dealt with. When exposed by operation the kidney appeared normal in every respect except that its consistence was firmer in the middle. Confident, however of our pyelographic findings we performed a nephrectomy and section showed an early epidermoid carcinoma in the situation diagnosed, obliterating the middle calyx as had been demonstrated pyelographically. Subsequently the prostate was treated. A better demonstration of the value of a routine cystoscopic examination in all cases of prostatism, and of the importance of localizing the source of the bleeding in all cases of haematuria would be difficult to find.

Bilharziasis.—Fortunately in this country bilharziasis is not endemic. It is met with especially in Egypt where 75 per cent. of the workers in the field, the fellaheen, are infected with this disease and all of these in their day pass red water and as youths may take pride in the depths of its tint. Although initially not distressing it is a dire and persistent disease with most serious ultimate consequences. During the war in the East a number of men were sent home infected with this ailment and as a possible cause of haematuria it has to be borne in mind when the patient has lived in a country where the condition is endemic. Examination of the urine may fail to reveal the ova. On cystoscopic examination however they are easily recognized. In the earlier stages they are seen on the bladder wall as minute sago points of a chalk like colour which are surrounded by a vascular ring. In a later stage of the earlier phase characteristic bilharzial granulations are observed. Fortunately by treatment with tartar emetic introduced by Christopherson good results are now being obtained.

Tuberculosis.—Haematuria due to tuberculosis of the urinary tract is usually vesical in origin and is due to bleeding from active tuberculous ulcers. There is usually a history of antecedent pyuria, some dysuria and frequency of micturition but occasionally these may be absent. The treatment of tuberculous cystitis is to locate the primary source of the infection which is most commonly in the kidney and to remove it. In the majority of cases this is followed by a spontaneous natural cure of the cystitis.

Cystitis, tumours and vesical calculi frequently cause haematuria and are easily recognized on cystoscopic examination.

Haemorrhage from the Ureter

When haematuria owes its origin to a cause situated above the bladder this is most commonly the kidney. It may have an intermediate origin. Thus villous papillomata may occur in the ureter particularly when they are already present in the renal pelvis—a point to bear in mind when treating the latter as occasionally after apparent cure for villous papilloma of the renal pelvis the delay and disappointment of the patient by a recurrence near. On cystoscopic examination in such a case the presence of a daughter tumour in the bladder is of rare and the possibility of the disease existing in the remaining kidney crosses the mind. Its rarity. The most probable explanation is that the growth of the tumour by ureteral ingrowth on the wall where the section was carried out and the passage of urine down this channel will be followed by implantation of cells of the ureter as well as the tumour cells into the cicatrix on the operation wound which is the favoured soil for proliferation of the renal pelvis.

Ureteral Calculus.—It is common knowledge that perhaps the most frequent error in surgical diagnosis is to mistake a case of right sided ureteral calculus for acute appendicitis. An error in the opposite direction is possible. Haematuria may owe its origin to acute appendicitis and when the appearance of blood is combined with frequency of micturition a mistaken diagnosis of urinary disease may readily be made. The explanation in such cases is that the inflamed retrocaecal appendix is adherent to the ureter causing congestion and irritation. The passage of a ureteral catheter is usually arrested at the level of the pelvic brim and its introduction followed by slight bleeding. These signs combined with the symptoms of appendicitis will usually be sufficient to establish a correct diagnosis but if doubt still lingers I would recall the wise advice of Professor Rutherford Morison of Newcastle. If you see a bird sitting on the house top, it may be a canary, most likely it is a sparrow.

Haemorrhage from the Kidney

Haemorrhage of renal origin has several causes which a careful pyelographic examination will differentiate. When a catheter has been advanced 30 cm. it enters the renal pelvis. Note at once the nature of the fluid that escapes. If bright blood flows for a few seconds and then stops from clotting in the catheter it is safe to diagnose that the point of the catheter has come in contact with a vascular tumour and that a hypernephroma invading the renal pelvis is present. If urine tinged brown from old altered blood escapes a pathological lesion is situated within the cavity. The appearance of a tinge of blood after the catheter has been *in situ* for some minutes is of no clinical significance and is due to the point of the catheter impinging on the delicate vascular mucous membrane of the channel. It occurs occasionally with all of us.

A bacteriological and cytological examination of the fluid from both kidneys is always carried out and the presence or absence of infection determined. As already mentioned the identification of tumour cells by microscopical examination is impracticable and further it should be remembered that the introduction of a catheter frequently dislodges normal epithelial cells from the mucous membrane lining the ureter and pelvis and these may be present in abundance in a normal case.

A careful examination of the contour and capacity of the renal pelvis as revealed by pyelography frequently enables an exact diagnosis to be made. Pyelography has rendered possible the positive diagnosis of early malignant disease of the kidney—a triumphant achievement. Further it enables us to form an approximate idea of the type of malignant disease that is present. A malignant tumour of the kidney may arise from an adrenal rest or from the secreting or drainage element of the kidney.

Hypernephroma.—The tumour that arises from the adrenal rest is called a hypernephroma. So popular was it that at one time almost every renal tumour was called by this name so that the inevitable reaction followed and some even were so severe as to suggest that like Mrs. Harris it did not exist. It is occasionally met with. It is a slow growing circumscribed tumour. The cells are identical with those of the stratum glomerulosum of the adrenal cortex which are superimposed on a highly vascular stroma and which developing in the cortex destroy the drainage system of that part of the kidney so that on pyelography certain calyces are observed to be obliterated and those adjacent are pressed on by the tumour drawn out and flattened—an appearance diagnostic of the disease. The functional activity of the kidney as estimated by excretion urography in these cases is good.

DIASTOLIC PRESSURE IN STROKE

It is interesting to study very clearly at what stages in high arterial pressure the stroke supervenes In my series of cases the stroke sensory or motor has not appeared in a single instance in which the diastolic blood pressure was under 115 In 20 per cent of the cases the stroke—in most transient in a few permanent in one fatal—occurred with a diastolic blood pressure between 115 and 120 In ten out of the 150 cases death resulted from what appeared clinically to be definite cerebral haemorrhage in nine of these the patients were actively or restrictedly pursuing their usual occupations Again in nine of these ten the diastolic blood pressure was over 135, the systolic being 200 and over In 10 per cent of the series the transient and permanent strokes occurred in cases with a diastolic blood pressure of over 125

It seems therefore that sudden changes in the normal sensory and motor phenomena appear most commonly with a diastolic blood pressure between 115 and 125 and are altogether absent in cases with diastolic blood pressures under 115 Cerebral haemorrhage seems to be uncommon in patients under observation, and they are warned against any but a very quiet life Fatal haemorrhage seems to ensue mostly in patients who carry on ordinary occupations without making allowances for their abnormal pressure Indeed it seems that the catastrophe of fatal haemorrhage is the one phase of high arterial pressure in which the practitioner or specialist can give little relief There is therefore all the more urgent need to study the earlier signs and symptoms very fully, for then therapeutic measures can be resorted to in time, and where these are likely to be of no avail, relatives and dependants may be warned of the possibilities ahead and adjustments relating to business, finance, or family matters may be made

HEART FAILURE AND STROKE

The relation of the stroke to heart failure consequent on high arterial pressure is worth studying My observations seem to suggest that fatal cerebral haemorrhage or even transient strokes, are very uncommon once failure has set in or the heart has begun to show considerable enlargement with dyspnoea and other symptoms of a tiring cardiac musculature—even though at this stage it is observed that the blood pressure systolic and diastolic remains high In three cases of mine however there was very marked enlargement of the heart with the apex in the sixth space and anterior axillary line with thickened vessels and a locomotor pulse (brachial), but with practically no symptoms referable to the heart These three patients are reported to have died of cerebral haemorrhage The impression is gained in a review of my cases, that patients with hyperpiesis showing few or no symptoms referable to the heart with or without cardiac enlargement are particularly prone to die of cerebral haemorrhage

DIAGNOSIS AND PROGNOSIS

In this country (Ceylon) there is a popular belief that the native doctor so called because he practises Ayurvedic medicine excels the practitioner of Western medicine in the diagnosis and treatment of paralysis This is no doubt due in my opinion to our mistakes in the matter of prognosis in these cases and to our failure to appreciate the transient nature of the attacks

A common procedure is as follows A man gets hemiplegia The nearest practitioner is sent for he diagnoses cerebral haemorrhage and gives a gloomy prognosis hinting at the possibility or probability of death within twenty four hours The blood pressure is not taken In despair the relatives run to the native doctor to whom no circumstances are hopeless and who not only promises relief but paints the picture of a permanent cure The case falls into the hands of the latter and time with restricted diet on the one hand and rest on the other, works the miracle In one case the patient gives this version 'Dr X saw me and said it was a spasmodic stroke We took native treatment as Dr X said recovery would take three months and it was due to high pressure If the possibility of recovery in a few hours or days had been mentioned with confidence the practitioner would have retained his patient as well as his fees

In sensory cases the phenomena are generally classed under neurasthenia neuritis and hysteria and the possibility of pressure as a causative factor is missed Thus in this country, and elsewhere too, misdiagnosis must be common

These observations have been made with one object in view—namely to invite the study of this common disease and so to correct or amplify the present finding From the point of view of the practitioner there is everything to gain and nothing to lose by agreeing with Cabot that the measurement of blood pressure is the most important of all the recourses that have been added to our armamentarium in the last fifteen years When the frequent occurrence of sudden motor and sensory changes as a result of high arterial pressure is more widely recognised the diagnosis and prognosis will be placed on more reliable data

CONCLUSIONS AND SUMMARY

In a final review of these observations on the stroke in high arterial pressure one appears entitled to infer

1 That transient or permanent paralyses of varied distribution occur fairly frequently

2 That the hitherto neglected sensory phenomena have a distribution similar to the motor phenomena that they also occur frequently and are probably caused through an affection of the sensory areas the pathogenesis being similar to that in the motor cases

3 That strokes often attributed to other factors such as shock exertion and emotion are the result of an already existing pressure exacerbated by the influence of these factors

4 That cerebral haemorrhage does not seem to occur with diastolic blood pressures of under 115 (whatever may be the systolic) and that prognosis may be based on this observation

5 That cerebral haemorrhage occurs most commonly in people working in defiance of an already existing pressure and without taking any account of this abnormality

6 That any kind of paresis or paralysis is very rare in cases in which the diastolic blood pressure is under 115 If they do occur, the minimum diastolic pressure is over 115 at the time of the stroke Strokes at this pressure are rarely fatal or permanent The former occurs in patients with thickened vessels or other disease the latter in an unfortunate few or in those in whom the causative factor is other than hypertension

7 That cerebral haemorrhage seems to occur more frequently in those cases of hypertension which show neither marked cardiac enlargement nor symptoms and rarely in those cases in which there are signs both of considerable cardiac enlargement and symptoms of heart failure

I am grateful to my medical colleagues at the General Hospital Colombo for giving me opportunities for verifying my observations with cases in their wards

CONVALESCENT SERUM IN PROPHYLAXIS OF MEASLES CHICKEN POX AND MUMPS

With Observations on Variations in the Wassermann Reaction*

BY

WILLIAM GUNN MA MB ChB MRCP DPH

SEN OF ASSISTANT MEDICAL OFFICER WESTERN HOSPITAL LONDON COUNTY COUNCIL

The aggregation of patients in hospitals or institutions presents many problems medical and administrative but few so pressing and disturbing as the outbreak of infectious disease in a susceptible population Certain common infectious fevers like diphtheria and scarlet and typhoid fevers usually occasion little alarm as being mildly contagious they are unlikely to lead to a widespread epidemic Prompt isolation usually suffices to avert a succession of cases while adequate means of providing immunity are readily available if required Moreover the incubation period of these diseases is relatively short so that prolonged detention in quarantine is unnecessary On the other hand in the three infections under consideration—namely measles mumps and chicken pox—the quarantine period is protracted (twenty one to twenty-eight days) and the necessity of placing cross infected wards in isolation seriously reduces the effective accommodation of the hospital and entails economic loss both to the individual and to the hospital authorities Furthermore the concurrence of two and occasionally of three diseases renders the patient more prone to the complications peculiar to each disease The association of measles and scarlet fever is particularly unfortunate in this respect frequently threatening the life of the patient

All three diseases mentioned are contagious to a marked degree but not equally so and the same disease may vary in infectiousness and virulence at different times irrespective of the susceptibility or otherwise of the population exposed to the infection The sequence of events was observed in a number of ward outbreaks in which no action was taken other than immediate removal of the infecting case It was found that secondary cases of chicken pox followed on nine occasions after ten outbreaks and further cases of measles ensued on eight occasions after ten outbreaks while mumps was seen to be much less contagious—the chances of further cases developing the disease being almost even

Factors in Serum Therapy

At least three factors must be taken into consideration when classifying the individual units of an exposed population before administration of serum—namely (*a*) whether susceptible or immune (*b*) distance from the infecting case which should be removed forthwith and (*c*) age and body weight In the case of measles in the absence of a reliable test to denote susceptibility or otherwise the history is the sole guide It is frequently found to be untrustworthy many children have had an attack of measles which was unrecognized at the time or forgotten by the parents others have been wrongly diagnosed as measles while a certain proportion appear to possess a primary immunity either inherited or acquired as the result of successive subinfective doses In chicken pox a careful search usually reveals the presence of characteristic scars and active of a previous attack but in the absence of this evidence must be accepted in the absence of this peculiar to the disease

[illegible] given in the [illegible] County Council

The distance of susceptible contacts from the primary infecting case is of vital importance in measles the patients in the immediate vicinity nearly always contract the disease on the first exposure and they alone while more distant contacts succumb in the second or third generation In chicken pox and mumps the effective striking distance is much greater and secondary cases occur almost as frequently in beds at a considerable distance as in adjacent beds

The dose of serum should be adjusted to the body weight of the individual but in practice it is found more convenient, and sufficiently accurate to take age as the dosage standard To obtain strict control conditions injections are given simultaneously to alternate contacts of approximately the same age placed at equal distances from the infecting case using a dose suitably adjusted to the body weight Only by taking such precautions can the data obtained in different outbreaks be comparable even then unequal and unexpected results may follow depending on such factors as chance season of the year bed spacing efficiency of nursing and general resistance of population

Human and Animal Serums

The employment of immune measles serum in the prevention of measles was first suggested by inoculation experiments on monkeys In the course of these experiments it was found impossible to reinfect the animals after successful primary inoculation presumably on account of the development of immune substances in their blood Convalescent serum was used in the earliest investigations on passive immunization in measles and has remained the only reliable prophylactic agent although numerous serums of animal origin have been tried or are still on trial In 1928 the writer subjected the three best known animal serums (Degkwitz Tunnicliff and Ferry and Fisher) to a critical examination by controlled experiments on the human subject and compared the potency of each with that of pooled convalescent serum It was concluded that animal serum contained no antibody or if it was present it was insufficient in amount to prevent the onset of measles or to modify its course Convalescent serum on the other hand gave consistently good results and is moreover free from the unpleasant effects which frequently follow the injection of a foreign protein The earlier experiments with convalescent serum at a time when the appropriate dose for a given case was a matter of doubt were naturally less successful than the later injections which conferred complete immunity in 100 per cent of cases These satisfactory results are the outcome of care in the selection of donors accurate adjustment of dosage to body weight and administration of serum at the optimum time after exposure

Dosage of Serum in Measles

The failure of a particular serum to protect is usually attributable to an erroneous diagnosis of measles in the donor with comparatively low antibody content in consequence Much less frequently a given sample of serum is found to be weak and to lower the protective value of a pooled serum on account of low antibody production in the donor This may be due to a defective mechanism for immunity production or probably more frequently to inadequate stimulation of the mechanism in mild forms of the disease Inadequate dosage is occasionally the cause of failure to ward off attack To ensure complete protection a minimum dose of 5 c.cm is advisable although smaller doses of a potent serum are effective From the age of 3 years onwards the dose is reckoned in cubic centimetres by multiplying the age in years by two All injections are given intramuscularly and as soon as possible after exposure to infection After the sixth

day a modified attack is the rule, although protection has been afforded apparently as late as the eighth day of exposure During the last two measles epidemics (1927–28 and 1929–30) a total of 206 susceptible contacts were injected with an average protection rate of 94 2 per cent For the last 52 cases in the series the protection rate was 100 per cent

Duration of Immunity in Measles

Certain data bearing on the duration of the immunity conferred by the injections were made available Modified or attenuated attacks of measles followed re exposure to infection on the twenty fifth twenty eighth, and thirty second days respectively indicating the approximate rate of disappearance of complete as distinct from partial immunity In two instances the incubation period was lengthened to eighteen and twenty one days, respectively, but as such occurrences are not infrequent under normal conditions undue stress should not be laid on the possible effect of the serum in delaying the onset of the disease

Immunization in Chicken pox

Inasmuch as chicken pox is a comparatively innocuous disease it might be questioned whether it is worth the trouble and expense incurred in seeking to provide protection The long incubation period—necessitating a prolonged quarantine for infected wards—and the extreme contagiousness and high resistance of the virus—rendering mere isolation measures useless—furnish sufficient cause for active interference Moreover the simultaneous onset of eruption and state of infectivity provide what would appear to be ideal conditions for successful immunization

The literature on chicken pox prophylaxis is extremely meagre and the published reports reveal conflicting evidence on the efficacy of the method In the present series forty three presumably susceptible contacts were given pooled convalescent serum at intervals varying from the first to the sixth day after exposure to infection The scheme of dosage was that followed in the measles series Of the forty three patients injected, 33 (76 7 per cent) did not develop the disease subsequently, but as exactly half the cases in the control group escaped attack the actual protection rate was reduced to 26 7 per cent Some of the failures had very mild attacks but not more so than may be encountered in a series of chicken pox cases under normal conditions It is evident that in the doses employed convalescent chicken pox serum is far inferior to convalescent measles serum as a prophylactic agent A more generous dosage is advisable in future experiments

Immunization in Mumps

The arguments advanced against passive immunization for chicken pox have also been urged against the method for mumps In addition the short period of infectivity the low grade of contagiousness, and the increased risk of complications (should the disease be deferred until adolescence) lend support to those arguments On the other hand a long incubation period should theoretically favour ready immunization and moreover the protected subject would probably not be exposed again during his lifetime as mumps is a comparatively infrequent disease in the general population

As in the case of chicken pox no records of experiments in passive immunization for mumps have been hitherto published in this country although several American and Continental writers have reported results as uniformly successful as in measles prophylaxis In the present series nineteen contacts were injected at intervals varying from the first to the fifth day after exposure and a further two cases were injected on what was later discovered to be the thirteenth and fourteenth days respectively The first day injections proved very satisfactory as none of the presumably susceptible contacts developed the disease while three controls (33 3 per cent) were attacked Those patients who escaped on the first exposure contracted mumps on the thirty first, forty third, and eighty seventh days respectively, after injection subsequently being reinfected by the control cases which had developed the disease Of five patients who were injected on the fifth day none contracted the disease, but the results were valueless from the experimental point of view as the control group escaped also In the whole series of forty three cases (twenty one injected and twenty two controls) 14 3 per cent developed the disease in the test group and 22 8 per cent in the control group The results are admittedly unsatisfactory but justify a further trial of the method with larger doses of serum

Technique for Collecting Serum

The donors selected should be vigorous and healthy free from syphilitic or tuberculous taint and well able to stand the loss of blood They should be kept under observation for twenty one days if possible to ensure that they are not incubating any infectious disease Amounts of blood up to 20 c cm may be taken from a child of 5 years, 100 c cm from a child of 10 years and 250 to 500 c cm from an adult The blood should be withdrawn on the fourteenth to twenty first day of the disease, or on the tenth to fourteenth day after defervescence The attack should be of moderate to marked severity and the recovery complete and uncomplicated For taking amounts up to 50 c cm an all glass 50 c cm syringe with peripheral nozzle lubricated with liquid paraffin, is recommended the blood is withdrawn quickly and expelled gently into specially prepared agar lined test tubes of 20 c cm capacity The maximum clot contraction and yield of serum are obtained in tubes of this size When greater amounts are taken a piece of rubber tubing (about 6 inches long) attached to an intravenous needle—both paraffin treated—is preferred and larger tubes (50–60 c cm capacity) are more convenient The test tubes are immediately placed in the incubator at 37° C for one hour and thereafter in the cold room (4° C) for twenty four hours when the serum is pipetted off and the Wassermann reaction is performed on each batch Three more samples are pooled the mixed product is filtered and 0 5 per cent phenol is added The serum is tested for sterility aerobically and anaerobically distributed in sterile ampoules of 5 c cm 10 c cm and 20 c cm capacity and stored at 4° C until required for use At this temperature the potency is maintained for at least a year, and probably much longer

Wassermann Reaction in Infections

Numerous workers on the Wassermann reaction have recorded positive results in various infectious diseases, such as typhus scarlet and typhoid fevers pneumonia, and tuberculosis in the absence of syphilitic infection, but in many instances there is reason to suspect defective technique in the performance of the test As a result of accumulated experience from all parts of the world the conclusion is generally accepted that scarlet fever and tuberculosis are both capable of returning a positive reaction although some authorities still deny that it is ever present apart from syphilis

Every sample of convalescent serum was tested by the Wassermann reaction The technique employed was that commonly known as the Medical Research Council Method No 1 in which the reactions are graded quantatively (++ + ± −) The test was usually carried out one to three days after the blood was withdrawn, although occasionally an interval of five to six days elapsed before it was done

In Measles—Fifty three samples of blood from convalescent measles donors were tested In six instances a positive reaction was obtained in one instance it was ++ in two instances it was + and in three it was ± The strongly positive serum was retested one week later, it was found to be still + and was discarded as unfit for use The two serums giving + reactions were retested a week later and found to be completely negative and were accordingly pooled with other samples for injection All three serums giving doubtful reactions were completely negative on retesting a week afterwards In two instances in which the reaction was + another sample of blood was withdrawn a week later and the fresh serum was found to be negative The blood of three patients examined on the fourth day of the disease gave a ± reaction but on the fifteenth sixteenth, and seventeenth days respectively the reaction was negative

In Chicken pox—In the chicken-pox series twenty five donors were utilized On three occasions a frankly positive reaction was returned while on one occasion it was doubtful Two of the three positive serums were re examined a week afterwards and found to be negative while the third sample was pronounced unfit for use as the significance of these doubtful reactions was not appreciated at the time The serum which gave the doubtful reaction was found to be negative on retesting a week later

In Mumps—Six samples of serum were taken from mumps convalescents the Wassermann reaction was negative in every instance

The Interpretation of these changes in the Wassermann reaction is not clear but it would appear that in the acute fevers there is an increase in the normal lipoidophile antibody content of the human serum or a physical or chemical alteration of its constitution which permits complement deviation to occur even in the absence of luetic infection (Mackie and Watson 1926) This change in the serum is present only for a short time (third to twenty first day) and rarely persists into the fourth week Moreover it is only found in fresh serum (first to fourth day after withdrawal) and always disappears within a week after storage at 4° C It is not improbable that the positive reactions reported in the acute fevers by various workers are attributable to the presence of this or like substance in fresh serum and have no relation to luetic infection

LEAD POISONING AS A CAUSE OF PEPTIC ULCER

BY

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In 1861 Tanquerel published his classic treatise which [illegible] to be the best work on industrial plumbism in the early part of the nineteenth century he was presented with a galaxy of material at the hospital of La Charité [illegible] From 1831 to 1839 he saw no fewer than 1 217 cases of lead colic and so accurate were his clinical observations that his list of important clues has been subsequently added to his conclusions Tanquerel mentioned that ulcer was often a sequel of lead poisoning in his [illegible] chlorhydro peptic ulcer [illegible] the stomach [illegible] Cruveilhier (1829–35) [illegible] [illegible] [illegible]

every case Lead was found in many men who did not show the slightest evidence of lead absorption, and who were apparently fit In one man (45 years old) who had worked for five years in the spelter works as much as 1 89 parts of lead per million was found in the urine He stated that he felt very well He left the works and became a labourer, and two years later died of a perforated peptic ulcer Post mortem examination was refused In the thirty men examined it was found that the higher the lead content in the urine the less the danger of immediate toxic symptoms In four cases exhibiting drop wrist a striking feature was the small quantity of lead found in the urine and in one of these who showed other severe toxic symptoms the amount of lead in the urine was as low as 0 163 part per million Of the 100 cases examined twelve (whose ages ranged from 30 to 60) were found to be suffering from gastric ulcer which was verified by x ray photograph Lead was found in the urine of each ulcer case Five of the twelve perforated one recovered and is now well Necropsy was performed on three and lead was found in the liver brain and kidney in each case

POST MORTEM EXAMINATION OF ONE CASE

The last necropsy we attended was that on a man who had shown all the classical signs of lead poisoning and who had been certified as a case of plumbism a month earlier by Dr Sladden the medical referee under the Workmen s Compensation Act

The man aged 40 had been a spelter worker for many years The body was emaciated

Heart atheroma of coronary arteries and well marked in the aorta The left ventricle was hypertrophied Lungs were congested the apices were free but there were adhesions of the left pleura Kidneys there was nothing of note on naked eye examination Brain meninges were adherent and the brain substance was congested there was atheroma of the arteries comprising the circle of Willis Stomach there were minute haemorrhages in the mucous membrane of the stomach Duodenum there were two ulcers about the size of a shilling one of which had perforated

The results of chemical analysis of liver and kidney in this case were as follows

	Lead	Zinc	Cadmium
Liver	0 063 grain per pound	0 294 grain per pound	0 511 grain per pound
Kidneys	Nil	0 154 grain per pound	1 274 grain per pound

Table showing the occurrence of perforation in twelve cases of gastric ulcer associated with lead poisoning

Case	Age	No of Years at Spelter Works	Amount of Lead in the Urine	Habits	Remarks
			Part per million		
1	30	8	0 738	Excessive beer drinker	
2	32	6	0 636	Abstainer	
3	36	13	0 175	Beer drinker	
4	39	15	0 195	Beer drinker	
5	42	5	0 59	Abstainer	Perforated duodenal ulcer death
6	45	7	0 035	Beer drinker	
7	45	11	0 267	Abstainer	Perforated duodenal ulcer death
8	45	5	1 89	Abstainer	Perforated duodenal ulcer 1 89 parts per million in urine two years previous to death
9	47	17	0 151	Beer drinker	Perforated duodenal ulcer death
10	57	26	0 025	Beer drinker	
11	57	8	0 0	Beer drinker	Perforated duodenal ulcer recovery
12	60	30	0 0 6	Abstainer	

COMMENTARY

Inferences based on an analysis of this table must of necessity be indefinite, but one or two features are noteworthy It appears that the older the workman and the longer the time spent in the spelter trade the less is the amount of lead excreted in the urine An impairment of the renal function due to the toxic effects of lead on the kidney may be the explanation

The incidence of ulcer seems to bear no relation to the duration of exposure to lead fumes the occurrence of perforation however is associated with a low urinary lead content in each case In our experience a moderate consumption of beer does not seem to play any part in influencing lead absorption on the contrary it apparently aids the elimination of lead by virtue of its aperient action The pathology of a peptic ulcer is not clearly understood and many authorities hold that toxaemia may play a potent part in its production Lead is a very toxic element and as it is eliminated by the liver via the alimentary canal the duodenum is more exposed than the rest of the intestine to its deleterious effects Brady of Harvard has pointed out that the bile is an important avenue for lead excretion Glaser of Berlin has found ulcers in the stomach and duodenum in a large proportion of his plumbic cases and he maintains that such ulcers are not the result of a special disposition but are caused by toxic vagotonia Lewin Kasper and many other Continental authors have drawn attention to the frequency of peptic ulcers in lead poisoning and McJunkin found a necrosis of the gastric epithelium in animals The experiments of Jores proved of much clinical interest He administered lead to dogs and was successful in producing gastric and intestinal ulcers On account of the frequency of gastric ulceration in lead poisoning his findings were significant and may prove to be the starting point for further investigation of the etiology of gastric ulcer

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GANGRENE DUE TO EMBOLUS OF THE INFERIOR MESENTERIC ARTERY

BY

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M R C S I R C P M B Ch B

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Embolism of the mesenteric arteries is fortunately a rare cause of an acute abdomen and it is almost impossible to diagnose the condition with any degree of certainty When it does occur however it is usual to find definite symptoms and signs of intestinal obstruction indicating the necessity for immediate laparotomy One would expect a complete obstruction to present the usual clinical picture of absolute constipation pain vomiting (either of the gastric contents or later of faecal type) and signs of peritonitis and collapse depending on the length of time which had elapsed after the onset of the ileus

The early stage of obstruction may present difficulties in diagnosis but it is to be expected that a case which has proceeded to extensive gangrene of the gut would have a history and clinical picture sufficiently clear to make the need for immediate surgical treatment obvious

The case to be described had a history and symptoms which were so confusing and indefinite that a diagnosis of acute abdomen could not be made until the patient had been closely observed for forty eight hours

History of Case

The patient a married woman aged 45 was admitted into this hospital at 9 p.m. on November 18th 1931 diagnosed by her doctor as a case of gastro enteritis She gave the following history

At about 11 o'clock the same morning she was sitting on a chair when she was suddenly seized with acute abdominal pain The pain was general and not localized to any particular point She felt sick and about five minutes later vomited some undigested food and yellow fluid The pain was somewhat relieved after vomiting and an hour later had entirely disappeared She then had an attack of diarrhoea the motions being green coloured and very offensive but as far as she could tell they did not contain any mucus or blood nor did she experience any pain The diarrhoea continued throughout the day and she gradually became weaker and more exhausted She had taken no food except a piece of bread and butter and a cup of tea for breakfast with cold water at intervals until admission The previous night she had had with the rest of the household some fish and chips for supper but she was the only one to experience any ill effects afterwards In her previous history she admitted having had a vaginal discharge twenty years ago She had received several courses of injections and had a blood test made a few years ago which she had been told was positive The history of previous venereal infection was however indefinite and she gave no reliable information as to the treatment she had received She had been operated upon for a prolapsed uterus nine or ten years ago and after this she had been very constipated with occasional attacks of diarrhoea During the week before admission she had been constipated There was no history of previous abdominal pain

On admission her temperature was 97° F. pulse 128 and very weak and respirations 40 She was in a feeble and exhausted condition with marked pallor but had no abdominal pain The tongue was dry and coated teeth carious breath very offensive and she appeared toxic

The abdomen moved with respiration there was no visible peristalsis and except for slight tenderness in both iliac fossæ on firm pressure there was nothing further of note The abdomen was soft and no rigidity was discoverible On examination per vaginam there was tenderness in both lateral fornices and on the left side a firm doughy mass could be made out There was an offensive and purulent uterine discharge Per rectum it was found that there was an infiltrating fibrous stricture of the rectum about half an inch within the junction of the anus and rectum It completely occluded the rectum but the little finger could pass through it Blood was passing green and offensive motions which were received but contained no mucus or blood Examination of chest and lungs revealed nothing abnormal The pupils were unequal and equal reacting normally to accommodation and light Reflexes were generally diminished

[illegible] was thought that her condition was a pyosalpinx and [illegible] was [illegible] case of [illegible] stricture She was given [illegible] per [illegible] of [illegible] hypodermically [illegible] [illegible] [illegible]

slide and numbered 1 2 and 3 Each sample is emulsified with four times its volume of the corresponding diagnostic serum the addition of serum and emulsification being conveniently performed with a platinum loop Coverglasses are applied and the slide is set aside for a few minutes whilst a further sample from the selected fleck of sputum is smeared on a slide fixed by heat and stained by Gram's method The general bacterial flora of the sputum and the number of pneumococci present are apparent at a glance in the stained film which exactly represents the characters of the sputum samples selected for the diagnostic test It is of special value to be informed in advance of these characters for if the pneumococci are plentiful a positive result in the typing will be apparent at once no time need be wasted in useless search therefore when as in the case of a Group IV infection there is no reaction

The slide carrying the fresh emulsions of sputum and specific serums is now examined using 4 ocular 1 6 objective and plane mirror the condenser being removed When gram stained pneumococci when present in small numbers are but just visible in the case of negative test the result in the case of a positive reaction is a conspicuous increase in the size of the individual pneumococcus due to conjugation of coccus and homologous antibody The enlarged cocci have a characteristic ground glass appearance with a highly refractive peripheral zone A positive reaction is at times appreciable to the naked eye on holding the preparation to the light The positive as compared with its companions on the same slide (which serve as controls) is seen to be opalescent due to the great increase in size of the sensitized cocci When the pneumococci are thickly coated with the mucinous pneumonic secretion the characteristic appearances develop more slowly as the specific serum soaks its way through In such cases twenty minutes may elapse before full completion although type may be distinguished much sooner by the change in those pairs which are floating free

It is to be noted that type is decided independently of actual agglutination of the pneumococci which is prevented presumably by the viscous nature of the sputum These sputum elements are digested in the peritoneal cavity of the mouse the cocci are freed and multiply rapidly so that agglutination takes place in presence of specific serum

Commentary

The results of the direct test have been confirmed in every case by mouse inoculation and by the other more deliberate methods in common laboratory use The direct method has proved trustworthy its value lies in extreme simplicity and swiftness The objection now disappears that pneumococcal type cannot be decided in general practice since animal inoculation is no longer essential and a special knowledge of bacteriological technique is not necessary

Generally speaking the later a case of pneumonia is examined the more profuse the sputum and the more numerous the pneumococci immediate typing as described is then a matter of minutes Thus no time is lost in the intravenous administration of serum to the patient On the other hand early in pneumonia the sputum may be scanty and the pneumococci few More care is required in reading the test and a second examination may be necessary But at this stage a little delay does not materially affect the patient's chances of recovery

Type may be decided with equal ease and speed by the direct method in the case of cerebro spinal fluid pus from empyema nasal discharges etc

The specific monovalent diagnostic serums used were prepared in the laboratory by inoculation of young rabbits with typical strains of pneumococci Similar reliable diagnostic serums are to be had from Messrs Parke Davis and Co

The diagnosis and serum treatment of lobar pneumonia are being carried on in conjunction with my colleague R Sleigh Johnson who confirms the reliableness of the immediate diagnostic test The Medical Research Council is assisting the inquiry

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A DIRECT METHOD OF TYPING PNEUMOCOCCI

BY

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In February 1931 R R Armstrong[1] drew attention to a phenomenon which was observed when the rapid examination of pneumococci by the mouse peritoneal exudate agglutination method was carried out Examining under the microscope an unstained drop of peritoneal exudate mixed with undiluted serum Armstrong observed that in addition to agglutination with the specific serum there was an increase in size of the pneumococci and they became very apparent as lanceolate bodies surrounded by a clear highly refractive capsular zone This phenomenon was observed and fully described by Neufeld[2] thirty years ago

We have typed about 170 specimens of sputum from cases of lobar pneumonia during the past twelve months using a variety of methods in each case and always confirming the result of the rapid method by isolating the pneumococcus and determining its type when obtained in pure culture We fully agree with Armstrong that the microscopical method is superior to other rapid methods and particularly to the macroscopic agglutination technique It is only in the case of pure cultures free from cells that the macroscopic method has advantages though even then the greater amount of serum required is of some economic importance

The object of the present paper however is to show that the phenomenon referred to above makes it possible in some cases to recognize the type of pneumococcus by a direct test with the sputum emulsion itself Many workers must have attempted a direct agglutination test with sputum emulsions The consistency of sputum and the presence in many specimens of large numbers of other organisms make this impracticable in most cases though not as we have found in all Using the reaction just described it is possible in some cases to diagnose the type confidently within a few minutes of receiving the specimen although of course in other cases no definite opinion can be given

Method

The technique is practically that described by Armstrong the sputum emulsion being substituted for the mouse peritoneal exudate A saline emulsion of the sputum is made Four thin glass slides are marked I II III and control and a large loopful of the undiluted type serum is placed on the appropriate slide a drop of saline being put on the control slide The sputum emulsion is then taken up in a capillary pipette with a teat A drop of the required size is placed beside each drop of serum

and then mixed by tilting the slide backwards and forwards. Sometimes it is better to drop the emulsion on to the serum; in other cases, in which the consistency is more gelatinous, it is necessary to mix with a loop. A thin coverglass is placed on the mixture which is then examined under the microscope. We use a 1/12 oil-immersion lens with the substage condenser racked down a little and the diaphragm closed to an extent which has to be constantly varied to get the best results. The plane mirror and a bright artificial light are employed.

In cases in which pneumococci are present in large numbers the swelling of the pneumococci and the appearance of the dark line sharply outlining the capsule along with a darkening of the body of the pneumococcus itself—distinct from the whitish, sometimes almost greenish-white capsular substance—are very strikingly seen where the homologous serum has been used. *In the other slides* the pneumococci are seen to be much smaller with a small halo which is a little lighter in colour than the surrounding sputum substance but there is no dark line sharply defining the outline of the capsule. *In specimens* where pneumococci are scanty it is sometimes only in the slide with the specific type serum that they stand out and become recognizable, while in specimens containing many streptococci in diplococcal form again it is only the reaction to the specific serum that indicates which are pneumococci. With some specimens the test has to be put up several times before a successful result is obtained. After some experience we realized more strongly than before how very unequal is the distribution of different organisms through a sample of sputum. There is some thing approaching colony formation to be seen in a semi-gelatinous medium.

Sixteen specimens of sputum from cases of lobar pneumonia have been tested in this way, and a provisional opinion noted prior to the *mouse* test and the isolation of the organism for typing in pure culture. Of the sixteen five proved to be Type I, ten Type II, and one Type III. In addition a direct test was carried out with a specimen of pus from an empyema *due to* Type I pneumococcus, and with the purulent cerebro-spinal fluid *from* a Type II pneumococcal meningitis. The agglutinating serum used had a titre *of* between 1 in 20 and 1 in 40.

Results

Type I Cases.—Of the five two were confidently diagnosed Type I by the direct test; two were thought to be probably Type I, but we would have hesitated to recommend that Type I serum should be given to the patient without further proof. In the fifth case no recognizable pneumococci were seen by the direct method, but neither were they found in the intraperitoneal exudate four hours after inoculation. It is evident that the pneumococci were present in this case of pneumonia in very small numbers, as none were found in the cultures made from the mouse peritoneal exudate, while a pure culture (Type I) was obtained by plating out a loopful, and two or three colonies only [illegible] of the mouse.

Type II Cases.—All the four were correctly labelled Type II cases [illegible] of the direct test in one of these [illegible] such large numbers and so in [illegible] was quite agglutinated [illegible] was thought to be [illegible] Type II [illegible] Type I and [illegible] III [illegible] Type II [illegible] was [illegible] from the

Type III Case.—In this case at the first examination no pneumococci were recognized by the direct method. When the mouse method had shown it was a Type III infection the original specimen was re-examined, and pneumococci showing enormous swollen capsules and sharply defined rather crenated outlines were seen in the Type III mixture. The sputum was old when examined the second time and no pneumococci could be recognized in the other serum mixtures or in the control. The crenation might have been due to the age of the specimen. The very size of the unstained organism which was present in small numbers was probably the cause of its being overlooked at the first examination, but once it had been seen it would probably not go unrecognized a second time.

The Type I empyema specimen and the purulent cerebro-spinal fluid from the Type II meningitis were both readily typed by the direct method. In the empyema pus there was also a certain amount of agglutination while in the spinal fluid the organisms were present in very large numbers and massive agglutination was seen. Both were confirmed by isolation and typing of the organism.

Discussion

It must be made very clear that it is not suggested that this direct method is applicable in all cases nor that it should supplant the more reliable methods. It requires some bacteriological experience, and would be quite unsuitable for use in a side room. To mention only one or two possible fallacies it would be easy for an inexperienced microscopist to mistake small yeasts, starch granules or other unidentified bodies for swollen pneumococci, while a Type III pneumococcus *in its normal condition* might be mistaken for a swollen Type I or II. But to the bacteriologist it is worth while putting up the test because if definitely positive, it may help the patient by its rapidity and may obviate the necessity for the former to return to the laboratory at inconvenient hours. *It is necessary* however in all cases to confirm the result by a more reliable test *including* in our opinion the isolation of the pneumococcus and the typing of a pure culture.

The mouse inoculations were carried out at the Research Laboratory of the Royal College of Physicians Edinburgh the Royal Infirmary being unlicensed for the use of animals.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

GAS GANGRENE COMPLICATING OBSTRUCTED LABOUR

This was a tragic case but interesting from the point of view of the gas gangrene which was probably responsible for death. It demonstrates the great need of antenatal work for these natives and the danger of interference on the part of uncleanly native midwives.

On July 8th 1931 a native mission school teacher reported [illegible] who was to [illegible] had been in labour for three days that the head had gone down and got stuck and that the membranes had ruptured. She was thought to be over seven months gone at 7 p.m.

She was said to be in a collapsed state restless in great pain with irregular and rapid pulse dry lips and parched mouth. Her face was unrecognizable the eyes lips and [illegible] being puffy and swollen and the left eye completely closed by oedema. She was breathing rapidly and complaining of obstruction in the throat. Her speech was husky and altered. Now and again she gasped for breath. The [illegible] was puffy and oedematous. There was no history of cough or pain in the chest. The fundus of the uterus was

high and pushed forwards It felt thick and hard on palpation and was in a state of tonic contraction showing no signs of relaxing The lower segment was extremely tender No foetal heart sounds could be detected

Over the whole body from the thighs upwards to the chest neck and face to the scalp typical emphysematous crackling could be detected

The external measurements were interspinous 7½ intercristal 8½ external conjugate 7½ inches (?) Oedema made the latter inaccurate Membranes were protruding from the vagina which was oedematous and emitted a foul smelling discharge The head was impacted in the pelvis the skull bones markedly overlapping and there was a very distinct caput succedanum Urine obtained by catheter was full of blood

An attempt was made to deliver with forceps after the patient had rested two hours under morphine This caused great pain and a little chloroform and ether had to be given with care The woman however died undelivered within a very few minutes and subcutaneous and intramuscular cardiac injections of strychnine with artificial respiration were of no avail Intramuscular sodium bicarbonate and intravenous quinine hydrochloride were being prepared but could not be given

A male child was delivered (about 7 lb) with great difficulty the head greatly distorted and flattened A foul smelling fluid and gas escaped from the uterus The foetus had apparently been dead for some time

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SUBARACHNOID HAEMORRHAGE WITH GLYCOSURIA AND HEMIPLEGIA

The following case of subarachnoid haemorrhage with glycosuria and hemiplegia in which the patient recovered, is worth recording

A locomotive fireman aged 29 was admitted to the Chesterfield Royal Hospital in May 1931 with the history that one night a month previously he experienced a sudden terrific pain in the head collapsed and vomited once he was in bed for a fortnight and was treated by his doctor for gastritis He returned to work for two weeks but on the morning of his admission to hospital he again had a sudden severe headache and collapsed as before

On admission the patient was conscious though somewhat confused and complained bitterly of headache Examination showed some rigidity of the neck with a bilateral Kernig's sign and normal reflexes with a large amount of sugar in the urine (sp gr 1030) but no albumin blood sugar 110 mg per cent There were neither retinal haemorrhages nor papilloedema and the temperature was subnormal The next day as the indications of meningeal irritation were increasing and he showed signs of becoming comatose a lumbar puncture was performed The cerebro spinal fluid was under pressure and homogeneously mixed with blood sugar in quantity was still present in the urine and remained for two days during which time the symptoms of *meningeal irritation* lessened the temperature was subnormal

On the fourth day after admission the temperature for the first time began to rise—on one occasion reaching 101° F—and with intermissions persisted for three days it then fell to remain normal or subnormal during the rest of the patient's stay in hospital With the onset of pyrexia there were again indications of rise of intracranial tension coma etc and the pulse became slower lumbar puncture showed cerebro spinal fluid under tension and more blood stained than before All specimens of fluid were carefully searched for tubercle bacilli with negative results Another lumbar puncture at the end of the pyrexial period the eighth day of illness yielded fluid still under pressure no longer blood stained but very yellow in colour

In spite of these repeated spinal tappings his mental state fluctuated continually between drowsiness and coma and the rigidity of the neck persisted to a greater or less extent This condition continued until the fourteenth day from the onset when he began rapidly to develop a right sided hemiplegia This persisted for nine days and then very gradually passed off full power of movement had returned at the time of discharge from hospital a month after admission His mental state too began to improve until it was quite normal a week before he left the hospital After a month's stay in a convalescent home he returned to his work and is still fit and well

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MENINGITIS DUE TO B ANTHRACIS

The following case showing symptoms so closely resembling cerebro spinal fever that the patient was sent to the isolation hospital may be of interest, in the literature at my disposal I have been unable to find an exactly similar case

The patient a Chinese supervisor at the gaol was admitted to the Chinese Police Hospital on June 11th 1931 with a history of a sore at the base of the right index finger of four days duration and enlargement of the axillary glands of three days He could give no satisfactory account of how the lesion a blackish scab with no inflammation round it came to be there An iodine dressing was applied and ung ichthyol to the axilla On June 13th the condition of the finger was not good and hot eusol fomentations were ordered Two days later the patient was slightly delirious the finger was incised and a swab from the wound sent to the laboratory query anthrax Only staphylococci were found

On June 16th the patient developed headache and vomiting but no rigidity of the neck was present The next day these cerebral symptoms increased some delirium and marked rigidity of the neck were present and both pupils were contracted Lumbar puncture gave a cloudy fluid under slight pressure 10 c cm of which was sent to the laboratory The patient was transferred to the Chinese Isolation Hospital at 9 a m and 0·9 gram novarsenobillon was given intraspinally In the afternoon he became unconscious with twitchings especially of the right cheek and limbs The pupils were contracted pulse thready and neck very rigid no petechiae were seen At 6 p m 60 c cm anti anthrax serum was given intramuscularly but the patient died about 9 p m

In the fluid sent to the laboratory a large Gram positive bacillus was present resembling *B anthracis* Cultures were put up in veal broth and on to agar slopes The next day a large spore bearing bacillus was found and 0·25 c cm of the veal broth culture was inoculated into a guinea pig The animal died in about forty hours with the lesions of anthrax the organism being recovered from the blood and spleen

I have to thank Dr J H Jordan commissioner of public health Shanghai Municipal Council for permission to publish this and also Dr D J Allan for the clinical notes

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Reports of Societies

RAW MILK AND DENTAL CARIES

At the meeting of the Section of Odontology of the Royal Society of Medicine on January 25th with Mr E B DOWSETT in the chair Mr E C SPRAWSON gave an account of certain preliminary investigations he had carried out among children in institutions on the effect of raw milk on teeth formation

Mr Sprawson said that his observations went to show that raw milk had a profound influence on the development of calcification in that it conferred on the teeth some immunity to dental caries He had under his dental supervision groups of children in residential institutions,

had been impressed by the large incidence of dental caries among them It was evident that the incidence of dental caries was generally speaking progressively less in the teeth deciduous or permanent in the order of their eruption He had investigated the effect on children of a daily ration of raw milk commenced during the first twelve months of life in order to discover whether there was any influence on the structure of the enamel which made the teeth more resistant to caries as the deciduous dentition was not fully erupted until the end of the second year he had excluded from his survey all the children thus fed until after they had reached the age of 2 years The cases observed numbered forty The average age at which they had commenced to take the daily ration of raw milk was 4½ months and the average age at which they were observed was 4 years Admittedly this was a small number on which to base any generalization but the results were quite remarkable In no case was there a trace of caries In thirty three other children who were over 12 months of age when the daily ration of raw milk was started but with whom it was started not later than about 2½ years twenty six at the age of 4½ years showed no trace of caries the remaining seven had fourteen carious teeth It was evident therefore that the teeth which had erupted but which were not fully formed when raw milk was commenced were brought under this influence He had thus had the remarkable experience of examining seventy children over 2 years old of whom sixty three were totally free from dental caries He added that nearly all these children were subnormal on admission to the institution suffering from gastro intestinal disturbances and rickets He also described how he had checked the matter by examining children who had not come under the influence of raw milk at such an early age In twenty eight cases in which the milk had been started at the average age of 4 years and 8 months and whose present age was from 7 years to 10 years and 9 months he found only two instances of caries in the permanent teeth most of these children had carious deciduous teeth A further control was done of children of a still later age This concerned forty four boys who had been admitted and had come on the milk ration before the end of their eleventh year and who were now 13½ years of age or over The second permanent molars of these boys were studied and eleven cavities were found in six boys Raw milk appeared to confer incomplete immunity if commenced at a time when it was no longer a physiological food Mr Sprawson added that practically all children got a milk ration during the first three or four years of life but the milk was always sterilized by boiling or pasteurization These processes had no effect on the vitamin D content or the salts present in the milk but both boiling and pasteurization could destroy either the antiscorbutic principle so that a baby fed exclusively on milk diet were given boiled milk alone scurvy resulted in a certain number of cases There was a possibility that fresh raw milk might be a more vital element than was at present thought Possibly also there might be different kinds of vitamin A some of which were at present thought to be identical with vitamin D some factors and some of these had a greater power for building certain tissues than others Tests of raw milk on the teeth of rats were actually being carried out in the laboratory [illegible] seemed clearly to indicate that it had an effect up to that age for teeth not yet completed He had no idea how long the immunity to caries would last but so far he had not seen a carious tooth in a child kept consistently on a daily ration from before 12 months of age though there had been no restriction in regard to sweets and other foods

In the course of some discussion Mr LEWIS PAYNE remarked on the variability of cow's milk saying it appeared that the growth promoting or vitamin A factor depended upon the diet of the cow whilst the antirachitic factor was determined partly by the diet and partly by the amount of light to which the cow was exposed Mr A T PITTS pointed out that the children in this experiment were living under institutional conditions where there was an ordered routine of diet which did not occur in the average household He had no knowledge as to how far raw milk was a regular addition to the diet of children of the hospital class but he knew that caries was far more prevalent there than in children seen in private practice Raw milk unless it came from herds which had been tuberculin tested was by no means safe The PRESIDENT said that the remarkable thing about Mr Sprawson's investigation appeared to be that positive results were obtained although the rest of the diet apart from the raw milk was not only normal but crowded with carbohydrates

RETICULO ENDOTHELIAL SYSTEM

At a meeting of the Liverpool Medical Institution held on January 14th with the president Professor W BLAIR-BELL in the chair Dr R H MOLE read a paper on the reticulo endothelial system with special reference to its function in defence

Dr Mole said that Metchnikoff held that microphages and macrophages were the main defence Ehrlich that the body fluids were more important Probably both were right and the cells of the reticulo endothelial system together with their humoral products seemed likely to prove to be the backbone of defence He described Cappell's interpretation of the histology of the reticulo-endothelial system and discussed the nature of the so called alveolar epithelium and its relationship to the reticulo endothelial system The reticulo endothelial system of separate animal types differed and the various parts of the reticulo endothelial system in any one type seemed to have dissimilar functions The cells responding to a general infection were not the same as those responding in the case of the haemolytic anaemias The splenic sinus endothelium took up injected carbon particles in fine granules whereas the pulp cells took up the carbon in bulk Dr Mole mentioned various functions suggested for the reticulo endothelial system including a possible function related to normal metabolism He cited much experimental work to show that the reticulo endothelial system was responsible for the removal and disposal of foreign particles and organisms in the blood He quoted L Rajchman's experiments with vaccinia virus and in conjunction with him demonstrating the activity of the reticulo endothelial system in local defence A great deal of experimental work he said pointed to the reticulo-endothelial system being responsible in part at any rate for the production of various kinds of antibodies Tissue culture had provided a possible solution to the origin of an body He spoke of precipitin agglutinin as well as bacteriolysin could be produced in tissue culture Dr Mole reviewed the function of the reticulo endothelial system in defence in the case of protozoon infection and its relation with chemotherapeutic action

In the discussion which followed Professor J H DIBLE said that the main points were the old question of the relative parts played by microphages and macrophages in immunity and the source of the immune bodies The injection of particulate matter or bodies of high molecular weight into the circulation produced a severe crisis in the polymorph cells, most of them disappeared almost immediately from the circulation, a considerable number being found in the lungs There was no doubt that some of them underwent destruction This phenomenon was often overlooked in considering the results of intravenous injections The case for the reticulo endothelium as the source of antibodies generally rested upon two types of observation the aggregation of injected bacteria into the sites where much of this tissue was normally found, and the effects on antibody production of injury and stimulation of this tissue The results of experiments while giving some support to the case, were often contradictory and at present there was little satisfactory evidence of the predominating role of the endothelial cells in the production of antibodies

COMMON GASTRIC SYMPTOMS

At a meeting of the Brighton and Sussex Medico-Chirurgical Society on January 7th Dr JOHN A RYLE gave an address on the nature and relief of some common gastric symptoms

Dr Ryle prefaced his remarks with a reminder as to the practical importance and the philosophical interest attaching to the study of the subjective phenomena of disease Diagnostic achievement was due more to a proper appreciation of symptoms than to any special skill in the methods of objective inquiry And yet the subject of symptomatology still suffered neglect in undergraduate teaching in the textbooks, and in practice If physical signs were the morbid anatomy of bedside medicine, symptoms were its morbid physiology each one expressing a perturbation of function an exaggeration or depression of some healthy vital reflex In the dyspepsias more than in any other group of maladies the practitioner was compelled to rely mainly upon symptoms for his opinions The nature common morbid associations probable physiological interpretations and the rational therapy of hunger pain gastric flatulence nausea, anorexia heartburn acid regurgitation and waterbrash were then reviewed in turn Hunger pain most often due to duodenal ulcer but occurring occasionally in association with gall stones appendicitis, tobacco excess and worry and very rarely with pyloric cancer was considered as an effect of exaggerated tonic and peristaltic activity the pain originating in the gastric plain muscle, it was not due to hyperacidity *per se* Malodorous eructations (sulphuretted hydrogen) were due to protein decomposition in gastric stasis from pyloric stenosis or carcinoma Eructations of bowel wind occurred in gastro jejuno colic fistula Odourless flatulence was probably the commonest of all dyspeptic symptoms While it might express organic disease it was more often symptomatic of unconscious habit and functional error Air-swallowing might be the whole or merely a part explanation Frequent and noisy eructations were nearly always due to aerophagy Nausea whether physiological or pathological and whether of local or central origin, seemed to be best explained (in its gastric elements) as due to an abolition or diminution of tonic or peristaltic activity A stomach with barium meal radiographed during migrainous nausea was found to be quite inert Dr Ryle reviewed numerous causes of nausea and said that the gastric element in anorexia—a near neighbour to nausea—was also best explained by a depression of normal tonicity The anorexia of fever, gastric cancer, and mental states was discussed It appeared from Poulton's work that heartburn was probably due to oesophageal contraction and was quite distinct from acid eructations which were, perhaps, the only true symptom of hyperchlorhydria Heartburn was not a symptom of organic gastric disease Waterbrash was due to a sudden hypersecretion of saliva and occurred more frequently in duodenal ulcer than in any other disease The general aim should be not merely to appreciate that certain symptoms were symptomatic of certain diseases or disorders, but to understand the actual physiology of each symptom Closer analysis of symptoms led to better precision in diagnosis and to earlier diagnosis, and with their aid the practitioner might avoid on the one hand, an attitude of despair or indifference in the face of dull or difficult cases and on the other, an over reliance on x rays and the laboratory

PROTECTION FOR X RAY WORKERS

The recommendations for the safety of x ray workers, revised by the International *X*-Ray and Radium Protection Commission and adopted by the third International Congress of Radiology held in Paris in July last were the subject of some criticism in a paper recently read at the British Institute of Radiology by Dr FRANCON ROBERTS As it was felt to be important that some answer should be given to Dr Roberts's strictures, the January meeting of the Institute was devoted to a discussion of the whole subject Almost a dozen speakers took part, all of them generally supporting the recommendations so that Dr Roberts found himself in a minority of one His general contention was that the recommendations were unnecessarily onerous For example the rules for ventilation of the x-ray department were over elaborate requirements for the protection of the walls went beyond what the circumstances of the case demanded, insistence on periodical blood and other examinations of x ray workers was likely to be honoured more in the breach than in the observance, while the need for four weeks annual holiday to be taken consecutively was another unjustifiable stipulation

Dr STANLEY MELVILLE a member of the British committee set up in 1921 under Sir Humphry Rolleston's chairmanship gave an interesting passage from history in stating that that committee was formed following upon the death due entirely to the effect of the rays of one or two prominent workers, and that it averted an influential newspaper campaign against the use of this dangerous radiation This newspaper only consented to hold its hand on the understanding that an inquiry would be held Within a few months of the setting up of the committee a first list of recommendations was made to be revised in subsequent years in the light of further experience At Stockholm in 1928 the British recommendations after certain criticisms had been offered were adopted as the international standard and again after some revision adopted in Paris in 1931 and Dr Melville considered this a great justification of their reasonableness

Two physicists from the National Physical Laboratory then gave to the meeting some account of the way in which calculations for protection were made The basic figure was the amount of radiation which a person of normal physique and health could stand if subjected to it regularly throughout the working day This tolerance dose having been laid down by the best medical authority obtainable the rest was a matter of calculation adjustment of tube output and incorporation of protective materials in the walls and elsewhere

Dr G B BATTEN pointed out that Dr Roberts had this justification for his criticisms—that of late years x ray practice had very largely altered Much less screening

was done than formerly and moreover the self-protected tube had been evolved which made it possible to interpret the recommendations in rather less stringent terms One of the disadvantages of the regulations as they stood said Dr Batten was that they made it difficult for x ray workers to obtain life assurance on ordinary terms

Dr A E Barclay the president of the Institute recounted an interesting experiment on secondary and scattered radiation which is now the dangerous radiation from the point of view of the worker He found that 20 per cent of this radiation came from the top of the tube 30 per cent. from the stem and 50 per cent from the body of the patient He placed a dental film at various distances from the patient the tube working at 110 kilovolts and 2 milliamperes and noted how the film was darkened by the scattered rays The danger limit or the tolerance dose was reached on a film exposed three feet away from the patient for half an hour

Dr W M Levitt referred to the danger of the rays coming from the top of the tube box and mentioned that at Erlangen he had seen a patient with a severe burn on the heel from such radiation although the source was eighteen inches away At St Bartholomew's Dr Levitt said it had been found that the rays were scattered over the top of the partitions dividing the x-ray rooms so that the partitions which were originally six or seven feet high had at first to be carried up to ten or twelve feet When this proved ineffective they were further extended to the ceiling

Dr G W C Kaye another member of the committee said that he regarded the self-protected tube as one of the results of the committee's recommendations He paid a tribute to the sympathetic co operation of the British x ray industry without whose assistance the work of the Protection Committee might well have been stultified At the congress in Stockholm in 1928 it was only British manufacturers who were showing protective devices although three years later in Paris such devices permeated the whole exhibition He added that the committee was still in existence and did not intend to rest on its oars

Dr Ffrancon Roberts still held to most of his objections and confessed himself unconvinced that ventilation in excess of the usual requirements of a building was really necessary to meet the case

At the close of the meeting a hearty vote of thanks was accorded to the British X Ray and Radium Protection Committee for its labours

DEMONSTRATION OF CASES

At a meeting of the Aberdeen Medico Chirurgical Society held on January 14th at the Royal Aberdeen Hospital for Sick Children with the president Mr F K Smith in the chair a demonstration of cases was given by members of the hospital staff

Mr G G Bruce showed a case of ectopia vesicae in a boy aged 12 years The right ureter had been transplanted obliquely into the lower end of the pelvic colon and after a month's interval the left ureter had been similarly transplanted the bladder was removed by diathermy The interesting point was that at operation the right ureter was apparently normal while the left one was dilated to three times the size of the right Con absence was uneventful the child being left however with epispadias and considerable dilatation of both ureters The percentage of blood urea after the first transplant was 23 mg after the second transplant 28 and 31 later falling to 10

Dr W Brown showed three cases One was that of a girl 10 years old with chorea and mitral stenosis showing rheumatic nodules He had found that only 16 out of the last 116 cases of rheumatism in his ward showed rheumatic nodules The second was that of a boy aged 9 months who had come to hospital on account of loss of weight and a suspicion of neck rigidity On admission the child was found to roll its head and to wave its arms in an athetoid manner this was noted to be due to difficulty in respiration the arm-waving appearing to help the child's respiratory movements The abdomen was distended and the child had a look of intense misery The nose and finger-tips were very red all the muscles were hypotonic and marked sweating was present No signs of rickets were seen On further examination the glottis was found to be very soft explaining the head rolling since the child had to throw back the head to get breath Treatment by atropine kept almost to toxic limits was commenced the dosage being 24 minims daily of a 1 in 1 000 solution increased to 30 minims daily Marked improvement occurred the weight increasing from 12 to 14¾ lb Dr Brown suggested the diagnosis of vagotonia The third case shown was that of a girl aged 4 months admitted in a state of dehydration with mucous diarrhoea and distension of the abdomen Bacteriological examination of the stools failed to demonstrate any causal organism Later double otitis media developed and on paracentesis being performed the diarrhoea ceased and the child began to recover Dr Brown showed this case as illustrative of diarrhoea of parenteral origin and emphasized the importance in the treatment of such cases of giving dextro maltose instead of glucose alone as it allowed a more prolonged and even utilization of glucose

Dr John Craig showed two cases The first was that of a boy aged 10 years who was admitted to hospital with a history of weekly attacks of frontal headache followed in about an hour by vomiting A month or two after the onset the child was noted to stagger to the right on walking A little loss of tone and of power of the right arm was present and there was fine nystagmus on looking to the left The right knee jerk and tendo Achillis-jerk were exaggerated but both plantar responses were flexor and all abdominal reflexes were present There was a marked degree of choked disk A diagnosis of subtentorial tumour was made but the child's parents refused operation and removed him from hospital Since discharge from hospital the condition had cleared up remarkably and the child was now left with only exaggerated right knee and tendo Achillis jerks and failure to swing the right arm normally on walking The case was thus one of meningo encephalitis with hydrocephalus having an unusually marked degree of swelling of the optic disk Radiograms showed that re deposition of bone had commenced in the posterior clinoid process The second case was that of a child aged 6 months who had wheezed since birth The whole of the upper part of the right lung showed all the signs of consolidation but there was no pyrexia or upset of the general health The tuberculous reactions were positive The diagnosis of epituberculosis was strengthened by the later appearance of a tuberculous focus in the left ankle A tuberculous focus with probable cavity formation also showed up later in the lung

Mr A Mitchell demonstrated a case of malignant tumour of the posterior end of a rib from which despite its having all the appearances of a tuberculous process nothing could be aspirated At operation the tumour was found to be hard apparently a fibrosarcoma but on section it turned out to be a round-celled sarcoma During the operation a tiny wound was made in the pleura which was promptly covered with a damp swab and later stitched up No respiratory embarrassment was noted but a radiogram taken a few days later showed

complete collapse of the lung The case was shown primarily as indicating the extraordinary degree of collapse of lung which can occur without marked symptoms when a tiny wound is made in the pleura at operation

Mr A FOWLER showed a case of avulsion of all the extensor tendons of the right arm, with complete destruction of the carpus and loss of an inch of the ulnar nerve The injury followed a motor accident The radial artery was intact so repair was decided on After the sepsis had cleared up nerve suture was performed and recovery took place at a normal rate There was now a certain restoration of power of the interossei, the child had a good grip, and could approximate the thumb to the index finger A useful hand had therefore been preserved

At the conclusion of the meeting a film was shown of several cases, including two of spastic paraplegia one showing the gait before operation and after nerve section Among other cases shown were those of congenital hip joint disease, progressive muscular atrophy infantile hemiplegia lipodystrophia progressiva and empyema thoracis, in this last case the operation itself and the respiratory movements afterwards were demonstrated

SOLITARY RENAL CYST

A meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland was held in the Royal College of Physicians on January 8th with Dr J LAIT in the chair

Mr F J HENRY showed, for Sir William Wheeler a solitary serous cyst of the kidney The specimen had been removed from a woman aged 57 She had complained of intermittent attacks of painless haematuria, and presented a smooth painless and mobile enlargement of the right kidney A diagnosis of hypernephroma had been made but at operation a large solitary cyst was found in the upper pole of the right kidney This cyst was removed by conservative resection a small layer of renal tissue having been shaved off The patient made an uneventful recovery Lantern slides demonstrating the pyelographic appearance of the kidney before and after operation were also shown

The CHAIRMAN said he did not think that cysts of the kidney were as rare as was generally supposed He had recently seen a case of congenital cystic disease where post-mortem examination revealed one kidney which was almost a mass of blood He was interested to hear that urea was found in the cystic fluid as this was a very uncommon finding

In reply Mr HENRY said that Sir John Thomson Walker regarded solitary cysts of the kidney as extremely rare McKim and Smith in America had reported 120 cases in which haematuria was a very unusual feature They called attention to the necessity of distinguishing between true solitary cysts of the kidney and perirenal cysts

Pleural Endothelioma

Dr J LEWIS showed a specimen of endothelioma of the pleura The patient was a woman aged 41 who had suffered for some months from pain in the left side of the chest She had paroxysmal pains which radiated down the left arm She developed a serous pleural effusion which later became haemorrhagic The only enlarged gland that could be found was situated behind the left clavicle This was removed for histological examination Post-mortem examination revealed a thickened pleura and a haemorrhagic effusion There were plaques of endothelioma studded over the parietal pleura and on its diaphragmatic surface Some plaques were also found on the pericardium Secondary deposits were seen in the liver kidneys and mediastinal glands Histologically the tumour was a typical endothelioma

Reviews

ETIOLOGY OF CANCER

Mr SAMPSON HANDLEY's well-known work on the dissemination of cancer entitles any opinion which he may express on the subject of that disease to the serious consideration of pathologists His recent book on *The Genesis of Cancer*[1] contains a new theory of the cause of carcinoma and the evidence on which it is founded and it will doubtless arouse much interest Precancerous conditions now figure largely in discussions on cancer formation, apparently they have a close relation with the actual cause of cancer, but they vary much in nature (cicatrices hyperkeratoses warts atrophies chronic inflammations and other conditions) and no one of them has hitherto been identified as the essential precursor of the disease

Mr Handley now claims to have detected a precancerous condition which is constantly present in cancer production —namely lymph stasis and in so far as a single constant precursor can be regarded as the essential cause he considers that lymph stasis is the cause of cancer Many facts are adduced to prove that lymph stasis is a prominent feature in cancer production The belief is daily gaining ground that papillary hyperplasia or some analogous condition such as adenoma or papilloma is a constant precursor of cancer, and Mr Handley's researches have led him to the conviction that these formations are the product of lymph stasis He has detected an obstructive lymphangitis at the base of all papillomata and in the light of our knowledge of the effects of lymph stasis in such conditions as elephantiasis with its connective tissue hyperplasia and papillary hypertrophy he concludes that papillomata are essentially connective tissue growths caused by lymph stasis Further proof of the significance of lymph stasis in carcinoma is afforded in the tendency of lupus carcinoma to arise at the margin of cicatricial areas where papillary hypertrophy due to obstructive lymphangitis is strongly in evidence

Absolute proof is impossible owing to the complexity of the subject but Mr Handley feels justified on the strength of the above and similar observations, in asserting that lymph stasis is at least frequently present in carcinoma, and it has never been proved to be absent As is the case with other precancerous states the exact relation of lymph stasis to the onset of malignancy remains a mystery There seem to be three possible alternatives lymph stasis may be the essential cause, it may be merely a contributory cause (essential or otherwise) or it may be a constantly associated phenomenon unconnected with the causation of the disease Here as Mr Handley suggests in his preface there is an opening for the experimentalist Meanwhile, he believes that time will show that lymph stasis is the essential cause of cancer, manifested as such when its action is not neutralized by surrounding conditions

HUMAN PARASITOLOGY

The object of *A Guide to Human Parasitology* by BLACKLOCK and SOUTHWELL is to enable a medical practitioner to identify any parasite he has before him A two legged animal that has feathers is a bird the diagnosis is at once made Similarly in this work the practitioner will find that he has only to ascertain a few

[1] *The Genesis of Cancer* By W Sampson Handley M S F R C S The Anglo-French Library of Medical and Biological Science London Kegan Paul Trench Trubner and Co Ltd 1931 (Pp xix + 258 113 figures 21s net)

A Guide to Human Parasitology By D B Blacklock M D, D P H and T Southwell D Sc Ph D F R S Ed London H K Lewis and Co Ltd 1931 (Pp viii + 272 122 figures 2 plates 15s net)

indeed a very few points in order to make an equally certain diagnosis. The characteristic then of this text book is its essentially practical nature: all other aspects of parasitology are subjected to this one end—diagnosis. Necessarily the nomenclature, the technical terms and the methods of parasitology must be known to a certain extent, and brief but admirably clear expositions are given on such matters as terminology, classification, anatomy and life histories. To protozoology is allotted somewhat under 100 to helminthology somewhat over a hundred pages. The helminthological portion moreover has a number of diagrams illustrated by drawings of man, pigs, cows, fish, dogs, cats, rats, sheep, mosquitos, snails, crabs, etc., in which the connexion between man and pigs, etc., is clearly shown, so that it is practically impossible to get a confused idea of a life history. Then follows a series of tables in which the previously acquired knowledge is finally summarized in a variety of ways—for example, in order to show the connexion between the various parasites and water or food, the part played by snails by arthropods, and by faeces. Pathology and treatment also find brief consideration. Here then the practitioner will have a book in which there is no mystery or guess-work in diagnosis. The diagnosis is made with certainty or not at all, and the simplicity of the whole business cannot fail to encourage those who have had misgivings as to their own capability of ever recognizing such a definite organism as an amoeba. Still we have to reckon with the perversity of the student who will gaze fondly at a piece of muscle in faeces in spite of the striae under the impression that he has found something. We fear too that leucocytes will still be taken for malaria parasites, fragments of earthworms (in vomit) for ascaris, stained blotting paper fibres for microfilariae, acarine eggs for helminth eggs, banana fibres for dipylidium segments, but so far as is humanly possible the authors have made the path very easy and have removed the difficulties which are apt to overwhelm the unassisted learner.

Coming to details we read in Chapter III. that greasy slides render good film making impossible, but we do not find instructions how to obtain an absolutely grease-free slide, a desirability in certain circumstances. The simplest and best method in our experience is to heat the slides. We think that the instructions for testing blood before transfusion are rather out of place in a work on parasitology. The paragraph on thrombocytes really conveys no information, and their approximate number might at least have been stated. Reticulocytes are not figured on page 19, nor is it clear if and how the authors distinguish them from red cells with basophil punctation. Again on page 27 under the instructions for obtaining plasma it is hardly precise enough to say that a little oxalate or citrate solution is placed in the syringe. In Chapter XII. the minute hooks of the hexacanth embryo are described. We would suggest that by the use of the word spines confusion by the student with the hooks of the mature cestode would be avoided. Regarding *Taenia granulosa* the authors state that it is almost impossible to obtain it in the British Isles. The natural infection certainly may be difficult to secure, but abundant material for study is readily got by feeding dogs on hydatid scolices. It is recommended that all dogs infected with *T. granulosa* should be destroyed at once, but would not the authors try first the effects of carbon tetrachloride if they owned pedigree pups? In Fig. 55 the line across the top of the figure would lead a student to think that the suckers and hooks were enclosed in a sac, and that only by a conjuring trick could Fig. 56 be arrived at. On page 114 Fig. 103 should read Fig. 105. In Chapter XVI. the term germ cells we think requires some explanation other wise it might suggest the existence of gonads, and though in this chapter the excretory system of trematodes is explained almost nothing is said of the excretory system of cestodes in an earlier one. We may note also that on page 143 the ovary (Fig. 78) should read Fig. 99, and on page 168 page 163 Fig. 98 should read Fig. 99 and on page 168 in the key to the species the paragraph relating to *Enterobius vermicularis* is misplaced; it should come at the end of the table. These are minor errors that have been overlooked in the otherwise evidently very careful proof reading, for we have not noted any verbal misprints.

The authors have written an excellent, accurate and intelligible guide to practical parasitology. What more could a student desire?

OPERATION FOR CLEFT PALATE

The small group of surgeons who deal with the notoriously difficult problems of cleft palate have for some time been awaiting with interest the publication of the detailed methods of VICTOR VEAU of Paris. The work now issued under the title *Division Palatine*[1] will certainly not disappoint them; it contains some five hundred pages and a considerably greater number of figures and is in many ways the most important book that has yet appeared on this subject. The minute and beautifully illustrated account of the anatomy concerned excels anything so far published, while the series of notes and drawings by which the author shows the gradual evolution of his present methods might serve as a model to writers on many branches of surgery. Apart from its clearness, the writing is uncommon in quality. After the pomposities and oracular vagueness of so much of the literature of our profession what a relief it is to find a frank admission of difficulties and failures, and a self criticism which calmly observes: "Nothing could be more ridiculous than what I did in this case." The results which are described in as much detail as the technique are well able to stand this frankness when judged by the only standard that is of importance, the production of a normal voice.

In the methods of Dr. Veau there is one really original idea. It is that a complete epithelial lining should be made for the nasal side of the new palate, both hard and soft, as well as for the oral side. He does this by detaching and suturing separately the mucosa of the septum and the floor of the nose and relies upon this layer rather than upon the oral one for closure of the gap in the hard palate. The provision of an interior lining of this sort is now recognized to be the secret of success in remaking a nose, and it is not inconceivable that it may be just as important on the floor of the nasal cavity as on its roof. Certainly anything which tends to diminish the huge raw areas so often left after operation is worthy of the most serious consideration. For the joining of the soft palate Veau uses counter tension rather than relaxation to keep the raw surfaces in apposition during healing. This tension is supplied as in Brophy's method by the traction of wires upon the muscles, but instead of pulling on lead plates the suture of Veau under runs the mucosa on both oral and nasal surfaces to grasp the entire thickness of the tissues between.

To turn to criticism surely Dr. Veau weakens a strong case by endeavouring to bend that most inelastic of sciences, anatomy, to suit his argument. There is none the less a definite blood supply to the hard palate by way of the anastomosis (through the incisive canal) of the posterior palatine and naso palatine arteries, though this supply is cut in his technique, and his careful preservation of the structures coming through the posterior palatine

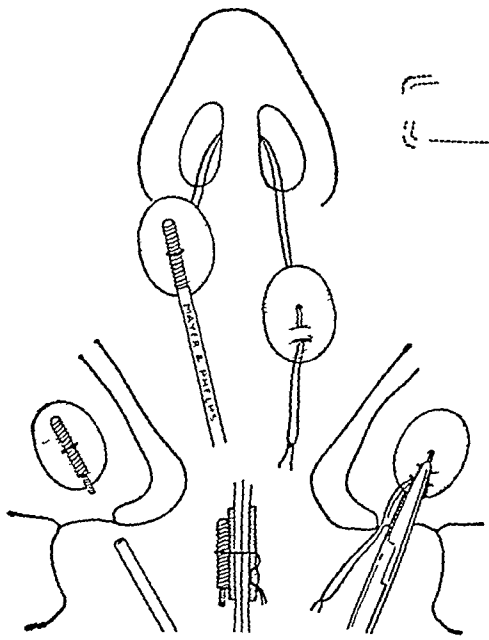
[1] *Division Palatine*. Par I. Veau avec la collaboration de Mlle. Borel. Paris: Masson et Cie. 1931. (Pp. 568, 786 figures. 140 fr.)

feeling which comes from leather covered handles after much usage The instrument is packed in a case with an arrangement which allows of its immediate extraction when it is required

A SPLINT FOR USE AFTER SUBMUCOUS RESECTION OF NASAL SEPTUM

SIR ROBERT WOODS (Dublin) writes the expedients usually adopted for the prevention of haematoma after submucous resection generally result in a night of much discomfort for the patient The device described has the great advantages of being easy to place in position easier still to remove and while ensuring that the membranes are held well together of permitting the patient to enjoy a comfortable night with free nasal respiration and even to indulge in the luxury of blowing the nose and wiping the nostrils with a handkerchief

Essentially it is the old mattress suture adapted to an awkward situation Two oval plates of lead are taken about 1 mm in thickness and measuring 2 cm by 1 5 cm That intended for the right nose has a small elongated hole in the middle that for the left a similar hole but in addition a bridge punched and elevated between the central hole and the edge of the plate Fixation is accomplished as follows A length of silkworm gut is taken and doubled The free

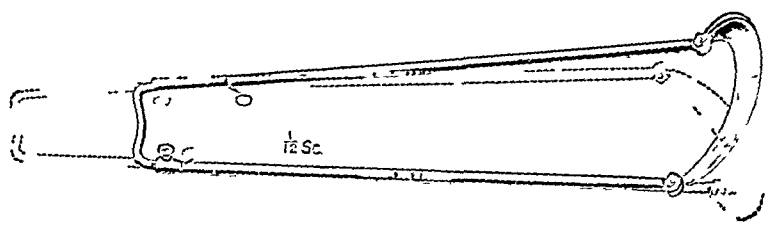


ends are knotted to prevent the plate slipping off The loop is threaded on to the left plate passing first under the bridge and then through the central hole The loop is next caught by a Reverdin needle slightly curved at the end and pushed through the membranes at about the middle point of the vacancy caused by the removal of the hard part of the septum When the loop appears in the right nose it is caught in a forceps or hook released from the needle and brought out through the right nostril The loop is next threaded through the slot in the right plate and a key is inserted to prevent its withdrawal Traction is made on the gut in the left nose while the right plate and key are guided up the right nose to their position against the septum While holding the right plate in position by gentle traction the left plate is now slid along the gut until it lies beside its opposite fellow being separated only by the two soft layers of the septum When the plates are snugly together it only remains to crush the bridge down by an artery forceps until the gut is pinched and the splint is secure The superfluous tails of the gut are then cut off For the key I first used a piece of wire but its removal was often surprisingly difficult as the loop had a trick of sticking to it and causing it to jam I now use a brass screw which is removed by unscrewing To facilitate this about 3 mm of the end of the key has a left hand thread This fits into a rod with a corresponding left hand female screw which is used as a handle When the time comes to remove the splint the handle being applied to the end of the key is rotated anti clockwise After two or three turns they become engaged and a continuance of rotation unscrews the key from under the gut loop The plates are then (right first) picked out of the nose with a pincette Cocaine is unnecessary for with ordinary gentleness there is no pain I have had this device in use for over two years and can say that it is ideal Theoretically the size of the plates should vary with the size of the area resected but in practice I have found the size mentioned suits all ordinary cases well A point of practical importance is that if the slot in the right plate is too short the gut loop is apt to roll over and by its gripping prevent the free rotation of the key If this happens it can be met by lifting the instrument so that the lower part of the gut loop is kept straight

The instrument is made by Mayer and Phelps Their illustration represents the fixation further forward than is customary

A MODIFIED THOMAS SPLINT

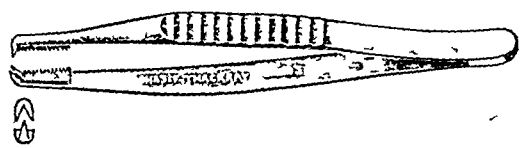
MR H E RAWLENCE M D F R C S Ed (Southampton) writes The splint shown in the accompanying figure is based in all particulars upon the principles of a Thomas hip splint



It packs flat for use in an ambulance It has a swivel joint on either bar below the buttock half circle this allows for the splint being used for the right or left lower extremity as required The anterior half circle being removed allows of application with ease and without pain The splint is intended for temporary use in motor accidents and for moving patients by road

COMBINED DISSECTING AND SUTURE HOLDING FORCEPS

MR LANCELOT BROMLEY M Ch F R C S writes The following diagram shows an instrument designed for use as an ordinary toothed dissecting forceps as well as for the purpose



of holding and keeping taut suture material during a continuous stitch and while tying knots The suture material may readily be grasped and held firmly between the evenly approximating surfaces without damage being caused The instrument was made for me by Chas F Thackray Leeds and of 252 Regent Street W 1

PERCAINE PREPARATIONS

Percaine is a new synthetic local anaesthetic that has been shown to be remarkably potent in its actions Moreover in its power to penetrate mucous membranes it excels most other synthetic local anaesthetics The Clayton Aniline Company Ltd have now put out two preparations for external use A 2 per cent watery solution of percaine ciba is intended for anaesthesia of mucous membranes in oto rhino laryngological and dental practice Percainal ciba is an ointment containing 1 per cent percaine and is recommended for application to the skin and mucous membranes It is intended to relieve pain in such conditions as bedsores cracked nipples and anal fissures

PHOSPHORUS THERAPY

Zoin (ciba) is the calcium salt of an amino acid phosphorus compound isolated from milk casein It is recommended for administration by mouth in all cases in which a rational phosphorus therapy is needed The makers are the Clayton Aniline Company Ltd

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INSTRUMENTAL METHODS IN CARDIOLOGY

Instrumental methods in diagnosis appeal to the modern clinician because they eliminate in some measure the personal factor They are of value only in so far as the results they produce are accurate and comparable and if the records obtained are susceptible of reasonably exact interpretation These accessory diagnostic measures have frequently elucidated problems previously obscure and they are often of further value as implements in the experimental study of physiological or pathological processes There can be little doubt that the physician faced with concrete difficulties seeks for the practical application of instrumental methods in clinical medicine

In relation to the cardio-vascular system and especially with regard to the value of radiography and electrocardiography some scepticism has existed in the minds of many This has up to a point, been justifiable since there has been so little uniformity in the assessment of the visualized or electrically recorded heart The difficulties that beset the clinician in his interpretation of the x-ray film or the electrocardiogram are, first inexact knowledge of the limits of the normal and, secondly ignorance of the precise significance to be attached to deviations from the normal even when these are gross For example it is not always possible, in the light of present knowledge to be sure that a certain contour observed on screening represents some pathological process and is not within normal limits Again it is of little value to know that the P waves are unusually large if the significance of this fact in terms of the heart's action is obscure

With the aim of securing greater uniformity in the interpretation of radiographic and electrocardiographic examinations of the heart the Heart Committee of the New York Tuberculosis and Health Association has just published two booklets [1] These deal respectively with each of the instrumental methods they represent attempts to define the deviations from the normal and to systematize their nomenclature No claim to completeness or finality is made by the authors in fact it has rather been their aim to create so that later it may be possible to refine statements concerning the grounds on which diagnoses can be made Further they invite suggestions modifying or improving the schemes they present This system of standardization has been applied with less success to radiography than to electrocardiography The reason for this is obvious, since in the former so much depends upon the observation of the heart as a dynamic mechanism This important fact tends to sink into the background when an attempt is made to classify sizes and shapes of the cardiac shadow, it certainly does not receive the prominence it deserves in the publication under review Thirty line drawings are appended to illustrate the contours which various forms of heart disease produce in the antero-posterior and oblique positions While they are clear and representative these drawings would have been of greater value had they shown the relative positions of the thoracic walls and the level of the clavicles

There can be no doubt that electrocardiography lends itself more readily to standardization A tabular key for the interpretation of electrocardiograms has been evolved in which every arrhythmia or abnormality in the deflections receives a name and a number tracings illustrative of these anomalies being included While this system is of value in that it attempts to define the limits of the normal, and confirms the use of descriptive terms now generally employed among clinicians and cardiologists, it may be harmful if its terms cloak the obscurity still investing certain electrocardiographic abnormalities For instance the definition as to what constitutes a "T-wave high voltage" and the pigeon-holing of the "shifting pace-maker" must not engender a belief that the significance of either is fully understood in terms of the heart in action More serious inherent defects of the system lie in the neglect of the importance of the relation between the abnormalities observed in the different leads and the constancy that standardization implies For example, the figure showing an upward convexity of the R-T interval, followed by a downward T wave is of little significance by itself and depends for its interpretation upon the changes present in other leads Again, the definition and classification of T-wave changes overshadows the vital fact that such changes are often transient and may vary from hour to hour, as they commonly do, from trivial causes When it is realized that fasting, exercise simple tachycardia the drinking of iced water, the inhalation of nitrous oxide thyroid deficiency and diabetes may all produce more or less passing changes in the shape and size of the T waves the importance of retaining an elastic concept of the electrocardiogram becomes evident

While the application of electrocardiography to clinical medicine dates back only fifteen years or so the study of the heart by radiography is of still more recent origin Much is to be expected from further work on both of these accessory diagnostic methods No full and authoritative account of the technique and scope of radiography in cardiology has as yet been published in this country and radiologists as a whole appear but little interested in its development On the other hand, electrocardiography is by no means the closed book or the academic pastime that some would have us believe More and more is the electrical examination of the heart being applied to the investigation of the myocardium and its blood supply, as distinct from the elucidation of

[1] *Radiological Diagnosis in Heart Disease.* Prepared by [illegible] M.D. *Criteria for the Interpretation of Electrocardiograms.* Prepared by Arthur C. De Graff M.D. New York: Heart Committee of the New York Tuberculosis and Health Association Inc. 1931

Western and Equatorial Africa, where variola major is the predominating form, no remarkable change has taken place while in Eastern and Central Africa an increase both of the benign and malignant types of small-pox still continues In the Union of South Africa only the mild type of the disease is observed, but in the northern provinces both forms coexist Apart from China for which no statistics are available, British India—with 215 204 cases in 1930, having a fatality above 50 per cent —forms the most important focus of small pox in Asia Australasia has been practically free from small-pox during the last two years In Canada and the United States the prevalence of a mild type of the disease remains high and has even slowly increased during the last five years In Mexico, on the other hand, a virulent form of small-pox is a serious menace to public health Only scanty information is available concerning the incidence of small-pox in Central and South America

GEORGE CRABBE—THE POET

So few people now remember George Crabbe who died on February 3rd 1832 that it is necessary to add the poet to identify him Yet he has an interest for medical men because he began life as a doctor, with experience of Poor Law practice at its lowest, wrote poetry when he was himself as poor as a church mouse and ended as a well-paid pluralist in the Church of England The approaching centenary of his death has led to a reperusal of *The Village* and *Tales of the Hall* and it is worth while therefore, to recall his early struggles as a medical man Born at Aldeburgh in Suffolk on December 24th 1754, he was the eldest of the six children of George Crabbe schoolmaster, parish clerk and collector of the salt duties George received some education at a school in Bungay, and was bound apprentice in 1768 to a doctor at Wickham Brook near Bury St Edmunds who employed him as errand boy and farm labourer Three years later, in 1771, he was transferred to Mr Page a surgeon at Woodbridge There he met Sarah Elmy, the niece of a substantial yeoman at Parham, whom he married in 1783 Still poverty-stricken, he returned to Aldeburgh in 1775, and worked in a warehouse publishing in the meantime a didactic poem in the style of Pope, called *Inebriety* and working as steadily as circumstances allowed at medicine and surgery He obtained sufficient money to take him to London, where he appears to have "walked the hospitals" for a short time but what hospitals is not now known He then returned to Aldeburgh, put a few bottles in a shop window with a small collection of herbs and drugs on the shelves, and started as an apothecary The venture proved unsuccessful, and after two years he discontinued it, shut up shop, and determined to cultivate literature For this purpose he borrowed five pounds, and after paying his debts sailed to London with a box of surgical instruments, three pounds in cash and some manuscripts Things went ill with him for eight months but early in 1781 Burke came to his assistance and from that time forward he went from good to better Acting on Burke's advice he abandoned medicine and was ordained as curate to the Rector of Aldeburgh on December 21st 1781 Two years later Lord Thurlow described him as being 'as like Parson Adams as twelve to the dozen" and gave him a couple of small livings in Dorsetshire, transferring him six years later to those of Muston and Allington in the Vale of Belvoir He was subsequently transferred to the rectory of Trowbridge in Wiltshire where he died Crabbe's recollections of medicine as he knew it were not flattering He describes the village practitioner as

> 'A potent quack long versed in human ills
> Who first insults the victim whom he kills,
> Whose murderous hand a drowsy bench protect
> And whose most tender mercy is neglect
> Paid by the parish for attendance here,
> He wears contempt upon his sapient sneer
> In haste he seeks the bed where misery lies,
> Impatience marked in his averted eyes
> And some habitual queries hurried o'er
> Without reply he rushes to the door

THE EMPIRE'S DEBT TO MEDICAL RESEARCH

The debt of the British Empire to medical research was the subject of an address given last week to the Royal Empire Society by Dr F E Fremantle M P Sir William Willcox, who presided, recalled some of the experiences which he and the lecturer shared in Mesopotamia during the war Dr Fremantle as a first illustration of the value of research mentioned the triumph of the Panama Canal a feat in which the British Empire was interested, seeing that not far short of two thousand British ships passed through the canal in a recent year He described how the construction of the canal was eventually made possible by the application of the discovery of the channels of infection of yellow fever and malaria The new conception of the transmission of disease by insects began with the discoveries of Timothy Lewis in India, Bancroft in Australia and Patrick Manson in China in the case of elephantiasis These discoveries became a beacon light to other inquirers and influenced later work on the transmission of disease by arthropods as, for example, that of Theobald Smith on the Texas fever of cattle, conveyed by ticks, and the classical researches of Sir Ronald Ross on malaria begun in 1895 It was on the analogy of elephantiasis (or filariasis) and malaria that the stegomyia mosquito was incriminated as the carrier of yellow fever, and Gorgas, within twelve months cleared Havana of this disease Passing to other instances Dr Fremantle mentioned the work on hook worm, on Mediterranean fever exterminated by the researches of Bruce on cholera, now prevented or controlled thanks largely to the work of Sir Leonard Rogers, on leprosy now amenable in early cases to modern treatment by drugs derived from chaulmoogra oil, and on sleeping sickness, beri-beri plague, dysentery and, representing in some respects the greatest triumph of all enteric After discussing the role of the clinician and sanitarian in tropical countries, and the conditions for health in the Tropics, based on the findings of physiological and psychological research, Dr Fremantle emphasized the internationalism of medical research It never had been, nor could be the credit of one country If a British worker, Manson, discovered the development of filaria in the mosquito, Laveran a Frenchman discovered the parasite of malaria The fact that protozoa could be transmitted by ticks was an American discovery, the association of trypanosomiasis in cattle with the tsetse fly was a piece of British work A Dutchman, Eijkman, found

that fowls were subject to polyneuritis when fed exclusively on decorticated rice Ross, in India, showed the commencing development of human malaria parasites in anopheline mosquitos, Grassi in Italy, confirmed Ross's work, Looss, a German, in Egypt, demonstrated hookworm infection, Carrol, Reed, and other Americans proved in Havana how yellow fever was transmitted But pardonable pride might be felt in the part which the British Empire had played, both in research and in application Dr Fremantle outlined the work of various governmental and other bodies in this country, and specially stressed the importance and value of the London School of Hygiene and Tropical Medicine Our health services, he declared, had been a strong missionary force for peace and even in these days of economy medical research was the best investment for the nation and the Empire

LATHYRISM

Professor Ralph Stockman has recently published an interesting study of the toxic effects produced on animals by lathyrus peas[1] Epidemics of human poisoning due to eating certain vetches were first recorded by Hippocrates and have been of fairly frequent occurrence in Southern Europe and in India Lathyrism is also a danger to various domestic animals, and horses are peculiarly susceptible Stockman had previously shown that the symptoms of lathyrism seen in man could be produced in monkeys by feeding experiments His recent experiments showed that the poisonous principle was an acid which was apparently the same in all the varieties of seeds examined A dose of 0 8 gram of the active principle was sufficient to produce paralysis in a monkey Post-mortem examination showed that lathyrus produced diffuse degeneration in the brain and spinal cords of the monkey, both the sensory and the motor tracts being involved

X-RAY AND RADIUM PROTECTION

Following the issue of recommendations for protection against dangers from x rays and radium, which were adopted by the third International Congress of Radiology last July and were published in our columns on October 31st (p 819) there has now been issued by a committee of the Health Organization of the League of Nations a review of these protective measures which is based on inquiries made in various countries During its twelfth session the Health Committee considered a memorandum prepared by two of its members (Drs Jitta and van der Plaats) on the dangers attending the use of x rays the health administrations of the various countries were subsequently invited to supply details about the regulations in force in this connexion Professor Hermann Wintz with the assistance of Dr Walther Rump then collaborated in compiling on the basis of the information thus obtained the present report in which special attention is directed to the precautions which should be adopted both for the patient and for persons remaining in proximity to sources of short wave rays A comprehensive and practical discussion of these matters is followed by a tabular survey of the regulations enacted up to the present in the different countries which reported Protective measures that should be taken against the possibility of electrical accidents in x-ray and similar establishments are dealt with in the next section of the report, and recommendations are made as to hygienic measures and the precautions advisable against risk of x-ray film fires The result of the broad survey undertaken by the Health Committee is a volume which should be of value to those who are concerned with endeavouring to diminish the liability to such serious accidents of various kinds as have in the past hampered the application of radiotherapy At page 192 this week we report a meeting of the British Inst[illegible] which the recommendations of the [illegible] were discussed

[1] *Journal of Hygiene* 1931 xxxi 4

Precautionary Measures against Dangers resulting from the Use of Radium Rays and Ultra Violet Rays League of Nations Health Organization Official No C.H.1054 London G Allen and Unwin Ltd 1931 (3s)

SIR ALFRED YARROW

Sir Alfred Yarrow, the great engineer and ship-builder who died at the age of 90 on January 24th, was elected F R S in 1922, and in the following year made a princely benefaction to the Royal Society of £100,000 to mark his sense of the value of research to the community, this sum, with his approval, was applied to the foundation of research professorships He will be especially remembered by the medical profession as the founder of the Yarrow Home and Hospital for Children at Broadstairs This admirable institution was built and endowed by him in 1895 for the early and preventive treatment of disease and convalescence after illness, for the children of civil engineers architects artists authors, clergymen, members of the medical, legal, and other professions, members of scientific societies, officers of the Navy and Army, officers of the Merchant Service, schoolmasters, and university professors" The home accommodates fifty boys and fifty girls When in the lean years after the war the original endowment fund proved insufficient, Sir Alfred Yarrow added a further large sum to it He took a keen personal interest in the management of the home, and watched over the purity of its milk supply His youngest daughter is the wife of the President of the Royal College of Physicians and President Elect of the British Medical Association

The ninth Congress of the International Society of Surgery will be held at Madrid under the presidency of Professor de Quervain of Berne, from March 15th to 18th when the following subjects will be discussed non tuberculous pulmonary suppuration diagnosis and treatment of intraspinal tumours surgery of the oesophagus, and recent progress in surgical anaesthesia Excursions will be made to Seville Cordova Granada, Valencia and Barcelona Further information can be obtained from the general secretary, Dr Mayer 72 Rue de la Loi Brussels

At the meeting of the Pharmaceutical Society of Great Britain on February 9th at 17 Bloomsbury Square W C an address will be given at 8.30 p m by Dr H E Archer on Biochemistry chemical pathology and pharmacy

The first annual lecture on Happiness and success founded under the will of the late Sir Alfred Fripp F R C S will be given by Mr Baldwin at University College, Gower Street W C on February 26th, at 5 p m

The First Hundred Years

NOTES ON THE HISTORY OF THE ASSOCIATION

THE British Medical Association founded at Worcester in 1832 by Sir Charles Hastings, celebrates its centenary next July under the Presidency of Lord Dawson of Penn. In anticipation of this landmark in professional history the Council invited Mr D. Murrhead Little, F.R.C.S., to undertake the task of annalist. We publish below the third of a series of advance extracts from the *History of the Association* which Mr Murrhead Little is preparing for publication at the time of the commemorative proceedings in Worcester and London. The first article appeared on December 5th 1931 and the second on January 2nd 1932.

THE MIDLAND MEDICAL AND SURGICAL REPORTER

The first number of this quarterly journal appeared in August 1828. Charles Hastings and the friends who were associated with him in this enterprise had in view, as he stated again later when founding the Provincial Medical and Surgical Association, the utilization of the valuable clinical material which existed in the provincial hospitals and the placing on record of pathological observations made within their walls.

The full title of the periodical was *The Midland Medical and Surgical Reporter and Topographical and Statistical Journal*. It bore the following motto quoted from Bacon's *Novum Organum*: Homo naturae minister et interpres tantum facit et intelligit quantum de naturae ordine re vel mente observaverit nec amplius scit aut potest, which may be translated 'Man being the servant and interpreter of Nature can do and understand so much and so much only as he has observed in fact or in thought of the course of nature beyond this he neither knows nor can do anything.' The assistants of Hastings in the editorship of the *Reporter* were Dr Malden, Mr James P. Sheppard and Mr John Rayment, all of Worcester, Dr Darwall of Birmingham and Dr Burne of London.[1]

Of this periodical sixteen numbers appeared from August 1828 to May 1832. The immediate cause of its decease was the failure of the printers and publishers in London. Two months later the Provincial Medical and Surgical Association was founded and its *Transactions* took the place of the *Reporter* to some extent but their annual volumes were not medical journals in the usual sense of the term and the *Reporter* had no periodical successor till the *Provincial Medical and Surgical Journal* appeared in 1840. The first volume of the *Reporter* opened with some account of the 'Faithful City' of Worcester. There were various articles on medical and pathological subjects and under the heading of medical jurisprudence an account of the appearances in the body of an infant of 11 months who died from gastritis after swallowing powdered glass; a charge of murder had ended in a verdict of Not guilty. There were hospital reports from various topographical places by Charles Hastings and an interesting summary historical account of the Worcester General [illegible] there were also [illegible] vern Hills and the [illegible] Atropa belladonna [illegible] coal district of Worcestershire on [illegible] and on the medical topography and [illegible] health of Birmingham by Dr John Malden, who condemned the water supply of the city; a case of ulcer of the right hemisphere of the brain, by Charles Hastings and reports of the dispensaries at Kidderminster and Cheltenham. Dr Walker of Huddersfield contributed "Observations on English hospitals." Meteorology was not neglected and there were the parochial returns of births, marriages and deaths in the city and suburbs of Worcester. Some remarkable cases were recorded: one by a veterinary surgeon of a case of psoas (?) abscess in a horse which afterwards recovered and was ridden to hounds; another, of strangulated hernia, in which six inches of gangrenous intestine and some omentum were removed, the consequent faecal fistula closed in time and the patient quite recovered. There was also an article on self supporting dispensaries and a complaint of plagiarism on the part of the *London Medical and Physical Journal*. Thomas Newell of Cheltenham, Surgeon Extraordinary to the King (George IV), reported an amazing case of spontaneous combustion. Unfortunately the narrator did not see the body until a few hours after death when it had been removed from the site of the fatality.

Infantile dyspepsia; Otorrhoea purulenta; 'Fracture of os calcis'; Strangulated hernia; A pot in the rectum; and A singular case of ischuria were the titles of other articles. The last named was by Hastings. Another article by him in this volume dealt with the use of the stethoscope, an instrument as yet little used by general practitioners. This article was severely criticized in a later number by W. Addison, surgeon of Malvern, and replied to by Hastings.

This brief resume shows that the *Reporter* was full of interest and must have been valuable to the practitioners of that day. The other two volumes were of equal merit and contain articles and reports that are still interesting to the student of the history of medical practice.

FOUNDATION OF PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION

The last number of the third volume of the *Reporter* dated May 1832 contained a notice of the termination of the work and the proposed formation of a medical association. This notice and prospectus signalized the crystallization into action of the ideas which Hastings and his friends had so long fostered. The notice and the prospectus were also printed as an advertisement in the *Lancet* of July 7th together with an announcement of the meeting to be held at Worcester later in the month. The editor of the *Lancet* called attention to the advertisement in a note in which its objects were stated and warmly commended. Notwithstanding this warm welcome to the project there appears to be no report of the meeting and no further comment on the Association in this volume of the *Lancet*.

The meeting was duly held in the board room of the Worcester Infirmary on Thursday, July 19th, 1832. A full report of it was published in the first volume of the *Transactions* of the Association. More than fifty practitioners were present including Dr Edward Johnstone of Birmingham who was unanimously called to the chair, the Regius Professor of Physic at Oxford, Dr Kidd and a number of physicians and surgeons from Bath, Bristol, Birmingham, Cheltenham, Warwick, Hereford and elsewhere including most of the resident faculty of Worcester and the neighbouring towns.

[1] See footnote to Hastings' address in the first number of the *Transactions* of the Provincial Medical and Surgical Association.

Hastings opened the proceedings with an address in which he congratulated his colleagues on the large proportion of provincial physicians and surgeons who supported their project He spoke of the aid to science rendered by the bringing together of its students and instanced the formation in the previous year of the British Association for the Advancement of Science The improved facilities of communication between distant towns both personally and by letter were such he said that the distance at which members might reside from one another will oppose but a slight barrier to our undertaking He was doubtless thinking of the then recent improvement of high roads as well as of vehicles *In 1832* the coaching system was at its best before railways had begun seriously to compete with it but even so the speed of the fastest mail coaches did not reach ten miles an hour including stoppages

In speaking of the numerous charitable medical institutions in the provinces and their possibilities he used the remarkable phrase if they really were sanctuaries of science as well as of sorrow He deplored the spirit of misrule and confusion with which some members of the profession were actuated and the attempts that had been made and were being made in the metropolis to bring about feelings of hostility between the cultivators of the different branches of medicine This he said was the time in which the friends of peace and harmony should declare themselves Those who doubted that enough willing labourers would be found he referred to the pages of the sixteen numbers of the *Midland Medical and Surgical Reporter* which gave evidence of the ability of provincial practitioners and of the wealth of available material The success of the *Reporter* had encouraged him and his friends to form a society in whose *Transactions* future communications would be published



BOARD ROOM WORCESTER GENERAL INFIRMARY

He referred with approval to a proposal made by Dr Conolly of Warwick that certain members should be appointed to report upon the state of medicine in foreign countries and pointed out the various ways in which such reports would be useful He proposed that at each annual meeting a report of the progress of the distinct branches of medical science during the past year should be presented Hastings then went on to survey the various branches of medical science and to point out to the members of the Association the rich field open to them in physiology pathology and therapeutics and the many openings for investigation and progress all of which offered material for essays which might be of great value In this field already provincial physicians and surgeons had distinguished themselves and they might do so still further and make a fuller use than in the past of the experience gained in the provincial infirmaries hospitals and dispensaries Medical topography by which term Hastings meant the study of population in the various cities and counties the incidence of disease both endemic and epidemic and the causes of good and bad health including climatic conditions was another subject that had long been neglected in this country although it had lately received attention in the *Midland Medical and Surgical Reporter* and at various times in certain other London and provincial journals He praised the work of Dr Hawkins on medical statistics and that of Mr Thackrah of Leeds on what are now called occupational diseases

The advancement of medico legal science to which it was proposed that the labours of the Association should be directed was he said of the highest importance As Dr Christison had observed there was a great lack of accessible records of medico legal inquiries in this country Finally he pointed out the need for a code of medical ethics and referred in some detail to the proposed organization of the Association

It will be noticed that neither in the official programme of the Association nor in the address of Hastings was any mention made of medico political matters and the regulation or qualification of medical practitioners which were so soon to become matters of the greatest moment It is probable that Hastings and his friends with that moderation which distinguished him thought it better to concentrate on those important but non contentious subjects which offered so large a field of work and to leave the contentious political matters to future meetings

Of the principal objects of the Association specified by Hastings only one and that the last dealt with the maintenance of the honour and respectability of the profession and made an appeal for that harmony and good feeling which ought ever to characterize a liberal profession So far were the founders of the Association from wishing to form anything like a trade union or a society merely interested in the selfish interests of the profession

Resolutions were then passed that a Provincial Medical and Surgical Association be formed that its management be conducted by a president council and two secretaries the several officers to be appointed annually by a general meeting of members convened for that purpose the place of such meeting being prospectively notified each year and that a report be presented by the secretaries and a copy of it supplied to every member At this meeting it is also proposed that one of the members shall be appointed to give at the next annual meeting an account of the state or progress of Medical Science during the last year or an oration on some subject connected with Medical Science or a Bibliographical Memoir of some eminent cultivator of Medical Science who may have resided in the provinces The office of president was to be conferred upon some senior physician or surgeon of eminence resident in any of the provincial towns comprised in the circle of the Association The two secretaries were to *reside in* Worcester in order that they might superintend the publication of the *Transactions* but the chief responsibility for publication of papers etc was to rest with the Council a quorum of three being necessary to approve any contribution Each member was to receive a copy of the annual volume of the *Transactions* in

return for his subscription of one guinea Dr Edward Johnstone of Birmingham physician to the General Hospital in that city was elected President for the ensuing year and Dr Carrick of Bristol for the year 1833–34 Dr Hastings and Mr Sheppard were elected secretaries

A vote of thanks was accorded to Dr Hastings "for the indefatigable trouble he has taken in forming a Society which owes its existence to his suggestion and for the able eloquent and learned discourse with which he has opened the proceedings of this day and it was resolved that it should be printed and circulated to the members

The first Council consisted of 70 members and the Association including Council 310 members The Council represented a wide area it included members from as distant places as Swansea Liverpool Norwich Wolverhampton Leeds Exeter, Sunderland Berwick on Tweed Edinburgh and many others Although the Provincial Medical and Surgical Association has by some been regarded as a general practitioners society it is evident from the number of physicians and surgeons to provincial infirmaries and hospitals such as Carden of Worcester that it was representative of the profession in the provinces as a whole for these local physicians and surgeons were as has been pointed out in a previous article as much consultants as those in London

The Worcester Infirmary had been founded, as we learn from the short history of it by Alderman H A Leicester of Worcester in the year 1745 It was removed to its present site in 1770 and was afterwards extended and altered but in 1832 it must have looked very much as it does now The board room in which the historic meeting took place on July 19th 1832 has been added to since by building out a glass covered portion but the view of the room here reproduced represents the unaltered part in which the meeting took place and its appearance is probably very much the same as that which met the eyes of the venerable Dr Edward Johnstone and his colleagues on that momentous occasion

INTELLIGENCE AND DISEASE

A SURVEY OF GLASGOW CHILDREN

The late Professor Noel Paton and Professor Leonard Findlay drew up for the Medical Research Council a scheme of research into problems of child life and themselves began an investigation on the lines they had indicated The first report dealing with poverty nutrition, and growth was reviewed in our columns five years ago[1] and since then the work has been continued by the late Dr H J Watt Dr Shepherd Dawson and Mr J C Conn One part of the scheme was an investigation into that vexed problem the part played by congenital syphilis in the causation of mental deficiency Unfortunately this particular piece of work had to be abandoned but research was made instead into the effect of various other diseases upon intelligence The outcome has now been published in the Special Report Series

The Binet system of intelligence tests was applied to 1 020 children in the wards of the Royal Hospital for Sick Children Glasgow Patients were taken at random and constitute a fair sample of the hospital population Records were made of the result of the test the diagnosis of the child's disease the stature the age at which walking and talking began the size of the family and the social conditions As a control 100 healthy brothers and sisters were also examined, together with a group of children attending the same schools and presumably of the same social class About one third of the fathers of the patients were labourers and about one fifth were unemployed the rest were steel workers boiler makers, or machinists with a few miners, railway workers sailors firemen porters and drivers The average number of rooms per house was 2 37 About a quarter of the patients came from families living in one room and over half from two room houses in this estimate a kitchen is counted as a room Nearly one eighth of the patients came from homes where there were six people to each room and in only fifteen families was there one room or more per person This apparently shocking state of affairs is by no means unusual in Glasgow Several factors are responsible for it shortage of houses poverty economy bad housing conditions and a genuine love of the people for herding together for the sake of companionship The average age of the children was 7 7 years only fifty six were more than 12 years old and only nine were more than 13

THE INTELLIGENCE RATIO

The intelligence ratio—the mental age over the chronological age—was found to be on the average 90 27 ± 0 31 a figure which is significantly below 100 Intelligence ratios of 100 or higher were found in 252 children while 768 were below the average Boys and girls were about equal in numbers and the mean intelligence ratios were not significantly different boys 90 54 girls 90 02 There was no evidence to support the once popular theory that the variability of boys intelligence is greater than that of girls The mean intelligence ratio of patients in the Yorkhill Hospital when mental defectives epileptics and those suffering from encephalitis lethargica and ductless gland derangements had been eliminated was 91 76 ± 0 35 Another group was tested in the Ruchill Fever Hospital where the conditions on admission are less exclusive and some patients of better class were likely to be found The mean intelligence ratio of 250 convalescent children here was 94 98 ± 0 61—that is just below the average of the whole community and significantly above the average of the Royal Hospital for Sick Children The mean intelligence ratio of 102 healthy brothers and sisters of patients was 90 8 ± 0 82 very nearly the same as in the patients themselves The two fundamental assumptions on which the interpretation of the findings in this report is based are (1) that if a group of patients suffering from a common ailment be tested at different stages of their illness and the average of the group at the second test be significantly lower than at the first then the fall is due to the illness and (2) that if a group of patients suffering from a common ailment be found to have a mean intelligence ratio significantly lower than a healthy group of the same or similar stock, then the difference is correlated with the illness The findings in the report refer to groups of cases and not to individual patients, so that the wide variations between individuals both in health and in disease are discounted

INFLUENCE OF DISEASE ON INTELLIGENCE

It may be objected that sick children are not suitable subjects for intelligence tests Professor Findlay therefore divided the case sheets into three groups the acutely ill (feverish) the chronic and those not acutely ill The results suggest that the acuteness of the illness raises rather than lowers the intelligence ratio The small rise in mental efficiency found in the feverish children could well be accounted for by an increased irritability of the nervous system When twenty eight of the acute

[1] *British Medical Journal* 1926 ii 214

Nature and Nurture: Intelligence and Disease by Shepherd Dawson assisted by J C M Conn H M Stationery Office 1931 (1s 6d net)

cases were tested again some time after their discharge from hospital it was found that in seventeen of them the intelligence ratio had decreased showing a significant difference of 3·36 ± 0·60 The average of the chronic cases was a trifle lower than that of the acute cases so that chronic illness does not apparently hinder mental development It appears that the Binet tests in spite of their apparently scholastic character gauge capacities which develop under the most adverse conditions of health In general therefore it may be said that sickness does not retard mental development Children suffering from rheumatism pneumonia nephritis chorea spinal and other non-brain ailments did not differ in intelligence from healthy members of the population to which they belonged

Effect of Special Diseases

On the whole diseases of the ductless glands and brain alone seemed to cause appreciable departure from the normal in intelligence There were eight cases of hypothyroidism five of hyperthyroidism and five of dwarfism with mean intelligence ratios respectively of 64·9 88·6 and 82 The intelligence ratios of cases in which there was some cerebral disturbance were appreciably below the normal The number of cases was too small to be more than suggestive but it is interesting that the average of eleven cases of cerebral tumour four of cerebellar tumour and three of cerebellar ataxia works out at 86·83 If two cases (one each of cerebral and cerebellar tumour) with ratios of 59 and 49 respectively are omitted the average comes to 90·94—very near the average of all the cases It seems therefore that although localized cerebral disease may affect the intelligence of a patient it is not incompatible with normal intelligence and perhaps seldom affects it seriously

Mental defect is common in spastic diplegia but in this investigation the figures of eight cases show that there are striking exceptions Half of them gave intelligence ratios at or above the average The mean intelligence ratio of eighteen hysterical patients was 87·17 ± 2·03 the individual values ranging from 109 to 53 It seemed odd that the ratios of the younger children were significantly higher than those of the older but there was not enough evidence to determine whether or not two different clinical groups could be differentiated Clear evidence of intellectual deterioration was observed in most but not all the fifty-three cases of encephalitis lethargica the mean intelligence ratio being 83·87 ± 1·20 There was no significant difference between those with Parkinsonism and those without nor between cases with and without behaviour disturbances As a group these patients developed at a little less than half the rate at which normal children develop and the seriousness of their backwardness is emphasized by comparing the final intelligence ratios with those of the normal population The figures show 39·6 per cent with ratios below 70 and 71·7 per cent with ratios below 80 There seems to be little difference between the younger and the older children in respect of arrest of development The contrast between the patients and their healthy brothers and sisters is also of interest Twenty-nine brothers and sisters of twenty-nine patients as far as possible those nearest in age showed that the difference between the victims of encephalitis and those who had escaped it was 25·65

Epileptics were on the whole of lower intelligence than their brothers and sisters the mean figure being 80·65 ± 1·43 with individual records varying from 49 to 117 The variability was however about equal to that of the rest of the patients a fact which does not support the common belief that some of the greatest figures in history may have been epileptic A study of the brothers and sisters of epileptics suggested that the disease is found in apparently normal stocks and if healthy members of these stocks have inherited epileptic potentialities they have not inherited any correlated intellectual defect Twenty-one of the forty-nine cases of epilepsy were re-tested at intervals and showed signs of deterioration There was a significant relationship between any general improvement that took place and the mental progress but no reliable inference could be made as to subsequent progress from the severity and frequency of the fits

Physique and Intelligence

There was a significant connexion between height and intelligence the more intelligent tended to be slightly taller A comparison with a group of school children studied in Glasgow suggested that the illness of the cases from the Royal Hospital for Sick Children had not affected their stature The correlation between height and intelligence was greater for boys than for girls The explanation of this finding is a matter for discussion It may well be that the inability to provide adequate food clothing and exercise which so often characterizes a dull parent may stunt the growth of the children of the more stupid individuals On the whole it appeared that the children of higher intelligence had begun to walk and talk at an earlier age than the others Many sociological suggestions are offered by the results of these tests The earlier investigation into the relation of poverty to nutrition and growth showed that the most important factor in a child's physique is maternal efficiency This finding is again emphasized by the present study

INTERNATIONAL PUBLIC HEALTH

Rat Destruction

An enlightening example of the activities of the International Public Hygiene Office is to be found in the Permanent Committee's report of the ordinary session held in Paris during October 1931 [1] Problems concerning periodic de-ratization (we must presumably accept this pseudo-scientific term in preference to the simple de-ratting) again hold a prominent place among the work undertaken The points which have occupied the attention of the committee include inspection of vessels for the presence of rats methods of extermination refusal to effect de-ratization exemption from it and the design of an international certificate As there are accepted means of recognizing whether and to what extent a ship is overrun with rats the Office proposes to evolve a more complete document to supplement the existing publications which describe methods now in use at Liverpool and Hamburg Details of the conditions of inspection naturally vary with the port the season and the cargo Extermination is practised successfully in Hamburg by the use of a gaseous mixture comprising 6 per cent carbon monoxide obtained from the incomplete combustion of coke or vegetable charcoal This method can be used in ships with grain cargoes The rats are killed in 30 seconds even at the bottom of the hold As in the case of hydrocyanic acid some danger of poisoning exists for those persons eventually residing on board In Italy de-ratization is effected with HCN or SO_2 the former being preferred in passenger ships the latter in cargo boats An uneven gas distribution is particularly likely with hydrocyanic acid owing to air displacement following temperature changes and other factors The Italian technique is also employed in the Netherlands while in

[1] Comité Permanent de l'Office International d'Hygiène Publique Session ordinaire d'Octobre 1931 Paris 195 Boulevard Saint Germain.

Australia good results have been obtained by the use of sulphur and traps As regards exemption certificates, it is becoming increasingly obvious that certain types of vessel, such as coolers, require no de ratization and the committee is considering an eventual revision of the international arrangements at present in force

ANTI PLAGUE VACCINATION

During May last year it was decided to issue a questionary to interested countries on the subject of their experiences with anti plague vaccination Opinions now to hand are extremely variable The principal objections to this vaccination seem to be (1) that the disease attacks a high proportion of vaccinated subjects, and (2) that serious and even fatal forms occur in these cases This has caused authorities in Italy to abandon vaccination of the personnel concerned with the unloading removal and supervision of an infected boat Instead passive immunization is effected by means of three injections of anti plague serum made at intervals of ten or to weaken the results of anaphylaxis, seven days

As regards plague among the vaccinated it may be added that the uselessness of vaccination against the pulmonary form is universally admitted It must be remembered however that many cases in vaccinated subjects occur soon after the inoculations—that is at a time before immunity is properly established—and further that there is some difference of opinion as to the length of time necessary for the efficient development of immunity—the figures of five to ten days are given in India two to three weeks in Morocco Finally, immunity is of short duration less than a year though it is probably strong for six months As to the influence of vaccination on the gravity of disease some statistics show an equal mortality in vaccinated and unvaccinated subjects others from India make the latter double the former Proof of the success of vaccination is shown in the arrest of an epidemic or the formation of a barrier round the afflicted zone Possibly the preparation of the vaccine has some influence over its efficacy In Morocco there appears to be no manifest difference between the ordinary vaccine and that of the Pasteur Institute On the other hand the Haffkine vaccine as used in India, is distinguished from other preparations in being a culture in bouillon four weeks old and in containing autolysis and metabolism products of the plague bacillus Recent methods employed at the Haffkine Institute have resulted in a vaccine which protects 75 to 100 per cent of animals where earlier preparations gave protection in only 30 per cent of tests

MISCELLANEOUS ACTIVITIES

Many other diseases are considered in the report An outbreak of haemorrhagic icterus is described is having occurred in Lisbon during August last Men were the chief sufferers, the mortality being 26 per cent The source of infection was traced to a drinking fountain An odd feature was the failure to demonstrate the spirochaete of Inada in both the blood and urine of patients Another outbreak of icterus without spirochaetes has been described in East Africa Exanthematic fever has appeared for the first time in epidemic form in Rumania The Weil Felix reaction was negative in all but two of thirty-one cases The infection was still more clearly distinguished from typhus by examination of the cerebro spinal fluid and by the absence of cerebral symptoms Dogs carrying ticks were found in the houses of almost all those affected and inoculation of tick material into general paralytics produced the disease In Athens exanthematic fever has been applied to pyrotherapy and psychical excitation was markedly diminished in 500 cases of mental disease which were submitted to this treatment Statistics of post vaccinal encephalitis show only one case in the Netherlands for the year ending June 30th 1931 On examination Germany will probably show nine cases (two deaths) for 1931 per 2,000 000 vaccinations, while in Denmark the figure is one per 50,000 to 70 000 Seven probable cases have been noted in Sweden, while the disease is becoming much rarer in England

An inquiry has been held among Swiss doctors with the object of establishing the frequency of undulant fever due to the bacillus of Bang Half those questioned report that during the years 1926, 1929 and 1930, 211 cases have been established in retrospect The disease seems to be increasingly prevalent it chiefly affects the larger towns—Zurich Lausanne and Basel—an indication that milk is the principal source of contamination The possibility of a cutaneous route of infection has also been proved and three laboratory cases have been observed In Denmark the number of cases in a population of three millions is between 500 and 600 a year the condition being encountered particularly in the country districts Infection by contact with stock was found in two thirds of the cases by milk in the remaining third At Copenhagen one third of the milk consumed had to be regarded as infected but there was *only one case of undulant fever per 700 000* litres of milk consumed Preventive vaccination has been used in Sweden and it appears that it should be renewed every six months

A passing comment on the use of Calmette's tuberculosis vaccine is of interest

Vaccination of adults by B C G the good results of which are recognized in Norway does not seem up to the present to have had any influence on the frequency of tuberculosis amongst the native troops in Senegal only subjects in whom the inoculation gave rise to a cold abscess appeared to be immunized In Rumania 5 000 recruits were vaccinated in 1930 8 000 in 1931 A case of tuberculosis has not yet been reported amongst them

CERTIFICATION OF BLINDNESS

REPORT OF THE PREVENTION OF BLINDNESS COMMITTEE

Until the Ministry of Health began to make grants in aid of the welfare of the blind under the Regulations of 1919 and the Blind Persons Act of 1920 the question whether a person was blind or not was solely one for the several voluntary associations which existed for the care of the blind each society did that which was right in its own eyes Governmental action and the granting of pensions however did not bring about co ordination and uniformity in certification on the contrary it resulted in some confusion

EXISTING METHODS

Even to day it is found that persons are registered as blind without any medical evidence at all In cases in which both eyes are absent the statement by a layman to this effect is as conclusive as that of a medical man but beyond this the layman's opinion is of no value Further, owing to the considerable financial benefits which the condition of blindness confers there is great inducement to unprincipled persons to malinger and there is some evidence that malingering is practised it is only an experienced ophthalmologist who can apply the necessary tests to detect malingering There has been an increasing tendency on the part of county councils with the approval of the Ministry of Health to secure medical examinations Sixty six per cent of county boroughs require it and 34 per cent of counties but some make the proviso that only in doubtful cases is the doctor to be called in and this defeats the object of the provision

As regards old age pensions for the blind the claim is referred to the local pension committee and the local pension officer The pension officer acts under instruction from the Board of Customs and Excise and is authorized to accept a certificate of blindness signed by the secretary and countersigned by a member of the committee of a recognized voluntary association no arrangement is made for providing the pension officer automatically with the opinion of a competent ophthalmologist The pension committee decides the claim as best it can on the evidence furnished by the claimant on the one hand and the pension officer on the other After the committee's decision the claimant or the pension officer may within seven days appeal against the decision to the Ministry of Health When such an appeal reaches the Ministry and the question of blindness arises the Ministry it appears considers the evidence and if this is not sufficient arranges for an examination of the claimant by a regional medical officer If on the receipt of this officer's report the case still appears doubtful the claimant is examined by an ophthalmologist selected by the Ministry in this instance only does the State pay the ophthalmologist's fee In practice these two separate and confusing modes of certification lead to ludicrous findings The local authority may find that a man is blind admit him to the register and provide him with benefits and the pensions committee may reject his claim and vice versa!

In 1929 on the recommendation of Dr Frecland Fergus there was a movement in Glasgow to remedy difficulties existing in the South West of Scotland A local joint committee was formed which took over the clinic established by the Mission to the Outdoor Blind for Glasgow and the South West of Scotland and which was worked by Drs Freeland Fergus and Halliday All supposed blind persons are examined at this clinic by two ophthalmic surgeons the conditions ascertained the causes discovered so far as possible the fact of blindness or otherwise determined and the possibilities of treatment explored The system has proved satisfactory and it has been taken as a model for the rest of the country

In 1930 the Union of Counties Associations for the Blind set up a committee to study the problems of the prevention of blindness At the outset of its work the committee was faced with the lack of essential scientific data of two kinds first as to the prevalence of the actual defects of the eye determining blindness and second as to the various causes of these defects It seemed therefore that advantage might be gained by establishing a regular system of certification of the blind and that ophthalmologists when certifying should furnish data on the condition of the eyes and the causes for that condition It was held that in process of time a record of the facts about blindness would thus be obtained

RECOMMENDATIONS OF THE COMMITTEE

The committee recommends that no one should be registered as blind until he has been examined and certified to be blind by a medical practitioner with special experience in ophthalmology whom it defines as follows

A medical practitioner who devotes his or her whole time to the practice of ophthalmology in all its branches or who is in charge of the ophthalmic department of a general hospital of not less than 100 beds and failing such a practitioner one who holds a diploma in ophthalmology from a university the Royal College of Surgeons of England the Royal College of Physicians of London or other body recognized by the General Medical Council

It also recommends that no certifying ophthalmic surgeon should be appointed unless approved by the Ministry of Health or the Board of Education in cases coming respectively under their jurisdiction and the use in all certification of a common form of certificate

The committee recognizes that there must be elasticity for meeting local needs examination need not necessarily be made only at a special clinic but also at the offices of local authorities recognized hospitals the consulting room of the ophthalmologist appointed and on occasions at the patient's own home

DEFINITION OF BLINDNESS

The committee has arrived at the following suggested interpretation of the statutory definition of blindness so blind as to be unable to perform any work for which eyesight is essential

Visual acuity means the best direct vision obtainable with each eye separately or both together (where both are present) as tested by Snellen's types with focus properly corrected

Group 1—Below 3/60 Snellen That in general persons with visual acuity below 3/60 Snellen may be regarded as blind In many cases however it is advisable to test the vision at one metre and not to regard persons having acuity of 1/18 Snellen as prima facie blind unless there is also considerable restriction of the visual field

Group 2—6/60 Snellen or better That a person with visual acuity of 6/60 or better may be regarded as blind if the field of vision is markedly contracted in the greater part of its extent and particularly if the contraction is in the lower part of the field (Persons in this group suffering from homonymous or bi temporal hemianopia retaining central visual acuity of 6/18 or better are not to be regarded as blind)

Group 3—Intermediate degree of visual acuity That a person with visual acuity of 3/60 Snellen but less than 6/60 may be regarded as blind if the field of vision is considerably contracted but should not be regarded as blind if the visual defect is of long standing and is unaccompanied by any material contraction of the field of vision—for example in cases of congenital nystagmus albinism myopia etc

The committee adds that there are other and immeasurable factors in blindness such as the duration of the defect and the age of onset and cases that will not fit into any of the suggested groups must be left to the judgement of the certifying ophthalmic surgeon

The committee publishes a model form for report and certification which it is suggested should be adopted throughout the country It is a formidable document of four folio pages closely printed with spaces for every conceivable condition but this elaboration may be justified in view of the desire of the committee that certification should be part of a general and continuous system of record or census of conditions of blindness

The committee holds that there is economy in the proposal

The cost of certification should not be great and would probably be reimbursed by the economies effected by confining expenditure on services for the blind to those who are properly entitled to benefit by them Blind old age pensions at the rate of 10s a week from the age of 50 and allowances to the unemployable blind which are given at rates varying according to the area from 15s to 27s 6d a week throw a heavy burden on the National Exchequer and local rates and the continuance of these benefits should not be imperilled by any doubt as to the eligibility of the beneficiaries The services for the blind established and administered in this country under the Blind Persons Act of 1920 constitute a system which has no parallel elsewhere for comprehensiveness and generosity and it seems a plain duty not only to safeguard these services from abuse but in the interest of prevention to obtain at the time of certification all available information on the causes of blindness

Report of the Prevention of Blindness Committee of the Union of Counties Associations for the Blind 68 Victoria Street S W 1 (1 pos free)

New South Wales

[FROM OUR CORRESPONDENT IN SYDNEY]

Royal Prince Alfred Hospital

The task of raising money for hospitals is at no time easy, and in these days when even Governments appear to be tottering on the brink of bankruptcy, it is harder than ever. Almost every member of the community cries poverty at the slightest suggestion that he should disburse a portion of what the Income Tax Commissioners have left him. The decline in industry has vastly reduced the spending capacity of both workers and employers, and many people who have been accustomed to give regularly are now unable to do so. Obviously those concerned with the management of hospital finances are not passing through a happy period. The difficulties of the Royal Prince Alfred Hospital, Sydney, are an outstanding example. By reason of lack of funds it has been found necessary to throw 200 of this hospital's beds out of commission, and still the board of management is faced with a huge debt owing to tradesmen for the ordinary necessities of upkeep. Now from the New South Wales Minister for Health (Mr. Ely) there comes an accusation that the board itself is largely responsible for the position, on account of its faulty administration. The Minister quotes from a report made by an officer of his department, who recently began (but did not conclude) an investigation into the affairs of the hospital. The board counters with the statement that the institution's financial difficulties are due not to *mismanagement* but to the broken promises of Governments during the past six years. The argument has provided subject-matter for several columns in the daily press.

Metropolitan Hospitals Contribution Fund

On December 7th, 1931, a system of voluntary contributions to a fund known as the Metropolitan Hospitals Contribution Fund of New South Wales was instituted in Sydney. The scheme was evolved by the Hospitals Commission of New South Wales. Funds organized and directed along similar lines have been in operation in many country centres for a considerable period and have proved eminently satisfactory. The following are some of the more important features.

The control of the fund shall be vested in a council constituted by the participating hospitals and the Hospital Saturday Fund. The council shall make such by-laws and rules as are necessary for the organizing and management of the fund.

Representation on the council shall be on the following basis: Hospitals with 301 or more available beds, three representatives each; Hospitals with 201 to 300 available beds, two representatives each; Hospitals with under 201 available beds, one representative each; The Hospital Saturday Fund, three representatives; The Hospital Commission of New South Wales, one representative.

There shall be an executive committee of fifteen persons elected annually by and from the members of the council, but there shall not be more than one representative of any hospital or of the Hospital Saturday Fund on the executive. Election of the executive shall be on a group basis, each group (of hospitals) electing its own member or members by preferential voting.

The objects of the fund shall be (*a*) To conduct a scheme of systematic contributions in the metropolitan area to provide a regular volume of income for the participating hospitals. (*b*) To afford the benefits hereafter outlined to the contributors and their dependants. The rate of contribution shall be six pence per week from every person willing to join the fund.

Contributors who by reason of their financial circumstances are eligible for admission to a public hospital and are medically certified as requiring indoor accommodation in an acute hospital shall not be required to make any payments to the hospital towards the cost of hospitalization of themselves or their dependants and shall not be required to pay any medical fees.

Contributors who by reason of their financial circumstances at the time are admitted to a hospital (as private or intermediate patients) shall be given credit of 7s. per diem *off the cost of accommodation for private or intermediate* patients as the case may be and shall only be required to pay the difference between 7s. per diem and the charges fixed for private or intermediate accommodation and the medical fees as prescribed by the regulations under the Public Hospitals Act for private and intermediate patients.

Contributors admitted to any hospital not included in the second or third schedule to the Public Hospitals Act shall have the right to claim on the prescribed form supported by receipted accounts for the hospital charges paid and by the certificate of the attending medical officer reimbursement of the charges of such hospital to the extent of 6s. per diem for a period not exceeding eight weeks in any one year. On the discharge of a contributor who by reason of his financial circumstances has been a patient in a public ward he shall be entitled to such after treatment as is necessary in the out-door department of the hospital without charge for one month. Contributors admitted to the public wards of a hospital shall receive without extra charge the whole of the services of the hospital.

The whole of the income of the fund after the payment of all administrative and other prescribed charges shall be apportioned to the participating hospitals on the basis of work done and be paid by monthly advances with half-yearly adjustments and consideration shall be given to the number of contributors treated during the period.

The hospitals shall not give any form of preference to any person because of his being a contributor. Financial membership of the metropolitan fund shall be transferable to any fund outside the metropolitan area. The executive of the fund may establish a special surgical appliance fund for the purpose of supplying destitute persons (whether contributors to the fund or not) with appliances as follows: artificial limbs, special appliances made for the sole use of the patients, spectacles, and any instrument or appliance which after closest consideration the executive finds essential to the well being of the patient.

It will be noted that a contributor is not by virtue of his contributions entitled to free treatment as an out-patient excepting for a term immediately following his discharge as an in-patient. An important feature of the scheme is the obvious intention of the Commissioners to *extend the scope of the public hospitals* to allow for the admission of patients able to pay full or intermediate fees. Practically all the country hospitals of New South Wales now have provision for the treatment of private and intermediate patients with the approval of the Commissioners, and medical practitioners of the various districts are able to attend their own patients and to charge fees. The system makes it possible to classify patients according to their financial condition and ensures that any person who is able to pay in whole or in part will do so. Obviously a great deal of organization and administration will be necessary if the system is to meet with success. It is to be hoped that it will go a long way towards solving the difficult problem of hospital finance in the metropolitan area of Sydney.

At a meeting of the New South Wales Branch of the British Medical Association held on October 31st, 1931, the following resolutions were passed:

1. With regard to the Metropolitan Hospitals Contribution Fund the medical profession affirms its traditional principle of free treatment of *the indigent* sick, but insists that its interests be conserved with regard to other classes of the community by payment for services rendered and that the principle be recognized in all contributory schemes providing hospital and medical services to the community.

2. That this meeting is prepared to support the Metropolitan Hospitals Contribution Scheme provided that proper arrangements are made to safeguard the interests

of medical practitioners in regard to intermediate and private patients and that these interests may be safeguarded (a) by establishing community services in all metropolitan hospitals (b) by provision of a uniform system of classification acceptable to the medical profession of the different classes of patients—public intermediate and private—according to their circumstances (c) by establishing machinery whereby the medical practitioner in attendance shall be able to charge and recover fees

That this meeting is of the opinion that any contribution scheme industrial or otherwise which provides for out patient services to the contributors is not acceptable to members of the New South Wales Branch of the British Medical Association

The State Lottery

During the current year the New South Wales Government instituted a State lottery similar to the Golden Casket Art Union which has been in vogue in Queensland for a number of years The object is to provide assistance to the public hospitals Each lottery has 100 000 subscribers at 5s 3d each £16 300 being distributed in prizes The success of the scheme as far as public support is concerned was immediate Since the commencement of activities in August there have been twenty six lotteries and the present indications are that the rate of five per month will continue There has been doubt in some quarters whether more than a small proportion of the gross profits will be available for the hospitals after the costs of administration have been deducted Fears have been expressed also that some persons who have previously contributed directly to the hospitals might now confine their charitable activities to the purchase of lottery tickets or assuming that the hospitals are now well cared for might consider that their contributions are no longer required It remains to be seen whether these fears are well grounded In the meantime we are assured by the Minister for Health that every penny from the State lottery is going direct to the hospitals and if it were not for the lottery the hospitals would be in a sorry plight It is perhaps refreshing to learn that their plight might be worse

Switzerland

[FROM A CORRESPONDENT]

The Leysin Factory Clinic

At Leysin which is chiefly noted for the sun and air treatment of patients suffering from glandular or from bone and joint tuberculosis the outstanding feature of the past year was the opening of the International Factory Clinic This has proved a great success despite the present economic situation and the consequent difficulty in obtaining orders and disposing of the goods manufactured by the worker patients This institution which accommodates 100 male and 20 female patients was founded by Dr Rollier with the object of easing the situation of working class patients affected by some form of bone tuberculosis Such patients are in a doubly unfortunate position because during the prolonged period necessary for recovery under helio-alpine treatment they are deprived of the chance of earning a weekly wage to support their family and themselves and because they cannot during the days of enforced idleness turn to the intellectual recreations of more highly educated patients In this combined factory and clinic matters have been arranged by means of ingenious orthopaedic appliances and by electrical power installation applied to lathes and other machines attached to the beds so that workers who have only one hand available can perform some lucrative work Here one sees the remarkable sight of patients suffering from Pott's disease of the spine undergoing sun treatment on open air verandahs and while living in the prone position supported by a pillow under the lower ribs (the position favoured by Dr Rollier for this condition) trimming or boring parts for watches winding dynamo coils and the like In another department patients suffering from tuberculous disease of the hip or knee living on the back in the sunshine are working busily at hosiery or weaving on machines suspended above the bed Patients in a more convalescent stage and able to move about are employed on heavier tasks of carpentry metal work toy-making etc with specially adapted apparatus By these means not only do the worker patients obtain relief from ennui but they are able to supplement the sickness allowances received from the State from friendly societies and from other sources and in some cases to earn complete support for themselves and their families For the hundreds of children under treatment in the various clinics on account of disease of the spine hip knee etc in addition to ordinary lessons a form of combined rhythmic movements of the arms and body carried out to music under the supervision of a special instructress has been devised in order to supply the desirable exercise From the medical point of view this type of treatment by sunshine at high altitude available in winter even more than in summer combined with fresh air and bodily activity has proved highly successful

Health Resorts and Sanatoriums

The winter season in Switzerland has so far been good in regard to weather—that is to say there has been bright sunshine and sufficient snow In the higher resorts there has been plenty of skiing and skating as compared with last winter at this time when the weather was too open to suit the visitors The distinctive feature this year has been the absence of English and particularly of Americans In most of the winter sport places where there are several hotels the larger and dearer have not been opened this season At one resort where some eighty English visitors had booked rooms in autumn not one appeared and the hotel was closed At the various health resorts and sanatoriums owing to the fall in value of the pound some of the English patients have been forced to return home although as a general rule, prices for accommodation have been reduced by 20 per cent to meet the financial stringency The popular clinics remain full though the more luxurious establishments which are usually frequented by patients from North and South America and from England are greatly depleted

England and Wales

Colston Medical Research Fellowship

The Colston Research Society was founded over thirty years ago as the University College Colston Society for the purpose of assisting the Bristol University College financially and to foster the idea of a University of Bristol When at the end of ten years the university came into existence the Colston Society decided to devote itself to the encouragement of research work therein A collection is made each year among the citizens of Bristol by the president who is elected for one year only and many thousands of pounds have been raised and used for this purpose In the last few years the collection has reached an average figure of about £800 In 1929 the society received a gift of £5 000 from one of its supporters —Mr R H Mardon—the money to be held in trust and the income applied for work in science or agriculture In the following year another trust fund was provided

anonymously for the encouragement of arts, and in 1931 Mr Falk the president, received a special gift of £5 000 from eight donors for research in medicine It has been decided to apply the income of this fund to the provision of one or more Colston Medical Research Fellowships of not less than £100 per annum each, and the regulations governing them are as follows

1 The fellowships shall be awarded by the council of the Colston Research Society

2 They shall be research fellowships primarily in clinical subjects but other medical subjects are not excluded

3 They shall be open to any member of the medical profession in Bristol preference being given to graduates or members of the teaching staff of the university Holders must possess a medical qualification and their proposed work shall have been approved by the council of the society

4 The work shall be carried out in the University of Bristol or in any of the clinical institutions associated with the university

5 The holder shall be required to present a report at the end of the year on his work

6 The fellowship shall be renewable yearly at the discretion of the council of the society

7 *The fellowships need not necessarily be awarded in any* given year

8 Applications should reach the honorary secretary of the Colston Research Society 12 Small Street Bristol on or before April 30th of each year

Coast Resorts Conference in South Devon

A conference of medical men and others interested in south western coast resorts was held at the Palace Hotel Paignton from January 15th to 17th under the chairmanship of Sir Alfred Goodson The conference was largely attended and included medical officers of health and practitioners from seaside towns in Devon, Cornwall and Somerset as well as representatives of railways hotels and entertainment organizations Lieut.-Col R H Elliot Dr Fortescue Fox and Dr W S C Copeman were present on behalf of the London Provisional Committee on Coast Resorts the formation of which was reported in last week's issue of the *Journal* (p 162) The aims of the Provisional Committee as there set out were fully discussed and cordially approved The members of the committee explained the object of the movement and pointed out that no kind of medical or other organization had hitherto been formed to promote the interests of the outer ring of health and holiday resorts on the British coasts, although the inland spas were already organized on both the medical and business sides The following resolution was unanimously carried

That this conference considers it a matter of urgency that there should be formed a British Coast Resorts Association and earnestly recommends to the committee appointed at the meeting held under the chairmanship of Lord Riddell at the Institute of Hygiene on Monday January 11th 1932 that it should proceed to its establishment with the least possible delay

The conference received messages conveying good wishes from Sir Herbert Samuel the Home Secretary and Mr George Lansbury, and expressions of regret at inability to be present were received from Lord Meston, Lord Dunedin and Dr W G Willoughby President of the British Medical Association among others The merits and possibilities of the health and holiday resorts on the British coasts were laid before the conference in a series of addresses Dr Fortescue Fox in discussing The medical case for the sea pointed out that wintering on the coast had been in all ages a common practice amongst northern nations Kent's and Philp's caverns on Tor Bay were probably amongst the most ancient seaside resorts in the world The human side of the winter in Britain movement the influence of coastal climates at different periods of life the business and economic aspects of sea coast development and the provision of recreational facilities were the subject of papers and addresses by Sir Herbert Morgan, Mr Graham Moffatt Mr Cyril Maude, and others Mr Maude contributed a striking paper on what might be done in seaside towns at a central pavilion, including recreational attractions of all kinds, music and lectures, glass verandas and gardens and provision for swimming and for sun bathing Many speakers drew attention to the need for improved and more reasonably priced accommodation at seaside places, and for abolishing the unnecessary restrictions which at present tend to hamper their development as national assets The desirability of having a permanent medical advisory body in London and a central bureau for obtaining the necessary medical data from the localities and collating and editing it for the guidance of the profession and the public—which are objectives of the London Provisional Committee—was also emphasized

Scotland

The Medical Curriculum

When opening the three days conference of student delegates from the four Scottish universities on January 20th in the Edinburgh University Union, Sir Thomas Holland, Principal of the University of Edinburgh referred to a proposal made by the medical students of Aberdeen that the medical curriculum should be extended by one year He said that the limits of a medical course for the principal group of students were fixed not only by mental capacity but by economic considerations Another year in the course would not only mean an increased cost to the student, but would be an added financial burden to the university A formal extension up to six years might suit those who thought too much work was crammed into five years, but they could not always afford to adopt the ideal During the discussion which followed it was pointed out that the Scottish practitioner, with his five years course was at a disadvantage in competition with the English practitioner who had one year more It was argued, on the other hand, that it was best to get the medical course over as quickly as possible and let the students have further clinical experience as residents in hospitals, this argument however was invalidated by the fact that only the best students obtained such positions A motion was subsequently carried to petition the authorities of the four Scottish universities to suggest to the General Medical Council that a complete reorganization of the medical curriculum be undertaken with a view to increasing the scope of clinical instruction At a dinner held after the close of the conference Dr Chalmers Watson proposing the toast of "The Visiting Delegates" said that the appeal to the General Medical Council, through the respective universities, for a complete reorganization of the medical curriculum would be endorsed by a large number of medical teachers especially by those concerned in clinical instruction There could be no question but that at the present time a serious disproportion existed between the time spent in the classroom and the laboratory on the one hand, and the time devoted to acquiring a practical knowledge of what would be the student's future work It was certain that a five years' curriculum much more effective than the present one could be planned and the curriculum should differentiate between what was indispensable and what was merely desirable or unnecessary By allowing the student time to cultivate his thinking faculties and develop his powers of self instruction they would promote the great essential in a medical man—his acquisition of a trained and *open mind*

Edinburgh Chair of Pathology

Professor Alexander Murray Drennan who was recently appointed to the chair of pathology in Edinburgh University rendered vacant by the death of Professor Lorrain Smith delivered his inaugural lecture on January 20th Principal Sir Thomas Holland presided Reminding his audience that the chair of pathology in Edinburgh University was founded in 1831 the lecturer took as his subject Reflections on the centenary of the chair He said that pathology had been started by the old anatomists and adopted by the clinicians, only recently had the pathologists become a separate body Physiology had begun in a similar fashion originally part of the institutes of medicine it had drifted away and had become an experimental biological science Physiology had gained greatly from this but medicine had seriously suffered In this there seemed to be a certain element of injustice for if it were not for the fact that many of the chairs in physiology and pathology were maintained by medical schools they would cease to exist the remainder though they might gain in fundamental biological knowledge would lose in opportunity for practical application Accordingly the primary duty of pathology seemed to be to train and equip medical students to be capable efficient medical men able to take their place usefully in the community The speaker's predecessor had approached pathology through the portals of physiology and to him pathology was the attempt at physiological response of the organism to unphysiological conditions He had found that instruction for the medical student was best conveyed by the study of the relation between clinical disturbances and pathological changes and he had introduced a case method of studying pathology and had correlated the teaching of pathology and bacteriology with medicine surgery and therapeutics Pathology was concerned with discovering the causes and processes of disease and if the teaching of this subject and the research required by it could be carried out in co operation with its academic neighbours this was no small thing Many platitudes had been expressed about the subject of research as if it were a thing that could be produced by turning a handle It was however analogous with poetry while many people could write rhymes few had the real gift of poetical feeling and expression He quoted Sir Thomas Browne Some have digged deep yet glanced by the Royal Veins and a Man may come unto the Pericardium but not the Heart of Truth Research seemed to him to be a natural urge it should not be a publicity drive

Edinburgh University Endowments Plan

A scheme affecting fellowships scholarships and bursaries vested in Edinburgh University was issued on December 23rd 1931 after having been approved by the Scottish Universities Committee of the Privy Council The scheme was drawn up by the Educational Endowments (Scotland) Commission 1928 and although these trust funds of the universities are exempt from the supervision of the Educational Endowments Commission the University of Edinburgh had alone among the four universities of Scotland requested the Commission to place its endowments upon a new and modernized footing The general lines of the scheme were drafted by the University authorities and presented to the Commissioners In the case of the Vans Dunlop scholarships in medicine formerly of the value of £300 and payable in three annual instalments of £100 it has been decided that these shall in future be of the value of £200 tenable for one year and awarded biennially In regard to medical scholarships the useful power of insisting that the holder shall do certain research work is prescribed In the past scholarships were regarded as of the nature of prizes with the result that the holders frequently left the university without doing anything in return for them Arrangements have been made so that two small bursaries shall be combined in cases where neither of them is of a greater value than £25 Unexpended balances are also to be constituted into a common bursaries fund for bursaries tenable in any of the faculties of arts law divinity and medicine The sex disqualification implied in the terms by which some bursaries are held is to be removed as also is the disability attached to bursaries tenable only by persons with certain family names Some bursaries will still be restricted to students coming from certain areas

Opening of Falkirk Royal Infirmary

On January 18th Prince George opened the new Falkirk and District Infirmary which serves a densely populated industrial region in East Stirlingshire and which with a capacity of 120 beds has been erected at a cost of £100 000 His Royal Highness was received by the Duke of Montrose Dr John Young (president) Dr Andrew Hunter (physician and surgeon to the Infirmary) and others Dr Young said that this institution had existed for forty three years first as a cottage hospital which had later developed into the Falkirk and District Infirmary With the exception of the maternity home and part of the isolation block the cost of which had been borne by the local authorities the new building which was being opened that day free of debt had been erected through public voluntary subscription A considerable percentage of the total sum had been derived from workers contributions of 2d or 3d per week for periods varying from one to three years over and above the ordinary weekly contributions towards maintenance Prince George said that this was one of the most modern and up to date institutions in the country and a triumph of co operation He conveyed a message from the King granting the inclusion of the title Royal in the name of the institution and directing accordingly that it shall in future be designated the Falkirk and District Royal Infirmary The Prince afterwards unveiled a memorial to the late Mrs J E Gibson foundress of the original cottage hospital

Glasgow Victoria Infirmary

At the annual meeting of the Ladies Auxiliary Association connected with Glasgow Victoria Infirmary it was stated that the sum expended in the maintenance of the Infirmary and its auxiliary institutions in the past year had been £71 816 while the subscribed income had been £26 748 After taking into consideration the revenue from investments and other sources there was still a sum of £20 473 which had had to be met out of legacies A special feature of this hospital introduced in 1931 had been an annexe for paying patients with accommodation for thirty-two beds This annexe was self supporting it had been fully occupied since it was opened over five hundred cases both surgical and medical having been treated The governors of the hospital were satisfied that it was filling a great want and should be extended

Farquhar Thomson Lectures at Aberdeen

The first of the series of Farquhar Thomson Lectures at Aberdeen University was delivered on January 18th by Professor James Ritchie who took as his subject The importance of the child The lecturer stated that among the important problems of the near future some of the most difficult were connected with populations Certain portions of the earth's surface were already overcrowded and Europe with less than one fifteenth of the land surface of the earth contained more than one quarter of the world's population The world's population in the past two hundred years had grown from 500 millions to more than 1 700 millions On the other hand the decreasing

birth rate among white races generally seemed to indicate the beginning of the disappearance of Western civilization before the impetuous flow of the peoples of the East The difficulties of raising a family had resulted in a greater falling off in the number of children of healthy provident and intelligent parents than in those of the shiftless, unhealthy and less intelligent members of the community Such problems raised the question of the relationship between parents and children and the present lecture course was devised to make plain some of the more important features of that relationship The modern attitude of civilized peoples was to revere the aged and to snub the child but that was contrary to Nature

Correspondence

EAR COMPLICATIONS OF INFLUENZA

SIR —I am grateful for the honour you have done me in your leader of January 16th by discussing the paper *I read at the Eastbourne Meeting on ear complications* of influenza The exigencies of time with a crowded programme have prevented my presenting more lengthy and informative notes on the cases and my dealing with the wider aspects of mastoiditis, to which you refer I cannot however trespass upon your valuable space to do so now beyond remarking that Kopetzky's classification of coalescent and haemorrhagic mastoiditis as first presented in the 1925 edition of his book is based more upon the pathological findings at operation than upon the clinical picture before and it is consequently not very helpful in aiding the surgeon to decide the best time for any surgical procedure The destructive changes he mentions under coalescent mastoiditis have been for over thirty years emphasized by the Austrian and German schools as being due to infection by the *Streptococcus mucosus*—a short chained encapsulated streptococcus which we now believe to be probably a pneumococcus

I am glad that you agree with my disapproval of the indiscriminate performance of paracentesis As surgeons, we should avoid the tendency to look too much at the physical and mechanical side of our problems in inflammation and suppuration at the expense of the physiological because a moment's reflection will convince us that all our efforts for good or ill are conditioned by the latter We have much to learn from the physicians on this aspect of the question I have heard it stated as a truism that the best surgeon is a good physician, he knows how to wait as well as when to act There must be an optimum time for performing the operation when the greatest benefit is likely to accrue from it if our knowledge and experience will enable us to decide correctly as good surgery cannot go by rule of thumb It was in my endeavour to arrive at this optimum time that I mentioned the organisms invariably present and indicated the systemic reaction to their presence and what its purpose was I also emphasized the value of the systemic reaction as a general physiological guide provided the physical changes in the middle ear were not such as to demand immediate operation

To clarify the latter point the physical changes observable in a developing or resolving inflammation of the tympanic membrane may be usefully recalled The common landmarks disappear in a definite order and return in the reverse and their gradual disappearance or reappearance enables one to judge of the rise or fall of the inflammation The lustre cone of light umbo handle of malleus and short process are those most easily seen Hyperaemia and oedema will obliterate the lot The lustre and cone of light go early with the hyperaemia and owing to the peculiarity of the membrane's blood supply, oedema begins below and ascends Consequently we see the umbo recede first then the handle of the malleus and lastly, the short process they reappear in the reverse order as the oedema subsides These changes take place more or less in all cases of middle ear inflammation and suppuration followed by recovery When the ascending oedema is submerging the short process, the postero superior quadrant of the membrane will usually show some fullness or bulging, this indicates the presence of secretion in the tympanum and paracentesis will now permit the escape of serous fluid—not pus This I should regard as the most effective time to operate, as a fair degree of immunity will have been established against both the acute infection present in the tympanum and any further possible infection by staphylococci and other resistant organisms that may enter through the external meatus and incised drumhead

The invasion of the tympanum by staphylococci in addition to the more active types already there before any immunity is established against the latter, is likely to increase the activity of any infection present in the mastoid and so light up trouble I have no doubt that some cases of mastoiditis occurring many days after the early *spontaneous rupture of the membrane* or a very early myringotomy are caused by this It is generally acknowledged that this mixed infection is one of the principal factors in causing the persistence of disease in chronic middle ear suppuration, and, therefore to expose to this risk every ear in which there is pain accompanied by some rise in temperature is much to be deplored

Mr Asherson, in the *Journal* of January 23rd has offered some friendly criticism of my views quoting part of your leader against me where mention is made of waiting until the whole membrane is bulging etc I did not advocate this as it is entirely at variance with my views At this stage the tympanum is full of pus and much damage may be done to the ossicles so to wait for it is to miss the proper moment for relieving inflammatory tension If the case is not seen earlier the surgeon is not to blame, and when he finds pus (as Mr Asherson did in some of his infant cases) the value of the operation is much discounted I am sorry to hear that he instructs the casualty officers to incise every drum in children with middle ear inflammation as this is the type of routine surgery against which the remarks in my paper were directed It is frankly a simple way of facing what is to me a serious surgical problem involving the permanent loss or otherwise of a function essential in the battle of life as no otological knowledge experience or discrimination is required and no technical skill beyond the brief if somewhat dangerous use of a knife —I am, etc,

London W 1 Jan 23rd JOHN F O MALLEY

TREATMENT OF SCALP RINGWORM

SIR —In the spring of 1927 I started using thallium acetate in the treatment of ringworm of the scalp and published a series of thirty one cases in the *Irish Journal of Medical Science* July, 1927 with two group photographs showing twenty-five children epilated All these children had 8 mg of thallium acetate per kilogram naked body weight They ranged in age from 21 months to 15 years Epilation was uniformly successful and no untoward results followed even in the older children

At that time there was no definite knowledge that it might be dangerous to give the drug to patients older than quite young children Encouraged by the successful results in two of the older cases a woman aged 51, who had had favus from childhood was given 447 mg of thallium acetate on June 1st, 1927 She weighed 52 7 kilograms and received 8 5 mg per kilogram Before

treatment her urine was examined and found normal Her blood urea was 34 mg per cent and the non protein nitrogen 26 mg per cent The urea concentration test gave 2 04 per cent in 90 c cm for the first hour and 2 9 per cent in 60 c cm for the second hour Epilation occurred on the twenty second day and was complete in three days The patient had severe pains in the legs and abdomen for six days previous to epilation and for a few days afterwards these were serious enough to require rest in bed There was no disturbance of temperature or pulse nor of the gastro intestinal tract On the twentieth day a faint trace of albumin was present and three days later some desquamated epithelial cells and leucocytes The albumin disappeared on the twenty seventh day The regrowth of hair was excellent and the favus was cured Her general health was perfect when last seen two years later

I have since used thallium acetate in a great number of cases without any ill effects except in one case A girl aged 9 was given a second dose three months after the first She had severe pains in the legs and drowsiness for two days with some difficulty in walking for two weeks She recovered perfectly In recent years I have not given doses greater than 200 mg except on rare occasions and no dose greater than 240 mg These amounts were calculated on the basis of 8 25 mg per kilogram The ages of these later cases were 9 years and under

My object in recording these cases is not to suggest that thallium acetate is a suitable drug for adults or that it may be given with impunity at any age but merely to point out that there is some danger of a useful drug being unnecessarily discredited and to emphasize some of the points made by Dr Ingram in his admirable paper in the *Journal* of January 2nd With all of his conclusions I am in agreement—I am etc

Dublin January 18th EDWARD T FREEMAN MD FRCPI

SIR—Dr Ingram states in his valuable review of the thallium acetate treatment of ringworm (*Journal* January 2nd) That the routine treatment of ringworm of the scalp demands some measure effecting depilation will be generally accepted Dr Ingram further states that the two depilatory measures known are *x* rays and thallium acetate

X ray treatment is however not possible in small children below the age of 5 years who cannot be induced to remain still during irradiation and although Dr Ingram states that thallium acetate may produce toxic symptoms from which all cases recover one would probably hesitate deliberately to induce metallic poisoning however mild in children of tender age Further the thallium acetate treatment is definitely contraindicated if kidney disease is present

The method of treatment described below indicates that depilation is not always essential

It consists of the use of a lotion together with a copper ointment used at the same time The prescription of the lotion is salicylic acid gr xx glycerin 3j antiseptic surgical spirit ad 3j The ointment used is unguentum cuprosal (Duncan Flockhart and Co)

The routine which must be strictly adhered to is as follows

1 The hair is clipped short but the head is not shaved

2 The lotion is gently rubbed into the scalp rubbing being continued until the hairs are all thoroughly wet

3 When dry cuprosal ointment is rubbed into the hairs and is covered with a cap (The cap is stained with the ointment and remains clean until the ointment is changed when appearance demands it) They need only be

4 Every morning the head is thoroughly washed all traces of previous ointment being removed The lotion is then applied as before and the sequence repeated until a cure is effected

Twenty three cases were successfully treated by the method without spread of the ringworm or reinfection occurring Although the numbers are small the results appear to justify publication of this treatment which was suggested to me by a general practitioner who in turn had learned of it from a medical man practising in West Africa

To summarize I have given an account of a simple method of treatment for scalp ringworm in which preliminary depilation is not essential It is suitable for very young children and for those in whom organic disease may at the same time be present It should be of great value in general practice as hospital treatment—for example *x* rays—is not required There is no danger and toxic symptoms cannot occur—for instance as rarely in thallium acetate treatment Treatment is commenced without delay thus preventing spread of the disease to other children and cure is effected in from six to ten weeks—I am etc

Pembury Hospital Kent Jan 18th E DUDLEY GRASBY MB

ASTHMA STATISTICS

SIR—I most sincerely agree with Dr Frank Cokes remarks (*Journal* December 12th 1931 p 1109) concerning the age incidence of asthma in Denmark This however is a very minor point in my paper and I have clearly indicated that my material is not ideal for this purpose My remarks on this point (translated) are the following

> It [that is asthma] can arise at any age as will be seen from Table I which however suffers from the disadvantage that many cases originating before the fifteenth year will not be included in our material because the patients are dead or have recovered In the great statistics of the British Asthma Research Council the heaviest age incidence therefore lies below the tenth year

I am quite aware that an abstract cannot give all the reservations of an author but should like to point out that there is no real difference of opinion—I am etc

Copenhagen Jan 23rd H C GRAM MD

UNDULANT FEVER IN THE BRITISH ISLES

SIR—In Dr J S Baxter's interesting account in your issue of January 16th of eight cases of undulant fever occurring in Northern Ireland he says that so far as he is aware the absolute proof of the disease afforded by the isolation of an organism of the Brucella group has been accomplished in only one case in the British Isles The facts are as follows Accounts have been published of four cases in which Brucellae have been isolated in two of these from the urine and in two from the blood[1] In addition to these cases the organism has recently been isolated from the blood of two medical men in London but these cases have not been published[2]

I am glad however that Dr Baxter has drawn attention to this point as the cases with a complete diagnosis represent only a small proportion of the fifty-three cases in Great Britain of which I have knowledge and in all of which the clinical features and agglutination titre make the diagnosis in my opinion certain

I hope therefore that one result of Dr Baxter's paper will be that more attempts will be made in cases of this

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[1] Todd *Lancet* 1929 i 888 Arthur and Wilcox *Proc Med Journal* 1930 i 888
[2] Poulton *Lancet* 1931 i 76 Nightingale and Wilson *Lancet* 1929 ii 1143

disease to isolate the causative organism An excellent account of the correct technique was given by Professor G S Wilson in the *British Medical Journal* of October 25th 1930 —I am etc

London W 1 Jan 20th W DAIRYMPLE CHAMPNEYS

VACCINIA IN DAIRY WORKERS

SIR —The occurrence of vaccinia in a farmer s wife, recorded in your columns on January 16th by Dr David M Cathie is of particular interest to me, because a small group of very similar cases came under my observation last spring

A Stirlingshire dairy farmer had purchased a cow which was found to have sore udders To prevent infection of the rest of the herd his wife took over the milking of this animal About a week later she began to develop what at first appeared to be a poisoned finger, but the appearance of papules and vesicles and the painful swelling of her arm made her realize that it was something out of the ordinary When I saw her on the eighth day after the first signs of the supposed whitlow had been noticed she had typical vaccinal lesions on the thumb and first finger of the left hand These were at the stage of umbilication There was a great deal of oedema of the hand and lymphangitis and lymphadenitis had extended right up the arm to the axilla There was general malaise with slight fever The pocks ran a normal course to healing but it was several weeks before the swelling of the hand and arm subsided The scars which were left on the finger and thumb were like ordinary vaccination marks

The farmer s daughter aged 19 years who had been working with cows since childhood had a vaccinal scar near her elbow contracted in the same manner two years previously One of the dairymaids showed me a scar on her hand with a similar history Since then I have heard of other cases in the neighbourhood While the ordinary textbooks of medicine make no reference to the matter it would appear that accidental inoculation of the hands and arms with cow pox is by no means rare in dairy workers

In the case recorded by Dr Cathie the ' bramble-gathering episode provided a means of entry for the virus In the three cases which I observed no skin lesions had been present other than the usual hacks incidental to dairy work It is noteworthy that all three patients had been vaccinated in infancy and that one of them the farmer s wife had been re vaccinated about fifteen years before the accidental infection took place —I am etc

J NORMAN CRUICKSHANK M D, M R C P

Glasgow Jan 18th

COLPORRHAPHY FOR PROLAPSE

SIR —Dr W Fletcher Shaw s letter in the *Journal* of anuary 16th states that in twenty seven years he has only ound it necessary to combine colporrhaphy with ventro ixation or ventro suspension on three or four occasions Cases of acquired retroversion without prolapse are not nfrequent one would like to know how many of these cases he has treated in the same period by abdominal operation alone and whether it is the custom in Manchester to ignore this condition or to cure it by a vaginal operation Puerperal retroversion develops at any time from the second week onwards a few of the cases that are diagnosed early and more of the cases that are diagnosed later cannot be cured by pessaries Dr S Gordon Luler in his article in the *Journal* of December 26th, 1931, is justified in advocating the treatment of such cases by ventro suspension, especially when the cure of retroversion by vaginal operation is by no means certain

A large proportion of the cases of prolapse that occur nowadays are due to overstretching of the tissues but in many there is a family history of prolapse or of ptosis of other abdominal organs Prolapse due to actual tearing of the tissues is getting much less frequent owing to more efficient and less impatient midwifery It is indeed quite probable that overstretching is the more important factor even in some cases where tears have occurred, and one would like further particulars from Dr Luker of the diet and exercises advocated by him for the prevention of growth of the foetus above 7 lb , together with some idea of the expectation of success by this treatment It is not generally realized that ptosis of the organs to the level of the true pelvic diaphragm is the earliest stage of prolapse and that this amount of ptosis is still liable to persist after the application of the usual methods of cure by colporrhaphy, *excepting cystopexy* , it is the explanation[1] of the appreciable proportion of cases (possibly 12 per cent) in which bladder [2] and back symptoms persist even after the abnormal downward bulging has apparently been cured The value of examination in the upright position for purposes of diagnosis of prolapse is mentioned by Dr Luker but I doubt whether any surgeon who uses the same position for post operative examination will be able to claim as high a proportion as the 99 per cent of cures which Dr Luker expects especially if they are examined by the new radiological methods[1] available

Some of the ideas advocated by Dr Luker support others already in print, but his opposition to hysterectomy in prolapse must sometimes be overcome by the necessity for it and can be counteracted either by not removing the cervix (except perhaps its core) or by performing pan hysterectomy by a method recently described [1] which enables the operator to conserve the suspensory tissues attached to the cervix and to retain their continuity with the vaginal suspensory tissues Dissection in colporrhaphy along the natural lines of cleavage[4] prevents excessive cicatrization does not interfere with normal luxation movements of opposed visceral walls in subsequent partur tion (thus avoiding tearing) and has not in my expe rience resulted in any recurrence of prolapse afterwards The frequently described pubo cervical muscle is not mentioned by Dr Luker Does this mean that he agrees with the writer that no such muscle exists and that the platysma like muscle in this part is in reality only the muscle of the anterior vaginal wall? This muscle is con tinuous over the lateral fornices of the vagina with the musculo facial suspensory tissue in the base of the broad ligament forming the superior pelvic diaphragm The anterior portion of this diaphragm is inserted into the anterior walls of the pelvis while its posterior portion has its origin in the postero lateral aspect of the pelvis (in common with the utero sacral and cardinal cervical ligaments which are parts of it) During labour the anterior portion passing over the vaginal fornices is lifted forwards upwards and outwards by the dilating cervix and vagina It is thus liable to be overstretched and unless normal involution takes place this overstretching results in cystocele the commonest type of prolapse The portion behind the cervix (including the cardinal and utero sacral ligaments), owing to its radial insertion into the cervix and fornices is less liable to be damaged by the dilating cervix and vagina but bears a large part of the weight of the puerperal uterus unless the patient is lying on her side subinvolution of this or of the lower uterine segment results in puerperal retroversion—uterine prolapse develops later

Postural treatment in the prevention of prolapse is rightly emphasized by Dr Luker and it is perhaps

pertinent to add that the Fowler position so frequently used in the treatment of uterine sepsis tends to prevent the proper involution of the supports of viscera if used when sepsis is not present.—I am, etc.

E. HESKETH ROBERTS, F.R.C.S.Ed.

London, W.1, Jan. 20th.

REFERENCES

1 *Recent Work on Prolapse*, 1931. Dickson and Scudamore, London.
2 Imperfect Urinary Control. By Professor Watson. British Medical Association Annual Meeting, Bradford, 1924.
3 Uterine Prolapse. *Trans. Edin. Obstet. Soc.* 1930–31, li, 109.
4 *Recent Work on Colporrhaphy*. H. K. Lewis and Co., London.

SUCTION IN SURGERY

SIR,—In congratulating the designers and makers of what appears to be a very neat and efficient pump described in the *Journal* of January 23rd I should like to draw attention to the extraordinarily backward state of medical engineering in this respect at any rate.

The advantages of suction particularly in nose and throat surgery, have been realized for many years yet how many theatres are properly equipped for this purpose? A very common plan, ludicrous in its inefficiency, is to use a small portable pump almost always of foreign make closely adjoining the operating table. Being of microscopic dimensions these machines have always to work at highest speed and are in consequence noisy, smelly, dangerous from sparking and frequently out of order.

For many years dentists have had as part of the ordinary equipment compressed air on tap delivered to the chair side from automatic pumps located out of sight and hearing and there seems no reason why a similar principle should not be applied to surgical suction. The engineering problems involved must be very simple and there seems no reason why the cost of installing a large solid quiet-running pump in or adjoining a theatre should be at all prohibitive. Needless to say the type of equipment required for portable use in private practice is entirely different from that which should be installed in hospitals.—I am, etc.

London, N.W., Jan. 25th. R. JOHN CLAUSEN.

CHILD GUIDANCE CLINICS

SIR,—I have been interested in the correspondence in your columns on the above subject.

I cannot express any opinion on the philosophic issues so ably discussed by Dr. Suttie nor on the other hand, do I wish to raise controversial topics with Dr. Fothergill whose interesting letters are admittedly written without knowledge of the intricacies of the treatment. But having some years experience with children both from the medical and psychiatric view points and in particular having the privilege of working at the London Child Guidance Clinic I would like to make the following points clear to your readers.

1. The vast majority of children whom I see at the clinic have not been recently treated by a general practitioner nor are their families in touch with one.

2. The vast majority of general practitioners regard most of the problems with which we deal—stealing truancy and the like—as outside their province.

3. No practitioner of my acquaintance can spare the time (even if he has the training) to obtain the psychological history required.

4. The clinic team is entirely under the control of a psychiatrist and no member comes into contact with the patient except at the wish of the psychiatrist.

5. In no branch of medicine with which I am familiar does a patient obtain so much individual attention and in no branch are there more possibilities for the relief of real suffering.—I am, etc.

[illegible] Mental Hospital, Jan. 19th. C. J. C. EARL.

THE TUBERCULOSIS PROBLEM

SIR,—It is a pity that views resting on a flimsy basis should be advocated by men who have not the special experience to guide them to the truth. It is a known fact that as Kitasato proved there was little or no tuberculosis in cattle of Japanese breed. These cattle were *naturally immune*. Yet in Japan adults and children suffered more from fatal tuberculosis than they suffered in England. Surely we ought not to hear anything more of the conversion of tubercle bacilli of the bovine strain into tubercle bacilli of the human strain in the human body.—I am, etc.,

London, W.1, Jan. 23rd. W. CARNEGIE WILKINSON.

DEATHS ASSOCIATED WITH ANAESTHESIA

SIR,—With reference to Dr. Blomfield's letter of January 2nd as it was I who pointed out to Dr. Chambers that passage in Dr. Blomfield's textbook of anaesthetics which we appear to have misunderstood may I express my regret.

We took it to mean that Americans were tending to advance along a road now taken incidentally by the Master of the Rotunda and that they were keen to explore any methods of anaesthesia which might offer real advantages instead of remaining satisfied with the existing methods good though their results may be. If not this what did it mean?

In Britain not to speak of a country with the population of the United States, there may no doubt be found any degree of skill and any variety of anaesthesia. Of course a high standard can be found here and lacking chances of personal observation we must rely on the published work of those who both teach and practise the use of many refinements now coming into favour. I do not know if the routine observation of blood pressure is regularly taught in this country but it finds a place on American teaching charts and if it does nothing else the practice tends to underline the importance of any anaesthetic.

Newspapers now and then report unfortunate results from the routine use of chloroform in minor operations. If only one or two of these were avoided by taking to heart Dr. Blomfield's paragraph (p. 1158) the Registrar General's percentages though impossible to measure against those of other countries would improve from year to year as surgeons have already reported in this country.—I am, etc.

Doncaster, Jan. 19th. BESSIE E. COOK, M.B., Ch.B.

IMHOTEP

SIR,—Sir D'Arcy Power in his review of Professor Sigerist's book on *Great Doctors* says he begins with Imhotep who is claimed as an architect of the Great Pyramid. I venture to suggest that the beginning was an unfortunate one for although many wonders have been attributed to Imhotep it is the first time that this picturesque legendary figure has been associated with the Great Pyramid. As alleged architect to Zoser his name to be sure is connected with the Step Pyramid but as Manetho says that Zoser and Imhotep were identical—and that cultured Greek generally knew what he was writing about—it is not easy to separate the truth from fiction. One thing however is certain (and I think I have made it perfectly clear in my work *Egypt the Hope of the Occult Sciences*) and that is that there is no contemporary evidence concerning Imhotep as a physician and he only first appears in that character some 2,000 years after his death, shortly before his deification—by foreigners.—I am, etc.

Cairo, Jan. 13th. T. GERALD GRY, M.D.

MEDICAL CONDITIONS IN SOVIET RUSSIA

SIR,—Thirty years ago armed with an introduction from the British Foreign Office (obtained through the kind offices of the India Office) I visited the principal ophthalmic hospitals in all the leading countries of Europe, and made a report thereon for the Madras Government which I served a report which was also published in an Indian medical journal I only visited ophthalmic hospitals Those of Moscow and St Petersburg under the Tsarist regime were modern buildings excellently designed well equipped and magnificently staffed They compared favourably with those that I saw in Austria Germany France Belgium, Holland Italy, Denmark Sweden and Switzerland The unfailing courtesy extended to me by Russian colleagues demands this protest against the adverse suggestions that have been made—I am etc

R H ELLIOT M D F R C S
London W 1 Jan 23rd Lieut Colonel (late of the I M S)

Obituary

FREDERICK RICHARD FISHER F R C S

Senior Consulting Surgeon to the Royal National Orthopaedic Hospital and to the Royal Surgical Aid Society

The death of Mr F R Fisher which occurred on January 18th removes from us almost the last survivor from the purely subcutaneous period of orthopaedic surgery He entered the medical school of St George's Hospital (then in Kinnerton Street) in 1863 one of the unusually large entry of thirty six in that year, and qualified M R C S in 1867 After serving the usual term of a year as house surgeon and an additional three months owing to a death vacancy Fisher was asked in 1871 to take on the post of house physician for six months an additional house physicianry having been created in place of the abolished office of apothecary No doubt it was thought desirable to inaugurate the new regime with one officer of long experience in the ways of The Cottage After holding various appointments as resident surgeon to distinguished people he obtained by examination the Fellowship of the Royal College of Surgeons in 1876 He was elected surgeon to the National Orthopaedic Hospital in 1875 becoming consulting surgeon in 1906 He was surgeon to the Surgical Aid Society (now Royal) for thirty one years becoming consulting surgeon in 1910

Fisher's influence as an exponent of subcutaneous surgery and gradual methods of correction was considerable and would have been much greater had not increasing deafness severely handicapped him He did not write much but his 'Essays on the treatment of deformities of the body which appeared with illustrations in the *Lancet* of 1879 included a description of his extension frame for the treatment of Pott's disease, which is still extensively used in the Royal National Orthopaedic Hospital especially at its country branch at Brockley Hill It has also been adopted by American orthopaedic surgeons He wrote the article on orthopaedic surgery in Ashurst's *Encyclopaedia of Surgery* vol vi 1886 and a suggestive article on The contracted muscle of infantile paralysis in the *Lancet* of 1905 Fisher was at one time assistant surgeon to the Victoria Hospital for Children Chelsea

Increasing deafness compelled him to give up practice and he retired to the country in 1910 finally settling in his native city of Salisbury He was at one time a keen and skilful fly fisherman When the bromide dry plate was popularized he took up photography as a means of clinical record and also became very skilful in landscape work, producing many beautiful pictures For many years before his death he had been quite deaf, so that communication was only possible in writing He was well advanced in his 88th year when bronchitis and heart failure released him

E MUIRHEAD LITTLE

Mr A ROCYN JONES writes

The death of F R Fisher removes the last survivor of that band of pioneer orthopaedic surgeons who flourished during the period of subcutaneous surgery, and out of whose work the correction of deformities by the open method gradually evolved Fisher himself was one of the last pupils of W J Little who performed the first subcutaneous tenotomy in London in 1837 He did good work on the etiology of paralytic deformities of the foot and was the first to explain clearly the mode of development of pes cavus Fisher's division of this clinical entity into two types—talipes arcuatus and talipes plantaris—still remains the best working classification and makes it easy to visualize the degree of pes cavus from which a patient may be suffering Fisher also devoted much time to the study of spinal curvature and was perhaps the first to observe that a severe total scoliosis could occur without rotation He devised a spinal suspension bed for the continuous treatment of spinal affections and this apparatus has found a permanent place in orthopaedic hospitals for it is in constant use to-day under the name of Fisher's bed He was particularly successful in the treatment of club foot a disability that can be as intractable as any in surgery His method was that of a gradual unfolding of the foot the two main elements of the deformity were separately corrected—first the varus and then the equinus—and several weeks or even months might be spent in the process His way of correction consisted of manipulation tenotomy, and splinting His favourite splint was the Scarpa shoe now long since discarded and a mere name to the modern orthopaedic surgeon Fisher accomplished most of his work while surgeon at the Royal National Orthopaedic Hospital and although he had retired from the hospital several years before I became a house surgeon there yet Fisher's excellent results in the treatment of club foot remained a legend amongst the older members of the nursing staff, who remembered the man and his work

THE LATE DR RUSSELL E WALKER

A friend writes The untimely death on December 27th 1931 from pneumonia of Russell Ernest Walker at the age of 45 already reported in the *Journal* of January 9th deserves more than passing mention Seldom can the close of a life have given rise to more universal regret in a community The reason for this is twofold—the profound affection in which Russell Walker himself was held in Peterborough and the sincere regard of the people of the town and district for the Walker family, which their remarkable services as family doctors for more than a hundred years have engendered The tradition dates back to 1812 when Dr Thomas Walker, the grandfather a native of Dundonald Scotland started in practice in the same house in Westgate as still serves as surgery He was followed by Dr T J Walker, who was in practice for fifty six years and was made an honorary freeman of Peterborough a year before his death in 1916 Russell Walker the eighth son of Dr T J Walker was the fourth of his generation to be engaged in the family practice His eldest brother Walter had to retire in 1903 on account of failing eyesight and two other brothers Alec and Joe Walker remain to carry on A graduate of Edinburgh University of 1912 and a Fellow of the Royal College of Surgeons of Edinburgh of 1914 Russell Walker will live long in the memories of his contemporaries and especially of those whose good fortune it was to be his fellow residents in the Edinburgh Royal Infirmary

In December 1914 he went to France with a temporary commission in the R A M C and served with the Durham Light Infantry in the Ypres salient at one of the most arduous periods of the war He was wounded in 1916 and after convalescence returned to Peterborough to help with the practice A year later however he joined up again but was not passed for foreign service performing valuable work at Clipston Hospital near Mansfield He was finally demobilized in 1919 and in 1920 was appointed to the honorary staff of Peterborough Old Infirmary On the opening of the Peterborough and District Memorial Hospital in 1928 he received an appointment as honorary surgeon A recent episode which stirred the imagination of his fellow citizens to an unwonted degree was that he was called upon at a moment's notice to perform a serious operation upon one of his brothers with happily successful results Throughout a strenuous and all too short professional life he identified himself like his forebears with the activities of the town He was a gifted actor and was especially interested in amateur theatricals on behalf of charity His sense of fun was infectious and his charm of manner such that he endeared himself to all with whom he came in contact The funeral service in Peterborough Parish Church was very largely attended and much sympathy was extended to his wife and three children and to his sisters and brothers

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An announcement has recently been made of the death at the age of 92 of Mr T S Ellis Gloucester's senior justice of the peace Qualifying in 1861 he was appointed house surgeon at St Bartholomew's Hospital and soon after leaving there went to Gloucester where he practised for many years He held the post of surgeon to the Gloucestershire Royal Infirmary and Eye Institution and to the Children's Hospital Kingsholm He was afterwards consulting surgeon to the Royal Infirmary and the Tewkesbury Rural Hospital and acted as vice president of the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association at Cheltenham in 1901 Mr Ellis wrote several pamphlets on surgical matters in particular one which dealt with the human foot He had many interests other than medical and did much useful work in his capacity as licensing justice and magistrate he was also an enthusiastic naturalist His loss will be keenly felt in Gloucester where he spent most of his long and useful life

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The following well known foreign medical men have recently died Professor P A Minakow an eminent medical jurist of Moscow aged 66 Dr Nicolas Leon formerly dean of the medical faculty of Jassy aged 68 and Dr Alfred Machard president of the Geneva Paediatric Society

Medico-Legal

MEDICAL MAN ACQUITTED ON CHARGE OF MANSLAUGHTER

At the Central Criminal Court on January 21st and 22nd before Mr Justice Finlay and a jury Alfred Hugh Bell of 1 St Mary's Road Church Road Hanwell was tried on the indictment of Church Road Hanwell was tried on the indictment and coroner's inquisition charging him with the manslaughter of Mabel Smith aged 22 a waitress of Acton who died in November last from septicaemia In the indictment there were two charges one that he used an instrument or [illegible] that he supplied a quantity of ergot knowing that it was intended to be used for an unlawful purpose Dr Bell pleaded Not guilty

Mr [illegible] for the prosecution stated that Mabel [illegible] had been engaged to Dr Bell by a young man with whom [illegible] This man said that he paid Dr Bell £4 [illegible] to him for her [illegible] On October [illegible] enclosing a certificate [illegible] that she was suffering from gastritis On November 8th a miscarriage took place The girl became very ill and her mother called in another doctor who ordered her removal to West Middlesex Hospital where she died on November 21st from septicaemia following the introduction of a foreign substance into her body Dr Bell in a statement made to the police at the time said that he consented to see the girl through her confinement and she paid him £5 She had asked him if there was anything she could take to bring about a miscarriage and he told her that such things led to serious trouble that it was a dangerous procedure and that he would have nothing to do with it Dr Bell stated that he prescribed for the girl and on later inquiry it was found that he had prescribed ergot

Dr Roche Lynch the Home Office senior analyst produced two prescriptions for liquid extract of ergot dated October 5th and 9th and said that in his opinion it was not proper to give ergot to a woman in such a condition He agreed that the prescriptions were for less than the usual doses Dr R M Bronte who had carried out a post mortem examination found evidence of septic abortion A catheter which was found in the girl's bedroom was produced in court and Dr Bronte said that it was highly improbable that she could have inserted the catheter herself There was no sign of injury but he agreed that it was possible for a non skilled person not to cause injury Dr Bronte was satisfied that ergot had no part in the woman's death his reason being that it had been taken as long as three or four weeks previously

Mr W G Earengey K C who appeared for Dr Bell submitted that there was no evidence to go to the jury and remarked that it was grossly unfair for a man to have to meet a charge when the prosecution did not specify with certainty how he committed the crime At the highest it was a case of suspicion The judge however ruled that there was some evidence to go to the jury

Dr Bell in evidence agreed that the girl had given him five guineas to see her through the confinement He had told her that on no account must she interfere with herself The girl called on him once a week she did not appear quite normal being very dull but this he put down to her condition Later he formed a suspicion that something had been done to her She had spoken about people using instruments and he had warned her against it The next time he heard about the case was that there had been a miscarriage He had prescribed liquid extract of ergot for the girl as he had been taught and found by experience that it was of great help in such cases he had no reason to suppose that it would cause abortion The catheter which was produced was not his property and he had never seen it before He had not thought it necessary in his first statement to the police to cite all the medicines he had prescribed but had he been asked for them he would have given them In cross examination he agreed that to give above a minimum dose of ergot to a pregnant woman was dangerous He was asked whether he did not enable this girl to get a bottle of ergot 120 minims Dr Bell replied that he gave her 7½ minims Mr Fulton said that that was what he prescribed but he enabled her to get 120 Dr Bell said that he gave her the usual bottle Questioned further Dr Bell said that he had 650 insurance patients and kept records of 50 to 60 per cent of them Of his private patients he kept no records at all Asked by the judge how in that case he sent in bills he replied that he had not sent in any bills for two years The judge pointed out that Dr Bell had suggested to the girl that she might go into a maternity home for her confinement in that case he would not have attended her Dr Bell replied that in such an event he would have given her back some portion of her fee

Dr F J McCann said that medical practitioners of the older school used ergot in small doses for women in such a condition and in the present case he believed it was quite right under the circumstances to have prescribed as Dr Bell had done The medicines would be a tonic to enable the girl to bear her confinement

The judge at this point asked the jury if they had heard enough of the case saying that there was more evidence for the defence The jury intimated that they were satisfied that the case need not proceed any further A verdict of Not guilty was accordingly returned and Dr Bell was discharged

Universities and Colleges

UNIVERSITY OF OXFORD

Lord Moynihan of Leeds P R C S will deliver the Romanes Lecture for 1932 during Trinity Term The subject and date will be announced later

At a congregation held on January 21st the following medical degrees were conferred

D M—J A Macfadyen

B M—W J Cotton J H Peel J R Braybrooks Elspeth W Smellie

Radcliffe Travelling Fellowship

An examination for a Radcliffe Travelling Fellowship of the annual value of £300 and tenable for two years will be held during Hilary Term 1932 at the University Museum commencing on Tuesday February 23rd at 10 a m

Candidates must have passed all the examinations required by the University for the B A and B M degrees They must not have exceeded four years from the time of passing the last examination required for the degree of Bachelor of Medicine The successful candidate must before election declare that he intends to devote himself during the period of his tenure of the Fellowship to the study of medical science and to travel abroad with a view to that study The Fellowship will be vacated *ipso facto* by a Fellow who spends more than nine months in the whole within the United Kingdom The examination will occupy four days Papers will be set in physiology pathology and preventive medicine and a subject will be proposed for an essay There will also be a practical examination in pathology Any candidate desiring to offer in addition a special branch of either medicine or surgery must send notice of this to the Regius Professor of Medicine by February 10th Intending candidates should send their names addresses qualifications etc to the Regius Professor of Medicine University Museum by February 10th

Hunt Travelling Scholarship

The George Herbert Hunt Travelling Scholarship is awarded without examination every second year to a graduate in medicine of the University (of either sex) who has not exceeded five years from the date of passing the final examination for the degree of Bachelor of Medicine

The Scholarship is of the value of £100 or such smaller sum as two years of the income of the fund provides Candidates are required to submit with their applications a statement of their academic record together with testimonials (five copies) and an undertaking that if elected they will travel abroad for a period of not less than three months for the purpose of clinical study or research in medicine In making the award a preference is given to such candidates as express the intention of engaging in the practice of their profession either as surgeons or general practitioners The scholar is required to complete his period of travel within twelve months from his election and within a reasonable period thereafter to submit to the Dean of the Medical School for the approval of the Electors a detailed report of his tenure of the scholarship Payment of nine tenths of the scholarship is made to the scholar on his signifying his readiness to proceed abroad and the remaining one tenth on the approval of his report by the Electors

The next election will be made in April 1932 Candidates must send their applications to the Dean of the Medical School University Museum Oxford by February 23rd

Schorstein Research Fellowship

The Board of the Faculty of Medicine will make an election to the Schorstein Research Fellowship in Medical Science in June 1932 if a candidate of sufficient merit presents himself The Board has power if in special circumstances it shall seem desirable to divide the Fellowship into two Studentships

The Fellowship which will be of the annual value of £200 will be tenable for two years from October 1st 1932 in any of the medical departments at Oxford under such regulations as the Board may approve Candidates must be graduate members of the University holding a registrable medical qualification and must be under 30 years of age on October 1st 1932 Candidates must submit their applications to the Dean of the Medical School University Museum not later than May 2nd 1932 Each candidate must submit evidence of age testimonials (three copies) or names of referees, a statement of his career and a statement of the department of medical science in which he proposes to research

UNIVERSITY OF LONDON

A ceremony for the installation of the Earl of Athlone K G as Chancellor and for the conferment upon him of the degree of Doctor of Laws (*honoris causa*) will be held at the University on February 18th at 8 30 for 9 p m Members of Convocation who desire to be present should communicate with the Clerk of Convocation at the University of London South Kensington S W at latest by February 4th If all applicants cannot be accommodated invitations will be issued in order of priority of application

The title of Professor of Biochemistry has been conferred on Dr Robert Robinson of the Lister Institute of Preventive Medicine and that of Reader in Biochemistry on Dr J M Gulland of the Lister Institute of Preventive Medicine and Dr William Robson of King's College

NATIONAL UNIVERSITY OF IRELAND

The following degrees and diplomas were conferred on January 16th

M D—W H Kelleher

M A O—D St A Atkins

M P B Ch B A O—P J Burke C J Callanan T F McCarthy P M McSwiney J J Murphy T Nunan P O Donnell J Walsh W F Whelton

B Sc (Public Health)—Mary C Cross P I Fitzpatrick

Diploma in Psychological Medicine—C B Molony

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly business meeting of the President and Fellows of the Royal College of Physicians of Ireland held on January 1st Sir Almroth Edward Wright K B E C B M D Sc D and Mr Edward Francis Stephenson F R C S I were elected Honorary Fellows of the College

Medical News

The Hunterian Society will hold a banquet at the May Fair Hotel Berkeley Street, W 1, on Thursday February 11th at 7 30 p m to commemorate the 204th anniversary of the birth of John Hunter the Lord Mayor and Lady Mayoress of London and other distinguished guests will be present Fellows can invite medical and lay friends tickets 12s 6d exclusive of wines The dinner will be served at separate tables and arrangements will be made to form parties

The annual dinner of past and present students of the Royal London Ophthalmic Hospital will be held at the Langham Hotel Portland Place on Thursday February 11th at 7 for 7 30 o clock The chair will be taken by Sir William Lister consulting surgeon to the hospital Tickets 15s (excluding wines), may be had from Mr Rupert Scott, 70 Harley Street W 1

At a meeting of the British Institute of Philosophy to be held at University College Gower Street W C on Tuesday, February 2nd at 8 15 p m the Dean of St Paul's will give a lecture on the philosophical and religious implications of the new astronomy and physics

The Fellowship of Medicine and Post Graduate Medical Association announces that Major Maurice Sinclair will speak on fractures of the lower limbs on Wednesday, February 3rd at 4 p m at the Medical Society 11 Chandos Street W This lecture is open to members of the Fellowship Free demonstrations will be given at 2 30 p m on February 4th by Dr L R Yealland at the Prince of Wales's Hospital Tottenham and by Mr Herbert Paterson at the London Temperance Hospital A demonstration on rheumatic infections and heart disease in children will be given by Dr Bernard Schlesinger at the Children's Heart Hospital West Wickham Kent, on Saturday February 6th from 10 30 a m to 12 noon; intending visitors must notify the Fellowship by February 2nd Forthcoming special courses include ante natal treatment at the Royal Free Hospital by Dame Louise McIlroy on Fridays at 5 p m diseases of the chest at the Brompton Hospital February 8th to 13th (all day) medicine surgery and the specialties at the Prince of Wales's Hospital Tottenham February 15th to 27th (all day) clinical surgery at the Royal Albert Dock Hospital on Saturdays and Sundays for two week ends February 20th–21st and February 27th–28th and an evening course for the M R C P examination including six clinical and two pathological evenings four lectures two ophthalmic demonstrations and one laboratory demonstration February 22nd to March 18th Syllabuses may be obtained from the Fellowship of Medicine 1 Wimpole Street W 1

The Devon Bed at the Marie Curie Hospital (2 Fitzjohn's Avenue N W 3) will be dedicated by the Bishop of Exeter on Tuesday February 2nd at 5 30 p m From 4 30 the hospital will be on view and tea will be served

The January–March course of post graduate instruction at the National Hospital for the Relief and Cure of Diseases of the Nervous System Queen Square W C 1, opened on January 25th and will continue till Friday March 18th The course consists of out patient clinics on each week day except Saturday clinical lectures and demonstrations lectures on the pathology and on the anatomy and physiology of the nervous system together with demonstrations on methods of examination

The annual meeting of the American Medical Association will be held this year at New Orleans from May 9th to 13th

The Second International Congress for Light will be held at Copenhagen under the presidency of Dr Axel Reyn from August 15th to 22nd when the following subjects will be discussed (1) The action of the general light bath in tuberculosis introduced by Sir Henry Gauvain (2) The role of pigment in light biology and the therapeutic effect of general light baths introduced by Dr Brody of Grasse and Professor G Miescher of Zürich (3) Helio climatological research in relation to public health introduced by Dr W Haussmann of Vienna and Dr Rollier of Leysin (4) Report by the international committee for the determination of a standard unit of measurement for ultra violet radiation introduced by Dr Saidman of Paris The fee for membership is 30 Danish gold crowns Further information can be obtained from the British secretary Dr W Kerr Russell 126 Harley Street W 1

The eleventh congress of the German Pharmacological Society will be held at Wiesbaden from April 8th to the 11th under the presidency of Professor O Loewi of Graz A detailed programme will be published in the middle of February Further information can be obtained from the secretary Professor W Lipschitz Pharmakologisches Institut Frankfort on Main

The annual congress known as Journées Médicales de Bruxelles will be held at Brussels from June 25th to 28th 1932

The Medical Society of the Mediterranean Littoral is organizing its sixth international Easter voyage along the Mediterranean coast under the presidency of Professors Lepine and Theveneot of Lyons and Professors Perrin of Nancy and de Noble of Ghent Particulars can be obtained from the general secretary 24 Rue Verdi Nice

An international society of endocrinology is being formed in Paris Further information can be obtained from Professor Pende Clinica Medica Genoa or from Dr Leopold Levi 16 Rue Theodore de Banville Paris

Dr Lesinger has been nominated professor of experimental and comparative pathology in the Paris Faculty of Medicine in succession to Professor Ruthery who has been transferred to the chair of medical therapeutics

Dr P Lowe a member of Lincoln's Inn was called to the Bar on January 26th

The late Mr Bilton Pollard emeritus professor of clinical surgery in University College London has left estate of the gross value of £60 015 with net personalty £56 702 After certain legacies the residue of the estate is bequeathed to his brother for life and the ultimate residue as to two thirds to University College Hospital for special purposes and one third to Epsom College

Mr C H Edington lecturer on clinical surgery in the University of Glasgow has been appointed a deputy lieutenant for the county of the city of Glasgow

D C Bertram Munro of Whitehaven has been appointed to the Commission of the Peace for Cumberland

Professor Mary Lalor has been elected president of the Society of Medical Officers of Health for 1932

Dr Muller has been elected president and Dr Sorgues vice president of the Academy of Medicine for 1932 and Professor Achard as general secretary

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to *the British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are *MUSEUM* 9861 9862 9863 and 9864 (internal exchange four lines)

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QUERIES AND ANSWERS

Relief of Urticaria

Dr H H BULLOCH (Colne) writes I should like to ask if any of your readers can suggest therapeutic measures calculated to reduce the acutely sensitive period through which a patient suffering from an intractable urticaria is passing Everything tried seems to bring one to a dead end Dieting has proved very disappointing She seems to be sensitive to most foods and indeed to one particular article of diet at one time and not at another Most drugs give no benefit or at most a very temporary one and several of the usual remedies—for example calcium lactate alone and with parathyroid quinine etc—act as irritants and make the rash worse than ever The benefit from whole blood injections was only temporary and the procedure was so disagreeable to the patient (a young lady) that I abandoned it after a course of seven injections Medicines given for an influenza cold appear to be the cause of the condition

Tracheal Tug in Normal Person

Dr J B DAVIDSON (Northumberland) writes I should be interested to have opinions as to the significance of the clinical sign of tracheal tugging Two of my patients display this phenomenon in a mild degree and yet neither of them shows any other sign or symptoms of either aortic aneurysm or mediastinal neoplasm X ray photographs showed nothing abnormal Is it possible therefore to have a tracheal tug in a normal person or in a person not suffering from either aneurysm or neoplasm?

? Intermittent Claudication

COUNTRYMAN writes Perhaps someone would be kind enough to give me the diagnosis and treatment of the following case My patient a retired man 70 years of age is fairly active except that during the last few weeks he has been pulled up after walking about half a mile by pain in the leg After waiting a short time the pain passes away but again recurs after walking If walking is persisted in the foot and leg become very cold Is this analogous to angina Radiant heat and diathermy have been tried

Impotence following Tonsillectomy

PERPLEXED would be grateful for any suggestions in the following case The patient a man aged 58 was operated upon two years ago for enlarged tonsils Following the operation he had a severe attack of secondary haemorrhage which caused him to be convalescent for some five or six weeks Previous to the operation he was just as strong sexually as he had ever been or if anything even stronger Shortly after the operation he noticed a great change and this continued gradually to get worse until at the present time he is quite impotent All forms of treatment employed so far have the undesired effect of causing severe sexual excitement accompanied by a semi erection which soon

passes off and terminates with an emission without penetration The patient is otherwise strong healthy and in good condition Needless to say he bitterly regrets having had the operation The name of any textbook for reference would be welcomed

Income Tax

Retirement of Partner

L G A joined a firm as partner in 1921 and the firm was subsequently assessed on the basis of the cash profits of the practice including fees earned before but received after he became a partner He is retiring from the firm on February 28th being succeeded by A who is purchasing his share of the then outstanding book debts but receiving £60 (paid by L G A) for services during the introductory period

*** The change in personnel of the firm will be ignored for the calculation of the gross liability of the firm unless all concerned elect to have the change regarded as a cessation and restarting of the practice To exercise that option would probably lead to the necessity for departing from the cash basis method of calculating the firm's profits and would therefore be inadvisable L G A's gross liability for 1931–32 is eleven twelfths of the share of the assessment that would have fallen to him if he had remained in the firm for the full twelve months The £60 paid for A's services would seem to be an expense incurred in carrying on the practice in the year to October 31st 1932 and a proper subject of deduction in computing the profits for that year and therefore the assessment for 1933–34 which however does not assist L C A A is assessable (*a*) for 1931–32 on the £60 plus one twelfth of L G A's original share and (*b*) for 1932–33 on the amount of his fractional share of the profits of the practice for the year to October 31st 1931

Car Allowance

S C makes his accounts up to December 31st of each year On December 1st 1931 he sold his car for £40 (the value as reduced by depreciation allowances being then £122) and bought another for £250 How does this affect his income tax liability?

*** The obsolescence allowance—£122 – £40 = £82—must be regarded as a professional expense of the year 1931 and therefore will affect his tax liability for 1932–33—not 1931–32 He will be entitled to depreciation for 1932–33 on the value of the new car—£250 at 15 or 20 per cent—the allowance for 1931–32 having been already fixed by reference to the value of the car as at the date of the closing of the previous professional account—that is as at December 31st 1930

Assessments for Past Years

"F W G inquires for how many back years assessments can be made can tax be demanded as far back as 1915 for instance?

*** The statutory limit prevents assessments being made for more than the six years previous to the year of assessment If however there has been gross negligence or misstatement of profits the assessments can be made in treble duty and other penal provisions can be invoked Consequently it sometimes happens that the amount which a taxpayer can be compelled to pay for years within the statutory time limit is less than the amount payable on equitable rather than strictly legal grounds for a longer period

LETTERS, NOTES, ETC

Treatment of Influenza

Dr A COWAN GUTHRIE (London W 1) writes The cause of influenza of which there still seems to be some doubt is the pneumosintes discovered by Olitsky and his co workers at the Rockefeller Institute It is a filterable organism which can be isolated and is very difficult to cultivate A vaccine against influenza which does not contain this organism is ineffective but a vaccine containing the pneumosintes proves in my experience all sufficient As the pneumosintes can now be obtained in London it should be easy to make up this vaccine in any up to date laboratory —that is pneumosintes plus influenzal vaccine It must be used in the preliminary injection in very small doses (10 millions) which can be rapidly increased later Not less than six doses should be given It must not be used during an epidemic for many patients have already been invaded with the specific organism although unconscious of the fact and there is consequently danger of the occurrence of a severe reaction simulating influenza if it is used When a patient has influenza he can be protected against serious consequences by an injection of a serum containing antibodies against streptococci pneumococci and *Micrococcus catarrhalis* That is in my opinion, the method to be adopted in this disease

Goethe and the Male Climacteric

Dr C R COOKE TAYLOR writes In his article published on January 9th Mr Kenneth Walker says that Goethe at the age of 74 fell so desperately in love with a girl of 17 that when his suit went badly he was prostrated with grief and no longer desired to live Indeed it was this episode in his life and a previous one in which he had been more successful that suggested to him the theme of *Faust* As this year is being commemorated as the centenary of Goethe's death any contribution to the study of his life and works is important One would like therefore some further information from Mr Kenneth Walker as to the grounds on which he makes the above statement I see the following objections to his theory (1) The Faust story was in existence 200 years previous to Goethe's birth (2) Goethe's chief addition to the story was the Margaret episode This occurs in the first part of *Faust* which was written half a century before the love affair which Mr Walker says suggested the theme of *Faust* (3) There is hardly any love element in the second part of *Faust* which Goethe completed within six months of his death but which was certainly commenced long before the aforesaid love affair

Sex Equality

Dr C C HARRISON (Central Hospital Chuadra India) writes Apropos the paragraph on page 1072 of the *Journal* of December 5th 1931 I enclose a copy of the form of return which has to be made to the civil surgeon Jalpaiguri under the Jalpaiguri Labour Act giving details of vital statistics Under Deaths from specified causes heading Puerperal fever a column is provided for males as well as females! In my fifteen years experience in India I have never yet come across a male sufferer from puerperal fever but one never knows in this land of surprises The form in question has been in force with its present wording for at any rate the last seven years

Silver Wire as a Drain in Cerebral Abscess

Dr M ONSI ABDEN (oto laryngologist Government Hospital Alexandria) writes Perforated rubber tubes gauze wicks and flattened rolls of rubber tissue are used as drains in brain abscesses but are to be found either lying flat upon the dural surface having been expelled by the intracranial pressure or closing the abscess opening with consequent retention of pus inside To ensure against a repetition of this mishap I thought that silver wire might be used as a drain with good results in the following way I take a silver wire of medium thickness bend its end five or six turns each turn being a little longer than the depth of the abscess till I have a sort of coil like the caliput one inside its glass tube Using such drain I find the following advantages It can be easily sterilized and easily introduced It remains inside the abscess cavity and keeps the opening patent The pus passes in between and along the wires to the outside quite easily I usually inject lipiodol inside the abscess cavity with this silver drain in it to ascertain the depth of the abscess and the position of the drain by an x ray picture I have used such a drain in mastoid operations with excellent results

An Obstetric Calculator

Dr THEODORE W WILES medical officer in charge City of Leicester Maternity Home writes With reference to the article by Professor Daniel Dougal in the *Journal* of January 16th (p 105) illustrating an obstetric calculator I may say I designed a similar one in 1926 and disposed of the design in January 1928 to Messrs Trufood Ltd who inform me that they have distributed 24 000 since that date and still have supplies for distribution on application to them I did not take out a copyright but so far as I know my design was the original of this type

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 42 43 44 45 48 and 49 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 35

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

102 Cardiac Rhythm during Lumbar Puncture

P Veil (*Arch des Mal du Cœur* November 1931 p 680) has observed by electrocardiography modifications in the rhythm of the heart during lumbar puncture These changes only occurred when the duration of the puncture was considerably more than one minute and when more than 10 c cm of cerebro spinal fluid was withdrawn In the course of many experiments it was observed that arrhythmias only occurred in patients who had lesions of the central nervous system healthy patients and those with toxic disturbances remained normal While modifications of rhythm were constant during puncture among individuals afflicted with organic nervous disease they were not necessarily the same in similar clinical conditions Sometimes a marked slowing of the heart followed the operation thus occasionally being a nodal bradycardia More commonly very brief periods of auricular flutter were recorded by electrocardiography in the course of the puncture Alterations in the form of the ventricular complexes were not uncommon while cyclical modifications of rhythm such as alternate slowing and quickening were sometimes seen The author makes no attempt to correlate the variety of the arrhythmia with the nature or localization of the lesion in the central nervous system but he insists on the constancy of rhythmic disturbances in neurological diseases in the course of lumbar puncture and upon the parallelism between these changes and those in the cerebro spinal fluid

103 The Sklowsky Symptom in Varicella

S A Glauberson (*Urol and Cut Rev* November 1931 p 718) refers to the symptom described in 1927 by Professor L L Sklowsky which he regards as pathognomonic of varicella When light pressure with the index finger is made upon the healthy skin near and then over the vesicle the wall of the vesicle readily collapses and the contents are discharged This phenomenon is found in both small and large vesicles in varicella whereas it does not occur in a number of vesicular dermatoses such as strophulus vesicular urticaria the vesicular stage of eczema herpes zoster herpes simplex and dermatitis herpetiformis

104 The Spleen in Measles

I Feldman (*Amer Journ Dis Child* November 1931, p 1114) refers to his previous paper on this subject (see *Lancet* February 18th 1928 para 158) in which he failed to confirm the experience of Bleyer who found the spleen enlarged in more than half of his cases of measles He has since examined 119 measles patients of whom were boys and 51 girls aged from 7 months to 10 years and found that only 13 or 10 8 per cent showed any enlargement of the spleen Sex exercised no definite role in the incidence The enlargement was very slight in most cases and great only in four The maximum degree of enlargement did not coincide with the height of the eruption nor was there any relation between the frequency and degree of splenic enlargement and the severity of the attack of measles

105 Haemorrhagic Typhoid Fever

[illegible] *Med Rec* November 27th 1931 [illegible] who records a case illustrates the rarity of condition by the fact that Heinrich Curschmann in 2,000 cases of typhoid fever saw only six haemorrhagic cases which were characterized by haematemesis [illegible] and usually from the [illegible] gums intestine [illegible] The patient was a youth aged 17 who on [illegible] with day of [illegible] a [illegible] of typhoid fever [illegible] bullæ on different parts of the body especially the malleoli iliac spines and ribs The striking features in the blood count were the leucopenia (1 555 per c mm) and thrombopenia (28 032 per c mm) The stools were loose and black but no other haemorrhages were noted Death occurred on the thirtieth day of disease At the necropsy no haemorrhages were found in the viscera or serous membranes except in the ileo caecal region and ileum

106 Tommasi's Sign in Uricaemia

A Paglia (*Rif Med* October 26th 1931 p 1623) who records nine illustrative cases in men aged from 26 to 76 states that L Tommasi in 1928 described a special form of alopecia on the postero external aspect of the legs especially in their distal two thirds which was found almost exclusively in adult males who were subjects of the gouty diathesis It was usually associated with other constitutional and somatic signs of uricaemia The alopecia which consists of round or oval patches or of more extensive areas is presumably due to a gouty neuritis

107 Hypertension in Gastro Intestinal Disease

J M G Galvan (*Rev Med Latino Americana* September 1931 p 1742) from examination of 1 000 gastrointestinal patients 738 of whom were males and 262 females aged from 29 to 72 comes to the following conclusions Systematic sphygmomanometry in gastro intestinal disease often shows a rise of blood pressure which is independent of affection of the other systems Essential hypertonus may be sufficient in itself to give rise to the digestive symptoms The stomach liver and intestine are most frequently affected in the order named The rational treatment of these cases is that of the vascular disturbance by an appropriate diet and hypotensive medication

Surgery

108 Hypertrophic Pyloric Stenosis in Adults

G L Laporte and T Scholz (*Med Journ and Record* November 4th 1931 p 442) consider this disease a localized form of linitis plastica—a condition of the stomach characterized by a marked increase in the connective tissue elements of the submucosa and the subserosa with subsequent thickening of the lumen and hypertrophy corresponding diminution of the gastric wall of the muscularis Metastases do not occur This process usually starts at the pylorus it may remain confined to it thus giving an anatomical picture similar to that of congenital pyloric stenosis or it may spread until it gradually involves the entire stomach producing the anatomical picture of diffuse gastric fibrocarcinoma The diffuse form is now recognized to be invariably malignant though a very careful and extended search for small disseminated nests of cancer cells is often necessary With regard to the localized form the question of malignancy is still undecided but its interest is academic since all cases end fatally unless an operation is undertaken The authors report the case of a man aged 48 years seen in January 1930 for pain in the stomach The onset seven years previously had been marked by vomiting slight eructation occasional heartburn and epigastric pain These attacks lasted about seven to ten days at a time with periods of complete relief for weeks and even months The condition became worse in October 1929 when the pain was more intense and came on two or three hours after meals it was not relieved by food There was some loss of weight but the clinical examination was negative The pathological findings were HCl 80 total acidity 190 no blood sarcinae or Boas Oppler bacilli in the stomach contents and a

negative Wassermann reaction The stomach was comparatively small as viewed radiologically with almost complete obliteration of the distal two or three inches but it emptied well within the six hours limit There was marked gastric hyperperistalsis At the operation in February 1930 a rather soft tumour was found which looked benign there was no gross lymph node involvement The tumour was resected and a short loop gastroenterostomy was performed Pathologically the condition was typical with no evidence of malignancy, and the patient regained full health

109 Complications of Artificial Pneumothorax

T CASPERSEN (*Tidsskrift f d Norske Laegeforening* November 1st 1931 p 906) states that at the Grefsen Sanatorium in Norway four cases of air embolism in connexion with artificial pneumothorax treatment have occurred during the past seven years among 310 patients given this treatment They had received a total of about 5 000 injections and in all four cases the embolism occurred comparatively late in the treatment The four patients recovered The first three were typical examples of air embolism of the central nervous system In the fourth instance air reached the right side of the heart giving rise to a loud splashing sound which could be heard several metres away This sound was synchronous with the heart beats and was audible for more than two days The pneumothorax was continued for some nine months more without further complications In the four cases the collapse of the lung was only partial Another important complication of artificial pneumothorax treatment discussed by the author is pleural effusion which, he considers is favoured by a high intrapleural pressure But even though high intrapleural pressures are regarded as undesirable at Grefsen Sanatorium where a positive pressure within the pleural cavity is very seldom induced 54 3 per cent of the patients developed a pleural effusion in the course of treatment by artificial pneumothorax The small pleural effusions demonstrable only by means of x rays played practically no part in the subsequent course of the case , sometimes the first sign of a pleural effusion was an unexpected increase in the rate of sedimentation of the erythrocytes in the absence of temperature changes or pain in the chest After referring to various other complications of this treatment the author insists that deservedly popular as it has become it is still a serious undertaking the unpleasant and even dangerous consequences of which must not be forgotten

110 Surgical Treatment of Chronic Tonsillitis

R GRAHAM BROWN (*Med Journ of Australia* October 10th 1931 p 444) strongly deprecates use of the guillotine He considers the inferior portions of the tonsils a very potent source of infection since this portion is only rarely removed by the guillotine dissection is necessary A recurrence of the diseased tonsillar state may follow incomplete removal As reasons for tonsillectomy in a child he cites chronic enlargement of the tonsils with recurrent sore throat or with clinically enlarged cervical glands , the presence of adenoids which need surgical attention the existence of cardiac, articular or muscular rheumatism subacute or chronic kidney disease or attacks of acidosis with or without cyclical vomiting exudation of pus from the tonsils causing gastric or intestinal disturbance and associated deafness, with or without otorrhoea The reasons for performing tonsillectomy in the adult are much the same except that adenoids are rarely found after childhood The physical signs which help in determining whether a tonsil should be enucleated or not are the presence of the faucial band of chronic infection and the appearance of inflamed tonsillar crypts The expression of tonsils for evidence of pus is advised as a routine procedure Tonsillar cultures may give confirmatory evidence The indications for and the relative merits of the reversed guillotine method expanded tonsillectomy and dissection are discussed diathermic coagulation is also mentioned The author believes that diathermy sterilizes the tonsils effectually in only a few instances and then but temporarily

Therapeutics

111 Dangers in Arsenobenzol Therapy

G DELITALO (*Rif Med* November 2nd 1931, p 1669) records a case of agranulocytic angina due to the administration of arsenobenzol It occurred in a married woman aged 36 who was first discovered to have syphilis in 1929 when she had a strong positive Wassermann reaction, and was given a course of bismuth followed by arsenobenzol In May, 1930 the Wassermann reaction was negative, and she was in good health , she was given seven injections of neargyrol in November she received six injections of arsenobenzol which were well tolerated but twelve days after the last arsenobenzol injection she complained of sore throat the temperature rose the throat quickly became phlegmonic and the general condition was serious There was no true jaundice but the skin became waxy the spleen and liver were not felt Abortion at one month took place and the patient died on the seventeenth day of her illness Examination of the blood showed marked leucopenia with diminution in the polymorphonuclear cells there was no change in the red corpuscles The outbreak of such severe fatal angina after a comparatively small dose of arsenobenzol in a woman who had very well tolerated previous courses is emphasized by the author as a matter for serious consideration The literature of the subject is at present not very extensive but he believes milder types of the disease may be more frequent than is recognized It is not invariably fatal and is much more common in women than in men

112 According to L STRAUSZ (*Derm Woch* November 21st 1931, p 1813) it is important to realize that anti-syphilitic treatment may produce circulatory disturbances and hyperaemia of the gastric mucous membrane which gives rise to a predisposition to catarrhal jaundice and to its initiation by other causes The most obvious symptoms in catarrhal jaundice are the gastric troubles, which usually do not occur in jaundice due to syphilis or salvarsan It is important to be on the look out for a relative overdosage of salvarsan which may cause certain degenerative changes in the liver such as fatty degeneration The greatest care should be taken with the dosage of arsenobenzol preparations in the presence of catarrhal jaundice, *since even* this kind of jaundice may represent a form of acute yellow atrophy A short interruption of the treatment is indicated on the occurrence of jaundice in syphilis and the treatment should then be continued with small doses The dietetic treatment in such cases is of the greatest importance *It* should not be forgotten that the antitoxin action of the liver partly depends on its glycogen content Formation of glycogen can be increased by intravenous injection of sugar and also by small doses of insulin In view of the antitoxic action of sodium thiosulphate this drug can be used in the treatment of arsenobenzol jaundice Iodides have also a favourable action on the condition If arsenobenzol treatment is to be continued it is advisable to change the preparation and administer it intramuscularly (myosalvarsan neoarcol) or by mouth (spirocid)

113 Calcium Therapy in Hypertension

Luckhardt, Drigstedt and others have demonstrated that calcium lactate prevents parathyroid tetany in dogs On the theory that if it had a preventive effect on tonic spasm in skeletal muscle it might also prove to be useful in spasm in arteriolar muscle N S DAVIS (*Journ Amer Med Assoc* October 31st 1931 p 1295) has administered this salt to fifty five patients suffering from hypertension, 5 grams of calcium lactate being given in water half an hour before meals This treatment was associated with a low salt low maintenance protein diet to which was added most of the protein from milk the total amount of the food was small but it proved to be adequate in all respects There followed a considerable relief of the symptoms but little objective improvement Davis considers

that hypertension like pyrexia may be intermittent remittent continuous or pernicious and that it may be symptom of several diseases or pathological conditions due to various causes. He concludes that no cure for it will be found until the conditions of which it is a symptom are defined and that the value of any reputed therapeutic agent cannot be determined in a few days or weeks but only after months or years of trial

114 Treatment of Whooping cough by Convalescent Serum

J. C. S. BATTLEY (*Arch. of Ped.* October 1931, p. 675) illustrates the high infantile mortality from whooping cough by the fact that of 6,254 deaths from it in the registration area of the United States in 1927, 3,761 occurred in infants under the age of 1 year, of 5,280 deaths in 1928, 3,000 were of infants under 1 year old. Battley refers to the severe cases of whooping cough successfully treated by Lesne and Petot and Mery and Girard by injections of whole blood and reports two cases in infants aged 1 year and 9 weeks respectively—one treated by 12 c.cm. convalescent serum and the other by 20 c.cm. of the father's whole blood with rapid improvement and recovery.

Radiology

115 Intravenous Urography

W. J. BRAASCH (*Minnesota Med.*, November 1931, p. 978) claims by personal experience that intravenous urography has many advantages over other methods although interpretation of the radiograms is difficult and indefinite in some cases. He has used both uroselectan and abrodil for it is not toxic and gives clearer impressions than the latter (called also iopax and skiodan) is preferred uroselectan. This method is said to be of especial value in recognizing urinary stasis and in renal and ureteric lithiasis. An injection is made slowly of 25 c.cm. of the drug provided in sterile ampoules into a vein of the recumbent patient. There are few contraindications. It has been employed in feeble patients and in several whose blood urea figure was 100 mg. per 100 c.cm. of blood. In hydronephrosis it is useful because there is no risk of infection and the condition of both renal tracts can be seen at once. In lithiasis the comparative renal function of the two kidneys can be recognized as well as the localization of stones in most cases. In renal tuberculosis intravenous urography is most useful when combined with other methods especially if it is impossible to catheterize both kidneys. Its uses in cases of renal tumour of renal ptosis of anomalies of the kidneys and ureters and in lesions of the lower ureteric tracts are described and attention is called to the great value of this method of examination in certain cases. Nine radiograms are given representing different pathological conditions of the kidneys and ureters.

116 X Ray Pelvimetry

According to J. J. CHU (*Amer. Journ. of Surgery*, November 1931, p. 419) clinical methods of determining the diameters of the maternal pelvis and the foetal head while valuable have much to be desired from the standpoint of accuracy. He therefore discusses various methods of radiographical pelvimetry which enable the size of the foetal head and of the passages to be determined with great precision. He insists that a radiograph should be obtained in every case of pregnancy in a primipara where there is a history of previous difficult deliveries. The information given is often most valuable as to the expectations required for such diagnoses are he other hand the latter months of pregnancy in a primipara where there is any suspicion of pelvic disproportion and also in multiparæ with histories of previous difficult deliveries. The technique of pelvimetry is described in detail. Precautions to be taken in the matter of exposure to the rays and the dosage are mentioned. He points out that the mode of direction of the rays and the degree of distortion of the pelvic image. He also describes the technique which corresponded accurately with that of Thoms but substitutes for the semi-recumbent position a sitting position with a back rest supporting the head and back. The lower portion of the back is arched so as to bring on to a horizontal plane the imaginary line between the anterior superior border of the pelvic symphysis and the identifying adhesive tab over the space between the fourth and fifth lumbar vertebræ (the diameter of the pelvic inlet). This ensures that the plane of the inlet is parallel with the sensitized film which is incorporated into the Potter Bucky diaphragm on the top of the table. The patient can maintain this position in comfort. Full details are given of the necessary measurements and calculations in the case of the maternal pelvis and of the foetal occipito-frontal diameter. As regards the determination of foetal maturity the technique in the latter instance has special value. Jarcho concludes from his investigations that in a given instance an occipito-frontal diameter of more than 10·5 cm. will be associated with a crown-heel length of over 45 cm. and a body weight of over 2,500 grams.

117 Radiology of the Stomach

R. A. GUTMANN and NEMOURS AUGUSTE (*Presse Méd.*, November 7th 1931, p. 1621) describe a simple method of demonstrating the mucous folds of the stomach. It consists in the administration of a dish of some opaque substance—for example bismuth carbonate mixed with the yolks of two eggs. After swallowing the mixture the patient lies down in turn on the side back and abdomen and the radiographs are taken while in the prone position. The author reprints several of these radiographs he claims for this method that it is simple and gives pictures of good quality.

Obstetrics and Gynæcology

118 Malaria Therapy in Pregnancy

ALEXANDRA ADLER and H. HARTMANN (*Deut. med. Woch.*, November 27th 1931, p. 2018) who report an illustrative case state that although a large number of cases are on record in which syphilitic women have been treated by injections of malarial blood during pregnancy very few have been reported in which the pregnant woman was suffering from general paralysis at the time of treatment. Unger had described an example in which malaria therapy was commenced in the fifth month of pregnancy and was followed by the normal delivery of a healthy child. Sarbo has reported a case of a woman with cerebral syphilis who underwent malarial treatment in the fourth month of pregnancy and gave birth to a healthy child at term with a negative Wassermann reaction in the blood and cerebro-spinal fluid. The present authors patient was a woman aged 31 suffering from general paralysis. 3 c.cm. of malarial blood was injected in the eighth month of pregnancy. After two febrile attacks in the course of the next nine days premature delivery of a normal child followed with no signs of syphilis apart from a positive Wassermann reaction in the blood serum. The mother had seven more malarial attacks after delivery but the mental condition considerably improved.

119 Functional Uterine Bleeding

According to E. NOVAK and G. B. HUBD (*Amer. Journ. Obstet. and Gynecol.*, October 1931, p. 501) functional endometrial bleedings—for example that occurring near puberty—are characterized by persistence and exaggeration of the interval phase of the endometrium which is due to the continued effect of the follicular hormone and absence of the effect of the progestin contributed by the corpus luteum. The ovaries contain no corpora lutea and unruptured Graafian follicles persist. Radiotherapy being undesirable in young women many of the patients have been treated by repeated curettings. Administration of progestin would be a rational although purely substitutional treatment but it is not yet available for human use. Knowledge of the complex pituitary-ovarian-endometrial hormone relations is still far from complete.

but it is logical to try to influence the ovaries by use of a luteinizing hormone from the anterior lobe of the hypophysis With such a hormone the authors report success in checking the bleeding in 44 out 51 cases of functional uterine haemorrhage The preparation, of which the active principle is the Prolan B of Zondek was originally intended for the treatment of amenorrhoea and was derived by methods which are still being investigated from the urine of pregnant women , its potency in different samples, as shown by animal experiments corresponded with its therapeutic efficacy The material used although it contained a certain amount of Prolan A was free from folliculin It is pointed out that such huge doses of this would be required in the human subject that at present therapeutic experimenting cannot be entertained

120 Indications for Caesarean Section

R W T H STEWART (*New Zealand Med Journ* October 1931 p 306) divides the indications for Caesarean section into (1) the absolute which include all conditions imposing an unsurmountable barrier to the passage of the foetus and (2) the relative indications such as certain degrees of pelvic contraction placenta praevia, pregnancy toxaemia, and the presence of uterine and ovarian tumours He remarks that the indications for it are subject to individual variations depending on the age and parity of the patient but it should always be considered a possible treatment of pre eclamptic toxaemia in a primi gravida with a viable foetus The mode of delivery in cases of placenta praevia should depend on the situation of the placenta and also on the condition of the foetus The classical operation is indicated when abdominal delivery is the route of election the lower cervical in cases in the first stage of labour or after a trial labour , and the Portes method when frank infection is present The last named technique has the advantage of being simple operative shock is reduced a mutilating operation is avoided and the mortality is much less than that of Caesarean hysterectomy When tonic contraction of the uterus is present even though the foetus is dead this method is safer than an ovariotomy or embryotomy, which may lead to rupture of the uterus

Pathology

121 Diphtheria Anatoxin Immunization

From a series of experiments C JENSEN (*C R Soc de Biologie* November 6th 1931, p 528) states that purified and concentrated diphtheria anatoxins are antigens of high immunizing power, and that they cause no greater reactions than the unprepared anatoxins Immunity appears rapidly—in some cases on the third or fourth day—without the negative phase so feared by some workers Jensen suggests therefore, that these anatoxins are especially indicated in epidemics In a further paper (ibid p 532) he shows that the immunity conferred is of varying duration, ranging from a few months to many years or practically the whole of life The shorter time must be considered as a minimal figure, because when the antitoxic titre of the blood has fallen to 1/30 U A or below it rises again in many infants, and thus the immunity becomes more lasting

122 The Liver in Scarlet Fever

S VAN CREVELD (*Nederl Tijdschr v Geneesk* October 31st 1931 p 5391) investigated the liver function with levulose and galactose in 35 children, aged from 6 to 12 suffering from mild attacks of scarlet fever He found that in the early days of the disease only a small proportion showed slight changes in the blood and urine which could be detected only by using galactose After disappearance of the clinical symptoms of hepatic insufficiency in the early stage this disturbance of carbohydrate metabolism became increasingly frequent in the following weeks and even in the sixth week was still perceptible In the stage of scarlet fever in which complications usually develop the disturbance of hepatic function was most prominent without there being a direct connexion with complications of organs other than the liver Jaundice, which occasionally develops after scarlet fever, showed the clinical picture of the catarrhal type The tolerance for galactose in this complication is considerably disturbed but in 15 cases examined the tolerance of levulose was not definitely affected

123 Acidosis and Alkalosis

E M SPENCER (*New Zealand Med Journ* October, 1931, p 274) describes these conditions as, respectively, an acidaemia or increased H-ion concentration of the blood and an alkalaemia or diminished H-ion concentration of the blood of such degree as to cause pathological changes or clinical symptoms Ketosis, an incomplete combustion of the fats with the appearance of oxybutyric and diacetic acid in the urine may be associated with either acidosis or alkalosis The reaction of the blood plasma and body fluids is maintained by the action of free carbonic acid and sodium bicarbonate The rate and volume of pulmonary ventilation keep the percentage of CO_2 in the plasma constant even under grossly abnormal conditions hence it is a variation in the bicarbonate factor that brings about any change in reaction Sodium constitutes nearly 90 per cent of the bases of the blood plasma and carbonic and hydrochloric acids form over 80 per cent of the acid radicals The bicarbonate breaks up rapidly forming a Na ion for combination with excess of acid the carbonic acid being eliminated by the lungs or providing the acid for taking up an excess of base But the stronger acids of the plasma have a greater affinity for the base than has carbonic acid, and expel the latter when they are restored to the body In persistent vomiting as in pyloric stenosis there is dehydration and a complete loss of HCl and NaCl from the gastric secretion the loss of the Na ion not being so marked as that of the Cl , the latter is replaced largely by the bicarbonate, and alkalaemia results The administration of normal saline solution supplies the chloride and relieves the dehydration, but, since the Na and the Cl are in equal amounts in this fluid an excess of Na will result, easily disposed of if the kidneys are functioning well But dehydration causes oliguria, and sometimes even anuria with impaired renal function fatal alkalosis will follow the administration of normal saline Intravenous glucose administration acts as an immediate food aids the absorption of normal saline and stimulates renal secretion In acute and severe diarrhoea there is a great loss of base radicals with a resultant accumulation in the system of acid Cl ions These with their strong affinity for sodium displace this basic ion from bicarbonate and leave a large volume of CO_2 to be eliminated by the lungs—the condition of acidosis The administration of bicarbonate solution is indicated and glucose is of as great a value In diabetic coma starvation, or cyclic vomiting with ketosis and acidosis there is a great reduction in bicarbonate due to the accumulation of ketone acids Glucose causes rapid and complete combustion of the fats and ketone bodies aided in the case of diabetes by insulin , it is seldom necessary to give sodium bicarbonate Associated alkalosis and ketosis may occur in the pyelitis of infancy After therapeutic alkalinization has been attained alkalaemia will result, if the child vomits and Cl ion is lost This will be favoured by a high temperature with consequent hyperventilation and loss of CO Alkalosis may be suspected clinically if an infant that has been doing moderately well develops marked prostration with slow shallow breathing , the presence of muscular twitchings and a positive Chvostek sign strengthens the suspicion Upper intestinal obstruction, where starvation has brought about ketosis, and vomiting alkalosis may also cause the condition The reaction of the urine is misleading in these cases The acetone bodies and incompletely broken down proteins cause an acid urine in spite of the alkalaemia Treatment consists in stopping alkalis giving glucose and normal saline solution and administering calcium chloride or magnesium sulphate to counteract the alkalosis and relieve tetany if present Should the respiration be much depressed, inhalation of CO improves the condition rapidly

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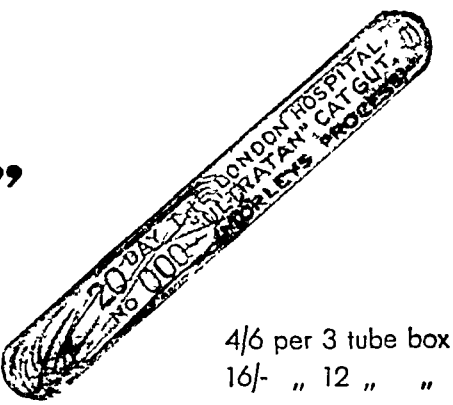
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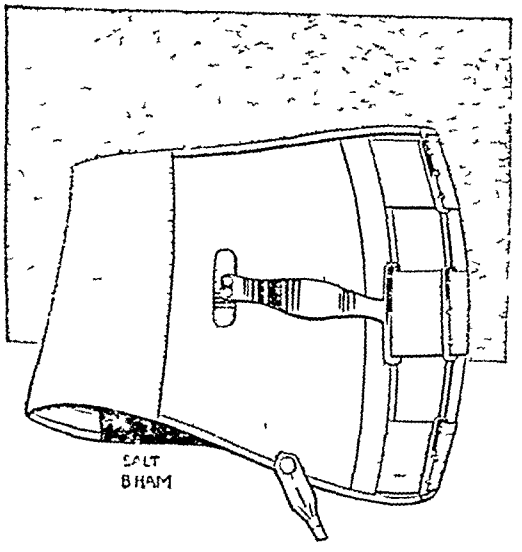
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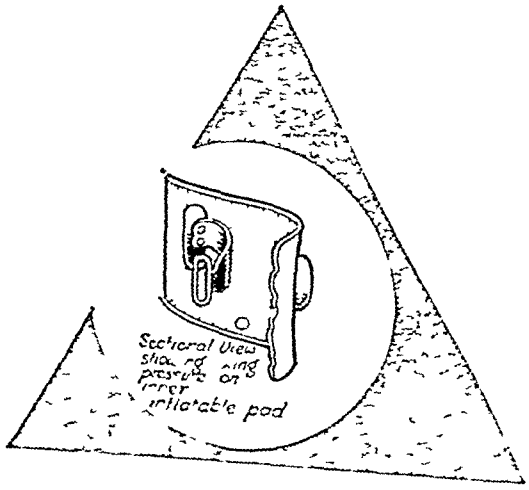
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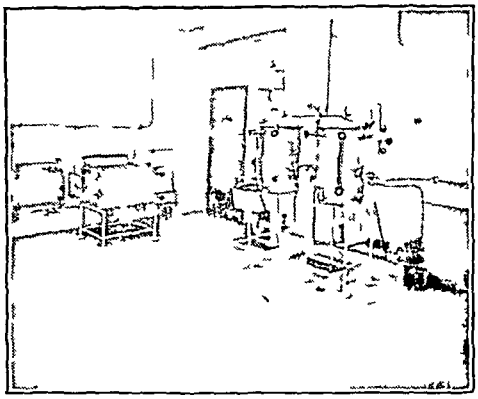
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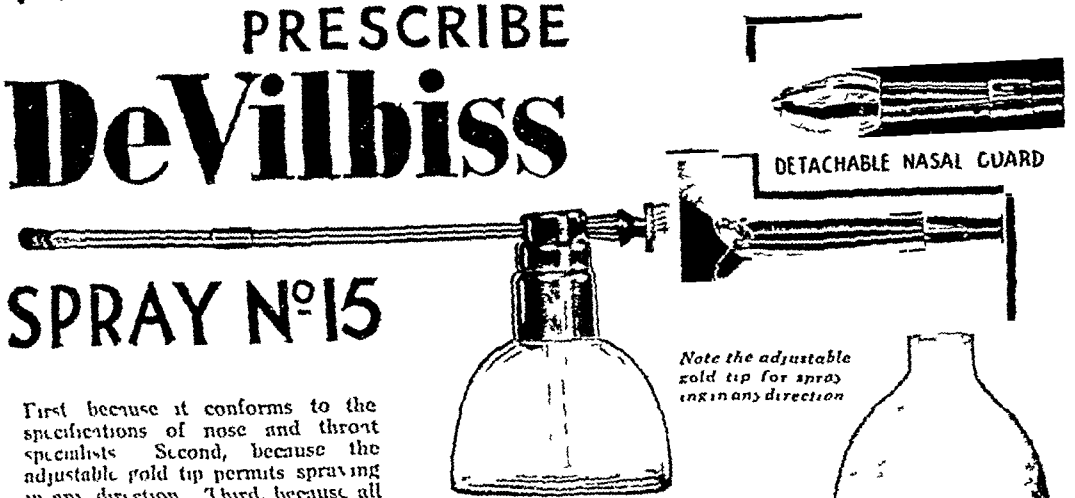
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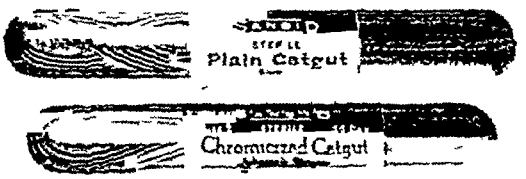
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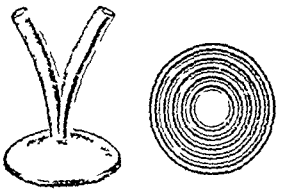
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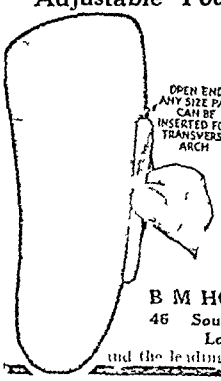
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HAYWARDS HEATH SUSSEX

The Committee of the above Hospital will be opening BLECHMONT HOUSE in February next for the reception of Female Private Patients suffering from mental disorder Voluntary Temporary and Certified Patients will be received

Blechmont is a large country house situated on the outskirts of Haywards Heath and quite separate from the Hospital

The house is healthily situated and stands on an estate of 27 acres with beautifully laid out grounds and lawns commanding extensive views of the South Downs It has up to date systems of lighting and heating and is attractively furnished on modern lines

The charges are from £3 7s to £10 10s per week including all necessaries except clothing Full particulars may be obtained from the Medical Superintendent

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The Registered Hospital situated in large ground near the Cathedral receives VOLUNTARY and CERTIFIED PATIENTS of both sexes for treatment of Mental and Nervous Disorder including Functional Inebriety conditions in adults Special facilities for Hydrotherapy in co operative cases

All particulars may be obtained from the Resident Medical Superintendent
Dr MAYA BALKAS M D D P M

BROOKE HOUSE,
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Telephone Clis old 1643
PRIVATE HOSPITAL for Ladies and Gentlemen suffering from Mental and Nervous Disorder The hospital is situated in nine acres of pleasure ground Both voluntary and patients under certificates received For further particulars apply Dr CLIFFORD JOHNSTON and Dr ERNEST ROLLINS Resident Physician

CLARENCE LODGE,
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Situated in 3½ acres of secluded gardens
HOME FOR TWELVE MENTAL PATIENTS (LADIES)
Well appointed private home Home comforts and Trained Nursing Staff Eminent Mental Specialist Visiting Physician
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For the treatment of Ladies and Gentlemen mentally afflicted Voluntary Boarders received Situated 1 200 ft above sea level facing S 14 acres of grounds —For terms apply to the Resident Medical Superintendent W W HOLTON M D Nat Tel 130

Tel & Telegrams Haynes Brentwood 45
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Large grounds 400 ft above sea HOME for ladies Mentally afflicted Voluntary Boarders received Station Brentwood and Shenfield 1 mile Liverpool St 26 mins —Apply Dr HAYNES.

CHISWICK HOUSE

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both sexes

Now removed to

CHISWICK HOUSE,
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Telephone PINNER 234

A modern country house 12 miles from Marble Arch in beautiful and secluded grounds

Fees from 10 guineas per week

Voluntary Patients received for treatment

Special provision for Temporary patients under the new Mental Treatment Act

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A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS Within two miles of the G W Railway and L M & S Railway Stations at Gloucester the Hospital is easily accessible by rail from London and all parts of the United Kingdom It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 280 acres Voluntary boarders of both sexes are also received for treatment Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE which has its own private grounds and is entirely separate from the main Hospital

For particular as to terms etc apply to— ARTHUR TOWNSEND M D Medical Supt Telephone No 7 Barnwood

BAILBROOK HOUSE,
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A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders

Voluntary Boarders received in the Villas Large Mansion on outskirts of Bath with 20 acres of grounds (see *Medical Directory* page 2134)

For terms apply S J GILFILLAN O B E M P C M Elm Resident Physician Telephone No Bathaston 8189

FENSTANTON,
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A Private HOME for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients Large Mansion with 12 acres of ground (See *Medical Directory* p 2134) Apply T H EARLS M D Resident Physician Telephone Streatham 8430

ST ALBANS, HERTS
(20 miles from London)

Ladies suffering from all forms of MENTAL ILLNESS received for treatment at the Herts County Mental Hospital Hill End Convalescent and mild cases can be treated in a delightful country mansion with extensive grounds known as

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A first class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted

Large gardens deer park private golf links Grounds extend to over 200 acres

Voluntary Boarders accepted

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A Private Home for the care of and treatment of a limited number of ladies mentally afflicted [illegible] healthy and bracing

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FOR MENTAL DISORDERS,
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON THE MARQUESS OF EXETER C M G A D C

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This registered Hospital is situated in 120 acres of park and pleasure grounds Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble temporary patients and certified patients of both sexes are received for treatment Careful clinical biochemical bacteriological and pathological examinations Private rooms with special nurses male or female in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE

This is a Reception Hospital in detached grounds with a separate entrance to which patients can be admitted It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders It contains special departments for hydrotherapy by various methods including Turkish and Russian baths the prolonged immersion bath Vichy Douche Scotch Douche Electrical bath Plombieres treatment etc There is an Operating Theatre a Dental Surgery an X ray Room an Ultra violet Apparatus and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical bacteriological and pathological research

MOULTON PARK

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres Milk meat fruit and vegetables are supplied to the Hospital from the farm gardens and orchards of Moulton Park Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming gardening and fruit growing

BRYN-Y-NEUADD HALL

The seaside house of St Andrew's Hospital is beautifully situated in a Park of 330 acres at Llanfairfechan amidst the finest scenery in North Wales On the North West side of the Estate a mile of sea coast forms the boundary Patients may visit this branch for a short seaside change or for longer periods The Hospital has its own private bathing house on the seashore There is trout fishing in the park

At all the branches of the Hospital there are cricket grounds football and hockey grounds lawn tennis courts (grass and hard courts) croquet grounds golf courses and bowling greens Ladies and gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry etc

For terms and further particulars apply to the Medical Superintendent (Telephone No 56 Northampton) who can be seen in London by appointment

Northwoods,
Winterbourne,
BRISTOL

Phone & Grams Winterbourne 18

For further particulars and prospectus apply to JOSEPH CATES M D

This beautiful mansion in fifty acres of secluded grounds was built specially for the TREATMENT OF MENTAL ILLNESS Certified patients of both sexes Thorough clinical bacteriological and pathological examination Separate bedrooms Private suite Indoor and outdoor amusements Wireless and other concerts Occupational therapy Physical drill Private golf course Garden and dairy produce from farm on the estate A few voluntary patients are received in the Medical Supt's house Terms from 4 to 6 guineas a week

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For the care and treatment of Ladies suffering from Mental Diseases Limited to eight patients Telephone Starcross 19

CLIFFDEN TEIGNMOUTH in connection with Court Hall for early and convalescent cases Cliffden is a large well appointed house with lovely views of the South Devon Coast. It is beautifully situated in grounds of 19 acres The gardens are very attractive and there is a private road to the beach

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Telephone Teignmouth 289

TYKEFORD ABBEY, NEWPORT PAGNELL,
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FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical interest standing in 9 acres of garden and grounds and is situated 14 miles from Northampton and 12 miles from Bletchley on the main London to Northampton Road fifty miles from London Both sexes are accepted Hydrotherapy Therapeutic Treatment is used extensively in suitable cases Radiant Heat X Ray and Ultra violet Light. Diathermy and Foam Baths Billiards tennis etc Fees from five guineas per week.

Apply Dr D E M DOUGLAS MORRIS *Telephone* Newport Pagnell 121

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For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES either voluntarily or under Certificate Patients are classified in separate buildings according to their mental condition

Situated in park and grounds of 400 acres Self supported by its own farm and gardens in which patients are encouraged to occupy themselves Every facility for indoor and outdoor recreation For terms prospectus etc apply MEDICAL SUPERINTENDENT

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Telegrams "Alleviated, London" Telephone Rodney 4741-4742

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis court Entertainments dances and indoor amusements held throughout the year

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

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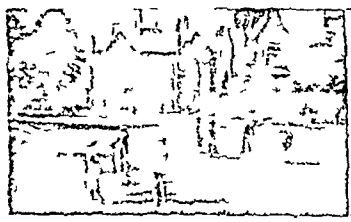
Unrivalled suites of Baths for Ladies and Gentlemen including Turkish and Russian Bath Ice and Vichy Douches Massage and Hombures Treatment and Electric Installation for Baths and other Medical purposes Deep Radiant Heat Diathermy High Frequency Diathermy Nauheim Bath Needle Sprays Foam Baths etc Special provision for invalids Milk from our farm of 300 acres Large Winter Garden Night Attendance if desired Well ventilated and all bedrooms warmed in Winter A large Staff (upwards of 60) of trained Male and Female Nurses Masseurs and Attendants

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ALCOHOLISM, DRUG HABIT, NEURASTHENIA, etc.

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A commodious HOME charmingly situated overlooking Torbay near Torquay Main line to Paignton Both Ladies and Gentlemen admitted as voluntary patients The treatment is the outcome of many years experience and besides removing all craving for drink it has a tonic action on the system and the general health is improved Many patients are benefited gradually without suffering

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For the treatment of GENTLEMEN under the Act and privately Established 1883 by an Association prominent in Medicine and others for the study and treatment of alcohol and drug abuse Large club like grounds on the bank of the River Colne Full sized billiards tennis croquet golf (Moor Park) Sandy Lodge) close by *For particulars apply to*— J S D H MACKAY M R C S Resident Medical Supt Telephone 16 RICKMANSWORTH

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Visitors to apply to the Medical Superintendent (Dr J C ROY M B) who may also be seen in Manchester by appointment Telephone 2251 GATLEY

THE MOAT HOUSE,

TAMWORTH STAFFS

A Licensed HOME for the TREATMENT of MENTAL DISORDERS and NERVOUS DISEASES Private Patients only Grounds and Park Land Terms and particulars to the Resident Proprietor Tamworth 108

STRETTON HOUSE,

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A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness including the allied disorders of Alcoholism and the Drug Habit All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the *Mental Treatment Act* 1930 Bracing Hill country *See Medical Directory* p 2158—Apply to Medical Superintendent Phone 10 P O Church Stretton

SPRINGFIELD HOUSE,

Near BEDFORD (Phone 3417)

For Mental Disorders with or without certificates

Resident Physician CEDRIC W BOWLER.

Ordinary Terms Five Guineas per week.

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THE HARE NURSING HOME

As founded and established by the late Dr FRANCIS HARE for 40 years Med Supt of the Norwood Sanatorium and author of Alcohol Its etc. for the treatment of ALCOHOLISM other Drug Habit Insomnia Neurasthenia Functional Nervous Disorders

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Among the Pine-clad Border Hills PEEBLES HYDRO PEEBLES SCOTLAND

A Medical Hydro in the country

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Completely equipped pleasantly situated highly recommended inspection invited

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Every kind of Bath Hombures Lavage
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THE GRA[illegible]

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near ROTHERHAM

A Hospital licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorders Both certified and voluntary patients received. Approved for Temporary Patients This is a large country house with beautiful grounds and park five miles from Sheffield Station Grange Lane L & N E Railway Sheffield Telephone No 40030 Brecksfield Resident Physician GILBERT F MOULD L R C P M R C S

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Ladies and Gentlemen received for treatment under certificates and without certification as either VOLUNTARY or TEMPORARY PATIENTS at a weekly fee of TWO GUINEAS and upwards

Bishopstone House, Bedford

PRIVATE HOUSE for MENTALLY AFFLICTED LADIES Ten only received Apply Medical Officer or Mrs LITTLE *Telephone* 2708

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Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Rec. Tel Address Bethlem Beckenham *Telephone* Springpark 1180—1181

Station Eden Park (Southern Railway)

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This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm grounds
Applications can be considered on behalf of patients of the educated classes in a presumably curable condition
With a view to early treatment voluntary or uncertified patients are admitted
Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise
The Committee will also consider applications for admiss on at lower rates and in certain cases will be prepared to admit patients free of charge
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this Unit is found the X ray and Dental Departments and the Bio Chemical Pathological and Psychological Laboratories
Furthermore provision is made for Electro-Therapy and Hydro Therapy to be carried out in all their forms
In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms
For forms and further particulars apply to the Physician Superintendent at the Hospital

RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological cultures the ordinary X ray examinations and electrocardiograph readings all treatment that may be prescribed such as special diets insulin artificial sunlight electrical treatment baths massage nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary X ray examination or for X-ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales *Telegrams* CASTLE RUTHIN *Telephone* RUTHIN 65

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A NURSING HOME for the treatment of EARLY MENTAL CONDITIONS in BOTH SEXES, twelve miles from Marble Arch Resident Medical Officer, visiting Pathologist, Occupational and Psychotherapeutic treatment Fees 5 to 12 guineas

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Telegrams PSYCHOLIA LONDON — FOR THE TREATMENT OF MENTAL DISORDERS — *Telephone* RODNEY 4731—4732

Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Bowls Croquet Squash Racquets and all indoor amusements including Wireless and other Concerts Occupational Therapy Physical Drill and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers also resident and visiting Consultants An illustrated Prospectus may be obtained upon application to the Secretary

HOVE VILLA BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods

Illustrated Brochure on application to the Medical Superintendent The Old Manor Salisbury Telephone 51

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GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts
Six acres of ground highly situated facing Finsbury Park
Private Suites Voluntary Patients and Temporary Patients received without certification
Convalescent Home Kearsney Court, Dover For further particulars apply to the Medical Superintendent.

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Medical Director David Lawson, M D, F R S E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J M JOHNSTON M B D P H etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK

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Built 1929-1930
Opened October 1930

For the Treatment of Tuberculosis (all forms) Diseases of the Chest Asthma. For patients requiring rest in the Alps under strict medical supervision and for medical conditions in which sun and air bathing are indicated

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

SPECIALLY REDUCED INCLUSIVE TERMS

For further particulars kindly apply to the Resident Medical Superintendent HILARY POCHE M D (Melb) M R C P (London) Tuberculous Diseases Diploma (Wales)

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Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine clad hills with sea and mountain views Modern treatment including SANOCRYSIN ARTIFICIAL PNEUMOTHORAX etc X ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L M S Main Line to Holyhead 4½ hours from London Resident Physicians Dennison Pickering, M D (Cantab) J A Hennesey, M B Ch B Matron Miss S A Eddy, S R N Late Sister in Charge Royal Hospital Annexe Sheffield

For particulars apply to the Secretary, Pendyffryn Hall Penmaenmawr N Wales (Phone 20)

VALE OF CLWYD SANATORIUM

This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES It is situated in the midst of a large area of park land at a height of 450 feet above sea level on the south west slopes of mountains rising to over 1 800 feet which protect it from north and east winds and provide many miles of graduated walks with magnificent views Average rainfall 29 57 per annum Full day and night nursing staffs X ray plant Every facility for Artificial Pneumothorax and for operations on the chest Electric lighting Central heating Home farm Clean milk from T T Herd For particulars apply to Medical Superintendent H Morriston Davies M D M Ch Cantab F R C S Llanbedr Hall Ruthin N Wales



KINGUSSIE, N B

THE GRAMPIAN SANATORIUM.

Situated in the upper Speyside district of Inverness shire One of the highest inhabited districts in Britain— The Switzerland of the British Isles Bracing and dry mountain climate Well sheltered Sanatorium specially built for the Open air Treatment of Tuberculosis Opened in 1901 Elevation 860 ft above sea level Electric light throughout buildings and in rest shelters Central heating Fully equipped X ray Plant All forms of treatment available including Artificial Pneumothorax and Ultra Violet Rays for surgical cases of Tuberculosis Terms £4 7s 6d to £6 6s per week inclusive No extras

MEDICAL SUPT FELIX SAVY M D For particulars apply to the Secretary

THE COTSWOLD SANATORIUM

First opened in 1893 and rebuilt in 1925 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect S S W sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by artificial Pneumothorax (X ray controlled) Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra Violet Rays is available when necessary without extra charge X ray plant Electric light Radiators hot and cold basins and Wireless in all rooms

Full day and night Nursing Staff

Resident Physicians C FOFFIEN A HOFFMAN B A M B T C Dub and MARGARET A HARRISON M B B S Lond

Apply The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 41 WITCOMBE *Telegrams* HOFFMAN BIRDLIP

FOR CONVALESCENCE AND RESIDENCE, RECOMMEND

Margate's climate is unequalled for all forms of tuberculosis (acute pulmonary cases excepted) Patients suffering from this and other illnesses can be safely recommended to convalesce or live permanently at Margate

Booklet free from The Secretary (Dept B M J) 14 The Parade MARGATE.

CFJL22

MARGATE

CLIFTONVILLE WESTBROOK

LONDON HOSPITAL MEDICAL COLLEGE.

F R C S

A COURSE OF INSTRUCTION for the Final F[illegible]ship Examination will begin on Tuesday March 1st

Fees (exclusive of Operative Surgery) 20 guineas Operative Surgery 5 guineas

A separate entry can be made for all Classes other than those of a strictly Clinical character

Further particulars may be obtained from Professor WILLIAM WRIGHT M.B. D.Sc. F.R.C.S. Dean London Hospital Medical College Mile End E.1

LONDON HOSPITAL MEDICAL COLLEGE.

Primary Fellowship Examination

A COURSE OF INSTRUCTION for the above Examination will begin on Monday Feb. 8th

The Fee for the Course is 15 guineas

Further particulars may be obtained from Professor WILLIAM WRIGHT M.B. D.Sc. F.R.C.S. Dean Mile End E.1

EPSOM COLLEGE

Application for the admission of CANDIDATES for PENSIONERSHIPS and FOUNDATION SCHOLARSHIPS at the next election must reach the office by the morning of February 19th

An EXAMINATION will take place in due course for the admission of three boys as COUNCIL EXHIBITIONERS. The fee payable is £15 a year instead of the usual fee of £135. Candidates must be the sons of such duly qualified Medical Men as shall in the opinion of the Council be among the less fortunate members of their profession. They must be over 12 and under 14 years of age on January 1st 1932. Application must reach me at the College Office 49 Bedford Square W.C.1 by the morning of February 19th

W. L. CIFFARD (Major)
49 Bedford Square W.C.1 Secretary
January 20th 1932

THE NORTH-EAST LONDON POST GRADUATE COLLEGE

The Prince of Wales's General Hospital Tottenham N.15 North Middlesex Hospital Edmonton and Associated Hospitals

An INTENSIVE REFRESHER COURSE will be held from February 15th—26th. Lectures demonstrations and clinics in the various Medical and Special departments

The number is limited to 25

Inquiries and applications should be sent to the Dean at the Hospital or to the Secretary of the Fellowship of Medicine 1 Wimpole Street W.1

NORTH-EAST LONDON POST GRADUATE COLLEGE

PRINCE OF WALES'S GENERAL HOSPITAL N.15

The Practice of the Hospital is limited to Medical Practitioners Particulars from J. BROWNING ALEXANDER M.D. Dean

STAMMERING, SPEECH DEFECTS

BEHNKE METHOD Estab. 1882. Cases non-resident treated at 39 Earl's Court Square, S.W.5 and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns.

"Pre-eminent success in the education and treatment of stammerers and others." — Times

"The [illegible] effected [illegible] and perfectly"

STAMMERING CLEFT PALATE SPEECH LISPING 3/9 Miss BEHNKE, 39 Earl's Court Sq. S.W.5

D O M S and D O (Oxon),

Training All [illegible] Practitioners and Private Nursing Homes Attached to Hospital and Operating Theatre Tavistock Square W.C.1

Convalescents needing care, rest

[illegible] and air taken into woman's [illegible] modern house Chiltern Village Oxford Station S. 3m. R.M.A. House Tavistock Square W.C.1

Doctor's widow in North London

[illegible] large bedroom garden car good [illegible] like some PAYING GUESTS Terms moderate — Address No. 3771 B.M.A. House Tavistock Square W.C.1

MEDICAL CORRESPONDENCE COLLEGE,

19, Welbeck Street, London, W.1

M.D. THESIS

All Universities

Skilled coaching guidance and advice by specialist tutors

Recent successes include Gold Medals at M.D. Edinburgh 1929 and 1930 and at M.D. Belfast 1930 and many High Commendations and Commendations at other Universities

Write for free booklet How to Write a Thesis for the M.D. degree

M.D. LONDON

Courses by skilled tutors for each branch of the M.D. London

Oral clinical and practical work arranged

Special courses postal oral and clinical for all higher medical examinations, M.R.C.P. London Edinburgh, F.R.F.P.S. Glasgow Many successes

Write for free booklet Guide to the M.D. London, to the Secretary Medical Correspondence College 19 Welbeck Street London W.1

UNIVERSITY OF LONDON, KING'S COLLEGE

PRIMARY F R C S

A Course in ANATOMY and PHYSIOLOGY in preparation for the JUNE EXAMINATION will commence on TUESDAY FEBRUARY 16th 1932 and will continue until the date of the examination

Fee for the Course Twenty Guineas

Applications for admission to the Course should be addressed to the Dean of the Medical Faculty King's College Strand W.C.2 from whom further particulars may be obtained

University of London

A Course of Three Lectures with lantern illustration on *The Feeding and Nutritional Disease of the Infant* will be given by Dr. L. FINDLAY M.D. D.Sc. M.R.C.P. (Physician East London Hospital for Children) at ST. BARTHOLOMEW'S HOSPITAL MEDICAL COLLEGE (West Smithfield E.C.1) on FEBRUARY 8th 9th and 12th at 5.30 p.m. At the First Lecture the Chair will be taken by Sir I. HOLTON SMITH HARTLEY C.V.O. M.A. M.D. F.R.C.P. (Physician to St. Bartholomew's Hospital)

Admission free without ticket

S. J. WORSLEY
Academic Registrar

University of London

A Course of Four Lectures on *Modern Views of Nutrition* will be given by Dr. E. J. COWELL M.B. (Cantab.) M.R.C.P. (University Reader in Dietetics at St. Thomas's Hospital Medical School) at BEDFORD COLLEGE PHYSIOLOGICAL DEPARTMENT (Queen's Gate S.W.1) on WEDNESDAYS FEBRUARY 3rd 10th 17th and 24th at 5.15 p.m.

Admission free without ticket by

S. J. WORSLEY
Academic Registrar

Rossall School — Some twelve

Open SCHOLARSHIPS for boys between the ages of 12 and 14 on March 1 next value £50 a year (carried will be awarded by Examination beginning March 14 1932 Boys examined at Rossall and in London — Apply THE BURSAR Rossall School Fleetwood.

NATIONAL POST-GRADUATE SCHOOL OF RADIOTHERAPY

The Mount Vernon Hospital and Radium Institute Riding House Street London W.1

Dean - Sir CUTHBERT WALLACE, K.C.M.G. C.B. F.R.C.S.

A Course in

RADIOTHERAPY

especially in its relation to Malignant Disease

will be held at the above School commencing Monday February 29th 1932

Copy of the syllabus and full particulars may be obtained on application

The fee for the Course entitles Students to two months Hospital Practice Independent arrangements can also be made for Hospital Practice

The Course will be repeated on subsequent dates

The Dean will be glad to see prospective entrants by appointment

THOS. A. GARNER Secretary

ST MARY'S HOSPITAL MEDICAL SCHOOL, W.2

(University of London)

PRIMARY F R C S COURSE

A Course of Instruction for the June Examination will begin on Tuesday February 2nd 1932 in the following subjects

ANATOMY AND EMBRYOLOGY
PHYSIOLOGY AND HISTOLOGY (with Practical Class)

The classes are conducted by the Professors and Demonstrators in the respective subjects

Fee for the Course £16 16s. or £9 9s. for either section separately This fee includes membership of the Students Club during the period covered by the Course

For further particulars apply to the School Secretary

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D.T.H. must possess the D.T.M. of the University)

For particulars apply to the Hon. Dean, Liverpool School of Tropical Medicine Leebroke Place Liverpool

TAUNTON SCHOOL, TAUNTON

A PUBLIC SCHOOL FOR BOYS

Boys are regularly prepared for the First M.B. Examinations University Scholarships in Chemistry Biology etc.

Special facilities are offered for the teaching of Chemistry Physics Botany and Zoology New Science Buildings containing seven laboratories two lecture rooms museum library store rooms etc. opened in September last

Prospectus from Head Master

University of Glasgow

[illegible]

[illegible]

[illegible]

January 1932

Refraction and the Ordering of

CLASSES taught by [illegible] Students in London £8 8s. for 10 [illegible] No. 125 B.M.A. House Tavistock Square W.C.1

POST-GRADUATE COURSES in February

(Open only to Members of the Fellowship of Medicine)

Ante Natal (Royal Free Hospital Fridays, Feb 5th 26th) Chest (Brompton Hospital Feb 8th 13th) Medicine and Surgery (Prince of Wales's Hospital Feb 15th 27th) Clinical Surgery (Royal Albert Dock Hospital, week ends, Feb 20th 21st, and Feb 27th 28th)

EVENING MRCP COURSE (Clinical, Pathological, and Lectures, Feb 22nd Mar 18th)

Apply —

FELLOWSHIP OF MEDICINE, 1, WIMPOLE STREET. W.1. Langham 4266

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL
MEDICAL SCHOOL

(FOUNDED 1816)

Telephone TEMPLE BAR 1457 BROAD STREET, HOLBORN, W C 2 (Near British Museum Station)

The Hospital has been rebuilt and contains 86 beds, including fourteen private rooms for paying patients
The new building has been specially designed for clinical teaching and post graduate study
Classes for the DOMS Examination Part I and II commence in May, 1932

Out patients are seen daily at 1 30 o'clock Operations are performed at 3 p m
The Pathological and Bacteriological departments will be pleased to report on specimens sent in by Ophthalmic Surgeons or Hospitals
Qualified medical practitioners and registered students may join at any time For particulars apply to the Dean or Secretary at the Hospital

QUEEN CHARLOTTE'S MATERNITY HOSPITAL
MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admissions being primiparous cases) Over 2 400 patients are admitted to the Wards annually and in the Ante natal Department there are over 18 000 attendance per annum
Certificates awarded as required by the various Examining Bodies
For rules fees etc apply ARTHUR WATTS Secretary

UNIVERSITY EXAMINATION POSTAL INSTITUTION
17, RED LION SQ., LONDON W C 1

(Tel [illegible])

Principal Mr F S Wa[illegible] M (Lond)
POSTAL OR ORAL TU[illegible] PATRON FOR ALL MEDICAL E[illegible]TIONS

SOME SUCCESSES

M D (Lond), [illegible]31 (9 Gold Medals during 1915 31)		355
M S (Lond) 1901 31 (including 4 Gold Medallists)		22
M B, B S (Lond), *Final* 1906 31 (Completed Exam)		280
F R C S (Eng), *Primary* 1905 31	*Final*	173 174
M R C P (Lond), 1914 31		199
D P H (Various) 1905 31 (Completed Exam)		308
F R C S (Edin) 1918 31		50
M R C S L R C P Final 1910 31 (Completed Exam)		501
M D Various By Thesis Numerous successes		

Preparation for the above and also for Medical Preliminary and for all examinations leading up to M R C S L R C P or M B of various Universities also for D P M D O M S D T M & H D I O D C O D M R E M M S A L M S S A etc Numerous successes

ORAL CLASSES

M R C P M D Final F R C S F R C S (Edin) Final M B B S and M R C S L R C P Museum and Microscope Work Also Private Tuition

MEDICAL PROSPECTUS (48pp)

CONTENTS —The Medical and the cost of entering the Medical Profession *Particulars of* all Postal Courses and Oral Classes for the Higher Medical Examinations for the higher Surgical Examinations for the Special Hire for visiting the Hours Open [illegible] arrangements with list of successes to the Principal 1 [illegible] (Telephone Museum 6313)

SIGHT SAVING
School by the Sea

Vacancies for Blind Children and also children whose weak sight hampers school work the latter trained by special sight saving methods

Full particulars from Principal

North Wales School for *Blind* Children

RHYL

CITY OF LONDON MATERNITY HOSPITAL,
CITY ROAD, E C 1

MIDWIFERY TRAINING SCHOOL

MED[illegible] to Hospital practic[illegible] and Obstetrical [illegible] Fortnightly Courses

PUPILS TRAINED as Midwives and Monthly Nurses in accordance with C M B regulations
PRIVATE WARDS for paying patients
MATERNITY NURSES sent out to private cases

Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric and Prelims
Chemistry *Physics and Biology* Labs
MANCHESTER TUTORIAL COLLEGE
327 Oxford Road Manchester

F R C S (Edin)

Full PRE[illegible] COURSE with Anatomical (Cadaver and Living Model) and Surg Path Demonstrations for next Exam will commence shortly POSTAL TUITION at any time —H C ORRIN F R C S Surgeons Hall Edinburgh

The East London Hospital for CHILDREN Shadwell E 1

The Board of Management invit[illegible] applications for the post of DERMATOLOGIST to see Out Patients one morning a week Applications with not more than three recent testimonials should reach the undersigned not later than Saturday February 13th

W M WILCOX Secretary

Colonial Medical Service

Two Vacancies exist at present for ASSISTANT GOVERNMENT MEDICAL OFFICERS OF HEALTH in BRITISH GUIANA
Candidates should be under 35 years of age and must hold a Degree or Diploma in Public Health Salary £650 per annum rising by annual increments of £25 to £800 per annum The salary is subject to a temporary levy of 10 per cent as an economy measure Duty allowance of £150 per annum is payable when stationed in Berbice House allowance of £100 per annum if no Government quarters are available Travelling and subsistence allowances are payable Private practice is not allowed
Free first class passages are provided The selected candidates will be on probation for a period of two years in the first instance and will be placed on the permanent establishment if confirmed in their appointments at the termination of their probationary periods
Further particulars and forms of application may be obtained on application in writing from the Director of Recruitment Colonial Office 2 Richmond Terrace London S W 1
Completed applications must reach the Director of Recruitment not later than February 20th

Urban District of Swinton and PENDLEBURY

MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified gentlemen for the appointment of Medical Officer of Health of the Urban District subject to the provisions of the Public Health (Officers) Act 1921 and the Sanitary Officers Order 1926
The gentleman appointed will be required to perform all the duties imposed on a Medical Officer of Health to act as School Medical Officer Maternity and Child Welfare clinics and to carry out Council may with the sanction of the Ministry of Health

He must reside in the district and devote all his time to the duties of the office and must not engage in private practice
The appointment will be subject to the approval of the Minister of Health and will also be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination
The salary to cover all the duties specified above will be £800 rising by annual increments of £25 to a maximum of £1 000 per annum with an addition of £75 per annum as car allowance
Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials should reach the undersigned not later than noon on February 8th endorsed Medical Officer
Canvassing either directly or indirectly will be a disqualification

Council Offices WILLIAM CARTER
Swinton Clerk to the Council
January 26th 1932

West Norwood Infant Welfare CENTRE

Applications are invited from fully qualified Medical Women for the post of MEDICAL OFFICER to the branch clinic (near Gipsy Hill) of the West Norwood Infant Welfare Centre on Tuesday age qualifi[illegible] together with testimonials to the Hon Superintendent 92 Barrow Road S W 16

City of Birmingham Mental HOSPITAL

JUNIOR LADY ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole time appointment from ladies under 30 years of age who are duly qualified and registered Medical Practitioners A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification

The successful candidate should be a good Anæsthetist

She will be required to reside in the hospital The commencing salary will be £350 per annum plus the usual residential emoluments of board lodging laundry and attendance Subject to twelve months service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum An additional £50 per annum will be paid to the holder of the D P M qualification or that person obtaining the D P M after appointment. The salary and emoluments will be subject to a temporary deduction amounting to £9 7 6d per annum in accordance with the Scale of Temporary Abatements from Salaries approved by the City Council The salary is inclusive of all fees received and any such fees must be accounted for and paid into the hospital account

The successful candidate will be required to pass satisfactorily a medical examination and to join the Scheme under the Asylums Officers Superannuation Act 1909 She will be required to reside in such institution belonging to the Mental Hospitals Committee as they may from time to time direct The appointment is subject to one month's notice on either side

The Queen's Hospital for CHILDREN Hackney Road London E 2

The Committee invite applications for the post of SURGEON for the Ear Nose and Throat Department with charge of beds Attendance required on Monday and Thursday mornings An honorarium to cover travelling expenses will be paid Candidate must be Fellows by examination of the Royal College of Surgeons England

Application with copies of three recent testimonials which may be printed or typewritten should be sent on or before February 13th to the undersigned from whom further particulars may be obtained

CHARLES H BESSELL
January 1st 1932 Secretary

Royal Southern Hospital, LIVERPOOL

WANTED

TWO HOUSE SURGEONS Salary £60 per annum

ONE MEDICAL OFFICER to Specials Department and RESIDENT ANÆSTHETIST Salary £60 per annum

ONE CASUALTY OFFICER Salary £100 per annum

The appointments are for six months Duties commence from April 1st

Applications and copies of testimonials to be sent to the undersigned at once

ALFRED MAPPETT
Superintendent & Secretary

Hospital for Consumption and DISEASES OF THE CHEST Brompton S W 3

The Committee of Management invite applications for the post of whole-time qualified ASSISTANT in the Department of Pathology Duly qualified women are eligible for appointment Further particulars may be obtained at the Hospital Salary £350 per annum Application with copies of testimonials must reach the undersigned not later than Saturday February 20th Candidates will be required to attend the Meeting of the Medical Committee on Wednesday February 24th at 4 30 p m

FREDERICK WOOD
Secretary

January 19th 1932

Preston and County of Lancaster ROYAL INFIRMARY

The Board of Management invite applications from unmarried gentlemen of British nationality who are duly qualified and registered for the post of HOUSE SURGEON Duties in the Department will be under Two Assistant Surgeons at the rate of £ 50 per annum with board residence and laundry Six months' appointment

Applications stating age qualifications and experience together with copies of recent testimonials to be sent to the undersigned not later than February 1st—

JOHN GIBSON Secretary Supt.

Royal London Ophthalmic HOSPITAL (Moorfields Eye Hospital) City Road E C 1

REFRACTION ASSISTANTS

Appointment of Three Refraction Assistant

Applications are invited for the posts of Refraction Assistants to attend on two mornings each week as follows

Monday and Thursday
Tuesday and Friday
Wednesday and Saturday

Candidate must be registered Medical Practitioners Salary at the rate of £100 per annum

Refraction Assistants will be appointed for a period of one year and will be eligible for reappointment

They will be required to undertake not more than 16 new cases per day and the hour of attendance will be from 9 a.m until 1 p m

Copies of regulation governing the appointments can be obtained on application

Applications with testimonials and stating age and qualifications must be received by the undersigned not later than February 6th

A J M TARRANT Secretary

Central London Throat, Nose, & EAR HOSPITAL Gray's Inn Road W C 1

RESIDENT HOUSE SURGEON (Male)

There will be a vacancy for a Third Resident House Surgeon to enter on duty on March 1st next

The appointment will be for a period of nine months—three months as Third House Surgeon three months as Second House Surgeon and three months as First House Surgeon

Remuneration at the rate of £75 per annum

Application accompanied by copies of not more than three testimonial should be sent to the undersigned on or before February 8th

JOHN H YOUNG Secretary Supt

Central London Throat, Nose, & EAR HOSPITAL Gray's Inn Road W C 1

ASSISTANT SURGEON

There is a vacancy for an Assistant Surgeon who must be a Fellow of the Royal College of Surgeons of England except in a case where on the ground of a candidate's distinguished research work in the Specialty the Electing Body agree to accept some other qualification

Further information regarding the appointment may be obtained from the undersigned by whom applications (accompanied by copies of not more than three recent testimonials) must be received by February 8th

JOHN H YOUNG Secretary Supt

Peterborough and District MEMORIAL HOSPITAL (154 Beds)

TWO RESIDENT HOUSE SURGEONS required

Applications are invited from fully qualified male practitioners for above posts which will become vacant at the end of February

Salary £135 per annum with board residence and laundry

Appointment will be for a minimum period of six months

Application stating age qualifications and experience with copies of recent testimonials to be sent to the undersigned from whom further particulars may be obtained

FRANK V C TAYLOR Secretary Supt

Addenbrookes Hospital, CAMBRIDGE

Applications are invited for the post of HOUSE PHYSICIAN The appointment will be for six months from February 23rd but a shorter period at an earlier date by one month's written notice on either side Salary at the rate of £130 per annum with board residence and laundry Candidate (male) will be required to be unmarried and duly registered are requested to forward their application stating age qualifications etc together with copies of not more than four testimonials to the undersigned on or before Wednesday February 10th

W H HEAD Secretary Supt

Bradford Royal Infirmary

TWO HOUSE SURGEONS (male) wanted by March 1st

Candidates must be duly registered and qualified Salary £150 per annum with board residence and laundry

There are 210 beds and over 4000 in-patients

Applications stating age qualifications and previous experience together with copies of not more than three testimonials to be sent to the undersigned not later than February 20th

J E HALLAM
Secretary Superintendent

City Mental Hospital, HUMBERSTONE LEICESTER

SECOND ASSISTANT RESIDENT MEDICAL OFFICER (Single Male Britishers under 30)

Applications are invited for the above post

Salary £400 a year rising by annual increment of £30 to £500 together with board lodging washing and attendance value for the purpose of superannuation a £100 per annum

Previous Mental Hospital experience not necessary

Candidate must have held a Resident House appointment in a recognised teaching Hospital for at least six months

Preference will be given to those holding a University degree The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909

Application marked A M O giving particulars of general and professional education etc and copies of not more than three testimonials to be sent to the Medical Supt

Dorset County Hospital, DORCHESTER

APPOINTMENT OF HOUSE SURGEON

The Committee of Management are open to receive application for the position of House Surgeon to take up his duties on or about February 20th

Every candidate for the office of House Surgeon must be unmarried and possess a registered qualification to practise Medicine and Surgery from one recognised in Great Britain or Ireland Salary £100 per annum with board and lodging The appointment is for a period of not less than six months All applications accompanied by copies of testimonials should be sent to the Secretary Dorset County Hospital not later than Feb 10th

Candidates must be of British nationality

Royal Northern Hospital, Holloway N 7

Applications are invited for the post of OBSTETRIC HOUSE SURGEON vacant on March 15th

The appointment is for nine months six months Obstetric House Surgeon and three months a Casualty Officer) Salary at the rate of £70 per annum with board and lodging

Applications with copies of testimonials should be sent by February 6th to the undersigned from whom forms of application and rules can be obtained

CHILBERT C PANTER Secretary

District Infirmary ASHTON UNDER LYNE (200 Beds)

HONORARY ANÆSTHETIST wanted Applicant must produce evidence of training in modern anæsthetic method They will be expected to act in a tutorial capacity to the Resident Medical Staff

Provisional appointment for six months Honorarium £40 and private fees

Further particulars may be obtained from and applications must be sent to—

FRANK OLIFFE
General Superintendent Secretary

January 22nd 1932

General Infirmary Salisbury (Central Hospital—160 Beds)

HOUSE PHYSICIAN (male) required to commence duties on March 8th

Candidate must be unmarried Fully qualified and registered Salary £150 per annum with board etc

Applications with copies of testimonials to the House Committee should reach the undersigned not later than February 6th when receipt of the full particulars of the appointment will be notified

French Hospital and Dispensary, 172 Shaftesbury Avenue W

[illegible]

Ilkeston General Hospital (200 Beds)

[illegible]

City of Birmingham

SELLY OAK HOSPITAL

BIOCHEMIST

Applications are invited from fully qualified Biochemist for the above whole time non resident appointment

The present Hospital accommodation is 550 beds divided into General Medical General Surgical Gynaecological Obstetrical and Children's Disease Sections There are completely equipped Pathological and Biochemical Laboratories and X-ray Electro-therapeutic Massage Ultra-violet Ray and Electro-cardiographic Departments Over 3 000 operations are performed annually

The scale of salary will be £400 per annum rising subject to satisfactory service by annual increments of £25 to a maximum of £500

The salary will be subject to the Scale of Voluntary Abatement accepted by the Council for a period of twelve months ending December 31st and to the Birmingham Corporation's Superannuation Scheme The candidate will be required to pass a medical examination and the appointment will be subject to one month's notice on either side

The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received

Further particulars of the appointment may be obtained from the Medical Superintendent P P STANLEY KELMAN Esq M B Ch B F R C S (Eng & Edin) to whom applications stating age experience and qualifications accompanied by copies of recent testimonials and endorsed Biochemist should be forwarded not later than February 10th

The Council House F H C WILTSHIRE
Birmingham Town Clerk

City of Liverpool

FAZAKERLEY SANATORIUM
(TUBERCULOSIS)

ASSISTANT RESIDENT MEDICAL OFFICER

The Port Sanitary and Hospitals Committee of the Council of the City of Liverpool invite applications for the above office Salary at the rate of £250 per annum (subject to an emergency reduction according to scale) together with the usual residential allowances

The appointment is for a term not exceeding one year and is not renewable

Candidates must possess a registered Medical and Surgical qualification and should have a knowledge of Bacteriological methods

The person appointed will not be allowed to engage in private practice and will be required to devote whole time service to the duties of the office

Applications to be made upon form to be obtained from the Medical Officer of Health Municipal Annexe Dale Street Liverpool and to be returned to the undersigned so as to be received not later than February 4th

Canvassing of Members of the City Council will be considered a disqualification

Envelopes to be endorsed Resident Medical Officer Fazakerley

Town Clerk's Office WALTER MOON
Town Clerk
January 22nd 1932

The Radium Institute, MANCHESTER

ASSISTANT MEDICAL OFFICER duties dealing largely with Radium and Deep X-Ray Cancer Therapy in the Institute and Associated Hospitals

Candidates should have good surgical and medical experience radiological experience not essential First appointment for *six months* but with view to permanency Salary £400 to £450 per annum dependent upon qualifications (F R C S or D M R E particularly)

This appointment offers excellent opportunity for specialising in Radium and Deep X-Ray Therapy

Applications to be submitted to the Hon Secretary by February 2nd

The Royal Infirmary, Sheffield

(500 Beds)

The Weekly Board of Management invite applications for the post of OPHTHALMIC HOUSE SURGEON

The appointment is tenable until June 30th next at the rate of £80 per annum

The hours are 9 a.m. to 9 p.m. alternate Sundays and all numbers 14 and 15 after six months' service salary is at the rate of £100 per annum

Applications stating age qualifications and experience of testimonials to be sent not later than
JAMES W BARNES F C I S
General Superintendent
& Secretary

Queen Mary's Hospital for the East End E 15

Telephone Maryland 2616

HONORARY ASSISTANT PHYSICIAN

There is a vacancy on the staff of this Hospital for an Honorary Assistant Physician

The Assistant Physician will have some beds allocated to him in the Hospital and he will be required to see Out patients

Applications accompanied by copies of testimonials from male candidates only who must be duly registered practitioners either Graduates in Medicine of a University or Fellows or Members of a Royal College of Physicians should be lodged with the undersigned not later than Wednesday February 3rd

RAPHAEL JACKSON (Major)
Secretary

Queen Mary's Hospital for the East End E 15

Telephone Maryland 2616

HONORARY ASSISTANT SURGEON

There is a vacancy on the staff of this Hospital for an Honorary Assistant Surgeon

The Assistant Surgeon will have some beds allocated to him in the Hospital and he will be required to see Out patients

Applications accompanied by copies of testimonials, from male candidates only who must be Fellows of the Royal College of Surgeons of England should be lodged with the undersigned not later than Wednesday February 3rd

RAPHAEL JACKSON (Major)
Secretary

Salford Royal Hospital

(263 Beds)

The [illegible] invite applications for the post of SUPERINTENDENT at a salary of £600 per annum rising by annual increments of £25 to £700 per annum Applications from Hospital Federated Superannuation Scheme in operation Candidates who must have had experience in the administration of a General Hospital should send in their applications stating age experience etc accompanied by not more than six recent testimonials addressed to the Chairman Salford Royal Hospital not later than February 27th next

January 25th 1932

Kettering and District General HOSPITAL

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Salary £200 per annum with board residence and washing Candidates must be fully qualified and registered Knowledge of Anaesthetics desirable

The appointment is for six months with eligibility for a further six months

Applications stating age nationality and qualifications together with copies of three recent testimonials to be sent to the undersigned as early as possible

G W JACKSON Secretary Supt

Manchester Hospital for Consumption & Diseases of the Throat and Chest

Wanted a RESIDENT MEDICAL OFFICER for the In Patient Department (50 beds) BOWDON CHESHIRE Must be registered Salary £200 per annum with board apartments laundry and railway contract Duties include attendance on [illegible] each at the Out Patient [illegible]

Applications with [illegible] to be sent not later than

Hardman St W HUNT
Deansgate Manchester Act Secretary

Bootle General Hospital,

Derby Road BOOTLE

APPOINTMENT OF HONORARY DENTAL SURGEON

Applications are invited for the above vacancy Candidates are requested to send particulars of their qualifications and experience accompanied by testimonials to the undersigned not later than February 6th

J A BEARDSALL Secretary Supt

London Temperance Hospital,

Hampstead Road N W 1

Applications are invited for the post of MEDICAL REGISTRAR which will become vacant on or about February 1st The appointment is open to qualified men and women and is for a period of one year Honorarium 40 guineas Applications accompanied by not more than three testimonials to be addressed to the Secretary by February 5th.

Bristol Royal Infirmary

Applications are invited for the following resident appointments for the six months commencing March 1st

TWO HOUSE PHYSICIANS
FOUR HOUSE SURGEONS
ONE HOUSE PHYSICIAN to Dr A T Todd
ONE HOUSE SURGEON to the Ear, Nose and Throat Department
ONE HOUSE SURGEON to the Gynaecological and Skin Departments
ONE OBSTETRIC HOUSE SURGEON
ONE CASUALTY HOUSE SURGEON
ONE ASSISTANT HOUSE SURGEON and H S to the Ophthalmic Department

Salaries at the rate of £60 per annum with board apartments and laundry except in the case of the Casualty House Surgeon when the salary will be at the rate of £100 per annum, with board, apartments and laundry

Candidates who must be duly qualified to send in their applications, stating age together with copies of not more than three testimonials to the undersigned on or before February 8th

The elected candidates must become members of the Medical Defence Union before taking up their appointments

ELLIS C SMITH F C I S
Secretary & House Governor

Ancoats Hospital, Manchester

The following vacancies will occur on March 1st next and applications are invited

HOUSE SURGEON (Orthopaedic)
HOUSE SURGEON (General)

The appointments are for six months Salary at the rate of £100 per annum, with board residence etc

Applications stating age qualifications experience (if any) and full particulars together with copies of three recent testimonials to be forwarded to the undersigned on or before February 16th

By Order of the Board
HERBERT J DAFFORNE
Gen Supt & Secretary

Oxford County and City Mental HOSPITAL LITTLEMORE near OXFORD

ASSISTANT MEDICAL OFFICER required Must have had previous Mental Hospital experience and experience at a Clinic for Nervous Disorders as this will be part of his duty Salary £400 per annum rising £25 every two years to £450 and £50 per annum to applicant holding the D P M (subject to a temporary deduction of £16 5s per annum) with board furnished apartments and attendance The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909

Applications with copies of three recent testimonials to be sent to the Medical Superintendent by February 6th

Norfolk and Norwich Hospital, NORWICH

Applications are invited for the post of HOUSE SURGEON Salary £120 per annum with board residence and laundry Preference will be given to a candidate who has held a previous Hospi[illegible] who must should forw[illegible] ality etc to the undersigned as soon as possible

FRANK INCH
House Governor & Secretary

January 30th 1932

Nottingham Hospital for Women

HOUSE SURGEON (female or male) required to commence duties on March 15th Appointment for period of not less than six months Salary at the rate of £150 per annum with board residence and laundry Previous hospital experience essential

Applications stating age experience and qualifications accompanied by copies of three recent testimonials to be sent to the Secretary Mr A L MORELL Burton Buildings Parliament Street Nottingham not later than February 14th

York County Hospital

(200 Beds)

The post of HOUSE SURGEON in the Ear Eye Nose and Throat Department will shortly become vacant

Salary £150 per annum with board residence and laundry

Duties inc[illegible] Appointme[illegible] is Applicatio[illegible] copies of not more[illegible] to be sent to the [illegible] ednesday February 10th

H E RYAN Manager

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary 7, Drumsheugh Gardens Edinburgh

(a) British Islands

Town or District	Town or District	Town or District
GENERAL POST OFFICE (*Assistant Medical Officer—Woman*)	**CONTRACT PRACTICE** (*contd*)	**CONTRACT PRACTICE** (*contd*)
CONTRACT PRACTICE	LLWYNYPIA CLYDACH VALE PENYGRAIG GLAMORGAN (*Workmen's Medical Scheme*)	OGMORE VALLEY GLAMORGAN (*Wyndham Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)
FFRWYDE MON (*Workmen's Medical Society*)	MARDY GLAMORGAN (*Workmen's Medical Scheme*)	**PUBLIC HEALTH**
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE (*Workmen's Medical Scheme*)	BUCKS COUNTY COUNCIL (*Medical Officer Amersham District*)
LOWESTOFT MEDICAL INSTITUTE (*Medical Officer*)	NEATH AND DISTRICT (*Medical Aid Association*)	DEVON COUNTY COUNCIL (*School Medical Inspector Male*)
	OAKDALE MON (*Medical Officer for Medical Aid Association*)	FULHAM BOROUGH COUNCIL (*Assistant Medical Officer—Woman*)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (*All Practice Society Appointments*)	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	SOUTH AUSTRALIA (*Lodge Appointments*)	Secretary South Australian Branch B M A House 206 North Terrace Adelaide.	WELLINGTON NEW ZEALAND (*Contract Practice Appointments*)	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
QUEENSLAND (*Friendly Societies Institute*) (*Townsville Associated Friendly Societies Medical Institute Townsville*)	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	VICTORIA (*All Institute or Medical Dispensaries*)	Dr J P MAJOR (Hon Sec. Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria.	WESTERN AUSTRALIA (*Contract and Lodge Practice*)	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St George Terrace Perth Western Australia

January 27th 1932 By Order of the Council ALFRED COX Medical Secretary

West London Hospital,
Hammersmith Road W 6 (234 Beds)

Applications are invited for the post of HONORARY OBSTETRIC REGISTRAR for a period of one year The successful candidate will be eligible for re-election annually for a further period of not more than 3 years The duties include the preparation of the Obstetric Registrar's report for the year and the supervision of the record of cases The candidate appointed must be available as an assistant to the Surgeon and Assistant Surgeon for Diseases of Women and for emergency operations when required and be prepared to undertake such duties as the Post-graduate College as the Board may approve

Candidates are required to be registered under the Medical Act to send applications to reach the Secretary later than Tuesday February 16th to attend the Medical Council Meeting on Friday February 19th at 4 30 p m and prior to that date to call upon and send copies of application and testimonials to each Member thereof to obtain from canvassing but nevertheless to send copies of application and testimonial to each Member of the Board of Management at the Meeting on Tuesday February 23rd at which selected candidates must be in attendance

H A MADGE Secretary

Birmingham and Midland Eye Hospital

Applications are invited from duly qualified Practitioners for the post of RESIDENT SURGICAL OFFICER at the above Hospital at a salary of £150 per annum and £10 10s per annum for Laundry

The appointment is for a period of Two Years all in the event of each the Resident Surgical Officer to elect to enter into a Superannuation at a salary of £110 per annum in lieu of the Superannuation and Widows' Pension Fund Provident Scheme

Applications must be received not later than Feb 8th

C A MASON
Gen Supt

January 8th 1932

West London Hospital,
Hammersmith Road W 6 (234 Beds)

Required a NON-RESIDENT CASUALTY OFFICER (male) The appointment is tenable for one year from March 1st next subject to one months notice on either side The appointed candidate will be eligible for re-election for two further periods of one year Salary at the rate of £250 per annum with lunch and tea daily

Candidate must be duly qualified registered Medical Practitioner and preference will be given to those who have held a Resident appointment in a General Hospital

Applications (which must be made on printed form obtained from me) must reach me not later than Thursday February 16th. Selected candidates will be required to call upon such member of the Medical Staff as directed and to be in attendance at a meeting of the Medical Council at 4 p m on Friday February 26th and the House Committee Meeting at 4 45 p m the same day when the appointment will be made

H A MADGE Secretary

Grimsby and District Hospital

Applications are invited for the post of HOUSE SURGEON Salary £200 per annum with board and residence

Applicants must be registered Medical and Surgical practitioners previous Hospital appointments desirable

Applications stating age qualifications and enclosing copies of not more than three testimonials to be sent to the Secretary Superintendent

Walsall General Hospital

The Committee invite applications for the post of RESIDENT SURGICAL OFFICER Salary at the rate of £100 per annum Applicants must be registered Medical Practitioners and must have had experience in Surgical work Applications stating age qualifications and experience together with copies of not more than three testimonials should be sent to the undersigned not later than

WALTER FRANCOMBE Secretary

West London Hospital,
Hammersmith W 6 (234 Beds)

Applications are invited for the post of HONORARY ASSISTANT ANAESTHETIST Candidates are required to be registered under the Medical Act to send application with copies of testimonials so as to reach me not later than Thursday February 18th to attend the Medical Council Meeting on Friday February 19th at 5 p m and prior to that date to call upon and send copies of their application and testimonials to each Member of the Board of Management at whose meeting on Tuesday February 23rd at 5 p m selected candidates must be in attendance

H A MADGE Secretary

The Hospital for Sick Children,
Great Ormond Street London W C 1

A CASUALTY OFFICER is required from February 21

Candidates must be registered Medical Practitioners and are invited to send application with copies of testimonials so as to reach me not later than Thursday February 18th to attend the Medical Council Meeting on Friday February 19th at 5 p m and prior to that date to call upon and send copies of their application and testimonials to each Member of the Board of Management at whose meeting on Tuesday February 23rd at 5 p m selected candidates must be in attendance

H A MADGE Secretary

January 1932

(*Appointments continued on p 48*)

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE

TAVISTOCK SQ LONDON W C 1

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ASSISTANCIES

Wanted — Assistantship, outdoor by Scots MB ChB aged 30 ex Medical Surgical and Midwifery Resident 2 yrs GP experience 3½ years Resigning now, in 3rd year of tenure from Honorary Surgical Staff of two Glasgow Teaching Hospitals Desires district with surgical opening preferred Capable and amount hard work Testimonials and references available No capital — No 528 BMA House Tavistock Sq W C 1

Wanted — Assistantship immediately by Woman MB BS Experience Hospital and GP private and panel anæsthetic Qualified 1925 Age 30 Keen Able to drive car Outdoor & city preferred but anywhere considered Particulars Line salary etc —No 707 BMA House Tavistock Sq W C 1

Wanted — Assistantship by MRCS LRCP woman aged 30 four years experience of general practice private and panel Used to office charge Interview London — Address No 508 BMA House Tavistock Square W C 1

Wanted, Assistantship or Locum MRCS LRCP experienced woman well qualified Good references Moderate terms moderate Hospitality considered Elsewhere duties light — Address No 616 BMA House Tavistock Square W C 1

Wanted — Outdoor Assistant, male young active unmarried resident country town Clothes Able to drive car Salary £300 to £400 according to experience Canal Land Dispenser kept Full particulars —No 629 BMA House Tavistock Sq W C 1

Wanted — Part-time Assistantship or other professional work in or near London by MRCS LRCP 34 Curious mind Post graduate work 5 years Hospital appointment 4 years general practice —No 720 BMA House Tavistock Sq W C 1

Wanted — Assistant, indoor male for private and panel practice in North Kent Particulars — Address No 600 BMA Tavistock Square W C 1

Wanted — Assistantship by MB [illegible] man Qualified 5 years [illegible] Tavistock Square W C 1

Wanted immediately — Indoor and outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cross Street Manchester

Wanted — Indoor Assistant, some experience in a general varied Practice keen Must be J J Motor provided State age refs photo returnable — Address No 609 BMA House Tavistock Sq, W C 1

Wanted — Indoor male Assistant £300 dispenser kept car provided S W Spa State age experience if any and enclose photo — Address No 701 BMA House Tavistock Square W C 1

Wanted — Assistantship, with view to Partnership in provincial town Scotland preferred but not essential — Address No 608 BMA House Tavistock Sq W C 1

Wanted — Indoor Assistant for 3 months Salary at rate of £250 p a — Address The Surgery The White House Pensnett Dudley

Wanted — Assistant, duties extremely light Suit retired Practitioner Part Hospitality and nominal salary — Address No 631 BMA House Tavistock Sq W C 1

Wanted — Assistant, with view, in sole charge Rural Practice *married* age 26 to 32 House provided — Address No 708 BMA House Tavistock Square W C 1

Assistantship, with view to Partnership in man's or woman's good class Practice wanted by experienced Scottish woman graduate MB ChB (now taking MD) IM Rotunda age 29 Capital available — Apply MEDICAL WOMEN'S FEDERATION 9 Clifford St Bond Street W 1

Assistant, outdoor, with view to Partnership wanted English or Scottish male with hospital experience in large growing mixed Practice in Western London suburb £500 — Address No 706 BMA House Tavistock Square W C 1

North London — Assistant wanted Salary £150 p a indoor Facilities for study if desired Replies not later than 5 days — Address No 617 BMA House Tavistock Square W C 1

Woman Doctor, Scotch, aged 29 requires ASSISTANTSHIP Six years experience general practice and hospitals Excellent testimonials Own car Free now in London — Address No 615 BMA House Tavistock Square W C 1

PARTNERSHIPS

Wanted at once, Partnership in good class Practice among better class patients No panel or small panel Good social amenities South of England preferable Share over £1 000 Immediate cash for share (and house if necessary) available MB BS Public School and St Bart's Hospital 29 married — Address No 620 BMA House Tavistock Sq W C 1

Wanted — Partnership, for April by MB BS London In London or district preferred worth £1 000 up Large experience in good general practice (particularly surgery anæsthetic and midwifery) Held all appointments at St George's Hospital No 620 BMA House Tavistock Sq W C 1

Wanted — Partnership or Assistantship with definite view by Edinburgh LRCP LRCS age 35 married ex HP Own car Reasonable capital available Ex testimonials and references Free March — No 621 BMA House Tavistock Sq W C 1

Devon — A busy Practitioner seeks keen energetic PARTNER for a share (about £800 p a) in a good class non panel [illegible] practice offering considerable scope for development in pleasant town Applicants qualification between the ages of [illegible] and preferably married Premium 2 years purchase Excellent doctor's house 5 bedrooms 3 reception rooms etc *Rent* £90 p a Highest references essential —Mr C S MOORES Incorporated Accountant 15 Bedford Circus Exeter

Anglo-Indian, 32, F'ship E'boro, Conjoint Lond 6 yrs abroad 2 yrs general and panel Liverpool area desires PARTNERSHIP or PRACTICE Scope for Surgery Part premium available — Address No 604 BMA House Tavistock Square W C 1

Third Partner required in unopposed Practice in convenient West Country Town Young married man with some experience of general practice and surgery desirable Cottage Hospital Capital necessary about £2 400 — Address No 710 BMA House Tavistock Square W C 1

To Fill Death Vacancy in firm of three in London at once — Address No 618 BMA House Tavistock Square W C 1

Well-qualified Partner required for quarter share (increasing) in well established Practice near London Average gross receipts £6 200 Capital essential — Address No 625 BMA House Tavistock Square W C 1

LOCUMS

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Wanted — Locums or Assistantships (with or without view) well qualified Edinburgh Graduate aet 33 thoroughly experienced 7 yrs Just disposed own practice Free immediately Capital available Excellent testimonials State salary — No 704 BMA House Tavistock Sq W C 1

Crown Colony Locum Vacancy FILLED Applicants thanked

London Practitioner, with small, easily worked Practice wishes to get in TOUCH with retired or semi-retired Doctor willing to do Locum work for reasonable fees —Write BM/GLBN

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A large firm of Manufacturers [illegible] to call upon Homes and [illegible] or scientific Box A2983
HADDON'S ADVTG AGENCY Salisbury Sq E C 4

As Secretary - Receptionist, Doctor's daughter aged 20 requires POST Shorthand typewriting book keeping and French Some knowledge massag — Write BM/GLJC London W C 1

Bookkeeper - Dispenser (Hall), 12 years experience desires POST with Doctor or firm of Doctors Recommended by present employer At liberty any time — Miss HINE c/o Mr Goggs Chemist Huntingdon

Doctors requiring qualified Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE LISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W C 2

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British Institute of Radiology

The Council of the British Institute of Radiology proposes to appoint a SUB EDITOR to the *British Journal of Radiology*. Candidates for the appointment which will be either a full time or part time one should have an acquaintance with medical radiology a proficient knowledge of French and German and experience in the duties relevant to the production of a scientific journal. The remuneration will depend on the qualifications and experience of the candidate appointed. Application accompanied by a statement of qualifications testimonials whether full time or part time should reach the General Secretary British Institute of Radiology 32 Welbeck Street London W 1 not later than February 23rd.

Lady Barrett wishes to highly recommend fully trained and experienced SECRETARY to medical man or woman. High speed shorthand typist used to medical terms can also take articles. French and German—61 Devonshire Place W 1.

Lady Dispenser - Bookkeeper (Hall) experienced very highly recommended desires POST South or West England Drive car—Address No 602 BMA House Tavistock Square W C 1.

Lady (30) requires post with General Practitioner or Consultant Experienced Dispenser Typist and Receptionist and willing to make herself generally useful CMB (QCH)—Address No 606 BMA House Tavistock Square W C 1.

London Area — Experienced Practitioner free for morning or even ing SURGERIES weekends no midwifery—Dr Jones Frobisher 2209.

Masseuse, disengaged, would travel Electro Therapy and Plombieres treatments—Address No 703 BMA House Tavistock Square W C 1.

Opportunity of working with Tuberculin required Experience in Ear and Throat work Bacteriology and General Practice—Address No 630 BMA House Tavistock Square W C 1.

Receptionist—Young lady seeks POST with Doctor or Dentist Typewriting shorthand knowledge first aid Good references West End or Hampstead district preferred—Miss SAUNDERS 4 Selborne Gdns Watford Way Hendon N W 4.

Scientific and Difficult Manu- SCRIPT typed accurately and quickly by London graduate Proof reading and indexing Verbatim shorthand Highest testimonials—MARGARET WATSON LTD Palace Chambers Bridge Street S W 1 Victoria 3838.

Situation wanted as Secretary to a Doctor town or country by Lutheran man ex medical student moved from last job through trade depression Would like to help in any capacity Knowledge of accounts can drive car and do running repairs Age 29 References Address No 627 BMA House Tavistock Square W C 1.

Superintendent or Warden of Rest House or other Institution capable elderly woman of experience offers SERVICES Nominal salary Good organizer tactful and willing worker—Address No 711 BMA House Tavistock Square W C 1.

Thoroughly efficient and experi- enced lady shorthand typist requires non residential post in London as SECRETARY or RECEPTIONIST SECRETARY to Professional Man part or full time knowledge of accounts—No 711 BMA House Tavistock Sq W C 1.

Trained Nurse, with C M B Certificate and able to type write requires DAILY ENGAGEMENT in Harley Street area Highest references—Address No 702 BMA House Tavistock Square W C 1.

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PRACTICES

Wanted, by experienced Practi- tioner good class private PRACTICE with scope South or South East Coast Town Income £1 000 p a upwards Capital available Small panel not objected—Address No 610 BMA House Tavistock Square W C 1.

Wanted—General mixed Prac- TICE £1 200 up in Leeds Bradford Manchester or similar Northern City Good panel and house essential Ample capital—Address No 622 BMA House Tavistock Square W C 1.

Wanted — Practice (£1,000— £1 500 p a) in country town preferably in South Cheshire or North Shropshire Good house with garden essential Capital available—Messrs JOHN STUBBS JAPKIN & CO Accountants 41 North John St Liverpool.

Experienced Practitioner, under 40 Cambridge graduate with special Ophthalmic experience returning England from India in April anxious to hear of PRACTICE or PARTNERSHIP London or rural not less than £1 000 p a Has small capital only A really good opening abroad might be considered—No 593 BMA House Tavistock Sq W C 1.

Excellent opportunity for quali- fied man to acquire good panel and private PRACTICE in suburb of Bath No competition—Address No 614 BMA House Tavistock Square W C 1.

For Sale — Old-established un- opposed Country PRACTICE in S W County Receipts £1 200—£1 300 including panel and appt Good modern house all conveniences Tennis court orchard and well stocked ground Educational facilities Hunting and fishing available House and Practice £4 100 — Address No 628 BMA House Tavistock Square W C 1.

For Sale — N E Coast, seaport town growing PRACTICE in rapidly developing area Panel 1 800 Income £2 200 p a Newly built freehold house in perfect condition 8 rooms garage mortgage on house easily arranged Scope for further development is exceptional—Address No 705 BMA House Tavistock Square W C 1.

For Sale —Old-estab Practice in better working class suburb large Yorks city 695 panel average receipt over £1 400 Good house with garden to rent 12 years purchase — Address No 612 BMA House Tavistock Square W C 1.

For Sale —Moorland Practice North Riding York Panel 210 Gross receipts £1 100—Address box or February 6th No 601 BMA House Tavistock Sq W C 1.

London, N — Working-class, about £700 private and panel Attractive corner house on lease Small garden and garage 1 years purchase on Accountant report — Address No 605 BMA House Tavistock Square W C 1.

London, S W —Wanted in S W London (Clapham district preferred) PRACTICE panel and private With good house Cash available—Address No 604 BMA House Tavistock Square W C 1.

Middle and working-class Prac- TICE in Lease For Annual receipt £575 Panel 180 Situated in healthy house £900 or will rent—Apply Messrs REYNOLDS & BRANSON LTD Medical Transfer Agents 13 Briggate Leeds.

Mixed Country Practice about 6 miles from Leeds Panel 1 000 Present year's takings £630 Average earnings £750 Separate surgery and waiting room House with good kitchen garden and fruit trees £150 Valuation 6 guineas—Apply Messrs REYNOLDS & BRANSON LTD Medical Transfer Agents 13 Briggate Leeds.

Near Cardiff —Old-established Receipts £1 100 Panel 1 000 Appointments £50 Nice house good garden rent £48 gas and electric light Price 1 years purchase part deferred—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown St.

North Belfast — Medical Practice for Sale with large panel in prosperous town Suit RC Quiet sale—Full particular from BRITISH MEDICAL BUREAU 72 High Street Belfast.

Practitioner, six years' G P, five year hospital experience all branches seeks suitable PRACTICE or PART NERSHIP (not Wales) would consider Assistantship with early view Moderate capital—No 632 BMA House Tavistock Sq W C 1.

Shropshire — Private and panel (520) £570 p a Med Officer and Public Vaccinator (transferable) could be doubled by energetic man Vendor too old to do more House 2 reception 4 bed waiting room consulting room dispensing bath h and c garage Rent £54 Good garden Rural Practice—No 525 BMA House Tavistock Sq W C 1.

Sussex —Health Resort, Inland Non panel PRACTICE doing over £1 200 Partner hip with early succession £1 800 in all—Address No 712 BMA House Tavistock Square W C 1.

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West Riding City — Old-estab- lished PRACTICE Average receipts £500 p a Panel 520 Rent of house £62 p a Premium £800 Scope for increase —Apply 2625 REYNOLDS BRANSON LTD Medical Transfer Agents 13 Briggate Leeds.

Yorks — Old-established —Re- ceipts over £800 great scope Nice house garden garage rent £80 Panel 700 increasing Clubs £160 Price £1 400 part deferred—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street.

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Bridge of Allan Spa —For Sale [illegible] PRACTICE [illegible] training [illegible] Mineral Waters [illegible] Bath [illegible] Gentleman [illegible]

Consulting Rooms to be Let — [illegible] £200 p a [illegible] £90 p a [illegible] £200 p a [illegible] —Apply [illegible] Cavendish Square W [illegible]

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New detached Residence, suitable for Doctor main road adjoining three new estate 4 bedrooms 2 lavatory lounge 21ft 6in x 16ft lounging room kitchen panelled hall garage Freehold £1 250 — Gables Corbets Lane Upminster Essex

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APPOINTMENTS—Contd

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HOUSE SURGEON (male or female) required Appointment for six months renewable Salary £200 with board residence and laundry Application with full particulars and copies of three recent testimonials to be addressed to the Hon Sec J M SOMERVELL

Royal Victoria and West Hants HOSPITAL BOURNEMOUTH
HOUSE SURGEON and CASUALTY OFFICER (male British nationality) required to commence duty at the end of February Salary £150 per annum with board lodging and washing The appointments are tenable for six months and candidates must be registered according to the provisions of the Medical Act Applications stating place of birth with copies of three testimonials to be sent immediately to the undersigned
Women and married men are ineligible
COLDON M SAVI
January 21st 1932 Secretary

Leamington Provident Dispensary
A vacancy occurs for a MEDICAL OFFICER IN ORDINARY at Eadday Applications in writing for a successor are invited accompanied by copies of not more than three testimonials which must be sent to the Secretary Provident Dispensary 38 Holly Walk Leamington Spa not later than Monday February 15th next Salary is derived from the payments of a fluctuating number of subscribing Members and divided between the three doctors according to their respective number of patients The amounts per doctor last year varied from £103 to £304
Copies of the rules and particulars can be obtained upon application to—
F H WACKRILL Secretary

Queen's Hospital, Birmingham
Applications are invited for the post of CASUALTY SURGEON Candidates must be Fellows of the Royal College of Surgeons of England Edinburgh or Ireland
The appointment is tenable for three years and the holder is eligible for re-election
Honorarium £100 per annum
Applications together with Diploma evidence of registration and copies of testimonial to be sent to the undersigned on or before Monday February 15th
Birmingham CHURFORD
January 26th 1932 House Governor

Princess Beatrice Hospital, Richmond Road S W
This Hospital is now open with 76 beds of which 18 are for the reception of private patients
A vacancy exists for an ANÆSTHETIST
Applications are invited from qualified Medical gentlemen who are engaged in the Hospital administration of Anæsthetics and who are experienced in the use of the Mc Kesson Nitrous Oxide Oxygen Apparatus Applications accompanied by copies of three recent testimonials should reach the Secretary not later than Monday February 8th

Nottingham Children's Hospital
Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (Woman) The salary will be at the rate of £150 per annum with apartments board and laundry The appointment will be for 12 months Duties to commence on April 1st
Applications together with testimonials and stating age qualification and experience to be sent to P PRAGNELL the Honorary Secretary 1 King Johns Chambers Bridlesmith Gate Nottingham by February 15th Selected candidates will be required to attend at the Hospital for a personal interview on Feb 23rd when the appointment will be made

Royal Hospital, Richmond, SURREY
The services of a THIRD HONORARY ANÆSTHETIST is required for duty on Monday mornings at 10 o'clock Applications are invited from gentlemen having experience in the administration of anæsthetic and should be sent addressed to the Secretary as soon as possible

House Surgeon required, male, British nationality for ASHFORD HOSPITAL KENT Salary £150 per annum Must have state experience and qualifications Candidates must be unmarried and under 35 years of age Duties to commence March 1st Applications with three recent testimonials to be sent to the Hon Secretary on or before February 6th

The Hostel of St Luke

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The Committee of Management invite applications for the appointment of RESIDENT MEDICAL OFFICER (male) to the above Hostel.

Candidates must have had previous experience as House Surgeon at a general hospital. The appointment is for six months and may be renewable for a further period of six months. Salary at the rate of £200 per annum with board, residence and laundry. A fortnight's holiday will be allowed every six months and travelling expenses will be paid by the Committee of the Hostel.

Applications and enquiries should be addressed to the Secretary of the Hostel at 14 Fitzroy Square London W 1 and reach him before February 6th. The successful applicant will be required to take up his duties on February 15th.

St Thomas's Hospital

VACANCY

The appointment of a PHYSICIAN in charge of Out-patients. Candidates must be registered Practitioners and Fellows or Members of the Royal College of Physicians of London.

Application with full details of academic career and testimonials should be forwarded to the Clerk to the Governors on or before February 13th.

The Babies' Hospital,

NEWCASTLE ON TYNE

NON-RESIDENT MEDICAL OFFICER required in March.

The duties are those of a House Physician with time and opportunities for research work. The appointment is for six months subject to reappointment. Salary £150 per annum.

Application with two testimonials and particulars of previous appointments held must be lodged with the Secretary 33 West Parade Newcastle on Tyne from whom further particulars may be obtained by March 1st.

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Favourite South Coast Resort — Non-panel PRACTICE established over 20 years retiring already £650 p.a. Fees about £1 1 Excellent detached house with 9 bedrooms 2 bathrooms 3 reception lounge hall lift 2 bathrooms etc Very suitable for resident patient Rent £140 or will sell for £2,000 Goodwill £650 —No 8973

Norfolk, near Coast —Town and Country PRACTICE. Half share of £3,400 with good scope Panel 2,000 also appt and club Visits 5/ to 21 Plenty of sport Excellent house with 2 reception 3 bed surgery etc Garden with tennis Partnership at £2,100 Premium 3 years purchase easy terms —No 8971

Middlesex — Rapidly growing district About £2,700 at present One-third share for sale now two years purchase increasing later Panel 1,400 Mixed £40 House with 3 reception 6 bed etc for sale at £1,800 Others available —No 8980

London, N.W. — Estab 3 yrs, about £650 p.a. Panel 300 and rising Visits 3/6 up Surgery 2 up Large corner house good position 6 bed 2 reception and surgery etc Rent £120 p.a. only Premium £750 for quick sale —No 8993

South Midlands —Country —Share worth £1,500 net and free of taxes 5 to 10/6 Good practice and appointments Choice of residence Premium only £2,750 —No 8958

Sussex, favourite part on high ground about £1,300 p.a. Non-panel practically Little or no midwifery Visiting fees 5/ to 21/ Large house with 9 bed 3 reception and consulting room and surgery to rent at £200 Smaller house at £120 p.a. with consulting room 2 reception and 5 bedrooms Premium £2,000 cash —No. 8954

Midlands —£3,000 a year Old-established Same hands over 30 years Partner 5 years One-third share for sale now more later at 2 years purchase House available to rent Station etc Fees 7/ to 21/ Extensive district very little opposition Pop 1,600 Principally known and recommended —No 8992

Eastern County —£3,000 a year A third share offered to a man of Assistancy considered to commence Partnership for 2 years Purchase Practice established 30 years standing in a favourite residential and agricultural district within easy reach of [illegible] Income for immediate [illegible] Partnership [illegible] Personally valuable —No [illegible]

Surrey —700 feet above sea-level [illegible] £600 [illegible] £2,000 [illegible] to 10 [illegible] 2 reception [illegible] £1,[illegible]

South Africa —£200 per month [illegible] PRACTICE [illegible]

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EASTERN COUNTIES —Cathedral City —PARTNERSHIP in good class non panel Practice Receipt average £4 450 Excellent opportunity for first class man on the medical side Probability of Hospital appointment Quarter share to commence at 2 years purchase

YORKS —PARTNERSHIP in middle and working class Town Practice Receipts approx £3 000 Panel over 2 000 House to rent Premium for 1/4 share 2 years purchase

LONDON N W —Well established mixed PRACTICE mainly better class with excellent house situated on main thoroughfare Receipts approx £900 Panel over 420 Fees 3 6 up No midwifery One appointment Part of house sublet if desired Vendor has developed Practice as part of practice at good fees Premium £1 300 cash

LONDON E Suburban middle class G P Maisonette House to rent on lease at the low rental of £50 p a Fee 2/ Aver receipts £516 Panel 350 Ex scope for young man Prem for Practice and Lease £1 050 cash or near offer

LONDON E —PARTNERSHIP in middle and working class Practice Receipts over £2 000 Large panel Scope for increase especially midwifery Premium for 2/5ths share 2 years purchase with view to larger share

WEST END —Physician with very fine consulting and treatment rooms near Harley Street offers favourable terms to another practising Physiotherapy

LONDON W —Excellent NUCLEUS Suburban Practice with splendidly situated Corner House Receipts approx £500 scope Premium for house and practice £3 000 or near offer

CHESHIRE —Near Coast —Small G I with excellent scope for expansion situated in working class and residential district Receipts £600 Panel 900 Suitable house available Premium 1½ years purchase Excellent scope for keen and energetic man

NORTHANTS —Old estab Country PRACTICE situated in charm locality Hunting and sport of all kinds Highly suit to semi retired Practitioner Splendid house in own grounds to rent or purchase central heating electric light etc Receipts £500 Panel 400 Premium £550

LONDON S E —Near West End —Cash and panel PRACTICE (lock up) Shop fronted surgery held on lease at £70 p a part sublet Receipts average approx £400 Panel 517 Excellent scope for one giving whole time and undertaking midwifery Premium 1½ years purchase or near offer

BERKS —PARTNERSHIP —Country Rural Practice in sporting district Receipts average nearly £1 150 Panel nearly 600 Fees 2/6 up Short preliminary Assistantship 1/3 to 1/2 share for disposal at 1½ years purchase Suitable to experienced man British aged 27 upwards

YORKSHIRE —Well established mixed rural PRACTICE Suitable house available (4 beds) Receipts approx £1 000 Panel 620 Fees 3/6 up One appointment Premium 1½ years purchase

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known country town Receipts approx £6 000 Select easily run panel Medium sized house to rent Premium for 1/4 share 2 year purchase This Practice has been known to the Agency for many years and is highly recommended It is essential that the incoming Partner shall hold the L R C S and be aged about 30 Appointment to Hosp Staff

YORKS —JUNIOR PARTNERSHIP after Preliminary Assistantship in well established mixed Practice Panel 1 700 Suitable only to one with Surgical experience Premium 1/4 share at 1½ years purchase with view to larger share Suitable accommodation available to rent

SOUTH COAST —Small PRACTICE in popular seaside resort Receipts nearly £400 Small panel Fees 5/ up Excellent hours (5 beds) available to rent Other accommodation available Premium for quick sale £350

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1 GLAMORGAN — Old established Contract PRACTICE 1 opponent £1 100 p a accounts this year Panel 1 000 Good modern house in pleasant situation with garden Rent £48 p a Premium for sole purchase

2 DEVON —Unopposed Country PRACTICE Last year £675 Panel 250 Scope for increase MOR £71 Rent £32 p a Premium for purchase Suit for man or woman

3 LANCASHIRE — Colliery PRACTICE in pleasant village Present year Panel 1 200 Receipts £870 p a Price £1 000 Good house

4 MONMOUTH — Old established PRACTICE Receipts £300 p a In same hand 40 years Owing to illness owing to age and ill health Populous district £1 000 for house and Practice

5 OXFORDSHIRE —Old established unopposed Country PRACTICE over £1 150 p a Price 14 years purchase Good house

6 DEVON —Superb Town — In growing district £920 in last 15 months Panel 500 Cost him to rent Prem £400 Present [illegible] Illness owing to ill health

7 MONMOUTH — Old established Country PRACTICE over £1 600 p a Third share at 2 years purchase with total succession Good house to rent Scope for [illegible]

8 WESTERN CITY —Panel of 451 and club Premises have cost £220 to date for sale Cost [illegible] House

9 COUNTY TOWN —PRACTICE £900 p a Carmarthen [illegible] Terms by instalments

10 INDIA —Short term —PRACTICE over £45 p a [illegible] Small panel [illegible] Terms —Third [illegible] Half share later [illegible]

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2 LANCS —SEASIDE TOWN —Panel and private PRACTICE Receipts last year nearly £900 Small panel Both increasing Good fees House to rent (5 beds) Garage etc

3 [illegible] Practice Receipts etc and £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

5 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

6 LANCASHIRE — (Large Town) — Non dispensing non panel largely surgical PRACTICE estab over 4 years Receipts average £1 179 p a and unlimited scope Good house etc

7 BERKS (Country Town) —PARTNERSHIP 2/5 share with short prelim Assistantship and ultimate Succession Receipts over £1 200 Panel 550 and good scope Appts worth about £250 Good fees and house

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FOR SALE

1 10 mins PADDINGTON — Old established PRACTICE Receipts £1 600 p a panel 2 177 Nice house rent £100 p a Premium little over 2 years purchase

2 LONDON S E — Small but steadily increasing PRACTICE Doing at present £4 per week with a panel of 90 Surgery rent 22/6 weekly Premium required £175 or near offer

3 LONDON N —Old established cash and panel PRACTICE Receipts £800 p a Large house upper part sublet long lease Premium £1 250 Scope for increase

4 LONDON (near Highgate) —Well established cash and panel PRACTICE Receipts last year £728 panel nearly 300 Nice corner house rent £120 Premium £900 Densely populated district

5 LONDON W — Well established PRACTICE Receipts nearly £1 700 a year with panel 655 Flat and surgery premises available Premium £2 700 or near offer payable only half down

6 WALES —Old established PRACTICE Receipts £1 100 a year including panel 1 000 Nice house pleasant surroundings rent £12 per quarter Premium 1 years purchase

7 10 mins CHANCERY LANE ROAD W C —Old established cash and panel PRACTICE with Branch Receipts £1 100 p a panel about 1 600 House on lease £56 p a Premium £2 000

8 BEDFORDSHIRE —Old established country PRACTICE Receipts average £1 042 p a panel nearly 600 Nice house in grounds rent £65 p a Premium 1½ year purchase

9 LONDON S E (10 mins London Bridge) —Well established PRACTICE Receipts £400 p a panel 450 Surgery rental £1 per week Densely populated district Premium £600

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LANCS TOWN —NEAR MANCHESTER —Sound mixed General PRACTICE Cash receipts last year £2 334 Panel 1 926 Good house 2 reception 4 bedrooms Garage Small garden Rent £75 pa or may be bought for £1 050 Premium—Practice—1½ year purchase (less panel reduction)—No 319

MANCHESTER —MIXED PRACTICE suitable for two in Partnership Cash receipts last year £2 840 Panel 2 156 Good scope Two excellent houses available with ample accommodation Premium—Practice—1 years purchase —No 321

CHESHIRE TOWN —NEAR MANCHESTER —PARTNERSHIP in Mixed Practice Average cash receipts £2 267 pa Panel 1 100 Good house available 2 reception room 3 bedroom Garage and small garden Premium—one third share—1 years purchase after six months assistantship Half share in three years —No 318

CLAMOLGANSHIRE — Old-established PRACTICE Cash receipts £1 100 Panel 1 000 Pleasant house 2 reception 4 bedrooms Garage and garden Rent £48 pa Premium—for quick sale—one years purchase —No 320

MANCHESTER Sound PRACTICE of £1 000 pa Panel 1 100 Scope Good house 2 reception 3 bedrooms Rent £50 pa Premium 1 year purchase —No 316

CHESHIRE COAST TOWN near LIVERPOOL — Middle-class PRACTICE Average cash receipt £1 184 Panel Small select panel Excellent corner house 2 reception 5 bedrooms Premium—Practice—1½ years purchase —No 317

MANCHESTER — Old-established PRACTICE Cash receipts last year £1 513 Panel 1 697 Scope for increase Good house 2 reception 4 bedrooms Premium—Practice —1½ years purchase —No 323

NORTH WEST COAST —SEASIDE RESORT —Old-established PRACTICE Cash receipts 1930, £874 Panel 250 Excellent freehold house 2 reception 5 bedroom Garage and garden —No 266

NORTH STAFFS —Old-established PRACTICE Average cash receipts £2 076 pa Panel 1 930 Exceptional detached house 4 reception 5 bedrooms Garage and garden Premium 1½ years purchase —No 314

MANCHESTER —Middle-class PRACTICE in pleasant suburb Cash receipts 1931 £1 327 Panel 450 Charming house 3 reception 6 bedrooms Billiard room Large garden and garage Premium—Practice—1 years purchase —No 322

LANCS TOWN near Country —Old-established PRACTICE Cash receipts last year £1 125 Panel 1 085 Excellent house 3 reception Large and large garage Premium—Practice and assistantship reasonable offer —No 324

MANCHESTER —PARTNERSHIP in Practice of £1 500 pa Half share available to recently qualified man—Half share this year £150 —No 303

LIVERPOOL —Old-established middle class PRACTICE Cash receipts over £2 000 pa Panel 900 Excellent house 2 reception 7 bedroom garage and garden to rent —No 270

YORKSHIRE —Pleasant City —TWO ASSISTANTS required with view to early Partnership Cash receipts over £5 000 pa Panel 4 000 Preliminary salary £300 pa all found and clearance —No 311

MANCHESTER —RESIDENTIAL SUBURB — Middle-class PRACTICE Suitable for two in Partnership (one a good man) Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses with ample accommodation Premium 1½ years purchase Part by arrangement —No 277

LIVERPOOL —Small PRACTICE of £621 pa consisting mainly of transferable appointments (£40 pa) Excellent house 4 reception 3 bedroom Garage Rent £50 pa Premium 1½ year purchase —No 312

Near MANCHESTER —Pleasant Town —Old-established PRACTICE Average cash receipts £995 pa Panel 902 Excellent detached house (freehold) 3 reception 5 bedrooms Garage and garden Premium—Practice —1 years purchase —No 234

NEAR LIVERPOOL —PARTNERSHIP in good-class Practice Cash receipts £3 000 Good house available Premium—one third share—2 years purchase —No 30

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MANCHESTER INDUSTRIAL PRACTICE Cash receipts last year £889 Panel 721 Plenty of scope Good house 2 reception 5 bedroom Flat £50 pa Suit R C Premises—No 193

MANCHESTER —Old-established PRACTICE— Cash receipts £688 Panel 578 House and garage 2 reception and garage Premium—Practice—1½ year purchase —No

NEAR PRESTON —PRACTICE offering scope Cash receipts £626 Panel 300 Good house reception Flat £50 pa Premium £800— No

MANCHESTER —PLEASANT RESIDENTIAL SUBURB— Old-established PRACTICE Average cash receipts £ per annum Panel 600 Modern house Large 2 reception garage and good garden Practice and goodwill for sale Premium—1 year purchase —No

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The Manchester Medical Agency, lately under the control and management of the Manchester Medical Committee has now been taken over by the British Medical Bureau as their Northern Branch

Medical Practitioners in the North requiring the services of the Bureau are recommended to consult the Branch Manager at the Offices 33 Cross Street Manchester

Telephones CENTRAL 5925 after Office Hours RUSHOLME 2549

Telegrams LOCUM MANCHESTER

Practices and Partnerships for Disposal

Full particulars sent free

1 DEATH VACANCY — KENT —Rapidly increasing PRACTICE in growing locality within 40 miles of London Receipts 1930 £2 100 1931 (6 months) £1 719 Panel nearly 1 400 House to rent at £60 p a

2 ITALY —Old-established Practice in an attractive City Receipts last 2 years averaged £1 400 p a No midwifery or night work Suit gentleman of experience married and with good social attainments Reasonable premium

3 W OF ENGLAND —Partnership in Practice in pleasant country town Cash receipts average about £5 200 p a (including panel and appointments over £1 500 p a) Charming old house (5 bedrooms and attics etc) garage and beautiful garden Plenty of sport Scope for increase Premium for one fifth share 2 years purchase

4 S E COAST — Popular Resort —Partnership in first class Practice about £4 000 p a Panel about 2 000 Lady Resident situated house (5 bedroom etc) with garden and garage for sale One half share for disposal at 2 years purchase

5 LONDON, S E — Partnership (with succession) in old established middle class Practice averaging nearly £2 400 p a in pleasant open suburb Panel about 820 Little night work Good house with garage and nice garden for sale or rent. Premium one half share 2½ years purchase

6 AUSTRALIA — Sound old - established Radiological PRACTICE in Capital City of Commonwealth (outside N S W) Income over £3 300 p a Victor Snook plant and equipment (cost £3 000) Premium for goodwill furniture and equipment £4 500

7 AUSTRALIA —Victoria —Old-established Radiological PRACTICE about £1 000 p a in first rate City Premium to include equipment £2 500

8 GLAMORGANSHIRE — Working-class PRACTICE Working over £1 100 p a Panel 1 000 Lady Resident house (3 from m) in pleasant surroundings with garage and garden to rent Premium (including drugs) 1 years purchase

9 MIDLANDS — Partnership in Country Practice Working about £3 500 p a Panel over 1 500 Premium for one fourth share 2 years purchase

10 S COAST — Non-dispensing Practice in residential town and seaside resort Earnings past 18 months £1 720 No panel Good house in one of the best positions (4 bedrooms and 2 bedrooms) to rent on lease Plenty of scope for increase Premium £1 150

11 N WALES — Steadily increasing Town PRACTICE of £375 p a (including good appt and small panel) in beautiful part Good house (6 bedrooms) garage and nice secluded garden to rent Educational facilities from only £750

12 LONDON, N W — Practice in suburban district Receipts 1931 £700 Panel 300 Corner house (5 bedrooms) garage and garden to rent on lease Premium £750

13 SUSSEX — Country Practice between £1 200 and £1 300 p a in delightful part No panel Large residence (9 bedrooms etc) garage and garden of four acres to rent on lease Premium £2 000

14 EASTERN COUNTIES — Partnership in Practice of about £3 650 p a in country town No panel Suitable house available Good educational facilities Premium one-half share £2 500

15 SURREY — Partnership in increasing middle class Town Practice of £2 300 Panel over 1 250 Modern detached corner house (5 bedrooms) garage and garden for sale Partner should be 26 30 and have held Hospital appointments. Share of £1 000 p a at 2 years purchase

16 DEVON — Partnership in Practice averaging £3 000 p a in small beautifully situated town Panel 800 House with 4 bedrooms and attics garage and garden to rent Cottage Hospital Premium one third share 2 years purchase

17 N OF ENGLAND — Partner required in increasing Practice in beautiful city Receipts last year £5 000 Panel 4 000 Applicants should be proficient in minor surgery anaesthetics and obstetrics Share of four fifteenths at 2 years purchase

18 LONDON, N W —Non-dispensing Practice over £950 p a in good residential district No panel Ten roomed house with garage and large garden Rent £200 p a Premium £1 200

19 N MIDLANDS —Partnership in Practice, about £3 000 p a in country district near two important towns Panel over 1 600 Small house (3 bedrooms etc) available to rent Great scope as district is growing rapidly Premium one third share 2 years purchase

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Practices and Partnerships for Disposal (continued)

20 EAST ANGLIA —Partnership in good-class non dispensing Practice of about £3 000 p a in favourite Second Report Partner should be a Varsity man about 30 years of age experienced in Medicine and Anaesthetics Good up to date Hospital Premium for one-third share 2 years purchase

21 W OF ENGLAND —Practice about £800 p.a. in first rate City Panel 1 524 Well built house (4 bed and dressing rooms) to let Excellent scope Premium £1 450

22 S E COAST —Easily worked Practice in exclusive part of sea side town Receipts last year £1 050 including appointments over £200 fees from resident patients and small panel Large modern house with beautiful garden to rent Ample scope Premium £1 150

23 CARMARTHENSHIRE —Increasing PRACTICE of £900 p.a. in pleasant Market Town Panel 150 Well situated house (non basement) with 3 bedrooms for sale Cottage Hospital Premium one years purchase

24 S MIDLANDS —Partnership in Practice about £8 000 p.a. in residential country district Suitable house to rent or purchase Cottage Hospital Share worth about £1 500 net p.a. at 21 years purchase on net cash receipts

25 LONDON, N W —Practice (carried on by Medical Woman) doing about £280 p a in main thoroughfare Panel 120 Shop fronted house to rent on lease Good scope for increase Premium £300

26 LONDON, W —Steadily increasing PRACTICE doing about £750 p a mo th from Lock up Surgery Panel about 500 Well situated corner residence (5 bedrooms) to rent Premium £900

27 LONDON, S W — Small, non-dispensing PRACTICE of nearly £400 p a close to the West End Select Panel about 417 with scope Corner house with ample accommodation to rent on lease Premium 1½ years purchase or near offer

28 S COAST —Favourite Resort —Practice of about £400 p a Panel 50 House contains 5 bedrooms Garage and garden Rent £150 p a Scope for increase Premium to effect quick sale only £250

29 DURHAM —Practice of over £500 p a in residential and colliery district near large towns Panel 360 Substantially built 9 roomed house for sale Scope for increase

30 LONDON, W —Middle class Practice averaging over £700 p a in outlying residential suburban district. No panel House with 4 bedrooms and fair sized garden to rent. Good scope Premium £700 cash.

31 NEW ZEALAND —NORTH ISLAND — Non-dispensing PRACTICE about £1 800 p a in first rate Town Modern detached house (4 bedrooms etc) garage and garden for sale Equable climate Good educational facilities Premium only £1 250

32 BIRMINGHAM —Practice of about £1,000 p a in one of the best residential suburbs Small panel and very little midwifery Well situated house (6 bedrooms) good garden and garage for sale Good scope Premium 1½ years purchase.

33 NORTH OF ENGLAND — Small Season PRACTICE in Inland Health Resort capable of increase by one practising all the year round Receipts about £150 No panel or midwifery House in own grounds with 6 bedrooms etc Price—house and Practice—£1 250

34 YORKSHIRE (W R) —Partnership (after Preliminary Assistantship) in Practice about £2 650 p a in manufacturing town Panel 1 640 House available Applicant with surgical experience preferred Premium one third or one fourth share 1½ years purchase

35 EAST ANGLIA —Partnership in Practice over £4 500 p a in beautiful country district easy access of important town Panel 3 000 Nice detached house (7 bedrooms) garage etc garden and grounds of 10 acres for sale Sport of most kind Considerable scope Premium two thirds or four ninths share 2 years purchase

36 WESTERN AUSTRALIA —Practice over £1 100 p a in Wheat and Sheep district Seven roomed house with electric light garage etc for sale or rent Ideal climate Sport Hospital Premium £600

37 SOUTH AFRICA —Easily worked Country PRACTICE in healthy district (elevation 2 000 ft) in Cape Colony Cash receipts year ended June 1931 over £1 000 Sport of all kind Well built house Premium—house and Practice—£1 225

38 KENT —Country Practice of over £800 p a in beautiful part Panel nearly 400 Very attractive residence (5 bedrooms) central heating grounds of 2½ acres orchard etc for sale Sport Premium 1½ years purchase

39 S OF ENGLAND —Partnership in Ophthalmic Practice about £1 300 p.a. in small but delightful resort Considerable scope to one able to operate Premium one half share 1½ years purchase

40 HOME COUNTIES —Partnership in exceptionally good and rapidly increasing Practice about £6 000 p a in delightfully situated Country Town easy distance of Coast Attractive house (4 bedrooms) to rent Partner must hold the FRCS and be aged about 30 Appointment on Hospital Staff Premium for one sixth to one fourth share 2 years purchase Preliminary Assistantship

41 SHROPSHIRE — Practice £800 p a in market town Panel 170 House (5 bedrooms) garage and garden to be sold or let Premium 1½ years purchase

42 KENT — Country Practice of about £850 p a Panel 550 Good house and garden for sale Prem £1 100

43 MIDLANDS — Country Practice of over £900 p a in beautiful district Panel over 700 House contains 5 bedrooms and dressing rooms etc electric light beautiful garden with greenhouse for sale All kinds of sport Premium £1 200

44 SOMERSET — Practice averaging £870 p a in country town Panel under 200 House with 6 bedrooms garage and small garden to rent or purchase Scope for increase Premium £1 300

45 LONDON, S W —Practice about £500 p a in suburban district Panel 650 No midwifery Semi detached corner house (6 bedrooms) for sale Scope Premium 1½ years purchase

46 WITHIN 12 MILES OF LONDON — PARTNERSHIP in rapidly increasing cash Practice about £1 600 p a in developing industrial district Panel nearly 1 950 Small house available Large cottage hospital Two fifths or one half share 2 years purchase

47 LONDON, S W — Increasing Practice in outlying suburb Bookings last year £890 Panel about 400 Modern house (3 bedrooms) Premium £1 000

48 GLOUCESTERSHIRE — Partnership in Country Practice of £1 000 p a Panel 870 Premium one half share 1½ years purchase

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1 LONDON SUPURB —(North)—In a rapidly growing district a well established and increasing PRACTICE offering excellent prospects Receipts last year £1 000 (last four months at rate of £24 a week) including panel also increasin of 400 No midwifery Small house containing surgery and waiting room four other rooms and offices Inclusive rental 50 p a Premium £1 500 cash

2 SOUTH WEST OF ENGLAND —FAVOURITE TOWN —PARTNERSHIP —A share producing about £800 p a, with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Mid wifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner must be well qualified and experienced

3 LONDON SOUTH WEST —PARTNERSHIP —A one fourth share (after Preliminary Assistantship of about six months at a salary of £540 p a) is offered in an old established middle and working class Practice Average gross cash receipts for the last three years £4 177 Panel of about 4 500 Fees from 1/6 to 7/6 Midwifery from 3 gns House contains 3 sitting rooms 3 bedrooms bathroom etc Garden Can be rented at £55 p a Premium for share 2 years purchase half down and balance by instalments

4 YORKS —PARTNERSHIP —A one fourth share is offered (with increase later) in an old established good mixed class Practice situated in a favourite town in good hunting district and within easy reach of popular seaside resort Average gross cash receipts for the past three years £3 700 Panel of 1 500 Fees 3/6 to 21/ Very suitable house with 2 reception 4/5 bedrooms etc and professional rooms Can be rented at £50 p a Sport of all kinds and good schools Premium for share £1 450

5 PARTNERSHIP —SOUTH WESTERN COUNTY —A two thirds or two fifths share is for disposal in an old established mixed class Practice in a very attractive district near favourite town Gross cash receipts for last 12 months over £2 500, including panel of 1 500 Fees from 2/6 to 10/6 Very nice house with all modern conveniences and ample accommodation Premium 2 years purchase Sport of all kinds and schools within reach Good surgical scope if desired

6 HOMOEOPATHIC PRACTICE —DEATH VACANCY —LONDON WEST —Old established connection Gross cash receipts have averaged between £3 000 and £4 000 p a Suitable house can be obtained on rental Offers invited

7 YORKSHIRE — COAST TOWN —Old established mixed class PRACTICE in attractive seaside and holiday resort offering good scope for increase and surgical work Average gross cash receipts for last three years over £1 900 Panel of 500 Fees from 5/ to 21/ Mid from 2 to 5 gns Exceptionally nice labour saving house specially built with 2 reception 6 bedrooms etc Separate entrance to professional rooms Electric light Garden Garage Freehold for sale at valuation Up to date Hospital Premium £2 300 Ill health reason for sale

8 NORTH WALES — Residential town near coast —Well established mixed class PRACTICE in beautiful surroundings averaging between £900 and £1 000 p a Panel of 123 and appts worth £450 p a Fees from 3/6 to 21/ Not much midwifery Good house with 2 reception 6 bedrooms etc and professional rooms Garden and garage Rent on lease £82 10s p a Hunting excellent fishing tennis etc and good educational facilities Premium £750 or near offer for prompt sale

9 SUFFOLK —FAVOURITE COAST TOWN —PARTNERSHIP —A one third share (with increase later) is offered in an old established chiefly better class Practice averaging for the past three years £2 766 including panel of 941 Lowest fee 5/ Midwifery 2 gns upwards about 36 cases Choice of houses Excellent social sporting and educational facilities Premium for share £2 000

10 WITHIN 80 MILES OF LONDON —PARTNERSHIP —A one third share (with increase later) is offered in a very sound and old established better class Practice situated in a good residential town within a few miles of the sea Average gross cash receipts for the last three years £3 253 (last year £3 600) Ample scope for increase Panel of 850 Fees from 3/6 to 2 guineas Not much midwifery from 2 gns upwards Suitable modern house with surgery attached Can be rented or purchased Excellent social amenities shooting yachting golf etc Ingoing partner should be experienced aged about 28 to 35 Premium for share £2 000

11 SOUTH OF ENGLAND —FAVOURITE COAST TOWN —Old established chiefly better-class PRACTICE producing about £1 800 p a Small selected panel Fees 3/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

12 MIDLANDS —Old established good mixed class unopposed PRACTICE situated in an attractive country town with beautiful surroundings Average gross cash receipts for last 3 years £1 584 including panel of 974 Good appts worth nearly £200 p a Fees from 3/6 Very nice house with 3 reception 6 bedrooms separate entrance to professional room Good garden with tennis lawn etc Garage for 2 cars Price for freehold £1 850 of which a good proportion could remain on mortgage Excellent sporting and social facilities and schools Premium 1½ years purchase

13 WITHIN 60 MILES OF LONDON near County Town —Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p a and offering good scope Selected panel of about 170 and appts worth £160 p a Fees 2/6 to 10/6 Very little mid Exceptionally nice house with beautiful garden, containing 3 reception 4 bedrooms etc Separate entrance to professional rooms Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

14 YORKS — LARGE TOWN —PARTNERSHIP — A one fourth share is offered after Preliminary Assistantship in an old established mixed class Practice averaging for the last three years £2 500 p a Panel of 1 700 Lowest fee 3/6 Suitable accommodation available Premium 1½ years purchase Good scope for surgery

15 NORTH MIDLAND CITY — PARTNERSHIP — Two Partners are required to take over a four fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town, producing for the last 12 months at the rate of over £5 500 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and school

16 LONDON NORTH WEST —Well established middle class non dispensing PRACTICE averaging for the past three years £840 including appts worth about £300 p a and panel of 120 Fees 3/6 to 21, Purchaser can choose his own residence Premium £1 250

17 NORTH WALES —Very old established good mixed class PRACTICE averaging £880 p a including panel of 433 Fees 2/6 to 10/6 medicine extra Suitable house with 2 reception 6 bedrooms etc Can be rented on lease at £50 p a Good sport Premium to include motor car £1 200 £400 down and balance by arrangement Ill health reason for sale

18 WEST OF ENGLAND —LARGE TOWN —Well-established PRACTICE producing nearly £900 p a including panel of over 1 300 Suitable house in excellent position Price £700 or can be rented at £60 p a Premium £1 450 Good scope for increase

19 LONDON S W —Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for leasehold (94 years to run) £1 200 part on mortgage Premium £1 050

20 MIDLANDS —PARTNERSHIP —A one third share is offered in a very sound middle and working class Practice held by the senior partner for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Prem 2 years pur

21 MID WALES —Agricultural District —Mixed class PRACTICE, producing about £880 p a including small panel of 130 Fees 3/6 to 21/ Small house with 2 reception 3 bedrooms etc Price £650 Fishing shooting and other sport Premium 1 years purchase

22 WOMAN DOCTOR'S PRACTICE —YORKS —LARGE TOWN —Established eight years easily worked and producing nearly £700 p a Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns Compact house with 2 sitting 2 bedrooms 4 attics etc Garden Garage Rent on lease £42 10s p a Prem 1½ years purchase or near offer

23 CHESHIRE —NEAR COAST —Old established middle and working class PRACTICE averaging for the past three years over £1 300 Panel of 550 Fees from 3/6 Good house with 3 reception 7 bed rooms etc Price for freehold £1 200 part on mortgage Premium 2 years purchase

24 WITHIN FOUR MILES OF THE BANK —Old established working class PRACTICE producing for the last 12 months £2 300 including panel of over 2 800 Appts worth about £160 Visits from 2/6 Low expenses Suitable house can be rented or bought Surgery premises on rental Premium £4 000 cash

25 MANCHESTER —Semi residential Suburb —Very old established non dispensing mainly middle class PRACTICE, averaging £2 500 p a, including small selected panel of 440 which latter is capable of extension Visits 5/ upwards Only about 20 cases of midwifery from 5 gns Well situated house with good accommodation Price (freehold) £1 600 Premium £3 750

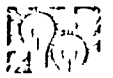
26 NORTH MIDLANDS —WITHIN 3 MILES OF FAVOURITE TOWN —Old established and good middle class PRACTICE offering large scope Cash receipts for last 12 months £1 332 including panel of over 1 000 Fees from 3/6 Mid from 2 gns Exceptionally nice house in about 4 acres of ground with tennis lawn fruit and vegetable gardens etc containing 3 reception 6 bedrooms etc Freehold for sale Premium 1½ years purchase

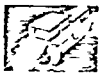
27 SOUTH OF ENGLAND —Pleasant Town near Coast —Very old established middle and upper class PRACTICE Cash receipts average nearly £1 750 p a including panel of 500 Visits 3/6 to 21/ Very little midwifery House including consulting room waiting room and dispensary in well situated part of town Price freehold £1 500

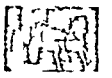
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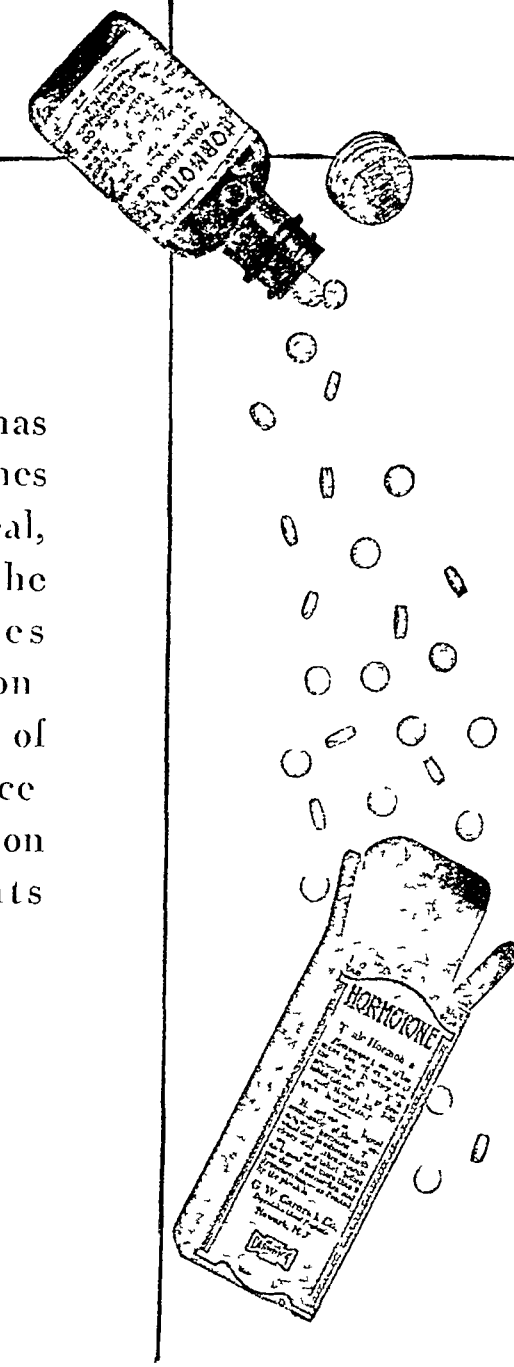
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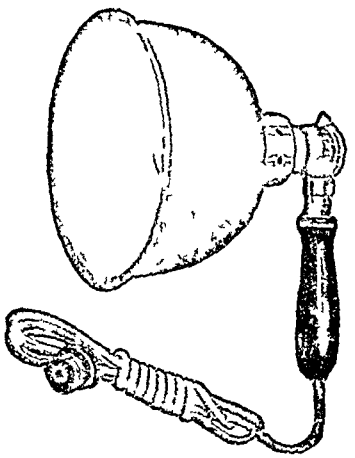
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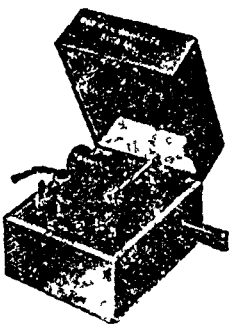
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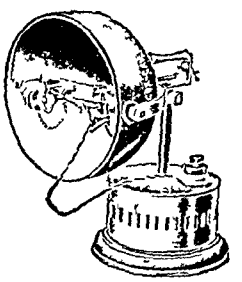
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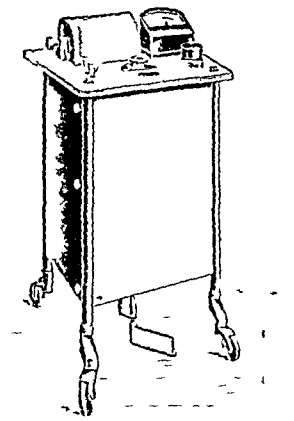


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CONTENTS

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ORIGINAL ARTICLES

The Endocrines and Some Associated Psychoneuroses By W LANGDON BROWN M D F R C P 223

Bladder Healing after Suprapubic Cystotomy By JAMES B MAC ALPINE F R C S (Illustrated) 226

Cystic Dilatation of the Common Bile Duct By JAMES H SAINT, M D F R C S (With Plate) 230

Adenomatous Papilloma of the Duodenum By ANDREW FOWLER F R C S E D (With Plate) 233

Atrophic Coarse Cirrhosis of Liver in a Congenital Syphilitic. By K C J FADDLE M R C S (With Plate) 233

Investigation of a Renal Case By F HECTOR SCOTSON M B F R C S (With Plate) 235

MEMORANDA

Aneurysm of Thoracic Aorta with Complete Transposition of Viscera By G HARRIDAS L M S (With Plate) 236

An Epiphyseal Lesion in Congenital Syphilis By ERIC ASSINDER M D (With Plate) 237

The Grafenberg Ring By G T CREGAN M B 237

CLINICAL PROCEEDINGS

CITY DIVISION Injection Treatment of Varicose Veins 237

REPORTS OF SOCIETIES

MEDICAL SOCIETY OF LONDON
Essential Hypertension 238

ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE
Transmission of Leishmania Infections 240

MEDICO LEGAL SOCIETY
The Liberty of the Subject 241

REVIEWS

Functional Digestive Disorders 242
Post Haemorrhagic Manifestations 242
Hutchison's *Index of Treatment* 243
St Bartholomew's Reports 243
Ophthalmology for the Layman 243
Diseases of Women 243
Notes on Books 244

MEDICO LEGAL

The Position of an Unregistered Medical Practitioner 206

LEADING ARTICLES

PSYCHONEUROSES AND THE ENDOCRINES 245
THE INTERVERTEBRAL DISKS 246

THE WEEK

Dawson Williams Memorial Prize 247
A Hundred Years of Hodgkin's Disease 247
Epidemic Meningitis 248
The Tuberculosis Scheme in France 248
A Queen's Obstetric History 248
Fracture of the Os Calcis 249
Schistosomiasis in Shanghai 249
Andrew Balfour Memorial 249

GENERAL ARTICLES AND NEWS

Spahlinger Treatment of Tuberculosis Disclosure of Formula 252
"The Mischiefs of Motoring" Report of Discussion 250
CANCER IN EX SERVICE MEN An American Survey 254
PREPARATIONS AND APPLIANCES (Illustrated) 244
MEDICAL NOTES IN PARLIAMENT 256
MEDICAL NEWS 267

LOCAL NEWS

SCOTLAND—
Health of Glasgow 255
Edinburgh Royal Infirmary 255
Health Exhibition in Edinburgh 255
Edinburgh Mental Clinic 256
Industrial Hygiene 256
Dunfermline Hospital 255

IRELAND—
Tuberculosis in County Antrim 256
Belfast Tuberculosis Committee 256
Dublin Housing Scheme 256

ENGLAND AND WALES—
Etiology of Rheumatism 257
Lecture on Mental Deficiency 257

UNIVERSITIES AND COLLEGES

University of Cambridge 264
University of London 264
Royal College of Physicians of London 264
Society of Apothecaries of London 264

OBITUARY

Joseph P Whitaker M B F R C P Ed 265
Francis O'Neill M B 265
James A Marsden M R C S 266

LETTERS AND ANSWERS

Income Tax 268
A Case of 268
Research 268
Victor Hensen 268
Brachial Embolus 268
Corrigendum 268

CORRESPONDENCE

Andrew Balfour Memorial 257
London County Hospitals By Lord Riddell and Geoffrey Evans M D F R C P Sir F N Kay Menzies M D F R C P Ed and Sir E Graham Little M D F R C P 258
Dangerous Drugs Register By Sir E W E Holderness 259
Ovulation and the Sex Cycle By J M Robson M D 259
Undulant Fever in the British Isles By G S Wilson M D F P C P 259
Bacillus of Epidemic Jaundice By John Matthews M B 259
Immediate Pneumococcal Typing By R R Armstrong M D F R C P 260
Colporrhaphy and Prolapse By Wm Fletcher Shaw M D 260
Immunity and Malignant Tumour By J A Shaw Mackenzie M D 261
Shoe Leather Dermatitis By D Jordan Lloyd D Sc 261
Treatment of Scalp Ringworm By L Haden Guest M R C S 261
Raw Milk and Dental Caries By Evelyn Sprawson M R C S L D S 261
Simulation of Heart Disease By W R Thrower M B 262
Appendicectomy in Early Life By Arthur H Bostock M R C S 262
Suction Surgery By C Langton Hewer M B 262
Plumbism and Peptic Ulcer By G Arbour Stephens M D 262
Face Masks and Fogged Spectacles By P H Elliot M D F P C S 263
Quinine and Malaria By W Addison 263
Medical Conditions in Soviet Russia By F G Clemow M D 263
Effect on Child of Acute Illness in Pregnancy By J A Nixon M D F R C P 264

VACANCIES 268
(See also page 47 of SUPPLEMENT*)*

The SUPPLEMENT contains

Proceedings of Council
CURRENT NOTES
Centenary Meeting Masonic Welcome
Annual Meeting of the A M A
CORRESPONDENCE
Excessive Prescribing
Reference to Regional Medical Officer
NATIONAL INSURANCE NOTES
Association Notice Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible classes will for the most part be found on the pages indicated

Advertisements of the following

PUBLISHERS

Cambridge University Press
Rolleston H —
Cambridge Medical School 4

Churchill J & A
Ball & Evans—Dis of the Kidney 4
Cameron & White—Biochemistry 4
Piney & Wyard—Clinical Atlas of Blood Diseases 4

Lewis H K & Co Ltd
3
3
3
3
3
Couching for Cataract 4
Glaucoma 4
Forsdike's Sterility in Women 3
3
3
3
3
3
Sanderson & Rayner's Intro to the Law & Tradition of Med Pract 3
Scott C L —The Morphine Habit 3
Swanzy's Diseases of the Eye 3
Sykes Manual of General Practice 3
White R P —
Affections of the Skin 3

Livingstone E & S
Wheeler & Jack's Handbook of Medicine 4

Oxford Medical Publications
Elliot R H —
Care of Eyes Cases 4
Treatise on Glaucoma 4
Tropical Ophthalmology 4

ASSURANCE COMPANIES—
Century Insurance Co Ltd 52

BANKS—
Westminster Bank 76

BRASS NAME PLATES &c —
Cooke's Name Plate 6
Ford's Name Plate 39
Herd S J & A —Name Plates 4
Lewis & Co Ltd —Name Plates 35
Osborne F & Co —Name Plates 36

DEBT COLLECTION—
British Medical Protection Society 32

FOOD PREPARATIONS—
Benax Laboratorie —Benax 10
Benger's Food 20
Bovril 34
Brooke Bond & Co Ltd.—
China Tea 11
Cow & Gate Ltd —Milk Food Cover iii
Harden Bros & Lindsay Ltd —
Doctor's China Tea 16
Valentine's Meat-Juice Cover iv
Virol 17

HOSPITAL, &c FURNITURE—
Staples Mattress 29

MOTOR CARS TYRES &c —
Lodge Sparking Plug 4
Mann Egerton & Co Ltd —
Motor 5
Second hand Motors for Sale 51

PRINTING & STATIONERY—
Anderson & Son—Account Forms 52
Barlock & Barlet Typewriters 52
Taylor's Typewriter 35

TAILORING & UNDERCLOTHING—
Burberrys Ltd —Sale 20
Hall, H —Medical Service Dress 52

CHEMISTS &c —
34
28
32
38
Boots Product 10 14
Bristol Myers Co —Sal Hepatica 33
British Drug Houses Ltd —
Calciferol
S U P 36 13
Burroughs Wellcome & Co — 9
27
C 15
C
12
22
22
12
Throat Pastilles 26
Thron Mint Products Ltd — 16
Cod Liver Oil Concentrate 19
Fox's Glacier Mint 33
13
Martindale W —
Methyl Aspriodine 38
Preparations 29
Sterules 18
May & Baker Ltd.— 11
8
9
Newbery & Son Ltd —
Alka Zane 14
Parke Davis & Co —
Theelin Cover i
Peat Products Ltd —Sphagnol 32
Petrolagar Laboratories Ltd —
Petrolagar 25
Pharmaceutical Corporation Ltd —
Novutox 21
Saccharin Corporation Ltd —
Novocain 18
Semco Ltd —Mistol 15
Wander A Ltd —Ovaltolax 8
Wyleys Ltd —
Elixir Bromo Valerian Co 34

SURGICAL APPLIANCES—
32
35
4
35
35
52
35
32
31
Tycos Sphygmomanometers 36
Spencer Corsets Ltd —Corset 7
Taylor E Ltd —Flexoplast 38

TOBACCO & CIGARETTES—
Player's No 3 37

TRANSLATIONS TYPEWRITING—
Radford B —Typewriting etc 50

VACCINES & CULTURE MEDIA—
Cenato an Ltd —Vaccines 24
Heinemann W —Vaccine Lymph 33
Laboratories of Pathology & Public Health 36

X RAY & ELECTRO-MEDICAL APPARATUS—
Cox Cavendish Electrical Co Ltd —
Electrical Apparatus Cover ii
Kodak Ltd —
Duplitized X Ray Film 6
Medical Supply Association Ltd —
Diathermy Apparatus 30

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE —
RE APPOINTMENTS 40

HOSPITAL &c VACANCIES—
Ards District Hospital 54
Ashton under Lyne Dist Infirm 52
Auckland Hospital Board 48
47
52
48
55
47
48
52
49
Derbyshire Royal Infirmary 53
Dorset County Hospital 48
Dudley Guest Hospital 43
East London Hospital for Children 52
53
48
53
52
47
46
47
52
46
47
47
47
46
41
43
49
47

WINES & SPIRITS—
Gaymer's Cyder 39

INEBRIETY—
Bay Mount Paignton 41
41
41
41
41

HOTELS & HEALTH RESORTS—
44
39
39
44

HYDROS & PRIVATE HOSPITALS—
Bournemouth Hydro 44
45
44
42
44

SANATORIA—
43
43
43
43
43
43
43
43

HOMES & ASYLUMS—
Barnwood House Gloucester 41
Bishopstone House, Bedford 41
41
41
41
41
41
41
41
41
41
Lawn Lincoln 41
Wye House Buxton 41

BATHS SPAS &c —
Bridge of Allan Spa 41
British Spa Federation 39

MEDICAL SCHOOLS &c —
City of London Maternity Hospital 45
45
45
45
45
43
Society of Apothecaries 45
West London Hospital 45

SCHOOLS &c —
Colthurst House School Warford 41
Paton—Schools for Boys & Girls 45
Rossall School 4
Taunton School 50

TUTORS & LECTURERS—
Exams —Med Corresp College 45
F R C S Edin Classes —H C Orrin 45
46

TRANSFER AGENTS—
Bovril Medical Agency Ltd 53
57
54
53
53
54
Turner L Ltd 50 53
Western Medical Agency Bristol 54

ASSISTANTS PRACTICES &c —
Assistancies Wanted and Vacant 50
Dispensers Medical Posts, &c 51
Locum Wanted and Vacant 50
Partnerships Wanted and Vacant 50
Practices Wanted and Vacant 50

NURSING INSTITUTES—
Cavendish Nurses 54
New Mental Nurses Co Operation 54
Nurses Association 54

MISCELLANEOUS—
51

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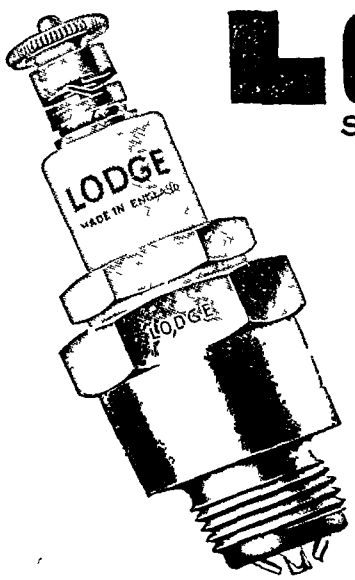
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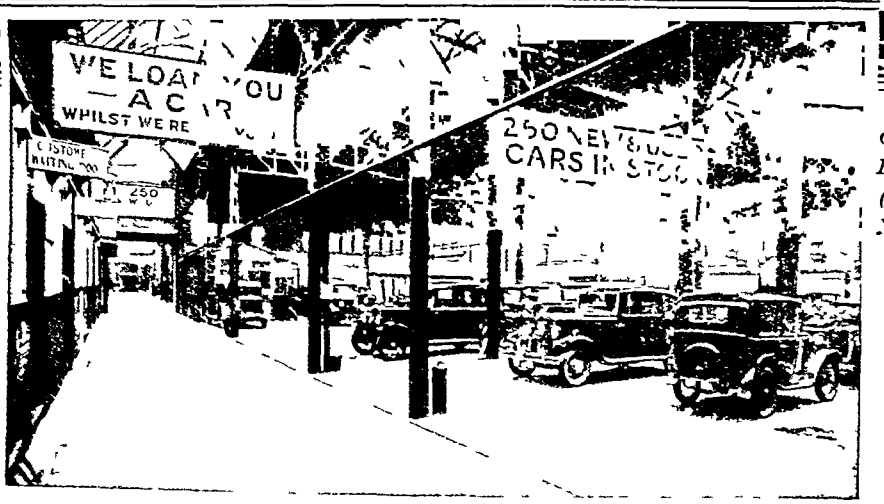
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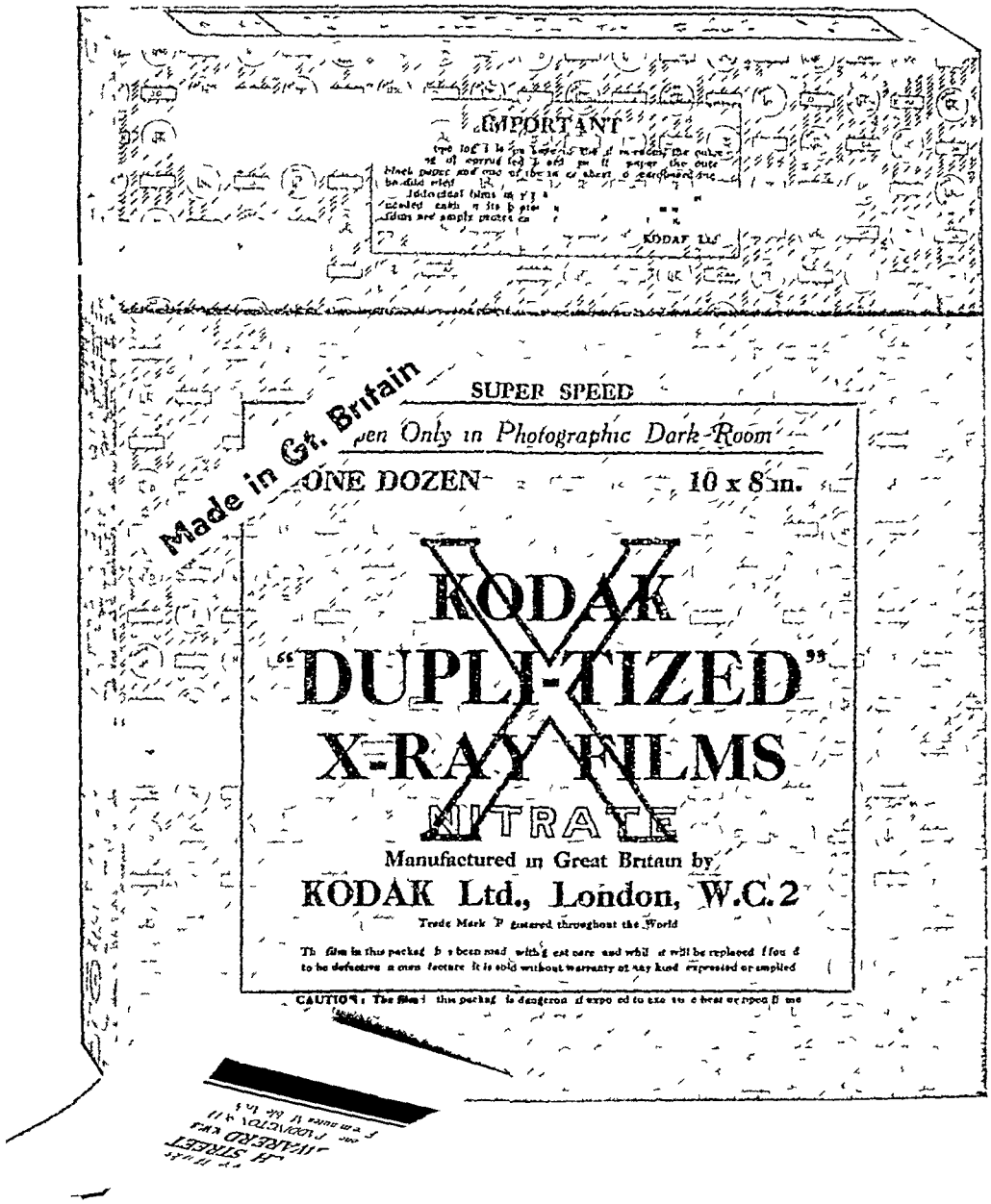
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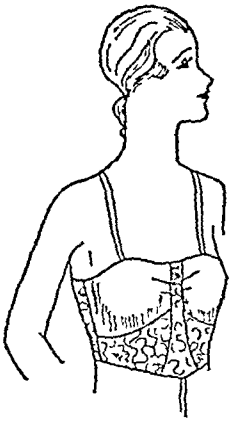
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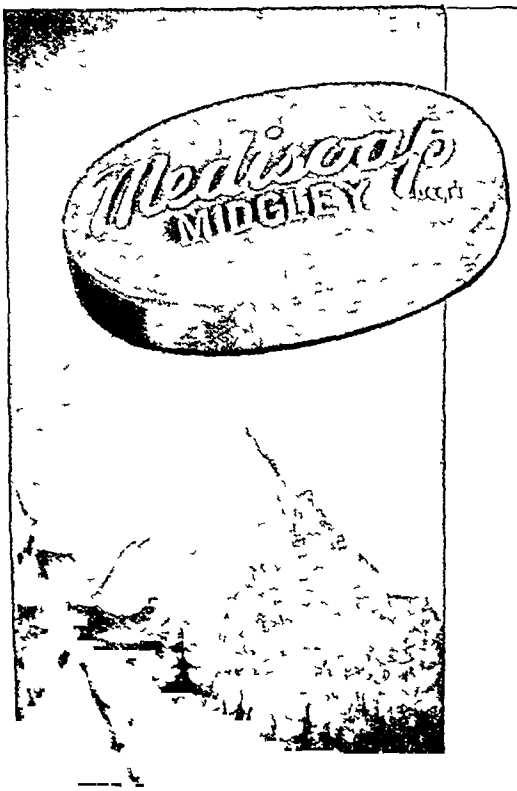
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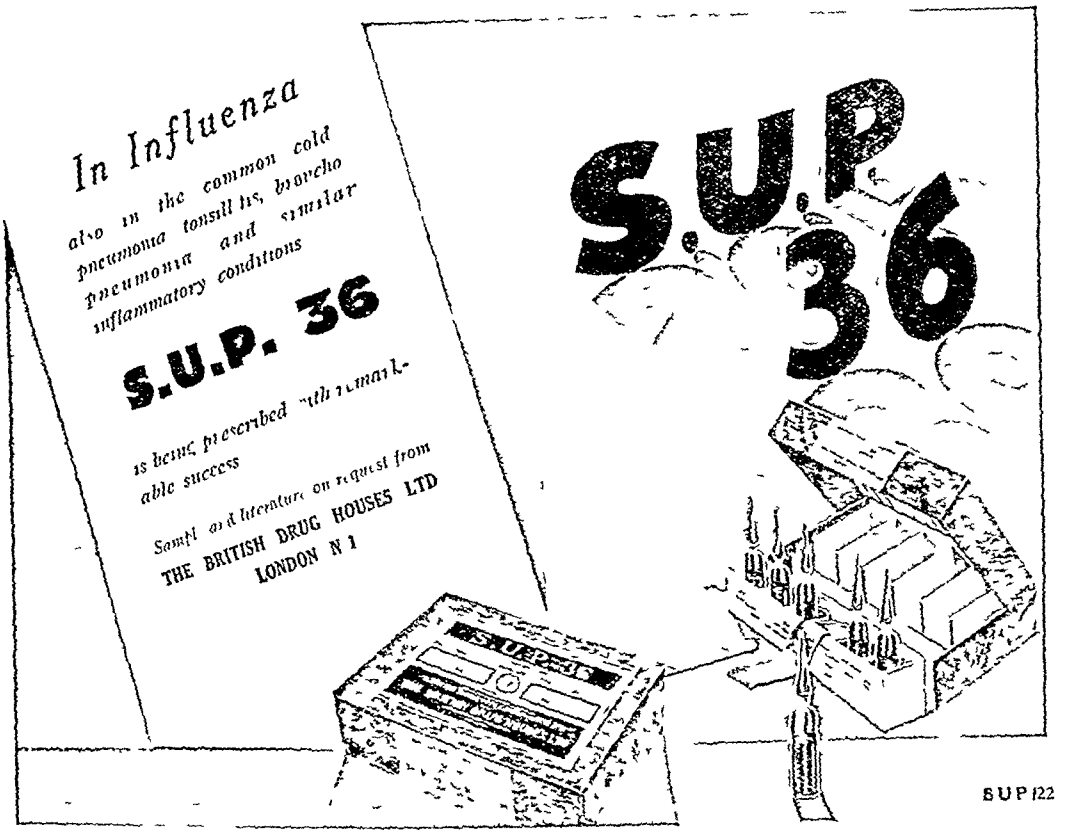
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MOND STAFFORDSHIRE REFINING CO., LTD., ABBEY HOUSE WESTMINSTER, S.W.1

For Influenza and Post-influenzal Debility

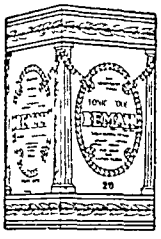
It is recognised that the severe debility, especially of the heart and digestive organs, which follows influenza, yields most readily to a dietary rich in vitamins The simplest way to secure this condition is by augmenting the ordinary diet with BEMAX

BEMAX is a natural vitamin food prepared from the de toxicated embryo of selected cereals It is the richest known source of Vitamin B and contains also Vitamins A and E with valuable salts of Phosphorus

Both as a preventative of influenza during times of epidemic and as a restorative food during convalescence, BEMAX has proved to be invaluable Definite improvement is usually observed soon after its use

BEMAX is a pleasant food to take, very easy to assimilate and digest It will be taken readily even in those influenza cases where gastric symptoms predominate

Laboratory reports on BEMAX and a clinical sample for personal trial will be sent to any medical man on receipt of his professional card



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STABILARSAN (BOOTS)

THE Standard Drug for the treatment of Syphilis and other Spirochætal Diseases Stabilarsan is manufactured under Licence No 19, from the Ministry of Health, tested in accordance with the regulations made under the Therapeutic Substances Act, 1925, and is APPROVED BY THE MINISTRY OF HEALTH FOR USE IN PUBLIC INSTITUTIONS

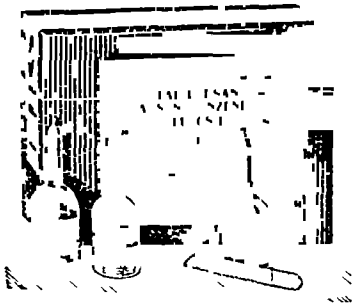
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Supplied in Sterile Solution in Ampoules ready for use

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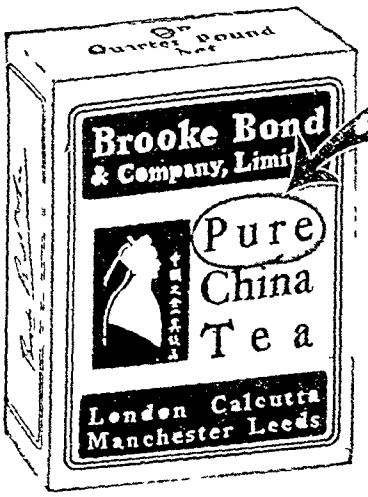
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(*Any grocer can easily get it*)

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A New and Highly Efficient Diuretic.

An organic mercurial agent of great service in nephritis, œdema of cardiac or renal origin, and in pleural or pericardial effusions

Its chief characteristics are

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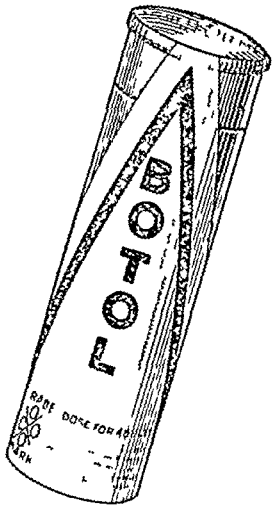
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Diluted with 10 times its bulk c[arrier]

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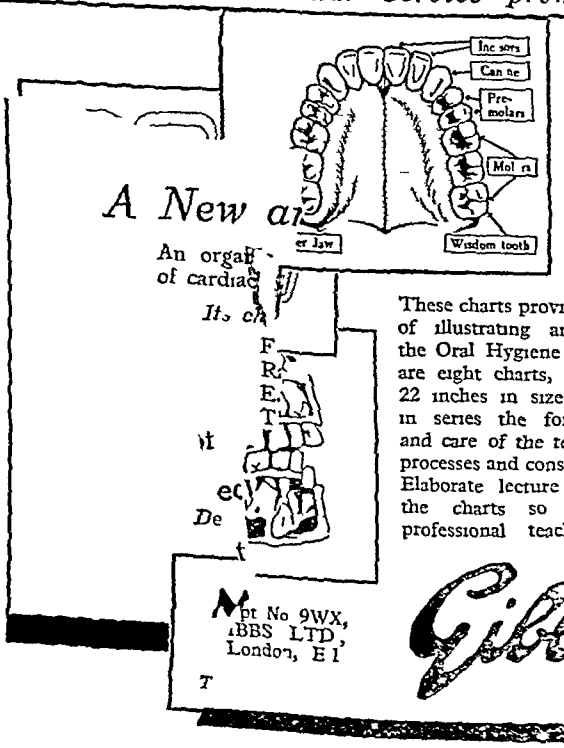
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Calciferol possesses an unvarying Vitamin D activity of 40,000 International anti-rachitic units per milligram, it is available in tubes of 0 1 gram at 12/- per tube

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Cal 13

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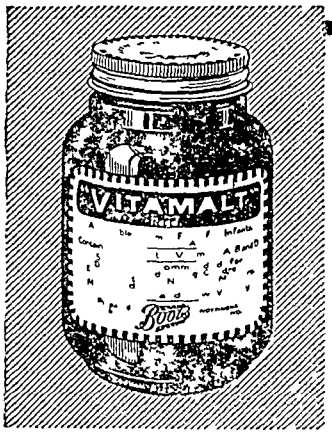
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These charts provide excellent means of illustrating and making vivid the Oral Hygiene Lectures There are eight charts, each 30 inches by 22 inches in size They illustrate in series the formation, structure and care of the teeth as well as the processes and consequences of decay Elaborate lecture notes accompany the charts so that even non-professional teachers of ordinary intelligence can give perfectly sound instruction

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Vitamalt has been skilfully blended to make a preparation which is easily assimilated and provides an acceptable form of vitamin medication

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An intimate association of Pure Liquid Paraffin with Magnesia in a state of ultra superfine division, which ensures an unusual therapeutic activity

M O is certain but bland in act on It is both laxative and adsorbent and promotes cleanliness throughout the whole intestinal tract

There are no secondary effects whatever

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FLATULENCE ACID ERUCTATIONS
NAUSEA VOMITING
HYPEREMESIS TOXÆMIAS
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THE Physiology of Evacuation is a very complex affair A gastro-colic reflex causes transference from the cæcum to the transverse and descending colons, the mass remains at the sigmoid flexure whence portions are passed into the rectum — giving rise to evacuative desire there follows relaxation of sphincter ani plus contraction of sigmoid and rectal walls, assisted by voluntary contraction of abdominal wall and pelvic floor and the control of the higher centres

Yet how often there is difficult or no, evacuation!

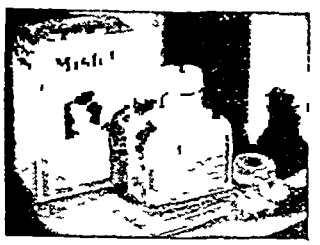
The reason usually is that the fæces are of such dense consistency that the whole machinery of evacuation cannot expel them

The Corrective Complement is — Prevent the fæces from becoming hard — not by mucosa-irritating purgatives — but by the certain admixture with them of Magnesia-Oil (Musterole Brand) This product ensures a consistent soft stool by its even diffusion throughout the bowel contents It does not irritate, and it promotes the recovery of intestinal tone so necessary to physiological function

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When children have *coryza* watch the middle ear

MOST cases of otitis media in children result from extension of a common cold or the coryza associated with influenza or the exanthemata Unless the primary inflammation in the rhinopharynx is treated vigorously there is always the danger that the infection may travel through the Eustachian tube and into the middle ear cavity

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The use of Mistol is effective treatment for all conditions of nasal congestion Its anticongestive and stimulating ingredients are contained in a light oil possessing the most favourable properties for spreading on and clinging to the nasal mucosa so that the preparation reaches every part and is not readily washed away by accumulated secretion.

Mistol assures greater comfort for little coryza patients and also protection for their ears It may be diluted one-half with Nujol for infants and proportionately for children.

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from the Medical Point of View

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Evans' Pastilles are prepared to a formula of the Liverpool Throat Hospital Their action is soothing and demulcent, the formula being carefully balanced with both these objects in view Evans' Pastilles relieve harshness and irritation and maintain their effect for some time after the pastille has dissolved

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Influenza and its sequelae

IN the pyrexial stage of Influenza, the patient is as a rule unable to take or digest ordinary food, and the fluid diet to which he commonly resorts is often unsuitable because it is not sufficiently nourishing

When the fever has subsided, loss of appetite—often persistent—is a common symptom which may present considerable difficulty in treatment

The addition to the diet of a concentrated food is, therefore, indicated

For this purpose VIROL is particularly suitable because

Virol is composed of Bone Marrow, Glycerine Extract of Red Bone Marrow, Malt Extract, Eggs, Lemon Syrup and Salts of Lime and Iron

The Vitamins are present in Virol in its manufactured state

(*a*) *It contains* all *the necessary constituents of a food, namely, proteins, carbohydrates, fat and vitamins*

(*b*) *They are present in correctly* balanced *proportions, none are in excess,*

(*c*) *It is so easily digestible, palatable and assimilable, that it can be taken by patients of all ages and at every stage of the disease*

(*d*) *It may be given either alone, in sandwiches, or added to milk*

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Does not contain Cocaine, and does not come under the Dangerous Drugs Act

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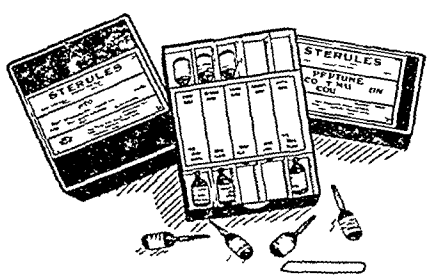
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containing both vitamins
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White's Cod Liver Oil Concentrate represents 100% of therapeutic efficiency Each tablet contains not less than 700 vitamin A units when essayed for xerophthalmia and 500 vitamin D units when essayed for rickets by the McCollum Line Test, equal to a teaspoonful of a high-grade Cod Liver Oil

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Indications—Tuberculosis Rickets Anæmia Malnutrition Infantile Weakness Deficiency Diseases Nervous Diseases Wasting Diseases Respiratory Diseases Adult Weakness

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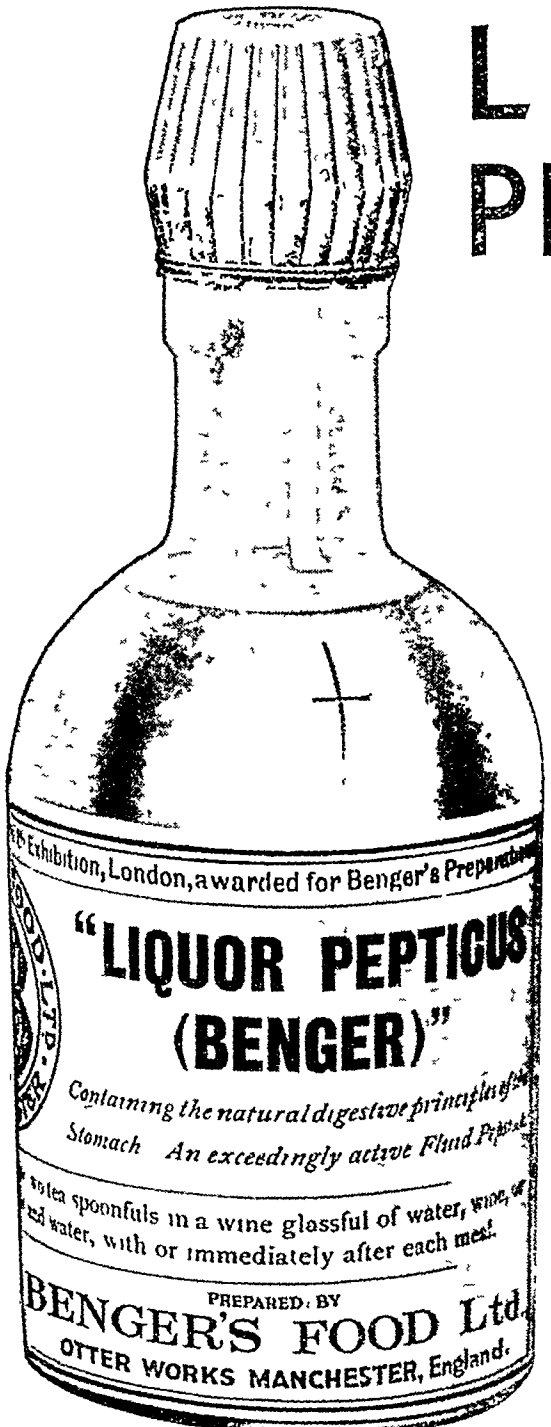
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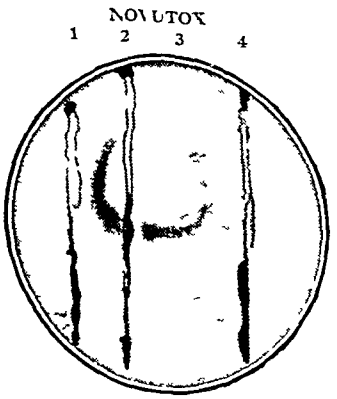


ILLUSTRATION OF THE BACTERICIDAL ACTION OF NOVUTOX LOCAL ANAESTHETIC

In Solutions 1, 2, and 4, as shown in the illustration, the bacteria continued to grow, at a temperature of 37° C in the incubator, whereas in Solution 3, the NOVUTOX SOLUTION, the bacteria were killed, and produced no growth, as can be plainly seen in the illustration

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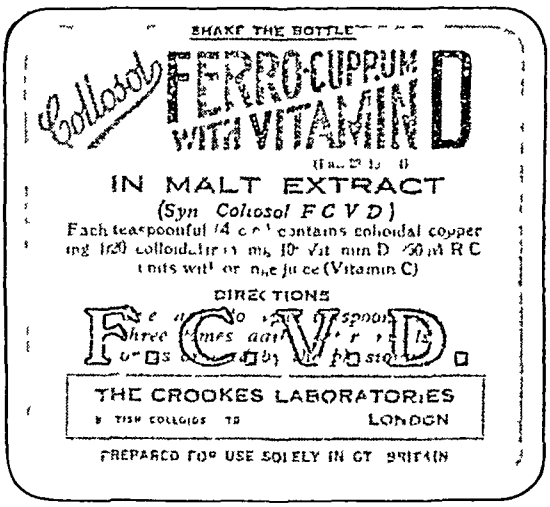
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EXTRACT OF THE INTESTINAL GLANDS

which strengthens the glandular secretions of the organs

BILIARY EXTRACT

which regulates the secretion of the bile.

AGAR-AGAR

which rehydrates the contents of the intestines

LACTIC FERMENTS

which reduce bacterial action of the intestines

IN TABLET FORM.

ITS USE DOES NOT LEAD TO HABIT

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INFLUENZA AND COLDS

Recent researches on influenza in Britain and America point to a pleomorphic streptococcus of the viridans type as playing an important rôle in this disease In the Pickett-Thomson Research Laboratory, St Paul's Hospital, London, this pleomorphic streptococcus has frequently been found in influenza cases along with pneumococci of various types in large numbers They occur also in the nasal discharge of many cases of the common cold It would appear, therefore, that many ordinary colds are merely mild forms of true influenza

Good results have been achieved both in the prevention and treatment of influenza and colds with a compound Detoxicated Vaccine containing the pleomorphic streptococcus in question, together with pneumococci and other important secondary organisms incriminated in the causation of these conditions This vaccine has also proved valuable in the treatment of the troublesome cough which accompanies and follows most cases of influenzal colds

The Pickett-Thomson Research Laboratory prepares two varieties of this vaccine, viz, "Anti-Influenza Vaccine (Detoxicated)" and "Anti-Coryza Vaccine (Detoxicated)" The former contains, per c c, 25,000 millions Influenza Streptococci and the latter 10,000 millions

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This reduction has been made at the request of the Medical Profession, because they desire to use 'Petrolagar' in a wider range of cases in their practice

Therefore, from February 1st 'Petrolagar' will be supplied by all chemists at reduced prices

4/6 for the 16 oz bottle ✣ **2/6** for the 8 oz bottle

'*Petrolagar Brand Paraffin Emulsion is manufactured in three varieties Plain with Phenolphthalein and Alkaline by*
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(*Æsculapius*)

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Issued in 5 c c. ampoules

See "Lancet," October 10th, 1931, page 791
" " November 7th, " " 1022

Prepared at
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Higher Runcorn Cheshire

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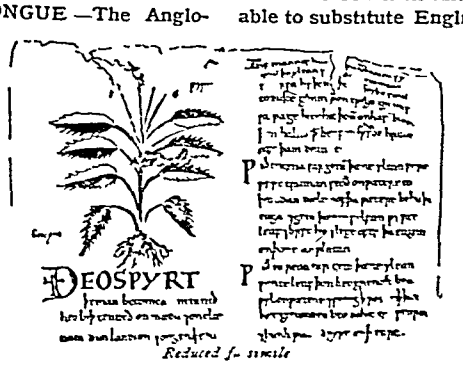
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PORTION OF A PAGE FROM THE EARLIEST EXTANT TREATISE ON MEDICAL BOTANY TO BE OFFERED TO THE TEUTONIC WORLD IN ITS OWN TONGUE.—The Anglo-Saxons did not perhaps, make any important contributions to the world's botanical knowledge, they were however, valuable pioneers of botany in England—and their work was original They cultivated herb gardens for utilitarian medical purposes and their various leech books show that they had recognised and named a large number of plants Their translation of the Latin herbal from which the accompanying illustration is taken further stimulated this study and increased their knowledge It also proves them able to substitute English names for the Latin ones This Anglo-Saxon translation became the forerunner of superior herbals in England and Germany It has been computed that during the Anglo-Saxon period 500 plants were named in England The herb illustrated is *Betonica Officinalis* and its supposed medicinal virtues are described in the text



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Remarks
ON
THE ENDOCRINES AND SOME ASSOCIATED PSYCHONEUROSES*
BY
W LANGDON BROWN M A M D F R C P
CONSULTING PHYSICIAN TO ST BARTHOLOMEW'S HOSPITAL

I will begin with some rather dogmatic statements because they are convenient pegs on which to hang recent observations but I hope to be able to show that these pegs have a firm attachment to a wall of facts

1 Endocrines are an elaboration of a survival of those chemical mechanisms to which animals responded before a central nervous system was developed

2 When the central nervous system was developed it entered into an alliance with pre existing chemical mechanisms particularly through its lowest level, the visceral nervous system

3 The visceral nervous system may be subdivided into (*a*) the sympathetic and (*b*) the parasympathetic, each co operates with its group of endocrines

4 The sympathetic is largely katabolic in its activities and is associated with the thyroid pituitary and adrenals

5 The parasympathetic (or extended vagus) is largely anabolic in its activities and is associated with the pancreas The parathyroids co operate with the internal secretion of the pancreas but there is no direct evidence of their control by the vagus

6 The gonads interact particularly with the sympathetic endocrine group

7 The pineal and thymus are not true endocrines, as they are not known to form any internal secretion They can however through some agency not at present completely understood influence the endocrine system and usually do so by retarding its action particularly do they retard the onset of sexual maturity in favour of somatic growth

PROGRESS DURING THE LAST DECADE

Three entirely new hormones have been isolated—insulin oestrin and parathormone the thyroid hormone thyroxine has been obtained in a crystalline form and synthetically prepared pituitrin has been shown to contain two distinct substances—pitressin which raises the blood pressure and oxytocin which contracts the uterus On the purely biochemical side therefore great advances have been made Clinically the discovery of insulin has revolutionized the prognosis and treatment of diabetes has clarified our views on many of the endocrine interactions and has proved a valuable help in the treatment of hyperthyroidism hepatic toxaemias and various wasting diseases Parathormone has been of great practical service in the treatment of tetany and has played an important part in the recognition of hyperparathyroidism Oestrin has been of limited use clinically and evidently technical difficulties have still to be overcome Active extracts have been prepared from the anterior lobe of the pituitary and from the adrenal cortex though these have not as yet proved capable of much clinical application

The revival of iodine therapy in hyperthyroidism by Plummer in 1922 has been of great service though many observers would limit its application to the periods before and after operation regarding it as in no sense curative Nevertheless its early use combined with other medical treatment seems to have prevented a number of cases reaching the stage at which operation would have otherwise been inevitable Operation for hyperthyroidism has grown greatly in esteem but it must be emphasized that the low mortality rates often quoted to day are obtained only by those surgeons specially skilled in performing the operation which in other hands still remains dangerous It is interesting to observe that the operation has grown in favour especially in cases in which cardiac decompensation including auricular fibrillation has developed—that is in just those cases which were formerly regarded as outside the sphere of surgery Here the results of operation are astonishingly good and medical treatment alone cannot hope to stabilize such patients The operation of election is subtotal thyroidectomy although in highly toxic cases a preliminary ligation of the arteries to the gland is still practised The method of anaesthetization of the patient is of great importance G L Keynes recommends rectal avertin before the patient is moved from the bed, followed by local anaesthesia and supplemented by gas and oxygen if necessary The question of toxic adenomata has been much discussed and it is generally agreed following Dunhill that they are not true new growths, but hyperthyroidic changes recurring in a previously damaged gland It is better therefore to speak of such cases as secondary Graves's disease The damaging effect of such a condition on the heart is explained by its occurrence in later life when the cardiac reserve is not so great as in youth It is certainly a striking fact that in earlier life a large diffuse hypertrophy of the gland will injure the heart less than will a comparatively localized adenoma later on

The role of the parathyroids in the metabolism of calcium and phosphorus has been satisfactorily determined and the clinical entities of hypo- and hyper parathyroidism have been established

Valuable additions to our knowledge of the pituitary body have been made The work of P E Smith and of Evans and Simpson has clearly shown its influence on growth (through the eosinophilic cells in the anterior lobe) on sex (through the basophilic cells in the same lobe) and on fat metabolism (through the associated action of the posterior lobe and overlying diencephalon) Cushing has demonstrated the close connexion between this gland and that part of the nervous system concerned with emotion

The association and interactions between the pituitary and the gonads has been the subject of much research The work of Dixon and Marshall deserves special mention They showed the stimulating effect of oestrin on the secretion of pituitrin and the opposing influence of the luteal hormone on this until the onset of parturition when the corpus luteum begins to degenerate releasing the oestrin with a consequent flow of the oxytocic principle into the cerebro spinal fluid Taking this in conjunction with other work we may say that an anterior pituitary hormone stimulates the production of oestrin which increases the secretion of the post pituitary hormone which in its turn stimulates uterine contraction The introduction of the vaginal smear test in rats has provided a method for the detection of oestrin and has shown how widely distributed this hormone is elsewhere than in the ovary—for example in the placenta and urine of pregnancy

The work of Stewart and Rogoff has led us to attribute a larger share to the adrenal cortex in the pathology of Addison's disease while Achard Thiers and others have added to our knowledge of the symptoms of the virilizing effects of tumours of the adrenal cortex and of basophil adenomas of the anterior pituitary

The evidence for the existence of status lymphaticus as a clinical entity has been seriously criticized and a far more critical attitude has been adopted towards the indiscriminate use of polyglandular extracts without consideration of the physiological principles involved and the pharmacological evidence

* Lecture delivered before the North Essex Division of the British Medical Association December 1931

THE PITUITARY

Although nothing was known of the function of the pituitary until 1895 when Oliver and Schafer extracted an active physiological substance from it it is now seen to be the leader of the endocrine orchestra The anatomists of the past looking at the brain enclosed in bone and joined by a narrow stalk to this small body similarly enclosed formed the conception of a brain in miniature which as it were responded to or repeated the actions of the big brain above Modern research has shown that there is more in this idea than was supposed in the nineteenth century Harvey Cushing said

No other single structure of the body is so doubly protected so centrally placed so well hidden [as the pituitary] Here in this well concealed spot almost to be covered by a thumb nail lies the very mainspring of primitive existence—vegetative emotional and reproductive—on which with more or less success man chiefly has come to superimpose a cortex of inhibitions The symptoms arising from disturbance of this ancestral apparatus are beginning to stand out in their true significance The diencephalon is an ancient part of the brain which remains essentially unaltered in all creatures that have a brain at all Moreover it proves to have direct connexions with the first of the organs of internal secretion to become recognizably differentiated and on which the very perpetuation of the species depends Such primitive instincts as hunger thirst and sleep also seem to be mediated through this region Cyclicism which may be diurnal lunar or seasonal is a peculiarity of many physiological processes such as oestrus menstruation hibernation and indeed ordinary sleep That these processes are somehow under the control of the diencephalo pituitary apparatus seems most probable Recent investigations serve closely to relate the diencephalon to metabolic processes to the primary emotions and lastly to the sympathetic nervous system

The Anterior Lobe

It has been known for a good many years that the anterior lobe of the pituitary contains eosinophil and basophil cells it has also been recognized clinically and experimentally that this lobe is concerned both with growth and with sexual development

Simmonds of Hamburg pointed out the frequency with which the pituitary may be affected by embolic processes in the course of septic infections The symptoms naturally vary with the age of onset If such an infarct occurs in childhood and involves only the anterior lobe the patient may show an extraordinary premature senility as first described by Jonathan Hutchinson and later more fully by Hastings Gilford under the name of progeria signifying premature old age The enfeebled old dotard of five of the *Bab Ballads* must surely have been an example of this Similar cases due to a failure in development of the adrenal cortex have also been reported This is not the only instance in which similar symptoms may result from anterior pituitary and cortical adrenal lesions

The Eosinophil Cells—Evans and Simpson have been able to isolate from the eosinophil cells a hormone which is concerned with growth and another from the basophil cells which is concerned with sexual development More over there is a definite antagonism between them the growth hormone being capable of completely nullifying the other if both are simultaneously injected That growth precedes sexual maturity is presumably due to the early predominance of the growth hormone When the basophil cells are able to assert themselves over the cosinophil cells puberty occurs The association between the eosinophil cells and growth is indicated by the coincidence of eosinophilous adenomas with gigantism or hemihypertrophy if they develop before the epiphyses join up and with acromegaly if they develop subsequently Gigantism is sometimes quite partial—as in one finger Beware of removing such local gigantisms by the operation has been followed by a gigantic growth of the whole limb This has an interesting bearing on Susman's recent hypothesis as to the influence of over activity of the anterior lobe in the causation of malignant disease

The Basophil Cells—The association between the basophil cells and sexual development is perhaps best illustrated clinically by certain cases of virilism in women I have been particularly interested in the type described by Achard and Thiers as diabetes of bearded women There are six characteristics of which only the first three are essential (1) hirsuties on the face—masculine in type (2) obesity with partial baldness of the frontal region (3) disturbed genital functions (4) high blood pressure (5) cutaneous striae (6) glycosuria or at least lowered carbohydrate tolerance I have described cases presenting all these features with increased basal metabolic rate in addition In the cases collected and described by Achard and Thiers the necropsies when obtained generally showed adrenal or pituitary tumours One such patient I saw had a basophilic adenoma of her anterior pituitary another had a hypertrophy of both adrenal cortices Here again we see the resemblance between the symptoms resulting from certain pituitary and adrenal lesions

Evans found that a continuous administration of the sex hormone from the basophil pituitary cells leads to cessation of oestrus as if it stimulated the ovary to the point of exhaustion Rhythm is the essence of reproductive function and this fact should be borne in mind in the clinical use of sex hormones

Anterior Pituitary Hormones—In a study of the anterior pituitary hormones carried out by Bugbee Simond and Grimes it was found that of the eleven different properties ascribed to the secretion of this lobe the property of growth could be clearly distinguished from the others and attributed to one hormone while the chemical substances responsible for the remainder were closely similar in their general chemical properties We shall not greatly err in regarding them as variants of one hormone This clears the ground and enables us to say that the eosinophil cells produce the growth hormone while the basophil cells produce a hormone which is responsible for the other activities of the lobe—the principal one being sex activation

The Chromophobe Cells—But the anterior lobe also contains cells which resist staining—the so called chromophobe cells Their function is unknown all we can say is that an adenoma composed of such cells actually diminishes pituitary function but apparently only by direct pressure on the chromophil cells The original cases of Fröhlich's syndrome were due to chromophobe adenomas But a simple pituitary inadequacy can produce the syndrome and whether it is produced by a tumour or not we shall see that more than the anterior lobe has to be involved Many of the milder cases unassociated with a tumour show extraordinary improvement at puberty

The Posterior Lobe

Of the two constituents of pituitrin—oxytocin and pitressin—the former stimulates contractions of the uterus and can act under conditions which exclude nervous influences As Dixon pointed out it is remarkable that medical men in empirically using pituitary extract to stimulate uterine contractions should have adopted the method which Nature has employed from time immemorial The secretion also seems necessary to involution of the uterus after parturition

Vasomotor Effect of Pitressin—Although this was the first pituitary function to be discovered it has been rather overshadowed by that of adrenaline Yet of the two glands the pressor effect of emotion would be more likely to be produced by the one so much nearer the emotional centres Emotional explosion with an accompanying rise of blood pressure has recently been observed to occur in an animal whose cortical inhibitions have been removed by severing the nerve paths from the frontal cortex to the diencephalon

Anti-diuretic Effect.—There was a tendency a few years ago to ascribe diabetes insipidus not to the pituitary but to the overlying diencephalon. While it is true that in some cases the diencephalon alone is damaged and in others only the pituitary it is highly improbable that corresponding effects should be produced by lesions in these two situations if there were no functional interaction between them. Many observations show that such interaction exists. Since the posterior pituitary produces an anti-diuretic hormone which will act on a denervated kidney the logical conclusion would appear to be that even when the diencephalon is responsible it must act not through a nervous, but through a chemical mechanism and that this mechanism resides in the underlying pituitary.

Carbohydrate Metabolism.—Hyperpituitarism has long been known to be associated with a lowered carbohydrate tolerance and not infrequently with glycosuria. Such glycosuria is usually intermittent and during the intermittence I have sometimes found the blood sugar curve completely normal while during the glycosuric period it was distinctly raised. Here again the pituitary function shows a rhythmical variation.

Conversely in hypopituitarism there is a raised carbohydrate tolerance. When insulin was discovered J. H. Burn soon showed that as might be expected from these facts it was antagonistic to pituitrin. Later he showed that it was only the pitressin fraction which was involved hence the lowered carbohydrate tolerance in hypopituitarism.

Galactogogic Effect.—It is usually stated that this is merely due to a contraction of the muscles in the mammary ducts but this would hardly account for three cases of pituitary tumour I have seen associated with lactation lasting seven three and two years respectively. I have seen this prolonged secretion cease promptly after the administration of corpus luteum.

The sharp bitemporal headache sometimes suddenly experienced by a woman on putting the child to the breast appears to be due to the demand made upon the pituitary and I have known it to be relieved by pituitary extract.

Fat Metabolism.—By the establishment of Fröhlich's syndrome attention was drawn to the association between pituitary lack and obesity. While it has recently been clearly proved that so-called pituitary obesity follows suprasellar damage (produced either by experiment or by diseases such as tumour or encephalitis) we cannot therefore exclude the secretion of the posterior pituitary from participation in this far from it. Removal of the pituitary of a tadpole leads to a large and persistent fat organ. This fat persists even after starvation but is soon absorbed when pituitrin is injected. This accords with Cooper's and Chamberlain's observation that pituitrin injections lead to an increase of fat in the liver (where it is metabolized) while the fat in the blood and peripheral tissues is diminished. From the close association between the gonads and the pituitary we can understand why castration or gonadal defects lead to obesity. But here again there is that blending of chemical and nervous mechanisms so characteristic of the pituitary. Although pituitrin injected into the cerebral ventricles is much more effective in promoting fat metabolism than when given subcutaneously this action is abolished by severance of the nervous channels at any level between the pituitary and the liver as well as by destruction of such centres as appear to paralyse the liver regulating centres. It would appear that fat metabolism in the liver and the influence of pituitrin has much to do with the maintenance of the body temperature. Raab is of opinion that any disturbance of the mechanism between the liver and the pituitary may lead to obesity.

THE DIENCEPHALO-PITUITARY APPARATUS AND THE EMOTIONS

That emotional expression springs mainly from the basal ganglia is well recognized. If cortical inhibition is removed afferent impulses arriving here give rise to explosions of the sham rage described by Cannon and others. Clinically we are only too familiar with the profound alterations in behaviour and emotional expression produced by lethargic encephalitis in this region.

The diencephalon is regarded by many as the head ganglion of the sympathetic nervous system this renders intelligible the close association between emotional disturbances and an upset of the sympathetic nervous system. Again the intimate ties between the basal ganglia and the leader of the endocrine glands through the diencephalon provides another association (this time of a chemical sort) between the emotions and the sympathetic endocrine system. That endocrine disturbances and psychoneuroses should frequently coexist is therefore not surprising. It is not always easy however to determine which of the two is cause and which effect.

Since instinctive behaviour was originally directed by chemical tropisms we can understand that the endocrine glands which still manufacture chemical controls will continue to influence such behaviour. We may consider the psychological changes associated with disturbances of the individual endocrine glands.

PSYCHONEUROSES AND THE THYROID

The necessity for thyroxine in the due maintenance of mental activity is well recognized. It has been one of the triumphs of thyroid medication that it has rescued many from mental hebetude or worse to a life of normal mental activity. The cretin is dwarfed in body and mind but is curiously placid and adaptable just as the sufferer from an excess of thyroid is irritable and intransigent.

Myxoedema.—The adult sufferer from thyroid defect—that is myxoedema—is more likely to be conscious of failing powers, and is therefore apt to be morose and suspicious referring internal difficulties to external causes as we are all apt to do. More usually the mental attitude is one of resigned melancholy. Sometimes there are hallucinations of sight and hearing. But the patient with myxoedema may occasionally become acutely maniacal. On several occasions I saw a patient with myxoedema and he improved very much on thyroid treatment. Then I lost sight of him and I thought that as he had now found the appropriate dose of thyroid extract he was treating himself. But I found later that he had abandoned medical treatment to take up Christian Science. Perhaps this was the first sign of impaired mental balance but at any rate he became violently maniacal and was removed to an asylum. Here it was recognized that he was myxoedematous but in view of his mania they did not venture to give him thyroid. However as he did not improve at all in three weeks they put him on thyroid with immediate benefit. He soon became sane and able to give his medical history and the superintendent communicated with me. He remained quite sane during some years later after an operation for gall-stones. I have heard of other similar cases.

But children and adults whose hypothyroidism falls short of cretinism or myxoedema may also have their mental state greatly improved by thyroid treatment. In daily life one sees many people whose condition does not amount to actual disease but proclaims aloud their need for thyroid.

The thyroid has been called the gland of creation. Just as thyroid secretion is essential to reproductive activity so it is needed for every kind of creative activity mental or artistic. Some time ago Crichton-Miller asked if anyone had ever heard of a myxoedematous artist. Tredgold

replied by citing a cretin who was an artist of some repute at Zurich in the eighteenth century But possibly he was really only an achondroplasic Crichton-Miller has returned to his point, and has asked for cases of sub thyroidic creators—be it of works of art or of children It is of course true that a subthyroidic woman may have children after she has had thyroid treatment He further maintains that child-bearing and artistic creation are mutually exclusive the storehouse of creative energy being unable to cope with both kinds of creation And I think that though we find apparent exceptions to this rule it is very rare for both kinds of creation to be simultaneously possible

Hyperthyroidism —Crile says 'I have never known a case of Graves s disease to be caused by success or happiness alone or by hard physical labour unattended by psychic strain or to be the result of energy voluntarily discharged Sufferers from this condition are always irritable and tend to be explosive Thoroughly unreasonable they regard themselves as the only righteous persons in a wicked and froward world O cursed spite that ever I was born to set it right is the burden of their lament We have been reminded that Shelley had a hyperthyroid face He certainly represented the hyperthyroidic temperament at its best Of his creative genius there is no doubt but in practical matters he beat his wings ineffectually against the bars of his cage Indeed his friend Hogg compared him with an albatross—magnificent in flight but merely grotesque in captivity

The sufferer from hyperthyroidism always experiences difficulty with her environment which not only makes her gey ill to live with but which may precipitate her into actual insanity with suicidal tendencies The thyroid gland is apt to enlarge in nerve storms while in the manic depressive psychoses I have seen the excited phase accompanied by signs of an overactive thyroid to be replaced by signs of underaction as the phase of depression comes on

I am more and more impressed with the influence of emotion in the causation of Graves s disease which is readily comprehensible in view of the sympathetic innervation of the thyroid gland This is particularly likely to happen if the distressing emotion has a matrimonial origin while it often adds considerably to the difficulty in detecting the cause as this is not usually a matter of advertisement Fear is another emotion which has a marked effect in exciting hyperthyroidism as was well shown during the air raids on London Russell Brain has recently shown that exophthalmos is due to an affection of the upper part of the mid brain and that no hard and fast line can be drawn between the exophthalmos of Graves s disease and that of a central nervous lesion This adds one more link to the connexion between the emotional nervous system and the endocrines

Psychoneuroses and the Pituitary

It is curious that many of the psychological accompaniments of pituitary disease are the same whether associated with excess or with defect of pituitary activity In fact usually we can only speak of the psychological effects of *dyspituitarism* It is true that a well developed anterior lobe is often associated with an imaginative force which can be controlled and brought to the service of an active brain the fortunate possessor is also often musical and in short a practical visionary It is also true that sufferers from a minor degree of hypopituitarism compensate for it by persistent conscientious effort often in excess of their physical strength But both the pituitary giant and the Frohlich tend to lack inhibitions They may lie steal and commit offences in a foolish pointless way often it would seem merely to attract attention They try to compensate for their feeling of inferiority by a craving for the limelight and if they cannot achieve this with their social equals they seek for it from their social inferiors They are very prone to fantasy thinking seeking a dream world in which to escape from this feeling of inferiority In two of my recent cases (one in a girl of 17) the craving for a child led to fantasies of pregnancy Another girl stole a gold watch from a schoolfellow and on her return home for the holidays told her mother it had been given her as a prize for good conduct!

It has been pointed out to me that these symptoms are not uncommon in psychoneurotics without pituitary disease From the close association between the glandular and nervous structures in this particular region it does not surprise me that pituitary disease should excite such typical reactions

Psychoneuroses and the Adrenals

The adrenal medulla from its activating effect on the sympathetic is a fighting gland And as the adrenal cortex tends to virilism the owner of a well developed pair of adrenals is a pugnacious and masculine type with plenty of drive not to say aggression If the adrenals are defective we see a weakening of all these characteristics with a tendency for the vagus to get the upper hand which may precipitate such things as asthma If the adrenals are overactive we find a liability to anxiety neurosis, and to phobias of all kinds In such an individual the dominant emotion is *fear*

I have recorded an extraordinary case in which a woman became terror stricken deploring a mysterious calamity which had fallen upon her At last she confided to me that she felt as if she were turning into a man This led me to look for an adrenal tumour which was found and removed Her case is of especial interest because the psychological changes were recognizable before the physical Her terror I refer to the concomitant irritation of the adrenal medulla by the tumour

These are but a few examples from a field of great interest which offers opportunities for further research For as Pottenger says 'Between the vegetative and psychical systems a vicious circle is established and each harmful stimulus in the one influences the other Every disease process of a serious nature, therefore must have a psychical side to it

BLADDER HEALING AFTER SUPRAPUBIC CYSTOTOMY

ESPECIALLY IN PROSTATECTOMY *

BY

JAMES B MACALPINE F R C S

HONORARY SURGEON AND SURGEON IN CHARGE OF THE GENITO-URINARY DEPARTMENT SALFORD ROYAL HOSPITAL MANCHESTER

In spite of many methods and fancies the post operative healing of bladder wounds remains unsatisfactory as is shown by the slow recovery from sepsis and the formation of sloughs for whose separation much time may be required As the only particular in which the suprapubic wound differs from any other surgical wound is contamination with urine and as I hold that to overcome this is the key to improvement may I inflict on you some personal views believing that they present advantages sufficient to justify me in bringing them to your notice?

I propose to consider (*a*) the methods of wound treatment which are responsible for this soakage (*b*) the results of urinary extravasation and (*c*) to suggest improved methods As the bladder is more frequently opened for transvesical prostatectomy than for other

* Based on a paper read before the Manchester Surgical Society in opening a discussion on the technique of prostatectomy

purposes and as this operation makes greater demands on the skill of the surgeon during the post-operative period than most other intravesical procedures I shall discuss the matter with prostatectomy in mind asking you to remember that the principles enunciated are equally applicable to suprapubic cystotomies for other purposes

Wound Treatment and Wound Sepsis

In discussing drainage I shall not consider immediate bladder closure, which is practised by a few surgeons but of which I have little experience Most operators employ a suprapubic drainage tube and in what follows the use of a tube is understood

Three methods for collecting urine from the suprapubic region hold the field in this country The first consists in the application of large dressings into which the patient's urine soaks—a more uncomfortable unsurgical and septic practice can scarcely be imagined surely there is no comparable disgrace in modern surgery! Not infrequently these unfortunates lie in the extremity of discomfort on a cold urine soaked bed which aids and abets the development of pulmonary complications In the second method a Hamilton Irving dish is placed on the wound at the end of the operation or on the return of the patient to the ward and the urine drains into a receiver placed between his thighs By some surgeons a bag containing boric acid crystals is introduced into the cup so that the crystals may dissolve in the urine to keep it acid and to inhibit the growth of organisms In criticism of this practice I would say that boric acid is a feeble antiseptic and a weak acid and that its presence further increases the hypertonicity of the urine with results which I shall discuss shortly Moreover the drainage of a Hamilton Irving dish is imperfect as the outlet tubes cannot at present be made to emerge from the lowest point of the apparatus thus there is always retained a quantity of urine which lies on the abdominal wall and in the wound and keeps them both sodden In the third method a tube placed in the bladder is joined by a connecting tube to the receiver at the bedside Of these three the second is the least objectionable and the most popular but all have a fundamental fault in that the receive only such urine as has reached the surface of the abdomen instead of going in search of it to the depths of the wound

Difficulties of Bladder Drainage

When a vesical wound is sutured we speak of closing it around a tube—that is to say we place a tube in one portion and draw together the remainder of the wound by interrupted stitches In the generous opening which is nowadays customary a considerable number of sutures may be required We then practise self deception in believing that this suture line is watertight and that the only outlet for bladder contents is the tube This credulity requires correction It probably springs from a comparison with the conditions obtaining in the surgery of the gastro-intestinal tract But the two cases are not comparable The urologist is denied that supreme boon vouchsafed to the abdominal surgeon—the peritoneum The peritoneum enables all the difference Its two applied surfaces have wonderful and prompt adhesive properties which greatly assist the abdominal surgeon's meddlesome The external coats of the bladder on the other hand have but inferior powers of adhesion and watertightness perfect wonder attends on one of the healing

The drainage of the bladder suffers another severe disadvantage in that it is displaced against gravity Urine therefore has to go into the bladder from the tube as it is poured in and it bathes the sutures and presses them apart so that they shall no longer be watertight Soon the whole of the fluid outside the bladder approximates to that within and the two together rise until the abdominal parietes are reached when they overflow on to the surface to be received into the Hamilton Irving dish or other device The fundamental fault is the saturation of the extravesical structures in urine before any of it arrives on the surface of the abdomen The damage is done before the usually applied external contrivances come into action The tube itself carries away only a small proportion of the urine and the water levels within and without it are the same If the wound is exposed and carefully watched urine can be seen to well up through it The main function of the tube is to provide an egress for blood clots

The cellular spaces around the bladder are extensive in addition to those wide areas in front and at the sides which are evident at operation they pass backwards as far as the rectum and sacrum and communicate freely above with the whole of the retroperitoneal cellular system They are moreover very vulnerable and are sites from which toxic material can be freely absorbed into the system To safeguard them from contamination appears fundamental yet the extreme importance of so doing has not as yet been fully appreciated or perhaps a way of so doing has not been popularized I would ask any surgeon who uses these external methods of diverting the urine and who has had the misfortune to lose a patient to open up the perivesical tissues and examine their state The condition is an actual extravasation of urine with all its attendant dangers

Results of Urinary Extravasation

1 Healthy uninfected urine introduced into the body is an intensely irritating fluid capable by itself of producing severe injury and even tissue death The causes of this irritation are probably numerous and not completely understood but the following may be mentioned It is a supersaturated (and therefore intensely hypertonic) solution Its constituents do not exist in simple solution but are held in adsorption on the urinary colloids enabling the urine to contain enormous volumes of salts As an example it may be mentioned that urine holds in solution three or four times as much oxalic acid and fifteen or more times as much uric acid as can be dissolved in plain water In itself this supersaturation is injurious to infiltrated tissues Furthermore the urine contains traces of pepsin (Troller[1]) and trypsin (Benderskys) each possessing digestive and therefore destructive powers

2 The urine however in many or most instances is infected when it escapes from the bladder as a result of antecedent urinary troubles or their treatment In any case it does not long remain sterile in a suprapubic wound The effects of a perivesical suppuration are thus superadded Urinary extravasation seen in the perineum is a familiar clinical picture the mention of which calls up visions of oedema emphysema and gangrene with severe toxaemia In what respect does the suprapubic condition differ from this save probably that in the latter virulent anaerobic organisms play a small part and that the cellulitis is hidden from view by the abdominal parietes?

3 When sepsis has occurred the presence of tissue-splitting organisms adds fresh chemical irritants (ammonia etc.) to those already enumerated

4 A certain amount of the urine is presumably reabsorbed into the circulation In protracted cases recognizable organic changes in the renal function already much damaged in most cases by back pressure supervene and the kidneys have no margin to cope with reabsorbed urinary extravasations Healthy urine introduced into the blood stream is well known to be toxic A rabbit weighing 1 kilogram dies after the injection of

replied by citing a cretin who was an artist of some repute at Zurich in the eighteenth century But possibly he was really only an achondroplasic Crichton-Miller has returned to his point and has asked for cases of sub thyroidic creators—be it of works of art or of children It is of course true that a subthyroidic woman may have children after she has had thyroid treatment He further maintains that child bearing and artistic creation are mutually exclusive the storehouse of creative energy being unable to cope with both kinds of creation And I think that though we find apparent exceptions to this rule, it is very rare for both kinds of creation to be simultaneously possible

Hyperthyroidism —Crile says I have never known a case of Graves's disease to be caused by success or happiness alone or by hard physical labour unattended by psychic strain or to be the result of energy voluntarily discharged Sufferers from this condition are always irritable and tend to be explosive Thoroughly unreasonable they regard themselves as the only righteous persons in a wicked and froward world O cursed spite that ever I was born to set it right is the burden of their lament We have been reminded that Shelley had a hyperthyroid face He certainly represented the hyperthyroidic temperament at its best Of his creative genius there is no doubt, but in practical matters he beat his wings ineffectually against the bars of his cage Indeed his friend Hogg compared him with an albatross—magnificent in flight but merely grotesque in captivity

The sufferer from hyperthyroidism always experiences difficulty with her environment which not only makes her grey ill to live with but which may precipitate her into actual insanity with suicidal tendencies The thyroid gland is apt to enlarge in nerve storms while in the manic depressive psychoses I have seen the excited phase accompanied by signs of an overactive thyroid to be replaced by signs of underaction as the phase of depression comes on

I am more and more impressed with the influence of emotion in the causation of Graves's disease which is readily comprehensible in view of the sympathetic innervation of the thyroid gland This is particularly likely to happen if the distressing emotion has a matrimonial origin while it often adds considerably to the difficulty in detecting the cause as this is not usually a matter of advertisement Fear is another emotion which has a marked effect in exciting hyperthyroidism as was well shown during the air raids on London Russell Brain has recently shown that exophthalmos is due to an affection of the upper part of the mid brain and that no hard-and fast line can be drawn between the exophthalmos of Graves's disease and that of a central nervous lesion This adds one more link to the connexion between the emotional nervous system and the endocrines

Psychoneuroses and the Pituitary

It is curious that many of the psychological accompaniments of pituitary disease are the same whether associated with excess or with defect of pituitary activity In fact usually we can only speak of the psychological effects of *dyspituitarism* It is true that a well developed anterior lobe is often associated with an imaginative force which can be controlled and brought to the service of an active brain the fortunate possessor is also often musical and in short a practical visionary It is also true that sufferers from a minor degree of hypopituitarism compensate for it by persistent conscientious effort often in excess of their physical strength But both the pituitary giant and the Rohilch tend to lack inhibitions They may lie steal and commit offences in a foolish pointless way often it would seem merely to attract attention They try to compensate for their feeling of inferiority by a craving for the limelight and if they cannot achieve this with their social equals they seek for it from their social inferiors They are very prone to fantasy thinking seeking a dream world in which to escape from this feeling of inferiority In two of my recent cases (one in a girl of 17) the craving for a child led to fantasies of pregnancy Another girl stole a gold watch from a schoolfellow and on her return home for the holidays told her mother it had been given her as a prize for good conduct!

It has been pointed out to me that these symptoms are not uncommon in psychoneurotics without pituitary disease From the close association between the glandular and nervous structures in this particular region it does not surprise me that pituitary disease should excite such typical reactions

Psychoneuroses and the Adrenals

The adrenal medulla from its activating effect on the sympathetic is a fighting gland And as the adrenal cortex tends to virilism the owner of a well developed pair of adrenals is a pugnacious and masculine type with plenty of drive, not to say aggression If the adrenals are defective we see a weakening of all these characteristics with a tendency for the vagus to get the upper hand which may precipitate such things as asthma If the adrenals are overactive we find a liability to anxiety neurosis and to phobias of all kinds In such an individual the dominant emotion is *fear*

I have recorded an extraordinary case in which a woman became terror-stricken deploring a mysterious calamity which had fallen upon her At last she confided to me that she felt as if she were turning into a man This led me to look for an adrenal tumour, which was found and removed Her case is of especial interest because the psychological changes were recognizable before the physical Her terror I refer to the concomitant irritation of the adrenal medulla by the tumour

These are but a few examples from a field of great interest which offers opportunities for further research For as Pottenger says Between the vegetative and psychical systems a vicious circle is established and each harmful stimulus in the one influences the other Every disease process of a serious nature, therefore must have a psychical side to it

BLADDER HEALING AFTER SUPRAPUBIC CYSTOTOMY

ESPECIALLY IN PROSTATECTOMY*

BY

JAMES B MACALPINE, F R C S

HONORARY SURGEON AND SURGEON IN CHARGE OF THE GENITO-URINARY DEPARTMENT SALFORD ROYAL HOSPITAL MANCHESTER

In spite of many methods and fancies the post operative healing of bladder wounds remains unsatisfactory as is shown by the slow recovery from sepsis and the formation of sloughs for whose separation much time may be required As the only particular in which the suprapubic wound differs from any other surgical wound is contamination with urine and as I hold that to overcome this is the key to improvement may I inflict on you some personal views believing that they present advantages sufficient to justify me in bringing them to your notice?

I propose to consider (*a*) the methods of wound treatment which are responsible for this soakage (*b*) the results of urinary extravasation and (*c*) to suggest improved methods As the bladder is more frequently opened for transvesical prostatectomy than for other

* Based on a paper read before the Manchester Surgical Society in opening a discussion on the technique of prostatectomy

purposes and as this operation makes greater demands on the skill of the surgeon during the post operative period than most other intravesical procedures I shall discuss the matter with prostatectomy in mind asking you to remember that the principles enunciated are equally applicable to suprapubic cystotomies for other purposes

Wound Treatment and Wound Soakage

In discussing drainage I shall not consider immediate bladder closure which is practised by a few surgeons but of which I have little experience Most operators employ a suprapubic drainage tube and in what follows the use of a tube is understood

Three methods for collecting urine from the suprapubic region hold the field in this country The first consists in the application of large dressings into which the patient s urine soaks—a more uncomfortable unsurgical and septic practice can scarcely be imagined surely there is no comparable disgrace in modern surgery! Not infrequently these unfortunates lie in the extremity of discomfort on a cold urine soaked bed which aids and abets the development of pulmonary complications In the second method a Hamilton Irving dish is placed on the wound at the end of the operation or on the return of the patient to the ward and the urine drains into a receiver placed between his thighs By some surgeons a bag containing boric acid crystals is introduced into the cup so that the crystals may dissolve in the urine to keep it acid and to inhibit the growth of organisms In criticism of this practice I would say that boric acid is a feeble antiseptic and a weak acid and that its presence further increases the hypertonicity of the urine with results which I shall discuss shortly Moreover the drainage of a Hamilton Irving dish is imperfect as the outlet tubes cannot at present be made to emerge from the lowest point of the apparatus thus there is always retained a quantity of urine which lies on the abdominal wall and in the wound and keeps them both sodden In the third method a tube placed in the bladder is joined by a connecting tube to the receiver at the bedside Of these three the second is the least objectionable and the most popular but all have a fundamental fault in that they receive only such urine as has reached the surface of the abdomen instead of going in search of it to the depths of the wound

Difficulties of Bladder Drainage

When a vesical wound is sutured we speak of closing it around a tube —that is to say we place a tube in one portion and draw together the remainder of the wound by interrupted stitches *In the generous opening* which is nowadays customary a considerable number of sutures may be required *We then practise self-deception* in believing that this suture line is watertight and that the only outlet for bladder contents is the tube This credulity requires correction It probably springs from a comparison with the conditions obtaining in the surgery of the gastro intestinal tract But the two cases are not comparable The urologist is denied that supreme boon vouchsafed to the abdominal surgeon—the peritoneum The peritoneum makes all the difference Its two applied surfaces have wonderful and prompt adhesive properties which greatly flatter the abdominal surgeon s needlework The external coats of the bladder *on the other hand* have but inferior powers of adhesion and watertightness must perforce await the tardy onset of *true healing*

The drainage of the bladder suffers another severe disadvantage in that it takes place *against gravity* Urine therefore passing into the bladder *from the kidneys* rises in that cavity until *it encounters* the suture line and promptly passes through *into the perivesical spaces* Soon the level of the *fluid outside* the bladder approximates to that within and the two together rise until the abdominal parietes are reached, when they overflow on to the surface to be received into the Hamilton Irving dish or other device The fundamental fault is the saturation of the extravesical structures in urine before any of it arrives on the surface of the abdomen The damage is done before the usually applied external contrivances come into action The tube itself carries away only a small proportion of the urine and the water levels within and *without it are the same* *If the wound is exposed* and carefully watched urine can be seen to well up *through it* The main function of the tube is to provide an egress for blood clots

The cellular spaces around the bladder are extensive in addition to those wide areas in front and at the sides which are evident at operation they pass backwards as far as the rectum and sacrum and communicate freely above with the whole of the retroperitoneal cellular system They are moreover very vulnerable and are sites from which toxic material can be freely absorbed into the system To safeguard them from contamination appears fundamental yet the extreme importance of so doing has not as yet been fully appreciated or perhaps a way of so doing has not been popularized I would ask any surgeon who uses these external methods of diverting the urine and who has had the misfortune to lose a patient to open up the perivesical tissues and examine their state The condition is an actual extravasation of urine with all its attendant dangers

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3 When sepsis has occurred the presence of urea-splitting organisms adds fresh chemical irritants (ammonia etc) to those already enumerated

4 A certain amount of this urine is presumably reabsorbed into the circulation In prostatic disease recovery depends largely *on the renal function*, already much damaged in most cases by back pressure sepsis old age and the like Such damaged organs are already working to full capacity and have no margin to cope with re absorbed urinary extravasations Healthy urine introduced into the blood stream is well known to be toxic A rabbit weighing 1 kilogram dies after the injection of

60 c.cm. of human urine into its circulation—a "urotony" (Bouchard[3])

5. A severe inflammatory focus has far-reaching effects on the damaged organs of an old man. By producing changes perhaps slight—a toxaemia, a cloudy swelling in elderly heart muscle, liver or kidney parenchyma—it delivers the *coup de grâce*. I believe that many prostatics die from extravasation of urine and that their deaths are variously attributed to uraemia, cardiac failure and the like, this being the mode of dying rather than the cause of death.

6. The later effects are delayed healing due to sepsis and necrosis in and below the abdominal parietes. Continued decomposition of urine leads to a resistant alkaline cystitis, deposition of phosphates in the wound, possibly subsequent extension of suppuration to other parts of the urinary tract, and later to the formation of phosphatic calculi. These complications, though important, do not call for a fuller discussion.

Suggestions for Prevention

All these post-operative misfortunes are the direct or indirect results of the escape of urine through the suture lines into cellular tissues. If there were no urine, the bladder and the suprapubic incision would heal just as favourably as do other wounds. If the urine from the very start could be kept *below the suture line* there would be no delay in healing, save such as is dependent on the temporary presence of a tube. A dry wound is the prime necessity of prostatic surgery.

Drainage by Suction

In my practice the wound is kept dry by suction. To facilitate this the patient is nursed with the wound exposed for suction apparatus cannot be efficiently attended to under bedclothes. Blankets are placed above on the chest and upper abdomen and below as high as the pubis and are in turn excluded by sterile towels and batiste. The dressings which were temporarily applied for transport from the theatre are removed and a thick layer of bismuth paraffin paste is applied around the operation area. Sterile wool is placed laterally to a point level with the anterior superior spines. A square of skin about 6 × 6 inches is thus exposed between the umbilicus and pubis. A loop of bandage applied to the wrist may be necessary to restrict the movements of the hands so that they cannot reach the wound or towels.

In the nursing home a small electric pump produces suction, but in the hospital I have had a water pump fitted in a linen room which distributes one branch to the male general ward and one to a side ward. Between the patient and the pump is inserted (*a*) a valve to preclude any possibility of back flow from the water system towards the patient, and (*b*) a Woulfe's bottle which acts as a reservoir for the urine. Other types of pump may be used, including a simple hand pump mounted on a stand.* The Sprengel pump sometimes used in the past gives inferior suction and should be replaced by the types described. An angled glass tube is fitted at the patient's end of the pump connexion. Periodically the pump is turned on and the tube passed down inside the rubber suprapubic drain and any contained fluid is thus withdrawn (Fig. 1). The quantity is generally small. If the output of urine in twenty-four hours be 50 ounces the hourly output will be approximately 2 ounces. If the suction is used each quarter of an hour only half an ounce of urine will be withdrawn. The pump is turned on, the glass tube is dipped once or twice within the rubber one and withdrawn in about five seconds, and the pump is turned off again. Ten seconds suffice for the whole manœuvre.

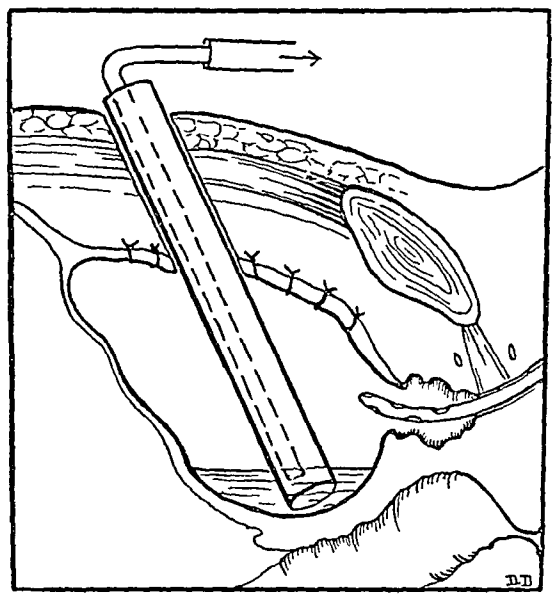


FIG. 1.

Precautions in Technique

In arranging this apparatus care must be taken that negative pressure is not set up within the bladder. There must be an adequate space for air entry along the side of the glass suction tube, otherwise the mucous membrane may be damaged owing to its being dragged into the end of the drain. The vesical limb of the glass tube must be shorter than the rubber drain, so that there will be no chance of its reaching the bladder mucosa. On the other hand it should not be more than a third of an inch shorter in order that the maximum quantity may be reached and the fluid level kept low.

Advantages of Suction Drainage

In the absence of unusual difficulty or of some technical fault the patient may be nursed from operation to the time of removal of the suprapubic drain without a single drop of urine falling on the abdominal wall. If vomiting or coughing occurs fluid may be forced up the tube on to the skin but it is small in amount and can be immediately removed by a touch of the suction pump. It follows that there is no wetting of the bed, no chilling of the patient through lying on a damp bed, and no disturbance from constantly changing draw sheets. I have frequently seen the original wool placed at the flank of the patient on his return to bed from the theatre clean and dry at the end of thirty-six hours. But desirable as are the dryness of the skin and bed and the quietude of the patient it is of trifling significance as compared with the importance of keeping the connective tissues of the pelvis sweet and free from urine. On this hang the future behaviour of the wound and the satisfactory convalescence. The time immediately after the operation and the subsequent twenty-four to forty-eight hours are of supreme importance. No time is lost therefore in removing the patient from the theatre and establishing suction. If for the first day or two infiltration can be successfully precluded the defences of the body will have been mobilized, some shutting off will have occurred, and the danger of perivesical soiling will be materially reduced.

It may be objected that the constant attention paid to the suction is more than can be given by the nursing staff of many institutions. This criticism is not valid. Bladder cases always make heavy nursing, but the time exacted by the manœuvre I have described is more than recovered by the freedom from changing of draw sheets while of

* Obtainable from Griffin and Tatlock, 34 Great Ducie Street, Manchester.

course there is no comparison in the comfort restfulness and progress of the patient Moreover if as I maintain, great advantages arise from this way of treating the post-operative bladder it would be unjustifiable to withhold *this treatment* even at the expense of additional nursing and even then economy would result owing to the abbreviated convalescence The amount of personal attention required of the surgeon is much reduced

METHODS OF SUCTION DRAINAGE

It is a time honoured dictum that bladder drainage should be free Why? The reasons for bladder drainage are the removal of urine of blood clot and possibly of pus Pus and urine are fluid and can escape from the bladder by small channels The only reason for the large tube is to allow the exit of blood clots Haemostasis is better with the modern operation than previously and at the end of most prostatectomies there is no bleeding The size of the drain must be determined by the degree of the haemorrhage A large tube leaves a gaping orifice on removal which collapses with difficulty Unnecessarily large ones should therefore be avoided for average cases in which there is practically no haemorrhage After toilet of the bladder I use a piece of tubing of No 14 size as this is neither so large as to delay wound closure nor so small as to impede suction down its lumen The tube may be dispensed with as soon as blood clots have ceased to come away

How long shall the tube be retained? Freyer said four or five days and most textbooks repeat his teaching When the vesical contents are entirely fluid or particulate its usefulness disappears With the modern operations blood clots rarely trouble and are almost invariably absent after the first day Four or five days is too long for at the end of that time stiffening has occurred in the wound which prevents its *spontaneous* coaptation My own practice is to remove the tube at *the end of* thirty six hours The sooner the drain is out the more rapidly the wound margins recover their original position and adhere

These remarks apply not only to the wound in the parietes, but also to that in the bladder From this point onwards an inlying catheter may be relied upon for drainage but there are advantages in continuing suction by some tube of lesser bulk for a further few days Once again it is imperative to *safeguard* the vesical mucosa from negative pressure for as soon as fluid is removed from the bladder suction acts in a closed viscus and may injure its lining To prevent this an inlet of air should be arranged Either of the two devices shown in Figs 2 and 3 may be used Fig 2 shows a double ended catheter with two interruptions similar to those in a Malaquet catheter* It is inserted *via the urethra during* the operation and drawn through so that one end emerges from the *suprapubic wound* It is so arranged that one of the interruptions lies in the prostatic cavity and the other on the vesical base Suction applied to either end will remove urine from the bladder until the level is below that of the catheter eyes After the urine is removed negative intravesical pressure is obviated by air passing in at the opposite end and traversing the catheter Suction should not be persisted in unless the air can be heard entering the inlet tube The advantage of this apparatus is the small size of the tube, which emerges through the suprapubic opening This permits *almost complete closure the wound still remaining dry*

Fig 3 shows an easily constructed device which can be used as an alternative A cannula* (bore 9 Charrière length 3¾ inches) is driven by means of its trocar through

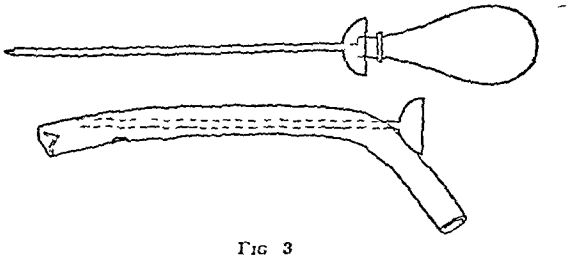


FIG 3

the lateral wall of a piece of No 7 or No 8 rubber tubing *and left in position* so that one-third of an inch of the rubber tubing overlaps and protects the lowest end of the cannula The combination is introduced into the suprapubic wound Suction is applied to the free end of the rubber tube The metal cannula *is important* It forms a *safety inlet for air and the* water level is kept down to its tip This device is easier *to use* than the double ended catheter, the air inlet to which sometimes gives trouble *though it is* very efficient when some experience has been gained But the second device is recommended for those seeking to prove the methods for the first time In each the desire to allow the bladder sinus to contract easily and to the greatest possible degree regulates the type of the tube The catheter is rather smaller than the tube

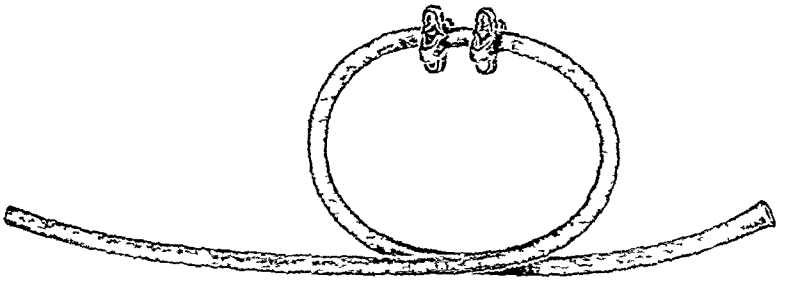


FIG 2

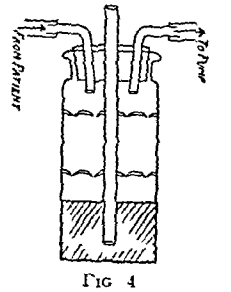


FIG 4

A third method is to apply suction directly to the inlying catheter the precaution having been taken of inserting a pressure valve The valve shown in Fig 4 is easily constructed If the rod is dipped into mercury at varying levels the force of the suction available in the bladder can be regulated When in use the mercury bubbles or boils and the two diaphragms seen in the figure act as a buffer to prevent *its reaching* the suction tubes This valve can be applied between the pump and the Woulfe's bottle or as a collateral If desired it may be used in conjunction with either of the above-described tubes

Suction of all kinds is dispensed with towards the end of the first week the inlying catheter being retained A gauze dressing is *placed on the* wound which as a rule

* Obtainable from the Genito-Urinary Manufacturing Co 8a Devonshire Street London W 1

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remains dry In the subsequent two or three days lotions introduced through the catheter for bladder lavage emerge suprapubically but even this soon ceases

OPERATIVE RESULTS

Since I adopted this technique, more than two years ago my personal results have greatly improved It is true to say that from no private patients wound have I removed any slough however small The whole wound with the exception of the tube track has in every case healed *per primam* and complete wound dryness has never been delayed beyond a fortnight The patients leave their beds as a rule in about three weeks Pyuria gives little or no trouble and there is no difficulty in maintaining an acid and healthy urine The deposition of phosphates has never been so much as suggested It is scarcely necessary to add that the personal well being of the patients is for the most part excellent Claims but little inferior may also be made for my hospital cases The methods are quite superior to any I have previously tried or seen tried and will I venture to hope be given a trial by other members of the profession

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[3] *Compt rend Acad des Sci* 1886

CYSTIC DILATATION OF THE COMMON BILE DUCT

REPORT OF A CASE WITH UNUSUAL FEATURES

BY

JAMES H SAINT MD MS, FRCS

SURGICAL REGISTRAR ROYAL VICTORIA INFIRMARY NEWCASTLE UPON TYNE LATE FELLOW IN SURGERY MAYO CLINIC ROCHESTER MINNESOTA U S A

(*With Special Plate*)

The comparative rarity of cystic dilatation of the common bile duct usually referred to as common duct cyst may be judged from the number of recorded cases McConnell[1] was able to collect records of only thirty five cases up to the end of 1917 Ten years later the number was reported by Judd and Greene to have increased to sixty four They state that in 17 381 operations performed on the biliary tract at the Mayo Clinic a common duct cyst was encountered only once The increasing interest in the condition due to the more frequent writings on the subject during the past few years has resulted in the number being increased to ninety three in 1930 as reported by Wilson [3]

It is only within recent years that it has been diagnosed before operation the first person to do this being Neugebauer[4] in 1924 Since then only Taylor[5] and Iselin[6] have attained this rare distinction The case reported below was no exception to the general rule of failure of preoperative diagnosis for its clinical features were so unusual that the thought of the possibility of a common duct cyst being present was never even entertained

CASE HISTORY AND EXAMINATION

J C a married woman aged 43 years was admitted to the Royal Victoria Infirmary on September 9th 1931 with the complaint of severe upper abdominal pain The onset of this pain occurred some six hours before admission For the next two hours she was able to go about but the pain then became worse and she went to bed Two hours later she vomited a small quantity of greenish bitter material this gave her a little relief for a while and then the pain began to increase in severity and continued to do so up to the time of admission The pain was sharp and jabbing in character and did not radiate into the back or shoulders The bowels had moved normally on the morning of admission before the onset of the pain but after this there was no further evacuation Micturition was normal and not in any way affected by the pain

Most of the previous history was elicited a few days after the operation for when seen after admission she was too ill to give any coherent story She had suffered from stomach trouble which she described as biliousness off and on for years beginning at the age of about 25 It took the form of mild attacks of epigastric pain coming on two to three hours after food sometimes persisting until the next meal the taking of which brought relief at other times she had nausea and was relieved by vomiting a small quantity of bilious material The average duration of one of these attacks was a week and she had several in a year She had not observed any relation between these attacks and the ingestion of some particular food Fatty foods she liked and they agreed with her Her bowels had always been regular there was no history of melaena nor had her stools ever been clay coloured She had had no trouble with micturition Her menstrual function was free from any irregularities Apart from her stomach trouble she had never had any illnesses or accidents in her life She had never been jaundiced or even sallow nor—so far as she knew—had she ever had typhoid fever or a pyrexia of unknown origin She had one child now 22 years of age who had always been healthy No miscarriages or abortions

On examination she was in great pain and showed some degree of shock Pulse 120 beats per minute and of low tension temperature 97 5° hands cold slight cold sweat on forehead tongue thinly coated with white fur

The abdomen was somewhat scaphoid in appearance Immobility of the abdominal wall was present respiratory movement being entirely thoracic in character There was a generalized board like rigidity with tenderness in the epigastrium most marked over the right rectus at a level about midway between the umbilicus and the xiphisternum No tumour could be felt On percussion there was no apparent loss or increase of liver dullness while no dullness was present in either flank The clinical picture seemed to be that of a clear cut case of acute perforation of a peptic ulcer and this diagnosis was accordingly made

Operation

A mid line supra umbilical incision was made On opening the peritoneal cavity there was no escape of gas No ulcer was present either in the stomach or in the duodenum and there was no evidence of peritonitis It was noticed that the first and second parts of the duodenum and the pyloric part of the stomach were pushed forward and the proximal half of the transverse colon displaced downwards The agent responsible for this was a large globular cystic swelling about 12 cm in diameter Above it the gall bladder could be seen lying distended and normal in size and appearance The liver showed no sign of disease

The cyst was covered with peritoneum continuous with the gastro hepatic omentum and with that covering the duodenum It extended above to the hilum of the liver below to the lower end of the second part of the duodenum to the left nearly as far as the mid line and to the right as far as the edge of the liver The cyst was found to extend posteriorly to the right kidney but a hand could easily be passed between it and the lower two thirds of the anterior surface of the kidney Anteriorly it was pushing the head of the pancreas forwards as well as the duodenum The foramen of Winslow was not found and the exact relation of the cyst to the cystic duct could not be defined The cyst was thought at first to be pancreatic in origin but on aspiration with a small needle cloudy bile was withdrawn this making it clear that the condition was one of cystic dilatation of the common duct Seeing that the bile looked infected and that the condition of the patient was not good it was decided to drain the cyst and leave any further operative procedure until a later date A trocar and cannula was inserted into the anterior wall of the cyst above and to the right of the duodenum On withdrawal of the trocar about eight ounces of fluid were evacuated The cannula was then removed and the hole made by it enlarged sufficiently to admit the index finger Owing to the large size of the cyst the whole of its

inner wall could not be palpated but the portion felt was smooth So far as one could judge the wall of the cyst was of the same thickness as that of a normal common duct No communications between the cyst and gall bladder hepatic duct or duodenum could be found A small tube was then *inserted into the cyst through the enlarged trocar puncture* wound the edge of which was sutured tightly around the tube The abdominal wall was then closed in layers the tube being brought out through the inferior angle of the wound

Subsequent History

The patient was far from well on the day following the operation but later began to make excellent progress After two days the bile lost its cloudy appearance and became clear and normal looking The faeces were normal in colour

Dr H J Slade bacteriologist to the Infirmary reported as follows on the specimen of bile sent him lactose fermenting and non lactose fermenting bacilli were grown in the cultures from the bile The lactose fermenters were typical of *B coli communis* The characteristics of the non lactose fermenters were as follows motile with progression and Gram-negative Sugar fermentations as for *B typhosus* Agglutination positive for *B typhosus* Conclusions *B coli* and *B typhosus* infection The Widal reaction was negative for *B paratyphosus* but strongly positive for *B typhosus* in dilutions of 1 in 25 1 in 50 and slightly so in a dilution of 1 in 125

As a consequence of these findings the patient was removed on September 16th to the Newcastle upon Tyne City Hospital for Infectious Diseases Walkergate where she was under the care of Dr Basil Dormer who has kindly supplied me with the following details of her progress On admission the tube was draining freely The sutures were removed on September 19th and the tube came out of the wound on September 21st (twelve days after operation) *B typhosus* was again isolated from the bile a specimen of faeces examined for this organism was negative A Widal test showed agglutination in a dilution of 1 in 125 She appeared to make an uninterrupted recovery until about 2 p m on September 26th when she complained of feeling unwell and of stiffness in the limbs There was no pain or other localizing symptom in the chest or abdomen On examination the pulse was imperceptible and the patient cyanosed Digitalis and strychnine were injected subcutaneously and oxygen was administered but the patient died at 5 15 p m

Post mortem Findings

The wound had healed by first intention A small hole with slightly reddened edges at the inferior angle indicated the drainage opening The wound was reopened and slightly enlarged The anterior wall of the cyst around its drainage opening was adherent to the anterior abdominal wall The adhesions were separated and a clear view of the abdominal cavity was obtained There was no evidence of infection extravasation of bile or other abnormality The cyst was collapsed and together with its connexions above and below was removed *en masse* in order that its relations might be more carefully studied Fig 1 (on Plate) is a photograph of the specimen obtained the cyst and duodenum having been cut open The cyst had shrunk to about the size of a tangerine orange In its upper part were seen two openings The larger led into the common hepatic duct which divided into its two branches about half an inch above its junction with the cyst Above the cyst there was no dilatation of the extra or intra hepatic bile ducts The smaller opening led into the cystic duct which was not dilated It was seen to join the cyst independently of the common hepatic duct At the lower end of the cyst was a small slit like opening A probe introduced into this passed obliquely downwards and to the right through the duodenal wall and emerged into the lumen of the duodenum in the usual position On cutting open this part of the duct it was found to be narrower than normal but the ampulla was well defined and the small opening of the pancreatic duct was seen just above it

From the above description it will be seen that the cystic dilatation involved the whole of the extra duodenal portion of the common duct and also the lower end of the common hepatic duct The small intestine was opened and found to contain bile coloured faecal matter The Peyer's patches showed no evidence of inflammation or ulceration The heart was not dilated and no ante-mortem thrombus or embolus was present The myocardium was pale and flabby and the coronary arteries were free from disease The lungs showed no evidence of embolism or thrombosis nor was pneumonia or congestion present Permission to examine the brain was refused The above findings are insufficient to establish the cause of death

COMMENTARY

Certain interesting features of this condition seem worthy of mention

Females predominate in a proportion of nearly 5 to 1 The age at which the condition has been found varies considerably one case having been reported in a still-born foetus while the oldest patient was 66 The majority of cases however have come to operation in late adolescent or early adult life

As to the pathological anatomy the cyst is formed from a dilatation of the extra-duodenal portion of the common duct and also as in the present case of the lower portion of the common hepatic duct The right and left hepatic ducts are not dilated nor is the intramural portion of the common duct usually affected although in some cases there has been a diminution and in others an increase in the diameter of this portion of the duct The liver usually shows no pathological change but in a few cases a mild degree of biliary cirrhosis has appeared to exist This type of dilatation is therefore very different from that due to obstruction of the common duct by stones or disease of the pancreas In this case the common duct is uniformly enlarged throughout its whole length above the site of obstruction while the dilatation also involves the hepatic ducts the diameter of which is increased more or less proportionately to that of the common duct The common duct may dilate to the size of a loop of small intestine but rarely even in advanced cases does it become larger A cyst of the common duct on the other hand may assume enormous proportions Although the smallest one reported was about 3 by 2½ cm in most instances the cyst is usually *much larger* varying in size from a tangerine orange to a man's head A capacity of four to five litres has been recorded The duodenum is pushed forwards and medially by the cyst which extends for a variable distance to the left behind the pancreas and pyloric part of the stomach The hepatic flexure and right half of the transverse colon are displaced downwards

As regards etiology the two principal hypotheses which have been advanced in explanation of the formation of a cyst of the common duct are first that of intermittent obstruction in the lower part of the duct with consequent dilatation above and secondly that which regards the condition as a congenital anomaly The first theory is based upon the fact that in some cases the direction of the intramural portion of the common duct differed from the normal or else there was present a valve like duplication of the wall of the cyst at its opening into this terminal part of the duct (Waller *et alii*) It is thought that when the cyst is filled to a certain degree either of these conditions produces a kink leading to a temporary obstruction to the flow of bile into the duodenum On further distension of the cyst due to the continuous flow of bile into it from the liver the kink is freed and bile is thus allowed to pass from the cyst into the duodenum While this mechanism offers an explanation of the intermittent jaundice observed in these cases there seems no convincing evidence in favour of its being the causative factor in the production of the dilatation of the common duct Indeed it would seem for the following reasons that the abnormalities noted are more likely to be a result of the dilatation than its cause Intermittent obstruction in a hollow muscular system always leads to a uniform dilatation above the obstruction of the system affected

We know that the intermittent obstruction caused by a stone in the ureter leads to dilatation both of the ureter above and also of the pelvis and calyces of the kidney To make a more pertinent observation the dilatation caused by a stone in the common duct in the same way not only affects that part of the common duct above it but extends upwards along the extra or intra-hepatic bile ducts However in cases of common duct cyst the dilatation ceases abruptly in the region of the common hepatic duct and is not continued upwards, the hepatic ducts above the cyst being unaffected Further it would be difficult to give credence to intermittent obstruction as the cause of cyst formation in Fowler's case [6] in which the lumen of the intramural portion of the common duct was dilated to such an extent that the operator was able to pass his finger from the cyst into the duodenum An additional objection to this hypothesis is to be found in the absence of jaundice in the present case, an indication that no obstruction to the flow of bile into the duodenum had ever existed—this in spite of the fact that the lumen of the terminal portion of the common duct was narrower than usual

It seems on the whole that the condition should be regarded as a congenital anomaly until further evidence may disprove this hypothesis The fact that such a cyst has been found in a foetus (Heiliger[9]) supports this opinion The condition appears to be analogous to the so called idiopathic dilatations which have been found in other hollow muscular systems The ultimate causative factor whether primarily muscular or nervous in origin still remains unknown

SYMPTOMATOLOGY

In most cases the onset of symptoms takes place in childhood and from that time they appear intermittently In a typical case the patient suffers from intermittent attacks consisting of the triad upper abdominal pain, vomiting and jaundice and the presence of a palpable tumour in the right hypochondrium The pain may vary in intensity from a mildness causing the patient little worry to a severity requiring morphine for its relief It usually occurs in the right hypochondrium but its radiation into the back and shoulder is variable Vomiting nearly always accompanies the pain and may be severe enough to cause great distress Jaundice has proved to be the most constant symptom in this condition and although it may be present only as a slight icteric tinge yet in nearly all the recorded cases it has been of marked degree The presence of a tumour more especially if it appears while an attack is under observation, as in Taylor's case [5] can be regarded as probably the most significant diagnostic factor Only in a few cases has it been recorded as absent When present the tumour may vary considerably in size sometimes being just palpable at other times extending from the costal margin above to the crest of the ilium below Up to the present time the condition has been diagnosed prior to operation in only three cases The many diagnoses which have been made include hydatid cyst (the most frequent) pancreatic cyst diseases of the gall bladder and ducts other than the cystic cyst or abscess of the liver hydronephrosis and ovarian cyst It is now established that the intermittent appearance of the clinical triad mentioned above, together with the presence of a tumour in the right hypochondrium occurring in a young individual especially a female should point to the diagnosis of cystic dilatation of the common bile duct

UNUSUAL FEATURES

Having described briefly the clinical features typical of the condition it will suffice to draw attention to the uncommon characteristics of the present case (1) The patient was of middle age (2) She was perfectly healthy throughout her childhood and adolescence the gastric symptoms not beginning till the age of 25 (3) Jaundice was never present at any time (4) No tumour was palpable (This however, is not surprising considering the board like rigidity of the abdominal wall and it is not possible to say whether or not a tumour would have been felt had the patient been examined when in ordinary health or during one of her bilious attacks) (5) Clinically the condition of the patient on the first occasion on which she had had need of medical attention resembled that of acute perforation of a peptic ulcer The cause of the patient's illness was apparently an acute cholangitis The bile contained *B typhosus* and *B coli* The Widal reaction two days after operation showed an agglutination in a dilution up to 1 in 125 a week later the agglutination remained the same This finding leads one to the conclusion that the patient was a typhoid carrier and was not suffering from an acute typhoidal infection for in such a case the Widal reaction after nine days would probably have shown agglutination in a dilution in at least 1 in 1 000 With *B typhosus* as the infective agent thus disposed of, it would appear that the causative organism of the acute cholangitis was the *B coli*

TREATMENT

There is no doubt that the treatment of choice is the performance of an anastomosis through which bile may pass easily into the upper gastro intestinal tract and so reduce stasis and lessen the tendency to cholangitis The results in cases treated by this method of primary anastomosis have been much more successful than those in which other types of treatment have been employed The anastomosis most commonly advocated is a choledocho-duodenostomy but a cholecysto gastrostomy appears to be equally efficacious Other operative procedures such as aspiration (which obviously can be only a temporary measure) and marsupialization of the cyst, have not proved satisfactory External drainage of the cyst as the sole procedure has not met with much success death resulting in some cases from peritonitis or haemorrhage while in those patients who have lived a biliary fistula has sometimes persisted for months only for its eventual closure to be followed by a recurrence of symptoms In several instances however the performance of secondary anastomosis between the cyst and the duodenum or jejunum following a preliminary drainage has proved satisfactory In the present case it was intended that a choledocho duodenostomy should be performed at an early date after the patient had recovered fully from the effects of her acute illness Everything seemed propitious for the carrying out of that intention when the patient died suddenly from causes apparently unassociated with the condition for which she had been operated upon

I wish to thank Mr J Hamilton Barclay into whose clinic the patient was admitted for his permission to publish this case

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A CASE OF ADENOMATOUS PAPILLOMA OF THE DUODENUM

BY

ANDREW FOWLER F R C S ED

ASSISTANT SURGEON ROYAL INFIRMARY ABERDEEN

(With Special Plate)

The rarity of this condition is evidenced by the following short review of the literature Camp[1] in 1924 reported a case of myoma of the duodenum Golden[2] in 1928 from a thorough review of the literature on non malignant duodenal tumours collected seventeen cases and recorded two others from his own clinic A further survey was undertaken by Balfour and Henderson[3] in 1929 when four additional cases were placed on record all of which were proved to be adenomata one being of the polypoid type Bookman[4] in 1930 described another case and Waters[5] in the same year reported a case of papilloma in the duodenum prolapsing through the pylorus from the stomach

CASE HISTORY

The patient a woman of 63 had from early adolescence experienced gastric symptoms which apparently became more pronounced ten years ago Since then she had constantly been under dietetic and alkaline treatment From 1926 onwards symptoms suggested duodenal ulcer and during this period she experienced several attacks of melaena A radiological diagnosis of duodenal ulcer was made in November 1926 In October 1929 as no improvement had resulted from careful medical treatment a further investigation was carried out

On examination the patient was in poor general condition and suffering from a secondary anaemia Except for some tenderness over the upper part of the right rectus muscle there were no physical signs in the abdomen A test meal showed complete achlorhydria Occult blood was found in the stools

X RAY INVESTIGATION

Owing to the weakness of the patient a radiological examination had to be made in the supine position A breakfast cupful of barium was given The stomach was of good tone and showed very active peristalsis Barium output was small and the stomach took five hours to empty A skiagram taken soon after the meal showed a contracted duodenal cap but a dilatation of the descending limb (Fig 2 on Plate) A second skiagram taken some ten minutes later showed that about eight inches from the duodeno jejunal flexure a small length of jejunum was dilated with a narrowing beyond (Fig 3) The passage of barium was held up at this point for a space of five to ten minutes Dilatation of the duodenum was now less apparent The remainder of the gastro intestinal tract showed nothing abnormal

The presence of a contracted cap and the slow emptying of the stomach led to a diagnosis of stenosed duodenum resulting from duodenal ulcer To explain the dilated duodenum and jejunum was much more difficult All the known lesions of the duodenum and jejunum were considered but a definite diagnosis could not be made and the remote possibility of a hair ball was suggested In view of the x ray findings and the unsatisfactory response to prolonged medical treatment operation was advised

FINDINGS AT OPERATION

The first and second portions of the duodenum were distended and a sponge like mass was seen shining through the wall On palpation this could be pushed down to within a few inches of the duodeno jejunal flexure The duodenum was opened longitudinally and a cauliflower like mass (Fig 1) was found attached to a point on the posterior wall about one inch distal to the pylorus by a pedicle two and a half to three inches in length The mass completely filled the lumen of the intestine The base was excised and the wound in the posterior wall sutured with catgut The incision in the duodenum was continued through the pylorus into the stomach and a modified Mikulicz pyloroplasty performed The appendix which was found to be very thickened and adherent to the caecum was removed The patient made an uninterrupted recovery The pathological report stated The growth is a simple adenomatous polypus on a fairly narrow stalked base The character and arrangement of the glandular tissue do not suggest any malignant tendency

CONCLUSIONS

1 In this case as in similar cases already recorded, great difficulty was experienced in establishing a diagnosis The clinical features strongly suggested either a prepyloric or a duodenal ulcer A mild duodenitis resulting from the continued mechanical irritation of the duodenum by the tumour might account for the symptoms

2 Persistent melaena was a constant feature

3 With a tumour of this size having such an unusually long pedicle it is surprising that no obstructive symptoms arose

4 The x-ray appearances do not conform to those in cases already reported The curious appearance of the distended jejunum was misleading and may have prevented the making of a correct diagnosis The question of polypus had been considered

5 As far as can be ascertained these papillomata do not show any tendency to malignant degeneration

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ATROPHIC COARSE CIRRHOSIS OF THE LIVER IN A CONGENITAL SYPHILITIC

BY

K C L PADDLE *M C* M R C S L R C P D P M

DEPUTY MEDICAL SUPERINTENDENT CATERHAM MENTAL HOSPITAL

(With Special Plate)

The following case appears to be of sufficient clinical interest to warrant a detailed account of the various stages leading to the development of a coarse atrophic cirrhosis of the liver Owing to the continuous detention of the patient in a mental defective institution from the early age of 8 alcohol the common causal factor can be completely excluded

There has always been some doubt as to the exact etiology of cirrhosis of the liver Muir[1] states that the same causal agent does not always produce the same result nor is a given type of cirrhosis always produced by the same cause Muir Delafield and Prudden[2] however agree that a coarse nodular cirrhosis may develop as a sequel to the rarer form of congenital syphilitic cirrhosis The case described below seems to confirm this view

F Y a young female imbecile of 8 was admitted to the Darenth Training Colony in 1903 She suffered from congenital syphilis was rather dull and required constant attention She was transferred to Caterham Mental Hospital in 1909 Her general health appeared to be quite good until 1922 when she was confined to bed for one week on account

of a cellulitis of the feet The subsequent history is as follows August 1923 attack of erysipelas of the head July, 1925 scarlet fever April 1926 cyanotic feet September 1926 acne of chest November 1926 right Colles fracture December 1927 jaundice was noticed for the first time and was fairly persistent

In October 1929 the patient was deeply jaundiced her abdomen was distended with free fluid the liver was easily palpable and extended to four inches below the costal margin in the pyloric line The spleen formed a large tumour in the left hypochondrium extending to below the level of the umbilicus Her blood count gave the following results Haemoglobin 80 per cent red blood cells 4 200 000 white blood cells 10 000 colour index 0 97 differential count polymorphonuclears 73 per cent eosinophils 8 per cent, lymphocytes 19 per cent no nucleated red cells were seen The blood Wassermann reaction was strongly positive Urine specific gravity 1028 very acid no sugar no albumin bile salts present The stools were of normal dark colour She received 15 grains of potassium iodide three times a day and appeared to do fairly well, both liver and spleen receding in size in the course of treatment In January 1930 the liver was one inch below the costal margin in the pyloric line and the spleen was just palpable near the umbilicus Free fluid had diminished in amount By May 1930 the patient had so far improved as to be allowed up She was however still slightly jaundiced The liver was half an inch below the costal margin in the pyloric line and felt hard and nodulous The spleen was still palpable on the left side at the umbilical level Free fluid was much diminished in amount Blood count showed the following red blood cells 3 800 000 white blood cells 4 500 haemoglobin 70 per cent colour index 0 9 polymorphonuclears 67 per cent lymphocytes 26 per cent eosinophils 7 per cent On August 19th 1930 she rapidly became worse showing signs of general weakness with unsteady gait She was put to bed and three days later became suddenly cyanosed and died within a few hours

Post mortem Examination

This was performed thirty three hours after death The body was fairly well nourished the skin being of a dark yellow colour Several small partly healed ulcers were seen over the back behind the left ear and below the left breast The brain weighed 49 oz each hemisphere being 21 oz cerebellum pons and medulla weighed 6 oz The veins over the dura mater were engorged The pia was thin stripped easily and showed no adhesions The hemispheres were symmetrical and of simple pattern convolutions did not show wasting There was no abnormality of grey or white matter no dilatation of the ventricles and so granularity of the ependyma The cerebro spinal fluid was clear The sclerotics were stained yellow the skull was irregularly thickened with bossing in the frontal region Several enlarged and thickened cervical glands were observed in the neck Thorax many old left pleural adhesions forming cystic pockets containing jelly like material The trachea and bronchi contained blood stained froth The lungs were oedematous with numerous wedge shaped haemorrhagic infarcts present Weight right lung 18 oz left lung 17½ oz Pericardium smooth and with no adhesions contained 2 oz of yellow fluid The heart weighed 7½ oz The right ventricle was distended with dark fluid blood the tricuspid valve orifice dilated Bases of the aortic and mitral valves were thickened the myocardium being soft and flabby There were no visible infarcts The coronary arteries were smooth and patent There was no dilatation of the aorta but several atheromatous patches stained a dark yellow

The abdomen showed adhesions and thickening of the peritoneum and omentum two pints of ascitic fluid were present The liver weighed 51½ oz had a much thickened capsule and an irregularly deformed surface with adhesions to the spleen on the left side It cut like leather showing a mottled appearance Gall bladder thickened containing a little bile Spleen 24 oz in weight much enlarged capsules thickened and very firm cut surface friable no visible infarcts The pancreas showed no gross abnormality The kidneys each weighed 6 oz The capsules were thin and stripped easily leaving smooth surfaces The pyramids were poorly defined The arteries were not thickened The stomach was much dilated with gas and showed post mortem changes only Intestines nothing abnormal Bladder contained 4 oz of clear urine Uterus weight 1 oz —virginal

Cause of Death —(1) Atrophic cirrhosis of the liver with ascites (2) infarction of the lungs

Histological Report

Liver and Spleen —A paraffin section stained by haemotoxylin and eosin shows a coarse interlobular cirrhosis There are large coarse bands of fibrous tissue which separate the lobules into irregular groups In many lobules the liver cells are further separated by an increase in intercellular fine fibrous tissue The cell outlines and staining properties are good towards the centre of the lobules but most of the cells stain poorly at the periphery Some of them appear to be actively proliferating with large dark staining multiple nuclei In the bands of fibrous tissue are to be found many young bile ducts and the periphery of some of them is infiltrated with small round cells No gummata were observed in the sections examined In a frozen section stained by Scharlach R and haemotoxylin the liver cells adjacent to the fibrous tissue bands and those at the periphery of the lobules show well marked fatty degeneration the cells having lost their nuclei and being loaded with small fatty droplets There is also some fatty infiltration between the lobule A frozen section stained by methyl violet showed no amyloid change whatever No spirochaetes were found in pieces of liver and spleen prepared and stained by Jahnel's silver method A paraffin section of the spleen stained by haemotoxylin and eosin shows great increase of the connective tissue One section shows an infarct There are dilated blood vessels in the middle with poorly stained cells on one side and healthy well stained cells on the other

Lungs —Blood vessels are much dilated and engorged The air alveoli have lost their outline and are filled with leucocytes and other cell debris In the bronchi the epithelium stains poorly and is desquamating into the interior (The section would appear to be adjacent to the infarcted area)

Kidneys and Suprarenal Glands —The cells of both renal cortex and pyramid show cloudy swelling and granular degeneration The blood vessels are not prominent and there is a definite increase in fibrous tissue elements Cloudy swelling and granular degeneration were present in the cells of both cortex and medulla of the suprarenals

Heart —A section of the right ventricle shows three recent and two old areas of infarction In the recent ones the muscle fibres have nearly all disappeared those remaining have lost their nuclei and striations their place being taken up by numerous polymorphs and small round cells many of the former being filled with dark granular pigment Surrounding the area of infarction the muscle fibres are oedematous poorly staining and filled with the same dark granular pigment Well beyond the area of infarction the muscle fibres and their nuclei stain fairly well and show definite striation In the old infarcted areas the muscle fibres have been completely replaced by fibrous tissue

Points of Interest

1 The occurrence of scarlet fever in 1925 may have had some influence on the subsequent development of cirrhosis of the liver

2 Jaundice was a persistent feature

3 Though the patient's blood gave a strong positive Wassermann reaction, no spirochaetes were found after death in either liver or spleen

4 Throughout the course of the disease there were no haemorrhages Otherwise apart from the blood picture, the case bears a strong resemblance to Banti's disease

My thanks are due to Dr J E McCartney for the photomicrographs and to Dr Thomas Lindsay for kind permission to publish details of this case

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INVESTIGATION OF A RENAL CASE *

BY

F HECTOR SCOTSON M B B S Lond F R C S Eng

HONORARY SURGEON TO CHESTER VICTORIA MEMORIAL JEWISH HOSPITAL HONORARY ASSISTANT SURGEON MANCHESTER NORTHERN HOSPITAL SURGICAL OFFICER TO OUT PATIENTS MANCHESTER ROYAL INFIRMARY

(With Special Plate)

I have chosen as my subject the investigation of a renal case because I have recently had to operate on a few very interesting cases The various investigations commonly employed are familiar enough but I should like to mention briefly the newer methods of excretion urography

Substances which are opaque to *x* rays are injected into the blood stream these substances are secreted by the kidneys and filling the renal pelves ureters and bladder show up very clearly on an *x* ray film The use of intravenous urography has brought this method of *x* ray diagnosis in the case of the urinary system into line with the diagnosis of liver and gall bladder affections by means of Graham's test This important advance was in a large measure made by von Lichtenberg and by its use we are able to photograph the shadows cast by the radio opaque substance with which the cavities of the kidneys and other parts of the urinary apparatus are filled

Use of Excretion Urography

The preparation we now use is uroselectan B a pyridine compound containing 51 per cent of iodine and the total amount of substance used is 15 grams The kidneys eliminate this in the urine in high concentration in a quarter of an hour Uroselectan is sold in sealed ampoules of 20 c cm containing 15 grams of the iodine compound this is warmed to body temperature and injected intravenously The injection of uroselectan B is best made with the patient on the radiological table as the first photograph is taken within a quarter of an hour and another one is taken half an hour after the injection these suffice

The only unpleasant effect produced by the drug is a feeling of heat throughout the body Uroselectan B is non toxic and has only a very few contraindications to its use of which the most important are uraemia and severe liver disease—the latter because the liver has to undertake part of the excretion of the drug if the kidneys are much diseased

Uroselectan is eliminated through the glomeruli of the kidneys and as these suffer last in surgical kidney disease it is only in severe cases of renal damage that the substance fails to be eliminated Hence excretion urography provides indication of renal function in addition to showing damage of the anatomical structure of the kidney A dense shadow may not be evidence of health but of disease owing to failure of the unstriped muscle of the pelvis and ureter quickly to pass the substance into the bladder Similarly the absence of any shadow would indicate renal inefficiency

Excretion urography is of special value in cases in which it is undesirable or impossible to pass a cystoscope —for example in enlarged prostate in stricture or in severe cystitis It is easy to see that this method of investigation is made to combine with and not replace other methods and has very definite uses

I will now describe a few recent cases illustrating some diverse renal conditions

* A post-graduate lecture delivered at the Manchester Victoria Memorial Jewish Hospital on November 25th 1931

Case I

A girl aged 14 was referred to me by Dr J W A Hunter with the complaint that although she could pass urine normally she continued to dribble for about one hour after the act hence she was always wet had a most unpleasant smell with her and had to have several changes of underclothes each day Her mother told me that this trouble had occurred ever since she could pass her urine voluntarily In addition habits of masturbation had of late been formed owing to the constant irritation of the external genitalia On examination Dr Hunter noticed drops of urine occasionally exuding from a small orifice in the vagina about half an inch above the urethral orifice

I suggested that we might cystoscope the patient and pass radiologically opaque ureteric catheters up the ureter or ureters which had a normal opening into the bladder and pass another opaque catheter up the abnormal passage which opened into the vagina

Cystoscopy on April 13th 1931 after intravenous indigo carmine showed that there were two ureters opening in the normal position in the bladder That each kidney was functioning normally was shown by the excretion of the dye in the required time in strong shoots Next the two opaque catheters were passed up the ureters and an attempt was made to pass a third one into the accessory passage but this would only pass a distance of four or five inches Accordingly to find the position of the track I injected with some force a solution of 12 5 per cent sodium iodide by means of a Record syringe attached to a small hollow ureteric catheter passed as far up the track as possible X ray photographs were at once taken and showed that the iodide solution flowed in a tortuous manner to the upper part of the right kidney

Later on April 15th I decided to explore the right kidney First of all I passed a bougie up the normally placed right ureter after a preliminary cystoscopy in order to locate the normally functioning part of the kidney and normally placed ureter when I reached the kidney Next I turned the patient over on her left side and exposed the right kidney by the usual oblique incision The renal tissue appeared normal and there was nothing externally to make one suspect a double organ Arising from the inner concave margin of the kidney there was seen a large lower pelvis giving rise to the normal ureter and an upper smaller pelvis giving rise to a thickened dilated ureter A wedge of the upper pole of the kidney corresponding to this upper pelvis was excised this wedge together with about six inches of the aberrant ureter were removed and the remaining kidney tissue was sutured The wound was closed in the usual way with a tube drain for fear of any leakage of urine from the sutured kidney The patient made a good recovery

Later on May 20th I again cystoscoped her after the injection of intravenous indigo-carmine and found both kidneys excreting the dye equally This showed that by our manipulations we had not damaged the remaining part of the right kidney At the present time the girl is in perfect health is gaining weight and is working with no discomfort of any sort

The case is of especial interest First because the condition is rare I can find in the literature forty two cases of single or supernumerary ureters opening into the vagina but only two records of a partial nephrectomy being performed for the incontinence produced by such a ureter opening extravesically In the other cases the ureter was either ligatured or implanted into the bladder while in the remainder the nature of the operation performed was not stated

The second point of interest is the fact that unless such a condition had been suspected and a very careful scrutiny of the opening had been made the patient might with the diagnosis of partial incontinence have been condemned to continue with her discomfort In fact she had been told some years previously that she would grow out of the habit of wetting herself as she got older

The reproductions of the photographs on the Plate show (1) the two radiologically opaque bougies in the

normal ureters and the shadow cast by the iodide solution after injection up the accessory ureter and (2) the wedge of kidney tissue which together with the upper part of the accessory ureter, was removed

CASE II

A boy aged 13 was referred to me for investigation by my colleague Dr William Brockbank The history was as follows

About nine months previously the patient complained of attacks of pain on the left side of the abdomen and in the left loin Starting suddenly they would come on about every ten days would last twenty four hours and then pass off as suddenly as they had begun During the attack he vomited but had no urinary symptoms of any sort For the first few months there were no signs to be made out on physical examination As time went on these attacks persisted and the patient was found to be tender in the loin The trouble was then thought to be due to a renal infection but no *B coli* tubercle or other organisms could be found on bacteriological examination of a catheter specimen of urine An x ray photograph of the urinary tract showed a rather large shadow in the line of the left ureter just above the brim of the pelvis which was thought by the radiologist to be a ureteric calculus At this stage the boy came under my care

On July 15th 1931 after the injection of intravenous indigo carmine cystoscopy was carried out under a general anaesthetic This showed that the right kidney was functioning normally but no indigo carmine was excreted from the left side This investigation rather confirmed the presence of a left ureteric calculus An operation to remove the suspected stone was considered necessary because if the shadow shown on the film was such the stone was obviously too big to pass down the ureter

On July 22nd under general anaesthesia I made a Battle's incision and exposed the ureter above the brim of the pelvis It was found to be of normal size and not dilated I incised the ureter but no urine appeared a gum elastic bougie passed downwards easily into the bladder and upwards towards the kidney Having failed to find a ureteric calculus, or any cause of obstruction of the ureter I turned the boy on his right side and explored the left kidney Here I found replacing the pelvis of the kidney a large cystic swelling due obviously to a much distended pelvis Leaving the lower part of this at an acute angle was the ureter the two forming a valvular junction with each other I did not consider it feasible to do a plastic operation and as I knew the right kidney was functioning normally and would be quite able to carry on life I performed a nephrectomy

The boy made an uninterrupted recovery and is at present in normal health

The reproduction of the photographs on the Plate show (1) the suspected renal stone and (2) the specimen removed

CASE III

The last case I wish to mention to you is that of a man aged 61 who was recently sent to me with the diagnosis of renal stone already made by his doctor who had obtained an *x* ray photograph of the urinary tract This stone had never caused the patient any urinary symptoms in the shape of frequency pain desire to pass water or haematuria This is not an uncommon state of affairs in the case of a so called resting renal calculus The history he gave me was as follows About four or five years ago he was troubled with pains in both loins always more marked on the right side These seemed to come on worse just when he was about to rise from his bed in the morning On and off for a long time he had been treated for lumbago The pain had recently been located more to the right loin and now tended to radiate round the flank and occasionally into the testicle When he consulted me he said he wished to have something done as it was worrying him I elicited a slight tenderness on deep pressure and found a slight trace of albumin in the urine The stone was plainly seen on an x ray film It appeared to be about the size of a damson plum and was within the outlines of the kidney

On October 29th 1931 under a general anaesthetic I exposed the right kidney The stone could not be felt from the outside and was clearly not in the pelvis of the kidney so I incised the renal cortex and pushing a finger through the incision could easily feel the stone which I extracted with a pair of long drainage tube forceps The small opening in the kidney was sewn up with mattress sutures The wound was then closed with drainage in the usual way

The interest to me of the above cases lay chiefly in their investigation In each case it is to be noticed that the early symptoms were not obviously referable to the kidneys In the first case, the girl was for a long period considered or thought to have nervous incontinence, in the second case the boy was thought to have some intra abdominal but extrarenal disease in the last case the man was diagnosed as a case of lumbago Fortunately in all the cases the true condition was eventually discovered and the appropriate treatment carried out

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

ANEURYSM OF THORACIC AORTA WITH COMPLETE TRANSPOSITION OF VISCERA

(With Special Plate)

A short description of the following recent case will be of interest owing to the curious and rare association of an aneurysm with complete transposition of viscera

A male adult Chinese aged about 44 years and a sampan coolie by occupation was admitted into the Tan Tock Seng Hospital Students Medical Clinic on September 3rd 1931 as a case of aortic incompetence associated with either an aortic aneurysm or a new growth

On admission he complained of pain over the front of the chest dyspnoea of about fourteen days duration and hoarseness of voice for two days He had cyanosis of the face and neck and oedema of the head neck face both arms and the upper part of the chest The veins coursing over the front and back of his thorax were prominent and formed visible venous networks The borders of the heart could not be accurately mapped out by percussion and signs of aortic incompetence were made out on auscultation the aortic diastolic murmur being best heard well to the right of the sternum Owing to the doubtful nature of the case the chest was examined by x rays from the anterior posterior and right oblique positions It was then found that the heart and stomach were on the right side and that there was a bulging of the aortic shadow on the left side this shadow showed pulsations The blood Wassermann reaction was strongly positive The patient died on October 22nd 1931

A necropsy revealed the following findings The heart which was transposed to the right side was enlarged with marked dilatation and hypertrophy of the ventricles and dilatation of the right auricle The pericardial sac was distended with a little clear serous fluid A saccular aneurysm of the ascending part of the aortic arch about the size of a tennis ball was visible bulging towards the front and to the left and pressing on the superior vena cava There was partial collapse of the lower lobes of both lungs with a considerable amount of fluid in both pleural cavities The stomach was transposed to the right side and the liver to the left side

I have to thank Professor R B Hawes for allowing me to publish this case Dr J C Tull the Government pathologist for giving me access to his post mortem notes Dr B J Ess for the x ray examinations and photograph of the case Mr P N Bardham for photograph of Fig 1 and Mr Lim Thian Po for photographs of Figs 2 and 3

G HARIDAS L M S
Medical Tutor College of Medicine
Singapore

AN EPIPHYSEAL LESION IN CONGENITAL SYPHILIS

(With Special Plate)

Affections of the joints are comparatively uncommon in syphilis and if we exclude the Charcot joint they are definitely rare The following case, which I was asked to see by Mr Eales of the Birmingham Eye Hospital seems to me to be of more than ordinary interest from the point of view of diagnosis and on account of the focal lesion

HISTORY OF THE CASE

A female child aged 6 years developed a painful swelling of the left knee joint eighteen months before I saw her She was diagnosed as having a tuberculous knee which was put in a splint

When I saw her in September 1931 an interstitial keratitis had just appeared in both eyes The knee was swollen and tender and the leg and thigh immobilized by a splint were wasted The Wassermann reaction was strongly positive (++)

The x ray photograph shows a well marked lesion in and around the epiphyseal line on the outer side of the lower end of the left femur In view of the diagnosis of congenital syphilis anti syphilitic treatment was started at once After fourteen days the splint was removed the swelling and pain in the joint rapidly subsided the muscular atrophy quickly diminished and to day six weeks after specific treatment was started the child can walk quite well

REMARKS

As regards diagnosis the last three cases of knee-joint effusion in congenital syphilis which I have seen had all been previously diagnosed as tuberculous knees Possibly some may say that in this particular case there were two conditions present but personally I should certainly not agree with that contention Textbooks often tell us that the diagnosis between tuberculous and syphilitic knee joints is made from the fact that pain is not an obvious symptom in the latter My own experience is that syphilitic knee joints with effusion are often very painful We are frequently told that syphilitic joints are bilateral here again I find that they are as often as not unilateral A correct diagnosis is of the greatest importance in treatment and I would suggest a routine Wassermann test in cases of this type

The lesion in this case is interesting Re-examining the x ray photographs of three similar cases I find that each shows an abnormal epiphyseal line not so marked as in the one reported above but apparently of the same nature I venture to suggest therefore that the cause of the effusion is not a chronic synovitis as it is so often stated to be but is a syphilitic inflammatory condition in and about the epiphyseal line and comparable to the similar condition in babies

In conclusion I wish to thank Dr Black for examining the x ray photographs with me

ERIC ASSINDER M D
Director V D Department General Hospital Birmingham

THE GRAFENBERG RING

The recent records of Colonel Green Armytage and Mr Trevor B Davies concerning their experience with the Grafenberg contraceptive ring induce me to report an interesting experience in one of my own cases last year

The patient was a young married woman who early in 1930 had a silver ring inserted into the uterus No untoward gynaecological features ensued In January 1931 the patient developed a sore throat and later middle ear trouble with a bulging drum which after incision discharged pus copiously Following this there ensued a high temperature rapid pulse pulmonary features multiple acute inflammatory lesions involving the joints and a localized erythema over the left leg associated with swelling of the deeper subcutaneous tissues from which a streptococcus was isolated by Dr Hamilton Fairley who saw the case in consultation The leucocytes equalled 16 000 per c mm of which 89 per cent were neutrophils Blood culture was negative A diagnosis of streptococcal septicaemia and pyaemia secondary to otitis media was made and the case was treated with large quantities of fluid massive doses of anti streptococcal serum and intravenous injections of septicemine Finally after several weeks severe illness she made a complete recovery

An interesting feature of the case was that during the earlier stages of the illness there was passed per vaginam a fleshy gelatinous mass which on microscopical section showed numerous chorionic villi and much extravasated blood Conception had thus occurred

In this case therefore pregnancy had ensued with the ring *in situ* and as there was no evidence of local uterine disease the abortion was evidently attributable to streptococcal fever The case is instructive as it again illustrates that the Grafenberg ring is by no means an infallible contraceptive

London S W G T CREGAN M B

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

CITY DIVISION

Injection Treatment of Varicose Veins

At a meeting of the City Division held on December 1st 1931 Mr REGINALD PAYNE of St Bartholomew s Hospital gave a practical address on the injection treatment of varicose veins

Mr Payne mentioned that with the introduction of injections the treatment of varicose veins had undergone a transformation Veins were classified as (1) Varicose involving part or whole of the saphenous system (2) Varicose of tortuous and diffuse type but having no obvious relation to the main existing veins (3) Those which showed marked dilatation or ectasia but no tortuosity a type found in young and athletic men

The varicules or spider like collections of small varicose veins found in women were excluded as unsuitable for injection treatment A varicose condition of the veins was invariably a progressive one and through the stages of skin congestion and dermatitis led to ulceration and changes in the soft tissues and even the bones

The theory of injection treatment was the introduction into the vein of some substance which would damage the delicate endothelium either chemically or by osmosis The cells of the damaged area became swollen and proliferated and a localized thrombus developed which was later organized into a thin fibrous cord The treatment did not consist of the introduction of substances causing clotting of the blood directly The idea of using thrombus formation as a curative measure was certainly seventy-five years old but many fatalities were associated with this early treatment of aneurysms and varicose veins

The substances he used were two (1) quinine and urethane which he considered the most satisfactory and (2) sodium salicylate only used where quinine was definitely contraindicated He did not use sodium morrhuate as the clinical manifestations associated with the injection of this drug suggested that at times at least it led to an immediate thrombus formation Further it was not correct to say that sodium morrhuate did not cause ulceration if it leaked into the surrounding tissues it undoubtedly had lesser tendency than the other drugs in use to do this yet one of the worst injection ulcers he had ever seen had been caused by sodium morrhuate With quinine and urethane it was the former which produced the thrombosing effect the latter being a solvent and to some extent possibly a local

anaesthetic In the actual injection he never allowed his patients to stand a tourniquet being used and released the moment the needle was in the lumen of the vein and before the giving of the injection The needle itself should not be too large a Number 17 gauge was satisfactory and it was always found that palpation was a much surer guide to the direction and size of a vein it was proposed to inject than attempts to rely on sight At the time of the injection the patient felt nothing beyond the first prick of the skin—with quinine pain was a valuable indication that the solution was getting outside the vein and that the injection should be stopped at once After twenty four hours or so there might be a little aching depending on the size of the vein injected Immediately after the injection the site should be firmly compressed for at least a minute to prevent the reflux of any blood mixed with quinine and then dressed with collodion on wool and covered with a strip of adhesive plaster applied rather tightly Patients were allowed to get about in the ordinary way but strenuous exercise was inadvisable and he refused to treat men playing Rugby football unless they cancelled their engagements Injections were best carried out at weekly intervals The first abnormal reaction was idiosyncrasy to quinine with its consequent headache tinnitus nausea, and vomiting Excessive thrombosis rarely occurred, it was usually due to the use of too large a dose of the drug in a vein poorly provided with collaterals The ulcers due to leakage were not in themselves dangerous but might easily become so by providing a portal of entry for infection from without Quinine was of course contra indicated during pregnancy and it was not wise to use this drug during menstruation because it might produce severe pain As a routine method 1/2 c cm was the usual initial dose to discover any idiosyncrasy leading up to a maximum dose of 2 c cm Sodium salicylate was not so certain in its effects as quinine and in consequence of the tolerance developed in the veins it was necessary to start with solutions of 20 per cent and lead up to ones of 40 per cent In addition these drugs invariably caused cramps during the injection All the types of veins mentioned were susceptible to treatment the third type being the most difficult to induce thrombosis As regards cosmetic effect the best results were obtained in veins under healthy, well nourished skin Injections should be commenced distally but it was inadvisable to commence on the dorsum of the foot or over the malleoli, as such veins were usually symptomless after treatment of the main ones and their injection was generally attended with some discomfort Were the results permanent? The lecturer said that cases had been followed up for five years, and after real obliteration he had never seen recanalization When veins were very severe and diffuse they must be watched afterwards Patients must never be promised that they would always be free from any more varicose veins but, on the other hand treatment would cure all existing veins and slow down the development of any others

The underlying cause in the development of varicose ulcers was the to and fro movement, with stagnation of blood in the lower part of the saphenous area whilst in most cases the immediate exciting factor was trauma Varicose ulcers could be cured by rest by bandaging by operation on the veins or by injection treatment Only the last two methods gave permanent results By injection treatment alone combined with local cleansing of the ulcer with ether followed by a calamine dressing Mr Payne stated that he could cure 87 per cent of ulcers In ulcer cases the important veins to inject were those found immediately proximal to the ulcer and which were therefore flooding it with toxic blood Further in the treatment of large ulcers elastoplast should be used for no matter what the size of the ulcer this hastened healing In practice these bandages were usually applied much too loosely In application all unevenness must be avoided and in the case of deep ulceration longitudinal strips should be applied before commencing the main spiral Reapplications were ideally made once a week but in hospital once every three weeks was found to answer Elastoplast rendered the ulcer more supple smoother and shallower, and caused the marginal scab to disappear

Contraindication to injection treatment existed in about 10 per cent of patients presenting themselves for treatment of varicose veins In all cases it was essential to take a careful history and to follow it up by a complete examination and in this way the following conditions would be recognized as contraindicating this method of treatment (1) thrombosis of the deep veins of the leg as in white leg (2) post operative thrombosis of the femoral veins, (3) femoral thrombosis as the result of typhoid fever Further it had to be remembered that uncomplicated varicose veins never caused oedema and whenever this was found a cause must be sought Injection treatment should never be given to patients who had had phlebitis until at least six months had elapsed after the subsidence of the condition otherwise the infection might be lit up with consequent risk of embolism As far as possible veins should not be treated during pregnancy but if on account of the severity of symptoms treatment was undertaken sodium salicylate should be used

There was of course in a method relying on thrombosis a remote risk of pulmonary embolus but when seen in proper perspective this risk was really negligible For example the mortality from pulmonary embolus after major surgical operations was about 1 in 1 000 and that in operations on varicose veins about 1 in 250 while the risk of an embolus after injection treatment was less than 1 in 5 000 cases In over 800 cases treated by the lecturer no accident of this type had occurred

A large number of questions put to Mr Payne in the discussion which followed resulted in the elucidation of numerous points A hearty vote of thanks was accorded to the lecturer for his instructive address

Reports of Societies

ESSENTIAL HYPERTENSION

At a meeting of the Medical Society of London held on January 25th with the president Mr Herbert Tilley, in the chair a discussion took place on the causation and treatment of essential hypertension

Dr Geoffrey Evans in opening said that the title of the discussion was a paradox since essential meant idiopathic or in other words that the causation was largely unknown He took as his definition of hypertension the condition of a rise in blood pressure to 170 mm of mercury systolic and to 90 mm diastolic or over It was very rare in normal healthy people for the pressure to vary beyond these limits He assumed the term persistent hypertension to mean a rise above the limits stated lasting for some days at rest or for weeks or months when the subject was leading an ordinary life The condition was diagnosed by repeated observations of the blood pressure but it could also be recognized by other clinical signs Dr Evans explained that he was excluding hypertension of nephritic origin from his remarks In the non nephritic group he first spoke about symptomatic hypertension In cases of tumour of the

suprarenal body the blood pressure might be raised and removal of the tumour bring about a cure of the condition Similarly alcoholic excess might cause hypertension which disappeared with rest and a teetotal period He also included in this symptomatic group hypertension in association with circulatory failure with nervous exhaustion certain infections endocrine disturbances (including a menopausal type) and a group due to poisons endogenous or exogenous In essential hypertension no definite etiological factor could be discovered Dr Evans then discussed the possible origin of such hypertension stressing the factor of heredity and the possible metabolic origin of some cases with the constitutional type described by Draper He also mentioned that gout was associated with hypertension and that the occurrence of osteo-arthritis with arterio sclerosis in the same patient suggested a possible common cause In some cases of symptomatic hypertension where the cause was known—for example in the menopausal type—the condition might persist after the cause had ceased to operate and this illustrated the limit between the symptomatic and the essential groups of hypertension It was necessary to consider in the latter cases all such factors which might produce the former and in treatment any such causes should be sought for and removed Dr Evans then discussed the pathology of the condition Persistent hypertension was due to increased peripheral resistance which had to be overcome by the increased activity of the heart and vessels Disturbances in the central and peripheral parts of the vascular controlling system had to be considered and it was possible that some amine in the circulation was responsible The morbid anatomy of the condition was a diffuse hyperplastic sclerosis of the arterioles and arteries but the nature of the change was still under discussion With regard to treatment Dr Evans emphasized that this might not be needed unless the symptoms were present and it was important to treat the patient and not his raised blood pressure

Dr G ARBOUR STEPHENS (Swansea) asserted that in certain cases taking the blood pressure might be more important than taking the temperature Examples were to be found in acute tonsillitis in rheumatic children followed by acute carditis with a silent interval between During this time the temperature usually remained normal but there was a disturbance in the basic blood pressure Dr Stephens proceeded to discuss the essential function of the pressure of the blood pointing out that the conditions of the blood must be suitable for the corpuscles to perform their functions Normal basic blood pressure was the optimum pressure under which these cells could flourish At each stroke of the heart an increase in pressure occurred in the arterial system This increase together with the basic blood pressure gave the systolic pressure Dr Stephens took hyperpiesis to mean a rise in the basic blood pressure with a proportionate rise in the systolic blood pressure He then illustrated his method of taking the blood pressure by means of two armlets placed one above the other The top one was inflated until the pulse was obliterated and the second one then blown up until an additional rise occurred in the manometer of the upper armlet The manometer of the lower armlet then gave the basic pressure He pointed out the possible errors which might be present if the armlet was too narrow and he gave an account of an experimental reproduction of the conditions occurring in the arm when the blood pressure was being measured

Dr F PARKES WEBER said that the high blood pressure in cases of so-called primary essential hypertension probably represented a compensatory or life prolonging mechanism The typical patient with a high blood pressure led a life of moderate comfort while the pressure was maintained at a high level, feeling less fit and weaker if the blood pressure was lowered He believed persistent hypertension represented a reaction to the stress of life There was a class of patient who felt better able to carry on his work and general mode of living on large quantities of stimulating food Treatment should be directed towards limiting the diet and avoiding mental excitement Since there was an hereditary factor in the condition it would be wise to adopt prophylactic measures where there was a family history of raised blood pressure In established cases the most likely end was slow circulatory failure

Dr H BATTY SHAW asserted that hyperpiesis was of chemical origin—that is due to toxins If the blood pressure were taken night and day for months on end he said it would be found that there were large variations the pressure falling to normal at times and rising again to a high level in a few days This fluctuation would be impossible he urged if hypertension were due to occlusive disease of the arteries The difficulty of accepting the theory of a toxic origin for the condition lay in demonstrating whence such a toxin came He thought there was possibly one set of bacterial toxins causing degenerative changes in the intima of the arteries as had been shown experimentally with the *Bacillus typhosus* and some other toxin or pressor body causing hypertension The determination of the nature of these pressor substances must be left to the biochemists It was significant he added that death from high blood pressure acting on the cerebral vessels only happened if these vessels were rotted by the effects of infection

Sir JOHN BROADBENT said that the discussion left the position with regard to the etiology of hypertension very much where it was before Originally it had been thought that all high blood pressure was renal in origin but now these essential cases had been put into a separate group and some pressor substance such as guanidine was blamed He agreed with the view that some toxin was at work in such cases and that the part played by the liver was probably important It had been shown that histamine was present in greater quantity in the lung than in the liver and if this was the active principle at work in liver extracts recommended for the treatment of raised blood pressure it would be more rational to use lung extracts He agreed as to the familial nature of essential hypertension but such cases were not usually seen until symptoms began to develop In his opinion most drugs to reduce blood pressure were dangerous and useless

Mr EARDLEY HOLLAND spoke of cases seen in obstetric practice where it was necessary to terminate pregnancy on account of hypertension He thought variations in blood pressure at the climacteric very common and asked for guidance in the case of patients with hypertension associated with menorrhagia after the age of 40 If an artificial menopause was produced would the hypertension get worse?

Professor F LANGLEAD referred to patients dying with hypertension in whom the suprarenals were found to be hyperplasic He wondered where this factor ought to be placed in the etiology of the condition Dr T IZOD BENNETT thought it unwise to exclude all examples of hypertension of renal origin since it was difficult to say that there was no renal element in all cases of essential hypertension He referred to certain cases recently reported from Australia where death from hypertension in young subjects was traced back to a very high incidence of lead poisoning among children In the treatment of hypertension he urged the value of venesection Dr H L TIDY pointed out that no person dying of hyper-

tension failed to show permanent intimal hypertrophy and here he thought, must be the initial change Heredity played a part undoubtedly but authorities differed as to the exact role taken by the various factors concerned Dr B E SCHLESINGER described certain cases of hypertension occurring in children in association with what he called the periodic syndrome —that is, patients exhibiting migraine cyclical vomiting vaso vagal attacks etc Here the blood pressure was often raised for several months at a time and came back to normal when the metabolic condition was cured

Dr GEOFFREY EVANS (in reply) pointed out that he had never said that arterial disease caused hypertension He held that there was probably some cause acting to produce both a rise in blood pressure and arterial changes

TRANSMISSION OF LEISHMANIA INFECTIONS

On January 21st the Royal Society of Tropical Medicine and Hygiene held its first meeting in its new building Manson House at 26 Portland Place W 1 The president Dr G CARMICHAEL LOW was in the chair In his introductory remarks the president traced the origin and growth of the society the official opening of which was to be made at a later date and expressed his gratification that Dr C M Wenyon F R S who for so many years had served as secretary to the society had consented on this historic occasion to lecture in the new hall on the transmission of leishmania infections

After some preliminary remarks Dr WENYON said that sand flies of the genus *Phlebotomus* have long been suspected of being transmitters of oriental sore but it was not until the announcement of Knowles Napier and Smith in 1924 that in *Phlebotomus argentipes* the parasite of kala azar developed to produce a heavy flagellate infection of the mid gut that these insects were regarded with suspicion in connexion with the more serious disease Since then intensive investigations had been carried out at the School of Tropical Medicine in Calcutta in Assam North China and Sicily on kala azar and in Palestine and Algeria on oriental sore The general result had been to show that in certain species of sand fly in each locality the local strain of parasite underwent a remarkable development The whole of the mid gut became blocked with flagellates which extended forwards along the oesophagus to the pharynx and even to the proboscis from which they had been proved to escape during the act of feeding In India the local strain of *Leishmania donovani* developed in this way in *Phlebotomus argentipes* in North China in *P major* var *chinensis* and in Sicily and Malta in *P perniciosus* while in Palestine the local strain of *L tropica* developed in *P papatasi* and in Iraq in *P sergenti* The flagellates which appeared in these flies are virulent and will produce infections when inoculated into susceptible animals such as the hamster All these sand flies with the exception of the one in North China had been found naturally infected so there was good reason to suppose that they are the vectors of kala azar and oriental sore Furthermore their distribution corresponded with that of the diseases So far however there had been difficulty in effecting transmission by the bite In spite of numerous experiments involving thousands of infected sand flies in only three instances was there a possibility that the diseases had been so produced Shortt head of the commission in Assam had infected a hamster by feeding on it 144 sand flies Adler and Theodor appeared to have succeeded in giving oriental sore to a man by the bite of *P papatasi* while Chodukin and his assistants claimed to have transmitted this disease from dog to dog by exposing animals to the bites of sand flies The difficulty of transmission suggested that there was some missing factor in these experiments for it was difficult to believe that the experimental and other evidence obtained does not indicate a specific relationship between sand flies and the parasites of kala azar and oriental sore Certain lizards such as the gecko were liable to similar infections and there was reason to suppose that sand flies were responsible for the spread of these also The difficulties associated with the sand-fly had tended towards a revival of some of the older theories Animals kept in close contact with infected ones had acquired the diseases while it had been shown that the parasite of kala azar was occasionally eliminated in the faeces and urine of patients This had suggested infection by the oral route but it had to be remembered that the organism would not survive outside the body in blood free media while such a method of infection took no account of the flagellate form which was such an important stage in its life history The bed-bug had been suspected but the development which occurred in it was an abortive one while there was no correlation between its distribution and that of kala azar and oriental sore Attempts to transmit by the bed-bug as also by the flea and louse had failed entirely It appeared clear that the only hope of solving the problem was to continue investigations with the sand fly in the hope that the missing factor would be discovered

Colonel J A SINTON said his main interest lay in the sand fly If a line was drawn from Bombay to Sind kala azar and *P argentipes* were found on the east side while oriental sore and other species of sand fly were confined to the west of it In India *P argentipes* was suspect as far as kala azar was concerned

Dr HINDLE referring to his work in China stated that in leishmania it was a waste of time to look for an insect vector other than the sand fly and cited evidence that the Chinese and Indian parasites constituted distinct strains In his opinion leishmaniasis was essentially a subcutaneous infection and in consequence exposed hamsters could only be regarded as non infected if the subcutaneous tissues had been carefully examined The epidemiological evidence in China was as clear as in India for the sand fly stopped dead at the Yangtze and kala-azar also ceased there

Dr H J SMYLY stressed the importance of Shortt's work and expressed the view that until transmission by biting had been proved one should keep an open mind regarding transmission via the alimentary route Professor J E THOMPSON stressed the number of negative biting transmission experiments in the literature and opined that there must still be some link missing somewhere certainly more definite positive results were necessary before the problem of sand fly transmission could be regarded as solved

Dr H G WHITTINGHAM referred to two experiments in which batches of sand flies were fed on ulcerated and non ulcerated oriental sores Though three volunteers were repeatedly bitten over a period of sixteen to seventeen days no lesions developed In his opinion sand flies were definitely implicated in transmission but their habits had to be known to appreciate the factors involved Sand flies disliked being wet and they would not bite where one sweats or where there is a broken sore Further since it took seven days for development of leishmania in the sand fly the average life of which was only fourteen to sixteen days and since it only fed on the first the fourth or fifth and the eighth or ninth day it obviously could only reinfect if it had bitten an infected person during the first feeds These facts probably helped to explain why there were so few cases of oriental sore and so many sand flies

THE LIBERTY OF THE SUBJECT

At the meeting of the Medico Legal Society on January 28th with Lord Riddell in the chair Dr L A Weatherly of Bournemouth gave an address on The liberty of the subject

Dr Weatherly began by suggesting certain further restrictions of liberty He was of opinion for instance that the law should be able to prevent a young man from squandering a fortune which he had inherited The helpless spendthrift ought to be brought before a master in lunacy under an enlarged Subsection (*d*) of Section 116 of the Lunacy Act 1890 With regard to recent observations of Mr Justice McCardie, Dr Weatherly thought the judge right in saying that it was ridiculous to charge an alleged abortionist with wilful murder when the death of the patient was the last thing he wanted and he noticed with approval that in a recent case of the kind reported in the *British Medical Journal* last week (p 219) the indictment was not murder but manslaughter But Mr Justice McCardie had gone a little too far when he threw the door open to more or less wholesale abortion Dr Weatherly also expressed an adverse opinion upon the sterilization of mental defectives Such a method must come under the heading of a hygienic Utopia But he thought that segregation was a practical proposition As for mental defectives with criminal instincts their liberty ought to be much further restricted The restriction of confirmed alcoholics was also desirable As things stood at present these people could not be restricted at all until they had been convicted at least three times for drunkenness and the most hopeless kind of alcoholic—the secret drinker—probably never got convicted at all With regard to early mental cases Dr Weatherly criticized at some points the Mental Treatment Act The Act had done some good things but he complained of unnecessary delay and circumlocution in dealing with patients for whom some institutional treatment was necessary but who strongly objected to going into any institution connected with insanity So far as the temporary patient was concerned, they had all jumped at the idea that the provisions were going to be a godsend but in fact they had turned out to be a farce because the word non volitional had been inserted Medical superintendents had told him they did not believe that 2 per cent of their patients were non-volitional

Mr Claud Mullins a metropolitan magistrate mentioned a difficulty in the administration of the Probation of Offenders Act to which Mr Weatherly had also alluded It was noised abroad that every dog was entitled to its first bite which was unsound law The idea that a magistrate was automatically to dole out probation to first offenders was one which he could not approve Sir William Collins made some remarks on the general subject of liberty quoting Sir Samuel Romilly to the effect that the true upholder of liberty was as indignant at a tyranny which he saw pressing upon another as at a tyranny which he himself might be called upon to bear Sir Sinclair Thomson on the other hand quoted Disraeli that liberty consisted in the right of every man in England to make as big a fool of himself as his father had done before him

Dr Henry Devine said it had been brought home to him with increasing force that it was quite possible for people who had severe mental disorder to enter a mental hospital voluntarily and one of the most beneficial developments in psychiatry was the admission of voluntary patients in such numbers into mental hospitals He agreed with Dr Weatherly in calling for some definite legal restrictions in chronic alcoholic cases Sir William Willcox instanced the difficulty short of compulsion in treating drug addicts The method of gradually diminishing doses was not effective Sir Nathan Raw defended the Mental Treatment Act and Dr Finucane added a few observations Lord Riddell said that he was sorry Dr Weatherly could not support the sterilization of mental defectives The national expenditure on this class of person had gone up from £600 000 to £1 400 000 in the past ten years

Dr Weatherly, in his reply mentioned that so far the approved homes under the Mental Treatment Act numbered only eight owing to the stringent rules and regulations imposed

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At a meeting of the Royal Photographic Society held at Russell Square on January 26th an *x* ray cinematograph film, lent by Dr Kurt Jacobsohn of Berlin was displayed The film has been produced as a result of the work of Drs Gottheiner and Jacobsohn under the auspices of the German Research Council and with the help of the Agfa Company A special lead lined Rönkine apparatus was used fitted with a simplified system of lenses and special sensitive high speed film Even with these refinements it was necessary to use a current of 100 milliamperes acting for a period of twenty five seconds at a time The success of the picture was so striking however that far from regarding it merely as a novelty, one realized that yet another means of refined investigation has been placed in the hands of medical science Normal speed cine pictures were shown of cases of pyopneumothorax a lung collapsed by phrenic avulsion and the slightly hypertrophied heart of an athlete at the time of a race A view of the thoracic viscera taken whilst the subject was turning through a complete circle revealed the action and relationships of the heart from every point of view and finally a picture of the buccal and laryngeal structures during the acts of speaking and swallowing presented a valuable display of the normal functions of these parts

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A meeting of the Fever Hospital Services Group of the Society of Medical Officers of Health was held on January 29th The president Dr E W Goodall delivered his presidential address on Some pre bacteriological views on infectious disease Confining his attention chiefly to the period immediately preceding the inception of the germ theory of disease—that is about a century ago—he pointed out that Fracastor s views on the nature of contagion had been forgotten and he quoted from various authors to show that few believed in the *contagium vivum* and that the doctrine of spontaneous generation was widely accepted The occurrence of epidemics was attributed to miasms and contagion was held to play no or only a secondary part in their production He dealt lastly with the classification and nomenclature of the infectious diseases drawing attention to the differences between old and modern methods and giving an outline of the growth in knowledge of the different disorders which were included at one time under the term continued fever Dr E H R Harries proposed and Dr Sage Sutherland seconded a vote of thanks to Dr Goodall for his scholarly contribution

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At the meeting of the Child Study Society London on March 10th a discussion on speech training for children will be opened by Mr A Lloyd James university reader in phonetics University of London on April 7th Mrs Muriel M Porter will describe an experimental child centre in the Rhondda Valley The meetings are held at 90 Buckingham Palace Road S W at 6 p m

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At the quarterly meeting of the Royal Medico Psychological Association on Wednesday February 24th at 11 Chandos Street Cavendish Square W Lieut Colonel W S J Shaw I M S (ret) will read a paper on the Alienist Department in India

Reviews

FUNCTIONAL DISORDERS OF THE DIGESTIVE SYSTEM

In his book on *Functional Disorders of the Gastro intestinal Tract* [1] one of the Everyday Practice Series Professor W GERRY MORGAN approaches the subject from a new and instructive point of view In hospital practice and for teaching purposes the organic diseases tend to be given greater prominence while practitioners soon find that a large proportion of their patients suffer from disturbances which are unaccompanied by detectable pathology and in which even painstaking search often fails to show any definite change in either tissue or function Yet these patients suffer and for the most part they may be relieved by properly directed treatment These cases may be discussed under two headings those in which the symptoms complained of are brought about through imaginary causes or in which the patient is suffering from a neurosis and the group in which functional disturbances are based on disordered mechanism or pathology of a minor character Professor Gerry Morgan's book is designed especially to consider these disturbances of the gastro intestinal tract in such a manner as to make their recognition and proper management plain and clear and the author has succeeded admirably in his intention

The nervous mechanism of the gastro intestinal tract is motor secretory and sensory and is made up of two opposing systems—one excitatory derived from the vagus the other inhibitory having its origin in the sympathetic There is in addition a local nervous control through Auerbach's plexus which subserves conduction and the correlation of adjacent portions and prevents spasticity The activity of the functions of stomach and intestine does not obtrude itself into consciousness so long as these organs function normally This does not mean that the stomach and intestines are physiologically devoid of sensation we are manifestly conscious of disturbance of function when spasm or muscular contraction greater than normal takes place and in some individuals the threshold seems to be lowered so that sensations occur when activity is little greater than normal

Functional disorders of the gastro intestinal tract are commonly classified as primary and secondary They are primary when the seat of the disorder is in the organ itself secondary when the functional disturbance is due to disorder elsewhere in the body The secondary group is by far the more important Included in this group are gastric disturbances resulting from or secondary to disease of the appendix gall bladder liver and pelvic organs Organs even more remote from the stomach physiologically such as the thyroid the heart lungs and central nervous system may give rise to functional disturbances of the stomach Certain constitutional diseases such as diabetes nephritis and the anaemias may cause gastric symptoms Functional disorders do not run a definite course but vary from time to time The multiplicity and variability of the symptoms are the chief characteristics of gastro intestinal neuroses and there are often added symptoms of a general neurosis The digestive symptoms are as a rule independent of the quantity or quality of the food ingested and in the early stages at least there is rarely any noteworthy interference with nutrition When pain is present it is rarely localized it is more apt to be vague and diffuse It is not uncommon in long continued cases to find the disorder complicated by a moderate secondary anaemia Broadly speaking however, the symptomatology in all gastro intestinal neuroses is but a localized manifestation of a general functional disorder of the nervous system Professor Gerry Morgan takes up each symptom or manifestation discusses its implications and especially relates it to possible organic disease in the gastro intestinal tract or elsewhere in the body He insists that the diagnosis of neurosis should never be made until all possibility of organic disease has been definitely excluded A careful history should be taken and a thorough physical examination made including tests of gastric contents and faeces and an *x* ray examination of the digestive tract

In the treatment of these cases the personal influence of the physician is most important The neurotic patient has a facile imagination which is easily impressionable The thorough physical and special examination is often an efficient means of convincing him that organic disease has been excluded, and that his functional disorder is amenable to successful treatment Specific regulations as to the mode of living and as to diet should be insisted on Isolation from home and friends and a rest cure in a nursing home are sometimes essential Massage and hydrotherapy especially the applications of poultices and stupes are serviceable Later in the treatment active exercise—riding swimming golf—are helpful aids in restoring normal vigour Psychotherapy is valuable Suggestions of returning health an air of cheerfulness and hopefulness are definitely beneficial Few drugs are useful in these cases The bromides luminal in small doses belladonna or atropine iron arsenic phosphorus and intramuscular injections of cacodylate of soda and iron are most valuable when indicated Professor Gerry Morgan applies these principles in a well written and handy book illustrating each form of gastro intestinal neurosis with summaries of his own cases His book is one that should be on every practitioner's shelf and in a convenient place for ready reference The physician who turns to it for help in dealing with these troublesome cases will not do so in vain and by carrying out the author's methods of treatment he will often find that a most satisfactory restoration to health is obtained

[1] *Functional Disorders of the Gastro intestinal Tract* By William Gerry Morgan MD Lond Everyday Practice Series London J B Lippincott Company 1931 (Pp xii + 259 82 figures 12s 6d)

POST HAEMORRHAGIC NERVOUS MANIFESTATIONS

As there is not a complete monograph on this subject Dr ROBERT WORMS has made the profession his debtor by the publication of *Les Accidents nerveux consecutifs aux Pertes de Sang* a clinical and experimental research Professor P ABRAMI has written a preface These complications are rare but not so exceptional as might be thought and it appears that their occurrence depends on some factor additional to the loss of blood—namely a pre existing pathological condition local or general such as arterio sclerosis latent chronic meningitis and cerebral syphilis and especially hepatic insufficiency This means that an otherwise healthy person even after a severe haemorrhage will not manifest the various nervous symptoms here under consideration but entirely latent lesions may thus become evident Experimentally this clinical observation has been reproduced by the author who regards the etiology of such nervous symptoms as even more complex These are numerous and include hemiplegia permanent or transient of which a number of examples are given and critically discussed paraplegia is very rare

[1] *Les Accidents nerveux consecutifs aux Pertes de Sang. Etude clinique et experimentale* Par Robert Worms Preface du Dr P Abrami Paris G Doin et Cie 1931 (Pp ii + 207 6 figures 32 fr)

It is pointed out that whereas chronic anaemia gives rise mainly to lesions of the spinal cord loss of blood affects the brain convulsions are the only post-haemorrhagic nervous manifestations usually recognized in the textbooks Attention is drawn to *fruste* or incomplete pyramidal syndromes which are shown by an extensor plantar response Psychical symptoms have long been known and were recorded by Pinel Esquirol Marshall Hall and Sansom Coma with hypertonia also occurs visual disorders are familiar to ophthalmologists and of serious prognosis One important deduction is that venesection is contraindicated in the failing heart of high arterial pressure The only real treatment of post-haemorrhagic nervous symptoms is blood transfusion which should be carried out as early as possible but even when employed late it may give results better than are often anticipated Blood transfusion is also indicated when the nervous system is affected after carbon monoxide poisoning and as a preventive measure in ligature of the common carotid artery

HUTCHISON'S *INDEX OF TREATMENT*"

Originally published in 1907 under the editorial guidance of Dr Robert Hutchison and the late Mr H Stansfield Collier *An Index of Treatment*[2] has progressively gained the confidence of the medical profession and grown in weight both of authority and ounces It has now reached its tenth edition and is a little over six pounds The last edition in 1925 in the production of which Mr James Sherren was associated was reprinted in the following year The then senior editor is now solely responsible —a task within the capacity of few save the author of *Clinical Methods* and *Food and the Principles of Dietetics* and several other popular handbooks In the present edition which has been revised throughout a number of articles have been rewritten thus Professor Francis R Fraser contributes an article on the conditions of exophthalmic goitre hyperthyroidism and toxic goitre and Mr Tudor Edwards describes how empyema should be treated Mr James Sherren's articles have been mainly revised by Mr A J Walton Mr Hugh Cairns being responsible for the important one on the surgical affections of nerves Mr Victor Lack has in similar fashion attended to the obstetrical and gynaecological articles of his senior Dr H Russell Andrews Mr Stanford Cade's account of radium therapy should be specially mentioned for its comprehensive scope Among the subjects now included for the first time are pink disease glandular fever diabetes in children and erythraemia the last of these is among the editor's own contributions which rightly outnumber those of anyone else they indeed amount in all to seventy eight

ST BARTHOLOMEW'S HOSPITAL REPORTS

The first article in the sixty fourth volume of *Saint Bartholomew's Hospital Reports*[4] is an *In Memoriam* of Sir Francis Champneys with a pleasing photograph and the extensive bibliography of this great leader in obstetrics and gynaecology Of the eleven other articles three—all of great interest—deal with malignant disease Dr Wilfred Shaw and Mr J H Johnston have experimentally investigated the mechanism by which the ovaries become secondarily infected with new growth The usually accepted hypothesis that cells loose in the peritoneal cavity become implanted on the ovaries was not supported by their experiments but no constructive explanation was forthcoming Mr Ralph Phillips's thesis for the degree of M S on buccal carcinoma covers a wide field as is suggested by its subtitle— The relationship between histogenesis and biology Fifty one cases of oesophageal cancer are analysed by Mr R W Raven with the view of finding data for more satisfactory treatment Mr R T Payne in two articles deals first with the technique of sialography or the demonstration of abnormalities of the salivary ducts by substances such as lipiodol opaque to x rays and secondly (with Mr Girling Ball) with excretion pyelography both these articles are generously and successfully illustrated The results of a research into the value of chemical antiseptics in preventing streptococcal infection are set forth by Dr L P Garrod who tested twenty-one antiseptics of which eleven were found to be ineffective as regards protection against *Streptococcus pyogenes* In his article Surgery and spastic paralysis Professor H H Woollard gives a very instructive account of the anatomical details—red and white muscles and their nerve supply—which underlie the operative section of the sympathetic nerve fibres Mr W J H Beattie's comprehensive description of achalasia of the cardia is embellished by the records of ten cases and plates of the microscopical changes The cause of death in chronic renal disease is considered by Drs James Maxwell and A W Franklin Mr Hosford writes on the treatment of some common fractures and Mr H J Burrows contributes a note on direct inguinal hernia

OPHTHALMOLOGY FOR THE LAYMAN

There has been in recent years a veritable spate of small books about the eye published for the instruction of the layman Of these quite the best we have seen is that entitled *Your Vision and How to Keep it*[5] by Drs MERRILL and OAKS They have produced a book that is readable clear in its statements and for the most part free from technical terms (though there are occasional sins of this order) The information contained is sufficient to give the intelligent layman a good general knowledge of how his eyes work and of the ordinary conditions of disturbance or disease Such a knowledge is proper and necessary for school teachers and nurses It is evident that the authors are in close touch with popular thought in their country for they are at pains to explain the meaning of words much abused They write

> An *oculist* or *ophthalmologist* is a medical doctor who has specialized in disease of the eyes and who devotes his time to that branch of medicine He tests for glasses treats diseased eyes or operates as occasion requires On the other hand an *optometrist* or *optician* is a person who gives glasses He is not a medical doctor and does not pretend to understand diseases of the eyes nor how to treat them That is to say he makes no such pretence if *he is candid* The lack of understanding of this distinction has led the public into many needless often serious errors The confusion may be kept up by those who profit by it

There is an amazing *vogue for muscle exercises in* some parts of the United States—and even in this country —as a corrective of defective sight The authors deal tersely with this quackery

> To lay aside a needed pair of glasses in the hope that these exercises will correct errors of refraction is to say the least useless and ill advised This will more easily be understood as one learns that the error of far sight near sight or of astigmatism means only that the eyeball is ill shaped It is too short or of an irregular curvature Muscle exercises will not change the shape of the eyeball any more than wriggling the nose will permanently alter its Roman its Grecian or its Irish contour

In any further edition more care might be given to the illustrations The drawing of the orbit given as a frontis-

[2] *An Index of Treatment* By Various Writers Edited by Robert Hutchison M D F R C P Tenth edition revised Bristol J Wright and Sons Ltd 1931 (Pp xviii + 1027 93 figures 42s net)

[4] *Saint Bartholomew's Hospital Reports* vol lxiv London J Murray 1931 (Pp xxv + 231 10 plates 25 figures 21s net)

[5] *Your Vision and How to Keep it* By H G Merrill M D F.A.C.S and L W Oaks M.D Second edition New York and London G P Putnam's Sons (Pp 145 13 figures 6s net)

piece has thirty one pointers to it and the key is on the next page and at right angles to the block This is a bad arrangement So far as feasible the legends should be on the block and they should be as few as possible Fig 3 is most misleading, it is meant to illustrate the pupillary light reflex but it is indubitably a photograph of monocular dilatation by mydriasis The photographs of ill fitting spectacles are very good

DISEASES OF WOMEN

The third edition of *Diseases of Women*[6] by Mr T G STEVENS has been improved by the incorporation in the subject matter of some of the recent advances in the physiology of menstruation and brief descriptions of endometriosis and of radium treatment have been added This textbook has always been popular for the style is incisive the teaching dogmatic, and on the whole the opinions expressed are generally accepted The last edition published in 1919 was a model of its kind representing the views of a gynaecologist and teacher of great ability and it was up to date Textbooks however, must move with the times in the present volume there is small recognition of the progress that has been made in gynaecology since 1919 Each of the new sections is shorter than the subject demands and ovarian physiology has not been adequately treated Much of the old material needs further revision—for example the subject of endometritis and the photomicrographs of premenstrual endometrium are still retained under the title of chronic glandular endometritis The photomicrographs excellent in 1912, compare unfavourably with those of the present day some show bad definition others flares and spherical aberration while in some the plates were badly overexposed The publishers might take a hint from modern American and German publications in these matters

NOTES ON BOOKS

We welcome the third edition of Dr F GARDINER'S *Handbook of Skin Diseases*[7] It is a comparatively modest work but is sound in every way as one would expect from a clinician of the author's attainments and experience It is far more copiously illustrated than is usual with so small a volume and there are no fewer than thirteen coloured plates most of which are very satisfactory Following the teaching of the doyen of the Edinburgh school Sir Norman Walker Dr Gardiner refuses to employ the term 'eczema' for which he substitutes 'dermatitis' but this terminological distinction does not appear to make his views on the subject very different from those of other modern dermatologists We notice that he claims to be able to cure leucodermia by the administration of intestinal antiseptics combined with the local application of potassium permanganate and *ichthyol* paste Is he not an optimist?

Dr P G STILES has produced an interesting and readable little book on *Nutritional Physiology*[8] He tells us that the making of it has been a study in elimination We could wish that other writers on this well worn theme would take equal pains to prune their work Dr Stiles's book is interesting accurate and thoughtful and best of all is written with style and *smoothness* He has realized what so many contemporary writers in popular science do not—that it is not sufficient merely to present facts without any attempt to round off the crudities and illiteracy with which their works so often bristle One can after all find the facts well and clearly represented in any reputable scientific textbook It is hardly reasonable having bawled a rehashed version of these into a dictaphone to expect the public to accept the result as a 'popular presentation of scientific work'—yet such must surely be the common practice Dr Stiles has dealt with the physiology of nutrition and the physiology of food in some 300 pages which are a refreshing reminder that such books can be a pleasure to the reader

Living the Liver Diet[9] by Dr ELMER MINER is a commendably brief work, which consists of some 100 pages of recipes and menus Each set of these is prefaced by a few remarks, embodying the author's views of the group of foodstuffs in question Dr Miner states in his preface that he is himself a physician suffering from pernicious anaemia It is possible that the recipes given for liver may be valuable, though we confess that certain of them sound peculiarly nauseous

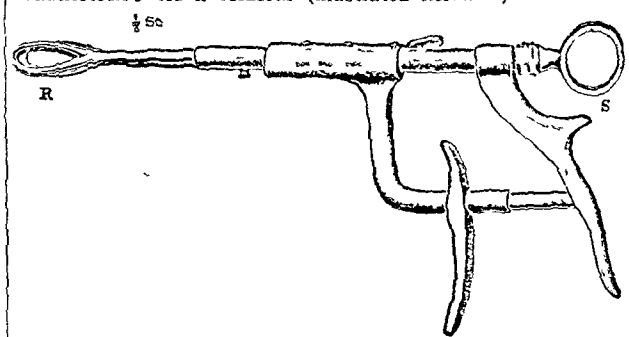
Volume xxv of the *Collected Papers* from the Department of Physiology and Biochemistry, University College London has now been issued under the joint editorship of Professors Lovatt Evans J C Drummond and A V Hill These papers number in all forty nine and the collection may be consulted in the Library of the British Medical Association

[6] *Diseases of Women* By Thomas George Stevens M D B S (London) F R C S M R C P New and revised edition *London University of London Press Ltd* 1931 (Pp xv + 444 199 figures 20s net)
[7] *Handbook of Skin Diseases* By Frederick Gardiner M D B Sc F R C S Ed F R S Ed Third edition Edinburgh E and S Livingstone 1931 (Pp x + 283 46 figures 13 plates 10s 6d net)
[8] *Nutritional Physiology* By Percy Goldthwait Stiles Seventh edition Philadelphia and London W B Saunders Company 1931 (Roy 8vo pp 713 23 figures 10s 6d net)
[9] *Living the Liver Diet* By Elmer A Miner M D With an introduction by William P Murphy M D London H Kimpton 1931 (Pp 106 3 figures 7s 6d net)

PREPARATIONS AND APPLIANCES

TONSIL ÉCRASEUR

Dr T B JOBSON writes The idea of encircling tonsils by means of an inner solid ring (R) moving from behind forwards like a snare was originated as long ago as 1892 by W B Fahnestock of Philadelphia C B Meding in America has adopted this principle in his guillotine a straight implement *resembling Beck's* snare He claims very good results both from the point of view of complete enucleation and minimum loss of blood Mr T B Layton has added a handle of the Morell Mackenzie type I have been using a further modification of Fahnestock's tonsil écraseur (illustrated herewith) This has



a double handle which affords a squeezing action The advantages of this instrument are (1) It gives a good leverage for enucleating the tonsil by the Whillis method (2) As the ring draws the tonsil from behind forwards it safeguards the anterior pillar from injury (3) After the tonsil is firmly gripped in the ring by squeezing the handle the process is continued by bringing the screw into action By slowly rotating the ring (S) the ring (R) is drawn further into the shank The base of the tonsil is thus strangled and separated If five minutes are allowed for each tonsil the separation is practically bloodless and causes a minimum amount of trauma Its drawbacks are (1) It is not suitable for rapid tonsillectomy with ethyl chloride (2) It requires a prominent tonsil for a flat tonsil I prefer the Jenkins guillotine I have to thank Messrs Down Bros for their skill in carrying out my design of this instrument

CONTROL OF STEAM DISINFECTION

Messrs Manlove Alliott and Co Limited engineers of Nottingham have introduced a new method for controlling the operation of steam sterilization and disinfection by means of three electric switches—one for vacuum one for steaming and one for drying—each stage being indicated by a coloured pilot lamp

British Medical Journal

SATURDAY, FEBRUARY 6th, 1932

PSYCHONEUROSES AND THE ENDOCRINES

The current issue of the *Journal* includes a useful and interesting contribution by Dr W Langdon Brown on the endocrines and some associated psychoneuroses This summary of recent developments in our knowledge of the various endocrines and their mutual relations is not only instructive from the point of view both of therapeutics and of pathology, but it also serves to remind us of the indissoluble unity between mind and body It is now generally recognized that consciousness is a manifestation rather than the essence of life and mind, and that the term ' mental " is suitably applied to states other than that of consciousness There are quite unconscious psychical happenings—such for instance as the instinctive reactions of animals in which there can be no conscious purpose, and even a unicellular organism exhibits behaviour to which the term "mental" is applicable Life and mind indeed may be quite properly regarded as synonymous terms The psychopathologist has made it abundantly evident that unconscious psychical phenomena—fundamental tendencies and past experiences—are accountable for many maladjustments and morbid states of consciousness But it is essential to remember that where the problems of psychiatry are concerned the unconscious mind must also be explored physiologically if the pathology of the morbid symptoms exhibited is to be understood How fruitful in results such researches have been is well brought out in Dr Langdon Brown s lecture for there it is clearly shown how certain psychological disorders are determined by diseased reactions at the physiological level Some of us have perhaps a tendency to think of the unconscious mind too exclusively in psychological terms There is it must be remembered an ' organic unconscious ' When the physiologist is investigating the vegetative nervous system which consists of the viscera and the ganglion cells and the ductless glands he is investigating the unconscious mind, for within this system are to be discovered ' the springs of action —the kinetic drives which regulate and sustain the activities of the conscious personality It is interesting indeed to observe that whether research into the origin of the neuroses and biogenetic psychoses is directed along psychological or biological lines similar conclusions are reached—namely that the sources of these disorders are to be discovered ultimately in disturbances of the emotional and instinctive life

In the course of his lecture Dr Langdon Brown makes it plain how frequently psychological disturbances are associated with disease of the thyroid pituitary and adrenal glands He shows, also how in some patients appropriate treatment of the physical disorder of which the psychic symptoms are the expression is instrumental in bringing about recovery In the case of cretinism and myxoedema the therapeutic effects of thyroid extract appear almost miraculous, and they certainly encourage unceasing research along similar lines Such results indeed allow us to hope that further work on the interactions of the endocrines may lead to the discovery of glandular extracts capable of curing the malignant psychoses of the schizophrenic group It certainly cannot be claimed at present that either psychotherapy or physiotherapy is capable of effecting any fundamental improvement in these cases Clinical psychological and pathological investigations however all tend to suggest that dementia praecox is the *expression of glandular dysfunction and biochemical* disturbance Especially important from this point of view are the genital glands It is natural in this connexion to think of the work of Mott who found complete arrest of spermatogenesis and more or less regressive atrophy in a large proportion of the testes of praecox cases Anomalies in the size consistency and position of the genitalia are very often noted in these patients and in women genital hypoplasia is extremely common Furthermore, there is the fact that schizophrenic symptoms manifest themselves especially at adolescence, and complaints of queer sensations in the genitalia are frequently made These morbid changes in sensibility are often disguised in delusional or hallucinatory symbols The sexual behaviour of schizophrenics in the pre-psychotic stage is generally speaking unhealthy All kinds of varying libidinous manifestations are observed—masturbation, impulsive sexual excitement, homosexual trends and fixations

It must not be supposed that, in setting out the possible causal functioning of the generative glands in schizophrenia Mott or any other observer has suggested that we are dealing with a simple massive monosymptomatic disturbance of function As Kretschmer points out, castration of a soundly constituted man has, as is well known, no psychopathological results of a schizophrenic nature If one accepts an endocrine causation as being probable in schizophrenia it must be regarded in the form of a complicated constitutional syndrome of a very tangled chemical relation between the brain and the glandular complex, in which the generative glands stand out in etiological prominence It must be admitted that up till now it has not been possible to record any notable success in the treatment of schizophrenia by means of glandular extracts Kraepelin stated that he had tried for a long time to influence dementia praecox by giving preparations of every possible organ—of the thyroid gland, of the testes of the ovaries and so on—unfortunately without any effect At the same time in the light of modern knowledge of the factors which appear to take a predominant part in the causation of the disease it would seem

altogether clear, and his timorous opening suggests that he was not at all sure himself Nevertheless, the salient features he described, the "primitive" nature of the glandular enlargement the slow progress of the disease, and the futility of treatment, marked it out as something different and the hundred years which have passed since that time have seen "Hodgkin's disease" persist as a *definite descriptive term* while leukaemia and other causes of glandular enlargement were being separated out This 'pupil of Dr Addison" was building better than he knew

EPIDEMIC MENINGITIS

In a recent communication[1] emanating from the Office of Statistical Investigations and the Department of Bio-Statistics of the School of Hygiene and Public Health Johns Hopkins University, Mr A W Hedrich surveys the movements of epidemic meningitis in the United States and foreign countries during the period 1915–30 After giving a historical retrospect of cerebro-spinal fever since its first recognition as a distinct disease by Vieusseux of Geneva in 1805, he points out that, though infection with the meningococcus is extremely widespread, especially in epidemic times, when it may be as high as 70 per cent , the clinical disease is rare, barely 11 000 cases having been reported in the United States in 1929 The disease, however, is very fatal, as 5 208 patients died, the case fatality in certain large cities being as follows New York 49 per cent , Detroit 50 per cent Chicago 53 per cent , and San Francisco 76 per cent The recent epidemic did not attack all sections of the United States simultaneously, but it first appeared in 1925 or 1926 in the Far West and one to three years later invaded the remaining sections Meningitis became epidemic in Europe shortly after the outbreak of the great war, the crest of the wave being in 1915 in England and Germany and France, and in 1916 in Denmark In England and Wales the 1915 crest was followed by a secondary rise in 1917, and then a gradual decline took place until 1923, when a fresh rise began, which continued until 1930 In the remainder of Europe the wave did not synchronize perfectly with that in England and North America Germany, for example had a pronounced epidemic in 1922, and minor peaks occurred in a number of other countries in that year or the next Outbreaks subsequently took place in France and Denmark in 1925, and in Sweden in 1926, when the incidence of the disease in the United States and England was approaching the minimum As regards the rest of the world, there was in many places a co ordination with the movement of the disease in Europe and North America

THE TUBERCULOSIS SCHEME IN FRANCE

National measures against tuberculosis in France are carried out by a semi-official committee the Comite National de Defense Contre la Tuberculose whose report for 1930 has now been issued France has a population of about forty millions almost equally distributed between the town and the country There is no doubt that the figures show a very much greater incidence of tuberculosis than is the case in this country In 1930 the death rate for all forms of tuberculosis in Paris was more than double that in London and more than thrice the figure for New York, and Paris continues to have more deaths from this cause than any of the great cities of Europe The Comite National is able to show an increased number of dispensaries scattered through out France These now total 710, and there are some 49,000 beds for the treatment of tuberculosis Information is given as to the number of consultations—approximately a million in 1930 Less than half of these reveal tuberculosis, and it would seem that dispensaries are performing a valuable diagnostic function Only 47 per cent of the pulmonary cases show positive sputum About 20 per cent of all patients who attend at the dispensaries receive a radiological examination The dispensaries also undertake the placing of cases in *hospitals and "preventoriums" and in private families* under the Grancher system A large number of cases which turn out to be free from tuberculosis are also housed in institutions With regard to the collaboration of medical practitioners the tenor of the report is less favourable Only an insignificant number of those who attend are recommended by general practitioners, and the Comite expresses a cautious opinion that it is desirable that this should be larger The age incidence in France seems to be exactly similar to that in England When both sexes are taken together the highest point of mortality is somewhere about the age of 25, but in both countries the deaths among males rise to a much greater number, about 45, whereas the females decline after 25 This increased middle-age mortality among males has the effect of making the curve much less sharp in its descent In America, on the contrary, among both males and females, there is a much larger mortality during the later period of life This question of the death rates from tuberculosis in France and the causes which make them among the highest in Europe, has not been sufficiently studied by those who deal with the general trend of tuberculosis mortality

[1] *Public Health Report* xli No 46 p 2769

A QUEEN'S OBSTETRIC HISTORY

In the *Caledonian Medical Journal* for January Dr Dan McKenzie states that 'medical men seldom undertake historical research" He communicates however, an interesting one of his own on a problem 'never before scrutinized by a medical eye, as far as I am aware"—namely, the obstetric history of Mary Queen of Scots at Lochleven It is known that Mary, who was married to Bothwell on May 15th was delivered of twins about the third week in July, 1567 Dr Dan McKenzie's investigation concerns the age of those twins He quotes Throckmorton's letter dated July 18th, 1567, which gives Mary's statement that she will in no ways consent unto that [divorce from Bothwell] but rather die, grounding herself on this reason taking herself to be *seven weeks* gone with child , by renouncing Bothwell she should acknowledge herself to be with child of a bastard, and to have forfeited her honour, which she will not do to die for it" Dr McKenzie shows that, in Nau's letter, translated into English by Stevenson, the word "twins' was in the original French 'deux enfans' and he states that it is improbable that the *jumeaux* would be discovered at the abortion and that they would be called 'enfans' It may be remarked, however that Mary was attended at Lochleven by two chamberers" (one a Frenchwoman) and her own skilful surgeon Arnault who would be likely to make

JAMES H SAINT CYSTIC DILATATION OF COMMON BILE DUCT



FIG 1.—Specimen showing the opened dilated common duct and its relation to surrounding structures

ANDREW FOWLER ADENOMATOUS PAPILLOMA OF THE DUODENUM



FIG 1.—Growth removed from duodenum (Piece of match is 1 inch long)

ANDREW FOWLER ADENOMATOUS PAPILLOMA OF THE DUODENUM

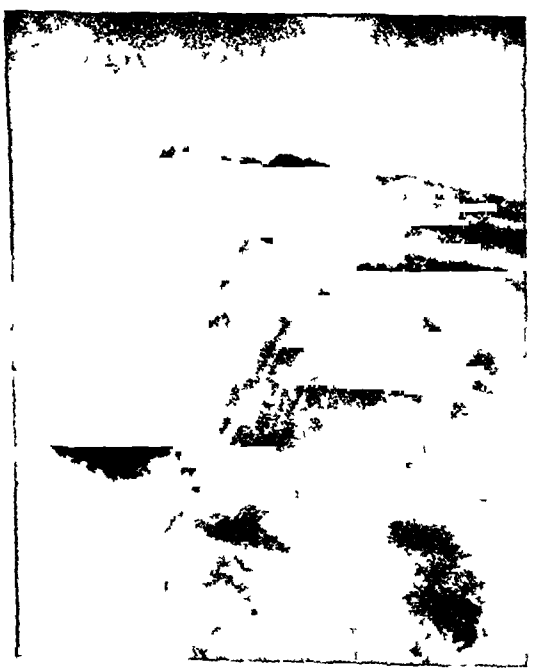


FIG 2.—First radiograph, showing contracted cap with dilatation of descending limb of duodenum.



FIG 3.—Second radiograph (10 minutes later) showing dilatation of jejunum with constriction below [Relatively reduced]

K C L PADDLE ATROPHIC COARSE CIRRHOSIS OF THE LIVER IN A CONGENITAL SYPHILITIC



FIG 1.—Upper surface of liver showing nodular cirrhosis



FIG 2.—Under surface of liver



FIG 3.—Cut surface of liver, showing invasion of fibrous tissue

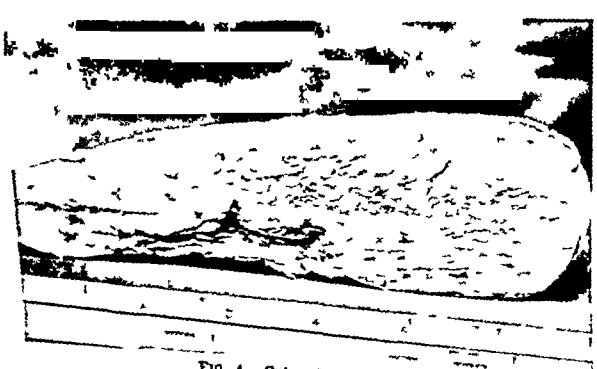


FIG 4.—Cut surface of spleen

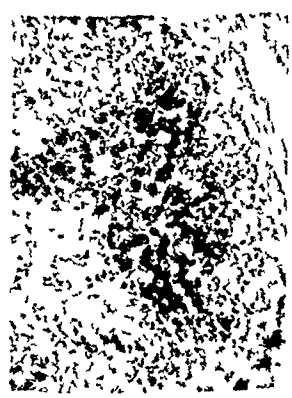




FIG 6.—Photomicrograph of spleen showing dilated blood vessels in middle with healthy tissue on one side and an infarcted area on the other with poor staining of degenerate cells

F HECTOR SCOTSON INVESTIGATION OF A RENAL CASE

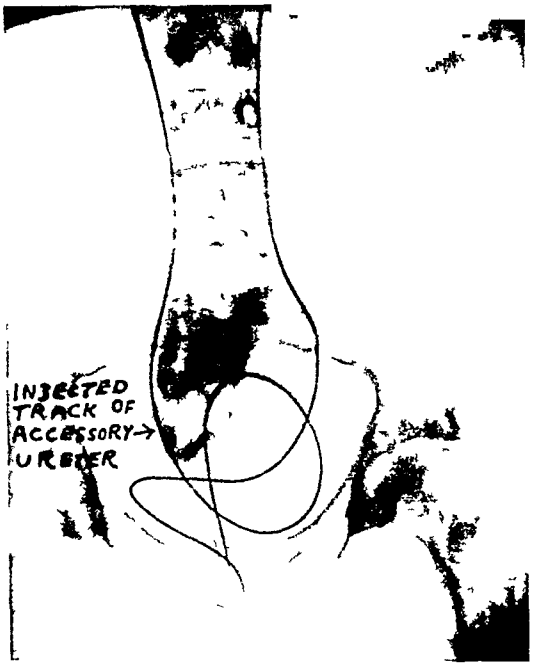


FIG 1.—Case 1 (1) Showing two radiologically opaque bougies in normal ureters and shadow cast by iodide solution after injection up accessory ureter



FIG 2.—Case 1 (2) Showing wedge of kidney tissue together with upper part of accessory ureter which was removed

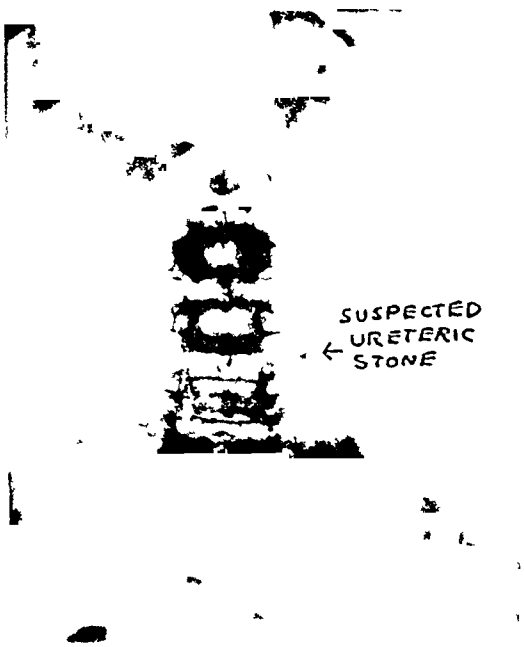


FIG 3.—Case 2 (1) Showing the suspected renal stone



FIG 4.—Case 2 (2) Showing the specimen removed

G HARIDAS ANEURYSM OF THORACIC AORTA WITH COMPLETE TRANSPOSITION OF VISCERA

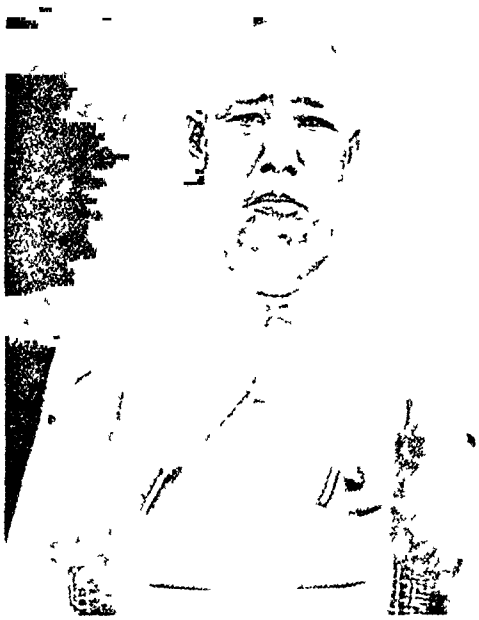


FIG 1.—Indicates surface markings of aneurysmal bulging to left and transposed heart to right of sternum



FIG 2.—Antero posterior radiograph (A) Outline of aneurysmal shadow (B) Outer border of transposed heart This is also displaced downwards and outwards

G HARIDAS ANEURYSM OF AORTA WITH TRANSPOSITION OF VISCERA



FIG 3.—Post mortem appearances (A) Aneurysm (B) Transposed apex of heart. (C) Transposed liver (D) Transposed stomach

ERIC ASSINDER AN EPIPHYSEAL LESION IN CONGENITAL SYPHILIS



FIG 1.—Lesion in and around epiphyseal line of lower end of left femur (outer side)

a careful examination of the abortion and to speak to the attendants of 'deux enfans' words used by his contemporary, Ambroise Pare, when writing of abortion Dr Dan McKenzie then quotes a letter from the Earl of Bedford to the Earl of Leicester, dated June 15th which states that "the Queen [of Scots] is with child," and another from the Spanish Ambassador Guzman, dated June 21st, which states that Mary was then *five months* pregnant (in other words, *six months* at the time she said she was *seven weeks*) Dr McKenzie ably discusses the discrepancy between the dates but we do not think that the evidence convicts Mary of premarital conception He then alludes to the story of the birth, at Lochleven of a daughter to Mary in February, 1568, which he gives good reasons for not crediting but his statement that "Mary having miscarried in July 1567, could not have given birth to a full-time child the following February" is perhaps too absolute and suggests, as an interesting subject of research the possibility of a triplet s surviving the abortion of the other 'deux enfans

FRACTURE OF THE OS CALCIS

Fractures of the os calcis are serious injuries from the point of view of disablement, and likely if not efficiently treated, to lead to long-lasting disability Dr Bohler of Vienna (*Journal of Bone and Joint Surgery* January, 1931, p 75) drew attention last year to some efficient methods of treating these injuries The subject has since been discussed by the Belgian Society of Surgery, to the meeting of which in June last a "rapport' was presented by Drs P Lorthioir and P Kempeneers [1] The amount of functional disability after these accidents depends on the amount of deformation produced, and consequently on the amount of violence suffered from falls on the foot or feet from a height (In one case at least, the force was applied from below by explosion) The fracture is usually impacted, the upper articular surface being driven down into the body of the bone and the lateral faces displaced The degree of restoration of form is a measure of the probable degree of restoration of function The rapporteurs find that impacted fractures urgently demand correction owing to the disabling effect of the deformity The maintenance of correction is not easy for the bone is spongy and with sparse periosteum and offers a bad hold for grafts or plates They describe Wilmoth and Lecœur's method of osteo periostic grafts through the necessary incisions and Bohler s subcutaneous forcible correction The latter especially they commend

SCHISTOSOMIASIS IN SHANGHAI

The floods which in summer drowned and starved millions of Chinese in the Yangtse Valley were also the cause of a considerable extension of disease Thus Dr J Kastein reports that the cases of schistosomiasis at Shanghai last autumn almost amounted to the proportions of an epidemic Ordinarily these cases are very frequent in the upper part of the Yangtse Plain but last year the mud from that region was unable to settle and carried down to the delta it has invaded bathing resorts near Shanghai which are generally free from this unpleasant visitor with its damaging effects The advanced stage of schistosomiasis is well known to practitioners in Shanghai but until lately there was little familiarity with the acute early stage of the infection The following is quoted as a typical case An Englishman of 34 went off with nine others for a country holiday at the beginning of August In the middle of September he fell ill as indeed did all the others except two who had not bathed He was attacked with general malaise headache and had pyrexia (103° F) cough, but no bronchitis The liver and spleen were not enlarged though the abdomen was slightly tender all over Thus far there was clinical justification for a diagnosis of typhoid or paratyphoid fever or influenza, but the microscope revealed a leucocytosis of 18,000, with 66 per cent eosinophils while numerous ova of *S japonicum* were seen in the stools Tuadin was given (0 5, 1 5, 3 5 5 c cm daily then 5 c cm on alternate days) The temperature fell by lysis after the third day There was complaint of profuse sweating and, on the eighth day a generalized urticaria for twenty-four hours At the close of the course the leucocytes were 8 000 eosinophils 6 per cent and no ova were found in the stools The patient was discharged from hospital at the end of October and completely recovered as do most cases if they are seen early This is reported as a typical case the author saw fifteen European cases and has heard of some forty more He suspects that there were hundreds of Chinese cases

ANDREW BALFOUR MEMORIAL

We publish this week an influentially signed letter inviting contributions to a memorial to Sir Andrew Balfour first Director of the London School of Hygiene and Tropical Medicine, whose death a year ago was so widely deplored The medical men supporting the appeal include Sir James Crichton-Browne, Sir Matthew Fell late Director-General A M S Professor W W Jameson dean of the London School of Hygiene and Tropical Medicine Colonel P S Lelean professor of public health, Edinburgh University Dr A T Stanton chief medical adviser to the Secretary of State for the Colonies, and Dr C M Wenyon director-in-chief Wellcome Bureau of Scientific Research Among the other signatories are Lord Lloyd formerly Governor of Bombay and High Commissioner for Egypt and the Sudan Sir Reginald Wingate formerly Sirdar of the Egyptian Army and Governor-General of the Sudan Sir James Currie formerly principal of the Gordon College Khartum the First Commissioner of Works the Governor of the Bank of England the chairman of the London School of Hygiene and Tropical Medicine and the founder of the Wellcome Tropical Research Laboratories Khartum

Mr Wilfred Trotter s Hunterian Oration 'The Commemoration of Great Men will be delivered before the Royal College of Surgeons of England on Monday February 15th at 4 o clock A banquet will be held in the evening at the College

We much regret to announce the sudden death on January 31st at the age of 46 of Dr John Parlane Kinloch chief medical officer of the Department of Health for Scotland An obituary notice will appear in our next issue

[1] Institut Solvay Collaborateur Prof Dr P Lorthioir et P Kempeneers Bruxelles R Fiévez
[2] Arch. Int. Chir. 2 Trimestre Hyg. et Journal 1932 p 1

"THE MISCHIEFS OF MOTORING"

At a meeting of the Marylebone Division of the British Medical Association held at the rooms of the Medical Society of London on January 27th a well sustained discussion took place on 'The mischiefs of motoring' Sir StClair Thomson, the chairman of the Division presided over a very large attendance and the proceedings lasted until a late hour

The Chairman said that it was possible to begin by agreeing that there must be some of the mischiefs of motoring which were inherent in all new inventions It would be remembered that when Stephenson was starting the railway lines he was asked what would happen if a cow got on the line and replied that it would be baad for the coo Railroads however were so constructed that coos were prevented from getting on the rails and they might hear that evening if the pedestrian was similarly to be banished from the high road Probably the road hogger considered that the chief mischief of motoring was the pedestrian while the 'jay walker' felt that the chief mischief was the motorist Both sides would be heard in the course of the discussion

Major and Minor Evils

Mr Zachary Cope said that most of the minor mischiefs of motoring were closely related to medicine and the mischief of major and malignant magnitude was especially surgical One of the minor mischiefs was due to noise and vibration Great annoyance some distress and direct physical and mental harm were caused by the various cacophonous sounds emitted by motor vehicles At night if one lived near a frequented highway or cross roads the hooting of the horn the explosion of the back fire the crescendo buzz of the accelerating mechanism and the throb of the noisy exhaust kept sleep away from many weary eyes In many hospitals and nursing homes patients were disturbed by the tiresome and thoughtless tooting and tintinnabulation of warning signals often given to save the precaution of slowing down The remedy lay in the education of the motorist Every medical motorist knew and every lay motorist should know, of the danger from poisoning by the exhaust gases in a confined space The large number of deaths which occurred annually from carbon monoxide poisoning could be avoided if common precautions were taken Less obvious but probably much more common was the slight degree of poisoning to which all who used motor cars were subject If there was any leakage in the exhaust pipe the fumes might enter the car and even in small quantities might cause toxic symptoms The sleepiness and yawning frequently noticed in saloon cars might be partly due to this cause There was room for research work to determine whether the CO content of these cars was increased after the engine had been running for some time The air of narrow and busy streets was much polluted by the gases from motor exhausts Experiments in German and American cities showed that the percentage of carbon monoxide considerably increased during the busy times of the day though it never went above 0 02 per cent Long exposure to the low concentration of carbon monoxide gave rise to dizziness headache lassitude and nausea It was possible that the common shopping headache was contributed to at any rate in sultry summer weather by the toxic effect of carbon monoxide poisoning derived from the polluted air Adequate ventilation of cars and buses and the provision of wide airy streets would remedy this evil or future research might make it possible for some appliance to be fitted to the exhaust to absorb the poisonous gases The speeding up of traffic had made it much more difficult for elderly people to get about With all due care even the healthy and able bodied had to be extraordinarily nimble to avoid injury Motorists were not too ready to slow down and crossings controlled by the police were not too plentiful Possibly the method about to be tried at Croydon by which the pedestrian could stop the traffic might provide a remedy

Dangers to Life and Limb

Having spoken of the spoiling of the countryside Mr Cope said that a minor but not unimportant grievance which followed from the frequency of motor accidents was the amount of gratuitous work which was expected of the doctor He knew of one doctor who rendered first aid to some rich travellers and sent in a modest account only to receive a solicitors letter saying that he had only done what in common humanity anyone would have done in the circumstances (Laughter) Even with third-party insurance it was to be feared that the costs for accident treatment would fall unequally upon those hospitals which were near accident centres

After a reference to the new types of crime immediately associated with the motor car the speaker came to the most serious of the mischiefs of motoring—the danger to life and limb In the last year for which figures were available over 6 000 persons lost their lives and 150 000 were injured in Great Britain as the result of motor accidents It was hoped that the new Act would improve matters but it was difficult to be optimistic in view of the mental attitude of many sections of society in which there was not that strong will to stop accidents which was the first necessity This unsatisfactory attitude was shown by the reputed unwillingness of pedestrians cyclists and motorists to submit to restrictions by the refusal to compel a scientific inquiry into all fatal motor accidents by the often rather casual way in which the daily list of fatal accidents was put in one of the less prominent pages of the newspaper by the apparent unwillingness of magistrates and juries to do more than fine those convicted of gross negligence and the examples of grossly careless driving which one witnessed almost daily There were great difficulties in determining what constituted dangerous driving If the present Act failed what could be done? Was the number of accidents to be accepted as a necessary consequence of modern civilization or should there be an attempt to find the cause of what amounted to a disease of the social community? Had the main cause of serious motor accidents been diagnosed? Was it congestion? Was it speed? Was it insufficient control of traffic? Was it simply carelessness? The accident statistics had not been studied fully and his chief object was to point out how insecure were the supports upon which present opinion was based, and to indicate the urgent need for further research in many directions First the roads Was it upon the narrow and tortuous or upon the broad and easy road that the more serious accidents occurred? Would the grading of roads as to priority of traffic help matters? The variation in frictional resistance was a matter of very practical importance The space within which a car could be brought to a standstill varied greatly with the different surfaces and with their condition at the time Some drivers expected the laws of momentum and velocity to be abrogated immediately they put on their brakes and blamed an unavoidable skid for what was actually due to an ignorance of mechanical laws A driver should have an approximate knowledge of the distance within which he could bring his car to rest with efficient brakes on various surfaces at usual velocities L G O drivers were tested in this way Makers and sellers of cars might well advertise these distances

Shortcomings of Driver and Pedestrian

The ease of running of a modern car often deceived the driver, and his inaccurate though honest statement that he was travelling slowly was difficult to confute The only method by which the external observer could know the pace of a car seemed to be the carrying of a large external speedometer indicating the speed in clear figures with a coloured light at night to indicate that a certain speed had been passed The pedestrian was a traffic unit and his movements should be regulated He should not be allowed to cross or attempt to cross a road when the robot or the traffic policeman had given the signal for motor traffic to advance and he should not saunter along the main roadway at night in the direction of oncoming traffic without a reflector or light But the motorist should remember that it was often very difficult to estimate the speed of an oncoming car and that the pedestrian had little time in which to correct mistakes When a mistake of judgement on either side occurred it was generally the pedestrian who suffered The Royal Commission decided against a driving test but many thought some such test necessary A test would not make a good driver any more than a medical degree made a good doctor but it would ensure a minimum of knowledge about the car tend to make a driver realize his responsibilities more fully and make certain that he understood the road signals

There was need for research to find out how soon the driver of a car was seriously affected by fatigue and what amount of alcohol diminished his control—particularly as to the finer points of judgement and ability to meet emergencies Medical men were often asked to say if a driver was under the influence of alcohol to such an extent as not to be fit to drive a car This could not easily be judged by the general mental condition for the finer points of control and the quick reaction time necessary to avoid disaster in emergency might easily be lost without the mental condition being very much altered The public did not realize as did the medical man that even small doses of alcohol and the toxins of fatigue might lessen judgement and increase reaction time to a dangerous extent The majority of the transport companies had a rule that drivers must be total abstainers while on duty a fact which showed that the drinking of even small doses of alcohol was thought to be unwise for drivers of cars

Speed in Relation to Accidents

Discussions on speed usually produced more heat than light largely because opinions were based on general observation rather than on accurate data There were two oft quoted sources of information—the figures furnished by coroners and Table IX in the Advisory Committee's report for 1927 The coroners figures stated that 15 per cent of fatal accidents were primarily due to excessive speed Table IX contradicted this and appeared to show that excessive speed had little influence on the production of serious accidents He believed Table IX had an important influence in leading to the abolition of the speed limit it therefore needed careful examination It showed that at a time when it was generally acknowledged that the speed limit was a dead letter the majority of fatal accidents happened with vehicles travelling at under ten miles an hour while at the most only one fatal case out of twenty was caused by cars going over twenty miles an hour In one year more deaths were caused by stationary cars than by those going over twenty miles an hour! (Laughter) These results appeared improbable From the surgical standpoint the table did not stand scrutiny The type of serious motor accident which he was seeing almost every week was not such as could be caused by a vehicle going under ten miles an hour Moreover the table did not state if the estimated speed was taken at the moment of impact or at the critical moment when the peril was first apprehended nor did it give the source of computation of speed which to quote the Royal Commission's report does not come from the police but in many cases from interested parties It would be seen therefore that this table which had had great influence in stifling discussion went beyond the bounds of probability transgressed the laws of evidence defied the laws of mechanics and the experience of surgery was vouched for by nobody but accepted by everyone—who did not scrutinize it closely There was great need for more reliable information on this question of speed Every possible error of judgement by driver or pedestrian was magnified in proportion to the speed at which a car was travelling and it could hardly be denied that very many accidents which were primarily due and commonly attributed to such errors of judgement were converted into tragedies by the fact that the speed of the car was too great to allow of correction of the misjudgement A little light was thrown on the subject by some figures gathered from the annual returns of accidents caused by vehicles and horses These appeared to show that the frequency of accidents was controlled by factors other than those responsible for fatal accidents The figures concerned all cities in England with a population over a quarter of a million and the first series showed that in all of them except Bristol Birmingham and Stoke the number of accidents in relation to the population was considerably greater than in the surrounding country districts This would lead one to the commonly held and reasonable conclusion that congestion was an important factor leading to accidents In considering the *proportion of fatal accidents* in each area a rather more striking fact emerged The latest figures published showed that in every case the proportion of fatal accidents was greater—on the average double—in the country round a city than within the city bounds 1 in 14 in one case and 1 in 28 in the other London and its environs showed the same difference, perhaps more strikingly He had tried to account for this difference by any other factor than speed but had not succeeded Cars in the country went much faster and in spite of the greater control in cities the congestion resulted in more accidents but the lesser speed only allowed half the proportion of fatal cases

The *figures pointed the way to further inquiry* If this proved that speed was the important factor some further limitation of speed might be necessary and this would not be objected to if it were based on accurate data He was all for systematic inquiry The time had gone by when the mere opinion of anyone ought to be accepted unless supported by clear and well established evidence (Applause)

GENERAL DISCUSSION

EARL HOWE said that it was true that people had rights but rights carried responsibilities and every user of a roadway whether riding or on foot had a responsibility to every other user and should play the game It was not generally realized that 20 people were killed and 450 injured every day on the roads of this country The recent drop in the figures was infinitesimal He belonged to the Lifeboat Institution through whose efforts in the past hundred years about 65 000 persons had been saved but in ten years all that saving would be nullified by accidents on the roads He was convinced that 80 per cent of the accidents could be avoided He attached great importance to the psychological value of an examination for drivers Last year in France where everybody had to undergo an examination before driving a very large proportion of applicants failed to pass the test Ordinary observation showed that many people driving in this country had limited knowledge and limited

imagination and in nine cases out of ten it was lack of imagination which led to trouble There was something wrong in the way the Motor Car Act was administered Traffic courts should be set up to deal with offences and everything relating to the highway He sympathized with the pedestrian in the difficulty of crossing the streets More could be done in the siting of refuges As to road surfaces it was possible for the most experienced motorist to get on to sections of road where he would be trapped into serious accidents Something might be done to insist upon the efficiency of brakes and in regard to faulty weight distribution

Mr T C FOLEY (Pedestrians Association) complained of an attitude of fatalism with regard to the appalling number of fatal and other accidents those in authority seemed to treat them as the inevitable though regrettable price of progress The development of motoring had meant an expropriation of public roads on a scale far larger than the expropriation of commons and open spaces some 150 years ago Statistics showed that speed was very largely responsible for accidents A red light should be shown at night and perhaps also a whistle sounded when a certain limit of speed was being exceeded

Mr FRYER (Automobile Association) made the remark that in the early days of the motor car the great mischief of motoring was the immobility of the machine which would not start To day the trouble was not the immobility of the machine but the immobility of the pedestrian He felt however, that the advantages of motoring far outweighed the mischiefs Colonel F LINDSAY LLOYD (Royal Automobile Club) said that if walkers realized that they had responsibilities like everybody else the roads would be safer It was an excellent idea that the pedestrian should be segregated but the trouble was that when footpaths were made along the arterial roads pedestrians would not use them but walked in the roadway

Miscellaneous Mischiefs

Mr PERCY T JOHNSON (Safety First Association) said that the real mischief of motoring was that roughly, 300 people were killed and many more injured every quarter in the Metropolitan Police area alone About one-third of the casualties were due to children running across the road and 10 per cent to children playing in the road He indicated the aims of the Safety First Association Sir GEORGE BADGEROW, referring to something that had been said about inefficient brakes remarked that in Canada his car was stopped while an official examined the brakes If brakes were found to be faulty a car was put on one side and sent to a repair shop Dr PERCY SPURGIN pointed out the temptation to speed which was offered by the new broad straight roads He urged tests for drivers and the need for education of the public especially of children The pedestrian should follow the rule, if he used the road, of facing oncoming traffic Dr SCOTT STEVENSON complained that any insurance company could prevent a driver from getting a licence by refusing to insure his car Insurance companies had increased premiums wantonly and had objected to motorists to whom no exception was taken by the police Mr WAGGETT satirized some of the popular conceptions as to the effects of speed Among these was the idea that if one hit a man when travelling at fifteen miles an hour his coat and hat were spoiled at thirty miles his leg was broken at sixty miles a blow with the mudguard killed him outright! Sir A KAYE BUTTERWORTH as an ardent pedestrian denied that there was reluctance on the part of pedestrians to submit to discipline He was in agreement with that arch motorist Lord Howe especially as to the need for an improved adminis tration of the law The real subject for inquiry was how to make the roads safe for all classes of people

Dr CLAUSEN pointed out that a very large proportion of motor cars according to newspaper reports were used merely for amusement and joy riding If people were to be encouraged to use cars merely for amusement and to drive at high speed, accidents would continue to occur and increase

Mr ZACHARY COPE in a brief reply said that his plea had been for scientific inquiry The CHAIRMAN (Sir StClair Thomson) said that nothing had been heard from the neurologist s point of view One of the mischiefs of motoring was to be seen at a busy London crossing where the face of every person wore the expression of a rabbit coming out of a burrow! Dr ROBERT HUTCHISON in proposing a vote of thanks, said that many people were suffering in health—eye strain for example—because they spent too much time in motoring It was a question whether the increase during the last twenty years of cancer of the lung was not traceable to this enormous use of the roads On the whole subject he confessed to pessimism, the remedies suggested were but palliatives

SPAHLINGER TREATMENT OF TUBERCULOSIS

DISCLOSURE OF FORMULA

A meeting attended mainly by press representatives took place on January 29th under the chairmanship of Lord Crewe at the house of Lady Seaforth in Berkeley Square London when M HENRI SPAHLINGER made public the formula of his method of vaccination against tuberculosis * It was stated that the meeting was called at the request of a committee consisting of H H The Aga Khan Lord Crewe Lord Rosebery Lady Seaforth, and Sir Arthur Stanley

Sir FREDERICK MAURICE said that the general nature of M Spahlinger s discoveries had been known to scientists for years but when the question of disclosing his detailed formula first arose he was advised by specialists in this country against such premature publication as might lead to improper exploitation of the remedies Long and costly processes were involved and there was a danger that preparations cheaply and hastily manufactured and probably valueless might be placed before the public as Spahlinger remedies to the discredit of the method During the long years of research the whole fortune of the Spahlinger family had to be sacrificed and M Spahlinger had been compelled to seek financial help from outside Funds were advanced on the security of the formula These funds were needed for the carrying out of the work of simplification and of testing the efficacy of the simplified bovine vaccine on cattle Then when the efficacy of the simplified vaccine had been finally established the formula was no longer under M Spahlinger s control The generosity of a small group of public spirited people had made it possible to release the formula Sir Frederick Maurice added that when M Spahlinger began the actual manufacture the cost of a dose of the vaccine was about £2, it was now about 2s The method described two things a bovine vaccine for the immunization of cattle and a harmless vaccine for the protection of human beings against the disease

M SPAHLINGER said a few words of thanks to Lord Crewe and others who had helped him after which copies of the document appearing below were distributed to everyone present

We are informed by M Spahlinger that he intends to communicate the results of his researches before a scientific body at an early date The full account of the methods distributed at the meeting is as follows

* See *British Medical Journal* May 12th 1923 p 830 June 2nd 1923 p 938

PRINCIPLES ON WHICH THE METHOD OF PREPARING SPECIFIC ANTIGENS IS BASED

The object is to prepare *in vitro* antigens identical with those generated by a given pathogenic micro organism in the living body of human beings or of a given animal species in which this micro organism gives rise to disease These specific antigens will stimulate the production of antibodies and anti micro organism defences identical with those which are elaborated in the living body when it is successfully overcoming disease

In order to prepare such antigens the appropriate pathogenic micro organisms are isolated from an infected subject without being passed through another animal species because this might alter their specificity by adaptation to a different zoological species These micro organisms are thereafter cultivated under conditions as similar as possible to those present *in vivo* This is done on specific culture media which will supply specific biochemical material identical with that provided *in vivo* thus enabling these micro organisms to retain and reproduce *in vitro* specific protoplasm metabolism secretions aggressive and defensive means and a specific progeny

The standard of specificity is set up by the antigenic structure elaborated by a given micro organism when developing under normal spontaneous conditions in a human or animal body wherein this micro organism causes the disease which the antigen is directly (active immunity) or indirectly (passive immunity) intended to prevent or cure

In addition no chemical or physical reaction or manipulation may be employed either during or after the preparation of the antigens which might alter or denature even to a slight extent the antigenic specificity

METHOD OF PREPARATION OF ANTIGENS FOR PREVENTIVE IMMUNIZATION OF CATTLE

A piece of tuberculous material is excised in a sterile manner from a lesion of one of the dead bovine cattle at a slaughterhouse Tuberculous micro organisms taken from this material are then inoculated under sterile conditions on specific media which will supply the micro organisms with specific bovine biochemical material

The specific culture medium is prepared as follows A bovine body fluid (defibrinated blood serum organ or tissue extract etc) is distributed in test tubes made of Jena glass These test tubes are thereafter placed in a sloping position in an incubator and the liquid is coagulated at about 65° C When the tubes and their contents have become cold there is spread on the coagulated surface of this solid medium a small quantity of normal (non heated) bovine body fluid (defibrinated blood serum organ or tissue extract etc) the tubes are then placed in the same inclined position as they were in the incubator so that the normal bovine fluid well covers the whole surface of the coagulated medium The tubes are left forty eight hours in this position so that the normal bovine fluid can well impregnate the superficial layers of the coagulated medium

These specific media inoculated with native bovine tubercle micro organisms (that is unaltered by passages on artificial media or by passages through an animal species zoologically heterogeneous to bovine cattle) are placed in an incubator where they are kept in the dark at a temperature of 38 5° to 39° C

As soon as the culture has sufficiently grown it is reinoculated on specific normal (unheated) bovine media preferably liquid consisting of normal defibrinated blood serum organ or tissue extract etc of bovine cattle contained in Jena glass flasks These cultures are then placed in a dark incubator and kept at a temperature of 38 5° to 39° C When the cultures have sufficiently developed the tubercle micro organisms are collected and made into an emulsion in a sterile manner in the absence of oxygen with distilled water or normal saline solution

The emulsion is thereafter distributed into ampoules put away and kept in a cool completely dark place until all the tubercle micro organisms in the emulsion have died a natural death by the effluxion of time According to the nature of the emulsion (its concentration state of division of the tubercle micro organisms etc) it is necessary to keep the vaccine a considerable time—a year or even longer—before it can be used It is then a harmless although efficacious material for preventive immunization

The antigens thus prepared *in vitro* are identical with the elaborated by the tuberculous micro organisms in diseased bovine cattle save that the former antigens when ready for use will not be part of a living micro organism

Each batch of vaccine must be tested so as to be quite certain that the micro organisms are indeed dead Traces of antiseptics formaldehyde for instance may be added to the emulsion before sealing it in the ampoules but every precaution must be taken to safeguard the strictest specificity of the antigenic elements The vaccines thus prepared retain for years their specific antigenic and vaccinating properties

It is essential that from the moment of the isolation of the tubercle micro organisms and during all the subsequent processes no reaction or manipulation should take place which might alter even in a slight degree chemically physically or physiologically the bacterial metabolism and the antigenic structure of the unmodified bovine tubercle micro organisms The vaccine embodies different bovine strains of tuberculosis

With vaccines prepared by the method described above bovine animals have been most successfully vaccinated in an extensive series of tests Calves immunized with the bovine vaccine were subsequently injected with large doses of living bovine tubercle bacilli which they entirely resisted while unvaccinated calves used as controls rapidly succumbed their autopsies revealing miliary tuberculosis

METHOD OF PREPARATION OF ANTIGENS FOR PREVENTIVE VACCINATION OF HUMAN BEINGS

The vaccine for human beings for anti tuberculous purposes comprises three different types of vaccine

1 A bovine vaccine (made from bovine tubercle micro organisms grown on specific bovine media) prepared as previously described

2 A vaccine made from bovine tubercle micro-organisms grown on specific human media Bovine tubercle micro organisms are isolated from tuberculous lesions of dead cattle and grown on a solid medium in the manner previously described They are thereafter inoculated on specific human media preferably liquid for instance normal (unheated) defibrinated blood serum ascitic or pleural fluids etc and grown in a dark incubator at a temperature of 37 5° When the cultures have sufficiently grown the tubercle micro organisms are collected and made into an emulsion in a sterile manner as said above

3 A vaccine made from human tubercle micro-organisms grown on specific human media Tubercle micro organisms of the human type are isolated directly from tuberculous lesions of human beings inoculated on human media made with defibrinated blood serum ascitic or pleural fluids etc prepared in the same way as the specific bovine solid media previously described and thereafter grown in a dark incubator at 37 5° If agar is added to ascitic fluid high temperatures must be avoided Thereafter a normal (unheated) human body fluid is spread on the surface of the solid medium so that it can well impregnate the superficial layers thereof

The human tuberculous micro-organisms should be isolated from a human lesion without animal (such as guinea pig) passage so as to avoid adaptation to an animal species which is foreign in the zoological sense to the human species and cultivated directly on a specific human culture medium

When the culture has sufficiently developed on this medium the micro organisms are reinoculated on normal (unheated) specific human media preferably liquid etc as soon as these cultures have attained their full development the tubercle micro organisms are collected and emulsified in a sterile manner as described above The emulsion must of course embody the different strains of the human type of tuberculosis

Distilled water peptone glucose glycerin and other substances which do not affect the specific properties of the tuberculous antigens can be added in small quantities to the culture media The human and bovine culture media employed must originate from tuberculous free bodies

It is advisable that the human body fluids be filtered before being made up into the culture media and the tubercle micro-organisms grown on these media should be washed

several times in a normal saline solution before being emulsified This is in order to remove all traces of the culture medium In addition formaldehyde may be added to the vaccine for human beings

The final human vaccine is a mixture of the three types of vaccines above described The relative proportions of these three vary according to the nature of the particular type of the tuberculous disease

Of course human beings cannot be used as controls or subjected to deliberate massive experimental infection (such as can be applied to cattle) to demonstrate the value of the human vaccine Therefore conclusive evidence of the degree and duration of the human immunity can only be based on statistics covering a very large number of cases and collected over a period of years during which those vaccinated have been subjected to careful observation

TYPES OF MATERIAL USED

According to the type of immunization and the species of micro organisms from which the antigens are derived the material used should be

(*a*) The bacterial bodies (whole endotoxins)

(*b*) An extract of the bacterial bodies (partial endo toxins)

(*c*) The specific liquid on or in which the micro organisms have grown this liquid containing the soluble antigenic substances (exotoxins) products of the bacterial metabolism and of the aggressive and defensive means elaborated by the pathogenic micro organisms

(*d*) A mixture of (*a*) and (*c*) or (*b*) and (*c*)

There is (the statement concludes) experimental evidence indicating that this method can be successfully used against various diseases in human beings and in animals not only for preventive and therapeutic vaccination but also for the preparation of antitoxic and antibacterial serums for test purposes antigen antibody reactions etc

CANCER IN EX-SERVICE MEN

AN AMERICAN SURVEY

It is generally believed that the incidence of malignant new growths is increasing but the reason for this is still obscure It has been stated that the great need in cancer work to day is intensive epidemiological research and the compilation of data analysed clinically and statistically With this aim in view Mr Philip B Matz[1] has carried out a survey of ex service men in the United States He found that out of 319 patients with malignant tumours six were coloured and the rest white Of the tumours 259 or 81 2 per cent , were carcinomas and 49 or 15 4 per cent were sarcomas while the remaining 11 comprised hypernephroma endothelioma glioma, teratoma or were unclassified Of the veterans 68 7 per cent had served in the world war and 26 6 per cent in the Spanish American war The proportion of Spanish-American veterans suffering from cancer was high, considering their average age and small total—234 931 compared with over four million world war veterans

ETIOLOGICAL FACTORS

A family history was obtained in only 16 3 per cent of the total a hereditary influence was recorded in 69 2 per cent and there was a familial incidence in 21 2 per cent The mother was the member of the family most frequently affected in the first group and the sister in the second group In the five instances in which both a familial and a hereditary history were given the father and brother proved to be the members of the family most often affected It is apparent that the percentage of cases giving a family history is low in this series Dr Matz ascribes this to the fact that the majority of ex service men have not yet reached the cancer age By this he means that when the full records of cancer among veterans are available, the family incidence will be found to be higher

The age group 35 to 40 appeared to be the critical period for the onset of malignant disease and Dr Matz recommends that in this quinquennium precancerous conditions—such as chronic irritation and benign tumours—should be carefully treated, as a preventive measure The mean age of onset in the veteran series was 43 for all groups

Hoffman suggested that malignant disease was more common among the over nourished, and this investigation therefore included a correlation between weight and the inception of the new growth There appeared however to be no connexion the majority were either under weight or within the normal range at the beginning of their illness

Of forty eight patients with cancer of the skin or mucous membrane twenty five were farmers and ranchers this confirms the belief that actinic rays and outdoor life may be factors in the causation of superficial cancers A well defined history of previous irritation or chronic inflammation was given by 40 per cent of the patients Just under 80 per cent of those who gave a history of a chronic inflammatory process developed carcinoma and the most frequent sites were skin and mucous membrane digestive tract, genito urinary system, buccal cavity bones and lymphatic system A precancerous condition was recorded in 27 6 per cent of the histories—such conditions as chronic ulceration or fissure pigmented mole gastric ulcer papilloma and chronic cystitis were included under this heading

THE CLINICAL HISTORY

The most frequent types of carcinoma found were adenocarcinoma basal cell carcinoma and squamous cell carcinoma The most frequent types of sarcoma were lymphosarcoma fibrosarcoma, spindle cell sarcoma round cell sarcoma, and osteogenic sarcoma The most frequent sites of malignant growth were the skin and mucous membrane followed by the stomach, the lymph glands the rectum the buccal cavity and the bladder

The commonest symptoms recorded in the history were induration and ulceration either alone or together In cancer the first symptoms to direct the patient s attention to his condition were ulceration tumour, pain bleeding and loss of weight In sarcoma the symptoms appeared in the following order tumour formation pain loss of weight and ulceration By the time the patients got to hospital the arrangement of symptoms in order of frequency had changed as follows pain tumour loss of weight ulceration loss of appetite cachexia anaemia bleeding discharge insomnia and nervousness In 62 7 per cent of patients the tumours grew slowly the sarcomas as would be expected growing more rapidly than the carcinomas

The progress of cancer is commonly believed to be associated with loss of weight, but in 8 per cent of the cases there was a gain and in 24 6 per cent no change was observed Metastases were found in 35 1 per cent and most frequently accompanied lymphatic sarcoma and carcinoma of the digestive tract skin mucous membrane and genito urinary system The minimum known duration of disease among eighty nine men who died was two months the maximum 156 and the mean 25 6 months When sarcoma was separated from carcinoma it was found that the mean duration was 18 2 months in twenty cases of sarcoma and 28 3 months in sixty-six cases of carcinoma Cancer of the skin or mucous membrane lasted longest—44 months mean duration

DIAGNOSIS AND TREATMENT

Since pain is such an important factor in drawing the patient s attention to his illness and thus ensuring early diagnosis a special inquiry was made into the history of

[1] Tech Bulletin of the Veterans Administration 1931 vii 1019 and 1123

pain at the onset of the cancer It was found that 304 patients gave a history of pain—46 per cent at the time of onset and 29 3 per cent later in 24 7 per cent there was no pain during the course of the disease Pain was more commonly associated with the onset in carcinoma of the digestive tract than in cancer of the skin or mucous membrane In six out of seventeen cases of sarcoma there was pain at the onset and in six no pain at all When pain appeared not at the beginning but later the delay—as far as this could be ascertained—varied from two weeks to 144 months It is clear therefore that pain cannot be relied upon to draw the patient s attention to the presence of a malignant growth

It was found that neoplasms of the digestive tract and lymphatic system often give rise to constitutional symptoms in the early stages As a rule in malignant disease these symptoms were late in appearing and the patient s activities were not materially affected until the disease had progressed some way This may account for the fact that 167 cases of carcinoma were treated on the average for 28 5 months and twenty nine cases of sarcoma for 34 9 months before the diagnosis of malignancy was established

The following coexisting diseases were found syphilis 2 1 per cent arthritis or rheumatism 6 9 per cent diabetes 1 9 per cent and tuberculosis 0 56 per cent There is therefore little evidence to support those who have tried to cite these diseases as etiological factors In 213 patients alive and under treatment at the time of the review, the average duration of the disease was 44 months In 100 patients who had died in hospital the average known duration was 25 9 months The therapeutic procedures found most effective were in order radium surgery, and irradiation x rays surgery x rays and radium The highest death rates occurred in carcinoma of the digestive tract buccal cavity and skin or mucous membrane in sarcoma of the lymphatic system, and in carcinoma of the genito urinary tract The total annual cost of compensation disability allowances and pensions for 178 veterans disabled as a result of cancer was $114 486 the average annual compensation per veteran being $643 18

Scotland

Health of Glasgow

The summary of health statistics for 1931 recently issued by the Public Health Department of Glasgow Corporation shows that the number of deaths during the year was 15 500 as compared with 15 453 in 1930 while the mortality rates for the two years were respectively 14 24 and 14 19 per 1 000 The high death rate 19 4 in the first quarter of 1931 was due to respiratory affections The epidemic of measles had begun earlier than usual in the spring and had increased greatly during the autumn there had been 15 000 cases during the year Although the epidemic was of a mild type the death rate from this cause was higher than it had been during the past six years The same was true of whooping cough Cases of scarlet fever had been widespread but this disease had also been of a mild type with low mortality Fewer cases of diphtheria had occurred and the death rate was 25 per cent lower than it had been in the previous year The mortality from pulmonary tuberculosis had been slightly higher than that for 1930 which had constituted a record low rate while the death rate from influenza had been slightly higher and from pneumonia and other forms of respiratory disease lower than in the previous year The infantile mortality rate was 104 per 1 000 births as compared with 101 during 1930 The total number of births had been 22 926 equal to a birth rate of 21 1 per 1 000 of the population as compared with the birth rates of 20 1 and 19 6 in 1930 and 1929 respectively

Edinburgh Royal Infirmary

The principal business of the meeting of the Court of Contributors of Edinburgh Royal Infirmary held on January 25th was to consider the report of a committee with regard to a scheme for paying patients It was unanimously decided that provision should be made enabling the Royal Infirmary to continue the system for paying patients at present in operation at the Royal Maternity Hospital when the latter should become part of the Royal Infirmary As regards payment by other patients it was stated that the introduction of such a scheme when there was a waiting list averaging 3 000 cases would be liable to cause dissatisfaction Mr William Adamson said that those who relied upon the help of the Infirmary were naturally much concerned that changes were proposed which might reduce the usefulness of the institution They were alarmed at the proposal to introduce a means test such as was in operation in certain other infirmaries in the country and they did not forget that apart from legacies this section of the community contributed a larger proportion of the ordinary income for maintenance and administration than any other The speaker was not opposed to the proposal for paying patients which had been introduced at the Victoria Infirmary of Glasgow but he did not consider that this example should be followed by infirmaries which had tremendous waiting lists of working people who could not afford to pay for treatment He understood that a legacy was in prospect for providing accommodation for paying patients and when this matured he thought the day for paying patients would have come special accommodation for this type of patient was out of the question in the present buildings An amendment was finally carried by one vote giving permission to the managers of the Infirmary to proceed with the necessary arrangements in regard to admission of paying patients Reference was also made at the meeting to the remuneration to the Infirmary for road accidents treated in the institution It was pointed out that every year between 400 and 500 such cases were admitted in which insurance was paid to the injured persons The treatment involved the Infirmary in an expenditure of about £3 000 per annum but the managers could recover only about £300 or some 10 per cent of that sum It was suggested that it would be desirable to equip the Board of Managers with powers to recover the cost of maintenance from such patients

Health Exhibition in Edinburgh

When opening the Health Exhibition in aid of the Bicentenary Extension Appeal Fund of the Royal Infirmary of Edinburgh on January 27th Sir James Barrie referred to the foundation of the hospital nearly 200 years ago and to some of the men who had been connected during that time with the Edinburgh Medical School—Sir James Y Simpson and Lord Lister There were he said three great objects to be achieved with the funds collected from the exhibition the provision of more accommodation for waiting cases the erection of a new nurses home which had long been required and the addition of a maternity hospital block which was urgently needed Sir James Barrie made a tour of the exhibits which included a Hippocratus bench Sir James s hand was photographed a model laundry a dietetic section under the supervision of the dietetic department of the Infirmary a model of a surgical ward apparatus by which hot water for a household can be obtained for 2d a day and an exhibit presenting an interesting synopsis of the medical history of the city during the past two hundred years

Edinburgh Corporation Mental Clinic

A circular to medical practitioners has been issued by Dr John Guy medical officer of health for Edinburgh, stating that the Public Health Committee of Edinburgh Corporation has resolved to open a clinic for patients suffering from nervous and mental disorders This clinic will be under the direction of Dr W T McAlister of Bangour Village Mental Hospital, and will be held at the Municipal Dispensary Spittal Street, Edinburgh every Tuesday morning Although no beds are available at present for observation cases it is proposed that arrangements should be made for these in the near future Medical practitioners are invited to refer to the clinic for advice any cases of mental disease incipient or relapsing, either in children or adults in which they desire assistance

Industrial Hygiene in Scotland

The first of a special course of five lectures on industrial hygiene was delivered in the Heriot Watt College Edinburgh on January 22nd by Dr Thomas Ferguson, H M Inspector of Factories The lecturer dealt with economic loss through industrial disease and after giving figures relative to certain of these diseases, said that in 1930 over 144 000 industrial accidents were reported to the Chief Inspector of Factories of which 899 had proved fatal He outlined the general measures taken for the protection of industrial workers against occupational diseases and reviewed their development He emphasized the necessity for loyal and intelligent co operation between the various forces in industry in order to produce improvement in the industrial health of the country

Dunfermline Hospital

At the annual meeting of subscribers of the Dunfermline and West Fife Hospital it was stated that the recent extension of the hospital buildings had cost some £69 000, but that a sum of over £10 000 remained to form an endowment fund It was pointed out that the extension of the hospital called for increased income and the hope was expressed that this would be forthcoming from the public The income for the past year amounted to £11 219 as compared with £11 081 in 1930, and the accounts had closed with a credit balance of income amounting to £2 190 The cost per occupied bed for the year had been £122 2s 8d and whereas the total cost of maintenance for 1930 had been £7 464 it had risen in 1931 to £9 071 The admissions during the year had numbered 1 289 or 347 more than in the previous year and the average number of beds in occupation had been 74 27 as compared with 56 53 in 1930 The attendances at the new out-patient department had increased considerably the number of out-patients treated during the year having been 4 011 compared with 2 786 in the previous year

Ireland

Tuberculosis in County Antrim

In his report for 1931 to the Antrim County Council the chief tuberculosis medical officer states that the incidence and mortality from pulmonary tuberculosis was declining and that there were probably many factors to account for this Improved housing and hygienic conditions had played a considerable part but a still greater improvement in these conditions was one of the most urgent needs of the county The incidence and mortality from surgical tuberculosis had not declined to the same extent It was estimated that 50 per cent of the cases were due to milk infection and the medical officer in conjunction with the Ministry of Agriculture was endeavouring to establish definitely the exact relationship In any case, however, the figures could be taken as indicating the great need for the elimination of tuberculosis from among cattle, and for the protection of the community in the meantime, by compulsory pasteurization of milk During 1930 there were 220 deaths from all forms of tuberculosis in County Antrim On the basis of the 1926 census population this figure represented an annual death rate of 115 per 100 000 of the population The rate in County Antrim was now lower than the average rates for Northern Ireland and the Free State, but appreciably higher than the general rate for England and Wales and considerably higher than that for similar rural districts in Britain The fall in the death rate in County Antrim as in Ireland generally was made up of a greater fall in the deaths from pulmonary than from non pulmonary forms—this was in contrast with the figures relating to England and Wales, where, following a more extensive supervision of the milk supply there had been a greater reduction in non pulmonary tuberculosis

Belfast Tuberculosis Committee Estimates

A decrease of £759 on the expenditure in 1930–31 but an increase of £1 550 on this year's estimated expenditure, is provided for in the estimate of the Belfast Corporation Tuberculosis Committee for the year ending March 31st 1933 The total sum required is assessed at £36 023 allowing for a reduction of £3 800 which represents the estimated credit balance at March 31st For the Municipal Sanatorium Whiteabbey the total estimated is £25 325 as against an estimated expenditure of £25,918 in the current year and an expenditure in 1930–31 of £22 910 For the Municipal Hospital for Tuberculous Children Graymount, £5 971 is required compared with this year's estimate of £6 023 and last year's expenditure of £5,554 The estimate for the tuberculosis institutes totals £11 187 as against an estimate of £11 371 in the current year and an expenditure of £12 341 in 1930–31 Graymount Open air School is estimated to require £1 390 compared with this year's £1 421 The city treasurer drew the attention of the committee to the amount included in respect of capital expenditure and suggested that pending a decision by the town solicitor as to the legality of including such expenditure in the estimates, the sum of £300 be omitted the committee agreed, and the estimates, as amended were approved Dr Andrew Trimble chief tuberculosis officer for Belfast, suggested that increased cleanliness was one of the factors responsible for keeping at bay the spread of infection The index of soap used was very interesting At the beginning of the nineteenth century 5 5 lb were used per annum per head of the population Until 1856 there was a heavy tax on soap almost equal to its value when this was repealed the index figure was 7 7 lb per head per annum of the population , now it was approximately 17 lb per head per annum

Dublin Housing Scheme for the Poor

The city manager's report of the Dublin Corporation's ' five year plan for the provision of 2 000 dwellings a year under the recent Housing Act shows only one minor adjustment by the committee in the details already published This is in connexion with the Cook Street area where the number of families to be accommodated is 103 with a population of 476 and not 402, with a population of 1 695 as previously stated The report adds that there was a minority objection to the provision of two roomed flats There were 22 000 families housed in one room tenements which were unhealthy and without proper water and sanitary conveniences and in place of the two roomed flats the minority urged three roomed flats or three roomed cottages which would be

a great improvement on existing conditions It is understood that consideration is to be given to the matter The report also states that some months prior to the financial crisis in England the Corporation entered into negotiations with Irish banks for the issue of £1 000 000 stock at 4½ per cent As a result of the crisis this issue was held up but the Irish banks allowed the Corporation an overdraft of £300 000 on the same terms as those on which the stock was to be issued This enabled the Corporation to proceed with schemes already in hand The Corporation it is also understood intends to proceed with its five year plan and the question of the provision of the money is to be considered at a special meeting to be held later

England and Wales

Etiology of Rheumatism

The introduction to a course of lectures on Rheumatism and arthritis as a public health problem was given on January 20th at the Royal Institute of Public Health by Sir William Willcox physician to St Mary's Hospital He said that the types of rheumatism to be considered included (1) rheumatic fever or acute rheumatism (2) chronic arthritis with the various types of arthritis and fibrositis and (3) an intermediate group where chronic rheumatism was grafted upon patients who had in early life suffered from acute rheumatism The terms suggested by Sir George Newman—namely the rheumatism of childhood and the rheumatism of the adult —were convenient for broadly distinguishing the first two groups In the case of acute rheumatism some twenty different observers in different parts of the world had identified a streptococcus as the cause of the trouble The work of Poynton and Paine in 1900 represented that of the earliest observers while J C Small in 1927 had carried out one of the latest bacteriological researches and given the name of *Streptococcus cardio arthritidis* to the organism which he isolated It could not at present be said that the specific microbe of rheumatic fever had been absolutely identified but all the evidence went to prove that it was a specific streptococcus The importance of unhealthy tonsils and nasopharyngeal infections was emphasized and attention was called to the action taken by public authorities in preventing and controlling the rheumatism of childhood

Sir William Willcox referred to the work in this country during the past fifteen years whereby focal infections with organisms of streptococcal type had been associated with the causation of chronic rheumatism There was he said overwhelming evidence that chronic rheumatism was due to a streptococcus a view fully confirmed by recent work in America A streptococcus of the mildly haemolytic or *viridans* type had been isolated from the blood and from the joints in cases of chronic infectious arthritis by Cecil Nicoll and Stansby in 1929 The same workers in 1931 had recovered a similar organism in the case of rheumatoid arthritis from the joints and the blood This confirmed the previous work carried out in this country Special clinics had been started for the treatment of and research into chronic rheumatism in this country and in Europe The lecturer advocated team work and said that the general hospitals of the country could do very valuable work in the prevention of chronic rheumatism by the examination of persons of school age which might be a source of chronic rheumatism were present

Dr W S C Copeman proposed a vote of thanks to Sir William Willcox and said that this course of lectures was the first occasion on which the medical profession had signified publicly that chronic rheumatism and arthritis was a subject that concerned the health authorities in this country as much as juvenile rheumatism

Lectures on Mental Deficiency

A course of lectures and clinical work dealing with mental deficiency and other closely allied conditions has been arranged by the University of London Tutorial and Extension Classes Council in co-operation with the Central Association for Mental Welfare and will be held subject to a sufficient number of applications being received from April 11th to 23rd 1932 at the University of London South Kensington The course is intended for qualified medical practitioners and will be based on the requirements for the University of London diploma in psychological medicine It will be divided into two parts—namely Part I dealing with mental deficiency (April 11th to 16th) and Part II dealing with mental conditions closely allied to mental deficiency (April 18th to 23rd) Students may take the whole course if desired Part I may be taken separately and Part II may be taken separately by students who have taken Part I in a previous year or have specialized experience approved for the purpose of the course The fee for the whole course is £6 6s for Part I or Part II £3 13s 6d Communications should be addressed to Miss Evelyn Fox c/o University Extension Department University of London Imperial Institute Road South Kensington S W 7

Correspondence

ANDREW BALFOUR MEMORIAL

Sir —It has been decided to found a memorial to Sir Andrew Balfour K C M G C B L L D M D F R C P who it will be remembered died in January 1931 shortly after the opening of the London School of Hygiene and Tropical Medicine of which he was the first Director When funds are available it is intended to place a simple and inexpensive monument in the School and with the remainder of the sum received to establish an Andrew Balfour Memorial Fund for helping students preferably from overseas to pursue courses of study at the School

We feel that Balfour's many friends all over the world would not wish to miss the opportunity of contributing to such a memorial and we should therefore be grateful if you would kindly allow this letter to appear in your columns We are confident that even considerations of hard times heavy taxation or other depressing circumstances will not deter those friends from helping to build up a fund of worthy proportions as a permanent memorial to a magnificent career While it is hoped that all to can do so will send a donation in the near future it is not proposed to limit the period during which the fund will remain open and proofs of donations or bequests will be gratefully acknowledged

Contributions should be sent to the Honorary treasurer Andrew Balfour Memorial Fund London School of Hygiene and Tropical Medicine Kennel Street W C 1 —We are

James Cantlie President	Lloyd
James Cantlie	Wellcome Chemical Works
W H Hale	Wellcome Physiological Laboratories
W H Hamer	A T Stanley
Sydney Harland	Henry S Wellcome
W J Howse	C W Wenyon
P S Leitch	Ronald Ross

London Hospitals

LONDON COUNTY HOSPITALS

Sir,—The concluding paragraph of your leading article on the London County Hospitals which appeared in the *British Medical Journal* of January 23rd reads as follows

> One further point may be touched on here It seems rather odd that no mention is made in this report of any meeting of the statutory committee set up under Section 13 of the Local Government Act 1929 representative both of the governing bodies and of the medical and surgical staffs of the voluntary hospitals serving the County which the County Council is bound to consult with reference to the provision and use of hospital accommodation Such a committee has been set up and it would have been interesting to hear whether consultation with it had taken place and with what results

As you say the omission seems rather odd, but probably the author or authors of the report were so overwhelmed by the extent and variety of the subjects to be dealt with that he or they unwittingly forgot to mention the important communications that have taken place between the Council and the committee representing the London voluntary hospitals In April 1931 the London Voluntary Hospitals Committee issued to both the medical and lay press a memorandum which you published on April 25th This memorandum gave an account of the activities of our committee during the first twelve months of its work It referred particularly to matters which had been the subject of joint discussion with the Central Public Health Committee and, amongst other matters, special reference was made to grants to voluntary hospitals pathological services for Council hospitals medical education in Council hospitals and maternity beds for teaching services

Further for your information, we would like to take this opportunity of making known that several conferences have taken place during 1931 between the Central Public Health Committee of the L C C on the one hand and the London Voluntary Hospitals Committee on the other Several questions of mutual interest have been discussed In particular a most important decision has recently been arrived at It has been agreed that a survey shall be made of the public medical and surgical services of London The London County Council are to make a survey of their own institutions the London Voluntary Hospitals Committee are to be responsible for that relating to the voluntary institutions It is felt both by the Central Public Health Committee and the London Voluntary Hospitals Committee that such surveys are necessary preliminaries to co ordinated action between the various bodies and institutions responsible for the medical and surgical services in London The surveys to be made by the Central Public Health Committee and the London Voluntary Hospitals Committee are now being proceeded with At an early date the co operation of the borough councils will be sought

We may say that although the Voluntary Hospitals Committee have not advertised their doings they have been diligent in watching over the interests they were appointed to represent.—We are etc

RIDDELL
Chairman
GEOFFREY EVANS
Honorary Secretary

London Jan 27th

Sir,—I have read with considerable interest the leading article in your issue of January 23rd on the London County Hospitals In the last paragraph surprise is expressed that no reference is made to the London Voluntary Hospitals Statutory Committee I think I ought to explain that the various meetings which have taken place between the Central Public Health Committee of the Council and the Statutory Committee of the London voluntary hospitals are matters which will be dealt with by the Clerk of the Council in his annual report It is for this reason and for this reason alone, that I have only made a very brief reference to the London Voluntary Hospitals Statutory Committee.—I am etc,

F N KAY MENZIES

Public Health Department The County Hall S E 1 Jan 27th

Sir,—In your leading article in the *British Medical Journal* of January 23rd, on the first report of the Medical Officer of Health for the County of London on general and special hospitals you say

> It seems rather odd that no mention is made in this report of any meeting of the statutory committee set up under Section 13 of the Local Government Act 1929 representative both of the governing bodies and of the medical and surgical staffs of the voluntary hospitals serving the County which the County Council is bound to consult with reference to the provision and use of hospital accommodation Such a committee has been set up and it would have been interesting to hear whether consultation with it had taken place and with what results

This statement is perhaps not fully justified for on page 191 of the report it is recorded that

> During the process of development of the scheme for providing a pathological service in the general hospitals the London Voluntary Hospitals Committee has been consulted from time to time on general matters as required by Section 13 of the Local Government Act 1929 particularly in regard to those questions relating to the recruitment of staff

But it is not clearly shown that these consultations have resulted in any deflection of policy on the part of the Council

In a letter to the *Times* of December 14th 1929 I pointed out that Section 13 of the English Local Government Act differed from the similar Act as applied to Scotland (Clause 27) in that the Scottish Act provided some safeguards for enforcing co operation which were absent from Section 13 of the English Act I pointed out that in the case of the English Act the committee representing the voluntary hospitals could do little more than advise the county councils and there was no obligation upon the county councils to take the advice thus given

It is noteworthy that on a matter upon which we are expressly told that consultations took place a policy has been definitely undertaken by the London County Council which I submit calls for some explanation We are informed that as a result of its consideration of the recommendations of the Departmental Committee (by which it is to be presumed is meant the Departmental Committee appointed by the Council and mentioned on page 7 of the report) the Council has in fact begun the provision of laboratories mainly to serve its general hospitals Five group laboratories are thus contemplated of the most elaborate type and less elaborate laboratories are to be furnished at individual hospitals We are told further that such laboratories have already been provided at New End Paddington Fulham and St George s in the East We are again told that a number of full time pathological posts under the County Council have already been made and more are in contemplation I would ask Is not this provision of laboratories in many cases a wasteful reduplication of existing facilities? There must be few districts in London in which a great voluntary hospital with expensively equipped laboratories and still more important a large and highly qualified personnel to run them is not already in existence One would like to be told whether the Voluntary Hospitals Committee advised this ambitious undertaking in the circumstances of our present financial stringency and the presence of established institutions for doing the same work as that contemplated by the new group centres To give a concrete example it seems

unnecessary and indeed extravagant to provide what must be a relatively poorly furnished laboratory at Paddington Infirmary when an Institute of Pathology famous throughout the world, exists at St Mary's Hospital within ten minutes walk of the Infirmary

At the annual dinner of St Mary's Hospital Medical School held early last October the chairman of the board of management made an impressive reference to the encroachments upon the sphere of the voluntary hospitals threatening from new developments at the county hospitals and he gave a timely warning that if the voluntary system was to be saved it was the medical staffs of the voluntary hospitals who would have to bestir themselves immediately to resist these encroachments, with this sentiment I heartily agree.—I am, etc.

House of Commons, Jan. 26th. E. GRAHAM LITTLE.

DANGEROUS DRUGS REGISTER

Duties of Non-dispensing Practitioners

SIR,—The Secretary of State finds that some misapprehension still exists with reference to the requirements of the Dangerous Drugs (Consolidation) Regulations concerning the keeping of registers by medical practitioners who do *not* dispense or supply drugs to their patients.

Every such medical practitioner who obtains the drugs for whatever purpose is by No. 11 (1) (*a*) of the Regulations required to keep a register in the form set out in the second schedule to the Regulations and enter therein true particulars with regard to every quantity of any of the drugs obtained by him at the time he obtains them.

The Secretary of State will be glad if you will give publicity to this statement of the legal position.—I am, etc.,

E. W. E. HOLDERNESS.

Home Office, Whitehall, Jan. 26th.

OVULATION AND THE SEX CYCLE

SIR,—In a letter to the *British Medical Journal* on January 23rd Dr. Wilfred Shaw, commenting on the editorial 'Ovulation and the sex cycle,' has taken up the rather dogmatic position that the relation between the menstrual cycle and ovulation is definitely and finally established and that further investigations of the question are therefore unnecessary. He quotes the evidence mainly histological (including his own very able contribution) which is familiar to those at all interested in the subject. That an observer of Professor Evans's eminence has taken up exactly the opposite point of view does not appear to shake Dr. Shaw's implicit belief in his own conclusions.

Yet he must be aware of the fact that Evans has actually made use of this very material (and notably the published data of Schroder) to confirm his own view that ovulation takes place at any time in the menstrual cycle. Moreover he has also criticized the interpretation of investigations on the corpus luteum.

The fact that there is this discrepancy in the interpretation of the known histological findings lends cogency to the experiments of Knaus who approaches the question from a somewhat different angle with a different technique. His published paper ('Eine neue Methode zur Bestimmung des Ovulationstermines') certainly appears to bear directly on the question and gives the impression that the author was not quite satisfied with the evidence previously published for he makes the statement that the majority of investigators to-day accept the view that [illegible] regelmässigem und 4 wöchentlichem [illegible] zwischen die Ovulation stark schwankend in der Zeit vom Tage des [illegible] stattfindet [illegible] ('Zentr. f. Gynäk.' 1929, xxxv, 2194).

Dr. Shaw gives the impression that gynæcologists are unanimous in their belief that ovulation occurs at a definite period of the menstrual cycle [illegible] be aware that quite a number of clinical observers particularly in Germany do not by any means share him. Nor does he mention [illegible] which suggest that conception may [illegible] occur at any stage of the cycle [illegible] or seven days preceding [illegible] sterile). This may be capable of explanation on suggested basis but surely it is worthy of further investigations.

Taking into consideration all available evidence it appears to me that at present the balance is in favour of the hypothesis that ovulation occurs [illegible] of the cycle. But to assert that the matter is proved beyond the need of further investigation is I [illegible] suggest to accept a standard of evidence to [illegible] to the experimental side.—I am, etc.,

Edinburgh, Jan. 27th. J. M. [illegible].

UNDULANT FEVER IN THE BRITISH ISLES

SIR,—In addition to the four cases mentioned by Dr. Weldon Dalrymple Champneys in your issue of January 30th in which the causative organism was stated to have been isolated from the blood or urine I have in the past two years succeeded in recovering *Br. abortus* from the blood of two cases of undulant fever. The opportunity of examining these cases both of which were in schoolboys was very kindly afforded me by Sir Ernest Graham-Little of London and by Dr. C. W. Sparks of Malvern, Bath. Both organisms grew only in the presence of added carbon dioxide and proved as the result of study by the H.S. dye and absorption of agglutinins tests to be of the bovine *abortus* type.

As the true frequency of Brucella infection in the British Isles is still problematical it is very desirable that those in charge of clinical laboratories should examine all serums from cases of undiagnosed pyrexia for agglutinations to *Br. abortus*. It is clear that infection with this organism besides giving rise to typical undulant fever may be responsible for a clinical picture varying from a brief pyrexial attack closely simulating influenza on the one hand to a severe and prolonged disease likely to be confused with typhoid fever on the other. Since moreover both in man and in animals this organism not infrequently tends to localize in the joints it is possible that a systematic examination of the serums of patients with joint pains might be of value. Where a positive agglutination reaction is obtained every endeavour should be made to recover the organism from the blood stream and so confirm the diagnosis.—I am, etc.,

London School of Hygiene and Tropical Medicine, Feb. 1st. G. S. WILSON.

BACILLUS OF EPIDEMIC JAUNDICE

SIR,—In the article on a case of [illegible] origin by Drs. C. J. P. Grosvenor and A. H. D. [illegible] in the *Journal* of January 23rd [illegible] bacillus which appears to be [illegible] familiar at St. Mary's and which we are accustomed to refer to under the unfortunate name of [illegible] epidemic jaundice.

Bacilli of this group were referred to in a paper by Morgan and Ledingham (*Proc. Roy. Soc. B.*, 1909, who described it as being commonly found in the [illegible] of intestinal bacteria pathogenic [illegible] (*Compt. rend. Soc. de Biol.* Band lx, 1912). The bacillus described as the bacillus of epidemic jaundice and [illegible] from that paper that we have [illegible] The [illegible] which [illegible] described in No. 8 of the Special Report Series of the Medical Research Committee by Dr. [illegible] Colebrook and Parry Morgan [illegible]

from 45 per cent of the cases of dysentery from Gallipoli investigated by them They also mention that the bacillus was recovered from the blood stream of a colleague of ours suffering from an enteric like attack of fever thus proving its potential pathogenicity

The bacillus is mentioned and shortly described in a list of intestinal bacilli pathogenic to man in the original and succeeding editions of Price s *System of Medicine* — I am etc

London W 1 Jan 26th JOHN MATTHEWS

IMMEDIATE PNEUMOCOCCAL TYPING

SIR —A fortunate coincidence of which I had no previous inkling has furnished confirmation from an authoritative source (in a consecutive paper) of the method of immediate pneumococcal typing briefly described by me in the *British Medical Journal* of January 30th But Drs Logan and Smeall incline to consider direct typing on the sputum of the pneumonic patient of limited application to be practised exclusively by the expert bacteriologist, surrounded by all the appliances proper to a first class laboratory Let it be said that I have enjoyed no such facilities

I can make no claim to be a bacteriologist nor do my assistants Our apparatus consists of a travelling set of stains and serums and the use of any microscope we can borrow in the six different hospitals in which we are engaged Working under these ' field conditions during the past ten weeks, a consecutive series of sixty cases of pneumococcal lobar pneumonia in adults—including thirty-four cases due to pneumococci belonging to the recognized serological varieties—has been typed ' without a hitch

It occurs to me that some of the diffidence of the Scottish workers may be due to the fact that the sputa examined by them have not always been freshly collected The direct test to be seen to perfection should be performed on freshly expectorated sputum containing living pneumococci I have frequently noted when demonstrating the reaction to others on sputum which has been stored in the ice chest that the appearances are less characteristic albeit still discernible, when the sample is stale

My sole excuse for seeking to occupy space in the columns of the *Journal* has been the conviction that here at last we have a test which can be applied by any informed observer almost literally at the bedside without refinement of apparatus or technique —I am etc

RICHARD R ARMSTRONG

St Bartholomew s Hospital Jan 30th

COLPORRHAPHY AND PROLAPSE

SIR —Dr Hesketh Roberts asks how many times I have treated acquired retroversion by abdominal operation The answer is—Very seldom

A mobile retroflexed uterus, whether congenital or acquired rarely causes symptoms If a patient with such a uterus has any complaints careful examination will find a concurrent condition (a lax pelvic floor is a very common one) which is the cause of those complaints and cure of this condition will cure her troubles True a skilfully performed colporrhaphy usually leaves the uterus in the normal position but routine examination reveals the fact that in a small percentage of these cases the uterus reverts to its old position and yet if the colporrhaphy is satisfactory it is extremely rare for these patients to have any complaints

In a paper on the treatment of prolapsus uteri in the *Proceedings* of the Royal Society of Medicine Obstetrical Section June 1910 I gave particulars of the cause of failure in the small number which had any complaints in the series investigated, not one of these had a retroverted uterus and I did not feel it necessary even to include this condition in the discussion on the causes of failure —I am etc,

WM FLETCHER SHAW M D,

Manchester Feb 1st ICOG

IMMUNITY AND MALIGNANT TUMOURS

SIR —I have read with very great interest the article in your issue of December 19th 1931 on the virus hypothesis of Dr Gye and Dr Purdy advanced in their recently published volume *The Cause of Cancer* In their researches on fowl tumour the authors have recognized biochemical factors which seem to me similar to some which for many years I have associated with immunizing and etiological factors in malignant disease in man I therefore beg the further courtesy of your columns for a few comments in continuation of my letters in the *Journal* of April 25th and August 1st 1931

In Dr Gye s pronouncements the filtrate of fowl tumour is separable into two parts, the essential part of the agent ' in transmission is (1) a living ultra microscopic microbe or virus, associated with (2) a labile non living accessory substance produced by the tumour cells—joint action being necessary for infection of new cells

My conclusions are that lipase, the lipolytic enzyme which is also separable into two parts, is a defensive intracellular reaction and that the thermolabile inactive, lipase fraction is activated by its corresponding pancreatic co enzyme or by other normal activators circulating in the blood stream On the other hand this normal course of events is broken by chemical agencies intrinsic and extrinsic, not excluding specific enzymes of parasites whether microscopic or ultra microscopic That is to say more than one cause may impair the lipolytic defensive activity of the normal cell and tend to permit malignant development and cell multiplication (*British Medical Journal* 1927 1 78) It is on the demonstrated serum variations and disturbance of the physiological mechanism in malignant and other diseases that my conclusions have been based

The introduction of a normal or specific co enzyme or activator into the blood activates in varying degree the inactive lipase (prelipase) which resembles complement in that it is thermolabile and is present in serum and in all tissues The evidence of this defensive enzyme production is found for example in the reaction of the serum in mice in which cancer grafts have failed to take the protein co enzyme of the cancerous tissue or antigen or of treated cancer grafts previous to inoculation in conjunction with the inactive lipase and of complement of the normal serum suppresses the graft This serum reaction is not evident for three days at least, as I described in 1911 Similarly this induced ferment action is increased in cases of recovery from cancer after successful treatment in the human subject as well as in recovery from bacterial and bacillary infections (for example tuberculosis leprosy) In the results of immunization as described by the authors in the duck goat and horse certain filtrates of fowl tumour used as antigens were rendered inert by heated immune serum alone and the antibody could be absorbed by normal fowl tissues The inference was that this type of action without complement showed the presence of a non living accessory intrinsic factor and corresponded to the action of antitoxic serums on toxins In this Dr Gye would seem to modify the position he held in 1925 as to the nature of the labile substance At that time he regarded his specific factor as being produced by the tumour cells now it seems to me that he regards the labile accessory substance as being a product of normal cells As I showed long ago the entry of diphtheria antitoxin into the blood

is followed by an increased lipase activating power of the serum produced as already described in conjunction with the inactive non specific thermolabile prelipase and complement In the other type of action as described the virus is made inert by the inactivated immune serum when fresh normal serum (complement) is added The antibody cannot be absorbed Hence it must be extrinsic and probably viral or microbic The action would appear to me to correspond to the induced ferment destructive action of the antiserum of sheep or other animal plus complement on tissue cultures to which I referred in the *Journal* of August 1st 1931

Nothing has been more clearly demonstrated or is more important than the fact that the lipase activating action is reduced in the serums of sheep goat and of other animal inoculated repeatedly with fresh human breast cancer tissue This I described in 1913 The inference is that in these immune serums the serum is deficient in inactive lipase or in complement Shortly stated the amboceptor or amboceptors may be in excess and unsatisfied as in the immunological explanation of bactericidal immune serums which prove to be ineffective So also in established cancer with certain exceptions the serum has a reduced action on lipase This reduced action is markedly the case with watery extracts heated or not of cancerous tumour tissues and cell emulsions as I described many years ago

In some recent preliminary experiments the addition of inactive lipase and of precipitated complement of normal human serum respectively to carcinoma serum restores the decreased lipase activating power of the serum to normal while the addition of the inactive lipase markedly restores or neutralizes the previous decreased lipase action by carcinoma tumour extract and cell emulsions (My experiments at this stage with added complement are incomplete) Normal serum contains the inactive thermolabile substance (or substances) which is deficient and impaired in carcinoma serum and tumour cells In my former experiments demonstrated in 1911, subcutaneous injections of pancreatic inactive lipase alone into normal mice markedly increased tissue lipolysis (with rapid increase in weight) I have long suggested as additional treatment the therapeutic clinical trial of this

The practical application of these indications to clinical work would appear to open out a broader field in the methods of prevention and treatment for the purpose of production of the ferment and its defensive normal fatty acid products in the serum and tissues in cancer and in directions other than that of malignant disease —I am etc

London Jan 29th J A SHAW MACKENZIE M D Lond

SHOE LEATHER DERMATITIS

SIR —In your issue of January 23rd (p 171) there is a letter from Dr Blair on the subject of dermatitis venenata caused by shoe leather The opinion is expressed that it is highly probable that the sumach process was the one (tanning method) used as it makes the most durable leather

The British Leather Manufacturers Research Association has been inquiring into a number of cases of dermatitis alleged to have been caused by leather It is very unlikely that cases caused by shoe leather would be due to sumach poisoning since this tanning material is not now always used in the manufacture of sole leather and is most unlikely to have been used in the manufacture of the upper leather In certain cases it is also highly improbable that persons who have suffered from dermatitis would have come into contact with sumach tanned leather [illegible] and it would be unreasonable to expect that these would occur more frequently among the workers of those tanneries where sumach is used than among the buyers of leather goods

Possible causes of dermatitis from leather which have been investigated by the Research Association are (1) contamination by traces of paraphenylene diamine or other dyestuff intermediates from the dyes used (2) free chromic acid also left over from the dyeing process It is important to emphasize that in spite of allegations as to the presence of paraphenylene diamine in dyed leather no actual sample of leather alleged to have been associated with dermatitis has as far as we are aware ever been proved to contain this base At present we hold the view that dermatitis caused by leather is either due to the presence of free chromic acid or to excessive amounts of water soluble dyestuffs To these causes must now be added the possibility of sumach poisoning

The British Leather Manufacturers Research Association is anxious to obtain all the material possible for pursuing its investigations and would be glad to co-operate in examining any leather or leather object which appears to have been connected with a case of dermatitis —I am etc

D JORDAN LLOYD M A D Sc F I C

London S E Jan 26th

TREATMENT OF SCALP RINGWORM

SIR —Dr E Dudley Grasby is somewhat misleading in his statement that x ray treatment is however not possible in small children below the age of 5 years The records of St George's Dispensary and School Clinic Blackfriars S E show that in the years 1922–31 we treated cases of scalp ringworm among the children of London elementary schools by x rays as follows over 5 years 93 cases under 5 years 53 cases What we have seen of cases treated with thallium acetate and referred to us for after treatment has not encouraged us to experiment in this direction ourselves And an experience of many other kinds of treatment has convinced us that anything but epilation by x ray treatment is a waste of time in any ordinary case Since regular x ray treatment has been given in the London County Council area the number of cases of scalp ringworm has fallen steadily In 1922 we treated 27 cases but in 1931 only 5 and we appear to be in sight of its practical extinction as a malady of school children —I am etc

L HADE GUEST M R C S
Honorary [illegible] to St George's [illegible]

London S W Jan 31st

RAW MILK AND DENTAL CARIES

SIR —With reference to the report of my paper on raw milk and dental caries in to-day's issue of the *Journal* with your permission I would like briefly to amplify one statement and make a minor correction

Concerning the thirty three children who commenced raw milk after 12 months and to about 2½ years of age of the 14 carious teeth in the children 11 were decayed and were probably carious before the children were admitted the remaining 3 teeth were [illegible] justifiably could [illegible] omitted from the investigation [illegible] doubt as to whether this [illegible]

Concerning the very slight [illegible] 7 months and 10 years and 9 months [illegible] and [illegible] in the permanent [illegible] exceptional case [illegible] years [illegible]

The [illegible] of [illegible] [illegible] [illegible]

these three exceptional cases none of the ninety eight other children tabulated as commencing raw milk during the period when it may be regarded as a physiological food had a trace of dental caries in any tooth erupted subsequent to the commencement of raw milk and it is during these three or four years immediately following eruption that teeth most frequently become carious —I am etc

EVELYN SPRAWSON

London Hospital Dental School Jan 30th

SIMULATION OF HEART DISEASE

SIR —The article by Dr Shirley Smith in the *Journal* of January 23rd raises some very interesting considerations especially that of inframammary pain to which I believe Charcot originally drew attention Signs of early myocardial change are often very difficult to elicit but a very important point in the distinction of whether or not the pain is related to disease of the heart is the associated tenderness over the apex because as a rule it will be found to disappear when the patient's conduct of life has been adjusted with suitably associated therapeutic measures thus forming a useful guide to progress As regards the treatment of paroxysmal pain with tachycardia the administration of the old fashioned trispiritus (sp cajuput co) often gives striking results —I am etc

Weymouth Jan 30th W R THROWER

APPENDICECTOMY IN EARLY LIFE

SIR —As science advances it is obvious that advantage should be taken of factors that can be of benefit to the general community and use made of any means that can minimize or actually prevent existing dangers to the well-being of individuals To everyone born there exists the danger of an attack of appendicitis The occurrence of it in its more virulent and dangerous types and the death rate cannot as is shown by statistics be lessened in any degree by the improvements in modern diagnosis or modern skilled surgical intervention although this is more readily and easily obtained than heretofore In cases operated on in the quiet stage it is increasingly found that even appendices that appear to all intents normal to the naked eye yet on microscopical examination reveal evidence of disease and defect In so far then as the appendix is concerned from the cradle to the grave—and it is the experience of all surgeons that no age is exempt—life is travelled with a bomb inside one that at any moment may light up and destroy life

In the last fifteen to twenty years appendicitis has undoubtedly increased in its incidence and is not diminishing Admitting as we do that diseases and diseased conditions have cycles of incidence we have to look upon it as one of our commonest ailments at the present day I would ask then why the State should not somehow step in and avoid this loss of life Modern science has made the opening of the abdomen—or laparotomy as it is called—safe I would therefore advocate that at the age of 7 or some considered age all children should be submitted to appendicectomy

The preliminary use of barley sugar and glucose has made the chief danger of anaesthetics in children negligible It is surprising how very little discomfort children have after a quiet appendicectomy nor need there be any danger to the abdominal wall with due surgical care The death rate from this procedure might be 1 in 1 000 in sound healthy children In unhealthy children the wisdom of the operation would have to be weighed in the balance

If one looks back on the death rate some years ago from accidents due to haemorrhage or anaesthetic difficulties in the removal of tonsils and adenoids in children one remembers how the risk was always thoroughly discussed Nowadays it is hardly considered, so that universal removal of tonsils and adenoids almost exists I would definitely state that universal appendicectomy in children would always be less liable to accidents than universal tonsillectomy

I am prompted to write this note because about three weeks ago in my taking in week at the hospital I had on one day four cases of acute perforated appendix with abscess and spreading peritonitis sent in from the area we serve A child an adult girl a middle aged man and a man of 71 with some lung complications all needing large incisions of the abdominal wall and free drainage and I left the hospital that night with the idea that all four could die as judged by my experience of such cases Happily only one succumbed—the man of 71 Now in all these cases not one point of suggestion of delay or indecision in the diagnosis could be found I ask then would it not have been better if all these human beings had been submitted to a safe appendicectomy at an early age?—I am etc

ARTHUR H BOSTOCK
Senior Honorary Surgeon Royal West Sussex Hospital

Chichester Jan 19th

SUCTION SURGERY

SIR —With reference to Mr R J Clausen's letter in the *Journal* of January 30th on the desirability of equipping operating theatres with efficient suction I might point out that all the theatres of the new surgical block of St Bartholomew's Hospital are so fitted A large suction pump in the basement can be switched on from any theatre and provides efficient negative pressure through permanent piping This system has been most satisfactory in practice and avoids the noise and danger of small portable pumps —I am etc

London N W Jan 30th C LANGTON HEWER

PLUMBISM AND PEPTIC ULCER

SIR —As Dr David R Lewis has paid me the compliment of referring to my work in connexion with lead poisoning I would like to thank him and, at the same time say that I am very glad that he has not taken up such a definite attitude on the subject as the title of his article suggests Pointing out that there is less lead in the urine of older men he makes the suggestion that this is due to renal disease but were this true all the older workers would be found to be diseased which is certainly not the fact and every death of these older men would be accompanied by a payment as compensation to the widow or dependants As a matter of fact the older workers are the healthiest one of the reasons being that they have good wives who supply them with well cooked food whilst much of the gastric trouble of the younger workers is due to their consumption of the wrong type of food In all works the good health of the workers is intimately associated with the possession of good homes and wives and especially so is this the case in connexion with those who are employed in spelter works

It is important to note that the presence of lead in the bones is no evidence of plumbism It is only when the lime salts of the bones are disturbed by disease that the lead previously deposited is set free to wander through the system and once again give rise to plumbism This connexion of lime salts gastric ulcer and plumbism is of extreme importance but to deal with it in a letter is

quite impossible I have dealt with it however at considerable length in a forthcoming book *The Heart and Spleen in Health and Disease* —I am etc

Swansea Jan 30th G ARBOLI STEPHENS

FACE MASKS AND FOGGED SPECTACLES

SIR —With reference to the letter under this heading in your issue of January 23rd may I suggest a very simple very effective and very practical form of mask which I have used for a number of years and the idea of which I owe to Dr J Dixon Stubbs? It consists of a piece of cambric 5 inches long by 5½ inches deep with tapes sewn at the four corners for tying behind the head and with a piece of lead wire about 1/10 inch in diameter sewn into the hem along the upper border of the mask The lead wire can be easily moulded to the nose and face The upper strings are tied firmly over the ears the lower much more loosely over the back of the neck The close fitting of the lead prevents the surgeon's spectacles from becoming dimmed by his breath The ophthalmic surgeon must provide against the steaming of his glasses as his operation short though it is demands perfect vision throughout This mask fulfils the necessary requirements but there remains the risk of the patient breathing on the surgeon's glasses This can be completely obviated by the simple expedient of rubbing both surfaces of the glasses with a little tacky soap and then polishing it off —I am etc

London W Jan 24th R H ELLIOT MD FRCS

QUININE AND MALARIA

SIR,—I have just read in the *Journal* of January 16th your report of Professor W Schulemann's lecture on synthetic anti-malaria preparations with more than ordinary interest because of long residence (about twenty years) in Sierra Leone where malaria is endemic My daily dose during this period at home while on leave and out there on duty was a 5 grain tablet of quinine bihydrochloride not sugar coated just before dinner and as a rule taken with a mild gin swizzle This daily dose kept me fairly free of fever I found no difficulty whatever in taking quinine in this form I barely noticed its bitter taste

In one place the anopheles mosquito was so plentiful at night that my body streamed with tricklets of blood when I was having my bath I then took my bath during the day but even so I was bitten The house was subsequently made mosquito proof I always slept in a mosquito net wore mosquito proof boots and when I dined out at houses furnished with cane bottomed chairs I protected my buttocks with sheets of paper placed between them and my shorts Most of the time I was beyond immediate medical help so I had to be my own doctor When attacked by malaria I took a dose of sodium sulphate went to bed and raised my daily dose of quinine to 10 grains then 15 20 30 the 30 taken 10 in the morning 10 at noon and 10 at night If this did not reduce my temperature I took one Faivre cachet which always did the trick I broke out into a profuse perspiration and down tumbled my temperature After the temperature began to fall I decreased the daily dose to 20 15 10 to 5 grains by which time I was able to get back to work My food during this period would be soup and chicken sometimes nothing but milk and water

Some men and women cannot tolerate quinine Until quinine is replaced by something better people who are going to reside in the Tropics where malaria is endemic should undergo a quinine course and intolerants should be rejected It simply comes to this quinine intolerants go out get ill and somebody else has to do their work the country loses their services and at the same time pays them—a not altogether intelligent procedure Children should never be permitted to reside in malaria-ridden areas It is most unfair to them I have seen it done and more than once has a mother said to me

Never again The medical profession does not know what effect the daily dose of quinine over a prolonged period will have on children of both sexes when they reach adult years nor the effect of its proposed substitute

In malarious countries the people should be able to get hold of quinine bihydrochloride not sugar coated in 5 grain tablet form as easily as they get their daily food I know of no such country but I do know that the production of quinine has been checked because the demand was not there It has been explained to me that the production of quinine bihydrochloride is an expensive process Possibly it is on a relatively small scale but what of the cost if prepared for possibly millions of people instead of a few thousand? Whatever substitute takes the place of this form of quinine it should be ascertained beyond doubt in the first place that it is more effective secondly steps should be taken to ensure that the people are able to get it and get it cheaply without having to travel miles to obtain it from a doctor or a dispenser The coated type of quinine is practically useless in my experience often being voided before the coating has dissolved

Some people attribute blackwater fever to quinine I do not agree From personal observation I know that men attacked by blackwater fever have said that they have taken quinine regularly Nothing of the kind they took it when they felt seedy and then swallowed a heavy dose when ill got blackwater fever and then put it down to the quinine I have known excessive exercise end in a dose of blackwater fever In one instance the patient did take quinine regularly but in what form I cannot say in the other case the patient was not a quinine addict—he was addicted to too many gin and bitters Repeated attacks of malaria without quinine will result in blackwater fever repeated attacks of malaria with quinine taken irregularly will end in the same manner but not quite so frequently The safe kind of quinine taken regularly in the same manner and at the same hour of the day is the surest guard against blackwater fever Of course other things must be taken into consideration food personal hygiene a man's work anxiety worry mental and physical strength—all have had some part when blackwater fever appears

My object in writing is to bring to the notice of medical men the experiences of a layman in relation to quinine and its use in the treatment of malaria (in blackwater fever no quinine is given until the discoloration has ceased and the temperature begins to fall) and to suggest that no universal change should be made until it is proved conclusively that the proposed substitute is superior and has other properties of at least equal value —I am etc

Bexhill on Sea Jan 20th W ADDISON

MEDICAL CONDITIONS IN SOVIET RUSSIA

SIR —The letters of Sir Robert Armstrong Jones Dr Herbert Spencer and Lieut Colonel Elliot published in your issues of January 23rd and 30th fully confirm the statements I had ventured to make respecting medical conditions in Russia under the Tsarist regime My sole object in writing to you was in no way to criticize or minimize the value of the work that we are told is being done under the present regime but to emphasize the (apparently forgotten) fact that under the Tsarist regime Russia did possess a medical organization and a series of hospitals laboratories and other medical institutions of which any country might have been proud *I were*

fortes ante Agamemmona —a motto that the leaders of all revolutions might occasionally bear in mind

That those hospitals and other medical institutions coexisted with a high general death rate (if we accept for the moment the figures of 31·4 per 1 000 in 1897 and 28·9 per 1 000 in 1909 mentioned by Dr Brend) was in no way surprising The climatic conditions, the vast and sparsely inhabited areas the low level of education and prevalence of superstitions among the peasants were some of the conditions that helped to increase the death rate, but above all was the fact that a very large proportion of the population of the Russian Empire were either Asiatics or were living under Asiatic conditions so that any comparison of the above figures could only justly be made with the corresponding figures of an Asiatic or semi-Asiatic country and not with those of a purely European one

Considerations of space prevent me from dwelling on the methods by which the authorities under the Tsarist regime endeavoured to cope with those difficulties I discussed them at some length—including the vexed question of *feldscherism* —in my essay on *Medicine past and present in Russia* (already referred to in this correspondence) and also elsewhere The Soviet authorities have now an unequalled opportunity of devising still better methods and should they succeed none will grudge them their success If they have in truth already reduced (as Dr Brend implies) the maternal mortality in Moscow to a figure even lower than that in our own country they are to be congratulated indeed!

In the interests of accuracy may I add that the post I formerly occupied in Russia had no connexion (as Sir Robert Armstrong Jones states) with either the Hon the Russia Company or (save indirectly) with the Foreign Office it was that of medical officer in charge of the British Seamen's Hospital in Kronstadt —I am etc

Ealing Feb 1st F G CLEMOW

EFFECT ON CHILD OF ACUTE ILLNESS IN PREGNANCY

SIR —I am trying to collect information as to the effects of acute illness during pregnancy upon the child should it be born alive and survive its birth I should be very much obliged to any of your readers who can send me any data particularly with reference to develop mental defects either physical or mental —I am etc,

Department of Medicine University of Bristol Feb 1st J A NIXON

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on January 29th Sir Frederick Gowland Hopkins professor of biochemistry was granted leave of absence with stipend for one term in each academical year in which he holds the office of President of the Royal Society

The following medical degrees were conferred

M D —F W Law

M P B Chir —M E D Roberts J V Lucas G T Cook J Sowerbutts E H Hudson

M B —I H W Lyle L L Houghton

M Chir —J Hughes J B Tracey M A Rushton W A C K Pruce

UNIVERSITY OF LONDON

The degree of Ph D (helminthology) has been awarded to W K Blackie of the London School of Hygiene and Tropical Medicine

ROYAL COLLEGE OF PHYSICIANS OF LONDON

At a meeting of the Royal College of Physicians held on January 28th with Lord Dawson of Penn the President in the chair Sir John Rose Bradford was elected a member of the Executive Committee of the Imperial Cancer Research Fund Dr Arthur Shadwell was re-elected the College representative on the Council of the Queen's Institute for District Nursing and Dr H Charles Cameron was appointed a representative on the Child Guidance Council The Milroy Lectures on The role of the haemolytic streptococci in infective disease will be delivered by Professor Cyril Okell on February 18th 23rd and 25th the Goulstonian Lectures on 'The pathology and treatment of anaemia' by Dr L J Witts on March 1st 3rd and 8th and the Lumleian Lectures on The border lands of medicine by Dr C E Lakin on March 10th 15th and 17th All these lectures will be given at 5 p m at the College Pall Mall East

Membership

The following candidates having satisfied the Censors Board were admitted Members of the College

Charles Thomas Andrews M D Philip Shaw Bell M B Cyril Frank Cosin M D Maneckjee Merwanjee Cowasjee M B John Davies M D Maslen Mackenzie Deane M B Guy Abercrombie Elliott M B Richard White Bernard Ellis M D Harley John Evans M B John Caradoc Evans L R C P Panagedage Bertram Fernando M B Alfred White Franklin I R C P William James Gardiner M B Mohamed Abdel Hamid Gohar M B John Gordon M D Hagar Hethrington M B Edward Weston Hurst M D David William Stuart Kaye M B Joseph Victor Landor M D Marjorie Low M D Dame Anne Louise McIlroy M D Joseph Mindline M B Adolf Marius Nussbrecher M B Thomas Clentworth Reah M B Harry Maynard Renme M B Walter Morrell Roberts M D John Guyett Scadding M B Mazhar Hussain Shah M B Neville Alexander Dyce Sharp L R C P Mary Broadfoot Waller M B Edward John on Wayne M B Alexander Duncan Shanks Whyte M C M B

Licences

Licences to practise were conferred on the following 95 candidates (including 17 women) who have passed the final examination in medicine surgery and midwifery of the Conjoint Board and have complied with the necessary by-laws A supplementary list will be issued in due course

*G Ashton H C Bamford G V Barker *H I Bateman H J Beard H Blumovitch I Bowen I F Buchland C Budein V H Bulleid Winifred M Burbury G W Causey M Chilkowski T A L Davies Jane Drukker G C T Du Toit C D Evans Jennie G Evans H T Giblin B Gilbert A M Gill Rachael V Gillespie A C Gladstone I J S Gower L L Green Elizabeth M (Mrs) Handfield Jones Joan G Harcourt D S Hayes S T Hayward C L Hemley W P Hedgcock V Hollingsworth M S Holzman L L R Hopkin James V C Howard J Howell S V Humphries K C Jeffery P W L Jones R A Jones Alison I Z Judd J J Kempton V Kennedy *E A Knappett N Langdon Down L W Lauste R V Q Lay O C Levine D T Lewis J I R Lewis W H Lewis Ethelberta M Lynton Low Jane S McDowell J C McGrath N F Maclagan P G C Martin K G Mayall W V Mayne J L Monkhouse Irene P Murray Parvathibai M (Mrs) Nair Pullit G V (Mrs) Nambiar R S Ogborn V H Osmond C C Owen R H Patel J C Pedley E D Portman S Prakash G Ramage J Reeve F R B Reynolds Irene P Rowlands P G Roberts H Rosenberg H W Salmon J L S Scott C K Shaw R F Simkin R E H Simpson I R Sinton W L Sleight W C Smith W P Stamm John W Stelfox M G Stratford C H Taylor H C M Walton Clara M Warren Grace E Watson H A T Wells Shirley L Whitaker H T S Wise I H Wood W Woolley

*M R C S previously granted

Diplomas

The following diplomas were granted jointly with the Royal College of Surgeons

PUBLIC HEALTH —C F Bramley J E Cheesman M M D Chughtai S N Consul Doris V Douglas Norman Ruth C Finn R C Jones P M Kaul Dorothy M Llewellin Janet M Macmillan L D Richards F A H Simmonds J E Stoles

LARYNGOLOGY AND OTOLOGY —V V Apte M Basheer V U Chitale N M Cuthbert H J Eizenberg L W Ingle H Y Khwaja D A P Macalister N D Matson C K C Misra B F Niblock E R G Pasee M V H Siddiqi

PSYCHOLOGICAL MEDICINE —C L Allen J C Batt F H Beare H C Beccle C L C Burns F N Butler Irene Dixon W J McCulley F L McLaughlin J H Mulvany L U H Pentreath Irene Yates G C Young

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

SURGERY —R R Clipstein R F Hawke

MEDICINE —G S N Hughes I S Lloyd H C Pain

FORENSIC MEDICINE —M Belo'zercovski W E P Corbett K F Hawke I S Lloyd V J McBrearty F D Norton B Rivlin L G Vendoll

MIDWIFERY —F Crowther M Ditton R G Joyce

The Diploma of the Society entitling them (upon registration under the Medical Acts) to practise medicine surgery and midwifery has been granted to Messrs M Ditton R F Hawke and B Rivlin

Obituary

JOSEPH RYLAND WHITAKER M B F R C P Ed

Lecturer on Anatomy School of Medicine of the Royal Colleges Edinburgh

Dr J Ryland Whitaker died at his beautiful residence overlooking Bruntsfield Links in Edinburgh on January 28th He was born near Wigan in 1846 and after an early education at Ushaw College Durham took the B A and M B of London University He studied for a time at the University of Louvain and took the Fellowship of the Royal College of Physicians of Edinburgh in 1894

Dr Whitaker devoted the whole of his professional life to the teaching of anatomy He was appointed to the Lectureship at Surgeons Hall in 1894 and in this sphere achieved extraordinary success He had great gifts of clear concise description a strong personality a commanding voice and a facility for apt illustration Whitaker's hymns were famous He kept a lively class A favourite dictum was *If you can make a student laugh about something he will remember it* He claimed to make use of all his senses in teaching except the sense of taste He summed up a lecture on the heart as follows The heart is the size of the closed fist 5 inches long 3 inches broad 2 inches deep it pumps out 5 ounces of blood at every beat and beats at the 5th interspace After demonstrating the bones of the wrist he used to offer a reward of £5 to anyone who could forget them He stated that a doctor in Australia wrote to claim the reward but added a postscript that he had found himself repeating the names as he wrote Whitaker's personally conducted tour from the outer ear through the labyrinth and back made an intricate little bit of anatomy wonderfully simple For many years Whitaker conducted a revision class in August and September which attracted students from all over the world and usually numbered well over one hundred

His devotion to teaching left little time for other work but his book on the brain and spinal cord ran through several editions For many years Dr Whitaker's horses and high four wheeled dogcart were familiar to Edinburgh South siders He loved an argument and could be a doughty opponent while he was always a loyal friend He was twice married and leaves a widow one son and four daughters His elder son Dr Norbert Whitaker was drowned while bathing His surviving son is the Rev J R Whitaker S J F R C P Ed, and one of his daughters is assistant medical officer of health for Newport Monmouthshire

It was with great regret that his friends noted Whitaker's obvious failure in health about a year ago but his indomitable spirit enabled him to carry on Last July in his 85th year and with only 25 per cent of haemoglobin he was conducting professional examinations It was only then that he consulted a colleague and was found to be suffering from pernicious anaemia An initial response to treatment proved transitory and the end came With him has passed one of the greatest teachers of his day and generation

ALEXANDER GOODALL

A correspondent adds

There must be many of our profession who will mourn the death of Joseph Ryland Whitaker My own acquaintance with him was brief but unforgettable Some ten years ago persistent neglect of the teaching facilities offered at Oxford University sent me to Edinburgh for a vacation course in anatomy I duly found myself at Surgeons Hall in company with a large number of other students uncomfortably conscious as I was of the nearness of the M B examination

It is still impossible to make gold out of lead and I will not say that Whitaker made anatomy interesting—no one could do that as he himself would have been the first to admit He knew however as everyone knows who came in contact with him that he had an uncanny gift for teaching I have no idea for how many decades he taught anatomy but he must have realized quite early in his career that though he might have been a successful surgeon a brilliant physician or the very best type of general practitioner it was his destiny to become and remain a teacher of anatomy—one of the best there has ever been

Whitaker's technique was not only anatomy without tears it was anatomy with laughter One could never forget anything he said He used an extremely ingenious system of mnemonics chants codes rhymes and sometimes even step dances to drum into his hearers minds the facts which they had come to him to learn To the uninitiated Surgeons Hall might have seemed like a madhouse The spectacle of sixty or seventy grown men and women some shy and self conscious others diffident but most of them enthusiastic standing on the benches of Surgeons Hall lecture room beating time with feet and hands whilst they chanted a nursery rhyme about the muscles of mastication was extremely amusing and as Whitaker realized amusingly unforgettable Amongst his other tricks of teaching were the fable of the semicircular canals with full histrionic accompaniments and his demonstration of the mysteries of the lesser sac of peritoneum and the foramen of Winslow—effected with a piece of string a duster and a peculiar looking instrument of unknown origin specially constructed for the purpose Always there was something striking about his methods something which fixed itself immovably in the mind He generally spoke in a singsong voice which however never for an instant permitted the student's mind to wander for his eagle eye could always detect the earliest premonitory signs of a slumber His voice seemed to say

This is a dreadfully boring subject but it's very very easy and we may as well learn something about it before we go home to tea Imperfectly cloaked by this his classroom manner was the most amazing clarity and agility of mind Though he had an exceptional memory for names and faces it was his extraordinary power of gripping the attention of his hearers that one admired He could assay the mental calibre and appreciate the difficulties of every student He encouraged the stupid brought up sharply the over confident stimulated the lethargic and dealt well and truly with the few scoffers there might be And always he bequeathed to his students an enduring knowledge of their subject Many of us must have carried away from Edinburgh that summer an affectionate memory of the brilliance the striking personality and the charm and wit of a very great teacher

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The death of Dr FRANCIS O NEILL of Jarrow on Tyne at the early age of 51 has deprived that town of one of its most popular practitioners A native of the North of Ireland Dr O Neill received his medical education in Edinburgh qualifying in 1902 After holding resident hospital appointments in Belfast he went as an assistant to Jarrow and succeeded to a practice on the death of his chief Dr Bradley He was devoted to his work and nothing that he could do for the benefit of his patients was ever a trouble to him By regular attendance at post-graduate courses and medical meetings he kept abreast of the times and was familiar with recent advances in medicine His popularity with his colleagues was evidenced by his having held the chairmanship of the South Shields Division of the British Medical Association and the vice presidency of the Newcastle and Northern Counties Medical Society For some time he took an

interest in municipal affairs and was a member of the Jarrow Town Council A countryman living in an industrial area he did not lose his love of the country and liked nothing better than a day by a river with a rod caring little about the size of the basket but observing all life by the waterside The attendance at his funeral was proof of the esteem in which all from the highest to the lowest held him and his death will be long and deeply lamented He is survived by a widow, but no family

We regret to record the death on January 19th of DR JAMES ASHNALL MARSDEN He was born in August 1861 at Burstow Rectory Surrey and after studying medicine at Guy's Hospital obtained the M R C S and L S A diplomas in 1883 he took the Durham licence in sanitary science in 1890 Dr Marsden practised first at Standish Lancs where he was medical officer of health to Standish Urban District Council and to Wrightington Shevington Parbold and Dalton rural sanitary authorities and after his marriage for many years at Lightcliffe Yorks where he held the appointments of medical officer of health to the Shelf and Hipperholme Urban District Councils and was a president of the Halifax Medical Society During the war he acted as specialist sanitary officer to Catterick camp and for his services received particular mention Later he was appointed special health officer to the North Midland Area and deputy assistant director of hygiene to the South Western Area with the rank of temporary major R A M C In his younger days an energetic Freemason Dr Marsden was a founder of the Lightcliffe Lodge

Medico-Legal

THE POSITION OF AN UNREGISTERED MEDICAL PRACTITIONER

At the Central Criminal Court on January 26th before the Recorder (Sir Ernest Wild K C) Rupert Charles Handley Ensor aged 51 described as an unregistered medical practitioner was found on the direction of the Recorder not guilty of a charge that he not being a duly qualified medical man unlawfully and for reward treated a patient for a particular disease on the following day the jury found him not guilty of obtaining sums of money by false pretences with intent to defraud

The hearing of the case extended over six days and the evidence turned largely upon the treatment which the defendant had given to a Mrs Halford whose husband was a witness for the prosecution while the lady herself was a witness for the defence On behalf of the defendant it was contended by Mr J D Cassels K C that he had kept himself within the law although no doubt he had been doing what the medical profession might not like He was not a quack he had had a medical training and had passed all his examinations except part of the final He had set himself to earn money by the treatment of cases he thought he was entitled to treat

The Recorder in summing up said that the real issue for the jury to determine was whether or not Ensor represented by words or conduct that he was a duly qualified medical man If he did so did he know it was false did the persons to whom he made the representation believe it to be true, and did he receive money in consequence? The medical profession was an honourable one but had no monopoly of the healing art It was not open for the profession to apply the term quack to a man and rule him out of the work of healing There were numbers of unqualified men who had survived with great success the dislike of the medical profession Osteopaths and others had professed the healing art in various directions with a perfect right to treat patients every bit as much as any qualified doctor so long as the public knew with whom they were dealing If the members of the public were aware that they were unqualified men or women they were entitled to go to them except where various statutes laid it down that unqualified practitioners must not treat certain diseases The medical profession had no more got the term doctor Many persons so called had qualified in science divinity literature music as well as medicine and it was for the jury to say whether the defendant had falsely represented himself to be a duly qualified medical man and in calling himself Dr Ensor had sailed under false colours

As stated the defendant was found not guilty and he was discharged

Note—The law on the subject is very simply stated The Medical Acts do not prohibit the practice of medicine and surgery by unqualified persons but the legislature has declared that it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners For the purpose of preventing unqualified persons from assuming deceptive titles any person who takes or uses a name or title implying that he is registered is liable to a penalty not exceeding £20 It must be shown that the title was assumed wilfully although an offence may also be committed by one who takes a title under a mistaken claim of right and the title must be assumed and advertised in such a manner as to deceive the public

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Parliament reassembled on February 2nd Business in the House of Lords was formal but the House of Commons had a heavy programme before it Mr Ramsay MacDonald announced that on February 3rd the Government would move to take all the time of the House This prevents any progress being made with private members Bills On February 3rd Mr Neville Chamberlain was to disclose his tariff proposals and move resolutions approving them

After the Premier's statements MR RHYS DAVIES asked if the Children's Bill had been dropped Mr MacDonald replied that nothing had been dropped a variation had taken place in order to get the Trade Bill advanced

Town and Country Planning

On February 2nd Sir E HILTON YOUNG moved the second reading of the Town and Country Planning Bill The Bill he said gave local authorities power to exercise reasonable foresight and control in planning the development of their localities It was not a Bill of compulsion but of permission The Bill would enhance the amenities of life in the country by regulating for instance the number of houses to be put up and the space there should be between them Another important point was that it gave local authorities the power to plan ahead for public improvements The Bill gave power to deal with ribbon development by zones and restrictions DR FREMANTLE in supporting the second reading said that the Bill was the only way to preserve the countryside It was essential to have some kind of control to deal with future development

The Bill was the culmination of a general agreement among those who had studied the question The London County Council had asked him to say that it gave general support to the second reading of the Bill although it naturally enough reserved the right to introduce certain amendments such as it secured in the last Bill The second reading was carried without a division

Foot and mouth Disease

Sir J GILMOUR replying on February 2nd to Mr Hurd who asked for particulars of the extent of foot and mouth disease in Holland and adjacent countries from which food stuffs came to this country said that last November there were 679 outbreaks in Holland 22 in Belgium 1 084 in France and 4 134 in Germany In December the figures were 251 23 865 and 4 350 respectively Mr HURD asked if the Minister did not think that these figures were alarming and Sir J GILMOUR replied that they were very serious Mr LAMBERT asked whether there was any danger of the disease being brought to this country Sir J GILMOUR said that was obvious when outbreaks occurred here

Medical News

The seventh annual address to newly qualified medical practitioners and senior students of the London hospitals will be given by Mr P H Mitchiner F R C S of St Thomas's Hospital on Tuesday March 8th at 5 30 p m in the Great Hall of the B M A House Tavistock Square under the auspices of the Metropolitan Counties Branch Council The title of the address is After the finals

The annual dinner of the Glasgow and Aberdeen Universities North East of England Club will take place on Friday February 19th at 6 30 p m (for 7 o clock) in the Royal Station Hotel Newcastle The guests are Professor J J R Macleod F R S Aberdeen and Professor Andrew Browning Glasgow Applications for tickets (price 9s) should reach Professor D Burns College of Medicine Newcastle on Tyne by Tuesday February 9th

The eleventh annual dinner of the Society of Radiographers will be held at Pritchard's Restaurant 79 Oxford Street W on Friday February 19th at 7 30 p m

On February 10th under the auspices of the National Council for Mental Hygiene and the Howard League for Penal Reform Mr George Ives will read a paper on penal methods of the past and present at 11 Chandos Street Cavendish Square W at 5 30 p m

A course on exotic pathology and parasitology will be held in Berlin from March 2nd to 19th The programme can be obtained from Professor Ziemann Pathologisches Museum der Charité Berlin

A course of lectures to medical practitioners and medical students under the auspices of the Institute of Psychoanalysis will be given by John Rickman M D at 36 Gloucester Place W on Friday evenings at 8 30 p m from February 5th to 26th Fee for the course 15s to be paid to the honorary treasurer Dr Bryan 35 Queen Anne Street W 1

The Fellowship of Medicine and Post Graduate Medical Association announces that Dr Maurice Davidson will give the next lecture in the series on treatment on February 10th at 4 p m at the Medical Society of London 11 Chandos Street Cavendish Square This lecture is open to members of the Fellowship Free demonstrations will be given at 3 p m as follows February 11th at King's College Hospital Denmark Hill by Dr Terence East and February 12th at St Paul's Hospital Endell Street by Mr Malcolm Simpson The next all day special course will be in medicine surgery and the specialties at the Prince of Wales's General Hospital Tottenham from February 15th to 27th Other forthcoming courses include clinical surgery for two week ends February 20th–21st and February 27th–28th at the Royal Albert Dock Hospital from 9 30 a m to 6 0 p m each day lunch and tea are obtainable at the hospital An evening M R C P course has been arranged as follows clinical and pathological evenings Mondays and Fridays February 22nd to March 18th lectures on Wednesdays and two ophthalmic and one laboratory demonstration on Thursdays limited to twenty five post graduates Instruction in neurology will be given at the West End Hospital for Nervous Diseases daily at 5 p m from February 22nd to March 18th psychological medicine at the Bethlem Royal Hospital on Tuesdays and Fridays at 11 a m February 23rd to March 18th and medicine surgery and gynæcology at the Royal Waterloo Hospital February 29th to March 19th Copies of the syllabuses and all information may be obtained from the Fellowship of Medicine 1 Wimpole Street W 1

The forty third international post graduate course of the Vienna Medical Faculty will be held from February 15th to 26th the subject being the treatment of internal diseases with special reference to rheumatic conditions and physical methods of treatment

As announced in our advertisement pages applications for 1932 for the Government grant for scientific investigations must be received at the offices of the Royal Society not later than March 31st Application forms may be obtained from the clerk to the Government Grant Committee Royal Society Burlington House W 1

In view of the present economic condition of the country the annual dinner of the Medical Society of London will not be held this year

Dr Godfrey Lowe has been appointed chairman of the Lincoln County Borough Insurance Committee He is a past vice chairman of that committee and has been a member of it since the inception of the National Insurance Act He has been chairman of the Medical Benefit Subcommittee for some years

The forty fourth Congress of the German Society of Internal Medicine will be held at Wiesbaden under the presidency of Professor Morawitz of Leipzig from April 11th to 18th when the following subjects will be discussed the action of certain substances on the circulation (Drs Dale of London and Volhard of Frankfort) disturbances of the functions of the lungs (Dr Brauer of Hamburg) bilateral pneumothorax (Dr Liebermeister of Duren) pulmonary collapse (Dr Jacobaeus of Stockholm) and non calculous disease of the biliary system (Drs Aschoff of Freiburg Umber of Berlin and Schmeiden of Frankfort)

Among the latest contributions to King Edward's Hospital Fund for London are the sum of £100 being the annual subscription of H R H the Prince of Wales President of the Fund and £25 each from the Duke of York the Duke of Gloucester Prince George the Princess Royal and the Duchess of York

The late Sir David Bruce has left estate of the gross value of £16 106 with net personalty £15 413 He bequeathed £200 to the director of the Lister Institute to be distributed at his discretion between the workers in the Institute other than scientific research and laboratory staff

The Massey Scientific Research Fellowship of the value of £400 per annum recently established at University College Nottingham for the purpose of promoting research on cancer by physical and chemical methods has been awarded to Mr L A Woodward

We have received two 'popular health' pamphlets from Mr Charles E Hecht honorary secretary Food Education Society entitled *Sugar Why worry about it?* and *Honey versus other forms of Sugar* Both contain vigorous comments on the indiscriminate consumption of sweets by children

The *Bruxelles Médical* announces that a medical cruise will be organized in 1932 leaving Bordeaux on July 26th and returning to Marseilles on August 21st The itinerary includes visits to the Azores Madeira the Canaries the Balearic Isles Sardinia and ports of French and Spanish Morocco Special inclusive terms are available for medical practitioners and their families and for laymen recommended by their family doctor These charges are 4 975 French francs first class and 2 325 francs second class For the cruise a steamer has been chartered with 270 first-class berths and 70 berths for students Early application should be made to the Section des Voyages de *Bruxelles Médical* (29 Boulevard Adolphe Max Brussels) from which full information may be obtained

Dr Karl Herxheimer professor of dermatology at Frankfort has been awarded the Ehrlich Weingert medal by the medical faculty of the university

Professor Léon Bernard has been nominated president of the French Council of Public Health for 1932 with Professors Pouchet and Jules Renault as vice presidents

Professor Pierre Duval has been elected president of the Societe de Chirurgie for 1932 with Dr Mouchet as vice president

The Spanish Republic has granted the title of 'Villa' (town with special privileges) to Villanueva the birthplace of Michael Servetus the discoverer of the lesser circulation

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House, Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861 9862 9863 and 9864 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are

EDITOR OF THE BRITISH MEDICAL JOURNAL *Aitiology Westcent London*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc) *Articulate Westcent London*

MEDICAL SECRETARY *Medisecra Westcent London*

The address of the Irish Office of the British Medical Association is [illegible] (telegrams *Bacillus Dublin* telephone [illegible] Scottish Office 7 Drumsheugh [illegible] *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Impotence following Tonsillectomy

Dr R MACD LADELL writes In answer to Perplexed it seems likely that his patient is suffering from a psychological condition analogous to ' ejaculatio praecox It is possible that the operation and particularly the secondary haemorrhage acted as a psychic trauma and aroused a mental complex which requires psychological analysis for its elucidation

Prophylaxis of Enteric Fever

' E C B writes As typhoid is said to be endemic in a Mediterranean island where I shall be staying this spring I should be glad to have particulars of a method for making water safe for drinking purposes

*** A person intending to reside in a place where typhoid fever is endemic and where available water is open to the risk of pollution should before departure undergo effective antityphoid inoculation In order to make such water safe for drinking one or other of the following three methods may be employed (1) *Boiling* Momentary exposure to 212° F kills all non sporing bacteria The water should be raised to the boiling point (2) *Pasteur Chamberland filter* A portable outfit with pump may be obtained from Messrs Doulton and Co Lambeth The pump is essential where the water is not delivered in pipes under pressure The bougie should be taken out every three days scrubbed scalded and replaced (3) *Bleaching powder* Put a level teaspoonful of bleaching powder into a teacupful of water Dilute this with three teacupfuls of water and add one teaspoonful of the dilution to each two gallons of the water to be drunk Water so treated is safe to drink fifteen minutes later It may be found to taste of chlorine but the amount of that substance present is innocuous The supply of bleaching powder should be put up in small quantities in sealed tins

Income Tax

Assistant Expenses

J R is an indoor assistant and is making certain payments to his mother in view of the fact that she assisted him in the purchase of instruments and other necessities when starting his professional work Are such payments deductible?

*** No essentially such expenses were in the nature of capital outlay and the payments now being made are not admissible expenses incurred in the carrying out of his duties

LETTERS, NOTES, ETC

A Case of Cow pox or Vaccinia

Dr D M CATHIE writes in reply to Professor Tom Hare's letter published on January 23rd (p 171) I would like to say that the assumption that my patient had contracted cow pox (or vaccinia) was made from the clinical progress of the case These observations were made carefully over a period of sixteen days During that time the definite stages of erythema papule vesicle pustule crusting and finally commencing scarring were all observed (beyond any doubt) The fact that a cow had discharging sores on the teats in no way prejudiced my opinion of the case After full investigation this was found to be the only cause of the condition and added weight to the diagnosis There is consequently no justification for using the term inexperienced when most practitioners go by their clinical findings and only bring in the special sciences to their aid in a minority of cases I would remind Professor Hare that the majority of medical men look at cases through medical eyes and not through veterinary spectacles I must thank him for his helpful suggestions and if possible I will try to carry them out at a suitable opportunity

Research on Sex Hormones

Dr J M ROBSON (Edinburgh) writes At the general meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on January 15th I spoke of the experiments carried out by Professor Johnstone and Dr B P Wiesner with gonadotropic preparations of pregnancy urine and the results obtained in some cases of spasmodic dysmenorrhoea and other disturbances of the menstrual cycle The report of the meeting in the *British Medical Journal* of January 23rd states that oestrin was used and I should be very glad if you would give me the opportunity to rectify this mistake

Victor Hensen

In the medical literature Claude Bernard's name is universally associated with the discovery of the glycogenic function of the liver in 1857 At a meeting of the Osler Club held on January 22nd Mr W R Bett made a short communication on Victor Hensen who as a medical student of 21 independently discovered glycogen in the liver in 1856 His research was made known to the scientific world in two papers published in the *Verhandlungen der physikalisch med zinschen Gesellschaft in Wurzburg* 1857 viii 219 and in the *Archiv fur pathologische Inatomie* 1857 xi 395 Hensen professor of physiology at Kiel died on April 5th 1924 at the age of 89 In this country his memory is kept green by such familiar eponyms as Hensen's canal cells line and node

Brachial Embolus

Dr J KELVIN (Glasgow) writes I read in the *British Medical Journal* January 9th (p 56) the description of a case of brachial embolus (very successfully operated on) I had a case last year but did not realize that the condition was a rarity The patient was a man of 70 suffering from acute capillary bronchitis with acute cardiac failure (dilated heart mitral systolic murmur oedema of legs) A week later the complication occurred which made the relatives suspect hemiplegia The complaints now were some loss of power in right arm with numbness pain and swelling in axilla There was neither brachial nor radial pulse which condition was obviously caused by axillary embolus I consulted a physician and he recommended wrapping the limb in cotton wool After a few days the arm condition apparently ceased to bother the patient and no oedema or gangrene supervened Although the patient was a debilitated subject and the oedema of the legs was increasing he insisted upon spending a day now and then out of bed About six weeks later he died

Corrigendum

We are asked to correct a printer's error in the advertisement pages of our issue of January 23rd (p 15) Dextrosal should read Dextrosol

Vacancies

Notifications of offices vacant in universities medical colleges, and of vacant resident and other appointments at hospitals will be found at pages 46 47 48 49 52 and 53 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 47

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

124 The Mean Arterial Hypertension

H VAQUEZ and D M GOMEZ (*Presse Méd*, December 5th 1931 p 1789) claim that a new syndrome—mean hypertension alone—should be included in the list of other syndromes associated with hypertension and describe two illustrative cases The first patient was a man aged 37 with an alleged arterial pressure of 230 mm Hg This on being checked was found to be only 155 mm Hg but after the patient had run 100 metres the pressure mounted again to 230 mm The mean pressure however was 135 mm instead of a normal 95 mm for this age and this mean pressure did not increase after the exercise There were no other subjective or objective signs of illness except a large increase in the heart confined entirely to the left ventricle and revealed by a rays The man had previously been rejected by an assurance company The second patient a woman aged 28 suffered severely from occipital headaches and a transitory amaurosis Fundus examination showed typical hypertension retinitis Her extremes of blood pressure were 145 mm and 85 mm Hg The second heart sound was accentuated at the base and the mean pressure was found to be 140 mm Hg An a ray examination showed a large increase of the heart and aortic arch The authors claim that the mean pressure has an independent and specific importance and that providing it remains relatively normal the extreme pressures may vary considerably without serious consequences to the patient when it becomes abnormal even though the extreme pressures do not vary much serious circulatory troubles are certain to arise Other cases are discussed and particular consideration is given to the association of increased mean pressure with eclamptic convulsions and also with the origin onset and attacks of glaucoma Evidence is also brought forward suggesting the hereditary nature of the syndrome and a case is described which occurred in the second decade of life Its value as an aid to prognosis is also mentioned especially in those cases where the increase of mean pressure is of a progressive type

125 Purpura Haemorrhagica in Paratyphoid Septicaemia

S WOLFF (*Zeit f Kinderheilk* November 23rd 1931 p 156) records the case of a female infant aged 6 months who on the 28th day of paratyphoid B septicaemia without any bacilli in the faeces or urine developed typical symptoms of purpura haemorrhagica The Widal reaction was positive for *B paratyphosus* B in a dilution of 1 800 and negative for *B typhosus* and *B paratyphosus* A paratyphoid B bacilli were found in the blood Death occurred on the 44th day There was no necropsy

126 Typhoid Carriers

A R SOUTHWOOD L B THOMAS, and R B KNIGHT (*Med Journ of Australia* October 31st 1931 p 541) describe a series of three small epidemics of typhoid fever during the years 1928 to 1930 due to carriers One of the early cases was suspected of having become a carrier but after three weeks investigation in hospital he was acquitted and discharged Three years later however after a short acute toxaemic illness he died his gall bladder was found to be very contracted and to contain pus and two stones After the third outbreak an investigation of previous cases brought to light another carrier a man aged 60 who had had typhoid fever six years previously He was in excellent health but typhoid bacilli were found in his faeces A saturated solution of magnesium sulphate was passed through a tube directly into the duodenum and a sample of bile was withdrawn which contained an abundant pure growth of typhoid bacilli Cholecystectomy was performed many extensive adhesions round the liver being found during the operation Nine days later the urine and faeces were free from typhoid bacilli and two further examinations during the next two weeks showed the same negative results Four weeks after the operation the duodenal tube was again passed but no typhoid bacilli were then discovered and it was considered probable that the man was no longer a carrier

127 Haemorrhagic Cystitis in Measles

P GALLI (*La Pediatria* October 15th 1931 p 1133) who records an illustrative case in a boy aged 7 states that writers are not agreed as to the involvement of the kidneys in measles While some such as Barthez and Rilliet West Cadet de Gassicourt Ashby and Wright and Hutinel do not mention it others including D Espine and Picot Sanne Bouchut Strumpell Comby Heubner Weill and Pehu and Jemma speak of it as a rare but possible complication while Kassowitz Baginsky Querirolo and Feer regard it as fairly frequent especially in a mild form In the present case haematuria which occurred during the eruptive period of an ordinary attack of measles could not be attributed to nephritis because the quantity of urine excreted was abundant the amount of albumin was slight and no renal casts or cells could be discovered The other causes of haematuria such as stone tuberculosis and new growth could be excluded Galli concludes that the condition was one of acute haemorrhagic cystitis Recovery resulted in ten days and when seen two months later the child was in good health

Surgery

128 Early Intervention in Congenital Muscular Torticollis

D BARGELLINI (*Chir d Org di Movimento* October 1931 p 415) records accounts of three patients with congenital torticollis treated respectively by operations at the ages of 35 days 45 days and 4 months In all the torticollis was severe being associated with cranio facial asymmetry and tumour in the sterno mastoid The author remarks that in these severe cases treatment by splints and passive movement is very tedious and prolonged and usually ends in surgical operation by operating early such delay is obviated and better results accrue Lateral deviations of the neck may occur in the newborn which are not to be considered as true torticollis and do not need operation the same applies to traumatic haematoma in the sterno mastoid which becomes absorbed in a short time In two of the cases other congenital anomalies were present suggesting an intrauterine origin of the deformity rather than injury at birth two of the cases were breech cases The exuberant production of fibrous tissue in the tumour removed constitutes a further support of the theory of intrauterine origin In each case operation was carried out without any anaesthetic partly because of the danger of an anaesthetic in such young infants and partly because sensation at that age is not acute The results in these three cases were very satisfactory Illustrations of the histological appearances are given

129 Primary Carcinoma of the Jejunum

F I HARRIS and H ROSENBLUM (*Arch of Surg* November 1931 p 805) emphasize the extreme rarity of carcinoma of the jejunum that organ being particularly immune to the development of primary cancer In a large series of necropsies this condition was found in only 1 per cent of all intestinal carcinoma It occurs in persons relatively younger than those in whom carcinoma

develops elsewhere in the intestines 30 to 40 being the decade of greatest incidence and men being affected about twice as often as women Symptoms depend on whether the growth obstructs the intestinal lumen The stenotic type which is the commonest causes epigastric distress cramps constipation and diarrhoea and the vomiting of large quantities of fluid which may contain bile peristalsis is sometimes visible The non stenotic type causes anaemia following haemorrhage and emaciation Diagnosis may be made on the presence of colic in the upper portion of the abdominal mid line with vomiting and blood in the stools The *x* ray examination shows delayed emptying of the stomach dilatation and atony or stenotic peristalsis The gastric analysis reveals a low amount or absence of hydrochloric acid due to the regurgitation of the bile Treatment which must be surgical may be resection or gastro enterostomy Radical operation which offers a 16 per cent chance of cure is considered the treatment of choice due to the fact that regional lymph nodes which appear to be carcinomatous may be only inflammatory moreover the spread of the growth is essentially slow the immediate mortality is no greater and removal of the primary focus may delay the formation of metastases Early diagnosis gives the best chance of cure A case is reported of a woman aged 42 in whom an advanced growth showed extension only into the immediate retroperitoneal region of the pancreas and stomach with no involvement of the adjacent mesenteric lymph nodes A gastro jejunostomy was performed successfully but intestinal obstruction due to adhesion from a previous operation developed and the patient died

130 Successful Late Operation for Intestinal Perforation

M Molnar (*Zentralbl f Chir* November 14th 1931 p 2873) who records three illustrative cases states that the prognosis of intestinal perforation depends principally on the stage at which laparotomy is performed Provided that no other organs or vessels are affected at the same time operation during the first twelve hours is likely to be successful while any further delay aggravates the prognosis After twenty four hours operation is usually unsuccessful but occasionally cases are met with in which in spite of the lapse of time there may be an indication for operation Molnar's cases occurred in peasants aged 35 48 and 17 respectively who as the result of being kicked by horses sustained a small perforation of the ileum Slight improvement occurred after rest in bed but as the result of massage to relieve the pain the adhesions broke down and peritonitis resulted Operations were performed forty one twenty six and forty hours respectively after the injury with successful results the patients being discharged about five or six weeks after admission

Therapeutics

131 The Combined use of Atropine and Pilocarpine in Post Encephalitic States

Though it has been recognized for some time that atropine acts on the basal gangha and vegetative centres in the brain which are affected by encephalitis lethargica the use of the drug in Parkinsonism and other post-encephalitic conditions has been limited hitherto by its unpleasant secondary effects difficulty in swallowing dryness of the mouth disturbance of accommodation tachycardia and motor restlessness S Muntner (*Med Klinik* October 30th, 1931 p 1599) has therefore combined small doses of pilocarpine with atropine never exceeding however 0 01 gram (1/6 grain) of the former These small doses were found to antagonize the peripheral action of the atropine particularly on the salivary and sweat glands He was able by this means to obtain considerable symptomatic improvement in a number of post encephalitic cases disturbances of speech and gait rigidity and tremor being notably relieved The dosage used was 0 002 gram (1/32 grain) atropine once daily given hypodermically and a pill containing 0 01 gram (1/6 grain) pilocarpine twice daily during the first week During the second week five drops of a 0 5 per cent solution of atropine sulphate are administered three times daily one drop being approximately equivalent to 1/250 grain the pilocarpine pills being taken twice daily as before The atropine is then gradually increased until the optimum without secondary effects is reached, when the patient is taking approximately ten drops of the atropine solution three times daily with the two 1/6 grain pilocarpine pills This optimum dose should then be continued daily without intermission In addition to the above medicinal treatment Muntner advocates hot baths massage, and psychotherapy

132 Dietary Treatment of Nervousness in Children

D A Laird M Levitan and Virginia A Wilson (*Med Journ and Record* November 18th 1931 p 494), in a preliminary report of experiments in the feeding of 53 elementary school children show that nervousness in such children is definitely related to hunger and diet in more than half those who impress their teachers as being obviously nervous while free from any signs of malnutrition or organic disease By giving extra feedings of milk between the first two meals of the day to counteract hunger an improvement of nearly 6 per cent in the nervousness of the average child resulted while with special feedings of a food concentrate to build up calcium metabolism, as well as to offset hunger pangs an improvement in nervousness of more than 13 per cent was obtained Since lactose enhances the absorption of calcium its addition to the food concentrate is of value The calcium metabolism in elementary school children should improve steadily day by day The authors conclude from their investigations that hunger is a cause of neurosis and they emphasize the importance of providing school lunches

133 Toxicity of the Arsphenamines

H L Cole *et al* (*Journ Amer Med Assoc* September 26th 1931 p 897) discuss the toxic effects of such anti syphilitic arsenical preparations as arsphenamine neoarsphenamine sulpharsphenamine tryparsamide and silver arsphenamine and report the results of 78 000 injections spread over 1 212 cases Of these 19 per cent of those with latent syphilis developed complications due to the treatment as compared with 14 3 per cent of those in the early stage Of the 214 patients presenting such complications those in the age group 40 to 49 were chiefly affected those under the age of 19 being the least liable Females were more sensitive than males Arsphenamine and neoarsphenamine were used in about 97 per cent of the cases The most frequent complication was a severe gastro intestinal reaction next came slight skin eruptions with pruritus In lesser frequency followed nitritoid reactions, dermatitis exfoliativa icterus and finally, haemorrhagic encephalitis The incidence of reactions was about the same for arsphenamine and for neoarsphenamine though icterus was more common after the latter Four of the six fatal cases of haemorrhagic encephalitis were due to arsphenamine and this complication seems to be related to young adulthood it appears early often after only two to four injections The most severe arsenical reactions were noted in the period from two or three months up to one year of the duration of syphilis the percentage of persons having such reactions rises from the sixth to the twentieth injection Though dosage is an etiological factor complications may occur even when very small doses have been used A patient sensitive to one arsenical will be more liable to sensitivity to the others, such sensitivity will probably persist for many years If an arsenical dermatitis for example occurs very great care should be taken as regards injections even many years later The authors emphasize the importance of prophylaxis and state that all patients receiving arsenicals should be carefully questioned as regards untoward reactions and the skin be examined for eruptions Two patients who died [illegible] dermatitis exfoliativa had received elsewhere an injection each of neoarsphenamine when they already had an [illegible]t posts [illegible] due to the previous treatment

Supplemen

Dermatology

134 Etiology of Pityriasis Rosea

M S THOMSON and J N CUMINGS (*Brit Journ Derm and Syph* December 1931 p 617) who have investigated a series of cases and performed experimental work conclude that there is insufficient evidence for the hypothesis that pityriasis rosea has any relation to tuberculosis or syphilis nor have they been able to incriminate any yeast like organism or to find any constant abnormality in the urine or faeces of patients While blood cultures have all proved sterile blood counts in 18 cases indicated a tendency to leucopenia with relative lymphocytosis Intradermal tests were made with a filtered saline solution in which had been incubated scales from herald patches definite urticarial reactions were deemed positive Of 13 healthy persons tested all but one gave positive reactions of 10 persons who had had the disease all but 3 gave negative reactions One of the positives was tested during the attack and the other two had had the disease five and eight years previously respectively Four positive and one negative reaction were obtained in subjects suffering from other skin diseases Attempts at reproducing the disease by inoculation of the blister fluid obtained by putting cantharides plasters over herald patches were unsuccessful but cases of effective experimental transmission have been recorded by other workers and also of accidental transmission through skin lesions Increasing degrees of positive reactions have been obtained by longer incubation of the saline solution with the scales which suggests that a living virus rather than a toxin is present in the filtrate The authors add that pityriasis rosea may be brought into line with the acute exanthemata and the existence of a filter-passing virus of low virulence be hypothecated The herald patch which is usually found in situations where underclothing fits most closely may thus represent the site of inoculation of the virus

135 The Relation of Yaws to Syphilis

C S BUTLER (*Ann de Derm et de Syph* November 1931 p 1188) contends as the result of thirty years experience that yaws and syphilis are manifestations of the same disease In his opinion the evidence of immunity experiments on apes conducted by Chalmers and Castellani by which they claimed to prove that yaws and syphilis failed to protect against each other is inconclusive in view of the known occurrence of syphilitic reinfections before complete immunity has become established He criticizes the statement of these authors that the initial infection in yaws is always extragenital and cites references to the contrary in medical literature He considers that an erroneous belief in this respect has arisen because yaws is commonly contracted in infancy so that transmission of the disease by the genital route is less commonly seen at a later age in communities where the disease is endemic Moreover he recalls references to the discovery of the lesions of yaws in the vaginal mucosa and emphasizes the fact that writers on tropical diseases have not brought forward statistical proofs of the absence of such lesions no systematic gynaecological examinations having been made Chalmers and Castellani have claimed that salvarsan has a more definitely curative action on yaws than on syphilis and that yaws is little influenced by mercury this is contrary to Butler's experience and he adduces the widely varying response to specific treatment observed in individual cases of undoubted syphilis

136 Sporotrichosis

E C WEISE (*New England Journ of Med* November 12th 1931 p 951) records a case of sporotrichosis and gives a brief description of this disease The etiological factor is the sporothrix of which there are several varieties This enters the body through a wound often on the finger and caused by a sharp object such as a thorn or splinter A small papule or nodule appears at the site of puncture This usually develops and ulcerates more rarely cure may be effected at this stage Secondary symptoms appearing after an interval up to three months are manifested as small firm nodules progressing along the lymphatics These increase in size and become painful in six to eight weeks or more they break through the inflamed skin and discharge a yellow or greyish yellow pus Involution may now occur or new fistulous openings may appear anywhere along the lymphatics Weise records a case in which they extended from the finger to the axilla The disease has also been reported as involving mucous membranes bones muscles the eye and testicle The primary lesion of sporotrichosis may be mistaken for that of syphilis and the ulcero nodular or gummatous ones with syphilitic cutaneous gummata or with cutaneous tuberculosis low grade streptococcal lymphangitis or ulcero glandular tularaemia may also be simulated The present case responded promptly to iodides and unfiltered x rays G M MacKee has reported cures with x rays alone and suggests that better results might be obtained with filtered than with unfiltered radiation

137 Essential Pruritus and Hypothyroidism

P F STOOKEY and P A STILEY (*Urol and Cut Rev* December 1931, p 769) record their observations on twelve cases of essential pruritus associated with hypothyroidism observed in the skin clinic of the out patient department of Kansas City General Hospital during the last two years Cases showing evidence of gross constitutional disturbance were not included in the series Five patients were male and seven female the average age was 54 years the youngest patient being 41 and the oldest 61 The metabolic rate ranged from 38 to 12 All the patients were treated with thyroid extract with the result that ten obtained complete relief from the pruritus and two were moderately improved The dose was 2 grams daily of desiccated thyroid extract

Obstetrics and Gynaecology

138 Ovarian Tumours and Modified Sex Characteristics

R MEYER (*Amer Journ of Obstet and Gynecol* November 1931 p 697) discusses the pathology of some special ovarian tumours—the disgerminoma the granulosa cell tumour and the arrhenoblastoma—which are sometimes associated with altered sex characteristics He states that the patients are usually cured by operation and that the opposite ovary if seemingly unaffected need not be removed The disgerminoma however occurs bilaterally in one in five cases called seminoma ovarii by French writers it is histologically similar to the so called seminoma testis which represents about two-thirds of testicular neoplasms It consists of large loosely joined carcinomatoid cells and a connective tissue showing lymphatic infiltration Meyer has collected twenty seven cases of disgerminoma in which the patients were psuedo-hermaphrodites and twenty one cases in women with typically female bodies but with infantile genitalia the tumours usually appear during the second or third decade He believes that the disgerminoma arises from undifferentiated germinal cells which have lost their specific power of sex direction The granulosa cell tumour may occur as a folliculoma (often associated with cysts) or in solid masses or as a diffuse sarcoma like structure mixed forms are common In most cases the characteristics of the granulosa cells can only be recognized through certain transitional cells The tumour is most common in women aged 60 to 75 and probably arises from undifferentiated cells Meyer's thirty-three cases include three children and seven women over 50 permanent cure after operation was apparently obtained in 19 In nearly all these cases bleeding was a prominent symptom there was hyperplasia of the endometrium attributed to a hormone effect of the proliferated granulosa cells Some patients had mammary hypertrophy two old women had galactorrhoea and two children showed precocious development and uterine bleeding The arrhenoblastoma may

cause defeminization and masculinization of previously normal females—mammary atrophy amenorrhoea, male hirsuties enlargement of the clitoris and alteration of the larynx and voice These changes diminish after extirpation of the tumour and it seems justifiable to conclude that this produces male sex hormones One form of arrhenoblastoma is the adenoma tubulare testicu lare of Pick, but only in three of the nine reported cases has this been associated with masculinization , in other forms with atypical epithelial structure Meyer has been able to predict from histological study, the alterations of sex character which were found clinically

139 Vaginitis due to Trichomonas vaginalis

R J MOE and W A COVENTRY (*Minnesota Med* December 1931 p 1024) find that routine microscopical examination in all cases of original discharge reveals many cases of infection by *Trichomonas vaginalis* which is a pyriform or ovoid protozoal flagellate It has usually four flagella at the anterior end an undulating membrane extending for half its length, and a projecting axostyle posteriorly When alive it exhibits a peculiar oscillating movement The discharge is collected on a non lubricated bivalve speculum and a small portion is transferred to a slide a drop of warm normal saline solution is added and a cover slip applied Examination under a 1/6 or 1/8 inch objective will reveal the presence or absence of tricho monas its movement is characteristic The mode of infection is unknown The clinical picture is characteristic a thin frothy greenish yellow malodorous discharge is usual but sometimes the discharge is thicker, and of a creamy yellow colour Nearly 80 per cent of these patients have pruritus, but many have no symptoms except for a few days before or after menstruation Trichomonas is often found when symptoms are absent In acute cases the symptoms resemble those of gonor rhoea Many forms of treatment have been recommended The authors use a rubber ball with a 120 c cm blunt tipped glass barrel attached After cleansing the external genitals with an antiseptic the syringe is filled with 0 5 per cent lysol solution and inserted The fluid is then washed forwards and backwards by alternating compression and release of the ball, and the solution is changed repeatedly until the vagina is cleansed The syringe is then filled with 4 per cent silver nitrate solution which is injected and retained for three minutes Any discomfort is removed by washing out with the lysol solution Pregnancy does not contraindicate treatment The authors report ninety five cases , of these 68 per cent were cured 15 per cent are under treatment and 17 per cent have been referred to their private practitioners or have not returned

140 Sarcoma of the Uterus

L P KASMAN (*Amer Journ of Obstet and Gynecol* November 1931 p 767) who records four cases of sarcoma of the uterus emphasizes the relative frequency and importance of such a sequel to uterine fibromyoma In one patient the growth was intramural it penetrated into the abdominal cavity and caused internal haemor rhage The other three cases showed gradations of sarcomatous degeneration of fibromyomas Reviewing the statistics published in the last fifteen years the author concludes that the average reported incidence of such degeneration is 0 41 per cent the estimates of various writers ranging from 0 09 to 2 37 per cent Kasman s estimate based on his own cases is nearly 2 per cent and he believes that insufficient care during the histo logical examination of fibroids has resulted in a lower incidence of sarcoma having been reported than is actually the case The diagnosis of incipient malignant disease is difficult since areas of greater cellularity are not uncommon in benign fibroid growths A certain degree of polymorphism in the cells is not infrequent particu larly in the neighbourhood of areas of liquefaction and other degenerative changes and indicates necrobiosis rather than malignancy In sarcoma the densely packed nuclei are highly polymorphous and show occasional mitotic figures A rare type of tumour is a sarcomatous growth developing from the uterine mucosa and usually assuming the botryoid form Kasman thinks it possible that in his intramural case, in which the tumour lay close to the serous surface of the uterine wall, radiotherapy may have been responsible for the breaking down in the centre of the growth and the subsequent perforation into the abdominal cavity

Pathology

141 Br abortus Infections in Holland

J P BIJL and J VAN DER HOEDEN (*Zentralbl f Bakt* Ref 1931 cii p 104) during the three years 1927 to 1930, examined for agglutinins to *Br abortus* all the blood serums that were sent into the laboratory from patients suspected of having enteric fever Approximately 4 000 serums were examined and as a result fifty cases of undulant fever due to *Br abortus* were diagnosed Of these 72 per cent were in men 62 per cent of the patients were between 20 and 40 years old and 48 per cent occurred in patients on farms In nine patients the disease followed assisted delivery in an aborting cow and in eleven patients the use of raw infected milk was sus pected Since 46 per cent of the Utrecht milk was found to contain living *abortus* bacilli the authors are surprised that undulant fever in Holland is not more common than it is It seems possible that the extremely low mor bidity in view of the large amount of infective material available may be explained either on the assumption that latent infections are common, or that the disease can develop only under special conditions Against the first explanation is the fact that in the serums of a large number of healthy persons examined positive reactions were scarcely ever found In favour of the second ex planation they have observed that the disease not infre quently occurs after extreme fatigue , in two persons the agglutination reaction became positive at the end of an attack of typhoid fever

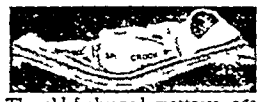
142 Anaphylactic Shock in Syphilis

It is known that intravenous and intraperitoneal injections of emulsions of *Treponema pallidum* into syphilitic rabbits have no effect on the manifestations of the disease and that on the contrary local injections round the foci pro ducing anaphylactic shock exercise an undeniable curative action A BESSEMANS R WILLEMS and FT DE POTTER (*Bruxelles Medical* November 29th 1931 p 136) have therefore endeavoured to find an explanation of this phenomenon They suggest that the curative effects ob served are a consequence of a natural and purely anaphy lactic process and might therefore be expected to be brought about by protein injections They used rabbits showing evidence of primary recent, and well developed testicular syphiloma which had been produced by artificial grafts from one or other of the four stocks at Ghent The first series was treated with frequently repeated intra muscular or intravenous injections of different proteins such as skim milk peptone and horse serum In these cases the syphilitic lesions developed exactly as in the control rabbits and no reactions appeared Some animals showed slight shock manifestations but all recovered com pletely the lesions remaining uninfluenced Local anaphy laxis (the phenomenon of Arthus) was obtained by giving several injections of 5 c cm of horse serum or a mixture of bouillon and ascitic fluid spaced at intervals of six to fifteen days into the scrotum, and as far as possible encircling the syphiloma Amelioration and some remark able cures were noted in this series The cures seemed to occur (1) in rabbits previously sensitized (2) when the injections were rich in protein and (3) when the injec tions completely surrounded the lesion If the injections were interrupted the syphilitic lesions developed with great rapidity but later diminished cure rapidly ensuing Two notes are appended of cases in which similar treat ment has been applied to patients with great success In one instance injections of Witte s peptone was used, and in the other anti diphtheritic horse serum

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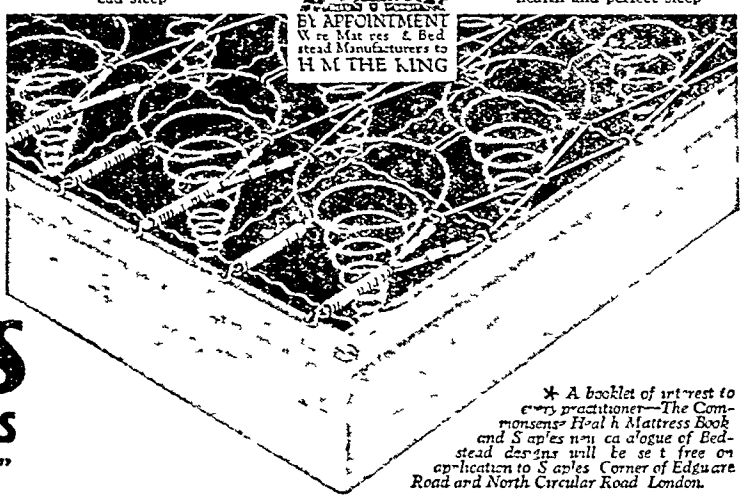


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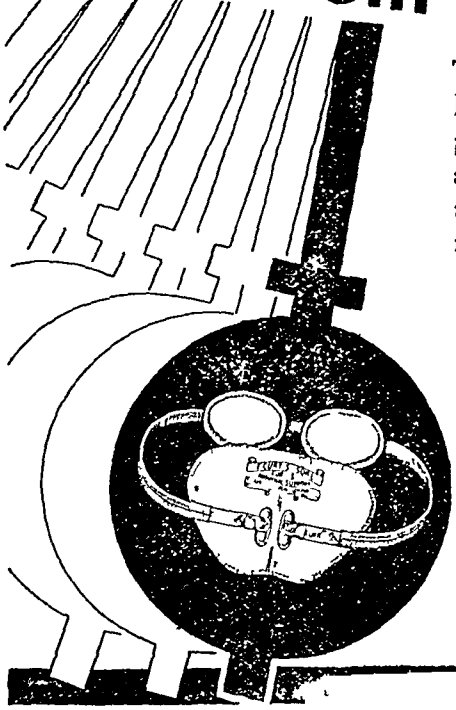
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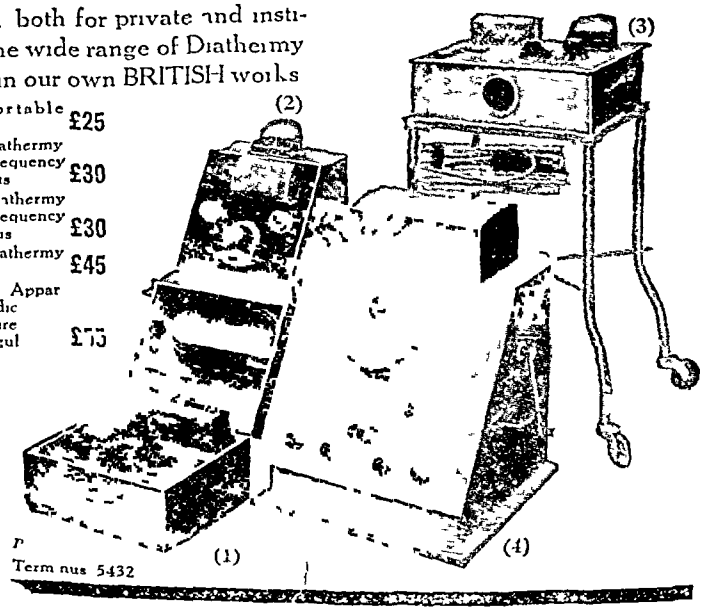
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estimate based and he believes logical examination incidence of sarcoma in the case The diagnosis is difficult since areas of uncommon in benign fibroid of polymorphism in the cells is largely in the neighbourhood of areas other degenerative changes and rather than malignancy In sarcoma the nuclei are highly polymorphous and show mitotic figures A rare type of tumour is a sa

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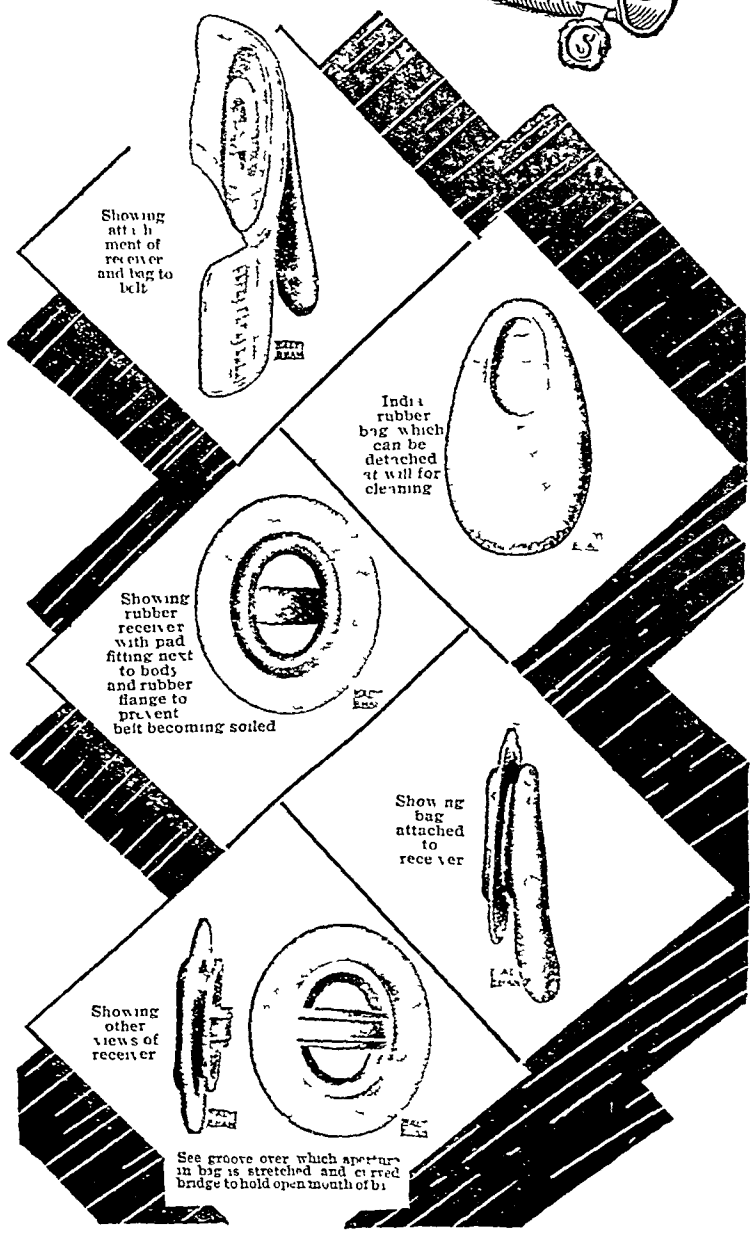
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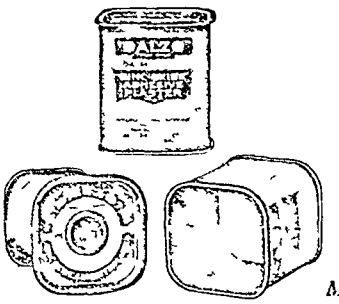
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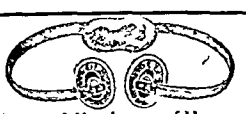
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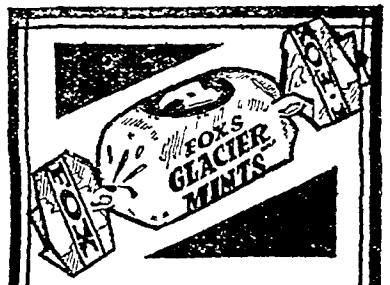
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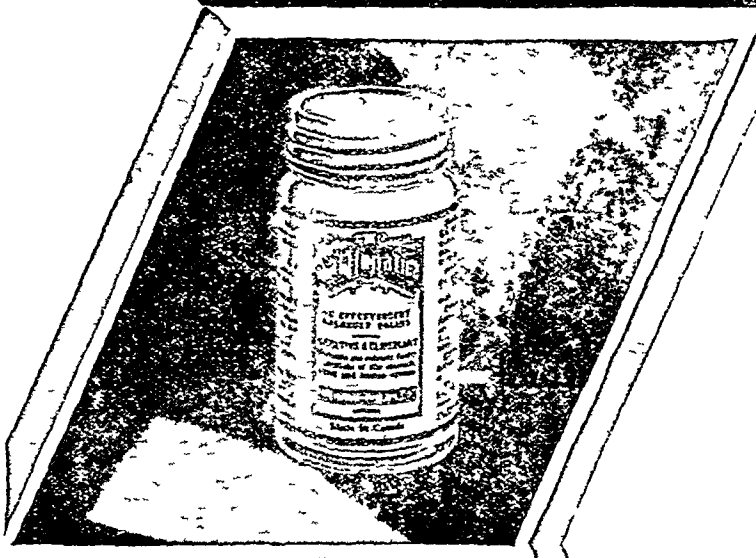
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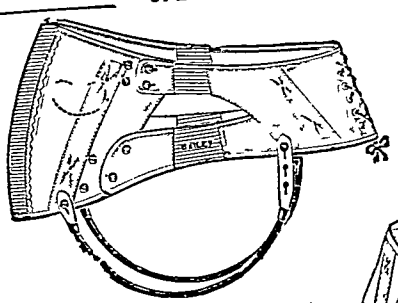
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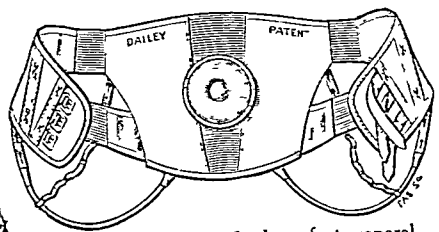
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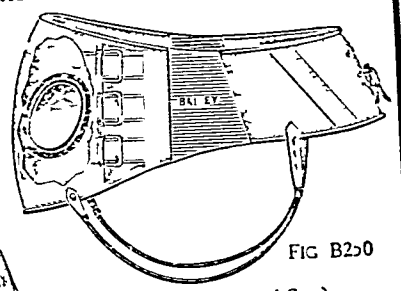


FIG B200
(Showing Interior of Cup)
SPECIAL BELT FOR AFTER COLOSTOMY

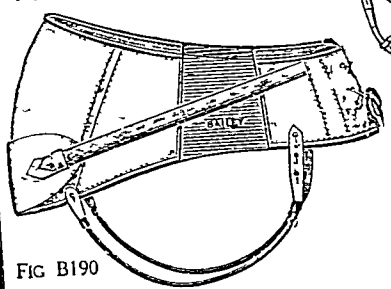
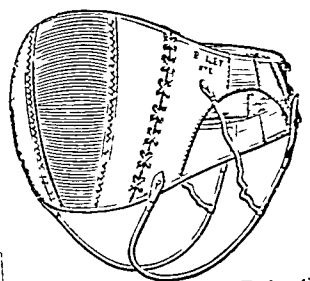


FIG B190
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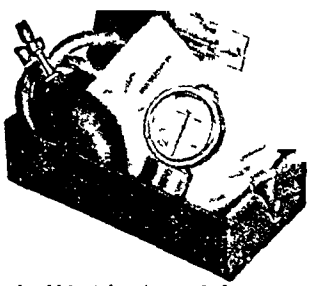
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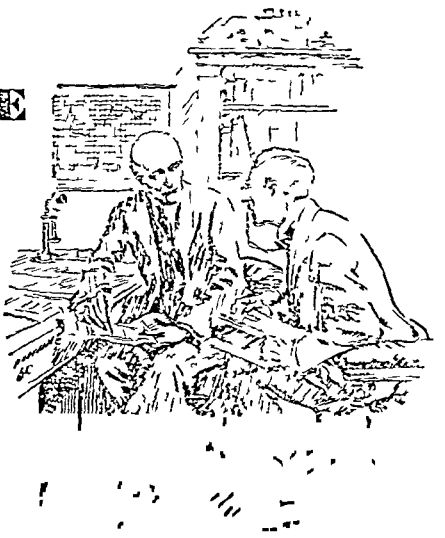
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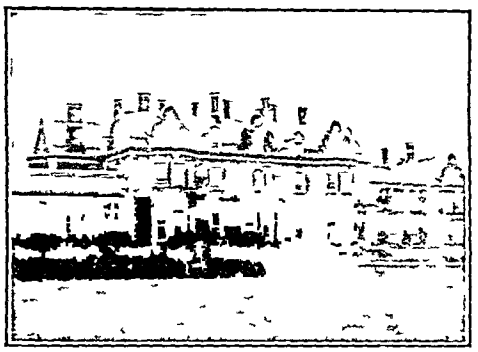
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The Registered Hospital situated in large grounds near the Cathedral is open to VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders including Inebriety Addiction etc adult Special facilities for Functional Nervous cases co-operative etc

All particulars may be had from the Resident Medical Superintendent

Dr MARY P PARKES M D D P H

THE MOAT HOUSE,

TAMWORTH STAFFS

Established 1876 For the TREATMENT of a few LADIES suffering from NERVOUS and MENTAL DISORDERS Visitors are not received For terms apply to the Resident Medical Attendant Telephone Tamworth 108

WYE HOUSE, BUXTON

For the treatment of Ladies and Gentlemen mentally affected Voluntary Boarders received Situated 1,200 ft above sea level facing South In own grounds —For terms apply to the Resident Medical Superintendent W W HORTON M D Nat Tel 150

RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

In view of the present economic position, the inclusive fees at Ruthin Castle, formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed, such as analyses bacteriological cultures the ordinary x ray examinations and electrocardiograph readings, all treatment that may be prescribed such as special diets insulin artificial sunlight, electrical treatment, baths massage nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales *Telegrams* CASTLE RUTHIN *Telephone* RUTHIN 66

WOODSIDE NERVE HOSPITAL

WOODSIDE AVENUE MUSWELL HILL LONDON N 10

Chairman THE RIGHT HON LORD BLANESBURGH, G B E Opened November 8th 1930

Fully equipped with every modern appliance for the diagnosis and treatment of

FUNCTIONAL NERVOUS DISORDERS

Private Rooms Broad Verandahs Electrotherapy and Hydrotherapy, X ray and Dental departments, Laboratories for investigation and research For terms and particulars apply to the Physician in charge at the Hospital Telephone Tudor 4211

CAMBERWELL HOUSE, 33, Peckham Road, London, S E.5.

Telegrams PSYCHOLIA LONDON

FOR THE TREATMENT OF MENTAL DISORDERS

Telephone RODNEY 4731—4732

Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts, Bowls Croquet Squash Racquets, and all indoor amusements including Wireless and other Concerts Occupational Therapy Physical Drill, and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre, Pathological Laboratory, Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers also resident and visiting Consultants An illustrated Prospectus may be obtained upon application to the Secretary

HOVE VILLA, BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury Telephone 51

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground, highly situated, facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification

Convalescent Home **Kearsney Court, Dover** For further particulars apply to the **Medical Superintendent**

PECKHAM HOUSE, 112, Peckham Road, London, S E.15

Telegrams "Alleviated, London **Telephone Rodney 4741-4742**

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

FENSTANTON,

CHRISTCHURCH ROAD

STREATHAM HILL S W 2

A Private HOME for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients Large Mansion with 12 acres of ground (See *Medical Directory* p 2254) Apply J H EARLS M D Resident Physician Telephone Streatham 8430

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For Mental Defectives of all ages

Under private management

Apply to Dr Langdon Down

Normansfield Teddington.

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CHEADLE, CHESHIRE

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For terms etc apply to the Medical Superintendent J A C ROY M B who may also be seen in Manchester by appointment

Telephone 2231 GATLEY

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MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson, M D, F R S E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J M JOHNSTON M B D P H. etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK

MONTANA HALL, Montana, Switzerland.

Built 1929-1930
Opened October 1930

For the Treatment of Tuberculosis (all forms) Diseases of the Chest Asthma For patients requiring rest in the Alps under strict medical supervision and for medical conditions in which sun and air bathing are indicated

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

SPECIALLY REDUCED INCLUSIVE TERMS

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LINFORD SANATORIUM,

RINGWOOD, NEW FOREST, HANTS

Established 1898 for the treatment of Tuberculosis Radiators and Electric Light throughout Hot and cold water and shower bath in nearly all rooms Powerful X-ray Plant Ultra violet Rays Full Nursing Staff All forms of treatment available Farm of 120 acres including 40 acres of wood Herd of Tuberculin tested Guernsey cows kept Resident Physicians—Arthur de W Snowden M D B Ch (Cantab) A G E Wilcock M R C S L R C P Colin Cassidy, M B B Ch (Cantab)

THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect S S W sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by artificial Pneumothorax (X ray controlled) Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra Violet Rays is available when necessary without extra charge X ray plant Electric light Radiators hot and cold basins and Wireless in all rooms

Full day and night Nursing Staff

Resident Physician GEOFFREY A HOFFMAN B A M B T C Dub and MARGARET A HARRISON M B B S Lond

Apply The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 41 WITCOMBE. *Telegrams* HOPE IA BIRDLIP

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PENMAENMAWR

Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine-clad hills, with sea and mountain views Modern treatment including SANOCRYSIN ARTIFICIAL PNEUMOTHORAX etc X ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L M S Main Line to Holyhead 4¼ hours from London Resident Physicians Dennison Pickering M D (Cantab) J A Hennesey, M B Ch B Matron Miss S A Eddy, S R N Late Sister in Charge Royal Hospital Annexe Sheffield

For particulars apply to the Secretary Pendyffryn Hall Penmaenmawr N Wales (Phone 20)

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FOR THE TREATMENT OF TUBERCULOSIS, was opened in January 1899, by ROWLAND THURNAM, M D

All modern forms of treatment are available There are X ray and ultra violet ray installations Full nursing staff The Sanatorium stands in gardens and private grounds of 65 acres at an altitude of 862 feet above sea level surrounded by woods and moorland All rooms are heated by hot-water pipes and electrically lighted

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CYRIL FRANCIS ASHBY, M R C S, L R C P Certificate of Sanatorium Stephani Swiss Land *President Medical Soc*

For full particulars apply to *The Secretary* Nordrach upon Mendip Blagdon Bristol *Telegrams* Nordrach Flagdon *Telephone* Flagdon 23

"THE VICTORIA," BRITISH SANATORIUM

DAVOS-PLATZ SWITZERLAND

ALTERED AND MODERNISED IN SUMMER 1930

SPECIALLY REDUCED TERMS

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The Board hopes that this will meet with approval

Medical Supt

BERNARD HUDSON M.D Cantab., M.R.C.P Lond. Swiss Federal Diploma.

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KINGUSSIE, INVERNESS SHIRE

Specially built for the Open air Treatment of Tuberculosis and opened in 1901 Bracing mountain air Elevation 850 ft above sea level Sheltered situation in pine wood. Graduated walks Electric light throughout building and in boilers Central heating Fully equipped X ray Plant Inoculation Treatment available for patients—24 beds Trained Nurse on duty all night Term £4 7s 6d to £6 6s per week inclusive. No extras Med Sup —FELIX SAVY M D

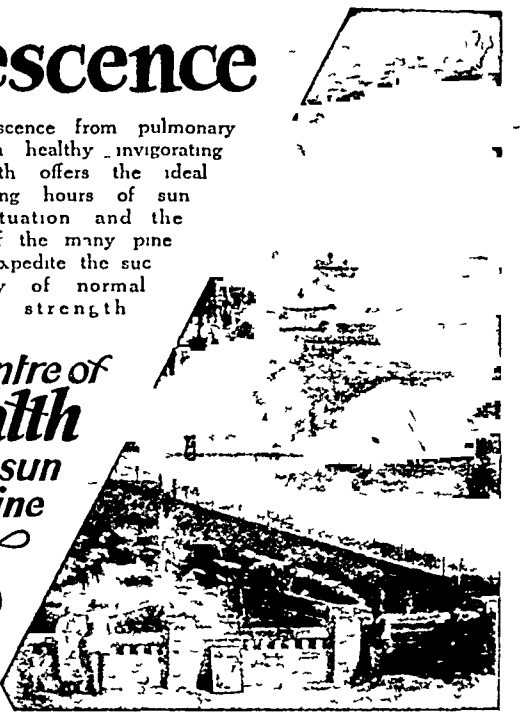
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When satisfactory convalescence from pulmonary disorders depends on a healthy invigorating atmosphere Bournemouth offers the ideal winter residence Long hours of sun shine sheltered situation and the resinous perfume of the many pine trees combine to expedite the successful recovery of normal health and strength

The centre of **health** *and sun -shine*





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"Where Summer Winters"

Pine Vapour and Swimming Baths all of SEA WATER at suitable temperature are available at the Pier Approach Baths during the Winter

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provide the ideal conditions for invalids and convalescents The air is bracing and healthful The climate is consistently good and there is an entire absence of fogs and mist You can safely recommend Margate to your patients for convalescence or residence Write for free booklet to

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C.F H. 31

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Resident Physicians
G C R HARBINSON M B B Ch B A O (R U I)
R MACLEHLAND M D C M (Edin)

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STIRLINGSHIRE



Facing due South Mild and equable climate The most modern methods of physical treatment

Full particulars from The Spa Director

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In the winter garden of Scotland facing the sun 600 feet up Tonic air beauty in every landscape from sheltered balconies Dancing Winter [illegible] Inns bad Winter baths Modern electric massage Physic radiation Illustrated for prospectus

Among the Pine-clad Border Hills
PEEBLES HYDRO PEEBLES SCOTLAND

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Attendance at school is a necessary part of the satisfactory treatment of Epilepsy in Children

COLTHURST HOUSE SCHOOL meets all the requirements of children of middle class parentage Extensions made necessary by the success of the school have created several vacancies

Only bright and intelligent boys and girls are eligible for admission

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Every kind of Bath Plombiere Lounge
Every kind of Massage Ultra Violet Light
Every kind of Electricity Diathermy
Every kind of Diet
High Frequency Electric Lift
Prospectus from Secretary *Tele* 341
Resident Physicians { J W JOHNSTON SMITH M D / L T ROSE HUTCHINSON M D

Doctor's widow in North London having large house garden car good staff would like some PAYING GUESTS Terms moderate — Address No 371 B M A House Tavistock Square W C 1

WONFORD HOUSE
EXETER, DEVON

Registered Hospital for Nervous and Mental Diseases for the Upper and Middle Classes

Telephone Exeter 2642

A hospital which provides modern investigation and treatment for Voluntary Temporary and Certified Patients of both sexes Special attention is paid to occupation

Accommodation provides for the separate treatment of early recoverable and of convalescent patients

Fees from 4 guineas

There is a seaside branch at Dawlish

A prospectus and full particulars may be obtained from the Medical Superintendent

THE GRANGE,
near ROTHERHAM

A HOUSE Licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorder Both certified and voluntary patients received Approved for Temporary Patient This is a large country house with beautiful grounds and park five miles from Sheffield Station Grange Lane L & NE Railway Sheffield Telephone No 40030 Ecclesfield Resident Physician GILBERT E MOULD L R C P M R C S

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F R C S

A COURSE OF INSTRUCTION for the Final Fellowship Examination will begin on Tuesday March 1 t
Fees (exclusive of Operative Surgery) 20 guinea Operative Surgery 5 guinea
A separate entry can be made for all Classes other than those of a strictly Clinical character
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The Prince of Wales s General Hospital
Tottenham N 15 North Middlesex Hospital
Edmonton and Associated Hospitals

An INTENSIVE REFRESHER COURSE will be held from February 15th—20th Lectures demonstrations and clinique in the various general and special departments
The number is limited to 25
Enquiries and applications should be sent to the Dean at the Hospital or to the Secretary of the Fellowship of Medicine 1 Wimpole Street W 1

SOCIETY OF APOTHECARIES OF LONDON

MASTERS OF MIDWIFERY

Examinations will be held beginning Tuesday May 17th and Monday November 21 t 1932 For regulations apply to the Registrar Water Lane E C 4

The Brighton County Borough
MENTAL HOSPITAL,
HAYWARDS HEATH SUSSEX

The Committee of the above Hospital will be opening BEECHMONT HOUSE in February next for the reception of Female Private Patients suffering from mental disorder Voluntary Temporary and Certified Patients will be received

Beechmont is a large country house situated on the outskirts of Hayward Heath and quite separate from the Hospital
The house is beautifully situated and stands on an estate of 27 acres with beautifully laid out grounds and lawns commanding extensive views of the South Downs It has up-to-date systems of lighting and heating and is attractively furnished on modern lines
The charges are from £3 3s to £10 10s per week including all necessaries except clothing
Full particulars may be obtained from the Medical Superintendent.

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Specially adapted for the investigation of ARTHRITIS and ALLIED RHEUMATIC DISEASES DIABETES JAUNDICE GASTRO INTESTINAL DISORDERS RENAL complaints which require Allied Chemical Bacteriological and Laboratory investigations
Brochure from the Secretary - - DUCHY HOUSE, 9 QUEEN'S ROAD

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Medical Students and Qualified Practitioners admitted to the Practice of the Hospital The usual opportunities are afforded of seeing Obstetrical Complications and Gynæcology Midwifery (about one half of the total admissions being primiparæ) over 2,000 patients are admitted to the Wards annually and in the Antenatal Department there are over 1,000 attendances per annum
Certificate awarded as required by the various Examining Bodies
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F R C S EDINBURGH

And all other Surgical Degrees and Diplomas

The remarkable success of Students of the Medical Correspondence College at the higher Surgical Examinations is specially noteworthy
Both at the Primary and Final F R C S England the majority of our Students are successful at the first attempt and Candidates who have failed at these Examinations on several previous occasions get through without difficulty after going through our courses
The Surgical Tutors of the College all hold either the M S London or F R C S England or both and are highly experienced teachers
The Postal Courses are thoroughly clear concise and up to date and the text questions are carefully selected from those set at previous Examinations so as *to embrace all* parts of the subject By working systematically through the Course the Student is brought up to the examination standard in the minimum time and much unnecessary reading is saved

VALUABLE BOOK

How to Pass the F P C S free on application to the Secretary

LONDON SCHOOL OF DERMATOLOGY
St John's Hospital for Diseases of the Skin,
Leicester Square W C 2

Conducted by the Honorary Staff of the Hospital together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospital Lectures and Demonstrations every Tuesday and Thursday at 5 p m from October to March and four times weekly during May Clinics daily at 2 p m and 6 p m Saturdays 2 p m only Pathological Laboratory for Instruction or Research work
For further particulars fees etc apply to J E M WIGLEY M B Dean

LIVERPOOL SCHOOL OF TROPICAL MEDICINE
(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (six months) for the Diploma in Tropical Medicine commencing January 14th and October 3rd and for the Diploma in Tropical Hygiene commencing January 11th and April 10th (Candidates for the D T H must also hold the D T M of the University)
For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pembroke Place Liverpool.

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The Mount Vernon Hospital and Radium Institute Riding House Street London W 1

Dean Sir CUTHBERT WALLACE, K C M G. C B F R C S

A Course in RADIOTHERAPY
especially in its relation to Malignant Disease

will be held at the above School commencing Monday February 29th 1932

Copy of the syllabus and full particulars may be obtained on application

The fee for the Course entitles Students to two months Hospital Practice Independent arrangements can also be made for Hospital Practice

The Course will be repeated on subsequent dates

The Dean will be glad to see prospective entrants by appointment
THOS A GARNER Secr

CITY OF LONDON MATERNITY HOSPITAL,
CITY ROAD, E C 1

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MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Gynæcological complications Monthly or Fortnightly Courses
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Medical and Dental Students

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Exams Written and Practical
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MANCHESTER TUTORIAL
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Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post Graduates may enrol at any time for any period from 1 week to 3 months—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant-aided Scheme for Post Graduate Study by Insurance Practitioners"—Anæsthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W.6

M.R.C.P. EVENING COURSE

February 22nd to March 18th, 1932

Open only to Members of the

FELLOWSHIP OF MEDICINE, 1, WIMPOLE STREET, W.1 Langham 4266

Six clinical and two pathological evenings (Mondays and Fridays), four lectures (Wednesdays), two ophthalmic demonstrations (Thursdays, February 25th and March 3rd), one laboratory demonstration (Thursday, March 17th)

Fee for the Course £12 12s. 0d. Number strictly limited to 25

Detailed syllabus on application

UNIVERSITY EXAMINATION POSTAL INSTITUTION

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(FOUNDED IN 1882)

Principal Mr. E. S. WEYMOUTH, M.A. (Lond.)

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

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	1906-31 *Final*	174
M.R.C.P. (Lond.),	1914-31	199
D.P.H.	(Various) 1906-31 (Completed Exam.)	308
F.R.C.S. (Edin.),	1918-31	50
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Preparation for the above and also for Medical Preliminary and for all examinations leading up to M.R.C.S., L.R.C.P. or M.B. of various Universities also for D.P.M., D.O.M.S., D.T.M. & H., D.L.O., D.C.O., D.M.R.E., M.M.S.A., I.M.S.S.A. etc. Numerous successes

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MEDICAL PROSPECTUS (48pp.)

CONTENTS.—The method and the cost of entering the Medical Profession. *Particulars of all Medical Examinations.* Postal Courses and Oral C[illegible] ical [illegible]sur[illegible] [illegible]ial [illegible]en [illegible] of [illegible] application to the Principal Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

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BEHNKE METHOD. Estab. 1882. Cases non-resident treated at 39, Earl's Court Square, S.W.5, and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns.

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of Miss BEHNKE, 39, Earl's Court Sq., S.W.5

UNIVERSITY OF OXFORD

DIPLOMA IN OPHTHALMOLOGY

The next Examination begins on June 20th, 1932. The two months' Course of Instruction starts on April 25th, 1932.

For further information apply to—

P. H. ADAMS,
6, Holywell, Oxford. Margaret Ogilvie Reader in Ophthalmology.

F.R.C.S. (Edin.)

Full PREL. COURSE with Anatomical (Cadaver and Living Model) and Surgical Demonstrations for next Exam. will commence shortly. POSTAL TUITION at any time.—H. C. ORRIN, F.R.C.S., Surgeons' Hall, Edinburgh.

M.D. THESIS

Advice and legitimate assistance by an expert in preparation of Theses. Also postal tuition for M.R.C.P. London and similar examinations.—No. 1001, B.M.A. House, Tavistock Sq., W.C.1.

Royal Society

GOVERNMENT GRANT FOR SCIENTIFIC INVESTIGATIONS

Applications for the year 1932 must be received at the offices of the Royal Society not later than March 31st next, and must be made on printed forms to be obtained from the Clerk to the Government Grant Committee, Royal Society, Burlington House, London, W.1.

The University of Liverpool

The Council invites applications for the post of a JUNIOR LECTURER (Ungraded) in the Department of Pathology. Salary £300 per annum. Applications together with the names of three referees should be sent before February 22nd to the Professor of Pathology, from whom further particulars may be obtained.

EDWARD CARPENTER,
February 1932. Registrar.

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September and December. For Regulations apply to the Secretary, College of Preceptors, Bloomsbury Square, London, W.C.1.

Rossall School — Some twelve

Open SCHOLARSHIPS for boys between the ages of 12 and 14 on March 1st next, value from £90 a year downwards, will be awarded by Examination beginning March 1st, 1932. Boys examined at Rossall and in London.—Apply THE BURSAR, Rossall School, Fleetwood.

The King Edward VII Welsh

NATIONAL MEMORIAL ASSOCIATION

Required at the SOUTH WALES SANATORIUM, Talgarth, Brecon, Mid (304 beds for pulmonary cases) ASSISTANT RESIDENT MEDICAL OFFICER (male). Salary £250 per annum, plus maintenance (subject to an emergency deduction in view of the national financial situation of £10 12s. 6d. per annum). This appointment is limited to a period of one year.

Applications stating age, qualifications and previous experience, together with copies of three recent testimonials, should reach the undersigned not later than February 12th.

Memorial Offices, Westgate Street, Cardiff. D. A. POWELL, Principal Medical Officer.

UNIVERSITY OF LONDON, KING'S COLLEGE

PRIMARY F.R.C.S.

A Course in ANATOMY and PHYSIOLOGY in preparation for the JUNE EXAMINATION will commence on TUESDAY, FEBRUARY 16th, 1932, and will continue until the date of the examination.

Fee for the Course, Twenty Guineas.

Applications for admission to the Course should be addressed to the Dean of the Medical Faculty, King's College, Strand, W.C.2, from whom further particulars may be obtained.

University of London

CHANGE IN DATE OF LECTURE.

The Second Lecture of Dr. I. FINDLAY'S Course on *The Feeding and Nutritional Disease of the Infant* will be given at St. Bartholomew's Hospital Medical College on THURSDAY, FEBRUARY 11th, at 5.30 p.m. and not on Tuesday, February 9th, as previously announced.

S. T. WORSLEY,
Academic Registrar.

Examining Board in England

BY THE
ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE
ROYAL COLLEGE OF SURGEONS OF ENGLAND

PRE-MEDICAL EXAMINATION

This Examination will commence on Tuesday, March 29th, 1932.

SECOND EXAMINATION (OLD REGULATIONS)

This Examination will commence on Thursday, March 31st, 1932.

FIRST EXAMINATION (NEW REGULATIONS)

This Examination will commence on Thursday, March 31st, 1932.

FINAL EXAMINATION

This Examination will commence on Monday, April 4th, 1932.

DIPLOMA IN GYNÆCOLOGY AND OBSTETRICS

This examination will commence on Thursday, April 21st, 1932.

Candidates who have completed the prescribed courses and who desire to present themselves for examination must forward the necessary schedule or schedules through the post to the Examination Hall, Queen Square, London, W.C.1, twenty-one days before the Examination commences.

HORACE H. REW,
February 2nd, 1932. Secretary.

University of Lucknow

Applications are invited for the post of PROFESSOR OF ANATOMY on a salary of R. 1,000—50—1,400 per mensem, with effect from August 1st, year, ill be, On confirmation, Pro, entitled to, ed to, vident Fund (to[illegible] subscribe 8 per cent. of his salary, the University contributing 8 per cent.). An agreement to serve the University for a period of at least 5 years will be necessary. Applications stating age, special qualifications, teaching experience, research work published, and copies of three testimonials should reach the Registrar, Lucknow University, Lucknow (India), on or before March 30th.

Jan. 13th, 1932. R. R. KHANNA, M.A., Registrar.

City of Manchester

PUBLIC HEALTH DEPARTMENT

BOOTH HALL HOSPITAL

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer at the Booth Hall Hospital for Children (760 beds) Charlestown Road Blackley Manchester

Every applicant must be a registered Medical Practitioner and unmarried

Preference will be given to applicant with previous hospital experience

The Hospital is a recognised Training School for nurses and is equipped with all modern hospital requirements

Salary £250 per annum subject to a temporary deduction of £6 10 per annum The amount payable is therefore £243 10 with board residence and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme No bonus

The appointment will be made in the first instance for a period of six months The successful candidate however will be eligible for reappointment for a further period of six months at the end of that period

Every application stating fully the training qualifications and experience of the candidate and his age with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Booth Hall Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester only and not to member of the Committee or Council and must be received by him not later than Monday February 15th

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall H E WARBRICK HOWELL
Manchester Town Clerk
February 1st 1932

City of Bradford

MUNICIPAL GENERAL HOSPITAL
ST LUKE'S

HOUSE PHYSICIANS and HOUSE SURGEONS required

Salary in each case £200 per annum plus board and lodgings

These appointments are for six months renewable for a further period of six month

Application forms may be obtained from the Medical Officer of Health Town Hall Bradford and should be delivered to the undersigned not later than February 19th

Town Hall N L FLEMING
Bradford Town Clerk

London Hospital, E1

Applications are invited for the post of MEDICAL FIRST ASSISTANT AND REGISTRAR The appointment is for one year but is renewable annually on application for two further periods of one year Salary £300 per annum payable by the Hospital and Medical College jointly

Candidates must be fully qualified medically

Applications should arrive at the Hospital not later than by the first post on Saturday March 12th

Further applications may be obtained from the House Governor

ARTHUR C ELLIOTT
House Governor

Liverpool Maternity Hospital,

OXFORD STREET

HOUSE SURGEON required for the six months commencing April 1st next Salary at the rate of £90 per annum with board residence and laundry Previous experience a House Surgeon essential Membership of a Medical Defence Society is a condition of appointment

Applications stating age qualification and experience together with copies of testimonials to be sent to the Hon Secretary of the Medical Board on or before February 20th

Royal National Orthopædic Hospital.

HONORARY DENTAL SURGEON

Applications from duly qualified Practitioners (L.D.S. L.C.S. Eng.) are invited for the post of Honorary Dental Surgeon Applications should be accompanied by copies of two recent testimonials and reach the Secretary 234 Great Portland Street W1 on or before Feb 27th

City of Birmingham

SELLY OAK HOSPITAL.

BIOCHEMIST

Applications are invited from fully qualified Biochemists for the above whole time non-resident appointment

The present Hospital accommodation is 530 beds divided into General Medical Centre Surgical Gynæcological Obstetrical and Children's Disease Section There are completely equipped Pathological and Biochemical Laboratories and X-ray Electrotherapeutic Massage Ultra-violet Ray and Electrocardiographic Departments Over 3 000 operations are performed annually

The scale of salary will be £400 per annum rising subject to satisfactory service by annual increments of £25 to a maximum of £500

The salary will be subject to the Scale of Voluntary Abatement accepted by the Council for a period of twelve months ending December 31st and to the Birmingham Corporation Superannuation Scheme The candidate will be required to pass a medical examination and the appointment will be subject to one month's notice on either side

The officer appointed will be required to refund to the Council all fee allowance and emoluments (other than the foregoing) received

Further particulars of the appointment may be obtained from the Medical Superintendent P STANLEY KEMMIS Esq MB ChB FRCS (Eng & Edin) to whom applications stating age experience and qualifications accompanied by copies of recent testimonials and endorsed Biochemist should be forwarded by not later than February 10th

The Council House F H C WILKINSON
Birmingham Town Clerk

County Borough of Oldham

BOUNDARY PARK MUNICIPAL HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER

Application are invited from registered Medical Practitioner for the post of a male Assistant Resident Medical Officer

Salary £200 per annum with board residence and laundry

Candidate should be unmarried

The appointment will in the first instance be for a period of six month The successful applicant however will be eligible for reappointment for a further period of six month

The Hospital comprises 355 beds with facilities for gaining experience in medicine surgery midwifery and diseases of children

Application on forms to be obtained from the undersigned endorsed Resident Assistant Medical Officer should be sent to the Medical Officer of Health Town Hall Oldham and should be received not later than February 20th

JAMES B WILKINSON MD DPH
Town Hall Medical Officer of Health
Oldham February 2nd 1932

Kettering and District General HOSPITAL

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Salary £200 per annum with board residence and washing Candidate must be fully qualified and registered Knowledge of Anæsthetics desirable

The appointment is for six month with eligibility for a further six month

Application stating age nationality and qualifications together with copies of three recent testimonials to be sent to the undersigned as early as possible

C W JACKSON Secretary Supt

Norfolk and Norwich Hospital, NORWICH

Applications are invited for the post of HOUSE SURGEON Salary £120 per annum with board residence and laundry Preference will be given to a candidate who has had previous Hospital appointment Candidates (male) who must be registered qualifications should forward applications stating age nationality etc together with copies of testimonials to the undersigned as soon as possible

FRANK INCH
House Governor & Secretary
January 30th 1932

The Willesden General Hospital,

Harlesden Road N W 10

The Council of Management invite applications for the post of SECOND RADIOLOGIST (Honorary) Attendance required on two half days each week

Two copies of applications and three recent testimonials must be sent on or before February 22nd to the Secretary of the Hospital from whom further particulars may be obtained

February 1 1932

City and County Borough of LONDONDERRY

The Mayor Aldermen and Burgesses of the City and County of the City of Londonderry invite applications for the appointment of a duly qualified Medical Practitioner to the joint offices of MEDICAL SUPERINTENDENT OF HEALTH AND EXECUTIVE SANITARY OFFICER of the City and County of the City of Londonderry

Applicants will be required to hold a registrable qualification in Midwifery and to have had experience in the Medical Superintendence of a Hospital for Infectious Diseases and in the Administration of Public Health Law

The successful candidate will be required to devote his whole time to the duties of the offices and will be subject to the provisions of the Public Health Acts and the Rules and Regulations made thereunder and to such other duties as may be assigned to him by the Council

The salary will be £400 per annum rising by annual increments of £25 to a maximum of £500 per annum

Applications stating age qualifications and experience together with copies of three recent testimonials must be sent to the undersigned not later than Monday February 15th 1932

Canvassing directly or indirectly will be a disqualification

By Order
F HENRY WILLIS
Town Clerk

Dated this 29th day of January 1932

The Manchester Port Sanitary AUTHORITY

AUTHORITY invite applications for the post of MEDICAL OFFICER OF HEALTH (whole time) to their Authority

Candidates must possess the registered qualifications for the practice of Medicine and Surgery and must hold a registrable qualification in Public Health practical experience in general training in Infectious Diseases and hospital practical experience in Public Health administration

The gentleman appointed will be required to devote the whole of his time to the duties of the appointment The appointment will be for six months notice on either side The salary is fixed at £1000 per annum with all out-of-pocket expenses incurred in connection with the duties of the Medical Officer of Health and such other duties as the committee may from time to time direct

Applications marked Port Sanitary Authority accompanied by copies of not more than three recent testimonials must be delivered at the Office of the Clerk to the Authority not later than Monday February 22nd

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

Canvassing personally or otherwise will be treated as a disqualification

Dated this 28th day of January 1932

(Signed) S HOWARD FLINT
Clerk of the Authority

Bexley Square Salford

London County Council

Applications are invited for the appointment as PRESIDENT MEDICAL SUPERINTENDENT [illegible] will be undertaken [illegible] Medical Officer [illegible] duties [illegible] Council's [illegible]

SOUTHEND HOSPITAL DARTFORD KENT [illegible] Hospital (760 beds) for Consumptives [illegible] Salary £1 [illegible] £90 to £1 300 a year

SOUTH WESTERN (FEVER) HOSPITAL Landor Road Stockwell S W 9 (323 beds) Salary £900 [illegible] £90 to £1 150 a year

[illegible] applicants [illegible] provided free of rent rates and [illegible] allowance of £100 a year The salaries are subject to the usual deductions

Candidates must be duly qualified Medical Practitioners [illegible] years standing [illegible] Diseases of Children Surgery or in public or other hospital practice and have experience of [illegible] administration

Applications [illegible] Medical Officer of the Council County Hall S E 1 must be returned by February 26th Canvassing disqualifies

The Guest Hospital, Dudley
(General Hospital—107 Beds)

Applications are invited for the following posts

HOUSE SURGEON Salary £200 per annum with furnished apartments, board and laundry Duties to commence March 16th

ASSISTANT HOUSE SURGEON Salary £170 per annum with furnished apartments board and laundry

Duties to commence March 1st

Candidates must be fully qualified and registered

Applications stating age qualifications and experience and accompanied by copies of testimonials to be sent to the undersigned

H RAYMOND HURST
The Guest Hospital House Governor
Dudley Secretary
February 1st 1932

Dorset County Hospital,
DORCHESTER

APPOINTMENT OF HOUSE SURGEON

The Committee of Management are open to receive applications for the position of House Surgeon to take up his duties on or about February 26th

Every candidate for the office of House Surgeon must be unmarried and possess a registered qualification to practise Medicine and Surgery from some recognised Body in Great Britain or Ireland Salary £160 per annum with board and lodging The appointment is for a period of not less than six months All applications accompanied by three recent copies of testimonials should be sent to the Secretary Dorset County Hospital on or before Feb 15th

Candidates must be of British nationality

The Tunbridge Wells and
COUNTIES CENTRAL HOSPITAL

Wanted HOUSE SURGEON (male) Candidates must be unmarried and duly qualified in Medicine and Surgery May be required to lecture to Nursing Staff (Two Residents)

In patients number over 1 400 yearly Out patients 6 000 with 50 000 attendances

Salary £160 per annum with board residence and laundry in the Hospital

This Hospital is approved by the University of London for the purposes of the M D and M S Examinations

Applications stating qualifications with certificate of registration and copies of testimonials should be sent to the undersigned on or before February 9th

TOM B HARRISON
Secretary

Birmingham and Midland Eye
HOSPITAL

Applications are invited from duly qualified Medical Practitioners for the post of RESIDENT SURGICAL OFFICER at the above Hospital Salary £150 per annum and £10 laundry allowance

The resident staff also consists of Two House Surgeons and in the event of one of these being promoted applicants should state whether they will be willing to accept appointment as House Surgeon at a salary of £110 per annum

Applications with testimonials and evidence of registration must be received not later than Tuesday February 9th

Church Street C A MASON
Birmingham Gen Supt
January 18th 1932

Sussex Maternity and Women's
HOSPITAL (38 Beds)

RESIDENT HOUSE SURGEON (male) required Salary at the rate of £130 per annum board and washing found and £40 allowed for travelling expenses Good experience in midwifery and gynaecology afforded No canvassing allowed The successful candidate will be required to enter on his duties towards the end of February

Applications in writing accompanied by testimonials should be sent to PERCY F SPOONER Secretary at the Hospital Bucking ham Road Brighton

January 26th 1932

Nottingham General Dispensary,
Broad Street NOTTINGHAM

Wanted RESIDENT SURGEON (male or female) unmarried Must have Medical and Surgical qualifications Salary £250 with £25 increase per year up to £300 House with attendance lights and fuel (not board) This Institution is a non provident one No beds No midwifery

Applications stating age and accompanied by copies of recent testimonials to be sent by February 26th to—

5 Thurland Street R J WILLATT
Nottingham Secretary

Royal Southern Hospital,
LIVERPOOL

WANTED

TWO HOUSE SURGEONS Salary £60 per annum

ONE MEDICAL OFFICER to Specials Departments and RESIDENT ANAESTHETIST Salary £60 per annum

ONE CASUALTY OFFICER Salary £100 per annum

The appointments are for six months Duties commencing from April 1st

Applications and copies of testimonials to be sent to the undersigned at once

ALLEN NAIRETI
Superintendent & Secretary

Nottingham Children's Hospital

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (Woman) The salary will be at the rate of £150 per annum with apartments board and laundry The appointment will be for six months Duties to commence on April 1st

Applications together with testimonial and stating age qualifications and experience to be sent to I PEAGRAM the Honorary Secretary 1 King John's Chambers Bridlesmith Gate Nottingham by February 15th Selected candidates will be required to attend at the Hospital for a personal interview on Feb 23rd when the appointment will be made

Salford Royal Hospital
(263 Beds)

The Board of Management invite applications for the post of CENTRAL SUPERINTENDENT at a salary £600 per annum with rooms from Hospital Superannuation Scheme in operation

Candidates who must have had experience in the administration of a General Hospital should send in their applications stating age experience etc accompanied by not more than six recent testimonials addressed to the Chairman Salford Royal Hospital not later than February 27th next

January 25th 1932

Addenbrooke's Hospital,
CAMBRIDGE

Applications are invited for the post of HOUSE PHYSICIAN The appointment will be for six months from February 23rd but is terminable at an earlier date by one month's written notice on either side Salary at the rate of £130 per annum with board residence and laundry Candidates (male) who must be unmarried and duly registered are required to forward their applications stating age qualifications etc together with copies of not more than four testimonials to the undersigned on or before Wednesday February 10th

W H HEAD Secretary Supt

Manchester and Salford Hospital
FOR SKIN DISEASES

HOUSE SURGEON

Applications are invited for the post of House Surgeon Must be registered The appointment is for six months from April 1st Salary at the rate of £100 per annum with board and residence

Applications with copies of three testimonials to be sent to the undersigned Quay Street Manchester on or before Wednesday Feb 24th

JOHN NALL Secretary

Manchester Hospital for Consumption & Diseases of the Throat and Chest

Wanted a RESIDENT MEDICAL OFFICER for the In Patient Department (50 beds) BOWDON CHESHIRE Must be registered Salary £200 per annum with board apartments laundry and railway contract Duties include attendance on three mornings a week at the Out Patient Department Manchester

Applications with copies of testimonials to be sent not later than February 13th to—

Haidman St W HUNT
Deansgate Manchester Act Secretary

New Sussex Hospital for Women
AND CHILDREN (INCORPORATED)
Windlesham Road BRIGHTON

HOUSE PHYSICIAN and HOUSE SURGEON (women) required to enter upon their duties on March 15th Salary at the rate of £100 per annum board and laundry provided

Applications in writing accompanied by three recent testimonials should be sent on or before February 15th to—

Board Room PERCY F SPOONER
January 29th 1932 Secretary

Sussex Eye Hospital
HONORARY ASSISTANT ANAESTHETIST
Required

The Committee of Management hereby give notice that a meeting of the Committee will be held on Thursday February 18th for the purpose of appointing an Honorary Assistant Anaesthetist to the Hospital

Applications in writing for the vacancy with testimonials must be sent to the Hospital addressed to the Assistant Secretary on or before Thursday February 11th

Candidates must be registered under the Medical Acts No candidate can hold the appointment unless he resides in Brighton or Hove

Board Room PERCY F SPOONER
Queen's Road Assistant Secretary
Brighton January 30th 1932

Hospital for Consumption and
DISEASES OF THE CHEST
Brompton S W 3

The Committee of Management give notice that a vacancy will occur in the office of PHYSICIAN on March 1st Dr A Hope Gosse the Senior Physician to Out patients is a candidate for the post

A vacancy for an ASSISTANT PHYSICIAN to the Hospital will also occur and application with copies of testimonials for this latter post are invited and should reach the undersigned not later than Wednesday February 17th

Candidates must be members (or have passed the qualifying examination for the membership) of the Royal College of Physicians of London

FREDERICK WOOD
February 1932 Secretary

Hospital for Consumption and
DISEASES OF THE CHEST
Brompton S W 3

The Committee of Management invite applications for the post of whole time qualified ASSISTANT in the Department of Pathology Duly qualified women are eligible for appointment Further particulars may be obtained at the Hospital Salary £350 per annum Applications with copies of testimonials must reach the undersigned not later than Saturday February 20th Candidates will be required to attend the meeting of the Medical Committee on Wednesday February 24th at 4 30 p m

Brompton FREDERICK WOOD
S W 3 Secretary
January 1932

Paddington Green Children's
HOSPITAL (Incorporated) LONDON W 2

Applications are invited for the appointment of HONORARY DENTAL SURGEON to the Hospital Candidates must be Licentiates in Dental Surgery of the Royal College of Surgeons England and a Medical qualification, though not dental would be advantageous

Applications stating age and qualification accompanied by copies of three testimonials should reach the undersigned not later than first post on Saturday February 27th

JAMES A HAMLIN
Secretary

Paddington Green Children's
HOSPITAL (Incorporated) LONDON W 2

Applications are invited for the appointment of HONORARY SURGEON to Out Patient Candidates must be Fellows of the Royal College of Surgeons England

Applications stating age and qualifications accompanied by copies of three testimonials should reach the undersigned not later than first post on Saturday February 27th

JAMES A HAMLIN Secretary

St Thomas's Hospital
VACANCY

[illegible] PHYSICIAN in charge must be registered or Members of the of London

Details of academic career and testimonials should be forwarded to the Clerk to the Governors on or before February 13th

The Auckland Hospital Board

A MEDICAL SUPERINTENDENT is required for the General Hospital Auckland New Zealand Salary at the rate of £1 200 per annum The post is purely administrative All particulars of appointment and form of application obtainable at the office of the High Commissioner for New Zealand 415 Strand London W C 2

Auckland H A SOMMERVILLE
New Zealand Secretary
December 24th 1931

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh

(a) British Islands

Town or District
GENERAL POST OFFICE *(Assistant Medical Officer—Woman)*
CONTRACT PRACTICE
EBBW VALE MON *(Workmen's Medical Society)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*
LOWESTOFT MEDICAL INSTITUTE *(Medical Officer)*

Town or District
CONTRACT PRACTICE *(contd)*
LLWYNYPIA CLYDACH VALE TENYCLAIG GLAMORGAN *(Workmen's Medical Scheme)*
MARDY GLAMORGAN *(Workmen's Medical Scheme)*
MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE *(Workmen's Medical Scheme)*
NEATH AND DISTRICT *(Medical Aid Association)*
OAKDALE MON *(Medical Officer for Medical Aid Association*

Town or District
CONTRACT PRACTICE *(contd)*
OCMOPE VALLEY CLYDACH VALE *(Workmen's Medical Scheme)*
PUBLIC HEALTH
BUCKS COUNTY COUNCIL *(Medical Officers of Health)*
DEVON COUNTY COUNCIL *(School Medical Officer)*
FULHAM BOROUGH COUNCIL *(Assistant Medical Officer)*

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Societies Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W
QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane

Town or District	Hon Sec of Division or Branch
SOUTH AUSTRALIA *(Lodge Appointments)*	Secretary South Australian Branch B M A House 206 North Terrace Adelaide
VICTORIA. *(All Institute or Medical Dispensaries)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria

Town or District	Hon Sec of Division or Branch
WELLINGTON NEW ZEALAND *(Contract Practice All intimated)*	Dr G F VANSE (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington N Z
WESTERN AUSTRALIA *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St Georges Terr Perth Western Australia

February 3rd 1932 By Order of the Council ALFRED COX Medical Secretary

West London Hospital,
Hammersmith Road W 6 (234 Beds)

Applications are invited for the post of HONORARY OBSTETRIC REGISTRAR for a period of one year The successful candidate will be eligible for re election annually for a total period of not more than 3 years The duties include the preparation of the Obstetric Registrar's Report for the year and the supervision of the records of case The candidate appointed must be available as a substitute for the Surgeon and Assistant Surgeon for Diseases of Women and for emergencies operations when required and be prepared to undertake such teaching for the Post graduate College as the Board may approve

Candidates are required to be registered under the Medical Act to send applications to reach me not later than Tuesday February 16th to attend the Medical Council Meeting on Friday February 19th at 4 30 p m and prior to that date to call upon and send copies of application and testimonials to each Member thereof to attain from canvassing but nevertheless to send copies of application and testimonials to each Member of the Board of Management at whose Meeting on Tuesday February 23rd at 5 p m elected candidates must be in attendance

H A MADGE Secretary

West London Hospital,
Hammersmith W 6 (234 Beds)

Applications are invited for the post of HONORARY ASSISTANT ANAESTHETIST Candidates are required to be registered under the Medical Act to send applications which reach me not later than Thursday February 18th to attend the Medical Council Meeting on Friday February 19th at 5 p m and prior to that date to call upon and send copies of their application and testimonials to each Member of the Board of Management at whose Meeting on Tuesday February 23rd at 5 p m selected candidates must be in attendance

H A MADGE Secretary

West London Hospital,
Hammersmith Road W 6 (234 Beds)

Required a NON RESIDENT CASUALTY OFFICER (male) The appointment is tenable for one year from March 1st next subject to one months notice on either side The appointed candidate will be eligible for re election for two further periods of one year Salary at the rate of £250 per annum with lunch and tea daily

Candidates must be duly qualified registered Medical Practitioners and preference will be given to those who have held a Resident appointment in a General Hospital

Application (which must be made on printed forms obtained from me) must reach me not later than Thursday February 18th Selected candidates will be required to call upon such members of the Medical Staff as directed and to be in attendance at a meeting of the Medical Council at 4 p m on Friday February 26th and the House Committee Meeting at 4 45 p m the same day when the appointment will be made

H A MADGE Secretary

Nottingham Hospital for Women

HOUSE SURGEON (female or male) required to commence duties on March 15th Appointment for period of not less than six months Salary at the rate of £150 per annum with board residence and laundry Previous hospital experience essential

Applications stating age experience and qualifications accompanied by copies of three recent testimonials to be sent to the Secretary Mr A L Mott Hon Building Parliament Street Nottingham not later than February 15th

Westmorland County Hospital,
KENDAL (Beds)

HOUSE SURGEON (male or female) required Applications from persons Salary £200 with board residence and laundry Application with full particulars and copies of three testimonials to be addressed to the Hon Sec J M SCARNELL

Central London Throat, Nose, & EAR HOSPITAL
Gray's Inn Road W C

RESIDENT HOUSE SURGEON (Male)

There will be a vacancy for a Third Resident House Surgeon to enter on duty on May 1st next

The appointment will be for a period of nine months—three months as Third House Surgeon three months as Second House Surgeon and three months as First House Surgeon

Remuneration at the rate of £50 per annum

Application accompanied by copies of not more than three testimonials should be sent to the undersigned on or before February 8th

JOHN H YOUNG Secretary Superintendent

Central London Throat, Nose, & EAR HOSPITAL
Gray's Inn Road W C 1

ASSISTANT SURGEON

There is a vacancy for an Assistant Surgeon who will be a Member of the Royal College of Surgeons of England except in cases where on the ground of age and special merit or distinction in Special Departments the Board may elect a candidate who is not a Member of the College Further information and particulars may be obtained from the undersigned Applications must be received not later than February 8th

JOHN H YOUNG Secretary Superintendent

General Infirmary, Salisbury
(Beds)

HOUSE PHYSICIAN (male) required on March 1st

Candidates must be Members of the Royal College of Physicians London or Edinburgh

Application with copies of testimonials to be sent to the House Committee not later than February 15th

(Appointments continued on p 52)

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQ LONDON, W C 1

T/A ARTICULATE WESTCENT LONDON
Tel MUSEUM 9861 (4 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) **9s**
Each Additional Line, 1s 6d

(a line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

Wanted —Assistantship, with or without view by well qualified hard working experienced Practitioner aged 35 married Would manage branch or assist elderly doctor with view to succession Small capital available Good references —Address No 819 B M A House Tavistock Square W C 1

Wanted immediately by recently qualified Medical Man Irish R C appointment as ASSISTANT or deputy LOCUM Anywhere in England Ireland or Wales Highest references —Address No 804 B M A House Tavistock Square W C 1

Wanted, March 1st, Assistant, Cheshire Coast Town near Liverpool Suit recent Graduate with some hospital experience Rooms and attendance provided Age and testimonials — Address No 806 B M A House Tavistock Square W C 1

Wanted — Assistantship by M B Scot 29 married over 4 years Hosp and C I experience Good appearance drive car reliable Free one month —Address No 814 B M A House Tavistock Sq W C 1

Wanted —Assistant, S Wales Pleasant district Salary £300 with rooms attendance etc Usual bond Give full particulars —Address No 831 B M A House Tavistock Square W C 1

Wanted — Outdoor Assistant, male Midlands Working class and panel Salary £450 Usual bond Particulars — Address No 818 B M A House Tavistock Square W C 1

Wanted, Assistantship, by M B Ch B (Indian) energetic reliable well received Drive car Experience panel and private — Address No 815 B M A House Tavistock Square W C 1

Wanted immediately, indoor ASSISTANT male British unmarried under 30 years for mixed Practice in South Wales Salary £350 p a —Address No 810 B M A House Tavistock Square W C 1

Wanted immediately — Indoor and Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries Stat full particulars —BRITISH MEDICAL BUREAU 33 Cross Street Manchester

Wanted — Young male Assistant indoor for panel and private Practice near Manchester Salary £350 Refs —Address stating age No 805 B M A House Tavistock Square W C 1

Part-time Assistant Work in London or suburb REQUIRED by Graduate of seven years experience Reading for higher degree Age 32 — Address No 808 B M A House Tavistock Square W C 1

Radiological Practice —Wanted, ASSISTANTSHIP with view to PARTNERSHIP by experienced D M R E Necessary capital available — Address No 816 B M A House Tavistock Square W C 1

PARTNERSHIPS

Wanted —Partnership or Assistantship with definite view to Edinburgh L R C P I R C S age 33 married ex H I Own car Personal capital available Ex testimonials and references Free March —No 621 B M A House Tavistock Sq W C 1

Wanted at once, Partnership in good class Practice among better class patients No panel or small panel Good social amenities South of England preferable Share over £1 000 Immediate cash for share (and house if necessary) available M B B S Public School and St Bart's Hospital 29 married — Address No 626 B M A House Tavistock Square W C 1

Wanted — Partner, with preliminary Assistantship for large private Practice in Lancashire town residential district (no panel) Share worth over £1 000 p a Applicants should possess good qualifications and Hospital experience Must be keen energetic worker well liked Excellent scope Opportunity —No 820 B M A House Tavistock Sq W C 1

Devon — Partner required in rapidly growing high class non panel, non dispensing Practice Important Hospital town with good social amenities M D (Lond) preferred Share about £800 p a to commence —Mr C S Moore's Incorporated Accountant 15 Bedford Circus Exeter

Manchester —Partnership in old-established Practice Receipts £1 600 yearly Good house garden garage £40 per annum Excellent scope Hand 1 500 Price £1 200 half share part deferred —M A CHRISTIE MEDICAL & SCHOLASTIC ASSOC 6 Crown St

Manchester District — £5,000 1/5th in old established working class Practice Small house with garden and separate surgery for sale Practice £1 700 House £1 100 — Address No 817 B M A House Tavistock Square W C 1

Partner required in a very sound and increasing middle class Practice on outskirts of good Lincolnshire Town near coast One THIRD SHARE for DISPOSAL at 2 year purchase average receipts £2 900 Married man of about 30 with some experience preferred —No 809 B M A House Tavistock Sq W C 1

Partner wanted immediately (gentleman) for good class non dispensing non panel PRACTICE in S W of England Incoming Partner should hold the M D of London Oxford or Cambridge Share worth £800 to commence Good house to rent at £90 —No 803 B M A House Tavistock Sq W C 1

Partner wanted immediately, to take 1/3 or 2/5 share in increasing industrial and middle class Practice in Midland Practice worth £2 400 panel 2 400 Good house to let or sell for incoming partner Must have hospital experience and be under 30 — No 833 B M A House Tavistock Sq W C 1

South Coast — Partnership in first class non dispensing Practice of £3 000 p a in favourite seaside resort successor in few years Premium £2 350 Fine modern house £3 500 Applicant should be experienced Graduate in Medicine not under 40 —No 822 B M A House Tavistock Sq W C 1

Third Partner required in unopposed Practice in convenient West Country Town Young married man with some experience of general practice and surgery desirable Cottage Hospital Capital necessary about £2 400 — Address No 710 B M A House Tavistock Square W C 1

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After Office Hours Epsom 9142

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Wanted — Part or Whole-time WORK London area by experienced well received M A M B Ch B age 32 Indoor preferred Own car Moderate remuneration Available about February 14th —Address No 802 B M A House Tavistock Square W C 1

A Lady Dispenser-Bookkeeper supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

Experienced Practitioner needs end £1 1s Period £3 3s —Address No 825, B M A House Tavistock Square W C 1

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Qualified and experienced in private and panel practice Permanent and part time Book Keeper Dispensers Secretary Dispensers Nurse Dispensers Chauffeur Dispensers and Receptionist
Write wire or phone Central 3679
The Reliance Bureau for Dispensers, 12 Holborn Viaduct E C 1

Advertiser, semi-retired, middle-age own car would WORK or ASSIST on short notice for short period only anytime in neighbourhood of Bournemouth and Southampton — Address No 830 B M A House Tavistock Square W C 1

British Institute of Radiology

The Council of the British Institute of Radiology propose to appoint a SUB EDITOR to the *British Journal of Radiology* Candidates for the appointment which will be either a full time or part time one should have an acquaintance with medical radiology a proficient knowledge of French and German and experience in the duties relevant to the production of a scientific journal The commencing salary will depend on the qualifications and experience of the candidate appointed Applications accompanied by a statement of qualifications testimonials whether full time or part time etc should reach the General Secretary British Institute of Radiology 32 Welbeck Street London W 1 not later than February 20th

Dispenser (young lady), Hill certificate requires LOST knowledge of book keeping and typewriting Will undertake light house hold duties if required Phone St Albans 925 —Address No 829 B M A House Tavistock Square W C 1

Doctors requiring qualified Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W C 2

Harley St specialist's daughter, 22 years of age requires POSITION as RECEPTIONIST to Doctor or Dentist in London Typewriting shorthand book keeping French Excellent references —MAISY TIBBLES 1 Harley Street W 1

Lady Dispenser-Secretary (23) require POST any district 3½ years experience private and panel book keeping minor dispensing etc Capable and willing Drives car Excellent references —No 801 B M A House Tavistock Sq W C 1

Resident Assistant Medical OFFICER age about 26 required by GOLD MINING COMPANY in WEST AFRICA Period of service 12 months under agreement 1st class passages and quarters provided —Write stating age qualifications etc to Box 102B c/o SMITHS 3 Lincoln's Inn Field W C 2

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PRACTICES

Wanted about midsummer, good class PRACTICE or PARTNERSHIP in West End N W or S W 1 district of London of £1 500 upwards per annum by well qualified and experienced man Capital available—No 823 B M A House Tavistock Sq W C 1

Wanted, by experienced Practitioner good class private PRACTICE with scope South or South East Coast Town Income £1 000 p a upward Capital available Small panel not objected—Address No 610 B M A House Tavistock Square W C 1

Wanted, good-class Practice or PARTNERSHIP in Liverpool London or nearby residential town by M D M R C P experienced general practitioner Income £2 000 up Scope for physician preferable Capital available—No 824 B M A House Tavistock Sq W C 1

Wanted — Practice or Partnership with a view to Succession in London Suburbs or large Provincial Town Middle class with proportionate panel £1 500 or over Capital available—Address No 832 B M A House Tavistock Square W C 1

Advertiser would pay cash for good mixed PRACTICE of £2 000 p a or over Large panel essential in London or Suburbs Strictest confidence No agents — Address No 811 B M A House Tavistock Square W C 1

Beds — Practice in pretty district Nice house electric light garage Receipts £500 great scope Panel 75 increasing House rent or will Price £400 or with house £1 300—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

Channel Islands — Wanted by experienced Practitioner a medium sized Practice situated preferably in Jersey Receipts approx £1 000 up with suitable house preferably to rent—Please send details in confidence to THE MEDICAL AGENCY Watergate House Adelphi W C 2

Death Vacancy, near Bradford Unopposed Average receipts £428 p a Panel approximate 1s 500 Receipt fallen owing to ill health Capable of increase House may be rented Good Locum in charge — Apply 2642 REYNOLDS & PHYSON LTD Medical Transfer Agents 15 Bridge Road

Doctor, holding appointment Wembley district to PRACTISE or PARTNERSHIP within a radius of 5 miles — Address No 812 B M A House Tavistock Square W C 1

Exceptional Opportunity, recently established PRACTICE 10 miles Maidenhead Receipts average £250 monthly Cash panel private rapidly increasing Unlimited scope House available One year purchase—No 826 B M A House Tavistock Sq W C 1

Exchange or Sale —Practitioner, with Midland Coast Practice average over £900 would EXCHANGE for S or S W Country Town or Seaside Health resort—Address No 827 B M A House Tavistock Square W C 1

For Sale—Mixed Country Practice South England Panel 350 Average receipts £980 Small house with garden Cool garden garage Price—house and Practice—£1 850—Address No 807 B M A House Tavistock Square W C 1

For Sale, old-established, unopposed Country PRACTICE in charming part of West Midland Receipt 1931 £1 200 Panel over 1 400 Excellent medical practice house garden tennis court electric light etc Sports House and Estate £3 000—Address No 821 B M A House Tavistock Square W C 1

Increasing Practice for Sale, London Suburb Now taking £14 to £15 per week Panel over 300 Surgery rent £1 per week only Premium £500 Part time if desired—Write HAYDEN HANDS & CLARK LTD 59 Holborn Viaduct E C 4

Limes — Large Town — Death Vacancy — Established practice Panel 1 100 Receipts £2 000 p a Healthy Country district Premises £20 p a Hope to let with Practice if desired Full value £1 000—Apply HOWARD HEARN, LTD 19 Craven Street Strand, W C 2

Lincolnshire — Death Vacancy —Middle aged PRACTICE in pleasant old Cathedral Town Panel 520 Good opportunity for private practice — For further particulars apply 27 Hunter Street Lincoln

London, E — Old-established PRACTICE Profits averaging nearly £600 p a panel 900 10 roomed house on lease Premium £700 for quick sale Ill health cause of selling—Apply PEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

London, S W (7 mins Kennington)—Old established PRACTICE Receipts average £800 a year including panel 650 Nice large house on lease rent £3 per week Premium £1 500 Practice steadily increasing—Apply PEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

Medical Practice (Industrial) for Sale in Ayrshire Panel 825—Apply ALEX L WRIGHT & Co Solicitors 6 Brandon Street Motherwell

Mental —Wanted —Practice or PARTNERSHIP preferably in Mental Private Asylum or Home in or near London by experienced middle aged Practitioner retiring from general practice with ample capital to invest — Detail in confidence to D F c/o PERCIVAL TURNER LTD 4 & 5 Adam St Adelphi Strand W C 2

Practice required — Advertiser, a competent and experienced Practitioner is seeking a Medical PRACTICE in a residential area preferably though not necessarily in the South Coast The chief essential considerations are a suitable house proximity to school and the possibility of securing an adequate income from £1 500 upward Should there be any gentleman who is contemplating an early retirement or change from an established practice of this type would he be good enough to forward some preliminary details by letter which will be treated in the strictest confidence—Address No 835 B M A House Tavistock Sq W C 1

Practitioner, with specialised Practice mainly venereal WISHES TO SELL Can work in conjunction with C P Large Town N Midland £1 800 p a House to be rented Vendor going abroad Any reasonable offer considered for quick sale—No 834 B M A House Tavistock Sq W C 1

To Purchasers — Do not buy without expert assistance With 50 years experience Mr PERCIVAL TURNER can advise in all cases Terms free on application to 4 Adam St Strand W C 2 Telephone Temple Bar 9011 Telegrams Epsomian London

Wales — Old-established Practice Receipt £1 100 p a including panel 1 000 Nice house pleasant surrounding rent £12 per quarter Premium 1 years purchase—Apply PEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

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Bournemouth — House or Flats There is a Consulting Room to be let in main road — Apply PRICE & PRICE Surgeons Street

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Manchester — Withington — To Let for 3 11 Wilbraham Road corner Dalkeith Road DESIRABLE SITUATION DOCTOR OR DENTIST 3 reception 6 bedrooms and usual offices Garage Reasonable rent or purchase—W H SMITH & SONS 60 Spring Gardens Manchester

Middlesex — To Let Nursing HOME partly equipped 11 bedrooms Long lease Low rent 3 W C Part £150 p a Bargain Osborne Terrace Ashley Wilson Bristol Telephone 60 for particulars

New Harley St and Baker St Welbeck House To Let or Sell Fully End Clinic Consulting Rooms Flats or full Board Moderate terms Nottingham Place W 1

Nursing Home, fashionable SEE Co Town Surveyor invites enquiries whether there exists a need for a Nursing Home in the Borough and if there is a probability that the Corporation would be approached to grant the necessary consent—Particulars of Site from SHORE Surveyor Dept (Tel 2000)

Part-time Consulting Room Provincial and suburban Practitioners desiring to Consult in London district should write for particulars of centrally fine consulting suite to let at nominal rent—Address No 342 B M A House Tavistock Square W C 1

Portland Place — One of the Premium to be RECEIVED to LET on Lease at £400 per annum Unique opportunity to acquire an old established fine decoration etc on Lease Apply to Sole Agent SAMUEL BECKETT 1 New Cavendish Street Portland Place W 1

Queen Anne Street — One £40 per annum second floor PART TIME LEASE exceptionally fine CONSULTING ROOM with waiting room attendance if required Reference — Address No 313 B M A House Tavistock Square W C 1

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Wimpole Street, best part, large Ground floor CONSULTING SUITE Also Front Room 1st floor £2 10s per week Excellent position Apply Caretaker 10 Harley Street W 1 Telephone Langham 2911

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APPOINTMENTS—Contd

The First London Hospital for
CHILDREN Shadwell E 1

The Board of Management invite applications for the post of DISPENSOLOGIST to see Out Patients one morning a week Applications with not more than three recent testimonials should reach the undersigned not later than Saturday February 13th
W M WILCOX Secretary

Ancoats Hospital, Manchester

The following vacancies will occur on March 1st next and applications are invited
HOUSE SURGEON (Orthopaedic)
HOUSE SURGEON (General)
The appointments are for six months Salary at the rate of £100 per annum with board residence etc
Applications, stating age qualifications experience (if any) and full particulars together with copies of three recent testimonials to be forwarded to the undersigned on or before February 16th
Applications are invited for the post of MEDICAL REGISTRAR to attend the Out Patient Department on Monday Wednesday and Thursday Mornings for which an Honorarium of £50 per annum is paid
By Order of the Board
HERBERT J DAFFORNE
Gen Supt & Secretary

District Infirmary, ASHTON UNDER LYNE
(General Hospital 200 beds mainly Surgical)

Wanted a HOUSE SURGEON preferably with experience of Ophthalmic work Six months appointment renewable Salary at the rate of £150 per annum with board, residence and laundry
The Resident Staff comprises a Resident Surgical Officer and Three House Surgeons
Applications with testimonials to be sent at once to the undersigned
FRANK OLIVER
Jan 30th 1932 Gen Supt & Sec

South Eastern Hospital for CHILDREN Sydenham S E 26

Applications are invited for the position of RESIDENT MEDICAL OFFICER (lady) The appointment will be for six months from February 25th Honorarium £100 per annum with board residence and laundry Ample time for reading Applications by letter only stating age and qualifications with three copies of testimonials should be sent to the Hon Secretary WALTER MASON M B E Woodfield 88 Dacres Road Forest Hill S E 23 to be received not later than Monday February 15th

The Royal Liverpool Children's HOSPITAL

There will be vacancies on April 1st next for TWO RESIDENT HOUSE PHYSICIANS and TWO RESIDENT HOUSE SURGEONS at the CITY BRANCH, Myrtle Street The appointments will be for a period of six months Salary in each case at the rate of £100 per annum Applications with copies of recent testimonials to be sent to the Secretary Royal Liverpool Children's Hospital Myrtle Street Liverpool on or before Wednesday Feb 10th

The Royal Liverpool Children's HOSPITAL

There will be vacancies on April 1st next for TWO RESIDENT MEDICAL OFFICERS at the DEAWELL BRANCH of the Institution (240 beds) The appointments will be for a period of six months Salary in each case at the rate of £120 per annum Applications with copies of recent testimonials to be sent to the Secretary Royal Liverpool Children's Hospital Myrtle Street Liverpool on or before Wednesday February 17th

Walsall General Hospital

The Committee invite applications for the appointment of HONORARY ORTHOPAEDIC SURGEON Applications should be sent on or before February 9th to the undersigned from whom full particulars regarding the post may be obtained
WALTER FRANCOMBE
January 28th 1932 Secretary

Seamen's Hospital Society, Greenwich

HOUSE SURGEON (male) required at THE BURY HOSPITAL ESSEX for six months from March 1st Salary £150 per annum with board, residence and laundry Good opportunities for minor surgery Applications with copies of three testimonials to be sent in by February 23rd to the undersigned
Seamen's Hospital Society R E V BAX
Greenwich Secretary

The Royal Waterloo Hospital for CHILDREN AND WOMEN
Waterloo Road S E 1

There is a vacancy for the post of HONORARY OPHTHALMIC SURGEON at the Royal Waterloo Hospital Candidates must be Fellows of the Royal College of Surgeons Particulars of the appointment can be obtained from the Secretary of the Hospital to whom applications should be sent *not later* than February 22nd with not more than three recent testimonials

City of Birmingham Mental HOSPITAL

JUNIOR LADY ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole time appointment from ladies under 35 years of age who are duly qualified and registered Medical Practitioners A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification
The successful candidate should be a good Anaesthetist
She will be required to reside in the hospital
The commencing salary will be £350 per annum plus the usual residential emoluments of board lodging laundry, and attendance Subject to twelve months service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum An additional £50 per annum will be paid to the holder of the D P M qualification, or to a person obtaining the D P M after appointment The salary and emoluments will be subject to a temporary deduction amounting to £9 7s 6d per annum in accordance with the Scale of Temporary Abatements from Salaries approved by the City Council The salary is inclusive of all fees received and any such fees must be accounted for and paid into the hospital account
The successful candidate will be required to pass satisfactorily a medical examination and to join the Scheme under the Asylums Officers Superannuation Act 1909 She will be required to serve in such institution belonging to the Mental Hospitals Committee as they may from time to time direct The appointment is subject to one month's notice on either side
Applications stating full particulars of qualifications experience and appointments held accompanied by copies of three recent testimonials must be addressed to the undersigned so as to be received not later than Feb 15th
F H C WHITSHIRE
Town Clerk's Office Clerk to the
Council House Committee of
Birmingham Visitors

City of Cardiff

MEDICAL OFFICER (TEMPORARY) CANTON MEDICAL RELIEF DISTRICT

The Council invites applications for the above appointment (part time) from registered Medical Practitioners, who, if not resident in the district which comprises the Canton Riverside and Llandaff Wards of the City of Cardiff must undertake to take up residence therein within three months of the date of the appointment
Salary £200 a year
The Council will also enter into a contract with the person appointed for the performance of Public Vaccination in the District the fees for which it is anticipated will average £150 per annum
The Medical Officer will be required to provide an Approved Surgery at which the patients may attend and to commence duty on April 1st
There are no extra fees except small sums for reports as to Lunacy Boarded Out Cases etc
The qualifications for and the duties and conditions of the appointment which will be for 12 months in the first instance are prescribed by the Public Assistance Order 1930
Applications on forms to be obtained from the Public Assistance Officer 11 Park Place Cardiff from whom further information may be obtained must reach me by 5 p m on Wednesday, February 17th
Direct and indirect canvassing is prohibited
CECIL C BROWN Town Clerk

Metropolitan Hospital, Kingsland Road E 8

The Committee of Management are prepared to receive applications for the appointment of a SURGEON who will be Junior Member of the Surgical Staff
Candidates must be Fellows of the Royal College of Surgeons of England and not engaged in general practice
Candidates will be required to call upon Members of the Staff
Twenty applications complete with copies of recent testimonials must reach the undersigned (from whom further particulars may be obtained) not later than first post on Monday February 29th
HERBERT J RICHFORD
Secretary & House Governor

Ilkeston General Hospital (60 Beds)

Wanted a fully qualified RESIDENT HOUSE SURGEON (lady) Salary £140 per annum with board residence and laundry Applications stating age and qualifications with copies of recent testimonials to be sent to the Chairman General Hospital Ilkeston on or before February 17th

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LIVERPOOL —Well established C P Medium sized house (7 bed) Receipts approx £1 100 Small elect panel Fees 3/6 up Midwifery not undertaken Several appointment Premium for practice and house £2 000 payable £1 500 down and balance by instalments

ESSEX —Seaside Resort —Good mixed class C P with scope for increase Excellent modern house to rent on lease or for sale Fees 3/6 up Appointments over £200 Receipts over £1 000 Small select panel Premium £1 150 to include drugs

ESSEX —NUCLEUS non panel G P with excellent house for sale or to rent Receipts approx £230 p a Scope for panel if desired Good opening for Lady Doctor

LONDON N W — Well established mixed PRACTICE mainly better class with excellent house situated on main thoroughfare Receipts approx £900 Panel over 420 Fees 3/6 up No midwifery One appointment Part of house sublet if desired Vendor has developed better class of practice at good fees Premium £1 300 cash

LONDON E —Suburban middle class G P Medium sized house to rent on lease at the low rental of £50 p a Fees 2/ Aver receipts £516 Panel 350 Ex scope for young man Prem for Practice and lease £1 050 cash or near offer

LONDON E —PARTNERSHIP in middle and working class Practice Receipts over £2 000 Large panel Scope for increase especially midwifery Premium for 2/5ths share 2 years purchase with view to larger share

WEST END —Physician with very fine consulting and treatment rooms near Harley Street offers favourable terms to another practising Physiotherapy

EASTERN COUNTIES —Cathedral City —PARTNERSHIP in good class non panel Practice Receipts average £4 450 Excellent opportunity for first class man on the medical side Probability of Hospital appointment Quarter share to commence at 2 years purchase

YORKS —PARTNERSHIP in middle and working class Town Practice Receipts approx £3 000 Panel over 2 000 House to rent Premium for 1/4 share 2 years purchase

NORTHANTS —Old established Country PRACTICE situated in charming locality Hunting and sport of all kind Highly suit to semi retired Practitioner Splendid house in own ground to rent or purchase central heat electric light etc Receipts £500 Panel 100 Premium £550

LONDON S E —Near West End —Cash and panel PRACTICE (Took up) Shop fronted surgery held on lease at £70 p a part sublet Receipts average approx £400 Panel 517 Excellent scope for one giving whole time and undertaking midwifery Premium 1½ years purchase or near offer

BERKS —PARTNERSHIP —Country Rural Practice in sporting district Receipts average nearly £1 150 Panel nearly 600 Fees 2 6 up Short preliminary Assistantship 1/3 to 1/2 share for disposal at 1½ year purchase Suitable to experienced man British aged 27 upwards

YORKSHIRE —Well established mixed rural PRACTICE Suitable house available (4 beds) Receipts approx £1 000 Panel 620 Fees 3/6 up One appointment Premium 1½ years purchase

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known country town Receipts approx £6 000 Select easily run panel Medium sized house to rent Premium for 1/4 share 2 years purchase This Practice has been known to the Agency for many years and is highly recommended by us It is seen that the incoming Partner shall hold the F R C S and be aged about 30 Appointment to Hosp Staff

YORKS —JUNIOR PARTNERSHIP after Preliminary Assistantship in well-established mixed Practice Panel 1 700 Suitable only to one with Surgical experience Premium 1/4 share at 1½ years purchase with view to larger share Suitable accommodation available to rent

SOUTH COAST —Small PRACTICE in popular seaside resort Receipts nearly £400 Small panel Fees 5/ up Excellent house (5 beds) avail to rent Other accomm avail Prem for quick sale £350

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1 BIRMINGHAM (Good class Suburb) —Private PRACTICE with small panel but ample scope if encouraged Receipts nearly £600 p a Good house to rent Garage etc

2 LANCS —SEASIDE TOWN —Panel and private PRACTICE Receipts last year nearly £900 Small panel Both increasing Good fees House to rent (5 beds) Garage etc

3 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Gar etc

4 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

5 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

6 LANCASHIRE — (Large Town) — Non dispensing non panel largely surgical PRACTICE estab over 4 years Receipts average £1 179 p a and unlimited scope Good house etc

7 SOUTH WALES —Contract and middle class PRACTICE Receipts aver £1 100 Panel about 1 000 Good house to rent Lawn Garage etc

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3 WESTERN CITY —Panel of 451 and club returning last year £220 together for sale Prem £300 Good house

4 CLAMORGAN — Old established Contract PRACTICE 1 opponent £1 100 p a accountants figs Panel 1 000 Good modern house in pleasant situation with garden Rent £48 p a Prem 1 yrs purchase

5 ESSEX —Seaside Town —PRACTICE aver £950 p a Easily worked Small panel Excellent house with good garden Appts £210 Price £1 150 incl drugs

6 DEVON —Unopposed Country PRACTICE Last year £675 Panel 250 Scope for increase M O £71 Rent £32 p a Prem 1½ years purchase Suit for man or woman

7 COUNTY TOWN —PRACTICE £900 p a in Carmarthen Low price by instalments for quick sale Good house to rent £45 p a

8 MONMOUTH — Old estab Country PRACTICE aver over £1 600 p a Third share at 2 yrs purchase with total succession Good house to rent Scope for surg No collieries

9 DEVON —Seaport Town — Increasing district £520 in last 15 months Panel 300 Good house to rent Prem £400 Great scope Selling owing to ill health

10 MONMOUTH — Old established PRACTICE Receipts £300 p a In same hands 40 yrs Good hse Selling owing to age & ill health Populous dist £1 000 for house & Practice

11 OXFORDSHIRE —Old established unopposed Country PRACTICE aver £1 150 p a Price 1½ years purchase Good house

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MANCHESTER SUBURB—PRACTICE (1 £1600) p.a. Est. 1 1/2 yrs. Net £[illegible] p.a. Price £[illegible] Principals only. No. 321

LIVERPOOL—PRACTICE of £[illegible] p.a. Last year £[illegible] Panel [illegible] Price £[illegible] Purchase [illegible] No. [illegible]

LANCS. TOWN—NEAR MANCHESTER—Small [illegible] PRACTICE. Cash receipts last year £[illegible] Panel [illegible] 2 rec., 4 bed., Garage. Well-[illegible] £[illegible] p.a. Price £1,000. Principals—Practice—1½ year purchase (part by instalments)—No. 314

MANCHESTER—MIXED PRACTICE [illegible] Partnership. Cash receipts last year £[illegible] Panel [illegible] Two cottages available with practice. Principals—Premium—1½ year purchase—No. 321

CHESHIRE TOWN—Old-established PRACTICE. Average annual receipts £420 p.a. Panel nearly 600. [illegible] 3 rec., 4 bed., Garage and garden. Principals—Premium—1 year purchase—No. [illegible]

CLAMORGANSHIRE—Old-established PRACTICE. Cash receipts £1,100 p.a. Price £1,600. Pleasant house, 2 rec., 4 bedrooms. Garage and garden. Part £450 p.a. Principals—Premium—quick sale—2 years purchase—No. 320

MANCHESTER—Old-established PRACTICE. Cash receipts last year £[illegible] Panel [illegible] Price £[illegible] Part of [illegible] 2 rec., 4 bedrooms. Principals—Premium—Practice—1½ year purchase—No. 323

LANCS. TOWN—Old-established MIXED PRACTICE. Average cash receipts £[illegible] Panel 710. Principals only will be introduced to [illegible] 4 bedrooms. Garage and garden. Premium—1½ years purchase—No. 298

CHESHIRE TOWN—NEAR MANCHESTER—PARTNERSHIP in Mixed Practice. Average cash receipts £[illegible] Panel 1,100. Good house available. 2 reception rooms, 3 bedrooms. Garage and small garden. Premium—on third share—1½ year purchase, after one month's assistantship. Half share in third year—No. 318

MANCHESTER—Middle-class PRACTICE. Important suburb. Cash receipts 1931 £1,357. Panel 450. Charming house, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1½ year purchase—No. 322

CHESHIRE COAST TOWN, near LIVERPOOL—Middle class PRACTICE. Average cash receipts £1,184 p.a. Small select panel. Excellent corner house, 2 reception, 5 bedroom. Premium—Practice—1½ year purchase—No. 317

MANCHESTER—RESIDENTIAL SUBURB—Middle-class PRACTICE. Small 2-3 in Partnership (one a good [illegible]-comer). Cash receipts 1931 £4,578. Panel 1,400. Two excellent houses with [illegible] annual [illegible] Premium 1½ year purchase part by arrangement—No. 277

NEAR LIVERPOOL—PARTNERSHIP in good class Practice. Cash receipts approx. £3,000. Good house available. Premium—one third share—1 year purchase—No. 309

MANCHESTER—PLEASANT RESIDENTIAL SUBURB—Old established PRACTICE. Average cash receipts £685 p.a. Panel over 600. Much scope. Excellent house, 2 reception, 4 bedrooms, garage, and good garden to be sold or may be rented for a period only. Premium 1 years purchase. Vendor retiring—No. 246

LIVERPOOL—Old-established middle class PRACTICE. Cash receipts over £2,000 p.a. Panel 900. Excellent house, 2 reception, 5 bedrooms, garage and garden. Part or whole—No. 276

MANCHESTER—PARTNERSHIP in Practice of about £1,600 p.a. Panel 1,550. House available to rent. Premium—half share—1½ years purchase—No. 303

NEAR PRESTON—PRACTICE offering opportunity. Cash receipts 1930 £700. Panel 300. Good house, 2 reception, 4 bedrooms. Part £70 p.a. Premium 1 year purchase—No. 250

MANCHESTER INDUSTRIAL PRACTICE. Cash receipts last year £889. Panel 721. Plenty of scope. Good house, 2 reception, 5 bedrooms. Rent £50 p.a. Suit R.C. Premium—[illegible] plus goodwill—No. 190

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72 High Street, Belfast
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LIVERPOOL—SUBURBAN PRACTICE of £[illegible] p.a. [illegible] Price £[illegible] Principals only. No. 300

Near MANCHESTER—Important Manufacturing Centre—Old-established PRACTICE. Average cash receipts £[illegible] p.a. Panel 1,0[illegible] Excellent house, 2 reception, 5 bedrooms. Garage and garden. Premium—Practice—1½ year purchase—No. [illegible]

MANCHESTER—Old-established PRACTICE. Cash receipts 1930 £[illegible] Panel 1,[illegible] House available, 2 reception, 5 bedrooms. Garage and garden. Premium—Practice—1½ year purchase—No. 294

NORTH WEST COAST—SEASIDE RESORT—Old-established PRACTICE. Cash receipts 1930 £874. Panel 1,200. Excellent freehold house, 2 reception, 5 bedrooms. Garage and garden—No. 66

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No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 MIDLANDS—COUNTY TOWN—PARTNERSHIP—A one third share (or larger share if preferred) is offered in a well established good middle and working class Practice Gross cash receipts average over £2 000 p a including panel of nearly 2 000 Fees 2/6 to 7 6 Not much midwifery Suitable flat available above surgery, or house can be rented Premium for share 2 years purchase

2 LONDON SUBURB—(North)—In rapidly growing district a well established and increasing PRACTICE offering excellent prospects Receipts last year £1 000 (last four months at rate of £24 a week) including panel also increasing at 400 No midwifery Small house containing surgery and waiting room four other rooms and offices Inclusive rental 30/ per week Premium £1 500 cash

3 SOUTH WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP—A share producing about £800 p a with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to £1/ Midwifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Incoming partner should be experienced and hold M D London

4 LONDON SOUTH WEST—PARTNERSHIP—A one fourth share (after preliminary assistantship of about six months at a salary of £540 p a) is offered in an old established middle and working class Practice Average gross cash receipts for the last three years £4 177 Panel of about 4 500 Fees from 1/6 to 7/6 Midwifery from 3 gns House contains 3 sitting rooms 3 bedrooms bathroom, etc Garden Can be rented at £55 p a Premium for share 2 years purchase half down and balance by instalments

5 YORKS—PARTNERSHIP—A one fourth share is offered (with increase later) in an old established good mixed class Practice situated in a favourite town in good hunting district and within easy reach of popular seaside resort Average gross cash receipts for the past three years £3,700 Panel of 1 500 Fees 3/6 to 21/ Very suitable house with 2 reception 4/5 bedrooms etc and professional rooms Can be rented at £50 p a Sport of all kinds and good schools Premium for share £1 450

6 PARTNERSHIP—A two thirds or two fifths share is for mixed class Practice in a very attracti Gross cash receipts for last 12 month of 1,500 Fees from 2 6 to 10 6 Very nice house with all modern conveniences and ample accommodation Premium 2 years purchase Sport of all kinds and schools within reach Good surgical scope if desired

7 HOMOEOPATHIC PRACTICE—DEATH VACANCY—LONDON WEST—Old established connection Gross cash receipts have averaged between £3 000 and £4 000 p a Suitable house can be obtained on rental - Offers invited

8 NORTHUMBERLAND — COAST TOWN—Old established mixed class PRACTICE in attractive seaside and holiday resort offering good scope for increase and surgical work Average gross cash receipts for last three years over £1,900 Panel of 500 Fees from 5/ to 21/ Mid from 2 to 5 gns Exceptionally nice labour saving house specially built with 2 reception 6 bedrooms etc Separate entrance to professional rooms Electric light Garden Garage Freehold for sale at valuation Up to date Hospital Premium £2 500 Ill health reason for sale

9 NORTH WALES — Residential town near coast—Well established mixed class PRACTICE in beautiful surroundings averaging between £900 and £1 000 p a Panel of 123 and 377 with £450 p a Fees from 5/6 to 21/ Not much midwifery Good house with 2 reception 6 bedrooms etc and professional rooms Garden and garage Rent on lease £82 10s p a Hunting excellent fishing tennis etc and good educational facilities Premium £750 or near offer for prompt sale

10 SUFFOLK—FAVOURITE COAST TOWN—PARTNERSHIP—A one third share (with increase later) is offered in an old established chiefly better class Practice averaging for the past three years £2 766 including panel of 941 Lowest fee 5/ Midwifery 2 gns upwards about 36 cases Choice of houses Excellent social sporting and educational facilities Premium for share £2 000

11 SOUTH OF ENGLAND—FAVOURITE COAST TOWN—Old established chiefly better class PRACTICE producing about £1 800 p a Small selected panel Fees 3/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

12 MIDLANDS—Old established good mixed class unopposed PRACTICE situated in an attractive country town with beautiful surroundings Average gross cash receipts for last 3 years £1 584 including panel of 974 Good appts worth nearly £200 p a Fees from 3/6 Very nice house with 3 reception 6 bedrooms separate entrance to professional rooms Good garden with tennis lawn etc Garage for 2 cars Price for freehold £1 850 of which a good proportion could remain on mortgage Excellent sporting and social facilities and schools Premium 1½ years purchase

13 WITHIN 60 MILES OF LONDON near County Town—Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p a and offering good scope Selected panel of about 170 and appts worth £160 p a Fees 2/6 to 10/6 Very little mid Exceptionally nice house with beautiful garden containing 3 reception 4 bedrooms etc Separate entrance to professional rooms Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

14 YORKS — LARGE TOWN—PARTNERSHIP — A one fourth share is offered after preliminary Assistantship in an old established mixed class Practice averaging for the last three years £2 500 p a Panel of 1 700 Lowest fee 5/6 Suitable accommodation available Premium 1½ years purchase Good scope for surgery

15 NORTH MIDLAND CITY — PARTNERSHIP — Two Partners are required to take over a four fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town producing for the last 12 months at the rate of over £5 500 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

16 LONDON NORTH WEST—Well-established middle class non dispensing PRACTICE averaging for the past three years £840 including appts. worth about £300 p a and panel of 1 0 Fees 5/6 to 21/ Purchaser can choose his own residence Premium £1 250

17 NORTH WALES—Very old established good mixed class PRACTICE averaging £880 p a including panel of 433 Fees 2/6 to 10/6 medicine extra Suitable house with 2 reception 6 bedrooms etc Can be rented on lease at £50 p a Good sport Premium to include motor car £1 200 £400 down and balance by arrangement Ill health reason for sale

18 WEST OF ENGLAND—LARGE TOWN—Well established PRACTICE producing nearly £900 p a including panel of over 1 500 Suitable house in excellent position Price £700 or can be rented at £60 p a Premium £1 450 Good scope for increase

19 LONDON S W—Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £6 0 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room, and dispensary 3 bedrooms sitting room etc Price for leasehold (94 years to run) £1 200 part on mortgage Premium £1 050

20 MIDLANDS—PARTNERSHIP—A one third share is offered in a very sound middle and working class Practice held by the senior partner for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Prem 2 years pur

21 MID WALES—Agricultural District—Mixed class PRACTICE producing about £880 p a including small panel of 130 Fees 3/6 to 21/ Small house with 2 reception 3 bedrooms etc Price £550 Fishing shooting and other sport Premium 1 years purchase

22 WOMAN DOCTOR'S PRACTICE—YORKS—LARGE TOWN—Established eight years easily worked and producing nearly £700 p a Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns Compact house with 2 sitting 2 bedrooms 4 attics etc Garden Garage Rent on lease £42 10s p a Prem 1½ years purchase or near offer

23 CHESHIRE—NEAR COAST—Old established middle and working class PRACTICE averaging for the past three years over £1 300 Panel of 550 Fees from 3/6 Good house with 3 reception 7 bed rooms etc Price for freehold £1 200 part on mortgage Premium 2 years purchase

24 WITHIN FOUR MILES OF THE BANK—Old established working class PRACTICE producing for the last 12 months £2 300 including panel of over 2 800 Appts worth about £160 Visits from 2/6 Low expenses Suitable house can be rented or bought Surgery premises on rental Premium £4 000 cash

25 MANCHESTER—Semi residential Suburb—Very old established non dispensing mainly middle class PRACTICE averaging £2 500 p a including small selected panel of 440 which latter is capable of extension Visits 5/ upwards Only about 20 cases of midwifery from 5 gns Well situated house with good accommodation Price (freehold) £1 600 Premium £3 750

26 NORTH MIDLANDS—WITHIN 3 MILES OF FAVOURITE TOWN—Old established and good middle class PRACTICE offering large scope Cash receipts for last 12 months £1 332 including panel of over 1 000 Fees from 3/6 Mid from 2 gns Exceptionally nice house in about 4 acres of ground with tennis lawn fruit and vegetable gardens etc containing 3 reception 6 bedrooms etc Freehold for sale Premium 1½ years purchase

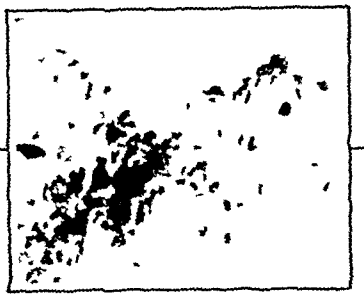
27 SOUTH OF ENGLAND—Pleasant Town near Coast—Very old established middle and upper class PRACTICE Cash receipts average nearly £1 750 p a including panel of 500 Visits 3/6 to 21/ Very little midwifery House including consulting room waiting room and dispensary in well situated part of town Price freehold £1 500

ASSISTANTS REQUIRED—(1) WEST MIDLANDS Good class Country PRACTICE Outdoor, £400 to £450 with free house Must be experienced accustomed to high class work able to give Anaesthetics and have good knowledge of Midwifery (2) CO DURHAM Outdoor charge of Branch Surgery £400 p a with unfurnished house etc (3) MIDDLESEX Indoor £300 p a with prospect of Partnership

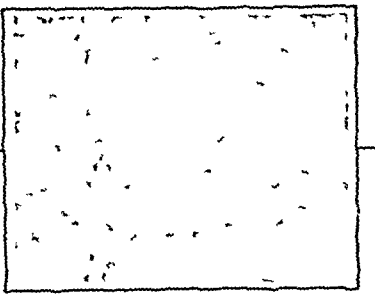
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Microphotograph of iodine stained faeces of infant fed on starchy food



Microphotograph of normal faeces of breast fed infant

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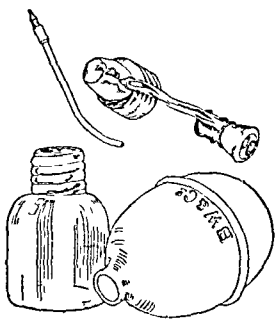
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British Medical Journal

FEBRUARY 13, 1932

CONTENTS

ORIGINAL ARTICLES

Intramuscular Liver Extract Therapy in Pernicious Anaemia By I S I Davidson M D F R C P I 269

Resistant Sprue Anaemia Yielding to Intravenous Liver Extract By Sir Leonard Rogers M D F R C I and W T Cooke F R C S I 272

Intravenous Liver Treatment of Pernicious Anaemia By I Public M R C S W N West Watson M D and C J Young M B Ch B 273

The Radiographic Dissection of Chronic Rheumatic Arthritis By S Gilbert Scott M R C S 276

Foreign Bodies in the Oesophagus By F Holt Diggle F R C S 277

The Circulation After an Endurance Test. By F B Gunson M D F R C P and T Harold Littit M B (With Charts) 280

A Case of Thrombo Phlebitis Migrans By Hugh Barber M D M P C I 281

Treatment of Erysipelas by Injections of Milk. By Ibrahim Abdel Salem 281

Chorea in Three Children Occupying Same Bedroom By R G Waitt M R C S 282

MEMORANDA

Spirochaeta Icterohaemorrhagiae By E Arnipson Brown M R C S and A J Clevela D M D F I C P 283

Epidemic Chorea By C O Donovan M B 284

CLINICAL PROCEEDINGS

Calcutta Branch Group-specific Substances in Forensic Medicine 284

REPORTS OF SOCIETIES

Medical Society of London
Chronic Toxic Cholecystitis 286
Royal Society of Medicine
Lung Abscess 287
Deaf Mutism 289
The Common Cold 290
Devon and Exeter Medico Chirurgical Society The Enteric Fevers 292
Royal Academy of Medicine in Ireland Laryngocele 292

LEADING ARTICLES

The Smallpox Vaccines 297
The Cambridge Medical School 298

THE WEEK

Treatment of Addison's Disease 299
Cortical Extract 299
Function of Posterior Pituitary Lobe 300
Statistical Methods 300
Sanatorium Treatment 301
Medical Education in the Sudan 301
British Industries Fair 301
The B C G Trial at Lubeck 301
Royal College of Physicians 301

REVIEWS

Intracranial Pyogenic Diseases 293
Genetics and Medicine 293
Treatment of Digestive Disorders 294
Surgery of Tuberculosis 294
Headache 295
Physical Education 295
Notes on Books 295

GENERAL ARTICLES AND NEWS

Nova et Vetera 302
Bygone Medical Obituaries 302
Fate of a Swallowed Needle 296
Preparations and Appliances (Illustrated) 303
Royal Medical Benevolent Fund 309
Medical Notes in Parliament 314
Medical News

LOCAL NEWS

Ireland—
Public Health in County Dublin 303
Registration of Births and Deaths in Northern Ireland 303
Royal College of Surgeons Charter Day Dinner 304
Scotland—
Civic Hospitals in Edinburgh 304
Public Health Work 304
Stirling Royal Infirmary 304
Crichton Royal Institution 304

UNIVERSITIES AND COLLEGES

Royal College of Physicians Edinburgh 310
Royal College of Physicians of Ireland 310
Inter Collegiate Scholarships Board 310

OBITUARY

John Parlane Kinloch, M D, D P H 311
(With Portrait)
R Stenhouse Williams M B C M 313

THE SERVICES

Deaths in the Services 310
(For Naval, Military and Air Force Appointments see Supplement)

CORRESPONDENCE

I C C Pathological Services By Lord Riddell and Geoffrey Evans M D 305
F I C P
Standardization of Ergot By H A Mitchell M D 305
Direct Pneumococcal Typing By W R Logan M D F P C P Ed and J T Smeill M B 305
Ovulation and the Sex Cycle By Wilfred Shaw M D F R C S 306
The Spahlinger Formula By Robert Carswell M B 306
The Tuberculosis Problem By J Middleton Martin M D and William S Stevens M R C V S 306
Milk and Dental Caries By Harry Campbell M D F R C P 306
Genito-Urinary Tuberculosis and the Ministry of Pensions By C J Gordon Taylor M D 307
Plumbism and Peptic Ulcer By David R Lewis M D 308
Simulation of Heart Disease By R Children M D F R C S Ed 308
Maternal Mortality By W Melgrave M Sc I M S 308
Assumption of Titles by Unqualified Persons By Fred Bullock J P 309
Medical Conditions in Soviet Russia By W A Brend M D 309
Catarrhal Infection and Formalin Vapour By C J L Wells M B 309

LETTERS AND ANSWERS

Sclerosing Solution for Varicose Veins 316
Urticaria 316
Income Tax 316
Drug Addicts in Court 316
Laying up the Car in Winter 316
Another Vicious Circle 316

Vacancies (See also page 69 of Supplement)

The SUPPLEMENT contains

The Centenary Meeting Provisional Time-Table
Current Notes
The Association's Annual Handbook
The Handbook for Recently Qualified Practitioners
Importance of Teeth in General Practice Prize for Essays
National Health Insurance
Inquiry into the Conduct of an Insurance Practitioner
London Insurance Committee
Meeting of Camberwell Practitioners
Correspondence
Association Notices Vacancies and Appointment Diary

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INDEX TO ADVERTISEMENTS.

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Advertisements of the following

PUBLISHERS

Churchill J & A
Ball & Evans—Di of the Kidney 5
Burton Wright E C —Botany 5
Beaumont & Dodds—
Recent Advances in Medicine 5
Jellett H —
Maternal Mortality 5
Midwifery for Nurse 6
Practice of Gynaecology 6
Practice of Midwifery 6
Kirk's Public Health Practice in 5
6
6
5
5
5
5
5
5
5
5
5
5
5
5
5
Backache 5
Massage 5
Moore's Medical Ophthalmology 5
Parry's Famous Medical Trials 5
Steven & Lucas—
First Line in Dispensing 5
Wood Jones Principles of Anatomy 5

Lewis H K & Co Ltd
Martindale W H —Pharmacopoeia 6

Oxford University Press
Allison & Ghormley—Joint Disease 4
Chamberlain E N —
Medicine for Nurses 4
Howden R A —Mind in Conflict 4
Wallace O —Wayfaring in a Splint 4

Saunders W B Co Ltd
Andrew Diseases of the Skin 3
Boyd's Surgical Pathology 3
DaCosta Modern Surgery 3
Howell's Physiology 3
MacCallum's Pathology 3

Wright & Sons Ltd
French H —Differential Diagnosis of Main Symptoms 6

ASSURANCE COMPANIES—
London Medical Protection Society 1
Medical Insurance Agency 51
Medical Sickness Annuity etc 37

BRASS NAME PLATES &c —
Cooke's Name Plates 36
Herd S J & A —Name Plates 38
Lewis & Co Ltd —Name Plates 38
Osborne F & Co —Name Plates 36

SURGICAL APPLIANCES—
Allen & Hanburys Ltd —
Lond Hospital Eyeless Needles 33
Burroughs Wellcome & Co —
Paroleine Atomizer Cover-ii
Cuxson Gerrard & Co Ltd —
Ligatures 30
Zudor Jacket 30
Ferris J E Ltd —
Artificial Limbs 38
Hillyard's New Absorbent Bags 36
Holborn Surg Instrument Co Ltd
Surgical Instruments 9
Leitz E —Micro Projection Apparatus 6
43
8
36
32
6
30

HOSPITAL &c FURNITURE—
Furniture &c Depositories Ltd —
Second Hand Furniture 36

CHEMISTS &c —
16
10
Angier Chemical Co Ltd —
Angier's Emulsion 26
Anglo French Drug Co Ltd —
Bivatol 28
Boots Product 12 16
British Drug Houses Ltd —
Caprokol 13
Insulin A B 15
10
iii
21
13
2o
Maw & Baker Ltd —
Planocaine 11
Soneryl 24
Midgley Ltd —Medisoap Therapy 20
Mond Staffordshire Refining Co —
Monsol 22
Newbery & Sons Ltd —
Agarol 29
Oppenheimer Products 19
Pharmaceutical Corporation Ltd —
17
35
iv
13
22

DEBT COLLECTION—
British Medical Protection Society 34

FOOD PREPARATIONS—
14
14
Cadbury's Milk Chocolate 28
Cow & Gate Ltd —Mill Food 25
H A G Coff 27
20
12
21
34
18
17

HOUSE AGENTS—
Bedford & Co 49
Elliott Son & Boyton 49

MOTOR CARS TYRES &c —
Riley Cars 7
Second hand Motor for Sale 49

PRINTING & STATIONERY—
Burlock & Bartlet Typewriters 50
Hamiltons—Medical Stationery 36
Taylor's Typewriters 36

TAILORING & UNDERCLOTHING—
Hall H —Medical Service Dress 50
Regent Dress Co —Tailors 38

TOBACCO & CIGARETTES—
Player's Navy Cut 37

TRANSLATIONS TYPEWRITING—
Radford B —Typewriting etc 49

VACCINES & CULTURE MEDIA—
Laboratories of Pathology & Public Health 36

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
REL APPOINTMENTS 47

HOSPITAL &c VACANCIES—
Aberdeen City 45
Ashford Hospital 50
Auckland Hospital Board 45
Birkenhead General Hospital 46
Birmingham General Hospital 46
Bootle General Hospital 45
Bradford City 45
Carlisle Cumberland Infirmary 50
51
45
50
47
45
46
46
47
46
46
46
43
46
50
45
50
46
50
46
47
46
47
50
51
50
45
51
50
50
47
47
50
46
45
45
50
50
45
47
46
51
46
50
Windsor K Edward VII Hospital 46

BATHS SPAS &c —
Piestany Spa Czecho Slovakia 42

INEBRIETY—
Bay Mount, Paignton 42
Caldecote Hall near Nuneaton 42
Dalrymple House, Rickmansworth 42
Old Hill House Chislehurst 42

HOTELS & HEALTH RESORTS—
Bonnington Hotel 38
Clifton Hotel 38
Hastings & St Leonards 43
Margate 43

WINES & SPIRITS—
Anderson Dobson & Co Ltd—
Ackerman Laurance 38

X RAY & ELECTRO MEDICAL APPARATUS—
Bell & Croydon—
38
31
8
38
9
36

HOMES & ASYLUMS—
Bailbrook House Bath
Wonford House Exeter
Wye House Buxton

HYDROS & PRIVATE HOSPITALS—

SANATORIA—
Cotswold Sanatorium 41
Grampian Sanatorium 41
41
41
41
41

MEDICAL SCHOOLS &c —
City of London Maternity Hospital 44
44

SCHOOLS &c —
Roxall School 45
Taunton School 44

TUTORS & LECTURERS—
44
43
43
44
43
44
44
43
44

TRANSFER AGENTS—
Bovril Medical Agency Ltd 55
53 55
52
52
52
48 51
51
49

ASSISTANTS PRACTICES &c —
43
43
43
43
49

NURSING INSTITUTES—
Cavendish Nurses 51
Nurses Association 1

MISCELLANEOUS—
51
43
43
43 50

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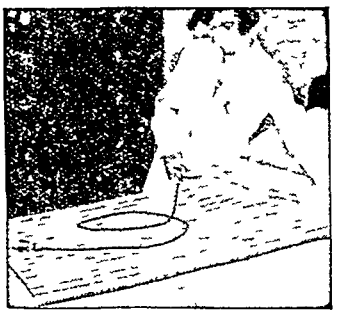
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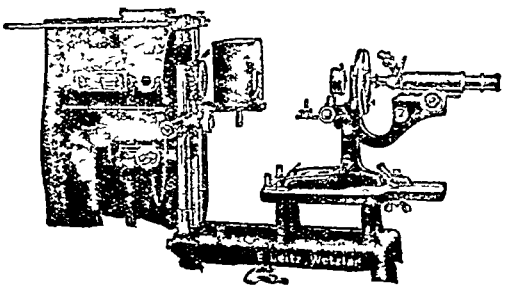
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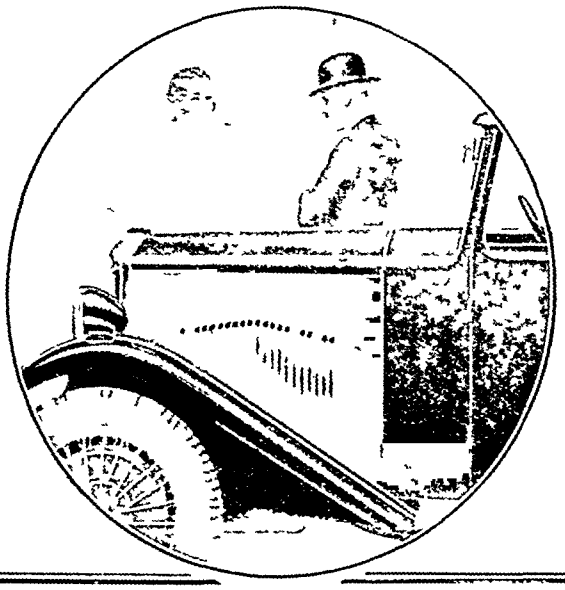
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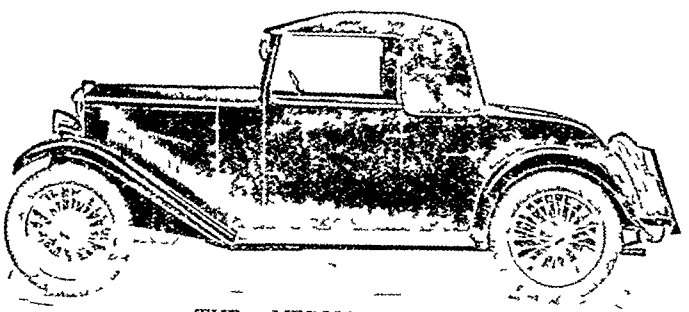
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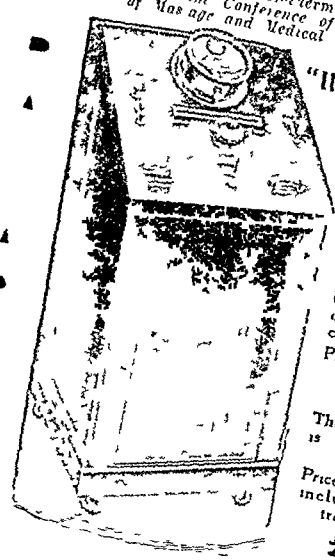
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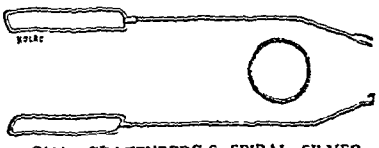
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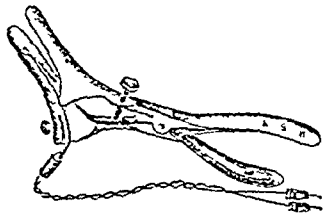
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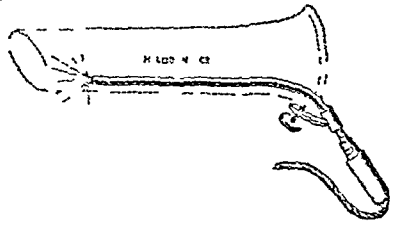
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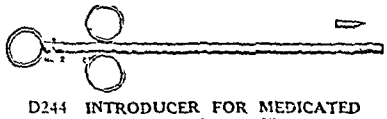
HAMISH N COL'S MODIFICATION OF KILLIAN S SPECULUM FOR THE SMALL VAGINA

With illuminating attachment 30/



ILLUM NATING ATTACHMENT FOR FERGUSSON VAGINAL SPECULUM

As suggested by Mr Keith Duff 14/6
Small Battery Handle or Cord Handle for same 12/6

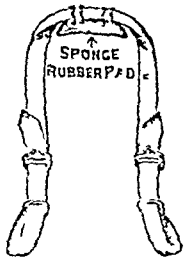


D244 INTRODUCER FOR MEDICATED CERVICAL PESSARIES

As made for Mr Hamish Nicol 6/6
Pessaries 2% Acriflavine 3/ dozen
Silver Proteina e 1% 2/3
Mercurochrome 2% 2/9

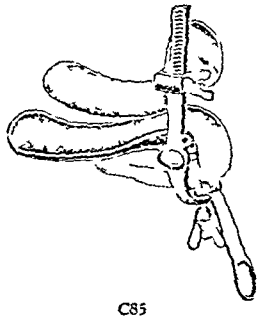


TERINE FORCEPS
21/29)
An without causing de a hed and
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Exceptic designed tion for y



YOUNG SIMPSON S IMPROVED LITHOTOMY STRAP

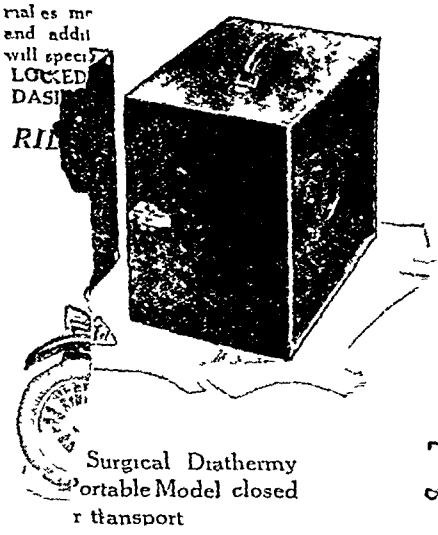
With Spon e filled Shoulder Pad and Special Buckles 21/ set



C85
SCHOENENBERG S SELF RETAINING VAGINAL SPECULUM
26/6
Electric attachment for same 22/6

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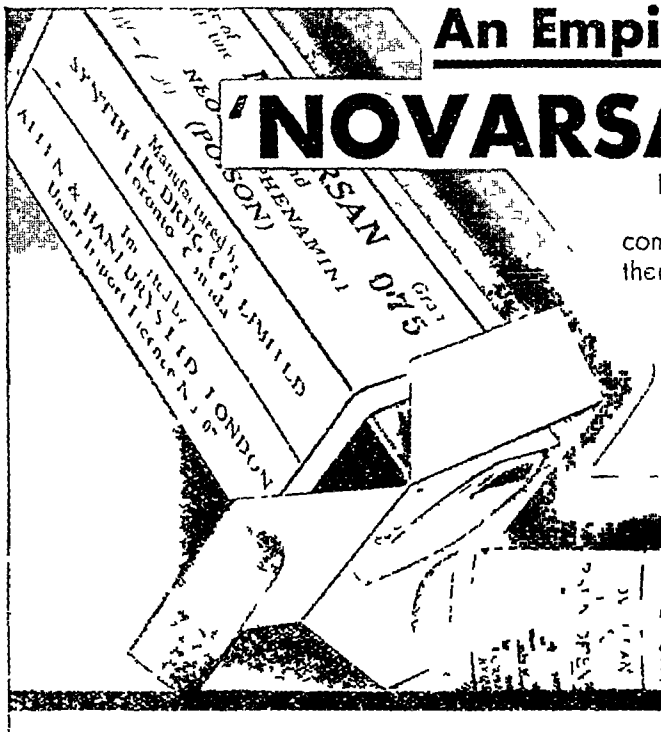
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471-3, HORNSEY ROAD, LONDON, N 19
Telephone Archway 2621 (3 lines)

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An Empire Product

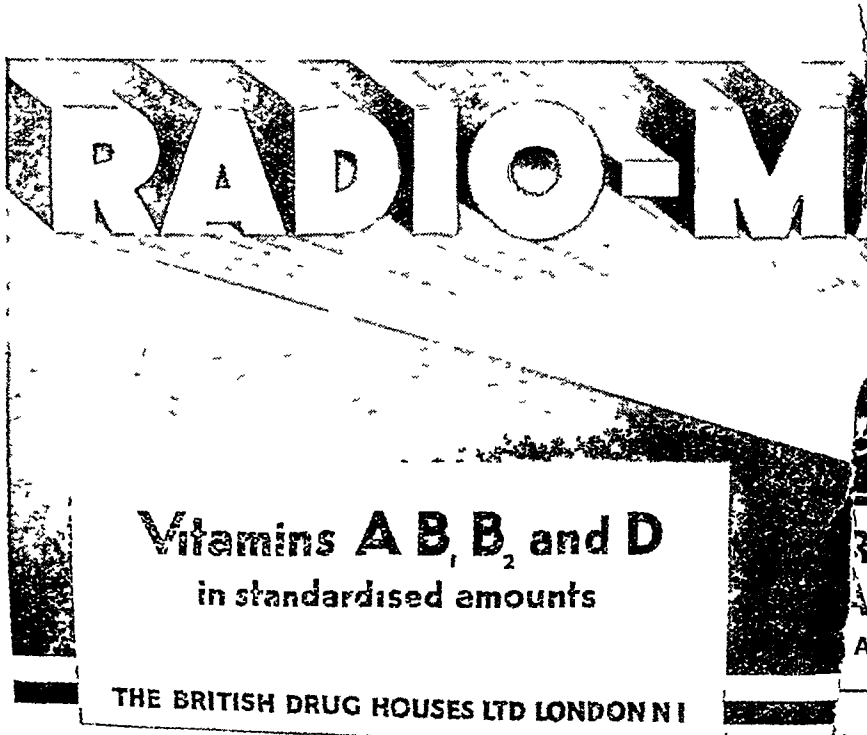
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ARTHRITONE

Sur all Rheumatic conditions.

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Rapid gain in weight

is secured in cases of retarded development by the use of

Mellin's Food

because it supplies Malto-Dextrin, the most readily absorbed of all carbohydrates

It contains peptised vegetable proteins and essential amino-acids, which, by lowering the pH of the mixture, ensures complete fat emulsification and casein flocculation.

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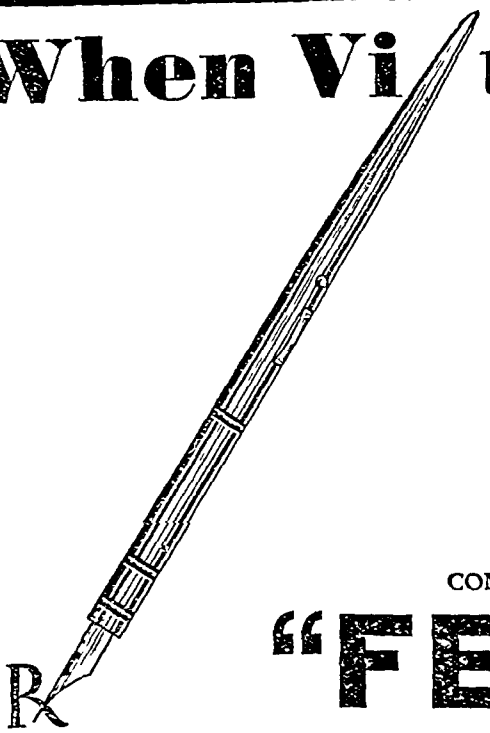
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"FELLOWS"

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20 units per c c. Packed in bottles containing
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"Eucortone"

(Extract of Suprarenal Cortex)

In the treatment of

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Efficacy established by biological tests and clinical use

(*Journal of Physiology*, June 6, 1931 *Proc. Physiol Soc* May 2, pp 4, 5, and 9)

"Eucortone" is prepared by the method of Swingle and Pfiffner, and is highly successful in the treatment of Addison's Disease Particularly striking is the rapid restoration of appetite, weight, strength, and feeling of well-being Biological tests and clinical use show that "Eucortone" contains the long sought cortical hormone in an active state and is free from adrenalin activity The extract contains no irritant or toxic substance, and is sterile

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FLUID EXTRACT OF LIVER (BOOTS)

A PALATABLE concentrated preparation which has been tested and found to be clinically active in the treatment of Pernicious Anæmia One fluid ounce is equivalent to half-a-pound of Fresh Liver

PRICES —
4 oz bottle, 7/-, 8 oz bottle, 12/6
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The perfect Local Anaesthetic

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IT IS BRITISH MADE

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IN the prevalent stage of Influenza, the patient is as a rule unable to take or digest ordinary food, and the fluid diet to which he commonly resorts is often unsuitable because it is not sufficiently nourishing

When the fever has subsided, loss of appetite—often persistent—is a common symptom which may present considerable difficulty in treatment

The addition to the diet of a concentrated food is, therefore, indicated

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(*a*) *It contains* all *the necessary constituents of a food, namely, proteins, carbohydrates, fat and vitamins*
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(*c*) *It is so easily digestible, palatable and assimilable, that it can be taken by patients of all ages and at every stage of the disease*
(*d*) *It may be given either alone, in sandwiches, or added to milk*
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Vide BRITISH MEDICAL JOURNAL October 10th 1925 March 6th 1926

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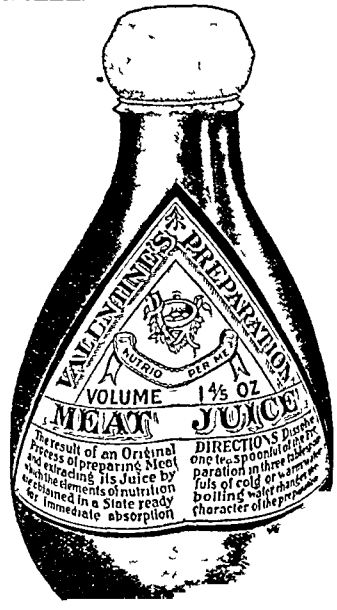
IN Vomiting of Pregnancy, in the Exhaustion following Haemorrhage or Prolonged Labour, and before and after Abdominal Operations, the Ease of Assimilation and Power of Valentine's Meat-Juice to Restore and Strengthen has been Demonstrated in

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(NON-TOXIC IODINE)

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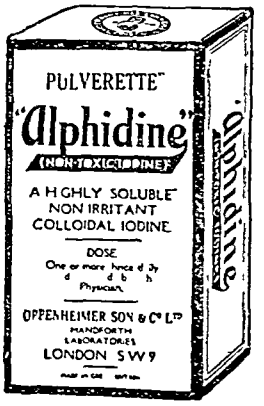
"ALPHIDINE" is a NON TOXIC NON IRRITANT PRODUCT of an allotropic colloidal iodine Clinical tests in some of the largest London Hospitals establish the non toxicity and high therapeutic activity of 'ALPHIDINE in Hypothyroidism Toxaemias, Rheumatic conditions in fact IN ALL THOSE CASES WHERE IODINE OR THE IODIDES ARE INDICATED

FULL PARTICULARS SAMPLES AND LITERATURE

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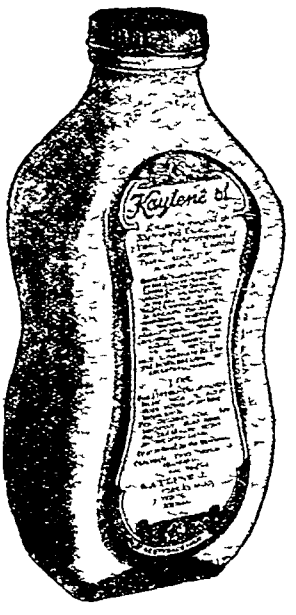
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Since the introduction of Kaylene-ol, the adsorption treatment of putrefactive toxaemias has received increasing attention, and to-day this method of detoxicating the contents of the bowel is recognised as a valuable addition to the medical treatment of gastro-intestinal disorders

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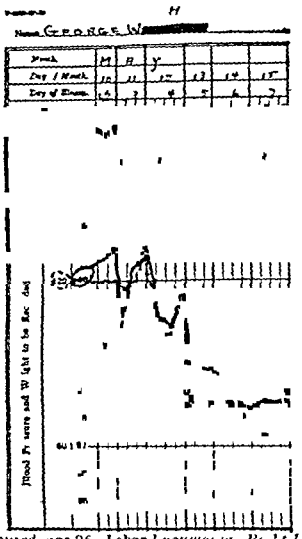
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Coloured age 26 Lobar Pneumonia Right Lower and Middle Lobes Treatment began on 2nd day

LYTIC LOWERING of the temperature and pulse curve is characteristic of the action of Disulphamin in broncho-pneumonia and influenza

Prof Stejskal of Vienna "Wiener med Wochenschrift 8, 1931
WITHOUT COLLAPSE The very well tolerated preparation produces a lowering of the temperature unaccompanied by collapse, and relief from painful and toxic conditions

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For months I have suffered from Indigestion after drinking other teas but have been able to take Typhoo tea without suffering discomfort afterwards

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What Practitioners Say!

Since your tea has come into the market I have drunk nothing else for breakfast or tea After giving up other teas owing to the following digestive trouble resulting Typhoo tea I drink with impunity and with much relish I also recommend it to my patients

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"Thousands of Medical Men are prescribing it regularly"

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"For years we have used your Typhoo tea and it is the only tea I am able to drink without getting indigestion

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. . gratifying results in the treatment of LEUCORRHOEA *(incipient and chronic)*

Physicians are invited to apply for full particulars and clinical sample to the manufacturers

Very gratifying results have attended the use of Monsol Pessaries in the treatment of both incipient and chronic leucorrhoea, and in kindred catarrhal conditions

Prepared on a glyco-gelatine base containing the equivalent of 2½% Monsol in a colloidal form, Monsol Pessaries are actively germicidal in the presence of organic matter, absolutely NON-CAUSTIC to the delicate tissues, and deeply penetrating These properties are doubtless the explanation of their success in combating these conditions

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A Distinct Advance Over Preparations of Acetyl-Salicylic Acid

Acetyl salicylic acid possesses a notable disadvantage Physicians have proved that it cannot be tolerated by patients suffering with a delicate stomach Consequently, the value of this medicament in the wide field in which it is indicated is very seriously reduced

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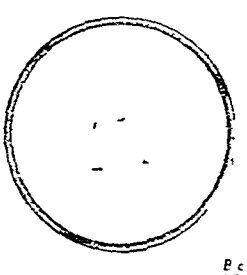
A supply for clinical trial with full descriptive literature sent free on request

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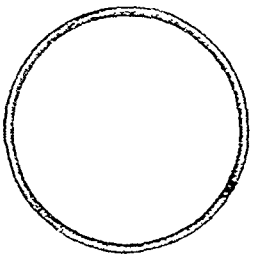
Alasil

M 232

CERTIFIED AND GRADED MILKS IN INFANT FEEDING



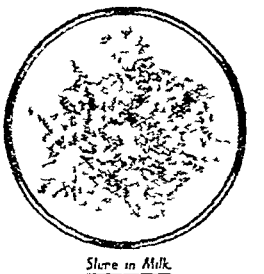
CERTIFIED MILK
Legal Limits
30 000 colonies per ml



COW & GATE MILK FOOD
Always below 150
colonies per ml

Bacteria in Milk

These are actual microphotographs



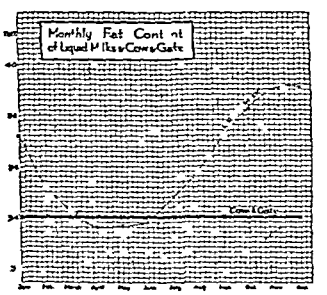
Slime in Milk

This is an actual photograph of the natural slime (cells pus blood etc) present in all milk Certified Grade A and ordinary but it is removed by the Cow & Gate Process.

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The above graph shows the large fluctuations in the fat content of liquid milks throughout the year as compared with the unvarying fat content of Cow & Gate which is based on the fat content of average healthy Breast Milk.

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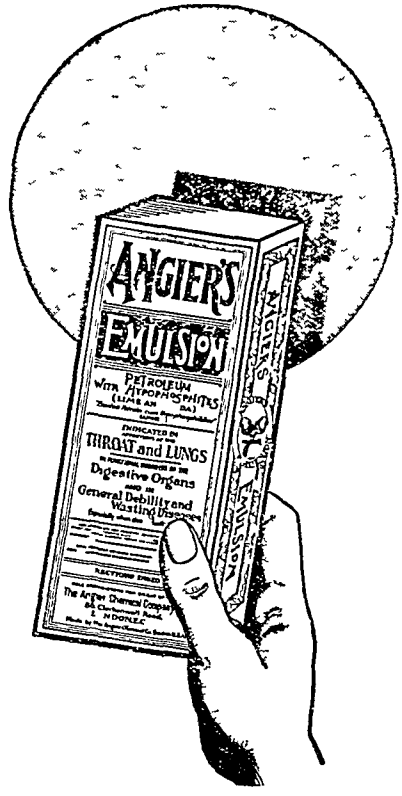
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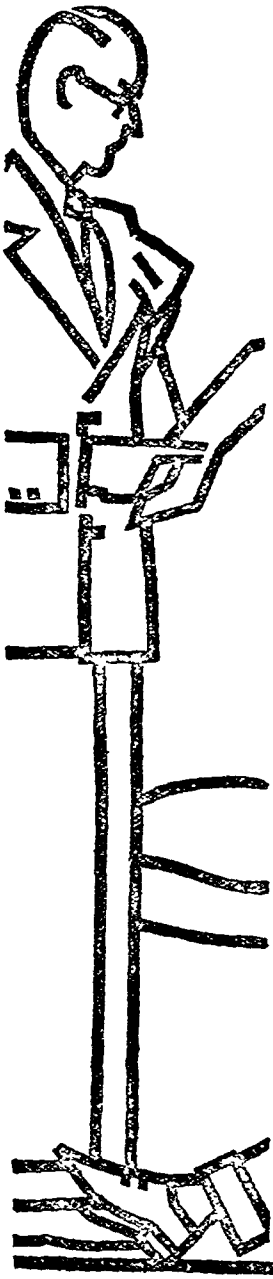
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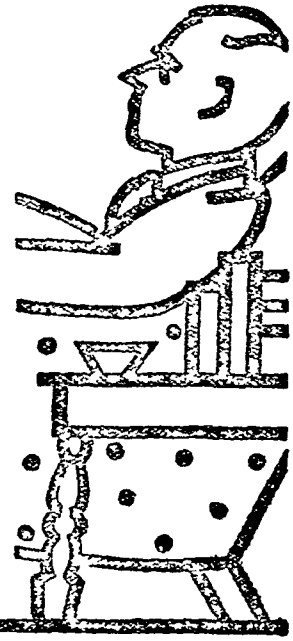
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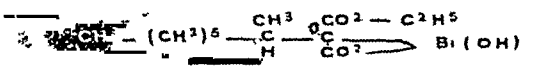
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References —Communications to the Societe de Dermatologie et de Syphilographie (July 1928)
Etude experimentale du Bismuth lipo-soluble par M C Levaditi en collaboration avec M V Sanchis Bayarri et Mlle R Schoen (pour la partie experimentale et histologique) Mlle Y Mannin (pour la partie chimico analytique)

Traitement de la Syphilis par le Bismuth lipo soluble, par MM L Fournier L Guenot Schwartz and Yovanovitch

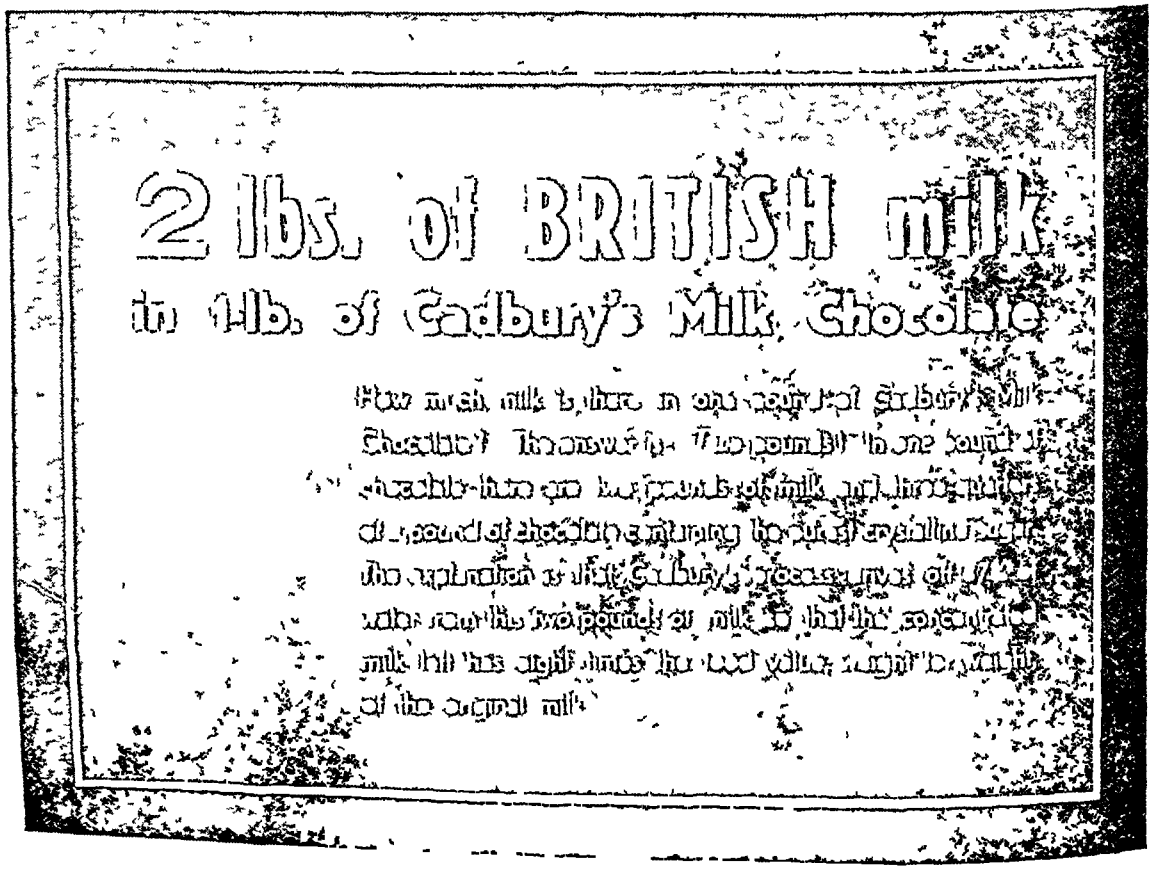
Les Bismuths Lipo solubles par Rene Mignot *La Presse Medicale* No 95 (27th Nov 1929)

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'Le Traitement d Attaque de la Syphilis par le Bismuth Lipo soluble par A Schwartz *La Presse Medicale* (3rd June 1931)

Literature and samples on request from—

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Observations

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INTRAMUSCULAR LIVER EXTRACT THERAPY IN THE TREATMENT OF PERNICIOUS ANAEMIA

BY

L S P DAVIDSON M D F R C P Ed

REGIUS PROFESSOR OF MEDICINE UNIVERSITY OF ABERDEEN

Although it is only a little over five years since Minot and Murphy[1] demonstrated the efficacy of liver diet in the treatment of pernicious anaemia great advances have been made since then in the purification and isolation of the active principle contained in liver In 1927 Cohn Minot and their associates produced a liver extract by a process of chemical fractioning which was found to be effective and which enabled treatment to be satisfactorily carried out in cases of pernicious anaemia in the severe relapse stage when nausea and vomiting prohibited the oral administration of sufficient quantities of whole liver Animal experiments revealed the fact that such extracts were unsuitable for parenteral injection since the small amount of contained protein was apt to produce dangerous allergic phenomena In addition the presence of a blood pressure reducing substance was detected which appeared to be an additional contraindication to this form of treatment

CHOICE OF PREPARATION

The obvious value of an active extract which could be given parenterally to pernicious anaemia patients who were critically ill or in the so called liver resistant cases stimulated further researches into this problem and in 1930 Cohn McMeekin and Minot[2] and West and Howe[4] had sufficiently purified the active principle in liver to enable intravenous and intramuscular treatment to be given with entirely satisfactory results The purification and isolation of the active principle free from its blood-pressure reducing properties presented a problem of the greatest difficulty According to Castle and Taylor Cohn McMeekin and Minot used as *much as 25 000 grams* of liver for the production of the active principle required for the treatment of a single case Castle and Taylor found that if aqueous solutions of fraction G (Cohn) were injected slowly—that is at the rate of not more than 2 c cm per minute—the depressor effects were never serious and disappeared with rapidity Any slight allergic manifestations which appeared could easily be controlled by the injection of 0 5 c cm adrenaline hydrochloride 1 in 1 000 solution The extract was easily made and was of astonishing activity since a single intravenous injection of the active principle derived from 100 grams of liver gave marked reticulocyte responses and a gain of one million red cells within ten days The purest preparation of the active principle so far produced has been made by Dalton West and Howe[6] who claim that maximal reticulocyte responses result from the injection of 0 1 gram They suggest that the active principle is probably a dipeptide of β hydroxyglutamic acid and γ hydroxyproline In their latest publication of September 1931 West and Howe state It must however be emphasized that although clinical activity has been present after two and three recrystallizations of these quinine salts the possibility of the presence of highly potent adsorbed material can be wholly excluded only when these products have been synthesized In this country Wilkinson[5] has recently reported excellent results from the use of a highly purified and extremely potent preparation from liver extract given intravenously or intramuscularly

The various preparations mentioned above have scarcely left the experimental stage and the majority are not yet available to the general practitioner so far as I am aware Credit for having first shown the remarkable difference between the effectiveness of the active principle when administered orally and parenterally belongs to Professor Gansslen[7] of Tubingen Gänsslen's extract has been used extensively on the Continent during the past year and its potency in over one hundred cases of pernicious anaemia has been vouched for by leading physicians such as Schilling Naegeli etc Impressed by the reports appearing in the German medical journals I asked Professor Gansslen if he could send me sufficient material for the treatment of a case of pernicious anaemia He did so and the results were wholly satisfactory Since then Gansslen's extract has been placed on the market by Bayer Products Ltd under the name of Campolon I have treated a series of cases of pernicious anaemia in the Royal Infirmary Aberdeen with this commercial product The object of this communication is to bring to the notice of the practitioners of this country that there is on sale to day at least one liver extract for parenteral injection which after prolonged clinical trial can be said to be highly potent and at the same time free from danger

ACCOUNT OF THREE CASES

CASE I

Mrs J B aged 74 was admitted to Ward V Royal Infirmary Aberdeen on October 30th 1931 complaining of weakness and breathlessness on exertion

Since May 1931 the patient had become progressively weaker and more easily tired She felt breathless on the least exertion her appetite gradually failed and for several weeks before admission to hospital she had lost all desire for food Recently nausea and vomiting had been present There was no history of sore tongue Flatulence and eructations were marked Pain was absent and the condition of bowels satisfactory

On examination the patient was found to be extremely emaciated—I have never seen a case of pernicious anaemia so thin and wasted as she was Prior to the blood examination *my first diagnosis* was in favour of cancer of the stomach a view held by the family doctor The skin was dry and extremely pale but a definite lemon yellow tint was present which was best seen in the conjunctivae The tongue was pale and atrophic but not ulcerated The radial artery was markedly thickened Systolic blood pressure was 150 mm Hg pulse rate 88 Haemic murmurs systolic in time were present at all areas Alimentary respiratory and renal systems were satisfactory Tingling and numbness of the hands and feet had been present for six weeks but no evidence of definite cord lesions was found from examination of the central nervous system

Laboratory data—Urine negative for bile urobilin positive Van den Bergh reaction immediate direct negative indirect positive Icteric index 40 Test meal complete absence of hydrochloric acid after histamine injection Blood count red blood cells 940 000 haemoglobin 22 colour index 1 2 white blood corpuscles 2 500 reticulocytes 1 per cent Blood picture marked anisocytosis and megalocytosis megaloblasts present platelets very scanty Price Jones curve showed marked broadening of the base and a shift to the right

Diagnosis—A case of pernicious anaemia in the severe relapse stage

For three days the patient received no treatment and the blood count fell to red blood cells 730 000 haemoglobin 18 per cent One ampoule of campolon was then injected intramuscularly on seven consecutive days and treatment was then stopped After the fifth injection the reticulocyte count began to rise reaching 20 per cent on the eighth day By the twelfth day both the red cell count and haemoglobin had doubled During the next week the count rose to 1 620 000 red blood cells haemoglobin 40 per cent and subsequently the blood level remaining stationary the patient was used for assaying the potency of another preparation of liver extract A second series of injections of campolon was

recently given and on January 20th 1932 the red cell count was over 4 millions The fact that no satisfactory minimal test exists for estimating the activity of liver preparations and the difficulty in securing sufficient numbers of cases of pernicious anaemia at a suitable blood level on which to make potency tests have recently been discussed by the writer [11]

That a patient of 74 years of age with marked arterio sclerosis and emaciation who had been severely ill for months responded to seven injections of campolon by doubling the red cell count and haemoglobin level in twelve days is clear evidence of the potency of the extract used

CASE II

Mrs W B aged 49 was admitted to Ward V Royal Infirmary Aberdeen on October 26th 1931 complaining of weakness and giddiness

For the past six months the patient had been getting progressively weaker and thinner On rising from her bed she felt giddy and had occasionally fainted Her ankles were slightly swollen at night No pain was complained of in any situation Appetite was very poor Nausea and vomiting occurred occasionally and the tongue was sometimes sore

The patient was an extremely pale anaemic woman with a slight icteric tint in the skin and conjunctivae The tongue was pale and atrophic Apart from haemic murmurs systolic in time heard at all areas of the heart nothing of importance was found in any system

Laboratory Data—Urine negative for bile Urobilin positive Van den Bergh reaction immediate direct negative indirect positive Icteric index 20 Test meal no free hydrochloric acid was found after histamine injection Blood count red blood cells 1 180 000 haemoglobin 26 per cent colour index 1 1 white blood cells 3 100 reticulocytes 1 per cent Blood picture marked anisocytosis and megalocytosis megaloblasts found Price Jones curve showed a pronounced shift to the right

Diagnosis—A case of pernicious anaemia in the severe relapse stage

After a control period of ten days with no treatment the count had fallen slightly to red blood cells 1 000 000 haemoglobin 22 per cent On October 9th 1931 an intramuscular injection of 6 c cm campolon was given Within twenty four hours the reticulocyte count started to rise reaching 10 per cent on the second day after injection and 14 per cent on the fourth day returning to normal in about ten days In eight days the red cell count was doubled This patient was also used subsequently for the assaying of the potency of another liver preparation

The potency of campolon is adequately proved by an increase of the red cell count by one million in a period of eight days following the injection of 6 c cm of the preparation

CASE III

W T aged 70 was admitted to Ward V Royal Infirmary Aberdeen on September 9th 1931 complaining of weakness and pain over the heart

The patient had been getting weaker during the past three years His relations had noticed that he had become much paler and that on occasion he had a distinctly yellow tint Numbness and tingling of the hands had been present for the past few months Recently his tongue had been sore and he had noticed several ulcers at the tip and on the sides

On examination nutrition was good the skin pale with slight icteric tint best seen in the conjunctivae Tongue pale and glazed Blood pressure 118/70 Pulse 78 Apex beat in the fifth left interspace 4¼ inches from the mid sternal line Faint haemic murmurs systolic in time at all areas Alimentary respiratory renal and nervous systems satisfactory

Laboratory Data—Urine bile and urobilin absent Van den Bergh reaction immediate direct negative indirect positive Icteric index 10 Test meal no free hydrochloric acid after histamine injection Blood count red blood cells 1 800 000 haemoglobin 43 colour index 1 19 white blood cells 3 400 reticulocytes 1 per cent Blood picture marked anisocytosis and megalocytosis Price Jones curve showed a shift to the right

Diagnosis—A moderately severe case of pernicious anaemia

After a preliminary control period of ten days in which the blood count remained stationary campolon one ampoule of 2 c cm was injected intramuscularly for seventeen consecutive days On the fifth day the reticulocyte count had risen to 5 per cent reaching a peak of 12 per cent on the seventh day and remaining above normal for sixteen days In three weeks the blood count rose to red blood cells 3 090 000 haemoglobin 62 per cent and a week later to red blood cells 3 400 000 haemoglobin 75 per cent The patient left hospital no further treatment having been given and reported at the Blood Clinic, Royal Infirmary Aberdeen at weekly intervals during the month of December The blood count was always in the neighbourhood of four to four and a quarter millions haemoglobin between 70 and 80 per cent The patient appeared to be in perfect health and complained of no symptoms In view of the well recognized danger of subacute combined degeneration starting in patients whose blood level is subnormal the patient is now receiving a second course of injections of campolon

That seventeen daily injections of campolon could raise the blood level from 1 800 000 to 4 250 000 is again adequate proof of the potency of this preparation

DOSAGE AND POTENCY OF PREPARATION

The claims made by Gansslen regarding the potency of his liver extract are clearly substantiated by the cases reported above Moreover the results are particularly satisfactory when it is remembered that minimal amounts of the material were administered This was deliberately done with the object of estimating the potency of the extract and also as already stated conserving the cases for further therapeutic trials of other preparations In addition to a rapid increase of the red cell level by approximately 100 000 red blood corpuscles per day remarkable changes took place within fourteen days in the red cell diameter the shape of the Price Jones curve the iron content of the blood the cell volume index and the plasma-red cell ratio These points however are being dealt with in a separate paper concerning a large series of cases of both primary and secondary anaemias

Gansslen in his latest communication [10] states that one ampoule should be injected daily for five to eight weeks in order to bring the blood level back to normal In some obstinate cases daily treatment for three months may be necessary Subsequently the number of injections may be reduced to one or two weekly, and finally a maintenance dose of two to three ampoules in one injection every fourteen days will keep the patient in perfect health That no danger exists from injecting larger amounts is indicated by the fact that in two cases I have given from 10 to 20 c cm in twenty four hours with no ill effects either local or general Many of Gansslen's cases remained in perfect health in the remission stage for many months without any further injections after the completion of the course In fifty consecutive cases he has had no failures and patients who commenced treatment with campolon two years ago are to day in perfect health Gansslen is of opinion that one ampoule a day is sufficient and that no additional benefit is derived from larger daily doses the additional material being presumably excreted or destroyed This is contrary to our knowledge of other forms of liver extract therapy in the acute stage of pernicious anaemia in which the body stores of the active principle are exhausted I have repeatedly pointed out that the response is a quantitative one therefore it is quicker and just as economical in the relapse stage to give large doses of liver extract over a short period as it is to give smaller doses over a longer period This is also borne out in Case II which showed a rise in the reticulocyte count within twenty four hours of the injection of 6 c cm of campolon while Cases I and III on daily injections of 2 c cm, both failed to show a change until the fifth day

It is necessary however in assessing the potency of a remedy in cases of pernicious anaemia to make allowance for the fact that in elderly patients particularly if they have been ill for a long period and in patients with arterio sclerosis or chronic sepsis the response is slower and less marked—a fact well illustrated in a series of cases recently published by Beebe and Lewis[1] Nevertheless it appears to me that in cases critically ill the dose of campolon should be about 6 c cm daily for the first forty eight hours thereafter returning to a single dose of 2 c cm daily until a normal blood level is reached One ampoule of 2 c cm of campolon is stated to contain the active principle derived from five grams of raw liver As judged by the cases reported above it is as potent as the quantity of liver extract derived from 500 grams of raw liver given by the mouth Intramuscular injection of the active principle would appear to be approximately one hundred times as effective as oral administration It is obvious therefore that when liver or liver extract is given by the mouth either a large portion is destroyed in the alimentary tract by bacterial or enzymic agencies or assimilation of the active principle is extremely poor

INDICATIONS FOR CAMPOLON THERAPY

There appear to be three definite indications for the intramuscular injection of liver extract

1 *In cases of pernicious anaemia* critically ill with a blood count of one million red cells or less and with marked nausea and vomiting the patients may die during the period of five to seven days which must elapse before oral administration can be effective At present blood transfusion is the treatment which is adopted to bridge this gap It is my experience that this is far from being the safe and simple procedure which a study of the literature leads one to believe In patients with blood counts between 500 000 and 1 000 000 red cells marked reactions with rigors and high temperatures may occur no matter how carefully the blood is matched or how slowly it is injected In fact a marked reaction may follow the intravenous injection of normal saline I have seen three fatal terminations in this type of case during the past eighteen months Presumably the intensely degenerated *myocardium is unable* to withstand the additional *strain of the reaction* The explanation of these reactions is far from clear Haemolysis *did not occur* in the three cases mentioned above as judged by the absence of haemoglobinuria It is believed that when the blood count is well below *one million* auto agglutination is very apt to take place The knowledge that the intramuscular injection of liver extract *can alter the blood* picture within twenty four hours will reduce the need for blood transfusion in severe cases of *pernicious anaemia to* a minimum

2 It is recognized that the average *maintenance dose of* liver is in the neighbourhood of two pounds weekly There are few of us who can contemplate a life sentence of this kind with equanimity It is not surprising therefore that we are constantly seeing pernicious anaemia *patients with blood* counts around three and a half to four million red cells who probably because of the haemoglobin level of about 80 per cent are able to continue their daily occupations fairly comfortably Inadequate intake of liver is the explanation *of these subnormal* counts which can be brought back to normal by increasing the consumption of liver Evidence is steadily increasing that one of the most important factors in allowing subacute combined degeneration of *the cord* to develop (or when present to accelerate its progress) is a subnormal blood level For this reason we must use every means at our disposal *to keep the blood level* up to standard An injection of two or three ampoules of campolon at fortnightly intervals provided a high protein diet containing a daily helping of meat liver or kidney is taken will accomplish this object without producing the disgust which continuous eating of large quantities of liver engenders in many patients after a period of time

3 Intramuscular liver extract therapy is of value in the so-called liver-resistant cases of pernicious anaemia Minot and Murphy stated several years ago that in their opinion no genuine case of pernicious anaemia ever failed to respond to liver therapy provided a sufficient quantity of the potent material was taken Gänsslen[10] also agrees with this dictum in his latest paper The so called liver resistant cases are frequently not examples of pernicious anaemia at all although the blood picture may simulate that disease closely During the past three years I have seen ten patients with red cell counts around a million colour indices over unity and megaloblasts in the blood who were sent to me as cases of pernicious anaemia which had failed to respond to liver therapy Vital staining methods clearly showed that these cases should be classified as haemolytic anaemia and not as pernicious anaemia since reticulocyte percentage counts of from 10 to 50 were present over long periods with no subsequent rise in the blood level Four of these patients at post-mortem examination were found to be cases of lymphadenoma three others have died with no definite pathological lesions other than evidence of anaemia and haemolysis while three are still alive and going downhill steadily No family history of haemolytic anaemia could be discovered and no fragility of the red cells to hypotonic saline was present

POSSIBLE MISDIAGNOSIS

Other conditions which may lead to faulty diagnosis are *aleukaemic* leukaemia certain obscure cases of liver disease associated with cirrhosis and hepatitis and malignant disease of the gastro intestinal tract especially of *the stomach* In the past eighteen months I have seen two cases of severe anaemia diagnosed as pernicious anaemia which reacted to liver therapy excellently After some months the red cell count began to fall in spite of intensive treatment In one case numerous intramuscular injections of campolon failed to improve the blood picture which by this time was definitely of the secondary type Cancer of the stomach was found in both cases at post-mortem examination It is worth remembering that while failure to respond to adequate liver therapy is strongly against the diagnosis of pernicious anaemia a response to such treatment is not proof that a primary anaemia is present since several other diseases with severe anaemia may also react in a similar way This is particularly true of diseases of the gastro-intestinal tract where the lesion interferes with the production of the active *principle from* protein or its absorption from the bowel Thus cases of malignant disease sprue dysentery etc may react to liver treatment with a reticulocyte response and a subsequent rise in the blood level After making due allowance for faulty diagnosis as the principal cause of failure to respond to liver therapy there remain a limited number of cases of genuine *pernicious anaemia* which fail to react to the usual dose of liver or liver extract by the mouth Defective assimilation and absorption is presumed to be the explanation of this failure Many of the cases are elderly persons with marked arterio*sclerosis and long* continued chronic focal sepsis By intensive feeding of a daily dose of extract equal to *1 000* grams of raw liver and in *some patients* by the additional use of large amounts of iron the blood level *can be restored to normal* in the majority of cases of the so called liver resistant type It is more economical and rapid and obviously far more pleasant for the patient,

RESISTANT SPRUE ANAEMIA YIELDING TO INTRAVENOUS LIVER EXTRACT

BY

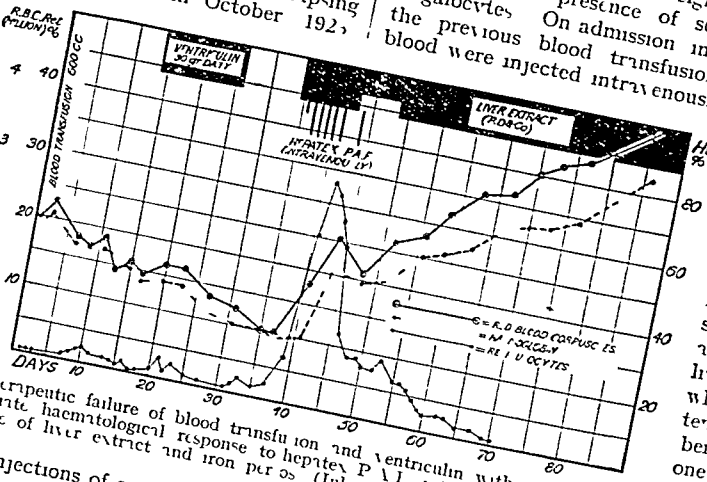
SIR LEONARD ROGERS KCSI MD FRCP
I M S (ret)
PHYSICIAN TO THE LONDON HOSPITAL FOR TROPICAL DISEASES

AND

W E COOKE FRCSI DPH
RESIDENT MEDICAL SUPERINTENDENT TO THE HOSPITAL

The patient a European male aged 47 has been under the care of one of us (L R) at the London Hospital for Tropical Diseases at intervals since 1926 for relapsing sprue contracted originally in Burma in October 1925 and complicated by severe anaemia At first he responded well to a milk diet and returned to Burma only to come home again in 1925 with a recurrence of his sprue with sore tongue fatty stools and anaemia In 1926 he was again treated with milk diet (and was also given small doses of novarseno billon as a positive Wassermann reaction had been obtained) with good effect on the anaemia In addition he had injections of an autogenous oral streptococcal vaccine which resulted in the clearing up of the soreness of his tongue In December 1928 he was readmitted with severe anaemia red blood cells 1 470 000 haemoglobin 50 per cent and colour index 1 A transfusion of 500 c cm citrated blood was given (causing rather a severe reaction) together with liquor ferri chloridi orally and a milk diet Once more good results after the blood was restored to about normal 5 000 000 reds and haemoglobin 95 per cent symptoms and he had gained a stone in weight and by January 1929 he was readmitted with sprue 1 lb of liver extract and Fairley's high protein diet was practically normal again but he relapsed once more in July 1930 to pick up yet again on liver extract and high protein diet He continued taking to three tubes of liver extract daily after leaving hospital but had to be readmitted in February 1931 when the liver treatment failed to have as good an effect as previously

On July 29th 1931 he was again admitted to the hospital with severe anaemia but freedom from the former sprue symptoms of diarrhoea and sore tongue Red blood cells were 1 940 000 haemoglobin 40 per cent and colour index 1 and there were signs of megalocytic anaemia including the presence of scanty normoblasts and of megalocytes On admission in view of the good effect of the previous blood transfusion 600 c cm of citrated blood were injected intravenously This was followed by a temperature of 104° F on the next day accompanied by vomiting of bile-stained fluid and the passage of dark urine There was drowsiness for three days and slight jaundice while at the same time the liver became somewhat enlarged and tender the reaction being thus a severe one Unfortunately instead of the hoped for improvement in the condition of the blood it steadily deteriorated until on September 1st it showed red blood cells 1 000 000 and haemoglobin 20 per cent His condition caused grave anxiety for in the meantime both Parke Davis and Co's ventriculin orally and the similar company's liver extract subcutaneously had failed to check the downward course of the blood changes Dr Donald Hunter was now asked to see the patient with us and he suggested iron orally in the form of Blaud's pills and the trial if available of intravenous injections of the new form of liver extract recently used by Professor Minot and his colleagues in Baltimore A cable to Professor Minot informed us that this could be supplied by Evans Sons Lescher and Webb in the form of hepatex P A F so we decided to try it



Therapeutic failure of blood transfusion and ventriculin with subsequent adequate haematological response to hepatex P A F intravenously and full dosage of liver extract and iron per os (July 29th to October 22nd 1931)

CONCLUSIONS

1 Gansslen's liver extract for intramuscular injection is shown to be a highly potent preparation Its effectiveness is about one hundred times that of raw liver given by the mouth No undesirable local or general manifestations occurred as a result of its injection

2 (*a*) Intramuscular liver extract therapy is of particular value in cases of pernicious anaemia which are critically ill with marked nausea and vomiting The necessity for blood transfusion is reduced to a minimum if adequate quantities of liver extract are given intramuscularly (*b*) The so called liver resistant cases of pernicious anaemia should be treated by intramuscular injection of liver extract

3 In patients in the remission stage the fortnightly injection of liver extract enables the maintenance dose of liver to be reduced to limits which can be easily tolerated even by persons who have an active dislike for the consumption of this organ The importance of maintaining a normal blood level in such patients for the prevention and treatment of subacute combined degeneration of the cord is discussed

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RESULTS WITH HEPATEX

This new preparation sold in 5 c.cm. doses containing the equivalent of 100 grams of fresh liver is said to produce an immediate reticular response. To be on the safe side a 2 c.cm. dose was injected intravenously on September 2nd without any undesirable symptoms. Five c.cm. was given by the same route on each of the next four days making a total of 22 c.cm. in six days. After the third dose of 5 c.cm. the patient felt better though he had a restless night. On the afternoon of the fourth injection he first complained of discomfort in the upper abdomen which became acute after the fifth dose and there was vomiting of undigested food in the evening. On this day the pain began a quarter of an hour after the injection with discomfort in the right hypochondrium spreading to the epigastrium becoming severe for five hours and being unrelieved by hot fomentations. On the following morning the liver was found to be enlarged to below the ribs and its edge was very tender. As the red corpuscles had already risen from 1,000,000 to 1,800,000 a 5 c.cm. dose of hepatex was given intramuscularly on September 7th the injections being omitted on the 8th and 9th as the severe abdominal pain had recurred and the sickness continued. On the morning of the 9th the edge of the liver was felt two inches below the ribs and there was a tender spot over the region of the pylorus. A bismuth meal was given and a radiological examination of the stomach and duodenum carried out with negative results. A rise of temperature accompanying the abdominal reaction on September 9th subsided the next day so between that date and October 7th ten doses of 2.5 to 3 c.cm. of hepatex were administered intramuscularly every second or third day without any further untoward symptoms. On the 13th the Blaud's pills which had been omitted on the 8th were recommenced.

The blood response was very satisfactory for a rapid and steady rise took place in both the red corpuscles and the haemoglobin accompanied by a remarkable reticulate response up to 6.6 per cent. in three days and up to 33 per cent. within six days of the commencement of intravenous hepatex. The red corpuscles and haemoglobin rose from 1,000,000 and 19 per cent. on September 3rd to 1,800,000 and 20 per cent. on the 7th, 2,660,000 and 41 per cent. on the 18th, 3,590,000 and 55 per cent. on the 29th, 4,020,000 and 64 per cent. on October 6th and 5,060,000 and 84 per cent. on October 22nd by which time the patient had been discharged from hospital. Two months later his blood condition was well maintained and the general health good except for the return of occasional watery diarrhoea which he believes followed the intramuscular injections of hepatex.

The main points of interest in the case are: first the remarkable and rapid recovery after intravenous hepatex from a dangerous condition of post-sprue pernicious anaemia which had failed to respond to ordinary methods of liver extract administration; secondly the severe abdominal symptoms following a few intravenous injections due to rapid enlargement of the liver and sufficiently acute to raise the question of serious gastric or duodenal disease. These symptoms subsided when the injections were made by the intramuscular instead of the intravenous route.

We are indebted to Dr. N. H. Fairley for the chart of the blood examinations carried out in his laboratory.

THE INTRAVENOUS LIVER TREATMENT OF PERNICIOUS ANAEMIA

BY

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AND

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The intravenous use of liver extracts in pernicious anaemia was first reported by Castle and Taylor[1] who showed that a much lower dose in terms of liver could be effective in treatment than was required by oral administration. The preparation used had the disadvantage of causing lowering of blood pressure. Wilkinson[2] recently employed an improved preparation made in the Evans Biological Institute this is stated to have been prepared by a method similar to Cohn's[3] but the protein fraction was separated as completely as possible to remove all blood pressure depressants. This preparation is now available under the name of hepatex P.A.F. and is stated to contain no carbohydrates lipoids or proteins. The intravenous injection produced no alteration of blood pressure in pernicious anaemia cases.

We have used this preparation in the treatment of the following two cases which present certain points of interest. Wilkinson refers to its advantage in severe cases in rendering transfusion unnecessary owing to the rapid reaction obtained and also in other cases where oral administration is impracticable on account of nausea vomiting or refractoriness on the part of the patient. He reports two cases of the latter type which were successfully treated one intravenously the other intramuscularly. Transfusion must be rarely necessary and owing to its various drawbacks it has not been a practice in this hospital even when the red cell counts were below 800,000 per c.mm. No patients have died since we commenced liver therapy in 1927 but some fatal cases have been reported[4] in which transfusion might have been effective. Another probable advantage of intravenous liver therapy is that a larger effective dose can more readily be given by this route than by the mouth. Castle and Taylor claim success with a single intravenous dose derived from only 100 grams of liver where oral administration of the equivalent of 3,000 grams of liver had been given in ten days without effect. Similarly the work of Smith[5] who appears to have been the first to use the parenteral method and later Gansslen[6] and Schottmüller[7] points in the same direction. These workers used doses equivalent to 1/2 to 30 grams of liver and although only given intramuscularly the efficacy of the parenteral route with Gansslen's preparation is estimated at about fifty times greater than is the oral. Anderson[8] reports a case put on liver in the usual daily doses and a little hog's stomach extract but the duration of time is not stated the treatment apparently being discontinued owing to nausea. The blood condition had deteriorated one month after commencing treatment and subsequent response was obtained with hepatex P.A.F. intravenously and intramuscularly. Whether oral treatment had failed owing to absence of response inadequate dosage or inability to continue it on account of nausea is not clear.

UNCOMPLICATED CASE

The following case failed to respond to oral administration of 40 grams of desiccated stomach for three weeks owing to vomiting subsequent response to intravenous hepatex P.A.F. being obtained. The dose used for each injection was 5 c.cm. stated to be equivalent to 100 grams of liver. No undesirable reactions occurred.

S. D. male aged 58 first seen at the out-patient department on June 22nd 1931 complained of feeling progressively weaker

TABLE I—S. D. *male aged 58*

Date	Days from 1st Intrav Treatment	Haemoglobin per cent	Red Cells per c mm	Colour Index	Reticulocytes Per c mm	Reticulocytes Per cent	Leucocytes per c mm	Polymorphs per c mm	Lymphocytes per c mm	Monocytes per c mm	Eosinophils per c mm	Basophils per c mm	Platelet per c mm	Arneth Lobes per 100 polys	Van d Berh Indir
22/6/31	−45	38	1 150 000	1 65	—	—	3 100	2 588	496	16	0	0	—	312	—
15/7/31	−22	22	875 000	1 29	42 900	4 9	4 800	3 437	1 267	77	19	0	16 000	470	Po-
30/7/31	−7	21	712 000	1 5	62 000	8 8	3 400	—	—	—	—	—	—	—	—
9/8/31	5	20	704 000	1 44	—	—	3 900	—	—	—	—	—	—	—	—
18/8/31	14	40	1 750 000	1 14	—	—	3 400	—	—	—	—	—	—	—	Ne
27/8/31	23	55	2 825 000	1 0	—	—	—	—	—	—	—	—	—	—	—
12/9/31	39	65	4 025 000	0 81	—	—	—	—	—	—	—	—	—	—	—
24/9/31	51	63	3 537 000	0 89	—	—	—	—	—	—	—	—	—	—	—
13/10/31	70	72	3 870 000	0 93	45 000	1 2	4 500	2 430	1 620	360	67	23	83 000	2s?	Ne
13/11/31	101	80	4 475 000	0 9	—	—	4 300	—	—	—	—	—	—	—	—
7/12/31	125	82	4 862 000	0 85	82 000	1 7	5 400	2 835	2 133	297	108	27	150 000	296	Ne

22/6/31 Megalocytes present 15/7/31 Megalocytes megaloblasts and Howell-Jolly bodies present

TABLE II—*A. H. female aged 38*

1/10/31	−1	21	775 000	1 4	106 000	13 7	9 200	5 042	3 238	626	55	18	38 000	238	Po
5/10/31	4	32	1 275 000	1 28	574 000	45 0	7 000	4 060	2 275	385	140	35	72 000	2s9	Po
7/10/31	6	38	1 500 000	1 27	660 000	44 0	3 000	1 350	1 350	120	165	0	130 000	2s4	Po-
9/10/31	8	46	2 212 000	1 05	662 000	29 0	3 600	1 764	1 332	414	90	0	175 000	314	Ne
12/10/31	11	45	2 162 000	1 05	324 000	15 0	3 300	1 897	1 074	231	49	49	195 000	28?	Ne-
20/10/31	19	55	2 637 000	1 04	122 000	3 0	3 600	2 106	1 008	270	198	18	93 000	27s	Ne
28/10/31	27	63	3 000 000	1 05	24 000	0 8	3 600	2 070	1 116	180	198	36	96 000	269	—
7/12/31	67	81	4 387 000	0 92	4 400	0 1	5 700	3 847	1 340	171	313	29	110 000	264	Ne

1/10/31 Myelocytes 221 per c mm nucleated reds 11 000 per c mm megalocytes megaloblasts punctate basophilia Howell Jolly bodies
5/10/31 Myelocytes 105 per c mm nucleated reds 400 per c mm 7/10/31 Myelocytes 15 per c mm nucleated reds 60 per c mm

for the previous five weeks of shortness of breath and of yellowness of his skin. There was an icteric tinge in skin and conjunctivae and also some albuminuria. Abdominal examination revealed an indefinite resistance below the right costal margin. A blood count made the same day suggested a primary anaemia. The man reported again on July 13th and was admitted to the wards, his appearance being much the same as when first seen. The liver and spleen were not enlarged and the indefinite resistance below the costal margin could not be detected. The blood condition had deteriorated (see Table I). Radiological examination showed a slight delay in the passage of the barium meal into the stomach and a growth at the lower end of the oesophagus was hinted at. On July 23rd a fractional test meal showed an absence of free hydrochloric acid in the stomach. On account of the blood picture he was put on 40 grams of desiccated hog's stomach daily and 1 drachm of dilute hydrochloric acid three times a day. This treatment failed to produce any improvement in the blood picture, and after a few days he began to refuse his food and vomited both food and hog's stomach once or twice a day.

On August 5th treatment with hepatex P.A.T. 5 c.cm. intravenously each day was begun. On August 15th the injections were given by the intramuscular route and on the 18th they were altered from daily to every other day with an oral liver extract (hepatex) in amount equivalent to 172 grams of fresh liver on the intervening days. On August 30th the injections were stopped and oral treatment as above was given daily. The immediate effect of the intravenous injections was dramatic. Within forty eight hours of the commencement of the treatment the man was hungry and could eat his meals well. He was discharged on September 24th and has continued taking the oral extract and dilute hydrochloric acid in the above doses ever since. The blood picture on December 7th was approaching the normal (see Table I). The man now looks well and he states that he is putting on weight and feels fit.

Although this case had failed to react to the oral treatment administered it is not claimed that no response would have occurred if the preparation given had been retained. We have not yet encountered a case of uncomplicated pernicious anaemia with the complete picture in the blood and gastric juice and without atypical features, which has failed to react to liver extract or hog's stomach by the mouth where doses larger than those generally required have been employed when necessary and retained. Our experience differs from that of Wilkinson whose results with liver treatment[9] appeared to be very much inferior to those with hog's stomach.[10] We have seen cases which failed to do well on the usual 230 grams of liver per day or its equivalent as extract, given orally, but on increasing the dose satisfactory results have always been obtained and we feel therefore that Wilkinson's poor results with liver may have been due to inadequate dosage or that many of his cases were atypical. Our more limited experience agrees with the findings of Minot and Murphy[4] who stated that it is highly probable that if a patient supposed to have pernicious anaemia has shown no improvement after taking liver in adequate amounts for about four weeks the diagnosis has been incorrect. We exclude from these remarks atypical cases such as those complicated by septic conditions which have been regarded as less likely to react to liver therapy. Such has been our experience, although some cases have responded.

CASE WITH SEPSIS

Our second case is of interest because a septic condition was present, as shown by the pyrexia, the condition of the mouth, and the leucocyte count with Arneth shift to the left instead of the usual shift to the right.

A. H., female aged 38. Admitted September 29th 1931 with a history of falling off for the previous three years and progressive anaemia. On admission she was well

nourished but the skin was pale and lemon tinted She was dyspnoeic on slight exertion the tongue pale and glazed the lips blanched and the teeth and gums septic The liver was palpable three fingerbreadths below the costal margin and was tender The spleen was palpable two fingerbreadths below the costal margin and was also tender The blood picture (Table II) was that of a severe pernicious anaemia with a polymorph leucocytosis A fractional test meal done on admission showed an absence of free hydrochloric acid in the stomach The temperature was 101 2° F On October 2nd daily injections of 5 c cm of hepatex P A F intravenously were commenced Within three days the appearance of the patient had altered She stated that she felt much better and the spleen and liver were smaller and less tender By October 5th the temperature was normal and remained so while she was in hospital The injections were continued for ten days by which time the red blood cells had risen from 775 000 to 2 212 000 per c mm and the spleen and liver had become normal in size Liver extract (hepatex) orally in dosage equivalent to 172 grams of fresh liver daily and 1 drachm of dilute hydrochloric acid three times daily were commenced and on November 2nd she was discharged at her own request The red blood cells at the time of discharge had risen to 3 000 000 per c mm but the colour index was still just above 1

Since discharge she has taken desiccated hog's stomach (Benger's) 10 grams daily and on December 7th the red blood cells were 4 387 000 per c mm and the colour index 0 92 She stated that she felt well and could do her own housework easily

It is of interest that the septic condition rapidly subsided with the treatment and it seems not improbable that here the sepsis was merely secondary to the pernicious anaemia In those cases which do not respond the opposite may possibly hold good but the relation of the sepsis to the anaemia will generally be difficult to determine With the subsidence of the sepsis here the leucocytic picture was converted from one atypical of pernicious anaemia to one typical of it the Arneth becoming right-handed with a polymorph leucopenia in place of a leucocytosis The Arneth count subsequently became normal and the following three counts are given to show the changes in detail (Cooke's[11] technique was used)

Oct 1st—Arneth count 27 30 26 12 5—238 lobes per 100
Oct 9th—Arneth count 6 12 44 28 8 2—314 lobes per 100
Dec 7th—Arneth count 8 34 46 10 2—264 lobes per 100

The polymorph leucopenia in pernicious anaemia is not due to the inability of the bone marrow to react to stimuli It is of interest therefore in view of the work of Ponder and others[1 12] who showed that the subcutaneous injection into animals of a wide variety of substances produced an Arneth shift to the left by increasing the output of polymorphs that in this case the intravenous injections of a potent liver extract were followed by no such effect although the first count showed the capacity of the bone marrow to react

No conclusions are to be drawn as to the probable effect of such treatment in other similarly septic cases but there is no doubt that the method is a very effective one the response being obtained much more rapidly than with the oral route The treatment would appear to be somewhat costly but when the more rapid response and earlier return of the patient to normal is considered and the cost of maintenance in hospital is taken into account this is not necessarily so One of the above cases was discharged from hospital thirty one days after commencing intravenous treatment Owing to the great variation in dosage required by individual cases however exact comparison of the cost of the oral and parenteral methods of treatment is impracticable except with large groups of cases

Summary

Two cases of pernicious anaemia treated intravenously with liver extract are described

Both responded rapidly although one had previously failed to respond to oral treatment owing to vomiting while the other was complicated by sepsis

We are indebted to Dr Franklyn for the radiological report quoted

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THE RADIOGRAPHIC DISSECTION OF CHRONIC RHEUMATIC ARTHRITIS

BY

S GILBERT SCOTT M R C S L R C P
D M R AND E C(AMB)

HONORARY RADIOLOGIST TO THE BRITISH RED CROSS CLINIC FOR RHEUMATIC DISEASES CONSULTING RADIOLOGIST TO THE LONDON HOSPITAL AND THE HEART HOSPITAL

The following is a brief outline of the radiological investigation upon which I am at present engaged at the British Red Cross Clinic for Rheumatic Diseases in London The objects in view are to simplify the classification and identification of rheumatic arthritic conditions by a radiographic dissection If it is realized that a radiograph will depict pathological changes or processes in terms of shadows it is obvious that it is only necessary to interpret these properly for a correct diagnosis to be reached

In 1907 Dr Strangeways carried out some important and painstaking research in this complex subject Though it covered the clinical radiographic and morbid-histological aspects and though many specimens of arthritis were dissected his final deductions were inconclusive He even remarks that it was not possible at that time to distinguish between the various types of rheumatic arthritis This statement might have been true twenty-four years ago I do not consider it will stand to-day Two reasons why fuller value was not obtained from his radiographic examination in those days were the inability owing to inefficient x-ray apparatus and technique to detect the early and slight diminution in bone calcium and other minute alterations in bone construction and the fact that the clinical diagnosis was often regarded as infallibly correct

Technique

The technique which I have adopted at the Rheumatism Clinic and which I consider essential to the investigation and identification of chronic rheumatic arthritis is as follows A standard radiograph of the hand is taken in every case accepted for treatment Standard refers to the conditions under which the radiograph is taken the hand for instance has been taken to be of standard thickness and density in the adult male and female and parts therefore used as the standard tissue One particular tube length and a definite time of exposure is decided upon while a set distance of tube from film and a uniform light and temperature for development will ensure all the radiographs of the hand being taken under uniform

These notes are a abstract of a paper read at the Third International Congress held in Paris in July 1931

OBSERVATIONS ON THE STATE OF THE CIRCULATION AFTER AN ENDURANCE TEST

BY

E B GUNSON M D F R C P LOND

AND

T HAROLD PETTIT M B , CH B N Z

The following observations were made in the case of a woman swimmer (Miss Mercedes Gleitze Auckland, January 16th and 17th 1931) after an endurance swim of forty three hours in salt water baths at a temperature of 75° F

At intervals during the trial particularly in the early hours of the morning the swimmer became very drowsy for periods of a quarter to half an hour but revived after taking liquid nourishment (She is unable to digest solid or semi solid foods during endurance tests as they produce epigastric discomfort and distress)

EXAMINATION

Aged 30 , height 5 ft 4 in weight 168 lb

On Completion of Test —The general condition was good , there was no cyanosis or distress and the feet and lower limbs were warm Hands and fingers were numb and blanched appreciably cool but not cold

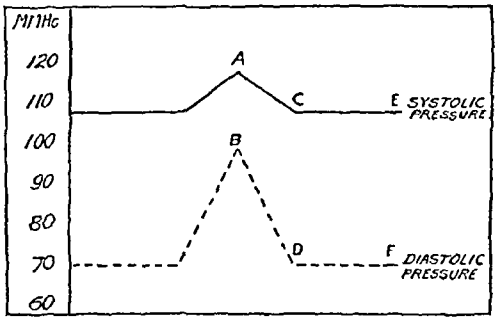


FIG 1 —Blood pressure immediately after forty three hour endurance swim (A B) nine hours after (C D) ninety six hours after (E F) Pulse pressure A B 118/100 = 18 mm Hg C D 108/72 = 36 mm Hg

General fatigue was evident There were occasional general body tremors and the knee jerks were markedly exaggerated The pulse was regular and of good strength (rate 80 per minute) The apex beat was in the fourth space internal to mid clavicular line and the sounds were clear Blood pressure was 118/100 mm (Fig 1) Electrocardiogram (Fig 2) showed a moderate degree of left ventricular preponderance

After Nine Hours Rest —The hands and fingers had regained their normal appearance and the numbness had entirely gone Blood pressure 108/72 mm pulse 72 per minute No abnormal circulatory or nervous signs

After Ninety six Hours —Blood pressure 110/72 mm pulse 72 An orthodiagram (Fig 3) showed a heart normal in size (M L 6 3 cm M R 4 2 cm , T D 10 5 cm) The electrocardiogram (Fig 2) showed a diminution in the degree of left ventricular predominance compared to that taken immediately after the endurance test

COMMENTS

Besides the alteration in the electrocardiogram the only change observed was in the blood pressure and the blanching of the hands which presented the appearance of a stage in Raynaud's disease This symptom previously experienced, and the associated numbness, caused the swimmer some concern The marked rise in diastolic pressure from 72 to 100 mm compared with the slight increase in systolic pressure from 108 to 118 mm , with the consequent development of a small pulse pressure (18 mm), and an increase in the heart rate of only eight

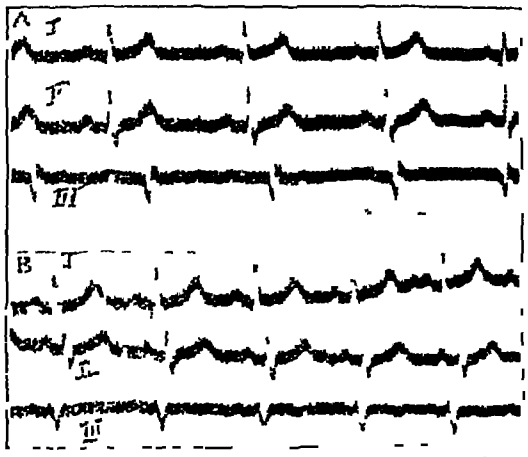


FIG 2 —A Under normal condition ninety six hours after endurance swim B In state of fatigue immediately after endurance swim Comparison of curves shows appreciable development of left ventricular predominance during endurance test

beats per minute, would appear to have an important bearing upon the failure of the circulation in the hands and fingers

The blood pressure change is of particular interest in view of the fact that the heart showed no sign of embarrassment It is interpreted as being reflex in nature arising from the state of nerve fatigue This would indicate that in the present case, where a healthy circulatory system was subjected to an endurance test to the point of fatigue a primary failure of the peripheral circulation had occurred in the hands It is suggested that a healthy swimmer's capacity for an extended endurance swim in tepid water may depend upon the integrity of the peripheral circulation in the first instance,

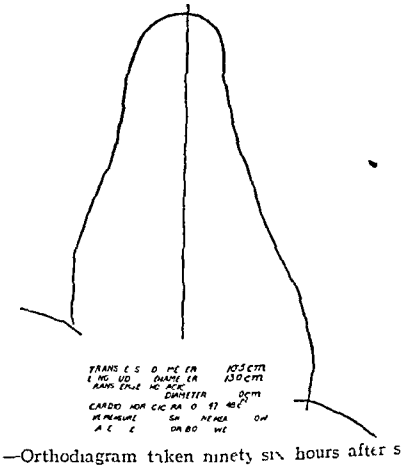


FIG 3 —Orthodiagram taken ninety six hours after swim

and that a healthy myocardium is not embarrassed at this stage

If appropriate measures were adopted to lessen the general exhaustion and nerve fatigue during such endurance swims the onset of the vasomotor disturbance might be retarded

A CASE OF THROMBO-PHLEBITIS MIGRANS

BY

HUGH BARBER M.D. M.R.C.P.

PHYSICIAN DERBYSHIRE ROYAL INFIRMARY

Since Moorhead and Abrahamson[1] in 1928 published four cases under the title of thrombo phlebitis migrans and Ryle in 1930 brought before the Association of Physicians the notes of five cases (which were subsequently published) it is probable that typical examples of this condition are being generally recognized. The etiology however is obscure so that the notes of another patient with recurrent thrombo phlebitis may be worth recording.

Ryle points out that the phlebitis usually appears in small lengths of superficial peripheral veins and frequently in the lungs and abdomen more rarely the heart or the brain is involved. The disease runs a tedious course with fever accompanying each fresh development but the prognosis is favourable. There is no difficulty in the diagnosis of a typical example but a visceral attack occurring alone may be obscure. Blood culture has proved negative but it would seem probable that some focal sepsis is the most likely cause and if found should be dealt with when a particular attack has subsided. Ellison[2] has recently described two cases following mild scarlet fever which are of considerable interest as they suggest a streptococcal origin.

HISTORY OF CASE

A married woman aged 37 was sent by Dr. Wills of Darley Dale to the Derbyshire Royal Infirmary on September 28th 1931 for phlebitis of the right arm. She is the mother of two healthy children the younger 7 years old. There had been no serious illness until two years ago but for about ten years she has frequently had small ulcers in the mouth and in the vagina which have improved lately. Two years ago she was in a cottage hospital for six weeks with a headache the pain was severe and felt as if it was in the bones of the skull all over the head and her doctor says she was semi-comatose for several days. She recovered gradually but since this attack has always been tired and depressed. In February 1931 a sharp pain developed in the back coming through to the abdomen which was tender. Soon afterwards phlebitis developed in the back of the right thigh and then in the left on April 15th 1931 she entered the Darley Dale Hospital under Dr. Wills for this phlebitis with intermittent pyrexia up to 100° to 101° F. which lasted several weeks. The swelling of the legs gradually subsided and she returned to her duties but in the middle of September the right arm began to swell and she was admitted to the Derbyshire Royal Infirmary on September 28th.

Examination.—General condition good. The right upper arm was swollen tender discoloured and about 2 inches more in circumference than the left but the hand and forearm were not swollen. The temperature was normal but three days later the tenderness and swelling extended up the right side of the neck over the external jugular vein and the temperature rose to 101° and was remittent for about ten days after which the swelling and redness subsided having been present for three or four weeks altogether from the history of onset.

The following tests were carried out during the pyrexial stage. Blood Wassermann reaction negative. Blood culture negative. Blood count—haemoglobin 110 per cent. red blood corpuscles 5,760,000 per c.mm. white blood corpuscles 11,200 per c.mm. Neutrophils 61 per cent. lymphocytes 31 per cent. mononuclears 5 per cent. eosinophils 1 per cent. basophils 2 per cent. blood platelets 250,000 per c.mm. Bleeding time was one and a half minutes. Coagulation time was three and a half minutes. Blood calcium—12 mg. per cent. Fractional test meal normal acidity and emptying time but mucus in first four specimens.

Examinations for focal sepsis (undertaken during convalescence) showed that the mouth was clean there had been only one small ulcer during her stay in hospital. There was no pyorrhoea and radiological examination of the teeth revealed no apical sepsis. X-ray examination of the nasal sinuses showed nothing abnormal and Mr. R. L. Flett reported that the nose and throat were healthy. Mr. N. L. Edwards found a small septic erosion on the cervix uteri which he cauterized. No ulcers were present in the vagina (of which the patient had given a history). She was discharged from hospital on November 13th 1931 having made a complete recovery at any rate for the time being.

SUMMARY

The case here recorded presents the following features (1) prostration and headache with pyrexia lasting several weeks suggesting venous cerebral thrombosis in 1929 (2) abdominal pain and tenderness immediately preceding the phlebitis in the legs (3) thrombo phlebitis first at the back of one thigh and then the other in March and April 1931 and (4) thrombo-phlebitis of the right upper arm and neck in September and October 1931.

If some septic focus is the explanation of the attacks of phlebitis the only possible source would appear to be an erosion on the cervix uteri.

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Ryle, J. V. *Lancet* 1930, ii. 731.
[2] Ellison, J. B. *Brit. Journ. Child Dis.* July-September 1931, 207.

TREATMENT OF ERYSIPELAS BY INJECTIONS OF MILK

BY

IBRAHIM ABD EL SAYED

GRADUATE OF THE FACULTY OF MEDICINE CAIRO

Subcutaneous or intramuscular injections of milk are known to produce a general reaction. They are thought to have considerable anti-infective value and have been used in certain skin affections. It seemed possible therefore that intradermal injections of milk near the site of infection in erysipelas by producing a local reaction might set up a line of defence forming a barrier to the further spread of the inflammation. They were tried in thirteen patients. In most cases a spreading and a receding margin was found the distribution being usually most rapid in the direction of the lymphatic supply. In some cases the spread was general.

METHOD

The value of the method of treatment is based on the results of ten cases of erysipelas on parts of the body other than the head and on three cases of erysipelas of the face. Details of these cases are given below. Fresh milk is kept at boiling point for four minutes. It is then cooled to body temperature and strained through sterilized gauze. From 5 to 15 c.cm. is injected as far as possible intradermally the remainder subcutaneously. A long fine needle is introduced parallel with and about 1½ inches from the spreading margin the milk being injected at intervals along the line. If successful the skin round the site of the injection is blanched by pæraemia following in about five minutes.

The spreading margin is first found by marking the skin round the affected area and examining two to four hours later. Injection at the receding edge is unnecessary. In erysipelas of the face intradermal injection is impracticable it is replaced by intramuscular injections with a view to the production of a general reaction.

In nine of the first ten cases the infection did not spread beyond the line of intradermal injection. In one (Case 5) in which one injection was subcutaneous the infection spread about 2 inches beyond that site of injection.

CLINICAL CASES

Case 1—A patient with erysipelas of the thigh and buttock was injected intradermally and subcutaneously with milk on April 25th 1931 1½ inches below the lower margin On the following morning there was no spread downwards near the site of the injection but the upper margin infection was spreading equally all round at 10 p m it was still spreading upwards on the morning of April 27th there was intradermal injection along the centre of the upper margin Next day there was no spread along the line at which the injection was made but the infection had extended in the form of a horn on either side The temperature returned to normal on the same day

Case 2—A patient with erysipelas of the right arm had received omnadine and anti streptococcal serum for three days without benefit On the fourth day an injection (intradermal and subcutaneous) of milk was made at the distal margin Next day the temperature was normal and the infection had subsided

Case 3—A patient with erysipelas on the inner side of the left elbow (temperature 103 7° F) was cured in one day by a milk injection at the proximal margin

Case 4—To a patient with erysipelas of the left leg was given one injection (intradermal) of 8 c cm of milk No spread at the site of injection ensued but there was some spread on the mesial aspect The next day the patient was cured

Case 5—Erysipelas of the left leg and thigh was treated by an intradermal injection of milk at the upper margin and by a subcutaneous injection at the lower margin There was no spread at the former site but there was a spread for 2 inches below the latter

Case 6—A patient with erysipelas of the left leg received an intradermal injection on the inner side of the leg Spread ceased in that area but continued in front and on the outer side to 1 inch above the knee where the infection stopped

Case 7—Erysipelas of the left leg and thigh was treated by an intradermal injection on the inner side There was no extension of erysipelas in that region the infection spreading only on the front of the thigh An injection along the upper margin on the front of the thigh was given three days later there was no further spread and the condition cleared up

Case 8—The patient had erysipelas of the left thigh and buttock An intradermal injection was made at the upper and outer margin No further extension ensued at the line of injection but there was spread on either side The condition cleared up in two days the vesicles drying up

Case 9—A patient with erysipelas of the breast which rapidly extended to the back was treated with anti streptococcal serum and omnadine for five days without any benefit The general condition became bad and there was toxaemia Milk was then injected at the margin of the left loin Further spread in that region ceased but the disease progressed into the right buttock Three days later milk was injected at the lower margin on the right buttock There was no further spread of the infection and the temperature fell oscillating for some days The urine was normal and a blood culture was found to be sterile An abscess which had formed at the site of one of the injections was opened after which the temperature became normal

Case 10—An injection of 10 c cm of milk was made along the upper margin of an erysipelatous patch on the mesial aspect of the left leg On the following day no extension was found in that region but the infection had spread 72 per anterior external and posterior aspects [illegible] was injected on the antero lateral aspect [illegible] The infection ceased along the site of [illegible] on either side for about 8 inches [illegible] up

The following cases of facial [illegible] intramuscular injections [illegible]

Case 11—The patient was [illegible] time for five days without [illegible] injection of 10 c cm of [illegible] day the condition had [illegible]

Case 12—Erysipelas [illegible] muscular injection of [illegible] spread and the condition [illegible]

Case 13—Nearly half the face was affected by erysipelas An intramuscular injection of 5 c cm of milk was given on the first day and 10 c cm on the second these injections cleared up the condition no further spread taking place

CONCLUSIONS

1 Intradermal injections of sterile milk made parallel with the spreading margin in erysipelas produce a local reaction, which prevents further extension of the infection at the site of injection and improves the condition elsewhere

2 The intramuscular injection of milk in facial erysipelas sets up general reaction which is curative of the condition

I wish to express my thanks to Dr Garns Bey for access to his section for the purpose of these observations and to Professor A K Henry for his advice

CHOREA IN THREE CHILDREN OCCUPYING SAME BEDROOM

BY

R G WALLER M R C S, L R C P

WANDER SCHOLAR AND REGISTRAR TO THE CHILDREN'S DEPARTMENT WESTMINSTER HOSPITAL

The following cases of chorea occurring in three children occupying the same bedroom are put on record as tending to support the contention of Paterson and Horn[1] that rheumatism may be contagious under overcrowded conditions

CASE I

A girl aged 16 years sister of Cases II and III was at the age of 11 years in April 1926 admitted as an in patient to Westminster Hospital with rheumatic fever with a past history of sore throats and growing pains The tonsils and tonsillar glands were found to be enlarged Mitral regurgitation was present After seven weeks in the ward the tonsils were enucleated and a few days later in June the patient was discharged much improved In July she was seen again as an out patient and was found to be suffering from chorea for which she remained under treatment until October since when she has not been seen at the hospital She has always slept in the same bedroom with her two younger sisters (Cases II and III)

CASE II

A girl aged 9 years was at the age of 6 years and 8 months in September 1929 admitted as an in patient to Westminster Hospital with an attack of typical chorea which had commenced eight days before admission No past history of sore throats or growing pains was elicited The tonsils and tonsillar glands were enlarged Numerous carious teeth were present There was no cardiac involvement One month after admission the tonsils were enucleated the carious teeth were also removed during the child's stay in hospital In October the child was discharged after five weeks in the ward but was readmitted as an in patient for [illegible] weeks late (November) with recurr[illegible] this occasion s[illegible] whic[illegible]

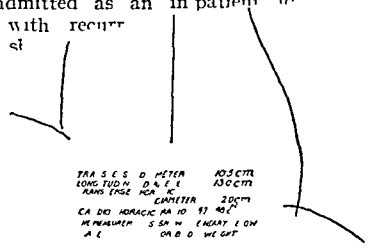


FIG 3—Orthodiagram taken ninety six hours after swim

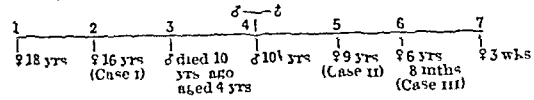
and that a healthy myocardium is not embarrassed at this stage

If appropriate measures were adopted to lessen the general exhaustion and nerve fatigue during such endurance swims the onset of the vasomotor disturbance might be retarded

involvement. After five weeks in the ward the child was discharged (July) much improved and has not been seen since at the hospital.

FAMILY HISTORY

The family consists of father, mother and six children as shown in the following scheme (a seventh child who died ten years ago from a rheumatic infection is also included).



An inspection of the home conditions was made and the following information obtained. The three girls (Cases I, II and III) have always slept in two beds in a room approximately 12 feet by 9 feet. The room is well lit by one large window which was open at the top at the time the inspection was made and is stated to be kept always open. The room was clean and well kept as also were the remainder of the rooms inspected. The children's room is separated by a door from a room approximately 15 feet by 12 feet in which the parents and the 3 weeks old baby live and sleep. The father states that he has never had a day's illness in his life and there is no family history of rheumatism on his side. The mother too is a healthy woman; she has never had any rheumatic affection and there is no family history of rheumatism on her side. The eldest girl aged 18 years is well and has never had sore throats or rheumatic manifestations; she sleeps on the floor below with her grandmother who is also quite healthy. The only boy now living aged 10½ years has never had manifestations of rheumatism or sore throat; he is quite well and lives with his uncle in the house next door. The boy who died ten years ago was admitted to Westminster Hospital at the age of 4 years in December 1921 with a history of rheumatic pains in the knees and ankles for one week. On admission he was found to be suffering from acute rheumatism and cardiac failure from which he died two days later.

The incidence of rheumatic manifestations in this family is thus in chronological order as follows:

1. *December 1921*.—The boy who died with acute rheumatism and cardiac failure.
2. *April 1926 until October 1926*.—The girl (Case I) who is known to have been exhibiting rheumatic signs over this period.
3. *September 1929 to November 1931*.—The girl (Case II) known to have been affected during this period.
4. *June 1931 to July 1931*.—The girl (Case III) known to have been exhibiting rheumatic signs for six weeks at this time.

The two latter children (Cases II and III) were thus ill [illegible] tenderness and s[illegible] here is an apparent period of the neck over the external jugular vein rose to 101° and was remittent for about te[illegible] on of the signs which the swelling and redness subsided having been prese[illegible] in for three or four weeks altogether from the history of onset.

The following tests were carried out during the pyrexial stage. Blood Wassermann reaction negative. Blood culture negative. Blood count—haemoglobin 110 per cent., red blood corpuscles 5,760,000 per c.mm., white blood corpuscles 11,200 per c.mm., Neutrophils 61 per cent., lymphocytes 31 per cent., mononuclears 5 per cent., eosinophils 1 per cent., basophils 2 per cent., blood platelets 220,000 per c.mm. Bleeding time was one and a half minutes. Coagulation time was three and a half minutes. Blood calcium—12 mg. per cent. Fractional test meal: normal acidity and emptying time but mucus in first four specimens.

Examinations for focal sepsis (undertaken during convalescence) showed that the mouth was clean, there had been only one small ulcer during her stay in hospital. There was no pyorrhoea, and radiological examination of the teeth revealed no evidence of dental sepsis. The tonsils were small and not septic. The nasal sinuses were normal. There was no evidence of sepsis in the ear, nose or throat.

The incubation period of chorea is probably about three weeks, and there is therefore no reason for assuming (in view of the recognized possibility of recurrence) that Case I was free from infection at the time of onset of symptoms in Case II.

I wish to express my thanks to Dr. Donald Paterson for permission to publish these cases.

REFERENCE

1 Paterson, Donald, and Horn, Louis J. *British Medical Journal*, 1931, ii, 833.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

A CASE OF SPIROCHAETOSIS ICTERO HAEMORRHAGICA

By E. KEMPSON BROWN, M.R.C.S., L.R.C.P., and ARTHUR J. CLEVELAND, M.D., F.R.C.P.

In general practice ordinary catarrhal jaundice is so common that one is apt to forget the more formidable variety, but in the case here reported the sudden onset of the rigor, the absence of previous indisposition or of any tenderness over the liver area, together with the very early bleeding, saved the mistake of diagnosing a simple jaundice.

A farmer, aged 32, sent for me on December 1st, 1931, complaining of sickness. The history of the illness was that on November 27th, after returning from a whist drive feeling perfectly well, he went to bed but very soon had a shivering attack and felt sick. On the following day he continued to vomit from time to time and developed pain in the lower part of the back and legs. This state of things continued until I first saw him about three and a half days after the initial symptoms.

I found his pulse very soft and quick—temperature 103° F.—and he was spitting blood which apparently came from the back of the nose. There were no adventitious sounds in the lungs and no abnormal physical signs in the abdomen. On the following day (December 2nd) vomiting was more frequent and haemorrhage more marked. The next day there was blood in the vomitus and marked melaena—temperature 104·5°—and there was suppression of urine. There appeared also an icteroid tint in the conjunctivae and skin which occurred six days after the onset of the disease. On December 4th the jaundice was very marked—temperature 101°—and the vomiting less though anuria continued. On December 5th there were haemorrhages under the skin of the thighs and marked myositis. The spleen was not felt. I then called in Dr. Cleveland of Norwich who concurred in the diagnosis of an acute infective jaundice probably due to a spirochaete. On December 6th the patient was removed to the Norfolk and Norwich Hospital where he died suddenly ten hours after admission.

With regard to the possible channel of infection it is interesting to note that five days previous to being taken ill the patient was bitten by a ferret and that [illegible] ferret had been bitten in the mouth by a rat just 1½ inches [illegible] the farmer. Subsequently the ferret died injected at inte[illegible] and inflicted by the rat did not become sl[illegible] in round the site o[illegible]. The patient paid no attention to [illegible]aemia following in about [illegible] was very slight and nothing was

The spreading margin [illegible] after his death. In reference [illegible] skin round the affected are[illegible] achaete so soon disappears in [illegible] hours later. Injection at the [illegible]tion may be of some interest. In erysipelas of the face int[illegible]on practice with some rat [illegible] practicable it is replaced by [illegible]elv[illegible] on the wound of a [illegible] with a view to the production of [illegible]y a rat asserting that [illegible]

In nine of the first ten cases [illegible]revent the ferret from spread[illegible]beyond the line of intradermal[illegible] most rat catchers (Case 5) in which one injection was [illegible]sinfect such wounds [illegible] infection spread about 2 inches [illegible]b[illegible]ome other substance [illegible] injection [illegible] und[illegible] may prove fatal.

If there is something in urine which is fatal to the spirochaete it would be interesting to know what it is and whether it could be used in the treatment of this fell disease in the human being Folk lore very often has a basis of fact

E K B

On admission to the Norfolk and Norwich Hospital the patient's condition was the same as described He was quite conscious and obviously gravely ill A few ounces of bile stained urine were drawn from his bladder but no spirochaetes were found in it As the urine was probably excreted four days previously this is not surprising since the organism soon disappears in the urine Death was sudden—the usual event in cases of complete suppression At the necropsy the organs were all bile stained but no macroscopic changes were observed except in the lungs which showed areas of hæmorrhage similar to those seen when blood has been inhaled Sections of the kidneys stained by Levaditi's method showed spirochaetes in clumps

The necropsy was performed and the sections prepared by Dr Claridge pathologist to the Norfolk and Norwich Hospital

In the *British Medical Journal* of July 17th, 1926 Dr Burton-Fanning and I published four cases of this disease occurring in Norfolk The features of the present case were similar to these The jaundice appeared on the fifth or sixth day in all of them In three out of five suppression of urine occurred The mortality was very *high—80* per cent In this case the source of infection seems clear There has been a plague of rats in Norfolk this year and I believe elsewhere in England and these cases illustrate how dangerous it may be to human beings

The question of the patient having accidentally swallowed some phosphorus was considered but nothing in the post-mortem appearances supported this theory

A J C

EPIDEMIC CHOREA

Having read the article An epidemic of chorea in a family in the *British Medical Journal* of November 14th, 1931 (p 893) I was prompted to report the following three cases of chorea which I have under observation at present

CASE I

L M aged 10 years Choreic movements began on August 20th 1931 There was no previous history of tonsillitis rheumatic pains or any other illness There are seven children in the family and the mother gives a history of having suffered from chorea in infancy No history of rheumatism in the family

CASE II

F L aged 9 years Tonsillectomy two years ago A slight attack of chorea occurred about this time which lasted for a period of eight months She has suffered from rheumatic pains in various joints for the past twelve months She had been in frequent contact with Case I both before and after the onset of chorea in the latter child having sat with her while she was ill in August Towards the end of August F L again developed severe chorea

CASE III

E L aged 6 years a sister of F L (Case II) commenced chorea on November 1st No previous history of joint pains or tonsillitis There are five children in this family and up to the present no symptoms of chorea are evident in the remaining members No history of chorea in the parents nor is there a history of rheumatism Both the husband's parents suffered from chorea

All three cases have mitral systolic murmurs Throat swabs revealed only staphylococci

COMMENTARY

The points of interest about the cases are the facts that the families live in adjacent houses to each other being next door neighbours and that all three cases occurred almost simultaneously An interesting question also arises Did Case I infect Case II? The fact that Case II had previously suffered from chorea would undoubtedly make her a suitable subject for reinfection Then again it is possible that the converse was the case—that is that Case II (F L) was the infecting agent If we accept *this latter theory* as *correct* we *must* assume that Case II had a latent form of the disease for over twelve months

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British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

CALCUTTA BRANCH

Group specific Substances in Forensic Medicine

At a clinical meeting of the Calcutta Branch on November 13th 1931 with the president, Dr KEDARNATH DAS in the chair Lieut Colonel R B LLOYD read a paper entitled Group specific substances in the human body

Colonel Lloyd said that four main human blood groups (with possibly some subgroups) had now been clearly defined These special blood characters were inherited according to the Mendelian law and almost certainly according to Bernstein's formula which postulated three factors 'A B, and O any two of which might be present simultaneously the first two being dominant to the last which was therefore recorded as zero In Moss's first group both A ' and B substances were present in his second there was A only, in his third there was B only and in his fourth neither substance was present The existence of these two substances was an ascertained fact they had been demonstrated mainly, though not entirely by their iso agglutination actions The term blood group was insufficiently comprehensive now for it had been shown that not only the blood but many *other body secretions and excretions contained* these factors, and it was possible to determine with absolute accuracy the group ' of a fragment of kidney liver or pancreas In general information about the A substance was more definite than that regarding the 'B substance This ' A substance was present in saliva the mucous membrane of the mouth stomach and small intestine though not in the faeces It was also found in large quantity in the pancreas and might be definitely demonstrated in a 1 in 10 000 dilution of a pancreatic extract It occurred also in the urine though not in great quantity and to extract it therefrom a large volume of urine was required It was extremely stable resisting boiling or strong alkalis but being destroyed by boiling with strong alkalis It might be soluble in water and not in alcohol, or soluble in alcohol and not in water It might perhaps be produced in the gastro intestinal mucosa or it might be the case that it was only excreted there Gastric juice contains much its absence from the faeces was apparently due to the destructive effect of bacterial contamination since bacteria free extracts of faeces did not destroy it It occurred in very high concentration in the sperm

Water soluble group substances had been found in the kidney heart muscle and skeletal muscle the lungs aorta in small quantity in the brain in the body fluids and in the cerebro spinal fluid in small quantity Considerably greater quantities occurred in urine and *still* greater quantities in the saliva gastric juice and intestinal juice Both milk and bile also contained the water soluble substance The alcohol-soluble substances were also present in the red blood cells and organs, but absent from all the secretions and excretions examined While

the water soluble substance of the kidney at any rate in part left the body in the urine the fate of the much greater quantity in the digestive juices was uncertain It was possible that the group substances of the saliva stomach and intestinal juice were destroyed in the large intestine or they might be reabsorbed From the urine and saliva highly active water soluble substances had been obtained they were non dialysable and heat-stable and contained no protein carbohydrate or lipoid Pepsin trypsin and yeast had no action on them The purified urine and saliva preparations still contained a small quantity of nitrogen The water soluble form of the A substance found in the secretions is chemically different from the lipoidal form of this substance found in the organs must contain the same serological receptors since it inhibited in exactly the same way the A -specific haemolysin On the other hand the two forms of the A substance might be distinguished by complement-fixation experiments only the lipoid form giving distinct complement fixation These substances were not found in the human body alone sheep erythrocytes contained the A substance in the lipoid form only By heating with alkali it was possible to convert this A substance into the water soluble form The possibility existed therefore that the group substance was really a lipoid which on saponification became water soluble and this explained why it was sometimes soluble in alcohol and not in water and sometimes the reverse The presence of the water soluble form alone in the secretions and excretions would thus suggest that a saponification process took place in the organism

In the forensic sphere this new work had far reaching importance As already stated the group substance was present in very large quantity in the semen in one case analysed by Schiff in Germany the determination of the group of a specimen of semen was the deciding factor and his results were perfectly definite even in a 1 in 100 000 dilution As regards saliva it was possible to detect the group of a person who had licked an envelope or smoked a particular cigarette The possible animal origin of the gum of the envelope had to be considered but the unlicked portion would be available as a control The discovery of the group specific substances in the organs had as its most important application the examination of old material such as a cadaver from which it would probably be impossible to obtain blood in suitable condition for iso agglutination tests In many cases the determination of the group of an organ would be of importance Supposing that the issue was whether particular organs could have been derived from a specified person it was first necessary to know that the organ was human If it had actually been removed from a human body by a responsible person tests for human origin might be disregarded but if it had been dug up out of the ground or its source was for any reason uncertain the fact that its origin was human or otherwise must first be determined by the precipitin test It was next necessary to know what the group of the specified person was if he was still alive or what it had been if he was dead In favourable circumstances the latter problem was more easily solved than might be expected In the large hospitals of Berlin the blood group of every patient was determined on admission and the report was added to the dossier Should such a person say five years after discharge from hospital be missing and cadaver material be discovered the group specific test could be applied to the organs found if the result differed from that given in the record available from the hospital the organs could not have belonged to the person under consideration These group specific tests both of blood and of the tissues could in no case prove that they had been derived from a given person since the same results would be yielded by two different persons of the same group They could only prove the contrary—namely that the blood or tissues had not originated from a given person in cases where the group of the person differed from that of the organs

Colonel Lloyd proceeded to explain how the A substance was demonstrated An anti A rabbit serum was first prepared by injecting into a rabbit human erythrocytes of Group A washed in the usual manner The resulting antiserum containing anti human and anti A factors was also haemolytic for sheep's erythrocytes—the heterophile antibody of Forssman it was inactivated and then absorbed with human erythrocytes of Group O to remove the anti human factor It was then titrated with complement and washed sheep cells to determine the haemolytic dose Into each of two tubes were placed four haemolytic doses of the antiserum to one tube was added an excess of Group A cells and to the other an excess of Group O cells The tubes were allowed to stand for some time with occasional shaking After centrifugalizing the two tubes now containing absorbed serums were incubated with the appropriate doses of sheep cells and complement It would then be found that the anti A serum absorbed with Group A blood could no longer haemolyse the sheep cells while the same serum absorbed with Group O blood haemolysed the sheep cells completely Thus was demonstrated the presence of the A substance in one human blood and its absence in the other

Colonel Lloyd then described the application of the method to a fluid such as saliva He said that in the case for example of two specimens of saliva one from a person whose blood group was A and the other from a person whose blood group was O a pair of tubes was put up containing different dilutions of the A saliva then two similar tubes with the same two dilutions of boiled and cooled A saliva and finally a third pair of tubes containing the same two dilutions of Group O saliva To each was added the appropriate dose of the anti A serum After absorption the correct dose of sheep cells and complement was added and the mixture was incubated It would be found that in the two tubes containing the unboiled Group A saliva there would be no haemolysis showing the presence of the A substance Similarly in the two tubes containing the boiled Group A saliva there would be no haemolysis showing that the A substance was unaffected by boiling In the two tubes containing the Group O saliva however the haemolysis would be complete indicating the absence of the A substance It was usual in this experiment to set up alongside a parallel set of tubes using instead of anti A serum a genuine sheep haemolysin prepared by injecting sheep erythrocytes into a rabbit In this last series the haemolysis would be complete in all the tubes since the genuine sheep haemolysin had no group specific action

In determining the group of an organ Colonel Lloyd suggested as an example that portions of two human kidneys were provided from persons whose blood groups were A and O respectively A small quantity of each was weighed out further subdivided with fine scissors and finally rubbed to a liquid in a mortar with distilled water and placed in a small flask After standing for some time it was boiled for twenty minutes It was then centrifuged and the supernatant fluid was dried off on a water bath The residue was then taken up in normal saline solution and the subsequent steps were as in the previous cases A control was required however to exclude general anti complementary action Colonel Lloyd added in conclusion that while others had contributed to this new extension of serological work by far the largest share had been taken in Berlin by Dr Schiff who had now published a book on the subject

Reports of Societies

THE SYNDROME OF CHRONIC TOXIC CHOLECYSTITIS

At the meeting of the Medical Society of London on February 8th, with the president Mr Herbert Tilley in the chair a discussion took place on The syndrome of chronic toxic cholecystitis

Mr W Harold Dodd in opening described three types of case (1) with a life long history of bilious attacks gradually becoming worse until the patient was unable to carry on (2) with ill health dating from pregnancy, (3) with ill health dating from a severe pyrexial illness, such as pneumonia diphtheria influenza malaria, typhoid or rheumatic fever A diseased gall bladder was a focus for continual auto intoxication It strained the defensive part of the endocrine system especially the thyroid and might even produce goitre It also caused a disorderly action of the biliary and digestive systems Removal of the focus abolished the auto intoxication permitted the intake of an adequate diet and gradually restored the endocrine balance and general health

Mr Dodd divided the syndrome into six sections and said that once recognized together with localizing physical signs confident diagnosis could be made (1) *Nervous* The patients were nervous and apprehensive depressed to a painful degree with neurasthenia a prominent feature Irritability of temper was usual, a placid contented wife would change into a continual nagger' Sensations of dizziness and giddiness occurred and occasionally after a meal a semi fainting attack (2) *Respiratory* Breathlessness was often a prominent symptom not only after slight exertion but after taking food and it wakened some patients at night Patients frequently described sensations of suffocation and choking in the throat Several cases of asthma had been relieved by the removal of a diseased gall bladder (3) *Cardiac* Palpitation was a common symptom possibly accompanied by pain which he had heard referred to as rheumatism around the heart When the pain was at the left costal margin stomach lesions were naturally thought of and treated it was not easy to associate the right sided gall bladder with a left sided pain The painful area of the chest was supplied by certain of the thoracic nerves from which segments the splanchnics on both sides took origin so that this might be the connexion with the gall bladder on the left side (4) *Alimentary* This section of the syndrome was usually marked and assisted in localizing the focus of the toxaemia to the gall bladder The appetite was capricious there was an indisposition towards certain foods Often complaint was made of a dry mouth with a nasty taste Immediately or within half an hour after taking food discomfort grading to severe pain occurred in the epigastrium at first only after the chief meal of the day but later after every meal Flatulence was distressing in all stages of the disease At times pain occurred one to three hours after food and might awaken the patients at night This suggested a not uncommon accompaniment—a duodenal ulcer In almost all cases of cholecystitis constipation was found (5) *Micturition* Symptoms of scalding burning and smarting were frequent relief being usually experienced after operation on the gall bladder in all types of patients (6) *Locomotor* Rheumatism and neuritis were a constant complaint This might only be experienced in the right shoulder and back of the neck but usually varying in time and degree it occurred in all areas of the body Backache was a very prominent complaint and might be quite severe

Turning to the physical signs Mr Dodd said that the appearance was usually one of tiredness and anxiety The skin was sallow, it was rare to find a clear complexion The trunk should be examined for hyperaesthesia which helped to localize the site of the toxic focus This was usually revealed over the right half of the abdomen occasionally only in the right iliac fossa Hyperaesthesia had been present in 75 per cent of his patients Palpation of the abdomen usually showed tension and tenderness in the right rectus muscle tenderness in the right iliac fossa to the right of the umbilicus and in the gall bladder area at the right costal margin Frequently a normal cholecystogram was returned, and yet operation showed established disease in the gall bladder If the syndrome and physical signs were definite he advised operation The barium meal showed a change in the tone or emptying rate of the stomach irregular filling and emptying of an irritable or dilated duodenum, and occasionally a tender pathological appendix Having established the diagnosis operation was confidently advised Men improved more quickly than women perhaps because women too often prematurely resumed their family duties He also discussed the appearances at operation, which confirmed the diagnosis of chronic cholecystitis The gall bladder was pearly coloured in part or whole It was surrounded by adhesions of varying amounts from an extension of the cholecysto duodenal fold to its complete submergence in attachments to the duodenum On the convex upper surface of the liver was often a patch of pinkish grey hepatitis which was continuous with the gall bladder attachment Occasionally stones were felt in the gall bladder but usually inspection was sufficient If the symptoms were present he regarded as pathological a gall bladder which would not empty on straightening out its duct and pressing His youngest patient aged 16 had this condition and on opening he found a small stone With the 'bonible cold light the gall bladder and bile ducts could be transilluminated This avoided handling the biliary ducts and so lessened operation shock The duodenum was often surprisingly dilated and the appendix usually twisted and kinked by adhesion In conclusion Mr Dodd stressed the marked restoration to health which followed operation

Dr Arthur Davies who had examined the sections in Mr Dodd's cases said that practically all showed definite histological signs of chronic cholecystitis He had tried to determine the nature of the spread of the infection this was difficult but his impression was that in the majority of cases it had been by the blood stream In a large proportion of the cases well marked sinuses were visible In a few cases he could find no evidence of pathological change so that there must be some gall bladders in which there was a change of function without any change of structure

Discussion

Dr C H Miller said there were a great many disorders seen by the physician found to be connected with the gall bladder These included urticaria asthma migraine and particularly the dyspepsia known as gall bladder dyspepsia He mentioned the relation between pain produced in disease of the gall bladder and that produced by heart disease There was certainly a difficulty in separating patients who came with attacks of definite angina pectoris from those who had definite attacks of gall-bladder colic He had collected a number of cases in which definite cardiac pain had been relieved by removal of the gall bladder There did not seem to be any symptom of cardiac pain which could not be simulated by disease of the gall bladder whether in severity localization shock or sense of impending death He mentioned the high incidence of atheroma in gall bladder patients One of the effects of chronic gall bladder disease was to produce early and severe arterial degeneration and it was possible that the symptoms

arising from the gall bladder might in the middle aged heart produce cardiac symptoms of a severe kind, which might be relieved by cholecystectomy

Dr G VILVANDRE said that with careful technique about 70 per cent of cases of gall stones could be shown by radiology A pathological gall bladder showed without question on a series of x ray films and he held that a gall bladder visible radiologically was a pathological gall-bladder Negative evidence from a radiological point of view was worth nothing at all

Mr ZACHARY COPE said that Mr Dodd had given a jigsaw puzzle of symptoms which could be pieced into several pictures Some of those present could interpret the symptoms he had mentioned into a picture of very different outline If Mr Dodd was claiming that all these symptoms were present in a case of chronic cholecystitis then no one suffered from that condition and on the other hand if only one or other of them need be present then everyone was suffering from it The multiplicity of symptoms mentioned in the paper was so great that it left him in ignorance as to the essential syndrome It was difficult to associate the syndrome with cases in which there was really serious and demonstrable organic disease of the gall bladder The more diseased the viscus the less frequently were these symptoms found In many of the cases with the changes mentioned that evening the liver was at fault

Mr A J WALTON said that it was necessary to be most careful about minor degrees of cholecystitis He had had the same feeling as Mr Cope in listening to Mr Dodd's paper In the past for much the same large group of conditions the removal of the ovary or the removal of the appendix had at various times been advocated now it was the turn of the gall bladder Speaking from memory he thought that he had had roughly 500 cases of cholecystitis out of 2 500 operative abdominal lesions—that is to say about 20 per cent—and these were among selected patients suffering from disease of the upper abdomen He would require very strong evidence before he accepted anything like the figure of 82 per cent suggested by Mr Dodd but if the syndrome Mr Dodd had described was taken as the criterion then 82 per cent was not too high but probably too low It was being more and more recognized that disease of the gall bladder was associated with disorder in other parts of the body but he had seen many patients who had had the gall bladder removed and were not one whit the better Such cases as Mr Dodd had referred to must be watched not until they had been followed up for at least ten years could it be said that they had been cured by cholecystectomy He believed that many of these cases were forms of hepatitis with which at present they were not quite conversant Many of the minor degrees of inflammation were curable by medical means The frank strawberry gall bladder case he believed to be curable only by surgical methods

Dr W LANGDON BROWN said that he was very much in agreement with the criticisms made by Mr Cope and Mr Walton How many of the symptoms which Mr Dodd had described were to be taken as the irreducible minimum to justify a diagnosis of cholecystitis? Even in the presence of cholecystitis many patients were amenable to medical treatment He agreed that the association between cardiac symptoms and gall bladder symptoms was very important

Dr A H DOUTHWAITE said that he had seen many patients suffering from the symptoms mentioned by Mr Dodd and yet not having cholecystitis There was a very large group in which the symptoms were referable to a visceroptotic condition which yielded to exercises and suitable diet here the element of fat in the food was important It amazed him that there was no reference in the paper to the treatment of these people without operation If Mr Dodd would hand over 50 per cent of his cases to him (apart from those showing definite radiological changes) he would guarantee to cure more of them by medical methods than Mr Dodd by surgical!

Dr J R WYLIE described some work on the preliminary stages of duodenal ulcer before deformity in which there were symptoms not unlike those described by Mr Dodd He had seen one such case develop into typical ulcer in the course of six months and go to operation These cases occurred in young people as well as in older ones

Dr CHARLES NEWMAN suggested that there was one more picture into which the jigsaw puzzle of symptoms might be pieced—namely what was called by some German observers the gall bladder dyskinesias Four different syndromes had been sorted out two of which were very common and corresponded closely with the syndromes of many gall bladder conditions The symptoms in gall bladder disease were largely due to dyskinesia functional alteration taking place without structural alteration or at any rate without inflammatory signs The diagnosis of these cases was arrived at by duodenal intubation and the test of pituitrin and olive oil Two common forms were the hypertonic distended gall bladder and the hypotonic distended type Many of Mr Dodd's cases he thought would be found in these two categories Although operative removal did relieve some of them a good many got worse following removal of the gall bladder because after all the gall bladder did definitely tend to ameliorate these troubles

Mr HAROLD DODD in reply said that he fully realized that the acid test of any condition like this was the follow-up and it would take five or ten years to consolidate this work But he could say definitely that no patient was worse and that many were unquestionably better He had been asked how large a part of the syndrome he regarded as the minimum Of course apart from the syndrome he insisted that the physical signs must be definite in every case otherwise no matter how full the syndrome he did not advise surgery But generally from four to six sections of the syndrome were fulfilled One speaker had mentioned the usefulness of diets containing fats but the mischief was that so many of these patients could take nothing but boiled fish bread and butter and tea He promised at a later date to bring before the Society a further report on the cases

DIAGNOSIS AND TREATMENT OF LUNG ABSCESS

At a joint meeting of the Sections of Medicine and Surgery of the Royal Society of Medicine on February 3rd with Dr H MORLEY FLETCHER in the chair a discussion on abscess of the lung was opened by Dr R A YOUNG

Lung abscesses Dr Young said were more common than was formerly supposed They were difficult to classify because their causation was frequently complex The following conditions which gave rise to abscess of the lung were mentioned foreign body in the bronchus aspiration of infective material especially during operations on the nose and throat septic foci in the naso pharynx embolism in septicaemia ulcerative endocarditis otitis media and phlebitis bronchiectasis as a result of infection extending into the lung tissue degeneration of new growths (responsible for 10 per cent of lung abscesses) perforating wounds and rib injuries and gangrene of the lung In embolism the foci might be multiple A fair proportion of aspiration abscesses were found in the upper lobes other abscesses were primarily parenchymatous Among the conditions simulating lung abscess was interlobar empyema but the absence of elastic fibres in the pus from an empyema was a helpful differential point In bronchiectasis the use of lipiodol

made the diagnosis clear New growth could usually be distinguished either by bronchoscopy or by lipiodol Abscess should be suspected when there was delayed resolution in pneumonia with persistent expectoration of pus when acute infective symptoms followed infarction of the lung and when marked pulmonary signs arose in ulcerative endocarditis or in septicaemia of any origin A marked leucocytosis was always present When the abscess was acute the patient was as a rule seriously ill, with fever and rigors With the more chronic type there were rising and persistent fever, expectoration of pus and a paroxysmal cough often brought on by change of position An unpleasant taste in the mouth or the appreciation of obnoxious gases by the patient often preceded the rupture of a closed abscess into a bronchus Copious expectoration of pus was followed by signs of a cavity the pus was foul tended to separate into three layers and might contain elastic fibres and necrotic lung tissue Pain might be severe with an acute abscess but slight with a chronic one With a deep seated central abscess there might be few physical signs save weak breath sounds and occasional rales If the coughing up of pus was followed by the signs of a cavity the diagnosis could be made immediately Multiple abscesses might simulate broncho pneumonia Clubbing of the fingers usually appeared rapidly, within six to eight weeks Radiography often established the diagnosis After rupture of an abscess into a bronchus a fluid level could be seen in the abscess cavity to show which both antero posterior and decid lateral radiographs in the upright position were necessary The use of lipiodol was sometimes condemned on the ground that it carried infective material into the lower bronchi actually obstruction of the bronchus prevented it from entering the abscess cavity Leucocytosis usually persisted after rupture of an abscess but the count was lower Exploratory puncture was decidedly dangerous when abscess was suspected since it might lead to widespread infection of the pleura or to precipitate rupture of the abscess Between 10 and 30 per cent of patients with acute abscess of the lung recovered after spontaneous rupture In most cases medical treatment should be tried first The patient was nursed as for acute pneumonia and after rupture drainage gradual to begin with was promoted by posture the patient hanging over the bed and coughing at least twice daily Inhalations and expectorants were useful later and intratracheal injections might be considered Arsenical preparations such as salvarsan were sometimes helpful If after a few weeks the patient showed no improvement on medical treatment surgical intervention became necessary Early operation was the best treatment for localized gangrene of the lung and operation was essential for an abscess rupturing into the pleural cavity Bronchoscopy was indicated for the removal of an inhaled foreign body Thoracotomy and drainage of an abscess was best carried out in a two stage operation unless adequate pleural adhesions were present to prevent the escape of pus into the pleural cavity Dr Young said that he did not consider artificial pneumothorax was advisable as adhesions preventing complete collapse were nearly always present Thoracoplasty should rarely be necessary if the diagnosis was made early Phrenic evulsion was useful in three conditions for incomplete drainage of a spontaneously evacuated abscess for secondary bronchiectasis (as a result of cicatrization) and occasionally to limit the extent of a thoracoplasty Lobectomy was rarely necessary Some of the complications of abscess of the lung were empyema bronchial fistula lattice lung and cerebral abscess

Mr J B Hunter opened the discussion from the surgical aspect He intended he said to confine himself to the single abscess which was not associated with dilatation of the bronchi Abscess occurred more commonly in men than women, more often on the right side than the left and in the upper than the lower or middle lobes An abscess might be acute subacute, or chronic but from the surgeon's point of view it was important to know whether it was closed or open If it was closed operative treatment might be urgently needed If it was open, there was often copious expectoration of foul pus On radiography the abscess showed as an opaque, circular shadow with a fuzzy outline, or as a triangular shadow with the apex towards the mediastinum If it was open a fluid level might be seen and occasionally this was visible when it was closed owing to the presence of gas forming organisms Lipiodol usually failed to enter the abscess cavity because the opening often faced downwards It was useful however in showing blockage of the bronchus Needling was dangerous and should never be performed it might lead to the development of pyothorax A considerable number of patients particularly if the abscess was in the upper lobe recovered without surgical intervention This was fortunate as upper lobe abscesses were difficult to treat successfully by surgery Where postural drainage failed other measures must be employed Artificial pneumothorax would not succeed if adhesions were present as they frequently were when the abscess was peripheral Pyopneumothorax would often clear up with repeated aspiration followed by drainage For closed abscess thoracotomy and drainage were necessary If adhesions were present it was possible to perform the operation in one stage Sufficient rib resection should be performed to allow adequate collapse and enough lung tissue should be removed for thorough drainage He preferred to use a large tube packed round with gauze the gauze being removed at the end of three days If it was found at operation that localization had been inaccurate, a finger introduced into the pleural cavity often found a patch of adhesions over the true site through which the operation could then be performed in one stage Manipulation of the lung during operation was dangerous the abscess might rupture into a bronchus drowning the patient After drainage the cough usually diminished and the temperature and pulse rate subsided clubbing of the fingers gradually disappeared The development of bronchial fistula or of bronchiectasis was due to inadequate collapse at the time of operation Cerebral abscess might develop after operation and was usually fatal Many observers had attempted to produce aspiration abscesses experimentally in animals without success Embolism from the infected area following nasal and oral operations might give rise to lung abscess especially as the operation area was subjected to violent straining immediately after operation owing to the vomiting induced by volatile anaesthetics

Dr James Maxwell said that in diagnosis chief stress should be laid on the history Physical signs and radiography were helpful in localizing the abscess Perhaps the commonest predisposing cause was pneumonia the aspiration of septic material was the next most frequent cause A certain number of abscesses developed without any apparent reason Cough pain in the chest and toxaemia were often the three earliest signs Rigors and sweats were common with increased pulse rate and rise of temperature and respiration rates though there might be no dyspnoea Blood was seldom present in the sputum in the early stages but bright blood found in the later stages was a sign of healthy granulation in the abscess cavity Many cases were complicated by empyema or pleural effusion before they came under observation Bronchoscopy was rarely helpful save in cases associated with new growth bronchiectasis or foreign body The differential diagnosis was from localized empyema bronchiectasis and new growth Abscesses tended to

grow and rupture spontaneously early treatment should therefore consist of rest postural treatment and such auxiliary measures as diathermy poultices and inhalants He had been favourably impressed by the results of 10 per cent oil of gomenol given intratracheally by means of a nasal catheter The bronchoscope might be used to establish drainage Organic arsenic compounds were beneficial especially in the treatment of spirilla infections Emetine had been given empirically If there was no improvement after eight or ten weeks operation should be considered Artificial pneumothorax was not indicated except with deep lung abscess draining into a bronchus

Dr PETER KERLEY said that the *x* ray appearance depended on the method of infection its nature and the local pulmonary involvement With pulmonary embolism the wedge shaped infarct described by the pathologist was seldom seen in life usually being fatal A small embolus gave rise to a round sharply defined opacity showing no fluid level Infection spread from the periphery and soon a hazy opacity in the lung tissue formed round the shadow Weeks might elapse before a fluid level could be seen but it appeared earlier if gas forming organisms were present Multiple abscesses from embolism had a tendency to form a circumscribed area An aspiration abscess in contradistinction to an embolic abscess threw a vague shadow at first which later became well defined as suppuration spread into the congested area Abscess might be simulated by interlobar empyema broncho pneumonia syphilis or new growth

Mr V E NEGUS spoke of the value of the bronchoscope in the diagnosis and treatment of lung abscess With a parenchymatous abscess not communicating with a bronchus bronchoscopy would show clear healthy bronchi Where an abscess communicated with a bronchus plugged with pus the obstruction would be visible and the bronchoscope could be used to remove it By repeated bronchoscopy pus might be aspirated through a flexible tube when coughing and postural drainage were ineffective This method was successful and was attended by no danger and little comfort to the patient

Dr L S T BURRELL said that there were four ways of dealing with lung abscess by expectant and postural treatment by bronchoscopy by surgical drainage and by artificial pneumothorax With the first method some patients recovered and some died bronchoscopy did little beyond making the bronchi patent after surgical treatment a large number of patients died or had a recurrence of the condition artificial pneumothorax was dangerous The patient was in the position of a man in a burning house If he remained where he was the fireman might put it out if he ran down the stairs he would be smothered and if he jumped from the window he would be killed He thought that treatment by pneumothorax should not be completely discarded especially for deep abscesses seen in the early stages

Mr TUDOR EDWARDS said that cases with continuous expectoration of pus were often confused with bronchiectasis and went on until bronchiectasis developed Infusions were of two types Where a slowly forming and localized empyema formed the prognosis was usually good Where the pleural cavity was large and free from adhesions a severe infection was likely which might terminate fatally A drainage operation should always be carried out in two stages since there was a risk that adhesions already present over the abscess might tear if the patient coughed during the one-stage operation Removal of lung tissue by diathermization prevented the subsequent dissemination of emboli by sealing off the vessels Chronic bronchial fistulae generally complicated those cases in which operation had been unduly delayed Pneumolysis offered a promising line of treatment Lobectomy was of value in the treatment of lattice lung

In replying Dr YOUNG said that he was still unconvinced of the efficacy of artificial pneumothorax He thought Dr Burrell's simile of the man in a burning house was incomplete he might still be rescued by the bronchoscopist with his hose or by the surgeon with his axe He agreed that pneumolysis was likely to prove a valuable operation

DEAF MUTISM

The pathology of deaf mutism was the subject of a communication by Mr J S FRASER to the Section of Otology of the Royal Society of Medicine on February 5th

Mr Fraser had obtained from Professor F R Nager of Zürich some microscopical slides illustrating the changes in endemic or cretinic deafness so frequently seen in Switzerland In that country the number of deaf mutes is said to be 24 in 10 000 of the population whereas in Europe as a whole it is 8 in 10 000 The microscopical examination of the ear in these cases showed myxomatous thickening of the submucous tissues of the middle ear often filling up the window niches In one of Professor Nager's cases the malleus and incus were deformed and the long process of the incus and the head and posterior limb of the stapes were adherent to the facial canal In another the cochlear duct was dilated in the lower and collapsed in the upper part According to Professor Nager who believes that the condition arises about the sixth month of foetal life tuning fork tests show that many cretinic deaf mutes are really only hard of hearing but this degree of deafness in conjunction with feeble mental development results in deaf mutism The endemic form said Mr Fraser was only one of the groups of constitutional or congenital deaf mutism the other being the sporadic form well known in this country In this there were four subgroups—namely one in which there was aplasia of the whole labyrinth (a very rare condition) another in which there was malformation of the bony and membranous labyrinths a third with malformation affecting both the cochlear and vestibular apparatus and a fourth with sacculo cochlear malformation to which type about 70 per cent of cases of congenital or developmental deaf mutism belong Turning to inflammatory or acquired deaf-mutism Mr Fraser said that this might be due to trauma to congenital syphilis to labyrinthitis following purulent meningitis or to labyrinthitis following middle-ear suppuration With regard to the last he pointed out that middle ear lesions alone did not produce such severe deafness as to give rise to deaf mutism but if the otitis media invaded the labyrinth through the windows on both sides bilateral labyrinthitis was set up and if the child was very young deaf mutism resulted There were two views about the nature of the pathological changes seen in congenital syphilitic deaf mutism One view was that congenital syphilitic deafness was due to syphilitic meningitis and secondary neuro labyrinthitis the other that the condition was secondary to otitis media which in syphilitic children did not clear up but broke through the windows or invaded the bony capsule of the labyrinth and so reached the hollow spaces of the inner ear

Dr J KERR LOVE who has been engaged in an observation of deaf mutes in Scotland for forty years made some remarks on the subject of prevention He said that between 1891 and 1931 the population of Scotland had increased by one fifth but the number of children attending schools for the deaf had remained practically stationary (about 530) In 1891 however half these children had shown acquired deafness and half congenital whereas of the present children only 28 per cent showed the acquired form and 72 per cent the congenital He considered that the diminution in acquired deaf mutism was chiefly due to medical inspection and treatment in

schools The tonsils and adenoids operation was one of the chief means of lessening the amount of acquired deafness and Dr Love pointed out that this operation was now so general that presently at least a quarter of the population would be without tonsils and post nasal adenoids Syphilis was still an important cause of deaf mutism though proportionately less now than formerly The treatment of syphilis at present was largely a failure because there was no compulsory notification and no power to compel completion of treatment Nothing was being done to reduce congenital cases except by the deaf themselves to the extent to which they like other members of the community practised birth control A reduction from 5 5 in 1891 to 4 in 1931 had taken place in the average number of children in families in which congenital deaf mutes were born

Mr A D SHARP quoted some figures from the records of a deaf school which gave 60 per cent of the cases as congenital and 40 per cent as acquired but he said that there was a difficulty in assessing acquired cases owing to the reluctance of parents to admit that their offspring had been born deaf Of the congenital cases 34 per cent had no hearing whatever and 66 per cent some remnants of hearing The age at which the acquired condition had appeared varied from 12 months to 3 years The causes cited were pneumonia laryngitis otitis media measles scarlet fever whooping cough teething diphtheria and traumatism He had not seen a case of deaf-mutism in which the father and mother had been nearly related On this point Dr Kerr Love said that married cousins if they produced deaf-mutes did so because there was deaf mutism already in the family There was no objection to the marriage of cousins in itself but if any defect such as deaf-mutism were present in the family it was liable to be accentuated

Mr BRAYSHAW GILHESPY exhibited to the Section a gramophone record of the 'speech' of deaf mutes, reproducing what the child suffering from nerve deafness really heard The single vowel sounds were fairly identifiable by the listener the consonants much less so

THE COMMON COLD

At the meeting of the Section of Laryngology of the Royal Society of Medicine on February 5th a discussion took place on the common cold

Sir THOMAS HORDER in opening first defined what a common cold was not Paroxysmal rhinorrhoea was not a common cold nor was paroxysmal sneezing nor hay fever nor the acute nasopharyngitis which ushered in certain of the acute specific fevers nor probably was acute coryza although here the differentiation became less clear The common cold was an acute specific catarrh involving the upper respiratory tract and in the majority of cases the nose and pharynx it ran a benign course of three to ten days with pyrexia and certain constitutional symptoms An attack protected the patient against another attack for a short time only It was probable that there was a specific infection by a filterable virus, associated with secondary infection by catarrhal organisms readily isolated The term feverish cold or influenza cold though condemned by some writers was justified by the inadequacy of clinical differentia and still more by the incompleteness of bacteriological knowledge As to the site of infection although the condition was a simple rhinitis in the majority of cases at any rate at first yet the pharynx was often infected also and the larynx and trachea not seldom Some degree of sinusitis and Eustachian catarrh as well as some degree of conjunctivitis was part of the type case thus amply justifying the term cold in the head In some persons the nose almost or altogether escaped the infection spending itself on the pharynx, larynx or trachea With some patients the disease was trivial with others devastating—not only because of the severity of the local discomforts but also because of the depth of the toxaemia He was not sure that there were any facts to support the view that the acute rhinitis expressed itself in terms of a chronic catarrh Of chronic catarrhs there were plenty but he thought they differed in origin from the catarrh of the common cold He also doubted some of the predisposing causes often alleged such as heredity, rheumatism and gout Increasing years brought a compensating immunity There was a seasonal incidence January September and November being bad months for this as for catarrhal infections in general As to exciting causes while he could not admit mere cold or mere heat rapid changes in temperature seemed to be an adjuvant to the main factor which was some *materies morbi* of a specific kind probably of the nature of a filterable virus Certain general methods whereby the individual could lower his susceptibility to infection had been advocated, such as methods of dealing with the atmosphere breathed of cleaning and disinfecting the nasopharynx the isolation of the infected person and preventive inoculation It was generally assumed that hardness tended to resistance and softness to susceptibility but he was not sure that this stood the test of strict inquiry It was a common experience that a person after reaching some exceptional degree of fitness on a holiday went down with a common cold immediately on returning to work He was not convinced that the common cold shared with tuberculosis the character of being an infection of low resistance A tendency to infection must not be confused with the ability to stand the infection Fitness did not necessarily protect though with the secondary infections the weakly and tired patient fared worse than the fit It had been suggested that some systematic spraying of the atmosphere in institutions by an appropriate disinfectant might diminish the case incidence of catarrhal infections A very suggestive set of figures was published quite recently by Dr C J Wells concerning the use of formalin vapour which he employed in a boarding school of 140 boys the spray used in this experiment was a 10 per cent solution of formalin [1] It was generally agreed that there should be correction of any defects of the airway drainage of areas of focal sepsis and treatment of chronic catarrh but here again not all acute catarrhs which arose in persons suffering from chronic catarrh were examples of the common cold—many of them were entirely endogenous in origin Did any form of treatment of the mucosa of the nose and throat lower the susceptibility to infection? If so what method was most helpful? Should it be simple cleansing as by an isotonic salt solution, and should it be by spray or douche or was an antiseptic of greater value than the salt solution and if so what antiseptic? As to isolation of the patient the public was now educated to regard this as desirable if not always practicable The trouble was that the mild cases which might be as important from the point of view of contagion as the severe went free With regard to preventive treatment along the lines of antigen therapy the infecting agent had not yet been isolated and therefore only secondary infections could be dealt with Some patients who had been inoculated were satisfied others disappointed and a few declared that vaccines rendered them more liable to infection Curative treatment should always begin at the earliest moment He regarded it as an established therapeutic fact that it was possible to abort a common cold and not by remedies either specific or magical many of them were old wives cures but not to be despised He believed in the hot bath copious hot drinks a smart purge and a warm bed Whether later

[1] *British Medical Journal* January 9th 1932 p 60

measures took the form of the giving of cinnamon ammoniated quinine or camphor did not matter It would not be without precedent if a potent remedy were found for this complaint on chemotherapeutic lines Whatever the method chemotherapeutic or other the profession would welcome as the public would the defeat of the common cold as being the defeat of a common enemy

SIR STCLAIR THOMSON said that he was glad that the treatment was not standardized for everyone got his own cold in his own way varying according to his age temperament habits constitution and local and general predisposition The first principles were early diagnosis and treatment If every individual at the first threat of the common cold went to bed for from thirty six hours to three days in an isolated and well ventilated room he would not only cease to be a focus of infection but would curtail his attack and escape most if not all complications Warmth applied to the head was important The use of suction was of doubtful value Drugs in the early stage should only be used to relieve symptoms the comfort of the salicylates aspirin phenacetin and so forth would be within everyone's knowledge When the mucous discharge became mucopurulent it generally meant the invasion of the sinuses If the purulent invasion of one or both maxillary sinuses was diagnosed simple saline lavage should be employed If the common cold invaded the ear incision of the drum might be called for Briefly epitomized however local treatment should be a masterly inactivity with if required antral lavage The treatment of extension in the acute stage to the pharynx or larynx could only be symptomatic Voice rest and the avoidance of tobacco helped to prevent such extension and old fashioned drugs like potassium iodide ipecacuanha antimony and paregoric might be indicated He had spoken of rest in bed in a well ventilated room but an American observer had had the courage to report that he found many patients did better with the windows closed Here he gave some account of a recent investigation at Cornell University which showed that among 815 freshmen 60 per cent had colds two or three times a year 15 per cent never more than once a year and 25 per cent four or more times a year As between the extreme groups there was no marked difference in respect of smoking history of operation on nose and throat exposure to irritant dust or gas mouth breathing sleeping exercise draughts wearing of flannel next the skin goloshes daily cold bath tendency to perspiration chronic constipation or family history In fact all the old fetishes were—in the language of the country where the investigation was made— debunked This debunking was not to be regarded as a mere iconoclastic proceeding The overthrowing of old fetishes would direct attention to more promising lines of research The common cold was still three days coming three days staying and three days going According to the cynical remark of a French man a cold if left to itself ran for a fortnight but if treated it only lasted fourteen days! Possibly the common cold was one of the penalties we had to pay for the pleasures of civilization or it might be one of Nature's methods evolved by the mischiefs of civilization to vaccinate mankind from time to time against worse evils

DR JOHN FREEMAN said that the pathologist had not been able to discover enough of the pathological mechanism of the common cold to give adequate knowledge and assistance to his practising colleagues When the mechanism of the infection was sufficiently established that would dictate the prognosis until then the clinical classification was provisional and from the angle of the laboratory really insufficient for research Undoubtedly the common cold was an infection Bacterial infections could be proved in all colds the causal agents being pneumococci streptococci Pfeiffer's bacilli diphtheroid bacilli Friedländer's bacilli micrococci of the *catarrhalis* type staphylococci and others These occurred as little epidemics throughout the catarrhal season The certainty of these infections was not lessened by the fact that these same microbes also commonly infested the normal or subnormal mouth but in much fewer numbers The multiplicity of origin was a suspicious circumstance to medical men brought up with a firm belief in the simple clinical entity of the common cold The infecting bacteria were to be found scantily or not at all in the initial stages of a running cold Therefore many attempts had been made to find an earlier primary infection of all common colds and to degrade the bacteria into secondary infectors An invisible filterable virus was the favourite conception and Dochez had come near to the proof of this if he had not reached it If there was a virus which initiated the common cold was it always present and if so could the subsequent bacterial infections to say nothing of the other sequelae be correctly called the cold? If there was a virus it could not be extirpated or protected against until much more was known Meantime whether primary or secondary the bacteria did most of the damage and caused the chief risk to health The bacterial factor in colds could not be combated usefully by antiseptics without damaging the tissues or dislodged by douching without removing the lysogens Definite help could be given by removing surgical obstruction and by prophylactic and therapeutic use of vaccines Many of the statistics regarding colds were vitiated by the psychic element If a man thought that he had sat in a draught or had got his feet wet he was likely to get a cold not merely on account of the indiscretion itself but because of the apprehension he experienced and similarly if he had sprayed his rooms and taken other precautions the psychic factor told the other way

DR DAN MCKENZIE believed that the key to the position from the epidemiological point of view was the carrier By the carrier he did not mean a person with signs of suppuration There were many people who must be carriers but in whom there was no sign of disease in the intervals between the attacks In them the virus was being harboured and set up the disease the reaction of the system after a few days or weeks producing an immunity which lasted for a longer or a shorter time Vaccines he thought were disappointing SIR LEONARD HILL had advocated a Spartan prophylaxis—cold air cold baths and so forth—but that was the wrong way of treating the carrier As for the open window he had known many people who after having had a hot bath and gone to bed with an open window had precipitated an acute cold The hardening of the system might be quite useful for people not liable to these attacks but not for the carrier With regard to curative measures he had found the use of iodine in a bad cold effective

DR PATRICK WATSON WILLIAMS said that plentiful examples of the carrier were found in families where one child seemed to start most of the family colds in many cases the parents were a perpetual source of infection Among the factors which tended to cause a nasal catarrh to become an established infection were various anatomical defects It was common knowledge that the pathway of every epidemic of influenza was strewn with wreckage in the acute and chronic sinusitis and other sequelae the influenza lighting a blaze in the cold hearth of a latent sinusitis or bronchitis which did not die out While the ordinary acute common cold might be left to the usual measures of prevention and treatment those who were the subjects of chronic cold asthma chronic bronchitis and so forth might be usefully examined by the laryngologist to exclude or determine the existence of any generally operative source of infection located in the upper respiratory tract One remedy which he had found useful in

aborting a freshly acquired infection of a common cold was massive quinine hydrobromide, in doses of 12 to 20 grains given within a relatively few hours of contracting the cold Mr Herbert Tilley referred to conditions in which a severe cold was accompanied in the head by unilateral pain On examination in such cases the whole meatus was sometimes found to be *blocked with oedematous mucous membrane* Congestion and oedema in that situation with a drop of pus was practically pathognomonic of suppuration It was useful after anaesthetizing that region, to scarify it with the point of a fine curved scalpel If at the same time a fine cannula could be passed in the upper frontal sinus and the sinus washed out it would help to prevent damage by septic discharges Mr H G Bidford Russell mentioned the value in acute coryza or acute sinusitis of 10 per cent cocaine given as frequently as four hourly intervals with the idea of allaying the turgescence of the nasal mucous membrane

Sir Thomas Horder in reply said that he had not used iodine in the early stages of a common cold He had not had the courage to risk the patient's idiosyncrasy and he had some idea that it might produce difficulty in regard to the sinuses He could quite appreciate the rationale of the application of cocaine as Mr Bedford Russell had suggested

THE ENTERIC FEVERS

At the annual meeting of the Devon and Exeter Medico-Chirurgical Society held on January 21st with Mr Norman Lock in the chair Dr J R Harper read a paper entitled Some aspects of typhoid '

Dr Harper pointed out the comparative lateness in the recognition of typhoid as a clinical entity and on its long confusion with typhus But while true recognition of the disease was wanting until the middle of the nineteenth century the real nature of the infectivity of typhoid was not generally accepted even in the 'nineties , for even as late as 1894 Creighton in his *History of Plagues and Epidemics* denied the infectivity of the freshly passed urine and stools In striking contrast to this attitude, and of great interest to this particular society were the views expressed some forty five years earlier by Dr William Budd of North Tawton in Devonshire, on the nature and spread of typhoid Budd studied the disease under Louis in Paris and later became physician to the Dreadnought Hospital Greenwich There he himself acquired typhoid and his health having suffered severely resigned his appointment in 1839, and repaired to North Tawton to help his father in a general practice Just at that period there was a severe outbreak of typhoid in the town and the surrounding district, and, having regard to the housing and sanitary conditions it was not surprising that some eighty cases occurred between July and November (an account of this appears in Budd's book *Typhoid Fever* published in 1873) Dr Harper then traced Budd's career to Bristol where he was physician to the Royal Infirmary and lecturer on medicine in the medical school and showed how, profiting by his close research, first in Paris and then in the North Tawton epidemic he had become throughout the West of England the accepted apostle of the theory of the infectivity of typhoid Budd insisted first that typhoid was spread by infection and secondly that the infective agent was excreted in the faeces He went further than this in pointing to the spread of infection by milk and by water and emphasized the importance of not overlooking the tainted hands of those who wait on the sick and the danger of bedding and clothing infected by faecal discharges Certain passages in Budd's work on typhoid showed that he had anticipated by several decades the part played by the carrier

Dr Harper passed on to a short review of typhoid as it was known to day commencing with the various theories held as to site of infection While claims had been made for entry via the tonsils and lymphatics of the pharynx—supported by the frequency of tonsillitis in the incubation stage and the finding of bacilli locally—the intestinal portal received general acceptance Discussing the various types assumed by this disease, he dwelt on the ambulatory form, so productive of epidemics Although by no means of common occurrence fifty seven cases had been discovered in a French garrison in 1909 in a general combing out ' of suspects during an epidemic which had resulted in 142 admissions to hospital Dr Harper then illustrated the clinical aspects of the disease from personal observations made in the medical wards of a military hospital in France during the great war Various types had come to view owing to the fact that the uninoculated as well as with those who had had injections were admitted The former were mainly civilians employed on or allied with, Government service but of the latter some had received ' T V ' only (namely, those observed in the earlier period of the war), whilst the majority were protected against both *typhoid* and *paratyphoid* Charts were shown of many hybrid forms were anti typhoid inoculation had tended to mask the characteristic features Dr Harper paid tribute to the bacteriologists without whose skilled investigations it would have been impossible to place these infections in their true cadre Tachycardia leading to a long convalescence had occurred in about 5 per cent of the earlier war cases and seemed to have been more prevalent in the paratyphoid B group Remarking that in the uninoculated splenic enlargement and tenderness was positive in 70 to 80 per cent , Dr Harper stated that in the inoculated the spleen was not found to be enlarged in more than 28 to 30 per cent although tenderness in the splenic area had been common

The President congratulated Dr Harper on the mass of information conveyed in the paper, and especially for having brought forward matters of local historical interest Mr Lock gave his personal experiences of an attack of typhoid, and testified to the intense headache of the onset and of the extreme prostration during early convalescence Dr R V Solly speaking from many years' experience, remarked upon the steady decline in the incidence of typhoid in the South West of England, so that it was now almost a rarity In regard to agglutination he admitted that there were great difficulties and more so with the inoculated cases Dr Robb referred to the passage of the duodenal tube as an aid to diagnosis in ' carriers '

LARYNGOCELE

At the last meeting of the Section of Anatomy and Physiology of the Royal Academy of Medicine in Ireland with the president Dr C P Martin, in the chair, Sir William Wheeler showed drawings and lantern slides of a patient, aged 24 who had a swelling about the size of a hazel nut on the right side of the posterior portion of his tongue and a swelling under the mandible in the submaxillary region

The tongue could not be protruded and on any attempt to do so it deviated to the side of the tumour The patient stated that he had had the condition all his life His main trouble was a difficulty in making himself understood when speaking On palpating the protrusion on the tongue the finger dipped into the tongue muscles It was obviously not solid nor had it the resistance which would be suspected if it contained fluid When the swelling was invaginated into the tongue substance the protrusion in the submaxillary region became bigger and vice versa A needle was introduced No fluid was withdrawn Lipiodol was injected and

the x ray photograph demonstrated a sac in the tongue which communicated with the larger sac under the jaw The nature of the condition was not suspected It was intended after preliminary tracheotomy to ascertain its nature by removal and mobilization of the tongue under rectal anæsthesia At the commencement of anæsthesia the patient suddenly ceased breathing and could not be resuscitated No post-mortem examination was permitted

Sir William Wheeler offered his thanks to Professor A F Dixon for referring him to the literature and for explaining by comparative anatomy the real nature of the condition E H Bennett in the *Dublin Quarterly Journal of Medical Science* 1865 was the first to discover a human larynx in which there existed laryngeal pouches such as were found greatly developed in the higher apes Sir William Wheeler said there was little doubt in the case which he brought forward that the appendix of the laryngeal ventricle on the right side had extended through the thyro hyoid membrane in an upward direction behind the body of the hyoid bone to the floor of the glosso epiglottic fossa He could find no mention of extension of these extra laryngeal pouches into the tongue in the surgical literature They were normal in many apes but they extended downwards to the neck over the clavicle and even into the axilla Von Bergman however discussed laryngocele in connexion with swelling of the neck and mentioned a case in which sudden distension of the sac was followed by death from suffocation The extension of the protrusion through the thyroid membrane was normally downwards but Quain mentioned that the end of the appendix of the ventricle sometimes passes upwards Certain German writers had referred to the danger of sudden death The portion between the tongue and the submaxillary protrusion and the larynx was not demonstrated by the lipiodol as the latter did not enter the larynx but it seemed probable that the opening into the larynx was either very minute or of a valvular nature Sir William Wheeler had considered in the first instance the possibility of some branchial cleft anomaly but this was discarded owing to the involvement of the tongue

Professor A F Dixon said that he had suggested that this was a laryngocele because laryngocele was the only thing which formed the kind of swelling that was present Cervical cysts also sometimes occurred near the clavicle as well as higher up Schwemer's book on abnormalities gave numerous descriptions of specimens of laryngocele Many of these patients had died suddenly

The PRESIDENT said that since the thymus gland arose from the third branchial cleft and grew backwards he wondered if the thymus gland was connected with the increase in size of the tumour on the side of that gland

Mr F J HENRY said that he had had an opportunity of seeing this patient The possibility of the tumour being a branchial remnant had been discussed but it was soon found that this was not so He wondered if there was any likelihood of the tumour being of the nature of a cystic hygroma The consistency of the lump in the neck had suggested that it might be a lymphangioma but it had been found that it was not The swelling was resonant on percussion which confirmed the view that it was an air containing tumour He referred to the similarity between this case and cases of oesophageal diverticula which were supposed to develop as the result of increased tension inside the oesophagus

Sir WILLIAM WHEELER in replying said that he felt that the case was almost proved and might be regarded as one of laryngocele If a condition was diagnosed beforehand the proper surgery was to dissect down and tie off communication between the cyst and the larynx He thought it might be assumed that in this case there was a communication with the trachea which the injection of lipiodol did not show

Reviews

INTRACRANIAL PYOGENIC DISEASES

The book with this title by Dr A LOGAN TURNER and Dr F ESMOND REYNOLDS[1] is an important addition to neuropathology the result of nine years systematic research In *Pyogenic Infective Diseases of the Brain and Spinal Cord* published in 1893 Macewen left comparatively little for subsequent workers within the limits of clinical observation and gross morbid anatomy Recognizing this Turner and Reynolds have endeavoured to trace by means of the microscope the path of septic infection chiefly from the face and accessory sinuses of the nose but also from the ear to the interior of the skull Their main conclusions may be briefly stated thus They find no evidence of a spread by the lymphatic system which they believe to be anatomically impossible though some writers have suggested and even stated that the lymphatic system is the route of infection to the brain and leptomeninges

Infection may occur in one of three ways either by direct extension through loss of continuity in the bone or by the blood stream usually through a spreading venous thrombosis or by a special regional path of which the most important in the authors experience is the perineural sheaths of the olfactory nerve Their study of the venous infections is especially fascinating and they insist upon the point that if these are to be properly understood the occurrence of a progressive retrograde thrombosis in the afferent venous tributaries to the large sinuses must be recognized In this relation microscopical examination is essential It may for example be shown in this way from serial sections that infection of the carotid plexus may be a retrograde complication from a thrombosed cavernous sinus The authors explain also how a septic thrombosis may occur in both cavernous sinuses without any orbital manifestations

The care and precision with which the research has been conducted and the caution displayed in drawing conclusions from examination of the *pathological material* after the careful weighing of every possible interpretation must excite profound admiration The clinical histories are given in full together with the post mortem and pathological findings of each case and the volume is profusely illustrated with magnificent plates both of morbid anatomical specimens and of histological preparations Problems of surgical treatment as such have no place in this book but a scientific systematic research of the highest order is revealed and no oto-rhinologist no neurological surgeon no neuropathologist must neglect to absorb the knowledge so skilfully presented

GENETICS AND MEDICINE

It is hardly too much to say that Professor LANCELOT HOGBEN's book entitled *Genetic Principles in Medicine and Social Science* marks the beginning of a new phase in human genetics Following the rediscovery of Mendel's work there was a period of intense activity not only in general animal and plant breeding but in its applications to man Soon it became clear that the new science was growing more complex and specialized The small size of the human family and the slowness of human breeding made it appear that there was little hope of acquiring

[1] *Intracranial Pyogenic Diseases* By A Logan Turner MD LL D Hon F R C P Ed and F Esmond Reynolds M D D P M and H M R C P Ed Edinburgh and London Oliver and Boyd 1931 (Pp xx + 271 82 figures 21 of which are coloured 12 6d net)

Genetic Principles in Medicine and Social Science By L [illegible] Hogben D Sc London Williams and Norgate Ltd [illegible] ogert Ph D 239 7 figures 15s net) [illegible] Company 1931

any full knowledge of human heredity within a reasonable period During the past few years however, it has become more generally recognized that statistical methods can be devised by the use of which these difficulties may be largely evaded There is a new spirit of hopefulness It is felt that a great store of useful knowledge awaits discovery and that methods are available or can be made available for the purpose Various writers notably in Germany and Scandinavia, have produced important methodological work and during the short period that has elapsed since he left the field of experimental zoology, Professor Hogben has himself contributed findings of fundamental importance

This book is quite different from any other hitherto produced in this country and as far as we are aware, cannot easily be compared with any book produced abroad There is no exposition of genetic theory and no catalogue of inherited defects For these the reader is referred to other works As his title indicates Professor Hogben is more interested in principles and in methodology There is a full discussion of the approach to human problems by the study of twin resemblances and by that of the blood groups The chapter on genetic selection is searching and precise All who are interested in problems of population growth should read the chapter on that subject if only to appreciate the strength of the case that can be made against some widely accepted current theories

Probably, however the medical man will be most directly interested in the chapter that deals with the methods available for the study of simply inherited pathological conditions The medical reader will undoubtedly be encouraged to feel that if he has any cases of hereditary or familial disorders their publication will be of value even though many similar histories have already been described A hundred families are of more use than fifty and ten thousand are not nearly so instructive as twenty thousand There is no limit to the usefulness of recorded hereditary data, even though the writers have nothing new to say of clinical interest Not only are the largest possible numbers desirable but it is clear that in the past many records have been faulty and their value is severely limited by serious omissions The requirements in the recording of such data are simple and any writer who is in doubt will have no difficulty in securing competent advice

Professor Hogben successfully sustains his thesis Genetic principles are not only of value but can be readily applied both in the field of medicine and in that of social science The experimental worker the statistician and the clinician will realize if they have not fully realized before the magnitude of the service they can render to a rapidly expanding and practically important branch of scientific study

TREATMENT OF DIGESTIVE DISORDERS

The series of volumes which is being brought out by the professor of therapeutics in the Faculty of Medicine in Paris promises to give a complete and adequate survey of the best modern French views on treatment [1] His aim to weld together the clinical pathological physiological pharmacological aspects of therapeutics into some practical unity He and his collaborator have in this object admirably There is something language which lends itself to exact descrip it is astonishing to find how many facts into a single short but memorable as a description of the nature and cause of pain in gastric ulcer, we read 'Les douleurs vraies et les crises paroxystiques précoce tardives ou très tardives, sont habituellement la traduction d'un spasme gastrique ou pylorique lui meme determine par un ulcère' If any one should object that the presence of so many adjectives weakens the sentence it may be urged that each of them takes on almost the force of a substantive, or, in less able hands would have been expanded into whole sentences The various regions of the alimentary canal are discussed in order Occasional chapters are devoted to the consideration of symptoms such as oesophageal spasm, aerography, vomiting diarrhoea, and constipation or pain in stomach disease Others treat of drugs and their administration while the last chapter deals briefly but sufficiently with mineral water cures and spas It is a most readable book adequately but not lavishly illustrated, unfortunately it loses much of its value by having no index and a most reticent 'table of contents French books would be much more freely consulted in English speaking countries if their publishers would deign to index them

Traitement Medical des Affections Stomacales,[2] by LLOYD MEUNIER is a smaller and less ambitious book in which clinical, physiological and pathological considerations do not obtain so much space but the details of treatment are laid down with great precision Not only are drugs dealt with, but diet directions are very fully given and cooking details too These last are charming examples of economy in words combined with perfect intelligibility Altogether an efficient little book on novel lines

SURGERY OF TUBERCULOSIS

In *Die Chirurgie der Tuberkulose* [3] Professor CLAIRMONT aided by O WINTERSTEIN and A DIMTZA has brought together an account of the surgery of tuberculosis in all its aspects This volume of some 650 pages constitutes one of the most ambitious attempts yet published to place under one cover the surgery of a single disease or pathological entity as occurring in all parts of the body and comes as something of a novelty among the much commoner publications confined to the surgery of a single viscus The typical thoroughness with which such a formidable task has been achieved is indicated by the fact that no fewer than ten pages are devoted to tuberculosis of the heart chiefly of the pericardium The wealth of material at the University Hospital of Zurich has enabled the authors to draw upon their own experience of even the rarer lesions Although the bibliographies at the end of each section are extensive yet it is upon obvious first-hand knowledge that they have founded their opinions in every section short reports of actual cases in the clinic are given Lest the title should however prove misleading it must be explained that the book deals with the pathology clinical history diagnosis and prognosis of the disease in various situations Operative surgery as such is not included although the varieties of treatment in use are indicated in the case reports

There is little new or unorthodox in the essential matter of the book it is rather the completeness with which the field has been covered that commends it As might be expected (in view of the modern surgical interest in the subject) pulmonary infection receives a good deal of attention and there is apparently little difference from English practice in the choice of the numerous operative procedures The urogenital system is considered very

[1] *Maladies du Tube Digestif* Par ration du Dr Andre Lemaire figures 50 fr)

[2] *Traitement Medical des Affections Stomacales* Par Lloyd Meunier Medecine et Chirurgie Pratiques Paris Masson et Cie (Pp viii + 211 13 figures 22 fr)

[3] *Die Chirurgie der Tuberkulose* Von P Clairmont O Wintersteinn A Dimtza Berlin S Karger 1931 (Pp viii + 661, 360 figures M 63)

adequately (even including some four pages upon tuberculosis of the urethra) as also is the section upon bones and joints The illustrations of which there are 392 in the text are exceedingly good radiograms are well reproduced and the numerous colour plates are all that could be desired This is a book for the specialist in the subject and we doubt whether the most experienced will find any aspect to which reference is not made or any rare lesion which is not mentioned

HEADACHE

In his manual on *Headache*[6] Dr W H ROBEY has expanded his text in a somewhat liberal fashion He quotes not only diseased conditions of which headache is a feature but also others from which this symptom is absent and in instances not a few he enlarges on pathology and treatment far beyond the direct claim of the subject which gives the title to his book Nor is he less catholic in his quotations and references few if any authors have escaped his notice and hence it is somewhat depressing to read that on the interesting question of the tissue structures in which the pain of headache originates we are often little nearer the answer than were Galen and his students One of the lessons Dr Robey wishes to enforce is that while the patient requests relief from his headache the physician—anxious to afford this if possible—must not fail to recognize that behind the symptom there may lurk serious possibilities and that only when all of these are excluded by thoroughness of examination can a mere functional explanation be justified Naturally in a volume on headache migraine secures attention and here Dr Robey discusses many views adds an explanation of his own and recites numerous medicinal agents which by various authorities have been credited with therapeutic value like the rest of us however he has no confident specific to advance Though perhaps in some degree discursive and over expanded his book contains sound teaching for the junior practitioner it is readable and it supplies more than it's title would lead the student to expect

PHYSICAL EDUCATION

Dr J F WILLIAMS and Dr W R MORRISON have written a *Text Book of Physical Education*[7] under the conviction that it will help undergraduates and high school boys and girls to become intelligent with reference to the physical activities that play so large a part in their lives It is doubtful if the reader will share this conviction except perhaps in regard to very junior school children and these would be unlikely to read the book The information it gives is of an elementary character and deals mainly with personal hygiene training and development of team spirit and the proper attitude to sport Knowledge of these things is desirable but should be absorbed almost unconsciously by the normal boy or girl during everyday life at home and school

The authors give a brief survey of the development of physical education from its unorganized form in primitive life to its highly organized form in Roman and Greek States where it was used primarily to train youths for military purposes The enormous impetus given by Ling to physical education in Sweden was also with the intention of training men as soldiers America to day is fortunate in being able to consider physical education entirely dissociated from war aims The results of physical education are discussed from their corrective hygienic and physiological aspects as well as in relation to their psychological value Tables of standard weights and measures and many statistics of athletic records are given but we question the value of giving the length breadth and thickness of the heart at different ages to students who (so far as this book is concerned) have not received even the most elementary instruction in anatomy To quote from Chapter IV In physical education activities a variety of learnings take place The need for careful gradual progress in these learnings is pointed out The long chapter on the laws of training is mainly a laboured recital of things in which common sense would guide the normal individual who already knows how to keep himself clean A chapter entitled How to do the fundamental skills may arouse the reader's curiosity but leaves him still a novice What is of real value is the authors insistence throughout the book that physical education and sports ought never to be carried to the point of bodily exhaustion a fact not sufficiently realized by those in training and engaged in contests Figures 24 and 26 are admirable illustrations of the expression of an athlete during breathlessness and violent effort The other illustrations are mainly of athletes in action

NOTES ON BOOKS

In the sixth edition of *Recent Advances in Organic Chemistry*[8] Dr STEWART has adhered in general to the scheme followed in the previous edition The material chosen for discussion is chiefly the work on which the more modern development of theory has been founded Volume I presents a historical survey of accepted fundamental theories and proceeds to deal with types of compounds from which newer ideas of constitution and spatial configuration have steadily progressed Theoretical considerations are also presented in the first volume which are introductory to subjects discussed in the second The latter is a well written series of essays dealing with the more prominent achievements in modern research treated principally from a theoretical point of view The manner in which ingenuity has been successfull applied in new fields of investigation to solve particular problems is discussed in entertaining style In reading the book one is compelled to admire the insight of many who devised schemes of experiment having crucial significance and carried their experimental work to a successful issue These two volumes comprise not only a textbook for advanced students of organic chemistry but a presentation of modern methods of research and a stimulus to fresh progress in organic chemistry

Dr BOGERT'S *Nutrition and Physical Fitness* is still another of those works which bear witness to the interest taken by Americans in matters relating to diet and health It exceeds 500 pages in length and we find some difficulty in picturing exactly to what public it would make an appeal It is surely too lengthy and too detailed for the ordinary reader who feels an interest in the subject and merely wishes to inform himself in a general way about the science of dietetics On the other hand the problems treated are not viewed from a strictly medical standpoint and it is clear that the writer is not possessed of a medical training To judge from this and from other works of a similar kind diet presents in America problems which to the English reader are quite unfamiliar Housekeeping no doubt is in many ways more organized there than in this country and with organization there have perhaps come certain faults in particular a tendency to monotony and lack of variety of food

[6] *Headache* By William H Robey M D Everyday Practice Series London J B Lippincot Company 1931 (Pp xiii + 234 21s net)

[7] *A Text Book of Physical Education* By Jesse Feiring Williams M D and Whitelaw Reid Morrison M D Philadelphia and London W B Saunders Company 1931 (Pp 243 60 figures 12s 6d net)

[8] *Recent Advances in Organic Chemistry* By Alfred W Stewart D Sc In two volumes Sixth edition London Longmans Green and Co 1931 (Vol I pp xii + 429 Vol II pp xii + 452 21s net each volume)

[9] *Nutrition and Physical Fitness* By L Jean Bogert Ph D Philadelphia and London W B Saunders Company 1931 (Pp 554 64 figures 14s net)

which is not usually met with here The book itself consists of five parts The first three deal respectively with foods body requirements and body processes—they are in fact an epitome of the chemistry and physiology of nutrition The last two parts are concerned with meal planning and diets for special conditions

The eleventh edition has now appeared of Dr BURNETT HAM'S convenient *Handbook of Sanitary Law for the Use of Candidates for Public Health Qualifications* [10] The continued popularity of this work proves that the author has successfully met the need for a small manual summarizing under appropriate headings the whole of the law bearing upon public health as applicable to England and Wales

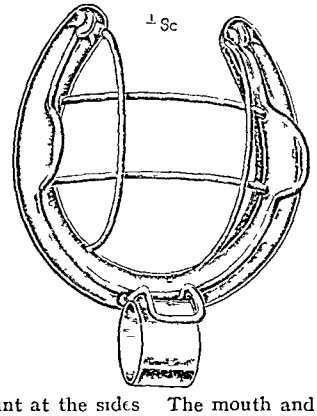
[10] *Handbook of Sanitary Law for the Use of Candidates for Public Health Qualifications* By B Burnett Ham M D D P H Eleventh edition London H K Lewis and Co, Ltd 1931 (Pp xxvi + 366 7s 6d net)

PREPARATIONS AND APPLIANCES

ANAESTHETIC MASK FOR OPHTHALMIC USE

Dr R BURNS (Sunderland) writes

The mask illustrated herewith consists of a hemispherical wire dome on a horse shoe shaped gutter There is no ∩ wire at the nasal end In practice any mask which straddles the nose is in the surgeon's way particularly during operations in the lower lid and lachrymal sac regions it invariably gets pushed off the nose allowing too great an air leak This mask rests just at the end of the nose The gap between the ends of the horse shoe gutter is bridged by the lint which is intended to be worked up with the finger into a hood This hood covers closely the lowest half inch or so of the nose and can be accommodated to any average sized nose by merely working up with the finger or pulling on



the lint at the sides The mouth and nostrils are thus closely covered and the mask is as far from the operator as possible

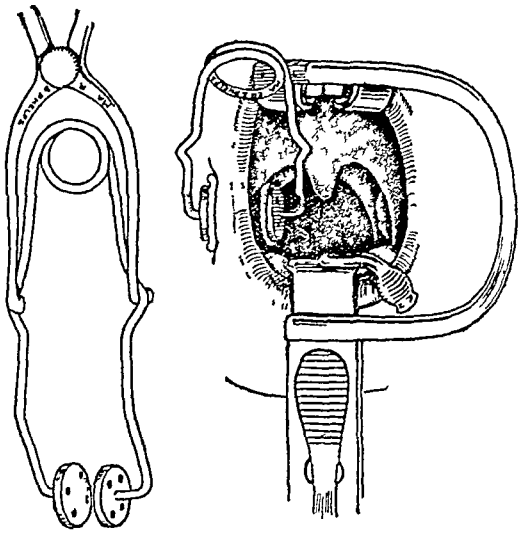
Additional points are (1) Loops in the clamping wire at the sides to allow of the passage under the lint of a tube from the oxygen cylinder or Junker's bottle The idea is that of Shipway's mask but the soldered in metal tubes were not thought necessary as a medium sized rubber tube is clamped quite tightly enough to prevent accidental falling away (2) A ring handle modified from Dunderdale's is fixed to the chin end of the gutter

The makers are Messrs Down Bros to whom I am indebted for practical advice and the taking of much care and trouble

A TONSIL HAEMOSTAT

MR CHARLES BENEY (London W) writes

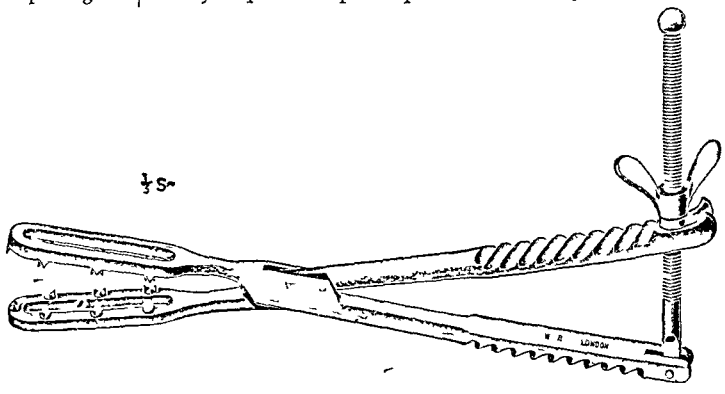
The instrument shown in the accompanying figures consists of a simple spring clamp with end plates to which swabs are attached and a handle or applicator It is intended that several of these spring clamps with swabs attached should be sterilized with the dressings The main difference between this haemostat and others lies in the detachable handle so designed that there will be nothing to get in the way of further operative work in the throat This haemostat can be applied without the aid of the handle although the special handle facilitates application The pressure exerted is quite sufficient to control any ordinary haemorrhage after the removal of the first tonsil in this way time is saved and unnecessary ligature of vessels avoided The cost is inconsiderable compared with other more elaborate haemostats



This instrument has been made for me by Messrs Mayer and Phelps 59 New Cavendish Street London W 1

CRANIOTOMY FORCEPS

Dr MILLICENT VERF WEBB (Women's Medical School Agra U P India) writes Messrs Down Bros have recently made at my request a special pair of craniotomy forceps designed



to meet the requirements of those who practise obstetrics in India The chief points to which I would draw attention are (1) its lightness and small size enabling it to be applied in a small pelvis, (2) the ease of application owing to its fixed joint (3) the firm grip obtained by the special teeth—these were suggested to me by Rivett's vulsellum

I wish to emphasize the point that this forceps is designed as a tractor it is not intended for use in crushing the head

The majority of cases even in India can be delivered after perforation and washing out the brain if a firm grip can be obtained In Agra and the neighbouring district the people have learnt the advantages of Caesarean section and craniotomies are comparatively rare But on the occasions when I have used it I have been more than satisfied with the advantage of this forceps over any other I have tried

I would suggest two small improvements in future models (1) that shoulders to each blade would give a better pull and (2) that a small fixed knob at the end of the rod on which the fixing screw runs would prevent the loss of the screw

VIYELLA SHEETS

For the nursing of rheumatic and other cases where woollen bedclothes are thought desirable Messrs Wm Hollins and Co Ltd manufacture viyella sheets in five sizes and nine colours and viyella pillow cases (21 in by 32 in) in colours to match Sample sheets examined by us were very light warm and agreeable to the skin

British Medical Journal

SATURDAY, FEBRUARY 13th, 1932

THE SPAHLINGER VACCINES

The publication in our last issue of a memorandum supplied by M Henri Spahlinger [1] outlining the principles on which his method of vaccination against tuberculosis in man and cattle is based has naturally aroused a considerable amount of interest Since before the war M Spahlinger has received much publicity as the result of his claims to have discovered certain methods of preparing products from the tubercle bacillus which could be used directly or indirectly in the successful treatment of tuberculosis Hitherto these methods in opposition to the code generally accepted by medical scientists have been kept secret and in failing to reveal the nature of a remedy for one of the most lethal diseases from which civilized man suffers, M Spahlinger laid himself open to justifiable criticism

Let us consider the actual principles that M Spahlinger has now enunciated, and the applications that may be made of them The whole burden of his argument is insistence on the strictest antigenic specificity of the organisms used in the preparation of his vaccines Every endeavour must be made to incorporate in the vaccine tubercle bacilli as nearly as possible identical with those which give rise to disease in the species of animal it is intended to protect For this purpose human tubercle bacilli designed for vaccination of the human subject must be grown outside the body only on media prepared with specific human protein such as defibrinated blood serum and ascitic or pleural fluid and must neither be cultured on other media such as egg or bovine serum nor be passed through the body of another animal Minor points consist in the exclusion of oxygen in the preparation of suspensions and in allowing the organisms to die a natural death though it appears that traces of formol may be employed to hasten this end

Twenty years ago when any strain of organism within a given species was generally regarded as being satisfactory for the preparation of a vaccine M Spahlinger s assertions would have attracted more attention but since then the doctrine of antigenic specificity has become so firmly implanted in immunological teaching that they are robbed of the novelty which they might previously have possessed Our knowledge of the antigenic structure of the tubercle bacillus is very incomplete and we do not know as we do with certain other species of bacilli which portion of the antigen is responsible for the development of the specific antibodies It may be that the method advocated by M Spahlinger is peculiarly suitable for the production *in vitro* of the antigenic constituent which is most concerned with an appropriate immunological response but it must be pointed out that there is at the moment no published evidence to indicate that the method rests on any firmer basis than that of empiricism Incidentally it may be remarked that the method of protective vaccination put forward by M Spahlinger is almost diametrically opposed in principle to the method of vaccination with B C G put forward by Professor Calmette and it is very difficult to imagine, if the principles upon which they are respectively based are correct how both of them could be effective In the preparation of the Spahlinger vaccine the strictest antigenic specificity is demanded necessitating in the case of man the use of a strain isolated directly from human tissues and maintained on specifically human culture media In the preparation of the B C G vaccine a strain of bovine bacilli is used isolated from cow s milk about thirty years ago and kept on a glycerin-bile-potato medium under conditions which according to M Spahlinger would presumably be fatal to the preservation of any antigenic specificity

The interest shown particularly during the past few years in M Spahlinger s work has been largely centred in the hope that he had found a method of preparing an antiserum suitable for the treatment of tuberculous patients In his present communication, however there is no mention of such a serum The products described are vaccines which are said to be of value for preventive and therapeutic purposes A statement of this kind requires definite evidence to support it The therapeutic treatment of tuberculosis by vaccination is, on general grounds not likely to find more than a restricted sphere of usefulness and unless specific antiserums can be prepared in animals by injection with one or other of the Spahlinger vaccines it is doubtful whether much hope can be held out to tuberculous patients If it is mainly intended for the prevention rather than for the treatment of tuberculosis what class of person is to be considered suitable for vaccination? We have already discussed this question in connexion with B C G It is generally admitted that no useful purpose is served by vaccinating persons who have already come into contact with the tubercle bacillus and have developed a positive tuberculin reaction Since in the large towns of Europe and the United States a very high proportion of children who reach school-leaving age react positively to tuberculin it is clear that the use of a vaccine must be restricted very largely to infants and young children The mortality from tuberculosis in infancy however is in this country so low constituting only about 1 per cent of deaths within the first year of life that insistence on antituberculous vaccination of all infants would certainly meet with considerable opposition If these premisses are correct it follows that the number of classes in the population for whom this type of vaccination would be suitable is extremely small Briefly, it might be considered valuable for infants of parents with open tuberculosis condemned to be brought up at home and for tuberculin-negative adults such as a small proportion of probationer nurses who are likely to be exposed in hospital or sanatorium to heavy tuberculous infection

Should it be considered desirable to give the vaccine a trial either in human beings or in animals we would

[1] *British Medical Journal* February 6th 1932 p 232

enter a very strong plea in favour of this being carried out as part of a deliberate organized plan drawn up by a committee of carefully selected men, one of whom at least should be a medical statistician B C G has now been used more or less indiscriminately for about eight years and we are still ignorant of its possible value in protecting against tuberculosis If M Spahlinger's vaccines are to be tested let us at least be spared the wasted time energy, material, and enormous literary output of comparatively valueless records that characterize any unorganized attempt to solve one of the most difficult of biological problems

THE CAMBRIDGE MEDICAL SCHOOL

All who are interested in medical education will enjoy Sir Humphry Rolleston's admirable biographical history of the Cambridge Medical School,[1] but to those who were privileged to share in the early summer of that school it will have the added attraction of romance Loyal alumni can hardly read the story of its long winter without some feelings of shame, and may be tempted to skip the pages till the record of the brilliant springtide of the latter half of last century is reached But now that the success of the school is so well established they ought to be able to read that story without flinching, while feeling thankful that they knew it under brighter auspices

Thomas Linacre was the founder of English academic medicine , in 1518 he persuaded Henry VIII to constitute the Royal College of Physicians, and six years later, just eight days before his death, founded lectureships at both Oxford and Cambridge But while his London enterprise flourished, Linacre's university gifts were sadly mismanaged for centuries In 1540 Henry VIII established five Regius Professorships at Cambridge that of physic being one Sir Humphry remarks that, although this should have ensured a living school of medicine there, the results were most disappointing, because, while caring for the needs of the mind the university atmosphere was conservatively hostile towards those of the body Medical students who wished to get real teaching were obliged to seek it elsewhere, as Harvey, Caius, and others did at Padua, and none of them when they came back to England founded a school at Cambridge The treatment meted out to Caius in spite of his magnificent benefactions, makes painful reading Glisson, the outstanding Regius Professor of Physic in the seventeenth century, though occupying the chair for forty-one years, was largely an absentee Medical teaching, such as it was, from the birth of the university until the nineteenth century, consisted in the reading and expounding of Hippocrates, Galen, and Aretaeus and was devoid of the experimental method in which Harvey could have led the way And this in spite of the fact that in 1705 Richard Bentley the turbulent Master of Trinity overrode his senior fellows and established a physiological laboratory in the College where Stephen Hales the discoverer of blood pressure, carried out experiments, after a sound training in Newtonian physics But little else stirred the general stagnation It is astonishing to learn that even as late as 1870 only two M D 's and seven M B 's were conferred, while in 1877 the four examiners passed five candidates

Sociologists tell us that the renaissance of a nation is always heralded by the outbreak of an "heroic age" It is generally assumed that it was the advent of G M Humphry to Cambridge which was responsible for the rebirth of its medical school, and he certainly was an heroic figure But our author points out that foundations had been quietly laid by John Haviland, who was Regius Professor from 1817 to 1851, ably seconded by Sir George Paget, who became Regius in 1872, when he was already 63 Humphry, a Suffolk man, was apprenticed at the early age of 16 to the well known surgeon John Green Crosse at Norwich, and subsequently entered St Bartholomew's Hospital where he came under the influence of the famous Peter Mere Latham, whose emphatic style of teaching he adopted On October 31st, 1842, when only 22 years of age he was, on the recommendation of George and James Paget, elected surgeon to Addenbrooke's, a post he held for fifty-two years Within two months he had obtained permission to deliver clinical lectures at the hospital From 1848 he was responsible for the teaching of anatomy, becoming professor in 1866 His energy was terrific Besides teaching surgery and anatomy he found time from the demands of a busy practice to pour out a constant stream of papers on anatomical, pathological and surgical subjects, which secured his election as F R S in 1859 His ambition was to make Cambridge a complete school of medicine, and Addenbrooke's Hospital was largely rebuilt from plans he prepared On the site where the Leys School now stands he established a hostel for medical students to enable those of small means to come to the university But his very success in drawing students made such a scheme impracticable There was not the clinical material available, and the governors of Addenbrooke's have always had a jealous eye to preserving the identity of their institution , so much so, indeed, that it was not until 1900 that the Regius Professor of Physic, as such, had any rights there In 1883 Humphry resigned the chair of anatomy and offered to become professor of surgery without stipend, a post he held till his death in 1896 at the age of 76 He was knighted in 1891 One can see him now, with his glittering hawk like eye, ready to pounce on ignorance and sloth, but equally ready to help A born teacher, "magnetic and Socratic," innumerable anecdotes cluster round his name

Humphry keenly advocated the establishment of a chair of physiology, but there were delays Here again, as in 1705, Trinity College came to the rescue, and on Huxley's *recommendation* brought Michael Foster from University College London, as Praelector and Fellow No more fortunate choice could have been made Although at first his only laboratory was a corner of the Philosophical Library, he rapidly gathered a brilliant

[1] London Cambridge University Press (10s net)

band of students round him W H Gaskell who had graduated as a Wrangler seeing a notice of a lecture to be given by Foster strolled in to hear it That determined his future career with what enormous consequences to English physiology everyone knows J N Langley entered St John's College the year after Foster's arrival and after gaining a first class in the Natural Sciences Tripos succeeded Newall Martin as his demonstrator Sir Humphry Rolleston remarks

It can be said of few men that their work has never been upset, but so careful in his observations and so much on the look out for fallacies was Langley that this verdict on his work has frequently been passed by his peers ' In 1903 he succeeded Sir Michael Foster in the chair of physiology which had been established in 1883 Gaskell said of Foster He was a discoverer of men rather than of facts and he worked for rather than at, physiology ' Sir Humphry rightly adds It is difficult to estimate how many undertakings and men's lives were determined and directed by his advice in his far-reaching spheres of influence To mention only those no longer with us such men as Frank Balfour Milnes Marshall Adam Sedgwick Francis Darwin Sheridan Lea Howard Vines Hugh Anderson and Rivers who have played no inconsiderable part in scientific teaching and advance were all Foster's students or helpers

The triumvirate of Paget, Humphry, and Michael Foster laid the firm foundations of success but we agree that Alexander Macalister's share in building thereon has not been sufficiently realized He held the chair of anatomy from 1883 till his death in 1919 , a great anatomist he took all learning for his province Space does not allow us to speak of pathology—with Roy Kanthack Sims Woodhead and Adami as its exponents —or of the great work going on in the school to day But no account however brief must omit to do honour to the memory of Sir Clifford Allbutt Regius Professor from 1892 to 1925 in whose time the Cambridge School of Medicine reached its full flowering Scholar and physician he stands for all that is highest in the traditions of the medical profession When Allbutt passed away full of years and honours it was to Sir Humphry Rolleston that the school looked as his natural successor That he also is in the succession of scholarly physicians this book proves

TREATMENT OF ADDISON'S DISEASE BY CORTICAL EXTRACT

Seventy odd years have elapsed since Addison described the disease which bears his name Subsequent workers have found little to disagree with in his original thesis but many must have demurred when they read his statement The chief difficulty that remains to be surmounted by further experience in this I fear irremediable disease is a correct and certain diagnosis The word *irremediable* was the chief difficulty After Oliver and Schäfer had demonstrated in 1894 the physiological properties of medullary extracts and Stolz had synthesized adrenaline in 1904 it was hoped that the remedy had been found The hope was not confirmed It was shown later that destruction of the suprarenal cortex was incompatible with life, and interest shifted from adrenaline to gland preparations In 1920 Dr A L Murhead was admitted to the Mayo Clinic suffering from Addison's disease He was given capsules of dried suprarenal substance and subcutaneous and rectal injections of adrenaline The temporary improvement produced by these measures led to their being adopted with various modifications, as the best line of treatment Since then it has been known as the Murhead treatment Meanwhile Hartman and his co-workers, and Rogoff and Stewart have produced cortical extracts with which they have been able to keep suprarenalectomized animals alive In 1930 Swingle and Pfiffner published the results obtained by the use of an aqueous extract of the adrenal cortex In a review of *A Clinical Study of Addison's Disease* in our issue of November 21st 1931 we suggested that the effects of this extract in Addison's disease might be compared to those obtained by insulin in diabetic coma Dr S Levy Simpson[1] has recently published an account of six cases treated by cortical extract Three of these patients died one had severe anaemia, another influenza and the third diabetes mellitus as complications Two of the three surviving patients were almost moribund at the beginning of treatment One of these was admitted " in a moribund delirious condition ' On the fourth day of treatment she ate eggs and bacon which she had not been able to touch for some months ' Sufficient clinical evidence has now accumulated to prove that an extract has been prepared from the suprarenal cortex which is as efficacious in ductless-gland therapy as are thyroxine and insulin Addison's disease however is an uncommon malady but the extended use of a cortical hormone in conditions where suprarenal inadequacy is suspected should open up a new field of research

FUNCTION OF POSTERIOR PITUITARY LOBE

During the last decade research has revealed more and more the extraordinary complexity and importance of the functions of the pituitary gland Attention has been chiefly directed to the anterior lobe because although the posterior lobe contains a variety of active principles of remarkable pharmacological potency and interest yet it is difficult to assign to it any definite physiological function In a recent series of papers Harvey Cushing[2] has brought forward significant experimental evidence bearing on the normal functions of the posterior pituitary Having injected pituitrin into the lateral ventricle of the human brain he discovered that the effects produced were totally unlike those following subcutaneous or intravenous administration Pituitrin given by the latter routes causes a striking pallor of the skin and mucous membranes and an increased activity of the colon which usually ends in defaecation Pituitrin given intracerebrally, however results in vasodilatation sweating nausea and occasionally vomiting These physical changes are identical with those accompanying the injection of pilocarpine either subcutaneously or into the brain it is interesting to note that they are produced by ordinary surgical pituitrin but

[1] *Quart Journ Med* January 1932 Addison's Disease and its Treatment by Cortical Extract by S Levy Simpson

[2] H Cushing *Proc National Academy of Sciences* 1931 xvii 163 and 239

not by the partly purified products oxytocin and vasopressin The phenomena observed after the intraventricular injection of pituitrin are abolished by atropine, and do not occur in cases in which the hypothalamus has been injured by tumour or hydrocephalus Cushing puts forward the hypothesis that the posterior lobe of the pituitary secretes into the ventricle of the brain thus stimulating some parasympathetic centre in the hypothalamus He suggests, also, that the relation between the posterior pituitary and the parasympathetic system is analogous to that between the adrenal medulla and the sympathetic system The experimental facts adduced and the hypotheses advanced in these papers, are obviously of quite exceptional interest and importance

STATISTICAL METHODS

Even as recently as twenty years ago most biologists regarded the use of statistical methods as restricted to the analysis and description of large masses of data Within the field of medical science for instance, it was recognized that demography, and, to some extent anthropometry, were proper objects of statistical study but certainly very few laboratory workers thought it advisable to use any but the most primitive of statistical tools in their investigations This state of affairs has been entirely changed The primary impulse was due to Professor Karl Pearson to whom statistical science owes more than to any other man, living or dead not even excepting Francis Galton and the late Professor Tschuprow But the publication of Mr Udny Yule's classical textbook in 1910 and the theoretical and practical researches of Dr R A Fisher have been factors of great importance Now very few laboratory workers can afford to neglect the statistical calculus Unfortunately but quite inevitably the application of statistical methods to the interpretation of small samples of data—the usual material of the laboratory worker—involves the solution of difficult and delicate problems of a mathematical kind It is hard for a textbook writer to steer a middle course between an exposition only intelligible to a student well versed in technical mathematics and a dogmatic way of writing which is irritating to an intelligent reader Mr Tippett's work, *The Methods of Statistics*,[1] is an attempt to steer such a middle course, and, in our opinion he has attained a very fair measure of success In the first three chapters what one may call the elements of "orthodox" statistics are expounded on normal lines, in the remainder Dr Fisher's methods are given special attention, and it is probable that most biological readers will find Mr Tippett's book rather easier reading than Dr Fisher's own work, *Statistical Methods for Research Workers*, although it must not be imagined that it in any way supersedes the latter volume We think that the careful reader of Mr Tippett's pages will not be likely to fall into any of the numerous pitfalls which yawn before the feet of those who apply statistical methods to small samples and there are several very useful general warnings—for example, on pages 54 et seq —respecting the rash computation of odds against particular happenings A criticism which might be passed is that the author's outlook is purely insular The name of Tschuprow is not to be found in his bibliography, and a perusal of that great investigator's little book on the theory of correlation might have led Mr Tippett to make a clearer distinction between stochastic and functional relations than the paragraph on pages 117 and 118 contains He also does not seem to be aware that the method of successive approximation to the terms of a polynomial, which he attributed to Dr Fisher, was published more than seventy years ago by Chebysheff, and that Dr Isserlis gave an account of the methods of that Russian mathematician quite recently in *Biometrika* (1927, xix, 87) Dr Fisher is not the only modern re-discoverer of the method Dr Esscher of Lund also published the formulae independently in 1920 Matters of this kind are however of little interest to laboratory workers In our opinion Mr Tippett's book should be a useful supplement to Mr Yule's work Armed with these two volumes the laboratory worker will be well equipped

[1] *The Methods of Statistics* By L H C Tippett M Sc London Williams and Norgate Ltd (15s net)

SANATORIUM TREATMENT

Once more, from an authoritative source, comes the often reiterated exhortation that it is only worth while sending the early case of pulmonary tuberculosis to sanatorium Thus in a recently published pamphlet[1] on their experience of the King Edward VII Sanatorium at Midhurst, Dr Trail and Mr Stockman advise "the desirability of concentrating upon those cases which are in the early stage, or only moderately advanced" All sanatorium reports on after-histories show the infinitely superior results obtained with early, as compared with advanced, cases when these are considered in bulk Does it need much perspicuity or research to arrive at this conclusion? Is it not true of every disease? And what is more important, has the right lesson been learnt from this fact? The early case responds well to treatment and is even curable, the slighter the lesion the better the prognosis Therefore patients with early pulmonary tuberculosis merit the most strenuous and thorough treatment If they can and will go through a sanatorium course in a spirit of co operation, and will carry its lessons home with them they have had the best advice and treatment But if the individual can't or won't submit to a sanatorium regime, is he not perhaps one of those for whom a perfect result can be obtained by domiciliary or private treatment, provided it is carried out with intensity and skill? This is certainly a feasible if more difficult and more risky line of treatment But what of the man with the gross lesion? To him, at any rate, his disease may appear "early" Surely he must not be treated or advised on "bulk" conclusions It is true that in bulk his type shows a poor return for time and money spent, but individually an excellent result may often be obtained For this type treatment in a sanatorium is not a counsel of perfection but an unavoidable necessity This is no argument for clogging beds by the pernicious habit of sending the chronic advanced case from one sanatorium to another —the "pass him along to someone else" attitude—but rather a suggestion that the recently diagnosed case, even though advanced may be quite suitable for sanatorium on trial No sanatorium should be

[1] A Report upon the Experience of the Patients of the King Edward VII Sanatorium Midhurst with Particular Reference to their Mortality after Treatment By Richard R Trail M C M D F R C P and George D Stockman F A I F S S Published by the Council of the Sanatorium (2s)

ashamed of having many such patients under its care to many of whom it will have given life and health nor (though this opens up a larger problem) should its efficiency be judged by the late after-histories of its patients

MEDICAL EDUCATION IN THE SUDAN

The third report of the Kitchener School of Medicine Khartum, covers the three years 1928–30 and describes the steady progress that has been maintained The students who graduated in this period are now carrying on useful work in the Sudan and their success has encouraged more boys of the better type to enter the Gordon Memorial College The completion at the end of 1928 of the new medical research laboratory did much to facilitate the teaching of pathology and the co ordination of work there with that of the hospital and medical school An appeal is made for financial help for the provision of an adequate museum because the higher education of Arabs is much handicapped by their inability to grasp in pictorial form the subject-matter of their reading—a defect largely due to the circumstance that picture books are but little used in the instruction of Arab children Sir Robert Philip and Mr R Dolbey who were assessors in the final examination in 1928, commended the candidates and expressed optimism about the future success of the Kitchener School of Medicine The annual report of the Gordon Memorial College for the year 1930 opens with a warm tribute to the late Sir Andrew Balfour, who had been connected with the College almost from its inception At present the number of boys is 555 and no further expansion is likely for many years The quality of the teaching has risen in all departments the only unfavourable feature of the situation is the difficulty of providing suitable work for students at the end of their curriculum owing to the general depression which prevails as much in the Sudan as in other parts of the world

THE BRITISH INDUSTRIES FAIR

The British Industries Fair the eighteenth of its series is again to be held at Olympia London and at Birmingham opening on February 22nd The bulkiness of the advance catalogue and the printing of the index in nine languages stoutly proclaim an optimism in the face of current depression and a faith in the future of export trade We are informed that there will be well over two thousand exhibitors in all that the floor space devoted to the fair will amount to thirty acres and the stand frontage will run to sixteen miles An analysis of the exhibits at Olympia which covers the 'lighter trades' is rather interesting Sixty firms are showing drugs and pharmaceutical preparations but some eight of these concentrate their efforts on patent medicines and more than twenty others on perfumes and essences Nearly twenty of the exhibiting firms however make analytical and research chemicals their chief stock-in-trade and seventeen others specialize in disinfectants and a dozen in dyes and intermediates The section concerned with medical and surgical instruments and appliances does not appear to be thoroughly representative Only seven firms intend to show electro-medical and x-ray apparatus In laboratory instruments and equipment however British enterprise is more to the fore, and a large number of chemical and analytical apparatus, balances and weights microscopes and other optical devices will be seen Some twenty firms also show hospital and invalid furniture We do not know whether the catalogue of the British Industries Fair will ever be consulted by the future student of social history but if so he may find it interesting to record his impression that in the fourth decade of the twentieth century the field of manufacture which British traders found it most worth while to cultivate was sports goods and that to judge from the array of exhibits cosmetics were far more popular than music, and the cinematograph film than the cradle

THE B C G. TRIAL AT LÜBECK

After a trial which began on October 12th 1931 and continued for more than seventy sittings judgement has now been delivered From the report published in the *Times* of February 8th we learn that Professor Deycke chief physician to the Lubeck General Hospital was sentenced to two years imprisonment, and Dr Altstaedt, head of the Lubeck Health Department, to fifteen months imprisonment for responsibility for the deaths of sixty-eight children and the infection of 131 others with tuberculosis Professor Klotz head of the Children's Hospital and Nurse Schutze, who acted as laboratory assistant were acquitted The court held that the culture of B C G obtained from the Pasteur Institute had either been replaced in error by or contaminated with a human strain of tubercle bacilli and that this had occurred at Lubeck through the negligence of Professor Deycke and Dr Altstaedt both of whom knew that virulent bacilli were being used in the laboratory

ROYAL COLLEGE OF PHYSICIANS

The Milroy Lectures before the Royal College of Physicians of London on the role of the haemolytic streptococci in infective disease will be delivered by Professor Cyril Okell on February 18th 23rd and 25th The Goulstonian Lectures on the pathology and treatment of anaemia will be given by Dr L J Witts on March 1st 3rd and 8th Dr C E Lakin will deliver the Lumleian Lectures, on the borderlands of medicine on March 10th, 15th and 17th The Oliver-Sharpey Lectures on the relation of light to nutrition will be given by Dr Harriette Chick on May 3rd and 5th and on June 2nd 7th and 9th Dr J W McNee will deliver the Croonian Lectures on the liver and spleen their clinical and pathological associations The lectures to which any member of the medical profession is admitted on presentation of visiting card will be given at the College Pall Mall East at 5 p m on each day

We have to announce with regret the death on February 7th of Mr William Billington honorary surgeon to Queen's Hospital Birmingham and professor of surgery in the University of Birmingham

Dr William Rees Thomas has been appointed a Senior Commissioner of the Board of Control under the provisions of Section 11 of the Mental Treatment Act, 1930

Nova et Vetera

BYGONE MEDICAL OBITUARIES

We have it on the authority of no less a person than Mr Walter Shandy of Shandy Hall that the near approach of death has made little alteration in the behaviour of some great men Vespasian died in a jest upon his close stool Galba with a sentence, Septimus Severus in a dispatch Tiberius in dissimulation, and Caesar Augustus in a compliment—I hope twas a sincere one quoth my uncle Toby — Twas to his wife, said my father Mr Shandy's last example is not quoted here in view of its indecency

Having always been interested in the biography of the profession I took the opportunity some years ago to copy out the death and marriage notices of medical men contained in the *Gentleman's Magazine* between the years 1731 and 1845 These extracts show some odd causes of death It is of course a well known fact that a doctor from the nature of his calling runs risks to which other sections of the community are less exposed Many a man has died as the result of a post mortem or dissection wound In the years of epidemics such as cholera it is noteworthy how large a number of doctors died of this disease Many an army surgeon has been killed in action but it is a fact that during the Crimea more medical men died in the base hospitals than on the field of battle Naval surgeons as well as civilians have been drowned and it should never be forgotten that a member of the profession met his death in the sinking of the troop ship *Birkenhead*

In 1813 an army surgeon was basely murdered by some of the crew of the *Asia* after she had foundered at sea and while the survivors were in a boat Even so late as the year 1841 an Edinburgh M D was killed in a duel another at an earlier date was murdered in Virginia, while in 1795 a Lincolnshire surgeon was robbed and murdered In 1843 an unfortunate doctor was eaten by a crocodile while serving on a mission to Abyssinia

In the year 1851 a doctor in the Midlands came home after a long round in stormy weather and fell dead in his room The crowner's quest brought in a verdict Died by the visitation of God from exhaustion' In 1738 a Dublin physician died of a twisting of the guts for which he had taken quicksilver without effect at post mortem examination, in one of his guts was found an excrescence of three pieces of flesh the smallest the size of a hen's egg and resembling the flesh of the liver In the earlier years many died of obscure diseases such as are called gout in the stomach and mortification of the bowels about the true nature of which one would like to know more A 'dead palsy was a favourite kind of death as was also putrid fever—one supposes typhus In 1751 a Cardiff doctor was suffocated by falling into a privy The great Cheselden apparently accelerated his demise by taking ale on the top of hot Bath buns In 1772 at Lee in Kent a doctor who had lost the use of his legs was sweated in a dunghill and died as a result—sweated to death Many a doctor has been killed as a result of a fall from his horse and in 1783 one out shooting fell into a disused coal-pit and was killed

The subject of death has been treated by various writers in every possible way Hood wishing to be facetious says in his *Ode on a Distant Prospect of Clapham Academy* poor Chase is with the worms Others have adopted the classical theme of the sounding of the trumpet and the passage through the golden gates those of a chemical disposition will prefer the dissolution theme of decomposition into carbon hydrogen etc Endless are the varieties of death If new hazards to life have been added during the last hundred years, such as motor traffic aviation delayed chloroform poisoning and status lymphaticus, we can welcome such alternatives to falling into a privy or being sweated in a muckheap and at the same time echo that magnificent section from the Litany

From lightning and tempest, from plague pestilence and famine, from battle and murder and from sudden death, Good Lord, deliver us"

R R J

FATE OF A SWALLOWED NEEDLE

Dr PETER RATTRAY of Huddersfield writes In a recent number of the *British Medical Journal* a case was mentioned of a foreign body being swallowed and coming to the surface of the body at a later date I came across the report of such an occurrence in an old Dutch medical book and send a copy in case it may be thought of sufficient interest for republication in the *Journal* The report is headed *A Needle Swallowed and making its Way through an Abscess in the Groin* and its author is D. Frederic Ruysch The book was published at Amsterdam in 1680

It is not without Reason said in the Proverb that Nature is the Preserver of herself for the Truth of this Maxim appeared as evident as the noon Sun in the little Daughter of a certain Lord who Unknown to her parents swallowed a Needle Sometime after a hard and inflammatory Tumour being formed in the Groin accompanied with Pain and Fever the Parents sent for me who being informed that the Tumour did not arise suddenly but enlarged by degrees the Patient being neither troubled with a Vomiting nor a Constipation of her Bowels I judged the Tumour to be a Bubo namely a Tumour and Inflammation of the inguinal Glands and since the Pains were so violent I judged nothing would be more convenient than the Application of emollient Cataplasms These Remedies being applied by another Surgeon the Tumour seemed to us to incline to Suppuration and therefore we endeavoured to bring it speedily to *Maturity* by the addition of maturating Substances and at length opened the Tumour with the Point of a Lancet but to our Surprise a rusty Needle was discharged together with a considerable Quantity of Matter mixed with some of the intestinal Faeces Having observed this the Case seemed unrelievable to Art but not so to Nature who frequently works her own Preferation in a surprising Manner and therefore we treated the Abscess with mundifying and incarnative Medicines till it was at length perfectly consolidated In this Case there is no Doubt but in the Beginning the Intestine firmly adhered to the Peritoneum being injured and inflamed by the Point of the Needle in the same Manner as we observed the Intestines to adhere daily in other Inflammations and from thence it was that we had a free Discharge of the intestinal Faeces which were thus prevented from falling into the Cavity of the Abdomen

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The Tuberculosis Association will hold a provincial meeting at Oxford from March 17th to 19th The provisional programme includes a paper on chronic pulmonary suppuration and its treatment by bronchoscopy and drainage by Drs A S Scott Pinchin and H V Morlock a paper on selective lung collapse in bilateral disease by Dr F Gravesen (Vejlefjord Sanatorium, Denmark) and a discussion on the etiology and treatment of spontaneous pneumothorax, to be opened by Dr L S T Burrell The meetings will be held in the pathological lecture room at the Dunn Laboratory South Parks Road Accommodation for members for wives of members and visitors will be available at Somerville College Further information may be obtained from the honorary secretary Dr G T Hebert Tuberculosis Department, St Thomas's Hospital London S E 1

ROYAL MEDICAL BENEVOLENT FUND

At the meeting held in January the committee voted seventy eight grants amounting to £1 844 8s 4d Subscriptions and donations are very urgently needed in order that the activities of the Fund may be maintained Cheques should be made payable to the Honorary Treasurer Royal Medical Benevolent Fund 11 Chandos Street London W 1

The following are particulars of a few cases helped

M R C S L R C P aged 62 married One daughter aged 9 Applicant had to retire in 1929 He is suffering from chronic nephritis and has had a number of cerebral attacks culminating in a haemorrhage which has caused paralysis He can barely walk and he is incapable of any mental work By the time he retired the practice had deteriorated and was unsaleable The applicant and his wife are living on a pension of £87 10s a year The daughter s school fees have been arranged for Fund voted £40 in four instalments and other societies are being approached to co operate with this case

Widow aged 53 of L R C P L R C S Ed Husband died in 1927 The applicant suffers from cardiac disorder and gall stones and is totally unfit for any employment Her eldest daughter aged 30 is paralysed and mentally affected so that she requires constant care and attention The youngest daughter is delicate The son aged 22 is a junior clerk salary £80 a year and contributes £24 to assist his mother The applicant s income is £90 a year Fund voted £26 in four instalments and will seek the help of other charities for this unfortunate family

Widow aged 67 of M D who was in receipt of an annuity of £40 from this Fund and a Government pension which ceased at his death in 1932 The widow is left entirely penniless It is hoped that some reduced pension may be obtained from the Government for the widow Fund voted £26 in four instalments

Widow aged 55 of L S A who died after a few days illness in November 1931 When the practice and house are disposed of it is expected that there will be nothing left from the estate as there is a mortgage to be paid off and debts to settle There is a daughter aged 14 The only son aged 30 a married man surgeon in one of H M Services stationed abroad with a salary of £400 a year is at present allowing his mother £10 a month Fund voted £26 The Ladies Guild of the Royal Medical Benevolent Fund will assist in the education of the daughter

Ireland

Public Health in County Dublin

The medical officer of health for County Dublin states in his report to the Health Board that of the diphtheria cases eleven had come from the Saggart area On investigation in this area it was found that in one of the first families affected by the disease no doctor was called until eight days after the child had been taken ill—a factor which must have had a considerable influence on the spread of the disease although swabbing of contacts in this and other households failed to reveal a carrier The outbreak had again demonstrated the importance of seeking medical attention immediately a child was found to be suffering from a sore throat Only one further case had been notified from the area within the last two weeks and it was hoped that the outbreak had subsided Should diphtheria persist in the area the question of undertaking an immunization campaign would have to be considered as immunization was the only really effective remedy when diphtheria became endemic The scarlet fever cases although numerous were scattered over various areas of the county there was no epidemic in any particular area Inspections in several of the dispensary districts showed that overcrowding was one of their most serious problems This was particularly noticeable in the Dundrum area Many of the houses were unfit for human habitation but until alternative accommodation was found for present tenants it was difficult to deal effectively with the problem A special report was being submitted on the Balrothery Union buildings

Registration of Births and Deaths in Northern Ireland

The recommendation of the Public Health Committee to transfer the registration of births and deaths from the Belfast Board of Guardians to the corporation will come before the City Council shortly Steps have been taken to place before the council the views of the medical officers concerned and of the guardians It is suggested that the transference of the work would probably involve additional expenditure The older medical officers would have to be compensated for loss of office and accommodation for carrying out the work would have to be found since dispensary medical officers had provided their own accommodation The majority of the notifications of deaths and births were received by the officers during the evening and as the City Hall offices closed at 5 o clock the proposed change would be a great inconvenience to the public There had been no complaint that the work had not been efficiently and expeditiously carried out and as existing arrangements suited the public they should be allowed to continue The recommendation from the Public Health Committee reads

That the present arrangement whereby the medical officer of each dispensary district is by virtue of such appointment also medical officer of health for the dispensary district under his charge at a salary paid by the Corporation in addition to the salary paid by the Board of Guardians be discontinued That the existing arrangement whereby the Belfast Board of Guardians is the authority for the registration of births and deaths occurring in the city of Belfast be discontinued and that the carrying out of this work be located in a central office directly under the control of the medical superintendent officer of health That the provisions of Part I of the Children Act 1908 under which an officer of the Belfast Board of Guardians visits premises where babies are being nursed out to ensure that the provisions of the Act are being complied with be amended as such premises are also visited by the staff of the Maternity and Child Welfare Committee and that the services under the Children Act 1908 and all other Acts of Parliament which have for their object the welfare of infants and young children be co-ordinated and the control of this work placed with the Corporation s Maternity and Child Welfare Committee That if the recommendation to transfer the registration of births and deaths from the Belfast Board of Guardians to the Corporation be adopted vaccination should automatically come under the control of the Corporation and be carried out as part of the maternity and child welfare scheme

Royal College of Surgeons Charter Day Dinner

At the Charter Day dinner of the Royal College of Surgeons held in Dublin on February 6th the President of the College Mr R Atkinson Stoney in proposing the toast of the Governor General (the principal guest) and Prosperity to Ireland said that the Royal College of Surgeons in Ireland was in a more flourishing condition than it had been for many years During the past year the number of students had increased and there were now sixty new students on the roll In regard to the amalgamation of the Dublin hospitals he thought it would entail an enormous capital expenditure—half a million to a million pounds for building purposes alone The scrapping of the present hospitals would be an extremely wasteful procedure To have a number of hospitals was an inestimable advantage to students—this would be largely lost if the hospitals were amalgamated—and the individual attention received by patients under the present system would be impossible in the larger institution The Governor General responding referred to the contribution of sweepstakes towards the improvement of medical teaching and practice

Scotland

Civic Hospitals in Edinburgh

At a recent meeting of the Lord Provost's and Public Health Committees of Edinburgh Town Council proposals were adopted for the staffing of the municipal hospitals of the city in such a way as to provide teaching facilities for students It is proposed that the hospitals at Pilton, Craigleith and Seafield previously Poor Law institutions shall be reorganized and administered as general hospitals, that these three hospitals shall form one hospital system divided into four main 'units (medical surgical, obstetrical and children) and that the staff of each 'unit shall consist of a director who will be a full physician or surgeon, one or more assistant physicians or surgeons and one or more clinical tutors while whole time resident physicians or surgeons will also be appointed The general administration of the hospital system will be under the control of the medical officer of health for the city and the medical officers will be appointed jointly by the corporation and the university An arrangement has been made with the University of Edinburgh that the town council will pay to the university a sum up to £2 000 per annum for salaries of a part time medical staff It is proposed that the Pilton Hospital which has hitherto been devoted largely to the treatment of tuberculosis shall be used for medical cases the Craigleith Hospital for surgical and obstetrical cases as well as diseases of children and the Seafield Hospital for chronic cases It is believed that the provision of a staff composed of teachers in the medical school will increase the confidence of the public in the services rendered by these municipal hospitals for it is generally recognized that the conduct of teaching in a hospital ensures increased efficiency as regards both diagnosis and treatment A large proportion of the patients in municipal hospitals suffer from chronic diseases such cases have considerable educational value and scientific interest and since they constitute a large part of the general practitioner's work it is very important that the student should have instruction in treatment Regret is expressed by some persons connected with the Edinburgh school that the town council has not given consideration to the teachers in the school of medicine of the Royal Colleges whose students comprise one fourth of the Edinburgh medical school population

Public Health Work

At the annual dinner of the Aberdeen University Edinburgh Association on February 5th the Rev Dr George Lawson in proposing the toast of The Guest said that Sir W Leslie Mackenzie had been one of the most talented students of Aberdeen University and since then for twenty seven years, had been a medical officer and administrator of the Scottish Local Government Board and the Scottish Board of Health it was difficult to appreciate the many reforms that owed their inception and success during that time to his beneficent planning Sir Leslie Mackenzie in reply said that during twenty seven years in the Civil Service he had had as political chief ten Secretaries of State for Scotland to each of whom could be credited some definite movement for the good government of Scotland He had given evidence before the Royal Commission (Scotland) on Physical Training and as the result of this commission's report in 1903 the medical inspection of school children had been established millions of children had benefited by that organization Later he had been associated with Sir Robert Philip in placing the tuberculosis movement on progressive lines and in 1906 that movement had resulted in the organization which still existed and which was constantly more successful Later still but not till 1919 an organized service was developed for the child who had not reached school age, this service however, was being attacked because of its alleged excessive expense In 1917 he had been associated with Dr McVail on the Dewar Committee for the medical service of the Highlands and Islands and as a result of the committee's report a medical and nursing service had been established for this region which was unique in the kingdom and which had become a model for similar work in the United States Canada New Zealand and South Africa The largest scheme in which he had taken part was the Scottish Royal Commission on Housing which had spent five years in investigation, visiting every county and considerable town in Scotland the commission had afterwards obtained parliamentary powers for every local authority to survey its area and with State assistance to make itself responsible for building the necessary houses This scheme had been accepted for England as well as for Scotland They had recommended 235 000 new houses and to day, fourteen years after the report Scotland had already 142 269 new houses, and was clamouring for more Principal Sir George Adam Smith in replying to the toast of 'Alma Mater, mentioned that the number of entrants this year in the Faculty of Medicine at Aberdeen University was larger than ever before and the number of medical students had now become as many as suited the resources and equipment of this University

Stirling Royal Infirmary

At the annual meeting of subscribers to Stirling Royal Infirmary, Lady Findlay congratulated the people of Stirling on having raised over £100 000 recently for the building and equipment of this new hospital These hospitals she said carried on a great public service the cost of which had to be met Under the voluntary system this was effected by a co operative effort in which every one had to play a part and contributions from patients subscriptions donations and legacies all testified to the hold which the voluntary hospitals had on the confidence and affections of the public and afforded evidence that the public received in return far more than an efficient public service She felt that at this juncture in the national finance it was wiser to stress the request for annual subscriptions than for endowments although a large reserve fund might still be desired No one need be ashamed of keeping the needs of hospitals before the public by passing on to others the knowledge of this voluntary system they were helping to perpetuate something which the nation could not afford to lose The annual report showed that during the year 2 265 in patients had been treated in the hospital and 3 588 out patients The income for the year had been £14 328 and the expenditure £15 974 the report of the convalescent home showed a deficit of £98 The capital account of the hospital amounted to £95 883 and legacies approximating to £5 000 had been received during the year

Crichton Royal Institution

The ninety second annual report of the Crichton Royal Institution Dumfries containing the report for 1931 of Dr C C Easterbrook physician superintendent shows that the number of patients on the registers on December 31st was 1 024 including 475 men and 549 women During the year there had been 327 admissions 230 discharges and 96 deaths while the total number of cases that had received treatment during the year was 1 350 The number of certified persons was 739 while the voluntary admissions were 285 The number of voluntary patients who received treatment during the year was 466 and of these only one had to be certified Of the total number of patients 663 were private cases of

which 72 per cent were admitted voluntarily The service patients numbered 15 at the end of the year and the rate aided patients 361 With regard to the age of patients the mean age on admission was 46 2 years (men 44 7 women 47 3) the youngest was a boy of 13 and the oldest a woman of 86 As regards occupation 57 cases belonged to the professional classes 34 were commercial 31 industrial 23 agricultural 115 domestic and 5 cases were undefined Pathological stresses or bodily ill health in one form or another could be traced in nearly all cases occurring most frequently in such forms as general debility exhaustion malnutrition arterio sclerosis heart diseases and anaemia organic brain diseases were found in 6 per cent The mental illness had occurred at the critical periods of life in some 69 per cent while conditions such as anxiety grief and shock were traced in 33 per cent and alcoholic excess in 9 8 per cent (men 18 2 women 3 3) Among the types of mental illness constitutional psychoses such as melancholia confusion dementia and mania predominated to the extent of 84 per cent The recovery rate among the voluntary cases was 35 6 per cent of the number admitted while among the certified cases it was 30 per cent The general death rate was 9 4 per cent The mean age at death was 58 2 years and the types of mental disease among those who died were mainly dementia confusional psychoses and melancholia In the laboratory in addition to the routine examination of specimens for diagnosis and treatment a research was conducted upon three patients in regard to the bodily metabolism in dementia

Correspondence

L C C PATHOLOGICAL SERVICES

SIR —Sir Ernest Graham Little wants to know whether the Voluntary Hospitals Committee advised what he calls this ambitious undertaking The reply is in the negative

In April 1930 a scheme for a pathological service for L C C hospitals was submitted by the Council to the committee This scheme consisted of two parts (1) the provision at each hospital for acute cases of a laboratory for routine pathological work (2) the establishment in the first place of five group laboratories to undertake the more difficult work which could not be dealt with at the smaller laboratories The Voluntary Hospitals Committee were of opinion that the necessity for laboratories in large municipal hospitals for acute cases could not be seriously criticized or contested But as an alternative to the proposed group laboratories the committee considered that use should be made of the facilities already available in certain voluntary hospitals obviously the cheaper and better plan These views were duly communicated to the London County Council Nevertheless the Council are still keen to establish the group laboratories Whether the project will mature in face of the economic blizzard remains to be seen The Voluntary Hospitals Committee have not changed their opinion —We are etc

RIDDELL
Chairman
GEOFFREY EVANS
Hon Secretary

London Feb 8th

STANDARDIZATION OF ERGOT

SIR —In your issue of January 16th reference is made to the report of the subcommittee on ergot appointed by the Pharmacopoeia Commission I commented on this report at some length in the pharmaceutical press recently and I venture to call special attention to one point in the report which particularly affects medical practitioners

It is now fully realized that liquid extracts of ergot no matter how prepared are extremely unstable The present *B P* extract contains even initially practically no physiologically active alkaloid and although the present new method does extract the active principle it is nevertheless so unstable that even when kept under the very best conditions as obtaining in a refrigerator 50 per cent of its physiological activity is lost in the first two months and under the less favourable conditions of commerce probably much more than that It will be seen therefore that by the time it gets into the hands of the clinician it will contain at best perhaps only a quarter of its original potency as manufactured

It is a common experience for a pharmacist to have liquid extract of ergot on his shelf for many months and one may suppose that the great bulk of extract as it finally gets into the doctor's hands even when prepared by the proposed new method will be relatively inert The Pharmacopoeia Commission is proposing nevertheless to lay down a standard of physiological activity for this extract Such a standard will be quite valueless and apart from affording a reliable guide to the user will be most misleading This raises the question of the advisability of retaining this extract in the *Pharmacopoeia* Modern knowledge indicates that its extreme instability renders it practically useless and I suggest that the medical profession should break away from the cult of liquid extract therapy entirely and substitute for it either the powdered form which is stable or the hypodermic extract of ergotoxine which is likewise satisfactory and which will ensure a desirable and adequate result following its administration —I am etc

Runcorn Cheshire Feb 3rd H A MITCHELL M D

DIRECT PNEUMOCOCCAL TYPING

SIR —Dr R R Armstrong is a little careless in stating that we incline to consider direct typing on the sputum of the pneumonic patient of limited application to be practised exclusively by the expert bacteriologist surrounded by all the appliances proper to a first class laboratory What we did say in our paper was that the method requires some bacteriological experience while we made it perfectly clear that no special apparatus whatever beyond a microscope is required Our view as to the undesirability of its use as a side room test was based on the danger that its apparent simplicity might lead to pneumococcal typing getting into the hands of persons with insufficient experience Our use of the term bacteriologist implied of course an person with an adequate training in this particular branch of bacteriology

Dr Armstrong is wrong in supposing that we use stale specimens The reasons why it is impossible to get 100 per cent of conclusive results by the direct method are on the contrary sometimes due to the desire to ascertain the type early in the illness before the scanty sputum contains pneumococci in sufficient numbers for this test Occasionally also using such specimens isolated pneumococci float free in the type serum and react both to Type I and to Type II serum It is impossible in such cases to state the type confidently by the direct test alone There is also the danger that one or two reacting pneumococci may be seen in the Type I slide while no pneumococci are seen in the Type II and what is really a Type II case wrongly called a Type I case by an observer who is not sufficiently cautious In other specimens pneumococci may be present in very small numbers relatively to other organisms and it is only by an enrichment method such as mouse inoculation that they can be obtained in sufficient numbers for satisfactory typing An incautious observer using the direct test would be very liable to call these Group IV cases when in fact

type specific strains were present in very small numbers Such an observer would also be liable to label specimens Group IV when in fact there might be no pneumococci present as many diplo streptococci cannot with certainty be distinguished from pneumococci under the microscope, whether stained or unstained

With many specimens as we showed typing by the direct method is easy and certain

These were some of the reasons which led us to put forward the test as a valuable addition to the methods available to the bacteriologist, rather than as a bedside or side room test which might or might not be accurately carried out by any chance observer —We are etc ,

W R Logan
J T Smeall

Bacteriology Department Edinburgh Royal Infirmary Feb 8th

OVULATION AND THE SEX CYCLE

Sir —I am not inclined to alter the views I expressed in the *Journal* of January 23rd as a result of Dr Robson s letter in your last issue My letter was written to point out that the article on ovulation and the sex cycle ignored the work already done by gynaecologists which has established fairly convincingly the time of ovulation in the human subject I fail to see why all this work should be repeated because investigators on animal repro duction do not accept this view I try to keep in touch with the work done on lower animals and my feeling is that the evidence in support of the view that ovulation is limited to about the fourteenth day of the cycle is as convincing as that which experimental biologists are accustomed to accept Schroder has recently reviewed the evidence in von Mollendorff s *Handbuch der Mikroscopischen Anatomie des Menschen* and I believe that most people will agree that it is convincing I have not published further results of my own for some years being of the opinion that the question was more or less settled but in view of this correspondence it is perhaps worth recording that I have not found reason to alter my views and I have examined some fifty specimens since 1925

The opposition to this conception emanates from the workers on the implantation of the early human ovum headed by Grosser and is based upon the evidence that insemination may be fertile during the post-menstrual phase I have pointed out elsewhere that these cases can be explained by assuming survival periods for the human spermatozoa which are longer than those existing in lower animals rather than by adopting the hypothesis that ovulation can be ' provoked by coitus

It should be pointed out that Knaus s paper admits in the succeeding sentence to the one quoted by Dr Robson that Fraenkel and Schroder limit ovulation to the fourteenth to sixteenth days of the cycle and concludes by accepting this limitation of the time of ovulation

I am quite prepared to admit that the cases of fertilization resulting from coitus during the post-menstrual phase are difficult to explain but I disagree that the whole of the work which has been done on the dating of ovulation should be dismissed in an attempt to explain them — I am etc

London W 1 Feb 6th Wilfred Shaw

THE SPAHLINGER FORMULA

Sir —In a famous article—Ueber Neue Tuberkulinpräparate—published in 1897 Koch expressed his conviction that by his method of comminution of young fresh virulent living and chemically unaltered tubercle bacilli he had laid the foundation for the use of the tubercle bacillus as an immunizing agent against tuberculosis This paper is so pertinent to the valuation of anti tuberculosis immunizing technique that it should be studied word by word The crucial difficulty of the problem lay in the irritating and unabsorbable qualities of tubercle bacilli which, when injected unaltered caused abscess formation and when chemically altered lost immunizing properties The story of Koch s solution of the problem by grinding up dried, living, virulent tubercle bacilli by hand in an agat mortar is one of the romances of medicine

We now learn from M Spahlinger that a better method is to keep tubercle bacilli in the absence of oxygen in distilled water or normal saline in a cool completely dark place until all the tubercle micro organisms have died a natural death by the efflux of time —a year or longer When stripped of irrelevancies this is the essence of the formula which has just been given to the world under distinguished patronage

It remains to invite the evidence upon which the claim is founded —I am etc

London S W 1 Feb 7th Robert Carswell

THE TUBERCULOSIS PROBLEM

Sir —The Japanese experience which Dr W Camac Wilkinson gives in your issue of January 30th is very interesting and would appear to confirm that in those communities where milk infected with the tubercle bacillus is not drunk infection from person to person results in acute and fatal illness His letter does not however explain the relative immunity of the population in the circumstances of this country which is among the problems to be solved before we can be satisfied that our knowledge of the subject is complete I do not suggest that personal infection may not occur in this country but in our circumstances other channels of infection are more common As regards the nature of tuberculous infection the conclusions of the Royal Commission on Human and Animal Tuberculosis written in 1911 are still worthy of respect however ' flimsy may be their basis —I am etc

J Middleton Martin

Health Department Gloucester Feb 3rd

Sir —I have read the communication from Dr Camac Wilkinson in the *Journal* of January 30th with regard to the incidence of bovine tuberculosis in cattle and human tuberculosis in young children in Japan Although the conclusions arrived at by Dr Wilkinson were widely quoted at the time they were made they have not been confirmed or corroborated This evidence therefore should be classed with the other flimsy evidence mentioned by him Especially is this so since Dr D Kato attached to the Japanese Consulate reports that statistics show that bovine tuberculosis in Japan is more prevalent than it is in England —I am etc

February 3rd William S Stevens

MILK AND DENTAL CARIES

Sir —Much has been written within recent years both in the medical and the lay press concerning the cause of dental caries but unfortunately opinion has been conflicting and the public and our profession have been left without any definite practical views on the subject As one who has long been painfully conscious of the unsatisfactory condition of British teeth and who has done his utmost to understand the cause of dental caries and the best means of preventing it may I give my conception of the teaching that should prevail regarding these problems? I conceive the main objects should be (1) To secure ample development of the jaws by providing the growing human with a due proportion of such of th vegetable class of foods as are calculated to promote

adequate mastication (2) To keep the dental enamel free from protracted contact—at retention areas such as interdental spaces pits and crevices and gum margins—with fermentable saccharide food If these two objects are achieved the teeth will not decay The importance of securing adequate development of the jaws is that by providing normal occlusion not only is normal mastication facilitated but the teeth are properly spaced and in consequence so much the more easily cleansed

I observe by the report of the proceedings of the Odontological Section of the Royal Society of Medicine in the *Journal* of January 30th that Mr E C Sprawson still coquettes with the notion that the dental enamel of *different persons may differ* in the resistance it offers to the corrosive action of acid by virtue of differences in its intimate *microscopic structure chemical constitution* vitality or what not To hold this view is surely to ignore a fundamental chemical truth—that if an acid such as lactic acid comes into contact with a base such as the calcium in dental enamel it will forthwith seize upon the calcium and cause disruption of the enamel If it be argued that the living enamel may like the gastric mucous membrane offer specific resistance to the attack of acids we are met by the objection that the enamel of a living tooth offers no more resistance to acid than that of a dead tooth Moreover experience shows that the enamel of stout healthy teeth readily succumbs to the acid of fermenting saccharides as I have myself over and over again observed Let us however assume that dental enamel does vary in its resistance to acid, what practical bearing will this have on the liability to dental caries seeing that caries never commences on a smooth enamel surface—such as that of the labial surface of an incisor tooth—kept constantly freed of saccharide material by labial friction and seeing that of the teeth in the same mouth all nourished by the same blood a molar tooth (by reason of its liability to harbour saccharide food) decays about twenty times more frequently than a lower incisor even though its calcium content is actually higher?

Are we then not on safe ground in telling the public that a tooth will not decay if kept clean? This does not of course imply that a constantly dirty tooth necessarily decays for the conditions in the case of such a tooth may be such as to prevent decay

I do not find Mr Sprawson's investigation on the supposed effect of raw cow's milk in preventing dental caries convincing the investigation as reported leaves ample room for error to creep in His inference is moreover contrary to the experience of others A report on dental disease in Hawaii states

> Sunshine cod liver oil eggs orange juice tomato and milk—both human and *fresh unpasteurized cow's in good measure* [my italics] singly or combined—do not prevent the rampant disintegration of the teeth of infants and small children during periods of accelerated bone growth (*New Zealand Dental Journal* September 1930 p 11)

I do not remember ever to have read a clearer more precise more comprehensive statement than this To my mind it suggests accurate observation I have myself met with numerous cases of children suckled by healthy mothers and who though fed during the first years after the period of weaning on an abundance of raw cow's milk have displayed the usual proportion of caries both in deciduous and permanent teeth encountered in the present day children of the British Isles

A final word Mr Sprawson suggests that for ideal dental development in man raw milk should be part of the daily food until 14 years of age With this teaching few physicians will agree it is possible to rear healthy children with sound teeth without any milk whatever after the first year It would be a sorry state of affairs if the human being were absolutely dependent for normal development upon the milk of another mammal—I am, etc

London W 1 Feb 6th HARRY CAMPBELL

GENITO URINARY TUBERCULOSIS AND THE MINISTRY OF PENSIONS

SIR —When I was a student I was taught that tuberculosis of the kidney might be present for quite a considerable time before attention was drawn to it by reason of the patient complaining of certain symptoms The infection was said to be a haemotogenous one and the kidney might be affected for a most variable time from one to seven years before a descending infection caused the bladder to be involved and produced much more definite signs and symptoms such as haematuria pain and so on True it is more than twenty years since I qualified and no doubt I am getting hopelessly out of date but reference to a textbook of surgery published as recently as 1930 gives me the impression that the above views still hold good—except apparently at the Ministry of Pensions I will describe the case I have in mind as briefly as possible

A man of 32 came to me on March 21st 1928 complaining of profuse haematuria and considerable pain at the tip of the penis at the end of micturition I sent him on to a urologist who cystoscoped him and found advanced tuberculosis of the bladder and of the left kidney with more than a suspicion of trouble in the right kidney as well The left kidney was removed and the patient was sent to a convalescent home for six months On his return home I gave him a course of injections of tuberculin The wound spouted pus from six sinuses from the date of operation down to about a month ago since when it has been dry The man still passes blood frequently pus always suffers a good deal of pain and has very much increased frequency of micturition He cannot be persuaded to submit to bladder lavage or any further active treatment I mention these details as I think they prove that the case must have been a very advanced one when the patient first came into my hands in March 1928

So far all efforts to obtain a disability pension for this man have been turned down because they say at the Ministry that there is no evidence that the disease was either contracted on or aggravated by war service The man joined up in 1915 went to France in January 1916 and was wounded on the Somme in July 1916 He rejoined in January 1917 and went to Salonika He served in the Struma Valley till the end of the year and then went to Palestine where he contracted malaria He was well enough to rejoin his division in France a month before the armistice He continued to have bouts of malaria after he was demobilized

The point I wish to make is this in face of the man's service on three different fronts and knowing that renal tuberculosis may rest unrevealed for a number of years how can anyone say that the disease was neither caused by nor aggravated by the conditions of active service in the field? I should have thought such conditions just ideal for starting anything of this sort

We all know how pressing is the need for economy but the case appeals to me as strongly from the purely medical point of view as it does from my desire to see justice done Besides if it is possible quite definitely to fix the date of onset in any given case of tuberculosis I think the Ministry owes it to the less knowledgeable colleagues outside to impart the secret of how it is done If the attention of authority can only be attracted when

documentary evidence is forthcoming for every minor detail in the course of years then Heaven help us all when the practice of medicine becomes an affair purely and exclusively the business of the State —I am etc ,

Bridlington Jan 31st C J GORDON TAYLOR

PLUMBISM AND PEPTIC ULCER

SIR —I cannot but admire Dr Arbour Stephens's tenacity in advocating better food A good and proper diet is undoubtedly an asset in maintaining a man s resistance to the deleterious effects of lead , but, however good the food it will not prevent plumbism, and I fail to understand what part a wife—be she good or bad—can play in preventing her husband from inhaling lead fumes or lead dust

Dr Stephens disagrees with my suggestion that the possible reason for the smaller amount of lead found in the urine of the older spelter workers is due to an impairment of renal function None the less all authorities agree that lead which has been absorbed into the body cannot circulate in the blood and be eliminated without damaging the liver and especially the kidney—two organs which are known to play a very vital part in such an elimination I fully agree that the damage to the renal system is not so marked in every man It varies in its acuteness and in every case of lead colic I have examined immediately after the attack I have found albumin in the urine In my experience the spelter worker who shows evidence of lead absorption and eliminates lead in the urine to the extent of about 0 34 part per million remains apparently healthy but if it falls below this standard the man is always in danger of toxic manifestations Fortunately many of the workers can absorb lead to the end of their working days without showing any toxic signs but most of the older lead workers I have examined have had an abnormally high blood pressure

It must be remembered that there is a Factory Act in existence and as soon as a workman is found to be exhibiting signs of plumbism he is naturally prevented from further exposure to lead Often these unfortunate men are dismissed from their work and thrown on the road Hence the older men employed in the lead trades are those who have managed to eliminate lead successfully

In my article I tried to give facts showing the close association of lead poisoning with peptic ulcer I fear that this association has never been fully investigated but I am convinced that it will prove a fruitful field for a fully trained investigator —I am etc

Swansea Feb 7th DAVID R LEWIS

SIMULATION OF HEART DISEASE

SIR —The publication of Dr Shirley Smith s paper on the above subject is very opportune for the Captain of the Men of Death to use Osler s description for sudden heart failure has been stalking through our midst

During the past three months but with increasing frequency since Christmas cases have been occurring of disordered health of sudden onset with cardiac pulmonary digestive and neuralgic components resulting sometimes in prolonged invalidism at other times responding quickly to treatment The heart symptoms are variable They may range from the acute type associated in one s mind with coronary thrombosis to the so called functional or neurocirculatory—Ue frequently in females accompanied by palpitation the extrasystoles with the alarming thuds bradycardia left submammary pain etc Almost invariably in these cases there is an accompanying lesion at the base of the left lung evidenced by rhonchi crepitations and often pleuritic friction—a very common site for the latter being below and slightly outside the cardiac apex In some cases diagnosed as coronary thrombosis—as evidenced by the pain feeling of swooning away, great drop in blood pressure followed on some days by auricular fibrillation and the appearance of systolic murmur at the apex, etc —the friction was over the heart s apex and was respiratory in incidence

The problem presenting itself was Were these chest signs cardiac in origin, or pulmonary? If the latter whence its origin? It was often associated with cough varying from slight to very troublesome The patient could not aerate this portion satisfactorily It seemed more a partial collapse It was almost invariably associated with tenderness over the costal margin of the eighth and ninth ribs with corresponding tenderness of the same dorsal segments near the spine Sir James Mackenzie states that this is characteristic of diaphragmatic involvement It seemed to me also that the lower intercostal muscles were not acting freely Looking for confirmation I found tenderness in the left supraclavicular region and over the acromion indicative of phrenic involvement But there seemed also to be well marked tenderness in the region of the sinus caroticus Some of these patients were extremely dyspnoeic even when being turned over in bed to examine the bases the face would get suffused often cyanosed

The nerve reflexes described by Herring as originating from the tunica intima of the carotid sinus have most widespread and vital effects—namely cerebral circulation pressor depressor effects on the heart with modifications of blood pressure and cardiac rhythm and respiratory embarrassment This spot in the carotid sinus may be extremely sensitive to impulses and the dyspnoea on exertion may be a reflex from this spot in the arterial tree The innervation is supposed to be from (*a*) superior cervical sympathetic ganglion (*b*) vagus (*c*) glosso-pharyngeal nerve Professor Cameron of Glasgow in an investigation into all cases of sudden death (under anaesthetics supposed status thymicus etc) found that cholesterol was deposited on the intima of this area even in young infants He states that similar findings were obtained in the coeliac axis which might be another source of origin of widespread reflexes Although this appears mostly on the left side at first several patients have developed the pains on the right side some weeks later (neck and lower ribs), accompanied by the same basic pulmonary condition Pressure on the carotid sinus in these cases with marked heart involvement elicited the pains running down the inside of the left arm as in angina pectoris

But why should there be this hyperexcitability of the vegetative nervous system and why should it be so prevalent of late? I believe the explanation lies in the sepsis or associated toxaemia with consequent calcium deficiency resulting in sympathetic parasympathetic irritability and imbalance Blood cholesterol is often + with a calcium deficiency —I am etc

Darlington Jan 29th R CHALMERS M D F R C S Ed

MATERNAL MORTALITY

SIR —Dr Beccle s letter in your issue of January 23rd raises many important points The most important I think is contained in the remark that a midwife tend to consider it a reflection on her capability if she calls in a doctor This is undoubtedly true The chief instance in my experience is that of post partum haemorrhage I have had women come into my surgery who are profoundly anaemic after a confinement with a clear story of having bled excessively and yet no doctor had been summoned Apparently it does not matter according to the C M B Rules so long as the midwife sees that the

woman's pulse is below 100 before leaving even then we have to accept her word for this The midwives books are inspected at intervals by representatives of the county medical officer and the midwives are thereby discouraged from calling in a doctor in order that the county funds may be spared The benefit therefore of the many doubts is in favour of the county funds rather than of the parturient mothers

I do not agree with Dr Beccle that more than twelve months training is required for midwives What is required is that they should carry out what they have already been taught One often finds that the midwife having waited by the bedside for several hours is after delivery in an excessive hurry to save a second or two in tying off the cord and getting the placenta away Often also she has not the physical strength to express clots from the uterus in the rare cases in which she attempts this The fault is not lack of training but lack of the conviction derived from intelligent understanding to carry out what has been taught

The remedy for the present system can only be by a capitation system for the doctors whereby a midwife can call a doctor in without hesitation his services being at command and she not being subject to possible censure for incurring financial liability for the county Moreover with such a scheme the midwife would feel herself responsible to the practitioner even if the latter is not called and so would act in accordance with her teaching in all cases It is this lack of responsibility to a doctor which is the chief defect of the present system —I am etc

Dagenham Essex Jan 26th M MELGRAVE

ASSUMPTION OF TITLES BY UNQUALIFIED PERSONS

SIR —From your report of the case against Dr Ensor (February 6th p 266) it would appear that he was not charged with an infringement of Section 40 of the Medical Act 1858 but with two different offences If this is so it is important that the distinction should be drawn For an unqualified person to style himself Dr without defining the term as being *Doctor of Medicine* would not be a breach of the Act but surely the term Dr is defined by the conduct of the accused in posing and practising as a medical man The section merely requires that the description taken shall *imply* that he is a Doctor of Medicine If therefore the accused had been charged with a breach of Section 40 surely there would have been a conviction It must not be forgotten that the Act was passed to protect the public by enabling it to distinguish between qualified and unqualified practitioners —I am etc

London W C Feb 6th FRED BULLOCK

MEDICAL CONDITIONS IN SOVIET RUSSIA

SIR —Dr Clemow now explains that the high death rate in Tsarist Russia in spite of the possession of a medical organization of which any country might be proud was due to the fact that a large proportion of the population of the Russian Empire were either Asiatics or were living under Asiatic conditions and he claims that comparison can only justly be made with an Asiatic country May I point out (1) that the statistics I quoted were for European Russia only and (2) that in 1897 when the death rate in Russia was 31 4 that in Japan was only 20 —I am etc

London S W Feb 6th W A BREND

* This correspondence is now closed —ED *B M J*

CATARRHAL INFECTION AND FORMALIN VAPOUR

SIR —With reference to my communication on this subject in the *British Medical Journal* of January 9th confusion appears to have arisen over my use of the word formalin which is a 40 per cent solution of formaldehyde A 10 per cent solution of formalin will therefore contain only 4 per cent of formaldehyde —*I am etc*

Bunbury Feb 2nd C J L WELLS M B

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

By large majorities the House of Commons this week carried resolutions approving the imposition of a revenue duty of 10 per cent on imports with some exceptions and higher duties where recommended by a Tariff Committee A Bill to carry out these proposals was introduced The second reading of the Children Bill was set down for Friday A Standing Committee of the House began the examination of the Town and Country Planning Bill

Dr Morris Jones having secured first place in the ballot has given notice that when the House goes into Committee on the Civil Service Estimates he will call attention to local government administration

The Departmental Committee on Maternal Mortality expects to present its final report very soon An interim report was published eighteen months ago

Road Accidents

Replying on February 4th to Mr Buchan Hepburn Sir HERBERT SAMUEL said there had been 181 486 street accidents recorded in Great Britain caused by vehicles and horses in 1931 of which 6 495 resulted in fatal injuries to one or more persons The corresponding figures in 1930 were 156 793 and 7 074 respectively The number of persons killed in 1931 was 6 685 and 202 147 were injured as against 7 305 and 177 895 respectively in 1930 Figures for England and Wales showed a similar increase in the total number of accidents resulting in personal injury and a decrease in the number of fatal accidents The increase in the total number of accidents resulting in personal injury might be more apparent than real and be attributable to the police obtaining fuller information regarding the accidents by reason of the institution of the motor patrols and the new requirements of the Road Traffic Act on the reporting of accidents

Replying to Mr Turton on February 3rd Mr PYBUS said that he could not recommend legislation to provide that the fee for a driving licence should be increased by 2s and the sum so raised paid out to the voluntary hospitals for such part of the maintenance of victims of road accidents as was not covered by payments from any other source

Cancer in Nickel Workers

On February 9th Mr D GRENFELL asked the Home Secretary if he had received notification of the deaths from cancer among men employed at the Mond Nickel Works at Clydach near Swansea Sir HERBERT SAMUEL in reply said that notification under the Factory Act was required only in the case of cancerous ulceration or the skin due to tar pitch or certain other substances No cases of this form of cancer had been notified from the works in question and he was informed that so far as the Factory Department was aware there was no process carried on at the works which would expose the workers to this risk At the request of the Department the medical officer of the company had gone through their records and found that during the last three years six men who had been employed at the works died from cancer but there did not appear to be any ground

in any of those cases for connecting the disease with the employment The average number of men employed during the three years was 1 105 the average age of death in the six cases was 53

Mr GRENFELL asked if the figures given were not indicative of a very high rate of deaths from cancer especially in view of the form of cancer (the same in each case) which attacked all these people Sir H SAMUEL No I am informed that the number of deaths is not disproportionate to that in the population generally and that no cases show symptoms of the particular kind of cancer due to industrial disease

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An All India Medical Council —On February 8th Sir S HOARE replying to Mr Griffiths said that the conditional recognition accorded by the General Medical Council to the medical degrees of certain Indian universities was withdrawn in March 1930 A revised draft Bill for the establishment of an All India Medical Council had been prepared and it was hoped to introduce it in the Indian Legislative Assembly at an early date

Imported Fresh Meat —On February 8th Lord SCONE asked the Minister of Health if he would consider the advisability of prohibiting the importation of boneless meat in view of the difficulty of detecting unsoundness or disease in it Mr E BROWN replied that the importation of boneless meat which afforded insufficient means of identification with definite parts of a carcass was prohibited under the Imported Food Regulations of 1925 The Minister was now considering the amendment of those Regulations so as to require a recognized official certificate of the country of origin with all imports of fresh meat less than the whole carcass

Lung Disease in Tube Workers —Sir H SAMUEL replying on February 8th to Dr O Donovan who asked if the right hon gentleman was advised that the precautions taken to prevent fatal lung disease in workers lining London tubes with asbestos were adequate said that he had no powers of control in respect of this work under the Factories or other Acts He had no information at present as to the precautions taken but he would make inquiries

Nurses Pensions —Sir E HILTON YOUNG told Dr O Donovan on February 4th that he would be willing to consider any practicable proposal to co ordinate the nurses pension schemes in federated voluntary hospitals and in municipal hospitals but no such scheme had as yet been submitted

Slum Clearance —Answering Dr Salter on February 9th Mr E BROWN said that up to January 31st last fifty one local authorities in England and Wales had submitted clearance orders under the Housing Act 1930 for areas containing 3 681 houses and 44 clearance orders had been confirmed

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Universities and Colleges

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

At a quarterly meeting of the Royal College of Physicians of Edinburgh held on February 2nd when the President Dr Robert Thin was in the chair Dr J D A Gray [illegible] Crie (Edinburgh) and Dr D N [illegible] their seats as Fellows

(Droitwich) Dr J J de Waal (Johannesburg) and Dr W L Lamb (Aberdeen) were elected Fellows

Dr Karl F Wenckebach (Vienna) was appointed the George Alexander Gibson Lecturer for 1932

Dr James Crooks (London) and Dr H J R Kirkpatrick (St Andrew) were awarded the Kirk Duncanson Fellowship in Medical Research for one year Colonel John Morison, I M S (retired) was awarded the Parkin Prize for the best essay on the [illegible] carbonic acid gas or other forms of carbon [illegible] functional or [illegible] forms of fever and other diseases [illegible] accompanied by palpita[illegible] alarming thuds bradycardia [illegible]

Almost invariably in these cases SICIANS OF IRELAND [illegible] lesion at the base of the left lung ld on February 5th the [illegible] crepitations and often pleuritic fric Dockeray V C Ellis [illegible] site for the latter being below and nna M E McCabe [illegible] ompson

LONDON INTER COLLEGIATE SCHOLARSHIPS BOARD

Medical Scholarships

The London Inter Collegiate Scholarships Board announces that an examination for fourteen medical scholarships and exhibitions and one dental scholarship of an aggregate total value of £1 483 will commence on May 23rd They are tenable at University College and University College Hospital Medical School King s College and King s College Hospital Medical School the London (Royal Free Hospital) School of Medicine for Women and the London Hospital Medical College Full particulars and entry form may be obtained from the secretary of the Board Mr S C Ranner M A the Medical School King s College Hospital Denmark Hill S E 5

The Services

DEATHS IN THE SERVICES

Deputy Inspector General Samuel William Vasey R N (ret) died at Teignmouth on January 17th aged 76 He was educated at St George s and took the M R C S in 1877 and the L R C P Lond in 1878 Entering the Navy as surgeon in June 1878 he became staff surgeon in 1890 fleet surgeon on December 19th 1894 and retired with an honorary step of rank as D I G on September 1st 1909 He served in the Zulu war of 1879 landing with the Naval Brigade from H M S *Boadicea* (medal with clasp) in operations on the West Coast of Africa in 1880 when he was present at the destruction of Batonga as surgeon of H M S *Seagull* in the Egyptian war of 1882 (medal and Khedive s bronze star) and as fleet surgeon in H M S *Centurion* flagship of Vice Admiral Sir Edward Seymour in the China war of 1900 Subsequently he was medical officer of H M S *Defiance* torpedo school ship at Devonport and medical officer in charge of Devonport Dockyard He leaves a widow and one son

Lieut Colonel Joseph Charles Stoelke Vaughan C I E Bengal Medical Service (ret) died in London on January 9th aged 69 He was born on June 29th 1862 the son of Mr Joseph Vaughan deputy collector Gorakhpur and was educated at Edinburgh where he graduated M B and C M with honours in 1885 Entering the I M S as surgeon on September 30th 1889 he became lieutenant colonel after twenty years service was placed on the selected list for promotion on April 1st 1917 and retired on January 24th 1921 Most of his service was spent in civil employ in Bengal and Bihar where he was successively a deputy sanitary commissioner superintendent of the Campbell Hospital and Medical School in Calcutta and professor of medical jurisprudence in the Calcutta Medical College and civil surgeon of Bhagalpur After retirement he remained in India for some years as superintendent of the Radium Institute at Ranchi He served on the North West Frontier of India in the two Mirunzai expeditions in 1891 receiving the frontier medal with a clasp and in the Tirah campaign of 1897-98 when he took part in the operations on the Malakand and in Buner with the actions at Landakai and on the Tanga Pass receiving the medal with a clasp He received the Kaisar i Hind medal of the first class on January 1st 1910 and the C I E on January 1st 1925

Lieut Colonel John McGregor Bombay Medical Service (ret) died in London on January 13th aged 83 He was born at Sandwick Hill in the island of Lewis on February 24th 1848 the son of John McGregor of Stornoway and was educated at Glasgow University where he graduated M B and C M in 1873 and M D in 1879 Entering the I M S as surgeon on March 31st 1876 he became surgeon lieutenant colonel after twenty years service and retired on October 20th 1896 Among other appointments he held in India were those of professor of materia medica in the Grant Medical College Bombay and of civil surgeon of Aden He served in the Burma war of 1885-87 was mentioned in dispatches in G G O No 434 of 1887 and received the medal with two clasps During these campaigns he served as P M O of the Frontier Brigade at Bhamo and with the Mogaung expedition on the frontier of China and three times had a horse shot under him He had travelled widely both before and after his retirement in the hinterland of Burma and Siam reaching the Mekong River and the China Sea He had also visited Mexico, and climbed the famous volcano Popocatepetl 18 000 ft high He was the author of *Toil and Travel* 1892 *Through the Buffer State* a record of journeys in Siam and Cambodia 1896 *Lunneagan Luaineach* poems in Gaelic and English 1897 *The Girdle of the Globe* a poem *The Donkeyboy of Cairo* 1903 *Midshipmite Curly* 1903 and *The Legend of Alompoa* 1924

Obituary

JOHN PARLANE KINLOCH M D D P H M R C P Ed

Chief Medical Officer Department of Health for Scotland

The death took place suddenly, on January 31st at his father's residence, Laurieston Dumbarton of Dr Parlane Kinloch chief medical officer to the Department of Health for Scotland He had transacted his official duties at the Department of Health in Edinburgh as usual on Saturday and in the evening went on a visit to Dumbarton where on the following morning he succumbed to a heart attack

John Parlane Kinloch was born in 1886 near Dumbarton and after receiving his early education at Glasgow High School he took up the study of medicine at Glasgow University where he graduated M B Ch B in 1909 After graduation he became house surgeon and later house physician in the Victoria Infirmary Glasgow and in 1910 determining to devote himself to public health took the D P H of Cambridge with distinction He acted for a period also as resident medical officer in the Queen Charlotte Lying in Hospital London and afterwards became a pupil assistant in the Glasgow Public Health Department In 1911 he entered Ruchill Fever Hospital as resident medical officer a post which he retained for three years when he was appointed deputy medical officer of health to the city of Aberdeen and lecturer in public health at that University In 1913 he took the M D degree at Glasgow being commended for his thesis On going to Aberdeen in 1914 he joined the R A M C (T F) as a captain and for three years commanded the Aberdeen University Officers Training Corps Later in the war he went out in 1918 to France in command of a mobile hygienic field laboratory After his return to Aberdeen he resumed his post in the public health service of that city and in 1923 was made reader in public health in Aberdeen University On the retirement of Professor Matthew Hay in the same year he became head of the public health department of the University and medical officer of health to the city In connexion with this post he also acted as physician superintendent of the City Fever Hospital and from 1926 of the Woodend municipal hospital Aberdeen For a time he acted as chairman of the Special Medical Research Committee for Scotland Towards the end of 1928 on the retirement of Sir Leslie Mackenzie from the post of medical officer to the Scottish Board of Health and when the powers of this Board were transferred to the Department of Health for Scotland Dr Parlane Kinloch was appointed chief medical officer to this Department in Edinburgh



Despite his great activity as an administrative officer Kinloch found time to make numerous contributions to current medical literature these being in the main the records of important pieces of work in public health research or administration they included a report on 'Constituents of fresh and vitiated air and their significance in problems of ventilation contributed to the *British Medical Journal* (1922) an account of the Aberdeen epidemic of milk borne bacillary dysentery which appeared in the *Journal of Hygiene* (1923) Community immunization against diphtheria and scarlet fever (1927) and a report on Maternal mortality (1928) During Kinloch's period of office in the Aberdeen health department several important developments which had a great effect upon public health administration in other places were carried out He was much interested in the possibilities of ultra violet radiation and at an early date established clinics for the observation of this method of treatment upon ailing children and in connexion with these much important work was done in recording the effects and arriving at standardization of treatment in connexion with therapeutic lamps Several outbreaks of food poisoning were investigated by his department and he was able to show that many of the outbreaks of infantile diarrhoea were due to infection by dysenteric organisms He had been greatly interested in the method of immunization against diphtheria introduced by von Behring in 1913 and perfected by Park about 1923 and was one of the first to develop a scheme for community immunization against diphtheria and scarlet fever in regard to which he was able to publish valuable results by 1927 An important movement took place in Aberdeen during his tenure of office as the head of the public health department in that city for the unification of the health services In this matter the experiment of the Aberdeen Corporation may be said to have afforded an example to the rest of Britain and in this Parlane Kinloch was the central and most active figure The Aberdeen authorities who enjoyed special powers were able to demonstrate the possibilities of co operation between the public health Poor Law school health Board of Control and university departments These various authorities with the county authorities of Aberdeenshire and the general practitioners of the North Eastern Scottish region were able to attain a considerable measure of co operation acting on Kinloch's advice prior to the powers which were later obtained under the Local Government (Scotland) Act of 1929 Sir John Gilmour who was then Secretary for Scotland gave his special commendation to this scheme of unification which had an important bearing on the drafting of the Act

Several of Kinloch's reports to the town council of Aberdeen were of great importance particularly that dealing with the results of a systematic investigation into the causes of maternal mortality with a view to devising methods for its diminution Kinloch's agreeable per-

own Some monographs of value, on the handling of milk and its bacteriological control have been issued under his direction from the Institute

Stenhouse Williams was a member of the Biochemical Society and the Pathological Society of Great Britain and of many other bodies A few years ago he received the honorary degree of Doctor of Science from the University of Syracuse In 1912 when the British Medical Association held its Annual Meeting in Liverpool he served as one of the honorary secretaries in the Section of Bacteriology

Sir Robert Armstrong Jones sends the following appreciation

In any list of eminent authorities upon public health Stenhouse Williams's name will rank high in precedence among illustrious teachers He was a most able tactful and well informed medical officer and also a practical hygienist He possessed a clear insight a sound judgement and an inflexible resolution His personality may be summarized as a strong will directed by knowledge and guided by reason From the medical standpoint he was engrossed with the single motive of lessening the devastating effects of bovine tuberculosis in children He realized fully the crippling and the permanent maiming of children who suffered from affections of the spine of bones and joints of glands and even of the skin through the ingestion of tuberculous milk and the health of children in particular appealed to him With this conception of the public welfare he not only persuaded the borough of Reading but also secured the influence and patronage of the University of Reading to exercise control over this aspect of human infection by the establishment of a Research Department in Dairying The laboratory work carried out under his direction together with the unceasing encouragement he gave to local farmers and purveyors of milk to keep their premises, utensils and staff clean as also their herds free from tubercle are a proof of his exceptional ability and devotion to this aspect of preventive medicine His expert knowledge was most keenly appreciated by his colleagues on the council of the People's League of Health under the direction of Miss Olga Nethersole The league which is about to issue a special report upon this subject, will greatly miss Dr Robert Stenhouse Williams from its council It was only quite recently that members of the league's council paid a special visit to Reading by his invitation and the writer was much impressed with his appreciation and his work in the borough

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The following well known foreign medical men have recently died Geh San Rat Louis Wolffberg, a Breslau ophthalmologist Dr Kunika Katayama founder of the Institute for Forensic Medicine at Tokio aged 77 Dr Dryfpondt founder of the Belgian Society for Colonial Studies and member of the International Colonial Institute Dr Wilfred Derome professor of legal medicine and toxicology at Montreal, aged 54 Dr Karl Helbich member of the Czechoslovak Ministry of Health Dr Max Christian professor of social hygiene at Charlottenburg aged 53 Dr Xavier Francotte emeritus professor of psychiatry at Liége Dr Kristian Poulsen a Copenhagen surgeon aged 77, Dr Ludwig Nielsen a Copenhagen dermatologist aged 74 Dr Antoine Remond professor of clinical medicine at Metz Professor Benjamin Lipschutz of Vienna author of works on ulcus vulvae acutum erythema migrans and molluscum contagiosum Dr Alfred Wiebe formerly director of the oto rhino laryngological clinic at Dresden aged 76 Dr Harold Krischner professor of pathology in the American University of Beyrouth aged 32 Dr Gesualdo Clementi emeritus professor of clinical surgery at Catania and Dr Lafonte an eminent Paris surgeon officer of the Legion of Honour

Medical News

The annual oration before the Hunterian Society of London will be delivered at Apothecaries Hall Water Lane E C on Thursday February 25th at 9 p m by Dr J B Christopherson on the etiology of chronic bronchitis

At the meeting of the Historical Section of the Royal Society of Medicine on March 2nd at 5 p m Dr W Langdon Brown will read a paper on the introduction of biochemistry into medicine The discussion will be opened by Sir Archibald Garrod who will be followed by Sir F Gowland Hopkins, President of the Royal Society Sir William Willcox, Sir Henry Dale Professor E C Dodds Dr T Lod Bennett, and Dr A P Cawadias

At the meeting of the Royal Sanitary Institute on Friday, February 26th at 4 p m in the Town Hall Wallasey a discussion on the reorganization of municipal hospitals will be opened by Dr W M Frazer medical officer of health, Liverpool

At the meeting of the West Kent Medico Chirurgical Society to be held at the Miller General Hospital Greenwich, S E to day (Friday February 12th) at 8 45 p m Dr Leonard Findlay will read a paper on chronic pulmonary disease in children illustrated by lantern slides

The annual general meeting of the Medical Officers of Schools Association will be held at 11 Chandos Street Cavendish Square W on Friday next February 19th at 5 p m (tea 4 30), when Dr William Moodie will read a paper on the significance of abnormal behaviour in children

The next monthly clinical meeting for medical practitioners will be given at the Hospital for Epilepsy and Paralysis Maida Vale W on Thursday February 25th at 3 p m when Dr Wilfred Harris (senior physician) will demonstrate cerebral tumours Tea will be provided and it will be a convenience if those intending to be present will send a card to the secretary

The Fellowship of Medicine and Post Graduate Medical Association announces a lantern demonstration by Mr P Lockhart Mummery on the diagnosis and treatment of diverticulitis on February 17th at 4 p m at the Medical Society of London 11 Chandos Street, W it is open only to members of the Fellowship Free demonstrations will be given as follows February 16th at 3 p m East London Hospital for Children Shadwell by Dr Leonard Findlay, February 16th at 2 p m Metropolitan Hospital Kingsland Road by Mr C Naunton Morgan A special course in medicine surgery and the specialties will be given at the Prince of Wales's Hospital February 15th to 27th from 10 30 a m to 5 30 p m daily A week end course of twenty four demonstrations in clinical surgery will be given at the Royal Albert Dock Hospital on February 20th and 21st and February 27th and 28th from 9 30 a m to 6 p m, lunch and tea are obtainable at the Hospital An evening M R C P course has been arranged as follows clinical and pathology evenings on Mondays and Fridays February 22nd to March 18th, lectures on Wednesdays two ophthalmic and one laboratory demonstration on Thursdays limited to twenty five graduates A course in practical pathology will be given at the Hospital for Sick Children from 12 noon to 1 p m on Mondays Tuesdays and Thursdays February 22nd to March 3rd Other forthcoming courses include neurology at the West End Hospital for Nervous Diseases February 22nd to March 18th daily at 5 p m psychological medicine at the Bethlem Royal Hospital Tuesdays and Fridays at 11 a m, February 23rd to March 18th medicine surgery and gynaecology at the Royal Waterloo Hospital February 29th to March 19th orthopaedics at the Royal National Orthopaedic Hospital March 7th to 19th proctology at the Gordon Hospital March 14th to 19th Copies of syllabuses of all courses may be obtained from the Fellowship of Medicine, 1, Wimpole Street W 1

ciation offers for award in June
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How is the condition of the
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the best paper submitted by officers
Medical Service—whether on the
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miasis

ibot has promised to give the summer
the Abernethian Society on Thurs
n. "Further travels with the North
The address will be given at 8.30 p.m.
surgical theatre of St. Bartholomew's
be illustrated by a film

ersary meeting of the French Ophthal
will be held from July 18th to 21st
asion of special celebrations. Requests
for information should be sent to Dr. Rene Onfray 6 Avenue de la Motte Picquet Paris VII.

The fifty-sixth Congress of the German Society for Surgery will be held in Berlin from March 30th to April 2nd under the presidency of Professor F. Voelcker of Halle. The principal subjects for discussion will be the liver in surgery introduced by Drs. Henschen of Basel and Brugsch of Halle; gangrene of the extremities introduced by Drs. Ropke of Barmen and Ceelen of Bonn; and artificial increase of resistance in surgical diseases introduced by Dr. Heile of Wiesbaden.

The February issue of *The Scottish Nurse* contains a practical article on the nursing of the prostatic case and a description of various emergencies which may be encountered in midwifery practice with their immediate treatment. There is a short account of the early history of hospitals in Edinburgh and elsewhere and a discussion of the changing conditions which are causing some diseases to vanish. This periodical is published monthly by Messrs. M'Naughtan and Sinclair of Glasgow; price 3d.

The Berlin correspondent of the *Journal of the American Medical Association* illustrates the decline in the use of luxury articles in Germany by the fact that the consumption of beer in the second quarter of 1931 had fallen by 20 per cent. that of cigarettes by 46 per cent. and that of pipe tobacco by 11 per cent.

We have received a copy of *The Catalogue of the Incunabula* or books printed in the fifteenth century in the library of the College of Physicians of Philadelphia compiled by the librarian Charles Perry Fisher and reprinted from the *Annals of Medical History*. The collection amounts to four hundred and four volumes.

The first meeting of the second session 1931–32 of the Harveian Society of London took place on Thursday February 11th when a discussion on the value of endoscopic methods was opened by Mr. V. E. Negus and Mr. H. S. Souttar. The Harveian lecture before the society will be given by Sir Bernard Spilsbury on pulmonary embolism on March 17th at 8.30 p.m. A clinical meeting will be held at King's College Hospital Denmark Hill on April 14th at 8.30 p.m. and on May 12th Dr. Geoffrey Holmes will give a film and lantern lecture on the general therapeutics of spa treatment with special reference to British spas. The Buckston Browne dinner will take place at the Connaught Rooms on June 9th and the summer meeting (to which ladies can be invited) will be held at Whipsnade on July 16th.

Mr. A. Ernest Maylard consulting surgeon to the Victoria Infirmary Glasgow recently gave a practical address on "Cottage hospitals their value in the light of modern requirements" to the South Eastern Counties Division of the Edinburgh Branch of the British Medical Association. In this he dealt in turn with the history of cottage hospitals and their extension within the last half-century practical points in connexion with site construction and management the admission of patients staffing finance and provision for maternity cases. The address has now been printed in pamphlet form and copies can be obtained from the publishers Messrs. J. A. Kerr and Co. 27 Northgate Peebles price 6½d. post free.

The Minister of Health received a deputation on February 9th from the County Councils Association the Association of Municipal Corporations and the Mental Hospitals Association on the subject of the sterilization of mental deficients. The deputation represented to the Minister that while the associations for whom they spoke had reached no final conclusion upon the desirability of sterilizing mental deficients they considered that the time had come at which a full inquiry should be made into the whole question in view of its national importance. The Minister of Health said in reply that he agreed that there was a need for inquiry into the problem and he proposed as a first step to arrange for it to be made by competent persons into its scientific aspects.

In his report on the circumstances connected with the recent disorder at Dartmoor Convict Prison (H.M. Stationery Office Cmd. 4010 6d.) Mr. Herbert du Parcq K.C. records that he took statements from Dr. E. G. Battiscombe senior medical officer and Dr. R. G. E. Richmond deputy medical officer the former of whom prepared a return showing the injuries suffered by officers and prisoners on Sunday January 24th. Throughout the disturbances the two medical officers seem to have been treated (as Dr. Battiscombe puts it) as "non-combatants" and they both carried on with their duties attending to the wounded. Among his general conclusions Mr. du Parcq says that the medical officers showed the greatest possible devotion to duty.

The Child Guidance Clinic of the Jewish Health Organization of Great Britain announces a short course of lectures on the psychological problems of childhood to be given on Tuesdays and Thursdays at 5.30 p.m. beginning on March 1st. The following subjects will be included: development of child mentality; mechanisms of child neuroses; behaviour disorder and delinquency; the retarded child in its mental and physical aspects; psychological testing of the difficult child; educational problems of the difficult child; psychology of the stammerer. The course is intended primarily for members of the medical profession and medical students and will only be held if the number of applicants is not less than fifteen. In association with the lectures afternoon clinical demonstrations will be held. The fee for the course is £2 2s. for medical graduates and £1 1s. for students; tickets and detailed syllabus to be obtained from the honorary director Child Guidance Clinic Jews Free School Bell Lane Spitalfields E.1.

The Medical Club of Bremen celebrated the hundredth anniversary of its existence on January 9th and 10th.

Professor Achard of Paris and Professor Rohmer of Strasbourg have been elected foreign corresponding members of the Belgian Royal Academy of Medicine.

Professor August Bier has been elected an honorary member of the Berlin Medical Society.

The following appointments have recently been made in German medical faculties: Dr. Bering of Essen professor of dermatology and syphilology at Cologne; Dr. Löhlein of Jena professor of ophthalmology at Freiburg i. B. in succession to Professor Axenfeld; and Dr. Löwenstein professor of psychiatry at Bonn.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, British Medical Association House, Tavistock Square W C 1**

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QUERIES AND ANSWERS

Cowper's Insanity

M D writes Can any reader give me information as to the exact type of insanity Cowper the poet suffered from?

Sclerosing Solution for Varicose Veins

Dr T Henry Treves Barber writes I have received correspondence in respect to the solution mentioned in my note in the *British Medical Journal* of January 23rd The solution has always been prepared for me by the Crookes Laboratories from whom supplies (issued as epsol) can be obtained

Urticaria

Dr H P Lehmann (Woodbridge Suffolk) writes The queries of Dr E I Tison (Salisbury) and Dr H H Bullough (Colne) in your issues of January 16th and 30th have interested me I had a patient male aged 55 who last summer suddenly developed urticaria without any known cause being found After trying many of the usual remedies it was discovered that he was much worse after eating salt beef Following this I ordered all his diet to be salt free this plan was followed and the urticaria rapidly cleared up entirely and he has remained free ever since except on one occasion when some salt was added in error to his potatoes Previous to ordering the entirely salt free diet the patient always took a normal amount of salt

Income Tax

Receipts from Lectures

'J M is a whole time public health officer Since 1926 he has given lectures for which fees have been paid but holds no permanent appointment as lecturer and the lectures have not all been given to the same body of students What is the basis of his liability?

*** In the circumstances we are of opinion that the fees are assessable under Schedule D as miscellaneous professional earnings and we believe that that course is frequently adopted by the authorities On that basis his liability would be calculated on the amount of the previous year's fees except for the first year the assessment for which would be on the current year's basis

Replacement of Car

'A B bought a car in 1924 for £575 In 1932 he sold it for £40 and bought another car for £300 How does this affect his income tax liability?

*** The cost of replacement—that is £300 - £40 = £260—can be treated as an expense of the year in which the expenditure was incurred If A B customarily makes his professional account up to December 31st the transaction will reduce his profits for 1932 and affect his assessment for 1933-34 If his accounts are made up to March 31st for instance it will reduce his profits for 1931-32 and his assessment for 1932-33

Depreciation of Car

'G P N" makes up his accounts at the end of March In March 1930 he replaced his car the cost of the new car being £302 What depreciation allowance is he entitled to for 1931-32?

*** The obsolescence allowance and the cost of replacement are treated as professional expenses for the year for which the account is made up so that the replacement deduction in 1929-30 affected the assessment for the following year (1930-31) That deduction excludes the depreciation allowance for the same year—that is 1930-31—under a judicial decision of many years standing If that allowance could have been claimed for 1930-31 it would have been £302 at 20 per cent—that is £60—leaving a written down value of £242 which would give a depreciation allowance of £48 for 1931-32 In fact the 1930-31 allowance as such has been lost—though the matter will be rectified by its effect on the obsolescence allowance when the new car is replaced—and the 1931-32 allowance must be reckoned at £48 subject of course to any modification for private use

LETTERS, NOTES, ETC

Drug Addicts in Court

Dr G Laughton Scott (London W) writes A recent inquest on a medical drug addict at Chester suggests that all is not well with the procedure in these cases It is difficult to see how the bringing of charges against these unhappy people is really in the sufferer's best interests as it is so often stated to be It enables the court to impose a period of treatment but the publicity means social and professional downfall If treatment is successful so that the patient can resume work he will find that his work is gone No one who has any knowledge of the Home Office methods in these cases will deny that their medical officers show an indulgence and kindness which is altogether admirable Their aim is to rescue and not to prosecute But if or when prosecution is inevitable surely a merciful suppression of the name in court is highly to be desired otherwise the recovered addict has only the ruins of his life to return to

Laying up the Car in Winter

Rarely can any substantial economy be effected by laying up a motor car during the winter months Depreciation continues so far as the factor of age is concerned and insurance against loss by fire or theft has to be maintained But for those who are obliged to lay up their cars for a considerable period the following recommendations are made by the Automobile Association Wash and polish the car thoroughly then coat with vaseline all nickel plated brass or steel unpainted parts Thoroughly lubricate the car Drain the radiator and water circulating system Empty the petrol tank Jack up the wheels so that the tyres are not resting on the floor Carefully wash the tyres and remove any flints embedded in the rubber Remove the battery from the car and store it with a competent electrician for periodic attention Failing this charge the electrolyte completely fully charge and give a freshening charge at intervals of not more than one month The terminals should be kept smeared with vaseline to prevent corrosion Cover the whole car with a dust proof sheet and ensure proper ventilation to keep the interior as dry as possible In the case of a touring car the hood and all side curtains should be erected If a saloon or closed type shut all the windows and place some anti moth preparation inside the body

Another Vicious Circle

Dr Herbert Armstrong (Liverpool) writes In a course of lectures to our nurses when describing the interrelation of anal fissure and constipation I fear I cannot have been sufficiently lucid But the following howler from a resulting examination paper I have just corrected throws a new light on the subject I am told that 'in *fissura in ano* a fissure can be seen in the anus often with a vicious circle round with the explanation that the vicious circle is an area of inflammation'

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 45 46 47 50 and 51 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 48 and 49

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 59

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

143 Sporadic Septic Sore Throat

I PILOT and D J DAVIS (*Journ Amer Med Assoc* December 5th 1931 p 1691) state that sporadic sore throat is most often due to haemolytic streptococci which in 10 per cent of the cases correspond in their cultural features to the *Streptococcus epidemicus* of epidemic sore throat The usual form of sore throat due to *Streptococcus epidemicus* is sporadic while the epidemic type is unusual and requires the development of streptococcal mastitis in a cow the milk from which becomes the source of the epidemic *Streptococcus epidemicus* carriers are probably the cause of the direct transmission of sore throat Clinically sporadic sore throat due to *Streptococcus epidemicus* ranges from very mild to severe types In tonsillectomized patients the symptoms are those of an infection of the upper respiratory tract resembling influenza Immediate complications may arise in the form of otitis media mastoiditis and cervical adenitis sequels such as acute polyarthritis endocarditis glomerulonephritis and erythema nodosum may develop from 10 to 30 or more days after the onset

144 Helminths as Cause of Meningitis

I J M LAURENT (*Brit Journ Child Dis* October–December 1931 p 296) who describes an illustrative case states that previous records of helminthous meningism or meningitis are rather scanty in English medical literature whereas many examples of serious nervous symptoms some with a meningeal syndrome have been reported by French authors since 1863 when Lebon recorded a case of meningitis due to *Ascaris lumbricoides* Guillain and Gardin described a case of meningitis due to *Taenia solium* and other cases of meningitis due to *Ascaris lumbricoides* have been reported by Lancelin and Challamel (see *Epitome* October 10th 1931 para 314) The nervous symptoms have been variously attributed to reflex irritation increased virulence of the bacteria caused by the worms on the intestinal mucosa and the absorption of a toxin produced by the worms Laurent's patient was a girl aged 4 years admitted to hospital as a case of cerebro-spinal meningitis the symptoms being vomiting convulsions photophobia nuchal rigidity and general irritability passing on to drowsiness Lumbar puncture gave issue to 40 c.cm of clear colourless cerebro-spinal fluid under considerable pressure Examination of the fluid showed 3 cells per c.mm no increase in protein content 6.25 mg of chlorides per 100 c.cm and rapid reduction of Fehling's solution Cultures remained sterile On the following day the child passed a large number of threadworms after an enema and during the next few days passed more worms as the result of anthelmintic treatment By the third day the condition had become quite normal The case was therefore diagnosed as one of meningism due to *Oxyuris vermicularis*

145 Low Voltage Cardiac Conditions

Reports conflict as to the significance of electrocardiograms of low voltage H N SLECKMAN and M L RICH (*Journ Lab and Clin Med* November 1931 p 165) record a study of fifty cases (forty nine with clinical evidence of heart disease) showing low voltage The criterion used for this diagnosis was that the total deflection of the QRS complex did not exceed 5 mm in any of the three standard leads This series indicates that the occurrence of low voltage in cardiac cases is of serious prognostic import The duration of the illness was less than one year in thirty three of the cases Arteriosclerosis with or without hypertension was the leading etiological factor In nineteen cases low voltage alone was present the mortality was sixteen within ten and a half months In fourteen cases auricular fibrillation also was evident with a known mortality of eight within ten months Ten cases showed aberrant QRS complexes including intraventricular block the mortality in these was nine in ten and a half months Heart block existed in nine patients the mortality being six in seven months Inverted T waves in significant leads were present in seven three patients had died within two and a half months The total deaths were thirty six thirty two died within six months after the taking of the first electrocardiogram showing low voltage Necropsies were performed on fourteen Some degree of sclerosis in the coronary arteries was found in ten cases Microscopical examination showed an abnormal myocardium in every case fibrosis being the most frequent finding

146 Undulant Fever in Children

E D ANDERSON and J F POHL (*Amer Journ Dis Child* November 1931 p 1103) report three cases of undulant fever in children two patients were boys aged 3 and 6 years and one a girl who was 8 years old The onset typically is slow poorly defined and insidious in character weakness anaemia fever chills and profuse sweats are usually the prominent symptoms as the disease becomes established Continued fever is the only consistent finding The diagnosis is arrived at by a process of exclusion and by a positive serum agglutination test Infection was traced in each of the cases under review to the cows supplying the milk used in the particular household The three cases ran mild courses the shortest lasted only seven weeks but the longest was still mildly active at the end of eight months Typical undulations of the fever did not occur there were periods of high fever but they followed physical exertion and the fever subsided after rest

Surgery

147 Operative Mortality of Acute Empyema

G P MULLER (*Journ of Thoracic Surg* October 1931 p 15) gives particulars of a series of 99 cases of acute empyema following pneumonia in which six deaths or 6.1 per cent occurred The series is divided into age groups the first being that of children not more than 2 years old in which the death rate was 15.4 per cent This high mortality is probably due to the fact that the effusion is large the resistance to infection undeveloped there is an intolerance of manipulation and possibility of sepsis from inadequate drainage attributable to timidity on the part of the surgeon There were 52 cases in children between the ages of 2 and 14 with a death rate of 9 per cent in adults over 50 it was 40 per cent The infecting organism is an important factor in the mortality deaths from a streptococcal empyema being much more frequent than from a pneumococcal infection Complications such as middle ear disease meningitis bilateral empyema or pericarditis are not uncommon and may cause the death of the patient even though the pleura is perfectly drained One or more aspirations are always performed in the case of infants usually in older children and frequently in adults especially if there is cyanosis displacement of the heart or dyspnoea Aspiration is followed by tube drainage during the metapneumonic stage and in 60 per cent of cases it was found necessary to undertake rib resection for the introduction of a larger tube Closed drainage is the proper method in nearly every case and in most patients will effect a cure Out of the series of 99 cases two required minor thoracoplasty several early cases were treated with bismuth paste one was operated on for bronchial fistula one returned with the tube slipped back

abdominal symptoms were followed by rupture of the cyst and evacuation of sebaceous material and hairs by the rectum Four months later the patient complained only of some dysmenorrhœa and refused either operation or proctoscopic examination declaring that she found the presence of a lock of hair 10 to 12 c cm long protruding from the anus to be lucrative In a third patient a large dermoid cyst had been aspirated by the rectum on account of dystocia at term grave infection followed but was cured by an operation and the introduction of a Mikulicz drain

160 Simulation of Cancer of the Cervix by Foreign Bodies

H Ruckens (*Zentralbl f Gynak* November 14th 1931 p 3309) describes two cases in which a foreign body in the vagina simulated cancer of the cervix The first patient a woman aged 17 who had had nine children had ceased to menstruate four months previously and had complained for three months of an offensive blood-stained discharge two medical examiners concurred in the diagnosis of carcinoma of the cervix It was not until after introduction of the speculum that the cauliflower like mass over the cervix was recognized as the remains of a bath sponge and was removed piecemeal Much parametrial infiltration was present but biopsies from the eroded portio and vaginal walls showed no evidence of malignancy In the second case a feeble minded single woman aged 42 had had curettings examined microscopically on account of a foul blood stained discharge later a fragment of tissue was excised for examination from what was regarded as the portio On admission to hospital cancer of the cervix was provisionally diagnosed but on sounding the cervix — which was in reality a stenosis of the vagina—a foreign body was detected and removed by laparotomy It proved to be a large transversely placed cotton reel which had been inserted two years previously with anti conceptional intent and which besides inducing atrophy and stenosis of the vaginal wall below had penetrated the vaginal vault towards the bladder

Pathology

161 Demonstration of Haemin Crystals

According to G Bertrand (*Bull de l Acad de Med* November 24th 1931 p 386) the demonstration of haemin or Teichmann's crystals is one of the most certain ways of detecting the presence of blood He points out the difficulties in obtaining these crystals by the usual method of evaporating with gentle heat the suspected substance after the addition of sodium chloride and acetic acid and personally uses a solution of crystallized magnesium chloride glycerol crystallizable acetic acid and distilled water Its preparation and the technique of manipulating it in preparing specimens is described The advantages of this reagent are its syrupy consistence which retards its flowing over the slide as does pure acetic acid minute specimens can be examined and permanent preparations can be made owing to the presence of the magnesium salt and glycerol

162 The Etiology of Acute Yellow Atrophy of the Liver

In Bessey (*Hygiea Stockh* December 4th 1931 p 1321) states that acute yellow atrophy of the liver which is due to various causes—such as poisons trauma and syphilis—or may be apparently spontaneous is not [illegible] but a more or less complete necrosis of [illegible] often associated with total blocking of the ducts and stroma The presence of areas of [illegible] in the early stages and the occasional finding of [illegible] in non fatal cases show that recovery [illegible] of the parenchyma cells [illegible] organ after experimental [illegible] if continued for thirty minutes [illegible] result Clinically reflex arterial spasm has been regarded as the cause of secondary parenchymatous degeneration Beneke believes that the necrosis is due to spasm of the hepatic arterial wall from irritation of the coeliac ganglion following stimulation of the vasomotor centres of the medulla and cord as well as to a secondary reflex irritation caused by parenchymal asphyxia originated by exogenous or endogenous poisons, possibly adrenaline circulating in the blood Another conceivable etiological factor is spasmophilia Certain persons are subject to local ischæmia of the fingers and it is suggested that this may appear in other organs it is known to occur in the heart In two fatal infantile cases no evidence of poisoning was found but the necropsies revealed extensive necrosis of the hepatic parenchyma associated with regeneration areas Ligature of the hepatic artery (the portal vein being patent) causes rapid complete hepatic necrosis This suggests that acute yellow atrophy is due to ischæmia and oxygen deprivation

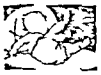
163 Hinton's Test in Blood Serum and Cerebrospinal Fluid

J Prokupek (*Bratislavske Lekarske Listy* November, 1931 p 514) reports that in 102 syphilitic and 158 non syphilitic cases the results of Hinton's test in the blood serum were almost identical with the result of the Wassermann test performed simultaneously as a control It offered no advantages over other methods Following anti syphilitic treatment it became negative at an earlier date as compared with other precipitation reactions He used two test tubes containing 0 1 c cm and 0 3 c cm of serum respectively and read the final result after eight and twenty four hours He recommends the test on account of its simplicity and accuracy In the cerebrospinal fluid the test proved less accurate

164 Latent Variolar Infections

P Teissier J Reilly E Rivalier and V Stefanesco (*C R Soc de Biologie* December, 18th 1931 p 1039) have undertaken a number of experiments on the susceptibility of different laboratory animals to the virus of small pox Injected into the testicle of monkeys the virus gives rise to an orchitis with the appearance of a rash on the scrotum or even more distally Passage from one monkey to another is almost uniformly successful In a series of forty two passages only three animals proved entirely insusceptible in three other animals inoculated with a very small dose an inapparent infection developed, as evidenced by the fact that though no orchitis was visible the animals serum nevertheless developed virucidal properties to the vaccinia virus These three animals were young and their testicles were poorly developed which may account for the failure of a definite reaction That they contained the virus however was proved by excising them in two of the animals a week later and inoculating them on to the skin of a fresh monkey this animal reacted by a local variolar rash A similar inapparent infection was produced by the intravenous inoculation of a monkey with a very small dose of virus Cats and dogs usually respond to the intratesticular injection of variolar virus by developing an orchitis but passage experiments are generally unsatisfactory The first passage animals develop an inapparent infection accompanied by the formation of an immunity to vaccinia but in subsequent passages even this does not occur In rabbits inoculated intratesticularly inapparent infections are the rule In a series of fifty three inoculated animals orchitis did not develop but the animals were found three weeks later to be partially immune to vaccinia Experiments on monkeys showed that the virus persisted in the rabbit's testicle for at least fourteen days Passage experiments in rabbits were unsuccessful the virus disappeared from the testicle in a few days and no immunity developed Rats and mice did not react to variolar virus when inoculated intratesticularly or subcutaneously but the virus remained in the tissues for a long time it could be demonstrated in the liver and spleen forty days later The animals acted as healthy carriers and no immune bodies appeared in their serum

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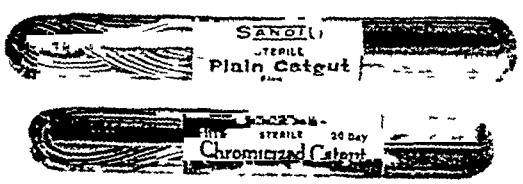
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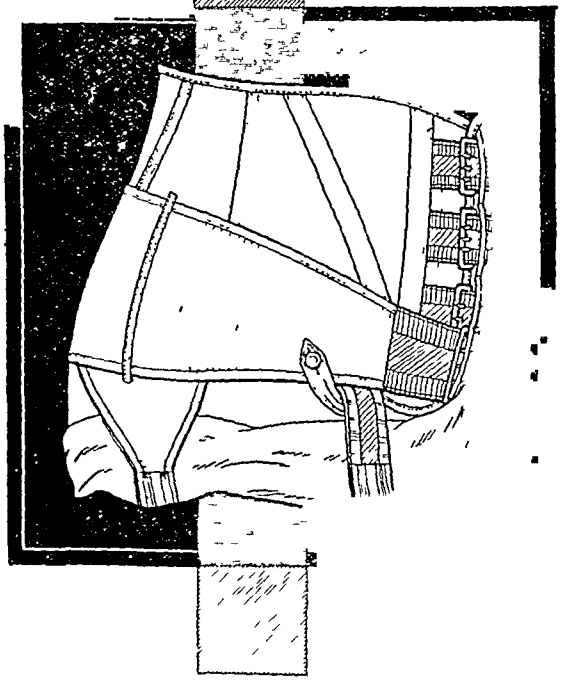
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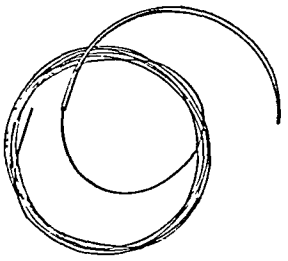
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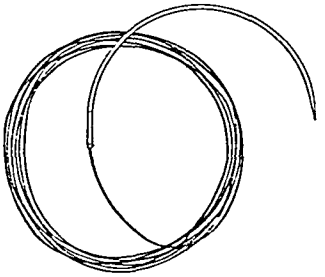
London Hospital Eyeless Needles

WITH L H CATGUT

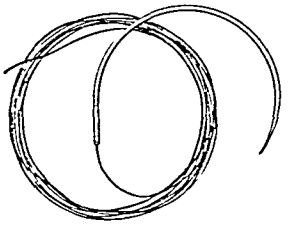
The London Hospital Eyeless Needles have been specially designed to avoid the doubling of the suture necessary in using needles with pierced eyes They are fitted with tubular ends into which the sutures are firmly fixed thus enabling the needles to be used with single strands These needles are finely ground sharp pointed and packed sterile in tubes for immediate use Special precautions are taken to avoid any rusting of the needle after it has been packed



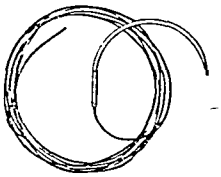
Curved Needle (Keith or Bantock) 3 side cutting edge Sizes 3/0 2 0 0 1 2 3
In boxes of 3 tubes 4/6



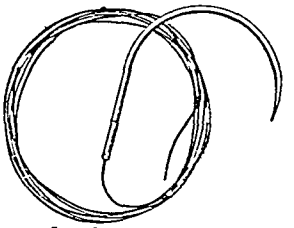
Curved Mayo Robson Stomach Needle Sizes 4/0 3/0 2/0 0 1 2 3 In boxes of 3 tubes 4/6



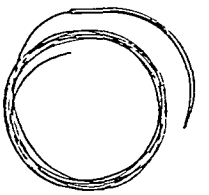
Moynihan's Model. In 3 tube box 4/6



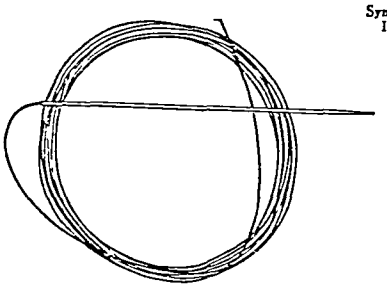
Small Curved Intestinal Needle
Size 0 In boxes of 3 tubes 4/6



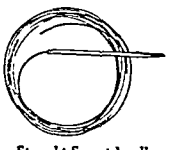
Symond's Round Bodied Model.
In boxes of 3 tubes 4/6



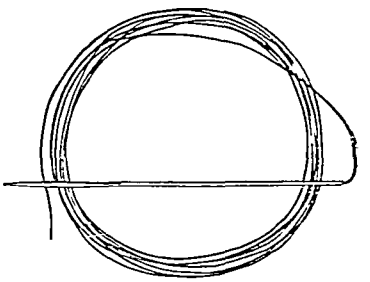
Curved Ophthalmic Needle (also for plastic work) Size 0/0
In boxes of 3 tubes, 4/6



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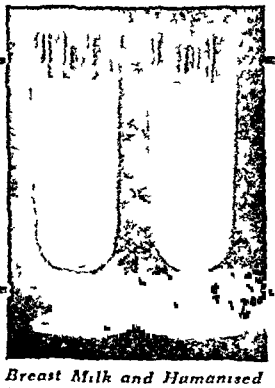
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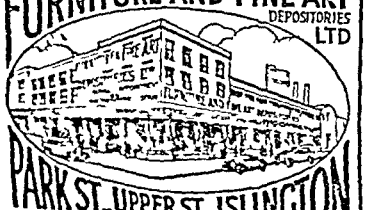
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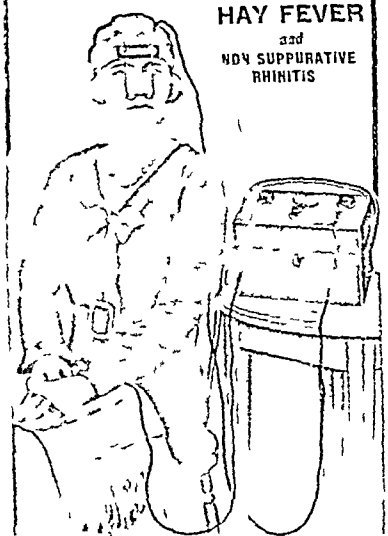
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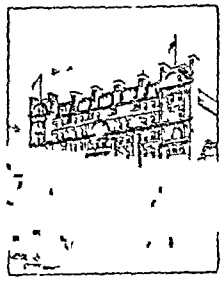
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At all the branches of the Hospital there are cricket ground football and hockey ground lawn tennis courts (grass and hard courts) croquet ground golf course and bowling green Ladies and gentlemen have their own gardens and facilities are provided for handicraft such as carpentry etc

For terms and further particulars apply to the Medical Superintendent (Telephone No 2355 and 2357 Northampton) who can be seen in London by appointment

COURT HALL, KENTON, EXETER,
SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Diseases Limited to eight patients Telephone Starcross 19

CLIFFDEN TEIGNMOUTH in connection with Court Hall for early and convalescent cases Cliffden is a large well appointed house with lovely views of the South Devon Coast It is beautifully situated in ground of 19 acres The garden are very attractive and there is a private road to the beach

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FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical interest standing in 9 acres of garden and ground and is situated 1½ miles from Northampton and 12 mile from Bedford on the main London to North upton Road fifty miles from London Both sexes are accommodated Private Therapeutic Treatment is used extensively in suitable cases Radiant Heat X Ray and Ultra Violet Light Diathermy and Foam Bath Billiard tennis etc Fee from five gns per week

Apply Dr D E M DOUGLAS MORRIS Telephone Newport Pagnell 121

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HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted Voluntary and Temporary Patients received

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Phone 11 Ashton in Makerfield

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition

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Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Reg Tel Address Bethlem Beckenham *Telephone* Springpark 1180—1181

Station Eden Park (Southern Railway)

President LORD WAKEFIELD OF HYTHE C B E LL D
Treasurer SIR LIONEL FALDEL PHILLIPS Bart
Physician Supt J G PORTER PHILLIPS M D F R C P

This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm grounds
Applications can be considered on behalf of patients of the educated classes in a presumably curable condition
With a view to early treatment voluntary or uncertified patients are admitted
Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise
The Committee will also consider applications for admission at lower rates and in certain cases will be prepared to admit patients free of charge
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this Unit is found the X ray and Dental Departments and the Bio Chemical Pathological and Psychological Laboratories
Furthermore provision is made for Electro Therapy and Hydro Therapy to be carried out in all their forms
In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms
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REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological cultures the ordinary x ray examinations and electrocardiograph readings all treatment that may be prescribed such as special diets insulin artificial sunlight electrical treatment baths massage nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales Telegrams CASTLE RUTHIN Telephone RUTHIN 66

PECKHAM HOUSE, 112, Peckham Road, London, S E.15.

Telegrams "Alleviated London Telephone Rodney 4741-4742

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year
Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification

Convalescent Home Kearsney Court Dover For further particulars apply to the Medical Superintendent

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Extensive Grounds
CONVALESCENT HOME
at BOURNEMOUTH
Illustrated Brochure

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and dairy produce from own farm Terms very moderate
acres of ornamental grounds with tennis courts etc which Voluntary
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CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.
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THE TREATMENT OF MENTAL DISORDERS
for mild cases with private suites if desired Voluntary Patients received
and Grass Tennis Courts Bowls Croquet Squash Racquets, and all indoor
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and Immersion Baths Operating Theatre Pathological Laboratory, Dental Surgery,
Senior Physician Dr Hubert James Norman assisted by three Medical Officers,
An illustrated Prospectus may be obtained upon application to the Secretary
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MURTLE DEESIDE ABERDEENSHIRE



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Physician Superintendent J M JOHNSTON M B D P H etc.

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PENMAENMAWR

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For particulars apply to the Secretary, Pendyffryn Hall Penmaenmawr N Wales (Phone 20)

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This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES It is situated in the midst of a large area of parkland at a height of 450 feet above sea level on the south west slopes of mountains rising to over 1 800 feet which protect it from north and east winds and provide many miles of graduated walks with magnificent views Average rainfall 29 57 per annum Full day and night nursing staffs X ray plant Every facility for Artificial Pneumothorax and for operations on the chest Electric lighting Central heating Home farm Clean milk from T T Herd For particulars apply to Medical Superintendent H Morriston Davies, M D, M Ch Cantab F R C S Llanbedr Hall Ruthin N Wales

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Full day and night Nursing Staff

Resident Physicians GEOFFREY A HOFFMAN B A M B F C Dub and MARGARET A HARRISON M B B S Lond

Apply The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 51 WITCOMBE *Telegrams* HOFFMAN BIRDLIP



KINGUSSIE, N B

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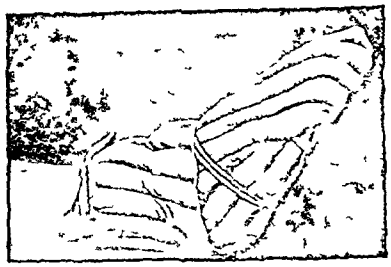
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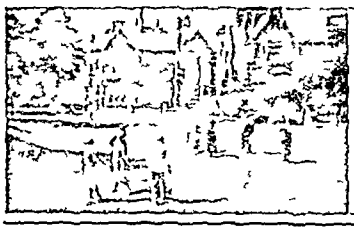
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Prospectus from Secretary *Tele* 341

Resident } W JOHNSTON SMITH M D

Physicians } L T ROSE HUTCHINSON M D

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The Committee of the above Hospital will be opening BEECHMONT HOUSE in February next for the reception of Female Private *patients suffering from mental disorder* Voluntary Temporary and Certified Patients will be received

Beechmont is a large country house situated on the outskirts of Haywards Heath and quite separate from the Hospital

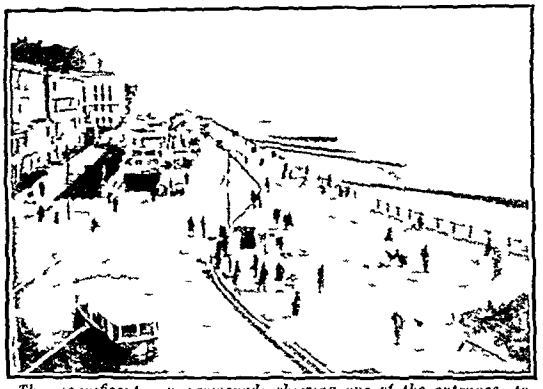
The house is healthily situated and stands on an estate of 27 acres with beautifully laid out gardens and lawns commanding extensive views of the South Downs It has up-to-date systems of lighting and heating and is attractively furnished on modern lines

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C.F.H. 31

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Candidates must have been born in England Scotland or Wales and be members of the Church of England unmarried and within the ages of 17 and 20 years for Physic and Divinity and 19 and 23 for Law

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University of London

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Admission free without ticket

S J WORSLEY Academic Registrar

University of Leeds

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MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complications. Monthly or Fortnightly Courses.

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A PUBLIC SCHOOL FOR BOYS

Boys are regularly prepared for the First M.B. Examinations. University Scholarships in Chemistry, Biology, etc.

Special facilities are offered for the teaching of Chemistry, Physics, Botany and Zoology. *New Science Buildings* containing seven laboratories, two lecture rooms, science library, store rooms, etc., opened in September, 1928. Prospectus from Head Master.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd, and for the Diploma in Tropical Hygiene on January 11th and April 10th. (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

NORTH-EAST LONDON POST-GRADUATE COLLEGE

PRINCE OF WALES'S GENERAL HOSPITAL, N.15

The Practice of the Hospital is limited to Medical Practitioners. Particulars from J. DOWNING ATTKINSON, M.D., Dean.

MEDICAL CORRESPONDENCE COLLEGE,

19 Welbeck Street, London, W.1

CONJOINT BOARD EXAMINATIONS

Candidates taking the First, Second, or Final Conjoint Examinations should make sure of passing at the first attempt by enrolling for the short intensive Revision Courses of the College.

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Highly qualified Tutors with accurate knowledge of the special features of these examinations.

Write at once for booklet "How to Pass the Conjoint Board Examinations." Sent free on application.

Address The Secretary

MEDICAL CORRESPONDENCE COLLEGE

18 Welbeck Street, London, W.1

LONDON HOSPITAL MEDICAL COLLEGE

F.R.C.S.

A COURSE OF INSTRUCTION for the Final Fellowship Examination will begin on Tuesday, March 1st.

Fee (exclusive of Operative Surgery) 20 guineas. Operative Surgery 5 guineas.

A separate entry can be made for all Classes other than those of a strictly Clinical character.

Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., Dean, London Hospital Medical College, Mile End, E.1.

THE NORTH-EAST LONDON POST-GRADUATE COLLEGE

The Prince of Wales's General Hospital, Tottenham, N.15, North Middlesex Hospital, Edmonton, and Associated Hospitals.

An INTENSIVE REFRESHER COURSE will be held from February 15th—26th. Lectures, demonstrations, and clinics in the various general and special departments.

The number is limited to 25.

Enquiries and applications should be sent to the Dean at the Hospital, or to the Secretary of the Fellowship of Medicine, 1 Wimpole Street, W.1.

Medical and Dental Students

Special Classes for Pre-Medical and Dental Exams. Matric. and Prelims. Chemistry, Physics and Biology Labs. MANCHESTER TUTORIAL COLLEGE, 327 Oxford Road, Manchester.

City of Liverpool

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Corporation invites applications for the position of Assistant Tuberculosis Officer at a commencing salary of £500 per annum rising by annual increments of £25 to £700 per annum (at present subject to the temporary deduction authorised by the Council)

Candidates must have had at least 3 years experience in the practice of their profession must have spent not less than 18 months in general clinical work of which not less than six months have been spent as a Resident Officer in charge of beds occupied by general medical and surgical cases and must have had special training for a period of not less than six months in the diagnosis and treatment of tuberculosis

The officer appointed will hold office subject to the Standing Orders of the City Council and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 He will be required to devote his whole time to the duties of the office and will not be allowed to engage in private practice and all emoluments out of public moneys which may be payable to or received by him shall be paid to the Corporation He will be under the administrative control of the Medical Officer of Health

Applications stating age qualifications etc accompanied by copies of not more than three recent testimonials to be made on forms obtainable from the undersigned to whom applications must be sent so as to be received not later than Friday February 26th Envelopes to be endorsed Assistant Tuberculosis Officer

Canvassing in any form oral or written direct or indirect is prohibited

Municipal Buildings WALTER MOON
Liverpool Town Clerk
February 8th 1932

Royal Salop Infirmary, SHREWSBURY (156 Beds)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST

Applications are invited from fully qualified men for the appointment of Casualty Officer and Resident Anaesthetist vacant from March 1st next

The appointment is for a period of six months subject to re-appointment for a further period of six months at a salary of £160 per annum with board residence etc Resident Staff comprises Resident Surgical Officer House Physician and Casualty Officer

Applications stating age qualifications experience nationality and accompanied by copies of three recent testimonials to be sent to the undersigned

Board Room J W NOBLE
February 3rd 1932 Secretary Supt

Royal Salop Infirmary, SHREWSBURY (156 Beds)

APPOINTMENT OF RESIDENT SURGICAL OFFICER.

Applications are invited from fully qualified men for the appointment of Resident Surgical Officer vacant March 1st next

The appointment is for a period of 12 months at a salary of £250 per annum with board residence etc The Residence Surgical Officer is senior Resident Officer of the Hospital House Staff comprises House Physician and Casualty Officer and Resident Anaesthetist

Application stating age qualifications experience nationality and accompanied by copies of three recent testimonials to be sent to the undersigned

Board Room J W NOBLE
February 3rd 1932 Secretary Supt

The Sheffield Royal Hospital (340 Beds)

Required at once a RESIDENT ANAESTHETIST who will be eligible for another resident post when a vacancy occurs Salary at the rate of £80 per annum rising to £100 per annum in six months with board residence and laundry There are eleven resident medical officers Applications should be forwarded immediately to—

W H BOOTH
February 6th 1932 Supt & Secretary

Rossall School — Some twelve

Open SCHOLARSHIPS for boys between the ages of 12 and 14 on March 1 next value from £90 a year downwards will be awarded by Examination beginning March 1st 1932 Boys examined at home all and in London—Apply THE BURSAR Rossall School Fleetwood.

London County Council

Applications invited for two appointments as RESIDENT MEDICAL SUPERINTENDENT Persons appointed will be under direction of Medical Officer of Health and must take part in any of the other establishments under control of Council if required

SOUTHERN HOSPITAL DARTFORD KENT Upper Hospital (777 beds) for Convalescent Infectious cases and Lower Hospital (767 beds) for Convalescent Infectious or Non infectious cases Salary £1 100 by £50 to £1 350 a year

SOUTH WESTERN (FEVER) HOSPITAL Landor Road Stockwell S W 9 (325 beds) Salary £900 by £50 to £1 150 a year

In each case unfurnished house or quarters provided free of rates etc valued provisionally at £100 a year The salaries are subject to temporary reduction

Candidates must be duly qualified Medical Practitioners of at least five years standing have been House Physician or House Surgeon in public general hospital and have experience of hospital administration

Application forms (stamped addressed envelope necessary) obtainable from Clerk of the Council County Hall S E 1 must be returned by February 26th Canvassing disqualifies

County Council of Dunbarton

PUBLIC ASSISTANCE MEDICAL SERVICE

The County Council of Dunbarton invite applications from registered Medical Practitioners for the appointment of DISTRICT MEDICAL OFFICER for the Parish of Arrochar as from April 1st

The appointment is a part time one the emoluments consisting of a salary of £65 and the tenancy of a house at Tarbet valued at £55 per annum It is anticipated that there will be available to the successful applicant additional emoluments from panel practice private practice and one or more other small appointments Applications accompanied by one copy of not more than three recent testimonials should be lodged with Dr T Lauder Thomson County Medical Officer 88 College Street Dumbarton not later than Wednesday February 17th from whom form of application and any other information required may be obtained Canvassing prohibited

(Sgd)
County Building County Clerk
Dumbarton Feb 2nd 1932

Bootle General Hospital, BOOTLE near LIVERPOOL (100 Beds)

Applications are invited for the post of CASUALTY OFFICER and the two posts of HOUSE SURGEON for the six months ending September 30th

Salaries at the rate of £150 per annum with board laundry etc

Duties to commence April 1st

Application stating age and qualifications with copies of testimonial to be sent to the undersigned on or before March 4th

J A BLAPDSALI
Secretary Superintendent

Derbyshire Royal Infirmary, DERBY (General Hospital—347 Beds)

Applications are invited for the post of CASUALTY OFFICER

Candidates must be qualified and registered under the Medical Act

The appointment is tenable for 12 months

Salary will be £150 per annum with apartment board etc

Application with copies of testimonial to be sent to the undersigned

WALTER BANKS
Feb 1st 1932 Supt & Secretary

Royal Hospital, Richmond, SURREY

Applications are invited for the post of HONORARY SURGEON (male) to Out Patient Clinics are held on Monday and Thursday at 2 o'clock and the Surgeon appointed will be required to attend on both days Applications with copies of testimonials should be forwarded to the undersigned not later than Feb 26th

RICHARD ALLEN Secretary

Manchester Royal Eye Hospital

JUNIOR HOUSE SURGEON required Salary £120 per annum with residence board etc

Applications (with copies of testimonials) to be addressed to the Chairman of the Board of Management not later than February 26th

H R NORTH Secretary

Sudan Medical Service

Three MEDICAL OFFICERS are required for the Sudan Medical Service

Candidates must be single and should be under thirty years of age and must have held a Resident appointment in a large general Hospital

Before proceeding to the Sudan the successful candidates will be required to take a Course at the London School of Tropical Medicine starting on April 14th 1932 Fee and a subsistence allowance provided by the Sudan Government

Pay in the Sudan commences at £E 720 a year subject to a 7½ per cent abatement rising to £E 1 200 after thirteen years service On confirmation of his appointment the elected candidate will be eligible for pensionable service

Applications (in writing only) with copies of recent testimonials should be made to Dr HODSON 24 Welbeck Street W 1 from whom and from the Secretaries and Deans of the principal Medical School further particulars can be obtained Only applications received by Feb 29th 1932 will be taken into consideration No special application form is required

Southern Rhodesia Medical SERVICE

ASSISTANT AND RELIEVING GOVERNMENT MEDICAL OFFICER

One Assistant and Relieving Government Medical Officer is required for the Southern Rhodesia Medical Service Salary £500 per annum rising by annual increment of £25 to £650 per annum with private practice

Salary is subject to a temporary economy cut of 10 per cent less the following abatement £100 for single man £250 for married man with £75 for each child or dependent

Preference will be given to holders of Public Health or Tropical Medicine Certificate

Application with full particulars of qualification age past appointments held etc and copies of reference should be addressed to the Official Secretary Office of the High Commissioner for Southern Rhodesia Crown House Aldwych London W C 2 from whom copies of conditions to the Southern Rhodesia Public Service can be obtained the applicant selected by Feb 27th

City of Aberdeen

CITY (FEVER) HOSPITAL.

JUNIOR RESIDENT MEDICAL OFFICER.

Applications are invited for the post of Junior Resident Medical Officer (male) at the City (Fever) Hospital Aberdeen Remuneration £100 per annum with apartment board and laundry free subject to temporary emergency cut of 5 per cent

The appointment is limited to one year and is not renewable Facilities will be given for the successful candidate studying for the Diploma in Public Health at Aberdeen University

Application with copies of recent testimonials should be forwarded to the undersigned on or before Wednesday 24th instant The successful candidate will be required to take up duties as soon as possible

4 Albyn Place HARRY J RAE
Aberdeen Medical Officer of Health

City of Bradford

MUNICIPAL GENERAL HOSPITAL, ST LUKES

HOUSE PHYSICIANS and HOUSE SURGEONS required

Salary in each case £200 per annum plus board and lodging

These appointments are for six months renewable for a further period of six months

Application forms may be obtained from the Medical Officer of Health Town Hall Bradford and should be delivered to the undersigned not later than February 19th

Town Hall N L FLEMING
Bradford Town Clerk

The Auckland Hospital Board

A MEDICAL SUPERINTENDENT is required for the General Hospital Auckland New Zealand Salary at the rate of £1 200 per annum The post is purely administrative All particulars of appointment and form of application obtainable at the office of the High Commissioner for New Zealand 415 Strand London W C 2

Auckland H A SOMMERVILLE
New Zealand Secretary
December 24th 1931.

The Tunbridge Wells and COUNTIES GENERAL HOSPITAL

Wanted HOUSE SURGEON (male) Candidates must be unmarried and duly qualified in Medicine and Surgery May be required to lecture to Nursing Staff (Two resident)

In-patients number over 1,400 yearly Out-patients 6,000 with 50,000 attendances

Salary £160 per annum with board residence and laundry in the Hospital

This Hospital is approved by the University of London for the purposes of the MD and MS examinations

Applications stating qualifications with certificate of registration and copies of testimonials should be sent to the undersigned on or before February 10th

TOMB HARRISON
Secretary

West Kent General Hospital, MAIDSTONE (106 Beds)

Applications are invited for the post of HOUSE SURGEON who must be a male and of British nationality Salary at the rate of £220 per annum with board apartments and laundry

Candidates must possess registered Medical and Surgical qualifications

Application together with copies of testimonial and giving particulars of post graduate experience in Anæsthesia to be sent to the undersigned not later than Friday the 19th *instant* The *successful candidate* will be required to take up residence on March 1st next

EDWARD J GREGG
House Governor & Secretary

West London Hospital, Hammersmith W 6 (234 Beds)

Applications are invited for the post of HONORARY ASSISTANT ANÆSTHETIST Candidates are required to be registered under the Medical Act to send applications with copies of testimonials so as to reach me not later than Thursday February 18th to attend the Medical Council Meeting on Friday February 19th at 5 p m and prior to that date to call upon and send copies of their application and testimonials to each Member thereof to abstain from canvassing but nevertheless to send copies of their application and testimonials to the Members of the Board of Management at whose *meeting on* Tuesday February 23rd at 5 p m selected candidates must be in attendance

H A MADGE Secretary

The Royal Waterloo Hospital for CHILDREN AND WOMEN Waterloo Road S E 1

There is a vacancy for the post of HONORARY MEDICAL REGISTRAR at the Royal Waterloo Hospital Candidates must be registered Medical Practitioner holding a University Degree recognised by the General Medical Council Particulars regarding the appointment can be obtained on application to the Secretary of the Hospital to whom applications should be sent not later than February 23rd with not more than three recent testimonials

The Royal Waterloo Hospital for CHILDREN AND WOMEN Waterloo Road S E 1

There is a vacancy for the post of HONORARY OPHTHALMIC SURGEON at the Royal Waterloo Hospital Candidates should be Fellows of the Royal College of Surgeons Particulars of the appointment can be obtained from the Secretary of the Hospital applications should be sent not later than with not more

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Short courses in elocution for qualified and public speaking
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Charing Cross
Strand
Aldwych
Kingsway
Holborn
Tottenham Court Road
Warren Street
Euston Road
Gower Street
Goodge Street
Oxford Street
Tube Station

Leicester Royal Infirmary (472 Beds)

HOUSE SURGEON

A vacancy is expected on April 1st The Casualty House Surgeon will be an applicant Salary at the rate of £125 per annum Applicants must have held a resident hospital post or had similar experience of hospital work Appointment will be made March 9th Applications to the House Governor and Secretary on or before March 1st

CASUALTY HOUSE SURGEON

In the event of the Casualty House Surgeon being appointed to the above House Surgeoncy there will be a vacancy for a Casualty House Surgeon Salary and conditions of appointment as for House Surgeon

Applications to the House Governor and Secretary by March 1st accompanied by copies of three recent testimonials

February 8th 1932

Leicester Royal Infirmary (472 Beds)

HOUSE PHYSICIANS

Two half yearly vacancies are expected on April 1st Salary at the rate of £125 per annum Applicants should have held a resident hospital post or had similar experience of hospital work Appointment about the middle of March Apply to the House Governor and Secretary *on or before* March 1st *enclosing* copies of three recent testimonials

February 8th 1932

The General Hospital, BIRMINGHAM

Applications are invited for the post of RESIDENT SURGICAL REGISTRAR

This officer will be attached to a Surgical Unit and a Special Department The salary will be £100—£120—£140

The appointment will be made for one year in the first instance and be subject to renewal for two further years Candidates must have held a surgical post

Applications giving full details of qualification and experience and accompanied by testimonials should reach the undersigned by February 23rd

A H LEANEY
Feb 8th 1932 House Governor

The General Hospital, BIRMINGHAM

Applications are invited for the following resident appointments

ANÆSTHETIST Vacant March 1st Salary £120 per annum

HOUSE PHYSICIAN Vacant March 15th Salary £70

Applications giving full details of qualifications and accompanied by testimonials (if desired) should reach the undersigned by February 22nd

A H LEANEY
Feb 8th 1932 House Governor

King Edward VII Hospital, WINDSOR (181 Beds)

A vacancy will occur on the Staff of the above Hospital on March 31st for a RESIDENT MEDICAL OFFICER (Senior of five Residents) Applicants must be fully qualified registered and have held a Resident appointment

Salary at the rate of £200 per annum together with board residence and laundry allowance

Applications with copies of recent testimonials should be sent to the undersigned not later than February 27th

ARTHUR E CHURCHER
Secretary

Kent and Canterbury Hospital, CANTERBURY

The Board of Management invite applications from duly qualified Medical Practitioners for the post of HONORARY ANÆSTHETIST to the Ear Nose and Throat Department Particulars of the appointment may be obtained from the undersigned to whom applications accompanied by testimonials should be forwarded not later than March 7th

W F SOUTHWOOD
Superintendent & Secretary

Assistant Resident Medical

OFFICER (lady unmarried) required for ISLINGTON DISPENSARY 303 Upper Street Applicants must be registered Medical Practitioners Salary £250 per annum Furnished apartments provided but not board with grant to cover cost of attendance fuel etc Applications on printed form to be obtained (by postcard) from the Hon Secretary at the Dispensary

Metropolitan Hospital, Kingsland Road E 8

The Committee of Management are prepared to receive applications for the appointment of a SURGEON who will be Junior Member of the Surgical Staff

Candidates must be Fellow of the Royal College of Surgeons of England and not engaged in general practice

Candidates will be required to call upon Members of the Staff

Twenty applications complete with copies of recent testimonials must reach the undersigned (from whom further particulars may be obtained) not later than first post on Monday February 29th

HERBERT F RUTHERFORD
Secretary & House Governor

Great Yarmouth General HOSPITAL (72 Beds)

Applications are invited for the following posts

SENIOR HOUSE SURGEON Salary at the rate of £150 per annum with board residence and laundry

JUNIOR HOUSE SURGEON Salary at the rate of £140 per annum with board residence and laundry

The appointments are for a period of six months renewable for a further similar period if mutually desirable

Applications stating age and qualifications together with copies of three recent testimonials to be forwarded to the undersigned

FRANK JENNINGS Secretary

Birkenhead General Hospital (156 Beds)

Applications are invited for the following resident posts (male) for the six months commencing April 1st next viz

SENIOR HOUSE SURGEON Salary £150 per annum with board residence and laundry

HOUSE PHYSICIAN Salary £100 per annum with board residence and laundry

CASUALTY OFFICER Salary £100 per annum with board residence and laundry

Applications stating age nationality and qualifications together with three recent testimonials to reach the undersigned as early as possible

W H DANIELS Secretary Superintendent

General Lying-In Hospital, York Road Lambeth S E 1

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER and ANÆSTHETIST Salary at the rate of £100 per annum with board residence and laundry Appointment for three months commencing April 1st The successful candidate will subject to satisfactory service be required to succeed to the Senior Medical Officer's post for a further three months

Applications stating age and qualifications with copies of three recent testimonials to be sent to the undersigned not later than February 29th next

LILY HEARN Secretary

Huddersfield Royal Infirmary (200 Beds)

Wanted LADY HOUSE SURGEON to commence duty *immediately* Duties mainly in Eye Ear Nose Throat and Medical Departments with Obstetrics Salary £150 per annum with board residence and laundry

Appointment for six months subject to renewal for a similar period

Applications accompanied by copies of three recent testimonials to be addressed to the undersigned

H E G HALL Secretary

London Temperance Hospital, Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from March 10th Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday March 4th addressed to the Secretary

Manchester Babies' Hospital, Burnage Lane HEATON MOOR

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER Appointment is for six months Salary at the rate of £50 per annum with laundry Applications together with copies of testimonials should be sent to the undersigned and marked JRMO by February 29th

ANGELA LOPEZ Secretary

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens Edinburgh

(a) British Islands

Town or District	Town or District	Town or District
GENERAL POST OFFICE *(Assistant Medical Officer—Woman)*	**CONTRACT PRACTICE** *(contd)* LLWYNYPIA CLYDACH VALE TENYCRAIG GLAMORGAN *(Workmen's Medical Scheme)*	**CONTRACT PRACTICE** *(contd)* OGMORE VALLEY GLAMORGAN *(Blaendare Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*
CONTRACT PRACTICE PEBBW VALE MON *(Workmen's Medical Society)*	MARDY GLAMORGAN *(Workmen's Medical Scheme)*	**PUBLIC HEALTH** DEVON COUNTY COUNCIL *(School Medical Inspector—Male)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE *(Workmen's Medical Scheme)*	FULHAM BOROUGH COUNCIL *(Assistant Medical Officer—Woman)*
LOWESTOFT MEDICAL INSTITUTE *(Medical Officer)*	NEATH AND DISTRICT *(Medical Aid Association)*	
	OAKDALE MON *(Medical Officer for Medical Aid Association*	

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	SOUTH AUSTRALIA *(Lodge Appointments)*	Secretary South Australian Branch B M A House 205 North Terrace Adelaide.	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 150 Wellington New Zealand
QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	VICTORIA. *(All Institute or Medical Dispensaries)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria	WESTERN AUSTRALIA *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St Georges Terr Perth Western Australia

February 10th 1932 By Order of the Council ALFRED COX Medical Secretary

The Guest Hospital, Dudley
(General Hospital—107 Beds)

Applications are invited for the following posts

HOUSE SURGEON Salary £200 per annum with furnished apartment board and laundry Duties to commence March 16th

ASSISTANT HOUSE SURGEON Salary £170 per annum with furnished apartment board and laundry

Duties to commence March 1st

Candidates must be fully qualified and registered

Applications stating age qualifications and experience and accompanied by copies of testimonials to be sent to the undersigned

H HAMMOND HURST
The Guest Hospital House Governor & Secretary
Dudley
February 1st 1932

Sussex Maternity and Women's Hospital
(38 Beds)

RESIDENT HOUSE SURGEON (male) required Salary at the rate of £130 per annum board and washing found and £40 allowed for travelling expenses Good experience in midwifery and gynæcology afforded No canvassing allowed The successful candidate will be required to enter on his duties towards the end of February

Application in writing accompanied by testimonials should be sent to PERCY F SPENCER Secretary at the Hospital Bucking ham Road Brighton

February 26th 1932

The Willesden General Hospital,
Harlesden Road N W 10

The Council of Management invite applications for the post of SECOND RADIOLOGIST (Honorary) Attendance required on two half days each week

Twenty five copies of application and three recent testimonials should be sent on or before February 22nd to the Secretary of the Hospital from whom further particulars may be obtained

February 1st 1932.

Ancoats Hospital, Manchester

The following vacancies will occur on March 1st next and applications are invited

HOUSE SURGEON (Orthopædic)
HOUSE SURGEON (General)

The appointments are for six months Salary at the rate of £100 per annum with board residence etc

Applications stating age qualifications experience (if any) and full particulars together with copies of three recent testimonials to be forwarded to the undersigned on or before February 16th

Applications are invited for the post of MEDICAL REGISTRAR to attend the Out Patient Department on Monday Wednesday and Thursday Morning for which an Honorarium of £50 per annum is paid

By Order of the Board
HERBERT J DAFFORNE
Gen Supt Secretary

Nottingham General Dispensary,
Broad Street NOTTINGHAM

Wanted RESIDENT SURGEON (male or female) unmarried Must have Medical and Surgical qualifications Salary £250 with £25 increase for year up to £300 House with attendance light and fuel (no board) This Institution is a non provident one No beds No midwifery

Applications stating age and accompanied by copies of recent testimonials to be sent by February 26th to—

5 Thurland Street R J WILLATT
Nottingham Secretary

Royal National Orthopædic Hospital.
HONORARY DENTAL SURGEON

Applications from duly qualified Practitioner (L D S R C S Eng) are invited for the post of Honorary Dental Surgeon Applications should be accompanied by copies of three recent testimonials and reach the Secretary 23a Cavendish Portland Street W 1 on or before Feb 27th.

Hospital for Consumption and
DISEASES OF THE CHEST
Brompton S W 3

The Committee of Management give notice that a vacancy will occur in the Office of PHYSICIAN on March 1st Dr A Hope Cooke the Senior Physician to Out patients is a candidate for the post

A vacancy for an ASSISTANT PHYSICIAN to the Hospital will also occur and applications with copies of testimonials of recent date are invited and should reach the undersigned not later than Wednesday February 17th

Candidates must be members (or have passed the qualifying examination for the membership) of the Royal College of Physicians of London

FREDERICK WOOD
February 1932 Secretary

Salford Royal Hospital
(263 Beds)

The Board of Management invite applications for the post of GENERAL SUPERINTENDENT AND SECRETARY Salary £600 per annum together with house away from Hospital Federated Superannuation Scheme in operation Candidates who must have had experience in the administration of a General Hospital should send in their applications stating age experience etc accompanied by not more than six recent testimonials addressed to the Chairman Salford Royal Hospital not later than February 27th next

January 28th 1932

Manchester and Salford Hospital
FOR SKIN DISEASES

HOUSE SURGEON

Applications are invited for the post of House Surgeon Must be registered The appointment is for six months from April 1st Salary at the rate of £100 per annum with board and residence

Applications with copies of three testimonials to be sent to the undersigned Quay Street Manchester on or before Wednesday Feb 24th

JOHN HALL Secretary

(Appointments continued on p 50.)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
T A Articulate Westcent London
Tel Museum 9861 (9 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) 9s
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(a line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than *first post* TUESDAY preceding publication

ASSISTANCIES

Wanted immediately, a fully qualified and thoroughly competent Outdoor male ASSISTANT for a large Panel and Private Practice applicant must be a good Vaccinator and preference will be given to one with some Surgical experience and possessing a motor cycle or car Salary (until Midsummer Quarter) £300 per annum increasing to £350 plus room board lighting heating and attendance—Write stating age and forwarding testimonials and particulars of past experience to No 914 B M A House Tavistock Square W C 1

Wanted — Assistantship or Salaried PARTNERSHIP by Practitioner married Son and Abstainer Recently disposed of own practice Extensive experience all branches but specially keen midwifery and medicine Accustomed to full charge Would take sole charge or relieve daily doctor Highest references —No 912 B M A House Tavistock Sq W C 1

Wanted, Assistant, lady or gentleman for Practice near London Private calls no night work or midwifery Indoor or out by arrangement Scope for surgical Start if best particulars —Address No 933 B M A House Tavistock Square W C 1

Wanted —Assistantship or long LOCUMS by Woman Doctor 6 years experience private and panel practice Able to drive car—Address No 921 B M A House Tavistock Square W C 1

Wanted — Outdoor Assistant, male young active unmarried resident (duty every Christmas) Able to drive car Salary £300 to £400 according to experience Usual Panel Dispenser kept Full particulars —No 907 B M A House Tavistock Sq W C 1

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APPOINTMENTS—Contd

Royal Liverpool Babies' HOSPITAL WOOLTON

Junior Resident Medical Officer required for this Hospital The appointment will be for a period of six months Salary at the rate of £90 per annum
Applications with copies of testimonials to be sent to the Chairman of the Hospital c/o the Children's Infirmary Catharine Hill Liverpool not later than Saturday Feb 27th

Wanted—A qualified Doctor to
[illegible] MEDICAL OFFICER [illegible] VISITS N DISTRICT [illegible] NW1 [illegible] at £2 2s per annum [illegible] [illegible] to [illegible]

Cumberland Infirmary, Carlisle
(160 Beds)
Resident Medical Staff—Four Qualified Officers

[illegible] vacant on April 1st male Previous experience in each case at the rate of £155 per annum board residence etc
(a) HOUSE PHYSICIAN
(b) SECOND HOUSE SURGEON and
(c) HOUSE SURGEON to Special Departments (Eyes Ear Nose and Throat)
Applications stating age nationality qualifications etc with copies of not more than four testimonials must be received by first post on Wednesday February 24th by the undersigned who will supply further particulars if desired
Separate applications required for each post
J C HOWITT Secretary

Radcliffe Infirmary and County HOSPITAL OXFORD

Application are invited for the following posts which will become vacant on April 1st
THREE HOUSE SURGEONS
OBSTETRIC HOUSE PHYSICIAN
Appointments are for six months with salaries at the rate of £120 per annum with board etc
Candidates must be male and qualified
Applications with four copies of three testimonials to be sent to the undersigned on or before March 5th
A G L SANCTUARY
Administrator

Samaritan Free Hospital for WOMEN Marylebone Road N W 1

Applications are invited for the post of HOUSE SURGEON for a period of six months commencing on April 1st next Salary at the rate of £100 per annum with board lodging and washing Previous experience as House Surgeon essential
Applications stating age accompanied by copies only of testimonials must reach the Secretary at the Hospital on or before Friday noon February 26th
G H HAWKINS Secretary

South Devon and East Cornwall HOSPITAL PLYMOUTH (240 Beds)

HOUSE SURGEON (male)

Salary £100 per annum with board residence and laundry Appointment is tenable for six months and is subject to renewal Duties to commence March 1st Candidates [illegible] Medical Act [illegible] and qualifications recent testimonials to February 23rd
HENRY R CASH
Feb 5th 1932 Gen Supt & Secretary

Ingham Infirmary, SOUTH SHIELDS

Wanted SENIOR and JUNIOR HOUSE SURGEONS (male) Salaries £200 and £150 per annum respectively with residence board and washing No outside duties Candidates must hold registered qualifications in Medicine and Surgery The appointment will be terminable by one months notice Applications stating age and accompanied by copies (which will not be returned) of recent testimonials to be sent to the undersigned from whom further particulars may be obtained
JOHN POTTER Secretary

The Loughborough and District GENERAL HOSPITAL

Wanted to commence duties early in April RESIDENT HOUSE SURGEON (male or female and unmarried) possessing a medical and surgical registered qualification Practical experience in the administration of anæsthetics required Salary £175 with apartments board and laundry All applications stating age etc with copies of testimonials to be sent to me at once
9 Leicester Road FRANK H TOONE
Loughborough Secretary

Rotherham Hospital

Wanted HOUSE PHYSICIAN (male) qualified Salary £180 p a with board residence and laundry to have charge of Out Patients also Junior Anæsthetics and assist Honorary Physician
Application with copies of recent testimonial to be sent to the Secretary G W Jones 8 Moorgate St Rotherham

The London Lock Hospitals, 91 Dean St W 283 Harrow Rd W 9

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By Order of the Board
H V J EASON
February 9th 1932 Secretary

Charing Cross Hospital

SURGICAL REGISTRAR

The Council invite applications from candidates who must be Registered Practitioners (male) for the post of Surgical Registrar Honorarium £150 per annum A copy of the regulations can be obtained from the undersigned to whom applications together with copies of three testimonials must be submitted not later than Tuesday, March 1st
Charing Cross PHILIP INMAN
Hospital Strand House Governor
London W C 2

Charing Cross Hospital

OBSTETRIC REGISTRAR

The Council invite applications for the post of Obstetric Registrar Honorarium £100 per annum
Applications together with copies of three recent testimonials must be submitted to the undersigned not later than Tuesday March 1st
Charing Cross PHILIP INMAN
Hospital Strand House Governor
London W C 2

North Staffordshire Royal INFIRMARY STOKE ON TRENT

ORTHOPÆDIC HOUSE SURGEON

The Committee invite applications for the post of Orthopædic House Surgeon Salary £150 per annum with board residence and laundry Previous orthopædic experience desirable Applications with two copies of recent testimonials to be sent to the undersigned immediately
W STEVENSON
Secretary & House Governor

Royal Free Hospital, Gray's Inn Road W C 1

Applications are invited for the appointment of ASSISTANT SURGEON to the Ear Nose and Throat Dept Intending candidates who must be Fellows of the Royal College of Surgeons England should submit applications to the undersigned stating age accompanied by copies of three recent testimonials on or before March 5th
REGINALD R CARRATT
Secretary

Doncaster Royal Infirmary (185 Beds)

SENIOR CASUALTY HOUSE SURGEON (male) required immediately Previous Hospital experience necessary
Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable
Applications accompanied by not more than three recent testimonials to be sent to the undersigned
WALTER R SMITH
Secretary Superintendent

House Surgeon required, male, British nationality for ASHFORD HOSPITAL KENT Salary £150 per annum Please state experience and qualifications Candidates must be unmarried and under 35 years of age Duties to commence March 1st Applications with three recent testimonials to be sent to the Hon Secretary on or before February 20th

The Royal National Hospital for CONSUMPTION VENTNOR ISLE OF WIGHT

Applications are invited for the post of SENIOR ASSISTANT RESIDENT MEDICAL OFFICER male of British nationality at the above Hospital 162 Beds

Candidates must be qualified in Medicine and Surgery and registered Previous experience in Tuberculosis work is essential

or one year service on either side or reappointment will be required to and be insured against sickness after appointment Commencing salary £400 per annum with full board residence and laundry allowance

Applications stating age and full details of qualifications and experience with copies of three recent testimonial to be sent to the Medical Superintendent at the Hospital by February 22nd

W H GARRATT Secretary

St Bartholomew's Hospital, ROCHESTER (125 Beds)

Rochester Chatham Gillingham and District

The House and Finance Committee invite applications for the post of HOUSE PHYSICIAN vacant on April 1st

Candidates must be unmarried qualified and registered Medical Men The appointment is for six months Salary is at the rate of £175 per annum with board residence and laundry The officer appointed will have charge of the medical beds Some knowledge of Ophthalmic work is desirable

Applications stating age qualifications and experience accompanied by copies of three recent testimonials to be sent to the Secretary not later than February 25th

Canvassing the Honorary Staff will disqualify

Charing Cross Hospital

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer from male candidates (unmarried) who must be registered Medical Practitioners Salary £250 per annum plus additional fees amounting to approximately £50 per annum The rules of the office may be obtained from the undersigned to whom applications accompanied by copies of three recent testimonials must be delivered not later than Monday February 22nd

Charing Cross PHILIP INMAN
Hospital House Governor
London W C 2

Paddington Green Children's HOSPITAL (Incorporated) LONDON W 2

Applications are invited for the appointment of HONORARY DENTAL SURGEON to the Hospital Candidates must be Licentiates in Dental Surgery of the Royal College of Surgeons England and a Medical qualification though not essential would be advantageous

Applications stating age and qualification accompanied by copies of three testimonials should reach the undersigned not later than first post on Saturday February 27th

JAMES A HAMLIN
Secretary

Paddington Green Children's HOSPITAL (Incorporated) LONDON W 2

Application are invited for the appointment of HONORARY SURGEON to Out Patient Candidates must be Fellows of the Royal College of Surgeons England

Application stating age and qualifications accompanied by copies of three testimonials should reach the undersigned not later than first post on Saturday February 27th

JAMES A HAMLIN Secretary

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London, S W 5 —Good residen-tial locality £400 p a Small select panel Non dispensing No appointments midwifery Visits 5/ to 10/6 Consultations 5/ to 7/6 Ground floor maisonette at £200 p a including rates 2 recep 2 bed bath kitchen room and good garden Premium £600—No 8982

South Wales — Mining Practice — £1 100 p a About £1 000 contract work incl panel of 1 000 Private fees Visits 3/6 up Surg 2/6 midy 42 up Modern house 2 recep 3 bed Sep Surg and all services Rent £48 Ireasonable purchase—No 8977

Lincs —£1,900 p a, with ample scope Unopposed Panel 1 250 Appts £80 or more About 80 confinements p a Fees £1 10 to £10 10s Visiting fees 3/6 to £1 1 Surgery from 2/6 Charming house and garden about 3/4 acre 5 bed dressing room 3 recep bath etc Waiting room and dispensary Rent £85 Premium 2 years purchase Scope for surgery in adjacent town—No 8960

Favourite South Coast Resort — Non panel PRACTICE established 24 yrs returning already £650 p a Fees 5/ to £1 Excellent detached house with 9 bedrooms passenger lift 2 bathrooms etc Very suitable for resident patient Rent £140 or will sell at £2 000 Goodwill £650—No 8975

Middlesex — Rapidly growing district About £2 700 and great scope One third share for sale now at 2 years purchase increasing later Panel 1 460 Appts £40 House with 3 recep 5 bed etc to sale at £1 800 Others available—No 8970

London, N W — Estab 3 yrs, about £650 p a Panel 3 000 and working class Visits 3/6 up Surgery 2 doors Large corner house good position 6 bed 3 recep and surgery etc Rent £120 p a or sale Premium £750 for quick sale—No 8990

Sussex, favourite part on high ground about £1 500 p a Non panel non dispensing Little or no midwifery Visiting fees 5/ to 21/ Large house with 9 bed 3 recep and conservatory room and garage to rent at £200 Smaller house at £120 p a with conservatory room 2 recep and 4 bed rooms Premium £2 000 cash—No 8954

Midlands —£3,000 a year Old-established Same hands over 30 years Partner 5 years One-third share for same now more later at 2 years purchase House available to rent Station close Fees 5/ to 21/ Extensive district very little opposition Panel 1 600 Personally known and recommended—No 8952

Eastern County —£3 000 a year A third share offered to a qualified Partner for 2 years purchase Practice has been long standing in a favourite residential and agricultural district in the Midlands with ample scope for increase No new opposition Good house and grounds available for partner Personally visited and recommended—No 8951

Surrey —700 feet above sea-level Over £600 p a Panel established No opposition in village Appts about £40 p a 12 confinements p a Fees 5 gns Visiting fees 3/6 to 10/6 Detached house with 6 to 7 bedrooms 2 recep room waiting room and surgery with garage and garage built on Water and electric light Price freehold £1 650 or might rent Premium for goodwill 1 year purchase Ideal place for resident patients—No 8959

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1 S W OF ENGLAND — Partnership in country Practice of about £3 000 p a Panel over 2 000 Small convenient house (4 bedrooms) garage and garden to rent Up to-date Hospital and scope for good surgeon One third share at 2 years purchase with option to increase at an early date

2 BIRMINGHAM — Practice averaging £984 p a in good class suburb Small panel but ample scope Very little midwifery Low expenses House with garage to rent Premium 1½ years purchase or near offer for quick sale

3 WILTSHIRE — Country Practice over £1 300 p a In a most picturesque village Panel about 700 Good detached house (6 bed and dressing rooms) garage and large garden to rent Premium £2 200

4 LONDON, W —Partnership in rapidly increasing Practice of about £2 000 p a in good class suburban neighbourhood Panel 2 000 One third share at 2 years purchase Partner must be a Scotsman (preferably Edinburgh or St Andrews)

5 FAMOUS UNIVERSITY TOWN —Sound well established non dispensing non panel PRACTICE Receipts average £3 300 p a including good proportion from Undergraduates Appointments Not much midwifery Very good house (6 bedrooms etc) in best position to rent on lease Premium 1½ years purchase

6 SURREY — Partnership (after Preliminary Assistantship) in Practice about £3 000 p a in first rate residential district Panel about 1 500 Incoming partner should be Graduate of Oxford Cambridge or London and aged about 30 Premium one third share 2 years purchase

7 ITALY —Old-established Practice in an attractive City Receipts last 2 years averaged £1 400 p a No midwifery or night work Suit gentleman of experience married and with good social attainments Reasonable premium

8 W OF ENGLAND —Partnership in Practice in pleasant country town Cash receipts average about £1 200 p a (including panel and appointments over £1 500 p a) Charming old house (5 bedrooms and attic etc) garage and beautiful garden Plenty of sport Scope for increase Premium for one-fifth share 2 years purchase

9 S.T. COAST — Popular Resort —Partnership in rising health practice about £4 000 p a Panel about 2 300 Fine old house (5 bedrooms etc) with garden and garage for 2 cars Five-twelfths share for disposal at 2 years purchase

10 LONDON, S E — Partnership (with succession) in old-established middle-class Practice averaging nearly £2 400 p a in pleasant open suburb Panel about 820 Little night work Good house with garage and nice garden for sale or rent Premium one half share 1½ years purchase

11 GLAMORGANSHIRE — Working-class Town PRACTICE averaging over £1 100 p a Panel 1 000 Modern house (5 bedrooms) in pleasant surroundings with garage and garden to rent Premium (including drugs) 1 year's purchase

12 MIDLANDS — Partnership in Country Town Practice averaging about £3 500 p a Panel over 1 000 Scope for increase Premium for one fourth share 2 years pur

13 N WALES — Steadily increasing Town PRACTICE of £875 p a (including good appts and small panel) in beautiful part Good house (6 bedrooms) garage and nice secluded garden to rent Educational facilities Prem only £750

14 LONDON, N W — Practice in suburban district Receipts 1931 £700 Panel 300 Corner house (5 bedrooms) garage and garden to rent on lease Premium £750

15 SUSSEX — Country Practice between £1 200 and £1 300 p a in delightful part No panel Large residence (9 bedrooms etc) garage and garden of four acres to rent on lease Premium £1 800

16 EASTERN COUNTIES — Partnership in Practice of about £3 650 p a in country town No panel Suitable house available Good educational facilities Premium one-half share £2 500

17 SURREY — Partnership in increasing[illegible] middle class Town Practice of £2 300 Panel over 1 200 Mod[illegible] detached corner house (5 bedrooms) garage and garden fo[illegible] Partner should be 26 30 and have held Hospital appoin[illegible] Share of £1 000 p a at 2 years purchase

18 N OF ENGLAND — Partnership[illegible] Good-class [illegible] Coun[illegible] increasing Practice in beautiful city Re[illegible] with free hou[illegible] Mu[illegible] exp[illegible] Panel 4 000 Applicants should be pr[illegible] ab[illegible] to give Ana[illegible]thetics anaesthetics and obstetrics Share [illegible] purchase.

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19 LONDON, N.W.—Non-dispensing Practice over £950 p.a. in good residential district. No panel. Ten roomed house with garage and large garden. Rent £200 p.a. Premium £1,200.

20 N. MIDLANDS.—Partnership in Practice, about £3,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years' purchase.

21 EAST ANGLIA.—Partnership in good-class non-dispensing Practice of about £3,000 p.a. in favourite Seaside Resort. Partner should be a Varsity man about 30 years of age experienced in Medicine and Anæsthetic. Good up-to-date Hospital. Premium for one-third share 2 years's purchase.

22 W. OF ENGLAND.—Practice about £800 p.a. in first-rate City. Panel 1,324. Well-built house (4 bed and dressing rooms) to let. Excellent scope. Premium £1,450.

23 S.E. COAST.—Easily worked Practice in exclusive part of seaside town. Receipts last year £1,050 including appointments over £200, fees from resident patients and small panel. Large modern house with beautiful garden to rent. Ample scope. Premium £1,150.

24 S. WALES.—Increasing Practice of £900 p.a. in pleasant Market Town. Panel 150. Well-situated house (non-basement) with 3 bedrooms for sale. Cottage Hospital. Premium.

25 LONDON, N.W.—Practice (carried on by Medical Woman) doing about £280 p.a. in main thoroughfare. Panel 120. Shop-fronted house to rent on lease. Good scope for increase. Premium £300.

26 LONDON, W.—Steadily increasing Practice doing about £750 p.a. motor front. Lock-up Surgery. Panel about 500. Well-situated corner residence (5 bedrooms) to rent. Premium £900.

27 LONDON, S.W.—Small, non-dispensing PRACTICE of nearly £400 p.a. close to the West End. Select Panel about 250 with scope. Corner house with ample accommodation to rent on lease. Premium 1½ years' purchase or near offer.

28 DURHAM.—Practice of over £500 p.a. in residential and colliery district near large town. Panel 370. Substantially built 9-roomed house for sale. Scope for increase.

29 NEW ZEALAND—NORTH ISLAND.—Non-dispensing PRACTICE about £1,800 p.a. in first-rate Town. Fitted-up detached house (4 bedrooms etc.) garage and garden for sale. Equable climate. Good educational facilities. Premium only £1,250.

30 BIRMINGHAM.—Practice of about £1,000 p.a. in one of the best residential suburbs. Small panel and very little visiting. Well-situated house (6 bedrooms), good garden and garage for sale. Good scope. Premium 1½ years' purchase.

31 NORTH OF ENGLAND.—Small Season PRACTICE in Inland Health Resort capable of increase by one to all the year round. Receipts about £150. No panel. House in own grounds with 6 bedrooms etc. Price—[illegible]—£1,250.

[illegible]R).—Partnership (after [illegible] about £2,650 p.a. in mani[illegible]. Applicant with [illegible]rd or [illegible]ourth

33 EAST ANGLIA.—Partnership in Practice over £4,500 p.a. in beautiful country district easy access of important town. Panel 3,000. Nice detached house (7 bedrooms) garage etc. garden and grounds of 10 acres for sale. Sport of most kinds. Considerable scope. Premium two-thirds or four-ninths share 2 years' purchase.

34 WESTERN AUSTRALIA.—Practice over £1,100 p.a. in Wheat and Sheep district. Seven roomed house with electric light, garage etc. for sale or rent. Ideal climate. Sport. Hospital. Premium £600.

35 SOUTH AFRICA.—Easily worked Country PRACTICE in healthy district (elevation 2,000 ft.) in Cape Colony. Cash receipts year ended June 1931 over £1,000. Sport of all kinds. Well-built house. Premium—house and Practice—£1,225.

36 KENT.—Country Practice of over £800 p.a. in beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms) central heating, grounds of 2½ acres orchard etc. for sale. Sport. Premium 1½ years' purchase.

37 S. OF ENGLAND.—Partnership in Ophthalmic Practice about £1,300 p.a. in small but delightful resort. Considerable scope to one able to operate. Premium one-half share 1½ years' purchase.

38 HOME COUNTIES.—Partnership in exceptionally good and rapidly increasing Practice about £6,000 p.a. in delightfully situated Country Town easy distance of coast. Attractive house (4 bedrooms) to rent. Partner must hold the F.R.C.S., and be aged about 30. Appointment on Hospital Staff. Premium for one-sixth to one-fourth share 2 years' purchase. Preliminary Assistantship.

39 SHROPSHIRE.—Practice £800 p.a. in market town. Panel 1,700. House (5 bedrooms) garage and garden to be sold or let. Premium 1½ years' purchase.

40 KENT.—Country Practice of about £850 p.a. Panel 550. Good house and garden for sale. Premium £1,100.

41 MIDLANDS.—Country Practice of over £900 p.a. in beautiful district. Panel over 700. House contains 8 bedrooms and dressing room etc. electric light. Beautiful garden with greenhouse for sale. All kind of sport. Premium £1,200.

42 SOMERSET.—Practice averaging £870 p.a. in country town. Panel under 200. House with 6 bedrooms, garage and small garden to rent or purchase. House for increase. Premium £1,300.

43 LONDON, S.W.—Practice about £500 p.a. in suburban district. Panel 650. No midwifery. Semi-detached corner house (6 bedrooms) for sale. Scope. Premium 1 years' purchase.

44 WITHIN 12 MILES OF LONDON.—PARTNERSHIP in rapidly increasing each Practice about £600 p.a. in developing industrial district. Panel nearly 1,500. Small House available. Large cottage hospital. Two-thirds or four-fifths share 2 years' purchase.

45 LONDON, S.W.—Increasing Practice in outlying suburb. Bookings last year £450. Panel about 400. Modern house (5 bedrooms). Premium £[illegible].

46 GLOUCESTERSHIRE.—Partnership in Country Practice over £1,000 p.a. Panel 870. Premium one-half share 1½ years' purchase.

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1 PARTNERSHIP—LONDON SUBURB (SOUTH EAST)—Owing to the retirement of one of three partners the third share of an old established middle and working-class Practice situated in a well populated district is for immediate disposal Cash receipts for past three years average £4 862 p.a., including appt over £500 p.a. and panel of about 5 300 Very little midwifery Expenses small Suitable house available Rent £40 p.a. Premium 2 years purchase

2 LONDON SOUTH WEST—PARTNERSHIP—A half share is offered in a very old established good middle and working class Practice averaging about £2 100 p.a. Panel of over 2 000 Fees from 2/6 to 10/6 Not much midwifery from 3 gns Purchaser can choose his own residence Premium for share £2 500

3 MIDLANDS—COUNT (or larger share if middle and workin —A one third share well established good sh receipts average over £2 000 p.a. including panel of nearly 2 000 Fees 2/6 to 7/6 Not much midwifery Suitable flat available above surgery or house can be rented Premium for share 2 years purchase

4 LONDON SUBURB—(North)—In rapidly growing district a well established and increasing PRACTICE offering excellent prospects Receipts last year £1 000 (last four months at rate of £24 a week) including panel also increasing of 400 No midwifery Small house containing surgery and waiting room four other rooms and offices Inclusive rental 30/ per week Premium £1 500 cash

5 SOUTH WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP—A share producing about £800 p.a. with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Midwifery 5 to 10 gns A suitable house can be rented at £90 p.a. Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be experienced and hold M.D. London

6 LONDON SOUTH WEST—PARTNERSHIP—A one fourth share (after Preliminary Assistantship of about six months at a salary of £540 p.a.) is offered in an old established middle and working class Practice Average gross cash receipts for the last three years £4 177 Panel of about 4 500 Fees from 1/6 to 7/6 Midwifery from 3 gns House contains 3 sitting rooms 3 bedrooms bathroom etc Garden Can be rented at £55 p.a. Premium for share 2 years purchase half down and balance by instalments

7 YORKS—PARTNERSHIP—A one fourth share is offered (with increase later) in an old established good mixed class Practice situated in a favourite town in good hunting district and within easy reach of popular seaside resort Average gross cash receipts for the past three years £3 700 Panel of 1 500 Fees 3/6 to 21/ Very suitable house with 2 reception 4/5 bedrooms etc and professional rooms Can be rented at £50 p.a. Sport of all kinds and good schools Premium for share £1 450

8 PARTNERSHIP—SOUTH WESTERN COUNTY—A two thirds or two fifths share is for disposal in an old established mixed class Practice in a very attractive district near favourite town Gross cash receipts for last 12 months over £2 500 including panel of 1 500 Fees from 2/6 to 10/6 Very nice house with all modern conveniences and ample accommodation Premium 2 years purchase Sport of all kinds and schools within reach Good urgical scope if desired

9 HOMOEOPATHIC PRACTICE—DEATH VACANCY—LONDON WEST—Old established connection Gross cash receipts have averaged between £3 000 and £4 000 p.a. Suitable house can be obtained on rental Offers invited

10 YORKSHIRE — COAST TOWN—Old established mixed class PRACTICE in attractive seaside and holiday resort offering good scope for increase and surgical work Average gross cash receipts for last three years over £1 900 Panel of 500 Fees from 5/ to 21/ Mid from 2 to 5 gns Exceptionally nice labour saving house specially built with 2 reception 6 bedrooms etc Separate entrance to professional rooms Electric light Garden Garage Freehold for sale at valuation Up to date Hospital Premium £2 300 Ill health reason for sale

11 NORTH WALES — Residential town near coast—Well established mixed class PRACTICE in beautiful surroundings averaging between £900 and £1 000 p.a. Panel of 123 and appts worth £450 p.a. Fees from 3/6 to 21/ Not much midwifery Good house with 2 reception 6 bedrooms etc and professional rooms Garden and garage Rent on lease £82 10s p.a. Hunting excellent fishing tennis etc and good educational facilities Premium £750 or near offer for prompt sale

12 SUFFOLK—FAVOURITE COAST TOWN—PARTNERSHIP—A one third share (with increase later) is offered in an old established and very better class Practice averaging for the past three years £2 766 including panel of 941 Lowest fee 5/ Midwifery 2 gns upwards Choice of house Excellent social sporting and educational facilities Premium for share £2 000

13 SOUTH OF ENGLAND—FAVOURITE COAST TOWN—Old established [illegible] PRACTICE producing about £1 800 p.a. Small [illegible] Fees 3/6 to 10/6 Not much midwifery Good [illegible] £3 000

14 MIDLANDS—Old established good mixed class unopposed PRACTICE situated in an attractive country town with beautiful surroundings Average gross cash receipts for last 3 years £1 584 including panel of 974 Good appts worth nearly £200 p.a. Fees from 3/6 Very nice house with 3 reception 6 bedrooms separate entrance to professional rooms Good garden with tennis lawn etc Garage for 2 cars Price for freehold £1 850 of which a good proportion could remain on mortgage Excellent sporting and social facilities and schools Premium 1½ years purchase

15 WITHIN 60 MILES OF LONDON near County Town—Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p.a. and offering good scope Selected panel of about 170 and appts worth £160 p.a. Fees 2/6 to 10/6 Very little midwifery Exceptionally nice house with beautiful garden containing 3 reception 4 bedrooms etc Separate entrance to professional rooms Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

16 YORKS — LARGE TOWN—PARTNERSHIP — A one fourth share is offered after Preliminary Assistantship in an old established mixed class Practice averaging for the last three years £2 500 p.a. Panel of 1 700 Lowest fee 3/6 Suitable accommodation available Premium 1½ years purchase Good scope for surgery

17 NORTH MIDLAND CITY — PARTNERSHIP — Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

18 LONDON NORTH WEST—Well established middle class non-dispensing PRACTICE averaging for the past three years £840 including appts worth about £300 p.a. and panel of 120 Fees 3/6 to 21/ Partchaser can choose his own residence Premium £1 250

19 NORTH WALES—Very old established good mixed class PRACTICE averaging £880 p.a. including panel of 433 Fees 2/6 to 10/6 medicine extra Suitable house with 2 reception 6 bedrooms etc Can be rented on lease at £50 p.a. Good sport Premium to include motor car £1 200 £400 down and balance by arrangement Ill health reason for sale

20 LONDON S.W.—Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 407 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for leasehold (94 years to run) £1 200 part on mortgage Premium £1 050

21 [illegible] A one third share is offered in a very [illegible] Practice held by the senior partner [illegible]ish receipts for the past three years nearly £5 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Premium 2 years pur

22 MID WALES—Agricultural District—Mixed class PRACTICE producing about £880 p.a. including small panel of 130 Fees 3/6 to 21/ Small house with 2 reception 3 bedrooms etc Price £550 Fishing shooting and other sport Premium 1 years purchase

23 WOMAN DOCTOR'S PRACTICE—YORKS—LARGE TOWN—Established eight years easily worked and producing nearly £700 p.a. Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns Compact house with 2 sitting 2 bedrooms 4 attics etc Garden Garage Rent on lease £42 10s p.a. Premium 1½ years purchase or near offer

24 CHESHIRE—NEAR COAST—Old established middle and working class PRACTICE averaging for the past three years over £1 300 Panel of 550 Fees from 3/6 Good house with 3 reception 7 bedrooms etc Price for freehold £1 200 part on mortgage Premium 2 years purchase

25 WITHIN FOUR MILES OF THE BANK—Old established working class PRACTICE producing for the last 12 months £2 300 including panel of over 2 800 Appts worth about £160 Visits from 2/6 Low expenses Suitable house can be rented or bought Surgery premises on rental Premium £4 000 cash

26 MANCHESTER—Semi residential Suburb—Very old established non dispensing mainly middle class PRACTICE averaging £2 500 p.a. including small selected panel of 440 which latter is offering for extension Visits 5/ upwards Only about 20 cases at 3 from 5 gns Well situated house with good accommodation Modern (freehold) £1 600 Premium £3 750 for sale.

ASSISTANTS REQUIRED—WEST MIDL[illegible] PRACTICE Outdoor £400 to £450 [illegible] enced accustomed to high-[illegible] have good knowledge [illegible] tal appointments.

AND — Partner required in [illegible] autiful city Receipts last year £5 00[illegible] should be proficient in minor surg[illegible]ies Share of three fifteenths at 2 [illegible]

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CONTENTS

FEBRUARY 20 1932

ORIGINAL ARTICLES

The Commemoration of Great Men Hunterian Oration by WILFRID TROTTER M S F R C S, F R S 317

High Blood Pressure as an Early Sign of Toxæmia of Pregnancy By F J BROWNE, M D F R C S Ed 320

Synthalin in Diabetes By A P THOMPSON M D F R C P R J GITTINS M D M R C P and GARFIELD THOMAS, M Sc 322

Activity of Commercial Preparations of Hog's Stomach By JOHN F WILKINSON M D (With Chart) 325

A Note on Aortic Valvular Disease By MAURICE CAMPBELL M D F R C P and J W SHACKLE M B (With Charts) 328

A Simple Technique for Photography of Pathological Specimens By C J C LAW M R C P I 330

MEMORANDA

An Unusual Case of Intussusception in an Adult By IAN M OFF M B 331

Intracerebral Hæmorrhage Due to Accident By STRATFORD SHELDON M B 332

REPORTS OF SOCIETIES

HALIFAX SOCIETY OF LONDON
Endoscopic Methods 332

EDINBURGH OBSTETRICAL SOCIETY
Toxæmias of Pregnancy 333

ASSOCIATION OF CLINICAL PATHOLOGISTS Pathological Methods 333

LIVERPOOL MEDICAL INSTITUTE
Antenatal Radiology 334

ROYAL ACADEMY OF MEDICINE IN IRELAND Psychographs 335

REVIEWS

Fractures 336
Medicine Science and Art 336
Biochemical Medicaments 336
French Views on Diabetes 337
Early History of Yellow Fever 337
Gould's Medical Dictionary 338
Notes in Brief 338

MEDICO LEGAL

Three Year Penal Servitude for Unqualified Practitioner 339
Fatal Mistake at Hospital 339

THE SERVICES

Deaths in the Services 339

LEADING ARTICLES

COMMEMORATION OF THE GREAT 339
SCOLIOSIS 340

THE WEEK

Tonsils and Adenoids 341
Treatment by Pneumothorax 341
Health Services for the Pre-School Child 342
Individual Psychology 342
Koch's Discovery of *Bacillus tuberculosis* 343
Newton the Man 343
The British Postgraduate Hospital and Medical School 343

GENERAL ARTICLES AND NEWS

The Hospital Nursing Service. Final Report of the *Lancet* Commission 344
PREPARATIONS AND APPLIANCES 338
MEDICAL NOTES IN PARLIAMENT
The Spahlinger Formula 356
National Health Insurance 356
Children's Bill 356
Sterilization of Defectives 357
MEDICAL NEWS 361

LOCAL NEWS

SCOTLAND—
Glasgow Western Infirmary 345
Maternity Mortality 346
Edinburgh Dental School 347
Central Midwives Board 347
ENGLAND AND WALES—
Royal College of Surgeons Hunterian Festival 347
Hunterian Society of London 347
L C C Hospitals 348

OBITUARY

William Billington Ch M F R C S (With Portrait) 348
The late Dr. H. H. Tidd 348
The late Dr. Stenhouse Williams 348

UNIVERSITIES AND COLLEGES

University of Cambridge 350
University of London 350
University of Glasgow 350
Royal College of Surgeons of England 350
Royal College of Physicians Edinburgh 350
British College of Obstetricians and Gynæcologists 350

LETTERS AND ANSWERS

Cowper's Insanity 361
Intestinal Flatulence 361
Income Tax 362
The Common Cold Correction 362
Operation at Advanced Age 362
Captain of the Men of Death 362
Conference on Leprosy in China 362
A Warning 362

CORRESPONDENCE

Pathological Service of the L C C By Gordon W Goodhart M D and C E A Bedwell 348
The Posterior Pituitary By I McNair Wilson M B 349
Psychoneuroses Endocrine and Terminology By Millais Culpin M D 350
Genito-Urinary Tuberculosis and the Ministry of Pensions By Sir E Farquhar Buzzard M D F R C P 350
Bladder Healing After Cystotomy By H P Winsbury White F R C S and A Basil Peake F R C S 350
Treatment of Lung Cysts By John Kinnear M D 351
Treatment of Erysipelas by Injections of Milk By Henry C Simon M D and C H Golding Bird F R C S 352
Shoe Leather Dermatitis By A P Thomson M D F R C P J A Blair M D and E Hunt M D 352
Medical Engineering By C Strutt Marshall M R C S 353
Suction Surgery By George Armitage M Ch F R C S (Illustrated) 354
Early Diagnosis of Pulmonary Tuberculosis By the Per I Kulbworth Lund M R C S 354
Peptic Ulcers and Plumbism By G Arbour Stephens M D 354
Direct Pneumococcal Typing By I P Armstrong M D F R C P 354
Therapeutic Assessment By J Strachey Dick M B 355
Spontaneous Cure of Cancer By John H Hannan M D 355
Medical Supplies for Mission 356
British Institute of Philosophy 356

VACANCIES 362
(See also p. 66 of SUPPLEMENT)

The SUPPLEMENT contains

Public Health Work and the General Practitioner REPORT OF DISCUSSION
CURRENT NOTES
Assistant Medical Secretary Appointments for Vacancies
NATIONAL HEALTH INSURANCE
Inquiry into the Cost of Sanatorium Treatment
CORRESPONDENCE
Anæsthetics and Industrial Insurance Act
The Insulin Preparation Eli
Certificates
Association Notes Vacancies and Appointments Etc.

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following classes will for the most part be found on the pages indicated

Bailliere Tindall & Cox
Irvin W K—Urinary Surgery 4

Churchill J & A
Bell & Evan—Diseases of the Kidney 4
Lucas & Wyard—Clinical Atlas 4

Lewis H K & Co Ltd
Coste & Delicati's Rheum Arthritis 4
Fifield's Minor Surgery 4
Mackenzie's Actionof Muscles 4
Stephens G A—The Heart & Spleen in Health & Disease 4
Stitt F R—Practical Bacteriology etc 4
Treatment of Tropical Diseases 4

Saunders W B Co Ltd
Arey's Developmental Anatomy 3
Campbell's Orthopaedic Surgery 3
Cecil's Text Book of Medicine 3
Curtis Text-Book of Gynaecology 3
Dorland's Illust Med Dictionary 3
Herrick's Introduction to Neurology 3
Jordan's General Bacteriology 3
Kaplan's Radiation Therapy 3
McLester's Nutrition and Diet 3
Maximow's Histology 3
Pearl's Medical Biometry etc 3
Ranson's Anat of Nervous System 3
Stevens Practice of Medicine 3
Todd & Sanford's Clinical Diagnosis 3

ASSURANCE COMPANIES—
Century Insurance Co Ltd 53
Medical Insurance Agency 57

BOOTMAKERS &c—
Dowie & Marshall—Bootmakers 32
Holland & Son—Foot Support 34

BRASS NAME PLATES &c—
Cooke's Name Plates 4
Ford's Name Plates 4
Herd S J & A—Name Plates 34
Lewis & Co Ltd—Name Plates 4
Osborne F & Co—Name Plates 38

DEBT COLLECTION—
British Medical Protection Society 38

DISPENSING BOTTLES &c—
United Glass Bottle Manufrs Ltd—Dispensing Bottles 35

FOOD PREPARATIONS—
Bemax Laboratories—Bemax 1
Brooke Bond & Co Ltd—China Tea 18
Cow & Gate Ltd—Milk Food Cover iii
Harden Bros & Lindsay Ltd—Doctor's China Tea 15
Valentine's Meat-Juice 12
Virol 16
Wander A Ltd—Ovaltine 22
13

SURGICAL APPLIANCES—
Allen & Hanbury Ltd—A & H Knife 32
Lond Hospital Eyelets Needles 33
Bailey W H & Son—Surgical Appliance 31
Curti & Son—Supports 31
Hillfield Sole Absorbent Bags 31
Medical Supply Association Ltd—Cellanband Paste Bandages 4
Cellanband Paste Bandages 30
Cellona Elastic Plaster Band 30
Medical Surgical Sundries—Ether Inhaling Apparatus 22
Millikin & Lawley—Instruments Otology etc 52
Salmon Otis—Surgical Appliances 38
Salt & Surgical Service 38
Smith & Nephew Ltd—Flexopla t 8 9
Taylor L. Ltd—Flexopla t 28
32

MINERAL WATERS—
Ingram & Royle Ltd—Vi y Cyder 13

MOTOR CARS TYRES &c—
Cars for Sparkling Wines 4
Land Motors for Sale 52

CHEMISTS &c—
Allen & Hanburys Ltd—Iodolysin Vapo Cresolene Cover i
American Apothecaries Co—Salvitae 10
Bayer Products Ltd—Novalgin 11
Boots Product 23
Brit Drug Houses Ltd—Radiostoleum 16 21
SUP 36 17
Burroughs Wellcome & Co—Preparations 21
Continental Labs Ltd—Botol 27
Dimol Laboratories Ltd—Dimol Pulverettes 19
Evans Son Lescher & Webb Ltd—Hepatex P A F 19
Throat Pastilles 25
Fairchild Bros & Foster—Panopepton 12
Glaxo Laboratories— 14
Preparations Cover iv
Hewlett & Son Ltd—Liq Santal 29
Flav c Buchu et Cubeba 11
Howards & Sons Ltd—Preparations Cover iv
Martindale W—Methyl Aspriodine 18
Sterules 36
May & Baker Ltd—Cover ii 10
Cardonal 24
Menley & James Ltd—Pyridium 15
Mond Staffordshire Refining Co—Monsol 11
Newbery & Son Ltd— 18
P 1e 14
P Ltd— 16
Roberts & Co—Dismenol 24
Saccharin Corporation Ltd—Novocain 20
Sharp & Dohme Ltd— 20
Solution S T 37
S P Chirgos Co—Sulphaqua 17
Wyleys Ltd— 10
Elixir Bromo Valerian Co 10

PRINTING & STATIONERY—
Anderson & Son—Account Forms 52
Burlock & Barlet Typewriters 52
Taylor's Typewriters 4

TAILORING & UNDERCLOTHING—
Hall H—Medical Service Dress 52

TOBACCO & CIGARETTES—
Player's Navy Cut 36
Three Nuns 34

VACCINES & CULTURE MEDIA—
Evans Sons Lescher & Webb Ltd—Vaccines 26
Laboratories of Pathology & Public Health 4

X RAY & ELECTRO MEDICAL APPARATUS—
Dean & Co—X Ray Apparatus 6
Hamblin Ltd—Intra Nasal Ionizer 34
Kodak Ltd—Duplitized X Ray Film 6
Medical Supply Association Ltd—Diathermy Apparatus 30
Newton & Wright Ltd—Victor X Ray Corporation Ltd—Diathermy Apparatus 7

BATHS SPAS &c—
Bridge of Allan Spa 43

HOTELS & HEALTH RESORTS—
Cannes 43
Clifton Hotel 38
Cora Hotel 38
Margate 43

INEBRIETY—
Bay Mount, Paignton 39
Laidecote Hall, near Doncaton 39
Dalrymple House, Rickmansworth 39
Old Hill House, Chislehurst 39
Rendle Lam Hall, Woodbridge 39

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—RE APPOINTMENTS 49

HOSPITAL &c VACANCIES—
Aberdeen Royal Mental Hospital 48
Acton Hospital W 3 48
Antrim County Mental Hospital 48
Ayr County Hospital 52
Birkenhead Children's Hospital 52
Birkenhead General Hospital 43
Birmingham City 43
Birmingham Queen's Hospital 46
Bootle General Hospital 47
Brighton Education Committee 47
Bristol Eye Hospital 46
British Medical A 52
C 46
1 48
L Infirmary 49
Lady Guest Hospital 53
Elizabeth Garrett Anderson Hosp 48
Eastbourne Leaf Homoeopath Hos 47
East Ham Memorial Hospital 53
Essex County Council E 7 47
Exeter Royal Devon Hospital 46
Glasgow Corporation 48
Great Yarmouth General Hospital 48
Hampstead Children's Hospital 46
Hampstead General Hosp N W 3 53
Harrogate Infirmary 48
Hull Royal Infirmary 48
Jewish Maternity Hospital E 1 48
Lancashire Mental Hospitals Board 53
Leicester Royal Infirmary 47
Liverpool City 49
London Lock Hospitals W 9 46 52
London Temperance Hospital 48
Loughborough General Hospital 47
Manchester Babies Hospital 53
Manchester Infirmary 47
Manchester Northern Hospital 48
Manchester Royal Children's Hosp 52
Manchester Royal & Salford Hospital 46
Manchester St Hosp for Consumption 53
Middlesex County Council 47
Miller General Hospital S E 10 52
Nat Hosp for Dis of the Heart 48
Newcastle Hosp for Sick Children 52
Newcastle Prin Mary Mat Hosp 46
Newport County Borough 52
Northwood Mount Vernon Hosp 46
Nottingham City Mental Hospital 47
Nottingham General Dispensary 52
Oxford Radcliffe Infirmary 46
Plymouth, Devon Hospital 47
Prin of Wales's General Hosp N 15 53
Q Charlotte's Maternity Hospital 53
Queen's Hosp for Children E 2 47
Richmond Royal Hospital 47
Rotherham Hospital 47
Royal Free Hospital W C 1 46
Royal National Orthopaedic Hosp 47
Royal Waterloo Hospital S E 1 47
St John's Hosp for Dis of the Skin 48
St Paul's Hospital W C 2 52
Samaritan Free Hosp for Women 49
Sheffield Jessop Hosp for Women 43
South Shield Ingham Infirmary 53
Staffs Royal Infirmary 49
Stoke N Ventnor Royal Nat Hosp for Cons 48
Wellington General Hospital 43
Willesden Windsor A Edward VII Hospital 43

HYDROS & PRIVATE HOSPITALS—
Bournemouth Hydro 44
Harrogate Investigation Clinic 44
Peebles Hydro 44
Ruthin Castle North Wales 41
Smedley's Hydro Matlock 43

MEDICAL SCHOOLS &c—
City of London Maternity Hospital 45
College of Preceptors 44
Liverpool School
London
Nat Po
Q Cha
Royal
Royal Veterinary Ho pital 45
Society of Apothecaries 44
West London Hospital 45

HOMES & ASYLUMS—
Barnwood House Gloucester 43
Bishopstone Hou e, Bideford 39
Borcatton Park Salop 40
Bowden Hou e Harrow on the Hill 41
Brighton Co Borough Mental Ho 44
Camberwell Hou e S E 5 41
Cheadle Royal Cheshire 43
Chiswick Hou e, Pinner 38
City of London Mental Hospital 43
Clarence Lodge Clapham Park 44
Coppice Nottingham 39
Court Hall Benton Exeter 43
Fen tanton, Streatham Hill 43
Grange, near Rotherham 38
Grove Hou e, Church Stretton 39
Haydock Lodge Lancashire 40
Highfield Hall St Albans 43
Lawn Lincoln 43
Littleton Hall, Brentwood Essex 38
Maudsley Hospital S E 5 44
Mount House, Tamworth Staffs 39
Normansfield Teddington 39
Northumberland House N 4 39
Old Manor Salisbury 41
Peckham House S E 15 41
Resident Patients 41
Rookesdown House Basingstoke 41
Royal Earlswood Institution 41
St Andrew's Hosp Northampton 38
Springfield House, near Bedford 41
Stretton House Shropshire 43
Sykeford Abbey Newport Pagnell 43
Wellwood Nursing Home 39
Wexford House Exeter 42
Woodside Nerve Hospital N 10 40
Wye House Buxton 41
39

SANATORIA—
Cotswold Sanatorium 42
Crumpian Sanatorium 43
Linford Sanatorium 43
Montana Hall Switzerland 42
Nordrach upon Mendip Sanatorium 43
Pendyffryn Hall Sanatorium 42
Tor na Dee Sanatorium 43
Victoria Sanatorium Davos-Platz 43

SCHOOLS &c—
Paton—Schools for Boys & Girls 45
Petton Hall Shrewsbury 44
Taunton School 45

TUTORS & LECTURERS—
Cambridge University 46
Evans—Med Corresp College 44
F R C S Edin Class e—H C Orrin 44
London University 44
Manchester Royal Infirmary 44
Manchester Tutorial College 44
Stammering—Gillies E Behnke 44
University Exam Postal Institution 43

TRANSFER AGENTS—
Borril Medical Agency Ltd 53
British Medical Bureau 55 57
Lee & Martin Ltd 54
Manchester Medical School Assoc 53
Peacock & Hadley Ltd 54
The Medical Agency 54
Turner P Ltd 54
Western Medical Agency Bristol 50 54

ASSISTANTS PRACTICES &c—
Assistancies Wanted and Vacant 50
Dispenser Medical Posts etc 52
Locum Wanted and Vacant 53
Partnerships Wanted and Vacant 50
Practices Wanted and Vacant 50 51

NURSING INSTITUTES—
Cavendish Nurses 54
Nurses Association 54

MISCELLANEOUS—
Consulting Room etc to Let 57
Derwen Cripples Workshops 38
Dr Jessie Macgregor Prize 44
Income Tax Consultant—Hardy 1
Medical Defence Union 1
Miscellaneous Sale etc 2
White Star Line—Cruises 5

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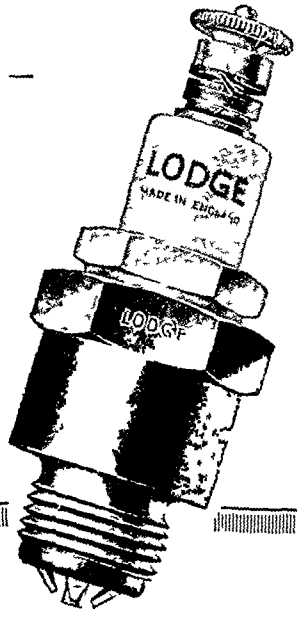
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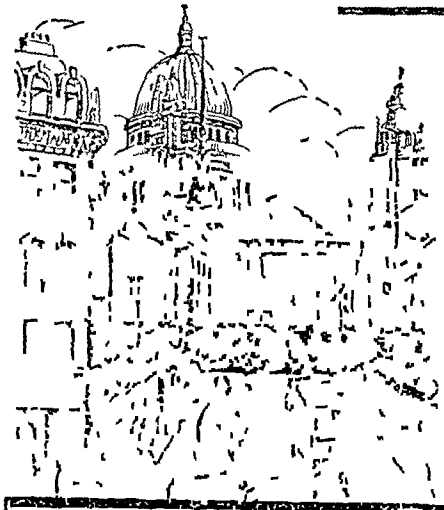
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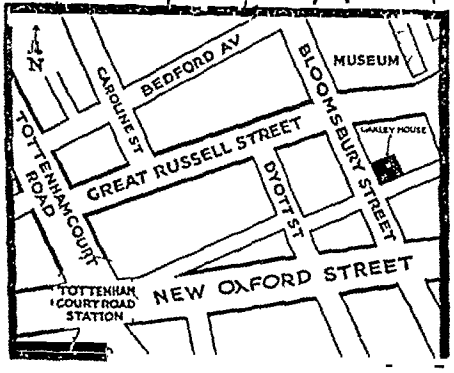
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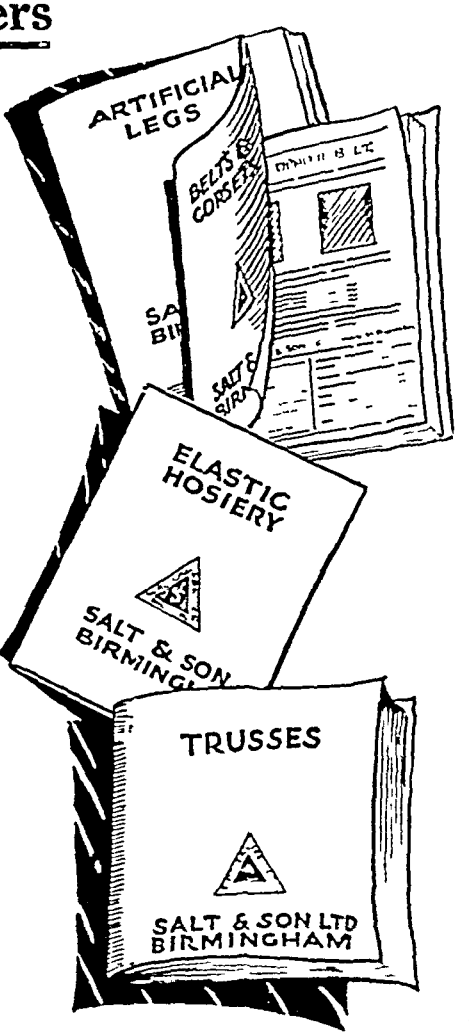
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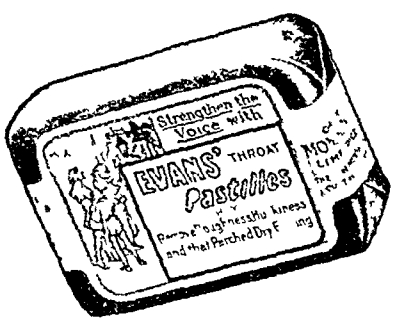
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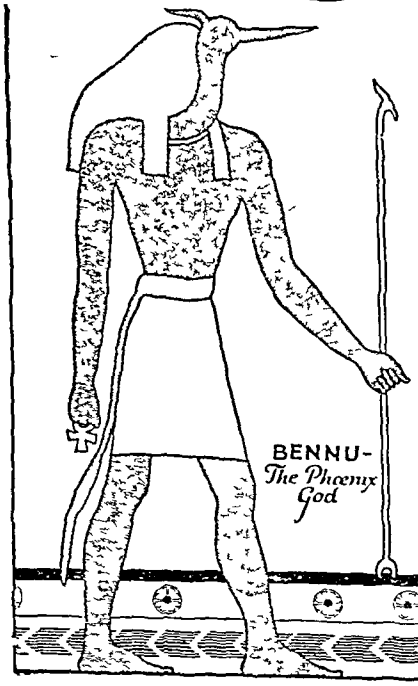
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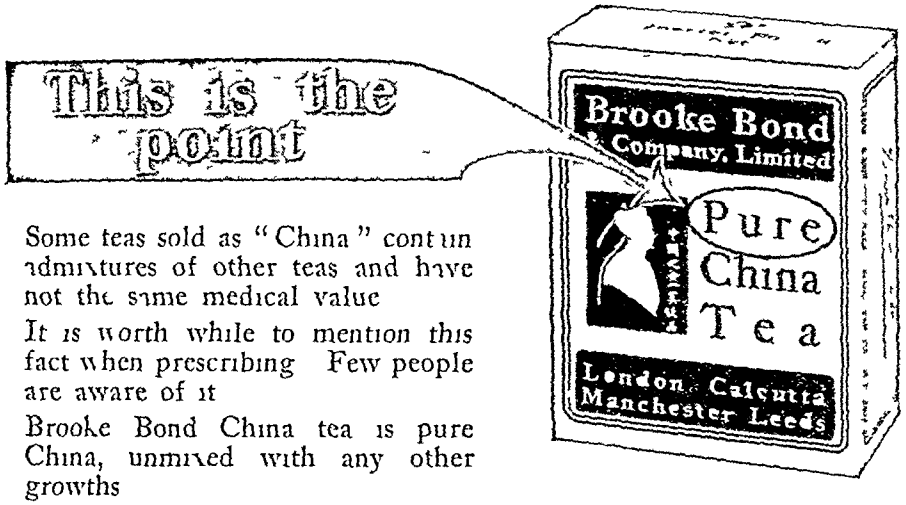
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Vide B M J February 13th 1932 pp 272 and 273
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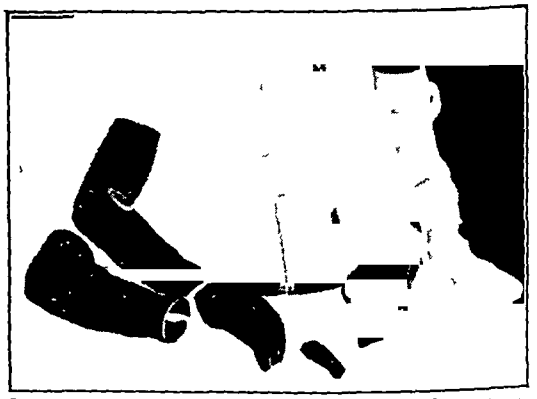


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The Hunterian Oration

THE COMMEMORATION OF GREAT MEN

BY

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I

Events that recur with a regular period are apt to be taken as a matter of course to have their significance regarded as obvious and to seem in no need of justification To resist this tendency to confuse the familiar with the self evident is one of the most necessary efforts the mind is called upon to make The institution whose recurrent activity we take part in to day was set up 119 years ago and marks a birthday since which 204 years have passed For more than a century orations have been delivered on the life and work of Hunter and they have explored their theme from every aspect and adorned it with every art The high qualities of these orations make it impossible for a new contributor without special aptitude to hope for any freshness in the presentation of a topic already so well discussed by better men On the other hand the imposing length of the series may perhaps have a little obscured our apprehension of the more elementary meanings that underlie these regularly returning occasions Under the pressure of these converging indications it will be my relatively humble task to seek answers to such questions as the first giver of this oration might be supposed in his preliminary musings to have put to himself What are the reasons we shall want to know why John Hunter should be regarded as a fit subject for enduring celebration and what do we wish and what do we attain in the many activities by which in general we pursue or suppose ourselves to pursue the commemoration of great men

II

To question established beliefs is nowadays perhaps a rather old fashioned activity We may be sure nevertheless that it is one of which Hunter would thoroughly have approved even if his own greatness was to be in question In that case however if we are to judge by his known methods in controversy the discussion would go all the smoother if we hunted beforehand what the verdict was to be For of the verdict there can be no doubt and it will find that the makers of this recurring celebration not only chose an exceptionally sound foundation but built perhaps a great deal better than they knew

Hunter was a successful surgeon with a large practice and a correspondingly ample income It must not be suggested here that that is anything but highly respectable attainment It is not however attainment that under any magnification or however many ciphers may be subtracted from the mortality of his patients and added to his income reveals in its creator the heroic features we are seeking

Hunter made the museum which for over a century has been the very focus and palladium of this College In this work we find the giant energy and resolution of true greatness directed by a correspondingly clear and ample idea It was no mere miscellaneous assemblage of odds and ends as the collections of his contemporaries tended perhaps a little to be but a grouping of orderly series nobly illustrating the living world and the processes of disease It is scarcely possible for the richness and order of this historic monument to be spoken of too highly but it may be doubted whether in themselves they could have given to their creator his unique and enduring prestige

Hunter was a consistent and expert user of the experimental method in the study of living processes and it is on this fact that his fame essentially and ultimately rests It was by impressing this method on his pupils and successors that his services to science and to surgery have had their most extended and their richest effects

These experimental studies covered a very wide field and dealt with fundamental problems such as the process of repair the survival of isolated tissues transplantation grafting inflammation the processes of growth and the influence on them of the sexual glands Such researches were pursued with a characteristic zeal and ability and yielded results of importance in many directions It is impossible however not to be struck by a certain disproportion between the amount of energy and genius that was expended and the harvest of substantial knowledge that was gathered Many of the researches were indecisive not a few of the conclusions were incorrect and no single advance was won which could be said to mark an epoch in the history of knowledge Every student of Hunter is convinced that he belonged to the very small class of those who possess powers of the first order few can be equally convinced that he made a direct contribution to the science of his day fully commensurate with his splendid gifts It is therefore particularly happy that his commemoration should have been formally assured and entrusted to an enduring institution Other experimental workers in the science of life more fortunate but perhaps not more richly endowed have by their labours so contributed to the very structure and substance of knowledge as to be sure of remembrance without any specific memorial Of Harvey of Pasteur of Lister every student of physiology or pathology is in some sense the beneficiary and direct legatee The influence of Hunter was more limited to the indirect and germinal he did not make an epoch he founded a school

III

That Hunter's prodigious powers and devotion yielded such comparatively moderate accessions to knowledge is perhaps not without a certain shade of mystery and pathos It is an idle occupation for the common man to busy himself with explaining the successes and failures of greatness but it is no undue presumption to turn our attention to the circumstances of Hunter's life in the search for light upon his career He was so resolutely modern in his attitude towards the problems of life and he accepted so whole heartedly the working hypothesis of their solubility that we are apt to forget the state of knowledge of his time During the 65 years of Hunter's life from 1728 to 1793 the biologist could look for practically no help from the sciences of the inorganic and was without almost every article of equipment we now regard as essential to experimental work

We are accustomed to associate with the earliest foundations of modern chemistry and physics the great names of Cavendish Priestley Galvani Volta and Lavoisier Every one of them was junior to Hunter Let us for a moment regard the situation of Hunter in his prime in 1765 He would have had to wait 10 years for Priestley's discovery of oxygen in 1775 he would have had to wait over 60 years for Wöhler's synthesis of urea and the foundation of biochemistry in 1828 and nearly 80 years for Joule's mechanical equivalent of heat Over 60 years ahead was Joseph Jackson Lister's completion of the compound microscope which made possible the science of histology and exactly a century away the proof of the nature of wound infections by Lister's greater son

In this atmosphere of embryonic science and primitive equipment Hunter worked with high faith and energy at problems which have resisted or yielded only grudgingly

* Delivered before the Royal College of Surgeons of England February 15th 1932

to all the resources of the modern world Not only was there little help for him in the general body of science but biology itself lay in a certain sense between two tides of inspiration The gross structure of the animal body had been fully exploited by the great anatomists the stimulus this had given to knowledge had come to the flood and was ebbing fast Exact histology lay half a century in the future and for the want of it most of Hunter's experiments could not be given full exploitation or carried to exact conclusions It needs all our imaginative sympathy to picture the twilit country in which his labours were carried on—the air is dim and thick the range of vision short the appearance of things ambiguous

> — the tired waves vainly breaking
> Seem here no painful inch to gain

We can scarcely resist the sense that there was a prophetic element in the feverish energy with which he set himself to his tasks For events were to give to such work a new value and a new necessity The long climax of the eighteenth century was passing by Ahead lay a changed order where social structure would have an *unheard of* complication and biological problems an *unheard of* urgency The world seemed to pause gathering itself for the plunge The movement would be slow at first but presently would take on a vertiginous acceleration

In 1774 when Hunter was 46 and in the full tide of work a young Scotchman named James Watt left Glasgow for Birmingham to become the partner of Matthew Boulton and with his help to add to the gathering forces of the industrial revolution the immense momentum of the steam engine There followed a commercial expansion and a crude industrial hypertrophy which made this country the envy of the world but which we can now contemplate with only a qualified pride The growth of trade and population was so imperious and so exuberant that the ordinary hygiene difficulties of social life increased out of all bounds Industrial areas of population grew uncheckeed by regard for space for decency or for health while the discrepancy between the rate of development of mechanical and biological knowledge became more and more dangerously wide The great but as we can now see rather Grecian gift made by the North to the South when James Watt brought the steam engine to England was to be repaid in a nobler and less equivocal form when 86 years later a young Englishman named Joseph Lister went to Glasgow The industrial revolution and the steam engine had done their work To the great new industrial populations hospitals had become more and more indispensable and with every enlargement of their activities they had become more and more dangerous to their surgical patients The process was a progressive one for a reason that is now obvious the frequent occurrence of infection from patient to patient being ideally suited to raising the virulence of micro organisms to the highest pitch and maintaining it there Surgery in hospitals was in fact already threatening to become extinct

It was in this darkest hour that the method of Hunter brought off its greatest stroke Of that method Lister was a devout and explicit disciple In five years from his coming to Glasgow he had solved the problem of wound infection and modern surgery was born

The lapse of time with its slow revelation of perspective and proportion in the succession of events seems more and more clearly to teach the lesson of Hunter's career It was not as a surgeon as the maker of his great museum or even as a discoverer in science that his greatness was revealed or his influence perpetuated It was by his work in the use of the scientific method—faithfully in love of truth and with utter devotion to truth

IV

We cannot examine even in this hasty way the special instance of a given memorable man without feeling a logical pressure towards the consideration of the more general case of the meaning and motives that underlie one of the most widespread of human impulses We assume that the commemoration of heroes is possible and to be desired and it would perhaps be well in prudence to leave it at that for the moment we pierce the smooth surface of the assumption we find ourselves in a world of ambiguities and uncomfortable hints Nevertheless it is perhaps a healthy exercise in an environment such as this—so solid so stable so justly confident—to recall to ourselves sharply that these also are appearances

Let us begin by planting squarely before us the plain fact of death I make that specious request not in the expectation that it will be granted for it is in the very nature of that fact's relation to life that we cannot get a square collected and as it were binocular look at it A living mind can form no intimate conception of its own death and is apparently for ever incapable of comprising two categories which are not opposites as is often crudely supposed but superlatively different And yet in the world of gross reality the expectation of death for the individual is the one prospect for which the attestation of experience amounts most nearly to philosophic certainty This radical antinomy in the life of every conscious being in spite of having been the chief preoccupation of the speculative mind since it came into existence remains and must remain unresolved Among the by-products of these secular activities is the strange jumble of sense and fantasy that makes up our attitude towards the memory of the dead

In even its most sober and enlightened moments mankind has regarded the dead with fear and pity In other moments the feeling has risen to awe and reverence or has sunk to a strange blend of horror and contempt The mixture of feeling has withdrawn attention from the central fact that from the moment of a man's death the memory of him begins to fade for he has entered on a new state about which the only certainty is that it has nothing to do with life Nothing can arrest this decline no memorial can do more than delay it and as it delays distort In all our commemorations whether by word or by plastic art we make our own pictures and drift increasingly away from the actual man These are the real ghosts and nothing brings more certain conviction of a man's death than his memorial This steadily increasing divergence between the subject commemorated and the object commemorating has perhaps its consolations when we view the objects of memorial art in our public places At any rate we may tell ourselves as we shrink before the marble frock coats and the bronze beards and whiskers their supposed subjects could scarcely have been like that However forlorn in the eyes of mere reason the task of keeping in being the veritable personality of the dead mankind has addressed itself to this object throughout the ages And its efforts have always illustrated the twin themes of pity and fear The hunter warrior must have his weapons and his dogs with him in the grave the head of the house his servants and his wives and both their finery and their food So they would be happy and at ease and the bereaved could feel a little comforted and if they were happy and at ease perhaps they would not come back

When the dead man is a great man another theme is added revealing motives with the same rich human mixture of the noble and the base The qualities of the hero are worshipped are desired and are pursued with devotion and without scruple Primitive man seems very early to have thought the most obvious way to assimilate the

virtues of the hero was to assimilate his body actually to eat his flesh in the expectation that the spirit which had animated it would also be conveyed and absorbed—a robuster conception of organotherapy than we have yet come back to Hence arises the commemorative feast which has penetrated Western civilization with what huge significances we know A second idea which belonged more definitely to the realm of magic was to make an image of the hero and so preserve his personality without limit thus the qualities most desired could be judiciously magnified and above all the whole conception was under control

But the primitive mind with its dangerous gift of logic could not leave the subject without a further rational expansion If heroic virtues are transferable at death must one wait upon the operation of mere natural processes? We need not doubt that the plain conclusion has been on due occasion reached When the slayer was assured of acquiring the virtues of the slain the crazy logic of memorial piety had reached its climax This dark theme wanders elusively in the customs and folk lore of early man and has its classical seat where in the shadowy southern woods we discern the enigmatic figure of the Priest of Nemi with the Golden Bough

It would be easy to fall into absurdity by making crude and over simplified applications of these primitive modes of thought to our modern affairs Nevertheless we must not forget the ingrained conservatism of Nature physiology has shown to how large an extent the fundamental chemistry of the body and the elementary working of the nervous system tend to be uniform throughout the animal world [1] There is good reason to suppose that the same kind of elementary uniformity obtains and has always obtained in the reactions of men s minds If the ideas we have indicated occurred in primitive minds we may be sure that manifest or latent evidences of them will be found in our own At any rate we cannot deny that the commemorative feast has its part in modern memorial celebrations or that man still likes to make magic images of his heroes—though there may be little enough magic about some of them—and to magnify the features he thinks they ought to have and suppress the others

It would partake too much of the nature of the over strained ingenuity I have already deprecated to enlarge upon the traces of what we may call the Golden Bough theme that are to be found in the treatment by society of its men of exceptional character and capacity Such traces are to be met with but they are perhaps too elusive to be put into words without an effect of crudity and exaggeration

V

The *conscious* and *ostensible* motives under whose influence we approach the commemoration of great men are first to contemplate in humble piety and emulation a largeness of mind and character that far exceeds our own and secondly to seek inspiration from struggles heroically engaged and perhaps triumphantly won There is no commoner mistake in practical psychology than to suppose that because a motive is admirable it must therefore be strong If we are to be honest with ourselves we shall have to admit that aspirations such as these do not accompany us very far along the humdrum and ignoble ways of daily life Many of us must have felt guiltily conscious of how little the exhilaration produced by such exercises has been able to compete with the anxieties and ambitions of our own pedestrian lives Side by side with this weakness in our conscious motives there is as I have hinted reason to suspect the presence of other and submerged impulses the vestiges of a cruder harsher type of feeling which for all their dimness may have a certain ugly strength When we remember in addition the difficulty of establishing and keeping alive the true and unadulterated personality of the dead we must I think confess that the art of ceremonial commemoration has to overcome obstacles of a very formidable kind if it is to avoid becoming increasingly formalized and superficial

It is possible that a future and more realistic age may reach the conclusion that the time to celebrate its heroes is while they are alive and not to wait with our remarkable patience until they are safely dead Such an age will perhaps reason in its clear way that its duty towards its great men is to get as much out of them as it can and that no piety after their death can equal in effectiveness for the purpose a receptive and sympathetic understanding during their lives

VI

It is unfortunately very much easier to recognize a man s greatness after he is dead and when we are freed from the distraction of the actual presence which unhappily tends so often to be odd angular and even quarrelsome It is also an old story that the reception of new ideas tends always to be grudging or hostile The text is a favourite one and is apt to become the theme of exhortations which in addition to having the dreariness of their kind are pointless because they constitute a frontal attack on an ingrained quality of the mind

Apart from the happy few whose work has already great prestige or lies in fields that are being actively expanded at the moment discoverers of new truth always find their ideas resisted The consideration of this process is often obscured by two assumptions first it is supposed that the most harmful resistance comes from obvious and noisy prejudice and that the more dangerous resistance of inertia and quasi rational negation is unimportant and secondly it is supposed that workers in science are of course free from any resistive tendency but a rational conservatism Each of these assumptions is an almost complete delusion

The vociferous opposition met with by the ideas of Charles Darwin and of Lister probably did nothing to hinder the spread of these and probably brought them within reach of a larger number of people capable of accepting them than would have been the case if the opposition had been well behaved Again it was not noisy prejudice that caused the work of Mendel to lie dead for 30 years but the sheer inability of contemporary opinion to distinguish between a new idea and nonsense That this same inability may be shown even by the most eminent workers in science scarcely needs demonstration for anyone at all aware of the history of knowledge but it may be illustrated by an anecdote which we owe to the third Lord Rayleigh and which is to be found in the delightful *Life* of that very great and wise man J J Waterston was an engineer who interested himself in mathematical physics and in 1845 wrote a paper on the molecular theory of gases which was 10 or 15 years in advance of his time and anticipated much of the work of physicists no less eminent than Joule Clausius and even Clerk Maxwell The only contemporary judgement on this paper that survives is that of the referee of the Royal Society to whom it was submitted He said The paper is nothing but nonsense What Waterston might have accomplished if he had had the recognition and encouragement upon which this genius seems to have been unusually dependent is beyond conjecture He did not get them His work lay in utter oblivion for 45 years until it was exhumed by the pious efforts of Rayleigh He himself lived on disappointed and obscure for many years and then was overtaken by a yet deeper obscurity for as the result of some strange accident or a long

gathering impulse of despair he disappeared and left no sign

This little story must strike with a chill upon anyone impatient for the advance of knowledge, and especially upon such as are inclined to assume the use of the scientific method to be synonymous with the possession of the scientific mind Experience fully proves that this assumption is unsound for there is no limit to the narrowness of the field within which the scientific method may be limited while the rest of the mind is uninfluenced Even if that assumption is not maintained there are several grounds on which has been defended the proposition that a man of science does well not to traffic very freely with new ideas It is thought that the necessary concentration on a limited problem is apt to be attenuated by the use of any general intellectual activity A proposition more worthy of serious attention is that which declares that scepticism and suspended judgement are the very essence of the scientific mind and scarcely to be depended on too much The conception is no doubt true when its elements are exactly defined Without such definition these venerable phrases may very easily become mere snares this is because they are apt to be the expression not of the principles they profess to represent but of far more deeply ingrained and potent impulses

The mind delights in a static environment and if there is any change to be itself the source of it Change from without interfering as it must with the sovereignty of the individual seems in its very essence to be repulsive and an object of fear A little self examination tells us pretty easily how deeply rooted in the mind is the fear of the new and how simple it is when fear is afoot to block the path of the new idea by unbelief and call it scepticism and by misunderstanding and call it suspended judgement The only way to the serene sanity which is the scientific mind—but how difficult consistently to follow—is to give to every fresh idea its one intense moment of cool but imaginative attention before venturing to mark it for rejection or suspense as alas nine times out of ten we must do In this traffic it is above all necessary not to be heavy handed with ideas It is the function of notions in science to be useful to be interesting to be verifiable and to acquire value from *any one* of these qualities Scientific notions have little to gain as science from being forced into relation with that formidable abstraction general truth Any such relation is only too apt to discourage the getting rid of the superseded and the absorption of the new which make up the very metabolism of the mind

VII

In making this small survey of the simpler reflections that are suggested by commemorative occasions such as this three general conceptions have presented themselves rather prominently Some of them at least have a practical bearing and we should therefore be very unworthy disciples of the Master we celebrate if we did not give them what point we can by a particular reference

The first of these ideas is the familiar truth that if any human institution is looked into at all closely it is found however admirable its ostensible purpose to be built out of a strange mixture of elements and to comprise motives many of them odd and some of them ugly Memorial ceremonies show themselves to be of this class and thereby demonstrate that they possess a thoroughly natural origin In these mild disclosures there is nothing to dismay and no one need be disconcerted by the homely skeletons in the cupboards of folk lore At the same time they perhaps have a use in explaining why the stimulation and enlargement of mind afforded by such commemorations are sometimes less potent than we could wish

The second conception that emerges is the suggestion that with the process of time it will become increasingly difficult to separate the commemoration of the dead from the responsibility for their treatment during life, or to believe that posthumous honour is in any real sense a reparation for the dead, or a discharge of the liability of the living It will become less and less possible to regard the discoverer of truth as responsible for the propagation of it and charged with the duty of converting a stiff necked generation

The third and last idea on which our discussion has converged is that if mankind is to profit freely from the small and sporadic crop of the heroically gifted it produces it will have to cultivate the delicate art of handling ideas Psychology is now able to tell us with reasonable assurance that the most influential obstacle to freedom of thought and to new ideas is fear, and fear which can with inimitable art disguise itself as caution, or sanity, or reasoned scepticism, or on occasion even as courage

We may now attempt for a final moment to link these speculations with our primary theme In his mental environment Hunter must be regarded as a happy man He lived in the relative intellectual freedom of the best part of the eighteenth century before its bland sunshine had died in the smoke of industrialism, and before the French Revolution and the reaction to it had deadened speculative thought He saw as from a peak in Darien, the illimitable ocean of biology before him and he addressed himself unhesitatingly to explore it all It was in the general level of knowledge and in instrumental equipment that he was less fortunate When a new Hunter appears he will not be held back by an undeveloped science and he will find this College able to give him all the facilities with which it has been munificently endowed Let us hope that he will also find an intellectual environment where even his most revolutionary ideas will be planted in a nourishing soil and bathed in a genial air

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HIGH BLOOD PRESSURE AS AN EARLY SIGN OF TOXAEMIA OF PREGNANCY

BY

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The purpose of this paper is to call attention to the fact that an elevation of blood pressure in toxaemia of later pregnancy may precede the appearance of albumin in the urine

Mahomed (1874) appears to have been the first to demonstrate that increase of tension on the arterial system might precede the albuminuric stage in the glomerulo nephritis following scarlet fever At that time however there was no very accurate method of measuring blood pressure and Riegel (1884) stated that the albuminuria and the rise of blood pressure were almost synchronous In 1925 Koch supporting Volhard's theory of a generalized arteriolar spasm as a cause of ischaemia and consequent injury to the kidney stated that during convalescence from scarlet fever there occurs in the majority of cases a rise in blood pressure another theme is quent or concomitant phenomenon of the human mixture processes going on in the body The duties of the hero after a day or two fall to normal which pursued with devot a man seems very

* From the Obstetric Unit University's way to assimilate

strable consequences but it might also be followed by albuminuria and haematuria and by an acute diffuse glomerulo nephritis His estimations were made by the Riva Rocci sphygmomanometer the systolic pressure being measured by palpation and the diastolic by auscultation In Koch's cases the albuminuria appeared a day or so after the rise in blood pressure which was in the cases he reported very slight (highest 132 mm systolic) and a complicating factor might well have been the elevation of temperature that not infrequently occurs at this stage of the disease In pregnancy of course such a complicating factor does not appear Last of all came the observations of Steiner (1928) who disagrees with Koch's conclusions and states that in his experience the glomerulo nephritis following scarlet fever is certainly primary and the rise in blood pressure only begins when the urine is already abnormal

There appear to be but few references in literature to the fact that the albuminuria of pregnancy may be preceded by a rise in blood pressure though Fishberg states that sometimes hypertension may precede the albuminuria and Theobald (1929) has recorded two cases of eclampsia in which albuminuria was absent though the blood pressure was raised On the other hand Izod Bennett (1929) says I have the impression and I think it is a general impression that the hyperpiesia (in the renal complications of pregnancy) does not occur until albuminuria or some other evidence of renal involvement is present The question is of great theoretical importance both from the point of view of the causation of the kidney lesions in glomerulo nephritis and eclampsia and of the etiology of hyperpiesia It is however chiefly with the clinical significance of the observation that I am concerned in the present paper

CLINICAL INVESTIGATION

In the ante natal clinics at University College Hospital blood pressure measurements are made by means of a mercurial manometer (Baumanometer) the auscultatory method being used for both systolic and diastolic estimations Blood pressure is estimated and the urine examined once a month till the thirtieth week fortnightly till the thirty sixth week and thereafter at weekly intervals till delivery If albumin is found in the ordinary way a catheter specimen is obtained and only the result of that is entered in the record The reagent used is a cold saturated solution of salicyl sulphonic acid In this way very accurate records are obtained and one is sometimes enabled to detect abnormalities in their earliest stage

Altogether the records of upwards of a hundred cases of toxaemias of late pregnancy have been examined but for various reasons—because they were examples of actual or possible chronic nephritis or of albuminuria without a rise of blood pressure at any time (the toxaemic nature of the condition being therefore doubtful)—the majority had to be rejected There were left forty eight cases bearing on the present discussion Out of this total the albuminuria and the hyperpiesia were discovered at the same time in thirty five This does not necessarily mean that they began at the same time but possibly the examinations were not frequent enough to detect the disorder in its earliest stage In the remaining thirteen hyperpiesia preceded the albuminuria by periods ranging from eleven to eighty nine days The following are three typical examples

Case 1 (550/31).—M C aged 24 first pregnancy previous history good First seen December 11th expected date of delivery July 20th B P 120/84 albumin *nil* May 14th B P 130/70 albumin *nil* May 28th B P 140 100 albumin *nil* no symptoms June 4th B P 142 84 albumin *nil* no symptoms no oedema June 15th B P 154/92 albumin + and slight trace of oedema Admitted June 18th June 20th Trace of albumin June 26th Albumin 1 per 1 000 July 2nd Albumin 1 5 per 1 000 With rest in bed the blood pressure fell gradually and was 110/65 just before labour began after induction by bougies on July 3rd In this case sixty two days elapsed between the rise of blood pressure and the appearance of albuminuria During all this time there were no symptoms to draw attention to the fact that the patient was in any way abnormal

Case 2 (554/31).—I R aged 30 first pregnancy previous health good First seen February 12th B P 150/90 albumin *nil* advice given March 12th B P 130/85 albumin *nil* April 9th B P 128/88 albumin *nil* April 23rd B P 140/90 albumin *nil* May 7th the same May 14th B P 145/90 albumin *nil* May 28th B P 140/95 albumin *nil* June 11th B P 145/100 albumin *nil* June 25th B P 170/100 albumin trace Admitted June 29th During all this time there had been no symptoms except headache on April 23rd which disappeared but returned in a very severe form on June 22nd After admission the blood pressure fell with rest and eliminative treatment to an almost normal level and never again exceeded 135/86 Albumin persisted until delivery on July 7th but was never more than a very small trace Seen on September 2nd following albumin was absent and B P 138/80 There were no apparent cardio vascular changes The high blood pressure at the first visit on February 12th was noteworthy Its possible significance will be referred to later

Case 3 (246/31).—E Z aged 24 one pregnancy a year previously complicated by albuminuria but healthy child born at term First seen January 4th B P 124/80 albumin *nil* February 11th B P 120/80 albumin *nil* March 4th B P 144/80 albumin *nil* March 18th B P 152/80 albumin + Admission to hospital refused April 1st B P 158/110 albumin + Delivered April 2nd Seen October 1st No albumin B P 126/76 In this case the blood pressure was raised for fourteen days prior to the appearance of albumin and during this time as in the other two cases the patient seemed perfectly normal

The following tabular statement gives the essential details in thirteen cases

Record Number	Age	No. of Previous Pregnancies	Number of Days Albumin preceded by Rise of Blood Pressure	Other Abnormal findings Accompanying Raised Blood Pressure before Albumin appeared	Previous History	Remarks
179/31	38	3	48	None	Albumin 1st pregnancy	—
550/31	24	0	62	None	Good	Slight trace of oedema at same time albuminuria appeared
246/31	24	1	14	None	Albumin 1st pregnancy	Twin pregnancy
547/31	22	0	60	None	Good	Rise of blood pressure to 139/92 (normal 125/85) first occurred at 30 weeks it then became normal for about 4 weeks but afterwards rose again with albuminuria
902/31	35	8	14	None	Good	Trace albumin first found when blood pressure was 160/94 but increased rapidly to 4 per 1 000
880/31	40	1	30	None	Good	Concealed accidental haemorrhage Caesarean section—live child
989/29	21	0	22	Pruritus only	Good	—
638/30	33	1	53	None	Good	Twins
994/30	24	0	89	Headache 5 days before albumin	Good	—
989/30	21	0	35	None	Good	Blood pressure at first visit (Sept 2) was 146/108 albumin 0 Sept 25 blood pressure 105/84 albumin 0 Oct 6 blood pressure 147/104 albumin 0 Oct 13 albumin +
129/29	19	0	11	None	Good	Had slight non febrile pyelitis
1073/31	29	0	42	Oedema of feet	Good	Instability of blood pressure notable
554/31	30	0	64	Headache and slight swelling of ankles Nausea occasionally	Good	Instability of blood pressure notable

Though the table is self explanatory it is necessary to emphasize that while the period elapsing between the rise of blood pressure and the onset of albuminuria varied between eleven and eighty nine days in only four of the cases was there during that time any symptom to draw attention to the fact that the patient was abnormal The importance of routine estimation of blood pressure is evident for there can be no doubt that it provides in many cases at least an earlier indication of the presence of toxaemia than does examination of the urine It is noteworthy too that sometimes the blood pressure rises slightly at a comparatively early stage of pregnancy, any other demonstrable abnormality being absent only to subside and remain at a normal level for some weeks When this occurs it will usually be found that a more permanent rise takes place later followed in due course by albuminuria This was so in cases 547/31, 989/30 1073/31 and 554/31 (see last column of table) It seems as if there is in these cases a curious instability of the blood pressure and in this connexion one calls to mind the statement of Elwyn that there is an increased irritability of the vegetative nervous system in pregnancy, and that this leads to a greater tendency to vaso constriction At any rate there seems good reason to believe that a temporary slight rise in blood pressure in the earlier stages of pregnancy may be taken as a warning of possible trouble later

SUMMARY

1 It is shown that in the toxaemia of later pregnancy a rise of blood pressure often precedes by a prolonged period the onset of albuminuria

2 During the interval between the rise in blood pressure and the appearance of albuminuria (varying in the reported cases from eleven to eighty nine days) there are usually no symptoms or signs to suggest that the patient is in any way abnormal

3 There is some evidence that there may be in the earlier stages of the pregnancy of patients who later develop toxaemia, a temporary elevation of the blood pressure, which soon subsides and which may be an expression of increased neuro-muscular irritability and of a greater tendency to vaso constriction in such patients

4 The importance, for the timely diagnosis of toxaemias of pregnancy of routine estimations of blood pressure is emphasized When these are made treatment can be commenced at a very early period with the obvious advantage of minimizing the risk of eclampsia and of chronic nephritis

5 The term 'albuminuria of pregnancy' is a bad one and is no doubt responsible for much of the permanent kidney damage that has in the past been a sequel of the toxaemia of late pregnancy Its use has pushed unduly into the foreground the albuminuria which is really a late symptom, and has therefore tended to obscure the early hyperpiesis and has thus been the cause of dangerous delay in diagnosis and treatment

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SYNTHALIN IN THE TREATMENT OF DIABETES

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In November 1926 a paper was published from the late Professor Minkowski's clinic in the University of Breslau by Frank Nothmann and Wagner[1] entitled Synthetically prepared substances with an action similar to that of insulin on normal and diabetic subjects in which the authors stated that their work had been undertaken in the erroneous belief that tetany following parathyroidectomy was associated with hypoglycaemia and with the knowledge that other work had suggested that tetany in children was connected with guanidine poisoning

Deciding for these reasons to investigate the effect on the blood sugar of animals of injections of guanidine Frank and his colleagues found that they produced very severe hypoglycaemia and convulsions indistinguishable in character from those which are known to follow heavy doses of insulin but with the remarkable difference that animals *convulsed* by guanidine could not be rescued by intravenous injections of glucose The next step was the endeavour to modify the chemical structure of guanidine in such a way as to eliminate its toxicity and retain its hypoglycaemic power The original paper claimed that this had been successfully done and that the new guanidine derivatives which were called synthalins not only had an action indistinguishable from insulin but also retained their potency when administered by the mouth

The experimental evidence described in support of this contention was very strong and may be briefly summarized as follows

1 Animals convulsed by the synthalin administered by injection could be rescued by glucose intravenously

2 After total extirpation of the pancreas from dogs the resulting high blood sugar could be reduced by synthalin and in dogs rendered diabetic by partial extirpation both hyperglycaemia and glycosuria could be controlled

3 After intra arterial injection of synthalin a dog had less sugar in the blood of the femoral vein than in that of the artery

4 Controlled cases of human diabetes were recorded in which on fixed diets the glycosuria diminished by 40 to 50 grams daily when synthalin was taken by the mouth

5 Acid bodies in the urine of diabetics diminished after the use of synthalin and this suggested that more sugar was used as the result of the administration of the drug

No detailed account of their clinical results was given at the time but it was stated that the general results in seventy cases were good and in addition the claim was made that two cases previously refractory to insulin had been successfully treated one of which was complicated by pulmonary tuberculosis

Towards the end of 1926 the action of synthalin was discussed by the Association of German Physicians and there was fairly general agreement on the following points

1 It was not advisable to use synthalin in severe acute cases or in children

2 The most suitable type of case was the milder diabetic with a total of about 30 to 40 grams of sugar in the daily urine on a fair diet

3 Previous long insulin treatment while not a final contraindication seemed in some way unknown to make a patient refractory to synthalin Transfer from insulin had to be slowly and carefully carried out

4 Synthalin was slower in action than insulin but its effect was more prolonged

5 The effect on the blood sugar was not as striking as that of insulin

6 Alimentary complications—vomiting diarrhoea loss of appetite and depression—were sometimes severe

On the whole there could be no doubt after reading the report of the discussion that the opinion of the *majority* of the German physicians who had used the drug was distinctly favourable and their experience extended over large numbers of cases

A curious position had by this time arisen In Germany a new drug was being widely used in the treatment of diabetes particularly of the milder varieties and in the rest of Europe and in America the method had not been investigated at all extensively—this was due to the fact that in their original paper Frank and his colleagues had not disclosed the method of preparation of synthalin When one of us visited Breslau a little later he was told that this unusual departure from established medical practice was due to the fact that the cost of the very extensive research had been borne by Messrs Kahlbaum the manufacturing chemists of Berlin on the understanding that if anything useful emerged from it they should have the right to place the synthetic product on the market before its method of preparation was disclosed Dr Aschoff of the firm of Kahlbaum was good enough to give us a supply of synthalin for clinical use a certain amount had also been sent into England to the Medical Research Council early in 1927 A little later the precise chemical formula of synthalin was published and its preparation was found to present no great difficulty

In our first series of twenty eight cases treated with synthalin (none of which are included in the detailed analysis set out later in this paper) no fewer than fifteen appeared to be benefited by the drug and it was therefore with some surprise that we read the report of the physicians[3] who had undertaken to investigate the matter at the request of the Medical Research Council for their conclusions with one or two exceptions were distinctly at variance with the favourable opinion formed by the German Association of Physicians to which reference has already been made The explanation of this discrepancy seemed to us to be that the report of the Medical Research Council was based on very few cases of which a considerable proportion were obviously unsuitable for synthalin in the light of German experience and the period of observation of them for various reasons had been short We therefore decided to continue to use synthalin cautiously and we were encouraged in this course by the subsequent appearance of papers which disclosed a more favourable view of the drug than that of the Medical Research Council report

In 1929 a further investigation of thirteen cases satisfied us that synthalin was of real value in the treatment of certain types of diabetic patients and we have therefore used it more extensively in the last two years mainly in the diabetic clinic at the General Hospital Birmingham

ACTION OF SYNTHALIN

It has already been definitely established in several researches[4] that synthalin *brings about* a decrease in the blood sugar of normal and diabetic subjects Just as insulin causes an increase before a decrease in blood sugar[5] so synthalin first induces a transient hyperglycaemia and then a more lasting hypoglycaemia[6]

There is general agreement that synthalin increases the respiratory quotient some authors report that the oxygen consumption decreases[7] others find an increase in the oxygen consumption[8] In this connexion it is important to record that synthalin administration causes an increase in blood lactic acid[10]

Glycogen stores of the liver and muscles are found to be diminished by synthalin[11] Bodo and Marks discovered that if an animal be killed when it has the transient synthalin hyperglycaemia its liver contains no more than a trace of glycogen In considering this it must be remembered that doses of 20 to 90 units of insulin in a day have been reported[12] to cause an immediate decrease of 30 to 85 per cent of liver glycogen

Simola (loc cit) made the interesting discovery that after synthalin administration there is in most but not all cases a fall in blood inorganic phosphate accompanying the fall in blood sugar If a poisonous dose of synthalin be given there is a sharp rise in blood inorganic phosphate Bodo and Marks found that when synthalin hypoglycaemia has been produced in an animal restoration of the sugar to normal level or higher failed to resuscitate the animal Even before a definite hypoglycaemia had set in adrenaline in doses which would normally produce a large and prolonged rise in blood sugar failed to have any such effect From their observations they conclude—and Dale[13] agrees with them—that synthalin in doses big enough to produce hypoglycaemia damages the liver If then the action of synthalin depends upon its damaging the liver one may expect the mechanism of the lowering of blood sugar to be the same as that operating in the production of hypoglycaemia in poisoning of the liver by chloroform or by phosphorus[14] or that following complete extirpation of the liver[15]

On the other hand the fact that an animal made hypoglycaemic by synthalin cannot be resuscitated by administration of sugar probably indicates that whatever damage may be done to the liver by a large dose of synthalin the condition is not necessarily to be compared with that resulting from complete extirpation of the liver for Mann and McGrath (loc cit) showed that the moribund animal (hypoglycaemic as a result of removal of the liver) is in a minute or less brought back to its normal appearance by the intravenous injection of glucose It would therefore appear that an overdose of synthalin may produce hypoglycaemia and it may also yield another result in that the animal is so badly damaged (poisoned) that even though the lack of sugar is made good the other trouble is so great that the animal dies

Those authors who have reported the decrease in glycogen stores of the muscles and liver and the marked damage to the liver after synthalin administration have worked with doses which in comparison with the quantities used in therapeutics are enormous Attention has already been drawn to the work of Simola in which it is shown that the effect of synthalin in small doses differs from that in large doses Liu and Krüger[16] have shown that intravenous administration of small doses of synthalin often causes a temporary rise in blood *p*H while large doses cause a fall in *p*H Whereas Bodo and Marks using large doses of synthalin have reported decreased oxygen consumption it is significant that Calvert (loc cit) and Karr Schumann and Petty (loc cit) working with normal and diabetic human beings have noted after synthalin an increase not only in the respiratory quotient but also in the oxygen consumption

Therefore it might well be that for synthalin there is a therapeutic dose and a toxic dose and that the therapeutic dose exerts its action without damaging the liver Of this no definite proof is offered but the purpose of this communication is to show that synthalin can be administered in doses large enough to produce a definite decrease in blood sugar and that this dosage may be kept up for a considerable time without the appearance of toxic symptoms

ANALYSIS OF RESULTS

Our patients attend the clinic periodically the majority coming every one or two months and on each occasion the blood sugar is estimated In assessing the value of synthalin we have noted the clinical effects and also the effect on the blood sugar level In many cases we have records of patients blood sugar readings while on a steady diet and before synthalin was administered we are thus in a position to compare such readings with those later while the patients were on the same diet but taking synthalin regularly for short or long periods

As far as possible the effect of the treatment on the blood sugar was determined by comparing the *mean* of readings before administration of the drug was commenced with the mean of the readings while taking it Owing to the quite large fluctuations in blood sugar level so commonly met with in diabetic patients this method is more reliable than relying on single estimations while the patient is off or on synthalin

FIRST GROUP (1929)

Number of patients 13 (5 male 8 female)
Average age 58 years
Average weight 11½ stone
Average dose of synthalin 34 mg daily
Number of periods of synthalin treatment 16
Average length of period of synthalin treatment 4½ months
Diet Twelve observations when the protein and fat of the diet was restricted (calories 1 900 to 2 200) four observations when protein and fat was unrestricted and carbohydrate from 80 to 160 grams
Average blood sugar before institution of treatment 246 mg per 100 c cm

Result In fourteen periods the blood sugar *fell* during period of synthalin treatment
Average fall of blood sugar 28 3 per cent of original level
In two periods the blood sugar *rose* in both cases by 9 per cent

Notes During one of the two periods when the blood sugar rose the carbohydrate content of the diet was considerably increased

In another series of twenty two periods of synthalin treatment the drug was commenced at the same time as dietetic treatment was instituted these cases therefore did not provide comparable blood sugar readings off and on synthalin treatment However, an average fall in the blood sugar of 31 per cent of the original level was noted in sixteen periods in six periods the average rise of blood sugar was 18 per cent We also noted that out of eighteen occasions on which synthalin treatment was stopped on seventeen the blood sugar subsequently rose

As we have already said these results encouraged us to use synthalin more extensively and we are now able to review another series of forty seven cases In several of these cases synthalin was commenced and stopped several times The number of observations of the blood sugar and the period for which synthalin was or was not taken have been noted where more than one blood sugar reading is available an average has been struck and compared with that after the change (on to or off synthalin) In a few cases where a patient has been on or off the drug for a very long period *all* the blood sugar readings before or after the change have not been included in the average since there is a great liability for considerable fluctuations in the blood sugar level to occur over a period of some months In such cases the mean of the two or three readings proximal to the change have been taken

In assessing the effect of synthalin it must be remembered that the circumstances in which these outpatients attend naturally tend to obscure somewhat the full effect because patients often allow their supply of synthalin to run out perhaps some days or even a week or so before coming again The blood sugar recorded on this next attendance is taken as one after a period on synthalin, yet actually the effect of synthalin on the blood sugar may have disappeared by the time they are seen again Furthermore it is our practice to give synthalin for three days with a rest on every fourth day patients may return on a fourth day and though the effect of synthalin is considerably longer than that of insulin its effects *may* be wearing off after twelve or more hours

SECOND GROUP

Our usual dose has been 30 or 35 mg as before occasionally only 20 mg
Number of patients 47
Number of changes of treatment—that is on to or off synthalin—76 (without any material change in diet)
Number of blood sugar observations 322
SERIES A In 35 patients involving 41 changes
By *adding* synthalin the blood sugar *fell*
SERIES B In 12 patients involving 18 changes
By *withdrawing* synthalin the blood sugar *rose*
SERIES C In 9 patients involving 9 changes
By *adding* synthalin the blood sugar *rose*
SERIES D In 7 patients involving 8 changes
By *withdrawing* synthalin the blood sugar *fell*

From the blood sugar readings therefore it seems that synthalin was active in fifty nine changes of treatment (on to or off synthalin) as against seventeen when it was inactive—that is it appeared to be active in approximately 80 per cent

Series A Synthalin Active

Analysis of forty one changes when synthalin was added and the blood sugar fell

Average actual fall in blood sugar 61 mg per 100 c cm—that is 35 per cent of previous blood sugar level
Average previous blood sugar level 174 mg per 100 c cm
Number of patients 36 (7 male 29 female)
Obese patients 14 normal 8 thin 14
Ages 40–60 years 24 over 60 years 12
Type mild (not requiring insulin at any time) 30 moderate (requiring up to 29 units insulin at some time) 6, severe (requiring 30 units or more) 0
Total number of observations of blood sugar before change 85—an average of 2 1 per change
Total number of observations of blood sugar after change 97—an average of 2 3 per change
Total period on synthalin 104 months—average 2 5 months per change
Total period off synthalin 71 months—average 1 7 months per change
Average loss of weight 1 7 lb
Toxic symptoms In only two cases were *mild* toxic symptoms observed in one of these it is probable that a slight pain over the liver was due to causes other than synthalin
In twenty seven periods on synthalin the notes indicate that the general condition was good or satisfactory in six periods it might be termed poor though there were no special symptoms In the remainder there is no indication that after was any change clinically though the blood sugar was

Series B Synthalin Active

Analysis of eighteen changes when synthalin was withdrawn and blood sugar rose

Average total rise of blood sugar 60 mg per 100 c cm—that is 42 5 per cent of previous level while on synthalin
Average previous blood sugar on synthalin 141 mg per 100 c cm
Number of patients 12 (2 male 10 female)
Obese patients 7 thin 5
Type of case mild 10 moderate 2 severe 0
Ages 20–40 years 1 40–60 years 8 over 60 years 3
Total observations of blood sugar while on synthalin 43—an average of 2 4
Total observations of blood sugar in the daily synthalin 46—an average of 2 6
Total period on synthalin before withdrawal average of 3 6 months
Total period off synthalin 4 months
Average loss of weight *off* synthalin

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Series C Evidence of Synthalin being Inactive

Analysis of nine changes when synthalin was added and blood sugar rose

Average total rise of blood sugar 32 mg per 100 c cm (15 5 per cent of previous level)

Average previous level 206 mg per 100 c cm

Number of patients 9 (2 male 7 female)

Obese patients 3 thin 6

Ages 20-40 years 1 40-60 years 5 over 60 years 3

Type mild 4 moderate 4 severe 1

Total observations before adding synthalin 11—an average of 1 2

Total observations after adding synthalin 13—an average of 1 4

Total period off synthalin before change 11 months—an average of 1¼ months

Total period on synthalin 27 months—an average of 3 months

Average gain in weight 0 75 lb

Notes (*a*) The average total change in blood sugar was much less than in Series A and B when synthalin appeared to be active (*b*) It should be noted that moderate and severe cases totalled 5 approximately 56 per cent whereas in the series when synthalin led to a reduction in blood sugar level the moderate cases were only 20 per cent of the total

Clinical One case showed marked hyperpiesis which appeared to account mainly for symptoms this patient took insulin for a time later One case was clinically well and showed at other times a favourable response to synthalin One patient reported feeling not so well when *off* synthalin though synthalin did not constantly lower the blood sugar One patient was a bad dieter and had symptoms suggestive of mild cholecystitis she seemed better on synthalin and at other times the blood sugar reacted favourably to the drug with falls more marked than the rise included in this series Two other cases later required insulin one of which reacted favourably to synthalin on other occasions One patient seems to be slowly deteriorating and it appears that he will probably need insulin

Series D

Analysis of eight changes when synthalin was withdrawn and the blood sugar fell

Average total fall of blood sugar 28 5 mg per 100 c cm (10 25 per cent of *previous blood sugar level*)

Average previous blood sugar level 278 mg per 100 c cm

Number of patients 7 (2 male 5 female)

Obese patients 4 normal 1 thin 2

Ages 40 60 years 4 over 60 3

Type mild 3 moderate 4

Total observations before adding synthalin 19—an average of 2 4

Total observations after adding synthalin 8—an average of 1

Total period on synthalin before change 25½ months—an average of 3 2 months

Research period off synthalin after change 15 months—an average of 1 9 months

In average *loss of* weight 0 4 lb

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certain[s] ld be noted that as in Series C the moderate cases used n for 57 per cent Clinically one patient also in in the c suffered with severe hyperpiesis One patient was rwards admitted as an in patient suffering with colitis there was no reason to believe that this was thalin but the colitis may have disturbed the

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cr mu and then a m CONCLUSIONS

Th re is general ng conditions outlined it appears that respirator quotient s ses a moderate fall in the blood consumptio decreases[6] patients with diabetes of mild oxygen consumption[7] In d that the general condition d by taking the drug

2 Though we have used synthalin over long periods and in sufficiently large doses to produce a definite effect on the blood sugar in approximately 80 per cent of sixty patients we have found no evidence of toxicity except in a few rare instances in which the toxic symptoms were only mild

3 Our usual dosage has been 10 mg three times daily after food for three consecutive days with a rest on the fourth day

4 We are not satisfied that synthalin B (the more recent product) has any material advantages over synthalin which is the less expensive

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ACTIVITY OF COMMERCIAL PREPARATIONS OF HOG'S STOMACH

BY

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The increasing replacement of liver by hog's stomach in the treatment of pernicious anaemia[1 2 3] makes it very important to ensure that the stomach preparations should be active and suitable for that purpose During the last two years a large number of different preparations have become available with the coincident possibility of unsuitable preparations being employed at grave risk to the patient Obviously the palatability and ease of administration of a particular preparation is of no account if the preparation is inactive As I have had occasion to examine one or two commercial preparations which were found to have an inadequate potency it appeared advisable to investigate the activities of others This was imperative since the distribution of stomach preparations of uncertain value might continue and prove a potential danger to the class of patients concerned

Of the sixteen preparations examined fourteen are in the form of powders (desiccated muscular or mucosal portions or whole stomach) the other two being described as hog's stomach tissue extracts Their equivalence in fresh tissue is variously given by the manufacturers as four to seventy times the weight Ten of these preparations are stated to be fat free The stomach preparations were supplied for clinical trial by the commercial houses which issue them but a few samples were purchased in their original packages Of some of the preparations further clinical samples were submitted by the suppliers after preliminary adverse reports and it is believed that several active products have become available for general clinical use Investigations showed that the commercial preparations

differ very considerably in their activities—some giving excellent responses consistently while many others show inconstant or wholly negative results It thus appears probable that the activities of many commercial preparations were being destroyed or reduced during manufacture This may be due to insufficient knowledge of the essential details of manufacture and of the importance of controlling the products clinically It is hoped therefore that the following details will serve the purpose of ensuring the widespread supply of active preparations of pig's stomach for the treatment of pernicious anaemia

Manufacture of Active Stomach Powder

The following outline indicates the essential details

1 The raw material is the whole hog's stomach It has been shown that such herbivorous animals as the cow and sheep do not furnish suitable potent preparations It is desirable that the *whole* stomach be used

2 The stomachs should be obtained as soon as possible after the pigs are killed and then if not to be dried at once should be kept at 0° C It is important that salt should not be added to preserve the stomachs

3 The stomachs are freed from adherent fat opened and washed in cold running water at room temperature

4 They are then examined for parasites tumours etc small nodules may often be found in the mucous membrane Stomachs showing such abnormalities must be rejected

5 The adherent water is removed by centrifuging if necessary and the whole stomachs are then minced as finely as possible by being passed several times through a mechanical mincer

6 The finely minced tissue is desiccated in suitable driers either *in vacuo* or at ordinary pressure

7 Drying must be carried out at a temperature *not exceeding* 45° C The time required for this operation varies according to the type and size of the plant employed but rapidity has some importance

8 The product so obtained is ground to the finest powder possible in a suitable pulverizer but the temperature must not be allowed to rise during this stage

9 The product is a light biscuit coloured powder has a slight odour and a faint fatty taste It contains less than 6 to 7 per cent of moisture not more than 10 to 11 per cent of fat and usually less than 11 per cent of total nitrogen It appears to keep indefinitely if dry The fat content can be very largely reduced by means of the usual fat solvents This renders the preparation slightly more palatable but more expensive *All traces of any such solvents must be carefully removed* before it is issued for use

10 *Before issue for use* the product so obtained must be examined (*a*) Bacteriologically for pathogenic organisms (*b*) Clinically for its activity in producing remissions in pernicious anaemia (*vide infra*) Although one batch of a product may be quite potent it does not necessarily mean that all subsequent batches from that source will be active Thus it is important that all batches issued for general use should have been clinically tested before release On the other hand the relative paucity of suitable cases of pernicious anaemia for such work renders it necessary that such testing should be kept to the minimum (*c*) For its peptic activity (*vide infra*) this is only suitable as a rough laboratory control test of known samples since it would be possible for pepsin to be added to an inactive preparation and yet be impossible to differentiate the two The pepsin content appears to run parallel in most cases to the haemopoietic activity of this desiccated product

11 In the use of desiccated stomach powders it should be remembered that the haemopoietically active substance is very susceptible to temperatures above 45° C , the product must not be administered, therefore in hot liquids

Testing of Hog's Stomach Preparations

It should be stated at the outset that until a suitable reliable laboratory method is fully worked out there is only one satisfactory method of testing these preparations of hog's stomach for their ability to induce remissions in pernicious anaemia—that is by direct clinical observations on patients suffering from that condition However undesirable the method may be, it should be remembered that it is for the ultimate benefit of the numerous patients under treatment for this disease Obviously, the greater the number of cases used the more accurate the estimation of the value of each preparation but owing to the large number of these preparations available the use of many cases for each is impracticable because of their scarcity It was possible however to devote a few cases to the examination of each preparation in this particular investigation—certain preparations used as controls having featured in the treatment of more than 240 cases

(*a*) *Potency for Initiating Remissions in Pernicious Anaemia*

For this test all samples are administered to cases of true pernicious anaemia under careful observation in hospital The following rigid criteria are essential before any case is considered suitable for these tests

(i) The presence of the clinical signs and symptoms of pernicious anaemia together with achylia gastrica a high colour index and typical blood picture

(ii) A red blood cell count of less than 1 500 000 per c mm (not increasing during the control period) so that satisfactory reticulocyte responses may be obtained with active preparations while not missing reduced responses for less active preparations

(iii) The absence of all complications (except postero lateral sclerosis) including minor infections such as tonsillitis etc

(iv) A reticulocyte count that has remained within normal values (below 2 per cent) for at least seven days prior to commencement of treatment This is important since many cases are admitted to hospital in spontaneous remissions easily detected by a determination of the reticulocyte and red cell counts Treatment in these cases even with inactive extracts or preparations gives misleading results

(v) No previous treatment has been or is being administered

The preparation under investigation is fed to such a patient in doses of 30 grams per day as has already been described [1] - but occasionally doses of 40 grams are administered where there is any preliminary uncertainty as to possible potency Other preparations not in powder form are given in doses greater than the equivalents of 30 grams of the desiccated preparations After the preliminary control period of at least seven days the preparation under trial is administered in the routine manner (with meals in cold milk or water or mixed with potted meat etc [2]) until (*a*) the reticulocytes have 'peaked' returned to normal and the patient has been discharged from hospital with a good remission in progress or (*b*) a minimum of fourteen days has elapsed without any signs of response on the part of the blood In the latter case a known active preparation is then administered in doses of 30 grams daily and the case shown to have been suitable for the test by the subsequent response obtained If a response is not then obtained within twelve days the case is rejected as unsuitable for the test

The progress of the condition of each patient is observed clinically and by regular estimations of the reticulocytes red blood cells white blood cells and haemoglobin in the circulating blood The reticulocytes are determined by the well known vital staining method using brilliant cresyl blue These are counted daily and given as a

percentage of the concurrent red blood cell count. The red blood cells, haemoglobin and white blood cells are estimated twice to six times per week according to the condition of the patient.

An active preparation is characterized by a rapid clinical improvement usually commencing in the first week and the following measurable blood changes in a case of pernicious anaemia (cf. Chart from 24th day onwards):

(i) A rise in the reticulocyte percentage within seven to twelve days of commencing treatment to a maximum of between 30 and 70 per cent. after a preliminary seven day control period.

(ii) A progressive increase in the haemoglobin and red blood cell values after the reticulocyte peak, without a relapse to normal values.

Ultimately an *adequate dosage* should maintain normal health.

Peptic Activity

The preparation of a suitable active desiccated preparation of hog's stomach necessitates the preservation of the natural enzyme activity of the stomach tissue. If this is destroyed the haemopoietically active substance in stomach is also destroyed. This is in contradistinction to liver. On the other hand the presence of the known enzymes in stomach tissue is not a criterion of its activity for initiating remissions in pernicious anaemia although it is certainly a good rough guide to its probable value. Too much stress however should not be laid upon this particular value since as stated above adulteration with pepsin would mask inactive preparations.

The estimation of the peptic activity is determined by two methods:

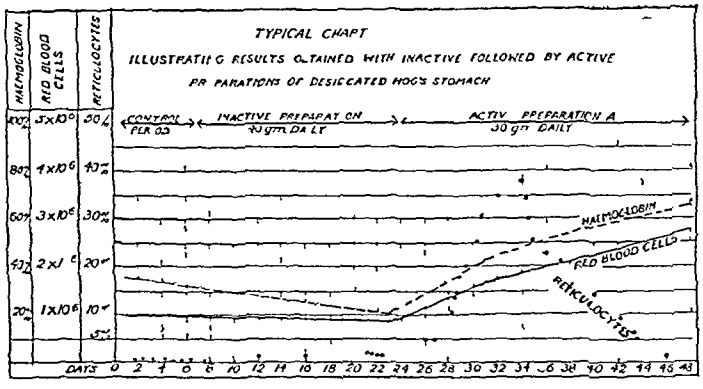
1. The egg white method.
2. Edestin digestion method.

The most satisfactory technique is using either of these to compare the activities of equal weights of the unknown stomach preparation and a known preparation of desiccated hog's stomach or known scale pepsin simultaneously by noting the time required in minutes for them to digest equal quantities of egg white or edestin. It is important to bear in mind that the pepsin values obtained in this test are influenced by the state of division of the desiccated preparations and the strength of acid employed for extraction.

Some comparative results obtained in a few of the preparations examined are shown in the Table. The pepsin contents given in Column 4 show the limits observed in repeated tests made during the last two years; those in Column 5 with egg white are the results obtained using the most recent samples of each preparation available. An equal weight of each preparation was employed and the figures represent the time in minutes required for complete digestion.

Illustrative Examples of Results Obtained with Stomach Preparations

Preparation	Daily Dose Grams	Remissions Produced	Peptic Activity Digestion Time in Minutes	
			Edestin Method	Egg white Method
A	15–30	+	14–24	14
C	15–30	+	28–32	19
D	30	+	19–44	17
H (i)	40	None	No digestion	No digestion
H (ii)	30	+	12	19



Illustrative Tests

Preparation A

A desiccated preparation of hog's stomach of a light biscuit colour and having a slight odour it contained 11 per cent. of fat and gave peptic activities of (*a*) edestin 15 minutes (*b*) egg white 14 minutes. A daily dose of 30 grams was administered in cold milk to a case of pernicious anaemia *after a control* period of seven days (cf. Chart 24th day onwards)—initial red cell count 1 400 000 haemoglobin 38 per cent. The reticulocytes reached a maximum of 42 per cent. on the eighth day of treatment and the blood picture showed a progressive improvement to red cells 3 200 000 and haemoglobin 77 per cent. on the sixteenth day. The patient is still taking the preparation and is in normal health.

Preparation H

A desiccated preparation of hog's stomach (H i) almost white no odour contained 1 per cent. of fat and 2 per cent. moisture. Peptic activity is *nil* by both edestin and egg white methods. It was administered in daily *doses of 40 grams to a case of pernicious anaemia* after the seven day control period—initial red cell count 950 000 and haemoglobin 38 per cent. After eighteen days there had been no response and the blood count had fallen to red cells 790 000 and haemoglobin 19 per cent. A known active preparation was substituted (30 grams daily) with good results (see Chart). The inactivity of this product was confirmed in two other cases. This report was *referred to the manufacturers* who supplied a *modified* preparation after certain recommendations had been made. This second product (H ii) was similar in appearance to the first but the peptic activities were (*a*) edestin 12 minutes (*b*) egg white 12 minutes. The administration of 30 grams daily to a suitable case of pernicious anaemia gave a rapid reticulocyte response (38·5 per cent. on the tenth day) similar to that shown in the chart. This product is now quite satisfactory.

Discussion of Results

As a result of this investigation it may be stated that (1) the active preparations of hog's stomach have shown good peptic activities at all times in the large number of samples examined and (2) the inactive preparations have failed to show peptic activities. Three preparations had variable peptic activities in different samples two of them being inconstant in their ability to initiate remissions clinically. It should be made clear that pepsin is not the active principle but only serves as a rough laboratory guide to the possible presence or absence of the as yet unidentified active substance. Certain of these preparations have been described in the medical literature as giving satisfactory results, although I

have previously criticized the lowness of the reticulocyte responses in some of the cases [3]

It appears probable that the manufacture of these products has not been sufficiently standardized or controlled so that batches of inactive material have been released for use before clinical trials have been carried out—an extremely serious matter where the life of a patient may be concerned This may account for the occasional reports in the medical literature of cases of true pernicious anaemia resistant to hog's stomach preparations

Obviously rigid clinical control of all material supplied to patients is essential if the safety of a large number of those under medical treatment is to be assured

I have to thank the honorary physicians of the Manchester Royal Infirmary for allowing access to such patients as were under their care and the following who have assisted in the blood investigations Miss A Bodoano M B Ch B Miss M Johnson M B Ch B Miss M Richards B Sc Miss B Porter B Sc and Mr A Huntington M Sc

Acknowledgement is also made to the Medical Research Council for assistance in connexion with this work

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A NOTE ON AORTIC VALVULAR DISEASE

With Reference to Etiology and Prognosis

BY

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ASSISTANT PHYSICIAN GUY'S HOSPITAL AND PHYSICIAN TO OUT PATIENTS NATIONAL HOSPITAL FOR DISEASES OF THE HEART

AND

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Disease of the aortic valves is generally due to rheumatism or syphilis but the relative importance of these two conditions is very differently estimated In some series most of the cases have been considered syphilitic while in others nearly all under the age of 40 have been said to be rheumatic In the following series of nearly 300 consecutive cases the cause was rheumatic in more than one half and syphilitic in about a quarter Out of every six cases with disease of the aortic valves acute rheumatism accounted for four syphilis for one while atheroma and all other causes were responsible for one or less

The etiology is summarized below

Table I—*Etiology in 300 Cases of Aortic Valvular Disease*

	Acute Rheumatism	Syphilis	Atheroma	Other Causes
Guy's Hospital	100	29	9	12
Heart Hospital	100	26	11	9
Total	200	55	20	21

When rheumatic patients with marked mitral stenosis were excluded out of every four patients with aortic disease acute rheumatism was responsible for two syphilis for one and all other causes for one or less advanced atheroma was present in half of the cases which were not either rheumatic or syphilitic and was probably the causal factor Of the twenty one cases due to other causes which will not be further discussed [illegible] infective endocarditis was responsible for six [illegible] of the remainder the cause was unknown [illegible] was adjudged rheumatic when there was [illegible] or rheumatic history (177 cases) or (2) mitral stenosis even without this (23 cases) When there was mitral stenosis (confirmed by x rays) only routine inquiries were made for a history of syphilis and the Wassermann reaction was frequently not done In the absence of mitral stenosis careful inquiries for any history of syphilis and a Wassermann reaction and x ray examination of the aorta, were included Patients were placed in the atheromatous group when radioscopy suggested such changes in the aorta in those who could not be included in the two previous groups or when there were advanced arterio sclerotic changes in the brachial radial or retinal arteries

Table II shows the different types of valvular disease in the rheumatic group. Of each six cases roughly

Table II—*Type of Rheumatic Valvular Disease*

	Males	Females	Total
Aortic stenosis and incompetence*	24	10	34
Aortic incompetence alone	27	15	42
Aortic stenosis and incompetence with mitral stenosis	9	26	35
Aortic incompetence with mitral stenosis	37	52	89
Total	97	103	200

* Five cases with aortic stenosis had no evidence of aortic incompetence while they were under observation

speaking three had aortic incompetence and mitral stenosis the fourth had aortic stenosis as well and the fifth and sixth were clinically without mitral disease one having aortic incompetence alone and the other aortic stenosis and incompetence

Age and Sex Incidence

There were equal numbers of men and women in the rheumatic group but they were differently distributed In those without mitral stenosis there were twice as many men as women in those with mitral stenosis the proportions were two men to three women In the syphilitic group there were three men to one woman In the atheromatous group there were seventeen men and only three women Of those with syphilis nearly 80 per cent were between 40 and 60 there being no sex difference in the ages in the atheromatous more than 90 per cent were over 50 On the other hand 90 per cent of the rheumatic cases were between 10 and 50

The etiology is well shown in Fig 1 nearly all the

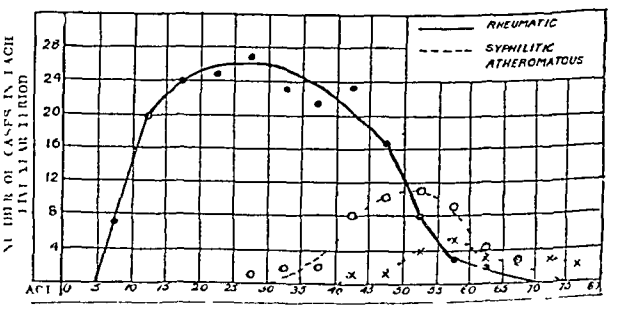


Fig 1—Age incidence of three main types of aortic disease

Note—Below 40 rheumatism is responsible for nearly all cases from 40 to 50 it is still a more common cause than syphilis from 50 to 65 syphilis is the most common cause after 65 atheromatous changes

cases under 40 were rheumatic while after 50 syphilis was the responsible factor twice as frequently as rheumatism atheroma occupying an intermediate position With the rheumatic cases the incidence was more evenly spread from 10 to 45 but there was a group of men with aortic stenosis between 45 and 55

Fig 2 contrasts rheumatic aortic incompetence with rheumatic aortic stenosis *and* incompetence Both curves have a similar shape and make it quite certain that aortic stenosis does not represent a much later stage of

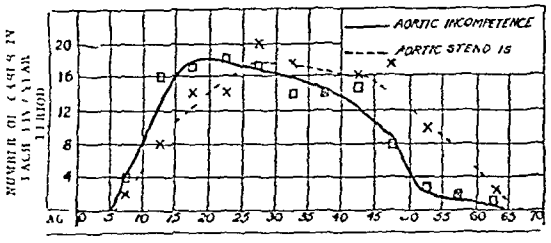


FIG 2—Age incidence of rheumatic aortic stenosis nearly always with incompetence and incompetence without stenosis

Note—Stenosis and incompetence irrespective of mitral stenosis curves are of similar type that for stenosis being displaced some five years to the right

rheumatic disease than aortic incompetence The curve for stenosis is displaced about five years to the right and this period may represent the usual time taken for stenosis to develop

BLOOD PRESSURE

In aortic regurgitation due to syphilis the average diastolic pressure was 60 and the average pulse pressure over 100 varying between 70 and 110 in two thirds of the cases In the rheumatic cases the diastolic and pulse pressures were about equal and represented half the systolic pressure—that is about 140/70 instead of 120/80 Pure aortic stenosis was rare and as would be expected its pulse pressure was low (it averaged 40) but when there was aortic incompetence the signs of stenosis made little difference to the blood pressure Evidently rheumatic aortic stenosis does not usually progress far enough to prevent free regurgitation and often an obvious water hammer pulse was present with signs of stenosis and incompetence

In the atheromatous group on the other hand the average pulse pressure was just over 50 when there was aortic stenosis but 80 when there was aortic incompetence In a few patients the stenosis had progressed far enough to lead to a very low pulse pressure The average diastolic pressure was 90 higher than in either of the other groups In three elderly patients there was independent hypertension

ELECTROCARDIOGRAPHIC CHANGES

The close association of fibrillation and mitral stenosis is well known It also holds good where there is also aortic incompetence and was present in 30 per cent of these cases The presence of mitral stenosis was more important than a history of rheumatism but with rheumatic aortic disease alone fibrillation was still found in 8 per cent Extrasystoles occurred frequently in about 15 per cent Paroxysmal tachycardia was noted in four cases Complete heart block was present in one of the rheumatic group and in one of the others Two non-rheumatic and five rheumatic patients had right bundle-branch block Most of the latter had aortic stenosis and only one had mitral stenosis all but one were men with an average age of 44 In addition three younger patients with rheumatic aortic incompetence had prolonged PR intervals without dropped beats (0 3 0 24 and 0 22 seconds) In the rheumatic cases with mitral stenosis and aortic incompetence there was little of note as regards preponderance of either ventricle 23 per cent showing left 12 per cent right and 65 per cent being normal Where there was pure aortic disease (especially when it was syphilitic) 54 per cent showed left and only 2 per cent right ventricular preponderance 44 per cent being normal

In nearly one third the T waves were inverted in leads I or II Where there was mitral stenosis and aortic incompetence 10 per cent showed inversion of T in lead I (and sometimes in lead II) and 5 per cent showed inversion of T in leads II and III the remainder being normal The results were very different when aortic disease occurred alone for 36 per cent of these showed inversion of T I (sometimes in lead II also and only a few inversion of the T waves in all leads) Again 7 per cent showed inversion of T in leads II and III, and again there was not much difference between the various etiological groups Among the rheumatic and syphilitic patients curves of unusually high voltage were not uncommon no curves of low voltage being found Among the atheromatous patients there were several examples of both these varieties

PROGNOSIS

This series does not bear out the view that aortic stenosis is an unimportant lesion in elderly patients for in the atheromatous group where it was common 30 per cent have died while under observation In the syphilitic group 26 per cent have died and even in the rheumatic group 16 per cent have died but eight of these died from acute rheumatic carditis and four from infective endocarditis The other rheumatic patients died from congestive heart failure generally secondary to fibrillation and there were no sudden deaths On the other hand, in the atheromatous and syphilitic groups twelve had congestive failure with normal rhythm four died absolutely suddenly without preliminary failure and two died from acute pulmonary oedema As most of the rheumatic patients are still alive at an average age of 35 years this only gives one side of the picture Their aortic disease had developed on the average about fifteen years before at a time when they had rheumatic fever—that is most of them had already lived for twenty years, and many were still in good health Admittedly this is an average which gives little guidance in the individual case because the prognosis depends so much on the condition of the heart muscle In some of the rheumatic patients the evidence was more complete—for example a doctor had been told as a student that he had aortic incompetence was later rejected for life insurance for the same reason but had successfully carried on his practice almost without symptoms until he was 62 Altogether there were more than twenty of the older patients who knew that their hearts had been affected at an average age of 16 years but were alive and often in good health thirty years later

In the other groups it was not possible to find patients in whom the disease had lasted so long but their natural expectation of life was much less as they were older when the condition developed—for example in the syphilitic group the average was 49 and in the atheromatous group 61 years Where it was definitely known, infection with syphilis had occurred, on an average twenty five years previously but during the greater part of this period there would certainly have been no evidence of regurgitation Five patients with syphilitic aortic incompetence were in relatively good health after six to eight years but experience of this series agrees with that of many other observers that a large number of such patients die within two years of developing symptoms This is a very striking contrast to the average expectation of more than twenty years in the rheumatic cases In the past much of the gloomy prognosis attaching to disease of the aortic valves has depended on the failure to differ-

entiate the rheumatic and syphilitic cases It is very rarely that this distinction cannot be made with certainty though sometimes it may be more difficult to differentiate the atheromatous and syphilitic cases One reason for this contrast is the association of syphilitic aortic incompetence with angina pectoris In both groups of non rheumatic patients this was a common finding frequently indeed it was a main presenting symptom and occurred in 40 per cent In those with syphilis nocturnal angina was not uncommon and often the pain lasted for longer than the usual angina of effort On the other hand angina occurred in less than 5 per cent of the rheumatic patients These were mostly men with an average age of 45 and all but one had aortic stenosis

SUMMARY

In a series of cases with disease of the aortic valves the condition was due to rheumatism in 200 to syphilis in 55 to atheroma in 20 and to all other causes in 21 cases

Out of every six rheumatic cases roughly three had aortic incompetence and mitral stenosis one had both with aortic stenosis as well one had aortic stenosis and incompetence and one had aortic incompetence alone When there was no mitral disease there were two men for each women when there was mitral disease there were two men for every three women They came under first observation at all ages least commonly before 10 or after 50 There was so little difference between the ages of those with and those without aortic stenosis that its presence must depend on the severity and nature of the attack rather than on the length of time that had elapsed Pure aortic stenosis was rarely found, and as far as could be judged from the pulse pressure the stenosis was relatively unimportant compared with the regurgitation even where the signs were well marked

Among the syphilitic cases there were three men for each woman nearly four fifths being between 40 and 60 Aortic stenosis was rarely or never present and the average pulse pressure was much greater than in the rheumatic cases (110 instead of 70)

Nearly all the atheromatous cases were men between 50 and 80 Aortic stenosis was more important and more frequently present the signs of regurgitation being often absent

Auricular fibrillation was present in 30 per cent of those who had also mitral stenosis in 8 per cent of the rheumatic cases without mitral stenosis and only rarely in the non rheumatic group

Left ventricular preponderance was found in about half the electrocardiograms of those with pure aortic disease normal limits being found in the remainder The T waves were inverted most often in lead I in about one quarter of the rheumatic cases and in about half the others

The prognosis was enormously better in the rheumatic group The average duration of life after the development of aortic incompetence was probably twenty years excluding those who died quickly from active rheumatic carditis In the syphilitic group on the other hand it was not much more than two years after the development of symptoms few patients living for eight years

We wish to thank Dr Parkinson and the physicians of Guy's Hospital for allowing us to refer to patients under their care

A SIMPLE TECHNIQUE FOR PHOTOGRAPHY OF PATHOLOGICAL SPECIMENS

BY

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The importance of photography as a means of recording morbid anatomical specimens is increasingly recognized The photograph is accurate impressive and easily interpreted a good photograph with a few words of description gives a better idea of a specimen than does a whole page of descriptive matter alone moreover photographs are readily comparable one with another The only difficulty is to obtain sufficiently good photographs Technique is the essence of photography and the busy pathologist or physician has little time to acquire it while the professional photographer is severely handicapped by his ignorance of what is required In these circumstances the following description of a simple technique is perhaps opportune The essence of the method is standardization and the elimination as far as possible of the necessity for technical skill

Apparatus

Camera—Any camera capable of taking close ups and with an aperture stopping down to f/45 will suffice We use a Kodak reflex reducing camera and find it quite satisfactory The stand should be adjustable for height and be capable of tilting the camera in order to take pictures directly downwards

Illumination—This is standardized by using a wooden box 18 × 18 × 15 inches In the place of a lid a wooden shelf 2 inches wide is fitted round the top of the box on the inside which slopes downward at an angle of 60 degrees to a central opening 11 inches square in the centre This rests on the edges of the four sides and is instantly removable In each of the four upper corners of the box a 100 watt frosted bulb is fitted so placed as to be invisible from above when the roof is in position The four bulbs are wired in series and the box fitted with a switch and a wall plug each bulb may be independently controlled by its own switch but this is unnecessary In one side of the box a door of lift out type 14 × 8 inches is provided The sides of the box and the under side of the roof are painted white the floor being a dull neutral colour the upper surface of the roof is painted matt black

The remainder of the apparatus consists of a straight sided glass bowl 10 × 4 inches a circle of ebonite of slightly smaller diameter than the bowl and four wooden blocks each 1 × 2 × 4 inches

Preparation of Specimens

To prevent spoiling the picture by glistening of the high lights the object is photographed under water and for this reason specimens are best fixed by Kaiserling's method before being photographed This obviates the risk of blood staining the water and the specimen is unharmed by its immersion should it be required for permanent preservation later The specimen is immersed in Kaiserling's solution A as soon as possible after death and left for a week or more A thick bed of cotton wool is always used to ensure that the specimen is not distorted by its own weight and it is sometimes a good plan to pin a specimen on a piece of board in roughly the position in which it is desired to photograph it Membranous structures such as heart valves cyst walls or fascial bands are carefully coaxed into the required position by picking with cotton wool while brain are suspended in the solution by a string passed beneath the basilar artery The solution requires to be changed after the first twenty four hours

After fixation any packing etc is removed and the specimen placed in water In the great majority of cases it sinks unevenly or not at all some unimportant portion obtrudes itself into prominence and many unsuspected fatty and fascial tags float upwards to spoil the outline The

various faults are noted and the specimen removed A number of leaden strips of from one third to one half of an inch in width and from two to six inches in length notched at intervals of half an inch along their sides are kept ready and one of these of suitable size is now stitched firmly across the under side of the specimen Two good stitches are usually enough and care is taken that they shall not be visible in the picture The leaden strip serves to sink the specimen and is sufficiently malleable to be applied closely to its under surface and to be further bent after the specimen has been stitched on should this be required to improve the pose The strips should not be left in position for more than an hour or so as the lead reacts with the solution and stains the specimen As much redundant tissue as possible is cut away preferably after stitching in position as some may be needed to hide the ends of the leaden strip Fatty tags are best trimmed away under water

Photographing

The glass bowl is filled with water and the ebonite disk immersed in it The bowl is placed in the centre of the illuminated box supported on the wooden blocks whose dimensions allow of three variations in its height from the floor of the box The camera is then inverted over the opening in the roof of the box and the bowl manœuvred until its centre is visible in the centre of the viewing screen If the room is darkened no focusing hood is required—an immense convenience The specimen is now introduced through the door in the side of the box and is carefully centred on the viewing screen The camera is adjusted to such a distance that the object when in focus does not quite fill the screen Some care has to be taken to ensure that the uppermost surface of the object is exactly horizontal otherwise serious foreshortening distorts the picture A ruler so placed that it appears at the edge of the picture is an added refinement

For most objects the lighting as described is almost ideal—evenly diffused and without harshness or shadow In the case of a light coloured object having a convex surface such as a brain or a fatty heart so much light is reflected on to the sides that these become over illuminated in relation to the upper surface To correct this a paper collar is fixed around the outside of the bowl its height being adjusted until the top light is definitely greater than the side light

Fresh specimens are best taken immersed in kerosene No weights are required and there is little tendency to clouding of the medium by leakage of blood This risk is minimized by rinsing the specimen in kerosene before placing it in the bowl and by very careful handling during posing Kerosene does not spoil specimens for subsequent preservation but its extreme inflammability is a very serious objection and rigid precautions should be observed if it is to be used

When the pose is quite satisfactory the highest point of the object is sharply focused the aperture set at f/45 and the picture taken The length of exposure varies with the aperture the lighting and the type of film or plate These three being standardized the optimum time is easily found by experiment With our illumination ninety seconds is correct

Choice of Film.—We use Kodal panchromatic films for nearly all objects no filter is necessary and very good colour values are obtained The films must be developed in total darkness For cut slices of brain we use Kodak commercial film but these slices are not easy to take The best method is to adjust the paper collar so as to cut off all side light and take at f/22 with a corresponding decrease in exposure Brilliant differentiation between grey and white matter is obtained by taking a rather thin negative and printing on contrast paper

The apparatus may be used to photograph charts or diagrams if these are drawn in black ink and pinned or (better) pasted on stiff card and placed on the bottom of the box

The method as described has the advantage of simplicity Little practice is required and no photographic skill the apparatus is cheap and easily handled while the results are at least as good as those obtained by far more elaborate and expensive methods

My best thanks are due to Miss D Coulson of Tooting Bec Hospital for her ready assistance in perfecting the technique

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

AN UNUSUAL CASE OF INTUSSUSCEPTION IN AN ADULT

The following is a report of a case in the Neyyoor Hospital Travancore S India

A man of the coolie class aged 30 was admitted complaining of abdominal pain loss of appetite and emaciation He was very thin and poorly nourished His complaint had been present for two years and during the last year he had been unable to work His diet as in the majority of the poorer classes of Travancore consisted mainly of tapioca rice water tamarind and red chillies with occasional small quantities of fish He was very constipated but did not complain of blood or mucus in the stools Though no mass was palpable a point of definite tenderness above the umbilicus and a tendency of the pain to be increased on taking food suggested gastric ulcer

Laparotomy was performed and a large enteric intussusception involving 3 feet of upper ileum was discovered It resisted all attempts at reduction and had to be resected the ends being united by side to side suture The intestine proximal to the intussusception was hypertrophied and there was slight congestion of all the small intestine

The patient did well passing motions on the second day after operation On the seventh day however he complained of severe colicky pains in the umbilical region and on palpation a mass could be felt which became more tense and prominent with each spasm of colic Fearing a second intussusception I opened the abdomen under local anaesthesia and found the anastomosis in good condition but proximal to it a large intussusception involving about 4 feet of small intestine It was easily reduced but was remarkable in that it was doubly intussuscepted—a small intussusception within a larger one After reduction the movements of the gut were observed and violent and irregular peristaltic waves kept passing along the gut as if attempting to repeat the performance The mesentery was shortened by a series of interlacing sutures and the abdomen closed Tincture of belladonna in 10 minim doses was given thrice daily with cod-liver oil emulsion and fruit juice as part of the dietary The patient made an uneventful recovery and put on weight One month later he was well and without signs of recurrence

This case was characterized by several unusual features It occurred in an adult and was of the enteric variety There was no sign of a polyp growth or anything else likely to cause the condition Even after extensive resection of bowel the small intestine seemed determined to revert to a state of intussusception

Perrin and Lindsay in the *British Journal of Surgery* (1921 ix 46) give the relative frequency of the different types as follows

	Per cent.		Per cent
Ileo-caecal	29	Retrograde	0 5
Ileo-colic	21	Meckel	1 2
Enteric	6	Unclassified	14 7
Colic	4 7	Appendicular	0 2
Compound	0 1	Jejunal gastric	0 2

The figures of this hospital are of interest Fifteen cases have been operated on in the last four years Their ages were as follows

	Cases		Cases
Under 1 year	1	20 to 30 years	5
1 to 10 years	1	30 to 40 years	5
10 to 20 years	3		

The types were classified as follows

	Cases		Cases
Ileo-caecal	5	Enteric	3
Ileo-colic	6	Appendicular	1

Infantile intussusception is very rare in this country and Western surgeons will be struck by the incidence in children as compared with Britain where intussusception is almost entirely confined to them One

has to remember however that in a country like India where distances are great and communication slow and where the general practice is to try medicine at home before making the journey to a big hospital many infants must die of the disease unoperated upon and undiagnosed Making full allowance for that it is still remarkable that 66 per cent of our cases are over 20 years of age In only two of them is there any record of a polyp or structural defect Some upset in the neuro muscular control of the bowel seems to be indicated in the rest

McCarrison working in the Nutritional Research Laboratory in Coonoor S India performed a series of experiments on monkeys feeding them on a diet deficient in vitamins low in protein and high in carbohydrate Among many interesting changes in the gastro intestinal tract he noted the very high percentage of intussusception which occurred In the same paper he quotes the fact that in Germany during the lean years of the war there was a greatly increased incidence of intussusception among children He goes on to say Without going too far we may safely say that children who are properly fed will be less liable to suffer from intussusception No doubt there is nothing new in such a statement but I do not think we have realized hitherto that the neuro muscular control of the bowel is dependent in great measure on the adequate provision of vitamins in the food In my case the man was obviously suffering from a marked dietetic deficiency and lack of balance

Comments

It would be interesting to know if surgeons in England find any marked difference in the incidence of intussusception in patients seen in hospital practice and those seen in private practice and between breast fed and bottle fed infants

The fact that the case quoted made such rapid improvement and his intestine seemed to take on normal movements after the administration of cod liver oil and fruit juice is some indication that the origin of his trouble was dietetic

The case was obviously caused by a fault in the neuro muscular control of the bowel and not by any structural change in the bowel wall itself

In a country where the adult population live on a very badly balanced diet the incidence of intussusception among adults is much higher than among children

A severe degree of enteric intussusception can exist for months without the patient being driven to seek surgical aid

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INTERNAL CEREBRAL HAEMORRHAGE DUE TO ACCIDENT

I thought it well to put on record the following case as it is unique in the experience of my colleague Dr A A Palmer and myself who have done the post mortem work for the coroner in Sydney for thirty years The possibility of such a haemorrhage being the result of accident did not occur to me prior to this experience Its bearing on forensic medicine is evident

T H aged 17 crossing the road to board a stationary tramcar was knocked over by a passing motor car He was picked up at once unconscious taken to a nearby hospital and died three hours later

The following were the findings at the post mortem examination An apparently healthy youth abrasions on back of left hand and front of knee a simple fracture of the right tibia in the middle third and much bruising of this leg There was no wound of the scalp and no fracture of the skull a little blood stained fluid in subdural space at the base of the brain The convolutions were somewhat flattened There was no injury or tearing of the outer surface of the brain On section an apparently typical haemorrhage and tearing of the brain between the caudate nucleus and the optic thalamus and free blood in both lateral ventricles The rupture of the vessel was on the right side All the vessels of the brain and throughout the body appeared quite healthy and free from atheroma

Whether the internal tearing of the brain was due to rupture of the vessel and the vessel was torn in the tearing of the brain I cannot say

Sydney N S W Stratford Sheldon M B Ch M

Reports of Societies

ENDOSCOPIC METHODS

At a meeting of the Harveian Society of London on February 11th Mr V E Negus opened an instructive discussion on the value of endoscopic methods He said that bronchoscopy had now proceeded far beyond the stage of merely retrieving foreign bodies, and that of 300 bronchoscopies performed last year only 21 were for this purpose The direct method of examination by means of a laryngoscope was especially desirable in children afflicted with papillomata Aspiration of sloughs and membrane from cases of diphtheritic laryngitis might in many cases be preferible to intubation and was practised in America while lung abscesses in the early stage responded well to bronchoscopic lavage Multiple bronchiectasis was difficult to treat while asthma and bronchitis derived little benefit Bronchoscopy, however was a very useful adjunct in the diagnosis of new growths of the lung Of 21 cases in which foreign bodies were removed from the lung 20 patients recovered but one died as a result of an open safety pin penetrating the pericardium Stress was laid on the fact that a foreign body in a bronchus acted as a ball-valve and caused hypertranslucency of the affected area in x-ray pictures Occasionally foreign bodies might be the causal factor of lung abscess and a rabbit vertebra was produced that had been removed from such a case

Mr H S Souttar followed with many interesting details regarding oesophagoscopes and their method of employment in treating carcinoma by intubation and introduction of radon seeds Mr Souttar showed much ingenuity in demonstrating how to manipulate the oesophagoscope to the curves of the channel rather than attempt to stretch the neck and thorax in one straight line Mr C Hamblen Thomas showed radiographs of a patient with a paper clip that had been in a bronchus for seven years and was subsequently removed Professor Wright stated that he had little experience of lung surgery in animals but puppies frequently had bones impacted in the oesophagus which required removal by oesophagotomy in front of the presternal cartilage

Mr Dickson Wright paid a tribute to Mr Negus's painstaking technique and stated that although only a disappointingly small quantity of pus ever seemed to be obtained by bronchoscopic aspiration of lung abscesses the stimulation of the cough reflex the stretching of granulations and the patency of the tubes certainly helped the patients considerably

In reply Mr Negus said that he thought the physician and thoracic surgeon should encourage the bronchoscopist to aspirate cases early because many lung abscesses cleared up rapidly by this means alone Even if the external route had to be employed finally the previous bronchoscopy cleaned up the field of operation and could never do any harm

TOXAEMIAS OF PREGNANCY

At a meeting of the Edinburgh Obstetrical Society on January 13th with the president Dr JAMES YOUNG in the chair three papers were read on different aspects of the toxaemias of pregnancy

Professor MUNRO KERR discussing the etiology of the toxaemias of pregnancy in the light of recent knowledge began by reviewing the extensive work that had been carried out on the toxaemias of pregnancy in this and other countries during the last thirty years He pointed out how little material benefit had been derived from this work and quoted Whitridge Williams's summary of the whole subject in which he states

> that it is evident that the cause of eclampsia has not been discovered and that the peace of mind of all concerned would have been increased had many of the so called contributors never written or at least had withheld their contribution sufficiently long enough to submit them to ordinary self criticism

The speaker then described his method of presenting the whole question of the toxaemias of pregnancy to students in which he propounded that the etiology of the toxaemias must be looked for not when grave symptoms were present but far back in the early days of pregnancy when following the embedding of the zygote changes occurred in the maternal organism Among the forces disturbing normal physiological processes was the great activity of all the endocrine glands during pregnancy especially the anterior lobe of the pituitary body and the thyroid Again it was well known that there was considerable destruction of the uterine mucosa at the site where the zygote embedded and later as the placenta grew and developed the area affected assumed large dimensions This destruction in the early weeks was most aggressive and the deposition of tissue by the chorionic villi must result in the discharge of products of protein autolysis in the maternal blood stream Thus in all probability cases of emesis gravidarum and hyperemesis were due to disturbed metabolism resulting therefrom Furthermore it had been shown by Snorl and Veit that portions of villi were transported by the circulation There must therefore be an additional strain on the organism in dealing with such foreign products In addition metabolism distinctly altered during the first three months of pregnancy—especially protein metabolism—and although there seldom occurred in the human subject a definite negative phase as seen in the lower animals something approaching that condition did happen It was rather striking that the sickness of pregnancy the disturbances of the negative phase and the full development of the placenta took place at about the same time These disturbances of the early months were succeeded by a period of relative stability lasting eight to ten weeks during which time grosser manifestations of toxaemia seldom developed This was followed by the last phase when outbreaks of toxaemia in one form or another were most frequently seen This was probably due to the fact that from the sixth month onwards the placenta was a degenerating organ and the ectoderm covering the villi had almost disappeared and was in a more or less degenerate state It would appear to be inconceivable Professor Munro Kerr continued that an organ degenerated as the placenta was at this stage could have any activity as an endocrine organ Therefore the placenta was unlikely to produce a special hormone at this time but it certainly acted as a storehouse for such a substance It was thought probable that an outbreak of toxaemia was due to products of protein autolysis and of villi from degenerated villi The pregnant woman had to combat the attacking forces of endocrine activity digestion of the endometrium and the resulting disturbed metabolism If she did not succeed the toxins produced further damage especially in the liver with the result that metabolic processes were still further affected Renal disorders were secondary in the absence of previous disease Faulty elimination followed and a vicious circle was established culminating in one or another of the recognized forms of gross toxaemia

Professor JOHNSTONE read a paper on a fatal case of presumably acute pregnancy toxaemia occurring at the seventeenth week of pregnancy which despite drastic operative intervention had ended fatally The clinical features and post-mortem examination showed that the case was probably a very early eclampsia though uraemia could not be entirely excluded Professor Johnstone reviewed the literature of eclampsia in the early months of pregnancy and pointed out that very few cases had been recorded With regard to diagnosis it was difficult to state exactly what really was an eclampsia as various textbooks and authorities defined this disease very differently

Dr JAMES DAVIDSON then recorded a fatal case of eclampsia associated with extensive cerebral haemorrhage at the thirty sixth week of pregnancy

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PATHOLOGICAL METHODS

The fifth annual meeting of the Association of Clinical Pathologists was held in the Bland-Sutton Institute of Pathology the Middlesex Hospital on January 30th with Dr L E H WHITBY in the chair

Dr A F WRIGHT opened the meeting by describing his experiences with the Zondek Aschheim reaction in the diagnosis of pregnancy He illustrated his remarks with numerous preparations showing the results obtained in mice rats and rabbits by means of the various techniques now in use Emphasizing the value of the test in the diagnosis or exclusion of pregnancy long before this was possible by any other means he produced figures showing that once pregnancy was established the reaction would in over 97 per cent of cases give a definite and correct answer to the question *Is this subject pregnant?* He said his own work and that of others suggested that in ectopic pregnancies there might be an error and further it appeared that an absent or weak reaction in a pregnant woman served as a warning of threatened abortion Dr Wright described the method of obtaining a quick reaction by precipitating the active principle from the urine with alcohol and injecting it intravenously into a rabbit he had found this very satisfactory In the subsequent discussion Dr A G SHERY asked the meeting about the value of the test in the diagnosis of chorion epithelioma and also whether members had found the reaction positive as stated by some in other types of malignant disease Dr S C DYKE replied that he had found the test positive in chorion epithelioma and that a persistent positive reaction in a woman who had recently been confined or had aborted was strong evidence for the presence of a growth of this type Dr E WORDLEY said that in the absence of pregnancy he had found the reaction universally negative in malignant disease Dr WRIGHT in reply drew attention to the necessity of examining microscopical sections of the ovaries in all doubtful cases

Dr J B DAVEY gave an account of a research into the bacteriology of normal teeth He pointed out that the present tendency was to attribute many rheumatic and other infections to apical infection of teeth the streptococcus being the organism usually implicated In support of this was adduced the fact that streptococci could practically always be recovered from the infected apices of such teeth He himself had isolated many such strains and had

found that for the most part they were non haemolytic and of the variety usually found in the mouth though some might give slight haemolysis of the a type He then described the result of the examination of thirteen absolutely healthy teeth and of eight that would have been passed as healthy by any except the most rigorous tests For cosmetic or other reasons, and not on account of *caries or infection* they had all been removed and examined under the most rigorous aseptic precautions Streptococci had been isolated from the tips of eleven of the thirteen healthy teeth and from seven of the eight teeth not above suspicion The root canal of the only healthy tooth where this was examined also gave a growth of streptococci

Dr Whitby communicated his experiences with the use of bacteriophage in the treatment of *B coli* infection of the urinary tract He said that in acute cases the phage would not appear in the urine until it became alkaline but that it would often do so on the *day following* its alkalization whereupon the infection rapidly cleared up In chronic cases the phage failed to appear in the urine at all Organisms surviving the initial attack of the phage were resistant and propagated a resistant strain it was therefore necessary to give a large dose of a high titre strain Many of the phages on the market were of low titre and should not be used until the titre had been raised by subculture with *susceptible organisms* He regarded crude sewage as the best source of potent phage Cultivation and increase of potency of the phage was better carried out at room than at incubator temperature The phage could be administered by mouth, hypodermically, or locally for hypodermic injection he gave 2 c cm three times a day for three days Dr Dyke said it was probable that so called acute pyelitis was always associated with small abscesses in the renal cortex and therefore local instillation of the phage into the urinary passages would *not* appear to be a rational method of treatment Dr Cuthbert Dukes remarked that he had never been able to find evidence that *lesions in the intestines* would permit of the passage of *B coli* to the urinary system Dr Embleton stated that bacillurn was frequently associated *with chronic constipation* particularly in the case of those who made habitual use of cascara in such cases even when the bacillurn had disappeared it could be brought back again by a dose of cascara Dr Whitby in replying agreed that local instillation of the phage had little to commend it he favoured the hypodermic route

Dr A G Signy briefly discussed the production of immunity by means of convalescent human serum with particular reference to measles He *recommended* that the blood be collected from ten to fourteen days after defervescence and the serum pipetted off the following day This was tested *for syphilis and for sterility* all serums were then pooled and put up *in ampoules with 0 5* per cent carbolic as an antiseptic *Such serum would* maintain its potency for at least one year if kept in the ice chest In prophylaxis Dr Signy pointed out that injection of the serum within five days of exposure was protective up to the ninth day the attack which developed would be abortive after nine days serum was ineffective The advantage of an abortive attack was the formation of active immunity Such attacks were usually so mild as not to necessitate confinement to bed Active immunity could be produced without an actual attack of the disease by the injection of a large dose of immune serum followed twenty four hours later by 1 c cm of blood from a case in the infective stage The speaker recommended a dose of 7 c cm for children in the first three years of life for older children up to 10 c cm should be given Dr Greenfield described the use of serum in the early treatment of poliomyelitis in Australia and drew attention to the fact that polymorph cells appeared in the cerebro spinal fluid in the early stages of the infection and before the appearance of paralytic symptoms the cells become progressively fewer as the disease declares itself The Australian experience had shown that the dosage of serum necessary bore an inverse ratio to the proportion of these cells in the cerebro spinal fluid

Dr E Wordley described the Van Slyke urea clearance test of renal efficiency This test was regarded by its originators as an indication of the rate of clearance per unit of time of urea from the blood It was calculated from the formula $\frac{U}{B}\sqrt{V}$ where *U represents the* urea in the urine B that in the blood and V the volume of urine secreted per minute over one hour When the rate of excretion of urine was high the formula $\frac{U \times V}{B}$ must be used For the first formula a normal clearance figure was anything over 54 for the second anything over 75 The speaker stated that he had determined the figure in a number of cases and had found it to give results according accurately with the clinical condition and with the results of other tests of renal function

Dr J G Greenfield gave a highly instructive address on some points in the microscopical differentiation of cerebral tumours Showing specimens and slides of many types he drew attention to the clinical and histological differences between those of gliomatous and ependymal origin and outlined a classification considerably simpler than that of Cushing but which apparently covered all types met with He drew particular attention to the relatively benign and slow growing nature of the oligodendroglioma Professor MacIntosh thanked the speaker for his simplification of the field and expressed the hope and also the opinion that it might be carried even further

ANTE NATAL RADIOLOGY

At a meeting of the Liverpool Medical Institution on February 4th with the president Professor R E Kelly in the chair Dr R E Roberts read a paper on ante natal radiology based on an analysis of the results of x ray examinations in 550 cases all of which were radiographed because they presented some element of clinical doubt or difficulty

Dr Roberts demonstrated the value of radiology in estimating the exact degree of pelvic deformity and the position and size of the presenting part in relation to the normal pelvis He illustrated the accuracy of the method in estimating the maturity of the foetus at any time after the end of the fourth month especially useful in cases where the clinical estimate was doubtful The method was also found to give important information not only as to the presentation but also about the position of the foetal limbs in relation to the trunk and head and in cases of multiple pregnancy it demonstrated the relative positions of the foetus Cases of extra uterine pregnancy were difficult to diagnose unless some means could be adopted of more clearly visualizing the position and size of the uterus In deciding the cause of hydramnios this method was found to be invaluable, foetal abnormalities were as a rule diagnosed with precision where their nature or even presence was uncertain from clinical examination Spalding s sign was found to be positive in 60 per cent of the cases of uterine death

Professor W Blair Bell said that he had co operated with Dr Roberts from the commencement of his work on ante natal radiological diagnosis especially at the Liverpool Royal Infirmary Great benefits had accrued to his patients from this co operation Yet he (the speaker) had found much difficulty in persuading some

of his colleagues in other places particularly in London that it was possible accurately to measure the pelvis estimate the age of the foetus and so on There were still those who though regarded as authorities on ante natal work did not yet recognize the fact that ante natal radiology was an essential part of ante natal investigation in many cases the most they would admit was that this was a matter for further research The Aschheim Zondek test had to a great extent displaced radiography in the diagnosis of pregnancy which was only possible after about the sixteenth week by radiography when as a rule the diagnosis was easy However he had found that a radiograph was very useful for dispelling the assertions and doubts of an unmarried or unbelieving woman Estimations of the age of the foetus and of the hardness of the skull were of great value for post maturity was not uncommon and led in many cases to difficult labour from disproportion if the head would not mould in the normal manner On the evidence of a radiograph induction could be practised in good time Actual measurement of the head which was difficult was in reality not of any special value for a slight degree of hydrocephalus was diagnosed by the radiographic appearance rather than by the size of the head Further to establish the fact of slight disproportion between a more or less normal head and a pelvis with no more than a slight degree of contraction was easy for the moulding of the vault of the skull and the uterine contractions in labour were determining factors in the passage of the head Professor Blair Bell hoped the day would come when cinema radiographs would be taken to illustrate the mechanisms of labours and to show movements if any of the pelvic bones and joints No one who had listened to Dr Roberts s demonstration could go away unconvinced that radiology now formed an integral part of ante natal work and since efficient apparatus and service could be obtained only in the large general hospitals without undue and disproportionate expense ante natal consultative clinics should be conducted there where radiography and other special facilities were available The speaker had long insisted on this He was grateful to Dr Roberts for revivifying this question in so able and interesting a manner

Professor H Leith Murray congratulated Dr Roberts on his paper and on the radiograms which so usefully illustrated it He was of the opinion that Dr Roberts had given a very fair balance in his paper to the indications for ante natal radiology and was prepared to support him in nearly all that he had said Although he deprecated any substitution of radiology for careful palpation he had found it of extreme use in difficult cases Many of these were fat women where palpation was far from easy No obstetrician should ever allow a case to enter labour without having made a full diagnosis of the presentation and the position Without the assistance of radiology this could not be guaranteed in all cases Lack of flexion too might suggest a disproportion which was not in fact present Here also modern radiology could be of great service in cases where palpation was inconclusive With regard to the diagnosis of degrees of immaturity while he had found radiology reasonably useful in patients with an undetermined amenorrhoea and a fat abdomen he would require a longer series of cases than had been presented by Dr Roberts before he agreed that radiology was superior to a study of the abdomen and the duration of amenorrhoea

Scalp Lesions

Dr R M B MacKenna read a note on three unusual lesions of the scalp The lesions considered were (1) gummatous ulceration of the scalp in a young man aged 24 (2) excessive self mutilation of the scalp resulting in exposure of the cranium in a farm labourer aged 36 (3) an extensive epitheliomatous tumour in a man aged 68 The signs symptoms and differential diagnosis were discussed and the note was illustrated by lantern slides showing the clinical appearances of the lesions and certain of the pathological and mycological findings Dr MacKenna raised three particular questions for discussion (1) Was the parieto temporal region the site of election of the large fungating type of epithelioma? (2) Were these large so called epitheliomata true squamous celled carcinomata or should they be classified so as to take an intermediate place between rodent ulcer and epithelioma? (3) Despite the advance in our knowledge of gamma ray irradiation and the improvements in the technique of surgical diathermy did the old dictum still hold good that rodent ulcers and epitheliomata which had become attached to underlying bone were incurable provided the bone could not be removed *en masse*?

PYELOGRAPHY

At the January meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland Dr Bouchier-Hayes read a paper on pyelography This procedure he said was divided into two main types instrumental pyelography and excretion urography the latter being divided into intravenous rectal and subcutaneous The preparation of the patient was dealt with the practice of giving cathartics being criticized and the use of taka-diastase recommended A short description of instrumental pyelography followed the solution favoured being 12 5 per cent sodium iodide The indications for and against instrumental methods were mentioned Excretion urography in its different phases was next described the solution favoured being uroselectan B This was followed by descriptions of the interpretation of pyelograms and a demonstration of radiograms showing types of renal pelvis hydronephrosis nephrolithiasis congenital anomalies and tuberculous disease

The president (Mr R Atkinson Stoney) said that pyelography was a diagnostic method of great help in the elucidation of difficult cases Mr A A McConnell expressed the opinion that pyelography was of greatest importance in cases of tuberculous disease He felt that a tuberculous ureter should not be catheterized if it could be avoided in these cases uroselectan was very helpful Dr T Garratt Hardman referred to the difficulty of getting patients properly prepared for examination of the genito urinary tract He thought it undesirable to give enemas and aperients on the night before examination Dr Bouchier Hayes in replying to the discussion said that in his practice the catheter was only passed part of the way up the ureter Other workers stated that the catheter should be passed up into the renal pelvis He felt that screening of the kidneys should be avoided unless it was really necessary If no shadow was obtained by the intravenous method it might lead one to think that there was renal dysfunction

Diverticulitis of the Bladder

Dr Bouchier-Hayes also read notes on a case of diverticulitis of the bladder occurring in a patient who exhibited signs of cystitis dysuria and frequency of micturition A cystogram demonstrated numerous diverticula four of which were removed at operation The President said that he had never seen a case in which so many and such large diverticula were present Mr McConnell remarked that some of the diverticula were densely adherent He thought it might have been possible to invaginate some of them but each one had to be dissected out separately

Reviews

FRACTURES

The work done in France by Major Meurice Sinclair at No 8 Stationary Hospital is well known, although its importance is much greater than has been perhaps generally appreciated As a pioneer in the modern treatment of fractures and especially in his intelligent use of the Thomas splint he saved many limbs and lives and prevented the evolution of many cripples In the preface to his recent book[1] Major Sinclair declines to apologize if this should seem in essence a glorification of the Thomas splint on which he has already written a monograph (reviewed in our issue of July 2nd 1927) He is not using too strong language when he speaks of the lethargic attitude of surgery towards the subject of fractures and the apparent indifference to the disabilities which too often follow the casualties occurring night and day on our motor front In a book on practical surgery it is not often that we find a quotation from the Old Testament but Major Sinclair's citation of Ezekiel is singularly apt and impressive The miracles which he wrought while not quite as wonderful as those described by the prophet on the reanimation of dry bones were yet striking enough as compared with the experiences of previous wars

Major Sinclair's *Fractures* differs from some other text books in the amount of space he devotes to the consideration of the principles and methods of treatment Nearly half the volume is taken up with general considerations the remainder being given up to individual fractures This in our judgement is a quite proper allocation of space for individual fractures can only be successfully treated by those who have thoroughly mastered the principles on which various methods of fracture treatment are based in all their details That the primary aim in the treatment of all fractures is reconstruction of normal anatomical relations should be a truism but its importance has of late years been somewhat overlooked by those who have advocated functional restoration as the first end in view In truth functional restoration should be sought through anatomical reconstruction The author regards extension as the cornerstone of reconstruction and the only rational means of immobilization He does not advise the use of plaster of Paris except in rare cases As a means of direct skeletal traction he prefers Kirschner's wire to ice tongs and similar devices It is obvious that extension is generally incompatible with ambulant treatment and that fractures of the humerus must be treated recumbent We believe with the author that the practice in hospitals of treating as many cases as possible on their feet is unsound It is dictated by the pressure on space but is not conducive to good results The greater the proportion of cases of fracture dealt with as in patients the better will be the results and incidentally the better instructed will the students be A crying want at present in the curriculum is adequate clinical training in the management of fractures

This book will we believe take its place as an authoritative guide to fracture therapy It is comprehensive and gives clear and definite advice on the many problems which it envisages It will prove valuable not alone to surgeons in large hospitals but to the isolated practitioner who may find himself confronted with a difficult problem and without opportunity of consultation If he acts upon Major Sinclair's principles he may count on getting a good result

[1] Fractures By Meurice Sinclair C M G M B B Ch Ed Major I M S (ret) With an introduction by Sir Robert Jones Bt C B F R C S Modern Surgical Monographs London Sidgwick & Jackson Co Ltd 1931 (Pp xxxiv + 559 337 figures 21s net)

MEDICINE, SCIENCE, AND ART

In the preface to his collected essays on certain aspects of *Medicine Science and Art Studies in Interrelations*[2] Dr A E Cohn of the Hospital of the Rockefeller Institute for Medical Research New York, modestly says that these are not subjects on which he can write but that he has enjoyed doing so because the process has clarified his own ideas on the problems presented In the first and much the longest of the six philosophical essays, he discusses the difference between art and science in their relation to nature and points out similarities between them for science is not so general or art so individual as might be anticipated The oldest of these essays is that on 'Purposes in medical research' which formed the introduction to the first number of the *Journal of Clinical Investigation* In this and in the following article entitled Medicine and Science Dr Cohn discusses the oft raised question Is medicine a science? Adopting Sarton's definition of science as systematized knowledge' he argues that the phenomena of disease are distinct from any other subject, even physiology and that their investigation is a science but treatment being largely empirical, is an art In the last of these philosophical essays on the hierarchy of medicine it is shown that the three phases of medicine—practice teaching and research—date back to Hippocratic times and the author then reviews in broad outline the inheritance of the nineteenth century medicine in ideas and how this has been utilized especially in North America, up to the present day In particular he insists on the real difference between the practising medical man who in the past also added to the sum of knowledge as occasion arose and those who with a different temperament devote their lives to the science of medicine Every school of medicine need not aim at combining teaching and research and though research is a quickening spirit some schools may concentrate on the education of medical practitioners while other schools perhaps preferably university departments devote themselves to the training of investigators To readers interested in the future of medicine these thoughtful reflections of a medical investigator must strongly appeal

BIOCHEMICAL MEDICAMENTS

In his *Recent Advances in Materia Medica*[3] Dr J H Burn deals with the methods used for preparing and for estimating the potency of what may be termed the biochemical drugs—that is serums and vaccines hormones and vitamins The book is based on lectures given to the Pharmaceutical Society and is written for pharmacists in the first place but it contains much that is of interest to the medical profession The medicaments discussed require to be assayed by biological rather than by chemical means so that a considerable part of the book is occupied by discussion of the methods and uses of bio assay This is a subject of which the author has a very special experience Technical details are avoided as far as possible but the general principles and purposes of the procedure used in each case are explained

The chapters on toxins and antitoxins deal with all the most important preparations and include some quite recent introductions such as the vaccine for distemper The arsenobenzene compounds find a place in the volume because although they are synthetic compounds experience has shown that a uniform activity can only be ensured by supplementing the chemical tests for purity

[2] *Medicine Science and Art Studies in Interrelations* By Alfred E Cohn Chicago The University of Chicago Press London Cambridge University Press 1931 (Pp xiii + 212 2 figures 20s net)

[3] *Recent Advances in Materia Medica* By J H Burn M D London J and A Churchill 1931 (Pp x + 224 25 figures 12s 6d)

by the bio assay of toxicity and therapeutic activity The chapters describing the preparation and bio assay of the hormones include an account of most of those which are in clinical use and also have a demonstrable activity An interesting summary is given of recent work on the sexual hormones—oestrin corpus luteum hormone and the testicular hormone In the case of the anterior lobe of the pituitary gland the author gives an account of three hormones—namely the growth producing hormone that producing precocious sexual maturity and the lutemizing hormone The second of these is at present of the greatest practical importance because its presence in the urine is the basis of the Zondek-Aschheim test for pregnancy The vitamins from A to E are described and in the case of the vitamin B group the author mentions five possible entities Lastly there is an account of the general principles of bio assay and of the international units that have been adopted

It will be seen that Dr Burn's book covers a wide range The author is indeed dealing with a new subject that is growing with remarkable rapidity—namely the methods for purifying and standardizing the medicaments manufactured by living organisms The outstanding properties of these substances are that they are usually very labile and extraordinarily potent In most cases the unit dose of purified products can be described more conveniently in micrograms than in milligrams These properties make the chemical treatment of all these substances unusually difficult and their clinical use has only been made possible by the development of the technique of bio assay The author is to be congratulated on his success in giving a short and yet clear account of this important but difficult subject

FRENCH VIEWS ON DIABETES

The Outline of Diabetes[4] by Drs CHABANIER and LOBO-ONELL will seem to British readers probably of more theoretical interest (and this is considerable) than practical value In practice they insist on the necessity for individual dietetic and insulin treatment in every case and so do not lay down many helpful rules for treating the average patient No mention is made of glucose tolerance tests in the diagnosis of diabetes the authors preferring to observe the patient for some days on diabetic diets—surely an unnecessarily long and sometimes misleading procedure In a former book they stressed the importance of the element renal in the course of diabetes and they now look upon it as a determining factor in deciding the amount of carbohydrate in the diet—the greater the renal element (that is the lower the renal threshold) the less the carbohydrate prescribed only some 60 to 80 grams being given in such cases and but 100 or over when the threshold is normal or high This is open to criticism on the ground that the more sugar is lost through a low threshold the more carbohydrate is necessary in the diet to prevent ketosis The diets containing 80 to 100 grams of fat and rarely more than 130 to 170 grams of carbohydrate are low in total calorific value

Of greater interest are some of the authors ideas about insulin of which they prefer impure preparations (even though local reactions may be troublesome) because hypoglycaemia is much less frequent But they prefer to use an oily or rather waxy suspension of insulin and details of their experience with it in the last year are given It may be difficult to inject and the effects of its prolonged use on the subcutaneous tissues are not certain It is claimed however that its action is more prolonged and that a large dose every second day may sometimes control quite severe diabetes From the data supplied it seems clear that this waxy suspension is differently absorbed and acts differently from day to day but the authors claim it as a great advance on the more usual injection of a watery solution In the treatment of fully established coma the importance of re establishing the normal level of blood chlorides is stressed The authors agree with Blum that hypochloremia is a significant feature in severe coma and better results are claimed since their recent practice of rechloruration of the tissues Unfortunately no chloride figures are given by which one can judge this hypothesis nor are there any suggestions as to the amount of sodium chloride to be injected intravenously

[4] *Le cas du Diabet* Par H Chabanier et C Lobo-Onell Paris Masson et Cie 1931 (Pp 280 4 graphs 26 fr)

EARLY HISTORY OF YELLOW FEVER

The historical study of yellow fever attracted much attention last century culminating in the encyclopaedic work of Berenger-Feraud published in 1890 During the past forty years however the discoveries concerning the method of transmission of the disease in addition to the increase in our knowledge of this and other allied infections have rendered it very desirable that the accounts of earlier epidemics of yellow fever should be re examined in the light of new facts in its epidemiology A recent publication by the late Henry Rose Carter entitled *Yellow Fever An Epidemiological and Historical Study of its Place of Origin*[5] is devoted to the early history of the disease The author had considerable experience of yellow fever epidemics while serving in the United States Public Health Service in which he became Assistant Surgeon-General and on his retirement he devoted the last three years of his life up to 1925 to this historical study His account has been prepared for publication by L A Carter and W H Frost and it forms a most interesting and valuable contribution to the subject

The first part of the book is devoted to a general account of the epidemiology of yellow fever including the conditions necessary for the continued existence of the disease The possibility of its dispersion linked up with the conditions affecting the distribution of its transmitting host *Aedes aegypti* is shown to depend on a variety of details among which temperature and sociological conditions seem to be the most important The second part is concerned with diseases which have or might have been confused with yellow fever in the past The most striking omission from this list is Weil's disease which in view of recent studies in South America must have been one of the most common sources of confusion It should be noted however that the treatise was written before the importance of this disease was realized The third part comprising three quarters of the book contains a detailed study of the place of origin of yellow fever including the historical evidence on this subject dating back to the codices of ancient Mexico and the earlier Spanish writers of the sixteenth century which leads the author to the conclusion that the disease did not occur in America prior to the epidemic of 1648 in Yucatan

After discussing many of the early American epidemics the author describes some of the early records of sickness on the West African coast and shows that many of these might well have been yellow fever It is interesting to note that he uses accounts of epidemics given by Bérenger-Feraud who held the view prevalent at that time that the disease had been introduced into West Africa from America The opposite view was advanced among others by Sir Rubert Boyce and supported by the evidence of the British Yellow Fever Commission (West Africa) Although the positive evidence is not very convincing there are

[5] *Yellow Fever An Epidemiological and Historical Study of its Place of Origin* By Henry Rose Carter M D Baltimore The William and Wilkins Company London Bailliere Tindall and Cox 1931 (Pp xii + 308 2 figures 26s 6d net)

many reasons for considering this region to be the place of origin of the disease The insect vector *Aedes aegypti* has many related species in West Africa and the Old World but none in America therefore the biological evidence is in favour of West Africa being the original home of the yellow fever mosquito whence it has been carried to ports and become established wherever the requisite conditions of climate and breeding places were found Moreover the African negro although contracting yellow fever as readily as other races has it more mildly, and rarely dies of it his reaction being what one would expect in a race exposed to the infection for many generations Hence the author concludes that the available biological evidence is altogether in favour of an Old World —African—origin of yellow fever and this is wholly consistent with the historical evidence

GOULD S MEDICAL DICTIONARY

The editor of *Gould s Medical Dictionary* [6] of which a third edition has been published remarks in the preface that Gould s dictionaries have had a world wide sale of nearly 800 000 copies This fact in itself is sufficient proof of the confidence with which the profession has come to regard these standard works each of which may be said to have contributed to the resources of the present volume In a previous notice we described Dr Gould as the Johnson of medical lexicography and it is a tribute to his scholarship that his ideas have been followed in the preparation of all revisions since 1915 with only such changes as have been advocated by the learned scientific societies The latest edition does not differ in any fundamental respect from its predecessor Hundreds of new words have been ingeniously accommodated and three specially prepared tables of bacteria metazoa and protozoa pathogenic to man and animals have been added bringing the total number of tables up to 173 Another useful addition incorporated in the text is the International Table of the Causes of Death based on the fourth decennial revision 1929 It is impossible in a brief note to do justice to the main body of the work which now comprises about 1 500 pages but a word may be said about one or two minor features that are apt to be overlooked In spite of accumulating material the publishers have wisely resisted the temptation to cram Signs and Abbreviations ' as before are set out in a large clear face type and the key to pronunciation though occupying only a few lines is given a page to itself By the skilful employment of various sizes of type the interests and needs of the busy practitioner continue to be kept in mind The editorial policy is to insert no matter that is not relevant and few illustrations are included that may be found in well known textbooks and works of reference The dictionary is a fine performance and we congratulate the editor Dr R J Scott and the publishers on the production of a most serviceable volume

NOTES ON BOOKS

In his preface to the first edition of *Gonorrhoea in the Male* Dr P S PELOUZE set forward as his aim that he should write a book the keynote of which was simplicity rather than encyclopaedic comprehensiveness Having been in general practice himself he realizes the hardship and difficulty of poring over a massive volume at the end of a day s work He therefore made his book on gonorrhoea as simple and as practical as possible leading one chapter into another and thus coaxing rather than bludgeoning his reader into fresh efforts That he succeeded in his task is shown by the fact that after so short an interval a second edition of his work should have appeared This time he has wisely yielded to the persuasion of his readers in adding a third section which is devoted to the subject of gonorrhoea in the female As a subtitle he has labelled this A study in analogies ' The disease in the female resembles closely that in the male and by bringing out the similarities he has done much to place the treatment of the female which has always tended to be chaotic on a sounder basis Dr Pelouze's second book maintains the simple practical style that characterized his first

The eighth volume (Neuralgie–Phlegmone) of the New German Dictionary of Practical Medicine,[8] edited by Professors GEORG and FELIX KLEMPERER contains the following articles by well-known authorities neuralgia myalgia and neuritis by Professor G Peritz of Berlin examination of the kidney and functional tests by Professor P F Richter of Berlin examination of the urine in renal disease by Professor H Biberfeld of Berlin bilateral haematogenous renal diseases, by Professor F Volhard and Drs F Koch, O E Guttentag F Doenecke and K H Hildebrand of Frankfort on Main surgical diseases of the kidney and renal tumours by Professor E Joseph and Dr S Perlmann of Berlin nephrolithiasis by Professor G Klemperer and Dr W Beck of Berlin, renal tuberculosis by Professor L Casper of Berlin constipation and haemorrhoids by Professor I Boas of Berlin diseases of the ear by Professor A Guttich and Professor H Frenzel of Cologne, operative treatment of lung diseases by Professor L Brauer and Dr J Herms of Hamburg diseases of the oesophagus by Professor H Starck of Carlsruhe osteomalacia by Professor S Joseph of Berlin whitlow by Professor W Baetzner of Berlin, diseases of the pancreas by Professor W Stepp of Berlin, paralysis agitans by Professor E Haase of Berlin, parasitic skin diseases, by Professor A Joseph of Berlin, pemphigus by Professor P Unna of Hamburg diseases of the pericardium, by Professor H Curschmann of Rostock peritonitis by Professors E Magnus Alsleben of Wurzburg and E von Redwitz of Bonn pertyphlitis and appendicitis, by Professor M Borchardt of Berlin plague by Professor H Hetsch of Frankfort and cellulitis by Professor W Baetzner of Berlin A subject index for the first eight volumes is issued with this volume

The recently published Recollections of a Sanitary Delegate [9] by GUY D AVELINE represents the autobiography of the late Dr Suleiman Gazala Bey translated by his widow from the Arabic The work is divided into three parts dealing respectively with Gazala Bey s early life and experiences as a medical student in Paris his career as a health officer particularly in connexion with cholera and plague and his activities as a sanitary delegate in Persia and Anatolia The autobiography is followed by a memoir by Madame Gazala Bey and in appendix containing reports by Gazala Bey on epidemics of cholera and plague in Mesopotamia

[6] *Gould s Medical Dictionary* By George M Gould M D [illegible] Third edition revised and [illegible] London H K Lewis and Co Ltd 1931 (Pp xvi + [illegible])

[7] *Gonorrhoea in the Male and Female* By P S Pelouze M D Second edition revised Philadelphia and London W B Saunders Company 1931 (Pp 440 92 figures 24s net)

[8] *Neue Deutsche Klinik* Herausgegeben von Professor Dr Georg und Felix Klemperer Achter Band Berlin und Wien Urban und Schwarzenberg 1931 (Pp 790 173 figures 8 plates Paper cover RM 33 bound RM 40)

[9] *Mémoires d un délégué sanitaire* Par Guy D Aveline Paris N Maloine 1931 (Pp 378 illustrated 20 fr)

PREPARATIONS AND APPLIANCES

VITAMIN CONCENTRATES OF COD LIVER OIL

McKesson s vitamin concentrate of cod liver oil is prepared from cod liver oil and contains both vitamins A and D In the process of manufacture a concentrate is obtained which represents 1 per cent of the original oil and this is diluted with neutral oil so that the final product has eleven times the potency of a high grade medicinal cod liver oil Recent research has demonstrated the clinical importance of an adequate supply of vitamin A as well as of vitamin D This preparation permits the administration of both these vitamins in a tasteless form and with doses of minims instead of teaspoonfuls of fat The preparation has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association

British Medical Journal

SATURDAY, FEBRUARY 20th, 1932

THE COMMEMORATION OF THE GREAT

Once again the Royal College of Surgeons of England has paid its tribute to the memory of John Hunter by an oration and by a festival The President and the Council have thus fulfilled a duty entrusted to the college 119 years ago by two near relatives of John Hunter—Sir Everard Home his brother-in-law, and Dr Matthew Baillie his nephew Festival and oration have become customary the best caterers of London have always been called in to supply the feast the most outstanding surgeons of England have pronounced the oration Orators have always given of their best, but we venture to think that the oration which fell from the lips of Mr Wilfred Trotter in the theatre of the college on Monday last stands out in two very important respects—its matter and its manner There is in its manner much that recalls the magical command Sir Thomas Browne exercised on the English tongue As in the writings of the Norwich physician, so here pearls of the mind are set in chosen words, but so set that they are to be seen by the mind rather than by the eye The orator's highly sensitive critical nature finds outlet in finished phrases often sly sometimes grim which give us glimpses rather than revelations of the deep realities besetting man's path through life So much for the manner of the oration, it has to be studied rather than read

As regards matter the oration of 1932 differs from all that have gone before For the greater part past Hunterian Orators have devoted themselves to a justification of their hero they have explored their theme from every aspect and adorned it with every art Mr Trotter also pays his tribute to Hunter's greatness It was not as a surgeon as the maker of his great museum or even as a discoverer in science that his greatness was revealed or his influence perpetuated It was by his example in the use of the scientific method—faithfully in purity of heart and with utter devotion to truth Having paid this tribute the orator then carried his theme beyond the limits imposed by Hunterian tradition What is it that moves all mankind to commemorate its great men? In an age given to the celebration of anniversaries the question is of immediate interest and importance for all of us lay and medical Some of the motives the orator admitted are conscious and ostensible there is the desire 'to contemplate in humble piety and emulation a largeness of mind and character that far exceeds our own there is the wish to seek inspiration from struggles heroically engaged and perhaps triumphantly won'

Besides these conscious and ostensible motives the orator urged that there were still alive in us older and deeper impulses which have come down from the unconscious childhood of humanity As soon as man realized that death was a fact, and that 'in the world of gross reality the expectation of death for the individual is the one prospect for which the attestation of experience amounts most nearly to philosophic certainty' he had to determine how the living were to comport themselves towards the dead The dead were regarded sometimes with fear and pity sometimes with awe and reverence and at other times with horror and contempt As to the dead hero primitive man seems very early to have thought the most obvious way to assimilate the virtues of the hero was to assimilate his body actually to eat his flesh in the expectation that the spirit which had animated it would also be conveyed and absorbed—a robuster conception of organotherapy than we have yet come back to' This manner of keeping the qualities of great men alive has happily long since disappeared from civilized communities so too has the practice which made the slayer heir to the spirit and insignia of the slain king—the theme of the *Golden Bough* If our aim is to make the great dead live again in our minds Mr Trotter is of opinion that our modern practices are no better than those of our remote ancestors "In all our commemorations, he asserts 'whether by word or by plastic art, we make our own pictures and drift increasingly away from the actual man These are the real ghosts and nothing brings more certain conviction of a man's death than his memorial' The diction is beautiful though it expresses but half a truth Many of the world's most critical events and the lives of men who took part in them are better known to us of to-day than they were to the generation who knew the man and were concerned in the events

If then our modern methods of commemorating the great dead are no more perfect than those practised by our uncivilized ancestors how are we to find a better way? Let us hear what the orator has to say He anticipates that 'a future and more realistic age may reach the conclusion that the time to celebrate its heroes is while they are alive, and not to wait with our remarkable patience until they are safely dead" The orator is not blind to the manifold difficulties which encompass this idealistic counsel It is unfortunately very much easier to recognize a man's greatness after he is dead and when we are freed from the distraction of the actual presence which unhappily tends so often to be odd angular and even quarrelsome To illustrate this difficulty he cites a telling instance In 1845 Mr J J Waterston who was an engineer wrote a paper in which he anticipated much of the work of physicists no less eminent than Joule Clausius, and even Clerk Maxwell' The verdict on this paper by the referee to whom the Royal Society submitted it was *The paper is nothing but nonsense* And so Mr Waterston disappeared from the struggle—unsung and unnoted He paid the penalty of having moved too far ahead of the army which advances the wave of knowledge Like Hunter Waterston was building not for his day but for generations ahead There is nothing which the

forwardly directed mind seeks to accomplish with greater zeal than the recognition and reward of living, struggling genius Yet even the most astute have to await the verdict of time before they are certain that what they regard as genius is not merely unusual mediocrity

The orator himself clearly felt his counsel was one of perfection and therefore hastened to explain the nature of the difficulties which, in these days made his ideal unattainable His explanation shows how profoundly Mr Trotter has plumbed human nature "The mind delights he says in a static environment, and *if there is any change to be itself the source of it* Change from without interfering as it must with the sovereignty of the individual seems in its very essence to be repulsive and an object of fear And fear as medical psychologists know can disguise itself in so many forms—such as caution sanity or reasoned scepticism, or "on occasion even as courage" Meanwhile we have to continue to commemorate our departed great in our accustomed way awaiting the day when the "scientific mind overcomes the natural impulses so strongly engrafted in human nature

The orator was at his best when he knitted the threads of his argument to bear on the occasion that had brought his audience before him When any human institution is looked into there is to be found in it "a strange mixture of elements' and 'motives many of them odd and some of them ugly Even in the motives that impel man to remember his great dead there are traces of his folk lore While the living does well to yield to such impulses it should see to it that posthumous honour is not deemed to serve as a discharge of its liability to the great who are still alive We have to develop the gift of recognizing genius when it appears among us And finally the hope was expressed that when a new Hunter appears "he will find an intellectual environment where even his most revolutionary ideas will be planted in a nourishing soil and bathed in a genial air

In the long series of Hunterian Orations there are many instances of supreme merit but none we think which shows more originality in treatment nor a deeper—if somewhat elusive—insight into problems which now confront thoughtful men, than the oration appearing in our present issue

SCOLIOSIS

The term scoliosis meaning twisting, and "lordosis" and kyphosis have been employed ever since the time of Hippocrates to denote curvatures of the spine More recently scoliosis has been more descriptively named rotary lateral curvature of the spine' Some years ago discussions on the treatment of this deformity occupied much time at meetings of orthopaedic societies and much space in their Transactions and the claims of rival methods for its cure were sometimes hotly debated Since the war however other subjects seem to have attracted surgeons and to have pushed scoliosis into the background

In regard to the pathology of this deformity it would almost seem as though anatomists and pathologists had given up the subject in despair or by tacit consent agreed to leave the etiology of rotary lateral deformity alone for a time The occurrence of widespread epidemics of anterior poliomyelitis in the United States has, however, forced the question into notice In very many of the cases which survived, the trunk or arm muscles have been involved and some of them have remained permanently palsied or at least weakened The result of such paralysis is often one of the most severe forms of rotary lateral curvature, to alleviate which surgeons have practised ankylosing operations on the chest walls, with some success, so far as time will allow us to judge Dr Russell A Hibbs of New York upon whose work we commented in March last,[1] and others have attained a very considerable degree of success by such means These however, do not and cannot touch the root problem which is how to prevent the development of deformity in the early stages after paralysis has occurred but before the bones and muscles have suffered permanent distortion As a step towards this desirable goal Dr Eben J Carey of Milwaukee has, in the last dozen years or so, carried out painstaking investigations into the relations between the growth of bones and of muscles and their reactions one with another These studies have been followed by an essay on "Etiology, pathogenesis, and prevention of experimental rotary lateral curvature of the spine,' which was read before the Milwaukee Academy of Medicine in December, 1930, and before the American Association of Anatomists in Chicago in April of the same year, and also before the Section of Orthopaedic Surgery of the American Medical Association at Philadelphia in June 1931 [2] It will be seen therefore, that this paper has not lacked publicity in the United States

Assuming as he does, that "scoliosis is a spinal sign of muscle-bone imbalance of the back," Dr Carey has focused his attention on the effect of muscular action In so doing he has attempted to construct a working model of a spinal column, of which the vertebrae are of wood and the muscles consist of spiral springs, which are intended, in force and direction of effect, to represent the spinal muscles The idea is not new Dr Adoniram B Judson of New York, who was one of the founders of the American Orthopaedic Association some years ago constructed a machine for the purpose of demonstrating the manner in which rotation of vertebrae accompanying flexion was produced, and also the formation of single and multiple curves (There is a copy of this apparatus in the museum of the London Hospital) There were however some fallacies in Dr Judson's machine which Dr Carey has avoided in whole or in part although it must strike the critic that in no such machine can the conditions existing in the living body be completely reproduced or the proper value be assigned to each and all of the artificial muscles employed in the model In taking it for granted that all cases of scoliosis are caused by unbalanced muscular

[1] *British Medical Journal* March 28th 1931 p 500
[2] *Journ Amer Med Assoc* January 9th 1932

action, Dr Carey has simplified the problem which he has set out to solve but it must be remembered that cases of rotary lateral curvature occur in which there is no evidence to be found of such action The complexity of the problem is great Superficially similar effects are found to follow different causes and scoliosis to result apparently from congenital bone defect from unbalanced muscular action (poliomyelitis) and from a cause which despite much inquiry is still undetermined A certain group of cases and those some of the most severe and intractable, can by the help of radiography be assigned without hesitation to the effects of congenital deformity and defect of bone with subsequent unbalanced muscular action Other cases equally severe may be attributed to the unbalanced muscular action resulting ultimately in bone deformity which follows the palsy of poliomyelitis From this it follows that it is difficult among various types of deformity always to distinguish between cause and effect Bone deformity is an undoubted cause in congenital cases it is no less certainly a late result in those following paralysis of muscles

Dr Carey has done much good work and seems to have collected a mass of observations on the effects of malnutrition of skeletal muscles which tend to show secondary effects upon growing bones He has thrown light upon the puzzling problem of the occurrence of rotation in some cases towards the palsied muscles and in others away from them As Dr Robert Osgood said in the discussion on the paper at the Philadelphia meeting Dr Carey s model and indicator are marvels of ingenuity and accuracy We share Dr Osgood s doubt however as to whether anyone will study the numerous possible combinations of the thirteen pairs of spinal muscles which are represented in the model

TONSILS AND ADENOIDS

There are signs that the pendulum has begun to swing away from the wholesale removal of tonsils and adenoids in children The views eloquently expressed in a pamphlet by Mr Layton[1] promise to give it yet further impetus though in predicting a time when the removal of adenoids will be as obsolete as blood-letting is nowadays the author cannot expect to find many supporters While it is possible that medicinal or dietetic measures may eventually render such operations superfluous Mr Layton s argument that the removal of septic tonsils is in itself a sufficient treatment for adenoids—which thereupon cease to cause symptoms—is unsound The converse that the removal of adenoids can benefit the state of the tonsils by the cure of mouth-breathing seems to us more rational and in practice the simple removal of adenoids is all that many children require We think it a little unfortunate that Mr Layton has carried his argument to such extremes In general the thesis which he has put forward will commend itself most forcibly to those who see day by day the amount of damage done to children by robbing them of such an important part of their defensive mechanism There is no doubt that on the whole much more good than harm is done by these operations On the other hand thousands of unnecessary tonsillectomies are performed, especially in small children with large tonsils—unnecessary because these children have need of the lymphoid tissue Mr Layton performs a valuable service in calling for the rational choice of cases for operation in place of the wholesale extirpation so commonly practised He also points to the very real dangers usually minimized which attend such operations Medical officers in charge of school clinics and general practitioners upon whom rests the responsibility of deciding for or against operation should read and re-read this pamphlet and they will forgive some slight exaggerations for the sake of the emphasis with which Mr Layton drives home a lesson of wide application and profound importance

[1] *On the Conservation of the Lymphoid Tissue of the Upper Respiratory Tract* By T B Layton DSO MS FRCS London Ash and Co Ltd (1s)

TREATMENT BY PLASMOQUINE

Some interesting observations on the value of plasmoquine in treating malaria and on the mechanism of its action are contained in the nineteenth annual report of the medical department of the United Fruit Company In Guatemala Dr N P Macphail found that an alarming number of patients about to leave hospital in a convalescent state after malarial attacks were carrying large quantities of gametocytes in their peripheral blood and were therefore returning to their camps in an excellent condition for infecting mosquitos Since the introduction of plasmoquine this state of affairs has been largely remedied and from observation of more than 1 000 cases Dr Macphail concludes that the drug has a more powerful action in destroying the gametocytes of all forms of malaria than had any previous kind of treatment Quinine was found to be more effective than plasmoquine in the destruction of ring-forms of aestivo-autumnal fever and the ideal treatment appears to be a combination of the two drugs The dose for adults has been 2 grams of quinine and 9 centigrams of plasmoquine daily for five days Certain cases developed toxic symptoms with this dosage and it was then found that 6 centigrams were as effective as the larger amount , later a still smaller quantity was employed for work outside hospital Three centigrams of plasmoquine daily for a week or more seems to be perfectly safe and efficacious In Panama Dr O T Brosius concludes that plasmoquine has a decided value in communities with a comparatively limited turnover of labour since it is possible to effect sterilization of the gametocytes in carriers by frequent plasmoquine and quinine blanket treatments given at intervals He thinks that plasmoquine may have played a somewhat more active part in reducing malarial infections than was credited to it in the earlier attempts to determine its exact value in tropical sanitation Its *modus operandi* he writes ' may be more or less insidious and its effects be latent ' In Cuba Dr V Bustillo has been using quinine-plasmoquine compound He finds the working classes there have a great dislike for quinine while another difficulty lies in the continuous ingress of new labourers throughout the crop season The routine treatment employed has been the administration of 2 ounces of concentrated magnesium sulphate solution the first day followed by 10 grains of quinine twice a day and one plasmoquine compound tablet

(0 01 gram of plasmoquine) daily until four have been taken Children under 5 years of age are given half this amount of plasmoquine daily for eight days, so that they receive the same total quantity No untoward effects have been noticed with this dose Dr Bustillo reports that in 91 per cent of cases gametocytes disappear from the peripheral circulation in from one to eight days under this treatment and in the remaining 9 per cent in from nine to twelve days He believes that small doses of plasmoquine devitalize the gametocytes so that their final disappearance is due to phagocytosis The conclusions which may be drawn from the results of treatment in these three areas within the tropical zone are that plasmoquine and quinine seem to play complementary parts and that in all types of malaria the two drugs should be used together in order to obtain the maximum curative results

HEALTH SERVICES FOR THE PRE SCHOOL CHILD

Though the organization, activities, and publications of the White House Conference on Child Health and Protection called by President Hoover, may be thought by many in this country and by some in America, to be on a grandiose scale quite out of proportion to their true value some curious and useful facts emerge from these activities and lie buried in these publications There is a somewhat bulky report entitled *Health Protection for the Pre school Child* presented by Committee C on the Medical Care for Children to Section I, on Medical Service and published under the auspices of the Follow Up Committee of that Section [1] It purports to be A national survey of the use of preventive medical and dental service for children under six,' and does in fact give results from the survey of such services in 156 cities and certain rural areas in 42 States Many persons medical and lay appear to have a combined responsibility for the report which is dedicated to the children of America whose faces are turned toward the light of a new day and who must be prepared to meet a great adventure The volume claims to provide for the first time a comprehensive and reasonably dependable picture of the use of preventive measures among pre school children throughout the United States It gives elaborate statistical tables and a large number of graphs or diagrammatic analyses of the numerical results of the survey The extent and methods of the survey do not however, seem to justify any complete reliance on these tabulated conclusions No doubt the conditions of many of the areas surveyed make this inevitable but several of the facts set out, and results arrived at would be regarded in this country as commonplaces Imperfect as our organized attention to the health of children under school age may be, we have yet little to learn from America in this field The health measures inquired about were four in number (1) a health examination (2) a dental examination (3) vaccination against small pox (4) immunization against diphtheria With regard to the last there are seem to be more general provision and facility than here but it is not fully employed The use of all these preventive measures or services is found to vary much from place to place—to such an extent indeed that the value of any averages is very doubtful Among facts of some interest which emerge are the following The proportion of children who receive a health examination varies directly with economic position the highest economic group has the largest percentage, the two lowest groups the smallest This rule holds to an even greater extent in the matter of dental examinations ' there is apparently little of this work being done for the poorer children " New York has the highest percentage of vaccinated pre-school children , the usual practice in the " average city " is to vaccinate only one child out of eight prior to the sixth year of age , vaccination is commonly postponed until children enter school, and the proportion in the different economic groups is in this respect about the same Immunization against diphtheria takes place mainly in the second year of age and in Detroit no less than 40 per cent of the pre-school children have been so dealt with The cities show a larger proportion of health examinations and of vaccinations than the rural areas, but it is curious that in regard to immunization against diphtheria the distribution as between cities and rural territories is almost equal , and in regard to dental examinations the rural areas on the whole, are better served than the cities All that the report says is that " no ready explanation suggests itself " We find little reference to actual health propaganda, but there is one excellent picture headed " Uncle Doc ," portraying a doctor gazing at a pig-pen and meditating, " Lem Sikes has his hogs immunized against cholera His children are still unprotected against diphtheria and small pox, but of course his pigs are thoroughbreds "

[1] *Health Protection for the Pre school Child* Report to the [illegible] New York and London The Century

INDIVIDUAL PSYCHOLOGY

Dr F G Crookshank's pamphlet on *Individual Psychology Medicine and the Bases of Science* [1] is the most recent of the publications of the youthful and active Medical Society for the Study of Individual Psychology The keynote is given in the preface, where he states that if Nietzsche stands for the extreme revolt of the individual against all compulsions and prohibitions Adler always seeks reconciliation by merging the individual will-to-power through co-operation with others Dr Crookshank emphasizes the ever present psychological element in disease, but while making very merry over morbid anatomy as the school of morbid medicine and over the experimental method which he terms the " veterinary or farmyard school " recognizes that a comprehensive view of the individual is necessary before a complete diagnosis is reached In this sense " human medicine is, and must be, very largely an affair of the market place but it does not ignore—on the contrary it implements—what we learn in the wards in the post-mortem rooms and in the laboratories " Those interested in more abstract questions will enjoy his discussion on the difference between the views of Adler and Freud which he regards as so great as " to render fatuous the notions of the well-meaning eclectics who say that they find a good deal of truth on both sides Such eclecticism is a kind of intellectual diplopia " Well, binocular vision is always preferable to monocular, and diplopia can be remedied by helping convergence

[1] *Individual Psychology Medicine and the Bases of Science* By F G Crookshank M D F R C P Individual Psychology Publications Medical Pamphlets No 3A London The C W Daniel Company (2s 6d net)

To achieve this both points of view will have to be modified Dr Crookshank goes on to a discussion on the doctrines of free-will and determinism in which he displays his well-known skill in dialectic His study of the views of Lamarck and Darwin as determined by their respective attitudes towards life in general is full of interest He maintains in conclusion that we are justified in giving Individual Psychology a rightful place in the long line of descent from the philosophy of Socrates for it cuts away metaphysical concepts and directs attention to the individual and to simple experience It teaches us to answer all endless and strictly senseless questions which cannot be answered by looking forward by showing how they have arisen within us in an attempt to evade our clear duty to ourselves our families, and society

KOCH S DISCOVERY OF BACILLUS TUBERCULOSIS

At a meeting of the Berlin Physiological Society held on March 29th 1882, Robert Koch reported his epoch-making discovery of the tubercle bacillus It had originally been intended to celebrate the fiftieth anniversary of the report of his discovery by a ceremony on March 24th to which foreigners should be invited In view however of the general financial situation it has been decided to postpone a celebration on a large scale until the Congress of Microbiology in Berlin next year In the meanwhile a commemoration of the discovery on a small scale will be held in Berlin on March 5th, when speeches will be delivered by the president of the German Ministry of Health the president of the Robert Koch Institute and Professor Pfeiffer of Breslau, the oldest of Koch s pupils As already announced in these columns the jubilee of the discovery of the tubercle bacillus will be made a feature of the eighteenth annual conference of the National Association for the Prevention of Tuberculosis to be held in the Great Hall of University College London on July 21st, 22nd, and 23rd A commemorative symposium will be held at the East London Hospital for Children on March 11th at 8 45 p m

NEWTON THE MAN

Everyone is interested in Sir Isaac Newton as our greatest scientific genius and those who are also interested in *Newton the Man*[1] will find much new information on that head as well as a very sympathetic and attractive delineation of Newton's character in a little volume bearing that title and written by Colonel R de Villamil The author has been indefatigable in searching for information bearing on Newton's private life and he has been rewarded with four discoveries of importance He has found that a large part of Newton s library is still in existence and has located it he has secured a complete catalogue of the original library which consisted of nearly two thousand volumes he has found a complete inventory of the contents of Newton s house at the time of his death and finally, he has obtained convincing evidence that the assertion which has more than once been made on seemingly good authority that Newton was addicted to gambling in stocks and shares is a ridiculous myth Colonel de Villamil has reproduced the catalogue and inventory in full and, as may be readily supposed a very great deal of information can be inferred from them concerning Newton s tastes both as regards his likes and his dislikes and his immediate surroundings in his home The picture drawn by the author bears out Samuel Johnson s estimate of Newton s character " that he was able to separate knowledge from those weaknesses by which knowledge is disgraced , and he was able to excel in science and wisdom without purchasing them by the neglect of little things and that he stood alone merely because he left the rest of mankind behind him not because he deviated from the beaten track ' All will heartily agree with the opinion expressed by Professor Einstein in his foreword to the volume, that Colonel de Villamil deserves the thanks and congratulations of physicists throughout the world for what he has done

[1] *Newton the Man* By Lieut.-Colonel R de Villamil Foreword by Professor Albert Einstein London G D Knox 1931 (3s 6d net)

THE BRITISH POST GRADUATE HOSPITAL AND MEDICAL SCHOOL

As recorded in our issue of December 26th, 1931 (p 1194) the scheme in which the Government and the London County Council are co-operating for the establishment of a post-graduate hospital and medical school in association with Hammersmith Hospital has had to be reconsidered in view of the financial position of the nation The amount of £250 000 originally mentioned as the Government s contribution, greatly exceeds the limit which the Government in the changed circumstances is prepared to expend The sum available will be in the neighbourhood of £100 000 and therefore the architect of the London County Council has been engaged in the preparation of a fresh scheme at a cost not exceeding £200,000 about half of which will be provided by the Government The revised plans have been submitted to the governing body of the British Post-Graduate Hospital and Medical School of which Lord Chelmsford is chairman and accepted by it with an expression of appreciation of the cordial and sympathetic manner in which the Council and its officers have dealt with the altered situation It is stated that the scheme is one which will enable building operations to be carried out in sections as opportunity and financial considerations permit each section being part of the complete scheme The preliminary plans provide for a medical school and for casualty receiving and out-patient departments in two new blocks a new ward central sterilizing room massage and light section and an additional boiler The new blocks will displace certain existing portions of the hospital buildings The total estimated cost of these proposals apart from the cost of equipment and furniture is £160 000 The Central Public Health Committee of the L C C is of opinion that having regard to the limited scope of the scheme now entertained the proposals submitted are the best in the circumstances

A course of three lectures on the reaction between drugs and cells will be given at University College London by Professor A J Clark M D F R S , at 5 15 p m on February 26th and 29th, and March 1st Admission is free without ticket

THE HOSPITAL NURSING SERVICE

FINAL REPORT OF THE LANCET COMMISSION

The final report of the *Lancet* Commission on Nursing issued to day [1] completes a useful inquiry which is likely to influence the standard and conditions of the nursing service for a long time to come

The Commission was appointed in December 1930, under the chairmanship of Lord Crawford and Balcarres to inquire into the reasons for the shortage of candidates for nursing in the general and special hospitals and to offer suggestions for making the service more attractive If nothing more than statistics were relied upon, as we pointed out in reviewing the second interim report of the Commission it would not be easy to demonstrate any marked shortage because the nursing staff of most hospitals is within 10 per cent of full establishment But this inquiry has probed beneath the numerical returns and has made clear the fact that staffs are maintained at necessary strength only by the acceptance of candidates not up to the desired educational standard or by the appointment of temporary or assistant nurses There is a shortage of suitable candidates as might be expected in view of the number of attractive occupations with less austere discipline awaiting girls from secondary schools

Taking all the hospitals together it is estimated that one fifth of them fail to secure suitable candidates as sisters and one half fail to secure staff nurses and probationers of the standard they require The wastage of candidates during the preliminary trial period and the first year in hospital confirms the view that the nursing profession is having to recruit a substantial proportion of unsuitable applicants Up to now the patients have not been allowed to suffer from any lack of nursing attention But this has meant an increased strain on the trained staff which cannot continue indefinitely

The Task of the Commission

Such being the case the task of the Commission has been to consider means of adjustment and adaptation whereby sufficient numbers of young women of the right type may be attracted to an essential public service—in other words how the popularity of nursing among educated girls may be restored From the time when Florence Nightingale revolutionized nursing to the beginning of the present century nursing was a vocation largely recruited from the upper and upper middle classes though that is not to say that a high standard of knowledge necessarily obtained among these gentlewomen, and in those days of course there was no organized examination system for nurses nor were the details of nursing technique so complex as now To day very few hospitals are in a position to insist on secondary education for all applicants and still fewer to demand a school certificate or matriculation The girl in search of a career as well as her parents and schoolmistress views with misgiving a calling which entails institutional life cuts her off from her friends and social amusements subjects even her leisure to supervision and during her working hours at least for the three years of probationership means a fair amount of drudgery Improvements have been made in the conditions now offered to probationers in the best training hospitals but prejudice dies the harder first because not all hospitals show such improvement and secondly because those which do are reluctant to give publicity to the change with the implied admission that they were necessary or overdue How far the prejudice is justified and what can be done to ameliorate the position without impairing the fine spirit of the nursing service, is the question which this Commission whose members have included hospital matrons and women educationists set out to answer

More than thirty witnesses were examined and information was collected from 686 hospitals representing a nursing population of 44 000 Most of the evidence was collected during the first half of 1931 and it is pointed out that the great economic depression which has since occurred has had a favourable influence on recruitment for every form of work where board and residence form part of the emoluments, so that the shortage of candidates for hospital work is probably everywhere less acute than it was a year ago But the Commission maintains its point that if the desired type of girl is not only to be recruited but kept in the profession, adjustment on the lines recommended will have to be made

A Conflict of Ideals

The nursing profession is at present the theatre of a conflict of ideals Its older members who have absorbed its traditions for the most part remain convinced of the value of strict discipline The senior nurse views with amazement and often with disapproval, the improvement in the conditions offered to probationers She feels that whatever may be said about the hardness of the apprenticeship it is an essential part of a system which has admittedly produced nurses unsurpassed throughout the world for perception skill and sense of responsibility The routine work of the probationer, occupying nine or ten hours a day, may be open to criticism from without, but to her mind it is necessary to the nurture of the vocational spirit including uncritical obedience punctuality and loyalty to superiors and to the institution served

On the other hand the educational methods practised in hospitals have been largely superseded in the training grounds for other professions by methods which rely on arousing instead of damping, curiosity and initiative and which insist on the development of the student's personality outside the range of daily work It is even stated that the matrons of important institutions aware of the social and educational tendencies of the day are endeavouring to bring hospital training into line with them but are hampered by the conservative attitude of valued members of their senior staffs The ward sister is intolerant of attempts to induce her to allow to others a discipline less severe than she imposes on herself

It seems quite possible that the shortage of educated candidates may be due to vexations which cut more deeply than uncomfortable quarters or indifferent food The probationer is painfully aware of the contrast between the responsibility assigned to her in the wards and the lack of confidence in her in the nurses home While still a student she may be left at night in sole charge of a ward or be detailed to attend and report on the changing condition of a patient critically ill yet she is allowed only the smallest discretion in the conduct of her personal affairs and is subject to a protective supervision which the modern girl resents For example she may be forbidden to go out between 8 and 10 p m without special permission—a survival of the days when it was not considered decorous for young women to be abroad unattended in the evenings This grievance may coexist with a luxurious nurses home and an excellent dietary Indeed while the organized nurses in their evidence to the Commission laid the greatest stress on the need for increased pay for the trained staff, provision for superannuation, and better accommodation, a number of "old girl from

[1] The Lancet 1932 (2s 6d net)
[2] British Medical Journal August 22nd 1931 p 380

secondary schools who were asked whether they had considered nursing wanted more freedom and the opportunity to lead a normal social life during and after training

On this point as on others the Commission has something well worth saying It is evident that the fear that they will be treated as children deters educated girls from nursing but until the better type of candidate presents herself it is not surprising that the hospitals should continue to treat probationers as children since many of them have not been trained to self government before entering hospital When after three years however the training is completed and the nurse is deemed fit to be sent out into the world as a State registered nurse she should also be considered fit to be trusted to regulate her own life in hospital outside working hours Action which indicated acceptance of this point of view might serve to secure the co operation of all sections of the community in attempts to restore nursing to its former position in the esteem of educated women

AGE OF ENTRY TRAINING AND PAY

One factor in deflecting possible recruits from nursing into other channels has nothing whatever to do with conditions of service It relates to the relatively late age of entry Few if any hospitals approved for complete training admit probationers below 18 some of the more renowned training centres refuse all candidates under 19 or even 21 The girl leaves an elementary school at 14 or a secondary school at 16 or 17 and the gap between school and employment hinders recruiting Various schemes are reviewed for providing continued general or special education and for remunerative occupation between 16 and 19 The Commission itself takes the view that an extensive trial should be made of combined scholarship and maintenance schemes for girls of 16 and upwards The curriculum should at first be general rather than special later anatomy physiology and hygiene can be introduced No suggestion is made that the age of entry on full training should be lower than 18 Many hospitals not approved as training centres accept girls at 17 and some declare that there is advantage in a trial year which does not bind the girl to continue her training

It is sometimes said that the nurse pays nothing for her training and is alone among students for a profession in receiving a salary as well as board and lodging The report knocks this superficial judgement to pieces The cost of her training is actually borne by the nurse in giving labour more skilled than that for which she is paid For the hospital the employment of student labour has advantages such as stability of labour force discipline and discouragement of complaints The great hospitals have never organized a school of nursing on a definite fee paying basis even when nursing was fashionable among girls with private means But the Commission feels that hospitals should recognize that the nurses are paying indirectly for their training and should provide good training facilities including expert instruction during hours of duty To this end a ward sister who has to train successive batches of students should be given extra remuneration and some relief from other duties The professional education of nurses should be encouraged by specific allocation of funds Endowment of lectureships or tutorships at training schools for nurses is a form of benefaction still too rare again while medical schools receive substantial help from the State nursing schools are unaided (Only one instance is mentioned of a grant to a hospital for this purpose from the Board of Education)

The Commission makes no recommendation with regard to the pay of probationers It is considered that the policy most likely to attract suitable candidates would be to offer low salaries to probationers and increased remuneration to trained staffs The minimum initial salary for staff nurses laid down by the College of Nursing (£60 to £70) is felt to be adequate at important hospitals where the post is still a learning one but initial salaries of between £65 and £80 should be offered by small outlying or special hospitals if they are to secure recruits At present 58 per cent of hospitals pay £60 or over The following are recommended as the minimum salaries for ward sisters (who are as a rule underpaid)

Hospitals	Initial salary	Rising to
Not approved as training schools	£80	£120
Partially approved	£90	£150
Completely approved	£100	£160

At present at 35 per cent of the hospitals the initial rates of pay for sisters are £80 or over at 55 per cent from £70 to £75 and at 10 per cent below £70 It is considered that the inclusive salary and emoluments offered to non resident sisters should be of not less value than £250 a year and for posts higher than ward sister the universal adoption of the College of Nursing minimum scale is recommended It is also urged that all institutions employing nurses should participate in the federated superannuation scheme (contributory) for nurses and hospital officers introduced in 1928 At present only 400 of the 1 000 voluntary hospitals participate

HOURS OF WORK CONDITIONS OF SERVICE EXAMINATIONS

The evidence indicated to the Commission that the long hours of nurses employment restrict recruiting and lead to leakage from the service In 60 per cent of hospitals the hours actually worked in a normal day are from 9 to 10 in 26 per cent they are more than this and in 14 per cent less In 50 per cent of the hospitals the average weekly hours worked are from 55 to 59 in 35 per cent more and in 15 per cent less The span over which the day's work is spread is 13 to 13¾ hours in 75 per cent of the hospitals longer than this in 7 per cent and shorter in 18 per cent while the night span in 71 per cent of hospitals is 11½ to 12½ hours in 8 per cent longer and in 21 per cent shorter

The arguments for and against shorter hours are marshalled in the report but the Commission comes down on the side of reduction though the difficulty of the problem is acknowledged Taking into account the fact that nurses under the living in system waste no time in journeys to and from work a net daily duty basis of eight to eight and a half hours is considered reasonable The span of day duty should not exceed thirteen hours during which at least one and a half hours should be allowed for meals and three clear hours off duty Corresponding proposals are made for the night span

We can do no more than glance at a number of other constructive suggestions The aim of the Commission has been the elimination of anomalies rather than fundamental change One suggestion is that a more genial reception of a candidate's preliminary overture would have a favourable effect on recruitment Exhortations in the prospectus and rules might be couched in rather more sympathetic language Instead of a three years contract under penalty being demanded a long notice of withdrawal should suffice The matron should have power only to suspend a probationer dismissal resting with a committee of the board of management The staff food in many hospitals might be less monotonous and more carefully prepared Further improvement in accommodation is desirable not only in some of the smaller hospitals but among those approved as training schools A separate bedroom should be provided for each nurse The objections of the

hospital management to living out experiments are appreciated but the Commission does not share the common prejudice and makes the cautious recommendation that the possibility of giving some of the trained staff the alternative of living out should be explored While intercourse between the various ranks of the staff must remain formal in hospital some relaxation of ward etiquette might be permitted in the nurses home and the home might very well be run on informal lines under a warden One grievance would be remedied if adequate notice were given to the nurse of her off duty time Three weeks annual leave should be ensured It is believed that the nurses time and energies are too much occupied in routine domestic work and an increase in the number of ward maids is desirable

The Commission has a body of useful suggestions to make with regard to examinations It is thought that certain secondary schools and technical institutes might be recognized as centres from which students could be prepared direct in anatomy physiology and hygiene, which would form Part I of the preliminary State examination this part to be taken before the nurse enters the wards Part II being the theory and practice of nursing should be taken twelve or eighteen months after entering hospital Thus the prospective nurse would use her last school year in preparation for her profession and in her first hospital year would be better able to concentrate on practical work A simplification of the final State examination is also suggested whereby direct questions on medicine surgery, and gynaecology would be eliminated and questions would be confined to nursing treatment Sister tutors should be provided in the proportion of one to not more than sixty nurses in training and should not be required to undertake duties other than those connected with education in some hospitals at present over a hundred nurses are in training, with one sister tutor

The last sections of the report deal with the staffing of sanatoriums and of mental hospitals The monotony and the depressing nature of the work in tuberculosis institutions though this is likely to diminish somewhat with recent innovations in the treatment of phthisis must be met by increased pay and amenities The recruitment of female nurses for mental hospitals will become less difficult with the more sympathetic approach to the problem of mental illness The provision of greater facilities for fully trained mental nurses to take a course at general hospitals is described as urgent

In conclusion the Commission makes one remark which all the time we felt needed to be made that in nursing a sense of vocation is essential and that the standards of the profession are not to be maintained merely by economic appeal It has faith, notwithstanding the competition of other careers open to educated women that the shortage of suitable candidates will be overcome without revolutionary change

A word of praise should be given to the form of the report A vast amount of information has been concisely assembled with well written comments ingenious schematic illustrations and eighty pages of appendices with detailed tables It will serve not only as a text book for progressive reform in nursing but as a model of the way in which inquiries of the kind should be made and reported

Scotland

Glasgow Western Infirmary

At the annual meeting of contributors to the Glasgow Western Infirmary the Lord Provost who presided drew special attention to the fact that like all other philanthropic institutions in the city of Glasgow, a decrease in revenue had to be recorded for the past year The principal cause for this decrease was the decline of the subscriptions received from employees in works He wished that a larger number of the citizens would appreciate their obligations to the hospitals These institutions could not stand still and to keep abreast of the latest scientific and medical requirements meant increased expenses Colonel J A Roxburgh chairman of the board of management said that the number of patients treated had been about the same as in the previous year As a result of the working of the auxiliary hospital provided by the new David Elder Infirmary the waiting list of the Western Infirmary had been materially reduced and many persons requiring operations had received earlier treatment He drew attention to the fact that the number on the waiting list of a hospital was not necessarily a criterion of the urgency of the cases for a careful purging of the lists at regular intervals showed that the deficiency in accommodation was not so great as it appeared Meantime however much good could be done to relieve the pressure by co operation between voluntary hospitals on the one hand and the hospitals of county and burgh councils on the other Much extra work had been done in connexion with the pathological bacteriological and biochemical departments which contributed not only to the efficiency of the hospital but to the benefit of the community as a whole The work of their new radiological department had increased materially in the past year and radium treatment had also been more generally used The managers had now obtained a site in Church Street for the new ophthalmological department, for which funds had been obtained from the trustees of the late Dr Gavin P Tennent and they hoped to begin building operations in the near future In connexion with this institution a professorship of ophthalmology had been endowed in Glasgow University and the combined post of professor and director of this department was to be filled by a joint selection board from the University and the Infirmary With regard to finance the speaker said that though the legacies received in 1931 were about £20 000 short of the sum received from this source in 1930 the managers had been able after meeting the deficit in ordinary income and the extraordinary expenditure to carry about £7 000 to capital account Professor Archibald Young referring to the diminution of about £4 000 in the subscriptions from works employees said that these subscriptions were still over £20 000 per annum and that there was no reason to suppose they would not again increase under more favourable conditions of commerce and industry Fifty years ago such subscriptions had been under £1 000, and in 1914 they had amounted only to £6 000 It was interesting to note that during the last fifty years the total amount contributed by employees of works had been between £500 000 and £600 000

Maternity Mortality

In a lecture at Glasgow University on February 12th presided over by Colonel D J Mackintosh M D, superintendent of Glasgow Western Infirmary Dr James Young physician to the Edinburgh Royal Maternity Hospital dealt with the organization and administration of maternity hospitals He referred especially to the high death rate in the Scottish maternity hospitals which

he said arose from factors over which they had little control In the Glasgow Royal Maternity Hospital during 1930 there were 119 deaths in 4 469 cases giving a mortality of 26 6 per 1 000 while in the Edinburgh Royal Maternity Hospital during that year there had been 36 deaths among 2 305 patients giving a mortality of 15 per 1,000 On the other hand in the East End of London Maternity Hospital there had been 10 deaths in 8 890 cases which gave a mortality of 1 1 per 1 000 These differences he thought were partly explained by the fact that in the case of the Glasgow and Edinburgh hospitals there was a high concentration of abnormal and difficult cases selected for hospital treatment out of the large areas which these institutions served This however did not appear to be a complete explanation because a comparison of the same class of case in the different hospitals still showed the same relative difference Thus with regard to cases of toxaemia in pregnancy in Glasgow there had been 448 with twenty two deaths a mortality of 14 9 per cent in Edinburgh seventeen deaths in 208 cases a mortality of 8 1 per cent while in the East End of London Maternity Hospital there had been 200 such cases with no deaths A similar comparison could be drawn in certain other types of case In the Scottish hospitals the patients were admitted with their health and chances of recovery already jeopardized and the hospitals were thus handicapped from the beginning Such comparisons indicated that when the domestic midwifery service was sound and the service for the supervision of pregnancy was well organized the hospital death rate was lower than when these arrangements were not so well made Another fact of importance was that cases had to be admitted to hospital which were already under suspicion of being infective and this introduced an element of danger to other normal healthy women To meet this risk the modern hospital ought to have a system by which the two classes of case were rigidly segregated under separate staffs The lecturer considered that there was urgent need for a revision of their maternity methods

Edinburgh Dental Hospital and School

At the forty fourth annual dinner of the Edinburgh Dental Students Society Professor Edwin Bramwell in proposing the toast of the Edinburgh Dental Hospital and School stated that it was nearly three quarters of a century since this hospital had been started on very modest lines by Dr John Smith who had been a striking personality There were now 120 students in the hospital and the number of operations was half as many again as it had been two years previously while the balance-sheet gave a very healthy impression Dr William Guy dean of the school in replying said that during his period of forty four years in its service he had seen the school advance from insignificance to importance and from penury to affluence Both as regards service to patients and education of students the school could now challenge comparison with any other dental school

Central Midwives Board

At a meeting of the Central Midwives Board for Scotland Dr James Haig Ferguson was re elected chairman and Dr Robert Cochrane Buist was re elected deputy chairman The meeting appointed other committees and also examiners for the ensuing year and approved subject to inspection by the Board the list of recognized institutions with the teachers attached thereto for the training of midwifery nurses Out of 133 candidates at the examinations of the Board held simultaneously in Edinburgh Glasgow Dundee and Aberdeen 126 passed Of the successful candidates 23 were trained at the Royal Maternity Hospital and 13 at the Elsie Inglis Memorial Hospital Edinburgh 32 at the Royal Maternity Hospital 8 at Stobhill General Hospital 5 at the Eastern District Hospital and 3 at the Western District Hospital Glasgow 3 at Govan Maternity Hospital 9 at Bellshill Hospital 3 at Barshaw Hospital Paisley , 4 at Motherwell Maternity Home 6 at the Maternity Hospital Aberdeen 11 at the Royal Infirmary Dundee and the remainder at various recognized institutions

England and Wales

Royal College of Surgeons Hunterian Festival

The Hunterian Festival of the Royal College of Surgeons of England was held this week on the two hundred and fourth anniversary of the birth of John Hunter when Mr Wilfred Trotter delivered the Hunterian Oration which is published in full in the opening pages of our present issue In the evening a banquet was given in the College Library the company being received by the President, Lord Moynihan and the Vice Presidents Mr R P Rowlands and Mr W Sampson Handley After the usual loyal toasts had been honoured and the Memory of John Hunter had been toasted in silence the health of the guests was proposed by the President Welcoming the distinguished visitors with happily turned phrases Lord Moynihan remarked that an institution such as the Royal College of Surgeons could die of dignity and rigidity or it could keep in touch with the sciences and live Thanks to the generosity wisdom and foresight of one of its Fellows Sir G Buckston Browne, the College would soon enter into possession of a surgical biological research institute at Downe in the grounds of Charles Darwin s house The President greeted also Sir Henry Wellcome as one to whom the public and the profession owed an immense debt for his benefactions for the advancement of medical research He coupled with the toast the names of the Duke of Atholl and of Sir Hilton Young for five years a member of the General Medical Council and now Minister of Health both responded in appreciative terms The health of the Hunterian Orator was proposed in a very graceful speech by Lord Dawson of Penn President of the Royal College of Physicians and Mr Wilfred Trotter acknowledging the many compliments paid him suggested that he had been chosen to give this year s oration because he was a Surgical Everyman The other guests who enjoyed the hospitality of the College included Lord Atkin the Minister of Labour the Dean of St Paul s the Treasurers of the Inner Temple and the Middle Temple the President of the Royal Society Lieut General Sir Harold Fawcus D G A M S Surgeon Vice-Admiral R St G S Bond Medical Director-General R N the Regius Professor of Medicine at Oxford the President of the Royal Society of Medicine and the Masters of several City Companies

Hunterian Society of London

A festival dinner to commemorate the two hundred and fourth anniversary of the birth of John Hunter was arranged by the Hunterian Society at the May Fair Hotel London on February 11th Dr David Ross president of the society occupied the chair—a chair which had at one time belonged to John Hunter and is eventually to be presented to the Royal College of Surgeons Among the principal guests were the Lord Mayor and Sheriffs of the City of London with their ladies Lord Meston, Mr Justice McCardie Sir Arthur Keith and the presidents of the Medical Society of London the Royal Society of Medicine and the Chelsea Clinical Society The Memory of John Hunter was given as a silent toast Lord Meston Chancellor of Aberdeen University in pro

posing the toast of The Hunterian Society, referred to the work and personality of Hunter who he said without any systematic professional training as it was understood to day and by the sheer force of his intuitive genius, had lighted a torch which burned clearer every year A man who could claim as his pupils Abernethy Jenner and Astley Cooper must indeed have been a man among men An admirer of his twenty five years after his death wrote that when any new discovery in pathology was made at that time it was only a matter of learning what had been overlooked in Hunter s writings or forgotten in his lectures As for the society which bore his name, he remarked that it was founded 114 years ago in the educational and professional renaissance following the Napoleonic wars and its origin belonged to the same decade which in London saw the establishment of King s and University Colleges Dr David Ross in responding to the toast referred to the work of the society, the success of its recent sessions and the international character of its series of Hunterian Lectures the lecturers having been drawn from France Belgium Holland Denmark, the United States and Canada He announced that a gold medal of the society designed by Mr Thornton Shiells had been established to be awarded to a practitioner engaged in general practice for what was judged to be by a committee of the council the best original unpublished essay on a subject chosen by himself He presented the first medal to Dr Griffith Ifor Evans of Carnarvon Sir Thomas Carey Evans proposed the health of the Lord Mayor and Corporation remarking upon the long association of the Hunterian Society with the City of London and the Lord Mayor Sir Maurice Jenks in responding also mentioned the fact that all the ordinary meetings of the society were held east of Temple Bar and that for its annual orations it had been the delight of successive lord mayors to offer the hospitality of the Mansion House itself Mr Justice McCardie in responding to the toast of The Guests wittily proposed by Dr D A Coles permitted himself some reflections upon the homage paid to great men of the past Their mortal remains perished he said but their aims and ideals remained for ever They belonged as was said of Abraham Lincoln to the ages They were one of the assets of the nation and time was a loyal and affectionate guardian of their memories To day 140 years after his death that assembly of men and women and innumerable others in the medical profession looked upon John Hunter as the embodiment of the great ideals of modern and future surgery Lieut Colonel C T Samman (Deputy-Master Society of Apothecaries) in the absence of the Master Lieut-Colonel Freeman through illness also responded on behalf of the guests and joined in a tribute to Hunter and a further response was made by Sir Arthur Keith who remarked that he was not quite sure that had Hunter himself been present—this red haired man from Scotland a man of somewhat peculiar vintage rather quarrelsome and contentious—he would have been instantly appreciated by that gathering But he was one of the men who looked deeply into life and contributed something of permanent worth to mankind and he was one of those whose greatness was fully disclosed not to his own century but to the century following or perhaps even to the century after that

London County Council Hospitals

The Plastic Surgery Unit formerly at St James s Hospital Balham under the London County Council has been transferred by the Council to Hammersmith Hospital Sir Harold Gillies who was appointed by the old authority as visiting surgeon to the unit is now acting in an honorary capacity Sir Harold Gillies himself offered to make the change and the Council has expressed its appreciation of his action Mr T Pomfret Kilner to whom Sir Harold Gillies had delegated some of the work is engaged as visiting plastic surgeon and as soon as possible one assistant plastic surgeon is to be appointed

Dr J H Griffiths medical superintendent Southern Hospital will retire under the age limit in April next He entered the service of the Metropolitan Asylums Board in 1896 and has held the appointment of medical superintendent since 1916 The London County Council in recording the fact of his impending retirement states that he has carried out his responsible duties with great ability and zeal

The number of voluntary patients in the London county mental hospitals on December 31st last was 90 (49 men and 41 women) and the number of admissions and departures during the preceding three months was respectively 58 and 30 The largest number of voluntary patients in residence (27) was at Claybury the others were distributed over eight hospitals At the Maudsley Hospital 188 voluntary patients were in residence at the end of the year (77 male and 111 female) and 171 had been admitted and 157 had departed during the previous three months In addition during the three months, 397 men 537 women and 195 children received treatment at the out patients department at the Maudsley Hospital

Correspondence

PATHOLOGICAL SERVICE OF THE L C C

Sir,—Holding office in the pathological service of the London County Council I am obviously unable to comment on the criticism Sir Ernest Graham Little makes in his letter of February 6th on the policy of the Council in establishing its own pathological laboratories but as the pathologist in charge of the work in several of the laboratories named by Sir Ernest I may perhaps be permitted to make some observations on the practical side based on actual experience of clinical laboratory work—an experience that has been lamentably lacking in a number of distinguished authorities to whose views I have listened

Sir Ernest maintains that the pathological work of the Council s hospitals might be adequately and more economically carried out in the laboratories already existing at the large voluntary hospitals and he says "There must be few districts in London in which a great voluntary hospital with expensively equipped laboratories and still more important a large and highly qualified personnel to run them is not already in existence In examining this statement let me take the area where my own group laboratory is situated We have in Highgate three large hospitals all just across the road from one another accommodating altogether about 2 000 beds the nearest voluntary hospital is the Royal Northern does Sir Ernest suggest that there is then space equipment and personnel adequate to serve an additional group of 2 000 beds? Passing the Royal Northern we come to the next nearest at University College Hospital as I have myself been responsible for the clinical pathology there for the last twelve years I can say with authority that there are no facilities there for taking on a large additional bulk of work in clinical pathology Indeed I challenge directly the whole of Sir Ernest s suggestion and I go out into his country and say that with the exception of University College Hospital which is the only teaching hospital in London to staff its clinical laboratory with an adequate whole time staff there is hardly a voluntary hospital in London where the staff

of the clinical laboratories receives adequate remuneration for the hospital's own work and it is a pretty general cry that the work of the institution is apt to suffer because the pathologist must seek not merely his jam but even his bread-and-butter in private practice Large laboratories with skilled personnel waiting to take over this kind of work are a chimera

Assuming however for the sake of argument that there were the necessary laboratories available at the voluntary hospitals would it be possible to carry out therein the pathological investigations required in the Council's hospitals? Anyone with the slightest practical experience of clinical pathology must give an immediate answer No for to them it is manifestly impossible Take the example Sir Ernest himself brings forward in support of his suggestion he says it seems useless to provide a relatively poorly furnished laboratory at Paddington Hospital when there is a world famous Institute of Pathology fully equipped at St Mary's Hospital within ten minutes walk Sir Ernest ought to know the local geography better than I but both by measurement on a scale map and by my speedometer the actual distance is as near 1½ miles as may be—a distance that a mere pathologist not given to fancy flights will not care to do in ten minutes The inaccuracy however is of little moment for the chief point I wish to make is that to be of real use the laboratory must be in the immediate vicinity of the wards and by this I mean not further away than just across the road if it is one mile away it might almost as well be five or ten Sir Ernest must be aware that the pathological work at the Paddington Hospital has in fact been done for some time past at St Mary's Hospital an arrangement that continued in most friendly fashion until the hospital laboratory was opened in October and I think I shall be betraying no secret nor be going beyond the truth if I add that the pathological staff at St Mary's have shed no tears at losing the work The fact that the blood counts done in the hospital laboratory during the last three months were almost equal in number to those done for the hospital at St Mary's during the preceding nine months is surely eloquent testimony to the presence of some inhibitory factors under the old arrangement and distance I believe is one of the most powerful How under such a scheme can sugar-tolerance curves be carried out conveniently? How is the case of amoebic dysentery to be saved from the lingering misery of a faulty but clinically much more probable diagnosis of ulcerative colitis? How avoid the almost inevitable delay by which many a specimen loses much of its value before it gets to the pathologist? Above all how shall we get that intimate co operation between ward and laboratory that clinician and pathologist unite in acclaiming as essential to satisfactory work?

To discuss the economic aspect would bring in questions of policy that are outside my sphere but here too there are practical facts that are worth noting The laboratories at Fulham Paddington and New End are indeed compared to the Institute at St Mary's poorly furnished the one at Paddington is about 12 feet square the others are a bit bigger but backed as they are by the resources of the group laboratory we can carry out in all of them any of the investigations other than serological ones that I have commonly been called upon to make for my colleagues at University College Hospital they can be made with greater ease rapidity and accuracy than would be the case if the material had to be transported to a distant laboratory and I shall be vastly surprised if the ultimate cost per specimen is not much less This is not to suggest that under the circumstances of the past Paddington Hospital has not had very full value for its money from St Mary's and I have the best of reasons for knowing how greatly the services of St Mary's have been appreciated by the medical staff at Paddington The fact is that for the main mass of routine clinical pathology the resources of a really expensively equipped institute are quite unnecessary and a relatively poorly furnished laboratory on the spot is a far greater asset The expensive part is the personnel and that costs no more for an equivalent amount of work in the hospital laboratory than in the research institute

May I add to an already over long letter my own vision of the future—not I hope very far distant—when the Council laboratories will be working in intimate co operation with the voluntary hospitals and providing the workers there with hitherto untapped and invaluable sources of material I see no reason to suppose such an unfortunate spirit of antagonism as is suggested in Sir Ernest Graham-Little's final paragraph —I am, etc

London S W Feb 9th GORDON W GOODHART

P S —Since writing this I have read the letter from Lord Riddell and Dr Geoffrey Evans in your issue of February 13th This strengthens the conviction I already felt that there is a good deal of misconception as to (*a*) the amount and scope of the work required in the Council's hospitals and (*b*) the elaborate nature of the group laboratories Three of these are now in active work at Lewisham, Lambeth and Highgate and Dr Allott Dr Braxton Hicks and I offer a very cordial welcome to any member of the Voluntary Hospitals Committee who cares to come and see the laboratories and something of what they are doing

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SIR —May I add to the letter of the chairman and secretary of the London Voluntary Hospitals Committee that the scheme of the L C C to establish pathological centres has so far matured that the agreement under which pathological work for one of their hospitals was done by King's College Hospital was cancelled more than six months ago Moreover the report under consideration specifies (p 191) the hospitals at which laboratories have already been provided —I am etc

C E A BEDWELL
House Governor King's College Hospital

London S E Feb 15th

THE POSTERIOR PITUITARY

SIR —I have just read your annotation on Dr Harvey Cushing's work on the posterior pituitary

While assisting the late Sir James Mackenzie I published a book entitled *The Hearts of Man* (Oxford Medical Publications) in which the suggestion was offered on purely clinical grounds that the posterior pituitary bears a relation to the parasympathetic similar to that borne by the adrenal medulla to the sympathetic Sir James Mackenzie was working at that time on what he called his doctrine of reaction of which no adequate account has ever been published since he died without reaching final conclusions The basal idea of that doctrine was that for example stimulation of the sympathetic in the healthy organism is not likely to produce the same effects as stimulation in a laboratory animal Sir James used to say If I hit a man who is down the effect of the blow may be to induce collapse but if I hit a fit man the effect will be to cause him to hit me back This latter he called reaction — action being the real effect of the blow which is seen only when reaction cannot be carried out

It would seem that Dr Cushing has been thinking along these lines Injections of pituitary into the blood produce perhaps what Sir James Mackenzie would have called reactions whereas injections into the ventricles

may produce actions —the real effect Some attempt to state this doctrine was made by me in a work *Circulatory Diseases in General Practice* (Oxford Medical Publications) to which Sir James contributed a preface but such evidence as was adduced was solely of a clinical kind —I am etc

London Feb 13th R McNair Wilson

PSYCHONEUROSES ENDOCRINES AND TERMINOLOGY

Sir —The titles of Dr Langdon Brown s lecture and of your leading article based upon it would raise expectations in the minds of those whose work it is to deal with the psychoneuroses Yet some will surely be disappointed when they turn to them for guidance The hysterias anxiety states and obsessional conditions that make up the bulk of cases grouped under the peculiar and ill defined word *psychoneurosis* find little place in Dr Langdon Brown s lecture if we except the admission that it has been pointed out to him that certain symptoms are not uncommon in psychoneurotics without pituitary disease and also the reference to a liability to anxiety neurosis and phobias in the presence of adrenal defect It would have been helpful if he had told us how this defect can be physiologically demonstrated and where we can find in a form that satisfies the scientific canons evidence that the owner of a well developed pair of adrenals is a pugnacious and masculine type with plenty of drive, not to say aggression That hyperthyroidism is a psychoneurosis—that is, a disorder psychologically determined—is not news to psychopathologists but Dr Langdon Brown s advocacy of that view is stultified by the inclusion on equal terms with it of cretinism and myxoedema Does he mean that these are psychoneuroses? There is plainly need for definition here

Your leader gives evidence that it is at last quite respectable to believe that unconscious psychical phenomena—fundamental tendencies and past experiences —are accountable for many maladjustments and morbid states of consciousness' a tardy recognition of the validity of psycho analytical discoveries But again the relation of subject matter to title is remote and we are left wondering whether paranoid states and dementia praecox are psychoneuroses Definition once more seems necessary and the coupling of the neuroses and biogenic psychoses adds to the confusion In a review on page 242 we read of gastro intestinal neuroses and a general neurosis though diffident mortals may be depressed by the need for omniscience involved in the demand that 'the diagnosis of neurosis should never be made until all possibility of organic disease has been definitely excluded What is a neurosis? You say that some of us tend to think of the unconscious mind too exclusively in psychological terms (as for myself I cannot think of mind in any other way) but is it not time to cease pretending that we are being physiological when we talk about neurosis? Do we use the word in the sense of Cullen its originator who included under that title apoplexy palpitation asthma colic diarrhoea and hydrophobia or of Maudsley who equated *neurosis spasmodica* with insanity or do we agree with the Oxford Dictionary that neurosis signifies a change in the nerve cells of the brain prior to and resulting in psychic activity ? If I am told that a man afraid to walk across an open field is suffering from a neurosis in the sense of a functional nervous disorder my physiological training will not help me to understand any more than it will allow me to attribute the man s trouble to excess or defect of adrenal activity

Throughout history every advance in our knowledge of physiological mechanisms has been hailed as giving the key to the everlasting problem of human behaviour and emotion Chemistry and the production of acids, fermentation the circulation of the blood all had their turn then came Haller s discovery of nerve irritability and upon this was built a nomenclature—*neurosis* being an example—that still serves as a defence against the psychological approach Conditioned reflexes seem to be losing ground though not long ago a medical gathering was assured that 'man s behaviour is nothing but a series of conditioned reflexes Endocrines are in full swing as my waste paper basket testifies but although we have learnt much about diseases of certain glands yet in regard to the psychoneuroses we have only learnt some more about the way in which the organism expresses itself Seventy years ago surgeons studied the muscles involved in stammer and sought to cure the affliction by dividing those muscles to day a well known American surgeon treats 'disordered action of the heart by denervating the adrenals Though more drastic this involves the same principle that would guide and does guide the use of endocrine therapy in the treatment of the psychoneuroses

Psychopathologists are ready to accept all the help that endocrinology can afford and may even have something to offer to that study but to return to the point where I began very little either of Dr Langdon Brown s lecture or of your leader has any bearing upon the relation of psychoneuroses and the endocrines —I am etc,

February 8th Millais Culpin
Professor of Medical Industrial Psychology, London School of Hygiene and Tropical Medicine

GENITO URINARY TUBERCULOSIS AND THE MINISTRY OF PENSIONS

Sir —The charge of injustice and medical incompetency brought against the Ministry of Pensions by Dr C J Gordon Taylor is so irresponsible and so devoid of supporting evidence that I am rather surprised it has found publicity in your *Journal*

His argument is substantially and briefly as follows (1) A man in March, 1928 is found to be suffering from advanced genito urinary tuberculosis (2) The patient served on various fronts in the war from 1915 until the armistice (3) The Ministry of Pensions says there is no evidence that the disease was either contracted or aggravated by war service

What else could the Ministry possibly say on that evidence? The unfortunate patient is suffering from tuberculosis in 1928 and because he served in a war which terminated ten years previously Dr Gordon Taylor is satisfied that war conditions are responsible for the disease *Post hoc ergo propter hoc!*

I have never had any official connexion with the Ministry but in a large experience of its dealings with individual cases I have always found its representatives more than anxious to do justice to every claim and more often than not erring on the side of generosity

The Ministry must be accustomed to abuse from those who are ignorant of medical problems and scientifically uneducated but not I hope to charges such as this from a graduate of Oxford —I am etc

Oxford Feb 13th E Farquhar Buzzard

BLADDER HEALING AFTER CYSTOTOMY

Sir —Mr Macalpine s article in your issue of February 6th giving the details of his careful technique for bladder drainage calls attention to the fact that the danger from the prevesical space is just as real in a simple cystotomy as in prostatectomy One calls to mind that unsurgical operation of emptying a distended bladder by puncturing the viscus with a trocar and cannula passed blindly

through the skin It is difficult to imagine a more certain way of providing for a continuous extravasation of urine into the space of Retzius than by this procedure which fortunately is of most interest as a practice of the unenlightened past

In opening the bladder for any purpose I employ a technique which safeguards against the escape into the abdominal wound of the fluid used for distending the organ I do this with a belief in the accepted surgical principle that even if the fluid contains no living organisms to flood an open wound with antiseptic is a harmful procedure After the site for bladder puncture is exposed and fixed the fluid is allowed to escape by way of the catheter Then the bladder is opened

It must be remembered that the purpose of the cystostomy is to maintain an efficient bladder drainage by tube for a period which will vary according to the case

In suturing the bladder after a simple cystostomy this can be done in such a manner as to reduce to a minimum the likelihood of the escape of urine either round the tube or through the suture line A self-retaining angled suprapubic tube of my own pattern is used De Pezzer Malecot and other varieties of tubes in my experience are not so easily rendered watertight at their junction with the bladder wall The edges of the bladder wound are united in front of the tube by two layers of continuous catgut sutures The first includes the whole thickness of the bladder wall excepting the overlying vesical fascia The second draws the latter structure together over the first suture line so that this is completely buried and inverted Both sutures finish in the vicinity of the tube so that this is gripped tightly and its expanded end is in contact with the fistula A corrugated rubber drain passes from the prevesical space to the skin through the lowest extremity of the parietal incision while the tube from the bladder reaches the surface about two inches higher up By fixing the tube to the skin with a suture contact of the expanded end of the tube with the bladder wall surrounding the fistula is maintained After several years experience of this technique I can pronounce the final results to be eminently satisfactory and the conclusion is justified that it provides an adequate safeguard against infection of the prevesical space —I am etc

London W 1 Feb 8th H P WINSBURY-WHITE

SIR —I have read Mr Macalpine's article on bladder healing after suprapubic cystotomy with great interest No one can fail to agree with his statement that with the methods ordinarily used the post operative healing of bladder wounds remains unsatisfactory Some two years ago I evolved a technique which I have since used in all my one stage prostatectomies It has given me very much better results than any other method I have tried

The method adopted is that of closing the bladder around a tube but this closure is not done with interrupted sutures and actually is watertight as is shown by the irrigation fluid (with which I wash out the bladder at the conclusion of the operation) escaping entirely through the suprapubic tube without any leakage through the tube placed in the prevesical space The healing of the wound without the phenomena which attend urinary extravasation affords additional evidence The method of closure is as follows

A large de Pezzer's catheter is selected and the terminal part beyond the flange is cut off This makes the opening as large as the lumen of the tube The line of incision into the bladder is made prominent by gentle traction on the retention sutures which have previously been introduced transversely immediately beyond the upper and lower extremities of the incision

The closing stitch is started from below It is introduced slightly below the incision and passes through the muscular coats emerging in front of the mucous membrane at the lower angle of the incision From here a continuous suture of the mucous membrane only is carried upwards as far as the site for the tube It is now carried downwards again taking muscular coats only and is finished by tying to the original long end 000 chromic catgut is used The suprapubic catheter is now placed in position and a similar suture is introduced from the upper end of the incision thus closing the bladder The suprapubic catheter is withdrawn until the flanged part only is left within the bladder and two interrupted stitches are introduced one above and the other below the tube so as tightly to grasp it

The bladder is allowed to fall back into its normal position so that its anterior and posterior surfaces are approximated The wound is thoroughly dried and swabbed with flavine and the abdominal wall is sutured with interrupted stitches a small tube being left in the prevesical space

A large quantity of 1 in 10 000 potassium permanganate solution is run through the urethral catheter washing the clots through the suprapubic tube The urethral catheter is withdrawn and no catheter or bougie is again passed throughout the after treatment The suprapubic catheter which has been connected by tubing to a vessel at the side of the bed is removed about the seventh day and the bladder is irrigated through the suprapubic wound on this occasion only An Irving's box is now applied and the patient generally passes urine per urethram by the fourteenth day after operation The wound is usually completely closed a week later

I have had no case of haemorrhage no severe suppuration and no stricture in the cases in which I have carried out this technique Its success depends upon careful suture of the bladder and allowing that organ to fall back into its normal position when empty so that the condition depicted in Mr Macalpine's illustration (Fig 1) does not obtain —I am etc

Bournemouth Feb 8th A BASIL ROOKE

TREATMENT OF TINEA CAPITIS

SIR —The recent publication by my friend Dr Percival in the *Journal* of January 16th of statistics of ringworm of the scalp in Edinburgh prompts me to give the incidence of ringworm at the Dundee Education Authority Clinic for the past seventeen sessions Expressed graphically, these figures show a curve which corresponds in a remarkable way with that given by Dr Percival

Session	No of Cases	Session	No of Cases
1914–15	43	1923–24	74
1915–16	51	1924–25	67
1916–17	62	1925–26	60
1917–18	95	1926–27	31
1918–19	140	1927–28	32
1919–20	125	1928–29	24
1920–21	80	1929–30	12
1921–22	95	1930–31	21
1922–23	85		

The explanation of this curve with its peak in the years immediately following the war is perhaps difficult I think it is due to the steady though gradual increase in efficiency of the recognition of the disease and the necessity for effective though drastic treatment both by school medical officers and parents alike

With regard to the treatment of ringworm of the scalp I cannot allow the figures given by Dr Percival to pass without comment Dr Percival states that the period of isolation at the special school is about 135 days when epilation has been produced by *x* rays Surely this is far too long If *x* ray treatment is properly given epilation should be complete in four weeks and cure have occurred by then or soon after The figures for the first fifty cases I epilated by *x* rays at the Dundee Education Authority Clinic show that the average absence from school after treatment was commenced was 50·5 days The period was increased by my efforts to obtain cure by epilation of affected areas only a procedure which I have given up as in spite of precautions the affected hairs when they fell infected other parts of the scalp With complete

epilation of the whole scalp in all cases it is now very rare to have to keep a child away from school for longer than four weeks

I have given up epilation with thallium for children of school age after a series of about twenty cases My experience of thallium is the same as that of Dr Percival and Dr Ingram (*British Medical Journal*, January 2nd p 8) Dr Percival gives the average duration with thallium epilation as 113 days and Dr Ingram gives nearly 7 per cent of failures with thallium I agree with these figures and when one adds the frequency of toxic symptoms even of mild degree and the undoubted danger of fatal issue in rare cases and puts against them the certainty of much more speedy cure without the risk even of pain to the patient when x rays are used competently there seems to be very good evidence for preferring epilation by x rays —I am, etc

JOHN KINNEAR M D M R C P Ed,
Assistant Physician for Diseases of the Skin Royal Infirmary Dundee

February 6th

TREATMENT OF ERYSIPELAS BY INJECTIONS OF MILK

SIR —The therapeutic value of milk and other non specific injections in the common streptococcal and staphylococcal infections has been known and practised particularly in France and in Germany for over a decade In this country as a natural result of the pioneer work of Sir Almroth Wright we are still inclined to prefer the specific as opposed to the non specific weapon although signs of an impending change in this attitude are occasionally to be noted Whatever the merits and potentialities of the respective methods the 'non specific' school can claim at least two powerful advantages—speed of preparation and complete safety—both at the time of administration and in the later effects thereof These points could be elaborated at some length but it is only pertinent to instance here the delay that may be involved in the preparation of a specific vaccine and the dangers of even a small overdose and in the case of a serum the very unpleasant and quite unnecessary sequels of anaphylaxis and serum disease which may incapacitate the patient for weeks In general neither of these drawbacks applies to milk although of course a susceptible or allergized individual may occasionally be encountered

Dr Sayed is fortunate in having no fewer than thirteen cases of erysipelas to record My own experiences are much more limited for the dermatologist in this country sees but few cases One such I recorded in considerable detail with a dramatic and convincing temperature chart in the *Lancet* of September 1st 1928 (p 446) it concerns the case of a woman who in spite of four injections of anti streptococcal serum and a stock vaccine which appeared to aggravate had continued in a hyperpyrexial and fluctuating comatose condition for over a month On the thirtieth day of the illness she received an intramuscular injection of nolan (detoxicated milk protein Beiersdorf) 10 c cm On the same evening her temperature fell from 105° to 101° F and with three subsequent 10 c cm injections did not again rise above 100° F

I confess I am unable to understand the rationale and advantages of the intradermic as opposed to the subcutaneous or intramuscular routes To anyone who has practised the former it would appear extremely difficult to administer as much as from 5 to 15 c cm even by as many punctures for as a rule only about 1/2 c cm is actually practicable as a single intradermal dose Surely too in erysipelas it is a question rather of a general than a purely cutaneous infection The symptoms and the occasional fatalities at any rate point that way It would therefore appear irrational and to some extent a waste of time to attempt a cutaneous desensitization (although it would be the method of choice in the chronic and relapsing types) If 15 c cm are injected intradermally it becomes difficult to separate the local resistance effect from that engendered by protein shock to the whole organism and Dr Sayed himself records three cases in which the intramuscular route set up a general reaction which is curative of the condition The local spread of erysipelas is purely a symptom of activity of the causal streptococcus, which has been cultured more than once from the blood of such patients But I will not labour the point or trespass any longer on your valuable space Dr Sayed has rendered a considerable service in once again drawing attention to a most valuable safe and little practised treatment of a dreaded infection—I am etc,

London W 1 Feb 13th HENRY C SEMON

SIR —The account of the use of milk to check the progress of erysipelas contained in the current number of the *British Medical Journal* reminds me of Professor Broca's practice which I witnessed in Paris nearly sixty years ago He painted a one inch band of tincture of iodine around the affected limb, a short distance ahead of the infection and with pride at his next visit would demonstrate how completely he had stopped the spread of the inflammation I certainly never saw this treatment fail and with equal success employed it myself Once to convince a sceptic he purposely left a gap in the iodine band and the next day the blush had escaped through it, to be however duly checked with a fresh application of the drug Caustic nitrate of silver he used in the same manner but its liability to produce sores stood in its way —I am etc

Meopham Kent Feb 13th C H GOLDING BIRD

SHOE LEATHER DERMATITIS

SIR —The letters from Dr J A Blair (*British Medical Journal* January 23rd p 172) and Miss Jordan Lloyd (ibid February 6th p 261) on this subject remind me that two years ago Dr Clyde McKenzie of Smethwick brought to me a young lady who had noticed a numb feeling in her left great toe On examination she was found to have complete anaesthesia of the skin of the toe to touch and to pin prick in other ways she was healthy and has remained so and she was not neurotic The anaesthesia persisted for some months, and then gradually disappeared

As I could find nothing to account for this curious symptom I made some inquiries about her shoes and found that she had danced frequently in golden shoes which she had refreshed from time to time with a certain gold leaf paint A sample of the paint (which was really a fine powder) was submitted to Mr Garfield Thomas our biochemist at the Birmingham General Hospital and he reported that its important constituent was copper At the time Dr McKenzie and I considered that our patient probably had a mild neuritis caused by local absorption of copper through the skin and I thought it would be well to mention the case as it is conceivable that toxic symptoms may arise from the material people put on their shoes after they have left the manufacturer's hands and Miss Jordan Lloyd might like to examine this possibility —I am etc

Birmingham Feb 9th A P THOMSON

SIR —I ask your indulgence to allow me to amplify my statements in my letter which appeared in the *Journal* of January 23rd (p 171) owing to Dr Jordan Lloyd's interesting letter in your issue of February 6th (p 261) regarding the cause of shoe leather dermatitis

Dr Lloyd suggests that chromic acid may have been the cause in the two cases in question but after careful consideration I rejected this acid in favour of sumach Chromic acid is a powerful oxidant causing destruction of the skin leading to ulceration as exemplified in its salt the bichromate of potash These actions do not tally with the condition of the two cases Although Dr Lloyd vouches for the absence of sumach in modern British sole leather she will hardly do so for the foreign leathers boots and shoes freely imported into this country

In one of the cases of dermatitis a piece of bleached kip contained the poisonous material The so called bleaching of leather is used to tone down the disagreeable colour of some leathers especially the reddish leathers produced by hemlock tanning in the United States This is not hemlock the plant but an extract from *Abies canadensis* and *Geranium maculatum* For this bleaching some manufacturers consider Virginia sumach is the best owing to its acid yellow liquor when in solution It is probable that it is not a real chemical bleacher but that the blending of colours produces the desired effect Ordinary sumach of commerce is from a European shrub (*Rhus coriaria*) but what is Virginia sumach? I do not know of any sumach peculiar to Virginia (U S) but North Carolina its neighbouring State grows the *Rhus michauxii* (Sargent) said by some to be the most poisonous of American sumachs by others it is considered harmless Belief in its latter reputation might lead to its use as a bleacher

In conclusion for light leathers used in the arts and possibly for uppers of boots and shoes, sumach tanning is considered superior to any other for durability This point was emphasized as the result of the inquiry by experts instituted by the Society of Arts regarding leathers used in bookbinding —I am etc

Stroud Feb 11th J A BLAIR D Sc M D

SIR —With reference to the letter of Dr Jordan Lloyd in your issue of February 6th in which she states that within the knowledge of the British Leather Manufacturers Research Association no actual sample of leather alleged to have been associated with dermatitis has ever been proved to contain paraphenylene diamine I recently had a case of severe dermatitis of the forehead in a young man which began after wearing a new hat with a lining band of leather A portion of the leather was submitted for analysis to the city analyst of Liverpool Mr W H Roberts M Sc F I C who reported the presence in it of a dye—metaphenylene diamine —I am etc

London W 1 Feb 15th ELIZABETH HUNT M D

MEDICAL ENGINEERING

SIR —With reference to Dr Clausen's comment in the *Journal* of January 30th on the backward state of medical engineering I submit that the primary fault is often to be found in the lack of an ordered approach to the problem *First of all* the inquirer must have enough mechanical sense to be aware (when such is the fact) that he could do his work better with mechanical aid or that his existing appliance is in some respect inadequate Secondly it is better that he should reduce his requirements as nearly to basic principles as possible so that investigators may not be led astray or biased by the work of previous designers Thirdly he should broadcast his now simply defined wants with if necessary an account of the nature and limitations of such appliances as are already extant The problem is now stated and may be studied by medical engineering firms by individual members of our *profession* (many of whom have a strong mechanical sense and both ability and means to indulge that sense) and by *such necessary* but yet unformed bodies as say the Appliance Section of the Royal Society of Medicine

To turn from the general to the particular the objection to most suction pumps mentioned by Drs Pinchin and Morlock in the *Journal* of January 23rd that although a fair vacuum may be attained the instant the vacuum is broken the pressure falls to *nil* is so loosely stated as to be difficult to follow In the first place although it is convenient to think of a vacuum as an entity it is not one and consequently one must be wary in applying to it such metaphors as that of breaking The expression breaking a vacuum in the context mentioned does not imply a final and irrevocable act such as breaking a window or a thread since the vacuum is continuously being restored and if there is between air pump and air inlet an enclosed space large in proportion to the effective area of that inlet a breach of the vacuum set up by the pump can do no more than slightly reduce it Here we have the old schoolboy problem of the tank that is being filled by pipe A and emptied by pipe B The objection mentioned above does not depend on the pump except very indirectly it depends rather on the relation between the volume of the vacuum reservoir the degree of vacuum and the size of the hole through which the vacuum is being broken

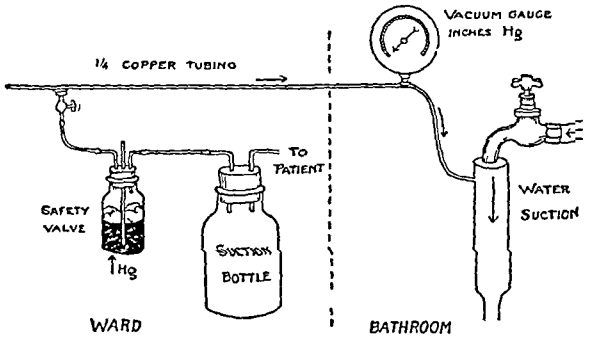
Drs Pinchin and Morlock say continuous effective suction on an open tube seemed impossible to attain but this remark again needs some qualification There are of course many types of suction machine including positive pumps which at each phase displace or extract a certain volume and so progressively build up a vacuum in a reservoir connected with them until their limit is reached and centrifugal machines which impel as tractors a great stream of air at only slightly reduced pressure without cumulative power of this latter class are most domestic vacuum cleaners which do maintain continuous effective suction on an open tube It appears from the context that what is required in this case is a continuous low-vacuum suction capable of rising quickly to fairly high vacuum if obstructed This implies the use of a small high speed positive pump with a small reservoir unless heavy pulsation is definitely intended when the pump should be large and slow running A suitable pump for the former purpose is the rotary blower used by dentists in their workrooms for working a blow pipe (not the dentists pump referred to by Dr Clausen which is reciprocating) This consists of a thick disk (or very short cylinder) with radial slots in which slide radially spring loaded fibre paddles the whole rotating eccentrically in an enclosed cylindrical space This type of pump should be rather more efficient than the one described and will certainly be much cheaper It is also suitable for use as a blower without an oil filter

As for Dr Clausen's remark that there seems no reason why vacuum should not be on tap as compressed air already is the problem is not quite so simple as this In many places such as operating theatres and chemical physiological and physical laboratories it is already so available while many dentists use a water injector type saliva pump But without a rather elaborate reducing valve at each point the on tap system would not be very suitable for the purpose under discussion as it implies the use of a fairly large reservoir which in turn connotes either excessive vacuum at all times or incapacity to raise the vacuum so as to clear its throat when an obstruction is encountered The storage capacity of a reservoir for compressed air is incomparably greater than for vacuum a one gallon tank can easily be made so as to store over 100 gallons of compressed air—it can store barely one gallon of vacuum —I am etc

London N W 4 Feb 9th G STRUAN MARSHALL

SUCTION SURGERY

Sir —The value of suction in surgery both in the operating theatre and in the wards is not yet fully appreciated and it is gratifying to know that attention is now being focused upon it The article by Mr Macalpine which appeared in your issue of February 6th will be of interest to all especially urologists A simple cheap but effective suction plant depicted below was installed in the Leeds General Infirmary over three years ago by Professor J F Dobson to supply eight beds used for bladder cases



The effect has been such as Mr Macalpine describes and the saving in linen and dressings alone justifies such an installation In this case however the suction is continuous The approximate cost including fixing was £8 —I am etc

George Armitage
February 11th Senior Surgical Tutor University of Leeds

EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS

Sir —There are here five large sanatoriums as well as a number of hotels pensions and chalets in which tuberculous people are curing and my work as English chaplain secures entry to these places Although I have been here only five months I have so frequently met with an experience that is both humiliating and distressing to one like myself who has practised as a doctor in England that I feel constrained to write about the matter I refer to the fact that a considerable number of the British patients out here are cases of delayed diagnosis Time after time have I been told that although the patient had complained to his doctor of symptoms suggesting pulmonary involvement—such as persistent cough and sputum haemoptysis etc or systemic disturbance (tiredness loss of weight digestive dysfunction etc)—no steps to discover the basis of such symptoms had been undertaken until the underlying condition had become obvious Thus many patients have become moderately advanced cases before adequate treatment has been begun and in some instances on account of delayed diagnosis patients have missed such advantages as can be obtained from modern methods of special treatment as for example, collapse therapy

One is driven to the conclusion that many general practitioners and even some chest specialists from time to time omit to investigate thoroughly symptoms which should make them at least anxious to exclude pulmonary tuberculosis I have heard of more than one case of true haemoptysis being dismissed as bleeding from the throat ! And many patients have informed me that they were assured that their chests were sound because the sputum test proved negative even though there were signs pointing in the opposite direction Quite clearly physical examination of the chest is too often given precedence over a ray photography

To facilitate earlier diagnosis, would it not be possible for local health authorities to send round from time to time to practitioners short circulars giving the various symptoms which should create suspicion of the existence of phthisis the steps which should be taken to elucidate the diagnosis and the name of the nearest centre where an x-ray diagnostic outfit was provided for those patients unable to pay the fee for a private radiologist? From what I have seen and learnt of medical work in Switzerland I am of opinion that estimations of the sedimentation rate of the erythrocytes although non specific as regards tuberculosis ought to be included in the routine examination of suspected cases, since they appear to be a reliable and objective index of toxaemia, even in the absence of raised temperatures and pulse rates

In conclusion may I again urge my medical colleagues to exercise the utmost care in their examination of all patients who complain of symptoms which might be due to tuberculosis? By such painstaking care the reputation of our profession will be increased, but of far more importance there will be the avoidance of much suffering, bitterness, and expense —I am etc

J Rushworth Lund MA,
Montana Switzerland Jan 31st MRCS LRCP

PEPTIC ULCERS AND PLUMBISM

Sir,—In my official capacity I have had to inspect periodically for the last fifteen years all the workers in the lead and spelter factories of this district including those who may have been patients of Dr David R Lewis for part of that time My attention naturally has been directed to all gastric symptoms but during that period no series of peptic ulcers due to plumbism have been brought to my attention Had Dr Lewis been concerned about such a terrible state of things as he describes one would have thought that he would at least have drawn my attention to the condition of which he seems to write with such great anxiety if not authority I have attended all the post-mortem examinations in this district made upon those who have been suspected of plumbism and was present at the only one of which he gives particulars including the chemical analysis Unfortunately he does not give the name of the analyst who examined the liver and kidney because the results are so extraordinarily different from those obtained by the borough analyst Such a discrepancy regarding the chemical analysis is not calculated to impress one with the accuracy or otherwise of the other statements Dr Lewis has placed before your readers especially those regarding the three deaths from duodenal ulcer which he says were followed by a post-mortem examination As I am present at all post mortem examinations held on cases suspected of plumbism it is extraordinary that I was not informed of these— I am etc

Swansea Feb 14th G Arbour Stephens

DIRECT PNEUMOCOCCAL TYPING

Sir —It was because I wish to popularize the method of direct pneumococcal typing not to seclude it that I wrote in your issue of February 6th I have already stated that sputums containing few pneumococci whether isolated or mixed with other organisms call for careful study but this in no wise invalidates the test I seriously question whether emulsification and consequent dilution of the sputum with saline solution as described by Drs Logan and Smeall is an advantage Direct admixture of sputum and diagnostic serum is preferable Again indifferent organisms are scarcely visible when as I recommend 1/6 inch objective and 4 eye piece are used— the swollen pneumococci in a positive reaction are then conspicuous.

In my opinion the chance of confusion of type due to reaction of pneumococci with both Type I and Type II serums has been exaggerated Drs Logan and Smeall cite only one case in their series of sixteen typed directly My own consecutive series (to date sixty nine cases of lobar pneumonia) includes forty due to the serological types In no case has there been reaction with more than one type serum nor did I ever observe this peculiarity when extensively practising the rapid mouse inoculation test last season The observation was made by myself ten years ago and is one of some academic interest Dealing with macroscopic agglutination of pneumococci *in vitro* (*Brit Journ Exper Path* 1922 iii 293) I wrote From time to time well authenticated strains of pneumococci exhibit agglutination in presence of both Type I and Type II serums the absorption test has shown these invariably to be Type II pneumococci I use the words academic interest advisedly The Parke Davis and Lederle concentrated anti pneumococcal serums now available for treatment are divalent and effective against both Type I and Type II infections There need be no delay in inoculation of serum to the patient therefore even if as described by Drs Logan and Smeall the result of the direct typing test be occasionally ambiguous —I am etc

RICHARD R ARMSTRONG

St Bartholomew s Hospital E C 1 Feb 15th

SPONTANEOUS CURE OF CANCER

SIR —I should be extremely grateful if practitioners would furnish me with details of any instances of spontaneous cure of carcinoma which have occurred in their practices

Control work in experimental medicine is difficult but the investigation of agents which may influence the growth of carcinomata cannot be undertaken without considering the incidence of spontaneous retrogression of malignant disease

I would suggest that cases investigated should satisfy the following requirements (1) The pathological diagnosis of malignant disease should be beyond reasonable doubt (2) Cases where the pathological diagnosis is disputable such as chorion epithelioma columnar celled carcinomata of the body of the uterus and carcinomata of the prostate—to give a few examples—are not suitable for this investigation (3) All instances of so called spontaneous cure should satisfy the five years free from recurrence requirements of carcinoma work

I particularly wish to obtain the reports of general practitioners since in ordinary hospital work the follow up of cases is unsatisfactory or the cases are too far advanced to afford assistance in the investigation in question —I am etc

JOHN H HANNAN M D
Registrar and Pathologist

Hospital for Women Soho Square W 1
Feb 9th

THERAPEUTIC ASSESSMENT

SIR —In the current number of the *British Medical Journal* you say

> If M Spahlinger s vaccines are to be tested let us at least be spared the wasted time energy material and enormous literary output of comparatively valueless records that characterise any unorganized attempt to solve one of the most difficult of biological problems

I think everyone will endorse this desideratum But may I venture to direct attention to another and perhaps more pressing problem with a view to enlisting your support for a suggestion which I made in the *Lancet* of November 28th 1925 as follows

> The treatment of incipient pneumonia is the concern mainly of the private practitioner for it is he who is faced with the emergencies The consulting physician sees them at a later stage often indeed so late that specific treatment if employed at all is not given a reasonable chance But material for a final assessment of the value of specific treatment can hardly be anticipated from the isolated efforts of individual private practitioners under present conditions
>
> If pneumonia were dealt with on similar lines to diphtheria as regards diagnosis specific treatment and notification the outlook would be more promising In connexion with pneumonia however I suggest that it would be desirable not only to provide pathological facilities and vaccines or serum but also some sort of clearing house preferably as a department of the public health service which would collate clinical records This would eventually permit of a sufficiently wide scrutiny of results to settle the matter

Recent developments in the diagnosis and specific treatment of pneumonia seem further to emphasize the desirability of some such scheme Individual predilections for other forms of treatment are I think sufficiently numerous to provide adequate controls —I am etc

Manchester Feb 13th J STAVELY DICK

MEDICAL SUPPLIES FOR MISSIONS

SIR —May I through the medium of your paper call attention to a crying need of Catholic missionaries—namely for medical supplies the necessity of which for missionaries far removed from hospitals or doctors cannot be exaggerated Those who have been in Africa or India know how the native crowds to the padre s veranda to beg attention for his fevers wounds sores or burns and they know also that his poverty often prevents him having an adequate supply of medicine ointment or even rags Hence the urgent demands on the Catholic Women s Missionary League a league of voluntary workers who send out gifts in kind to missionaries

A recent activity of this league is the provision of medical supplies This though begun on a small scale has already proved a great boon to missionaries many of whom work in districts far removed from any source of medical aid The constant requests received by the league for medical requisites show how necessary is the work of our St Luke s Store and the requests have now reached such proportions that it is essential for us to increase our activities in this direction if we are to satisfy even a portion of the demand

Unfortunately having very small funds at our disposal we are unable to purchase adequate supplies It has occurred to us however that doctors dentists and chemists must regularly receive from manufacturers many samples of such articles as pills ointments bandages tablets dentists instruments soaps tooth brushes etc Such samples are probably of little value individually but when collected from a number of sources they become in bulk of the greatest value to missionaries A simple scheme has been devised by which samples can be collected without expense and with a minimum of trouble to those who are willing to part with samples for which they have no need

It may be urged that some samples are useless and even dangerous when administered by amateurs but in answer to this objection we may state that a Catholic doctor has kindly offered to look over our supplies and ensure that obscure samples shall only be sent to missionaries with proper medical training We do not ask for ordinary drugs though these would be of immense value especially quinine and aspirin (both in tablet form) nor what is better still money to buy supplies but we do beg the charity of the medical profession for their surplus

samples and we feel that we shall not appeal in vain to the well known generosity of medical men

It may be well to add that the league works under proper authorized direction and its patron is His Eminence the Cardinal Archbishop of Westminster A postcard expressing willingness to respond to our request should be sent to the President, C W M L 3B Morpeth Terrace S W 1 —I am etc ,

EVELYN L THOMAS
President C W M L

February 3rd

BRITISH INSTITUTE OF PHILOSOPHY

SIR —In the multitude of causes that appeal through your columns philosophy might seem to be the last that has a claim on the attention of practical men But it is not difficult in the present disorganization of beliefs in fundamental principles that is manifest in every department of life to see the need of a cultivation of systematic thought that has the most intimate bearing upon practice We venture therefore to invite public attention to the *work of the British Institute of Philosophy*

Founded in 1925 with the late Lord Balfour as its president the institute has now a membership of over 1 400 which includes in addition to the general body of members almost all the representative philosophers in Great Britain as well as many distinguished scientists The institute publishes a quarterly review *Philosophy* it holds courses of lectures and organizes reading circles it arranges for the delivery of addresses by men of authority In addition to the work which is being done in London there are active local centres in Manchester, Bangor Cardiff Liverpool Newcastle and Durham, and Sheffield

The institute is anxious that its work should be more generally known in order that an enlarged membership may open to a wider public an opportunity to study the principles that underlie human experience and action in science art politics morals and religion Those of your readers who would desire to become members of the institute (the subscription is one guinea including the quarterly review) or to obtain further information with regard to it are invited to communicate with the Director of Studies at the rooms of the institute in University Hall 14 Gordon Square W C 1 —We are, etc

S ALEXANDER	OLIVER LODGE
ARTHUR EDDINGTON	J H MUIRHEAD
WILLIAM EBOR	RUSSELL
W R INGE	RUTHERFORD
A D LINDSAY	HERBERT SAMUEL
	W R SORLEY

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons gave a second reading this week to the Import Duties Bill by 451 to 73 and began the committee stage of this measure The list of duty-free articles appended to the Bill does not specify imports of drugs chemicals or medical instruments All these will be subject to an import duty of 10 per cent unless the Bill be amended The House of Commons also debated unemployment

The second reading of the Dangerous Drugs Bill was set down for this week in the House of Lords

When announcing the Government's agricultural policy on February 11th Sir John Gilmour said the Government would investigate the means of securing a reduction of disease among dairy herds

The Spahlinger Formula

Replying on February 11th to Mr Hammersley Sir E HILTON YOUNG said he had received from M Spahlinger a copy of his statement concerning the treatment of tuberculosis as issued to the press and was considering it He had also sent copies of the statement to the Medical Research Council and other competent research bodies for their observation

National Health Insurance

In reply to Mr Hicks on February 11th Sir E HILTON YOUNG stated that under the existing law insured persons were entitled to national health insurance benefits at the full rates for a period of at least eighteen months of continuous unemployment without the payment of any contributions An extension of that period would impose on societies a burden which they were not in a position to bear Apart from the temporary provisions of the Prolongation of Insurance Act insurance both for health and pensions was already kept alive for nearly three years of continuous unemployment

Replying to Mrs Ward on February 11th Sir E HILTON YOUNG *said he was unaware of any delay in payment of* maternity benefit for ten and twelve days after confinement by representatives of some insurance companies

Children's Bill

Mr OLIVER STANLEY Under Secretary for the Home Department moved the second reading of the Children's Bill on February 12th The Government intended that the present Bill should be followed by a Consolidation Bill gathering together all the provisions dealing with children and young persons The Bill provided that the magistrates sitting in juvenile courts should be chosen from a panel of ordinary magistrates who had been selected for their knowledge of work of this kind The Lord Chancellor would be asked to prescribe rules for the juvenile court to make it more intelligible and less frightening to the young person The juvenile court was not to be held in a building normally used as a police station or as an ordinary adult court Special arrangements would be made for the metropolitan courts The Bill would extend the jurisdiction of juvenile courts from 16 to 17 Up to the latter age an offender could be sent to an industrial school or committed to the care of a fit person a phrase which included the local education authority In future there would be no power to whip a child under 14 Boys over 14 could be sent to quarter sessions to be tried on any charge for which Parliament had ordered whipping as a statutory punishment The distinction between industrial schools and reformatories would be abolished and both would become approved schools The period of retention in an approved school would be for the child under 14 three years and in any case till 14 In the case of a young person it would be three years but not beyond 19 with six months further detention if needed to complete vocational training The Bill provided for a register of voluntary homes and gave the Home Secretary power to apply to a court against those where inspection was unsatisfactory and the alterations demanded were not made The Bill also proposed to raise the prohibited age for street trading from 14 to 16 unless the young person was trading with his parents and to raise the age during which street trading was regulated by the local education authority from 16 to 18 About 400 000 boys and girls were in unregulated employment enjoying neither the benefit of the Shops Act nor of the Factory Act The Home Secretary had decided that their hours could not be regulated by the present Bill This contained a clause dealing with employments which were bad and dangerous to children but there was nothing harmful in the vocation of the van boy the page boy or the errand boy The Bill would apply to Scotland by a special application clause

Mr RHYS DAVIES said that in 1917 51 323 young offenders were brought before the courts In 1929 the figure fell to 23 787 In 1917 27 290 convictions were recorded In 1929 these declined to 5 936 He was informed that the improvement had not continued since 1929 He regretted the Bill

made no provision for the establishment of observation centres In this country children were brought before the court and their destination decided irrespective of the mental capacity of the child In Belgium all such children were brought into the observation centre under medical care There were eminent psychologists to study the children before it was determined what training they should receive He was glad the Bill proposed to raise the age of responsibility from 7 years to 8 years He thought it should be raised to 9 now the average human life had extended by ten or twelve years The Bill proposed to raise the minimum age for capital punishment from 16 to 18 He hoped the House of Commons would agree to raise it to 21

MRS TATE thought the clauses dealing with infant life protection were inadequate It would be of advantage to have exhaustive inquiries made into how certain societies looked after homeless and illegitimate children

MR BRIANT regretted that Parliament had taken no recent steps to protect children against sexual offences SIR JOHN WITHERS said that juvenile offences were psychological and could not be judged in a few minutes before a magistrate Observation centres were needed

MR CADOGAN said that at least 50 per cent of the offences committed by young persons were attributable to neglect He was not prepared to attribute all juvenile offences to a deficiency of some gland with an unfamiliar name and to its effect on the metabolism of the body but he conceded that such physical discoveries were invaluable to those who had to correlate adolescence and crime He would like to see probation and institutional treatment replace prison so far as possible for persons under 21 and he regretted that last year 2 000 or 3 000 lads on remand were received into prison That scandal was obviated by the Bill for persons up to 17 but there was no provision after that age

DR SALTER said he understood that during the later stages of the Bill efforts would be made to repeal Section 120 of the 1908 Act which prohibited the admission of children to public house bars He implored the Home Secretary and the Government to resist any such change of the law The Royal Commission on Licensing had recommended that the general prohibition of 1908 should be maintained

MR SKEITON Under Secretary for Scotland said it would not be practicable to set up juvenile courts at once throughout Scotland as only 10 per cent of the summary criminal work of Scotland was done by justices of the peace courts When the Bill became law the Secretary for Scotland could order the provisions with regard to juvenile courts to be applied to any district in Scotland which was ripe for the change MR LAWSON cited the Young Offenders Committee as having said it found that medical officers unanimously condemned the policy of sending lads and girls of 16 or 17 to prison

THE DUCHESS OF ATHOLL hoped the Government would maintain the provision of the Education Act 1901 which forbade casual employment of children in Scotland after 7 P.M. in winter That had ruled out the possibility of children appearing in theatrical performances She had visited the lodgings of theatrical children on tour and had noticed what seemed to her indications of children having been doped to keep them small She suggested that the Bill should put a limit on the period in each year during which a child might be licensed in England for theatrical performances and should ensure that a child must be examined every time before a licence was reissued

MR MORGAN JONES said that when a child was mentally deficient and an offence had been committed in regard to it the authority to be responsible for its education and treatment should not be a body connected with the Home Office but the Board of Education Parliament ought to correlate all the educational activities of the State through the same vehicle

MR ROTHERMERE Parliamentary Secretary for Education said that regulation of certain employments for young people would take a better shape in some Factory Bill or Shop Hours Bill An investigation of the hours of 150 000 children in occupations showed immense improvement since 1913 Of van boys nearly 80 per cent did not work more than sixty hours a week including meal The fall in the birth rate during the war years and since would make the position of such children more economically favourable in future

The Bill was read a second time without a division and sent to a Standing Committee

Sterilization of Mental Defectives

On February 15th Captain WATT asked the Minister of Health whether in view of the social evil arising out of unrestricted propagation among mental defectives and the consequent increase in the number of such persons he would investigate the question of the sterilization of the mentally unfit and if desirable introduce legislation to eradicate the evil MR E BROWN who replied said that the desirability of legislation could not in the Minister's view be determined until there had been a full and authoritative inquiry into the problems of mental deficiency in which sterilization was only one of several interrelated questions As a first step towards such an inquiry the Minister proposed to arrange for a preliminary investigation of the scientific issues involved DR MORRIS JONES asked if the hon gentleman would announce the names of the members of the committee but MR BROWN replied that he had nothing to add to his answer

Dental Benefit

SIR E HILTON YOUNG told MR RHYS DAVIES on February 10th that in 1931 approved societies had made 52 081 references to regional dental officers as against 55 352 in 1930 In each year in about 85 per cent of the cases examined the report of the regional dental officer confirmed entirely or substantially the statement given by the dentist as to the treatment required or the satisfactory completion by him of treatment given During the year 1931 the number of questions under Part V of the Dental Benefit Regulations dealt with by local reference committees in England and Wales was 375 Two hundred of these were appeals by dentists of which 77 were allowed 84 were dismissed and 39 were decided in a manner not wholly for or against the dentist Appeals against the decisions of reference committees were lodged in 13 cases In one of these the appeal was allowed in part and in 12 cases the appeal was dismissed Inquiries under Part VI of the Dental Benefit Regulations on representations made to the Minister by the Dental Benefit Council were held in nine cases The reports of the inquiry committees on six of these cases had already been received and were now under consideration

Pulmonary Disease and Mine Workers.—Replying on February 11th to SIR WILLIAM JENKINS SIR HERBERT SAMUEL stated that it had not been established that work in anthracite mines was a cause of special pulmonary disease The question of the effect of coal dust on the lungs had been referred to the Pulmonary Diseases Committee of the Medical Research Council for investigation and it had found there were serious technical difficulties in prosecuting the researches necessary for determining the question This was receiving the close attention of the Medical Research Council but he could not say when the inquiry was likely to be brought to a completion SIR H SAMUEL told SIR W JENKINS that there had been 18 cases of coal miners who recovered compensation for disablement from silicosis in 1930 In 1929 there had been 12 cases Figures for 1931 were being collected

Imported Liquid Milk.—SIR E HILTON YOUNG told GENERAL CLIFTON BROWN on February 11th that it was compulsory for importers of liquid milk to be registered with the local authority under the Public Health (Imported Milk) Regulations and he could not properly give a list of the names of persons thus registered There was reason to believe that most if not all of the imported milk registered by the Port Sanitary Authorities of London Harwich and Newhaven was heat treated before shipment

Illegal Detention of Servant Girl.—On February 16th MR WEDGWOOD asked the Minister of Health if his attention had been called to a recent case of illegal detention of a so-called mentally deficient girl MR E BROWN replied that the Minister's attention had been called to the case This girl was not certified as mentally defective nor regarded as subject to be dealt with under the Mental Deficiency Act There was no evidence that other persons were being detained by the same people All premises certified for the reception of mental defectives were regularly inspected by the Board of Control

Obituary

WILLIAM BILLINGTON M S CH M F R C S

Surgeon Queen's Hospital Birmingham Professor of Surgery University of Birmingham

Professor William Billington who died at Edgbaston on February 7th had been in failing health for several months past but in spite of increasing disabilities he carried on his work almost to the last His death makes the third which has occurred on the active staff of Queen's Hospital Birmingham during the last fifteen months the other two being Professor Lawrence Ball and Mr A W Nuthall They were all three much loved men and their loss is keenly felt in the city to which they particularly Professor Billington gave great service and in the hospital and school to which they were devoted

William Billington eldest son of John Charles Billington was born at Elton Hall Sandbach Cheshire on June 16th 1876, he was educated at Sandbach Grammar School and Wellington College (now Wrekin School) Shropshire where he became head boy He began his medical studies with a scholarship at Mason College Birmingham and continued them at King's College London He had a brilliant career as a student winning many medals and prizes as well as the Ingleby scholarship in gynaecology In 1899 he graduated M B Lond with first-class honours and the gold medal in obstetric medicine He served as house physician and house surgeon at the Queen's Hospital Birmingham and then after a period of post-graduate work in London and elsewhere returned to Birmingham as acting resident pathologist at the General Hospital He obtained the diploma of F R C S in 1901 and two years later the degree of M S Lond and in 1925 the University of Birmingham conferred on him the Ch M In 1902 he was appointed surgeon to out patients at the Queen's Hospital and full surgeon in 1913 in 1924 he was made professor of surgery in the university



At the outbreak of war in 1914 Billington joined the 1st Southern General Hospital and was placed in charge of the centre for jaw and facial injuries Co-operating with his dental colleagues Mr Harold Round and Mr A H Parrott he did a great deal of original work in bone grafting and facial repair

He was largely instrumental in founding St Chad's Hospital this was the first institution of its kind in the country to provide expert medical and surgical treatment and skilled nursing for the large class of patients who cannot afford high fees and yet have no wish to enter public hospitals An account of this enterprise was contributed by him to our columns exactly twelve years ago As chairman of the Medical Committee of the Queen's Hospital he took a leading part in promoting its extension and in helping to raise the necessary funds he also represented his hospital in many spheres of public work in the city and was an ardent supporter of the proposed university hospital centre He was a past president of the Midland Medical Society and as a member of the Société Internationale de Chirurgie he recently visited Rome and Warsaw His book on movable kidney is now in its second edition and among his many contributions to the *British Medical Journal* and other periodicals were a number of papers on renal surgery

Billington was a born surgeon whose work was his principal hobby as an operator he was exceptionally neat and every procedure was marked by scrupulous care for detail His patience in obtaining full and precise histories of cases inspired great confidence As a speaker he was convincing and eloquent and his classes were very popular among students As a colleague he was always helpful in advising and guiding juniors His hospital duties and a large consulting practice left him very little leisure for other pursuits but country life always attracted him and he looked forward with delight to an occasional day's fishing or shooting

The funeral service was held at St Germain's Church Edgbaston on February 11th in the presence of a large and representative gathering

[The photograph reproduced is by H J Whitlock and Sons Ltd.]

THE LATE DR R H TODD

SIR HENRY SIMPSON NEWLAND writes from Adelaide

It is impossible to assess the magnitude of the loss the British Medical Association in Australia has suffered by the death of Dr Todd Having served for over twenty years in some or other official capacity on the executive of the South Australian Branch I am able to write with a full knowledge of Dr Todd's splendid services not only to the New South Wales Branch but to the Association and the profession at large He was a model secretary methodical courteous thorough in his doings and with an elastic outlook His legal training enabled him to view affairs in the right perspective and to guide others aright He had the courage of his convictions but in the presentation of them he never rode roughshod over the feelings of others

Of recent years my chairmanship of the Federal Committee of which Dr Todd was secretary had enhanced my respect for him and strengthened our friendship I can testify that my predecessors in the chair the late Dr W T Hayward C M G and the late Sir George Syme had the same high appreciation of Dr Todd's services and character The great compelling impulse of his very full life was his intense loyalty and devotion to the British Medical Association On his way back to Sydney after his recent visit to England he discussed with me plans for our joint visit to the forthcoming Centenary celebrations in London It is sad to think that death has robbed the historic occasion of his presence and him of the plaudits he was assured of and which he so well deserved

THE LATE DR STENHOUSE WILLIAMS

Professor LEITH MURRAY writes

The death of Stenhouse Williams will come as a sad shock to his many friends throughout this country and abroad Stenhouse as he was always known to his intimates was a remarkable and particularly lovable character At heart overburdened with shyness he yet had the faculty of making devoted friends To become a friend of Stenhouse was no easy matter In research work he was a hard taskmaster He had no patience with anyone who was not prepared to work *himself* to the bone Absolute honesty of purpose and unceasing endeavour were his watchwords

For several years before the war I had the privilege of carrying on research work in his laboratory In our conjoint researches I speedily found that time was to be no factor Midnight or even one o'clock might strike from the adjacent University Tower but he was deaf to its call if there was any item of work to be completed He never spared himself and was unwilling to spare others In Liverpool and as I understand later on in Reading he was ever surrounded by a band of willing workers as keen as any investigator could wish for Work and plenty of it seemed easy under the stimulation of his original mind and the attraction of his fervid enthusiasm

I remember well two incidents of my association with him At one time he was studying the endotoxins of the diplococcus of cerebro spinal fever and persuaded me—or ordered me—to inoculate him subcutaneously with a certain quantity of sterilized vaccine Within a very few hours he became seriously ill and remained so for some days with high temperature and vomiting The toxaemia ended with a herpes of the ear and neck such as I never wish to see again Yet in a few weeks he was busily testing the opsonins of an isolated limb (his own forearm) after one hour of a very tight Bier's bandage—a proceeding painful beyond telling as his face made obvious We all took our part in these experiments *in vivo* but Stenhouse always insisted on the lion's share although his name might only appear last on the list of authors of any paper that followed He carried this same vein of concentration into his occasional games of golf I do not recall ever having seen him smile during the progress of a game yet at the end as at all off duty times he was the good and happy companion *par excellence* I first met him at the Pasteur Institute in Paris When we both returned to Liverpool I went to his laboratory for a week or two of instruction on a particular point—and stayed six years That is the sort of man he was He will be difficult to replace

Medico-Legal

THREE YEARS PENAL SERVITUDE FOR UNQUALIFIED PRACTITIONER

At the Central Criminal Court on February 8th before the Recorder (Sir Ernest Wild K C) George Edward Williams aged 51 described as a medical attendant of Foley Street W pleaded Guilty on an indictment charging him with committing perjury on the trial of an action in Clerkenwell County Court in swearing that he was a registered medical practitioner to another indictment under the Dangerous Drugs Act charging him with having in his possession and procuring certain dangerous drugs without being duly authorized and also to a third indictment concerned with an untrue statement for the purpose of procuring a passport

Mr G D Roberts who prosecuted speaking with regard to the first charge said that the defendant had given evidence in the case as an expert medical witness and had stated that he had been in practice for twenty six years and that his qualifications were M D Camb M R C S L R C P and D P H

The charges relating to drugs were for being in unauthorized possession of morphine sulphate and cocaine hydrochloride contrary to the Dangerous Drugs (Consolidation) Regulations 1928 It appeared that a certain doctor had had a surgery in Foley Street and that when he left Williams who had been acquainted with him took the lease of the premises and practised there as Dr G E Williams He had treated patients and had obtained drugs from a number of chemists in one case actually prescribing a dangerous drug for a patient Evidence was given by chemists of having supplied Williams with dangerous drugs believing him to be a registered medical practitioner

Mr Laurence Vine in defending stated that Williams was not a drug addict nor had he trafficked in drugs for persons who were addicts He had been a steward in a hospital and during the war had served in the Royal Army Medical Corps

The Recorder sentenced Williams to three years penal servitude on the charge of perjury and on the charge under the Dangerous Drugs Act the sentences to run concurrently He passed no sentence on the charge of making an untrue statement for the purpose of obtaining a passport

FATAL MISTAKE AT HOSPITAL

An inquest was held at Dartford Kent on February 8th concerning the death of Mrs Beatrice Summers at Livingstone Hospital Dartford following the administration of belladonna in mistake for syrup of figs

It appeared from the evidence that the deceased aged 52 had undergone an operation and was making slow progress towards recovery Nurse James a probationer aged 17 was in charge of the patient who was ordered castor oil but asked for syrup of figs and the sister said she could have it The nurse stated in evidence that in mistake for syrup of figs she took a bottle which she now knew to contain belladonna and glycerin Three patients were given a dose from the same bottle but the other two were progressing favourably The medicine chest was low down and badly lighted and there was nothing to distinguish some of the bottles containing poison from others containing other mixtures She did not know how long it was since the cupboard was cleaned out and new labels affixed Sister Hebborn in charge of the women's and children's wards said that she gave Nurse James the key of the medicine cupboard to get the aperient She had put the aperient bottles on a tray earlier in the day and thought the syrup of figs was among them but later found it outside the tray She did not know how or when the bottle of belladonna got into the cupboard but she knew it had been there for some weeks Dr C F Knight said that he saw the patient after he had been told that belladonna had been administered by mistake Everything possible was done to counteract the poison Apart from this unfortunate occurrence the woman was likely to have recovered from her operation Miss Anderson the matron of the hospital said that as soon as she discovered that belladonna had been given she gave emetics She had no idea how the belladonna bottle got into the cupboard the mixture was last ordered two years ago She agreed that the bottle and label were not suitable for poisons She added that building operations had been taking place at the hospital and the staff had been working under difficulties

The jury returned a verdict of Accidental death accelerated by the administration of belladonna by mistake

The coroner said that he hesitated to add anything which would hinder the work of the hospital but he could not shut his eyes to the fact that the evidence showed great want of organization and supervision The young nurse was hardly old enough to have the administration of medicines (though it appeared she had given her age as 18 when she joined the hospital in October 1930) The medicine cupboard should have had attention and bottles and labels should not have been used as they were The mistake was one that ought not to have been made but the blame for it should not rest on the shoulders of the nurse alone The most astounding thing was that the sister did not know from where the belladonna came

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on February 14th the following medical degrees were conferred

M D—C F Brockington
B Chir—G D Kersley T C Larkworthy

UNIVERSITY OF LONDON

The regulations of the M D examination for internal and external students have been amended by the addition of the following (A) To paragraph (1) relating to the submission by candidates for Branches I–IV of certificates of having been engaged in professional practice for not less than five years (Red Book 1931–32 p 205 Blue Book September 1931 p 265)

> The certificate must be signed by some person other than the candidate being a registered medical practitioner or other person whom the University may approve for the purpose and the person signing the certificate must certify that to his personal knowledge the candidate has been engaged in professional practice for not less than five years

(B) To the last footnote on page 209 of the Red Book 1931–32 and page 270 of the Blue Book September 1931

> Four copies of any supplementary documents submitted must be furnished

The regulations relating to Exemption from external intermediate examinations through the Higher School Examination of the University Pamphlet 77 (5) have been amended by the insertion of the following after the section relating to Intermediate Arts Examination

> *External First Examination for Medical Degrees*—To qualify for complete exemption from the First Examination for Medical Degrees a candidate must at one and the same Higher School Examination pass on the main subject syllabuses in the three following subjects of Group D (1) Physics (2) Chemistry (3) either (*a*) General Biology or (*b*) Botany and Zoology
>
> A candidate who qualifies for the Higher School Certificate and passes on the main subject syllabuses in any of the subjects (1) Chemistry (2) Physics (3) General Biology or (3) Botany and Zoology will be exempted from examination in (1) Inorganic Chemistry (2) Physics (3) General Biology respectively at the First Examination for Medical Degrees
>
> A candidate who obtains exemption from one or two subjects of the First Examination for Medical Degrees may obtain

exemption from the remaining subject or subjects at a subsequent Higher School Examination or a subsequent External First Examination for Medical Degrees

A fee of two guineas for one subject and four guineas for two subjects is charged in respect of each subsequent entry and if at an External Examination the candidate must be registered before such entry as an external student

Such registrations must be completed at least six months prior to the last date of entry to the examination with the exception that Higher School Candidates who propose to take or complete a First Examination for Medical Degrees in the following December may do so provided they register within one month of the publication of the Higher School result

Professor H S Raper has been appointed external staff examiner in physiology for Science Examinations for 1932

Applications for grants from the Thomas Smythe Hughes and Beaverbrook Medical Research Funds which are allocated annually for the purpose of assisting medical research must be sent in not later than April 1st Particulars can be obtained from the Academic Registrar University of London South Kensington S W

UNIVERSITY OF GLASGOW

Sir Arthur Keith M D F R S will deliver the Frazer Lecture in Anthropology on Friday March 4th

ROYAL COLLEGE OF SURGEONS OF ENGLAND

At a meeting of the Council of the Royal College of Surgeons held on February 11th with Lord Moynihan the President in the chair diplomas of Membership were conferred on the following candidates who had passed the final examination in medicine surgery and midwifery of the Examining Board in England

J H B Beal H L Beckitt F J Beilby H W Boake J A Boycott H F L Broadway S B Bromberg R H P Clark J G R Clarke I Cohen F R S Cormack E H de B Crowther Smith J F Dales G A Desai R D Green K H C Hester W Holdsworth E T Jones K D Keele W S G Lawson P H Lomax I A MacDougall G J McFarlane N C O Byrne Norah W K Petter F W J Platts C R D Porter T W H Porter K C Priddy Pushpawati J A E Scott J R S Sharp R H Smith G L Talwar J C S Thomas A A M Wajih G Walker

(The names of other successful candidates receiving the diploma were printed in the report of the meeting of the Royal College of Physicians published in our issue of February 6th p 264)

Diplomas in Public Health were granted jointly with the Royal College of Physicians to the candidates whose names were printed in the report of the meeting of the Royal College of Physicians published in the *Journal* of February 6th (p 264)

Sir Percy Sargent was appointed Bradshaw Lecturer and Mr Francis Weston F S A Past Master of the Barbers Company Thomas Vicary Lecturer for the ensuing year

Mr Victor Bonney was reappointed the representative of the College on the Central Midwives Board for the period of one year from April 1st 1932

The gift of a silver bowl from Sir George Makins Past President of the College was reported

The Chester Royal Infirmary was recognized for the twelve months surgical practice required of non Members before admission to the Final Fellowship Examination

The President reported that an election of three Fellows into the Council would take place on Thursday July 7th next at 11 a m in the vacancies occasioned by the retirement in rotation of Mr W McAdam Eccles Mr Wilfred Trotter, and Sir Charles Gordon Watson that notice of the election would be given to the Fellows by advertisement and by circular on March 11th and that March 21st would be the last day for the nomination of candidates and that a voting paper would be sent on April 6th to every Fellow of the College whose address was registered at the College

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

Dr Jessie Macgregor Prize in Medical Science

An award of this prize will be made in July next to the applicant who presents the best record of original work in the science of medicine Such work may be published or unpublished but must not have been published earlier than July 1929 The prize is of the value of £70 and is open to medical women who are graduates in medicine of the University of Edinburgh or who have taken the Scottish triple qualification and who before becoming qualified have studied medicine for at least one year in Edinburgh The successful applicant shall within six months following the award deliver a lecture to the medical profession in Edinburgh on the subject of the work for which the prize has been awarded such lecture to be entitled The Dr Jessie Macgregor Lecture Applications marked Dr Jessie Macgregor Prize in Medical Science must reach the Convener of Trustees Royal College of Physicians of Edinburgh not later than April 30th

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

At the quarterly meeting of the Council recently held with the president Professor W Blair Bell in the chair the following Members were elevated to the Fellowship of the College

John Hewitt M B Ch B (Glasgow) Frederick Arthur Maguire D S O V D M D Ch M F R C S (Sydney) Donald McIntyre M B E M D Ch B F R F P S (Glasgow) Wilfred Shaw M A M D F R C S (London) Barry Keyte Tenison Collins M A M D F R C S I d (Cardiff)

The following were elected Members

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* By examination

The Services

DEATHS IN THE SERVICES

Surgeon General Sir Henry Hamilton K C B Bengal Medical Service (ret) died at Mentone on January 21st aged 80 He was born on April 7th 1851 the son of William Hamilton of Coolaghey House Raphoe Donegal was educated at the Royal School Raphoe and at Queen's College Belfast and graduated B A in 1872 and M D and M Ch in 1875 of the Queen's University of Ireland Entering the I M S as surgeon on March 31st 1876 he became surgeon lieutenant colonel after twenty years service brigade surgeon lieutenant colonel by a special promotion for his services in the Tirah campaign on May 20th 1898 colonel on October 1st 1902 and surgeon general on March 24th 1907 retiring on April 7th 1911 He served in the Afghan war of 1878 80 in the action at Charasiah operations at and around Kabul the affair at Shekhabad and in General Roberts's march from Kabul to Kandahar was mentioned in dispatches in G G O No 582 of 1880 and received the Afghan medal with three clasps and the special bronze star for the Kabul Kandahar march in the North West Frontier in the Chitral campaign of 1895 as P M O of General Gatacre's brigade medal with clasp in the Frontier campaign of 1897-98 in the operations in Samana and in the Kurram Valley mentioned in dispatches in G G O No 304 of 1898 two clasps in the Tirah campaign of 1897-98 mentioned in dispatches in C G O No 244 of 1898 and specially promoted to brigade surgeon lieutenant colonel and clasp and in the China war of 1900 in command of No 2 General Hospital medal He received a Good Service Pension on October 25th 1902 the C B on June 24th 1904 and the K C B on June 3rd 1913 He married in 1900 Violetta daughter of Mr John Williams by whom he had one daughter and secondly in 1909 Beatrice daughter of the late Henry Locke

Lieut Colonel John Norman MacLeod C M G C I E Bengal Medical Service (ret) died suddenly at Nice on January 16th aged 66 He was born on May 8th 1865 the eldest son of the late Rev John MacLeod D D of Govan and was educated at Glasgow University where he graduated as M A in 1866 and as M B and C M in 1890 also subsequently taking the F R C S Ed in 1899 Entering the I M S as surgeon lieutenant on January 30th 1893 he became lieutenant colonel after twenty years service and retired on August 23rd 1916 Among the appointments he held in India were those of surgeon to H E the Commander in Chief Residency Surgeon in Nepal and successively in several other States and of Civil Surgeon of Quetta and Principal Medical Officer of Baluchistan He served on the North West Frontier of India in the Chitral campaign of 1895 took part in the relief of Chitral and received the frontier medal with a clasp and in the Tochi campaign in 1897-98 gaining another clasp Soon after the war of 1914-18 started he was appointed to the command of the Indian Hospital in the Pavilion Brighton when he was mentioned in dispatches in the *London Gazette* of July 27th 1917 and received the C M G On his retirement he was appointed commandant of Queen Mary's Convalescent Auxiliary Hospitals for limbless sailors and soldiers at Rochampton and at Dover House He received the Kaisar i Hind medal on November 9th 1901 the C I E on January 1st 1908 and the C M G on June 4th 1917 He married Katherine Campbell daughter of the late Mr P M Intyre of Kildowan Glasgow who survives him with one son and one daughter

Medical News

At the meeting of the Medico Legal Society to be held at 11 Chandos Street W 1 on Thursday February 25th at 8 30 p m Dr Gerald Slot will read a paper on Sudden death A discussion will follow

A meeting of the Fever Group of the Society of Medical Officers of Health will be held at the House of the society, 1 Upper Montague Street Russell Square on Friday February 26th at 4 p m when Dr R R Armstrong (St Bartholomew s Hospital) will read a paper on The serum treatment of pneumonia All interested in the subject will be welcome

The annual meeting of the Industrial Health Education Society will be held in British Medical Association House Tavistock Square W C on Tuesday next February 23rd at 4 p m The speakers announced are Sir Thomas Horder Bt M D president of the society Lord Luke of Pavenham chairman of executive and Sir W S Haldane chairman of Scottish area council

A new session of post graduate lectures and demonstrations will open at the Manchester Royal Infirmary on Tuesday February 23rd when Dr A Ramsbottom will discuss some points in the diagnosis and treatment of pleural effusion On Friday February 26th Mr J Morley will give a demonstration of surgical cases The course will be continued on succeeding Tuesdays and Fridays (with the exception of March 25th 29th and April 1st) till May 10th All the lectures and demonstrations will begin at 4 15 p m and tea will be served at 3 45

The Fellowship of Medicine and Post Graduate Medical Association announces a lecture by Dr R D Lawrence on Some difficulties in insulin treatment in general practice at 4 p m on February 26th open only to members of the Fellowship Free demonstrations will be given as follows February 25th 2 30 p m the Blackfriars Skin Hospital by Mr Willmott Evans February 26th 2 p m the Chelsea Hospital for Women by Dr F Roques followed by gynaecological operations at 3 p m A course in neurology begins on February 22nd and will continue for a month daily at 5 p m at the West End Hospital for Nervous Diseases Lecture demonstrations in psychological medicine will take place at the Bethlem Royal Hospital Monk s Orchard Eden Park on Tuesdays and Fridays at 11 a m from February 23rd to March 18th A whole day course will be given from March 7th to 19th at the Royal National Orthopaedic Hospital also a whole day course in proctology at the Gordon Hospital from March 14th to 19th Copies of syllabuses and tickets of admission may be obtained from the Fellowship of Medicine 1 Wimpole Street W 1

The seventeenth Congress of the German Dermatological Society will be held in Vienna from May 16th to 18th when the principal subject for discussion will be cancer of the skin introduced by Lubarsch of Berlin and Miescher of Zürich Further information can be obtained from the secretary Dr Matras Alserstrasse 4 Vienna IX

The third international Congress of Eugenics will be held at the Natural History Museum New York from August 21st to 23rd under the presidency of Mr Charles Davenport Further information can be obtained from Mr Harry H Laughlin Cold Spring Harbor Long Island N Y

On his sixtieth birthday Dr Lafayette B Mendel professor of physiological chemistry at Yale University was presented on February 5th with a portrait of himself by John Quincy Adams Over four hundred students and associates participated in making the gift in recognition of Professor Mendel s long and distinguished service as a teacher and as a leader in his field of science

The Association of German Medical Women recently celebrated the seventieth birthday of Dr Agnes Bluhm of the Kaiser Wilhelm Institute for Biology where she won the silver Leibnitz medal by a work on the influence of alcohol on descendants

An Italian society of surgery of the mouth and dento facial orthopaedics was recently founded at Parma with Dr Bellinzona of Milan president of honour and Professor Arlotta of Milan president The first congress of the society will be held at Parma in May with Professor Paolucci as president of honour

For the first time in its history the Prussian Parliament has elected a medical man as its president in the person of Marine General Oberarzt Dr William Boehm of Remscheid a member of the German People s Party

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

Dry Mouth

W H M writes I wonder if anyone can do anything except to recommend sips of water during the night or patience when the morning brings some salivation for that very distressing condition the dry parched mouth—often described as leather or parchment I suppose it is due to sleeping with the mouth open and consequent evaporation of saliva I am aged 65 edentulous otherwise healthy I awake about 4 a m with a dry tongue almost painful Of course I snore drink water when I awake and get off to sleep again but it is a beastly nuisance

Cowper s Insanity

Dr J R WHITWELL writes in reply to M D (February 13th p 316) William Cowper suffered from repeated attacks of acute melancholia marked by delusions of unworthiness of having committed unpardonable sin of being forsaken by God etc and was of suicidal tendency His first attack occurred about the age of 21 and his third attack at 42 continued practically without interruption until his death some twenty seven years later References (1) Boutin J *Etude med co psychologique sur W Cowper* Lyon (2) *Medical Times and Hospital Gazette* London 1905 xxxii p 287 (3) The Insanity of William Cowper *American Journal of Insanity* 1857 (4) *The Life of William Cowper* T Wright Fisher Unwin 1892 (a full review of which appeared in the *Journal of Mental Science* 1890 xl)

Intestinal Flatulence

C R A (Bombay) writes In the *Journal* of December 19th 1931 Puzzled asks for suggestions for relief of intestinal flatus May I suggest to him to abstain from using saccharose in any form He may use levulose instead He will find that he is soon free from his worries

INTERESTED writes from Northern Ireland If your correspondent Puzzled has not yet found a satisfactory cure for his patient with intestinal flatulence I suggest that the case might be one of gastric atony with spasm of the colon In these cases there seems to be a large amount of fluid in the stomach in the mornings which has evidently been fermenting during the night I have found the

following treatment helpful (1) Deep breathing with light Swedish drill for the abdominal organs for about five minutes in the morning with general massage all over the body with a rough towel afterwards (2) Breakfast to be dry with milky tea or coffee and no sugar taken about one and a half hours afterwards Dinner should also be taken dry and well masticated particularly all starchy food Attention should be given to defective teeth (3) Rest after each meal with tapping lightly over the stomach from left to right (4) With regard to drugs the iron and mercury mixture suggested by Stacey Wilson or creo garlic one tablet with the milky tea at midday another an hour before the evening meal and a third an hour before supper I should be glad to hear if the above method of treatment is a success

Income Tax

Wear and Tear Claim for Arrears

A L S firm purchased an x ray apparatus in 1921 cost £900 No depreciation claim was made until 1931-32 when a further claim was made for the appropriate allowance for back years The latter claim was at first refused by the local inspector but on application being made to the Board of Inland Revenue the claim for arrears of the allowance was admitted from 1925-26 onwards

*** The section under which the claim was admitted provides relief in the case of an error or mistake in the return and such claims must be made within six years from the end of the year of assessment A claim for 1924-25 would therefore have to be made by April 5th 1931 and if—as would seem to be the case—that was not done the earliest year of claim would be 1925-26 If the firm replace the apparatus there may be ultimately no net loss provided that an obsolescence claim is made as the basis of that claim is the cost of the old apparatus less the depreciation allowances given so that the less that has been actually received in that way the greater would be the obsolescence allowance

Division of Partnership Assessment

A and B are partners with equal shares in the firm s receipts but each pays his own expenses for house and motor Taking the divisible receipts at £2 000 and assuming A s expenses are £400 and B s £200 how should the assessment of £1 400 (= £2 000 − £600) be divided?

*** Section 20 of the Income Tax Act 1918 provides that the income of a partner shall be deemed to be the share to which he is entitled during the year to which the claim [that is statement of total income] relates The income referred to is clearly the income as computed for assessment—that is on the above quoted figures the £1 400 and not the £2 000 The division should therefore be made as follows

A £1 000 + £400 = £600 B £1 000 + £200 = £800

Salaried Appointment Subscriptions

J H E holds a public appointment and has claimed to deduct from his salary subscriptions (*a*) to professional medical societies and (*b*) to the Society for the Relief of Widows and Children of Medical Men the latter subscription being regarded as in substance life assurance payments

*** The subscriptions are not allowable As regards those falling under (*a*) they are deductible only if J H E is required to belong to the societies in question by the terms of his appointment (rule laid down in Simpson *v* Tate) and apparently that condition is not fulfilled As regards the other subscription the statutory provision for life assurance relief requires the payment to be made under contract with an insurance company lawfully carrying on business in the United Kingdom or with a registered friendly society apart from other possible objections the subscriptions in question are apparently paid voluntarily and not under a contract

Payment of Interest

T H puts the following question A has lent money to B for the purchase of a practice Must B deduct income tax at 5s in the £ when paying the interest to A or may he pay the interest in full leaving it to A to return it for assessment? If either course can be adopted is there any advantage in one or other?

*** The Income Tax Acts prohibit the deduction of interest in computing profits liable to taxation and consequently B will have to pay tax not only on that portion of his professional profits which he retains but also on that portion which passes on to A as interest B is not bound to deduct the tax when paying the interest but he has to include it in his profits and of course suffers personally unless he recoups himself by such deduction This method of payment of tax on interest is merely machinery of collection for all other purposes the interest is regarded as A s income and there would be no real advantage to B if the payments were treated as professional expenses and the amount assessed on A

LETTERS, NOTES, ETC

The Common Cold

A Correction

Mr Herbert Tilley writes In the report of the discussion on The common cold in the *British Medical Journal* for February 13th may I point out that on page 292 line 7 the word whole should read middle (meatus) Otherwise the paragraph in which the mistake appears as well as that which follows it would be unintelligible

Operation at Advanced Age

Dr Wm S Dickie (Middlesbrough) writes Recently I operated on a gentleman for a large irreducible scrotal hernia subject to recurrent attacks of obstruction The patient was born on September 13th 1841 and consequently at the date of the operation was aged 90 years and 4 months The operation of reduction and radical cure done under spinal anaesthesia was simple and free from any anxiety Wound healing was perfect and the convalescence uncomplicated except for signs from the twelfth to fourteenth days of a small pulmonary infarction I am interested in the question of age and operation Doubtless there are instances of major operations at ages equal to and greater than that in the case above mentioned

Captain of the Men of Death

Dr A Hayes Smith (Bradford) writes Dr Chalmers in his letter on simulation of heart disease in your issue of February 13th quotes Osler as describing sudden heart failure as Captain of the men of death The term Captain of the men of death ' was applied by Osler to pneumonia It is found in the address on Medicine in the nineteenth century *Aequanimitas* second edition eighth impression page 260

National Conference on Leprosy in China

Dr James L Maxwell medical adviser to the Mission to Lepers writes from Shanghai under date January 18th The first national conference on leprosy in China will be held in Shanghai on April 14th and 15th 1932 under the auspices of the Chinese Mission to Lepers The first day will be devoted to an appraisal of the leprosy position in China and to discussions on the methods most applicable to the special conditions in that country The second day will be given to the consideration of problems of diagnosis and treatment No special invitations are being sent out but it is hoped that leprologists from neighbouring countries will take part in the discussions and a hearty invitation is extended to any foreign leprologists who might be travelling in the East at the time of this conference

A Warning

Mr Hamilton Kirk M R C V S (London N W 11) writes I wish to give timely warning to all practitioners not to effect the purchase of a second hand Philips metalix portable x ray apparatus bearing the maker s number 4760 or more significant still no number at all This set in a leather case and with an auto transformer No 138284 was stolen from my motor car and I have offered £15 reward to anyone who can help me to recover it

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48 49 52 and 53 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 66

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

165 Etiological Factors in Hypertension

I S PALMER (*New England Journ Med* December 24th 1931 p 1233) believes that if the progressive course of hyperpiesia is to be altered the vascular mechanism involved must be understood an early diagnosis of the existence of this mechanism must be made and all possible etiological factors be fully appreciated Three main physiological factors influence blood pressure the head of pressure or minute volume output of the heart the viscosity of the blood and the resistance offered to the flow of blood through the vascular system Increased peripheral resistance is the underlying cause of abnormally high blood pressure The two chief etiological factors in hypertension are an inherited predisposition and obesity Many contributory factors such as dietary errors endocrine dysfunction diminished chest volume foci of infection allergy and nervous strain may prove important in individual cases but are not generally significant The practical indications are to recognize the potential hypertensive patient from his family history to guard him against obesity and to ascertain if any contributory factor exists in that particular individual

166 Undulant Fever

J R LEAVELL MARY POSTON and H L AMOSS (*Arch Int Med* December 1931 p 1186) report a case of Brucella infection of only seven days duration in a man aged 25 Had blood cultures not been taken it might have been easily mistaken for influenza or some other febrile condition and the authors remark that there probably exists some relationship between similar cases and the ambulatory cases previously described Though the disease is not highly communicable the possibility of such patients acting as carriers must be borne in mind from a public health point of view The authors think that their case may afford an explanation by reason of its short duration of the cutaneous hypersensitiveness to Brucella which is sometimes discovered and of the presence of agglutinins for Brucella in patients who have no history of undulant fever it emphasizes the difficulty of diagnosis by ordinary clinical methods

167 H R LEAVELL and H L AMOSS (ibid p 1192) from the study of the cutaneous test in Brucella infections note that the cutaneous hypersensitiveness in cases of undulant fever varies in the course of the disease certain patients reacting more strongly in the early stages while in others the reaction is more acute later The test though not definitely specific is of value in diagnosis in cases in which no Brucella agglutinins are present in the blood and in which the organism cannot be grown on culture of the blood urine stools or bile Representative strains of several different types of Brucella should be used in testing the interpretation being based on consideration of the reactions as a whole, rather than on any single one

168 Staphylococcus Food Poisoning

E O JORDAN (*Journ Amer Med Assoc* December 5th 1931 p 1704) states that while nearly nine tenths of the outbreaks of food poisoning in Great Britain are due to bacilli of the Salmonella group in the United States food poisoning is not infrequently due to staphylococci without any admixture of paratyphoid bacilli The staphylococcus type of food poisoning differs from the Salmonella type in having a much shorter incubation period symptoms rarely appearing later than four hours after the toxic substance has been swallowed In Salmonella food poisoning on the other hand symptoms do not appear until six to twelve hours after eating the food, and in many authentic cases the incubation period has been more than twenty hours Although the symptoms may be alarmingly violent no fatal cases of staphylococcus food poisoning have yet been recorded whereas the mortality in the Salmonella type is about 1 to 2 per cent

169 Diphtheria Prevention in Philadelphia

E L BAUER (*Amer Journ Med Sci* December 1931 p 839) states that approximately 55 per cent of the children of infant and pre school age in the city of Philadelphia have been immunized against diphtheria by toxin antitoxin 47 8 per cent of them by the Department of Public Health 66 25 per cent of the children of this age group and perhaps more of the school age group have either been immunized or are naturally immune The incidence of diphtheria has since been reduced 80 per cent He adds that 99 2 per cent of the cases of diphtheria in the city of Philadelphia occur in non immunized children or in those in whom no immunity has been demonstrated while less than 1 per cent occurred in immunized cases

Surgery

170 The Leather bottle Stomach

J FRIEDENWALD and T H MORRISON (*Amer Journ Med Sci* December 1931 p 847) believe that the term leather bottle stomach covers several conditions which though grossly similar present a varied pathology It is hard to differentiate these types clinically The condition may be divided into two main groups carcinoma (linitis plastica) and fibromatosis each may be local or diffuse Seven cases, illustrative of each type are recorded The carcinomatous form is represented by a small cell epithelioid growth the histology of which is described as is also that of the fibromatous form The clinical and *x* ray appearances of both types are similar and are largely those of carcinoma though a definitely benign form apparently exists The duration of life varies according to the type of lesion The symptoms are progressive pyloric stenosis is common and unless surgical measures are instituted death occurs from anaemia inanition, metastases and cachexia Radical operation either pylorectomy or gastrectomy affords the only hope for complete cure occasionally gastro enterostomy or other palliative measures may give relief W R BROOKSHER jun (*Radiology* December 1931 p 1176) presents a study of linitis plastica and tersely describes its etiology symptoms and pathology He emphasizes the importance of *x* ray examinations since these reveal characteristic pictures Short notes on several cases are added

171 Exophthalmic Goitre

M SCHTEINGART (*Rev Sud Amer de Med et de Chir* November 1931 p 1073) attributes exophthalmic goitre to hyperfunction of the thyroid producing an excess of thyrotoxin and associated with functional changes in the sympathetic system Clinically one of the earliest symptoms is wasting to which he attaches much importance in the differential diagnosis from other thyroid affections tachycardia goitre exophthalmos (rarely one-sided) cardio vascular troubles tremor digestive disturbances menstrual derangements and cutaneous pigmentation are discussed in turn followed by consideration of the increase in the basal metabolism The author believes that as the basis of the various causes there is a special thyroido sympathetic neuro endocrine predisposition The main means of ameliorating the disease are the administration of lugol either with or without radiotherapy and surgical intervention associated with lugol before and after the operation Of the 200 cases on which his con-

clusions are based amelioration was obtained by iodine and radiotherapy in seventy by radiotherapy alone in fifty and by surgical procedures in eighty Treatment should start with 30 minims of lugol daily for a month if improvement ensues as shown by increased weight fall in the metabolic index and diminution in the pulse rate the choice between radiotherapy and surgery must be decided on the merits of the case Complete cure in the sense of the disappearance of all symptoms is rare although it may occur Relapses follow in 15 to 20 per cent but might be prevented by iodine therapy On the whole the author is in favour of surgical treatment unless the condition of the patient is too grave The ideal resection is subtotal thyroidectomy preserving only a simple posterior layer and the superior pole of the gland

172 Intrathoracic Goitre

M BERARD (*Lyon Chir* November–December 1931 p 753) points out the difficulty of distinguishing between a true thoracic goitre (that is one which lies almost completely behind the sterno costal junction and in which the upper pole is hardly perceptible in the neck) and a cervical goitre which has a fairly large projection down into the thorax The term intrathoracic goitre should really be applied to those tumours which develop primarily in the mediastinum but these are rare they are more frequently found in a patient who comes with a small and easily palpable goitre in the neck the main tumour lying within the thorax As a result of experience in fifteen cases it has been found that even in cases of very large goitre it has been possible to operate on these benign intrathoracic goitres by a single incision in the neck In one instance it was found necessary to perform a sterno costotomy for an enormous goitre as large as an adult head which was causing symptoms of suffocation with paralysis of the right vocal cord Division of the vascular pedicles must be carried out care being taken to divide between two ligatures in order to avoid the risk of haemorrhage In most cases it is possible to remove the whole of the tumour by progressive traction on the upper pole from the neck The size must first be reduced by puncture of the goitre which is often cystic or by enucleation of any adenomata which may be found on the surface An incision in the neck under local anaesthesia has given the best results When a goitre is very large its removal leaves a large mediastinal space which must be adequately drained in the second or third intercostal space immediately outside the internal mammary vessels to avoid the risk of a slowly developing infection With these precautions the mortality following operation in these cases may be reduced to from 4 to 10 per cent according to the operative technique employed

173 Spina Bifida

W T COLGHLIN (*Annals of Surgery* December 1931 p 982) records twelve cases of spina bifida in which operation was undertaken The ages of the infants ranged from 16 hours to 7 months seven were females and five males The various types of spina bifida are described myelocele myelocystocele syringomyelocele and meningocele The condition in one form or other occurs once in every thousand births and in each case there is a dural defect Paralysis of the lower limbs is not a contra indication to operative treatment but in cases where paralysis of the bowel and bladder is present causing incontinence an operation does little or no good Operation in all other forms of spina bifida should be performed as soon as possible babies under 3 days old suffer little from shock Of the cases under review there were five myeloceles four meningomyeloceles and three meningoceles eight were open and discharging cerebro spinal fluid and four were closed Five showed sphincteric paralysis before the operation and have not improved since these with one other case also had some paralysis of the extremities In one instance this was improved and in another it was made worse Three cases were hydrocephalic and of these patients one died in four months one child was alive and well at the age of 7 years Of the twelve infants treated, eight are living and well three died and one could not be traced The author remarks that after the operation the child must be kept in the head down position for at least six days or for two days after the cerebro spinal fluid has stopped draining Osteoplastic reconstruction of the spinal canal is not recommended it was not attempted in any case of the series No child has developed hydrocephalus since the operation

Therapeutics

174 Injection Treatment of Cavernous Haemangioma

S E LIGHT (*Arch Derm and Syph* December 1931 p 992) discusses the injection treatment of cavernous haemangiomas and reports a cure by injection of a 75 per cent invert sugar solution A man aged 20 had had a tumour of the left ankle since infancy, this had increased in size and become superficially ulcerated during the four years before he received the injections Standing or walking increased its size and caused aching in the leg On raising the leg with the patient recumbent the oedema and tumour mass became reduced to about half its original size revealing on palpation an agglomeration of tortuous vessels and blood sinuses Lassar's paste was applied locally and an elastic bandage was worn during the following month four injections of a 75 per cent invert sugar solution were made into the large veins emanating from the main tumour Remarkable improvement ensued with reduction of the tumour to half its original size healing of the ulceration and subsidence of the pain After continuing the injections at regular intervals for eight months the leg became practically normal in shape and the patient was able to stand for many hours without swelling or discomfort A total of thirty four injections was given—nine of a 30 per cent sodium salicylate solution and the remainder of the 75 per cent invert sugar solution Light adds that while angiomas may be treated successfully with radium CO snow high frequency currents or surgery those measures are often not feasible in the cavernous type and it is in such that success may follow the use of sclerosing substances which have the advantage of producing no scarring being relatively painless and not interfering with the occupation

175 Treatment of Asthma

M C HARRIS (*Med Journ and Record* December 2nd 1931 p 539) believes that the specific treatment of asthma yields the best results A careful and complete history must be obtained in every case while the physical examination should be specially directed to those organs which are most frequently found to be the site of infection Laboratory measures should be employed freely all foci of infection should be removed and measures be instituted to improve the hygienic condition as far as possible No case can be said to have been thoroughly investigated until all these steps have been taken Intradermal tests are advisable and if sensitivity to foods is detected these must be removed from the dietary or desensitization be instituted Pollen asthma may be dealt with prophylactically or therapeutically In bacterial non allergic cases an autogenous vaccine from the sputum may be useful or a stock vaccine containing *M catarrhalis Staphylococcus aureus* and haemolytic and non haemolytic streptococci Operative measures on the nose should be avoided whenever possible conservative treatment being indicated Harris remarks that injections of peptone typhoid vaccine milk and tuberculin give no constant or uniform results while calcium therapy has been shown to have no scientific basis The oral administration of sodium iodide may be useful and local applications of ultra violet rays have been found helpful in some cases Adrenaline remains the best drug though ephedrine hydrochloride may be employed with advantage to prevent an attack or ward off an impending reaction during specific treatment Adrenaline however seems to be more constant and prompt in affording relief Cocaine and morphine are

discouraged as habit-forming drugs The use of an artificially produced febrile reaction in intractable asthma is still in the experimental stage

176 Malaria Therapy in Gonorrhoea

J WERTHER and HILDEGARD KOSTER (*Derm Woch* December 5th 1931 p 1893) record their observations on 510 cases of gonorrhoea treated at the Dresden Skin Clinic by malaria therapy during 1929 and 1930 250 were women and 260 men suffering from all forms of gonorrhoea and complications Cures ensued in 94 6 per cent recovery taking place in 37 8 days on the average in the case of women and in 30 9 days in that of men The average incubation period was four days the maximum period being 16 days and the minimum 0 the rise of temperature followed by a malarial paroxysm occurring on the day of inoculation The average number of malarial attacks in each case was 12 The cure of gonorrhoea was usually effected in the febrile stage but occasionally in the apyrexial interval The authors remark that the method can only be used in hospital and requires a specially trained staff One death occurred among the 510 cases The patient was a woman aged 24 in whom death resulted from cardiac failure during a malarial attack Beyond revealing status lymphaticus the necropsy was negative

Laryngology and Otology

177 Membranous Rhinitis

G SALVADORI (*Arch Ital di Otol Rinol e Laringol* November 1931 p 512) records four cases of membranous rhinitis in children aged from 4 to 11 years in one of which the condition was due to the Klebs Loeffler bacillus and in the rest to the ordinary pyogenic organisms He comes to the conclusion that there are two clinical forms of membranous rhinitis one being diphtherial in nature and the other being produced by staphylococci streptococci and pneumococci In the early stage it is very difficult to differentiate one form from the other The distinction cannot be made by rhinoscopy since in both cases a more or less thick and adherent membrane is present The clinical picture however may yield valuable information because the course of the affection in the pyogenic form is shorter and milder than in the diphtherial form Bacteriological examination may be of help though it is not infallible since the presence of the Klebs Loeffler bacillus has sometimes no pathogenic importance Treatment is an excellent method of diagnosis the pyogenic form can be cured by local measures only while the diphtherial form only yields to serum therapy In doubtful cases therefore diphtheria antitoxin should be given at the onset, and the same prophylactic measures should be taken as in diphtheria

178 Prognosis and Treatment of Tuberculosis of the Larynx

O STRANDBERG (*Nordisk Medicinsk Tidskrift* October 17th 1931 p 665) of the Finsen Institute in Copenhagen is not impressed by the value of the rate of sedimentation of the erythrocytes as a guide to the prognosis of tuberculosis of the larynx and he attaches more importance to the Arneth blood count a displacement to the left of the neutrophil count is of bad prognosis particularly when it coincides with the appearance of young nucleated cells On the other hand a normal Arneth count is of good omen even when the appearance and extent of the laryngeal disease suggest the reverse A negative cutaneous tuberculin reaction is usually a bad sign The appearance of the local disease is often misleading in the matter of prognosis and not infrequently the laryngeal lesions heal clinically although the patient sooner or later dies from his pulmonary disease General treatment is essential it is a waste of time to tinker with the local disease unless suitable general therapeutic measures are adopted beforehand or at the same time It is more than fifteen years since the author gave up local applications of lactic acid and he has nothing good to say for this treatment or for the local application of menthol He also advises against diathermy which is most dangerous on account of the risk of perichondritis On the other hand, the galvano cautery may give excellent results but only in conjunction with general treatment and when the patient's capacity for reacting is great enough if his defensive mechanism has broken down altogether even the most cautious employment of the galvano cautery may do harm Tracheotomy and perineural injections of alcohol are no longer popular and the author has seen no healing of the laryngeal disease follow x ray or radium applications But universal light treatment natural or artificial is to be recommended While only a score of years ago it was calculated by Arnoldsen that recoveries from this disease did not exceed 4 per cent this proportion has risen to 84 per cent at the Vejlefjord Sanatorium in Denmark Among the causes contributing to this great change is the more active treatment of the pulmonary disease during recent years

179 Treatment of the Mucosa of the Inferior Turbinates

GRAIN (*Rev de Med* November 1931 p 690) briefly describes the nasal fossae and outlines the physiological functions of the mucosa Pathological reactions of the nasal mucosa are of three orders the nervous such as headache and neuralgia the secretory including coryza hydrorrhoea and the vascular (hypertrophies) These are usually interrelated The reactions may be due to local causes inherent in the fossa itself or to general causes such as the mal functioning of some other organ chiefly the liver or endocrine glands Hypertrophy of the mucosa of the inferior turbinates due to a local cause should be corrected by direct local treatment in that due to a general cause treatment should be directed to the organ affected All mutilation of the mucosa such as cauterization or more or less extensive resection of the turbinates is most strongly contraindicated except in very exceptional cases To reduce the hypertrophy local applications of an aqueous solution of chromic acid are recommended These should be allowed to act for a few seconds only and should then be neutralized with oxygenated water This method does not give rise to any trauma and causes no disturbance of the functioning of the mucosa Short details of three cases are given

Obstetrics and Gynaecology

180 Pre Eclamptic Amaurosis

According to A MAYER (*Zentralbl f Gynak* December 5th 1931 p 3490) the onset of sudden blindness during pregnancy is almost invariably followed by an eclamptic convulsion, the case of Schiotz in which amaurosis a month before term lasted three days only (venesection was performed morphine and chloral were given and the subsequent course of gestation and labour was normal) is exceptional Sudden blindness may be the first sign of a latent eclampsia and when term is near acceleration of labour is desirable as in ordinary eclamptic cases If amaurosis occurs before term expectant measures may be justified for a time in the foetal interest since eclampsia associated with temporary blindness is not necessarily of special severity nevertheless the child will be stillborn in many cases Formerly the amaurosis was regarded as purely functional but recently cases have been recorded with organic lesions of the fundus, such as retinitis papillo retinitis haemorrhages and retinal detachment Krückmann regards an amaurosis of more than twelve hours duration as endangering sight Mayer has seen vision restored after so long as three days blindness but holds that it is only permissible to abstain from acceleration of labour if the fundus appears normal Treatment of the amaurotic patient consists in lumbar puncture and venesection in order to diminish intracerebral pressure and dieting with the exhibition of

sedatives in an endeavour to prevent convulsions In one of Mayer's cases amaurosis was reported in a patient at term with slight labour pains but an undilated os she had had eight convulsions At first 20 c cm and later 7 c cm of cerebro spinal fluid were drawn off and replaced by 14 c cm and 10 c cm respectively of serum from a healthy pregnant subject Sight which had been absent for twelve hours returned within two hours, delivery accelerated by the introduction of a bag occurred a few hours later

181 Diagnosis and Treatment of Cancer of the Body of the Uterus

VIOLET (*La Gynecol* November 1931 p 664) discussing the diagnosis of cancer of the body of the uterus, does not agree with the statements recently made that intrauterine exploration in such cases is contraindicated as useless or dangerous and that ablation of the uterus is required He points out that in cases of post menopausal bleedings and sero sanguineous discharges possibly associated with periodic pain and some pyrexia although a diagnosis of carcinoma of the corpus uteri is very probable and will be correct in 90 per cent of cases the symptoms may be due to a small intrauterine myoma or a senile metritis either of which is susceptible of cure by a less radical operation than hysterectomy In cases of haemorrhage preceding or accompanying the climacteric 5 or 6 per cent are due to cancer of the uterine body without exploration these cannot be diagnosed Violet recommends that this should be effected by means of a rigid uterine sound which is made to search systematically first the anterior surface then the posterior surface and finally the angles If the sound should give uncertain findings slight dilatation of the cervix and the use of a small curette are permissible in Violet's opinion however corporeal carcinoma may be diagnosed in these cases whenever exploration with the sound is followed by free bleeding disproportionate to the small degree of trauma involved Such bleeding being noted hysterectomy may be undertaken without further investigation Violet concludes with a strong recommendation of vaginal rather than abdominal hysterectomy in about one third of cases—those of aged, obese or weakly subjects

182 The Biological Diagnosis of Pregnancy

ADELE BROUHY (*Gynecol et Obstet* November 5th, 1931, p 655) describes the procedure employed and records the results of 190 tests in which rabbits were used in the diagnosis of pregnancy This animal has many practical advantages over the mouse which was originally used by Aschheim and Zondek being always easy to procure and requiring no supervision from birth it tolerates injections and operations well and always reacts to the injection of urine from a case of pregnancy thus permitting the use of one animal only for each test One intravenous injection only is required the reaction is macroscopic and very easy to read appearing rapidly in only fifteen to thirty six hours The exact age of the rabbits employed is not a critical factor, and since the advent of puberty varies with the race, feeding and birth season, it has been found advisable in practice not to limit the test to non adolescent rabbits but to use those of all ages Under such conditions it is essential to observe the state of the ovary before injection of the gravid urine This precaution—a laparotomy performed under ether anaesthesia—allows the discoveries to be made (1) whether any ovarian malformations exist (2) whether the ovary is sufficiently formed to respond, (3) whether there are any ripe follicles undergoing a spontaneous haemorrhagic atresia—formations which do not hinder the ovary from responding but which introduce a certain element of doubt into the interpretation of the results and (4) whether the ovary contains a recent corpus luteum since at the beginning of gestation rabbits react badly to gravid urine After the laparotomy the urine is injected very slowly into the marginal vein of the ear the usual dose is 5 c cm but occasionally 2 c cm suffices The first passed urine of the morning is employed after having been filtered through a bougie or centrifuged for a long time Urine voided at other times of the day does also give results but less decidedly Twenty four hours after the injection the second laparotomy is performed and the ovaries are observed If the urine is very dilute or from a woman whose pregnancy has lasted only a few days two injections may be made, or a longer interval be allowed to elapse before the second laparotomy In a series of 190 biological tests of this kind made on the rabbit all the results were clinically confirmed There was only one failure in the tests in this case the rabbit was unhealthy at the time of the injection, and did not respond

Pathology

183 Cultivation of the Organism of Avian Spirochaetosis

E LANDAUER (*Ann de l Inst Pasteur* December, 1931, p 667) has studied the cultural requirements of *Treponema anserinum* isolated from avian spirochaetosis On first isolation it is necessary to use Galloway's medium in its original form or as modified by Marchoux and Chorine This consists of 20 c cm of rabbit serum 100 c cm of saline 2 c cm of a 10 per cent solution of Witte's peptone, 5 c cm of a 2 per cent solution of glycogen and two drops of fresh defibrinated fowl's blood After about ten passages the spirochaete grows more easily and can be cultivated in a medium made up with an extract of egg white later a medium containing the ash of egg white suffices and after about thirty passages growth may occur in a synthetic medium Fresh egg white was found to contain an inhibitory substance by cooking the egg this inhibitory action was removed Blood was found to be indispensable in early cultures but later on haemoglobin proved satisfactory or a red cell extract prepared at *p*H 7 2 No growth occurred under anaerobic conditions though it was best when the medium was sealed with vaseline The organisms retained their virulence in cultures

184 Blood Ammonia and Renal Insufficiency

A GUALDI (*Il Morgagni* November 29th 1931 p 2281) as the result of observations on 22 patients with acute diffuse or focal glomerular nephritis or chronic nephritis with or without renal insufficiency as well as on 20 healthy controls comes to the following conclusions The amount of ammonia in the blood ranges in normal conditions from *7 to 9 mg per 1 000* In acute diffuse or focal glomerular nephritis the amount of ammonia in the blood bears no relation to the azotaemia, which may be considerably increased while the amount of ammonia shows only slight variations which may be regarded as normal In chronic nephritis without renal insufficiency the amount of ammonia in the blood was never increased the slight variation in these normal cases being within the normal limits In cases of nephritis with renal insufficiency secondary to chronic nephritis renal sclerosis, or other causes with all the symptoms of chronic uraemia the amount of ammonia in the blood was always normal although the azotaemia constantly showed a considerable increase In cases with the clinical syndrome of chronic uraemia without a nitrogen retention in the blood sufficient to explain it the amount of ammonia in the blood was never found to exceed the normal Gualdi holds therefore, that the hypothesis maintained by some writers that uraemic intoxication is the expression of ammonia intoxication is not confirmed

185 Congenital Multiple Carcinomata

L MERCIER and L GOSSELIN (*C R Soc de Biologie* December 4th 1931, p 841) record the simultaneous occurrence in one mouse of a mammary cancer and a pulmonary lymphadenoma The first growth was apparently inherited from the mother and the second from the previous generation The authors conclude that at least two different factors must be present to produce two types of cancer in the same individual and that the recessivity of these factors explains the rare occurrence of multiple primary cancers in human statistics

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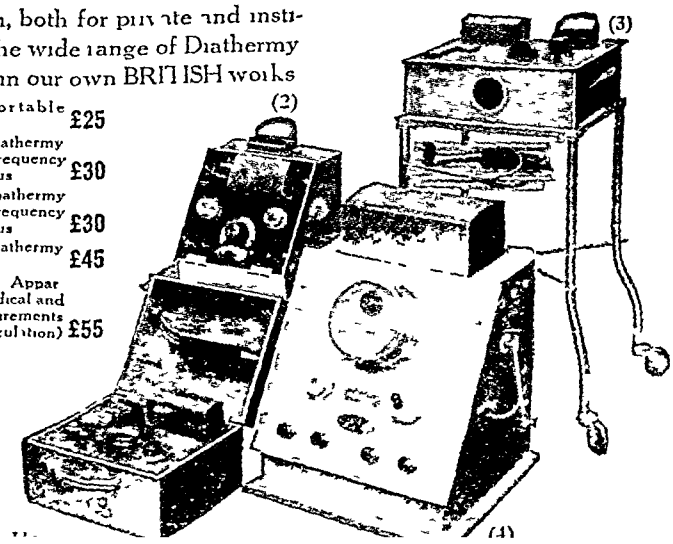
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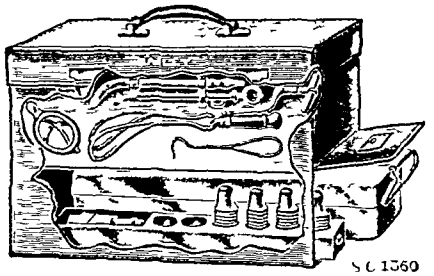
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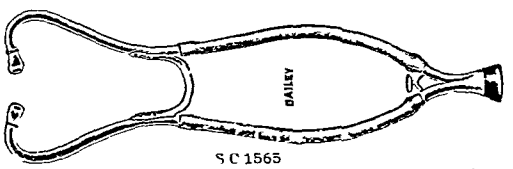
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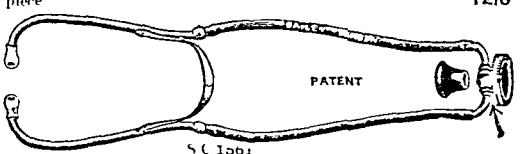
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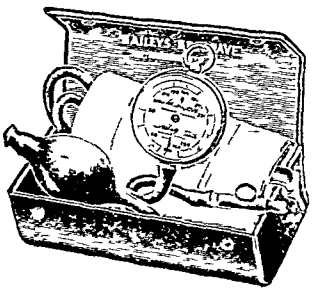
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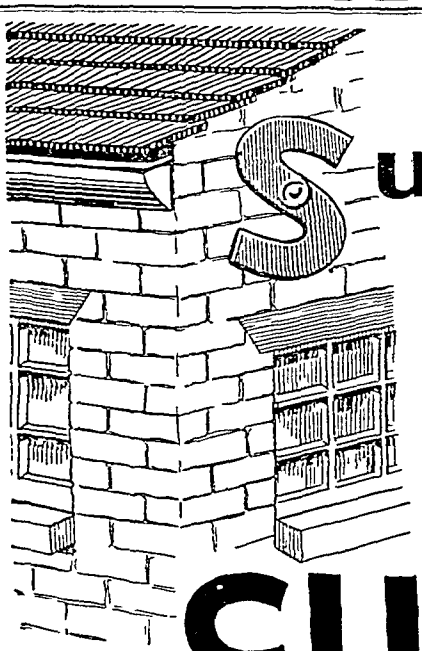
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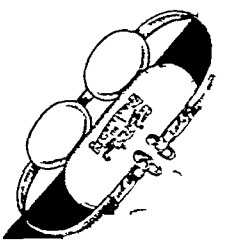
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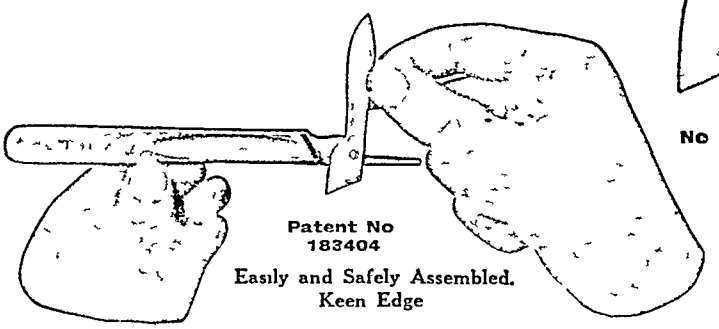


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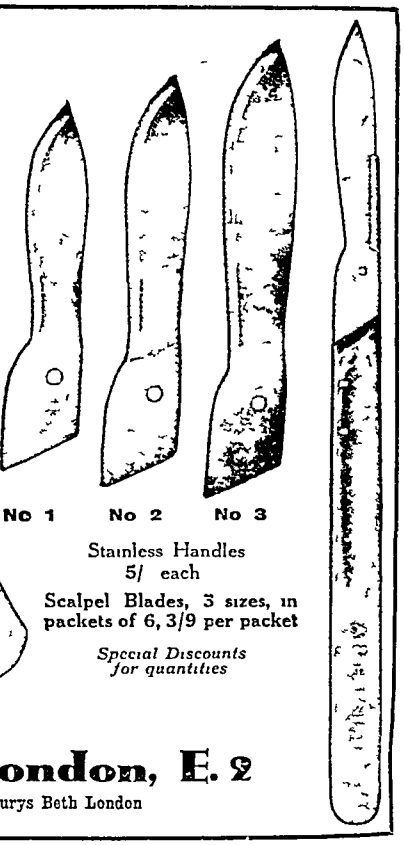
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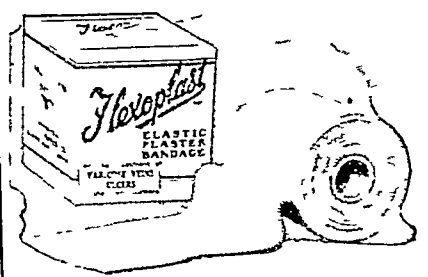
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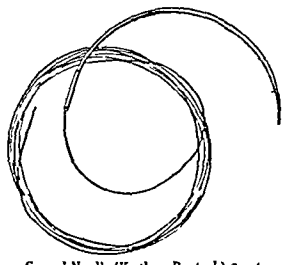
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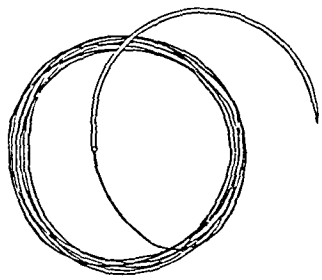
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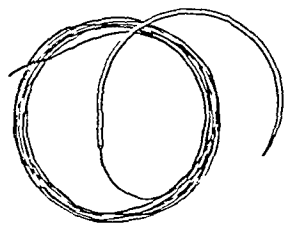
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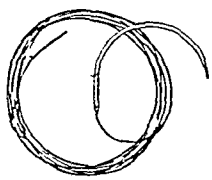
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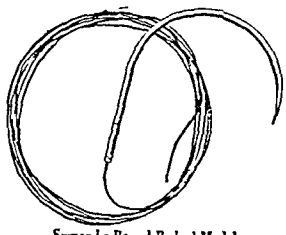
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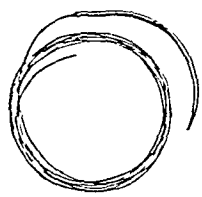
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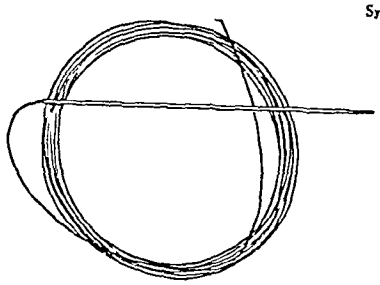
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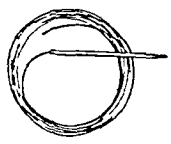
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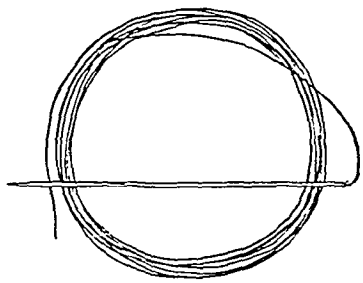
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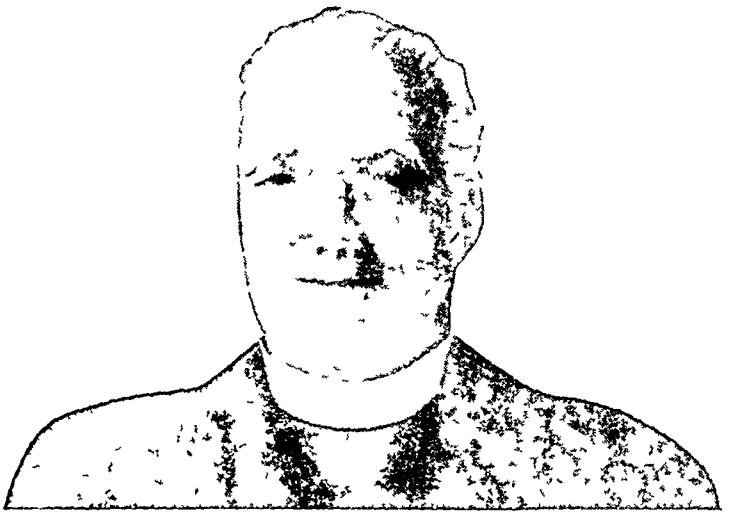
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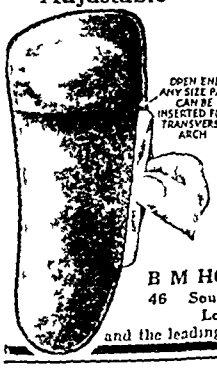
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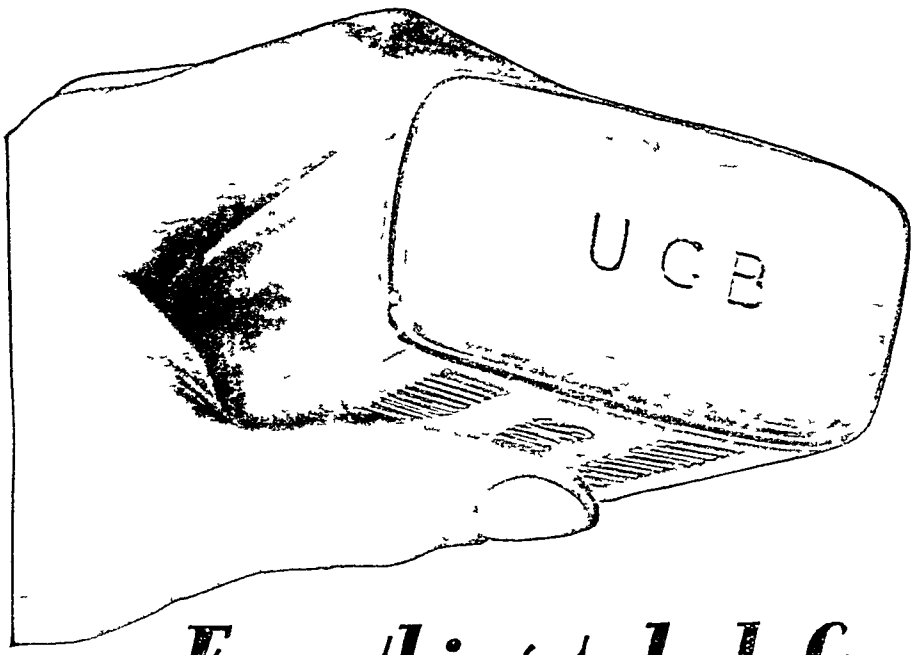
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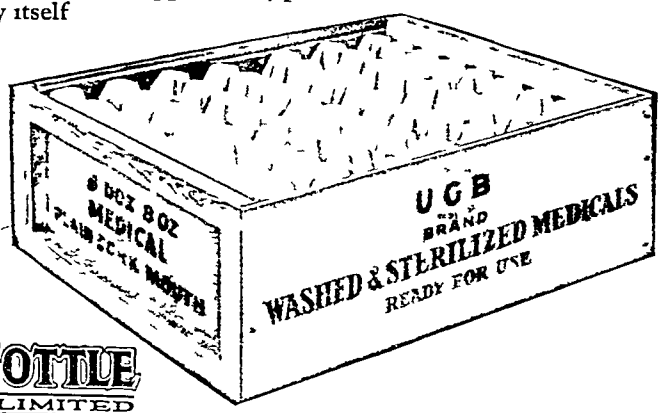
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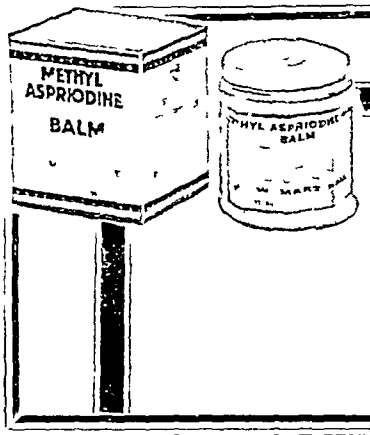
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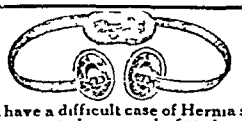
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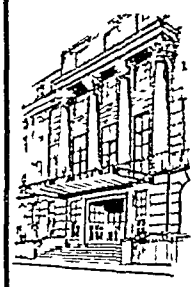
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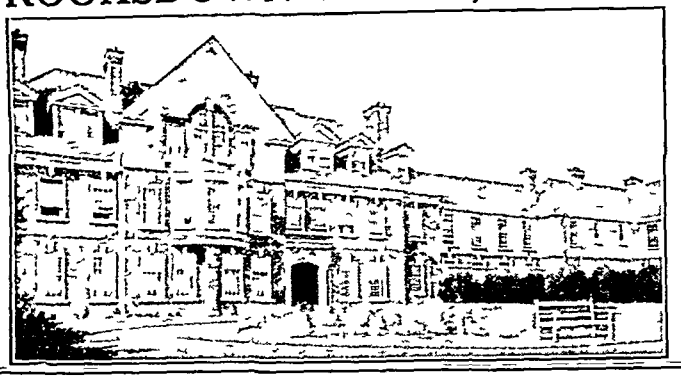
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The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological culture the ordinary x ray examination and electrocardiograph readings all treatment that may be prescribed such as special diet in ultra artificial sunlight electrical treatment baths massage nursing medicines or vaccine board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual form of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30·5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales Telegrams CASTLE RUTHIN Telephone RUTHIN 66

BOWDEN HOUSE,

HARROW-ON-THE-HILL

A NURSING HOME OPENED IN 1911 FOR THE INVESTIGATION AND TREATMENT OF FUNCTIONAL NERVOUS DISORDERS OF ALL TYPES

No cases under certificate Thorough clinical and pathological examinations Psychotherapeutic treatment occupation and recreation as suited to the individual case

PARTICULARS FROM THE MEDICAL SUPERINTENDENT *Telephone and Telegrams* HARROW 0545

WOODSIDE NERVE HOSPITAL

WOODSIDE AVENUE MUSWELL HILL LONDON N 10

Chairman THE RIGHT HON LORD BLANESBURGH G B E. Opened November 8th 1930

Fully equipped with every modern appliance for the diagnosis and treatment of

FUNCTIONAL NERVOUS DISORDERS

Private Rooms Broad Verandahs Electrotherapy and Hydrotherapy X ray and Dental departments Laboratories for investigation and research For terms and particulars apply to the Physician in charge at the Hospital Telephone Tudor 4211

PECKHAM HOUSE, 112, Peckham Road, London, S E 15.

Telegrams "Alleviated, London" Telephone Rodney 4741-4742

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

Convalescent Home Kearsney Court, Dover For further particulars apply to the Medical Superintendent

WELLWOOD NURSING HOME,
CULTS, ABERDEENSHIRE.

Physician Superintendent R DODS BROWN, M.D., F.R.C.P.Ed — *Matron* MISS BERIRAM (late of The Retreat, York)

This Home which has been recently established, is equipped for the treatment of those suffering from early mental and nervous disorders, and is under the charge of the Physician Superintendent, Aberdeen Royal Mental Hospital.

The Home is situated on Deeside three miles from Aberdeen, amidst delightful surroundings of garden park, and woodland attractively laid out for the occupation and recreation of those resident. It is beautifully decorated and comfortably furnished. Rest and privacy are assured, and all forms of treatment are available.

The patients may be attended by their own physician, or by the Physician Superintendent.

The minimum charge is £4 4s. a week.

For further particulars application should be made to the PHYSICIAN SUPERINTENDENT Royal Mental Hospital, Aberdeen, or to the MATRON Wellwood Nursing Home, Cults, Aberdeenshire. (Telephone No. 31 Cults.)

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds — Detached Villas — Chapel — Garden and dairy produce from own farm — Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc. which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams PSYCHOLIA LONDON — FOR THE TREATMENT OF MENTAL DISORDERS — *Telephone* RODNEY 4701–4732

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HOVE VILLA, BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

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PENMAENMAWR

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For particulars apply to the Secretary, Pendyffryn Hall, Penmaenmawr, N. Wales. (Phone 20)

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First opened in 1893 and rebuilt in 1925. On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 800 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X-ray controlled). Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra Violet Rays is available when necessary without extra charge. X-ray plant. Electric light. Radiators, hot and cold basins and Wireless in all rooms.

Full day and night Nursing Staff

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Apply The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Tel. phone* 41 Witcombe. *Telegrams* HOFFMAN, BIRDLIP.

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All modern forms of treatment are available. There are X-ray and ultra-violet ray installations. Full nursing staff. The Sanatorium stands in gardens and private grounds of 65 acres at an altitude of 862 feet above sea-level, surrounded by woods and moorland. All rooms are heated by hot-water pipes and electrically lighted.

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For full particulars apply to *The Secretary*, Nordrach-upon-Mendip, Blagdon, Bristol. *Telegrams* Nordrach, Blagdon. Telephone Blagdon 25.

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson, M D, F R S E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J M JOHNSTON M B D P H, etc.

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Built 1929-1930 Opened October 1930

For the Treatment of Tuberculosis (all forms) Diseases of the Chest & Asthma For patients requiring rest in the Alps under strict medical supervision and for medical conditions in which sun and air bathing are indicated

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

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Specially built for the Open air Treatment of Tuberculosis and opened in 1901 Bracing mountain air Elevation 850 ft above sea level Sheltered situation in pine wood Graduated walk Electric light throughout Building and in shelter Central heating Fully equipped X ray Plant Inoculation Treatment available for patients 2½ bed Trained Nurse on duty all night Terms £4 6d to £6 6s p w inclusive No extra Med Supt—FELIX SALT M D

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"THE VICTORIA," BRITISH SANATORIUM
DAVOS-PLATZ SWITZERLAND

ALTERED AND MODERNISED IN SUMMER 1930

SPECIALLY REDUCED TERMS

The Board of Management is desirous of meeting the difficulty of the exchange in every possible way and until this improves is willing to cash English Pounds at the uniform rate of Frs 18 50 as far as the actual Sanatorium bill is concerned

The Board hopes that this will meet with approval

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BERNARD HUDSON M D Cantab, M R C P Lond Swiss Federal Diploma

SPRINGFIELD HOUSE,
Near BEDFORD (Phone 3417)

For Mental Disorders with or without certificates

Resident Physician CEDRIC W BOWER.

Ordinary Terms Five Guineas per week (Including Separate Bedrooms where suitable)

Interviews in London by appointment.

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Specially adapted for the investigation of ARTHRITIS DISEASES DIABETES JAUNDICE GASTRO INTESTINAL complaints which require skilled Chemical Bacteriological a

Brochure from the Secretary - - DUCHY AD

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Every kind of Bath Hombiere Lavage
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Physicians R I ROSE HUTCHINSON M D

HOME FOR DELICATE CHILDREN
"THE LOG HOUSE," KLOSTERS
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Inclusive terms from five guineas weekly
No Infectious cases taken All particulars from Mrs or Dr B HUDSON (above address)

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Ladies and Gentlemen received for treatment under certificates and without certification as either VOLUNTARY or TEMPORARY PATIENTS at a weekly fee of TWO GUINEAS and upwards

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SOCIETY OF APOTHECARIES OF LONDON

MASTERY OF MIDWIFERY

Examinations will be held beginning Tuesday May 17th and Monday November 21st 1932
For regulations apply to the Registrar Water Lane E C 4

The Brighton County Borough MENTAL HOSPITAL HAYWARDS HEATH SUSSEX.

The Committee of the above Hospital have recently opened BEECHMONT HOUSE for the reception of Female Private Patients suffering from mental disorder Voluntary Temporary and Certified Patients will be received

Beechmont is a large country house, situated on the outskirts of Haywards Heath and quite separate from the Hospital

The house is healthily situated and stands on an estate of 27 acres with beautifully laid out gardens and lawns commanding extensive views of the South Downs. It has up to date systems of lighting and heating and is attractively furnished on modern lines

The charges are from £3 3s to £10 10s per week including all necessaries except clothing
Full particulars may be obtained from the Medical Superintendent

Scotland — Alcoholic Cases received in Delightful country house with extensive grounds Trained attendants Particulars — Address No 904 B M A House Tavistock Square W C 1

Doctor's widow in North London having large well kept garden car good station would like one PAYING GUEST Terms moderate — Address No 871 B M A House Tavistock Square W C 1

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FACULTY OF MEDICAL SCIENCES

SPECIAL COURSE FOR THE PRIMARY FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS

Special SHORT COURSES in ANATOMY and PHYSIOLOGY will begin on Tuesday March 1st 1932 in preparation for the June Examination
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The Course in Anatomy (including Embryology) is made up of lectures and demonstrations Students are permitted to use the Dissecting Room and Museum of Anatomy at other times The Courses in Physiology Bio consist of lectures with revision of hes of the subject ortance in Medical Practice

Full particulars may be obtained on application to—
University College London (Gower Street W C 1) C O G DOUIE Secretary

University of London

A Course of Three Lectures on *The Reaction between drugs and the Cells* will be given by Prof A J CLARK M D F R C P F R S (Professor of Materia Medica in the University of Edinburgh (Gower St 29th and first Lecture the Chair will be taken by Prof A V HILL O B E F R S Professor of Physiology in the University Lantern illustrations Admission free without ticket

S J WORSLEY
Academic Registrar

Dr Jessie Macgregor Prize in MEDICAL SCIENCE

An award of the above Prize will be made in July next to the applicant who presents the best record of original work in the Science of Medicine Such work may be published or unpublished but must not have been published earlier than three years prior to the month of July 1932

The Prize is of the value of Seventy Pounds (£70) and is open to medical women who are graduates in Medicine of the University of Edinburgh or who have taken the Triple Qualification and who before becoming qualified have studied Medicine for at least one year in Edinburgh

The successful applicant shall within six months following the award deliver a lecture to the medical profession in Edinburgh on the subject of the work for which the Prize has been awarded such lecture to be entitled The Dr Jessie Macgregor Lecture

Applications marked Dr Jessie Macgregor Prize in Medical Science must reach the Convener of Trustee Royal College of Physicians of Edinburgh not later than April 30th 1932

Manchester Royal Infirmary

POST GRADUATE LECTURES will be given by members of the Honorary Staff in Medical Surgical and Special Subject each week on Tuesdays from February 23rd to May 10th (with exception of March 29th) On Friday from February 26th to May 6th (except March 25th and April 1st) Clinical cases will be shown in the Medical and Surgical wards All lectures and demonstrations begin at 4 15 and are free Details may be obtained from the Secretary of the Post Graduate Lecture

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The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March June September and December For Regulations apply to the Secretary College of Preceptors Bloomsbury Square London W C 1

Refraction and the Ordering of GLASSES taught by Practising Ophthalmic Surgeon in London £8 8s for 10 lessons — Address a 123 B M A House Tavistock Square W C 1

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NEW TERM BEGINS ON MARCH 1st

The SLIT LAMP COURSE will begin on March 1st Fee £5 5s

The complete curriculum is specially adapted to meet the requirements of those reading for the DOMS and similar diplomas in Ophthalmology

For further particulars apply to the Secretary to the Medical School at the Royal London Ophthalmic Hospital, City Road E.C.1 or to the Dean CHARLES GOULDEN, O.B.E. M.D. M.Ch. F.R.C.S.

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant aided Scheme for Post Graduate Study by Insurance Practitioners"—Anaesthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

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Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admissions being primiparous cases). Over 2,400 patients are admitted to the Wards annually and in the Antenatal Department there are over 18,000 attendances per annum.

Certificates awarded as required by the various Examining Bodies.

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Dean - Sir CUTHBERT WALLACE, K.C.M.G., C.B., F.R.C.S.

A Course in

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especially in its relation to Malignant Disease

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Copy of the syllabus and full particulars may be obtained on application.

The fee for the Course entitles Students to two months' Hospital Practice. Independent arrangements can also be made for Hospital Practice.

The Course will be repeated on subsequent dates.

The Dean will be glad to see prospective entrants by appointment.

THOS. A. GARNER, Secretary.

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MEDICAL STUDENTS admitted to Hospital Practice with operative Midwifery and Obstetrical complications. Monthly or Fortnightly Courses.

LADIES TRAINED as Midwives and Monthly Nurses in accordance with C.M.B. Regulations.

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Special facilities are offered for the teaching of Chemistry, Physics, Botany and Zoology.

New Science Buildings containing seven laboratories, two lecture rooms, science library, store room, etc., opened in September 1925.

Prospectus from Head Master.

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For particulars apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

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FINAL FELLOWSHIP COURSE.

February—May, 1932.

A Course of instruction in preparation for the Final Examination for the Fellowship of the Royal College of Surgeons of England will commence on Monday, February 29th, 1932.

T. B. JOHNSTON, Dean.

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	Final	174
M.R.C.P. (Lond.),	1914-31	199
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FRCS

A COURSE OF INSTRUCTION for the Final Fellowship Examination will begin on Tuesday March 1st

Fee (exclusive of Operative Surgery) 20 guineas Operative Surgery 5 guineas

A separate entry can be made for all Classes other than those of a strictly Clinical character

Further particulars may be obtained from Professor WILLIAM WRIGHT MB DSc FRCS Dean London Hospital Medical College Mile End E1

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This Scholarship is open to members of the University or of Girton College or Newnham College who are Graduates or titular Graduates in Medicine or to Graduates or titular Graduates in Arts who have passed Part II of the Natural Sciences Tripos

Applications must be sent to the University Registrary before June 20th

WILL SPENS
Vice Chancellor

Essex County Council

PUBLIC ASSISTANCE DEPARTMENT

JUNIOR RESIDENT MEDICAL OFFICER

The Public Assistance Committee invite applications for the appointment of Junior Resident Medical Officer at the OLDCHURCH HOSPITAL ROMFORD The appointment is for one year

Salary £200 per annum together with the usual emoluments subject to a temporary reduction not exceeding 5 per cent with an abatement of £150

The successful applicant will be required to pass a medical examination

It is probable that if the officer appointed is not subject to the Poor Law Officers Superannuation Act 1896 his salary will be subject to deductions under the Local Government and Other Officers Superannuation Act 1922

Applications for the above position to be made on forms obtainable from the Public Assistance Officer Prudential Buildings Duke Street Chelmsford must be returned to him by Saturday February 27th

By Order
JOHN H GOOLD
Clerk of the County Council

Shire Hall
Chelmsford
February 12th 1932

Great Yarmouth General HOSPITAL (72 Beds)

Applications are invited for the following posts

SENIOR HOUSE SURGEON Salary at the rate of £150 per annum with board residence and laundry

JUNIOR HOUSE SURGEON Salary at the rate of £140 per annum with board residence and laundry

The appointments are for a period of six months renewable for a further similar period if mutually desirable

Applications stating age and qualifications together with copies of three recent testimonials to be forwarded to the undersigned

FRANK JENNINGS Secretary

Royal Manchester Children's HOSPITAL PENDLEBURY near MANCHESTER (190 Beds)

Wanted a RESIDENT MEDICAL OFFICER Salary £125 per annum who will be appointed for six months Duties to commence April 1st

Candidates must be unmarried and duly registered Previous hospital experience essential

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned not later than Wednesday March 9th

Canvassing directly or indirectly may disqualify

By Order
W M HUMPHRY
February 16th 1932 Secretary

Rotherham Hospital

Wanted HOUSE PHYSICIAN (male) qualified Salary £160 p a with board residence and laundry to have charge of Out Patients also to assist Practitioners and assist Honorary Staff

Applications with copies of recent testimonials to be sent to the Secretary G W Jones & Morgan & Son Rotherham

City of Liverpool

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Corporation invites applications for the position of Assistant Tuberculosis Officer at a commencing salary of £500 per annum rising by annual increments of £25 to £700 per annum (at present subject to the temporary deduction authorised by the Council)

Candidates must have had at least 3 years experience in the practice of their profession must have spent not less than 18 months in general clinical work of which not less than six months have been spent as a Resident Officer in charge of beds occupied by general medical and surgical cases and must have had special training for a period of not less than six months in the diagnosis and treatment of tuberculosis

The officer appointed will hold office subject to the Standing Orders of the City Council and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 He will be required to devote his whole time to the duties of the office and will not be allowed to engage in private practice and all emoluments out of public moneys which may be payable to or received by him shall be paid to the Corporation He will be under the administrative control of the Medical Officer of Health

Applications stating age qualifications etc accompanied by copies of not more than three recent testimonials to be made on forms obtainable from the undersigned to whom applications must be sent so as to be received not later than Friday February 26th Envelopes to be endorsed Assistant Tuberculosis Officer

Canvassing in any form oral or written direct or indirect is prohibited

WALTER MOON
Town Clerk

Municipal Buildings
Liverpool
February 8th 1932

Brighton Education Committee

ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT TO THE MEDICAL OFFICER OF HEALTH

Applications are invited from fully qualified Medical Men for the above appointment Applicants should have had experience in children's diseases and should have a practical knowledge of refraction work in children A knowledge of school medical inspection would be an asset

Salary £500 rising by annual increments of £25 to a maximum of £700 The salary is subject to a temporary economy deduction according to scale (£20 p a on a salary of £500 p a)

Applications on forms to be obtained from the undersigned together with copies of three recent testimonials should be sent in on or before March 7th

Canvassing will be regarded as a disqualification

F HERBERT TOWNE
Secretary

Education Offices
54 Old Steine Brighton

Royal Manchester Children's HOSPITAL

OUT PATIENTS DEPARTMENT Garside St MANCHESTER

Wanted for the Out patients Department TWO ASSISTANT MEDICAL OFFICERS non resident salary £150 per annum who will be appointed for six months

Candidates must be on the *Medical Register* Particulars of the duties can be obtained from the Secretary The hours of duty are from nine am till one p m or until the work of the Dispensary is finished Patients attendances number 93 000 per annum Duties to commence April 1st

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned not later than Wednesday March 9th

Canvassing directly or indirectly may disqualify

By Order
W M HUMPHRY
February 16th 1932 Secretary

Corporation of Glasgow

PUBLIC HEALTH DEPARTMENT

JUNIOR RESIDENT MEDICAL OFFICER (male) wanted for HAWKHEAD ASYLUM Commencing salary £300 per annum with board lodging and laundry Previous asylum experience unnecessary but preference will be given to one who has been engaged in pathological work or who has been House Physician Ample opportunity afforded for research

Application stating age and experience and accompanied by copies of not more than three testimonials to be sent to the Medical Superintendent Hawkhead Asylum Crookston Glasgow S W 2

British Medical Association

APPOINTMENT OF ASSISTANT MEDICAL SECRETARY

The Council of the British Medical Association is prepared to receive applications from registered Medical Practitioners for the appointment of an Assistant Medical Secretary He will be required to work under the instructions of the Medical Secretary and to give his whole time to the duties of his office Duties to commence on October 1st 1932 and the appointment to be subject to six months notice on either side

Salary £800 rising by £50 per annum to a maximum of £1 000 subject to deductions for superannuation

Applications stating experience and age with not more than three recent testimonials should be sent to the Medical Secretary British Medical Association Tavistock Square W C 1 not later than by first post Monday March 14th

Canvassing not allowed

ALFRED COX Medical Secretary

County Borough of Newport

APPOINTMENT OF MEDICAL OFFICER OF HEALTH &c

The Council invite applications from male Medical Practitioners qualified for the whole time appointment of Medical Officer of Health for the Newport Urban Sanitary Authority and the Newport Port Sanitary Authority respectively The duties will also include the office of Police Surgeon to Isolation Hospital for Rats and Mice Welfare fare Supervision Acts Inspection for superannuation purposes of entrants to the Corporation service and such other duties which the Corporation may from time to time require him to perform in connection with their health services generally and whether under the charge of the statutory Committees of the Council or not Preference will be given to candidates not exceeding 45 years of age The salary will be at the rate of £1 000 a year plus £125 a year car allowance rising subject to satisfactory service by annual increments of £50 to £1 200 a year plus the said car allowance the first increment to take effect on January 1st 1934 The salary will be subject to a deduction of 5 per cent under the Local Government and Other Officers Superannuation Act 1922 and to a temporary (economy) deduction of 5 per cent The successful candidate will be required to pass a medical examination by the Corporation's Medical Examiner and the appointment will be subject to determination by three months notice from either side

Applications in candidate's own handwriting stating age qualifications and experience service (if any) with Crown Forces with copies of not more than three recent testimonials enclosed in an envelope endorsed Medical Officer of Health must reach me not later than March 4th

Canvassing will be deemed a disqualification

O TREHARNE MORGAN
Town Clerk

Town Hall
Newport
February 17th 1932

City of Birmingham

MATERNITY AND CHILD WELFARE DEPARTMENT

CANWELL HALL BABIES HOSPITAL (85 Beds)

A RESIDENT MEDICAL OFFICER is required for a period of six months duties to commence on April 14th

Applications are invited from ladies with previous experience as House Physician preferably in a Children's Hospital Salary £250 per annum with board and laundry

The salary and emoluments will be subject to the voluntary abatement approved by the Council in respect of its officers The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by her

Applications giving all particulars of qualifications age and experience and accompanied by copies of three recent testimonials should be sent to the Medical Officer of Health The Council House Birmingham on or before March 5th

Nottingham General Dispensary, Broad Street NOTTINGHAM

Wanted RESIDENT SURGEON (male or female) unmarried Must have Medical and Surgical qualifications Salary £200 with £25 increase per year up to £300 Board with attendance lights and fuel (not board) This Institution is a non provident one No beds No midwifery

Applications stating age and accompanied by copies of recent testimonials to be sent by February 25th to—

R J WHLATT
Secretary

5 Thurland Street
Nottingham

Queen Charlotte's Maternity
HOSPITAL Marylebone Road N W 1

ASSISTANT RESIDENT MEDICAL OFFICER (male) required to commence duties on April 1st. Applications must be registered. Appointment for three months. On completion of this appointment the selected candidate will be expected to proceed to the post of Senior Resident Medical Officer (for three months) on the recommendation of the Medical Staff. The salary of the Assistant Resident Medical Officer is at the rate of £80 per annum and of the Senior Resident Medical Officer £100 per annum with board residence and washing allowance (47 weeks). Application with copies (not original) of not more than three testimonials will be received by the Secretary up to March 1st.

ARTHUR WATTS Secretary

Queen Charlotte's Maternity
HOSPITAL Marylebone Road N W 1

DISTRICT RESIDENT MEDICAL OFFICER (male or female) required to commence duty on April 1st. Applicant must be registered. The appointment is for six months. The salary is at the rate of £80 per annum with board residence and washing allowance (47 weeks). Application with copies (not original) of not more than three testimonials should be sent to the Secretary by March 14th. Canvassing is prohibited.

ARTHUR WATTS Secretary

The Guest Hospital, Dudley

Application are invited for the post of HONORARY SURGEON to the above Hospital. Candidates must be Fellows of the Royal College of Surgeons and not engaged in general practice.

Applications stating age, details of experience and duties held to date, together with certificates of registration and copies of testimonials to be sent to the House Governor and Secretary, Guest Hospital, Dudley, not later than March 4th.

H RAYMOND HURST
The Guest Hospital, House Governor &
Dudley, Secretary.
February 12th 1932

The Guest Hospital, Dudley

Notice is hereby given that a meeting of the Committee of Election will be held in the Board Room, Guest Hospital, Dudley, on March 11th, at 12 o'clock noon, for the purpose of electing an HONORARY SURGEON to the Hospital.

H RAYMOND HURST
The Guest Hospital, House Governor &
Dudley, Secretary.
February 12th 1932

Bootle General Hospital,
BOOTLE near LIVERPOOL (100 Beds)

Applications are invited for the post of CASUALTY OFFICER and the two posts of HOUSE SURGEON for the six months ending September 30th.

Salary at the rate of £150 per annum with board, laundry, etc.

Duties to commence April 1st.

Applications, stating age and qualifications with copies of testimonials, should be sent to the undersigned on or before March 4th.

J A BEATTIE

The Mount
NORTHWOOD MIDDLESEX

There is a vacancy for a HOUSE SURGEON (male). Candidate must be fully qualified and registered. Salary £150 per annum with board, lodging and laundry. Application with copies of three testimonials should be sent to the undersigned not later than Feb 20th.

W J MOLTON
92 Fitzroy Sq W 1 Secretary

Manchester Babies' Hospital,
Burnage Lane HEATONSHULME

Application are invited for the post of RESIDENT MEDICAL OFFICER. Appointment is for six months. Salary at the rate of £50 per annum with laundry. Applications to be in writing with copies of testimonials, which will not be returned, and marked "M.O." to be received not later than February 29th.

ANCELLA LOPEZ Secretary

Margaret Street Hospital for
CONSUMPTION (Brook Street)
29 Margaret St W 1

The Committee invite application for the appointment of HONORARY ASSISTANT PHYSICIAN with staff of the above Hospital. Applicants should have had clinical training and be on the Register. Applications, with copies of three testimonials, should be sent to the Hospital not later than Feb 27th.

M C HAYTHORNE
Secretary

Radcliffe Infirmary and County
HOSPITAL OXFORD

Applications are invited for the following post which will become vacant on April 1st:

THREE HOUSE SURGEONS
OBSTETRIC HOUSE PHYSICIAN

Appointments are for six months with salary at the rate of £120 per annum with board etc.

Candidates must be qualified and registered.

Application with copies of three testimonials to be sent to the undersigned on or before March 5th.

A G E SANCTUARY
Administrator

Queen's Hospital, Birmingham
(A Medical School)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON AND RESIDENT ANAESTHETIST to commence duties at once.

Salary £70 to £100 per annum (according to experience and previous Hospital Resident Appointment) together with board, apartment and laundry.

Applications should be sent to the undersigned accompanied by three recent testimonials. C HURFORD House Governor.

Birmingham, February 15th 1932.

Queen's Hospital for Children,
Hackney Road London E 2

HOUSE PHYSICIAN required April 7th.
CASUALTY OFFICER required April 7th.
Some Ophthalmic work additional. Six months appointments. Salary at the rate of £100 per year with board, lodging and washing.

Application must be made on form to be obtained from the undersigned and must be sent in with copies of not more than four testimonials on or before March 10th.

CHARLES H BESSLEY
Feb 8th 1932 Secretary

London Temperance Hospital,
Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male). The appointment will be for a period of six months at a salary of £100 per annum and will date as from March 10th. Preference will be given to one who have held a resident post.

Candidates must submit applications stating qualification, age etc with copies of not more than three testimonials by Friday March 4th addressed to the Secretary.

Royal National Orthopædic
HOSPITAL COUNTY BRANCH
Brockley Hill STANMORE MIDDLESEX

Application are invited for the post of HOUSE SURGEON (2). Salary £150 per annum with board quarters and laundry. The appointment is for six months from April 1st renewable for a further period of six months on the recommendation of the Medical Board. Application with copies of testimonials should reach the undersigned not later than March 11th.

Royal National Orthopædic
HOSPITAL
234 Great Portland Street W 1

Applications are invited for the post of HOUSE SURGEON. Salary £150 per annum with board quarters and laundry. The appointment is for six months from April 1st renewable for a further period of six months on the recommendation of the Medical Board. Application with copies of testimonials should reach the Secretary not later than March 11th.

Royal National Orthopædic
HOSPITAL

HONORARY DENTAL SURGEON

Application from fully qualified Practitioner (L.D.S. R.C.S. Eng.) are invited for the post of Honorary Dental Surgeon. Applicants should be accompanied by copies of three recent testimonials and should reach the Secretary at 234 Great Portland Street W 1 not later than 27th.

Royal Free Hospital,
Gray's Inn Road W C 1

Application are invited for the appointment of ASSISTANT SURGEON to the Ear, Nose and Throat Department. Intending candidates who must be Fellows of the Royal College of Surgeons England, should submit applications to the undersigned, stating age, experience, and copies of three recent testimonials on or before March 5th.

REGINALD P GARRATT
Secretary

Lancashire Mental Hospitals
JOINT

CALDERSTONES (CERTIFIED INSTITUTION FOR MENTAL DEFECTIVES)
WHALLEY Near BLACKBURN

Application are invited for the post of ASSISTANT MEDICAL OFFICER (male) from duly qualified and registered Medical Practitioners. Candidate must be male and under 35 years of age. Preference will be given to a candidate who has held a residential post in a General Hospital for at least six months.

Commencing salary £500 rising by annual increments of £50 to £600 with further increase on promotion, subject to deduction of 2½ per cent under the Asylums and Certified Institution (Officers Pensions) Act 1918. There are no emoluments.

The elected candidate will be required to live in the Hospital and he will be provided with board, lodging, etc for which a charge of £150 a year is made.

The possession of a Diploma in Psychological Medicine will entitle the Officer to an additional £50 per annum.

A temporary abatement from the gross salary will be made the amount of the abatement on £500 being £18 15s.

Application giving full particulars with testimonials (copies only) should be forwarded to the Medical Superintendent to reach him not later than February 29th.

The Cancer Hospital (Free)
(Incorporated under Royal Charter)
Fulham Road London S W 3

The Committee are prepared to receive application for the post of HOUSE SURGEON. Salary at the rate of £100 per annum.

The appointment is for six months and subject to rules.

Candidates must call upon each member of the Medical Committee not later than Tuesday March 15th.

A copy of the rules and the names and addresses of the Medical Committee may be obtained from the Secretary.

Previous experience as a House Surgeon is indispensable.

Application with three (copies only) testimonials to be sent to the undersigned not later than the first post on Saturday March 5th.

J COURTNEY BUCHANAN Secretary

East Ham Memorial Hospital,
Shrewsbury Road E 7 (100 Beds)

Applications are invited for the post of HOUSE SURGEON to Special Department and CASUALTY OFFICER for six months commencing April 1st. Salary at the rate of £120 per annum with board residence and laundry.

Application stating age, experience and full particulars together with copies of testimonials should reach the undersigned by first post on March 7th.

REGINALD PERRY Secretary.

East Ham Memorial Hospital,
Shrewsbury Road E 7 (100 Beds)

Applications are invited for the post of HOUSE PHYSICIAN for six months commencing April 1st. Salary at the rate of £150 per annum with board residence and laundry.

Application stating age, experience and full particulars together with copies of testimonials should reach the undersigned by first post on March 7th.

REGINALD PERRY Secretary.

Royal Hospital Richmond,
SURREY

HOUSE SURGEON (male) required to take up duties on April 1st. Salary at the rate of £100 per annum with board, furnished apartments and washing. Candidate must be fully qualified registered etc. The appointment will be for six months, after which the successful candidate will be eligible for appointment as Senior House Surgeon. Applicants should state age, experience and copies of three testimonials must be forwarded to the undersigned not later than March 2nd.

RICHARD ALLEN Secretary.

Royal Hospital, Richmond,
SURREY

Application are invited for the post of HONORARY SURGEON at 11 to Out-Patients' Clinic at 2 o'clock and the Surgeon appointed will be required to attend on Monday and Thursday. Applications with copies of testimonials should be forwarded to the undersigned not later than February 26th.

RICHARD ALLEN Secretary.

Addenbrooke's Hospital,
CAMBRIDGE

Applications are invited for the following posts

(a) HOUSE SURGEON No 1 vacant on March 16th
(b) HOUSE SURGEON No 2 vacant on March 14th
(c) HOUSE SURGEON to the Special Departments with care of beds for Ear Nose and Throat Eye Gynaecological and Maternity cases vacant on March 21st

Each appointment is tenable for a period of six months but is terminable at an earlier date by one month's written notice on either side

The salary of each officer will be at the rate of £130 per annum with board residence and laundry

Candidates (male) who must be unmarried and duly registered are requested to forward their applications stating age qualifications etc together with copies of not more than four testimonials to the undersigned on or before Wednesday March 2nd

W H HEAD
Secretary Superintendent

The Royal National Hospital for
CONSUMPTION
VENTNOR ISLE OF WIGHT

Applications are invited for the post of SENIOR ASSISTANT RESIDENT MEDICAL OFFICER male of British nationality at the above Hospital 162 Beds

Candidates must be qualified in Medicine and Surgery and registered Previous experience in Tuberculosis work is essential

The appointment will be for one year terminable by three months notice on either side The holder will be eligible for re appointment

The successful candidate will be required to pass a medical examination and be insured against sickness after appointment Commencing salary £400 per annum with full board residence and laundry allowance

Applications stating age and full details of qualifications and experience with copies of three recent testimonials to be sent to the Medical Superintendent at the Hospital by February 22nd

W H GARRATT Secretary

Royal Devon and Exeter
HOSPITAL EXETER (225 Beds)

APPOINTMENT OF CASUALTY OFFICER AND HOUSE SURGEON TO SPECIAL DEPTS

Applications invited from qualified and registered individuals for this appointment shortly becoming vacant

Engagement for six months candidates being eligible for subsequent appointments

Salary at the rate of £150 per annum with board residence and laundry

Applications with copy testimonial should be sent to the undersigned not later than Tuesday March 1st

S S COLE Secretary & Manager

The Hospital for Sick Children,
NEWCASTLE-UPON-TYNE (94 Beds)

Applications are invited for the following appointment

HOUSE PHYSICIAN
SENIOR HOUSE SURGEON
JUNIOR HOUSE SURGEON

(Male or female) for a period of six months as from April 1st Salary at the rate of £100 per annum together with board residence and laundry Application stating age and qualifications with copies of testimonial to be sent to the Secretary Mr NEIL BRODIE 18 City Road Newcastle on or before March 5th

Harrogate Infirmary

Application are invited from British subjects (male) for the post of JUNIOR HOUSE SURGEON for the period commencing April 1st and terminating September 30th Salary at the rate of £140 per annum with board and lodging Applications to be made on official forms to be had from the undersigned should be sent in not later than March 27th

CEO BALLANTYNE
The Infirmary Secretary

Elizabeth Garrett Anderson
HOSPITAL Euston Road

Wanted a fully qualified Medical Woman for the post of OBSTETRIC ASSISTANT Appointment for 6 months from March 1st next at the rate of £50 per annum with board residence and laundry Application with full particulars to be made to the undersigned not later than February 27th

JEAN E MILLAY Secretary

Hull Royal Infirmary

The Appointing Committee are prepared to receive applications for the office of HONORARY SURGEON to the Infirmary

A candidate must be a Fellow of the Royal College of Surgeons in England or Edinburgh or Ireland or have been an Honorary Assistant Surgeon to the Infirmary for five years

The appointment will be for a period not exceeding twenty years or until the holder attains the age of sixty whichever event comes first

The Senior Honorary Assistant Surgeon is a candidate for the post and in the event of his appointment the Appointing Committee will proceed to consider applications at the same meeting for the office of

HONORARY ASSISTANT SURGEON

Candidates for this post must possess surgical qualifications and be registered

The appointment will be for five years in the first instance

Personal canvassing in connection with either of the above posts is prohibited but candidates may send copies of their applications and testimonials to members of the Appointing Committee

Applications addressed to the Chairman of the Committee of Management should reach the Institution not later than 10 a m on Saturday March 12th

R J CARLESS
February 15th 1932 House Governor

Central London Throat, Nose, & EAR HOSPITAL
Gray's Inn Road W C 1

ASSISTANTS IN THE OUT PATIENT DEPT

There are vacancies for two Second Assistants one for attendance on Wednesdays at 2 p m and one for attendance on Saturdays at 2 p m The duties are to assist the Surgeons in seeing the patients and the posts are honorary ones

Applications for either of these appointments may be for periods of three six or twelve months and should be sent to the undersigned on or before March 5th

JOHN H YOUNG
Secretary Superintendent

Miller General Hospital,
Greenwich Road S E 10

Applications are invited for the two following posts

RESIDENT SURGICAL OFFICER AND REGISTRAR (the senior of six Resident posts) Salary £250 per annum
HOUSE PHYSICIAN Salary £100 per annum

Candidates (male) must be unmarried Board residence and laundry are provided Duties to commence on April 1st next Applications stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials to be sent to the Secretary as soon as possible

February 15th 1932

Ingham Infirmary,
SOUTH SHIELDS

Wanted SENIOR and JUNIOR HOUSE SURGEONS (male) Salaries £200 and £150 per annum respectively with residence board and washing No out visiting Candidates must hold registered qualifications in Medicine and Surgery The appointment will be terminable by one months notice Applications stating age and accompanied by copies (which will not be returned) of recent testimonials to be sent to the undersigned from whom further particulars may be obtained

JOHN POTTER Secretary

Doncaster Royal Infirmary
(185 Beds)

SENIOR CASUALTY HOUSE SURGEON (male) required immediately Previous Hospital experience necessary

Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable

Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER P SMITH
Secretary Superintendent

Hulme Dispensary, Dale Street,
Stretford Road MANCHESTER

Wanted a RESIDENT MEDICAL OFFICER male or female single duly registered and fully qualified

Application with testimonials at once to Honorary Medical Secretary Salary £300 with apartments attendance coal and light

The London Lock Hospitals,
91 Dean Street W and
283 Harrow Road W 9

The Board of Management invite applications for the following appointments

(1) SURGICAL REGISTRAR to the Male Lock Hospital and
(2) SURGICAL REGISTRAR to the Female Lock Hospital

The present holder is an applicant for reappointment

Honorarium in each case £100 per annum The appointments are for one year Candidates who must be doubly qualified and duly registered are invited to send in their applications together with three copies of testimonials only to the Secretary at 283 Harrow Road W 9 not later than 10 a m on February 29th Copies of the Laws and By laws relating to the appointments can be obtained on application to the Secretary Candidates must be Fellows (or Members) of the R C S England or Surgical Graduates of a University of the United Kingdom Duties to commence April 1st

By Order of the Board
HY J EASON
Feb 9th 1932 Secretary

Birkenhead & Wirral Children's HOSPITAL
Woodchurch Road BIRKENHEAD

HOUSE SURGEON

The Board invite applications for post of House Surgeon (m or f) for a period of six months from April 1st Honorarium at the rate of £100 per annum with board residence and laundry

SECOND HOUSE SURGEON

The Board invite applications for the post of Second House Surgeon (m or f) for a period of six months from April 1st Honorarium at the rate of £75 per annum with board residence and laundry

Applications for above posts together with copies of testimonials to be addressed to the Secretary at the Hospital not later than February 29th

Hampstead General and North-
WEST LONDON HOSPITAL
Haverstock Hill N W 3

APPOINTMENT OF CASUALTY MEDICAL OFFICER

Applications are invited from unmarried registered Medical Women for the position of Casualty Medical Officer at the Out patient Department of the Hospital Bayham Street Camden Town The salary will be at the rate of £100 per annum together with board residence etc and the term will be for six months

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on February 24th next

St John's Hospital for Diseases
OF THE SKIN
49 Leicester Square W C 2

Applications for the posts of OUT PATIENT and IN PATIENT MEDICAL REGISTRARS are invited to be sent to the undersigned on or before Saturday morning March 5th

Honorarium £50 per annum in each case

Applicant must be duly qualified and registered Medical Practitioners Particulars of the duties can be obtained on application

There are also vacancies for Clinical Assistants

HONARD C P TURPIN
February 10th 1932 Secretary

Acton Hospital, W 3

JUNIOR RESIDENT MEDICAL OFFICER (male unmarried) required immediately Salary £150 per annum with board residence and laundry Candidates must be fully qualified and registered Application stating age and nationality and qualifications together with a copy of three recent testimonials should reach the Secretary Acton Hospital Gunnersbury Lane W 3 by Saturday February 27th

DONALD C D SWORD
February 13th 1932 Secretary

Aberdeen Royal Mental Hospital

The office of JUNIOR ASSISTANT PHYSICIAN (male) in Aberdeen Royal Mental Hospital is vacant and applications are invited

Salary will commence at £300 per annum with board lodging and laundry

Applications stating age and qualifications with copies of testimonials should be sent to the Physician Superintendent

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens, Edinburgh

(a) British Islands

Town or District	Town or District	Town or District
CENTRAL POST OFFICE. *(Assistant Medical Officer—Woman)*	**CONTRACT PRACTICE** *(contd)*	**CONTRACT PRACTICE** *(contd)*
CONTRACT PRACTICE	LLWYNYPIA CLYDACH VALE PENYCRAIG GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen Medical Scheme)*
FFRWD VALE MON *(Workmen's Medical Society)*	MARDY GLAMORGAN *(Workmen's Medical Scheme)*	**PUBLIC HEALTH**
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme)*	DEVON COUNTY COUNCIL. *(School Medical Inspector—Male)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	NEATH AND DISTRICT *(Medical Aid Association)*	FULHAM BOROUGH COUNCIL *(Assistant Medical Officer—Woman)*
	OAKDALE MON *(Medical Officer for Medical Aid Association*	LANARK COUNTY COUNCIL *(Assistant Medical Officer of Health and Tuberculosis Officer)*

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Societies Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	SOUTH AUSTRALIA *(Lodge Appointments)*	Secretary South Australian Branch B M A House 206 North Terrace Adelaide	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	VICTORIA. *(All Institute or Medical Dispensaries)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria.	WESTERN AUSTRALIA *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St George's Terr Perth Western Australia.

February 17th 1932 By Order of the Council ALFRED COX Medical Secretary

Leicester Royal Infirmary
(472 Bed)

HOUSE SURGEON

A vacancy is expected on April 1st. The Casualty House Surgeon will be an applicant. Salary at the rate of £125 per annum. Applicants must have held a resident hospital post or had similar experience of hospital work. Appointment will be made March 9th. Application to the House Governor and Secretary on or before March 1st.

CASUALTY HOUSE SURGEON

In the event of the Casualty House Surgeon being appointed to the above House Surgeoncy there will be a vacancy for a Casualty House Surgeon. Salary and conditions of appointment as for House Surgeon.

Application to the House Governor and Secretary by March 1st accompanied by copies of three recent testimonials.

February 8th 1932

Leicester Royal Infirmary
(472 Bed)

HOUSE PHYSICIANS

Two half-yearly vacancies are expected on April 1st. Salary at the rate of £125 per annum. Applicants should have held a resident hospital post or had similar experience of hospital work. Applications should be sent in by the middle of March. Applicants should state the month for which they desire to be considered and enclose copies of three testimonials.

February 8th 1932

The Willesden General Hospital,
Harlesden N W 10

The Council of Management invite applications for the appointment of SECOND ASSISTANT (Resident) Appointment required for two and a half years.

Applicants must have had three resident hospital appointments. Applications, stating age, with copies of three recent testimonials, should be sent by the 24th inst. to the Secretary, the Hospital, Harlesden, from whom further particulars may be obtained.

February 11th 1932.

Cumberland Infirmary, Carlisle
(160 Bed)

Resident Medical Staff—Four Qualified Officers

The following posts are vacant on April 1st: six months' appointment each. Previous experience desirable. Salary in each case at the rate of £155 per annum, board, residence, etc.

(a) HOUSE PHYSICIAN.
(b) SECOND HOUSE SURGEON, and
(c) HOUSE SURGEON to Special Departments (Eye, Ear, Nose and Throat).

Applications, stating age, nationality, qualification, etc., with copies of not more than four testimonials, must be received by first post on Wednesday, February 24th, by the undersigned, who will supply further particulars if desired.

Separate applications required for each post.

J. C. HOWITT, Secretary.

The Jessop Hospital for Women,
SHEFFIELD (146 Bed)

GYNÆCOLOGICAL AND MATERNITY DEPARTMENTS

The Board of Management invite applications for the post of HOUSE SURGEON (male) for a period of six months.

Salary £100 per annum, together with board, residence and laundry.

Applications, stating age, together with copies of testimonials, should be addressed to the undersigned at once.

H. B. SHELSWELL, Secretary.

The Royal Waterloo Hospital for
CHILDREN AND WOMEN
Waterloo Road, S.E.1

There are vacancies for the post of HONORARY MEDICAL REGISTRAR at the Royal Waterloo Hospital. Candidates must be registered Medical Practitioners and must have passed the examinations required by the General Medical Council. Letters stating the appointment desired can be obtained on application to the Secretary at the Hospital, to whom applications should be sent not later than February 23rd, with not more than three recent testimonials.

Birkenhead General Hospital
(156 Bed)

Applications are invited for the following resident posts (male) for the six months commencing April 1st next, viz.:

SENIOR HOUSE SURGEON. Salary £150 per annum with board, residence and laundry.

HOUSE PHYSICIAN. Salary £100 per annum with board, residence and laundry.

CASUALTY OFFICER. Salary £100 per annum with board, residence and laundry.

Application, stating age, nationality and qualification, together with three recent testimonials, to reach the undersigned as early as possible.

W. H. DANIELS, Secretary Superintendent.

King Edward VII Hospital,
WINDSOR (181 Bed)

A vacancy will occur on the Staff of the above Hospital on March 31st for a RESIDENT MEDICAL OFFICER (Senior, five Assistants). Applicants must be fully qualified, registered and have been Resident at an Hospital.

Salary at the rate of £200 per annum, together with board, residence and laundry.

Applications, with copies of testimonials, should be sent not later than February 27th.

ARTHUR E. CHURCHER, Secretary.

Samaritan Free Hospital for
WOMEN, Marylebone Road, N.W.1

Applications are invited for the post of HOUSE SURGEON for a period of six months, commencing on April 1st next. Salary at the rate of £100 per annum, with board, lodging and washing. Previous experience as House Surgeon essential.

Applications, stating age, accompanied by copies of testimonials, must reach the Secretary at the Hospital on or before Friday, February 26th.

G. H. HAWKINS, Secretary.

(Appointments continued on p 52)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE
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Wanted — Assistantship or LOCUM imm diately by Woman M B F S experience Hospital and G I all types Age 30 keen able drive car Free London Interview d sired Partic Practice salary etc —No 1021 B M A Hou e Tavistock Sq W C 1

Wanted — Assistant, with Hospital and general experience £360 p a (indoor) State exp height and capital (if with view) If marri d accommodation for wife can be provid d Send photo —Address No 1030 B M A House Tavistock Square W C 1

Wanted —Assistant for Colliery Practice in Glamorgan Must be young unmarried British Salary £300 live in Would suit newly qualified man Apply with t stimonials and photograph if poss ble —Add No 1035 B M A House Tavistock Sq W C 1

Wanted —An outdoor Assistant, with view for Woman s Practice Ind s trial area Yorks Salary £300 p a £20 p a for use of own car —Address No 1024 B M A Hou e Tavistock Square W C 1

Wanted immediately — Indoor and Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cross Street Manchester

Assistant (man or woman) indoor wanted country town Midlands State age height religion and full particulars —Address No 1011 B M A House Tavistock Square W C 1

Assistantship, with or without view or LOCUM by M B Class 29 marri d (no family) good appear well received 4 year Hosp and C P Anaesthetics Mid wif ry etc Good te timonials —Addre s No 1023 B M A Hou e Tavistock Square W C 1

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Temporary Assistant wanted for al st 6 months N E London or a Must h ener tic reliabl and int rusty qualified Salary ne gunea a day indo r M trainer pref rred — Addr s No 1040 B M A Hou e Tavistock Square W C 1

PARTNERSHIPS

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Wanted — Good-class Partnership in South of England No panel non dispensing Nice country district or country town Cottage hospital and surgical scop — Address No 1008 B M A House Tavistock Square W C 1

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Gold Coast Colony —Temporary MEDICAL OFFICER required for about six months commencing about middle of March Salary £80 per month and quarter Pass (1st class) both ways Applicants should be under 45 active and experienced in Surgery and tropical diseases —Apply BRITISH MEDICAL BUREAU 12 Stratford Place Oxford St W 1

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M B, C M, Ed Univ D P H, aged 59 in very urgent need of MEDICAL WORK in any capacity — V c/o Hon Sec 55 Bryanston St W 1

Medical Officer wanted for Group of Tea Estates in ASSAM Candidates preferably about 30 or upward who experience and qualifications must bear strictest expert investigation 1 our years agreement commencing salary Rs 1 500 a month risin Rs 50 a month each year plus Rs 150 a month car allowance throughout (Rupee equivalent 1s 6d) Free furnished bungalow use of certain servants first class passage—Write with fullest particulars Box /B420 DEACONS ADVERTISING AGENCY 5 St Mary Axe E C 3

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Representatives required with CONNEXIONS amongst the Medical Profession one for London and one for Provinces Write stating qualifications previous experience and salary required —Addres No 1014 B M A House Tavistock Square W C 1

Retired Officer (I M S), would be glad to hear of congenial EMPLOYMENT Experienced in Mental Diseases and extensive experience as Civil Surgeon —Address No 1003 B M A House Tavistock Sq W C 1

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Wanted, by experienced Practitioner, capital available good practice and panel PRACTICE or PARTNERSHIP Scotland preferred Assistant kept with early view consid of prosp cts gd Parties in treaty —No 1010 B M A Hous Tavistock Sq W C 1

Wanted in Lexton, Lextonstone, Stratford or neighbourhood a part PRACTICE Write in strict confidence —No 1025 B M A Hous Tavistock Sq W C 1

Wanted, in Scotland, General PRACTICE preferably in a fair Capital available — Address No 1046 B M A Hou e Tavistock Square W C 1

Wanted about beginning April, small Country PRACTICE or ASSISTEDSHIP in district where some sport can be had would entertain Assistantship or Partnership with view House with 4/5 bedroom all modern conveniences and good yard required Replies in confidence — Address No 1005 BMA House Tavistock Square WC1

Wanted shortly, Practice or PARTNERSHIP with early succession in or near London NW W or SW about £1 500 p a Middle class with some panel House 4 bedrooms and garage —Address No 1004 BMA House Tavistock Square WC1

Wanted by experienced Practitioner mixed general PRACTICE or PARTNERSHIP succession in London Income about £2 000 or more p a including sub tantial panel Cash available —Address No 1042 BMA House Tavistock Square WC1

Beds — Practice in pretty district Nice house electric light garden garage Receipts £500 great scope Panel 73 increasing House rent or sell Price £400 or with house £1 300 —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

Country Practice, situated within 60 to 70 miles London wanted by DIH Receipts should be £800 to £1 500 Panel not object to Public Health Appointment — *Send full detail in confidence to* THE MEDICAL AGENCY Watergate House Adelphi WC2

Dental Practice for Sale, old-established Receipts £1 200 House in main road, Balham SW sell or let on lease Low premium — Address No 1028 BMA House Tavistock Square WC1

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For Sale, growing Practice in Scottish Industrial area Income £900 with good scope for increase Panel about 1 000 Would suit RC Premium £1 200 — Address No 1012 BMA House Tavistock Square WC1

For Sale to Medical Woman — Small PRACTICE near Waterloo Low working expenses Panel about 160 Premium £350 or near offer —Address No 1020 BMA House Tavistock Square WC1

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London — Residential suburb PRACTICE for Sale mostly middle class (510 panel) Receipts £900 Specially suit Surgeon as good local hospital can be used Much building going on —Address No 1016 BMA House Tavistock Square WC1

London, SE —Well-established PRACTICE Receipts average £1 300 a year including panel £640 House on long lease Premium £1 500 payable only £500 down Excellent opportunity — Apply PEACOCK & HADLEY LTD 19 Craven Street Strand WC2

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Shropshire — Private and panel (320) £370 p a Med Officer and Public Vaccinator (transferable) Could be doubled by energetic man Vendor too old to do more House 2 reception 4 bed Professional rooms bath hot and cold Good garden Garage Rent £34 —Address No 1034 BMA House Tavistock Square WC1

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APPOINTMENTS—Contd

National Hospital for Diseases
OF THE HEART
Westmoreland St Marylebone W 1

...ited for the post of ...FICER (non resident ...is for a period of six months from April 1st but may be renewed for a further period not exceeding six months
Salary at the rate of £125 per annum
Candidates who must be duly registered Medical Practitioners will not be expected to call on the Hon Medical Staff but should send their applications with copies of three recent testimonials to me at the Hospital not later than Monday March 7th
The Out patient Medical Officer will be required to assist the Hon Medical Staff on five afternoons weekly or four afternoons and one morning as may be arranged
ROBERT C E WHITNEY Secretary

National Hospital for Diseases
OF THE HEART
Westmoreland St Marylebone W 1

RESIDENT MEDICAL OFFICER

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) The appointment is for a period of six months from April 1st but may be renewed for a further period not exceeding six months
Salary at the rate of £150 per annum with board residence and washing
Candidates who must be duly registered Medical Practitioners will not be expected to call on the Honorary Medical Staff but should send their applications with copies of three recent testimonials to me at the Hospital not later than Monday March 7th
ROBERT G E WHITNEY Secretary

St Paul's Hospital for Diseases
(INCLUDING CANCER) OF THE GENITO URINARY ORGANS AND SKIN
Endell Street Holborn W C 2

Applications are invited for the under mentioned position
HOUSE SURGEON (vacant April 1st)
Candidates must be doubly qualified and registered Salary at the rate of £150 per annum with board and residence The appointment is for a period of six months on the termination of which the holder is eligible for the position of Resident Medical Officer in which capacity he will have charge of the Surgical bed During his appointment as House Surgeon the duties will involve work in the Surgical Wards and in the Out patient Department for Venereal Diseases
Applications with copies of recent testimonials to be sent on or before March 8th to the Chairman of the Medical Committee

Manchester Northern Hospital
FOR WOMEN AND CHILDREN
Park Place Cheetham Hill Road

The Committee of Management require the services of a JUNIOR HOUSE SURGEON duly qualified who is to commence duty on April 1st
Salary £100 per annum with board only
Applications stating age and experience with copies of recent testimonial to be sent to the Secretary Mr JAMES C DANIELS 38 Barton Arcade Manchester by the first post Feb 29th

City Mental Hospital,
NOTTINGHAM

SECOND ASSISTANT MEDICAL OFFICER (not Deputy) required with General and Mental Hospital experience Salary £400 rising by £25 a year to £500 with all found In addition £50 per annum if holding D P M No quarters available for married man Apply at once with fullest particulars to Medical Superintendent

Bristol Eye Hospital

Applications are invited for the post of HONORARY ASSISTANT SURGEON
Candidates must be Fellows of one of the Royal Colleges of Surgeons or hold a Special Diploma in Ophthalmology
Application to other with three testimonials should be received by the Secretary not later than March 7th

House Surgeon (male) required
for AYR COUNTY HOSPITAL for six or twelve months to commence duty on April 1st Salary at the rate of £150 a year with board and residence Application with two copies of testimonial to be forwarded with the Secretary Ayr County Hospital Holmston Road Ayr not later than March 7th

County Council of Middlesex
NORTH MIDDLESEX COUNTY HOSPITAL
JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners and should have held resident appointments in a General Hospital
North Middlesex County Hospital is a modern General Hospital with accommodation for over 900 cases chiefly acute 230 beds in the adjoining Edmonton Institution also are under the care of the Medical Staff of the Hospital In addition the Hospital possesses a Pathological Laboratory and X ray Roentgen Deep therapy Radium Electro therapeutic Massage Ear Nose and Throat Ophthalmic and Dental Departments
The gentleman appointed will work under the control of the Medical Superintendent and devote his whole time to his official duties
Salary £250 per annum together with board lodging and laundry subject to a small temporary abatement in view of the national situation The appointment is for one year only and is subject to one months notice on either side At the end of the period of one years service the successful candidate if considered satisfactory in all respects will be eligible upon the recommendation of the Medical Superintendent for promotion to the post of Assistant Medical Officer If not so recommended he will leave the Councils service
Applications stating (1) age (2) qualifications and (3) previous experience together with copies of not more than three recent testimonials must be received by the undersigned not later than March 5th
Canvassing directly or indirectly will be a disqualification
No special application forms are provided Envelopes must be endorsed Junior Assistant Medical Officer
ERNEST S W HART
Clerk of the County Council
Middlesex Guildhall Westminster S W 1
February 1932

City of Liverpool
RESIDENT ASSISTANT MEDICAL OFFICERS (MALE AND FEMALE)
WALTON HOSPITAL (1650 Beds) Male Medical Officers
ALDER HEY CHILDREN'S HOSPITAL (300 Beds) Male and Female Medical Officers

Applications are invited for the above named appointments for a period of one year at a salary of £200 per annum (subject to a temporary deduction as authorised by the Council) together with the usual residential allowances Canvassing will be deemed a disqualification
Applications to be made upon forms obtainable from the Medical Officer of Health Municipal Annexe to be endorsed Resident Assistant Medical Officer and returned to the undersigned so as to be received not later than Monday February 29th
Municipal Buildings WALTER MOON
Liverpool Town Clerk
February 15th 1932

County of Antrim Mental
HOSPITAL
ANTRIM NORTHERN IRELAND
APPOINTMENT OF RESIDENT MEDICAL SUPERINTENDENT

The Committee of Management of above Hospital invite applications for the position of Resident Medical Superintendent Salary £800 per annum with house fuel and light washing and garden valued at £150
One Assistant Medical Officer resides in the Hospital At present there are 564 patient
Applicants must have an extensive experience of the treatment of Mental illness A Degree or Diploma in Psychological Medicine desirable
Applicants must be not less than 40 years of age
The gentleman appointed will be required by the Committee to devote all his time to his professional duties The appointment will be subject to the provisions of the Asylums Officers Superannuation Act 1909
Applications accompanied by copies of recent testimonials must be made to the Committee of Management endorsed Resident Medical Superintendent and received by the Clerk of the Hospital up to March 5th
Canvassing directly or indirectly prohibited
By Order of the Committee of Management
J WALKER Clerk

The Princess Mary Maternity
HOSPITAL Jubilee Trust
NEWCASTLE UPON TYNE

RESIDENT MEDICAL OFFICER (male) required for six months from March 1st For details apply House Governor

South Devon and East Cornwall
HOSPITAL PLYMOUTH (240 beds)

HOUSE SURGEON (male)

Salary £100 per annum with board residence and laundry. Appointment is terminable for six months' notice. It is subject to renewal. Duties to commence March 1st. Candidate must be registered under the Medical Acts.

Applications stating age and qualifications together with copies of recent testimonials to reach the undersigned not later than 23rd February 1932.

ARTHUR J. CASH
1 Feb. 5th 1932 Hon. Secretary

Manchester and Salford Hospital
FOR SKIN DISEASES

HOUSE SURGEON

Applications are invited for the post of House Surgeon. Must be registered. The appointment is for six months from April 1st. Salary at the rate of £160 per annum with board and lodging.

Application with copies of three testimonials to be sent to the undersigned, Quay Street, Manchester, on or before Wednesday, February 24th.

JOHN NAIL, Secretary.

The Loughborough and District
GENERAL HOSPITAL

Wanted to commence duties early in April RESIDENT HOUSE SURGEON (male or female and unmarried) having a medical and surgical registered qualification. Practical experience in the administration of anæsthetics is required. Salary £150 with apartments, board and laundry. All application stating age, etc., with copies of testimonials to be sent to me at once.

9 Leicester Road, Loughborough. FRANK H. TOONE, Secretary.

North Staffordshire Royal
INFIRMARY, STOKE-ON-TRENT

ORTHOPÆDIC HOUSE SURGEON

The Committee invite application for the post of Orthopædic House Surgeon. Salary £150 per annum with board, residence and laundry. Previous orthopædic experience desirable. Applications with two copies of recent testimonials to be sent to the undersigned immediately.

W. STEVENSON,
Secretary, House Governor.

Charing Cross Hospital

SURGICAL REGISTRAR

The Council invite applications from candidates who must be registered practitioners (male) for the post of Surgical Registrar. Honorarium £150 per annum. A copy of the regulations can be obtained from the undersigned to whom applications together with copies of three testimonials must be submitted not later than Tuesday, March 1st.

Charing Cross Hospital, Strand, London, W.C.2. PHILIP INMAN, House Governor.

Charing Cross Hospital

OBSTETRIC REGISTRAR

The Council invite applications for the post of Obstetric Registrar. Honorarium £100 per annum.

Application together with copies of three recent testimonials must be submitted to the undersigned not later than Tuesday, March 1st.

Charing Cross Hospital, Strand, London, W.C.2. PHILIP INMAN, House Governor.

Jewish Maternity Hospital,
Underwood Street, Mansfield Road, N.1

There is a vacancy for an HONORARY CONSULTANT SURGEON.

Applicants to be Fellows of both Royal Colleges of Surgeons of England should submit their applications together with copies of three testimonials to the undersigned not later than 29th February.

ALICE MOORE,
Hon. Gen. Secretary.

Leaf Homœopathic Cottage
HOSPITAL, EASTBOURNE

APPOINTMENT OF HONORARY SURGEON

Applications are invited for the appointment of Honorary Surgeon to the above Hospital. Candidates are requested to forward their applications together with copies of testimonials to the undersigned not later than March 1st.

The Prince of Wales's General
HOSPITAL, Tottenham, N.15

The following resident posts will be vacant on April 1st next:

(a) ONE SENIOR HOUSE PHYSICIAN
(b) TWO SENIOR HOUSE SURGEONS
Salary at the rate of £120 per annum.
(a) ONE JUNIOR HOUSE PHYSICIAN
(b) TWO JUNIOR HOUSE SURGEONS
Salary at the rate of £90 per annum.
Board, residence and laundry.

Appointment held for six months, but holders are eligible for a further term.

Candidates (male) must be fully qualified and registered and application (on the prescribed form) together with copies of three recent testimonials should be sent to me on or before the first post on Wednesday, March 2nd.

J. C. BUFFETT, Director.

Children's Hospital, Hampstead,
College Crescent, Swiss Cottage, N.W.3

Applications are invited for the post of RESIDENT MEDICAL OFFICER. The appointment will be for the period of six months at a salary of £100 per annum with board, lodging and laundry, and will date from March 1st next. Candidates must be registered Medical Practitioners unmarried and of British nationality.

Application accompanied by copies of not more than three recent testimonials should be sent to the undersigned not later than February 27th.

J. H. JOHNSTON (Lieut.-Colonel), Secretary.

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London, W.—About £2,000 p.a. Old-established Small panel of about 450. Non-dispensing. Patients' Private fees 7/6 to 21/. Appointment £180. No midwifery taken. Good house with 6 bed. consulting surgery and garden. Private house and Practice £4,500.—No. 8987.

Norfolk — Partnership — One-third share. Very old-established Country Practice. Average £3,500. Panel over 1,500. Private about £1,000. Midwifery 2 gns. up. Visits 5/- to 21/-. Detached house, garage and small bed. Large surgery etc. (part cottage and laundry). The One-third share of goodwill only £1,250. Freehold share of purchase.—No. 8960.

London, S.W.5.—Good residential locality. £4,000 p.a. Small Private Panel. Non-dispensing. No night or midwifery. Visits 5/- to 10/6. Consultations 5/- to 7/6. Ground floor maisonette at £1,000 p.a. including rates. Entrance hall, 2 bed. bath, consulting room and good garden. Freehold £6,000.—No. 8982.

S. Wales — Mining Practice — £1,100 p.a. About £1,000 contract work. Panel of 1,000. Private fees visits 5/- up, surgery 2/6, mileage 4d. up. Modern house, 2 reception, 5 bed. Separate surgery. Rent £48. Freehold for sale or purchase.—No. 8917.

Favourite South Coast Resort — Non-panel. PRACTICE established 21 yrs., returning already £1,300 p.a. Fees 5/- to £1. Excellent detached house with 9 bedrooms, passenger lift, 2 bathrooms, etc. Very suitable for resident patient. Rent £150 or will sell at £2,000. Goodwill £650.—No. 8975.

Middlesex — Rapidly growing district. About £2,500 and great scope. One-third share, or will sell 2 years' purchase including large Panel 1,400. Appt. £40. House with 5 recep., 5 bed., etc., for sale at £1,800. Others available.—No. 8970.

London, N.W. — Estab. 3 yrs., about £900 p.a. Large 300 and working class. Visits 3/- to 5/-. Surgery up. Large corner house, 6 bed., 3 rec., and surgery, etc. Rent £120 p.a. or will lease. Premium £50 for quick sale.—No. 8996.

Sussex, favourite part on high ground. About £1,500 p.a. Net. Panel non-dispensing. Little or no midwifery. Visiting fees 5/- to 21/-. Large house with 9 bed., 3 recep. and consulting room, and 2 acres to rent at £200. Small house at £120 p.a., with consulting room, 2 recep. and 3 bedrooms. Premium £2,000 cash.—No. 8904.

Midlands — £3,000 a year Old-established Sole Agency over 30 years. Partner 5 years. One-third share for sale now, more later at 2 years' purchase. Horse available to rent. Station close. Fees 7/- to 21/-. Extensive district, very little opposition. Panel 1,000. First-class. Known and recommended.—No. 8902.

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LONDON.—Mixed G P situated in Eastern Suburb. Medium sized corner house. Receipts approx. £1,000. Panel 975. Premium for Practice £1,750. Leasehold house £900.

LONDON, W.—PARTNERSHIP in West End Practice. Receipts over £5,600. Panel nearly 1,000. Premium for 1/3 share £3,000. Suitable opening for man with good address and experience preferably about 30.

KENSINGTON.—Good class non dispensing and panel PRACTICE. Large house to rent on lease. Receipts approx. £400. One appointment. Fees 10/6. Premium £500.

LONDON, N.W.—Well established mixed PRACTICE, mainly better class, with excellent house situated on main thoroughfare. Receipts approx. £900. Panel over 420. Fees 3/6 up. No midwifery. One appointment. Part of house sublet if desired. Vendor has developed better class of practice at good fees. Premium £1,300 cash.

LONDON, E.—PARTNERSHIP in middle and working class Practice. Receipts over £2,000. Large panel. Scope for increase especially midwifery. Premium for 2/5ths share. 2 years purchase with view to larger share.

LONDON, E.—Well established and growing PRACTICE in thickly populated locality. Receipts approximately £1,200. Panel about 1,000. House to rent on lease. Fees 2/- up. Excellent scope. One appointment. Premium 2 years purchase or near offer.

DURHAM.—Middle class and industrial PRACTICE. Average receipts approx. £500. Panel 370. Medium sized house. Branch surgery. Fees 2/6 up. No appointments. Rem. £725 or offer. Excel. scope.

YORKS.—PARTNERSHIP in middle and working class Town Practice. Receipts approx. £3,000. Panel over 2,000. House to rent. Premium for 1/4 share. 2 years purchase.

ESSEX.—Seaside Resort.—Good mixed class G P with scope for increase. Excellent modern house to rent on lease or for sale. Fees 5/6 up. Appointment over £200. Receipts over £1,000. Small select panel. Premium £1,150 to include drugs.

LONDON, S E.—Near West End.—Cash and panel PRACTICE (Lock up). Shop fronted surgery held on lease at £70 p.a. part sublet. Receipts average approx. £400. Panel 517. Excellent scope for one giving whole time and undertaking midwifery. Premium 1½ years purchase or near offer.

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YORKSHIRE.—Well established mixed rural PRACTICE. Suitable house available (4 beds). Receipts approx. £1,000. Panel 620. Fees 3/6 up. One appointment. Premium 1½ years purchase.

HOME COUNTIES.—PARTNERSHIP in good class Practice situated in well known country town. Receipts approx. £6,000. Select easily run panel. Medium sized house to rent. Premium for 1/4 share 2 years purchase. This Practice has been known to the Agency for many years and is highly recommended. It is essential that the incoming Partner shall hold the F.R.C.S. and be aged about 30. Appointment to Hosp. Staff.

NORTHANTS.—Old estab. Country PRACTICE situated in charming locality. Hunting and sport of all kind. Highly suitable to semi-retired Practitioner. Splendid house in own grounds to rent or purchase. Central heating, electric light etc. Receipts £500. Panel 400. Premium £550.

EASTERN COUNTIES.—Cathedral City.—PARTNERSHIP in good-class non panel Practice. Receipts average £4,450. Excellent opportunity for first class man on the medical side. Probability of Hospital appointment. Quarter share to commence at 2 years purchase.

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2 LANCS.—SEASIDE TOWN.—Panel and private PRACTICE. Receipts last year nearly £900. Small panel. Both increasing. Good fees. House to rent (5 beds). Garage etc.
3 LANCS. — FASHIONABLE RESIDENTIAL and SEASIDE TOWN. Good class non dispensing Panel and private PRACTICE. Receipts £874. Good house for sale. Car etc.
4 NORTH OF ENGLAND.—Panel Colliery and Club PRACTICE. Receipts average £800 p.a. Panel 550. *Appointments* £350. Good house to rent. Considerable scope for energetic man.
5 MIDLANDS.—Panel and Private PRACTICE. Receipts considerably over £700. Panel over 600 and both increasing rapidly. Appointments worth about £70. House to rent. Garage etc.
6 LANCASHIRE. — (Large Town) — Non dispensing non panel largely surgical PRACTICE estab. over 4 years. Receipts average £1,179 p.a. and unlimited scope. Good house etc.
7 SOUTH WALES.—Contract and middle class PRACTICE. Receipts over £1,100. Panel about 1,000. Good house to rent. Lawn car etc.

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3 GLAMORGAN. — *Old established* Contract PRACTICE. 1 opponent. £1,100 p.a. accountants figs. Panel 1,000. Good modern house in pleasant *situation* with garden. Rent £48 p.a. Prem. 1 yrs. purch.
4 BEDFORDSHIRE.—Country PRACTICE. Net £500 p.a. Cd. house to buy or rent. Prem. £900.
5 ESSEX. — Seaside Town.—PRACTICE av. £950 p.a. Easily worked. Small panel. Excellent house with good garden. Appts. £210. Price £1,150 incl. drugs.
6 COUNTRY TOWN.—PRACTICE £900 p.a. in Carmarthen. Low price by instalments for quick sale. Good house to rent £40 p.a.
7 DEVON. — Unopposed Country PRACTICE. Last year £675. Panel 250. Scope for increase. M.O. £71. Rent £52 p.a. Prem. 1½ years purchase. Suit for man or woman.
8 MONMOUTH. — Old established PRACTICE. Receipts £300 p.a. In same hands 30 years. Good house. Selling owing to age and ill health. Populous district. £1,000 for house and Practice.
9 DEVON. — PARTNERSHIP for well qualified Physician. 2/5 share returning at first £800 p.a. Good class non panel. Trained Fee. Excellent house to rent. Prem. 2 yrs. purch.
10 MONMOUTH. — Old-established Country PRACTICE over £1,600 p.a. *Third share* at 2 yrs. purchase. Good house. Vendor retiring sale of whole Practice. Scope for surgical.
11 DEVON.—Seaport Town. — In good district £520 in last 15 months. Panel 500. Good house to rent. Rem. £400. Great scope. Selling owing to ill health.

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MANCHESTER.—Old established PRACTICE in present hands over 30 years. Cash receipts last year £1 409. Panel 885. Scope for increase. Rent of surgery premises £50 p.a. Premium 1½ years purchase.—No. 328.

LANCS.—PLEASANT COUNTRY TOWN.—Sound mixed PRACTICE. Average cash receipts £1 369 p.a. Appointments—mostly transferable—Approximately £265 p.a. Panel 1 037. Excellent house 3 reception 6 bedroom garage and large garden. Premium—Practice—1½ years purchase.—No. 326.

LIVERPOOL.—Mixed General PRACTICE. Cash receipts last year £1 080. Panel 950. Scope for increase. Good house 3 reception 5 bedroom. Rent £70 p.a. or would sell for £1 250. Premium 1½ years purchase.—No. 324.

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CUMBERLANDSHIRE.—Old-established PRACTICE. Cash receipts £1 100 p.a. Panel 1 000. Pleasant house 2 reception 4 bedroom. Garage and garden. Rent £48 p.a. Premium—for quick sale—one years purchase.—No. 320.

MANCHESTER.—Old established PRACTICE. Cash receipts last year £1 513. Panel 1 65[illegible]. Scope for increase. Good house 2 reception 4 bedrooms. Premium—Practice—1½ year purchase.—No. 325.

MANCHESTER.—Middle-class PRACTICE in pleasant suburb. Cash receipts £1 531. £1 327. Panel 459. Charming house 3 reception 6 bedrooms. Tiled bathroom. Large garden and garage. Premium—Practice—1½ years purchase.—No. 322.

CHESHIRE TOWN.—NEAR MANCHESTER.—PARTNERSHIP in Mixed Practice. Average cash receipts £2 267 p.a. Panel 1 100. Good house available. 2 reception rooms 3 bedrooms. Garage and small garden. Premium—one-third share—1½ years purchase after expiration of assistantship. Half share in three years.—No. 318.

MANCHESTER.—RESIDENTIAL SUBURB.—Middle-class PRACTICE. Suited for two in partnership (one a good surgeon). Cash receipts £1 31[illegible] £4 3[illegible]8. Panel 1 400. Two excellent houses with ample accommodation. Premium 1 year purchase part by arrangement.—No. [illegible].

LANCS TOWN.—Old-established mixed PRACTICE. Average cash receipts £[illegible] p.a. Panel 1 [illegible]10. Excellent opening for energetic man or 4 partners. Garage and garden. Premium—1½ years purchase.—No. 2[illegible]8.

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MANCHESTER.—Old established PRACTICE. Cash receipts 1930 £688. Panel 578. House on main road 2 reception 5 bedrooms and garage. Premium—Practice—1½ years purchase.—No. 29[illegible].

NEAR PRESTON.—PRACTICE offering scope. Cash receipts 1930 £700. Panel 300. Good house 2 reception 4 bedroom. Rent £70 p.a. Premium 1½ years purchase.—No. 2[illegible]4.

LIVERPOOL.—Old established middle-class PRACTICE. Cash receipts over £2 000 p.a. Panel 900. Excellent house 2 reception 7 bedroom garage and garden to rent.—No. 2[illegible]6.

MANCHESTER.—PARTNERSHIP in Practice of about £1 600 p.a. Panel 1 550. House available to rent. Premium—half share—1½ years purchase.—No. 303.

NEAR LIVERPOOL.—PARTNERSHIP in good-class Practice. Cash receipts approx. £3 000. Good house available. Premium—one-third share—2 years purchase.—No. 309.

LIVERPOOL.—Small PRACTICE of £621 p.a. recently transferred appointments (£520 p.a.). Excellent house 4 reception 7 bedroom. Garage. Rent £75 p.a. Premium 1 year purchase.—No. 302.

NEAR MANCHESTER.—Pleasant Town.—Old established PRACTICE. Average cash receipts £[illegible]95 p.a. Panel 502. Exceptional opening for [illegible] (freehold). 3 reception 5 bedroom. Garage and garden. Premium—Practice—1 years purchase.—No. 23[illegible].

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The business undertaken by the British Medical Bureau is divided under the following heads —

TRANSFER OF PRACTICES, PARTNERSHIPS, etc

Medical Practitioners wishing to dispose of Practices or desiring to take Partners are advised to negotiate the business through the British Medical Bureau Vendors may depend upon receiving introductions only to eligible and bona fide purchasers All information is treated in strictest confidence Full and trustworthy information regarding Practices Partnerships etc, for disposal supplied gratis to Purchasers

ASSISTANTS AND LOCUM TENENS

Assistants and Locum Tenens can be secured at short notice It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out

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Medical Men wishing to receive Resident Patients should enrol their names on the books of the British Medical Bureau A large number of Patients are placed yearly through this medium

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3 WITHIN 30 MILES OF LONDON — PARTNERSHIP in non dispensing Practice of about £5 000 p a in first rate country town Panel 1 750 Good house (4 bedrooms etc) to rent Partner should be aged 30 35 and must hold the F R C S Premium one-half share 2 years purchase

4 E ANGLIA —Partnership in Practice of about £3 000 p a in suburb of cycle town Partner must be good at anaesthetics Premium one third share 2 years purchase

5 YORKSHIRE —N R — Country Practice in delightful and picture que part easy access of favourite seaside resort Receipts average £1 500 p a including £650 p a from the panel House (5 bedrooms) with electric light garage and large garden etc and good water supply for sale Hunting shooting fishing Premium £2 150

6 WITHIN 70 MILES OF LONDON — Lucrative PRACTICE of over £2 200 p a in flourishing county town Panel 1 830 Excellent house (6 bedrooms) in best part for sale or rent Premium 1½ years purchase

7 MIDLANDS —Partnership in Practice of about £2 500 p a in suburb of important city Panel 2 400 Good house (6 bedrooms etc) for sale or rent Partner must have had Hospital experience and be accustomed to minor surgery One third or two-fifths share for disposal Preliminary Assistantship if liked

8 LONDON, S E —Cash and Panel Practice in populous suburban district Receipts about £1 000 p a in cash with at least £400 p a from a panel of 950 Freehold non basement (3 good storeys) Price £1 000 or rent £100 p a Duty of six guineas Premium 1½ years purchase

9 LONDON W —Well established Nursing HOME Gross receipts about £7 000 p a Fees range from £8 8s to £15 15s Lease 21 years from Lady Day 1931 at £350 p a All quite modern and in perfect order with about 10 years to run Would suit two ladies Any reasonable offer will be considered for goodwill furniture and lease

10 S W OF ENGLAND — Partnership in country Practice of about £3 000 p a Panel over 2 000 Small convenient house (4 bedrooms) garage and garden to rent Up to date Hospital and scope for good surgeon One-third share at 2 years purchase with option to increase at an early date

11 BIRMINGHAM — Practice averaging £584 p a in good class suburb Small panel but ample scope Very little midwifery Low expenses House with garage to rent Premium 1½ years purchase or near offer for quick sale

12 WILTSHIRE — Country Practice over £1 300 p a in a most picturesque village Panel about 700 Good detached house (6 bed and dressing rooms) garage and large garden to rent Premium £2 250

13 LONDON, W —Partnership in rapidly increasing Practice of about £2 000 p a in good class suburban neighbourhood Panel 2 000 One third share at 2 years purchase Partner must be a Scotsman (preferably Edinburgh or St Andrews)

14 FAMOUS UNIVERSITY TOWN —Sound well established non dispensing non panel PRACTICE Receipts average £3 300 p a including good proportion from Univ graduates Appointments Not much midwifery Very good house (6 bedrooms etc) in best position to rent on lease Premium 1½ years purchase

15 SURREY — Partnership (after Preliminary Assistantship) in Practice about £3 000 p a in first rate residential district Panel about 1 500 Incoming Partner should be Graduate of Oxford Cambridge or London and aged about 30 Premium one third share 2 years purchase

16 ITALY —Old-established Practice in an attractive City Receipts last 2 years averaged £1 400 p a No midwifery or night work Suit gentleman of exceptional attainments and with good social attainments Reasonable Premium

17 W OF ENGLAND —Partnership in Practice in pleasant country town Cash receipts average about £5 200 p a (including panel and appointments over £1 500 p a) Charming old house (6 bedrooms and attics etc) garage and beautiful garden Plenty of sport Scope for increase Premium for one fifth share 2 years purchase

18 S E COAST — Popular Resort —Partnership in mixed class Practice at out £3 600 p a Panel at 2 000 Excellently situated house (5 bedrooms etc) with garden and garage for sale Five twelfths share for disposal at 2 years purchase

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Practices and Partnerships for Disposal (continued)

19 LONDON, S.E. — Partnership (with succession) in old-established middle-class Practice averaging nearly £2,500 p.a. in pleasant open suburb. Panel about 820. Little night work. Good house with garage and nice garden for sale or rent. Premium one-half share 14 years' purchase.

20 GLAMORGANSHIRE — Working-class Town PRACTICE averaging over £1,100 p.a. Panel 1,000. Modern house (3 bedrooms) in pleasant surroundings with garage and garden to rent. Premium (including drug) 1 year's purchase.

21 MIDLANDS — Partnership in Country Town Practice averaging about £3,500 p.a. Panel over 1,500. Scope for increase. Premium for one-fourth share 2 years' pur.

22 N. WALES — Steadily increasing Town PRACTICE of £875 p.a. (including good appt. and small panel) in beautiful part. Good house (6 bedrooms), garage and nice secluded garden to rent. Educational facilities. Premium only £750.

23 LONDON, N.W. — Practice in suburban district. Receipts 1931 £700. Panel 300. Corner house (5 bedrooms), garage and garden to rent on lease. Premium £750.

24 SUSSEX — Country Practice between £1,200 and £1,300 p.a. in delightful part. No panel. Large residence (9 bedrooms etc.), garage and garden of four acres to rent on lease. Premium £1,800.

25 EASTERN COUNTIES — Partnership in Practice of about £3,650 p.a. in country town. No panel. Suitable house available. Good educational facilities. Premium one-half share £2,500.

26 SURREY — Partnership in increasing middle-class Town Practice of £2,300. Panel over 1,200. Modern detached corner house (6 bedrooms), garage and garden for sale. Partner should be 26-30 and have held Hospital appointments. Share of £1,000 p.a. at 2 years' purchase.

27 N. OF ENGLAND — Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgery, anæsthetics and obstetrics. Share of three-fifteenths at 2 years' purchase.

28 LONDON, N.W. — Non-dispensing Practice over £900 p.a. in good residential district. No panel. Ten-roomed house with garage and large garden. Rent £200 p.a. Premium £1,200.

29 N. MIDLANDS — Partnership in Practice, about £3,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years' purchase.

30 EAST ANGLIA — Partnership in good-class non-dispensing Practice of about £3,000 p.a. in favourite Seaside Resort. Partner should be a University man about 30 years of age, experienced in Medicine and Anæsthetics. Good up-to-date Hospital. Premium for one-third share 2 years' purchase.

31 W. OF ENGLAND — Practice about £800 p.a. in first-rate City. Panel 1,320. Well-built house (furnished and extensive rooms) to let. Excellent scope. Premium £1,450.

32 S.I. COAST — Easily worked Practice in exclusive part of small town. Receipts last year £1,050 including all appointments over £200. Fees from resident patients and extra-Panel. Large modern house with beautiful garden to rent or purchase. Premium £1,150.

33 S. WALES — Increasing Practice of £900 p.a. in Central Market Town. Panel 150. Well-situated house (recently enlarged) with 5 bedrooms for sale. Cottage Hospital. Premium.

34 LONDON, N.W. — Practice (carried on by Medical Woman) clearing about £2,300 p.a. in main-tiered clientele. Panel 1,250. Semi-detached house to rent on lease. Good scope for increase. Premium £1,000.

35 LONDON, W. — Steadily increasing Practice of clearing about £750 p.a. mainly from Panel and Private. Panel about 700. Well-situated corner residence (6 bedrooms) to rent. Premium £750.

36 LONDON, S.W. — Small, non-dispensing PRACTICE of nearly £400 p.a. close to the West End. Select panel about 410 with scope. Corner house with ample accommodation to rent on lease. Premium 1½ years' purchase or near offer.

37 DURHAM — Practice of over £500 p.a. in residential and colliery district near large town. Panel 350. Substantially built 9-roomed house for sale. Scope for increase.

38 NEW ZEALAND — NORTH ISLAND — Non-dispensing PRACTICE about £1,800 p.a. in first-rate Town. Modern detached house (4 bedrooms etc.), garage and garden for sale. Equable climate. Good educational facilities. Premium only £1,250.

39 BIRMINGHAM — Practice of about £1,000 p.a. in one of the best residential suburbs. Small panel and very little midwifery. Well-situated house (6 bedrooms), good garden and garage for sale. Good scope. Premium 1½ years' purchase.

40 NORTH OF ENGLAND — Small Season PRACTICE in Inland Health Resort capable of increase by one practising all the year round. Receipts about £150. No panel or midwifery. House in own grounds with 6 bedrooms etc. Price—house and Practice—£1,250.

41 EAST ANGLIA — Partnership in Practice over £4,500 p.a. in beautiful country district easy access of important town. Panel 3,000. Nice detached house (7 bedrooms), garage etc., garden and grounds of 10 acres for sale. Sport of most kinds. Considerable scope. Premium two-thirds or four-ninths share 2 years' purchase.

42 SOUTH AFRICA — Easily worked Country PRACTICE in healthy district (elevation 2,000 ft.) in Cape Colony. Cash receipts year ended June 1931 over £1,000. Sport of all kinds. Well-built house. Premium—house and Practice—£1,225.

43 KENT — Country Practice of over £800 p.a. in beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms) central heating, grounds of 2½ acres orchard etc. for sale. Sport. Premium 1½ years' purchase.

44 S. OF ENGLAND — Partnership in Ophthalmic Practice about £1,300 p.a. in small but delightful resort. Considerable scope to one able to operate. Premium one-half share 1½ years' purchase.

45 HOME COUNTIES — Partnership in exceptionally good and rapidly increasing Practice about £6,000 p.a. in delightfully situated Country Town easy distance of coast. Attractive house (4 bedrooms) to rent. Partner must hold the F.R.C.S. and be aged about 30. Appointment on Hospital Staff. Premium for one-sixth to one-fourth share 2 years' purchase. Preliminary Assistantship.

46 SHROPSHIRE — Practice £800 p.a. in market town. Panel 1,700. House (5 bedrooms), garage and garden to be sold or let. Premium 1½ years' purchase.

47 KENT — Country Practice of about £850 p.a. Panel 550. Good house and garden for sale. Premium £1,100.

48 MIDLANDS — Country Practice of over £900 p.a. in beautiful district. Panel over 700. House contains 6 bedrooms and dressing room, etc., electric light, beautiful garden with greenhouse for sale. All kinds of sport. Premium £1,200.

49 SOMERSET — Practice averaging £870 p.a. in country town. Panel under 200. House with 6 bedrooms, garage and small garden to rent or purchase. Scope for increase. Premium £1,300.

50 LONDON, S.W. — Practice about £500 p.a. in suburban district. Panel 600. No midwifery. Semi-detached corner house (6 bedrooms) for sale. Scope. Premium 2½ years' purchase.

51 WITHIN 12 MILES OF LONDON — PARTNERSHIP in rapidly increasing cash Practice about £1,600 p.a. in developing industrial district. Panel nearly 1,900. Small house available. Large cottage Hospital. Two-fifths to one-half share 2 years' purchase.

52 LONDON, S.W. — Increasing Practice in outlying suburb. Bookings last year £890. Panel about 700. Modern house (5 bedrooms). Premium £1,000.

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1 PARTNERSHIP—LONDON SUBURB (SOUTH EAST)—Owing to the retirement of one of three partners the third share of an old established middle and working class Practice situated in a well populated district is for immediate disposal Cash receipts for past three years average £4 862 p a including appt over £500 p a and panel of about 5 300 Very little midwifery Expenses small Suitable house available Rent £40 p a Premium 2 years purchase

2 LONDON SOUTH WEST—PARTNERSHIP—A half share is offered in a very old established good middle and working class Practice averaging about £2 100 p a Panel of over 2 000 Fees from 2/6 to 10/6 Not much midwifery from 3 gns Purchaser can choose his own residence Premium for share £2 300

3 MIDLANDS—COUNTY TOWN—PARTNERSHIP—A one third share (or larger share if preferred) is offered in a well established good middle and working class Practice Gross cash receipts average over £2 000 p a including panel of nearly 2 000 Fees 2/6 to 7/6 Not much midwifery Suitable flat available above surgery or house can be rented Premium for share 2 years purchase

4 LONDON SUBURB—(North)—In rapidly growing district a well established and increasing PRACTICE offering excellent prospects Receipt last year £1 000 (last four months at rate of £24 a week) including panel also increasing of 400 No midwifery Small house containing surgery and waiting room four other rooms and offices Inclusive rental 30/ per week Premium £1 500 cash

5 SOUTH WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP—A share producing about £800 p a with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Midwifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be experienced and hold M D London

6 LONDON SOUTH WEST—PARTNERSHIP—A one fourth share (after Preliminary Assistantship of about six months at a salary of £540 p a) is offered in an old established middle and working class Practice Average gross cash receipts for the last three years £4 177 Panel of about 4 500 Fees from 1/6 to 7/6 Midwifery from 3 gns House contains 3 sitting rooms 3 bedrooms bathroom etc Garden Can be rented at £55 p a Premium for share 2 years purchase half down and balance by instalments

7 YORKS—PARTNERSHIP—A one fourth share is offered (with increase later) in an old established good mixed class Practice situated in a favourite town in good hunting district and within easy reach of popular seaside resort Average gross cash receipts for the past three years £3 700 Panel of 1 500 Fees 3/6 to 21/ Very suitable house with 2 reception 4 5 bedrooms etc and professional rooms Can be rented at £50 p a Sport of all kinds and good schools Premium for share £1 450

8 PARTNERSHIP—SOUTH WESTERN COUNTY—A two-thirds or two fifths share is for disposal in an old established mixed class Practice in a very attractive district near favourite town Gross cash receipts for last 12 months over £2 500 including panel of 1 500 Fees from 2 6 to 10/6 Very nice house with all modern conveniences and ample accommodation Premium 2 years purchase Sport of all kind and schools within reach Good surgical scope if desired

9 HOMŒOPATHIC PRACTICE—DEATH VACANCY—LONDON WEST—Old established connection Gross cash receipts have averaged between £3 000 and £4 000 p a Suitable house can be obtained on rental Offers invited

10 YORKSHIRE — COAST TOWN—Old established mixed class PRACTICE in attractive seaside and holiday resort offering good scope for increase and surgical work Average gross cash receipts for last three years over £1 900 Panel of 500 Fees from 5/ to 21/ Mid from 2 to 5 gns ally built with 2 profe sional rooms sale at valuation reason for sale saving house specially built with 2 separate entrances to large Freehold for £2 300 Ill health

11 NORTH WALES — Residential town near coast—Well established mixed-class PRACTICE in beautiful surroundings averaging between £900 and £1 000 p a Panel of 123 and appts worth £450 p a Fees from 3/6 to 21/ Not much midwifery Good house with 2 reception 6 bedrooms etc and professional rooms Garden and garage Rent on lease £82 10s p a Hunting excellent fishing tennis etc and good educational facilities Premium £750 or near offer for prompt sale

12 SUFFOLK—FAVOURITE COAST TOWN—PARTNERSHIP—A one third share (with increase later) is offered in an old established high class Practice averaging for the past three years £2 766 including panel of 941 Low scale of fees 5/ Midwifery 2 gns upwards about 50 cases Choice of houses Excellent social sporting and educational facilities Premium for share £2 000

13 SOUTH OF ENGLAND—FAVOURITE COAST TOWN—Old established high class PRACTICE producing about £1 800 p a Small panel Fees 3/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale or to be let on lease at £300 p a

14 MIDLANDS—Old established good mixed class unopposed PRACTICE situated in an attractive country town with beautiful surroundings Average gross cash receipts for last 3 years £1 584 including panel of 974 Good appts worth nearly £200 p a Fees from 3/6 Very nice house with 3 reception 6 bedrooms separate entrance to professional rooms Good garden with tennis lawn etc Garage for 2 cars Price for freehold £1 850 of which a good proportion could remain on mortgage Excellent sporting and social facilities and schools Premium 1½ years purchase

15 WITHIN 60 MILES OF LONDON near County Town—Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p a and offering good scope Selected panel of about 170 and appts worth £160 p a Fees 2/6 to 10/6 Very little mid Exceptionally nice house with beautiful garden containing 3 reception 4 bedrooms etc Separate entrance to professional rooms Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

16 WEST OF ENGLAND—LARGE TOWN—Well established PRACTICE producing nearly £900 p a including panel of over 1 300 Suitable house in excellent position Price £700 or can be rented at £60 p a Premium £1 450 Good scop for increas

17 NORTH MIDLAND CITY — PARTNERSHIP — Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

18 LONDON NORTH WEST—Well established middle class non dispensing PRACTICE averaging for the past three years £840 including appts worth about £300 p a and panel of 120 Fees 3/6 to 21/ Purchaser can choose his own residence Premium £1 250

19 NORTH WALES—Very old established good mixed class PRACTICE averaging £880 p a including panel of 433 Fees 2/6 to 10/6 medicine extra Suitable house with 2 reception 6 bedrooms etc Can be rented on lease at £50 p a Good sport Premium to include motor car £1 200 £400 down and balance by arrangement Ill health reason for sale

20 LONDON S W—Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for lease (94 years to run) £1 200 part on mortgage Premium £1 00

21 A one third share is offered in a Practice held by the senior Partner Cash receipts for the past three years 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Premium 2 years purchase

22 MID WALES—Agricultural District—Mixed class PRACTICE producing about £880 p a including small panel of 130 Fees 3/6 to 21/ Small house with 2 reception 3 bedroom etc Price £500 Fishing shooting and other sport Premium 1 years purchase

23 WOMAN DOCTOR'S PRACTICE—YORKS—LARGE TOWN—Established eight years easily worked and producing nearly £700 p a Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns Comfortable house with 2 sitting 2 bedrooms 4 attics etc Garden Garage Rent on lease £42 10s p a Premium 14 years purchase or near offer

24 CHESHIRE—NEAR COAST—Old established middle and working class PRACTICE averaging for the past three years over £1 300 Panel of 550 Fees from 3/6 Good house with 3 reception rooms etc Price for freehold £1 200 part on mortgage Premium 2 years purchase

WITHIN FOUR MILES OF THE BANK—Old established working-class PRACTICE producing for the last 12 months £2 300 including panel of over 2 800 Appts worth about £160 Visits from 2/6 Low expenses Suitable house can be rented or bought Surgery premises on rental Premium £4 000 cash

16 MANCHESTER—Semi residential Suburb—Very old established non dispensing mainly middle class PRACTICE averaging £2 500 p a including small selected panel of 440 which latter is capable of extension Visits 5/ upwards Only about 20 cases of midwifery from 5 gns Well situated house with good accommodation Price (freehold) £1 600 Premium £3 750

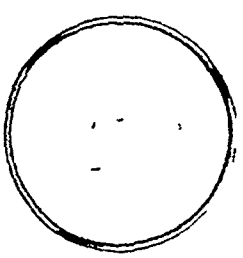
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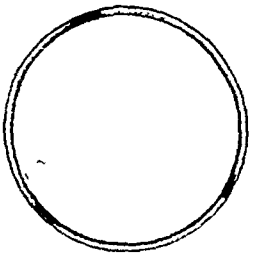
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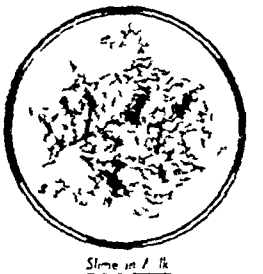
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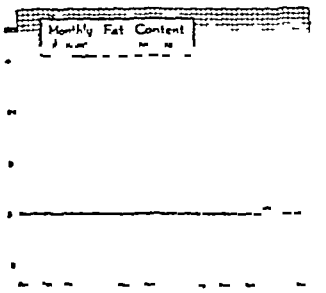
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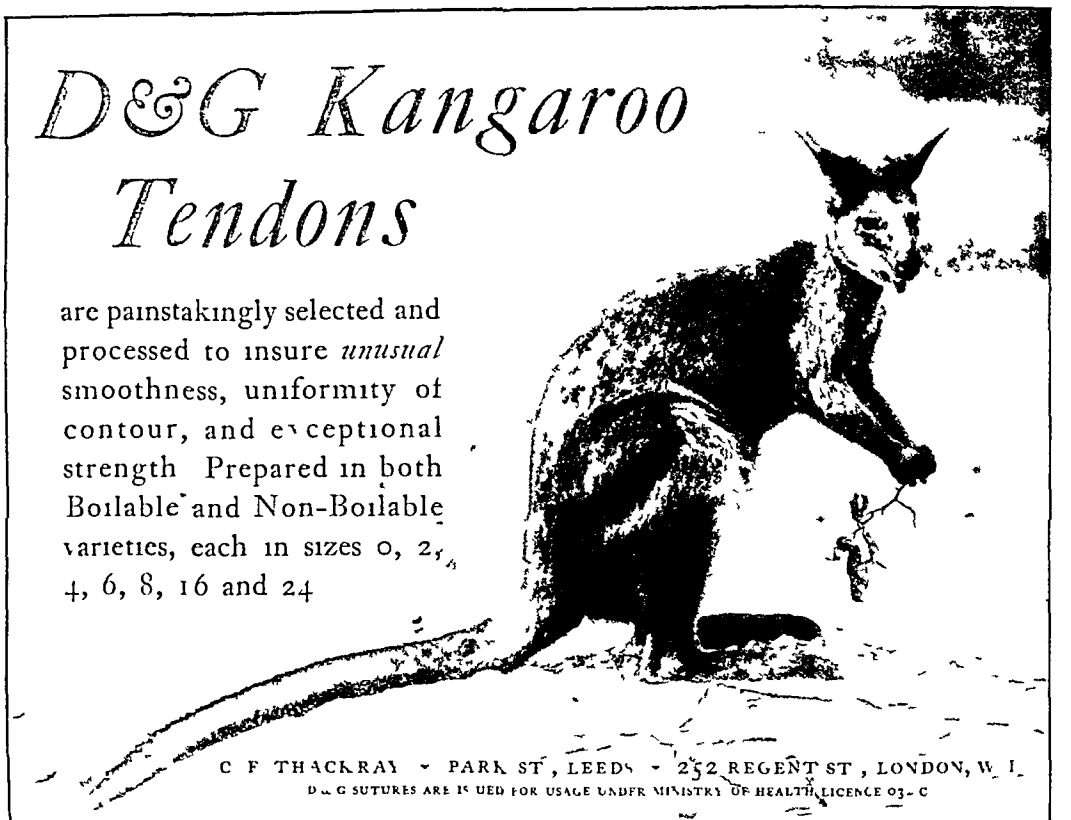
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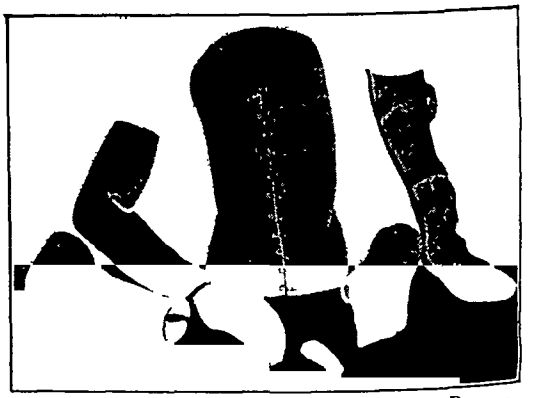
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British Medical Journal

FEBRUARY 27, 1932

CONTENTS

ORIGINAL ARTICLES

A Clinical Study of Achlorhydria By Henry Moore M D F R C I I 365

Some Clinical Aspects of Coronary Disease By Thomas F Cotton, M D F R C I 368

The Diagnosis of Neurotic Conditions in General Practice By David Forsyth M D F R C P 370

The Use of Vitamin B in Cases of Oedema By D W Carmalt Jones D M F R C P 374

Shortening an Elongated Uvula for the Cure of Cough By Sir James Dundas Grant M D F R C S 375

Diverticulum of the Male Urethra By C Hopkinson M Ch F R C S 376

Human and Bovine Tuberculosis By Nathan Raw M D M R C P 377

MEMORANDA

Congenital Epicanthus and Ptosis Transmitted Through Four Generation By Norman Ross M B 378

Spontaneous Version of Extended Breech By Marguerite M Fen M B and Florence Whitfow M L 379

REPORTS OF SOCIETIES

Medical Society of London
Asthma and Allied Conditions 379

Royal Society of Medicine
Gonorrhœa and other Cervical Discharges 380

North of England Obstetrical and Gynæcological Society
Zondek Aschheim Test in Ectopic Pregnancy 382

Liverpool Medical Institution
Aspects of Cancer 383

REVIEWS

Radium and Cancer 383
Gymnastics for Women and Girls 383
384
Operations 384
384
385
Notes on Book 385

OBITUARY

Walter Smith M D F R C P I 406
J G Blackman M D 406
Thomas Walker Sinclair M D 406
The late Dr Parlane Kimbell 407
Ernest Edwin Carter M B 407

LEADING ARTICLES

A Survey of B C G Vaccination 389
Ophthalmology in Egypt 390

THE WEEK

Syndromes of Coronary Obstruction 391
The Philosophy of a Biologist 391
Effect of Smoking on Blood Sugar 392
The Lubeck Trial 392
Birmingham Medical School and the Hospitals Centre Scheme 393
Purchase of Radium 393

GENERAL ARTICLES AND NEWS

Malformations of the human Body from a New Point of View Hunterian Lectures by Sir Arthur Keith M D F R S 387

Deep Radium Therapy Statement by the Radium Commission 391

The Etiology of Cancer Dr W E Gye's Post-graduate Lecture 395

London Clinic and Nursing Home Opening by the Duchess of York 396

Preparations and Appliances (Illustrated) 380

Medical Notes in Parliament
Radium 408
[illegible] 408
[illegible] 408
[illegible] 408

Medical News 409

LOCAL NEWS

Ireland—
Presentation to Prof T Sinclair 397
Lunacy in the Dublin District 397
Health of School Children 397

Scotland—
Jubilee of University College Dundee 398
Glasgow Royal Infirmary 398
Royal Medical Society of Edinburgh 398

England and Wales—
Epsom College Foundation 398
Moorfields Dinner 398
Benjamin Ward Richardson 399

THE SERVICES

Royal Army Medical Corps 407
Deaths in the Services 407
(For Naval Military and Air Force Appointments see SUPPLEMENT)

UNIVERSITIES AND COLLEGES

[illegible] 407
407
[illegible]anchester 407
407
[illegible]s of England 407

CORRESPONDENCE

Standardization of Ergot By J H Burn M D and S W F Underhill B M 399

Parenteral Liver Therapy By E T Freeman M D F P C P I and F Wilkinson M D W C Anderson M D and V H Smith M B 400

Foreign Bodies in the Air Passages By Thomas Guthrie F R C S 401

Radium By Clifford Morson F R C S 401

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Antagonistic Diseases By E Granger M B 405

LETTERS AND ANSWERS

Dry Mouth 410
Cowper's Inanity 410
Income Tax 410
Operation at Advanced Age 410
Captain of the Men of Death 410

Vacancies 410

(See also page 75 of SUPPLEMENT)

The SUPPLEMENT contains

National Health Insurance Medical Benefit Regulations.
Deputation to the Minister of Health

Correspondence
Future of Panel Practice
Another Doctor's Dilemma
Anæsthetic Fees under the Insurance Act

Current Notes
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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classe will for the most part be found on the pages indicated

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Arnold & Co
C[illegible]r & C[illegible]ll r—Clin Diagno is 5
H[illegible]t G T—Pulmonary Tubere 5
Hur[illegible]n H—
Di[illegible]s of Children 5
F[illegible]d 5
M[illegible]n H—
Di[illegible] of the Stomach 5
Sa[illegible] T D—Clinical Medicine 5
Sil[illegible] W K—Di[illegible] of th Skin 5
T[illegible] Teachers—Midwifery 5

Churchill J & A
B[illegible] Prin—Di[illegible] of the Kidney 3
Bart[illegible]n Wright E C—Botany 3
Gam[illegible]n A T—Biochemi try 3
Gam[illegible]n & White—Biochemi try 3
Illingw[illegible]rth & Dick—
Surgical Pathology 3
Me[illegible] 3
Nex[illegible]
3
Ne[illegible] ie 3
O Don[illegible]van s Hair 3
Orla J[illegible]n s Dairy Bacteriology 3
Orgi[illegible]d & Ha kins Lab Diagno i 3
Panton & Marrack s Clin Pathol 3
Parson J H—Di[illegible] of the Eye 3
Pinley s A[illegible]ane s in Micro copy 3
Pin[illegible]y s Di[illegible]s of the Blood 3
Pinley & Wyard—Clinical Atlas 3
Pryd[illegible] Bi chemi try 3
Q Charlott s Pract of Ob tetries 3
Rog[illegible]s Tr pical Medicine 3
Roge[illegible]s & M[illegible]saw Tropical Med 3
S[illegible]queira s Di ea e of the Skin 3
Yell[illegible]wlee H—Clinical Lectures on I ychological Medicine 3

Constable & Co Ltd
Bennett T I—Diabete 32
Dodd C Whitby—
Laboratory in Surgical Practice 32
Pat[illegible]rson & Smith—
Feeding in Infancy 32
Sinclair M—Fracture 5 32

C W Daniel Co
Le[illegible] R—Science of Medicine 4

Kerr J A & Co
Maylard A E—Cottage Ho pital 4

Lancet Ltd
[illegible] t Commi ion on Nursing 4

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Cowdry E V—Human Biology and Racial Welfar 6
D[illegible]thi[illegible]e A H—
Rheumatoid Arthritis 5
Ir[illegible]ban H—Embryology 4

Wright & Sons Ltd
Hutchi on R—
Ind x of Treatmer 4

ASSURANCE COMPANIES—
Lon[illegible]on Medical Protection Soc ety 1
Medical In[illegible]urance Agency 30

BRASS NAME PLATES &c—
C[illegible]kle Name Plate 32
Bri[illegible]s S J & A—Nam Plates 4
J[illegible]n[illegible]s & Co Ltd—Name Plate 4
O[illegible]borne E & Co—Nam e Plates 4

DEBT COLLECTION—
Briti h Medical Pr ec ion Society 36

FOOD PREPARATIONS—
B[illegible]ox Extract Co B[illegible]ox 17
Bo[illegible]k Bi[illegible]it Co Ltd—
Cho[illegible] 29
Cow & Gate Ltd—Milk Food for Infants
Her[illegible]k Mal[illegible] Milk 30
Ne[illegible] & Ange[illegible] Sons Cow Milk Co
Inc[illegible] 2
Va[illegible] Mot[illegible]Juice 14
V[illegible] 1

HOSPITAL, &c FURNITURE—
Ever[illegible]ge Di[illegible]ct[illegible] L[illegible]—
S[illegible]ec[illegible]l and Hom[illegible] 6

HOUSE AGENTS—
P[illegible]r[illegible] &
[illegible]t[illegible]s & Bay[illegible] 31

MOTOR CARS TYRES &c—
[illegible]y[illegible]—
[illegible]n[illegible]ar 3 c[illegible]f[illegible]a 47

CHEMISTS &c—
Allen & Hanburys Ltd—
Co tor On 5
Eucortone 19
In ulin A B 10
Lixen I ozone 19
Umbro e 19
Armour & Co Ltd—Liv r Extract 20
Bencard, Ltd—
Extra t Hepa Simplex 29
Root Produc 11 16 23
Britis h Drug Hou e Ltd—
Ergofex 17
In ulin A B 10
Radio-Malt 9
Burroughs Wellcome & Co—
Hypoloid 27
Clayton Aniline Co Ltd—
Preparation Cover i
Continental Lab Ltd—Lactobyl 18
Dimol Laboratories Ltd—
Dimol T Pulverettes 8
Dinneford & Co Ltd—Magne ia 9
Duncan Flockhart & Co—
Cyanocel Compound Ampoules 24
Evan Son Le cher & Webb Ltd—
Hexorite 21
Fellows Compound Syrup of Hypo phosphite—Fellow 8
Glaxo Laboratories—
Preparations 28
Hoffmann La Roche Chem Works—
Omnopon 20
Hough Ho es on, & Co Ltd,—
Formacel & Arthritone 12
Kaylene Ltd—Kaylene ol 34
Martindale W—
Preparations 9
Sterules 5
Matthews & Lab Ltd—Sterilin 4
May & Baker Ltd—Arthrytin 11
Midgley Ltd—Medi oap Therapy 15
Newbery & Son Ltd—
Agarol 56
Alka Zane 16
Pharmaceutical Corporation Ltd—
Nomtox 15
Reed & Carnrick—Nephritin 24
Saccharin Corporation Ltd—
Novocain & Glauco an
Santal Midy 34
Savory & Moore Ltd—Dres ing 31
Wander A Ltd—Alb n & Alocol 13
Wright, Layman & Umney—
Coal Tar Preparations 12

SURGICAL APPLIANCES—
Aerogriph Co Ltd—No e Spray 35
Arnold & Sons—
Davi & Geck—
Kangaroo Tendons Cover ii
Ferri J F Ltd—
Artificial Limb 36
Hawk ley & Son Ltd—
Stetho cope 32
Hilliard s New Ab orbent Rags 36
Manlove Alliott & Co Ltd—
Sterilizers 32
Medical Supply A ociation Ltd—
Cer ban Ban age 33
Smol Catgut 33
Ma[illegible]l Surgical Sundries—
[illegible] 50
4
30
Over ii

TAILORING & UNDERCLOTHING—
Camage—Sal 6
Hall H—Medical Service Dre s 49
Regent Dress Co—Tailors 32

TOBACCO & CIGARETTES—
Player s Navy Cut 6

TRANSLATIONS TYPEWRITING—
Radford B—Typewriting etc 48

VACCINES & CULTURE MEDIA—
Allen & Hanburys Ltd—
Vaccine etc 25
Laboratori s o Patholo y & Public Heal h 32
Pa ke Davi & Co—
Bacteriophage Antitoxin Cover iv

X RAY & ELECTRO-MEDICAL APPARATUS—
Portable X Ray Ltd—
X Ray Cat heter o 32
Sanit & Sur Ltd—
I[illegible]ral Appara[illegible] 36

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 47

HOSPITAL &c VACANCIES—
[illegible] 45
45
47
46
50
47
43
44
42
43
43
45
43
Bri[illegible]to Ly
Br[illegible]sh Medical A sociation
[illegible] Hosp 45
[illegible] 3
6
4
6
0
16
16
12
44
43
44
46
47
47
43
46
45
46
46
46
1 47
45
46
44
46
46 47
44
45
43
44
Nat Ho p[illegible]
Newcastle Ho p for Sick Children 50
Newca tle Prin Mary Mat Ho i 43
Newport County Borough 43
Nottingham City Mental Ho pital 43
Port mouth Roy al Ho pital 44
[illegible] 15 47
44
44
46
46
45
46
44
St Thoma s Ho pital 45
Salford Royal Hospital 45
Seamen s Ho pital Society 43
[illegible] Je op Ho p for Women 44
[illegible] 45
45
44
43
42
44

HYDROS & PRIVATE HOSPITALS—
Bournemouth Hydro 41
Ebbles Hydro 41
Builth Co tle, North Wales 37
Smedley s Hydro Matlock 41
Stanborough Watford Hert 40

INEBRIETY—
Bay Mount Paignton 37
Caldecote Hall near Nuneaton 37
Dalrymple Hou e, Rickm n worth 37
Old Hill Hou e Chi lehart 37

PRINTING & STATIONERY—
Bar lock & Bar let Typewriters 43
Hamilton—Medical Stationery 4
Taylor s Typewriters 32

HOMES & ASYLUMS—
[illegible] 37
[illegible] 38
[illegible] 37
[illegible] 32
[illegible] 37
[illegible] 37
[illegible] 37
[illegible] 38
[illegible] 37
[illegible] 38
[illegible] 37
[illegible] 37
[illegible] 37

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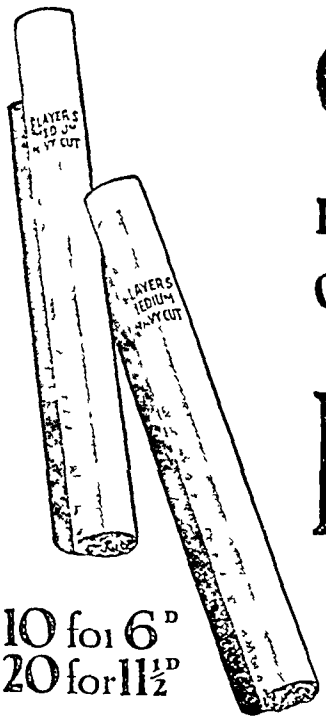
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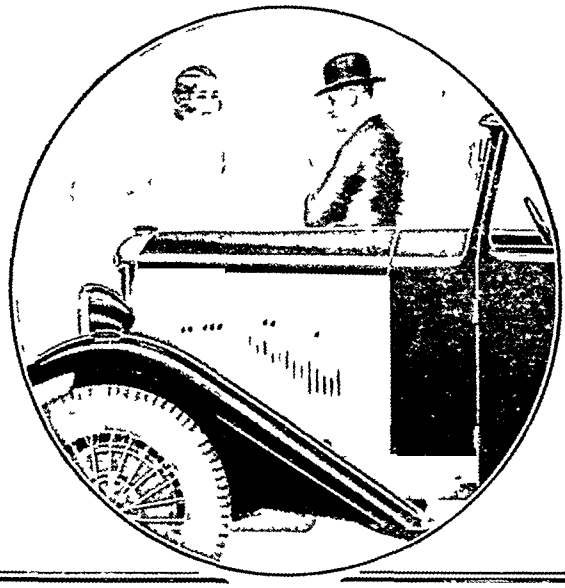
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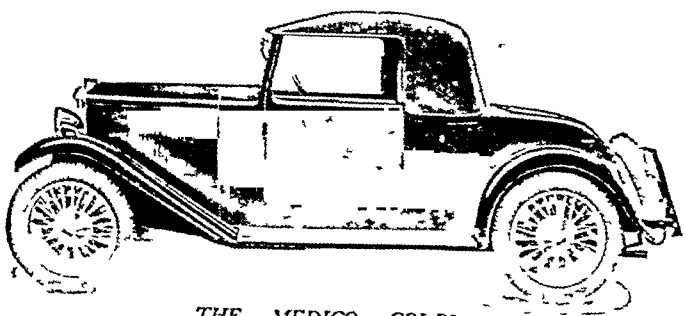
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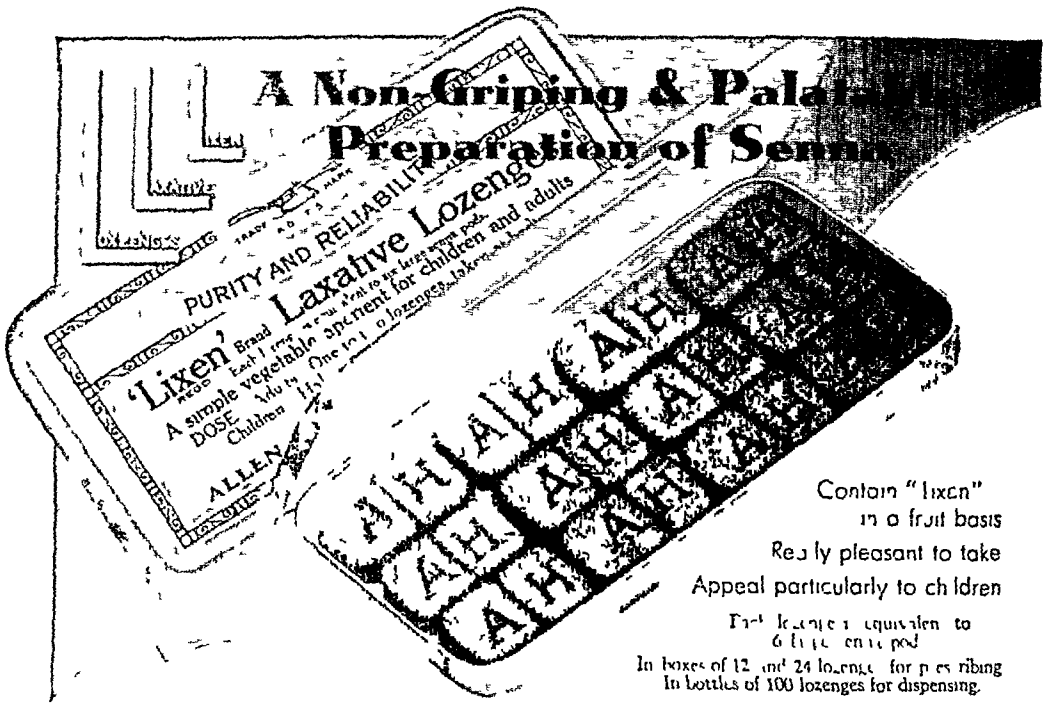
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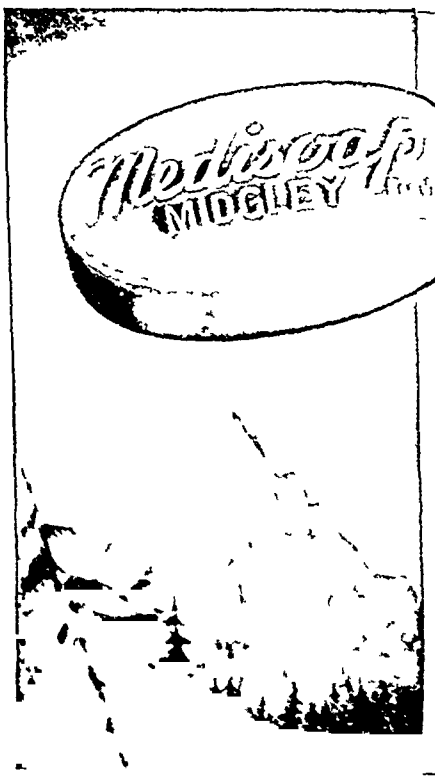
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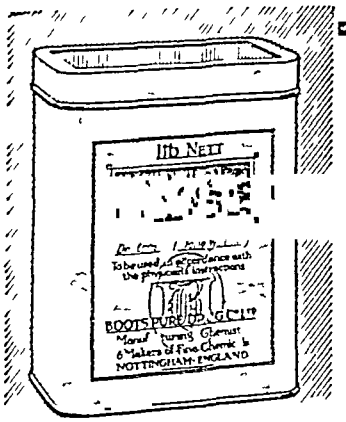
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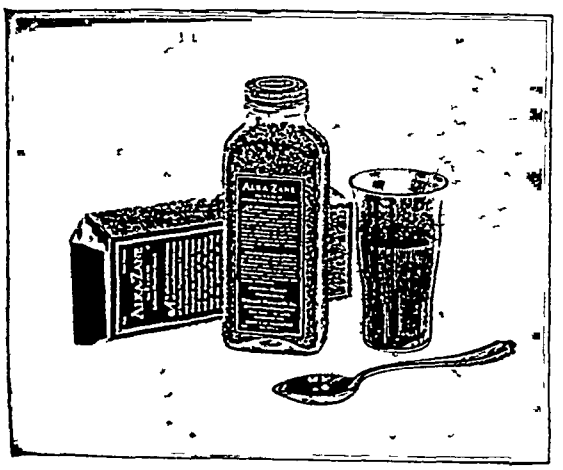
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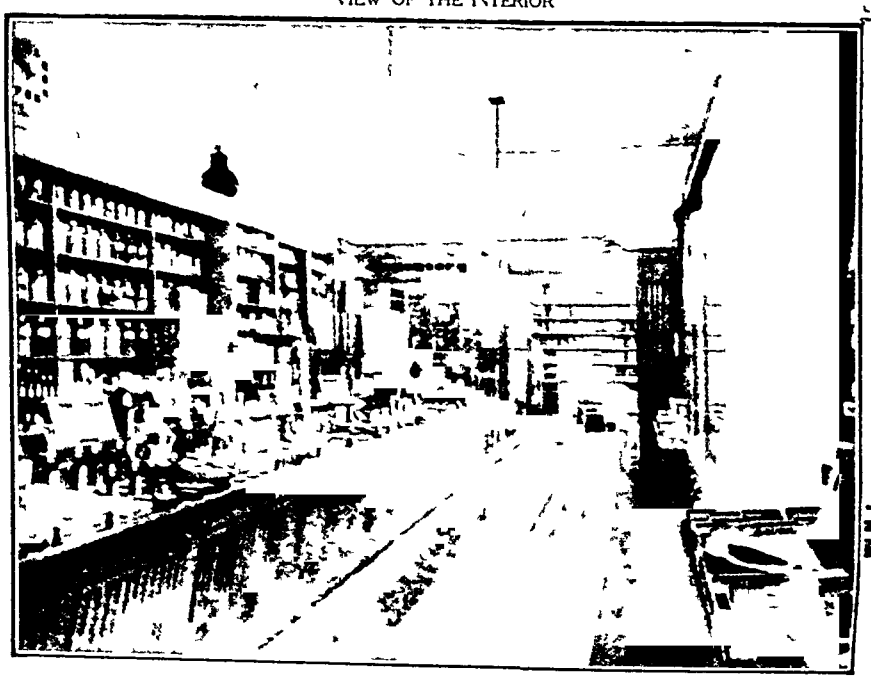


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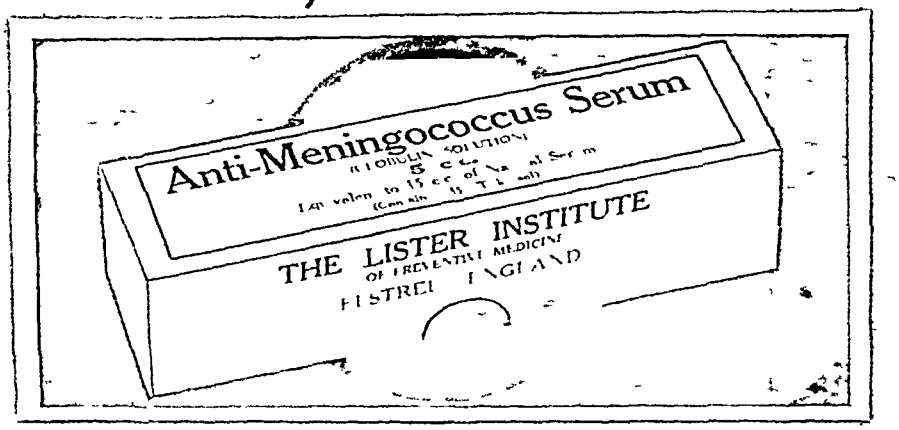
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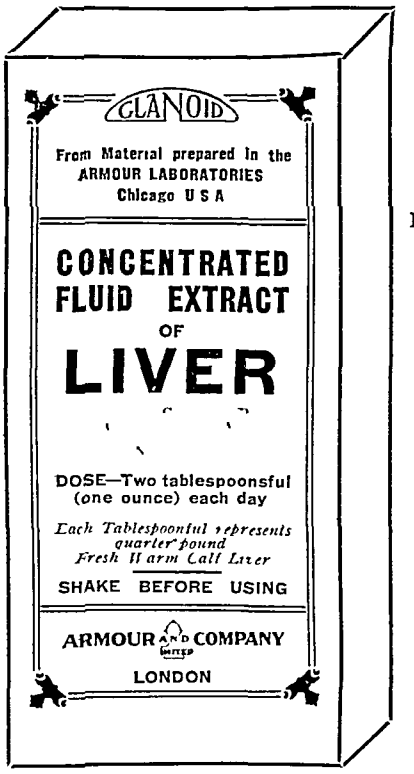
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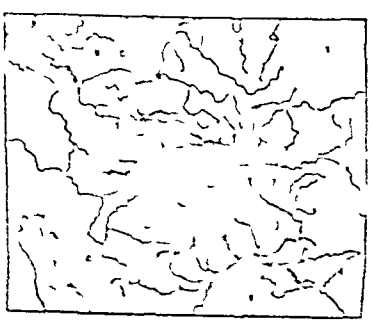
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on

A CLINICAL STUDY OF ACHLORHYDRIA

BY

HENRY MOORE, M.D., D.Sc., F.R.C.P.I.

PROFESSOR OF CLINICAL MEDICINE IN THE ROYAL COLLEGE OF SURGEONS IN IRELAND; PHYSICIAN TO THE ROYAL ALEXANDRA AND ALBERT HOSPITAL, DUBLIN; CONSULTING PHYSICIAN TO THE MATER MISERICORDIÆ HOSPITAL, DUBLIN.

[The lecturer first discussed in the light of recent literature the significance of achlorhydria in pernicious anæmia and subacute combined degeneration of the spinal cord, and pointed out that while achlorhydria is almost a constant finding in pernicious anæmia, yet theoretically this disease might possibly occur with hydrochloric acid present in the stomach secretion—he had himself met with one such case. He then continued:]

INTRODUCTION

For more than ten years I have been interested clinically in achlorhydria, and about five years ago my interest in this connexion became acute when some peculiar cases of anæmia in middle-aged women presented themselves. The anæmia in these patients appeared at first sight to be pernicious in type, inasmuch as there was atrophy of the lingual papillæ associated with superficial glossitis and achlorhydria, and the patients had a sallow or subicteroid complexion. The blood examination however showed an anæmia with a colour index well below unity, megalocytosis was absent, and although there was anisocytosis and poikilocytosis the average size of the erythrocytes was not greater than normal, the anæmia therefore was not Addisonian in type. As the standard textbooks gave no information about this syndrome, and as a superficial search of the journals furnished but little, it was evident that we were dealing with a form of anæmia not generally recognized. During the following years—namely, from January 1st, 1927, to June 30th, 1931—we endeavoured to collect, and when possible to study, cases of this form of anæmia—that is, cases of non-megalocytic anæmia with a low colour index and achlorhydria—we succeeded in collecting thirty-three such cases, in each of which the hæmoglobin content of the blood was under 70 per cent. During the same period we did fractional test-meal analyses on as many other patients as was possible, with the idea of obtaining some information relative to the incidence of achlorhydria in other diseases. Naturally we were unable to have test meals done on all cases entering the wards, and at first we concentrated on cases which symptomatically might be likely to have achlorhydria. The incidence of achlorhydria in some of the groups—for example, diabetes mellitus—may be somewhat higher in this study than is actually the fact, because in the earlier part of the work only those cases of the [illegible] showing symptoms or signs suggestive of achlorhydria were tested, whereas after we realized from our own experience that absence of hydrochloric acid from the stomach secretion was a rather common finding, such cases were [illegible] of that group entering the wards were tested by fractional test-meals as a routine. In this way a much lower [illegible] of the frequency of achlorhydria in this study cannot [illegible] having [illegible] test-meals [illegible] but [illegible] of the frequency of achlorhydria [illegible]

[illegible]

about the presence of achlorhydria or if there was much mucus present in the majority of the cases the stomach was thoroughly washed out as recommended by Hurst and the test-meal repeated. (Only cases showing complete achlorhydria as judged by this method are so classified.) In certain cases the fasting gastric juice was aspirated and the test-meal repeated after the subcutaneous injection of 0·5 mg. of histamine in the form of acid phosphate, which is known to be a powerful stimulant of gastric secretion[5] or the fasting stomach was twice evacuated, twenty and fifty minutes after histamine injection. (Wherever this method was used it is mentioned in the tables.) We have made no attempt to test for pepsin in the gastric contents. The fasting blood sugar was estimated by the Folin-Wu method, and the basal metabolic rate was determined by means of the Roth-Benedict apparatus. Hæmoglobin was estimated by a checked Sahli test, and a certified Bürker chamber was used for the blood counts. Table I. gives a general

TABLE I.

Total number of patients for whom one or more test-meals [illegible] were done, period [illegible]. Total [illegible].
Number of these patients with initial achlorhydria, 272 (22·1 per cent.).

Description	Number with Achlorhydria	Total number	Per cent. Achlorhydria
Non-megalocytic anæmia [illegible]	33	47	70·2
Diabetes mellitus	35	83	39·7
Hyperthyroidism	37	47	78·7
Gastro-intestinal cases	100	—	—
Miscellaneous	71	—	—
Total	277−5=272	—	—

Two patients with diabetes [illegible] with hypercalcæmia, infective [illegible] and spontaneous fractures, and two with [illegible] and pernicious anæmia, and hæmocytometer and [illegible] are included in this table.

summary of our results and shows that out of forty-seven cases of so-called secondary hypochromic or non-megalocytic anæmia thirty-three or 70 per cent. had achlorhydria. This particular form of anæmia is probably therefore one of the commonest types of anæmia encountered; it is certainly surprising that so little attention had been paid to it in the literature, and that it was so seldom recognized in practice. The table also shows that out of eighty-three cases of diabetes mellitus thirty-three or over 39 per cent. had achlorhydria, and out of forty-seven cases of hyperthyroidism thirty-seven or over 78 per cent. had achlorhydria. There were 100 gastro-intestinal cases and seventy-four miscellaneous cases with achlorhydria. Out of a total of 1,225 patients tested by the fractional test-meal method during three and a half years, 272 or 22 per cent. had achlorhydria as judged by this technique. Achlorhydria is not [illegible] apparently healthy individuals. [illegible] an incidence of 4 per cent. with [illegible] and Baird Campbell and [illegible] [illegible] 3·5 per cent. [illegible] [illegible] persons. Comparison [illegible] [illegible] [illegible]

were frequent findings amongst our cases of achlorhydria (provided that organic obstruction and gastric hypotonia were absent)

Non-Megalocytic Anæmia

Of the thirty-three cases of non-megalocytic anæmia of unknown origin with achlorhydria (Table II) there were twenty-seven females and six males. The anæmia was chronic in all and in some had lasted for several years. Weakness, palpitation and breathlessness on exertion were common symptoms and many of the patients complained of digestive disturbances such as flatulence and epigastric discomfort after food, diarrhœa, vomiting after food or loss of appetite. The complexion was usually sallow but sometimes pale. A frequent finding, present to some degree in nineteen of the thirty-three cases, was atrophic superficial glossitis very similar to the form so frequently found in pernicious anæmia, the tongue often being too red and the papillæ having in many cases completely disappeared from the dorsum. In several cases this condition was patchy in distribution or more advanced in some areas of the dorsum linguæ than in others; furrowing of the tongue was even more common than glossitis, while some degree of regeneration of the atrophic papillæ was occasionally observed after successful treatment and frequently the redness and furrowing became less. Paræsthesia and signs suggesting subacute combined degeneration of the spinal cord were not observed, but menstrual irregularity was not uncommon. The average number of erythrocytes was about 3,700,000 per c.mm. and the average hæmoglobin content of the blood was 50 per cent. before treatment, the lowest red cell count was 1,920,000 per c.mm. and the lowest hæmoglobin measurement 15 per cent., both in the same patient (Case 19). In some patients the red cell count was about normal but a considerable hæmoglobin deficiency existed. The average colour index before treatment was 0·66 (lowest 0·32 and highest 0·95). The average colour index after successful treatment in twenty cases was 0·86 (lowest 0·61 and highest 1·04). The average leucocyte count before treatment (excluding Case 17 where there was a polymorphonuclear leucocytosis from severe oral sepsis and Case 32 where there was a thyroid abscess with a leucocytosis) was 5,200; after successful treatment in nineteen cases it was 7,022 as against 5,400 on admission. The differential leucocyte count was normal in all except in Cases 17 and 32 which showed a polymorphonuclear leucocytosis.

The degree of anisocytosis and poikilocytosis was usually proportional to the severity of the anæmia. The average diameter of the red cells was never greater than normal. Blood bilirubin, the platelet count and the reticulocyte count before treatment were normal in all. No cases included in the present series were under 15 or over 70 years of age or had a blood hæmoglobin of over 70 per cent. In the series there was one case (Case 29) of the so-called Plummer-Vinson syndrome, and the spleen was enlarged only in two (Cases 29 and 33). This variety of anæmia occurred in two cases of diabetes mellitus and in three cases of hyperthyroidism, all five of which had achlorhydria (one of the latter is not included in Table II). In all cases a hæmorrhagic cause was carefully excluded.

Details of Treatment

Twenty-three cases submitted themselves to treatment for a period sufficiently long to show an excellent response to oral iron therapy. With the exception of one patient (Case 32) who died of infection, the blood values—hæmoglobin content, erythrocyte and leucocyte counts—were restored to normal or considerably improved, while there was at the same time great symptomatic improvement. Iron by mouth gave good results in treatment as shown by the table. At first we used citrate of iron by mouth in treatment and found that 60 grains per day were necessary to get a good result in three to five months. Later we found that Blaud's mass in doses of 30 to 45 grains a day gave a much quicker response, the period of time necessary for effective treatment being in some cases reduced to from four to six weeks. Thirteen of the successfully treated cases were tested for the presence of hydrochloric acid in the stomach (fractional test meal) after the anæmia had responded to treatment and the acid was then found to be present only in three—namely, the Plummer-Vinson case (Case 29) which showed a normal curve of gastric HCl without histamine, one case (Case 2) which showed traces without histamine and Case 17 which had no gastric HCl with the ordinary technique but showed it after histamine. Seven cases which showed achlorhydria with the ordinary fractional test meal technique after successful treatment of the anæmia also had achlorhydria after histamine injection. These findings would indicate that the anæmia was not the cause but more probably in part at least the result of the achlorhydria. The administration of 60 minims of dilute hydrochloric acid (*B P*) by mouth with pepsin thrice daily after food did not seem to be of any special value in restoring the blood to normal but it was of undoubted value in relieving the frequently associated gastro-intestinal symptoms. Liver extract for pernicious anæmia and desiccated stomach proved useless. The use of cooked whole liver by mouth gave doubtful results but I obtained the impression that its use was of some value as an adjunct to iron, however I am not prepared to be definite on this point. Neither can I be dogmatic on the best form of maintenance treatment once the anæmia had disappeared—some patients have kept well for a year or even more on small doses of iron, some on moderate doses of hydrochloric acid and at least one (Case 17) on no special form of medication. It is interesting to note that two years after successful treatment this case showed HCl in the fractional test meal after histamine injection but none on the ordinary technique (no histamine) before treatment. It is worth mentioning that we have had a female patient with true achlorhydria under frequent observation since early in 1928 who in September 1931 developed for the first time glossitis and non-megalocytic anæmia of a mild type although she had been continuously taking 40 to 60 minims of dilute hydrochloric acid with pepsin by mouth thrice daily after food. She is not included under the heading of anæmia in this paper for the blood changes developed after this study had ended. In this case the taking of acid as a prophylactic measure in these doses did not prevent the ultimate development of the anæmia.

It would seem probable that both iron and hydrochloric acid would have their own place in maintenance treatment in the majority of cases iron being probably by far the more important. The achlorhydria in the majority of these thirty-three cases was probably a true and not an apparent achlorhydria for suitable precautions were used in all the fractional test meals—for example several test meals were done on the majority of the patients the stomach in many cases being washed out beforehand but the histamine stimulation method was unfortunately only used in a minority (eight) of the patients before treatment.

Its Etiology

As regards the etiology of this non-megalocytic anæmia one is at once struck by the fact that it is commonest in women from the ages of 20 to 50 years although examples of it were encountered in male patients from the ages of 15 to 60 years. It would appear that the achlorhydria is the most important single etiological factor,

TABLE II

No.	Sex	Age—Years	No. of Erythrocytes in Thousand: Before Treatment	No. of Erythrocytes in Thousand: After Treatment	Haemoglobin Per Cent: Before Treatment	Haemoglobin Per Cent: After Treatment	Duration of Treatment in Days	Treatment and Result	HCl in Test Meal after Treatment	Remarks
1	F	[illegible]	3,690	5,310	54	80	27	HCl, Fe, I +	—	—
2	F	6	4,490	5,070	40	90	31	HCl, Fe +	Trace	—
3	F	9	4,100	5,150	63	80	11	HCl, O, Fe—+	—	Hyperthyroidism
4	F	77	5,300	5,850	62	93	71	HCl, O, Fe—+	Absent	Traces of HCl appear in one after histamine
5	F	53	3,890	5,850	39	88	61	HCl—O, Fe—+	Absent	—
6	F	50	3,170	5,040	54	90	4	HCl, I +	—	Enlargement on examination (No HCl in test subsequently)
7	F	0	3,400	5,000	50	82	115	HCl—O, I—+, HCl, Fe, ++	Absent	Relapse on HCl after histamine. Renal [illegible]
8	F	3	4,090	—	60	—	39	HCl, Fe, Clinical +	—	—
9	F	41	4,980	—	65	—	—	—	—	—
10	F	64	4,910	4,500	58	60	21	HCl, As—O	—	—
11	F	41	5,330	4,760	40	85	9	PCl, Fe—+	Absent	Irregular [illegible]
12	F	27	5,200	—	65	—	6	HCl, Fe—, clinical +	—	—
13	F	5	4,800	5,500	60	75	8	Fe +	—	—
14	F	40	5,500	—	60	—	—	—	—	—
15	F	25	2,780	—	38	—	—	—	—	—
16	M	16	3,890	—	50	—	—	—	—	Blood condition normal 4 years later. Infantilism. HCl absent after histamine
17	M	50	2,900	4,120	36	80	60	HCl, Fe, Oral sepsis, treatment +	Absent	Lumbar and oral sepsis. HCl present 2 years later but absent after histamine
18	F	22	3,500	4,900	35	77	133	HCl—O, HCl, Fe, O, HCl, Fe, I +	Absent	Hypocalcaemia, infantile, and spontaneous fractures
19	F	23	1,900	5,100	15	61	91	HCl, Fe, O, HCl, F, V—O, HCl, Fe, L—+	—	No nest-eggs for years. Severe attacks of discomfort. Vertigo and diarrhoea. Treatment [illegible]
20	F	38	4,000	5,000	50	90	110	HCl—±, HCl, Fe—+	Absent	—
21	M	1	3,700	—	65	—	—	—	—	Imperfectly developed testes
22	F	5	4,300	5,100	45	83	81	HCl—O, Fe +, Fe, L—++	Absent	HCl absent after histamine
23	F	9	3,270	3,750	45	58	31	HCl, Fe—+	—	—
24	F	53	3,000	4,200	50	90	41	HCl, Fe, L—++	—	Diabetes mellitus under treatment for 7 years. Achlorhydria discovered 18 months and anaemia developed 4 years later
25	F	69	3,100	3,410	65	75	21	HCl, Fe—+	—	Enlarged axillary and inguinal glands. Under treatment
26	M	38	3,810	4,310	85	90	—	HCl, Fe, I—++	Absent	—
27	F	41	4,150	—	61	—	—	HCl, Fe—, Clinical +	—	Hysterectomy 3 years previously
28	F	53	3,250	670	40	91	29	HCl, Fe—+	—	Diabetes mellitus under treatment for 2½ years. Severe anaemia developed. Achlorhydria discovered
29	F	45	3,600	5,000	51	90	39	HCl, Fe—+	Normal	Extreme vomiting and diarrhoea for several months. Operation during [illegible] for treatment of ulcer
30	M	9	2,600	4,600	38	78	72	HCl, Fe, L—+	Absent	Fecal haemorrhages during period of treatment. HCl shown after histamine
31	F	55	4,150	5,100	65	91	60	HCl, Fe—+	Absent	HCl absent after histamine
32	F	38	3,300	5,000	50	80	60	HCl, Fe—+	—	HCl absent after histamine. Later thyroid [illegible]
33	F	47	3,850	—	45	—	—	—	—	Sclerodermia. Hysterectomy 1 year previously. Anaemia developed [illegible] months previously
34 (Case 3, Table I)	M	50	4,900	4,870	52	76	67	Fe—+	—	Lesions of 3 years' standing. Anaemia in remission

27 Female, 6 Male

EXPLANATION OF TABLE II.—By Duration of Treatment is meant the number of days during which the patient received the iron and/or other treatment mentioned. The number of days does not include the period between the end of treatment and the test meal. HCl means free hydrochloric acid. (HCl)—indicates that only a trace was found. Where no HCl appears in the column headed Remarks, it means that HCl was present in the test meal.

although probably there are others. In this connection one must note that recently Meltzer and Minot[8] have shown that liver is more potent for blood production in secondary anaemia when it is fed from an acid than an alkaline medium, thus showing that the stomach and intestinal tract play a further part in this process, and that the anaemia may result from failure of the digestive apparatus to provide the requisite conditions of the gastro-intestinal tract as to suitable pH for normal absorption and digestion.

We have met with cases of secondary anaemia associated with HCl [illegible] and there are such cases recorded in the literature. In these cases the anaemia is relieved by the administration of HCl, and the blood picture returns to normal. Such cases are not to be confused with those of pernicious anaemia, in which HCl is usually present in the gastric juice, and in which the blood picture is not relieved by the administration of HCl.

Of the 34 cases recorded in Table II, 27 were females and 6 were males. Of the 27 females, 19 were married and 8 were single. Of the 19 married women, 5 had had children, and 14 had had no children. Of the 8 single women, 3 were over 40 years of age, and 5 were under 40 years of age. Of the 6 males, 3 were married and 3 were single. Of the 3 married men, 2 had had children and 1 had had no children. Of the 3 single men, 2 were over 40 years of age and 1 was under 40 years of age.

Of the 34 cases recorded in Table II, 5 were cases of anaemia of infancy and childhood, 3 were cases of anaemia of pregnancy, 1 was a case of anaemia of hyperthyroidism, 1 was a case of anaemia of hypocalcaemia, 1 was a case of anaemia of sclerodermia, 1 was a case of anaemia of hysterectomy, 1 was a case of anaemia of diabetes mellitus, 1 was a case of anaemia of sepsis, 1 was a case of anaemia of renal disease, 1 was a case of anaemia of hypogonadism, 1 was a case of anaemia of chronic ulcer, 1 was a case of anaemia of chronic diarrhoea and vomiting, 1 was a case of anaemia of chronic lesions, and 1 was a case of anaemia of unknown origin.

To summarise, one may say that one of the commonest forms of secondary anaemia, especially in females, is that form in which it is associated with achlorhydria, that it is probably due to deficient formation of

haemoglobin, that it is not haemolytic or haemorrhagic in origin, and that its appropriate treatment with iron gives eminently satisfactory results

COMMENTARY ON CASES

Relevant details of these thirty-three cases of non-megalocytic anaemia of unknown origin with achlorhydria are shown in Table II. Certain of these cases require comment.

Case 3 had Graves's disease; the anaemia was refractory to treatment with hydrochloric acid alone but readily improved on iron being given by mouth; the hyperthyroidism showed a satisfactory result from non-operative treatment; she now remains in good health three and a half years after her first visit.

Case 6 had a relapse some months after ceasing treatment but again the anaemia yielded to hydrochloric acid and iron by mouth.

Case 7 had a relapse on a maintenance treatment of hydrochloric acid by mouth alone but again a good result was obtained on iron.

In Case 16 treatment was refused at first examination. We asked the patient to return four years later when the anaemia and achlorhydria was found to be present to the same degree. Thirty grains of Blaud's mass a day by mouth caused the haemoglobin to rise from 52 to 76 per cent. in sixty-seven days, and it rose to 80 per cent. later. This case showed a mild degree of infantilism.

Case 17 had secondary purpura haemorrhagica and severe oral sepsis, there being a polymorphonuclear leucocytosis (10 000 per c.mm.). The treatment consisted in clearing up the oral sepsis by mouth hygiene, teeth extraction, and the giving of hydrochloric acid and iron by mouth. Both anaemia and purpura readily responded to treatment. HCl was absent from the stomach contents two years later on the ordinary technique, but was present after histamine, and neither the anaemia nor the purpura reappeared in this period, although the patient was on no special treatment for the final year. Possibly the oral sepsis was one important factor in causing the anaemia.

Case 24 is of particular interest. She had been under treatment for diabetes mellitus with diet and insulin for seven years when symptoms suggestive of achlorhydria caused us to do a test meal examination which showed achlorhydria. Hydrochloric acid in 60 minim doses thrice daily with pepsin after food relieved the gastro-intestinal symptoms, but after a year this treatment was only irregularly carried out. Two years after the achlorhydria was discovered the anaemia developed, and this readily yielded to iron in the form of Blaud's mass with HCl, and later the haemoglobin rising from 50 to 90 per cent. in forty-four days.

Case 28 also had diabetes, and anaemia developed two and a half years after the treatment with diet and insulin was started, when she was found to have achlorhydria. The anaemia readily yielded to treatment with iron and HCl. There was no relapse in nine months on treatment with HCl alone, in combination with anti-diabetic measures.

Case 29 was the only one which exhibited the so-called Plummer-Vinson syndrome originally described by Kelly [11]. The oesophagospasm was in the lower third of the gullet; atrophic superficial glossitis was present, the tongue being smooth, red, and furrowed; there were cracks at the angles of the mouth, and the spleen was enlarged. The patient was edentulous and had eaten no meat for months. Six days after oesophageal dilatation by Dr. P. Dempsey she was able to swallow normally, and a test meal (without histamine) showed achlorhydria. With treatment by HCl, iron, and a normal diet (including meat) the anaemia quickly disappeared, the spleen after three weeks was no longer palpable, the tongue became normal, and the cracks at the angles of the mouth disappeared. When the blood count was normal the [illegible] secretion was retested, and HCl was found to be present in normal amount without the use of histamine. It is [illegible] time to speculate whether a similar result would have [illegible] had the HCl and iron been omitted.

[illegible] of the rare combination of hyperthyroidism [illegible] and anaemia. The anaemia [illegible] by HCl and iron after the thyroid abscesses had been drained by Mr. P. J. Smyth, but the hyperthyroidism persisted until a temporary remission was obtained through iodine by mouth.

Case 33 proved refractory to treatment by HCl and iron (Blaud's mass, 45 grains a day by mouth) for several weeks, and then developed acute right-sided parotitis with a subcutaneous abscess behind the right ear. Notwithstanding surgical drainage she died, and in my absence my house-physician (Dr. Malley) removed the liver and spleen and some tibial bone marrow. He found the gastro-intestinal tract macroscopically normal. Dr. W. R. O'Farrell reported no significant changes in the liver beyond slight thickening of the capsule, a slight round-celled infiltration in the neighbourhood of the portal areas, and slight cloudy swelling with patchy fatty degeneration of the parenchymatous liver cells. He found a pure hyperplasia of the spleen without qualitative alteration in its structure. The tibial bone marrow he found to be erythroblastic in type with large numbers of red corpuscles, some normoblasts, but no megaloblasts; myelocytes and lymphoid cells were also seen in normal numbers.

GENERAL DISCUSSION

In 1930, when the present study was drawing to a close, the first comprehensive account of this particular form of anaemia in the British literature was given by Witts [1 13]. Our own results up to date, were reported to the Royal Academy of Medicine in Ireland[14] and summarized in the *British Medical Journal*[15] about the same time *. As Witts[1 13] and Davies[16] have gone fully into the literature it will suffice to point out that, although Faber[1] described the disease in 1913, his description did not seem anywhere to attract the attention which we now know that it deserved. As far as our cases are concerned, the clinical picture seems closely to resemble that described by Witts except that while he notes that koilonychia was occasionally observed we have never seen it in any of our cases, and further, that he encountered splenomegaly much more frequently than we have done.

A reference might here be made to terminology. Up to about eighteen months ago we frequently referred in clinical lectures to this disease as "achlorhydria anaemia," but we believe that we have recently encountered some examples of it with traces of HCl present in the stomach contents, and this makes it doubtful whether such a term should be employed in its designation. Consequently, for the time being we prefer the unfortunately cumbersome name of 'non-megalocytic anaemia with achlorhydria.' This term will serve to distinguish the condition from pernicious anaemia which is macrocytic but which is, except in very rare instances, associated with achlorhydria. Again we prefer the term 'non-megalocytic' rather than 'microcytic' as used by Witts because in our series while none showed macrocytosis some cases did not show microcytosis. We do not like the term 'secondary' anaemia partly because the only real form of primary anaemia is probably a form of aplastic anaemia, and partly because as knowledge grows most forms of anaemia will probably be shown to be 'secondary.' For example it is now believed that pernicious anaemia is secondary to defective formation by the stomach (or defective absorption) of an erythropoietic substance.

Achlorhydria in Diabetes Mellitus

Among eighty-three cases of diabetes mellitus achlorhydria was found in thirty-three (39·7 per cent.); six cases had traces of gastric HCl, ten had hypochlorhydria, thirty had the acid present in normal amounts, and four had hyperchlorhydria. Histamine was not used in these cases except in a few odd instances; whenever there was acidosis the test meal examination was not done until several days after the ketosis had disappeared as a result of treatment.

* These results were also given before the British Medical Association Meeting in Melbourne in July 1931.

To give brief details forty four of these patients were males and thirty nine females Achlorhydria was present in thirteen males and twenty females The ages varied from 9 to 69½ years (average 42) and the fasting blood sugar from 161 to 345 mg (average 254) per 100 c cm Two of the cases developed the type of anaemia referred to above with glossitis and achlorhydria Probably the incidence of achlorhydria in these cases is somewhat too high for the reason already mentioned but it is clear that the condition is a frequent finding in diabetes mellitus Curiously enough comparatively few diabetic patients with achlorhydria complained of the gastro intestinal disturbances which are frequently associated with absence of the gastric acid and superficial glossitis was also rare among them but the two patients (Nos 24 and 28 Table II) with achlorhydria who developed anaemia both had superficial glossitis flatulence and diarrhoea The rarity of gastro-intestinal symptoms and glossitis among diabetics was probably responsible for our not realizing that achlorhydria was fairly common in diabetes until the present study was well under way

A search of the literature showed that others have noted a fairly high incidence of achlorhydria in diabetes mellitus Joslin[18] gives a figure of 27 3 per cent among 106 cases and he mentions an incidence of 40 per cent in the first 100 cases tested in the Royal Victoria Hospital Montreal Bowen and Aaron[19] reported achlorhydria in 29 per cent of sixty nine diabetics and Rabinowitch Fowler and Watson [9] found achlorhydria in 39 per cent of 100 diabetics It is interesting to note in this connexion the considerable number of cases of pernicious anaemia recently reported in diabetics Joslin [1] mentions forty eight cases in which both diabetes and pernicious anaemia were found combined As regards the value of giving hydrochloric acid by mouth in diabetes when achlorhydria exists we found that this procedure was of some use in the few patients who complained of gastro intestinal symptoms but that it appeared to be of little help otherwise

To summarize one may conclude that achlorhydria is a common finding in diabetes mellitus In two cases of the present series it was accompanied by the non megalocytic form of anaemia above described

Achlorhydria in Hyperthyroidism

Our attention was called to the frequent occurrence of achlorhydria in Graves's disease by the gastro intestinal symptoms such as flatulence and diarrhoea of which patients with this malady so frequently complain More over the appearance of the tongue in hyperthyroidism quite frequently suggested absence of gastric HCl although the definite degree of superficial glossitis seen in the above mentioned form of non megalocytic anaemia with achlorhydria was encountered only occasionally

The fractional test-meal examination showed that amongst forty seven definite cases of hyperthyroidism achlorhydria was found in thirty seven (78 7 per cent) four cases had traces of HCl one had hypochlorhydria and four had the normal amount of gastric HCl Full details cannot be given owing to lack of space Forty one were females and six were males achlorhydria was present in thirty three females and four males The ages varied from 16 to 62 years (average 38) and the basal metabolic rate from +25 to +112 per cent (average +56 per cent) Three of these patients had anaemia with achlorhydria and in two the haemoglobin was under 70 per cent Histamine was used in only five cases but its use in these failed to stimulate the formation of HCl In practically all of these patients a remission with marked lowering of the basal metabolic rate was obtained by the use of Lugol's solution in doses of from 4 to 10 drops twice daily by mouth and in the majority microscopical examination of the gland removed at operation showed the changes associated with hyperthyroidism or with the iodine remission It is without doubt remarkable that such a high incidence of achlorhydria should be found in hyperthyroidism and our present results obtained since this study was concluded still continue to show a high incidence Faber[7] found achlorhydria in 50 per cent of patients suffering from Graves's disease

Two of these cases of hyperthyroidism with absence of gastric hydrochloric acid showed the non megalocytic anaemia (with haemoglobin under 70 per cent)—namely Cases 3 and 32 (Table II)

Other Associated Diseases

In the gastro intestinal group there were 100 cases whose main complaints were referable to the gastro intestinal tract Forty five had such vague symptoms that notwithstanding careful investigation no definite diagnosis beyond the achlorhydria itself could be made The symptoms complained of were flatulence and sensations of abdominal distension discomfort or pain after food nausea or vomiting attacks of diarrhoea soreness of the tongue or occasionally superficial ulceration of the buccal mucous membrane regurgitation of food or sour fluid into the mouth and so forth Fifteen other cases were diagnosed as definite or probable chronic cholecystitis ten as visceroptosis seven as chronic gastritis and four as gastric carcinoma The remaining patients of this group were given various other gastro intestinal diagnoses but space again forbids going into detail All these cases were thoroughly investigated clinically routine gastro-intestinal x ray or gall bladder visualization examinations were made and special laboratory and diagnostic procedures were used whenever indicated The treatment of gastro intestinal symptoms associated with achlorhydria by means of oral administration of hydrochloric acid has been recently gone into by Wilkinson and Oliver [13] As we are in substantial agreement with the opinions of those authors on this subject we need not deal with the matter here beyond saying that where achlorhydria seems to be a direct or indirect cause of gastro intestinal symptoms the use of dilute hydrochloric acid in 15 to 60 minim doses (with pepsin if necessary) in a suitable vehicle thrice daily with or after food frequently gives satisfactory results provided that appropriate attention is paid to whatever additional therapeutic instructions may be necessary

There were seventy four cases in the miscellaneous group Fourteen were labelled pulmonary tuberculosis two amongst them having also chronic nephritis There were thirteen cases of pernicious anaemia and ten with cardio-vascular hypertensive disease—with or without evidence of kidney involvement various diagnoses were made in the other members of the group The frequent occurrence of achlorhydria in pulmonary tuberculosis was noted by Faber [7] in 1905

It would be hazardous with the information in our possession to express an opinion on the causes of achlorhydria Faber [4] thinks it is an expression of gastritis—traumatic or toxic—haematogenous in origin and brings forward post-mortem evidence to that effect this matter however should be still a fruitful field for investigation There appears to be a good deal yet to be learned about the physiology of gastric hydrochloric acid and it must be admitted that our present clinical methods of studying gastric secretion leave much to be desired

SUMMARY AND CONCLUSION

Achlorhydria besides being found in a certain proportion of apparently healthy persons in many cases of gastro intestinal disease and in odd cases suffering from

miscellaneous disorders is a frequent finding in diabetes mellitus, and a still more frequent occurrence in hyperthyroidism and in the non megalocytic 'hypochromic' anaemia above described In the latter disease it seems to have causal relationship direct or indirect but in the light of recent work on pernicious anaemia even this surmised causal relationship may ultimately prove to be incorrect At any rate this form of anaemia is of frequent occurrence and its adequate treatment with iron in the ferrous form by mouth, gives satisfactory results

It gives me great pleasure to acknowledge in this study the cordial co operation of Dr W R O Farrell pathologist to the hospital and of Drs L K Malley and M A Moriarty while they were my house physicians

The original lecture was illustrated by more extensive tables and details which cannot be reproduced here owing to lack of space

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SOME CLINICAL ASPECTS OF CORONARY DISEASE *

BY

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Clinical observations of practical value in the treatment of patients with disease of the coronary arteries have in recent years been rapidly accumulated and some of the gaps in our knowledge of the clinical manifestations of this malady have been filled in For many years the general conceptions of coronary disease and the events associated with it were influenced by studies which often lacked the observational precision shown by those great physicians Heberden Parry and Jenner in their classic records of a hundred and fifty years ago The theories advanced were based on insufficient knowledge of the anatomy and physiology of this region and progress was relatively slow The observation that nitrites introduced by Lauder Brunton controlled the pain of angina pectoris by means of vaso dilatation has undoubtedly increased our knowledge of the clinical pathology of coronary artery disease Head and Mackenzie made important observations regarding the distribution of pain in anginal subjects and Mackenzie revived the theory of myocardial exhaustion and its relation to a deficient coronary circulation as the cause of anginal pain and heart failure Allbutt viewed angina as a symptom of aortic disease and Wenckebach supported him in opposing those who accepted the coronary explanation of the anginal syndrome, others have maintained that anginal pain may be a symptom either of coronary or of aortic disease It has long been known that pain with an anginal distribution may be due to other causes than heart disease, the term 'secondary angina has been employed to distinguish such cases from primary angina subjects with structural disease of the heart In 1912 Herrick in America described symptoms and signs associated with acute obstruction of a coronary vessel and stated that these patients might recover from the attack His description of the coronary occlusion syndrome was a valuable contribution to clinical medicine and it has helped clinicians to diagnose obstruction of a coronary vessel at the bedside, and to offer a fair prospect of recovery to the patient To American physicians is due the credit of describing the clinical picture of this disease as we now recognize it and their success in this field of medicine is a tribute to observational methods of research

Shortly after the war Pardee and others observed characteristic changes in the electrocardiogram of patients with coronary artery occlusion which are of the greatest value in the diagnosis of this disease Some years later Parkinson and Bedford in this country in a series of accurately recorded cases confirmed by post mortem evidence described electrocardiographic signs which have added to our knowledge of coronary infarction and thrombosis These clinical observations, by distinguishing the coronary occlusion syndrome from angina pectoris have established on a sound basis our present conception of some of the clinical phenomena of coronary artery disease

Within the last three or four years observations relating to the mechanism controlling the peripheral circulation have been made by Lewis and his co workers By employing precise observational and experimental methods they have brought forward evidence which explains how pain is produced in contracting visceral muscle under conditions of circulatory arrest Their studies support the generally accepted view that ischaemia of the heart muscle from a defective coronary circulation is responsible for the pain in anginal subjects Lewis has now isolated from the general group of anginal patients a distinct type with aortic regurgitation having a high blood pressure and rapid heart rate during the paroxysms of pain These signs suggest that widespread vaso constrictor influences involving the coronary circulation are an essential feature and they emphasize the importance of recognizing, in addition to coronary disease other contributory factors associated with the anginal seizure It is beyond the scope of this paper to discuss the pathology of arterio sclerosis which is the cause of coronary disease or the class and sex incidence of anginal pain, except to point out that vaso constrictor influences may be a determinant factor

There are certain characteristic symptoms arising out of an insufficient blood supply to the heart muscle from structural changes in the coronary vessels which enable us to distinguish two types of cases presenting distinct clinical phenomena in one angina pectoris in the other the syndrome of coronary occlusion The differential diagnosis is extremely important for upon it depends the treatment—which is quite different in the two maladies—and not infrequently the life of the patient

ANGINA PECTORIS

The distinctive character of the pain of angina pectoris is that it can always be provoked by effort it is paroxysmal usually felt in the front of the chest under the sternum and down the left arm and is relieved by rest and nitrites An emotional upset a heavy meal exposure to cold may initiate an attack or favour the

* Abridged from a lecture delivered to the Rutland Division British Medical Association on December 4th 1931

onset of pain after exercise An attack can however occur when the patient is at rest and not be related to any known exciting cause The pain is of short duration but may recur at frequent intervals and completely incapacitate the patient *Pallor sweating* the look of anguish and the fear of death are well known features of this malady There are signs of structural disease of the cardio vascular system in the majority of cases—enlargement of the heart, aortic disease high blood pressure and electrocardiographic changes In not a few perhaps 25 per cent of all cases there is no clinical evidence of a structurally damaged heart and the diagnosis of angina pectoris is based entirely on the character and the position of the pain Signs of disease are of diagnostic value as confirmatory evidence in doubtful cases particularly in women and young men who are much less likely to have angina than middle aged and elderly men It is particularly important in cases showing no signs of structural disease of the heart to look for structural or functional changes in other organs of the body for such changes may be the cause of a pain closely resembling the true anginal syndrome An unstable vaso motor system with a predominant vaso constrictor element a toxic state from an infected gall bladder an inflamed appendix a toxic goitre or some other seat of focal sepsis may play an important part in producing the pain of what has been called secondary angina In some primary anginal subjects the contributing causes of secondary angina may influence the course of the disease and to assess their relative significance although in many cases a difficult task is important from the point of view both of prognosis and of treatment

Syndrome of Coronary Occlusion

The coronary thrombosis syndrome is a definite clinical picture easy to recognize and quite distinct from angina pectoris The pain is anginal in character and distribution and lasts for hours or days it is sudden in its onset, gradually fades away usually occurs when the patient is at rest and is often accompanied by a considerable degree of respiratory distress Amyl nitrite inhalations do not control this pain Occasionally breathlessness is a conspicuous symptom and pain is absent in these rare cases an electrocardiogram with characteristic changes is usually required to establish a diagnosis Vomiting is a commonly associated symptom and when accompanied by abdominal pain may lead to a mistaken diagnosis of an acute surgical condition Symptoms of shock with a rapid pulse low blood pressure and weak heart sounds may be a striking feature of the illness There is generally a rise of temperature for a few days or in exceptional cases for several weeks a leucocytosis is the rule and occasionally a pericardial friction rub can be heard Signs of embolism arising from the necrosis of the infarct which in the majority of cases is in the descending branch of the left coronary artery may be expected Death can occur within a few minutes of the onset of the occlusion Of those who recover probably 50 per cent of all cases some may lose all their symptoms within a few days others develop signs of congestive failure or symptoms of angina pectoris and many have exhaustion symptoms and a low blood pressure for weeks or months With the onset of the attack there is sometimes a disturbance of the heart's rhythm all types of cardiac irregularities have been recorded Coronary infarction can develop without causing symptoms there is post mortem evidence of this in patients who have died without presenting any manifestations of heart disease during life

There are certain electrocardiographic signs which may be regarded as reliable evidence of coronary thrombosis Characteristic changes occur in the *QRS* and *T* complexes which form that part of the curve lying between the initial and the terminal ventricular deflections The most important of these are the coronary T wave changes described by Pardee Although electrocardiographic signs are of the greatest value in diagnosing coronary thrombosis abnormalities in the electrocardiogram are not always present in this disease

A large number of these patients are hypertension subjects and many have had anginal pain with coronary occlusion the terminal event Prognosis is more favourable in the group with angina pectoris than in those with coronary occlusion the average anginal patient is likely to die within five years from the onset of symptoms and generally the coronary occlusion case will not survive the attack for a longer period than two or three years Although in both types the malady is serious and the prognosis must be a guarded one there are records of patients living for many years If there are signs of gross structural disease with enlargement of the heart or valve disease, the outlook is more serious than when such signs are absent Within the first three weeks of the onset of occlusion whether the symptoms are severe or mild no definite prognosis can be given with any degree of certainty Beyond this period if there are no symptoms or signs of heart failure and there has been an improvement in the general condition the patient may be expected to recover from the attack and possibly regain normal health and be able to lead an active life others are crippled with anginal pain or develop congestive failure symptoms and die In the anginal group frequent seizures occurring at rest and not controlled by treatment are a grave prognostic omen sudden death can occur at any time life is a misery and the end is a happy release from a precarious existence When pain is felt only after effort and is easily avoided by restricting activities the patient may have an unexpectedly long and useful life

Treatment

The indications for treatment of these two maladies are essentially different Coronary thrombosis is an acute illness sudden in its onset and there may be rapidly developing symptoms of a grave heart affection Morphine should be given in doses large enough to relieve the pain which is an early and conspicuous feature of the occlusion syndrome Rest in bed for at least a month is essential preferably for six weeks and every unnecessary movement should be avoided for two weeks, or longer if there are symptoms of shock signs of embolism, or congestive failure Good nursing and mild sedatives are more important than circulatory stimulants mild purgatives and enemas are usually required if morphine is continued for any length of time Digitalis is indicated when there are signs of congestive failure and the auricles are fibrillating or in flutter adrenaline should be reserved for patients with signs of heart-block and quinidine restricted to rare cases of paroxysmal tachycardia of unusual length A convalescence of two months is always necessary before allowing the patient gradually to resume a part or full-time active life

Angina pectoris is a chronic malady and the treatment ambulatory in most cases When the attacks recur at frequent intervals or reach a stage of status anginosus and the pain is not easily controlled by the nitrites a long rest in bed is indicated Such patients are sometimes helped by chloral or morphine given in sufficient doses to raise their pain threshold and keep them free from pain for a week or two The therapeutic measures upon which we must rely are based on restricting their activities, both physical and mental and regulating their lives so that the extracardiac contributory factors aggravating the anginal syndrome may be eliminated or controlled

a suitable diet a change of environment, and the treatment of focal sepsis form part of this regimen It is doubtful whether drugs which are supposed to have a dilating action on the coronary vessels materially alter the course of the disease For patients with cardio aortic syphilis iodides and mercury should always be prescribed intravenous injections of arsenic are indicated in the early stages of the disease and can be given under conditions of rest in moderately large doses

As regards the narrowing or obstruction of the coronary arteries in relation to breathlessness and congestive heart failure it is a well known clinical experience to see congestive failure develop rapidly as a result of a sudden occlusion from infarction of a coronary vessel or to have dyspnoea a striking symptom of arrest of the coronary circulation When there is an insufficient blood supply to the myocardium from a narrowing of the coronary arteries as part of a general or local arterio sclerotic process the function of the heart is impaired and there is undue breathlessness on exertion This is a common complaint in elderly people with cardio vascular changes of a senile type and is often observed in middle aged hypertension subjects With a gradual or rapid failure of the heart to maintain the general circulation of the body the heart increases in size and signs of congestive heart failure dominate the clinical picture Progressive heart failure of this nature is likely to follow the onset of auricular fibrillation although it may take place with a normal rhythm The treatment of breathlessness in this large and ill defined group of patients is that of heart failure in all its grades With suitable therapeutic measures a recovery of the functional efficiency of the heart which can be maintained for a long period may be expected in some cases in others heart failure cannot be arrested and with a rapidly increasing disability death is not long postponed

THE DIAGNOSIS OF NEUROTIC CONDITIONS IN GENERAL PRACTICE *

BY

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During the last quarter of a century medical psychology has been revolutionized The neuroses have been made to yield the secret of their origin and nature and for the first time the kinship has been traced between all the chief types of human personality—normal eccentric neurotic psychotic sexually perverted and criminal But as yet little of this accession to our knowledge has reached the body of medical practitioners at any rate to the extent to being utilized by them in daily practice For one thing this new work has been mainly contributed by psychoanalysis and Freud's discoveries have been looked at even more askance by the medical profession than by the laity—perhaps for the reason that doctors have received no training in psychology (thanks to the medical curriculum) and both in their student days and later their preoccupation is with organic diseases They have yet to realize that the importance of Freud's discoveries is no longer disputed among psychologists and that many of these discoveries are directly applicable to their neurotic patients Further now that the acceptance of psychoanalysis is general among the laity the difficulty has increased of satisfying patients or their relatives by merely pushing the subject aside as an unpleasant one

* A course of three lectures delivered at Charing Cross Hospital

Not that a general practitioner has need of any technical training in analysis but he should be able to recognize a neurotic case as surely as he diagnoses organic diseases, and to overlook a case of either kind is equally serious a technical error Even after a full medical examination has excluded organic disease the diagnosis of a neurosis is to be made only on psychological evidence obtained by a full psychological examination It is not permissible to make this diagnosis negatively merely for lack of evidence of organic disease We know how often physical signs are absent in the earlier stages of numerous organic diseases including cancers tuberculosis anaemias cerebral tumours and general paralysis Remember also how organic and neurotic diseases may coexist in the same subject and that many patients with organic disease develop a halo of psychogenic symptoms which may easily obscure the organic condition

I

As a first step towards this psychological diagnosis the practitioner will probably require to revise some ideas which have guided him hitherto *The very term* functional (which after all is more misleading than informative) is best replaced by psychogenic, that is mentally produced Little or no diagnostic value now attaches to the so called stigmata of hysteria to areas of anaesthesia or hyperaesthesia or to the state of the tendon reflexes The methods clinical and laboratory of investigating organic disease are inapplicable to cases of neurosis a totally different examination being needed In approaching a case of this latter kind forget for the time being that your patient is anatomically composed of different organs—your concern with him is of another sort Discard equally the supposition of a neurosis of a viscus—a gastric neurosis or a cardiac neurosis—which implies a distortion and falsification of the facts inasmuch as psychogenic symptoms referable to a viscus are never more than a detail of a neurosis of which more widespread evidence can be found

A positive diagnosis requires that two primary conditions must be satisfied The first is that a *neurosis is essentially a disorder of temperament* the manifestations of it therefore are to be looked for in the patient's emotions and behaviour It never consists of a single symptom localized perhaps to one part of the body and rarely of a few symptoms but of many, which are to be sought over the whole range of the patient's temperament With experience one comes to recognize a fairly typical case of neurosis as readily as one does a straightforward case of organic disease

The second condition to be satisfied before diagnosing a neurosis is that *every neurosis begins in childhood* The diagnosis therefore is not to be made without a psychopathic history leading back to nursery years As a rule the earlier in childhood that the psychological development went wrong the graver is the result so that for example, disturbances within the first year or two are responsible for setting up psychoses while those between the third and sixth lead to nothing more serious than a neurosis and healthy development over the entire first five or six years excludes a neurosis in adult life

The investigation of a case of neurosis proceeds by allowing the patient to talk freely, and so disclose his disposition and its peculiarities The very loquaciousness of most neurotics which to the psychologically untrained can be frankly boring becomes to the medical psychologist as significant and illuminating as is a detailed physical examination to the clinician Here a warning must be given Though neurotics are usually tiresome difficult and exacting a doctor must not be provoked into showing any impatience or annoyance at their failings He needs

to hold in check his own prejudices and to go almost all the way in meeting and accepting his patient's point of view After all is not his help being sought precisely on account of these temperamental disabilities which his patient possesses? He must put aside any inclination to impose his own ideas on his patient to criticize him and still more to blame him whatever the circumstances Above all he must not seek to exercise any authority moral or otherwise over him but to encourage him to decide and to act for himself This last condition is of course, the exact contrary to the usual professional relationship where the doctor expects his opinion to be accepted and his advice followed without question

To return to the investigation of a case Neurotics rarely converse with average freedom Most of them are ready to pour out their troubles at length (their letters about themselves run to pages) but not a few are shy and reticent speaking of themselves with obvious difficulty But in both these classes the same excess of pent up emotion is usually disclosed by their agitation nervous movements and perhaps the heightening colour of their cheeks as they talk Of a third class much less often met with who are not only uncommunicative but cold and apathetic throughout the interview it will suffice to say that this is the reaction of a psychotic and not of a neurotic Neurotic patients with somatic (bodily) symptoms are prone to describe their pains in superlative terms—terrible excruciating such as no one has ever endured before—and they may be full of dread as to their significance In this connexion a suggestive contrast in temperaments can often be noted—on the one hand the mental perturbation shown by a neurotic who believes himself to be suffering from say a (non existent) cancer and on the other hand the impassive gravity with which a non neurotic patient describes the symptoms which as he has come to suspect only too surely are those of an actual cancer Further the symptoms in cases of neurosis are often too numerous and widely spread to be accounted for by any organic lesion The patients themselves are apt to describe a symptom with an as if —for example a headache as if a red hot plate was being pressed on to the top of my head —an analogy which often offers a clue to the mental significance of the symptom

As you listen to your neurotic patients you soon have occasion to become aware of their temperamental peculiarities Almost always they are inveterate worriers especially about little things at home or at work about their health or their religion they are easily irritated and may be unable to control their tempers and they tell you that their many troubles keep them from sleeping at night Indeed anxiety (worrying) irritability and insomnia compose the commonest trio of neurotic symptoms Neurotics find difficulty in meeting their everyday social obligations often on account of strong and unreasonable likes and dislikes or because of feelings of inferiority or of a quarrelsome assertiveness For many of them their daily activities are handicapped by morbid fears or by feelings of shame disgust or guilt Their moods are inconstant their enthusiasms short-lived Many are preoccupied with their bodily functions faddists about diet or extremonialists in the closet They are often ill started in their love affairs and unhappy in marriage The sexual side of life repels them and the sexual act disgusts them Almost always they suffer from some notable sexual abnormality such as ejaculatio praecox impotence frigidity or dyspareunia It remains to add that the level of intelligence of most neurotics is high

As a class they are supersensitive self centred intolerant of interference and avid of attention and devotion In these important respects they resemble children Indeed this sums up their outstanding peculiarity—their childishness Once this is recognized the importance of three general propositions becomes apparent (1) Every neurotic retains in his adult temperament some traits and tendencies which should have been left behind with childhood (2) It is precisely this childishness which makes it impossible for him to meet the demands of adult life (3) The aim of psychological treatment is to free him from these attachments to his immature years and so to liberate nervous energies which will bring about his mature development at last

II

This recognition of the opening years of life as the decisive period for the development both of healthy character and of neurotic and psychotic conditions—a view directly conflicting with that hitherto generally accepted that puberty is the critical age—is probably the most momentous change of view enforced by psychoanalytical research The significance of the first five or six years is due again contrary to current belief to the fact that at no other time are emotions so intense and so deeply and lastingly impressed by environmental influences The general outline of development during this early period as well as many of its details are now known At birth and for some while afterwards an infant possesses neither knowledge nor experience of the outside world but is preoccupied with its own bodily functions and the powerful emotions with which they are charged Most commanding among these are the functions of nutrition and of excretion The alternating sensations of hunger and repletion provide the infant with intense emotional experiences of pain being replaced by pleasure Defaecation and urination are the other similarly outstanding interests in its daily emotional life the painful distension of bowel and bladder being followed by pleasurable relief Of altogether subordinate emotional importance are the sensations derived from elsewhere, such as the skin and even the eyes and ears Later but still in early infancy a fourth main interest takes shape when discovery is made of the pleasurable qualities of the external genital organ

To this lowest level of development (0–2 years) when the child's principal desires and pleasures are comprised within its own body is given the name of auto erotism or since the infant is exclusively self centred in its affections taking itself as the first object choice of its love the narcissistic stage Oral, anal urethral and genital erotism are the four components (partial impulses) of auto erotism and according as the infant happens to become more or to become less centred on one or the other of these so are the foundations of its character differently laid For example oral erotism by engaging its interests in feeding, thence in the breast and the mother and so to objects outside itself tends to develop an affectionate nature responsive to external influences (extroversion) while anal erotism, which leads the infant to prize its own motions coming from within itself as a source of pleasure tends to induce a self-centred unaffectionate and difficult temperament (introversion) Other partial impulses which are features of the auto-erotic stage are the sadistic impulse and the masochistic impulse Later and in conjunction with the infant's narcissistic self love develop the impulses to expose its naked body and to look at another's naked body (passive and active exhibitionism)

The second phase overlapping the first in time is the pregenital stage (2–4 years) The oral anal and urethral erogenous zones lose none of their dominance but genital erotism now plays a more prominent part (masturbation is usual) and the child though still without any appreciation of the sexual function of the genital organ is

impelled to press itself against any loved object so furthering the process of extroversion In this way it helps to establish the relation wherein the child's affection passes increasingly to one or other parent—heterosexual and incestuous if to the parent of the opposite sex homosexual if otherwise Out of the heterosexual love of one parent develops jealousy of the other parent the child entering upon the Oedipus situation which is so fateful in its consequences by determining the pattern of the child's later adult love life

The next phase is the *genital stage* The other autoerotic impulses now yield predominance to genital erotism and the psychosexual life of the child approximates to that of the adult This brings us to about the sixth year A fourth or *latent period* now sets in and continues till puberty Throughout this period erotic impulses are largely in abeyance and shame disgust and morality first take shape With puberty begins the adult psychosexual life and this surprising though the discovery may seem is essentially a repetition of the psychosexual life of the first six years When the latter has followed normal happy lines the adult love life also will be *satisfactory* but any early abnormality will now again show itself

Healthy psychosexual development implies the smooth transition of the child from one stage to the next the distinctive interests of each stage being gradually abandoned as the next is reached Failure to do this means that some emotional urge proper enough to an earlier *period* is *continued* into a later and probably becomes permanent To this occurrence is given the name of a fixation and it is characteristic of neurotics of whatever age that confronted by difficulties in life their behaviour tends to regress to the level of the original fixation Herein lies their childishness

Now these ideas so new and on a first hearing so strange are derived from the analyses of cases of various kinds of neuroses It would seem that in each type of neurosis the characteristic behaviour is by regression to the same fixation level the neuroses for example representing regression to a level not earlier than that of object love (that is second stage) while in the more serious psychoses the regression is to the first or narcissistic stage Or more particularly anxiety neurosis and hysteria—the mildest and most curable of the neuroses—involve regression only to the third or incestuous (heterosexual) stage obsessional neurosis derives earlier from the second (anal sadistic) stage paranoia—essentially a disorder of homosexuality—from the auto erotic stage (early anal erotic), manic-depressive insanity also from the first stage and dementia praecox (schizophrenia)—the profoundest psychosis of all and the least amenable to treatment—to the opening months of the auto erotic stage (early oral erotism) Except for the three just mentioned no other psychosis has an exclusively psychogenic origin organic causes being responsible for general paralysis toxic and post febrile insanities senile dementia etc

If fixation and regression were the only processes to be understood the neuroses would indeed be simple to study and patients might even be expected to see for themselves the nature of their troubles and get the better of them But a third mechanism repression no less important than the others complicates the situation for the patient beyond hope of recognition It comes about in this way In later childhood and after any persisting infantile impulse must encounter the barriers of shame and morality its conscious recognition grows to be intolerable and it is repressed into the unconscious the patient affording himself the partial relief of denying its existence and yet it remains as potent as before and as insistent on gratification From then onwards his mental life becomes more and more abnormal in multiplied efforts to disguise and defend himself against the forbidden wish Along these lines develops the neurosis with all its complex features

III

Before proceeding further it is worth asking What can be done by way of preventing neurotic trouble? How best can we guide a child through those early critical years of its psychosexual development? By attention to two matters in especial First by recognizing the infant for the little animal it is tending solicitously its animal wants and permitting it ample time to proceed with its development without prematurely invoking its disgust shame, or guilt or seeking to impose on it conventional adult morality Second healthy psychical development can hardly proceed except in an atmosphere of continuous parental harmony and love

Here then, are some everyday causes of morbid development—seemingly trivial happenings and yet in reality as every analyst can confirm from his own cases potential disasters so emotionally impressionable are infants a violent tempered mother tends to turn her disappointed suckling from oral erotism to anal erotism and its lifelong disabilities the same result may follow if rectal suppositories are used too freely or if the infant's bowels are neglected until it experiences the enhanced thrill of passing constipated motions To delay with the breast when the infant is raging with hunger to give it a bottle with the milk too hot or too cold may it would really seem produce grave psychological upsets The experience of being weaned (against its will) causes the child to feel desolate and forsaken by its mother and is believed to play a leading part in the genesis of melancholia

Some later everyday family factors which are known to derange normal development are a worrying or irritable parent (a mother especially) a drunken or violent father and marital disharmony (with or without separation or divorce)

IV

It should not be difficult to recognize oncoming neurotic trouble in a child Always the earliest signs are to be found as changes of temperament and behaviour To an observant eye whether of parent or doctor the onset can often be dated to a particular week sometimes even to a particular day In the case of infants of a year or less the beginnings are most often to be seen in a general discontent The infant becomes restless and fretful and may develop a show of temper often amounting to violent attacks of rage and screaming and sometimes culminating in convulsions Sleeplessness is frequent or at least disturbed and unrestful sleep The infant may refuse to take its feeds or reject them by vomiting soon after swallowing them Similarly it may refuse to pass its motion the best efforts of the mother to this end notwithstanding Or it may vomit void motions or urinate at times calculated to be inconvenient to the mother Sometimes its attitude towards the mother shows habitual unresponsiveness and indifference antagonism or fear Nervous habits may appear especially thumb sucking or picking at parts of its body Masturbation in excess may be indulged in

With children beyond infancy any of the peculiarities just mentioned may develop and many others as well One of the earliest and most frequent of these is night terrors the child waking terrified from an anxiety dream (nightmare) Before long it may begin to show timidity and fearfulness by day and may become the subject of definite phobias especially of animals such as dogs or horses In instances where fear strong and persistent takes hold of the child its intelligence may be numbed and paralysed cases of this kind are liable to be

erroneously diagnosed as mental deficiency Disobedience obstinacy and perverseness are further evidences of trouble and may even amount to a general naughtiness and antagonism to the whole world Bad temper may still be of the violent kind with the child now becoming quarrelsome and even spiteful towards others or the temper may take the form of sulkiness and moroseness Special difficulty in learning to speak delay in speaking amounting exceptionally to several years or abnormalities such as stammering may be obvious Left handedness and clumsiness are occasional peculiarities Morbid jealousy especially of some other member of the family is often manifest and with this may come an exaggeration of the child's self assertiveness Bed wetting and sleep walking are common happenings Often enough neurotic biases reveal themselves at table and this or that dish provided for the child cannot be eaten In a few cases the outstanding peculiarity is an increasingly self centred interest the child growing less and less responsive to things about it

Later again shyness with perhaps blushing may become noticeable or the child begins to lose its self confidence and initiative Morbid worrying is a frequent trait as is supersensitiveness especially to unkindnesses criticisms and injustices Still later again hyper conscientiousness may be shown in connexion with either home or school Precise neurotic symptoms may appear the commonest —apart from the phobias already mentioned—being twitchings of the face head or arm other frequent somatic hysterical symptoms are headache and indigestion Finally obsessional symptoms may take shape the child having to carry out (or having to refrain from carrying out) certain actions (such as keeping its doll lying absolutely straight up and down its toy perambulator) Among other obsessional states which may be seen about this age are the so called touching mania when the child is compelled to touch with its hand most things within its reach and kleptomania In this latter the trouble is usually first disclosed in the compulsive stealing of pins needles pencils and other objects of similar shape

V

Based on the foregoing the classification of the neuroses is set out in the following table where the two main divisions are regression (fixation) neuroses and actual neuroses The table deserves attentive study even though no one could fairly expect a general practitioner to make the diagnosis between these different conditions

CLASSIFICATION OF NEUROSES

I *Regression (Fixation) Neuroses*
- A Transference neuroses (emotional energy shifted from object to object)
  - 1 Hysteria—(regression to third stage)
    - (*a*) Conversion hysteria
    - (*b*) Anxiety hysteria
  - 2 Phobias—(regression to third stage)
  - 3 Obsessional (compulsion) neurosis—(regression to second stage)
- B Psychoses (narcissistic neuroses)—(regression to first stage)
  - 1 Paranoia
  - 2 Manic depressive insanity
  - 3 Dementia praecox
- C Perversions—for example homosexualism sadism

II *Actual Neuroses*
- A Anxiety neurosis (from sexual frustration)
- B Neurasthenia (from excessive masturbation)
- C Hypochondria

The differential diagnosis of these various forms is properly the concern of the psychological specialist But even with him it may be difficult and impracticable to make a diagnosis at a first visit Repeated interviews during a week or longer are sometimes necessary—a continued and systematic investigation comparable with that which is customarily followed with difficult clinical cases admitted to a hospital or nursing home Only by this means is it possible in some cases to distinguish for example phobias from obsessions or obsessions from delusions while an even more extended inquiry may be needed before drawing the line between a transference neurosis and a psychosis or discriminating one psychosis from another Similarly only expert observation will be able to settle points of forensic importance such as the diagnosis between kleptomania and criminal stealing or between a hysterical fugue and a post epileptic confusional state

By way of explanation of the actual neuroses it may be said that the immediate causes of these are usually referable to the patient's current life *Anxiety neurosis* is one of the commonest neurotic conditions it is the neurosis to which the older name of neurasthenia is still so often erroneously applied Its trio of leading symptoms are anxiety irritability and insomnia (with anxiety dreams) The etiological factors most often involved are coitus interruptus dread of pregnancy frustrated sexual desire (as in engaged couples and widows) and enforced abstinence *Neurasthenia* the condition which develops in inveterate masturbators is characterized by loss of energy both physical and mental defective concentration headache pains in the back and ejaculatio praecox or even complete impotence * In *hypochondria* anxiety is the prominent symptom but becomes attached to ideas not of home or of business but of the patient's bodily functions with the result that he is preoccupied and worried even about normal processes healthily performed Hypochondriacal symptoms may also cloak early cases of psychosis but in these the patient is usually anti social with recognizable delusions or hallucinations

It should not be forgotten that though anxiety is so very prevalent as a neurotic symptom it is occasionally associated with organic disease The two organic conditions in which anxiety indistinguishable from psychogenic anxiety develops are cardiac decompensation and exophthalmic goitre With the former the manifestations of heart failure local and general should make the diagnosis plain but with exophthalmic goitre anxiety may be an early symptom preceding both the exophthalmos and the goitre In these cases the diagnosis can usually be established from the one side by the lack of other psychogenic symptoms and of a psychopathic history and from the other side by the concurrence of tachycardia fine tremor and increased basal metabolism with consequent loss of weight

A special type of anxiety case which is by no means uncommon is that in which the patient though physically sound fears himself to be the subject of some grave affection—those most dreaded are heart disease consumption cancer stroke paralysis and insanity—and may even develop some of its symptoms but never enough to establish an organic diagnosis

It remains to add a few comments on certain forms of hysteria The diagnosis of conversion hysteria (that is hysteria with somatic symptoms) is all the more difficult since there is no bodily symptom organically produced which may not in another case be hysterical Especially perplexing among the commoner hysterical symptoms are headache suggestive of cerebral tumour vomiting suspicious of gastric cancer or of pregnancy pain in the back hinting at tuberculous or malignant spinal disease

* The word neurasthenia implying as it does exhaustion of nervous strength is altogether appropriate to this onanistic condition and not at all to anxiety neurosis with its characteristic excess of pent up nervous energy

abdominal or pelvic pains inviting an exploratory laparotomy twitches and paralyses simulating the motor disturbances of encephalitis or disseminated sclerosis, and the varied hysterical symptoms of the so-called occupational neuroses which may resemble cases of peripheral neuritis tabes or syringomyelia In all but a few of these difficult cases the diagnosis can be effected on the lines already drawn—by a detailed physical examination and a detailed psychological investigation In a minority of cases where doubt remains the diagnosis must be postponed until a re-examination from time to time has served to bring fresh evidence to light

Pseudo-angina is really a form of conversion hysteria and the distinction between it and angina pectoris should not be a matter of serious difficulty The points to be relied on are the patient's age (at or after middle life in organic disease) dyspnoea on exertion modified blood pressure and sclerosis of the peripheral arteries In the hysterical form perhaps the most significant detail is the occurrence of attacks at times when the heart is least subjected to physical strain—during sleep for example

Much has been needlessly made of the difficulty of distinguishing an epileptic seizure from a hysterical fit The distinctive features of epilepsy including the sudden loss of consciousness at the onset the comparatively short convulsive stage and the recovery in a few minutes with mental confusion headache and perhaps vomiting are all unlike a hysterical fit where consciousness is rarely if ever lost the movements are always purposive shouting and muttered talking are usual and the duration of the fit is altogether longer than that of epilepsy The supposition of a hystero-epileptic attack is little in accord with modern psychological knowledge and usually means nothing better than an equivocal diagnosis

THE USE OF VITAMIN B IN CASES OF OEDEMA

BY

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In 1918 Professor Wenckebach[1] of Vienna delivered the St Cyres Lecture in London in which he described the beri-beri heart In beri-beri right heart failure often occurs in which there is grave oedema resisting cardiac drugs but disappearing at once on the administration of vitamin B Profound oedema is always of serious significance in heart failure with congestion in cases of rheumatic origin Every hospital physician is familiar with rheumatic heart cases which are constantly in and out of hospital the intervals between the attacks progressively diminishing until the patients are admitted with extensive oedema this admission is generally the last There are occasional exceptions but extensive oedema is often of the gravest prognosis in congestive heart failure

In the light of Wenckebach's paper I thought it would be wise to try the effect of vitamin B in such cases to see if by this means any principle could be supplied the absence of which was causing the fatal result I used it first in two or three moribund cases in which its effect if any was quite insufficient to postpone death A few less grave cardiac cases showed some improvement and afforded encouragement to proceed but death was not prevented In the oedema of pernicious anaemia however two striking results were obtained and in some oedemas of other origin the results were satisfactory The cases are briefly described below The preparations of vitamin B used were marmite and tiki-tiki the nature of which is discussed at the end of the paper

Case I

A female aged 22 weighing 19 st 9 lb Rheumatic fever one year earlier Influenza with heart failure six weeks before admission Admitted with dyspnoea cyanosis albuminuria and extensive oedema Treated for three weeks with digitalis diuretin and starvation lost about 20 lb but otherwise no change pulse rate varied from 120 to 140 per minute All drugs were stopped and marmite was given For a fortnight there was improvement the pulse rate fell to 110/120 and the oedema was reduced but there was no noticeable diuresis The fluid was probably lost by the bowel Heart failure recurred and the patient died in another fortnight Post-mortem examination showed mitral stenosis and myocardial degeneration

Case II

A female aged 60 under the care of my colleague Dr Frank Fitchett an old heart case with ten years' history Admitted with heart failure vomiting and oedema which was remarkably soft involving the legs to the knees and arms to the elbows—an unusual distribution in a cardiac case urine 15 oz per diem After two weeks ordinary treatment she was given tiki-tiki one drachm twice daily Next day 42 oz of urine was passed the vomiting ceased and in a week the oedema disappeared in the arms and was much reduced in the legs The pulse rate dropped from 110 to 100 The tiki-tiki had to be stopped on account of diarrhoea shortly afterwards the patient relapsed and died At post-mortem gross myocardial change was found

Case III

A female aged 56 with chronic myocarditis and thyroid disease Admitted on January 22nd 1930 with heart failure dyspnoea palpitation haemoptysis dyspepsia cough asthenia and wasting cyanosed more than oedematous Auricular fibrillation liver to umbilicus jaundice small hard goitre On January 26th the oedema began and persisted though the pulse rate fell and there was otherwise general improvement with the usual cardiac treatment On April 24th (three months later) all drugs were stopped and marmite was given On May 16th she was much better the urine increased to 30 oz daily the oedema was much reduced and she was able to leave her bed Unfortunately the thyroid condition was over-emphasized basal metabolism was investigated by which she was much upset she relapsed and died a month later Post-mortem chronic myocarditis chronic venous congestion of organs thyroid—colloid nodules fibrosis calcification and degeneration

In these three cases the vitamin acted as an efficient diuretic or stimulant to the alimentary tract its chief physiological action is said to be on the latter The patients were all beyond hope of recovery but temporary benefit was obtained which might have tided over less grave cases

Case IV

A female aged 45 with secondary anaemia and oedema Admitted on September 29th 1930 after severe gastric haemorrhage red cells 2·5 millions per c.mm On October 5th she was transfused with 20 oz of blood Slight dependent oedema present in arms and legs pulse rate 100 per minute On October 10th tiki-tiki (half a drachm twice daily) was given On the following day 60 oz of urine (not previously recorded) was passed On October 15th oedema was gone and the pulse rate was 80 per minute

Case V

A female aged 52 Hemiplegia with unilateral oedema Admitted unconscious with severe right hemiplegia There was slight oedema of the paralysed limbs which became very marked in the arm and remained so for two months there was no recovery of power in the arm The oedema decreased considerably with tiki-tiki details are lacking

In these two cases also there was a satisfactory reduction of the oedema one had the impression that the vitamin was an efficient diuretic drug but no dramatic result was obtained

CASE VI

A female aged 68 with pernicious anaemia The anaemia was of two years duration one year before she had been in hospital in a crisis and she had also been in a mental hospital She was readmitted to Dunedin Hospital with heart failure *On December 26th 1929* the red cells were 1 5 millions per c mm with a typical blood picture the pulse rate varied from 100 to 160 per minute She had the usual treatment with blood transfusions and liver diet On January 5th persistent oedema of the legs was noted and marmite was added to the diet The oedema remained for some days and then cleared up rather suddenly about twelve days later The urine was not measured (Marmite is not nearly so powerful as tiki tiki and in this early case it was not used with much conviction) She was discharged with a red cell count of *3 8 millions*

CASE VII

A female aged 59 with pernicious anaemia Admitted May 17th 1930 with the diagnosis of heart failure—dyspnoea fatigue aching limbs and oedema She was pale with tick tack heart rhythm and showed a soft oedema to the knees and in the arms to the elbows especially the left There was a large effusion in the left chest She lay for preference on the left side Blood count was as follows red cells 1 8 millions per c mm haemoglobin 40 per cent colour index 1 1 white cells 4 000 per c mm the blood picture was typical From the left chest 12 000 c cm fluid was removed two blood transfusions were given and liver diet was taken there was some general improvement but the oedema remained Urine 20 oz daily On June 18th a month after admission tiki tiki (1 drachm three times a day) was given on the same day 40 oz of urine was passed On the next day 54 *oz of urine* was passed and the oedema decreased On June 29th the oedema had nearly disappeared and fluid had been absorbed from the pleura Urine 30 to 50 oz daily Tiki tiki was reduced to 1 drachm daily on account of diarrhoea The ward sister informed me that vomiting (not recorded in the notes) ceased when vitamin B was taken

In the second case of pernicious anaemia it seemed clear that a change for the better took place when vitamin B was added to the diet something wanting had been supplied The fact is rather remarkable as the patients were living on the ordinary diet of the district which does not appear to be deficient in these particular properties In this connexion a recent paper by Dr Lucy Wills is of great interest

Two separate fractions are commonly recognized in vitamin B—B_1 and B experts recognize several more B_1 is the antineuritic factor B the antidermatitis factor The most accessible source of vitamin B is yeast, chiefly eaten as marmite which contains all the B factors I obtained much more striking therapeutic results with tiki tiki in half drachm to drachm doses Tiki tiki contains only B_1 it is a Philippine preparation made from rice prepared by the Philippine Islands Government My colleague Dr John Malcolm professor of physiology obtained some through the good offices of the New Zealand Director General of Health for animal experiments and was kind enough to allow me to use some of it Dr Woods states that fresh liver contains all the B vitamins but liver extract chiefly B Since tiki tiki contains only B_1 and is far more effective than marmite in *reducing* oedema it is presumably this factor which is important and cases of pernicious anaemia treated by liver extract should receive marmite for its B_1 content or tiki tiki if the latter is available

As noted above marmite is not a powerful preparation we have not used it in measured quantities but have given it spread on bread and butter with each *meal* Dr Wills mentions a drachm three or four times daily we probably used a similar quantity Tiki tiki is very powerful a drachm twice daily has been given but this dose soon had to be reduced on account of diarrhoea Half a drachm twice daily was often sufficient we also had need to economize a preparation of which little was available As far as these few cases are of any value I would suggest that vitamin B may be used with advantage in any case as a diuretic but that in the oedema which sometimes accompanies pernicious anaemia and probably in all cases of the latter, it is of great and specific value

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SHORTENING AN ELONGATED UVULA FOR THE CURE OF COUGH

BY

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The downright condemnation meted out to the long lived operation of shortening the uvula for the relief of cough calls for a plea on its behalf I am convinced that practitioners general or special of any considerable experience must have seen cases in which an intolerable cough has been completely removed by the operation and must have been surprised to hear it described as 'a discarded method and utterly unsuccessful in achieving its purpose It would be most regrettable if they were to be deterred from affording such relief on account of the *ipse dixit* of any writer authoritative or dogmatic

In my letter on the subject in the *British Medical Journal* for September 19th 1931 I referred to the value of the operation in suitable' cases and I promised to follow up my communication with a series of what I considered to be such In general, I would say that a tickling cough on lying down accompanied by an obviously elongated or trailing uvula, makes the case a suitable one for intervention either by the application of astringents or the removal of the redundant portion of the uvula If the suffering of the patient is not too clamant astringents may be employed in the first instance and I have succeeded in some acute cases of short duration in affording relief by applications of an astringent by means of a throat brush I usually prescribe what I call jam ' in the form of two drachms of syrup of Virginian plum with six of glycerin of alum If however this fails to act or the cough is extremely severe, the judicious removal of a portion of the uvula is called for with every prospect of success

In support of my contention I offer the following consecutive series of cases it is naturally not a very long one because I avoid the operation unless in quite suitable cases which are not very common

Case 1—Tickling cough at night Tip of elongated uvula removed August 1st 1929 two days later reported cough much less and sleep undisturbed

Case 2—Cough and tightness in the throat Elongated uvula shortened October 15th 1929 four days later reported cough and tightness better

Case 3—Complained of frequent loss of voice in reading and lecturing on account of coughing and sore throats Elongated uvula shortened December 5th 1930 fourteen months later reported that since treatment he had had no sore throat or laryngitis and that he could read aloud with comfort his voice being both stronger and clearer than it had been for years

Case 4—Troublesome cough and very irritable throat Elongated uvula shortened February 1st 1930 Reported on February 20th 1930 uvula perfect and discomfort gone Treatment for lateral pharyngitis and tonsillitis subsequently required

Case 5—Tickling in throat at night on lying down with occasional tightness and soreness Elongated uvula shortened March 8th 1930 reported April 16th 1930 cough not so troublesome Subsequent treatment of antrum carried out

Case 6—Patient a doctor uvulotomy performed December 17th 1930 on account of cough Reported June 11th 1931 No irritating cough your partial removal of uvula has been distinctly successful

Case 7—Tickling cough of two months duration Tip of uvula removed January 6th 1931 Reported next day cough much better

Case 8—Tip of uvula removed June 17th 1931 on account of choking feeling A month later reported quite relieved

Case 9—Tip of uvula removed July 1st 1931 on account of cough on lying down Reported November 25th 1931 cough much better for a month and still much less than before operation can now lie down without coughing Patient has bronchitis

Case 10—Tickling cough at night or in a warm room Elongated uvula shortened October 19th 1931 reported October 27th 1931 cough gone

Case 11—Elderly man bleeder tickling cough at night four months Trailing uvula shortened with scissors galvano cautery to raw surface December 8th 1931 no haemorrhage Reported a week later and recently cough quite gone a great success

My colleague Dr P. H Abercrombie writing on September 26th 1931 reminded me that many years ago I shortened his uvula with the very greatest relief to him My trouble was an irritating spasmodic cough on lying down in bed on my back more than once it resembled a mild attack of whooping cough After thoroughly cocainizing you removed fully half an inch of my uvula and the cough has never bothered me since! You may add my name to your list if you like and I can honestly say that I have quite a number of times relieved and removed an irritating cough by shortening an elongated uvula

Most of us have seen cases of inordinately long uvulas which appeared to nestle down quietly without causing any symptoms whatever to shorten these would serve no good purpose As a rule Dr Feldman's proviso is appropriate—that the operation is called for only when there is no other apparent cause for the cough such as tuberculosis There are exceptions however as for example in a few cases of tuberculosis of the larynx and lungs in which the exciting cough is increased in intensity and in frequency by the presence of a trailing uvula with its characteristic symptom of tickling cough on lying down In such cases I have diminished the suffering very greatly by discreet and almost bloodless shortening of the uvula Another exceptional case was one of ictus laryngis McBride's laryngeal syncope commonly misnamed laryngeal vertigo The patient was a middle aged man suffering from cancer of the inlet of the larynx, with narrowing of the air way On several occasions he had dropped down at the commencement of a cough I found an elongated uvula the presence of which excited the cough I therefore shortened it and during the brief remainder of his life the patient was free from cough and attacks of syncope

A word or two on the little operation may not be out of place After anaesthetization of the uvula a pair of scissors are held in the right hand and a forceps in the left The scissors are used to depress the tongue while the tip of the uvula is gripped with the forceps and pulled forwards The scissors are then used to cut through the uvula *upwards and backwards* so as to leave the raw surface on the posterior aspect of the organ The portion left should be of the size of a small normal uvula The ring end of the scissors may with advantage be curved slightly downwards so that the knuckles of the right hand may not obstruct the view and the distal end may be very slightly curved upwards It is very helpful however to have sharp points on the grasping parts of the forceps as the uvula is most elusive especially when the tongue wobbles actively

The ideal result is obtained if the removal of a small semi oedematous elongation beyond the muscle is sufficient to produce the desired effect but this is only occasionally possible As a counsel of perfection it has been proposed to cut a wedge out of the tip and bring the little flaps of mucous membrane together with a stitch Under ordinary circumstances we have to be content with a less elaborate technique I find it very desirable to minimize the chance of haemorrhage by applying the galvano-cautery to the raw surface, and I have amputated by means of the galvano caustic snare though without any very special advantage In respectful dissent from the opinion of those who hold that calcium is effective only if administered by the veins I have found it advisable to prescribe calcium bromide before meals and at bedtime for the two or three days preceding the operation to quiet the nerves and increase the coagulability of the blood

If these remarks encourage the practitioner to shorten uvulas in appropriate cases as of old I am sure much relief will be afforded which is otherwise withheld

DIVERTICULUM OF THE MALE URETHRA

WITH A SUGGESTION AS TO ITS ORIGIN

BY

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This condition is rare there being about one hundred cases described in the literature Many hospitals see perhaps one case in five or ten years

It has been the custom to distinguish between cases supposed to have a congenital origin (although the diverticulum does not show itself until quite late in life) and cases which are acquired as the result of urethral obstruction or trauma The explanation offered of the congenital diverticulum is that at birth there is a flap-like obstruction where that part of the urethra which arises in the cloaca joins with the part which was formed in the external genitalia It is supposed that in a few hours increasing urinary pressure overcomes this obstruction but there is left a tiny potential diverticulum Later in middle life for some obscure reason this sac suddenly enlarges and becomes a clinical entity Now this theory puts an undue strain on the imagination It resembles other embryological hypotheses made in the early days before research had placed this science on its modern foundation Such a pioneer hypothesis was that which accounted for the downgrowth of Meckel's cartilage by manual traction exerted by the foetus

The second class of urethral diverticulum is easier to understand The acquired obstruction of a stricture or stone causes the proximal urethra to dilate and later to form a lateral expansion or a break in the wall of the urethra may result in extravasation of urine into a space which becomes lined with epithelium or a peri urethral abscess or extraneous cyst may burst into the urethra or there may be a pressure dilatation of Cowper's gland or of the uterus masculinus Finally after perineal prostatectomy the cavity from which the prostate was removed may dilate and present in the perineum Its passage forward is prevented by the triangular ligament

DIAGNOSIS OF URETHRAL DIVERTICULUM

This is often made during the investigation of other conditions which themselves gave rise to the diverticulum Should the diverticulum dominate the clinical picture the landmarks are a fluid swelling associated with frequent micturition poor stream and perineal discomfort The swelling is perineal scrotal or penile The frequency is of the type of a dribble when seated or lying down or on standing or walking

DISCUSSION OF A RECENT CASE

The above summary of etiology and diagnosis is given since there will now be described a patient to whom none of the mentioned causes of origin appear to apply and in whom diagnosis was made only during operation

A *man* aged 66 a road sweeper by *occupation* presented himself in January 1929 with the symptoms and signs of benign enlargement of the prostate This was enucleated in the usual manner by the suprapubic route in a one stage operation use being made of a Pilcher bag which was removed forty eight hours later This bag was maintained in position by a cord passing over a pulley to a weight of 1 lb Five days later severe bleeding occurred which was controlled by reintroducing the bag for several hours The patient made a good recovery and returned to his work as a road sweeper

During the next two years he had slight dribbling when sitting down and during this period developed a right inguinal hernia which filled half the scrotum when standing

In May 1931 there suddenly appeared a swelling the size of a lemon in the left side of the scrotum It was painless but three days after it appeared he presented himself for examination This showed an ordinary right sided inguinal *hernia* and the left sided fluid swelling which was apparently attached to the cord and taken to be a hydrocele His complaint of dribbling was noted but assumed to be an unfortunate complication of the prostatectomy of *two* years before Urethroscopy and cystoscopy were not done but he was admitted for scrotal exploration and *repair* of the hernia and *hydrocele*

At the operation the hernia was dealt with in the orthodox *manner* and the left sided swelling approached by an inguinal incision The swelling was seen to be no part of the cord but was a fluid swelling arising by a pedicle one and a half inches wide from the corpus spongiosum just in front of the bulb A diagnosis of urethral diverticulum was made and it was supposed that some distal obstruction accounted for it A flexible bougie was therefore passed into the external meatus It passed *along* the urethra with ease and coiled itself up in the diverticulum There was no urethral obstruction The bladder was *now* opened suprapubically Its neck presented the usual *appearance* at this *time* after prostatectomy A sound entered at the internal meatus passed easily through and could be manœuvred either into the diverticulum or onward to the external meatus A soft rubber catheter was now introduced along the length of the urethra and the diverticulum opened The *neck* seen from inside looked just like the neck of a diverticulum of the bladder It was lined by smooth epithelium and the orifice was one inch long and one third of an inch wide being aligned with the urethra in which could be seen lying the catheter The diverticulum was cut away enough being left to close the pedicle over the catheter by double breasting The catheter was *tied in situ* Into the bladder was placed a Marion's tube The left inguinal incision through which the above urethral operation was performed was closed Apart from a scrotal haematocele the convalescence was uninterrupted and the patient resumed his work as a road *sweeper* on which he has since been *engaged* When seen recently his only complaint was slight dribbling of urine of *which he loses* several drops an hour

OBSERVATIONS ON THE ABOVE CASE

Attention is drawn to the facility with which such a condition may be dealt with through a low inguinal incision The lax scrotum resulting from the existing right sided hernia made the exposure much easier Further this like most other urethral operations is best undertaken in association with suprapubic cystostomy both for the additional angle of approach thus afforded to the lesion and for the suprapubic drainage during convalescence which allows the urethra to remain dry throughout healing

It appears advisable that disorders of *micturition* after prostatectomy should be investigated by *urethroscopy* and a urethrogram as well as by cystoscopy

When we come to consider the etiology of urethral diverticula in the light of this case it is by no means easy to arrive at any conclusion But it may be said outright that the case affords no support for the theory of congenital origin Why should this man, aged 66 suddenly develop a urethral bulge because on the first day of his life there was a temporary rise of pressure in the bulbar urethra? Next there was no doubt that the urethra distal to the diverticulum was completely patent at the time of the operation and the obstruction of stricture or stone which comes first to the mind may be entirely dismissed

It is a natural thing to try to associate this diverticulum with the prostatectomy he had undergone two years before But it is very hard to do so The prostatic cavity appeared normal and was in *no* way connected with the diverticulum Had it been then the diverticulum would have presented in the perineum and not in the scrotum There was *no* residual post operative urethritis Now it might have been that the passage of sounds after the prostatectomy had injured the urethra But none of these had been *passed for over two* years

I tentatively put forward the suggestion that there was urethral obstruction due to the right sided inguinal hernia The hernia pressed on the urethra just distal to the bulb What would be the effect of this on a man with post prostatectomy dribbling due to a damaged sphincter? It would help him to control the dribbling But if he lay down or sat down and the hernia went back up the inguinal canal this additional control of micturition would cease This is precisely what this man complained of He could control his water when at work as a street sweeper but *not* when at meals or in bed Later the pressure of the hernia on the urethra just *in front* of the bulb would cause obstruction and behind this point the diverticulum appeared

If *this* be the case *then we must* regard urethral diverticulum as another of the possible complications of an inguinal hernia as well as one of the differential diagnoses of hydrocele

Finally I would express my indebtedness to Mr James McClure F R C S *of the London Temperance* Hospital by whose kindness I had the *opportunity* of taking care of and operating upon this patient and with *whose permission* these notes are published

HUMAN AND BOVINE TUBERCULOSIS

THE QUESTION OF MUTATION OF THE TUBERCLE BACILLUS

BY

NATHAN RAW C M G, M D M R C P

LORD CHANCELLOR'S VISITOR LATE BRITISH MEMBER OF THE INTERNATIONAL COMMITTEE ON TUBERCULOSIS

In *my original* paper in the *British Medical Journal* of 1903 I ventured on the following conclusions

1 That there are two distinct varieties of tuberculosis affecting the human body one produced by human tubercle the other by bovine tubercle

2 That human and bovine tubercle are separate and distinct

3 That phthisis is caused by the human bacillus

4 That gland bone and joint tuberculosis and lupus are of bovine origin and conveyed by milk

The general *opinion* of bacteriologists *with regard to* specific micro organisms *is that* they retain their characteristics under *ordinary conditions and are not* subject to mutation *If however these micro* organisms are *subjected to a new environment in some instances* a change takes *place which is usually called transmutation* I *have* for many years been of the opinion that bovine tubercle bacilli introduced into the human body in infancy or early childhood may after many years growth in new

tissues undergo mutation and become human bacilli capable of producing the usual lesions in the human body generally attributable to the human bacillus Up to the present time I have had no opportunity of proving my theory but the following case may throw some light on the subject The case was investigated in great detail and is as follows

A man aged 50 was seen by me at hospital in 1929 and gave the following history No evidence of tuberculosis in family was brought up on a farm and when 5 years old developed glands in the neck which were removed at the age of 7 by a distinguished surgeon who said they were tuberculous On one side of the neck the glands suppurated and some small glands had remained indurated on the other side all his life Two years ago the patient developed pulmonary tuberculosis and at the same time the glands became active and swollen finally suppurating He had tuberculosis in both lungs of two years duration with profuse expectoration which on bacteriological examination showed typical human bacilli The pus from the neck glands was also carefully examined both by culture and by animal inoculation Guinea pigs developed extensive generalized tuberculosis whilst rabbits all gave negative results and *gained in weight Cultures on 4 per cent glycerin agar from* the guinea pigs showed a typical human growth

Discussion

The whole experiment showed that the bacilli found in such large numbers were of the human type but the question of supreme importance is were they originally human or was the first infection at the age of 5 caused by milk containing bovine bacilli, which, after a long residence in a new host had been transformed into a human bacillus? Tubercle bacilli recovered from the human cannot always be definitely classified as human or bovine Many intermediate strains are met with which I suggest may be stages of mutation in a new environment After examination of hundreds of cases of tuberculosis in the laboratory I have never found human and bovine bacilli *in the same body* I am certain that no change takes place in the three types of bacilli—namely human bovine and avian—on ordinary media as I have sub cultured these three types continuously for twenty-two years and though they have lost all virulence and toxicity, and are non tuberculigenic they still retain their distinct cultural characteristics It is only when the tubercle bacilli are placed in a new host as in the human body that mutation occurs

It is now generally accepted by clinicians that all cervical gland infections are caused by the bovine bacillus conveyed by milk and the figures quoted by that eminent worker Stanley Griffiths are as follows In children under 5 years of age he found about 90 per cent due to bovine infection but in cases between 20 and 40 years of age he found a much higher percentage due to human bacilli Adults are not as a rule susceptible to bovine infections and I suggest as an explanation of these figures that the original bovine bacillus is being slowly changed into an intermediate or even a true human bacillus

Problem of Pulmonary Tuberculosis

We have not yet sufficient knowledge to answer with any certainty two vital questions (1) When does infection occur? (2) How does it take place?

We are generally agreed in thinking that infection takes place in early childhood but many authorities deny the possibility of direct respiratory infection and affirm that the bacilli are conveyed from the alimentary system to the bronchial glands and so to the lungs These questions are not decided I have examined many thousands of cases of pulmonary tuberculosis but have never been able to understand why they generally occurred between the ages of 18 and 30 If the infection has occurred in childhood it must be latent in the tissues I would like to suggest as a possibility that bovine bacilli introduced into the alimentary system in childhood *may* remain dormant in the mesenteric glands for a period of ten to fifteen years, in the meantime slowly assuming in human tissues the characteristics of human bacilli By *direct* lymphatic extension, or by the lacteals these bacilli may be conveyed to the bronchial glands and so set up pulmonary tuberculosis

If there is any substance in this supposition it is obvious that by directing our energies to the prevention of bovine infection through milk we will not only eradicate *all* forms of surgical tuberculosis, but may also be assisting in the prevention of the more serious and fatal form of the disease popularly called consumption

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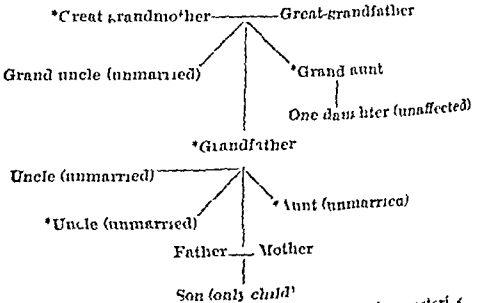
Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

CONGENITAL EPICANTHUS AND PTOSIS TRANSMITTED THROUGH FOUR GENERATIONS

Epicanthus is a subject on which little has been written during recent years Foggin (*Ophthalmic Review* vol xx 1901) classified congenital epicanthus as (*a*) transient or temporary (*b*) permanent (very unusual) whilst it is recognized that incomplete development of the nasal bones is the main factor in its production (thus acquired epicanthus may occur in necrosis of the nasal bridge from whatever cause) Usually as the nose grows forwards and the face develops the condition disappears

The case in point a boy aged 5 was very definite and was associated with a marked congenital ptosis—in order to look at the ceiling it was necessary for the child to flex his neck on the back to the utmost The condition was definitely traced back through each generation to his great grandmother and further in no case had the condition entirely disappeared in adult life—an uncommon event



The members of the family affected are marked with an asterisk

There has been no history of intermarriage in the family and no evidence of mental defect In the present case the only disturbing element to the child seems to be a liability to conjunctivitis There is no defect in visual acuity

Although cases occurring in families have been noted previously I do not think that such a well marked case of hereditary and permanent type has been described

As yet there has been no surgical intervention The ordinary plastic operation of removing an elliptical piece of skin from the root of the nose and suturing the edges of the skin together would of course not affect the ptosis for which separate treatment would be necessary—either a suture operation (Hess), or utilization of part of the superior rectus muscle (Motais)

I am indebted to Mr R E Bickerton ophthalmic surgeon to the Lyelma Hospital for permission to publish this case

NORMAN ROSS M B Ch B
Casualty Officer Lyelma Hospital

SPONTANEOUS VERSION OF EXTENDED BREECH

In view of the recent correspondence in the *British Medical Journal* on breech presentations the following case may be of interest

M P aged 18 primigravida was first seen at the twenty fourth week of pregnancy when the foetus was presenting by the breech This presentation persisted and recurred after external version at the thirty second week x ray examination at the thirty fifth week confirmed the breech presentation and showed extension of the legs

As the pelvis was particularly large pregnancy was allowed to go to full term Natural labour had not begun three days after the expected date of delivery so the patient was admitted to hospital Quinine induction was tried but without success Surgical induction was decided upon three days later but on that day the patient complained of severe backache and abdominal discomfort and labour was thought to be commencing After twenty four hours all symptoms of labour had passed off but vaginal examination showed conclusively that the vertex was now presenting and that spontaneous version had occurred The cervix was then two fingers dilated and natural delivery took place forty eight hours later

The interest of this case lies in the facts that (1) The foetus turned spontaneously from an extended breech to a vertex position and version occurred at the onset of labour at full term (2) The shape of the head was typical of that seen after a breech delivery

We conclude that the time of version was coincident with the intense backache experienced three days before delivery and also in all probability that flexion of the legs took place prior to the change in presentation

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Reports of Societies

ASTHMA AND ALLIED CONDITIONS

At a meeting of the Medical Society of London held on February 22nd with the president Mr HERBERT TILLEY in the chair a discussion was held on asthma and allied conditions

Dr G H ORIEL opening the discussion divided asthma into three distinct types There was he said an extrinsic form of asthma in which the attacks depended upon exposure to substances outside the body such as animal inhalations ingestion of certain foods and serum injections this was the true allergic type Secondly there was intrinsic asthma usually due to infection Thirdly there was a mixed type in which infection took place in a case formerly allergic Eczema could be subdivided in exactly the same way into an allergic type (the Besnier prurigo) a seborrhoeic type due to infection and a mixed type in which scratching of the allergic form had led to secondary infection Dr Oriel discussing the question of treatment first described the so called specific methods of desensitization as originally applied to the treatment of hay fever The results here were far from perfect and he thought that many cases probably cleared up without treatment the value of which was therefore difficult to assess Skin tests tended to remain positive after so called desensitization so that the method was far from satisfactory and where in an allergic condition multiple sensitivity was present to several substances specific desensitization was almost impossible Investigation of biochemical changes in allergic persons showed that certain changes were present during an attack which incriminated the liver and good results were obtained in some cases by administering dextrose This kept the liver full of glycogen and thus enabled it to fulfil its function of detoxication—especially of the breakdown products of protein Dr Oriel then described his discovery of a substance in the urine of patients during an allergic attack This p substance had been the object of much criticism and he presented a series of therapeutic results obtained by injecting this substance in very small quantities at weekly intervals In asthma he had obtained cessation of symptoms in 36 4 per cent and relief in a further 43 6 per cent of patients while in all cases of allergy treated the corresponding figures were 43 6 per cent and 38 7 per cent In discussing these results Dr Oriel said that a longer time was necessary before cure could be claimed although some of the earliest cases had remained well without any treatment for two years He began with 0 1 c cm of a 1 in 10 million solution with very gradual increase He had applied the same method of treatment in chronic urticaria migraine Besnier s prurigo dermatitis herpetiformis arthritis and spasmodic rhinorrhoea He thought that this form of therapy would compare very favourably with so called specific desensitization

Dr G W BRAY discussed the origin of the allergic state explaining the familial nature of many of its manifestations on the basis of a predominantly germinal mode of inheritance Sometimes a normal mother he said might over indulge in certain foods during pregnancy and the foetus become sensitized reacting allergically on coming into contact with the food for the first time after birth Large statistical surveys had shown that it is at least seven times more likely that a member of an allergic family will suffer from some manifestation of allergy than a person of normal parentage Although the tendency to allergy was thus inherited so often continued the speaker the site and type of reaction were consequent upon local tissue damage For example the asthma following pulmonary inflammation in childhood was frequently due to hypersensitivity to feather pillows or horsehair beds on which the patient had lain during the illness the selectivity of the allergen being a result of repeated or continuous contact In the absence of hereditary influences it was usually found that the post natal factors had been particularly severe and constant Dr Bray next dealt with the types of asthma in childhood describing the recurrent bronchitis variety of infancy and the three main types of later childhood These he classified as the hereditary type the eczema prurigo asthma syndrome and the lung damage type In an account of the principal differences between these he emphasized the absence of permanent changes in the lungs and the presence of hypochlorhydria in the first type the association of recurrent skin trouble and wheezing in the second and the gross changes in the lungs—usually of a fibrotic or bronchiectatic nature—found in the third group in which the gastric juice was normal and the absence of

hereditary influences a notable feature In the treatment of the asthmatic child Dr Bray urged the giving of a linctus at night to soothe the bronchial mucous membrane and the administration of glucose and hydrochloric acid before meals He also stressed the value of using kapok instead of hair or feathers for the mattress pillow, bolster or eiderdown He also recommended breathing exercises Speaking of hay fever he pointed out that *Holcus lanatus* or Yorkshire fog grass, gave rise to more trouble than timothy grass judging by his recent investigations into skin reactions with pollen He was trying to produce a permanent cure in hay fever patients by perennial treatment over three years instead of by intermittent desensitization every spring Lastly, Dr Bray spoke of the possible allergic origin of migraine and nocturnal enuresis putting forward the theory that migraine might be due to sudden dilatation of vessels in the cerebral cortex leading to local oedema—as in other allergic reactions He was studying especially the 'cyclical vomiting of childhood which so often preceded the migraine of later life

Dr J Freeman agreed that hay fever was the best type of allergy to study but protested against statistical statements of cures If a patient was willing to go to a lot of trouble he could be guaranteed a cure for his hay fever but this might mean fifty injections He hoped Dr Oriel would not base his scientific belief on the results of treatment since asthma was often "cured even by admission to the wards of a hospital He used only timothy grass pollen in treating hay fever patients since he found this gave best results Mr Frank Coke thought the work by Dr Oriel on a urinary proteose of great importance, although it might be difficult to settle how or why it worked Since small amounts of the proteose were found in the blood, it was possible that the good results of auto haemotherapy depended on this He had found certain hay fever cases with symptoms prolonged into the autumn here there appeared to be an additional sensitivity to feathers Sir William Willcox said that he was interested in the toxic or infective element in asthma Where a gross focus of sepsis could be found and removed—for example in the nasal sinuses or tonsils —a case of asthma could often be permanently cured If no gross focus could be found vaccines in small doses might sometimes help He asked for more details as to the nature of Dr Oriel's urinary proteose Mr E B Waggett had found in asthma cases frequent evidence of infection of the paranasal sinuses He pointed out that hay fever could always be cured for one season by scorching the whole of the nasal septum Dr A F Hurst emphasized the necessity for regarding asthma on a much broader basis than the narrow one provided by the allergic theory He thought modern methods of treatment were no more successful than many methods advocated in the past In cases with an irritable nervous system residence in Switzerland often produced much benefit which in children might be permanent He mentioned the great importance of the psychological aspects of asthma The other two significant factors were the reflex one especially from the nose and the chemical one concerned with allergy Sir James Dundas Grant spoke of the nasal factor in asthma He had found abnormalities in the nose in many cases and removal of these had sometimes cured the condition Dr W Langdon Brown mentioned the important part possibly played by histamine This substance was antagonized by adrenaline and possibly produced by an intracellular ferment histaminase He suggested that in a study of histaminase lay the clue to the relation between the closely related psychological and chemical aspects of asthma Mr M Mollison expressed the view that the part played by infection of the nasal accessory sinuses and by diseases of the nose in the causation of asthma had been exaggerated Mr E Pearce Gould asserted that the asthmatic patient must not be allowed to give up the ordinary course of life which he would have normally followed Secondly he must take advantage of all steps available to suppress his disorder The speaker specially urged that the hopeless asthmatic patient should be most carefully treated The asthmatic should be taught to use adrenaline himself if he required it The President made the statement that he had never seen a case of confirmed asthma cured by an intranasal operation although relief of symptoms for some months might certainly be obtained

Dr Oriel in reply gave some details of the preparation of proteose from the urine and briefly described the chemistry of the substance as far as investigations had gone Its exact chemical structure was unknown

GONORRHOEA AND OTHER CERVICAL DISCHARGES

At the meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on February 19th with Mr Victor Bonney in the chair a discussion took place on gonorrhoea and other cervical discharges

Colonel L W Harrison (St Thomas's Hospital) referred to the present chaos in regard to this subject—a chaos reflected in the variety of treatments advocated and in the new remedies placed on the market almost weekly In most clinics he had found that the treatment of vaginal discharges was that which was considered appropriate for gonorrhoea and little attempt was made to distinguish between discharge due to the gonococcus and that due to other causes Commonly the treatment was by douching with some half hearted swabbing with protargol and perhaps also, though more rarely, the insertion of a medicated pessary In diagnosis he would supplement clinical examination by microscopical and cultural tests, and to these he would add the complement fixation test which he was surprised to find so little practised in this country With the more precise methods of diagnosis now available it should be possible to say whether a case was one of gonococcal infection, of bacterial infection other than gonococcal or of chemical irritation In non gonococcal bacterial infection the lesion was more superficial and accessible to bactericidal agents In non gonococcal cervicitis his favourite antiseptic was mercurochrome applied in a strength of 10 per cent In gonorrhoea the problem was different, local treatment was certainly necessary but had its limitations and an equally or more important factor was the patient's resistance To attempt to destroy gonococci buried in the depths of the tissues was to invite disappointment It was important to control the patient's resistance Vaccines were often given more or less blindly according to some dosage prescribed on general lines Reactions to vaccines varied widely and vaccine treatment to be of use must be much more individual and closely watched than was the case at present

Mr J J Abraham (Lock Hospital) said that in order to get some idea of the proportion of cases in which the gonococcus was isolated he had abstracted the figures of 1 000 consecutive cases of adult women admitted to the Lock Hospital with a diagnosis of venereal disease Of these cases 411 were proved by the finding of the gonococcus and 437 showed gonorrhoea clinically though the gonococcus was not found the other 152 were found to be not venereal Of the 1 000 patients 305 were pregnant of whom 259 were venereal Of the frankly venereal cases in the pregnant group only 91 were gonococcus positive of the 589 venereal non pregnant cases 320 were gonococcus positive This seemed to indicate that it was

more difficult to isolate the gonococcus during pregnancy. Not infrequently a woman though *gonococcus negative* during pregnancy was gonococcus-positive afterwards. Syphilis was found in 172 of the cases. With regard to other organisms found when the gonococcus was not isolated the presence of haemolytic streptococci in the cervix was an indication not to do an induction. Many secondary organisms—if he might so term them in distinction from the gonococcus—found their way into the female genital tract and tended to keep up inflammatory symptoms long after the gonococcus had disappeared. It was very difficult to decide when a woman had been cured of gonorrhoea but the complement fixation test was useful in this respect. Intravenous treatment had in his hands been disappointing. In the matter of vaccines he endorsed what Colonel Harrison had said. Pyrotherapy was coming into vogue he deprecated malaria therapy on the ground of risk. All treatment came down eventually to the treatment of the cervix vagina and urethra. The swabbing out of the cervix with various glycerin preparations was extremely valuable. In cases where there was a secondary infection of the cervix he preferred ionization by zinc to diathermy.

Dr T. ANWYL DAVIES (L.C.C. Clinic Whitechapel) said that unfortunately there was no specific remedy against the gonococcus—hence this discussion and the diversity of opinion. The prevalent method of local treatment was to apply a caustic or germicide to the urethra and cervical canal with a dressed probe or syringe twice a week among the most popular solutions being silver nitrate picric acid or one of the flavine series. He did not think this method was very satisfactory with the gonococcus. Neither silver nitrate nor picric acid penetrated more than one sixteenth of an inch below the mucous membrane of the cervical canal. Mercurochrome was useful in treating vulvo vaginitis in children under 2½ years but was not so satisfactory later when the cervical canal had become patent. Diathermy in his hands using various types of electrodes had failed miserably when the gonococcus was present it seemed to raise the incidence of salpingitis. Although the gonococcus was so easily destroyed *in vitro* at 106° F. in the body it was not killed by any temperature which left the tissues intact. He doubted whether diathermy stimulated the formation of antibodies. The cure for gonorrhoea was expected to be found not by local germicidal applications but by some agent which *would act through* the blood stream. Gonococcal vaccines at present available had failed to produce the results expected of them. In conclusion he emphasized the usefulness of glycerin in vaginal discharges it was bactericidal and antiseptic bland mild non-irritating and odourless killing streptococci very quickly. He gave an account of *200 successive cases of* vaginal discharges at the Whitechapel Clinic. *Apart from* two of them which were due to *chemical irritation* the organisms found were gonococci 102 staphylococci and coliform organisms 32 staphylococci only *26* coliform organisms only 10 streptococci 23 strepto-*pneumococci* 3 *B. proteus* 2.

Dr LYNETTE HEMMANT (King's College Hospital) said that with the picture of a typical cervix in her mind's eye she found it difficult to understand how any clinician could claim infallibility or even a modest certainty in diagnosing these difficult cases without certain routine laboratory tests. She mentioned appreciatively the oxidase reaction in the laboratory diagnosis of gonorrhoea introduced by Dr. I. N. O. Price which was the subject of an article by him in the *British Medical Journal* of February 2nd 1929. She believed in the complement fixation test and pleaded for its routine use. *In treatment* she used a 10 *per cent. solution of* mercurochrome also glycerin pessaries and tampons. She gave weekly doses of mixed gonococcal vaccine having some evidence that it stimulated antibody formation. She also attached great importance to the psychological encouragement of the patient.

Dr DAVID LEES (Edinburgh) urged that cases in which neither the clinical history nor the bacteriological findings suggested that the gonococcus was producing the discharge should be cleared out from the venereal diseases department and sent back to the gynaecologist. In treatment it was difficult to dogmatize except on general principles such as the promotion of the natural *resistance* of the patient by physical and mental rest *attention to* the action of the bowels kidneys, and skin *the establishment* of good drainage from the infected area *and destruction* so far as possible of the infecting organisms. *Strong antiseptics* only cauterized the cervix and damaged it. In resolving and chronic cases drainage could often be improved by employing in addition to glycerin cervical and urethral suction. In cases which were hanging fire with no acute symptoms he found suction and dilatation to be a valuable means of assisting good drainage. With care and perseverance gonococcal infection in the female could be cured and a reasonable attitude of optimism should be adopted in every case.

Dr D. H. MACLEOD (Middlesex Hospital) said that the main treatment carried out in his department was routine irrigation and he was satisfied that up to the present this method was attended by results better—or no worse—than any other. Infection in time wore itself out or was finally overcome by the natural resistance of the patient. Irrigation by keeping the patient clean prevented reinfection. Care of the general health and an increase of the defensive mechanism would hasten the cure. The actual attendances of patients for treatment in his department had almost doubled between 1927 and 1931 the figure for the earlier year being 5,961 and for the latter 11,117. The main obstacle to the cure of gonorrhoea was the protracted nature of the treatment. The average duration of treatment among his patients discharged as cured had been as long as fifteen months. 13 per cent. of the total admissions during 1930 were discharged as cured by the end of 1931. The duration of symptoms before the commencement of treatment appeared to bear some relation though a slight one to the cure rate in gonococcal infection. Cases of gonococcal urethritis appeared to stand a better chance of cure than those of cervical infection. Rectal infection appeared to be uncommon and was not responsible for the occurrence of the gonococcus in vaginal discharge.

Dr J. C. MOIR (University College Hospital) spoke favourably of diathermy. In all he had treated with diathermy forty four patients having definite gonorrhoea most of whom had previously been treated by local antiseptic applications until the disease had reached the chronic stage. The standard number of applications was six. Of the forty four cases twenty were clinically cured and showed three or more post-menstrual negative smears. It had been possible to follow up many of the others with certainty but he believed that most of them were satisfied with their condition. Three patients showed positive smears in one of these at least reinfection seemed extremely probable. The claim that the heat generated in the tissues by diathermy directly destroyed *the gonococcus* could not be upheld but he believed *diathermy* acted by promoting drainage and by increasing *the vascularity* of the parts treated. *It followed that it was* irrational to use diathermy in acute cases *diathermy* produced no benefit in such cases *and might in fact* exacerbate the condition.

Dr D. WATSON (Glasgow) said that in the treatment of gonococcal endocervicitis he used as a matter of routine

5 per cent acriflavine and believed he got excellent results from it He also invariably employed tubular sounds He objected as a matter of principle to the insertion into the canal of a solid instrument which, as it became further inserted would increase the pressure ahead of it and tend to force infection more deeply

ZONDEK ASCHHEIM TEST IN ECTOPIC PREGNANCY

At a meeting of the North of England Obstetrical and Gynaecological Society, held in Manchester on January 22nd with the president Dr Lacey in the chair Mr W W King (Sheffield) described a case illustrating the value of the Zondek-Aschheim test in ectopic pregnancy and the presence of hydatidiform degeneration of the chorion After referring to the frequency of the instances in which this test could be of definite clinical value in ectopic pregnancy Mr King paid tribute to the support it gave in confirming the necessity for immediate operation in a difficult case

The patient had gone seventeen days over her time before the so called period commenced but this delay as well as certain indefinite symptoms such as pains in abdomen and left shoulder were ascribed to chills overeating and rheumatism respectively The only physical sign was the doubtful presence of free fluid and even under anaesthesia no suspicious appendage swelling was palpable but on arrival of a positive report on the urine operation was insisted upon Laparotomy showed free blood which was mostly clotted in the peritoneal cavity and a tubal mole which revealed naked eye and microscopical evidence of early vesicular degeneration The presence of this degeneration would account for the positive reaction in spite of the fact that the foetus was apparently dead

Mr King referred to the greater relative frequency of vesicular degeneration of the chorion in tubal than in uterine pregnancies The President said he had found needling the pouch of Douglas helpful in the diagnosis of doubtful cases of tubal gestation and also described a modification of the Zondek Aschheim test in which rabbits were employed

Dr Datnow (Liverpool) mentioned Aschheim s original description of the test in 35 cases of ectopic gestation with a correct result in 29 The signs indicative of progressive gestation (either uterine or extrauterine) consisted in the mouse of uterine hypertrophy and haemorrhages and the formation of corpora lutea atretica in the ovary while if the foetus had died there was simply distension of the uterus with neither of these ovarian changes Dr Datnow had carried out the test in three cases of tubal pregnancy with a correct result in each case and therefore considered it of value in arriving at a diagnosis He believed that the reaction was never positive more than forty eight hours after delivery or abortion except in hydatidiform mole or where chorion epithelioma had developed

Prolapse of Female Urethra

Professor Leith Murray (Liverpool) read a note on ' Prolapse with strangulation of the female urethra After a reference to the infrequency of a clear definition of this condition in textbooks four cases were described All the patients were elderly multiparous women their ages ranging from 67 to 84 and all had similar symptoms and physical signs—namely considerable local pain marked urinary frequency especially by day difficulty in walking and a blood stained discharge After describing the cases in detail Professor Leith Murray expressed the opinion that strangulation of the protruding mass must occur at some stage of the process owing to the marked livid colour and that although infection is present this must be secondary No tendency to urinary retention was present so there appeared to be no urgency in the treatment which consisted in the application of adrenaline and chloretone ointment for a day or two replacement of the urethra by finger pressure (under anaesthesia in two cases) and the use of a self containing catheter for a few days There was no recurrence in three of the cases over a period of one to four years but in a fragile old lady of 84 there was a slight recurrence for ten days after removal of the catheter This was controlled by daily observation and reposition and the patient was reported to have been free from symptoms during the last seven months

Specimens

Mr J E Stacey (Sheffield) showed a specimen of a twisted hydrosalpinx removed from a nulliparous woman aged 29 who had been married four years and had complained of abdominal pain (with premenstrual exacerbations) for three years She sought medical advice on account of sterility alone

Bimanual examination revealed a retroverted uterus with a mass of enlarged matted appendages palpable in the pouch of Douglas and as Rubin s test was negative a laparotomy was performed It was found that the right tube had been converted into a hydrosalpinx five inches long which had undergone one complete twist and which contained blood stained serous fluid In the process of torsion the broad ligament had been torn and there was a large hiatus in it thus preventing the ovary being involved but this organ was cystic and bound down by adhesions Right salpingectomy was performed and as the left tube was thickened and the lumen occluded at the fimbrial end left salpingostomy was carried out and an infected retrocaecal appendix was also removed

Mr Stacey discussed the question whether salpingostomy was preferable to a more radical operation in patients complaining of pain and sterility, and mentioned one personal case in which pregnancy had followed bilateral salpingostomy

Dr C P Brentnall (Manchester) showed a specimen of a fibroid with red and cystic degeneration removed from a primigravida aged 27 who had complained of continuous pain and tenderness apparently due to the tumour, and present for months The fibroid which was extensively adherent to omentum and colon was almost uniformly degenerate and showed areas of cystic degeneration containing a fluid which after fixation somewhat resembled chocolate in appearance Dr Brentnall referred to the opinion frequently expressed that red degeneration of a fibroid in pregnancy affords no indication for operation He had collected two series of hospital cases and found that the eleven patients who had had enucleation performed all went on to full term while of thirty one instances in which no operation was performed one mother died of peritonitis following hysterectomy two months after delivery and there were four abortions one premature labour with death of the foetus one macerated child and four neo natal deaths In view of the above results of the danger of changes such as those in the specimen described and also of the possibility of the development of sarcomatous metaplasia or dense adhesions round the tumour Dr Brentnall advocated early surgical treatment when red degeneration was diagnosed in pregnancy Professor Leith Murray defined the late stage of red degeneration as chronic necrobiosis or grey degeneration and considered that all cases should be allowed to settle down under morphine unless in spite of this treatment there was an increase in the degree of toxaemia

Dr K V Bailey (Manchester) showed a specimen of carcinoma of the perineum removed from a single woman aged 36 who had complained of soreness in the perineal region for two months Examination revealed a deep excavating ulcer of the perineum extending up to but not actually invading the external sphincter ani muscle

with extensive glandular involvement in both groins As a result of extensive treatment comprising three applications of radium colostomy and excision of the left iliac and both sets of inguinal glands and finally of excision of the ulcer the patient had been rendered comfortable The perineum readily healed by granulation and the glandular areas were being treated by *x* ray therapy

ASPECTS OF CANCER

At a pathological meeting of the Liverpool Medical Institution held on February 11th with the vice president Mr FRANK JEANS in the chair Professor C E WALKER read a paper on Some aspects of cancer He said that a case of cancer might go through periods of improvement and regression Very rarely there might be a spontaneous cure and this seemed to be brought about by an overgrowth of fibrous tissue which destroyed the cancer cells Connective tissue had been neglected by cytologists and the more delicate cell phenomena were not shown in ordinary histological and pathological specimens Yet the connective tissue cells must multiply and differentiate freely and frequently Any destruction of a tissue beyond a very small amount was replaced not by the multiplication of the cells of the injured tissue but by connective tissue—a scar There was generally a crowding of leucocytes round the advancing edges of malignant growths There was a close relation between the development of connective tissue and blood At some periods it was impossible to say whether a particular cell was going to become connective tissue or the ancestor of a leucocyte This close relationship continued throughout life There was an insensible gradation between the wandering connective tissue cells and leucocytes The temporary improvement in some cancer cases might possibly be due to the leucocyte activity in the production of connective tissue having caught up and temporarily counterbalanced the multiplication of the cancer cells It was probable that the reaction of many of the treatments described was brought about in the same way This result might be purely mechanical Experiments seemed to show that cancer cells were more resistant to unfavourable factors in the environment than were the corresponding normal tissue cells Therefore it seemed that it would be more profitable to seek some methods of stimulating the wandering cells that accumulate round the growth to multiply and differentiate rather than to attempt to find something that would kill the cancer cells without killing the patient In Professor Walker's opinion many of the methods of treatment described brought about this result unwittingly to a partial extent and it would probably be better to aim directly and deliberately at obtaining this result and assist the wandering cells and their offspring in what they appeared to be trying to do all the time

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At a meeting of the Osler Club held on February 19th Professor LEONARD FINDLAY gave a talk lavishly illustrated by books and papers on the history of rickets He said it was doubtful whether human rickets occurred in ancient Egypt The first genuine description of the disease was given in the first century A D by Soranus Ephesius In 1650 Francis Glisson established rickets as a clinical entity John Mayow noted that scabies or itching occurring in the course of rickets contributed much to its cure The first chemical analysis of a rachitic bone was performed by Bibra in 1844 The address ended with a brief review of some of the more modern work and was followed by a discussion in which Mr WARREN DAWSON Professor FRASER HARRIS and Drs E W GOODALL J D ROLLESTON C F HARRIS A MONCRIEFF and W H IRITT took part

Reviews

RADIUM AND CANCER

Into his interesting little book on *Radium and Cancer*[1] Mr H S SOUTTAR has succeeded in compressing a large amount of information Rather less than the first half deals with physical and biological preliminaries while the remainder is devoted to an epitome of the methods employed in the treatment of some of the most usual forms of malignant disease Some few points in the preliminary portion might invite a certain amount of disagreement this is however a relatively unimportant matter so far as concerns those readers for whom the book is intended The outstanding criticism which we have to make is that throughout the book we find no warning that treatment by radium or radon should never be undertaken except by those who have had special training and opportunities for studying the subject Indeed in some places the emphasis given to the (apparent) simplicity of the procedures involved might encourage the idea that such treatment could be carried out by anybody possessing a very moderate degree of surgical skill provided supplies of the radio active material were forthcoming So far is this from being the case that the Radium Commission is doing all in its power to limit the use of radium and radon to such centres as are specially equipped for the purpose The very clearness and conciseness of this small book of sixty-four pages has called forth this comment That it should in any way be regarded by its readers as a practical guide is we are quite sure the last thing its author would desire As a brief summary of radium treatment expressed in clear and simple language we can cordially recommend its perusal to those who wish to obtain a glimpse of a very difficult subject

GYMNASTICS FOR WOMEN AND GIRLS

A small volume full of stimulating ideas and practical suggestions for teachers of physical culture written by ELLI BJÖRKSTEN has now been translated into English under the title *Principles of Gymnastics for Women and Girls* The general introduction is in itself a most interesting thesis which might with profit be studied by all leaders in education The keynote of the author's teaching based on practical experience of many years is that physical and mental education should be more closely linked She maintains that lessons in physical exercise for which mental alertness is necessary should be given in the open air if possible before the child has been wearied with long hours of study in the sedentary position If those responsible for the crowded time-table of children in secondary schools would listen to Froken Björksten's plea for shortened hours of study the knowledge acquired and displayed at examinations might be less but the ultimate achievement of brain and body relieved of overstrain at school might in adult life be considerably increased

The greater part of the book is devoted to a detailed consideration of gymnastic lessons viewed from various points of view Throughout this chapter stress is laid with almost too frequent reiteration on the important principle that body and mind must work in harmony the muscles in their various groups being under the voluntary control of the brain The teacher is urged to

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[1] *Radium and Cancer* By H S Souttar C B E M D M Ch F R C S Pocket Monographs on Practical Medicine London J Bale Sons and Danielsson Ltd 1932 (Pp 64 8 diagrams 2 Cl net)

[2] *Principles of Gymnastics for Women and Girls* By Elli Björksten Translated from the Second Swedish Edition (1926) for the Ling Association by Agnes Dawson B Sc (Lond) and L M Wilkie London J and A Churchill 1932 (Pp xi + 223 30 figures 8 6d)

aim at the development of beauty in the form and movement of her pupils rather than excellence in particular forms of exercise, leading to honours in competitive athletics or to the acquirement of mere muscular strength To the reader not versed in the phraseology of Swedish gymnastics the description of the exercises is sometimes difficult to follow The author advocates music as an important help towards certain aims of gymnastic teaching It is difficult to see why this popular aid to routine class drilling has been so generally abandoned in this country in recent years

In the chapter on Gymnastics for different age groups an excellent grading and variety of physical work is outlined but it is disappointing to find that Froken Bjorksten shares the view, so prevalent on the Continent that the female generative organs after adolescence are likely in some mysterious way to suffer as a result of vigorous exertion Holding this view it is not surprising that she should state It is most important that students should not take part in gymnastics during menstruation ' But in support of this precept apparently she refers to the leaflet on the subject published by the Medical Women s Federation Now the main object of that leaflet was to encourage girls to continue all their usual activities throughout the period as physical exercise is found to be the best means of preventing disabilities associated with menstruation With this exception the teaching throughout the book must have done much to reform the older methods of physical training for girls in Scandinavia and it is to be hoped that many teachers of physical culture in this country will study the excellent translation of the book into the English language

APPLIED PHARMACOLOGY

As was prophesied in the review of the third edition in 1929 it has not taken very long for a fourth edition of A J Clark s *Applied Pharmacology*[3] to make its appearance To employ the rather threadbare phrase this fact alone is sufficient testimony to its usefulness and to its popularity Professor Clark has held three chairs of pharmacology and is now at the head of one of the most important centres of pharmacological teaching in the British Isles It is worth while to notice the plan he has adopted in arranging his textbook, which is designed primarily for the use of students

He plainly regards the science of pharmacology as based on physiology and biochemistry and projecting forwards into medicine and surgery It is not merely a subject dealing with the scientific aspects of the action of drugs it is on the contrary synonymous with the science of therapeutics, in which drugs play their part on equal terms with dietetic physical electrical and other forms of treatment The chapters are arranged not under the heads of drugs— Opium ' Quinine and so forth— but under titles such as The Pharmacology of the Alimentary Canal The Pharmacology of the Circulatory System Now if the student is to learn, as a unit the pharmacology of say digitalis there is an obvious risk that he may obtain quite an erroneous impression of the relative importance of its different actions and finding later that what he has learned seems to bear little relation to the actions of drugs as he observes them at the bedside may be tempted to dismiss the whole subject as academic and better forgotten by the practical man That road obviously leads to empiricism and to absence of the scientific habit of thought necessary to the progress of therapeutics On the other hand to start with some physiological or anatomical system to consider the action of drugs upon it, and as far as may be the relation of those actions to morbid processes is an approach much more likely to put the actions of any given group of drugs in proper proportion to make what is learned applicable in the wards and (what perhaps is most important of all from the student s point of view) to bridge the still yawning gulf that exists at points between physiology and biochemistry on the one side and medicine on the other

Whatever the cause therapeutics and pharmacology are often lamentably ill taught in the great teaching hospitals Few have thought it worth while to establish a department where pharmacological and therapeutic research can be carried out in conjunction with the ward work The completed case still looms too large before the eyes of the students and the junior staff and the vision of the bedside still blots out the wider aspects of treatment and so militates against the proper use of remedies When launched into practice the young physician faced with the necessity of doing something for his patients often falls back on the drugs so freely and unscrupulously advertised to him through the post

Professor Clark s book is accurate clearly written interesting and comprehensive but we would stress above all things this point—that it affords a living and progressive avenue of approach to the student who is commencing the study of therapeutics

MANAGEMENT OF ABDOMINAL OPERATIONS

Mr Rodney Maingot s small book on *The Management of Abdominal Operations*[4] is intended for the use of general practitioners and house surgeons who may be left with after care of operation cases when the surgeon is not immediately available The book consists of short chapters each one dealing with a separate stage or complication The opening chapters describe the preparation of a patient for various abdominal procedures, with a discussion on the most suitable anaesthetic In the succeeding chapters detailed treatment is given of the immediate post operative period and the author in the majority of cases gives only one method believing rightly that alternatives will only lead to confusion Some of the chapters have been written by collaborators who are acknowledged in the preface but not in the chapter headings There are frequent blank pages for notes which allow the reader to fill in methods which have proved better than that given in the text or additional treatment This book will certainly prove a valuable help to house surgeons for it deals much more in detail with the subject than the ordinary textbook

A NEW METAPHYSIC

An absolutely original book may be very interesting without being always quite easy to read or to understand This is true of a series of papers by Dr J C McKerrow entitled *Novum Organum*[5] which as the subtitle indicates, are essays in a new metaphysic Each of them is unusual unorthodox somewhat striking but the general idea underlying them is by no means bizarre or crude and when once its implications are grasped it does in fact present a fresh instrument for use in the field of thought and philosophy It is not difficult to frame a sentence which briefly sets out this general idea Events in whatever sphere when they first occur are pure accidents they tend to recur merely because they

[3] *Applied Pharmacology* By A J Clark M C M D F R C P F R S Fourth edition London J and A Churchill 1932 (Pp x + 580 Illustrations 15s)

[4] *The Management of Abdominal Operations* By Rodney Maingot F R C S London H K Lewis and Co Ltd 1931 (Pp xii + 212 7s 6d net)

[5] *Novum Organum* By James Clark McKerrow M B London and New York Longmans Green and Co Ltd 1931 (Pp xiii + 277 9s net)

have happened before 'It is by accident that natural systems of activity—atoms stars organisms—arise and their animating principle is habit The applications and implications of this idea are not at once appreciated either as to their fundamental importance or as to their widespread field One has to get some way into their exposition before they become easy to *follow* For *example* they at once enable one to dispense with such concepts as *matter*, or *energy* or mind or cause! This *in itself* is a *revolutionary* upheaval and it is probably *because so* large a readjustment is required that the later essays in the book are more easy to follow than the earlier

There can be no doubt however as to the intrinsic interest of the author's basic conception or the admirable and provoking use he makes of its applications These applications even as illustrated in this volume are many and always novel and profoundly suggestive Dr McKerrow's papers deal with very important aspects of biological evolution of psychology and psychiatry of economics and even of theology Some of their headings may be given as evidence of their diverse yet unified interest The world as habit The difficulties of evolution The illusion of immediate experience The biogenic psychoses The social psychosis The style of the book is somewhat unusual also though not so much as its matter There are scattered throughout a good many striking aphorisms and expressions which one would wish to remember

It is unlikely that any man's philosophy is exactly like —it may not even resemble—his neighbour's or his own a decade earlier Gratitude is due to those who thought fully and with sufficient brevity formulate and make available that which seems to them the least unsatisfactory Dr McKerrow's book *makes an important contribution of this kind* It requires a good deal of consideration before it can be properly rejected if it is not approved

GUY'S HOSPITAL REPORTS

In the last quarterly instalment of the *Guy's Hospital Reports*[1] three subjects are *primarily* represented—syphilis blood conditions and asthma Drs V E and N L Lloyd of the department of venereal diseases report on the clinical significance of the urinary excretion of novarsenobillon in syphilitic patients treated by injections of that drug and give an analysis of 3594 tests of the urine in 302 patients they find no evidence that deficient excretion can be associated with toxic jaundice The great value of the *Kahn test* is shown by Drs Cann and De Navasquez in a consideration of 175 cases with 5000 serum examinations Mr Philip Turner records a case of gumma of the pancreas associated with severe vomiting Mr N L Eckhoff a case of gumma of the stomach and Dr G McGregor a fatal case of hepatic syphilis with severe *recurrent ascites* Disappearance of gummata under treatment was not followed by improvement All but the last of these three reports are supplemented by useful summaries of the literature In his account of a case of Addisonian anæmia with subacute combined degeneration of the cord associated with gastric carcinoma Dr C K Simpson reviews the present state of knowledge about this form of anæmia and points out that the belief in toxic absorption of bacterial products from intestinal foci has invited a Brobdingnagian [illegible] which have failed to establish any constant [illegible] Dr N C Plummer describes a case of gastric carcinoma in a patient who had recovered from Addisonian anæmia and was one of the first to be treated by liver in the hospital Methæmoglobinæmia in four sisters due to furniture polish (*metadinitrobenzene*) poisoning is reported by Mr D Erskine Dr Oriel describes some experiments on urinary antigens and with Dr E T Conybeare who contributes another paper on the cutaneous reactions in asthma gives an account of pollen sensitization in asthma Dr Close analyses 363 cases of intussusception in children and the use of lipiodol in bronchography is described by Mr R C Brock

NOTES ON BOOKS

DIBLE'S *Recent Advances in Bacteriology and the Study of the Infections*[2] was first published in 1929 and reviewed in our columns on April 27th of that year The author undertook a very difficult task for the subject with which he deals is continually enlarging its scope and modifying its dogmas The fact that another edition has been called for in the short space of three years shows how useful the book has proved The present edition contains new matter on virus diseases Brucella infections flocculation tests for syphilis, the Salmonella group and antigenic structure With regard to the original matter the author remarks that there is hardly a page which it has not been necessary to extend *modify or rewrite* This has been accomplished so successfully that the book remains one of the most readable surveys of bacteriological knowledge with which we are acquainted

Popular health education is a difficult task that needs to be handled very skilfully *The Lungs and the Early Stages of Tuberculosis*[3] by LAWRASON BROWN and HIRST is one of a popular health book *series published* by an American firm Naturally with such authorship all the information in the book is sound and accurate but it is *too crude and too terse for popular reading* It *would* we fear only bring that dangerous gift "a little learning to the healthy and but little help to the *consumptive* For nurses, health visitors or almoners however it can be strongly *recommended* as an excellent small handbook on pulmonary tuberculosis

Poisons and Poisoners[4] is a readable exhaustive but rather discursive volume, which surveys the history of *poisons from the earliest times to the present day* The author Mr C J S THOMPSON honorary curator of the historical section of the museum of the *Royal College* of Surgeons of England, confines his study mainly to poisons *that have been employed for criminal purposes illustrating* their application by reference to famous trials and cases Starting with primitive man he traces through national traditions the poisons commonly used by various peoples —hemlock mandrake, gold leaf curare aconite queen mother of poisons —and ancient antidotes like unicorn's horn and bezoar stone Mr Thompson has a vivid narrative style and he describes with a skilful insistence on the human motive the growth in variety and subtlety of methods of administration practised in Borgian Rome and Valois France and in Elizabethan England While criminal poisoning nowadays has lost much of the glamour of former ages with their poisoned daffodils and love potions it will probably appear no less startling in historical retrospect The author gives an account of a case of criminal poisoning with bacteria and devotes a chapter to poisons *used in warfare This is a book that* may be read with much profit and we *recommend* it as a serviceable introduction to the history of *toxicology*

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[1] *Reports from the Laboratory and the Study of the Infections* By J Bass DSO MC MB FRCP Second edition London J & A Churchill 1932 (Demy 8vo pp xi + 476 29 figures 15s)

[2] *The Lungs and the Early Stages of Tuberculosis* By Lawrason Brown MD and Burrell Hirst MD Philadelphia and London W B Saunders and Co 1931 (Demy 8vo pp 151 5s net)

[3] *Poisons and Poisoners* By C J S Thompson MRCS LRCP London H K Lewis 1931 (Demy 8vo pp 292 12s 6d net)

The fourth volume of the forty first series of *International Clinics*[10] contains a good general account by James J Walsh of New York of the third Congress of the Pan American Medical Association held in Mexico City last July followed by papers read at this congress by Edward L Kellogg and William A Kellogg of New York on duodenal diverticulosis and by Elmer Hess of Erie Pennsylvania on renal sympathectomy In the next section devoted to diagnosis and treatment, attention may be drawn to the following papers the malarial therapy of paresis by William A White of Washington, the role of helminths in the production of tumours by Richard P Strong director of the department of tropical medicine at Harvard University Medical School the coronary problem in heart disease by Walter Y Bierring of Des Moines Iowa and some problems confronting mental hygiene by E van Norman Emery professor of psychiatry and mental hygiene at Yale University The section on endocrinology consists of a paper by Sir Humphry Rolleston on some points, mainly historic, on the endocrine glands generally and the thyroid and parathyroid in particular The section on surgery contains a richly documented paper by M Muschat and J Carp of Philadelphia on torsion of the testis and is followed by an anthropological study of the origin of man by Professor Hans Friedenthal of Berlin The volume ends with a useful series of medical questionaries collated by B Bickel of Washington

The second part of Messrs Merck's *Annual Report*[11] for 1931 includes an interesting section dealing with organotherapeutic substances The number and variety of these preparations is increasing rapidly For example seven cardiac hormone preparations are mentioned although the scientific basis for their use is in most cases somewhat obscure A large number of ovarian preparations have also been put on the market Preparations of the active principles of the anterior lobe of the pituitary are more over available In the last two cases the physiological activity of the preparations can be measured accurately but the effective human dose is most uncertain A number of investigations on spleen therapy are reported several authors note beneficial effects in tuberculosis of bones but negative results with other diseases are recorded The general tendency in endocrinology for commercial enthusiasm to outrun scientific evidence appears to be still maintained

[10] *International Clinics* Edited by Henry W Cattell M D Philadelphia Vol iv Forty first series London J B Lippincott Company 1931 (Pp viii + 328 illustrated 12s 6d net)

[11] *E Merck's Annual Report* English edition Second part 1931 Darmstadt E Merck Chem Fabrik 1931 (Pp 155–320 illustrated Sent free of charge post paid to any member of the medical profession on application)

PREPARATIONS AND APPLIANCES

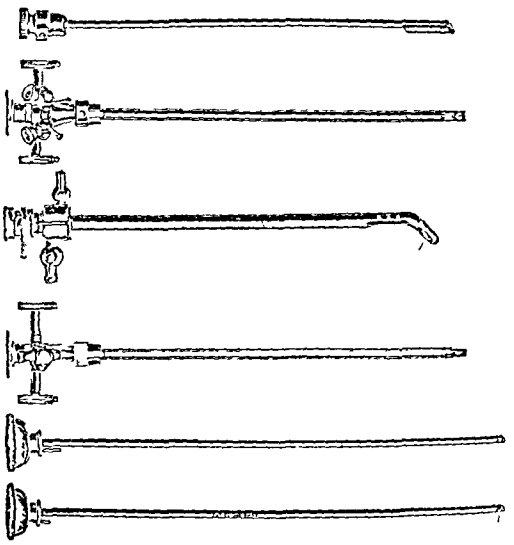
CYSTOSCOPE FOR APPLYING DIATHERMY TO BLADDER GROWTHS

Mr H P Winsbury White F R C S writes Increasing experience in the treatment of bladder growths by transcystoscopic diathermy gradually made it clear that the best results were to be obtained by using a cystoscope embodying the following features a large field of vision the telescope a catheter channel carrying a [illegible] Circulatory a wide excursion of the lever which operates as a unit, of the tip of the electrode a system there is an obvious irrigation which rapidly clears the field of an erroneous impression ment making it possible to rotate the eyepiece actions and rotating the cord from the battery and the instrument seems to bear cocks with their attached tubes observes them

How to meet adequately all of these requirements the whole the same time to keep the calibre of the instrument within practicable limits which would enable it to be passed without actual discomfort was the mechanical problem set for and solved by the instrument maker An extra telescope with retrograde vision is included it is required to deal with exceptional cases of growth on the anterior bladder wall An internal fitment with double catheterizing channels which can replace the single channel is incorporated so that this cystoscope can be used for catheterizing the ureters in certain cases of tuberculous cystitis in which the fluid in the bladder readily becomes tinged with blood Two years experience of this instrument in regular use enables me to say how well it serves the purposes for which it was intended

Description of Instrument

The sheath differs from the usual type in that it is made of two tubes The outer of these is round in cross section and the inner one elliptical the long axis of the ellipse being equal to the inner diameter of the round or outer tube The result of this arrangement is that a crescent shaped space is left on either side of the elliptical tube In one of these spaces the electric wire leading to the lamp is housed whilst the other serves as a water channel for the irrigating fluid which enters the bladder through a series of small openings at the distal (bladder) end of the sheath It is therefore possible to obtain a continuous water circulation in the bladder instead of an intermittent filling and emptying of the viscus After entering the bladder the fluid returns via the interstices between the telescope and the ureteric catheter channels to the exit



At the proximal end a revolving watertight collar fitted with inlet and outlet cocks and clutch pin for the switch is mounted on the sheath By means of this device the cystoscope can be rotated at will in either direction whilst the electrical and water conduits remain stationary the switch in the operator's hand acting as a handle The time wasting entanglements with the cord from the battery and tubes from the irrigator and the kinking of the latter are thus avoided Two internal fittings one for two ureteral catheters and one for operating instruments and a right angle and a retrograde telescope complete the set

For the purpose of retrograde diathermy on the anterior wall of the bladder it is necessary to bend the diathermy electrode at a right angle or even further back To enable the operator to do this additional rotary movement of the Albarran lever is required The Albarran lever on these instruments rotates through an angle of 135 degrees instead of 90 as in the usual cystoscopes The retrograde telescope is also fitted with a longer guide pin so that the tip of the electrode can be brought into the centre of the field when it is in the most retrograde position

The sheath is 24 Charriere in size and of standard length The double catheterizing attachment allows of the simultaneous passage of two No 6 Charriere ureteric catheters and the operating attachment one No 9 Charriere diathermy electrode or scissors

Particular attention has been paid to the telescope the field of view of which has been enlarged to 28 mm at the standard distance of 25 mm from the objective to facilitate manipulation This represents a gain of approximately 20 per cent over the usual catheterizing telescope

The instrument is made by the Genito Urinary Manufacturing Company Ltd 28a Devonshire Street London W 1

MALFORMATIONS OF THE HUMAN BODY FROM A NEW POINT OF VIEW

SIR ARTHUR KEITH'S HUNTERIAN LECTURES

The following are the first two of a series of six abstracts of Hunterian Lectures delivered in January at the Royal College of Surgeons of England by Sir Arthur Keith F.R.S. Conservator of the Museum

I.—MALFORMATIONS OF THE BRAIN AND SPINAL CORD

In the earlier stages of development operations which are in many respects comparable to those performed by surgeons are carried out automatically by the tissues of the human embryo. Pre-natal surgery might be described as painless, bloodless and surgeonless. When pre-natal operations fail—and modern research is throwing much light on why they sometimes fail—children are born with defects which may be so grave that life is impossible. But even the lesser defects tax the ingenuity of the modern surgeon.

The greatest of these developmental operations carried out in the embryo relate to the enclosure of the entire nervous system of the human body. Thanks to the combined labours of embryologists we are now able to follow the rapid sequence of events which brings about the enclosure of brain and spinal cord from forehead to rump. Although the human brain is by far the most complex structure known to us, it and the spinal cord are in reality a greatly transformed wide strip of skin which runs along the back of the embryo. It is a remarkable fact that although the brain is only needed after birth, yet it is the first of all bodily structures to become differentiated, appearing even before the heart has become functional and when the embryo is less than one-twenty-fifth of an inch long. In this early period the skin of the back is being modified to form nerve plates.

Medical men have become so familiar with the details of the operation which encloses the nervous system that they are apt to forget the merits of Nature as a surgeon. Two conditions are necessary in every-day surgery: the parts which are to unite must be brought into apposition—that condition is dependent on the surgeon. The other condition is that the parts so brought together must have the power to unite by healing: this power is inherent in all living tissues, particularly in those of the embryo. When the embryo enters the fourth week of development the margins of the nerve plate along the back begin to rise up, so that first a trough is formed and then a tube. The folded margins of the tube begin to come in contact at the region of the neck; edge becomes healed to edge just as in a wound, except that there is no scar left to mark the site. From the neck the process of [illegible] backwards and backwards. In less than a [illegible] the site of the forehead; and in less [illegible] it will be seen it has reached the lower region of the [illegible] than two weeks the whole of man's central [illegible] becomes submerged in an orderly manner [illegible] of submergence is obliterated by a covering [illegible] operation in plastic surgery is successful [illegible] and quite naturally carried out.

[illegible] Nature's operation may fail completely: the child then comes into the world with the brain and spinal cord exposed on the head and back as flat plates. More frequently the failure is partial—the lower part of the spinal cord [illegible] left exposed—constituting the defect known as spina bifida. We are coming to a knowledge as to why an operation—usually carried out with the utmost success by Nature or by powers inherent in the tissues—does sometimes fail. Spina bifida can be produced experimentally in the developing eggs of fish and frog by subjecting them—when the neural plates are being enclosed—to injurious influences. By such means any wound can be kept open.

The formation of the eye also entails two operations carried out by developmental surgery. They are minor operations compared with that which segregates the brain from the embryonic skin. Although they fail much less frequently than that connected with the central nervous system they are much more instructive from a surgical point of view, for it was while experimenting with the rudiments of the eye that embryologists discovered some of the secrets of developmental surgery. An eye arises by part of the embryonic tube growing out sideways as a pocket to form the retina. When the closed end of the neural or retinal pocket comes against the skin of the embryonic head the area of skin so touched begins to behave curiously. It grows inwards in the form of a pocket which abuts against the nerve pocket or outgrowth. Both pockets become shut off—the one from the embryonic skin to form the lens of the eye, the other from the neutral tube to form the sensitive lining of the eyeball. So perfect is the healing at the point where the lens pocket becomes detached from the skin that not a trace is left. Indeed that part of the skin becomes the clear cornea of the eye. When the first stages of eye formation are completed one side of the eyeball still remains open; this fissure is closed by a process similar to that which unites the two sides of a wound. Sometimes union of the fissure of the eyeball is imperfect, giving rise to the defect known as *coloboma*.

It was in connexion with the development of the eye that embryologists made the first of a series of discoveries which are letting us into some of Nature's surgical secrets. It was found that the brain pocket which grows out to form the retina is a master tissue—one possessing almost magical qualities. If it is prevented from coming in contact with the embryonic skin or is cut away before it reaches the skin then the lens-forming area of skin remains quiescent and no lens pocket is formed. But if the neural pocket be detached and then be embedded beneath any area of skin of the embryo then the overlying skin at once begins to form a pocket and a lens. The neural pocket possesses this magical power because of a growth controlling substance formed within it. Magic of a similar kind is known to everyone who has studied the formation of galls on plants and trees.

Lately Professor Spemann of Freiburg discovered that a certain small area of tissue on the back of the very young embryo has these magical or morphogenetic qualities to a much more wonderful degree than even the retinal pocket. If a graft is taken of this central tissue and if it be implanted on the side of the embryo then the surrounding tissue which in ordinary course would have become part of the body wall now begins to form a nerve plate and a new embryo. The key to some of Nature's secret surgical processes carried out as routine proceeding in building up the embryonic body will be found in a knowledge of her morphogenic substances. In the matter of repair Nature is still the master surgeon.

The elaborate lining of the internal ear which provides the essential machinery of hearing begins as an area of exposed skin on the side of the head of the embryo. Through a series of growth and healing processes the area becomes submerged in the form of a pocket, the mouth healing over and leaving no trace of the original opening. The lecturer knew of no instance in man where the auditory pocket had failed to close; yet in certain fishes it remained open. This was one of the minor discoveries made by John Hunter, founder of the Museum of the Royal College of Surgeons.

Although the surgeon's immediate interests were confined to making good Nature's failures he could not help speculating on how the elaborate operations just described had come into being It was quite evident that no kind of vertebrate animal could have lived with its nervous system spread out as open medullary plates on head and back exposed to every injury To find such a stage of evolution one has to turn to the lowest of invertebrate forms of life where the nerve system is still essentially a part of the skin The elaborate growth and extension of the nerve system seen in the vertebrate animal became possible only when provision had been made for the earlier stages of development being gone through in positions of shelter and nurture With the elaboration of intrauterine life all forms of developmental extensions and elaborations became possible When we see a human child born with its nerve plates still exposed from head to sacrum we are in reality witnessing a reversion to a stage of evolution which our ancestors went through long before the coal measures were laid down

II —MALFORMATIONS OF THE FACE AND MOUTH

Nature in carrying out her evolutionary projects has resorted to operations nearly akin to those carried out by modern surgeons In the formation of the face of all animals which suckle their young two such operations are carried out Even as late as the seventh week the human foetus has no roof to its mouth the mouth—the chewing and sucking chamber—is continuous with the nasal and breath chamber By the beginning of the third month a fleshy shelf has grown out from each side of the mouth the edges of these shelves coming into apposition along the middle line of the roof of the mouth, unite together by a process similar to that seen in the healing of a wound The operation proceeds automatically, and is finished in the space of ten days If it fails then the condition of cleft palate results and the surgeon has to make good Nature's failure Cleft palate interferes with sucking mastication and speech Many of the lion cubs formerly born in the Zoological Gardens London suffered from cleft palate By altering the diet of the lionesses—as suggested by Sir John Bland Sutton—giving them a plentiful supply of vitamins and better surroundings the occurrence of these defects has been prevented

Thanks to the labours of Dr Robert Broom amongst the fossil animals preserved in very early geological formations (Permian and Triassic) of South Africa we know that the evolutionary movement which ended in shutting the mouth off from the nose began very many millions of years ago Amongst these South African fossil forms there occur mammal like reptiles Dr Broom and Professor Watson of University College London have traced the evolution of the palatal plates from mere side ledges until they meet in the middle line of the roof of the mouth and form a complete bony palate The evolution of the palate which occupied aeons of time is repeated in the course of ten days in the face of the human foetus

The appearance of a bony roof in the mouths of South African mammal like reptiles was part of a revolutionary movement which overtook the jaws of the ancestors of true mammals Fifty years ago we knew that the lower jaw of mammals had somehow and at some remote date become hinged to the base of the skull in a new way and that the old hinge—the one which continues to serve in reptiles—became incorporated in the ear How such a transformation in structure and function took place was an enigma until the discovery of the South African mammal-like reptiles In them several stages of the transformation have been found—the new joint coming into being and the bones of the old hinge being allocated to the ear and serving for purposes of hearing In the Museum of the Royal College of Surgeons there are two human lower jaws which reproduce both hinges—the new mammalian and the old reptilian

If as yet we know little of the growth controlling mechanisms which make such evolutionary changes possible we do clearly realize the functional significance of the change With a bony roof to the mouth and a new hinge to the lower jaw, mastication became possible Mechanical preparation of the food formerly thrust on the stomach was taken over by the teeth and jaws With the development of a palate sucking became possible Nay, it is not unlikely when we consider how Nature has lavished her inventive resources on behalf of the young that the primary purpose was to permit the immature young to be suckled

At a still earlier date another evolutionary operation was carried out in the face of vertebrate animals—one still to be observed in the face of every human foetus during the latter part of the seventh week of development If this operation fails then there results the condition known as "hare lip —where one or both nostrils communicate by a single or a double cleft with the roof of the mouth The first stage in establishing an open communication between nose and mouth is still perpetuated in certain fishes with the evolution of air-breathing forms this open trough between nose and mouth became covered over In the course of development the edges came together and a process of union similar to that seen in a wound united their opposing edges Thus a respiratory passage was established through the nose to the mouth The surgeon in carrying out an operation for the repair of hare lip in a human infant is repeating a process which was introduced during the evolution of the lowest and earliest air breathing vertebrate animals

Hare lip and cleft palate ' the commonest malformations of the human face may be regarded as relapses or reversions to states which prevailed in the infancy of vertebrate animals but there are other defects which cannot be so explained There is the condition of ' cyclops ' where both eyes in place of being separated by the bridge of the nose, are fused together to form one eye under the forehead The degree of fusion varies The nose may be absent altogether or it may form a fleshy, proboscis like structure just over the median eye The lower jaw may be absent altogether so that the ears meet in front of the neck, and the mouth is reduced to a mere pin hole We have no reason to believe that at any point of man's long ancestral chain there was ever a form with a median single eye a proboscis like nose a pin hole mouth and ears which met where the chin should be These cyclopean monsters can be produced to order in the developing eggs of fish and newt The front part of the brain—the part to which nose and eyes are attached—is the last to be developed in the growth of the embryonic head If when this final stage is being reached the developing embryo be subjected to injurious conditions then development is arrested before the right and left eye buds and nose buds have separated It is under such conditions that human cyclopean monsters are produced and fortunately they never live They can never have produced progeny and yet they occur to day just as they did in the time of the ancient Greeks

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The Department of Scientific and Industrial Research has now issued its report for the year 1930 31 (Cmd 3989 H M Stationery Office 3s net) This is divided into the following main sections report of the Committee of the Privy Council for Scientific and Industrial Research report of the Advisory Council summary of the work of the research organizations of the Department and information concerning research associations

British Medical Journal

SATURDAY, FEBRUARY 27th, 1932

A SURVEY OF B C G VACCINATION

It is regrettable that, owing to a printers strike lasting for six months the proceedings of the seventh conference of the International Union Against Tuberculosis held at Oslo in August 1930 should have been delayed so long in publication One of the main questions under discussion was the prophylactic vaccination against tuberculosis by B C G, and the conference afforded an excellent opportunity for delegates from all parts of Europe and from the American continent to relate their own experiences and to criticize some of the views expressed in the opening paper by Professor Calmette In briefly reviewing the proceedings it may be well to select a few of the points on which attention was chiefly focused

One of the main contentions of Calmette has always been that for some days after birth the mucosa of the small intestine is abnormally permeable allowing tubercle bacilli for example, to pass through in the absence of any pathological lesions and reach the mesenteric glands It is for this reason that he has consistently advocated the giving of B C G to infants by the mouth during the first ten days of life The evidence on which this belief rests is not altogether convincing Örskov using newborn guinea-pigs found that when even large doses such as 20 to 75 mg of B C G were administered by the oral route, there was no indication that the organisms passed especially through the intestinal mucosa Only very few bacilli seemed to invade the body at all and those that did gained access chiefly by the pharyngeal mucosa and the respiratory tract Cultural experiments showed that the cervical glands and later the lungs might become infected, while the mesenteric glands remained free from demonstrable tubercle bacilli Park of New York using a different technique obtained results capable of bearing a similar interpretation Instead of killing the animals at various times after vaccination and cultivating the different tissues he tested the skin for hypersensitiveness to tuberculin to ascertain whether invasion of the body had occurred In 54 newborn guinea pigs vaccinated orally with B C G the tuberculin reaction was uniformly negative on the other hand 75 per cent of the animals vaccinated intracutaneously or subcutaneously developed a tuberculin positive reaction On the basis of these results it is clear that the permeability of the intestinal mucosa during the few days succeeding birth deserves further study for unless it can be shown that virulent tubercle bacilli can pass through it with abnormal ease at this stage the whole rationale of oral vaccination falls to the ground Morelli goes so far as to suggest that if this increased permeability really does exist it may account for the apparently favourable results which have been obtained as the result of B C G vaccination, for infants in tuberculous families during their period of vaccination and for some time afterwards are kept away from infection while control infants remain in the infected home, being thus exposed during their most susceptible period to infection from which the vaccinated infants are protected From this he argues that all infants should be removed from their infected surroundings and kept in a preventorium for at least a month after birth

Closely related to this subject is the choice of the best route for giving the vaccine There seems to be a growing consensus of opinion that the oral route is not the most suitable Örskov and Schick both strongly favour intracutaneous or subcutaneous injection though neither of these methods of vaccination is free from objection Thus Schick states that subcutaneous vaccination leads in 60 per cent of cases to the formation of a cold abscess, and intracutaneous vaccination in 85 per cent of cases to a maculo-papular tuberculide The intradermal method however has the advantage, according to Kereszturi that much larger doses can be given resulting in an earlier development of the allergic state

Of late years Calmette has maintained that B C G vaccination leads to a diminution not only in the tuberculosis death rate but also in the general mortality rate from all causes during the first year of life The meaning of this observation has given rise to much discussion If B C G has a specific immunizing action against tuberculosis there is no reason to suppose that it will protect against other diseases, if it does in fact protect against other diseases then it is manifestly not specific for tuberculosis and its general immunizing action must be attributed to some non-specific protein effect or other similar cause Admitting this one is forced into the position of having to defend oneself for using a living and potentially dangerous vaccine in order to produce an effect which might equally well result from the injection of a sterile solution of peptone This position is of course wholly untenable Partly for this reason certain erudite bacteriologists such as Professor Neufeld of Berlin, have tried to extricate Professor Calmette from the web of his own spinning by asserting that if the general mortality from all causes really is less in the vaccinated than in the unvaccinated group it can be due only to the fact that the infants chosen for vaccination were stronger and healthier than those left as controls The mere fact of the difference affords prima facie evidence that the infants in the two groups were specially selected and not chosen at random Neufeld would apparently to judge from his criticism of Naeslund's work in Sweden condemn as unsound any statistics bearing on the prophylactic effect of B C G which showed a difference in the general mortality rate in the vaccinated and unvaccinated groups Another attempt along different lines to support Calmette is made by Leon Bernard who points out that the diagnosis of tuberculosis in infants up to 2 years of age is scientifically impossible without a

post mortem examination Tuberculosis death rates for infants are therefore unreliable and one is forced to use the general mortality rate If a lowering in this rate is found among the vaccinated infants one may conclude, not that B C G has exerted a non-specific immunizing effect as Calmette asserts, but that the fall in the general mortality rate is due to a diminution in the number of tuberculosis deaths in the vaccinated group This argument holds true only if it can be shown that tuberculosis deaths constitute a relatively high proportion of the deaths from all causes if they do not, even though the difference in the real tuberculosis death rates between the vaccinated and unvaccinated groups may be considerable they will not affect the general mortality rate sufficiently to produce a significant difference According to Blumel at Halle however the deaths from all causes amongst unvaccinated infants in tuberculous families during the first year of life is so small—only 4 5 per cent as against the figure of 24 to 30 per cent given by Calmette—that very little information is likely to be gained from a comparison of the general mortality rates

Many workers are exercised in their minds over deciding what class of person should be vaccinated Everyone is agreed that vaccination should be reserved purely for tuberculin-negative subjects but there is obvious reluctance to extend it to all infants, independently of whether they are to be brought up in a tuberculous environment or not A great deal of work has recently been carried out to show that infection of infants not necessarily accompanied by clinical disease, occurs far more readily in a tuberculous family than in a normal family and there are therefore strong reasons for confining vaccination to infants of tuberculous parents Van den Berg however, states that in Amsterdam a large number of infantile cases of tuberculosis are ascribable to infection from persons who were not suspected of being tuberculous and he argues that if these cases are to be prevented B C G vaccination must be practised on a much larger scale At Oslo Scheel has collected some very suggestive figures relating to the vaccination of probationer nurses who on arrival at the hospital were found to react negatively to tuberculin In view of the apparently favourable results that he has obtained he advocates the vaccination of all tuberculin-negative nurses medical students and other adolescent persons entering on the most dangerous period of their lives, who are likely to be exposed to unusual risk of infection

Finally a word may be said on the prophylactic value of vaccination with B C G in animals Nohlens failed to protect monkeys with B C G Uhlenhuth in Germany and Watson in Canada both had unsatisfactory results with cattle their opinion is that B C G probably leads to a transitory increase in resistance similar to that produced by the injection of dead bacilli but that this slight degree of immunity soon wears off permitting any organisms that may have gained access to the tissues to proliferate in much the same way as they would do in the body of an unprotected animal

OPHTHALMOLOGY IN EGYPT

The fifth annual report of the Giza Memorial Ophthalmic Laboratory [1] in Cairo which is under the direction of Dr Rowland P Wilson, is a document of much interest There are reports of the work done in the laboratory and details of some of the more unusual cases, but by far the most important part is the account given of further investigations made into the etiology of trachoma During the year under review Dr Wilson had working with him Dr Thygeson, who brought from the Rockefeller Institute of New York attested strains of the *Bacterium granulosis* originally described by Noguchi as the probable cause of trachoma The pure cultures of the bacillus have in this laboratory, failed to produce "chronic granular conjunctivitis" in monkeys of which thirteen were inoculated Inoculations into monkeys of infected monkey tissue or secretions have never failed to give good positive results, even in monkeys refractory to pure cultures The bacillus is capable of inducing in the human eye an acute conjunctivitis of short duration The inflammation was accompanied by mild granular lesions which, however, disappeared without treatment, leaving no permanent sequelae Tissue transfers from monkey to human conjunctiva have so far failed to produce granular lesions The *Bacterium granulosis* has never been recovered from Egyptian trachoma

The intensive investigation of the beginnings of trachoma in the villagers of Bahtim has been continued Thirty-seven infants were born in four months, and each was examined frequently from birth All these infants with one exception contracted trachoma before they were 1 year old, initial symptoms were seen as early as 10 weeks In the majority of cases the first definite signs of disease were preceded by an acute mucopurulent conjunctivitis, mostly of Koch Weeks bacillary origin In the minority there was a chronic conjunctivitis and from most of these cases the same bacillus was recovered It was observed that children born in the hot summer months developed trachoma at an earlier age than those born in the winter months Note is made of a new method of treatment of trachoma introduced by Liebermann who combined a neutral preparation of chaulmoogra oil with copper sulphate the ointment is known as "tragynol" The eye is cocainized and then the ointment is rubbed into the tissue for a few seconds whereupon the conjunctiva becomes red and bleeds the excess ointment is washed out There is some discomfort for a few hours but no actual pain It was found that the ointment applied in this way produced scar formation more rapidly than most forms of treatment especially in cases of papillary hypertrophy Distortion of the lids was not caused, and complications were rare

Spring catarrh is fairly common in Egypt Differential diagnosis of this affection from trachoma can often only be made by the discovery of eosinophil cells in film preparations Many forms of treatment have been

[1] Fifth Annual Report of the Giza Memorial Ophthalmic Laboratory 1931 Cairo Schindler's Press

tried for the most part radium gave the best results Ten milligrams of radium are contained in a gold-screened plaque one centimetre square and this is applied directly to the everted eyelid taking care to see that the eye itself is screened from the action of the radio-active element contained in the plaque As a general rule 300 to 600 milligram minutes have been given spread over a period of from three to five months The use of ultra violet light has been encouraging in the treatment of resistant chronic blepharitis, in trachoma it has been found of no use

There are two appendices to the report The first is a most comprehensive review of the etiology of trachoma by Dr Wilson The second is a paper by Dr A F Fi Tobgy and Dr Wilson on the tattooing of the cornea in cases of leucoma After a survey of earlier efforts they give a detailed account of the method introduced recently by Krautbauer The eye is cocainized and the leucoma is carefully freed from its covering epithelium without injuring the fibrous layers beneath A solution of platinum chloride is dabbed on the bare area with cotton wool for two minutes, and the salt is reduced by dropping a solution of hydrazine hydrate on the eye for twenty to twenty-five seconds the eye is then anointed and bandaged for five days A preliminary iridectomy must be done if the iris is adherent to the scar The eye must be free from any signs of irritation The conjunctiva must not be held with toothed fixation forceps during the tattooing The results so far obtained suggest that this method has a great future

SYNDROMES OF CORONARY OBSTRUCTION

When Heberden addressing the Royal College of Physicians in 1768 gave the first concise clinical description of angina pectoris he spoke of a disease not extremely rare ' and referred to an experienced physician who " had known several ill of it In the following century in a Victorian New York Flint saw no case of angina pectoris in the course of five years These facts contrast sharply with the experience of present day physicians who from all quarters announce the increasing incidence of coronary syndromes even though allowance be made for the improved methods of diagnosis and the greater facilities for medical advice available to the public During the decade that has followed the general clinical recognition of cardiac infarction each year has produced an abundant crop of publications dealing with every aspect of coronary disease—radiography of the coronary arteries prognosis late sequelae of infarction diagnosis of aneurysm of the heart and the electrocardiographic localization of infarctions to mention but a few of them In view of the massive and often conflicting literature of this subject it is opportune that Dr T F Cotton (whose lecture we print at page 368) has brought to notice some important clinical bearings of coronary artery disease In relation to angina he has stressed the importance of vaso constriction not only local and involving the coronary arteries but also as a widespread phenomenon producing as has been shown by Sir Thomas Lewis elevation of blood pressure during the attack in certain patients Further, he has made clear the fact that the contributory toxic causes of secondary angina such as gall-bladder infection, goitre or other focus of sepsis may influence the course of true angina pectoris There can be few physicians who have not observed the variable role of the higher centres in the production of angina pectoris some patients have a syndrome in which an almost mathematical relationship exists between the degree of effort and the production of pain emotional factors being insignificant or absent others while suffering at times from angina of effort are predominantly influenced by anxiety anger and excitement The latter group and those patients already mentioned in whom widespread vaso constrictor influences are manifest appear to indicate unmistakably aspects of angina pectoris which have hitherto been largely neglected These are the psychological and individual characteristics A constitutional disposition to spasmodic manifestations would appear also to play a part in the production of angina in patients who have no discoverable basis of organic disease in the circulatory system Dr Cotton draws attention to this group and estimates that they constitute about 25 per cent of all anginal patients A further consideration of the influence of the higher centres in relation to attacks of angina pectoris suggests the wider inference that we must look to the increasing hurry stress and competition of modern life as fundamental factors in the increasing incidence of anginal syndromes It might be suggested that the greater expectation of life would account for the greater frequency of angina pectoris in modern clinics That this factor cannot alone be responsible is obvious when we realize that the expectation of life in the later decades is actually less to day than it was seventy years ago There seems to be no doubt however that this modern danger of growing old is largely due to hypertension and its train of cerebral and cardiac catastrophes for Fahr has estimated that in the United States during the year 1924 deaths wholly or in part due to hypertension exceeded those due to tuberculosis respiratory diseases, and cancer combined

THE PHILOSOPHY OF A BIOLOGIST

At the beginning of this century physics appeared to provide firm proof for the doctrine of determinism as far as scientific facts were concerned and biologists who wished to be thought real men of science strove desperately to drill their disorderly material into some semblance of the orderly array presented by physical facts To day the physicists have abandoned determinism but most of the followers of biological science, more royalist than the king remain faithful to their ancient creed and while the physicists are driven to advance theories of indeterminacy to account for the vagaries of the behaviour of atoms many psychologists confidently interpret human behaviour on strictly determinist lines There is a fairly steady output of works by physicists intent on explaining the new concepts of the physical world that are forming but biologists have been more reticent Dr Joseph Needham's book *The Great Amphibium* [1] is therefore all the more welcome The title is taken from Sir Thomas Browne Thus is MAN that great and true Amphibium whose nature is

[1] *The Great Amphibium* Four Lectures on the Position of Religion in a World Dominated by Science By Joseph Needham London Student Christian Movement Press (6d net)

disposed to live not only like other creatures in divers elements but in divided and distinguished worlds" The author strives to explain the relations between the worlds of science and religion as they appear from the biological outlook As he points out, "Nothing can be more profoundly characteristic of the scientific method than its stern overlooking of the individual Science is through and through statistical" But all who study living things must be interested in the individual and hence the biologist finds it difficult to be completely satisfied by the statistical methods of science, just as the practising physician who is intensely interested in the fate of individual patients, feels only a limited sympathy with statistical analyses of the action of remedies Dr Needham shows that biology like physics presents many problems that find no solution in the statistical laws of physics and chemistry The central enigma of biology is the nature of the organizing relations whose presence or absence constitutes the difference between living and dead matter Apart from such deep questions as these, other more obvious difficulties are beginning to appear The new physics was founded because the laws of classical physics could not explain the behaviour of the smallest units of matter and it is interesting to learn that the ultra-filterable viruses promise to present problems that will prove very difficult of solution by the ordinary laws of physical chemistry for they appear to be too small to allow of the operation of the ordinary statistical laws on which this science is based "The regularity of macroscopic phenomena, in which determinism is for all intents and purposes complete and trustworthy, is in reality a statistical regularity and we cannot ascribe a similar regularity to events in the ultra-microscopic field On these grounds Lillie in an extremely interesting paper, has sought to deduce psychological indeterminism from physical indeterminism Dr Needham proceeds from the relation between physics and biology to a more general consideration of the relations between science and religion The chapter heading The inadequacy of scientific deism" prepares the reader for the conclusion 'Science on the one hand Religion on the other are some will say indispensable properties of our existence but scientific deism as we see from its long history has never been and will never be more than a barren stirring together of immiscible opposites' The essential component of religion is recognized to be mystery and mystical experience and the possibility of uniting these with the scientific spirit of measurement and analysis is the theme of the last chapter of the book "Religion and the Scientific Worker'

THE EFFECT OF SMOKING ON BLOOD SUGAR

Drs E and S Thyselius Lundberg in a study of the effect of tobacco smoking on the blood sugar, have provided information of practical clinical importance on the action of nicotine in man [1] They observed the effects on healthy persons and diabetics produced by smoking two or four cigarettes both smokers and non smokers were examined In all cases smoking caused a well-marked rise of the blood sugar which rising quickly immediately the smoking commenced regained normal level after about half an hour In most cases the blood sugar rose about 15 per cent above its initial value but in one case there was a constant rise of 50 per cent No change occurred with nicotine-free cigarettes The reaction of diabetics to nicotine was greater than that of normal individuals, therefore they should smoke in moderation These experiments also show that smoking may be a source of serious error in blood sugar estimations Another point of interest is that here is a method for measuring the physiological action produced by moderate smoking in habitual smokers The authors believe that the effect observed is caused by the stimulation of the suprarenals by nicotine, with the subsequent liberation of adrenaline

[1] [illegible] would do [illegible] Supplement xxxvm Stockholm

THE LUBECK TRIAL

Various German medical journals are reviewing the evidence brought out in this trial during the past three months, and the following comments are extracted from these and from articles in the daily press of that country A complete and incontestable proof that human tubercle bacilli had become mixed with the B C G vaccine was not established although it is obvious that all precautions were not taken In view of the hesitation of the Reichsgesundheitsamt it was not wise to introduce the vaccine at Lubeck, though the Paris Commission of the League of Nations in 1925 was of opinion that the method was devoid of danger On this point some of the experts at the trial observed that there was always an element of risk in using vaccines containing living bacilli In any case, the B C G culture from Paris had been grown on an unusual medium and no animal experiments had been done, as was advisable The children should have been under medical supervision throughout There was lack of contact between members of the medical team doing the work, for one of them appeared to be unaware that the vaccine was being used not only for children exposed to constant danger in infected households but for healthy children as well During the trial Professor Hahn reported some interesting researches on the lipoid content of the various strains The vaccines used at Lubeck had been made up on different days—some were harmless and presumably contained B C G others were lethal to the children and presumably contained the Kiel human strain In support of this hypothesis Hahn reported that bovine strains contained about 16 per cent of lipoid and B C G 24 per cent A culture obtained from one of the Lubeck children who, it is supposed, had been given a vaccine properly made from harmless B C G, but had died of an intercurrent sepsis, contained 21 per cent of lipoid On the other hand, human strains contain only 10 to 12 per cent, and the three strains isolated from Lubeck children dying of alimentary tuberculosis after receiving the contaminated vaccine yielded 9 to 10 per cent of lipoid Ludwig Lange found that (particularly on Sauton medium) human strains the Kiel strain and thirty-nine cultures from the Lubeck children with alimentary tuberculosis all showed a characteristic yellow-green fluorescence while bovine strains of B C G did not Abel thought that whereas probable contamination of the vaccine with human bacilli had occurred the possibility of a chance in the bacilli could not be absolutely excluded and he felt some hesitation in accepting as final the new lines

of evidence brought forward by Hahn and Lange The judgement of the Lubeck court (briefly recorded in the *Journal* of February 13th at page 301) did not deal with the two dominant questions—Is the administration of B C G devoid of danger, and, Is it an efficient method of giving protection against tuberculosis? A survey of the latter question will be found in our leading article at page 389 this week Professor Deycke and Dr Altstaedt were not found guilty because they had introduced the method but because they did not exercise proper control over the making of the vaccine and contamination had occurred Professor Bruno Lange in an article in the German press points out that nearly a million children in the world have been treated by Calmette's method, and no alimentary tuberculosis of the Lubeck type has been recorded elsewhere He states that according to the three investigations made in the Koch Institute Reichsgesundheitsamt and Berlin University, the cultures recovered from the children resemble the Kiel strain of human tubercle bacilli (which was present in the Lubeck laboratory) in its behaviour in animals, growth (especially on Sauton medium), and in the chemical structure of the bacilli Universal sympathy is expressed with Professor Deycke and Dr Altstaedt and the punishment is felt to be very severe in view of their long services to medicine in this field Professor Deycke's advanced age, and his moving speech at the last session of the court, asking that if the court decided that punishment was deserved it should fall on him alone and the others should be held free of blame An appeal against the severity of the sentence is apparently to be made

BIRMINGHAM MEDICAL SCHOOL AND THE HOSPITALS CENTRE SCHEME

Building operations in connexion with the Birmingham hospitals centre scheme particulars of which have from time to time appeared in these columns (for example, February 28th, 1931, p 371), are not to be started until January of next year This decision of the executive board entrusted with carrying out the scheme has caused disquiet to the medical faculty of the university In his review of the last session presented to the University Court, Sir Charles Grant Robertson, Vice Chancellor and Principal discusses at some length the effect of this postponement upon the future of the medical school He states that before the centre scheme was mooted it was realized that a complete reorganization and expansion of the medical school was already overdue and that such a development could only be brought about by transference to a site affording adequate provision for existing departments and for the clinical professors and teachers for whom there is at present at Edmund Street beyond one unsatisfactory general lecture room no provision at all The medical school in fact is based upon the principles and arrangements of more than thirty years ago It has been unable to adapt its accommodation to the impressive advance of medical science and the requirements for teaching resulting from that advance From time to time patchwork readjustments have been made, but any one familiar with a really modern medical school could compile a formidable report on the disadvantages and omissions from which our medical faculty suffers to day in its cramped and inadequate quarters Further patchwork readjustments are impossible" The centre scheme promised transference to such a site as was desired, and combined it with the provision of a modern teaching hospital so planned that the school and hospital would dovetail into each other, bringing together the research worker, the teacher, and the clinician on the hospital staff In the faith that the scheme would quickly mature the faculty held its hand, but now that the commencement of the work has been postponed until January, 1933, a serious problem has been created The medical school cannot wait until some undefined date for the new hospital Postponement for twelve months is more than unfortunate, postponement for a longer period would be disastrous The Vice-Chancellor suggests two alternatives that the school should proceed at once to the assigned site and wait until the hospital comes alongside or that the school should be transferred to a site on university property at some distance the latter would mean the abandonment of the fundamental character of the scheme whereby school and hospital are combined "A stage, in fact has been reached at which the university must be prepared for a serious representation from the medical faculty asking that in the discharge of our duty to the medical school of Birmingham, and to the medical service of the city the transference and reorganization of the school as planned be regarded as urgent in the present session The Vice-Chancellor also points out that on the efficiency of the medical school depends the reputation of the university We understand that a conference of those concerned with the project of the hospitals centre scheme is to be held next week in Birmingham under the chairmanship of the Lord Mayor to be attended by representatives of the General and Queen's Hospitals as well as by members of the hospitals centre executive board when doubtless the position outlined by the Vice-Chancellor himself a member of the conference, will be duly considered

PURCHASE OF RADIUM

In view of inaccurate statements which have appeared concerning the purchase of radium the National Radium Trustees state that the total amount received by them to date from public subscriptions and moneys voted by Parliament is £250 250 Of this sum £200 000 was received in November 1929 and the balance later By March 31st 1930 radium (including containers) to the value of £94 770 had already been delivered paid for and placed at the disposal of the Radium Commission The corresponding figure on March 31st 1931 was £194 936 Since that date further substantial purchases have been completed Two annual reports of the Trust (including balance sheets and full details of purchases) have been presented to Parliament by the Treasury and published as Command Papers (Cmd 3678 and Cmd 3958) An official statement on deep radium therapy issued by the National Radium Commission this week appears at page 394

We regret to announce the death at Edgbaston of Mr William Frederic Haslam F R C S formerly professor of surgery in the University of Birmingham, and consulting surgeon to the Birmingham General Hospital

DEEP RADIUM THERAPY

STATEMENT BY THE RADIUM COMMISSION

The following official communication dated February 23rd 1932 has been received for publication from the National Radium Commission (5, Adelphi Terrace London W C 2)

The attention of the Radium Commission has been called to certain comments in the public press on the policy which is being pursued by the Commission with regard to deep radium therapy—particularly in connexion with the four gram bomb which was originally acquired at the instance of the Commission and which has until recently been on loan to the Westminster Hospital

As stated in the last annual report of the Commission dated August 31st 1931 (para x p 25) the bomb which had then been continually in use since November 1929 had not given satisfactory results Indeed it became clear in the course of the discussions with the medical representatives of the hospital that the results obtained were so discouraging that they did not wish to continue work with the bomb unless it could be divided up into smaller units

It was therefore felt and stated in its report, by the Commission that

> the continued use of the four gram bomb in its present form was not only uneconomic but unwarranted This whole subject of surface therapy by means of radium bombs is one which is only very partially explored and the Commission in conjunction with King Edward s Hospital Fund for London is at present engaged in considering what the policy for the future should be

Following upon this statement and upon consultations with King Edward s Fund (to which the radium composing the bomb actually belongs) it was decided that it was not at present advisable to continue the clinical use of the four gram bomb and that the interests both of the treatment of the sick and the advancement of knowledge of the best methods of rendering such treatment and of securing due economy in the use of radium (the primary duty of the Commission under its Charter) would be better served by dividing up the radium composing the bomb into smaller units of one gram each Such one gram bombs have already demonstrated their utility but much more work with them is required before their full possibilities can be developed

It was further decided that one of such units should be allocated to each of a selected group of London hospitals which have had long experience in radium therapy and which have undertaken to carry out a definite course of investigation over a period of not less than three years

In the view of the Commission whose first duty under its Charter is and must always be to promote the treatment of the sick and the welfare of patients suffering from malignant disease the policy above outlined is the right one to pursue under present circumstances and they intend to adhere to it This does not mean that the Commission has lost faith or interest in bomb therapy but it believes that further experience in the use of mass irradiation is highly desirable before the treatment of patients with the larger type of bomb is continued under its auspices

If as a result of the scheme now being initiated the desirability of using larger units—2 3 4 or more grams—should be established there would be no technical difficulty in reassembling the radium composing the present bomb which is contained in twenty separate tubes of 200 mg each and which can at any time be speedily rearranged in whatever grouping is desired

The observance of due economy in the use of the radium enjoined upon the Commission has been referred to above and whilst it may not appeal to those who attach overriding importance to the development of bomb therapy it must be a material consideration to a body which is specially charged to arrange for the full use of the radium with the object of promoting the treatment of the sick and securing due economy in connexion therewith The supply of large four gram bombs to national centres all over the country would in any case be financially impossible under present conditions, as six such units would absorb the entire stock of national radium and leave none for other purposes

Apart from these economic considerations it is the considered view of the Commission that the practical therapeutic value of large bombs has not yet been sufficiently established either in this country or abroad to justify any immediate change of the policy outlined above It is true that such bombs are in use in certain foreign centres but (in spite of suggestions to the contrary) statistical or other reliable evidence of the therapeutic results achieved is either extremely scanty or not available at all

The Commission has spared no pains to obtain such information realizing as stated in para xvi of its last annual report that it can base its judgement only upon ascertained facts which alone provide the foundation for any real scientific progress in the therapeutic use of radium In this connexion the Commission has received confirmation—only within the last few days—from such authorities as Professors Regaud of Paris Forssell of Stockholm and Murdoch of Brussels—of the lack of adequate statistics in this field of research and indeed it is the view of the first named that 'most of the publications made up to the present on the use and results of bomb therapy are premature' If however any further authoritative information can be supplied to the Commission it will of course be welcomed and receive the fullest consideration

Meanwhile and in view of the specific terms of its Charter the Commission believes that it is pursuing the right course in completing the organization of National Radium Centres throughout Great Britain on the lines indicated in its two annual reports This policy is one of concentration of the national radium at present at 18 hospitals all of which, with the exception of 5 regional subcentres were selected for this purpose by the medical faculties of the local universities and all of which are required to satisfy the Commission that they are adequately staffed with experts both clinical and radiological and are provided with the necessary technical equipment before they are recognized as national centres or can have any radium loaned to them

Simultaneously and bearing in mind its obligation under the Charter to promote the advancement of knowledge of the best methods of treatment the Commission has already placed at the disposal of the Medical Research Council and the National Physical Laboratory approximately 1 2 grams of radium for purely research purposes Moreover it would welcome the setting up of an inquiry conducted by the medical profession and on the lines suggested by the Presidents of the Royal Colleges of Physicians and Surgeons into the scientific aspects of radiotherapy That is a task which the Commission is neither charged with under its Charter nor equipped to undertake

In conclusion the Commission certainly does not claim either for itself or for British radiologists a higher degree of wisdom than is possessed elsewhere Nor does it take exception to the statement that it has gone out of its way to emphasize the need which exists in this country for a more highly trained body of workers and

for more efficient instruction Its published reports and the conditions which it has laid down for the recognition of national centres are sufficient evidence of that In all these matters the attitude and policy of the Commission is not one of complacency but of responsible caution of the kind indicated in the final paragraph of its last report, and from which it does not propose to depart

THE ETIOLOGY OF CANCER

DR W E GYE'S POST-GRADUATE LECTURE

In the post-graduate course at Hampstead General Hospital Haverstock Hill on February 17th Dr W E Gye delivered a lecture his subject being The etiology of cancer

Dr Gye said that an immense amount of literature had been published on this subject but many writers had not taken the trouble to consider the fundamental pathology The one feature of cancer which distinguished it from all other diseases was the autonomous character of the cancer growth When man or an animal was infected with a micro-organism such as that of tuberculosis an accumulation of cells took place around the focus the vast majority of the cells forming the tumour having migrated from other parts of the body That was the essential character of any inflammatory process But in the case of a spindle-celled sarcoma for example in which the cell divided and formed two cells the eventual tumour formed consisted entirely of cells derived from the first spindle cell which acquired malignant characters The tumour did not increase in size by the accumulation of cells from other parts of the body When experimental cancer research became systematized some thirty years ago the facts repeatedly demonstrated by Bashford and Murray and others in this country, as well as by workers in Germany France and the United States all pointed to the same conclusion at which the morbid anatomist had arrived—that cancer was essentially a growth of cells independent of a stimulus When a cancer was grafted into the skin of a mouse within twelve hours the middle of the graft died the peripheral cells surviving and multiplying so that in a short time they formed a new tumour On examination of such a carcinoma it was found that so far as could be judged every cell of the daughter tumour was derived from the cells originally implanted The mouse merely provided the nourishment for the cells to multiply The opinion was held so strongly as to have become a dogma that when a tumour was transplanted the whole of the daughter tumour which was formed came from the cells which had survived the graft The interesting thing was that in grafting on to a mouse, rat or other animal it was essential to have a living cell If the tumour tissue was killed by freezing by drying or by any other method and the killed cells were transplanted no tumour resulted The unit of the disease was therefore the living cell itself A micro-organism of any kind could not be extracted from the tumour or morbid material

Further if mouse carcinoma was inoculated into a rabbit no tumour was produced in other words the cell was specific There were certain exceptions to the rule that the cells of one species would not grow in another Nearly twenty years ago he had a sarcoma from a mouse which was grown in rats for some generations Others had observed a tumour from a hare which grew fairly well in a rabbit and from a dog which grew in a fox and a few years ago a worker in the Pasteur Institute published an account of a human tumour which he had grafted in a chimpanzee but those were all exceptions Speaking generally the tumour of the mouse would grow only in the mouse of the rat only in the rat and of man only in man The general opinion seemed to be quite definite that in cancer there could be no causative living organism and that the cancer really consisted of cells the original of which had acquired a power of independent growth presumably due to some form of nuclear distortion Cancer research had been directed very largely to the histological investigation of cells

In 1911 Peyton Rous published an account of a spindle-celled sarcoma in a fowl and a year later declared that this very remarkable tumour could be ground up with sand the mush extracted with saline, spun and filtered and the filtrate when inoculated into a fowl would cause a form of spindle celled sarcoma again All orthodox cancer workers said at once that this could not be a tumour but Rous went on and found that the tumour tissue could be dried and kept dry even for years and yet cause the tumour to start again He found the same thing with two other varieties of sarcoma the filtrate of each producing the same kind of growth When eight years ago the lecturer himself began to work on this problem he could not conceive that the bacteriologists were right in supposing that there was a virus for each one of these three kinds of sarcoma It seemed an impossible supposition that in the spindle celled sarcoma or the osteochondrosarcoma there was a tissue which was so specific that it could only produce the one particular form of tumour in one particular species of animal But since that time a whole series—forty or fifty—of species of tumours had been found of like nature One which he had himself discovered was a muscle tumour An endothelioma had also been studied with great care by Murray The extraordinary thing was that every one of these tumours could be propagated with its own filtrate and the resulting tumour was of the same character as that from which the filtrate had been made Indeed in the same animal a number of inoculations of different tumours could be made and in each case there would be a reproduction of the specific tumour It was this very difficult and fascinating problem of the specificity of the virus that he had been investigating for the last seven years

With regard to the proof that these were really tumours Peyton Rous worked on them for many years examining them by every known method and could find no fact which conflicted with the conception of the real nature of a tumour There was nothing to distinguish these tumours from other cancers except the fact that they could be transmitted by filtrates It was true that they were not always transmissible with absolute certainty Even the most easily transmissible known as Rous tumour No 1 sometimes went into a phase in which a filtrate to infect another fowl could not be made but if these were not tumours then some other criterion for a tumour must be found because they resembled in every respect the tumours of man and of animals

What was it in the filtrate of a tumour which gave rise to a new tumour? Was it a living virus? Was it something which came from the tumour cell itself some thing manufactured by a very malignant cell? Dr Gye described by lantern slides some explanatory experiments He had taken two goats obtained a normal serum from each and had then begun a course of injections of the animals with extracts of chick embryos or fowl tissue After a series of immunizing injections these goats acquired antibodies to fowl proteins After taking the immune serum and comparing it with the original normal serum for the two goats these serums were allowed to act upon a preparation of the material which caused the Rous tumour A Rous tumour filtrate was made and separated from the accompanying fowl proteins so that the anti-protein immune bodies which had developed in these goats as a result of the inoculations had no protein upon which to act The filtrate containing the protein from the Rous agent was acted upon by the normal serum and then by the immune serum The mixtures were incubated for one to two hours and four fowls were inoculated It was found that the normal serum had no effect in stopping the formation of the tumour while the serum obtained from the goats after the immunization dose did stop such formation Apparently an antiserum to fowl tissue would neutralize the agent or whatever it was which was present in the filtrate of the tumour

The lecturer next described a similar experiment in which the filtrate of Fujinami's myosarcoma was used If the immune body obtained by injecting a horse with normal fowl tissues was allowed to act upon the Fujinami

tumour when it had been grown into ducks (this was a duck tumour not a fowl tumour) there was no neutralization at all The antibodies of the fowl tissue would not neutralize the virus which was present in the duck tumour In this experiment he took a filtrate of Fujinami tumour which was grown in a duck and treated it with an immune serum which was antagonistic to chick embryo—it had no effect but with a serum which was made by immunizing a goat with the Fujinami tumour itself there was complete neutralization To put the result shortly in the case of chicken tumour neutralization was obtainable with the anti fowl serum and with the anti tumour serum (that is a serum made by inoculating the animal with filtrates made from the tumour itself) but not with an anti duck normal serum In the case of the duck tumour neutralization was possible with an anti duck serum and with an anti tumour serum but not with an anti fowl serum

Actually in the filtrate of the tumour there was something which was neither duck nor fowl and that was what the bacteriologist called the virus But linked to that there was a cell element or if one liked to put it so a fowl element in the case of the fowl and a duck element in the case of the duck The production of the tumour depended upon the action of these two together Once it was realized that the actual virus would not of itself produce a tumour then the old arguments simply broke down but the difficulty was that so many people seemed to think it a perfectly ridiculous thing to suggest that a virus which could cause a cancer would only cause it under special conditions Yet one had only to look for confirmation to other fields of medicine There were a whole group of organisms which did not of themselves produce disease except when certain local conditions were fulfilled One of the most remarkable experiments which he had ever performed was to take mice and inoculate them with tetanus spores and to inoculate other mice with saline Six months later to all these mice he gave calcium chloride and twenty-four hours after the inoculation the first set of mice were under tetanus while the second set were perfectly well showing that a mouse would carry tetanus spores at any rate for six months and when at the end of that time some calcium chloride was given would go down within twenty four hours Thus there were organisms which caused diseases but depended upon some peculiar local condition before the disease for which they were responsible was actually manifest

Finally Dr Gye said that it was very clear that since the virus was dependent upon the cell constituent the only cells of the body which could be infected if the virus broke free from the growing tumour would be connective tissue cells The reason why infection did not spread over the whole body was very simply stated The animal which had cancer rapidly developed immune bodies to the virus These were weak to begin with and increased in strength If the virus did escape from a growing tumour the existence of the immune bodies caused its neutralization Infection was confined to the tumour cell by the fact that immediately the virus escaped it was neutralized Thus the character of cancer was explicable in terms readily understood because already so much was known about immune bodies The cell itself continued to divide and the tumour to grow simply because the immune bodies could not get inside the cell But it was really only in a disease like diphtheria where there was a toxin circulating in the blood that an antitoxin could be utilized From a clinical point of view therefore one could not hope for an immune body to affect the cancer and thus the outlook for the treatment of cancer in this respect appeared to be as bleak and dismal as ever

THE LONDON CLINIC AND NURSING HOME

OPENING BY THE DUCHESS OF YORK

The London Clinic and Nursing Home which occupies a site of two and a half acres with frontages on Harley Street Devonshire Place and Marylebone Road was opened on February 18th by the Duchess of York who was accompanied by the Duke Their Royal Highnesses were received by the chairman of the home the Duke of Atholl and by the Mayor of Marylebone and cutting a ribbon fastening the folding doors the Duchess declared the building open After a number of presentations had been made brief speeches were delivered by the Duke of Atholl and by Lord Dawson President of the Royal College of Physicians and Lord Moynihan President of the Royal College of Surgeons

The Duke of Atholl said that the scheme which had been brought to completion that day realized the dream of many medical men He believed that the home was for its size unsurpassed in respect of equipment and modernity on both the medical and the surgical sides It was hoped to provide people of moderate means with what he might term a fair and square deal Many of the single rooms for patients were priced low and there were also luxury suites of rooms for those who desired more accommodation but the care and treatment of all patients would be the same He added that this was not a [illegible] men rooms would be available for patients of any registered medical practitioner who would be able to look [illegible] If [illegible] and to call in the services of any consultant desirability the same freedom as in other nursing homes should be est[illegible]he operating theatres for major operations culty in reassembl[illegible]to surgeons on the staffs of the great [illegible] bomb which is ex[illegible] the chairman of the group of medical 200 ing each and a scheme briefly thanked Her Royal [illegible]rrang[illegible]d in whatever the ceremony

Lord Dawson said that this was a private hospital on a scale which he thought had not been previously equalled certainly not in London The fabric would meet the needs of present and advancing knowledge It was not only a hospital in structure but an institution animated by hospital ideals Perhaps it was only fair, now that the project had reached fruition to recall the difficult struggles which were so courageously undertaken by its pioneers and he could speak on this point with greater freedom because he had no part in them One of the difficult questions of the time was how the medical and surgical needs of people of moderate means could be met The term moderate means was too elastic and he would suggest that the people intended were those with incomes varying from £500 to £800 a year The needs of this class could only be met at a weekly rate of eight guineas downwards not upwards He rejoiced to learn how determined those in charge of this new home were that it should play a part in seeking a solution of the problem relating to this class So far as he knew, there was no institution up to now which had entirely met the difficulty of caring for those whom he would call the 'cultured poor It would be a mistake for anyone to imagine or expect that an institution such as this could do more than make small and modest beginnings in this direction To pretend otherwise would produce a reaction of disappointment which would be to its disadvantage But he was quite sure that the home was going to contribute materially to what was no small social problem

Lord Moynihan remarked that it was a matter of common knowledge among members of the medical profession that in so far as the services which they were able to render were concerned the very poor had always received the very best The well to do and the rich had had something which was almost but not quite the best for it was essential for successful treatment that every method of investigation—clinical pathological bacteriological radiological—should be easily accessible under the same roof and that there should be immediate and complete opportunity for carrying out any indicated treatment

to its full result Such conditions had always existed in the large teaching hospitals but the London Clinic and Nursing Home in taking people of moderate means as well as the well to do was making available a service which had never yet in this country at least been offered to the class from which private patients came Everything in the home said Lord Moynihan seemed to be on the right lines The medical staff consisted of men from the great teaching hospitals of London each distinguished in his own province The nursing staff also he thought when completed would certainly be better than any nursing staff ever available before at a large institution In respect of its structure and equipment the clinic offered every facility needed and desirable for efficient work But over and above all this material equipment something more was necessary to the life of an institution —namely the exercise of discipline loyalty and devotion by everybody engaged—and these he knew, would be also forthcoming He believed that the home would do much to relieve human suffering and would advance the science and art of medicine and surgery in this country

After the formal proceedings the Royal party under the guidance of Dr McCrea, Mr H S Souttar and Sir Lenthal Cheatle inspected a number of the rooms and suites the operating theatres, the labour wards and the x ray department The King and Queen had already paid a private visit of inspection

The building which with the site has cost over £400 000 consists of 1,000 rooms arranged on ten floors with accommodation for 214 patients either in single rooms or in suites One floor (the seventh) is to be devoted to maternity cases and this floor has a roof garden Another floor is for children, another for special dietetic cases while four floors are reserved for general cases There are seven operating theatres all on the eighth floor equipped with the most modern apparatus each with its own sterilizing plant and there are two labour wards (on the maternity floor) as well as a special theatre for nose and throat cases and a dental room

Some of the special devices which have been fitted into the structure are interesting The corridors are rubber paved over an extent of one mile In order to overcome vibration the steel foundation of the building which rests on a concrete bed is padded with heavy felt To banish noise almost the whole of the patients rooms are made to overlook a courtyard the frontage to Marylebone Road where heavy traffic passes being reserved chiefly for administration The windows of the patients rooms are designed so that the two sashes can be lowered below the sill thus making the room practically a loggia with half of one side open to the air

Ireland

Presentation to Professor Thomas Sinclair

In recognition of his services to Queen's University Belfast Professor Thomas Sinclair C B M D F R C S M P was recently presented with a portrait of himself painted by Mr George Harcourt R A Viscount Bangor presided and referred eulogistically to Professor Sinclair's career in the Army the Imperial Parliament and the Senate of Northern Ireland Sir Thomas Houston spoke particularly of the debt that the Belfast School and his former pupils owed to his teaching and exposition of the art of surgery Professor Sinclair in acknowledging the gift said that it was indeed very difficult for him to express adequately the pride and gratitude he felt for the magnificent portrait He begged the donors to accept his warmest thanks for it and for the generous words with which their gift had been accompanied He owed much to Queen's University—his own education the opportunity of teaching others afforded by the chair of surgery which he had had the privilege of holding for thirty seven years It was a welcome revelation to him that those efforts had evoked the approbation and regard of so many of his pupils colleagues and friends, and he would ever bear the recollection of that day in most grateful remembrance The portrait was handed to the Vice Chancellor Sir Richard Livingstone to be kept in the University

Increase of Lunacy in the Dublin District

The inspection report to the Grangegorman Mental Hospital Committee states that the average daily number of patients in the two institutions of Grangegorman and Portrane for the year ending March 31st next is estimated at 3 750 an increase of 230 since March 1929 these figures cover Dublin Louth and Wicklow Statistics for the Irish Free State the report continues show that 1 in every 200 of the population is a patient of a public mental asylum There are, however a large number of such patients in private asylums workhouses and hospitals and hidden away in private homes and if to this be added the number of nurses attendants and other officials engaged in the work of these asylums a figure approaching 1 in every 100 of the population not only dead to the State but actually a burden to the State would be obtained A figure of 1 in every 300 would be a more normal level for the country Discussing the question of the increase in the number of patients from year to year the report states that the fundamental evil is one that should be inquired into and attacked at the source with a view not only to checking any increase but obtaining a decrease The report mentions bad housing conditions as one of the sources of mental disorder and says that the large influx of inhabitants from country districts to the city should be discouraged as there was no doubt that in time many became patients or inmates of the union The report recommends the preparation of a treatise on the causes of lunacy and its prevention and the enlistment of the support of the press the pulpit the medical profession the senior schools and the welfare societies in a campaign to direct public attention to the rampant evil and the tragedy of lunacy, and to appeal for constant work and care to reduce it

Health of County Fermanagh School Children

In a report on the medical treatment of school children submitted by Dr W A Dickson, school medical officer at a recent meeting of the Fermanagh Regional Education Committee the following facts and figures are given Out of 3 633 children examined 554 had defective teeth 707 defective vision 1 009 tonsils and adenoids (slight 719 marked 290) 719 cervical glands 417 otitis media 41 skin diseases 39 heart defects 40 lung trouble 264 anaemia, 7, deformity and 9 were mentally defective The eye clinic held thirty six sessions at which 318 children attended Glasses were supplied to 210 and of the remainder 14 suffered from headache not of ocular origin 17 were to be kept under observation for squint etc , glasses would not improve 11 and 17 did not require glasses at present 38 attended for re-examination 14 of whom did not require glasses At County Hospital 110 children attended of whom 105 were operated upon, the remainder in Dr Kidd's opinion did not require an operation The number of dental clinics in operation was 4 at which 517 children attended extractions numbered 552 fillings 215 other treatments 55 There had been 83 complete and 38 partial inspections of schools 75 sanitary inspections 71 surprise visits to schools 171 visits to parents and 28 to managers 53 lectures in schools 36 visits from parents at home 22 special inspections afflicted children etc and 18 consultations with local medical officers regarding special cases

Scotland

Jubilee of University College, Dundee

The founding of University College Dundee in 1882 was publicly celebrated on February 18th At a special graduation ceremony presided over by Sir James Irvine principal of St Andrews University Lord Sands chairman of the Carnegie Trust said it was originally intended that scientific teaching and research should be the predominating features of the College University College had later been incorporated into the University of St Andrews although it had maintained its local identity As a result Dundee had secured university status and the neighbouring University of St Andrews by association with Dundee had gained closer touch with the interests and needs of industry and commerce This incorporation had especially rendered possible the inauguration of a fully equipped medical school At the close of the meeting Professor Steggall who was a member of the original college staff introduced seven honorary graduands among those for the degree of LL D were Dr Robert Cochrane Buist formerly lecturer in clinical gynaecology at University College and Mr David M Greig F R C S Ed conservator of the Museum of the Royal College of Surgeons Edinburgh and formerly lecturer in clinical surgery and in diseases of children at University College

Glasgow Royal Infirmary

At the 137th annual meeting of the Glasgow Royal Infirmary Lord Provost Sir Thomas Kelly who presided said that in the past year there had again been an increase in the number of patients treated and the ordinary expenditure had exceeded the ordinary income by £24 200 As was usually the case this deficit was made good from the extraordinary revenue derived from legacies and large donations Dr James Macfarlane said that he had compared the figures of one of the largest hospitals in England outside London with those of the Royal Infirmary and he had found that the average cost per occupied bed for last year had been £177 14s 11d as against the Glasgow Royal Infirmary's £120 17s 6d the average cost for each patient treated had been £8 5s 7d as against the Royal Infirmary's £5 15s 1d and the cost per day 9s 9d as against the Royal Infirmary's 6s 7d Owing to the continued general trade depression the present year was likely to prove an exceptionally difficult one Sir John Snrling Maxwell referred to the decrease in ordinary subscriptions from employees and said that they must appeal for an increase in the number of subscribers which was still small in proportion to the population of Glasgow Sir Leslie Mackenzie said that anyone who had doubts regarding the future of the voluntary hospitals should study the figures in the report of the Royal Infirmary and compare them with those of an earlier date The tide of hospital demand had been rising steadily for the last thirty years and there was no reason to think that there would be fewer people to treat in future Public health would be served when it was made possible for every sick person in the community to have access through the family practitioner to the best methods of diagnosis and treatment He suggested that the report of the medical officer of health should be studied by every young practitioner on the staff with a view to seeing whether the numerous cases involving some 10 000 operations annually could not somehow be reduced by the practice of preventive medicine The report which was presented to the meeting stated that during the year 12 955 persons received attention at the Infirmary and as the numbers were increasing every year it was clear that the existing accommodation would have to be extended and modernized The general subscriptions showed a decrease of £1 171 and the subscriptions from organized bodies of employees a diminution of £3 959 Legacies during the year amounted to £47 896 which was £2 205 more than the corresponding figure for 1930 The managers considered that the time had arrived when it was essential to build up a reserve fund for prospective improvements including the provision of a new out patient department the reconstruction of the ophthalmic institution and the replacement of worn out equipment and they were applying the balance of the extraordinary income towards this purpose As regards the Canniesburn Auxiliary Hospital and Nursing Home the fund for this now stood at £61 641 and in addition the managers had intimation of legacies of considerable amount which would be available in the future so that plans for the erection of this institution were now being made

Royal Medical Society of Edinburgh

At the annual dinner of the Royal Medical Society of Edinburgh on February 18th Dr W Melville Arnott senior president of the society, in proposing the health of the principal guest referred to Sir Norman Walker's recent election as President of the General Medical Council Sir Norman Walker in reply said that medicine was now advancing with prodigious strides and the General Medical Council was entrusted by the State with the duty of seeing that the education provided in the medical schools was sufficient to ensure that those admitted to the *Medical Register* were efficient practitioners The decennial cycle of inspection was almost complete and as a result of this inspection the Council would now consider whether or not any changes should be made in the medical curriculum With regard to the question of a six year curriculum all that could be said at present was Were they making the fullest use of the existing five years? Dr F L Ker replying to the toast of The Royal Medical Society said that the society was within five years of its bicentenary and the sum of £600 which had now been collected was barely one quarter of what was necessary for celebrating this event Money was needed especially for new shelving of the library of 30 000 volumes possessed by the society

England and Wales

Epsom College Royal Medical Foundation

Although the Governors of Epsom College unanimously decided at an extraordinary general meeting in June 1931 to take the necessary steps to abolish the voting system no change can be made until the scheme has received parliamentary consent The earliest date at which Parliament can sanction the proposed legislative changes coupled with the statutory requirements and other unavoidable preliminaries of an annual election by votes of the governors makes the cancellation of this year's voting in June impracticable and therefore it will be necessary to adhere to the system of voting for the year 1932 Voting papers will be forwarded to all governors in due course

Moorfields Dinner

The annual dinner of past and present students of the Royal London Ophthalmic Hospital (Moorfields) took place at the Langham Hotel on February 11th Sir William Lister was in the chair and among those present were Lieut General Sir Harold Fawcus Vice Admiral St G S Bond Sir Peter Chalmers Mitchell, Sir Arnold Lawson Mr Theodore Luling (chairman of the hospital) Mr F T Harold Clouston H G R Vaizey T Wontner Smith Dr Gordon Holmes Mr Treacher Collins Mr J H Fisher,

and Lady Lister The toast of The Hospital and Medical School proposed by the chairman was responded to by Mr Luling and Mr Charles Goulden Dean of the school In presenting his annual report the dean said that al though there had been a slight diminution in the number of students attending the hospital they reached neverthe less 161 of whom seventy seven were new admissions Among successes at examinations it was gratifying to know that of the sixty five candidates who sat for the diploma in ophthalmic medicine and surgery of the English Conjoint Board of whom thirty eight were successful Moorfields students accounted for thirty one For the diploma of ophthalmology of the University of Oxford five of the successful candidates came from Moorfields During the year also three students had obtained the diploma of F R C S.Ed and since 1926 thirty one had obtained the Edinburgh Fellowship The proposed improvements—enlargement of the out patient department and medical school—which had been put forward two years ago were soon to be put in hand although last autumn this seemed unlikely The result of these changes will be a larger and more conveniently worked out patient department greater facilities for teaching and a much larger medical school building

Benjamin Ward Richardson

Dr J D Rolleston gave the first Chadwick Public Lecture of the year in the hall of the Medical Society of London on February 18th his subject being Sir Benjamin Ward Richardson His life and work Al though it was little more than thirty five years since Richardson s death the lecturer said that in spite of his valuable contributions to public health his work and even name were unknown to members of the present genera tion unless they were interested in the history of medicine and especially biography the alcohol problem or the provision of model abattoirs Richardson was born in 1828 and after a varied experience as assistant to country practitioners qualified at Glasgow in 1850 He sub sequently came to London and at the early age of 30 became a well known man in the medical profession His time was henceforth divided between consultant practice laboratory research (especially in connexion with anaes thetics) delivery of lectures and literary work in which he was engaged until two days before his death in 1896 Many honours were conferred upon him In 1867 he was elected a Fellow of the Royal Society in 1868 president of the Medical Society of London in 1877 hon LL D of St Andrews and in 1893 he was knighted Dr Rolleston discussed Richardson s activities as a pioneer in public health under the three headings of literary work including medical journalism his active part in societies connected with public health and lectures and addresses on the ways and means of promoting the sanitary welfare of communities and individuals Richardson was the founder and editor of the first two journals in this country devoted to public health the *Sanitary Review and Journal of Public Health* and the *Social Science Review* In addition to biographies of eminent medical men or natural philoso phers which were published separately in 1901 under the title of *Disciples of Aesculapius* and clinical and experi mental studies the twelve volumes of the *Asclepiad* entirely written by himself contained numerous articles on aspects of hygiene Richardson was one of the founders of the Epidemiological Society of London He also took an active part in the proceedings of the Sanitary Inspectors Association of which he was elected president in succession to Sir Edwin Chadwick and in 1882 founded the Model Abattoir Society of which he was president until his death In 1878 he proposed the establishment of a Ministry of Health which was not realized until twenty three years after his death Dr Rolleston attributed the undeserved neglect into which Richardson s work had fallen partly to the fact that in an age of specialism there was a tendency to value lightly a man who attempted to cover so large a field partly to his un popular views on the alcohol problem, and partly to his attitude towards certain new doctrines especially the germ theory and inoculation against certain diseases

Correspondence

STANDARDIZATION OF ERGOT

Sir —Dr Mitchell s letter in the *Journal* for February 13th takes too pessimistic a view of the stability of liquid extract of ergot A liquid extract prepared as recommended in the recent report to the Pharmacopoeia Commission of the Ergot Subcommittee is certainly unstable but not so unstable as he suggests A loss of 50 per cent of the physiological activity in the first two months was indeed found in one extract by my colleague Mr Wokes working in this laboratory but fortunately that is not the whole of the story Other evidence obtained in this laboratory indicates that weaker extracts than the one referred to above which initially contained 0 1 per cent of ergotoxine will deteriorate much more slowly The Ergot Subcommittee recommend an official strength corresponding to 0 03 per cent ergotoxine

The recent paper of M I Smith and E F Stohlman (*Journ Pharm Exper Therap* 1931 xlii 621) appears to be the best guide on this subject In this paper it is shown that eight extracts which were examined after eight months in the cold room (2° C) still retained their entire activity but that other samples of the same extracts kept at room temperature for the same length of time had lost amounts of activity varying from 0 to 95 per cent of that pre existing There was no loss of activity in the cold room even after thirteen to sixteen months storage in four of the extracts though in the other three which were examined after this interval the activity had dropped to 74 51 and 43 per cent of the original

I agree with Dr Mitchell that there is much to be said in favour of replacing the liquid extract by the use of powdered ergot the *pulvis parturiens* was the original form in which ergot was introduced into medicine I suggest that better still though more expensive would be tablets containing ergotoxine ethanesulphonate to be given by mouth The evidence however does not warrant the view that the recommended liquid extract will be relatively inert or practically useless '— I am etc

J H Burn
Pharmacological Laboratory
Bloomsbury Square W C

February 19th

Sir —Dr H A Mitchell states in your issue of February 13th that it is now fully realized that liquid extracts of ergot no matter how prepared are extremely unstable I feel that this statement is too sweeping Whilst it is undoubtedly true that many liquid extracts of ergot made by pharmacopoeial methods quickly lose part of their activity on storage I have found that stable preparations can be made As an instance the liquid extract ergodex retains its potency unchanged for a long period of time A difficulty which has possibly con tributed to the view adopted by Dr Mitchell arises from the fact that the best pharmacological method of assay available—namely that of Broom and Clark—is subject to a margin of error which may be taken as ± 25 per cent

I have recently retested a batch of ergodex ten and a half months after its preparation and found the amount

of ergotoxine to be unchanged The same batch has been tested at intervals during the year and the variation observed was within the limits of accuracy of the method I believe it to be essential to keep all extracts of ergot out of contact with air and do not find that under these conditions the stability is any greater at 0° than at room temperature It is hoped at an early date to publish in greater detail the results referred to above — I am etc

S W F Underhill M A B M B Ch

London N W 7 Feb 19th

PARENTERAL LIVER THERAPY

Sir —I have read with interest the papers in the *Journal* of February 13th on intramuscular and intravenous liver therapy and consider that the following case is of sufficient interest to be recorded

A married woman aged 53 years was admitted to the Mater Misericordiae Hospital Dublin on November 24th 1931 under the care of a surgical colleague She gave a history of rapid loss in weight and strength during the previous two months frequent vomiting for the same period and pain in the left hypochondrium which had become intense for the past six days This pain was the outstanding feature and the chief complaint Hydrochloric acid was absent from the vomited matter A tentative diagnosis of gastric carcinoma was made a barium meal was given and was reported negative As symptoms continued an exploratory laparotomy was performed on December 3rd 1931 Nothing pathological was found

I saw the patient when convalescent from the operation She appeared somewhat anaemic had a smooth red tongue and complained of paresthesia in the feet The knee jerks were absent A diagnosis of pernicious anaemia was made and confirmed by the finding of total achlorhydria in a fractional test meal and the following blood count red cells 2 080 000 per c mm haemoglobin 63 per cent colour index 1 5 leucocytes 3 380 per c mm The blood picture showed anisocytosis and poikilocytosis The patient was given 8 oz of liver daily The vomiting improved considerably but there was little change in the blood picture while signs of a rapid subacute combined degeneration of the cord became manifest Great loss of power in the legs and rapid wasting of the muscles occurred so that the patient was unable to stand within a period of three weeks Numbness and tingling were present in the calves and feet On January 9th 1932 after three weeks administration of liver the blood picture was almost unchanged Red cells were 2 450 000 per c mm haemoglobin 65 per cent colour index 1 3 leucocytes 6 100 per c mm

As the laboratory findings were stationary and the clinical condition was getting worse I decided to try the effect of hepatex P A F intravenously and on January 14th 5 c cm was given by this route The dose was repeated on January 15th 18th 20th and 22nd No reaction of any kind followed the injections The oral administration of liver 6 oz daily was continued during this period and up to date On January 19th—after the third injection—the blood count was red cells 2 880 000 per c mm haemoglobin 69 per cent colour index 1 2 The reticulocytes the maximum response of which to oral liver had been 7 per cent were now 19 6 per cent On the 22nd they had fallen to 3 6 and on the 24th to 2 2 per cent The blood count rose rapidly and on January 30th the red cells were over 4 000 000 per c mm and the haemoglobin 90 per cent The advance in the signs of subacute degeneration of the cord stopped on the administration of hepatex and with electricity and massage there has since been a steady return of power so that the patient can now stand upright holding on to a support and can attempt one or two steps After the second injection the vomiting ceased altogether and has not returned The blood count to day is red cell 4 120 000 per c mm haemoglobin 86 per cent colour index 1 05

This case presents three features of unusual interest (1) the marked visceral pain not unlike the visceral crises of tabes (this is no in my experience an uncommon sign in pernicious anaemia, but is frequently misinterpreted) (2) the lack of response to oral liver 3½ lb weekly and the rapid development of severe symptoms of subacute combined degeneration of the cord during this treatment whilst the red cells were about 2 000 000 per c mm and (3) the immediate response to hepatex P A F and the maintenance of this improvement on the oral administration of 2 lb 10 oz of liver weekly, which however is unable further to improve the blood count —I am, etc

Edward T Freeman, M D, F R C P I

Dublin Feb 14th

Sir —The three interesting papers on parenteral liver therapy in your issue of February 13th prompt me to trespass upon your space As I pointed out last year (*Lancet* 1931, ii, 791), this form of therapy for pernicious anaemia has certain distinct advantages in that it can (1) replace blood transfusion in most cases, (2) obviate the use of large doses of liver for long periods, (3) accelerate the recovery of the patient, and (4) be used where there is marked nausea vomiting or other gastro intestinal disturbance I have never yet observed any ill effects following the use of hepatex P A F in doses of as much as 20 c cm daily intravenously or intramuscularly and not even a momentary depression of the blood pressure After nine months treatment the maintenance doses in my original cases are of the order of 5 c cm intramuscularly once every one to three weeks this is nearly equivalent to the dosage that Professor Gansslen has been using so successfully with another preparation

I am glad to see Professor Davidson again emphasizing the danger of blood transfusion in these critically ill cases of pernicious anaemia, it is still insufficiently recognized and is in accord with our own observations here I cannot quite agree that all cases of pernicious anaemia respond to liver since I have seen many cases of typical pernicious anaemia that have relapsed after adequate doses and failed to respond a second time to daily doses of as much as 1 lb or more of fresh uncooked liver plus liver extract in varying quantity yet they have shown rapid improvement with 1 oz of desiccated stomach (equivalent to 4 to 5 oz of fresh tissue)

The results of the oral liver treatment reported by Dr W Brockbank and myself were not poor (as suggested by Dr West Watson) but good although they are not to be compared with the results of the stomach and parenteral liver therapy introduced later In the short comparative table of results of treatments (*British Medical Journal* 1931 i 85) representative groups of typical cases were taken all doubtful and atypical cases being omitted The liver treatment consisted of 8 oz of fresh liver daily plus in many cases additional liver extract the stomach treatment was 1 oz of the desiccated preparation (equivalent to 4 to 5 oz fresh tissue)

		Average percentage increase in forty five days (hospital treatment)	
Treatment	No of Cases	Erythrocytes	Hæmoglobin
Iron and arsenic	47	+ 46	+49
Liver (oral)	33	+ 94	+77
Hog's stomach	52	+157	+91

Surely if 4 to 5 oz fresh stomach (or its dried equivalent) can give such quicker and better responses than 8 oz or more of liver their relative potencies are not the same and much less so weight for weight! Comparison of the values of different treatments of course cannot be made with a few cases our present figures are based on 206 definite cases of pernicious anaemia of which 240 have received hog's stomach treatment eventually

I was much interested to see that according to Sir Leonard Rogers such excellent results are being obtained

in America with the liver preparation I described last year (*Lancet* 1931 ii 791) he does not however, allude to our interest in it —I am etc

Manchester Feb 17th JOHN F WILKINSON

SIR —In the article on the intravenous liver treatment of pernicious anaemia in the *Journal* of February 13th (p 273) a previous communication of mine to the *Lancet* (1931 ii 1022) is referred to

By the omission of the word 'later' from the quotation and a little later hog's stomach extract some doubt is engendered as to the adequacy of the pre injection treatment I should like to say that liver in full doses (3½ lb per week) was used and 40 grams daily of ventriculin and that oral treatment failed in this case owing to the absence of response and the utter inability of the patient to face further liver by mouth, on account of nausea as stated in my original communication

As to the permanency of the treatment this patient has recently suffered a relapse not from the point of view of his symptoms (the patient feeling quite well) but from the point of view of his blood count weekly injections of 5 c cm of hepatex P A F intramuscularly having proved insufficient to keep his blood to a good standard The red cells which were 3 000 000 per c mm with haemoglobin 55 per cent have since his grading up come down to 1 750 000 per c mm with haemoglobin 30 per cent (February 7th) He is now on another intensive course of injections —I am etc

Cardiff Feb 15th W CAMPBELL ANDERSON

SIR —May I draw your attention to a misstatement which occurs in the *Journal* of February 13th (p 269) in Professor Davidson's paper He states

> Credit for having first shown the remarkable difference between the effectiveness of the active principle when administered orally and parenterally belongs to Professor Gansslen of Tubingen

Professor Gansslen's work was published in 1930 In February 1928, two and a half years before Gänsslen's publication I demonstrated the superiority of the parenteral administration of liver over the oral method in my monograph on *Acute Aplastic Anaemia* I estimated then that the effectiveness was possibly two thousand to three thousand times greater when given intramuscularly Pages 4 and 64 and the serial blood counts and graphs in my publication support this claim —I am, etc

Bradford Feb 15th A HAYES SMITH

FOREIGN BODIES IN THE AIR PASSAGES

SIR —In his interesting post graduate lecture on foreign bodies in the oesophagus which appears in the *Journal* of February 13th Mr Holt Diggle refers to the comparative rarity of foreign bodies in the lower air passages—in his own series two cases of foreign body in the air passages as against sixty seven cases of foreign body in the oesophagus during a period of ten years As cases of foreign body in the air passages appear to be more frequent in America Mr Diggle suggests that it would be interesting to have the experience of British endoscopists as to the relative frequency of foreign bodies in the food and air passages

I have looked up my records (hospital and private) which extend over a period of twenty five years with the following result Foreign bodies in the oesophagus—dentures 12 meat and fish bones 17 coins and other objects 75 total 104 Foreign bodies in the lower air passages—larynx 7 trachea and bronchi 20 total 27 This shows a relatively much higher frequency of air passage cases than appears in Mr Holt Diggle's records The discrepancy may perhaps be due in part to the fact that some of the cases of foreign body in the oesophagus coming to hospital have been dealt with by my assistants and so are not included in my personal records Even so twenty-seven lower air passage cases in twenty five years is a small number and it remains true that few endoscopists can expect to acquire a very large experience of these cases —I am etc

Liverpool Feb 16th THOMAS GUTHRIE

RADIUM

SIR —Radium is the most potent element yet discovered for the production of discontent in the medical profession The recent letter signed by consultants, appearing in the *Times* reminds me of one addressed to the same newspaper on the subject of radium therapy by some distinguished surgeons in the spring of 1914 —I am etc

London W Feb 17th CLIFFORD MORSON

THE SPAHLINGER VACCINES

SIR —May I briefly comment on one point only in your leading article of February 13th—namely your remarks on B C G I quite agree that at first sight it may appear that Calmette's method and mine are so different that if the one can confer immunity the other cannot Mine is based on specificity and Professor Calmette's on attenuation One may wonder how two methods so widely apart could both be effective Yet closer consideration shows that it is quite possible for both to confer immunity

My vaccine contains no living micro organisms Each dose must therefore include *ready made* all the antigenic elements required to create immunity the antigens are elaborated *in vitro*, hence the need for specificity B C G on the other hand is an emulsion of living attenuated bacilli The inoculation of a vaccine containing *living* micro organisms may introduce into the body to be vaccinated a source of *antigen-production in vivo* Therefore although the antigens required to create immunity may be in insufficient quantities in the vaccine itself or even completely lacking immunity may nevertheless be produced provided the attenuated micro-organisms have retained enough of their original characteristics to allow them to elaborate *in vivo* sufficient disease specific antigens to vaccinate but insufficient to create lesions of a progressive type This degree of attenuation is considered by many as an adequate safeguard justifying the use of living attenuated cultures Personally however I decided to confine my researches in tuberculosis to the preparation of a vaccine derived from *dead micro organisms* but that is not the point at issue here The question you raised was that of the efficacy of the two methods

To go more fully into this subject would involve exploring the complex problems of immunology at more length than it would be considerate to ask of you now especially as I intend shortly to publish a series of communications in the course of which the mechanism of antibody production will be analysed in the light of my own researches —I am etc

London Feb 16th H SPAHLINGER

TYPES OF THE TUBERCLE BACILLUS

SIR —During the past eight years I have isolated and further investigated more than three hundred strains of the tubercle bacillus from various sources human and animal and have in addition studied more than a hundred strains received in primary culture by me from Dr W T Munro medical superintendent Glenlomond Sanatorium About 10 per cent of these strains have been of the bovine type During that time I have read numerous articles concerning the bacteriology of the

connexion I venture to record an accident which I witnessed about twenty five years ago in a chemical laboratory at King's College London

A Bunsen burner was alight at one end of a laboratory bench about four to five yards long At the other end of the bench and in ignorance of this fact a senior student was using a flask containing ether The flask slipped from his hand on to the bench and was broken I was working at the bench behind heard the crash looked up and saw a sheet of flame rush along the length of the bench to envelop the student Fortunately, owing to prompt measures the student escaped with relatively mild injuries

Imagine a similar state of affairs occurring during labour not necessarily owing to a dropped anaesthetic bottle but to the dense ether vapour resulting from the anaesthetic administration falling to the floor and extending to a naked source of light or heat

I believe that a fatality due to the ignition of ether vapour by a diathermy cautery was recorded comparatively recently —I am etc,

Chelsea S W Feb 10th M Cutner M R C S

RAW MILK AND DENTAL CARIES

Sir —I am sorry that Dr Harry Campbell did not postpone his comments on my thesis till the paper had been published as he would have found answers to some of his comments given in it I would say outright that so far as I can see I am in 100 per cent agreement with him that dental caries is caused by carbohydrate stasis Dr Campbell's postulates that (1) efficient development and functioning of the jaws and (2) prevention of carbohydrate stasis will prevent dental caries are of course true but these produce freedom from caries and not immunity which is a very different thing

Dr Campbell's remark that Mr Sprawson still coquettes with the notion that the dental enamel of different persons may differ in the resistance it offers to the corrosive action of acid is rather misleading because most dental surgeons who have had the observation of large numbers of children over prolonged periods can inform him from clinical experience that some individuals are far more prone to caries than others—a difficult thing to prove in private or hospital practice, but easy in institutional children where they are all on the same diet There is also other confirmatory evidence of such difference And again his argument that differences in chemical constitution etc allow of no differences in resistance to the corrosive action of acid is surely inaccurate and shows I think that it is he rather who is guilty of ignoring a fundamental chemical truth What Dr Campbell may not realize is that in the 101 children tabulated (there were 126 if one includes those under 2 years old) who commenced raw milk before 6 years old *no tooth that erupted since they started it had become carious* except in the case of three children whom I should have been justified in omitting from the tabulation for reasons already stated in these correspondence columns I may add that there is a great deal more confirmatory evidence that this thesis is correct than appears in my paper but for the sake of brevity I have only put in the more striking of the clinical facts

I cannot discuss the Hawaiian reference because I do not know (1) at what age the non pasteurized milk (was it given raw?) was commenced (2) what teeth were observed (3) how long it was kept up and (4) most important of all if raw milk had been given from before till some time after the eruption of the teeth which disintegrated but from the paragraph Dr Campbell quotes this reference does not seem to be relevant to the point at issue in my thesis One may here comment that to say that a child has been brought up on Certified or Grade A (T T) milk may be very misleading as such milk is often and in early years usually heated before being used in the home In a large general hospital where both Certified and Grade A (T T) milks are often prescribed in the children's wards the sister in charge informed me that they are always boiled for ten minutes before being given By raw milk one means milk which has *at no time* been heated to more than a few degrees above body temperature, approximating as far as one may to the state in which it is physiologically taken I would point out also that the children I tabulate are from four widely separated centres, that having formulated my hypothesis from observations at *one of them* I sought to find children who had been brought up on raw milk from before the eruption of the deciduous molars and that having found such groups (I had never before seen or heard of them) I found that they had no incidence of caries whatever, a thing hitherto unheard of—by myself anyway Moreover they are regularly given sweets after their dinner each day

When making my examination of these groups I had my first sight of two of them on the same day so that on that day I saw a total of 80 children consecutively aged up to 5 years and 3 months of whom 78 had no caries at all, the other two had two carious teeth each which were erupted and almost certainly carious before admission (6 of the 80 I should add, were so young as to have no teeth) Has anyone ever heard of such a thing in this or any other civilized country? And nearly all of these children had been sent to these centres because they were on admission subnormal in health or physique

Finally, Dr Campbell writes "It would be a sorry state of affairs if the human being were absolutely dependent for normal development upon the milk of another mammal" He will find, however, that the conventions of civilization do largely make human being so dependent With primitive races, to whom the use of cow's milk as a food was unknown such as the natives of the Belgian Congo some other African races, and the Eskimo there is plenty of first hand evidence that if a child's mother died the infant also died unless there was some friend or relative who could suckle it otherwise there was no alternative means of feeding it—until the infant foods of civilization were introduced

Freedom from caries and immunity to it can often coexist in the same mouth the latter possibly in different degrees both perhaps were seen at their best in the primitive Eskimo And immune and non immune teeth can also exist simultaneously in the same mouth dependent on the age at which raw milk is commenced or left off It is interesting to note that the primitive races which investigation (by others) has shown to have the smallest incidences of caries in the human race were those in which investigation (also by others) has shown that the children are suckled for the longest periods—that is they were fed on raw milk My investigation merely goes to show that raw cow's milk seems to be an efficient substitute in that it produces a similar result —I am etc

Evelyn Sprawson

London Hospital Dental School Feb 13th

Sir,—In the *Journal* of February 13th there appears a letter from Dr Harry Campbell called forth by your report of Mr E C Sprawson's address to the Odontological Section of the Royal Society of Medicine Dr Campbell states that if the jaws are fully developed by adequate mastication, and the dental enamel is kept free from protracted contact at retention areas with fermentable saccharide food the teeth will not decay and he further scorns the idea that immunity partial or complete may be obtained in any other way How then,

does he explain the results obtained by the addition of ostelin to children's diet, published by me in the *British Dental Journal* of March 15th, 1930 and the results obtained by Mrs Mellanby in her Birmingham experiment (The Influence of Diet on Caries in Children's Teeth Medical Research Council Report 1931)?

Surely it is now proved beyond doubt that the incidence of dental caries can be and is affected by a number of factors including vitamin D The apparently conflicting reports such as that quoted by Dr Campbell from Hawaii are to my mind simply an indication that immunity from dental caries is dependent on the observance of several conditions not merely on the intake of vitamins It is not possible for the mass of the public to observe the rules laid down by Dr Campbell in the present state of civilization so it is as well that further advice should be available for those who wish to preserve their teeth

Mr Sprawson only claims that raw milk gives partial immunity and I can bear out that contention Further in the vast majority of cases I have investigated of bad dental caries in children I have found that milk was discontinued early as a main article of diet or given other than in the raw form I completely agree with Mr Sprawson that raw milk should be part of the daily food until 14 years of age —I am etc

Bath Feb 15th ROBT H MCKENG

CERTIFICATION OF BLINDNESS

SIR —In your issue of January 30th (p 208) there is a review of the report issued by the Prevention of Blindness Committee of the Union of Counties Associations for the Blind 66 Victoria Street S W 1 In the earlier part of this review very proper recognition is given to the work of Drs Freeland Fergus and Halliday who in 1922 organized a clinic under the auspices of the Mission to the Outdoor Blind of Glasgow and the South West of Scotland The success of the Glasgow clinic led the Department of Health for Scotland, in November 1930 to recommend the establishment of regional clinics throughout Scotland based on the Glasgow model with centres in Glasgow Dundee Aberdeen and Inverness These clinics were soon set up and are all functioning

In March 1931 the Department of Health for Scotland having observed some divergence of interpretation of the standard of blindness by different certifying surgeons summoned a meeting in Edinburgh of all the surgeons attached to the clinics and asked them to try and lay down more precisely the factors to be taken into account in determining whether a person was or was not so blind as to be unable to perform any work for which eyesight is essential that being the rather vague definition employed in the Blind Persons Act of 1920 and applying both to England and Scotland At this first general meeting a subcommittee was appointed to consider the matter further and to prepare a preliminary report The subcommittee met on several occasions and the draft prepared by them was discussed at another general meeting of all the surgeons With only slight modifications their recommendations were adopted by the Department and on November 5th 1931 they were issued to the local authorities in Scotland by the Department of Health and the Scottish Education Department in a joint memorandum This has been the basis of certification in Scotland since that date

It does not appear that your reviewer was aware of the fact that the English Prevention of Blindness Committee above referred to was made cognizant of the Scottish proposals before issuing its report At least no reference is made to the fact that the recommendations are based almost verbatim upon those of their colleagues north of the Border Anyone reading the report issued from 66 Victoria Street, London might naturally suppose that the standard of blindness now recommended throughout the country originated with the English committee, but that is not the case I am sure I may say that my Scottish colleagues are gratified to see that their interpretation of a standard of blindness and their form of medical certificate have been so well received in England because it would be highly undesirable to have any divergence of practice in the two countries But it appears to me only fair and historically accurate that the names of the Scottish surgeons who did the spade work in connexion with this advance in public administration should be given not less acknowledgement than those who acted on the English committee

The standard of blindness upon which statistics have hitherto been based varies in different countries and this has made comparative statistics difficult or misleading Uniformity should be aimed at The International Society for the Prevention of Blindness founded in 1929 has not so far tackled the problem of defining blindness In this matter as well as in the system of certification and provision for the blind Great Britain may truly be said to have given a lead to the rest of the world

The following gentlemen composed the general committee in Scotland (An asterisk marks the names of those who served on the subcommittee) *Dr Marshall *Dr Walker Dr MacMillan *Dr Halliday Dr Smith (*Glasgow*), *Dr Mackay *Dr Graham *Dr J R Paterson Dr Ligertwood (*Edinburgh*) Dr Alister MacGillivray Dr Moodie Dr Scott (*Dundee*) Dr Galloway, Dr Souter (*Aberdeen*) Dr Chalmers (*Inverness*) —I am etc

GEORGE MACKAY M D F R C S Ed
Edinburgh Feb 15th Convener of the Subcommittee

ANTAGONISTIC DISEASES

SIR —It has long been known that various diseases occur in association one with another such as scarlet fever and rheumatic fever or asthma and urticaria The opposite condition dissociation or antagonism is little known or discussed Such antagonism if it could be demonstrated would be of far more practical importance as regards both prevention and cure General paralysis of the insane and malaria is a case in point also perhaps melancholia and hyperthyroidism but there must be many other examples

Everyone in general practice must have come across apparently incurable cases suddenly recovering inexplicably when all that the histories of the cases show is that some fresh disease has superimposed itself on the original chronic condition As the above will be isolated incidents in the experience of any one general practitioner they will be regarded as coincidences whereas if a sufficient number of these so-called coincidences could be compared it might be found that there were so many similar cases that they could no longer be regarded as chance and that certain diseases were definitely antagonistic to others The following is a case in point

A girl aged 16 years had suffered from epilepsy since an early age, having one or two fits every day On contracting scarlet fever and going to bed the fits suddenly and dramatically left her—no gradual cessation but like being turned off at a tap This case continued under my observation for two years during which time there was no return of the fits

This at the time I regarded as a coincidence which it might well have been but for the fact of the sudden cessation of the fits It was not due to the rest in bed as that was no new thing in her life I should think it improbable that scarlet fever in itself is antagonistic to

epilepsy the pyrexia however might have had something to do with the case

Perhaps in regard to the cancer question the statisticians are on the wrong tack instead of looking for associated conditions they should be on the look out for dissociations It might conceivably be found that the majority of cancer patients had never contracted one of the more common ailments or on the other hand one of the less common diseases might prove to be definitely antagonistic to cancer—I am etc,

Southsea Feb 11th E Granger M B

Obituary

WALTER SMITH, M D F R C P I

Past President Royal College of Physicians of Ireland

We regret to report the death which took place on February 16th at 25 Merrion Square Dublin of Dr Walter George Smith who was President of the Royal College of Physicians of Ireland in 1892–95 He was born in 1844 a son of the late Dr Aquilla Smith whose volumes on materia medica have been textbooks in all schools of medicine Dr Walter Smith had a most distinguished career in Trinity College Dublin graduating as a first senior moderator, and receiving a gold medal in experimental and natural science He graduated M B in 1867 and M D in 1870 and was admitted F R C P I in 1868 In 1887 he acted as examiner for the Irish Conjoint Board

An ex-President of the Royal College of Physicians Dr Smith was also an ex President of the Royal Academy of Medicine and although the holder of these distinctions was invariably knighted he declined the honour His principal work was as physician to Sir Patrick Dun's Hospital and he was also examiner in medicine for the R A M C and professor of materia medica in the School of Physic Trinity College Dublin His abilities were widely recognized and he was a great favourite in general society His lectures on the clinical uses of electricity were issued in volume form and he was author of *Commentary on the British Pharmacopoeia* and *Incompatibility and some of its Lessons* the last mentioned running to a second edition He found his recreation in the study of botany and chemistry and also in music

J G BLACKMAN M D

Portsmouth

One of the oldest and most respected practitioners of Portsmouth passed away on February 12th in the person of Dr J G Blackman who had practised there for half a century A few months ago he had a breakdown in health but apparently recovered He retired from practice only a fortnight before his death

Josiah George Blackman was born at Southampton in 1855 and from King Edward VI Grammar School in that town went to Charing Cross Hospital where he gained the Golding Scholarship in 1874 He took the L S A in 1876 the M R C S in the following year and the Brussels M D in 1886 In Portsmouth where he settled down soon after qualifying he held a number of posts For many years he was a Poor Law medical officer retiring only three years ago he also served as medical officer of health to Portsea Island Rural District Council and as medical examiner and referee to the local branches of several assurance societies From the beginning of the Insurance Act era he actively identified himself with insurance practice He had a large private practice and was extremely popular among his patients He was a very old member and keen supporter of the British Medical Association at one time honorary secretary of the Portsmouth Division and a familiar figure at Divisional meetings At the opening meeting of recent sessions it became the custom for the chairman to give this Nestor of Portsmouth practitioners a special greeting When the Association held its Annual Meeting at Portsmouth in 1899 Dr Blackman was chairman of the Reception Committee and did much to make the meeting the successful one that it was He was also on that occasion a vice president of the Section of Laryngology and Otology He contributed several papers to medical journals, apparently his last contribution being a paper on Trench foot published in the *British Medical Journal* during the war

Dr Blackman's favourite recreation was music to the therapeutic possibilities of which he was very much alive A little pamphlet on Music and medicine issued from his pen He was formerly honorary secretary of the Portsmouth Philharmonic Society and a member of the church choir Another interest of his later years was the Portsmouth Rotarian Club of which he had been a member since its inception He was also an honorary life member of the St John Ambulance Association He had many family ties with members of the profession in Portsmouth *His wife who died in 1901 was the sister* of a Portsmouth practitioner the late Dr James Green and one of his three sons the Rev George D'Arcy Blackman now rector of Hoigham Norwich married the daughter of Dr R A Weston also of Portsmouth At the funeral service at St Mark North End a large gathering paid tribute to a highly respected practitioner and fellow townsman The Portsmouth Division of the British Medical Association was represented by Dr D McAskie (chairman) and Dr F C B Gittings (honorary secretary) and many other medical men including representatives of the Panel and Insurance Committees were present

THOMAS WALKER SINCLAIR M D D P H

Formerly Medical Officer of Health City of Melbourne

The death of Dr Thomas Walker Sinclair on January 30th at the age of 56 will be regretted by many friends and fellow workers of the health services in Australia and in this country He was on a voyage to South America and was buried at sea

He graduated M B Ch B in 1897 from Melbourne University and was subsequently a resident of Melbourne Hospital and a demonstrator in anatomy at the Medical School After obtaining his M D in 1901 he came to this country and secured his D P H in 1903 Returning to Australia in 1905 he served under the late Dr J Ashburton Thompson in the Department of Public Health in New South Wales In 1912 he was appointed medical officer of health for the city of Melbourne and held that post till he retired for health reasons in 1926 From 1914 to 1926 he was lecturer in public health at Melbourne University In 1924 he toured the United States and reported on many aspects of civic health administration to the council As medical officer of health he carried on the fine tradition of health service in the city of Melbourne During his tenure of office advance was made in immunization of school children against diphtheria and in the institution of a complete poliomyelitis service with treatment by immune serum and after care

Sinclair had been president of the Preventive Medicine Section of the Victorian Branch of the British Medical Association and was a vice president of the Sections of Preventive Medicine and Tropical Hygiene at the Australasian Medical Congresses (British Medical Association) held at Melbourne in 1923 and at Dunedin in 1927 After his retirement he spent some time in this country and showed his interest and enthusiasm in various conferences which he attended He is survived by his widow who was with him at the time of his death

THE LATE DR PARLANE KINLOCH

Sir Arthur Newsholme sends us extracts from a letter received by him (dated January 25th 1932) in acknowledgement of a work of his from Dr Parlane Kinloch These extracts appear to define more definitely than any of Dr Kinloch's published papers the great schemes of investigation and reform to which he had put his hand For this reason it is appropriate that his statement should be published along with other obituary notices The statement (Sir Arthur says) makes one realize the terrible loss which public health has experienced in the sudden death of a forceful and striking personality

We are actively engaged at the present moment in reviewing the whole of our health services with reference to their efficiency and to the results they are providing and I think it is inevitable that we will be compelled to the conclusion that there will require to be a very definite reorientation of our work At this stage I would illustrate my point by reference to any one of our services say the school health service At the initiation of the service I think we all generally took the view that with a system of periodic examination of school children we would be able to detect divergencies from health and minor and major defects the correction of which would prevent the development of more serious disease The defects thrown up by the school health service are in order of frequency carious teeth diseased tonsils and adenoids enlarged glands rickets discharging ears etc and it is obvious that these conditions are either the late and in some cases the irreparable effects of malnutrition or the end products of earlier infectious diseases including catarrhal and respiratory infections

In other words routine inspection is revealing conditions that cannot properly be remedied as detected and it would appear that we must go much further back and secure the adequate nutrition of the expectant mother and of the infant and growing child in its earliest years we must improve the diet to increase resistance to the infections whose end products are revealed by school health inspection and we must provide a medical service that will deal with infections in their earliest stages and so by early and intensive treatment prevent complications and sequelae The school medical service as you are aware yields no evidence of the incidence of morbidity in child life Whenever a child becomes ill it disappears from the school health service and comes under the care of the family doctor It seems to me that we will have to swing the whole service into the hands of the general practitioner and concentrate on educating the general practitioner to be able to discharge the functions that this proposal requires of him

I have been able to interest the Secretary of State in this matter and have received an instruction to review the whole of our health services including the national health insurance service from this viewpoint The review statistical and otherwise will take a considerable time to complete but as the matter is so closely related to the world wide inquiry you are engaged in I thought I should tell you the lines on which we are thinking here When our review is complete I shall let you have a copy of our data

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Dr Ernest Edwin Carter who died in a sanatorium at Davos on February 5th was born at Lewisham on April 3rd 1897 His father now retired was an inventor and draughtsman at Woolwich Arsenal Dr Carter was educated at the City of London School where he gained several scholarships including the City of London Scholarship to St Thomas's Hospital in 1915 He joined the Navy the Harwich T B section in 1917 as a surgeon probationer and was mentioned in dispatches When H M S *Calvre* was sunk in a raging sea Carter went into the stokehold and rescued some men and also amputated the leg of one of the injured Partly in recognition of this and of the City of London Scholarship he was granted the freedom of the City of London which was presented to him on April 12th 1918 In the following year he passed the second M B examination with distinction in organic chemistry and physiology and qualified as M R C S L R C P in June 1920 he graduated M B B S Lond After a five months voyage as ship surgeon he started general practice at Westcliff His health broke down and after treatment he went to sea again as ship surgeon On his return he took up radiology and joined Dr T Anstey Chave at Redhill in 1924 and obtained the D M R E Camb in 1927 He was appointed assistant radiologist to the East Surrey Hospital

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The Services

ROYAL ARMY MEDICAL CORPS

The following were successful candidates for commissions in the Royal Army Medical Corps during January last D P F Mulvany C S Gross J B Macfarlane P J Richards R D MacRae R St J Lyburn J V Quinn Vacancies still exist and particulars can be obtained either by letter or personally from the Assistant Director General Army Medical Services War Office S W 1

DEATHS IN THE SERVICES

Lieut Colonel Samuel Foster Lougheed C M G R A M C (*ret*) *died at Tenterden Kent* on February 4th aged 72 He was born on January 24th 1860 the son of the late S Lougheed of Ballinakill County Sligo and took the L R C S I in 1880 and the M D of the Royal University Ireland in 1881 Entering the Army as surgeon on February 4th 1882 he became lieutenant colonel after twenty years service and retired on March 14th 1908 He served throughout the South African war of 1899–1902 when he took part in operations in the Cape Colony the Orange Free State and the Transvaal was mentioned in dispatches in the *London Gazette* of April 16th 1901 and received the Queen's medal with three clasps and the King's medal with two clasps and the C M G

Universities and Colleges

UNIVERSITY OF OXFORD

An examination for the Theodore Williams Medical Scholarship at Pembroke College will begin on May 31st The scholarship of £100 a year is tenable for four or five years Full particulars can be obtained on application to the Senior Tutor Pembroke College Oxford before May 1st

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UNIVERSITY OF LONDON

The Earl of Athlone was installed as Chancellor of the University at a ceremony held on February 18th

The title of Fellow of University College London has been conferred upon Professor Harold John Channon D Sc Johnston Professor of Biochemistry in the University of Liverpool Professor Henry Albert Harris D Sc M B Professor of Clinical Anatomy at University College and University College Hospital Medical School and Mr Herbert Tilley F R C S consulting surgeon to the ear nose and throat department of University College Hospital

The title of Honorary Fellow of University College London has been conferred upon the Right Hon Sir E Hilton Young Minister of Health

The William Julius Mickle Fellowship for 1932 has been awarded to Dr Philip Eggleton for his research on the labile compounds of phosphorus in muscle

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VICTORIA UNIVERSITY OF MANCHESTER

Dr J F Wilkinson director of the Laboratory of Clinical Investigations has been appointed lecturer in systematic medicine and Dr Allan Taylor demonstrator of anatomy The resignation of Dr J M Yoffey assistant lecturer in anatomy has been accepted on his appointment as lecturer in anatomy at University College Cardiff

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UNIVERSITY OF EDINBURGH

The Cameron Prize for 1932 for highly important and valuable additions to practical therapeutics has been awarded to Dr Edward Mellanby F R S Professor of Pharmacology in the University of Sheffield

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ROYAL COLLEGE OF SURGEONS OF ENGLAND

The spring course of museum demonstrations opens on Monday February 29th when Sir Arthur Keith will discuss specimens illustrating successful and unsuccessful bone

grafting He will demonstrate specimens illustrating the various forms of acute post natal intestinal obstruction on March 11th and on March 18th specimens illustrating fractures of the cervical spine including those from cases of hanging On March 4th Mr Eric D Moir will demonstrate the functions and pathology of the great omentum and Mr C E Shattock will demonstrate on March 7th specimens illustrating cysts and on March 14th specimens illustrating diseases of joints The demonstrations which will be given in the theatre of the College Lincoln s Inn Fields W C at 5 p m are open to advanced students and medical practitioners

Medical Notes in Parliament

[From our Parliamentary Correspondent]

The Parliamentary Medical Committee met at the House of Commons on February 18th to consider the ineffectiveness of Section 36 (2) of the Road Traffic Act 1930, so far as payments to hospitals for treating third party motor injuries are concerned Dr G C Anderson Deputy Medical Secretary of the British Medical Association, and Mr Zachary Cope surgeon to St Mary s Hospital attended the meeting The discussion was adjourned

The House of Commons this week passed the Import Duties Bill through committee and subsequent stages To the Free List of commodities to be admitted without tax which already included radium compounds and ores Mr Chamberlain on February 23rd announced the addition of platinum potassium carbonate chloride, and sulphate and other substances Sir John Gilmour introduced the Wheat Quota Bill on February 23rd

On February 23rd in the House of Lords the Destructive Imported Animals Bill was read a second time The Bill gives the Minister of Agriculture power to prohibit and control the importation of musk rats and other animals likely to become pests Persons who wish to keep such animals for scientific research may apply for a special licence

Radium

Sir E Graham Little asked the Minister of Health if he would consider the advisability of promoting the formation of a committee of inquiry to take evidence and to report as to the best methods of forwarding radium research and advising as to the most useful application of the public money subscribed for that purpose and at present in the custody of the National Radium Trust Replying on February 23rd Sir Hilton Young said that Sir E Graham Little would be aware that as had been stated in the House on several occasions the Radium Trust and the Radium Commission were not appointed by the Minister of Health but were constituted by Royal Charter It was the duty of the Radium Commission under Article 7 of the Charter to make arrangements for the proper custody equitable distribution and full use of the radium which might from time to time be the property of the Trust with the object of promoting the treatment of the sick throughout Great Britain and the advancement of knowledge of the best methods of rendering such treatment and of securing due economy in the use of radium for the purposes of such treatment to consider proposals submitted to it for the use of the radium for these purposes and to arrange the supply on loan of the radium or any preparations of it so as to enable proposals approved by it to be carried out He had therefore in the first instance referred Sir E Graham Little s suggestion to the Radium Commission for its consideration and he would inform him of its views in due course

Dangerous Drugs Bill

In the House of Lords on February 17th Lord Lucas moved on behalf of the Home Office the second reading of the Dangerous Drugs Bill He said the Bill was to make the amendments in the Dangerous Drugs Acts 1920-1925 which were necessary to enable the British Government to ratify the International Convention which had been adopted at Geneva in the summer of 1931 That was a Convention for limiting the manufacture and for regulating the distribution of certain narcotic drugs An extensive traffic in such drugs as morphine heroin and cocaine was carried on in many parts of the world and was facilitated by the fact that the drugs had been and were still produced in quantities largely in excess of the medical and scientific requirements of the world The Opium Advisory Committee of the League of Nations advocated as the most effective step towards suppressing the illicit trade the limitation of the manufacture of these drugs to the quantities required for medical and scientific purposes Such limitation could only be brought about by international agreement between the manufacturing countries with the co operation of the consuming countries There had been a conference on the subject at Geneva in 1924-25 and the question was revived again in 1929 In the summer of 1930 a conference at Geneva was attended by delegates from fifty six countries and drew up the International Convention Legislation now had to be passed to enable the Government eventually to ratify this He excused himself from going into detail on the proposals of the Bill and said he would be glad to learn how some of the drugs mentioned therein were pronounced but he offered to procure any further information which might be required

The Bill was then read a second time without further discussion and referred to a Committee of the whole House

In the House of Lords on February 23rd the Dangerous Drugs Bill passed through committee with a drafting amendment

Vaccination

On February 23rd Mr E Brown told Mr Groves that the medical officers of the Ministry of Health had not made any examination into the nature and size of the scars produced by the new method of vaccination adopted on October 1st 1929 The Minister was advised that the nature and size of the scars were such as might be expected from the method of vaccination employed and had not called for comment by his medical officers

Mr E Brown further replying to Mr Groves said that since October 1st 1929 38 cases of suspected disease of the central nervous system following vaccination including suspected cases of post vaccinal encephalitis had come to the notice of his Department Inquiries showed that in at least 5 of these cases the suspicion could not be verified In 18 cases vaccination had been followed within a short period by the occurrence of a disease of the central nervous system without there being any reason to associate this disease with the antecedent vaccination Of these 13 were fatal There remained 15 cases in which the occurrence of post vaccinal encephalitis was definitely established and of these 8 proved fatal

The relation of the incidence of small pox to the regularity or otherwise of vaccination was discussed on pages 49 and 50 of the report on certain aspects of small pox prevention which was published last year The Minister of Health had received no more recent report on the subject

Medical Referees

Replying on February 18th to Mr T Williams Sir Herbert Samuel said that it was a condition of the appointment of a medical referee under the Workmen s Compensation Act that he should hold no regular appointment either on the employers or on the workers side Medical referees were enjoined that in their private practice they should as far as possible avoid cases which might come before them in their official capacity It had not been considered necessary or practicable to impose more stringent restrictions but he would make inquiry into any individual cases if particulars were supplied

Mr Williams asked if suspicion were not created in the minds of injured workpeople when the referee or assessor received fees for other cases from an indemnity company or association Sir Herbert replied that if more stringent rules were applied it might be difficult in particular areas to obtain men of the requisite standing to act as referees and particularly in cases where specialists had to be employed

Replying to the question whether the Home Secretary had considered setting up a central board of referees who would be strictly impartial towards employers and employees Sir Herbert Samuel said he would consider the suggestion In making appointments for medical referees a reputation for impartiality had to be taken into account

Carbon Monoxide Poisoning.—Sir Herbert Samuel states that a proposal to schedule poisoning by carbon monoxide gas among diseases under the Workmen's Compensation Act was considered and rejected by the Industrial Diseases Committee of 1907 on evidence that the effects of such poisoning were invariably sudden and therefore in the nature of accidents and already covered as such by the Act. The question whether all cases were so covered had been recently referred for further examination to the Industrial Diseases Committee. Sir Herbert suggested that particulars of any cases showing the need for an extension of the schedule should be sent to the committee.

Metropolitan Refuse Dumps.—Replying to Mr McEntee on February 15th Sir Hilton Young said that the metropolitan authorities had been pressed to discontinue the insanitary tipping of refuse and active measures had been taken by some of them. The main recommendations of the Departmental Committee on London Cleansing would require legislation of which he saw no immediate prospect. The Town and Country Planning Bill now before Parliament contained proposals for empowering local authorities to control the deposit of refuse by provisions in planning schemes.

Sterilization of Mental Defectives.—Sir Hilton Young told Dr Morris Jones on February 18th that he had not yet determined the precise form of inquiry which was likely to yield the best results in investigating and reporting on the question of the sterilization of the mentally deficient.

Spahlinger Formula.—Sir Hilton Young in reply to Mr Hammersley on February 18th said he was unable at present to say when it was likely that the observations of the Medical Research Council and other research bodies on M. Spahlinger's statement concerning a formula for the treatment of tuberculosis would be published.

Medical News

Sir George Newman will deliver four lectures on 'Great English doctors and their message' illustrated by lantern slides at Gresham College, Basinghall Street, E.C.2, on March 1st, 2nd, 3rd, and 4th at 6 p.m. Admission is free.

At the meeting of the Pharmaceutical Society of Great Britain to be held at 17 Bloomsbury Square, W.C., on Tuesday, March 8th, at 8.30 p.m., an address on 'The importance of ergot in pharmacy' will be given by Mr Frank Wokes, B.Sc., a member of the staff of the society's pharmacological laboratory, and of the subcommittee on ergot of the Pharmacopœia Commission.

The seventh annual address to newly qualified medical practitioners and senior students of the London hospitals will be given by Mr P. H. Mitchiner, F.R.C.S., of St. Thomas's Hospital, on Tuesday, March 8th, at 5.30 p.m., in the Great Hall of the B.M.A. House, Tavistock Square, under the auspices of the Metropolitan Counties Branch Council. The title of the address is 'After the finals.' The president of the Branch, Dr. F. W. Goodbody, will hold a reception at 5 p.m.

Part II of the series of lectures and practical courses of instruction for the diploma in psychological medicine at the Maudsley Hospital, Denmark Hill, S.E., will be held during March, April, and May. The fee for the whole of Part II is £10 10s. Inquiries as to lectures, fees, etc., should be addressed to the Director of the Central Pathological Laboratory, Maudsley Hospital, Denmark Hill, S.E.5.

The annual meeting of the Royal Medical Benevolent Fund will be held at 11, Chandos Street, W.1, on Tuesday, March 15th, at 5 p.m., when the annual report and financial statement will be presented and the officers and committee elected for the ensuing year.

A series of post-graduate demonstrations at the Salford Royal Hospital will be held on Thursdays at 4.15 p.m., from March 3rd until May 5th, with the exception of March 24th.

The Fellowship of Medicine and Post-Graduate Medical Association announces that the next lecture in the 'Treatment' series will be given by Dr. F. D. Howitt on arthritis at 4 p.m. on March 2nd, at the Medical Society of London, 11 Chandos Street, W. This lecture is open only to members. In connexion with the M.R.C.P. evening course various demonstrations and lectures have been arranged for members on payment of the requisite fees. A three weeks' course in medicine, surgery, and gynæcology will be given at the Royal Waterloo Hospital, Waterloo Road, from February 29th to March 18th. Members should apply to the Fellowship of Medicine, 1 Wimpole Street, W.1.

The Hunterian Society's gold medal for 1932 has been awarded to Griffith Ifor Evans, M.D., F.R.C.S., Carnarvon, for his essay on 'Chronic familial syphilis,' with Miss Gwladys Victoria Smallpeice, M.D., M.R.C.P., as *proxime accessit*. The medal was presented to Dr. Evans at the annual dinner on February 11th. The next award of the Society's gold medal will be made in 1933 for essays received on or before December 31st, 1932. The competition is open to all general practitioners of Great Britain, Ireland, and the Channel Islands. Full particulars may be obtained on application to Dr. D. C. Norris, 14 City Road, E.C.1, or Mr. Andrew McAllister, 79, Wimpole Street, W.1.

At the eleventh annual dinner of the Society of Radiographers held on February 19th under the chairmanship of Mr. Cyrus L. Winch the principal guests were certain of the officers and members of the British Institute of Radiology, whose president, Dr. A. E. Barclay, proposed the toast of 'The Society.' He remarked that the society and the institute had come into existence at about the same time and it had been a great advantage to both to have worked together in such harmony. In his reply Mr. Winch referred to the excellence of the manufacture of *x*-ray apparatus and material; one manufacturer was said to have brought his tubes so near to perfection that when he had sold one to a hospital there was no likelihood that it would ever want another! In reply to the toast of 'The Guests,' proposed by Mr. C. W. Furby, Professor H. A. Harris spoke of the manner in which knowledge in radiography as in other subjects tended to come in snippets. No one could afford to ignore these small accretions from whatsoever field they came, whether from the photographer finding a new and cheap emulsion—owing entirely to British chemists—or from certain alterations in the construction of apparatus, or certain changes of outlook as regards a hospital department. It was very important to get rid of vanity and to be prepared to borrow, for after all in science all men were borrowers, and their borrowing was condemned or praised only by the use they made of the borrowed thing. If there was one valid criticism of all craftsmen and technicians to-day it was their absurd disregard of training facilities for the younger members. The facilities afforded to the younger technicians in the London area were far fewer than in the North. Professor Harris felt that one of the duties of the Society of Radiographers should be to give facilities for beginners so that they would have a better background for their work. Dr. C. G. Teall, president of the Birmingham Radiographic Society, and Mr. C. E. A. Bedwell, house governor, King's College Hospital, also responded.

Mr. Henry Kimpton announces for early publication the first volume of Mr. W. S. Duke-Elder's *Text Book of Ophthalmology*, dealing with the development, form, and function of the visual apparatus.

A symposium on the fiftieth anniversary of the discovery of the tubercle bacillus will be held at the East London Children's Hospital, Shadwell, on Friday, March 11th, at 8.45 p.m., with Sir Percival Hartley in the chair. The speakers will include Sir Henry Gauvain, Dr. Jane Walker, Dr. A. S. MacNalty, and Dr. Harley Williams.

The International Congress against Rheumatism, which was to have been held this May in Rome, has been indefinitely postponed in view of the present economic condition.

An outbreak of small-pox has recently occurred in Malmö, Sweden.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

Dry Mouth

Dr C LUTHER BATTESON (Watford) writes If the cause of dryness is sleeping with the mouth open W H M (February 20th p 361) may get relief from the use of a bridle to prevent the lower jaw falling during sleep This is made of elastic one inch wide to go over the head and under the chin with another piece stitched on so as to pass above the ears and under the occiput It should not be tight slight elastic pressure is sufficient I have found this arrangement of great value for children under similar conditions

Mr J H BADCOCK (London W) writes Supposing that W H M breathes freely through the nose he should consult his dental surgeon who would make him a light vulcanite shield known as a mouth valve to fit inside the lips and prevent mouth breathing Of the comfort it gives I speak from personal experience The absence of teeth is a difficulty but doubtless this could be overcome If the jaw tends to drop during sleep a light bandage might be needed to support it

B writes I suffer in a similar way to W H M By the side of my bed at night I keep a number of tiny pieces of lump sugar When I wake I put a piece of this between the gum and the lip of the upper side of the mouth It induces saliva and if one swallows it when asleep it is not likely to matter much I have done this for many years and always with effect

Wasp Stings

Dr E H WILKINS (assistant school medical officer Birmingham) writes The application of alkalis is generally recommended for stings probably on the ground that most stings are acid It is said however that wasp sting is alkaline Can anyone give authoritative information on this point and the best remedy for wasp sting?

Cowper's Insanity

Dr J B DAVIDSON (Morpeth) writes In reply to M D s question about the type of insanity from which Cowper the poet suffered I imagine this must have been chronic melancholia following on paranoia As a schoolboy he was shy and suspicious of his fellows He became introspective and appeared to misinterpret his sensations In later life he became the subject of both hallucinations and delusions which goaded him on to attempt suicide by hanging This failed and he next became filled with acute remorse It is interesting to note that the climax of his mental disorder took place in the early morning—a tendency common in chronic melancholics For some years Cowper had a mania of self-accusation delusions and false beliefs especially that of sin and unworthiness Finally dropsy [illegible] and he died in April 1800

Income Tax

Residence in the United Kingdom

W H P is in the Colonial Medical Service and his wife and children are normally resident here He is at present in the United Kingdom on leave but proposes to return to the colony on April 6th He inquires what will be the result as regards his income tax liability if he purchases or rents a house for his wife and children in *1932–33*

*** The general principle deduced from a series of High Court decisions is that when a person maintains a residence in the United Kingdom available for his use he is liable as a British resident for any financial year in which he is personally in this country Those decisions do not specifically contemplate a case where the residence was acquired after departure from the country but the general tendency is to look to the facts of each financial year as a whole While therefore the position is open to doubt we are inclined to think that W H P would be held to be liable to British income tax as a resident for the year 1932–33 in the circumstances stated unless he can arrange to expedite his departure by twenty four hours The basis of liability would be the total amount remitted to the United Kingdom during the year

LETTERS, NOTES, ETC

Operation at Advanced Age

Professor GREY TURNER (Newcastle upon Tyne) writes In your last issue my friend Mr Dickie of Middlesbrough writes concerning an operation for hernia on a man during his 91st year Five years ago I operated for double inguinal hernia on a hardy old Northerner of 93 years of age The ruptures were causing him a good deal of inconvenience though they had never been strangulated At his very urgent request I did a double radical cure using a local anaesthetic He tolerated the intervention perfectly well and made a good immediate recovery though alas! both hernias recurred a few months afterwards Surely it was expecting too much of tissues nearing their normal span! Two years ago I saw an old gentleman in his 91st year suffering from what was clearly a ruptured viscus Unfortunately ten hours had elapsed since the time of perforation but none the less he appeared to have a reasonable chance and an operation was carried out A perforated duodenal ulcer was found and dealt with but he died quite suddenly some few hours afterwards I have at the present time under my care a bright alert old man in his 90th year suffering from a large rodent ulcer occupying the orbit and extending into both the cheek and the nose In order to carry out treatment by radium it was necessary to give him a general anaesthetic but he withstood the ordeal perfectly well and is making a recovery free from untoward incident I remember many years ago a woman in the seventies who was highly indignant with her own medical man because he had told her that she was too old for an operation Her words of reproach to the effect that old people had as much right to be relieved as young ones have always been a guiding principle with me and I have often proved their justification

Captain of the Men of Death

Dr R CHALMERS (Darlington) writes I thank Dr Hale Smith for his correction of my misapplication of Osler's designation referred to in my letter It is nearly twenty five years since I read *Aequanimitas* and the quotation was quite familiar to me The responsibility for my application is due to my finding it so applied in a paper by Sir James Barr published in the *British Medical Journal* of April 26th 1930 (p 774) where he says How is it that since then [the armistice] not only the incidence but the mortality from diseases of the circulatory system has so increased that they have now become in Osler's language the Captain of the Men of Death?

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 42 43 44 45 46 47 and 50 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 48 and 49

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 75

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

186 Infarct of the Heart

G Bickel and J Mozer (*Rev Méd de la Suisse Romande* December 25th 1931 p 827) give a comprehensive account of the anatomy physiology pathology symptoms and treatment of coronary embolism They state that the clinical signs do not invariably correspond with the classical description since they are not exclusively dependent on the vascular thrombosis which is the immediate cause of their appearance They vary largely with the age of the subject the rapidity of the arterial obliteration the topographical situation of the injured branch the state of conservation of the neighbouring coronary anastomoses and in a large proportion of cases on the nature of the preceding condition and the functional capacity of the myocardium Since the clinical study of these cardiac abnormalities necessitates exact anatomical knowledge various methods have been perfected to demonstrate the blood supply of the myocardium Stereo radiography of a heart the vessels of which have been injected by a liquid opaque to *x* rays renders it possible to follow their finest ramifications The anastomoses specially abundant in the depth of the myocardium at the level of the septum are of an extreme tenuity they unite the right and left coronary circulations Under physiological conditions their role is minimal but it becomes considerable in pathological states The most usual seat of coronary thrombosis (arterio sclerotic) corresponds in 80 per cent of cases to the upper third of the descending branch of the left coronary artery The predisposing causes are influenza plumbism diabetes rheumatism and syphilis The dominant symptoms are the sudden agonizing pain of anginal character shock and circulatory collapse with lowering of the tension followed by a febrile state a pericardial rub and embolic accidents or rhythmic upsets The electrocardiogram affords confirmation The prognosis depends on the localization and extent of the infarct and on the state of health previous to the attack Sudden death may be caused by a syncope due to ventricular fibrillation difficulty in conductability of the bundle of His cerebral embolism acute pulmonary oedema or rupture of the heart In about half the cases the patient progresses to a slow convalescence though the prognosis is bad

187 Early Diagnosis of Pulmonary Tuberculosis

According to W Forest Dutton and N C Prince (*Med Journ and Record* December 16th 1931 p 573) the constitutional signs (such as loss of weight and lassitude) commonly regarded as indicative of early pulmonary tuberculosis are really signs of well advanced disease the early onset of the disease may be detected in 96 per cent of cases given a knowledge of the important auscultatory sounds and their concomitant radiographic manifestations The authors ascribe great importance to direct as opposed to stethoscopic auscultation and state that bronchiolar obstruction is the pathological process which produces the variations in normal auscultatory sounds which give a clue to the diagnosis Tuberculous processes whether proliferative or inflammatory tend to bring about obstruction of the bronchiolar lumen it is this obstruction which they hold responsible for the two signs which they consider the most important in diagnosis namely prolongation of the expiratory sound and the production of a sound heard only during inspiration This second sound is described as being nearly imitated by placing the lips and tongue as for articulating the letter T and then making the sound shlu while slowly drawing in breath The authors find that this sound may be either continuous or undulating and that in the case of the most common site of an initial lesion it is best heard in the second or third intercostal space anteriorly on the side affected It is transmitted from foci in the upper lobes toward the bifurcation of the bronchi At the stage where these signs are first present the voice sounds are not affected When the lesion is situated elsewhere than at the apex the sound is best heard over the actual site of the lesion it is to be distinguished from cog wheel breathing a discontinuous vesicular murmur which is often heard when apical pleurisy is present Characteristic radiological changes depend on alterations in the density of the lung parenchyma simple peribronchial infiltration has little known significance but when it extends into the apex beyond the main bronchial terminations it is usually due to tuberculosis

188 Familial Epidemic of Glomerulonephritis

A C Ernstene and G P Robb (*Journ Amer Med Assoc* November 7th 1931 p 1382) record a familial epidemic of acute diffuse glomerulonephritis not due to scarlet fever Eight of the children in the family successively developed an acute infection of the upper respiratory tract and in six the symptoms and signs of acute diffuse glomerulonephritis appeared in convalescence The interval of seven to ten days which elapsed in each case between the onset of the acute infection and the appearance of nephritis was in favour of the view that acute diffuse glomerulonephritis results from the development of a state of hypersensitiveness to the primary infection Although throat cultures yielded streptococci absolute proof as to the precise identity of the organism causing the primary infection could not be obtained

Surgery

189 Paget's Disease

B L Coley and G S Sharp (*Arch of Surg* December 1931 p 918) point out the frequent association of Paget's disease and osteogenic sarcoma in patients over the age of 50 Paget's disease which is a constitutional affection may be found in a single bone or in a number of bones the skull being the favourite site It is suggested that the cause may be a defective metabolism of calcium having as its basis a faulty function of the parathyroid glands The bone changes seen in Paget's disease are the result of a combination of bone destruction and the formation of new bone which is not normal but is rather an osteoid tissue Changes in the shape size and structure of the bone occur as the medullary cavity is invaded When the disease involves the lower extremities bowing due to the weight of the body is seen with pain as a transitory symptom When the skull is affected an increase in the size of the head is the first symptom noted Diagnosis is not difficult since the bone changes revealed by the *x* rays are characteristic Paget's disease which is progressive appears in patients who have reached middle or late life and is unresponsive to any form of treatment There appears to be a definite tendency in patients with osteitis deformans to develop neoplastic conditions out of 71 cases of osteogenic sarcoma in patients over 50 years old 28 per cent of cases were associated with Paget's disease This association occurs five times more frequently in men than in women and in most instances Paget's disease is present from ten to fifteen years before the development of the osteogenic sarcoma Prognosis when the two diseases are associated is very grave since there is a 100 per cent mortality and no case has been reported in which a patient has lived for as long as five years No method of treatment has proved successful but it is suggested that preliminary radiation by intensive exposure to the radium pack and high voltage *x* rays followed by amputation and the use of

prophylactic constitutional therapy with mixed toxins is a form of treatment which may prove less disappointing than those previously employed

190 Treatment of Cutaneous Epithelioma

L Talbot and H Morrow (*Radiology* December 1931 p 1281) give a short description of the etiology and pathology of malignant cutaneous growths which they divide into two main groups the squamous and the basal cell epithelioma (rodent ulcer) Early diagnosis is essential for their cure treatment must be adequate to destroy the lesion completely and should not be confined to one method For lesions such as those of the eyelids where the least possible destruction of uninvolved tissue is desirable the authors use radium or radon exclusively The dose varies with the extent of the lesion but is usually given with tubes screened with 0 5 mm of silver and 1 mm of rubber and ranging from 40 to 60 mc hours allowing one tube for each square centimetre to be irradiated When there is no contraindication the lesion is curetted and the base is cauterized Radical surgery with plastic repair where possible is the treatment of choice for lesions previously unsuccessfully irradiated Epithelioma of the ear is considered by the authors to be a surgical problem and radiotherapy is contraindicated Epithelioma of the hand and lip is also best removed surgically though in the latter case cure has been obtained by radium alone or combined with curetting and desiccation Radiotherapy is particularly indicated in cases of extensive superficial cheilitis The possibility of metastasis to the regional lymph nodes must be borne in mind The excision of lymph chains which are not obviously involved is not advised when infiltrated the nodes with the entire lymph chain should be removed If inoperable they are best treated by the insertion of gold seeds of radon through the skin or by surgical exposure this may be augmented by external deep x radiation

191 Cerebral Abscess following Typhoid Otitis

A Peroni (*Arch Ital di Otol Rinol e Laringol* November 1931 p 500) records a fatal case in a man aged 20 of chronic inflammation of the right middle ear it was complicated by meningitis and an abscess developed in the inferior temporal convolution with dilatation of the lateral ventricles Examination of the turbid cerebrospinal fluid showed the presence of *B typhosus* and the Widal reaction was positive in 1 in 250 The necropsy however demonstrated the absence of any lesions in the intestine and there was no previous history of typhoid fever The case therefore is regarded by Peroni as being one of primary infection of the ear with the typhoid bacillus which had acted like an ordinary pyogenic organism

192 Diagnostic Pneumothorax

W B Faulkner jun (*Amer Journ of Surg* December 1931 p 646) advocates diagnostic pneumothorax as an aid to the selection of proper treatment in cases of pleural adhesions resulting from pulmonary abscess Pneumothorax is easy to perform and does not aggravate the patient's condition The air is introduced under local anæsthesia into the pleural cavity at a point distant from the diseased area to lessen the chances of perforating the abscess and soiling the pleura The amount of air is governed by the intrapleural pressure the vital capacity and the subjective reaction to the air It is advisable that the radiograms should be taken in three different positions erect postero anterior lateral and horizontal Diagnostic pneumothorax has made it possible to classify lung abscess cases into three groups according to the treatment required as follows—conservative measures such as postural drainage bronchoscopy and pneumothorax conservative measures with supplementary minor surgical procedures such as avulsion of the phrenic nerve and major surgical procedures such as open drainage extrapleural thoracoplasty partial thoracoplasty or lobectomy When a pulmonary abscess is shown to be non [illegible] cure will be effected by the combined use of postural drainage bronchoscopy and pneumothorax treatments Diagnostic pneumothorax should not be employed if the abscess has a thin wall and should be preceded by bronchoscopic treatment and aspiration when the bronchus leading to the abscess is occluded When pneumothorax reveals the abscess situated peripherally and adherent to the chest wall surgical approach is easy and safe and open drainage gives good results It has been found that the employment of pneumothorax with bronchoscopy and iodized oil has increased the percentage of cures has shortened convalescence and has obviated operation in a number of cases

Therapeutics

193 The Effect of Digitalis on Cardiac Dyspnœa

T R Harrison J A Calhoun and F C Turley (*Arch Int Med* December 1931 p 1203) as the result of a series of investigations conclude that digitalis is usually of value in patients with regular cardiac rhythm but suffering from paroxysmal nocturnal dyspnœa or from dyspnœa on exertion due to disease of the heart Most of the 43 patients had never had congestive failure and had no œdema while under observation The drug was administered in the form of capsules or tablets of the powdered leaf the most frequent dosage being 0 6 gram daily for three days and then 0 2 gram daily for an indefinite period in some cases higher doses were given Of 19 patients with paroxysmal nocturnal dyspnœa (cardiac asthma) 16 were completely relieved by the treatment two received definite benefit and one became worse In 43 cases of dyspnœa brought on by exertion definite benefit was manifest in 15 a lesser degree of relief in 14 no improvement in 12 and deterioration in two In eight patients the vital capacity ventilation per square meter on standardized exercise and the ventilation index were studied Seven of these patients reported some degree of clinical improvement, and in all this was confirmed by *ventilation measurements* The remaining patient felt worse and the ventilation test supported his statement No light was thrown by this investigation on the way in which the drug produced improvement other than the discovery that the action was not associated with diuresis or any change in the heart rate it is possible that cardiac dilatation *per se* can produce dyspnœa and that digitalis acts by reducing this abnormality The authors add that the number of patients with rheumatic heart disease was too small to justify generalizations in regard to this condition but patients with hypertensive arteriosclerotic and syphilitic heart disease were usually benefited

194 The Suprarenal Cortex in Addison's Disease

L G Rowntree C H Greene R G Ball W W Swingle and J J Pfiffner (*Journ Amer Med Assoc* November 14th 1931 p 1446) report twenty cases treated with the preparation of suprarenal cortex made by Swingle and Pfiffner three did not respond Five patients improved in some measure while at the clinic, but have required nearly continuous treatment with the cortical hormone following their discharge a group of three did very well at the clinic but did not continue treatment at home and died Nine patients reacted well to treatment while at the clinic and have done well since discharge The clinical changes observed in those who reacted satisfactorily were (1) disappearance of the anorexia nausea and vomiting (2) relief from fatigue and increase in strength and endurance (3) disappearance of pain and improvement in sleep (4) decrease in the pigmentation (5) gain in weight (6) return of the normal gastro intestinal activity (7) mental improvement characterized by euphoria (8) moderate increase in the blood pressure if in crisis or shock but little otherwise (9) improved resistance to infection or operation and (10) partial or complete ability to return to work The observations have been handicapped by a difficulty in procuring adequate quantities of the extract A course

of treatment has usually consisted of from 40 to 60 c cm over a period of four to ten days As much as 20 c cm has been given intravenously at one time and a total of 40 c cm in one day with no untoward sequels The results are usually apparent in from 24 to 72 hours the maximal effect is generally noted five to seven days after stopping the treatment Continuous administration has been maintained 3 to 10 c cm being given daily The cortical hormone is too irritating for subcutaneous injection though some patients tolerate it well intramuscularly The intravenous route is the method of choice when the patient is in crisis or is hypersensitive It should be given slowly and be diluted with saline or dextrose solution if slight pain is felt along the course of the vein

195 Malaria Therapy in Neurosyphilis

A PAIGE *et al* (*New York State Journ of Med* December 1st 1931 p 1441) record a series of over 400 cases of neurosyphilis treated by malaria injections in 200 of these cases there was no paresis The mortality was 2 per cent in paretic cases and 1 per cent in non paretics The contraindications to the treatment are old age marked arteriosclerosis advanced hepatic myocardial or renal disease severe anæmia and diabetes late stages of aneurysm pregnancy active tuberculosis chronic alcoholism and rapidly progressive neurosyphilis As a rule eighteen to twenty rigors were induced and the patient is kept from work for about eight weeks It is advisable to give a full intensive course of arsphenamine and bismuth before the malaria treatment and two or three similar courses after the malaria injections have terminated The ideal time for malaria therapy is from the second to the sixth year of infection Whether malaria therapy will prevent the subsequent development of paresis is as yet undetermined Clinical details of a few of the cases so treated are recorded The authors are satisfied that malaria therapy is a valuable aid to treatment in suitable cases

Anaesthetics

196 Carbon Dioxide as an Adjunct to Spinal Anaesthesia

C A ROLDER (*Amer Journ of Surg* November 1931 p 454) discusses the causes and treatment of the vascular and respiratory collapse which may follow the injection of anæsthetizing substances into the subarachnoid space Respiratory failure may be due to paralysis of the motor nerves of respiration or of the vasomotor nerves of the splanchnic area with consequent fall in the blood pressure followed by myocardial and medullary ischæmia He finds that the addition of 5 to 10 per cent of carbon dioxide to pure oxygen is a valuable adjunct in spinal anæsthesia when the motor nerves of respiration are not paralysed This mixture usually maintains the blood pressure and safeguards the circulation of the blood when the heart contraction ceases from myocardial ischæmia due to a sudden drop in the blood pressure If paralysis of the motor nerves of respiration occurs artificial respiration is essential followed by vaso constrictor stimulation If paralysis of the splanchnic vasomotor nerves occurs primarily vasomotor tonics are indicated to relieve the myocardial and medullary ischæmia The anæsthetist should have therefore an apparatus for artificially inflating the lungs with oxygen and carbon dioxide and a vaso constrictor drug such as adrenaline Rolder remarks that the complications of spinal anæsthesia are too great to be placed on the shoulders of the surgeon there necessitate the attendance of an anæsthetist who is well acquainted with the causes of respiratory and vascular collapse and is equipped with the means to deal with them promptly and effectively Owing to the greater frequency of such complications in spinal than in general anæsthesia such an anæsthetist must have had special training and keep constantly in mind the fact that both respiratory and vascular collapse may be either of central or of peripheral origin In the first case the collapse may be due to functional failure of the medulla owing to ischæmia or blocking of the motor nerves of thoracic respiration

197 Sacral Block Anaesthesia in Perineal Prostatectomy

E DAVIS (*Journ Amer Med Assoc* December 12th 1931 p 1771) attacks the current impression that sacral block anæsthesia is not wholly reliable in prostatectomy and that there is a certain small but inevitable percentage of failure He attributes this mistaken idea in part to confusion between the simple caudal injection and complete sacral block and in part to inaccuracy in technique he maintains that when sacral block anæsthesia is accurately administered with the needles unquestionably in the foramina it is uniformly and invariably dependable He records a series of 229 consecutive cases in which this operation was performed without the necessity for additional anæsthesia in a single instance and without drug narcosis other than the administration of a quarter of a grain of morphine In no case was the operation interrupted by a patient's fear or mental excitability Davis remarks that this method of anæsthesia involves no hazard which is inherent in the induction itself providing that caution is observed (aspiration before injection) in avoiding puncture of the dural sac or blood vessels The average time necessary for injecting the caudal canal and the three sacral foramina on each side (seven injections in all) is 12½ minutes The mortality rate was as low as 2·38 per cent (nine deaths) in a consecutive series which included 378 cases of perineal prostatectomy The patients return to their beds in the same condition as regards their circulation and general appearance as before the operation and postoperative shock or headache is conspicuously absent

198 Eserine as an Anaesthetic Adjuvant

According to G PASCALIS (*Bruxelles Medical* January 3rd 1932 p 273) the quality of a general anæsthesia depends on the vagotonic state of the patient this can be determined beforehand by testing the oculo cardiac reflex The author divides patients into two groups the receptives and the resistants In the former who are easily anæsthetized pressure on the ocular globes causes a slowing of the pulse in the latter who take the anæsthetic badly such pressure causes no such retardation in the pulse or an acceleration ensues In resistant cases a subcutaneous injection of 1/2 mg of eserine salicylate produces an immediate abdominal calm as complete as with spinal anæsthesia with a return of any protruding intestines into that cavity Moreover the amount of anæsthetic necessary is diminished by about 40 per cent The awakening from the anæsthesia is as rapid as with nitrous oxide vomiting is absent and in two thirds of the cases no effect on the intestines was produced In rare cases one dose is insufficient and the injection should be repeated it should be given with the patient on the operating table and the surgeon ready to commence This method does not preclude the previous use of morphine or pantopon it is applicable to all ages in all forms of anæsthesia and aids in diminishing operative shock

Obstetrics and Gynaecology

199 Primary Epithelioma of the Vagina

Placing on record a study of fifty nine cases of primary vaginal epithelioma seen at the Mayo Clinic L MARI MOENCH (*Amer Journ Obstet and Gynecol* December 1931 p 837) states that two forms of early lesion occur One closely resembles a benign papilloma the other appears as a small firm nodule which later ulcerates with a characteristically firm margin suggestive of syphilis In both forms a biopsy is necessary for diagnosis The growths usually consist of a highly undifferentiated rapidly growing type of cell This fact and the rich supply of the vagina in lymph channels which leads to early metastasis are important factors in the rapid course of the disease The region of the

lymph nodes affected depends on the site of the vaginal lesion The initial symptoms of the disease are insidious in most cases a slight intermenstrual discharge usually containing blood may be the only sign Marriage fecundity and leucorrhoeal discharges are apparently predisposing factors In thirty five of thirty seven cases in which a biopsy was made the growth proved to be a squamous celled epithelioma in the other two it was an adenocarcinoma In eighteen cases reported by Broders surgical measures alone were adopted radium not then being in general use The remaining forty one were treated wholly or partly with radium or x rays Only 9 patients out of 53 with a known subsequent history have survived without evidence of recurrence during a period of from two to twelve years This low figure indicates the high degree of malignancy the rarity of early diagnosis and the failure of the present methods of treatment Short notes on twenty-four cases are appended

200 Pregnancy Pyrexia

A Fruhinsholz (*Paris Méd*, December 19th 1931 p 518) thinks there is little doubt that the 'pregnancy pyrexia described by Tarnier and Budin in 1888 is really caused for the most part by pyelonephritis or certain other well defined pathological states In certain women however he has observed a rise of temperature during the early months of pregnancy, which he considers is physiological and probably endocrine in origin Such cases must be remembered if clinical errors in diagnosis are to be avoided Examination of the temperature chart may occasionally be helpful in diagnosing a doubtful pregnancy Other observers have remarked that soon after conception the pulse is accelerated and the skin becomes hotter especially in the evening this condition generally ceases about the fourth or fifth month Fruhinsholz is convinced that there is a relatively frequent thermal variation in women who are clinically free from tuberculosis and all pre existent or concomitant gynaecological lesions Charts show that from the time of the cessation of the menses there is a slight rise amounting to several tenths of a degree Such variations are relative only each person having a definite specific range in this respect For example women who oscillate normally below 37° C find their chart showing oscillations below and above 37° Such thermometric oscillations are known to occur in the premenstrual phase Both conditions it is suggested are physiological and may be due to the activity of the corpus luteum The fact that the rises in temperature and the activity of the corpus luteum are both confined to the first half of pregnancy is cited by the author as lending support to this suggestion

201 Lugol's Solution in Hyperemesis Gravidarum

The etiology of hyperemesis gravidarum is unknown to the various factors already suggested such as reflex irritation and mental and emotional states T H Falls (*Amer Journ Obstet and Gynecol* December 1931 p 882) adds another—namely hyperthyroidism He has noted that certain cases of pregnancy with hyperemesis present evidence of hyperthyroidism and are benefited by the treatment for the latter condition Two fatal cases in which the thyroid glands were not examined and the cause of death was unknown are reported and also five cases in which recovery followed iodine therapy The routine method now adopted by Falls in such cases is as follows All food and fluid intake by the mouth is stopped for twenty four hours After a cleansing enema at 7 a m there is introduced into the rectum 1 litre of normal saline solution containing glucose alcohol sodium bromide sodium bicarbonate and Lugol's solution This total in three doses is given respectively at 9 a m 1 p m and 6 p m If alkalosis is present the bicarbonate is omitted The patient is also given hypodermically 1 600 to 2 000 c c m of a 5 per cent glucose solution with 20 to 30 mm of Lugol's solution This may be repeated the following day and if subcutaneous administration proves to be too distressing intravenous injections (containing only 10 to 15 mm of Lugol's solution) may be employed After twenty four hours the patient is allowed half an ounce of water every half hour and later milk tea and orange juice may be given To each ounce of the last named one drop of Lugol's solution is added so that about 30 drops are administered daily by the mouth As improvement becomes manifest the injections are discontinued and the diet is gradually increased Since adopting this method no deaths have occurred in Falls's cases and the performing of abortion has been unnecessary

Pathology

202 The Blood Picture after Operations

M Dahle (*Norsk Mag f Laegevid* December, 1931 p 1319) studied the effect of various operations under ether local, or spinal anaesthesia on the leucocytes in twenty one patients in every case a well marked increase in the number of leucocytes was observed The increase began during the operation reached its maximum in the course of twenty-four hours and returned to the normal again in the next four or five days The differential count showed a considerable increase of the neutrophils with a slight shift to the left There was a pronounced drop in the number of the lymphocytes and the eosinophils entirely disappeared during the first few days after the operation The sedimentation rate of the red corpuscles was moderately increased after the operation The maximum was reached in five to ten days the normal rate being restored in ten to twenty days if the post operative course was uncomplicated

203 Lipaemia in Old Age

E Puxeddu (*Lo Sperimentale* December 18th, 1931 p 415) examined the lipoid content of the blood of forty two normal and arterio sclerotic subjects, aged from 55 to 84 and five normal young persons with the following results In old age, whether it was normal or accompanied by arterio sclerotic lesions of varying kinds and severity there was an increase in the total lipaemia due to an increase of all the lipoids altogether they did not exceed the maximum limits regarded as normal The highest increase was found in the case of cholesterin although there was no relation between the amount of cholesterin and the blood pressure or between the cholesterin and the severity of the arterial lesions Puxeddu adds that it may even be said that the differences in cholesterinaemia in normal and arterio sclerotic old age were very slight He therefore attributes the increase of cholesterin to old age and regards it as the consequence of the slowing of metabolism characteristic of this period of life and of a functional insufficiency of the liver which has lost its powers of synthesis fixation, and elimination which play such an important part in lipoid metabolism

204 Fracture of Epiphyses in Growing Animals

G Sacerdote (*Chir d Org di Movimento* September 1931 p 291) has made a number of observations of the effect of injury to the epiphysis of the metatarsal bones in growing dogs After completely interrupting the circulation of the epiphysis by a circular periosteal section below the growing cartilage the circulation is completely restored in five to fifteen days In the epiphysis thus temporarily deprived of circulation there is necrosis of the bone and medulla while the articular cartilage remains intact but soon there follows a process of repair which leads to complete restoration of the epiphyseal structure After separating and then at once replacing *in situ* fragments of osteo cartilage removed from the epiphysis with intact circulation there is an initial necrosis of the fragment followed by perfect repair through the agency of the remaining epiphyseal tissue Intra articular fractures in epiphyses temporarily deprived of blood supply do not heal they lead generally to severe destructive effects on the epiphysis with or without elimination of the fragments Interruption of the circulation and inter articular fractures lead to severe deformities of the head of the bone sometimes accompanied by subluxation and reproducing a feature of chronic arthritis deformans

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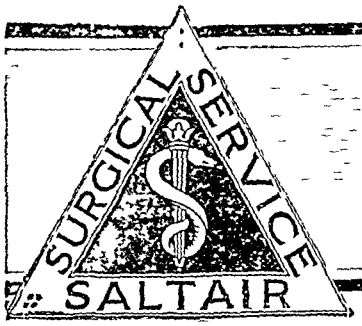
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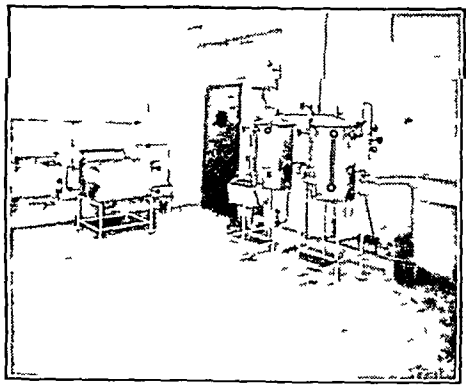
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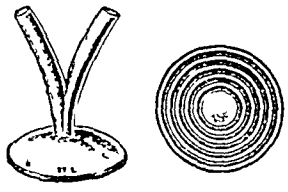
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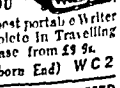
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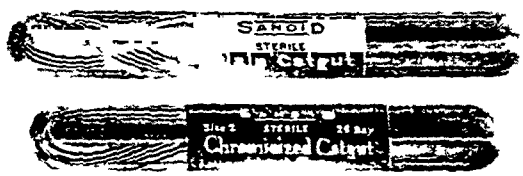
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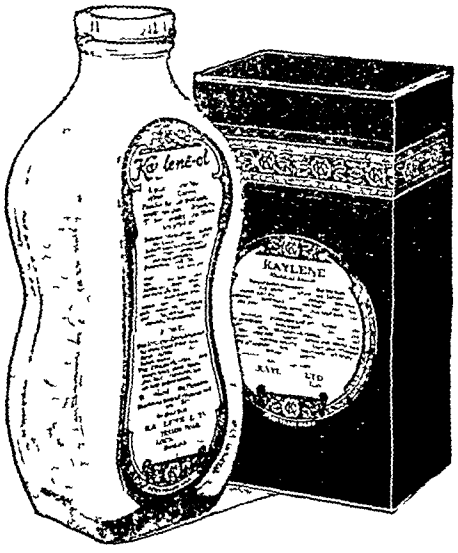
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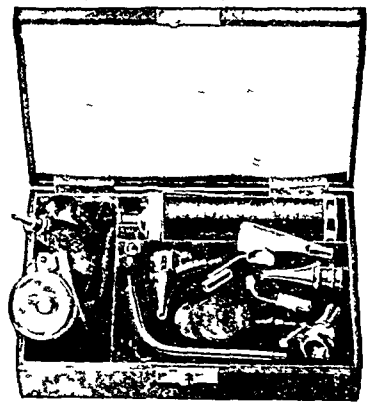
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ST. ANDREW'S HOSPITAL

FOR MENTAL DISORDERS,

NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON THE MARQUESS OF EXETER CMG ADC

Medical Superintendent DANIEL F RAMBAUT MA MD

This registered Hospital is situated in 120 acres of park and pleasure grounds Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble temporary patients and certified patients of both sexes are received for treatment Careful clinical biochemical bacteriological and pathological examinations Private rooms with special nurses male or female in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided

WANTAGE HOUSE

This is a Reception Hospital in detached grounds with a separate entrance to which patients can be admitted It is equipped with all the appliances for the most modern treatment of Mental and Nervous Disorders It contains special departments for hydrotherapy by various methods including Turkish and Russian baths the prolonged immersion bath Vichy Douche Scotch Douche Electrical bath Dombieres treatment etc There is an Operating Theatre a Dental Surgery an X ray Room an Ultra violet Apparatus and a Department for Diathermy and High Frequency treatment It also contains Laboratories for biochemical bacteriological and pathological research

MOULTON PARK

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres Milk meat fruit and vegetables are supplied to the Hospital from the farm gardens and orchards of Moulton Park Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming gardening and fruit growing

BRYN-Y-NEUADD HALL

The seaside house of St Andrew's Hospital is beautifully situated in a Park of 330 acres at Llanfairfechan amidst the finest scenery in North Wales On the North West side of the Estate a mile of sea coast forms the boundary Patients may visit this branch for a short seaside change or for longer periods The Hospital has its own private bathing house on the sea shore There is trout fishing in the park

At all the branches of the Hospital there are cricket grounds football and hockey grounds lawn tennis courts (grass and hard courts) croquet grounds golf courses and bowling greens Ladies and gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry etc

For terms and further particulars apply to the Medical Superintendent (Telephone No 2356 and 2357 Northampton) who can be seen in London by appointment

TYKEFORD ABBEY, NEWPORT PAGNELL,

BUCKS

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical interest standing in 9 acres of garden and grounds and is situated 14 miles from Northampton and 12 miles from Bedford on the main London Northampton Road fifty miles from London Both sexes are accommodated Electro Therapeutics Treatment is used extensively in suitable cases Radiant Heat X Ray and Ultra violet Light Diathermy and Loam Baths Billiards tennis etc Fees from five guineas per week

Apply Dr D F M DOUGLAS MORRIS Telephone Newport Pagnell 121

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment It is beautifully situated in its own grounds on an eminence a short distance [illegible] and from its singularly healthy position and comfortable every facility for the relief and cure of those mentally and Temporary Patients received

Tel 64117 *For terms etc apply to the Medical Superintendent*

COURT HALL, KENTON, EXETER,

SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Diseases Limited to eight patients Telephone Starcross 19

CLIFFDEN TEIGNMOUTH in connection with Court Hall for early and convalescent cases Cliffden is a fine well appointed house with lovely views of the South Devon Coast It is beautifully situated in ground of 19 acres The gardens are very attractive and there is a private path to the beach

Resident Physicians BERTHA M MULFS MD BS ANNIE S MULFS MRCS LRCP

Telephone Teignmouth 289

HAYDOCK LODGE,

NEWTON-LE-WILLOWS, LANCASHIRE.

Phone 11 Ashton in Makerfield

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES either under order or under Certificate Patients are classified in separate [illegible] to their mental condition

[illegible] and grounds of 400 acres Self supported by its own farm and gardens [illegible] Every facility for indoor and outdoor recreation [illegible] apply MEDICAL SUPERINTENDENT

CHISWICK HOUSE,

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both sexes

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone PINNER 234

A modern country house, 12 miles from Marble Arch, in beautiful and secluded grounds

Fees from 10 guineas per week

Voluntary Patients received for treatment

Special provision for Temporary patients under the new Mental Treatment Act

DOUGLAS MACAULAY MD DPM

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EXETER, DEVON

Registered Hospital for Nervous and Mental Diseases for the Upper and Middle Classes

Telephone Exeter 2642

A hospital which provides modern investigation and treatment for Voluntary Temporary and Certified Patients of both sexes Special attention is paid to occupation

Accommodation provides for the separate treatment of early recoverable and of convalescent patients

Fees from 4 guineas

There is a seaside branch at Dawlish

A prospectus and full particulars may be obtained from the Medical Superintendent

BARNWOOD HOUSE,

GLOUCESTER

A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS Within two miles of the G W Railway and L M & S Railway Stations at Gloucester the Hospital is easily accessible by rail from London and all parts of the United kingdom It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 280 acres Voluntary Boarders of both sexes are also received for treatment

Special accommodation for Ladies Voluntary Boarders is also provided at the MANOR HOUSE which has its own private grounds and is entirely separate from the main Hospital

For particulars as to terms etc apply to— ARTHUR TOWNSEND MD Medical Supt Telephone No 7 Barnwood

ST ALBANS, HERTS

(20 miles from London)

Ladies suffering from all forms of MENTAL ILLNESS received for treatment at the Herts County Mental Hospital Hill End Convalescent and mild cases can be treated in a detached country mansion with extensive grounds known as "HIGHFIELD HALL," situate about a mile away from the Hospital

Fees 3 guineas weekly

Particulars from the MEDICAL SUPT

BOREATTON PARK,

BASCHURCH SALOP

A first class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted

Large gardens deer park private golf links fishing Grounds extend to over 200 acres

Voluntary Boarders accepted

Apply for particulars to Dr SYKES

THE GROVE HOUSE,

CHURCH STRETTON SHROPSHIRE.

A Private Home for the care of and treatment of a limited number of ladies mentally afflicted Climate healthy and bracing

Medical Superintendent Dr McLINTOCK

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Telephone Springpark 1180—1181

Post Tel Address Bethlem Beckenham *Station* Eden Park (Southern Railway)

President LORD WAKEFIELD OF HYTHE C B E LL D
Treasurer SIR LIONEL FALDEL PHILLIPS Bart
Physician Supt J G PORTER PHILLIPS M D F R C P

This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm grounds
Application can be considered on behalf of patients of the educated classes in a presumably curable condition
With a view to early treatment voluntary or uncertified patients are admitted
Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise
The Committee will also consider applications for admission at lower rates and in certain cases will be prepared to admit patients free of charge
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this Unit is found the X ray and Dental Departments and the Bio-Chemical Pathological and Psychological Laboratories
Furthermore provision is made for Electro-Therapy and Hydro Therapy to be carried out in all their forms
In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms
For forms and further particulars apply to the Physician Superintendent at the Hospital

RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological culture the ordinary x ray examinations and electrocardiograph readings all treatment that may be prescribed such as special diet artificial sunlight electrical treatment bath massage nursing medicines or vaccine board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales Telegrams CASTLE, RUTHIN Telephone RUTHIN 66

OXHEY GROVE, HATCH END, MIDDLESEX

A *NURSING HOME* for the treatment of EARLY MENTAL CONDITIONS in BOTH SEXES, twelve miles from Marble Arch Resident Medical Officer, visiting Pathologist, Occupational and Psychotherapeutic treatment Fees 5 to 12 guineas

Full particulars from the MEDICAL SUPERINTENDENT Telephone HATCH END 368

PECKHAM HOUSE, 112, Peckham Road, London, S.E 15.

Telegrams 'Alleviated London' Telephone Rodney 4741-4742

The above House which was established in 1826 as an *Institution* for the care and treatment of persons suffering from mental diseases and nervous disorders Both *certified patients and voluntary* boarders are received Separate houses *for treatment and* accommodation of special cases *adjoin the* Institution There is a seaside branch Kearsney Court near *Dover* to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year
Illustrated prospectus and further particulars can be obtained *from the Medical* Superintendent

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

[illegible] SUBSIDIARY LONDON

Telephone NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

Consultant Hon Kearsney Court Dover For further particulars apply to the Medical Superintendent

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FOR THE TREATMENT OF MENTAL DISORDERS

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Most delightfully situated Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Putting Croquet Squash Racquets and all indoor games Billiards Wireless and other Concerts Occupational Therapy Physical Drill and Dancing Classes Near Lake Private Chapel Operating Theatre Pathological Laboratory Dental Surgery Physician Dr Hubert James Norman Visited by three Medical Officers Consultants In-patients Prospectus may be obtained upon application to the Secretary

HOVE VILLA, BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

ST. ANDREW'S HOSPITAL
FOR MENTAL DISORDERS,
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

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Medical Superintendent DANIEL F RAMBAUT M A M D

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Apply Dr D E M DOUGLAS MORRIS Telephone Newport Bucks 121

THE COPPICE, NOTTINGHAM.
HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted Voluntary and Temporary Patients received

Tel 6411 *For terms etc apply to the Medical Superintendent*

COURT HALL, KENTON, EXETER,
SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Diseases Limited to eight patients Telephone Starcross 19

CLIFFDEN TEIGNMOUTH in connection with Court Hall for early and convalescent cases Quietly but well appointed house with lovely views of the South Devon Coast Well appointed villas situated in grounds of 19 acres The gardens are very attractive and there is a private road to the beach

Proprietors BERTHA M MULES M D B S ANNIE S MULES M R C S L R C P
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Near 21 Ashton in Makerfield

For the treatment and training of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES Certified and Certificate Patients are classified in separate [illegible] Standing in 40 acres of park and farm supported by its own farm and garden Every facility for indoor and outdoor occupation

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Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

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situate about a mile away from the Hospital Fees 3 guineas weekly

Particulars from the MEDICAL SUPT

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RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

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OXHEY GROVE, HATCH END, MIDDLESEX

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GREEN LANES, FINSBURY PARK, N 4.

Telegrams SUBSIDIARY LONDON Telephone NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

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Telegrams PSYCHOLIA LONDON

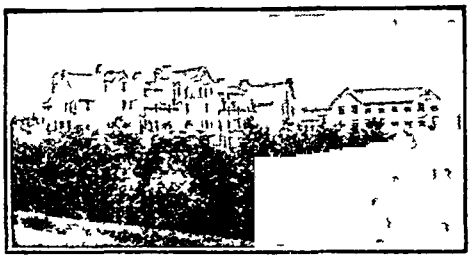
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Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Bowls Croquet Squash Racquets and all indoor amusements including Wireless and other Concerts Occupational Therapy Physical Drill and Dancing Classes X ray and Actino-therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers also resident and visiting Consultants An illustrated Prospectus may be obtained upon application to the Secretary

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TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson, M D, F R S E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J M JOHNSTON M B D P H etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK



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Situated in the upper Speyside district of Inverness shire One of the highest inhabited districts in Britain— The Switzerland of the British Isles Bracing and dry mountain climat Well sheltered Sanatorium specially built for the Open air Treatment of Tub rculo is Opened in 1901 Elevation 860 ft above sea level Electric light throughout buildings and in rest shelters Central heating Fully equipped X ray Plant All forms of treatment availabl including Artificial Pneumothorax and Ultra Violet Rays for surgical cases of Tuberculosis. Terms £4 7s 6d to £6 6s per week inclusive No extras

MEDICAL SUPT ELIX SAVY M D For particulars apply to the Secretary

VALE OF CLWYD SANATORIUM

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THE COTSWOLD SANATORIUM

First opened in 1893 and rebuilt in 1925 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect S S W sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by artificial Pneumothorax (X ray controlled) Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra Violet Rays is available when necessary without extra charge X ray plant Electric light Radiators hot and cold basins and Wireless in all rooms

Full day and night Nursing Staff

Resident Physicians GEOFFREY A HOFFMAN B A M B I C Dub and MARGARET A HARRISON M B B S Lond

Apply The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 41 WITCOMBE *Telegrams* HOFFMAN BIRDLIP

PENDYFFRYN HALL SANATORIUM
PENMAENMAWR

Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine clad hills with sea and mountain views Modern treatment including SANOCRYSIN ARTIFICIAL PNEUMOTHORAX etc X ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L M S Main Line to Holyhead 4½ hours from London Resident Physicians Dennison Pickering, M D (Cantab) J A Hennesey, M B Ch B Matron Miss S A Eddy, S R N, Late Sister in Charge Royal Hospital Annexe Sheffield

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DARTMOOR CONVALESCENT HOME.

750 FEET ABOVE SEA LEVEL

Established 1903 for Treatment of Pulmonary and other forms of Tuberculosis Sheltered Situation on the slopes of the bracing moorland Radiographic Installation Electric Light Central Heating Separate Bedrooms Efficient Treatment combined with individual comfort and minimum restrictions Illustrated Prospectus on request to the Resident Physician C H BERRY M R C S L R C P Torr House Chagford Devonshire Telephone 11 CHAGFORD Telegrams TORR CHAGFORD

HOSPITAL FOR CONSUMPTION
AND DISEASES OF THE CHEST, BROMPTON, and FRIMLEY SANATORIUM

PAYING PATIENTS RECEIVED

BOTH MEDICAL and SURGICAL CASES

3 to 8 guineas per week at the Hospital 3 to 4 guineas per week at the Sanatorium.

APPLY TO THE SECRETARY—BROMPTON HOSPITAL, S.W 3

A Medical Hydro in the country

(Half an hour from London)

The Stanboroughs, WATFORD HERTS

Completely equipped pleasantly situated highly recommended inspection invited

Send for Brochure No 12

Telephone WATFORD 5—?

Your patients will recover at-

In addition to the favourable climatic conditions of Margate there is an abundance of calcium in the chalk cliffs and iodine in the seaweed which will ensure a speedy recovery in cases of anaemia and neurasthenia During convalescence and for permanent residence there is no place like Margate

Booklet free from The Secretary Dept B M J 14 The Parade MARGATE.

MARGATE

CLIFTONVILLE or WESTBROOK

C.F.H.33

MONTANA HALL, Montana, Switzerland. Built 1929-1930 Opened October 1930

For the Treatment of Tuberculosis (all forms) Diseases of the Chest Asthma For patients requiring rest in the Alps under strict medical supervision and for medical conditions in which sun and air bathing are indicated

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

SPECIALLY REDUCED INCLUSIVE TERMS

For further particulars kindly apply to the Resident Medical Superintendent HILARY POCHE M D (Melb) M R C P (London) Tuberculous Diseases Diploma (Wales)

PEEBLES

In the winter garden of Scotland facing the sun 600 feet up Tonic air beauty in every landscape from sheltered balconies Dancing tea winter Modern tonic baths massage electrical treatment ultra violet radiation. Physician in attendance Write for prospectus

Among the Pine-clad Border Hills
PEEBLES HYDRO PEEBLES SCOTLAND

BOURNEMOUTH HYDRO,

with Vitaglass Sun lounge and Marine Balcony on the South Coast

Every kind of Bath Plombiere Lavage
Every kind of Massage Ultra violet Light.
Every kind of Electricity Diathermy
Every kind of Diet
High Frequency Electric Lift.

Prospectus from Secretary Tele 341
Resident } W JOHNSTON SMYTH M D
Physicians } T ROSS HUTCHINSON M D

The Brighton County Borough
MENTAL HOSPITAL
HAYWARDS HEATH SUSSEX

The Committee of the above Hospital have recently opened BEECHMONT HOUSE for the reception of Female Private Patients suffering from mental disorder Voluntary Temporary and Certified Patients will be received

Beechmont is a large country house situated on the outskirts of Haywards Heath and quite separate from the Hospital

The house is healthily situated and stands on an estate of 27 acres with beautifully laid out gardens and lawns commanding extensive views of the South Downs It has up to date systems of lighting and heating and is attractively furnished on modern lines

The charges are from £3 3 to £10 10s per week including all necessaries except clothing

Full particulars may be obtained from the Medical Superintendent

STAMMERING SPEECH DEFECTS

BEHNKE METHOD Estab 1852 Cases now resident treated at 39 Earls Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE's house on the Chilterns

and treatment
— *Times*
— *Lancet*
and perfectly

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Shortly after Midsummer next the Governors and Trustees propose to elect ONE STUDENT IN PHYSIC at Gonville and Caius College Cambridge ONE STUDENT IN DIVINITY at Christ's College Cambridge and ONE STUDENT IN LAW at Lincoln Inn

Candidates must have been born in England Scotland or Wales and be members of the Church of England unmarried and within the ages of 17 and 20 years for Physic and Divinity and 19 and 23 for Law

The annual stipend of each Student is £100

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Medicine, Surgery and Gynaecology (Royal Waterloo Hospital February 29th to March 19th, all day) **Orthopaedics** (Royal National Orthopaedic Hospital, March 7th to 19th, all day), **Proctology** (Gordon Hospital March 14th to 19th all day)

Detailed syllabuses may be obtained on application to the

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W. (Langham 4266)

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Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

Theodore Williams Medical Scholarship

TEMBLOR COLLEGE, OXFORD

An Examination for the purpose of filling up the Scholarship which is of the value of £100 a year and is tenable for four or five years will be held in May 31st.

For full particulars apply before May 1st to the Senior Tutor, Temple Cowley, Oxford.

Salford Royal Hospital

POST-GRADUATE LECTURE-DEMONSTRATIONS will be given monthly to members of the honorary staff in MEDICAL, SURGICAL and SPECIAL SUBJECTS each week on Thursday, commencing March 3rd, and ending on May 26th, with a holiday on March 24th). These lectures begin at 4.15 and last for one hour. Dinner will be provided at 7 p.m.

Lady specializes in the Education of backward and MENTALLY DEFECTIVE children. Healthy rural country home. Private or class lessons. Special attention to speech defects. Reply, ROYAL, 7, Ladbroke Terrace, W.11.

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE

FACULTY OF MEDICAL SCIENCES

SPECIAL COURSE FOR THE PRIMARY FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS

Special SHORT COURSES in ANATOMY and PHYSIOLOGY will begin on Tuesday, March 1st, 1932, in preparation for the *June Examination*.

ANATOMY: T. KIRK, M.B., Ch.B., F.R.C.S.E.
PHYSIOLOGY: H. P. GILDING, M.A., B.M., B.Ch., W. H. NEWTON, M.B., B.Ch., M.Sc.

The Course in Anatomy (including Embryology) is made up of lectures and demonstrations. Students are permitted to use the Dissecting Room and Museum of Anatomy at other times. The Courses in Physiology Biology consist of lectures with revision of the subject matter in Medical Practice.

Full particulars may be obtained on application to—

University College, London (Gower Street, W.C.1). C. O. G. DOUIE, Secretary.

CITY OF LONDON MATERNITY HOSPITAL,

CITY ROAD, E.C.1

MIDWIFERY TRAINING SCHOOL

MEDICAL STUDENTS admitted to Hospital Practice with operative Midwifery and Obstetrical complications. Monthly or Fortnightly Courses.

PUPILS TRAINED as Midwives and Monthly Nurses in accordance with C.M.B. regulations.

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Boys are regularly prepared for the First M.B. Examinations. University Scholarships in Chemistry, Biology, etc.

Special facilities are offered for the teaching of Chemistry, Physics, Botany and Zoology.

New Science Buildings containing seven laboratories, two lecture rooms, science library, store rooms, etc., opened in September 1925. Prospectus from Head Master.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd, and for the Diploma in Tropical Hygiene on January 11th and April 10th. (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars apply to the Hon. Dean, Liverpool School of Tropical Medicine, Tem broke Place, Liverpool.

NORTH-EAST LONDON POST-GRADUATE COLLEGE,

PRINCE OF WALES'S GENERAL HOSPITAL, N.15

The Practice of the Hospital is limited to Medical Practitioners. Particulars from J. BROWNING ALEXANDER, M.D., Dean.

Dancing — Adele Collier, 124, New Bond St. 6017 Mayfair. Guarantee the simple step of any Dance in three Lessons, one guinea. Learn the Blue for crowded Ball rooms. Practice Dances every Thursday. 6017 Mayfair.

Four Lectures on "Great British Doctors and Their Methods" will be delivered by Sir CECIL P. G. WAKELEY, K.C.B., M.D., D.C.L., on March 1st, 2nd, 3rd and 4th, 1932, at Cowham College, Farm Hall, Street, E.C.2, at 6 o'clock. Admission free.

Royal College of Physicians of LONDON

The next ordinary PROFESSIONAL EXAMINATION for MEMBERSHIP will commence on Friday, April 15th, 1932.

Candidates are required to give twenty-one days' notice in writing to the Registrar of the College to whom all certificates and testimonials required by the By-laws must be sent at the same time.

Candidates who propose to submit published work under the regulations now in force should apply in writing to the Registrar without delay for detailed instructions as to the procedure they should follow.

RAYMOND CRAWFURD, M.D.
Pall Mall East, S.W.1. Registrar.

Royal College of Physicians

Dr. J. F. WITTS will deliver the CROONIAN LECTURES on Tuesday, March 1st, Thursday, March 3rd, and Tuesday, March 8th, at 5 p.m. at the College, Pall Mall East, S.W.1.

Subject: *The Pathology and Treatment of Anaemia.*

Any Member of the Medical Profession admitted on presentation of card.

By Order of the President,
H. M. BALLOW, Secretary.

Royal Medical Benevolent Fund

11 Chandos Street, Cavendish Square, London, W.1

The ANNUAL MEETING of the MEMBERS of the ROYAL MEDICAL BENEVOLENT FUND will be held at 5 p.m. on TUESDAY, MARCH 15th, 1932, at 11 Chandos Street, Cavendish Square, London, W.1, when the Annual Report and Financial Statement for the year ended 31st December, 1931, will be presented and the Officers and Committee elected for the ensuing year.

PERCY SARGENT,
LEWIS G. CLOVER,
Feb. 23rd, 1932. Hon. Secretaries.

Seamen's Hospital Society

POST-GRADUATE COURSES FOR SHIP SURGEONS

The Seamen's Hospital Society announces that PART 2 of these courses—that in Tropical Medicine and Hygiene—will be held from April 11th to May 6th, 1932, at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C., and the London School of Hygiene and Tropical Medicine, W.C.1.

Further particulars may be obtained on application to the Secretary, Seamen's Hospital Society, Greenwich, S.E.10.

Royal Albert Edward Infirmary AND DISPENSARY, WIGAN (180 beds)

THREE HOUSE SURGEONS (male) required. One for March 16th, 1932, and Two for April 1st, for a period of six months. Salary £100 per annum with board, apartments and washing. Resident staff consists of an H.S.O. and three House Surgeons. Application, stating age and qualifications, together with copies of three recent testimonials, should be addressed to the undersigned as soon as possible.

A. STANLEY BLUNT,
Feb. 22nd, 1932. Gen. Supt. & Sec.

Durham County Hospital

(100 Beds)

TWO HOUSE SURGEONS are required to commence duties on March 31st. Salary £100 per annum with board and lodging. Applications with copies of testimonials to be sent to WM. I. WILSON, Secretary, 79 Saddler Street, Durham.

Bradford Royal Infirmary

HOUSE SURGEON (male) wanted from April 1st to November 30th. Candidate must be single and legally qualified. Salary £100 per annum with board, residence and washing. There are 215 beds and six Resident Officers. Applications stating age, qualifications, previous experience, if any, with copies of recent testimonials to be received not later than March 8th, and not later than March 8th.

J. J. BALLON, Secretary, Sub-

County Borough of Newport

APPOINTMENT OF MEDICAL OFFICER OF HEALTH &c

The Council invite applications from male Medical Practitioners qualified for the whole time appointment of Medical Officer of Health for the Newport Urban Sanitary Authority and the Newport Port Sanitary Authority respectively The duties will also include those of Police Surgeon Medical Superintendent to Isolation Hospital Administrative Officer for Rats and Mice Destruction Blind Persons Welfare Superintending Officer under the Midwives Act In respect of Food Medical Examiner for superannuation purposes of entrants to the Corporation service and such other duties which the Corporation may from time to time require him to perform in connection with their health services generally and whether under the charge of the statutory Committees of the Council or not Preference will be given to candidates not exceeding 45 years of age The salary will be at the rate of £1 000 a year plus £125 a year car allowance rising subject to satisfactory service by annual increments of £50 to £1 200 a year plus the car allowance the first increment to take effect on January 1st 1934 The salary will be subject to a deduction of 5 per cent under the Local Government and Other Officers Superannuation Act 1922 and to a temporary (economy) deduction of 5 per cent The successful candidate will be required to pass a medical examination by the Corporation's Medical Examiner and the appointment will be subject to determination by three months notice from either side

Application in candidate's own handwriting stating age qualification and experience service (if any) with Crown Forces with copies of not more than three recent testimonials enclosed in an envelope endorsed Medical Officer of Health must reach me not later than March 4th

Canvassing will be deemed a disqualification

Town Hall O TREHARNE MORGAN
Newport Town Clerk
February 17th 1932

County Council of the West Riding of Yorkshire.

SCHOOL MEDICAL INSPECTORS

The County Council of the West Riding of Yorkshire invite applications for the appointment of School Medical Inspectors to act under the supervision of the County Medical Officer

Applicants may be of either sex

Salary £500 per annum rising by annual increment of £25 to £700 per annum The above salary is subject to a temporary reduction of 7½ per cent

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

Further particulars and form of application may be had from the undersigned by whom all applications with copies of not more than three recent testimonials must be received not later than March 7th

County Hall J CHARLES McCRATH
Wakefield Clerk of the County
February 1932 Council

County Councils of Midlothian, Westlothian and Peebles

Applications are invited for the post of ASSISTANT MEDICAL OFFICER OF HEALTH and TUBERCULOSIS OFFICER for the above Counties

The salary will be at the rate of £650 per annum (less a temporary economy cut of 7½ per cent) together with travelling expenses

Six copies of application stating age qualification and previous experience together with six copies of not more than three recent testimonials must be lodged with the undersigned not later than March 16th

Canvassing is a disqualification

County Rooms G J M'GREGOR
Edinburgh County Clerk
February 18th 1932

The Loughborough and District General Hospital

Wanted to commence duties early in April RESIDENT HOUSE SURGEON (male or female unmarried) possessing a medical and surgical registration in the [illegible] required Salary [illegible] per annum board and laundry etc with coal and gas Applications to be sent to me at once

Hospital Road FRANK H TOONE
Loughborough Secretary

The Princess Mary Maternity HOSPITAL Jubilee Road NEWCASTLE-ON-TYNE

RESIDENT MEDICAL OFFICER (male) required for six months from March 1st For detail apply House Governor

County Council of Middlesex

NORTH MIDDLESEX COUNTY HOSPITAL

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

The County Council [illegible] the above appointment [illegible] registered Medical [illegible] have held resident appointments in a General Hospital

North Middlesex County Hospital is a modern General Hospital with accommodation for over 900 cases chiefly acute 230 beds in the adjoining Edmonton Institution also are under the care of the Medical Staff of the Hospital In addition the Hospital possesses a Pathological Laboratory [illegible] therapy Radium Ear Nose and Throat Department

The gentleman [illegible] under the control of the [illegible] and devote his whole time

Salary £250 per [illegible] and lodging and laundry subject to a small temporary abatement in view of the national situation The appointment is for one year only and is subject to one months notice on either side At the end of the period of one years service the successful candidate if considered satisfactory in all respects will be eligible upon the recommendation of the Medical Superintendent for promotion to the post of Assistant Medical Officer If not so recommended he will leave the Council's service

Applications stating (1) age (2) qualifications and (3) previous experience together with copies of not more than three recent testimonials must be received by the undersigned not later than March 5th

Canvassing directly or indirectly will be a disqualification

No special application forms are provided Envelopes must be endorsed Junior Assistant Medical Officer

ERNEST S W HART
Clerk of the County Council
Middlesex Guildhall Westminster S W 1
February 1932

Corporation of Bristol

MENTAL DEFICIENCY ACT COMMITTEE

HORTHAM COLONY FOR MENTAL DEFECTIVES

Applications for the post of ASSISTANT MEDICAL OFFICER are invited from duly qualified registered Medical Practitioners (male and female) not exceeding 40 years of age

Post graduate experience in medicine and surgery is essential and experience in mental deficiency and children's diseases a recommendation

Salary £350 rising by annual increments of £25 to £450 with emolument equivalent to £150 per annum and an additional emolument of £50 per annum for D P M The salary will be subject to a temporary reduction in accordance with the scale fixed by the Council

The post will be pensionable under the Asylums and Certified Institutions (Officers Pensions) Act 1918 and the appointment will be subject to the successful candidate satisfactorily passing a medical examination

Application form which must be returned not later than Monday March 14th are obtainable from the Town Clerk Council House Bristol

Corporation of Glasgow

PUBLIC HEALTH DEPARTMENT

JUNIOR RESIDENT MEDICAL OFFICER (male) wanted for HAWKHEAD ASYLUM Commencing salary £300 per annum with board lodging and laundry Previous asylum experience unnecessary but preference will be given to one who has been engaged in pathological work or who has been House Physician ample opportunity afforded for research

Application stating age and experience and accompanied by copies of not more than three testimonials to be sent to the Medical Superintendent Hawkhead Asylum Crookston Glasgow S W 2

East Lancs Tuberculosis Colony, BARROW HOPE HALL GREAT BARROW near CHESTER

(Under the direction of the British Red Cross Society and Order of St John of Jerusalem)

ASSISTANT MEDICAL OFFICER (male) required Salary £275 rising to £300 at end of six months with board residence and laundry The appointment will be terminable by one months notice Preference will be given to candidates with experience in Tuberculosis

Application marked Assistant Medical Officer with copies of three recent testimonials to be sent to the Medical Superintendent at the above address before Thursday March 10th

British Medical Association

APPOINTMENT OF ASSISTANT MEDICAL SECRETARY

The Council of the British Medical Association is prepared to receive applications from registered Medical Practitioners for the appointment of an Assistant Medical Secretary He will be required to work under the instructions of the Medical Secretary and to give his whole time to the duties of his office Duties to commence on October 1st 1932 and the appointment to be subject to six months notice on either side

Salary £800 rising by £50 per annum to a maximum of £1 000 subject to deductions for superannuation

Application stating experience and age with not more than three recent testimonials should be sent to the Medical Secretary British Medical Association Tavistock Square W C 1 not later than by first post Monday March 14th

Canvassing not allowed

ALFRED COX Medical Secretary

City of Birmingham

MATERNITY AND CHILD WELFARE DEPARTMENT

CANWELL HALL BABIES HOSPITAL (85 Beds)

A RESIDENT MEDICAL OFFICER is required for a period of six months duties to commence on April 14th

Applications are invited from ladies with previous experience as House Physician preferably in a Children's Hospital Salary £250 per annum with board and laundry

The salary and emolument will be subject to the voluntary abatement approved by the Council in respect of its officers The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by her

Applications giving all particulars of qualifications age and experience and accompanied by copies of three recent testimonials should be sent to the Medical Officer of Health The Council House Birmingham on or before March 5th

Brighton Education Committee

ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT TO THE MEDICAL OFFICER OF HEALTH

Applications are invited from fully qualified Medical Men for the above appointment Applicants should have had experience in children's diseases and should have a practical knowledge of refraction work in children Knowledge of school medical inspection would be an asset

Salary £500 rising by annual increments of £25 to a maximum of £700 The salary is subject to a temporary economy deduction according to scale (£20 p a on a salary of £500 p a)

Applications on forms to be obtained from the undersigned together with copies of three recent testimonials should be sent in on or before March 7th

Canvassing will be regarded as a disqualification

F HERBERT TOYNE
Education Offices Secretary
54 Old Steine Brighton

County Borough of Halifax

ST LUKE'S HOSPITAL

SENIOR RESIDENT MEDICAL OFFICER

The Health Committee of the Halifax Corporation invite applications for the above position The salary will be £350 per annum rising by annual increment of £25 to £450 together with board lodging washing and attendance

Applicants must be duly qualified registered Medical Practitioners and preference will be given to those who have held a Resident appointment in a General Hospital

Form of application with further particulars may be obtained from the undersigned and must be completed and returned to him not later than Monday March 14th

By Order
PERCY SAUNDERS
Town Clerk's Office Town Clerk
(Carlton Street Branch)
Halifax February 24th 1932

City Mental Hospital, NOTTINGHAM

SECOND ASSISTANT MEDICAL OFFICER (not Deputy) required with General and Mental Hospital experience Salary £400 rising by £25 a year to £500 with all found In addition £50 per annum if holding D P M No quarters available for married man Apply at once with fullest particulars to Medical Superintendent.

The Royal Hospital,
WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required for Ear Nose and Throat Department. Duties to commence on March 16th next. Good opportunity for operative experience.

The Hospital contains 230 beds includes the usual special departments and is recognised by the various Examining Bodies for a part of the required attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum, board furnished rooms and laundry provided.

Applications with copies of testimonials to be forwarded to the undersigned by March 1st.

W. H. HAPPER
Wolverhampton. House Governor & Sec.
February 22nd 1932.

The Royal Hospital,
WOLVERHAMPTON
(Incorporated under Charter)
(230 Beds)

Applications are invited for the post of RESIDENT ASSISTANT SURGEON. Salary £250 per annum. Experience of major surgery is essential and the successful candidate must hold one of the higher qualifications in Surgery.

Duties and conditions of appointment on application to—

W. H. HARPER
House Governor & Secretary.
February 22nd 1932.

Walsall General Hospital

The Committee invite applications from men or women for the posts of

(1) HOUSE PHYSICIAN and RESIDENT ANAESTHETIST.
(2) HOUSE SURGEON.

Salary at the rate of £150 per annum.

Candidates who must be registered under the Medical Acts must produce three recent testimonials.

The appointments will be for six months.

The Hospital contains 100 beds and is equipped in all special departments.

Applications stating age, qualifications and nationality must be received by the undersigned not later than the first post on Monday March 8th.

WALTER FRANCOMBE
Secretary.

Charing Cross Hospital

SURGICAL REGISTRAR

The Council invite applications from candidates who must be registered Practitioners (male) for the post of Surgical Registrar. Honorarium £150 per annum. A copy of the regulations can be obtained from the undersigned to whom applications together with copies of three testimonials must be submitted not later than Tuesday March 1st.

Charing Cross Hospital, Strand, London W.C.2.
PHILIP INMAN
House Governor

Charing Cross Hospital

OBSTETRIC REGISTRAR

The Council invite applications for the post of Obstetric Registrar. Honorarium £100 per annum.

Application together with copies of three recent testimonials must be submitted to the undersigned not later than Tuesday March 1st.

Charing Cross Hospital, Strand, London W.C.2.
PHILIP INMAN
House Governor

Elsie Inglis Memorial Maternity Hospital
Spring Garden, EDINBURGH (60 Beds)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON at the above Hospital.

Appointment is for six months from April 1st. Honorarium at rate of £25 per annum with board, residence and laundry. Applications, with copies of testimonials to be sent to the Secretary of the Hospital on or before March 12th.

Harrogate Infirmary

Applications are invited from British subjects (Ladies) for the post of JUNIOR HOUSE SURGEON for the period of three months from April 1st next. Salary £30 per annum with board, residence and laundry. Applications, with copies of testimonials, should be sent to the undersigned not later than March 12th.

(MISS) HALLA TINN
Secretary.

Bootle General Hospital,
Derby Road, BOOTLE

APPOINTMENT OF HONORARY ORTHOPAEDIC SURGEON

The Committee invite applications for the above position. The rule governing the appointment is as follows:

Every candidate for the office of Surgeon shall have obtained a degree of Master of Surgery at one of the Universities of the United Kingdom or be a Fellow of one of the Royal Colleges of Surgeons in the United Kingdom.

Candidates are requested to send particulars of their qualifications and experience accompanied by testimonials addressed to the Chairman not later than March 5th.

J. A. BEARDSALL
Secretary Superintendent.

The Royal Portsmouth Hospital,
PORTSMOUTH

HOUSE SURGEON (*male*) required to commence April 1st, fully qualified.

Salary at the rate of £130 per annum, six months' appointment and eligible on completion of term for extension or other appointments.

There are five Resident Medical Officers, Senior House Surgeon, House Physician, Two House Surgeons and Casualty Officer.

Applications stating age, nationality and full details with copies of three testimonials to be sent to the undersigned on or before March 14th, from whom all particulars can be obtained.

B. WAGSTAFF, Secretary.

Seamen's Hospital Society,
GREENWICH

The Committee invite candidates for the appointment of HOUSE PHYSICIAN at the HOSPITAL FOR TROPICAL DISEASES, Endsleigh Gardens, W.C. Candidates must be male, doubly qualified and registered. The elected candidate will be required to take up duty on April 1st. Salary at the rate of £150 per annum with board, residence and washing. The appointment will be for six months.

Applications stating age, together with copies of not more than three recent testimonials to be sent in on or before March 8th to the undersigned from whom further particulars can be obtained.

Greenwich, February 22nd 1932. R. E. V. BAX, Secretary.

Seamen's Hospital Society,
GREENWICH

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL, Greenwich, for six months from April 1st. Salary £110 per annum and a proportion of fees with board, residence and washing. Candidates must be male. Applications with copies of three testimonials to be sent in by March 8th to the undersigned.

Greenwich, February 22nd 1932. R. E. V. BAX, Secretary.

The Jessop Hospital for Women,
SHEFFIELD (146 Beds)

GYNAECOLOGICAL AND MATERNITY DEPARTMENTS

The Board of Management invite applications for the post of HOUSE SURGEON (male) for a period of six months.

Salary £100 per annum together with board, residence and laundry.

Applications stating age together with copies of testimonials should be addressed to the undersigned at once.

H. B. SHEFFIELD, Secretary.

The Lady Chichester Hospital,
HOVE (for Early Nervous Breakdowns)
(50 Beds)

Medical Woman required as JUNIOR HOUSE PHYSICIAN for six months to commence duties on April 1st with board, lodging and laundry and an honorarium at the rate of £20 per annum.

Applications must be made in writing and be accompanied by testimonials and sent to the Secretary, Mr. P. F. SPOONER, 117 North St., Brighton, not later than March 7th.

February 16th 1932.

St. Thomas's Hospital

VACANCY

OPHTHALMIC REGISTRAR AND REFRACTIONIST

Candidates must be Fellows of the Royal College of Surgeons in England. Applications with full details of academic career to be sent to the Clerk to the Governors not later than March 9th next.

Manchester Royal Infirmary

NON-RESIDENT MEDICAL REGISTRAR TO OUT-PATIENTS

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment vacant on April 1st. Applicants must be registered and hold a Medical and Surgical qualification and have held a hospital appointment.

The appointment is for six months, renewable for further periods subject to the provisions of the By-laws as to notice etc. Salary £150 per annum.

Applications with testimonials stating age to be sent to the Chairman of the Medical Board not later than March 16th.

By Order,
FRANK G. HAZELL
Feb. 1932. Gen. Supt. & Secretary.

Miller General Hospital,
Greenwich Road, S.E.10

Applications are invited for the two following posts:

RESIDENT SURGICAL OFFICER AND REGISTRAR (*the senior of the Resident posts*). Salary £250 per annum.

HOUSE PHYSICIAN. Salary £100 per annum.

Candidates (male) must be unmarried. Board, residence and laundry are provided. Duties to commence on April 1st next. Application stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, to be sent to the Secretary as soon as possible.

February 15th 1932.

Miller General Hospital,
Greenwich Road, S.E.10

ANAESTHETIST

Applications are invited for the post of Anaesthetist (male) from those who are specially engaged in the practice of anaesthetics. Attendance on Tuesday mornings. Honorarium at the rate of 52 guineas for one attendance a week. All particulars to be obtained on application to the Secretary.

February 18th 1932.

East Ham Memorial Hospital,
Shrewsbury Road, E.7 (100 Beds)

Applications are invited for the post of HOUSE SURGEON to Special Departments and CASUALTY OFFICER for six months commencing April 1st. Salary at the rate of £100 per annum with board, residence and laundry.

Applications stating age, experience and full particulars together with copies of testimonials should reach the undersigned by first post on March 7th.

REGINALD PERRY
Secretary.

East Ham Memorial Hospital,
Shrewsbury Road, E.7 (100 Beds)

Applications are invited for the post of HOUSE PHYSICIAN for six months commencing April 1st. Salary at the rate of £150 per annum with board, residence and laundry.

Applications stating age, experience and full particulars together with copies of testimonials should reach the undersigned by first post on March 7th.

REGINALD PERRY
Secretary.

Princess Louise Kensington
HOSPITAL FOR CHILDREN
St. Quintin Avenue, North Kensington, W.10
(50 Beds)

HOUSE PHYSICIAN (male or female) required for six months from April 1st. Salary for first three months at the rate of £75 a year, after which should he or she be appointed Senior Resident (of two) the salary would be at the rate of £100 a year with board, residence and laundry in each case. It is desirable that applicants should have had a resident hospital post. Applications with copies of three testimonials must be submitted on a form to be obtained from the Secretary, and must reach the Secretary not later than first post on Friday, March 11th.

Queen's Hospital for Children,
Hackney Road, London, E.2

HOUSE PHYSICIAN required April 7th.

CASUALTY OFFICER with some Ophthalmic work required April 7th.

Six months' appointment. Salary at the rate of £100 per year with board, lodging and washing.

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials on or before March 10th.

CHARLES H. BESSELL
Secretary.
Feb. 8th 1932.

Salford Royal Hospital
(265 Beds)

Applications are invited for the following vacancies which will occur in the Resident Medical Staff (male) on March 31st

HOUSE SURGEON (who will also be in charge of the Orthopaedic Department) Salary at the rate of £125 per annum

HOUSE SURGEON (who will also be in charge of the Genito-Urinary Department) Salary at the rate of £125 per annum

HOUSE SURGEON (who will also be in charge of the Neurological Department) Salary at the rate of £125 per annum

HOUSE SURGEON (attached to the Aural Skin and Gynaecological Departments) Salary at the rate of £125 per annum

CASUALTY HOUSE SURGEON Salary at the rate of £125 per annum

The appointments are for a period of six months with board and residence

Candidates must be registered under the Medical Act

The Hospital has the approval of the Royal College of Surgeons of England and appointments here are recommended for the English Fellowship (Final)

Forms of application which may be obtained from the undersigned must be delivered on or before March 9th

By Order of the Board

Salford Royal Hospital RICHARD NEWALL Assistant Secretary

February 22nd 1932

National Hospital for Diseases
OF THE HEART
Westmoreland St Marylebone W 1

Applications are invited for the post of Out-patient MEDICAL OFFICER (non-resident male) The appointment is for a period of six months from April 1st but may be renewed for a further period not exceeding six months

Salary at the rate of £125 per annum

Candidates who must be duly registered Medical Practitioners will not be expected to call on the Hon Medical Staff but should send their application with copies of three recent testimonial to me at the Hospital not later than Monday March 7th

The Out-patient Medical Officer will be required to assist the Hon Medical Staff on five afternoons weekly or four afternoons and one morning a week may be arranged

ROBERT G E WHITNEY Secretary

National Hospital for Diseases
OF THE HEART
Westmoreland St Marylebone W 1

RESIDENT MEDICAL OFFICER

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) The appointment is for a period of six months from April 1st but may be renewed for a further period not exceeding six months

Salary at the rate of £150 per annum with board residence and washing

Candidates who must be duly registered Medical Practitioners will not be expected to call on the Honorary Medical Staff but should send their applications with copies of three recent testimonial to me at the Hospital not later than Monday March 7th

ROBERT G E WHITNEY Secretary

Leicester Royal Infirmary
(472 Beds)

HOUSE SURGEON

A vacancy is expected on April 1st The Casualty House Surgeon will be an applicant Salary at the rate of £125 per annum Applicants must have held a resident hospital post or had similar experience of hospital work Appointment will be made March 9th Applications to the House Governor and Secretary on or before March 1st

CASUALTY HOUSE SURGEON

In the event of the Casualty House Surgeon being appointed to the above House Surgeoncy there will be a vacancy for a Casualty House Surgeon Salary and conditions of appointment as for House Surgeon

Applications to the House Governor and Secretary by March 1st accompanied by copies of three recent testimonial

February 8th 1932

Leicester Royal Infirmary
(472 Beds)

HOUSE PHYSICIANS

Two half-yearly vacancies are expected on April 1st Salary at the rate of £125 per annum Applicants should have held a resident hospital post or had similar experience of hospital work Appointment about the middle of March Apply to the House Governor and Secretary on or before March 1st enclosing copies of three recent testimonials

February 8th 1932

St Peter's Hospital for Stone, ETC
Henrietta Street Covent Garden W C 2

The office of HO vacant from April 1st and in a similar office at a General Hospital The salary offered is at the rate of £75 per annum with board lodging and laundry

At the expiration of six months term of office and subject to the recommendation of the Medical Committee the House Surgeon is appointed Resident Surgical Officer for a further similar period Candidates should therefore be prepared if successful to remain at the Hospital for twelve months in all

Applications accompanied by copies of testimonial will be received by the undersigned not later than first post on Thursday March 10th

BEECHEY ROGERS
Secretary

Royal Northern Hospital,
Holloway London N

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Candidates must be registered Medical Practitioners of at least two years standing The appointment is for one year from May 1st

Salary £200 per annum plus an allowance for work undertaken in connection with the National Insurance Act with board residence and laundry Preference will be given to candidates experienced in practical operative surgery

Applications accompanied by copies of testimonials should be sent on or before March 14th to the undersigned from whom forms of application and rules can be obtained

GILBERT G PAINTER
Secretary

Montagu Hospital, Mexborough
YORKS

Applications are invited for the position of JUNIOR HOUSE SURGEON (Lady) at the above hospital The commencing salary offered is at the rate of £100 per annum with the usual residential allowances One month's holiday is allowed yearly The hospital has 84 beds of which 64 are surgical 10 maternity with a further 10 maternity to be brought into commission within the next few weeks

Application giving fullest details as to experience should be sent to the undersigned so as to be received not later than March 5th Applicant should state how soon they could enter upon their duties also state what experience if any they have had in the giving of anaesthetics

DONALD WILSON Secretary

Southend-on-Sea New General (VOLUNTARY) HOSPITAL
(221 Beds to be opened in June 1932)

Applications are invited for the following honorary posts

ONE SURGEON Candidate must be F R C S (Eng)

ONE OF MORE PHYSICIANS Candidates must be F R C P (Lond) or M R C I (Lond)

ONE OF MORE GYNAECOLOGICAL AND OBSTETRIC SURGEONS Candidates must be F R C S (Eng) M R C P or M D

[illegible] governing the appointments may be obtained on application stating the appointment desired and must be returned to the Secretary on or before March 31st

Southend-on-Sea New General (VOLUNTARY) HOSPITAL
(221 Beds to be opened in June 1932)

Applications are invited for the post of RESIDENT MEDICAL OFFICER Salary £400 The successful candidate must be under 40 years of age and unmarried and devote his whole time to the Hospital Preference will be given to an applicant holding the higher qualification Previous residential Hospital experience essential and experience in administrative Hospital work essential

Application form with regulations governing the appointment may be obtained on application and must be returned to the Secretary on or before March 31st

Aberdeen Royal Mental Hospital

The office of JUNIOR ASSISTANT PHYSICIAN (male) in Aberdeen Royal Mental Hospital is vacant and applications for it are invited

Salary will commence at £300 per annum with board lodging and laundry

Application stating age and qualification with copies of testimonial should be sent to the Physician Superintendent

Addenbrookes Hospital,
CAMBRIDGE

Applications are invited for the following posts

(a) HOUSE SURGEON No 1 vacant on March 16th

(b) HOUSE SURGEON No 2 vacant on March 14th

(c) HOUSE SURGEON to the Special Departments with care of beds for Ear Nose and Throat, Eye Gynaecological and Maternity case vacant on March 21st

Each appointment is tenable for a period of six month but is terminable at an earlier date by one month's written notice on either side

The salary of each officer will be at the rate of £130 per annum with board residence and laundry

Candidates (male) who must be unmarried and duly registered are requested to forward their applications stating age qualifications etc together with copies of not more than four testimonials to the undersigned on or before Wednesday March 2nd

W H HEAD
Secretary Superintendent

All Saints' Hospital (for Genito-URINARY DISEASES)
In-patient Dept 91 Finchley Road N W 8
Out-patient Dept and Secretary's Office 49 55 Vauxhall Bridge Road S W 1

HOUSE SURGEON (male) required on April 1st for period of three months a Junior House Surgeon (non-resident) followed subject to the approval of the Board of Management by a period of three months as Senior House Surgeon (resident) Salary will be at the rate of £150 per annum with board and laundry during the Resident period The duties of the Non-resident House Surgeon consist of attendance at the Out-patient Department every afternoon and three evenings weekly Application stating age experience and qualifications and enclosing copies of recent testimonial should be sent to me not later than March 11th

D H EADE Secretary

Royal National Orthopaedic HOSPITAL COUNTRY BRANCH
Brockley Hill STANMORE MIDDLESEX

Applications are invited for the post of HOUSE SURGEON (2) Salary £150 per annum with board quarters and laundry The appointment is for six months from April 1st renewable for a further period of six months on the recommendation of the Medical Board Application with copies of testimonial should reach the Secretary not later than March 11th

Royal National Orthopaedic HOSPITAL
234 Great Portland Street W 1

Applications are invited for the post of HOUSE SURGEON Salary £150 per annum with board quarters and laundry The appointment is for six months from April 1st renewable for a further period of six months on the recommendation of the Medical Board Application with copies of testimonial should reach the Secretary not later than March 11th

Jewish Maternity Hospital
Underwood Street Vallance Road E 1

There is a vacancy for an HONORARY CONSULTANT SURGEON

Applicants who must be Fellows of the Royal College of Surgeons of England should submit their application together with copies of three recent testimonials to the undersigned not later than February 29th

ALICE MODEL
Hon Org Secretary

Jewish Maternity Hospital
Underwood Street Vallance Road E 1

Applications are invited for the post of RESIDENT MEDICAL OFFICER

Duties commence April 1st, for a period of one month Salary at the rate of £50 per annum

Applications together with copies of three recent testimonials to be sent to the undersigned not later than March 15th

ALICE MODEL,
Hon Org Secretary

London Temperance Hospital,
Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from March 10th Preference will be given to those who have held a resident post

Candidates must submit application stating qualification age etc with copies of not more than three testimonial by Friday March 4th addressed to the Secretary

Cardiff Royal Infirmary

NATIONAL RADIUM CENTRE

Applications are invited for the post of RADIUM REGISTRAR to the Cardiff Royal Infirmary

Applicants must be duly qualified Medical Practitioners The remuneration will be at the rate of £200 per annum with board and residence The successful applicant will in the first place be appointed for a period of three months which will normally be extended to twelve months and which may further be extended for a second year

Previous clinical experience in Radium work is desirable

Intending applicants should apply to the undersigned who will furnish an application form together with full details of the duties of the office

Applications should be received not later than Saturday March 12th

R ARMSTRONG
Medical Supt Cardiff Royal Infirmary

February 23rd 1932

Cardiff Royal Infirmary

(Associated with Welsh National School of Medicine)

Applications are invited for the post of HOUSE PHYSICIAN which is now vacant Appointment is for six months and salary at rate of £50 per annum with board residence and laundry

Applications to be made on a form which will be supplied by the undersigned to be sent with copies of recent testimonials as soon as possible

P ARMSTRONG
Feb 23rd 1932 Medical Supt

St John's Hospital for Diseases

OF THE SKIN
49 Leicester Square W C 2

Applications for the posts of OUT PATIENT and IN PATIENT MEDICAL REGISTRARS are invited to be sent to the undersigned on or before Saturday morning March 5th

Honorarium £50 per annum in each case

Applicant must be duly qualified and registered Medical Practitioners Particulars of the duties can be obtained on application

There are also vacancies for Clinical Assistants

LEONARD G R TUPPIN
February 10th 1932 Secretary

Royal Hospital, Richmond,

SURREY

JUNIOR HOUSE SURGEON (male) required to take up duties on April 1st Salary at the rate of £100 per annum with board furnished apartment and washing Candidates must be fully qualified registered and single The appointment will be for six months after which the successful candidate will be eligible for the senior post Applications stating age experience and copies of three recent testimonials must be forwarded to the undersigned not later than March 2nd

RICHARD ALLEN Secretary

Royal Samaritan Hospital for

WOMEN GLASGOW

The Governors invite applications for three appointments as RESIDENT HOUSE SURGEON (open to Graduates of either sex) to become vacant on April 9th

Applications with copies of testimonials to be lodged not later than March 8th with the undersigned from whom all information can be obtained

T MASON MACQUAKER
200 St Vincent St Secretary & Treasurer

Glasgow
February 20th 1932

Manchester Northern Hospital

FOR WOMEN AND CHILDREN
Park Place Cheetham Hill Road

The Committee of Management require the services of a JUNIOR HOUSE SURGEON duly qualified who is to commence duty on April 1st Salary £100 per annum with board only

Applications stating age and experience with copies of testimonials to be sent to the Secretary Mr JAMES C DANIELS 38 Fountain Street Manchester by the first post Feb 29th

Rotherham Hospital

HOUSE PHYSICIAN (male) qualified with board residence at the rate of £180 per annum Duties to commence on April 1st

Applications stating age and experience of recent testimonials to be sent to the Secretary G W
Rotherham

King Edward VII Welsh

NATIONAL MEMORIAL ASSOCIATION

CENTRAL TUBERCULOSIS LABORATORY

Applications are invited for the position of ASSISTANT BACTERIOLOGIST Salary £350 with increments of £25 to £400 per annum

The laboratory is situated in the Welsh National School of Medicine and apart from experimental work carries out routine examination of material from the various hospitals sanatoria and dispensaries of the Association

The Assistant Bacteriologist will be employed chiefly with this routine work but will have opportunities for research in connection with it

Applications stating qualifications experience etc to be sent to—

W H TATTLER Bacteriologist
Institute of Preventive Medicine
The Parade Cardiff

East Suffolk and Ipswich

HOSPITAL IPSWICH
(265 Beds—7 Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN vacant April 1st Salary at the rate of £120 per annum Board residence and laundry

Previous experience essential

Applications from British (male) candidates stating age qualifications and experience and accompanied by three recent testimonials to be sent to the undersigned

ARTHUR GRIFFITHS
The Hospital Secretary
Ipswich

Stockton and Thornaby Hospital,

STOCKTON ON TEES
(140 Beds—3 Residents)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER for a period of at least six months duties to commence March 18th Salary £160 with board residence and laundry Candidates must be duly qualified and unmarried

Applications stating age nationality and experience together with copies of three recent testimonials to be sent to the undersigned

J WILKINSON Secretary

City of London Maternity

HOSPITAL City Road E C 1

Applications invited for fully qualified male candidates for the post of ASSISTANT RESIDENT MEDICAL OFFICER vacant April 1st Three months appointment at £80 p a If satisfactory the appointee fills Senior post for ensuing three months at £100 p a Twenty copies of applications and of testimonials should reach the undersigned by March 10th

RALPH B CANNINGS Secretary

King's College Hospital

The Committee of Management invite applications for the post of JUNIOR SURGEON in the Ear Nose and Throat Department

Candidates must be Fellows of the Royal College of Surgeons of England

Applications with copies of three testimonials should be sent before March 10th to the House Governor King's College Hospital Denmark Hill S E 5 from whom particulars of the duties may be obtained A Registrar in the Department is a candidate for the post

Hertford County Hospital

Applications are invited for the post of HOUSE SURGEON (male) Salary £200 per annum with board residence and laundry The appointment is for six months in the first instance

Applications with copies of three recent testimonials should be sent to the undersigned not later than Wednesday March 9th

PERCY G BROOKS
Secretary

Buchanan Hospital,

ST LEONARDS ON SEA (115 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON (female) at a salary of £125 per annum for a term of six months commencing on April 1st Eligibility for senior position after six months service Applications with copies of testimonials should be sent to the undersigned by March 16th

S C W DISNEY
Secretary

Bristol Eye Hospital

Applications are invited for the post of HONORARY ASSISTANT SURGEON

Candidates must be Fellows of one of the Royal Colleges of Surgeons or hold a Special Diploma in Ophthalmology

Applications together with three testimonials should be received by the Secretary not later than March 7th

The London Lock Hospitals,

91 Dean Street W and
283 Harrow Road W 9

The Board of Management invite applications for the [illegible] to the Male Lock

(1) Hospital [illegible]

(2) SURGICAL REGISTRAR to the Female Lock Hospital

The present holder is an applicant for reappointment

Honorarium in each case £100 per annum The appointments are for one year Candidates who must be doubly qualified and duly registered are invited to send in their application together with three copies of testimonials only to the Secretary at 283 Harrow Road W 9 not later than 10 a m on February 29th Copies of the Laws and By laws relating to these appointments can be obtained on application to the Secretary Candidates must be Fellows (or Members) of the R C S England or Surgical Graduates of a University of the United Kingdom Duties to commence April 1st

By Order of the Board
H T J ASON
Feb 9th 1932 Secretary

Royal Manchester Children's

HOSPITAL

OUT PATIENTS DEPARTMENT Gartside St MANCHESTER

Wanted for the Out patients Department TWO ASSISTANT MEDICAL OFFICERS non resident salary £150 per annum who will be appointed for six month

Candidates must be on the *Medical Register* Particulars of the duties can be obtained from the Secretary The hours of duty are from nine a m till one p m or until the work of the Dispensary is finished Patients attendances number 93 000 per annum Duties to commence April 1st

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned not later than Wednesday March 9th

Canvassing directly or indirectly may disqualify

By Order
W M HUMPHRY
February 16th 1932 Secretary

Edinburgh Hospital for Women

AND CHILDREN
(Whitehouse Loan Edinburgh)
(56 Beds including Radium Wards)

Applications are invited from fully qualified Medical Women for the following posts at above Hospital (1) HOUSE PHYSICIAN honorarium at rate of £50 per annum (2) JUNIOR HOUSE SURGEON residing to Senior House Surgeon at the end of three months honorarium at rate of £25 per annum for first three month £50 per annum for second three months

The appointments are for six months from April 1st Board residence and laundry provided Applications with copies of testimonials to be sent to the Secretary of the Hospital on or before March 12th

District Infirmary,

ASHTON UNDER LYNE
(General Hospital—200 Beds mainly Surgical)

Wanted a HOUSE SURGEON Six months appointment renewable Salary at the rate of £150 per annum with board residence and laundry

The resident staff comprises a Resident Surgical Officer and Three House Surgeons

Applications with testimonials to be sent at once to the undersigned

FRANK OLIVER
General Superintendent & Secretary

February 22nd 1932

Croydon General Hospital

Applications are invited for the post of ASSISTANT PHYSICIAN (Honorary) to the X ray Dept Intending candidates should forthwith submit applications to the undersigned stating age experience and qualifications and accompanied by three recent testimonials on or before March 19th The duties of the candidate appointed will include diagnosis and treatment Further information can be supplied upon application

GEORGE H PAMS
Feb 23rd 1932 Hon Secretary

Darlington General Hospital

(120 Beds)

Applications are invited for SENIOR HOUSE SURGEON male fully qualified unmarried British Salary £175 per annum board residence and laundry Applications stating qualifications and experience with copies of two recent testimonials to be addressed to—

ARTHUR RIDDLE Secretary

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh

(a) British Islands

Town or District	Town or District	Town or District
GENERAL POST OFFICE. (Assistant Medical Officer—Woman)	**CONTRACT PRACTICE** (contd)	**CONTRACT PRACTICE** (contd)
CONTRACT PRACTICE	LLWYNYPIA CLYDACH VALE PENYCRAIG CLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Pwllgwaun Colliery Medical Aid Society) (Workmen's Medical Scheme)
EBBW VALE MON (Workmen's Medical Society)	MARDY GLAMORGAN (Workmen's Medical Scheme)	**PUBLIC HEALTH**
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE (Workmen's Medical Scheme)	DEVON COUNTY COUNCIL. (School Medical Inspector—Male)
LOWESTOFT MEDICAL INSTITUTE. (Medical Officer)	NEATH AND DISTRICT (Medical Aid Association)	LANCASHIRE COUNTY COUNCIL. (Assistant Medical Officer of Health and Tuberculosis Officer)
	OAKDALE MON (Medical Officer for Medical Aid Association	

(b) Overseas

Medical Practitioners are requested *not to apply* for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch *named* in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (All Friendly Society Appointments)	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	SOUTH AUSTRALIA (Lodge Appointments)	[illegible] Terrace Adelaide.	WELLINGTON NEW ZEALAND (Contract Practice Appointments)	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 166 Wellington New Zealand
QUEENSLAND (Brisbane Associated Friendly Societies Institute) (Toowoomba Associated Friendly Societies Medical Institute Toowoomba)	The Hon Sec. Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	VICTORIA. (All Institute or Medical Dispensaries)	Dr J P MAJOR (Hon Sec. Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria.	WESTERN AUSTRALIA. (Contract and Lodge Practices)	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St Georges Terr Perth Western Australia.

February 24th 1932 By Order of the Council ALFRED COX Medical Secretary

Lancashire Mental Hospitals BOARD

CALDERSTONES (CERTIFIED INSTITUTION FOR MENTAL DEFECTIVES) WHALLEY Near BLACKBURN

Applications are invited for the post of ASSISTANT MEDICAL OFFICER (male) from duly qualified and registered Medical Practitioners Candidate must be single and under 35 years of age Preference will be given to a candidate who has held a residential post in a General Hospital for at least six months

Commencing salary £500 rising by annual increments of £25 to £600 with further increase on promotion subject to a deduction of 2½ per cent under the Asylums and Certified Institutions (Officers Pensions) Act 1918 There are no emoluments

The selected candidate will be required to live in the Hospital and he will be provided with board lodging etc for which a charge of £150 a year is made

The possession of a Diploma in Psychological Medicine will entitle the Officer to an additional £50 per annum

A temporary abatement from the gross salary will be made the amount of the abatement on £500 being £18 15

Application giving full particulars with testimonials (copies only) should be forwarded to the Medical Superintendent to reach him not later than February 29th

Royal Devon and Exeter HOSPITAL EXETER (225 Beds)

APPOINTMENT OF CASUALTY OFFICER AND HOUSE SURGEON TO SPECIAL DEPTS

Applications invited from qualified and registered candidate for this appointment shortly becoming vacant

Engagement for six month candidates being eligible for subsequent appointment

Salary at the rate of £150 per annum with board residence and laundry

Application with copies testimonial should be sent to the undersigned not later than Tuesday March 1st

S S COLE Secretary & Manager

County of Antrim Mental HOSPITAL ANTRIM NORTHERN IRELAND

APPOINTMENT OF RESIDENT MEDICAL SUPERINTENDENT

The [illegible] of above Hospital [illegible] position of Resident [illegible] Salary £800 per annum [illegible] light washing and [illegible] value at £150

One Assistant Medical Officer resides in the Hospital At present there are 564 patients

Applicants must have an extensive experience of the treatment of Mental illness A Degree or Diploma in Psychological Medicine desirable

Applicant must be at least 40 years of age

The gentleman appointed will be required by the Committee to devote all his time to his professional duties The appointment will be subject to the provisions of the Asylums Officers Superannuation Act 1909

Application accompanied by copies of recent testimonials must be made to the Committee of Management endorsed Resident Medical Superintendent and received by the Clerk of the Hospital up to March 5th.

Canvassing directly or [illegible] disqualify

By Order of the [illegible]

The Prince of Wales's General HOSPITAL Tottenham N 15

The following resident posts will be vacant on April 1st next

(a) ONE SENIOR HOUSE PHYSICIAN
(b) TWO SENIOR HOUSE SURGEONS
Salary at the rate of £120 per annum
(a) ONE JUNIOR HOUSE PHYSICIAN
(b) TWO JUNIOR HOUSE SURGEONS
Salary at the rate of £90 per annum
Board residence and laundry

Appointment held for six months but holders are eligible for a further term

Candidates (male) must be fully qualified and registered and applications (on the prescribed form) together with copies of three recent testimonials should be sent to me on or before the first post on Wednesday March 2nd

J C BUDDETT Director

Birkenhead General Hospital (156 Beds)

Applications are invited for the following resident posts (male) for the six months commencing April 1st next viz

SENIOR HOUSE SURGEON Salary £150 per annum with board residence and laundry

HOUSE PHYSICIAN Salary £100 per annum with board residence and laundry

CASUALTY OFFICER Salary £100 per annum with board residence and laundry

Applications stating age nationality and qualifications together with three recent testimonials to reach the undersigned as early as possible

W H DANIELS Secretary Superintendent

Royal Manchester Children's HOSPITAL PENDLEBURY near MANCHESTER (190 Beds)

Wanted a RESIDENT MEDICAL OFFICER salary £125 per annum who will be appointed for six months Duties to commence April 1st

Candidates must be unmarried and duly registered Previous hospital experience essential

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned not later than Wednesday March 9th

Canvassing directly or indirectly will disqualify

By Order
W W HUMPHRY
February 16th 1932 Secretary

Elizabeth Garrett Anderson HOSPITAL, Euston Road

Wanted fully qualified Woman for the post of OPHTHALMIC ASSISTANT Appointment for four months Salary at the rate of £[illegible] per annum with board residence and laundry Applications with copies testimonials should be sent to the undersigned not later than [illegible]

[illegible] Secretary

(Advertisement continued on page 50)

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W.C.1
TELEGRAPHIC ADDRESS WESTCENT LONDON
Telephone MUSEUM 9861 (4 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) **9s**
Each Additional Line, 1s 6d

(a line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

Wanted — Assistant, with ultimate view for mixed rural Practice (Cornwall) English or Scot Excellent prospects for capable conscientious man Good experience hospital and general (including midwifery) essential Not over 35 Work light Salary £450 and rooms —Address No 1130 B M A House Tavistock Square W C 1

Wanted — Assistant till June end prospect of further engagement Work light Car when necessary Usual bond Male or female Comfortable rooms —Address stating age and nationality also references No 1109 B M A House Tavistock Sq W C 1

Wanted — Assistant, large general Practice London S W £300 and rooms Scots Graduate with previous house appointments preferred — Address giving particulars of experience No 1113 B M A House Tavistock Square W C 1

Wanted — Assistant, male, single young able to drive car live at Branch Surgery small country town Welsh preferred but not essential Usual bond State full particulars —Address No 1126 B M A House Tavistock Square W C 1

Wanted, immediately, male ASSISTANT in Colliery Practice (Glamorgan) Welsh speaking pref Married or single Furnished house coal and light free Salary according to experience —Address No 1136 B M A House Tavistock Sq W C 1

Wanted — Outdoor Assistant, male young active unmarried Residential Country Town Cheshire Able to drive car Salary £350 to £400 according to experience Usual bond Disp kept Full parties —No 1123 B M A House Tavistock Sq W C 1

Wanted, March 22nd, Indoor ASSISTANT male unmarried East End London near City Work light no midwifery Salary £300 p.a Usual bond Give all particulars — Address No 1224 B M A House Tavistock Square W C 1

Wanted —Assistant for Colliery Practice in Glamorgan Salary £400 with rooms (outdoor) Send particulars and photo if possible —Address No 1222 B M A House Tavistock Square W C 1

Wanted — Assistantship, with view by L R C P S I Ex Colonial Medical Service Good experience of general and panel work Excellent references — Address No 1121 B M A House Tavistock Square W C 1

Wanted immediately — Indoor and Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particular —BRITISH MEDICAL BUREAU 33 Cross Street Manchester

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Wanted — Part-time Assistantship indoor by young gentleman doing [illegible] evenings and week ends — Address No 1102 B M A House Tavistock Square W C 1

Wanted at once, male Assistant, [illegible] for country Practice London [illegible] 1123 B M A House Tavistock

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Assistant (man or woman) indoor wanted country town Midlands State age height religion and full particulars —Address No 1011 B M A House Tavistock Square W C 1

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M D, M R C P E, aet 40, married Would like PARTNERSHIP in good class Practice Holds public health appointment as Tuberculosis Officer Has had previous experience in general practice Hospital in vicinity desired Midlands South of England or the West preferred Capital available —Address No 1110 B M A House Tavistock Sq W C 1

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Nucleus Practice for Sale in London Kentish Town District Sixth Panel or near offer—Address No 1124 B M A House Tavistock Square W C 1

Practice for disposal, London, E two years purchase Income over £1 000 Panel 2 200 about Appointments in addition of £380 approx Good house main road opposite park on sea rent £65 Suit two young men In Vendors hands 25 years Capable of being doubled if midwifery taken —Address No 1111 B M A House Tavistock Square W C 1

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[illegible] growing district About £2 700 and great scope One third share for sale now at 2 years purchase increasing later Panel 1 460 Appts £40 House with 3 recep 5 bed etc Free sale at £1 800 Others available—No 8940

London, N W — Estab 3 yrs, about £650 p a Panel 300 and working class Visits 3/6 up Surgery 2/ up Large corner house good position 6 bed 2 recep and surgery etc Rent £120 p a on lease Premium £750 for quick sale—No 8906

Sussex, favourite part on high ground about £1 300 p a Non panel dispensing Little or no midwifery fees 5/ to 21/ Large house with recep and cons rooms and garages £200 Smaller house £120 [illegible] room 2 recep and 4 bedrooms Practice in £2 000 cash—No 8954 an income of

Midlands —£3,000 a year [illegible] panel not [illegible] estab Same hands over [illegible] Partner 5 years One third share [illegible] more later at 2 years purchase [illegible] able to rent Station close [illegible] Extensive district very little op[illegible] 1 600 Personally known and [illegible] No 8952

Eastern County —£[illegible] A third share p a [illegible] Assistancy [illegible] panel not objected—[illegible] 2 years B M A House Tavistock Square W C 1 stand [illegible]

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LIVERPOOL—PRACTICE in good Industrial area Cash receipts 1931 £685 Panel nearly 800 Scope for increase Good house 2 reception 4 bedrooms Rent £52 p a Premium £1 000—No 331

MEDICAL WOMEN'S PRACTICE—MANCHESTER — Old established Cash receipts 1931 £645 Panel 450 Good ope Excellent house 3 reception 6 bedroom Garage Rent £80 p a on lease Premium 1¼ year purchase—No 330

CHESHIRE TOWN—NEAR MANCHESTER — PARTNERSHIP in Mixed Practice Average cash receipts £2 267 p a Panel 1 100 Good house available 2 reception room 3 bedroom Garage and small garden Premium—one third share—1½ years purchase after one months assistantship Half share in three years—No 318

NEAR [illegible] dential di pen [illegible] Avera [illegible] ceipts la Small panel of 450 Well situated establi he rechold detached house 2 reception rent Fir bedroom Garage Premium—Practice—1¼ years purchase—CAL AGENCY 329

—So South [illegible]

New [illegible] erage cash receipts £1 369 p a Appointments—months transfer [illegible]—approximately £265 p a Panel 1 037 Excellent house 3 [illegible]ourer or reception 6 bedroom garage and large garden Premium—[illegible]ractice—1½ years purcha —No 326

Practice [illegible]NCHESTER — Sound PRACTICE of £1 000 Panel 1 100 [illegible] Cool house 2 reception 3 bedrooms Rent £75 p a [illegible] Premium 1 years purchase—No 316

£1 000 [illegible]

addition of [illegible]NCS TOWN—Old-esta [illegible]shed mixed PRACTICE Average cash road opportunity £995 p a Panel 710 Excellent house in pleasant district two young ct 2 reception 4 bedroom Garage and garden Premium—Capable o years purchase—No 298

—Address [illegible] Sale [illegible]NCHESTER—Old established PRACTICE in present hand over Tenders [illegible] year Cash receipt last year £1 409 Panel 885 Scope for [illegible]d of mid [illegible]e Rent of urgent premises £50 p a Premium 1¼ years BMA Hou [illegible]e—No 328

[illegible],000—Mixed General PRACTICE. Cash receipt last year [illegible] Panel 950 Scope for increase Good house 3 recep [illegible] 5 bedroom Rent £75 p a or would sell for £1 250 [illegible] annum [illegible] 1 years purchase—No 324

[illegible]sposal in Liv [illegible] Chemist

MANCHESTER—Old established PRACTICE Cash receipts last year £1 513 Panel 1 697 Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1½ years purchase—No 325

GLAMORGANSHIRE—Old established PRACTICE Cash receipts £1 100 p a Panel 1 000 Pleasant house 2 reception 4 bedrooms Garage and garden Rent £48 p a Premium—for quick sale—one years purchase—No 320

YORKSHIRE—Pleasant City—TWO PARTNERS required in sound Practice Average cash receipts £5 000 p a Panel 4 000 Share of three fifteenths each at 2 years purchase—No 325

MANCHESTER—Middle class PRACTICE in pleasant suburb Cash receipts 1931 £1 327 Panel 459 Charming house 3 reception 6 bedroom billiard room Large garden and garage Premium—Practice—1¼ years purchase—No 322

CHESHIRE COAST TOWN near LIVERPOOL—Middle class PRACTICE Average cash receipts £1 184 p a Appointment £80 p a Small select panel Excellent corner house 3 reception 5 bedroom Premium—Practice—1½ year purchase—No 317

MANCHESTER — RESIDENTIAL SUBURB — Middle class PRACTICE Suitable for two in Partnership (one a good surgeon) Cash receipt 1931 £4 578 Panel 1 400 Two excellent houses with ample accommodation Premium 1½ year purchase part by arrangement—No 277

NEAR LIVERPOOL—PARTNERSHIP in good class Practice Cash receipts approx £3 000 Good house available Premium—one third share—2 years purchase—No 309

MANCHESTER—MIXED PRACTICE suitable for two in Partnership Cash receipts last year £2 840 Panel 2 156 Good scope Two excellent houses available with ample accommodation Premium—Practice 1 years purchase—No 321

NEAR PRESTON—PRACTICE offering cope Cash receipts 1930 £700 Panel 300 Good house 2 reception 4 bedrooms Rent £70 p a Premium 1½ years purchase—No 254

MANCHESTER—PARTNERSHIP in Practice of about £1 600 p a Panel 1 550 House available to rent Premium—half share—1½ years purchase—No 303

LIVERPOOL—Old-established middle class PRACTICE Cash receipt over £2 000 p a Panel 900 Excellent house 2 reception 7 bedrooms garage and garden to rent—No 276

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YORKSHIRE
Phoenix Chambers, South Parade, Leeds
(Tel 25771)

NORTHERN IRELAND
72, High Street Belfast.
(Tel 7636/7 Gram Vouch Belfast

All communications to be addressed to the *Branch Manager* BRITISH MEDICAL BUREAU 33 CROSS ST MANCHESTER

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)

(FOUNDED 1880)

12, Stratford Place, Oxford Street, W 1.

Tele Address Triform Wesdo—London

Telephone Mayfair {1782 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending its members to consult Mr A V STOREY, the General Manager, in all transactions requiring the services of a Medical Agent

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them

NORTHERN BRANCH

The Manchester Medical Agency, lately under the control and management of the Manchester Medical Committee has now been taken over by the British Medical Bureau as their Northern Branch

Medical Practitioners in the North requiring the services of the Bureau are recommended to consult the Branch Manager at the Offices 33 Cross Street Manchester

Telephones CITYPAL 3925 after Office Hours RUSHOLME 2549
Telegrams LOCUM MANCHESTER

Practices and Partnerships for Disposal — **Full particulars sent free**

1 EAST ANGLIA — Partnership in unopposed Practice of £3 580 p a in small market town in beautiful part Panel 1 900 Good house (6 bedrooms) in excellent order with three quarters of acre of garden for sale Cottage Hospital and ample scope for surgery Premium one third share 2 years purchase

2 W OF ENGLAND —Partnership in Practice averaging £2 360 p a on outskirts of first rate town Panel 2 400 House with 5 bed and dressing rooms for sale One third share at 1st year purchase Preliminary Assistantship

3 STAFFS — Partnership in Practice over £4 000 p a in manufacturing town Panel 4 700 Suitable house to rent Premium one third share at 1 years purchase

4 MIDLANDS — Partnership in Practice nearly £1 900 p a in good town Panel 1 100 Partner must be Public School or Oxford or Cambridge man Prospect of Hospital appointment to one holding F R C S One half share at 2 years purchase with ultimate succession

5 N WALES —Practice in small Wateringplace Receipts 1931 £575 Panel 238 Mod in house very easily run with ample accommodation at nominal rent Very bracing climate Excellent shooting fishing Scope for increase Premium £450 Welsh not essential

6 W MIDLANDS —Partnership of upwards of £2 000 p a in mail market town Suitable house to rent One half share for sale

7 DEATH VACANCY — S COAST HEALTH RESORT —High class general and consulting PRACTICE over £5 000 p a No Panel House (9 bedrooms etc) in good position with garage and large garden for sale

8 MIDLANDS —Partnership in sound non-dispensing Practice in beautifully situated county town Panel 2 000 Good will qualified Physician required aged 30 35 Share of about £1 150 p a at 2 years purchase with early increase Cottage Hospital with prospect of appointment on Staff at an early date

9 WITHIN 30 MILES OF LONDON — PARTNERSHIP in non-dispensing Practice of about £5 000 p a in first rate country town Panel 1 750 Good house (4 bedrooms etc) to rent Partner should be aged 30 35 and must hold the F R C S Premium one half share 2 years purchase

10 E ANGLIA —Partnership in Practice of about £3 000 p a in small old market town Partner must be Graduate Premium one third share 2 years purchase

11 YORKSHIRE — Country Practice in delightful part of county Practice established over 30 years average £ 500 p a including £650 p a from panel Receipts for year ended 31st March last £1 150 House to be taken with Practice at rent of £70 Electric light gas and water supply Premium £2 500

12 WITHIN 70 MILES OF LONDON — Lucrative PRACTICE of over £2 200 p a in flourishing county town Panel 1 830 Excellent house (6 bedrooms) in best part for sale or rent Premium 1½ years purchase

13 BIRMINGHAM —Partnership in Practice of about £2 500 p a in suburb Panel 2 400 Good house (6 bedrooms etc) for sale or rent Partner must have had Hospital experience and be accustomed to minor surgery One third or two fifths share for disposal Preliminary Assistantship if desired

14 BIRMINGHAM — Practice averaging £584 p a in good class suburb Small panel but ample private Very little midwifery Low expenses House with garage to rent Premium 1½ years purchase or near offer for quick sale

15 WILTSHIRE — Country Practice over £1 300 p a in a most picturesque village Panel about 700 Good detached house (6 bed and dressing room) garage and large garden to rent Premium £2 200

16 LONDON, W —Partnership in rapidly increasing Practice of about £2 000 p a in suburban residential Panel 2 000 One third share at 2 years purchase Partner must be a Scotsman (preferably Edinburgh or St Andrews)

17 FAMOUS UNIVERSITY TOWN —Sound well established non dispensing non panel PRACTICE Receipts average £3 300 p a including good proportion from Undergraduate Appointments Not much midwifery Very good house (6 bedrooms etc) in best position to rent on lease Premium 1½ years purchase

18 SURREY — Partnership (after Preliminary Assistantship) in Practice about £3 000 p a in first rate residential district Panel about 1 500 Incoming partner should be Graduate of Oxford Cambridge or London and aged about 30 Premium one third share 2 years purchase

19 ITALY —Old-established Practice in an attractive City Receipts last 2 years averaged £1 400 p a No midwifery or night work Suit gentleman of experience married and with good social attainments Reasonable premium

20 W OF ENGLAND —Partnership in Practice in pleasant country town Cash receipts average about £5 200 p a (including panel and appointments over £1 000 p a) Charming old house (6 bedrooms and attics etc) garage and beautiful garden Plenty of sport Scope for increase Premium for one fifth share 2 years purchase

21 S T COAST — Popular Resort —Partnership in mixed class Practice about £3 600 p a Panel about 2 000 Freehold beautifully situated house (6 bedrooms etc) with garage and garage for sale Five twelfths share for disposal at 2 years purchase

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)

(FOUNDED 1880)

12, Stratford Place,

Oxford Street, W.1.

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Practices and Partnerships for Disposal (continued)

22 LONDON, S.E. — Partnership (with succession) in old established middle class Practice averaging nearly £2,400 p.a. in pleasant open suburb. Panel about 820. Little night work. Good house with garage and nice garden for sale or rent. Premium one-half share 1½ years purchase.

23 GLAMORGANSHIRE — Working-class Town PRACTICE averaging over £1,100 p.a. Panel 1,000. Modern house (5 bedrooms) in pleasant surroundings with garage and garden to rent. Premium (including drugs) 1 years purchase.

24 MIDLANDS — Partnership in Country Town Practice averaging about £3,500 p.a. Panel over 1,500. Scope for increase. Premium for one-fourth share 2 years purchase.

25 LONDON, N.W. — Practice in suburban district. Receipts 1931 £700. Panel 300. Corner house (5 bedrooms) garage and garden to rent on lease. Premium £750.

26 SUSSEX — Country Practice between £1,200 and £1,300 p.a. in delightful part. No panel. Large residence (9 bedrooms etc.) garage and garden of four acres to rent on lease. Premium £1,800.

27 EASTERN COUNTIES — Partnership in Practice of about £3,650 p.a. in country town. No panel. Suitable house available. Good educational facilities. Premium one-half share £2,500.

28 SURREY — Partnership in increasing middle-class Town Practice of £2,300. Panel over 1,200. Modern detached corner house (5 bedrooms) garage and garden for sale. Partner should be 26-30 and have held Hospital appointments. Share of £1,000 p.a. at 2 years purchase.

29 N. OF ENGLAND — Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgery, anaesthetics and obstetrics. Share of three-fifteenths at 2 years purchase.

30 LONDON, N.W. —Non-dispensing Practice over £950 p.a. in good residential district. No panel. Ten roomed house with garage and large garden. Rent £200 p.a. Premium £1,200.

31 N. MIDLANDS —Partnership in Practice, about £3,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years purchase.

32 EAST ANGLIA — Partnership in good-class non-dispensing Practice of about £3,000 p.a. in favourite Seaside Resort. Partner should be a Varsity man about 30 years of age experienced in Medicine and Anaesthetics. Good up-to-date Hospital. Premium for one-third share 2 years purchase.

33 W. OF ENGLAND —Practice about £800 p.a. in first-rate City. Panel 1,324. Well-built house (4 bed and dressing rooms) to let. Excellent scope. Premium £1,450.

34 S.E. COAST — Easily worked Practice in exclusive part of seaside town. Receipts last year £1,050 including appointments over £200, fees from resident patients and small panel. Large modern house with beautiful garden to rent. Ample scope. Premium £1,150.

35 S. WALES —Increasing Practice of £900 p.a. in pleasant Market Town. Panel 150. Well situated house (rent £35 unfurnished) with 3 bedrooms for sale. Cottage Hospital. Premium.

36 LONDON, N.W. —Practice (carried on by Medical Woman) doing about £280 p.a. in main thoroughfare. Panel 120. Shop-fronted house to rent on lease. Good scope for increase. Premium £300.

37 LONDON, W. —Steadily increasing Practice, carrying about £750 p.a. mostly from Lock-up Surgery. Panel about 500. Well situated corner residence (3 bedrooms) to rent. Premium £950.

38 LONDON, S.W. — Small Practice of nearly £400 p.a. close to the West End. Select panel about 417 with scope. Corner house with ample accommodation to rent on lease. Premium 1½ years purchase or near offer.

39 DURHAM —Practice of over £500 p.a. in residential and colliery district near large town. Panel 370. Substantially built 9-roomed house for sale. Scope for increase.

40 NEW ZEALAND — NORTH ISLAND — Non-dispensing PRACTICE about £1,800 p.a. in first-rate town. Modern detached house (4 bedrooms etc.) garage and garden for sale. Enviable climate. Good educational facilities. Premium only £1,250.

41 BIRMINGHAM —Practice of about £1,000 p.a. in one of the best residential suburbs. Small panel and very little midwifery. Well situated house (6 bedrooms) good garden and garage for sale. Good scope. Premium 1½ years purchase.

42 NORTH OF ENGLAND — Small Season PRACTICE in Inland Health Resort capable of increase by one practising all the year round. Receipts about £150. No panel or midwifery. House in own grounds with 6 bedrooms etc. Price—house and Practice—£1,250.

43 EAST ANGLIA —Partnership in Practice over £4,500 p.a. in beautiful country district easy access of important town. Panel 3,000. Nice detached house (7 bedrooms) garage etc. garden and grounds of 10 acres for sale. Sport of most kinds. Considerable scope. Premium two-thirds or four-ninths share 2 years purchase.

44 SOUTH AFRICA —Easily worked Country PRACTICE in healthy district (elevation 2,000 ft.) in Cape Colony. Cash receipts year ended June 1931 over £1,000. Sport of all kinds. Well built house. Premium—house and Practice—£1,225.

45 KENT —Country Practice of over £800 p.a. in beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms) central heating, grounds of 2½ acres orchard etc. for sale. Sport. Premium 1½ years purchase.

46 S. OF ENGLAND —Partnership in Ophthalmic Practice about £1,300 p.a. in small but delightful resort. Considerable scope to one able to operate. Premium one-half share 1½ years purchase.

47 HOME COUNTIES —Partnership in exceptionally good and rapidly increasing Practice about £6,000 p.a. in delightfully situated Country Town, easy distance of coast. Attractive house (4 bedrooms) to rent. Partner must hold the F.R.C.S. and be aged about 30. Appointment on Hospital Staff. Premium for one-sixth to one-fourth share 2 years purchase. Preliminary Assistantship.

48 SHROPSHIRE — Practice £800 p.a. in market town. Panel 170. House (5 bedroom) garage and garden to be sold or let. Premium 1½ years purchase.

49 KENT — Country Practice of about £850 p.a. Panel 550. Good house and garden for sale. Prem. £1,100.

50 SOMERSET — Practice averaging £870 p.a. in country town. Panel under 200. House with 6 bedrooms garage and small garden to rent or purchase. Scope for increase. Premium £1,300.

51 LONDON, S.W. —Practice about £500 p.a. in suburban district. Panel 650. No midwifery. Semi-detached corner house (6 bedrooms) for sale. Scope. Premium 1½ years purchase.

52 WITHIN 12 MILES OF LONDON — PARTNERSHIP in rapidly increasing cash Practice about £1,600 p.a. in developing industrial district. Panel nearly 1,950. Small house available. Large cottage hospital. Two-fifths or one-half share 2 years purchase.

53 LONDON, S.W. — Increasing Practice in outlying suburb. Bookings last year £890. Panel about 500. Modern house (3 bedrooms). Premium £1,000.

MEDICAL PARTNERSHIPS TRANSFERRED AND ASSISTANTSHIPS (PARNARD & STOCKER) *Post free* 12/6

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(ESTABLISHED BY J A. REASIDE IN 1893)

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ESSEX —Within 12 miles of London —Mixed G P situated in growing locality Medium sized house available Receipts nearly £1 200 Panel approx 1 200 Excellent scope Premium 2 years purchase

LONDON —Mixed C I situated in Eastern Suburb Medium sized corner house Receipts £763 9s 5d books audited Panel approximately 1 000 increasing Premium £1 340 for Practice £900 for lease *Hold house or near offer*

LONDON W —PARTNERSHIP in West End Practice Receipts over £3 600 Panel nearly 1 000 Premium for 1/3 share £3 000 Suitable opening for man with good address and experience preferably aged about 30

KENSINGTON — Good class non dispensing and non panel PRACTICE Large house to rent on lease Receipts approx £400 One appointment Fees 10/6 Premium £500

LONDON N W — Well established mixed PRACTICE mainly better class with excellent house situated on main thoroughfare Receipts approx £900 Panel over 420 Fees 3/6 up No midwifery One appointment *Part of house* sublet if desired Vendor has developed better class of practice at good fees *Premium £1 300 cash*

LONDON E —PARTNERSHIP in middle and working class Practice Receipts over £2 000 Large panel Scope for increase especially midwifery Premium for 2/5ths share 2 years purchase with view to larger share

LONDON E —Well established and growing PRACTICE in thickly populated locality Receipts approximately £1 200 Panel about 1 000 House to rent on lease Fees 2/ up Excellent scope One appointment Premium 2 years purchase or near offer

DURHAM —Middle class and industrial PRACTICE Average receipts approx £500 Panel 370 Medium sized house Branch surgery Fees 2/6 up No appointments Prem £725 or offer Excel scope

YORKS —PARTNERSHIP in middle and working class Town Practice Receipts approx £3 000 Panel over 2 000 House to rent Premium for 1/4 share 2 years purchase

ESSEX —Seaside Resort —Good mixed class G I with scope for increase Excellent modern house to rent on lease or for sale Fees 3/6 up Appointments over £200 Receipts over £1 000 Small select panel Premium £1 150 to include drugs

LONDON S E —Near West End —Cash and panel PRACTICE (Lock up) Shop fronted surgery held on lease at £70 p a part sublet Receipts average approx £400 Panel 517 Excellent scope for one grain whole time and undertaking midwifery Premium 1½ years purchase or near offer

BERKS —PARTNERSHIP —Country Rural Practice in sporting district Receipts average nearly £1 150 Panel nearly 600 Fees 2/6 up Short preliminary Assistantship 1/3 to 1/2 share for disposal at 1½ years purchase Suitable to experienced man British aged 27 upwards

YORKSHIRE —Well established mixed rural PRACTICE Suitable house available (4 beds) Receipts approx £1 000 Panel 620 Fees 3/6 up One appointment Premium 1½ years purchase

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known country town Receipts approx £6 000 Select easily run panel Medium sized house to rent Premium for 1/4 share 2 years purchase This Practice has been known to the Agency for many years and is highly recommended It is essential that the incoming Partner shall hold the L R C S and be aged about 30 *Appointment to Hosp Staff*

NORTHANTS —Old established Country PRACTICE situated in charming locality Hunting and sport of all kinds Highly suitable for semi retired Practitioner Splendid house in own grounds to rent or purchase central heating electric light etc Receipts £500 Panel 400 Premium £550

EASTERN COUNTIES —Cathedral City —PARTNERSHIP in good class non panel Practice Receipts average £4 450 Excellent opportunity for first class man on the medical side Probability of Hospital appointment Quarter share to commence at 2 years purchase

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FOR SALE

1 LONDON (near Stratford Broadway) —Well established cash and panel PRACTICE Receipts average £550 p a panel 575 House on lease £75 p a Premium £525 or near offer Vendor going abroad

2 LONDON S E.—Well established PRACTICE Receipts average £1 340 a year including panel 640 House on long lease Premium £1 500 payable say £350 down Excellent opportunity

3 LONDON S E —Small but steadily increasing PRACTICE Doing at present £4 per week with a panel of 90 Surgery rent 22/6 weekly *Prem req £175 or near offer*

4 Few minutes of Harrow Road W —Very old established cash and panel PRACTICE Receipts private £900 and panel 2 000 House £50 p a (partly sublet) Densely populated area Premium £3 000

5 LONDON E — Old established PRACTICE Receipts average nearly £600 p a panel 900 10 roomed house on lease Premium £700 for quick sale Ill health cause of selling

6 LONDON S W (Streatham Hennington) — Old established Practice Receipts average £700 a year including panel 650 Nice house on long lease rent £3 p week Prem £1 400 Practice steadily increasing

7 LANCS — Large Town —Death Vacancy — Old established panel PRACTICE held 5 years Assistantship if desired £20 p a House to be sold with Practice Premium £1 £1 £1 £1 000

8 ESSEX — Small Town —Well established PRACTICE Receipts average £ p a including panel 650 Nice house on long lease rent £ p a Premium £ p a

9 BRISTOL N W —Well established Cash and Panel PRACTICE Receipts average £ p a panel 250 Lease of house £ p a Premium £500 Owing to [illegible] of partner

ESTABLISHED 1877

LEE & MARTIN, LTD,

The Birmingham Medical Agency,

71, TEMPLE ROW, BIRMINGHAM

Telegrams Locum Birmingham *Telephone* 5963 Midland Birmingham

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FOR DISPOSAL.

1 MIDLANDS —COUNTY BOROUGH —PARTNERSHIP (One Third Share) in old established panel and industrial Practice Receipts £4 200 Panel 4 700 *Good house to rent*

2 BIRMINGHAM (Good class suburb) —Private PRACTICE with small panel but ample scope if encouraged Receipts nearly £600 p a. Good house to rent Garage etc

3 LANCS —SEASIDE TOWN —Panel and private PRACTICE Receipts last year nearly £900 Small panel Both increasing Good fees House to rent (5 beds) Garage etc

4 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Garage etc

5 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE. Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

6 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

7 SOUTH WALES —Contract and middle class PRACTICE. Receipts average £1 100 Panel about 1 000 Good house to rent Lawn garage etc

FINANCIAL ASSISTANCE afforded to approved applicants for the purchase of Practices or Partnerships on very reasonable terms. Full particulars on application.

THE

WESTERN MEDICAL AGENCY

(Dr K H BENNETT Dr W J PARAMORE)

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(Bond Street Station) *Tel* Mayfair 6941

NO CHARGE TO PRINCIPALS FOR SUPPLYING LOCUMS AND ASSISTANTS

FOR THE SALE OF A PRACTICE OR PARTNERSHIP MAXIMUM FEE IS £50

1 *COUNTRY PRACTICE* —Old established in pleasant country Last year £1 750 accts figs Panel 946 Appts £120 In present hands 23 years Good house garage large garden House and Practice £5 000 Borders of Monmouthshire *Good scope*

2 DEVON —Seaport Town — In growing district £520 in last 15 *months* Panel 300 Good house to rent Prem £400 Great *scope Selling* owing to ill health

3 COUNTRY TOWN —PRACTICE £900 p a in Carmarthen Prem £850 Good house to rent £45 p a

4 MONMOUTH — Old established PRACTICE Receipts £300 p a. *In same hands* 30 years Good house Selling owing to age and ill health Populous district £1 000 for house and Practice

5 DEVON —Seaside Town —Doctor's house 25 years with small PRACTICE attached Vendor retiring Details on application

6 COUNTRY TOWN — *Gloucestershire* —Third Share with inc to half share later Last yr £1 800 Choice of house Prem 2 yrs purchase

7 DEVON — Unopposed Country PRACTICE Last year £675 Panel 250 Scope for increase M O £71 Rent £32 p a Prem 1½ years purchase Suitable for man or woman

8 GLAMORGAN — Old established Country PRACTICE 1 opponent £1 100 p a accountant's figs Panel 1 000 modern house in pleasant situation with garden Rent £48 p a *Prem 1 yrs purchase* £950 p a Easily worked Small panel Excellent house with good garden Surgery £210 Price £1 150 incl drugs

9 ESSEX — Seaside Town —PRACTICE over £950 p a Easily worked Small panel Excellent house with good garden Surgery £210 Price £1 150 incl drugs

10 MIDLAND CITY — Old established PRACTICE Receipts last year £2 740 Panel 500 recently established *Increasing* Excellent house to rent Prem £3 400

FINANCIAL ASSISTANCE for PURCHASERS and all classes of MEDICAL INSURANCE arranged

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ALDINE HOUSE,

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Under the personal directorship of Dr J FIELD HALL and J C NEEDES

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No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 DEATH VACANCY — FAVOURITE SOUTH COAST WATERING PLACE—Highly non-panel non-dispensing PRACTICE averaging over £4 000 p.a. for last five financial years Fees from consulting work average for same period £1 411 p.a. not included in foregoing figures Good house in excellent position with large garden garage etc Premium for whole £5 000 or £1 500 each plus one fifth of earnings for 4 years and house on mortgage for £2 500 (estimated value £3 000)

2 SOMERSET—SUBURB OF FAVOURITE TOWN—PARTNERSHIP—A one-third share (after a preliminary Assistantship of about six month at £300 p.a. indoor) is offered in an old-established mixed class Practice averaging for the last three years £2 371 p.a. Panel of over 2 400 Fees from 3/ Suitable house with 2 reception 4 bedrooms dining room separate entrance to professional rooms electric light Fair-sized garden Garage Price for freehold £1 000 part on mortgage Premium for share one and a half years purchase

3 PARTNERSHIP—LONDON SUBURB (SOUTH-EAST)—Owing to the retirement of one of the three partners the third share of an old established middle and working class Practice situated in a well-populated district is for immediate disposal Cash receipts for past three years average £4 862 p.a. including appts over £500 p.a. and panel of about 5 300 Very little midwifery Expenses small Suitable house available Rent £40 p.a. Premium 2 years purchase

4 MIDLANDS—COUNTY TOWN—PARTNERSHIP—A one-third share (or larger share if preferred) is offered in a well-established good middle and working class Practice Gross cash receipts average over £2 000 p.a. including panel of nearly 2 000 Fees 2/6 to 5/6 Not much midwifery Suitable flat available above surgery or house can be rented Premium for share 2 years purchase

5 SOUTH-WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP—A share producing about £800 p.a. with further increase later is offered in an old-established non-panel and non-dispensing Practice having large scope for development Fees from 5/6 to 21/ Midwifery 5 to 10 gns A suitable house can be rented at £90 p.a. Premium for share 2 years purchase Good Hospital with over 250 beds Incoming partner should be experienced and hold M.D. London

6 LONDON SOUTH-WEST—PARTNERSHIP—A one-fourth share (after [illegible] six months at a salary of £540 p.a.) in [illegible] middle and working class Practice [illegible] gross cash receipts for the last three years £4 177 Panel of about 4 500 Fees from 1/6 to 7/6 Midwifery from 3 gns House contains 3 sitting room 3 bedroom bathroom etc Garden Can be rented at £55 p.a. Premium for share 2 years purchase half down and balance by instalments

7 [illegible] fourth share is offered (with increase later) in a good mixed-class Practice situated in [illegible] ting district and within easy reach of popular seaside resort Average gross cash receipts for the past three years £3 700 Panel of 1 500 Fees 3/6 to 21/ Very suitable house with 2 reception 4/5 bedrooms etc and professional room Can be rented at £50 p.a. Sport of all kinds and good school Premium for share £1 400

8 FAVOURITE SOUTH-WESTERN COUNTY—PARTNERSHIP—A two-thirds or three-fifths share is offered in a well-established Practice situated within easy reach of good residential town Gross cash receipts for last 12 months £2 522 Panel of 1 500 Visits 3/6 to 10/6 Very up-to-date attractive house with 2 reception 6 bedrooms Price for freehold £2 500 payable £1 000 down and £1 500 on mortgage Premium for share two years purchase Good sporting social and educational facilities Surgical scope if desired

9 HOMŒOPATHIC PRACTICE—DEATH VACANCY—LONDON WEST END—well-established connection Gross cash receipts have averaged between [illegible] £3 000 and £4 000 p.a. Suitable house can be obtained on [illegible]tal Offers invited

10 YORKSHIRE — COAST TOWN—Old-established mixed class PRACTICE in attractive seaside and holiday resort offering good scope for increase and surgical work Average gross cash receipts for last three years over £1 822 Panel of 500 Fees from 5/ to 21/ Midwifery from 2 to 5 gns Exceptionally nice labour-saving house specially built with 2 reception 6 bedrooms etc Separate entrance to professional rooms Electric light Garden Garage Freehold for sale at valuation Up-to-date Hospital Premium £1 800 for prompt arrangement owing to ill-health

11 SOUTH WALES — Residential town near coast—Well-established mixed class PRACTICE in beautiful surroundings averaging between £900 and £1 000 p.a. Panel of 125 and appts worth £450 p.a. Fees from 5/6 to 21/ Not much midwifery Good house with 2 reception 6 bedrooms etc and professional rooms Garden and garage Rent on lease £82 10 p.a. Hunting excellent fishing etc and good educational facilities Premium £750 or near offer for prompt sale

12 SUFFOLK—FAVOURITE COAST TOWN—PARTNERSHIP—A one-third share (with increase later) is offered in an old-established good-class Practice averaging for the past three years £2 766 including panel of 941 Low fees 5/ Midwifery 2 gns upwards about 36 cases Choice of houses Excellent social sporting and educational facilities Premium for share £2 000

13 SOUTH OF ENGLAND—FAVOURITE COAST TOWN—Old-established chiefly better class PRACTICE producing about £1 800 p.a. Small selected panel Fees 5/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

14 MIDLANDS—Old-established good mixed class unopposed PRACTICE situated in an attractive country town with beautiful surroundings Average gross cash receipts for last 3 years £1 584 including panel of 974 Good appts worth nearly £200 p.a. Fees from 3/6 Very nice house with 3 reception 6 bedrooms separate entrance to professional rooms Good garden with tennis lawn etc Garage for 2 cars Price for freehold £1 850 of which a good proportion could remain on mortgage Excellent sporting and social facilities and schools Premium 1½ years purchase

15 WITHIN 60 MILES OF LONDON near County Town—Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p.a. and offering good scope Selected panel of about 170 and appts worth £160 p.a. Fees 2/6 to 10/6 Very [illegible] house with beautiful garden con[illegible] etc Separate entrance to professio[illegible] for 2 cars Price for freehold £1 [illegible]

16 WEST OF [illegible] established PRACTICE producing n[illegible] £300 p.a. including panel of over 1 500 Suitable house in excellent position Price £700 or can be rented at £60 p.a. Premium £1 450 Good scope for increase

17 ABERDEENSHIRE COAST—Old-established mixed class PRACTICE in attractive district averaging about £950 p.a. including panel of over 500 Fees from 3/6 Suitable house with 2 reception 5 bedrooms and professional rooms etc Good garden Garage Can be rented at £55 p.a. Premium 1½ years purchase

18 NORTH MIDLAND CITY — PARTNERSHIP — Two Partners are required to take over a three-fifteenths share each (with increase later) in a very sound old-established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ [illegible] be obtained Premium 2 years pur[illegible] [illegible]ools

19 LONDON [illegible] middle class non-dispensing PRACTICE [illegible]ears £840 including appts worth about £300 p.a. and panel of 120 Fee 5/6 to 21/ Purchaser can choose his own residence Premium £1 250

20 NORTH WALES—Very old-established good mixed class PRACTICE averaging £880 p.a. including panel of 433 Fee 2/6 to 10/6 medicine extra Suitable house with 2 reception 6 bedrooms etc Can be rented on lease at £50 p.a. Good sport Premium to include motor car £1 200 £400 down and balance by arrangement Ill-health reason for sale

21 LONDON S.W.—Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for lease-hold (94 years to run) £1 200 part on mortgage Premium £1 050

22 MIDLANDS—PARTNERSHIP—A one-third share is offered in a very sound middle and working class Practice held by the senior partner for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fee 5/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Prem 2 years pur

23 MID-WALES—Agricultural District—Mixed class PRACTICE producing about £880 p.a. including mall panel of 130 Fees 3/6 to 21/ Small house with 2 reception 3 bedrooms etc Price £550 Fishing shooting and other sport Premium 1 years purchase

24 WOMAN DOCTOR'S PRACTICE—YORKS—LARGE TOWN—Established eight years easily worked and producing nearly £700 p.a. Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns Compact house with 2 sitting 2 bedrooms 4 attics etc Garden Garage Rent on lease £42 10s p.a. Prem 1 years purchase or near offer

25 CHESHIRE—NEAR COAST—Old-established middle and working class PRACTICE averaging for the past three years over £1 300 Panel of 550 Fees from 3/6 Good house with 3 reception 7 bedroom etc Price for freehold £1 200 part on mortgage Premium 2 years purchase

26 WITHIN FOUR MILES OF THE BANK—Old-established working class PRACTICE producing for the last 12 months £2 300 including panel of over 2 800 Appts worth about £160 Visit from 2/6 Low expenses Suitable house can be rented or bought Surgery premises on rental Premium £4 000 each

27 MANCHESTER—Semi-residential Suburb—Very old-established non-dispensing mainly middle-class PRACTICE averaging £2 500 p.a. including small selected panel of 440 which latter is capable of extension Visits 5/ upward Only about 20 cases of midwifery from 5 gns Well-situated house with good accommodation Price (freehold) £1 600 Premium £3 750

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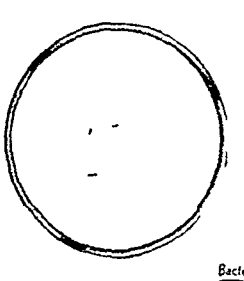
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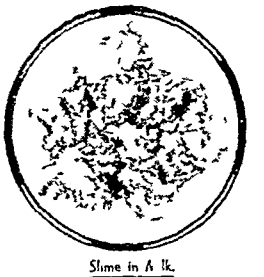


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Slime in Milk

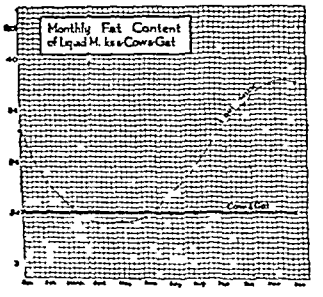
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indicate evidence of disease in one or more of the cows supplying the milk" *M O H Report 1930*

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CONTENTS

MARCH 5, 1932

ORIGINAL ARTICLES

Two Specimens of Early Human Ova
By Winifred Shaw M.D. F.R.C.S. (With Plate) 411

Malignant Disease of the Lungs
By Peter Kerley M.D. D.M.R.E. (With Plate) 416

Injury of the Rectum Caused by the Faulty Administration of Enema
By H. H. Rayner M.B. F.R.C.S. (With Plate) 419

Pharmacological Properties of Iso Amyl Ethyl Barbituric Acid (Amytal) By R. C. Garry M.B. 421

Some Interesting Drug Eruptions
By H. Haldin Davis M.D. F.R.C.P. 422

MEMORANDA

Compressed Fracture of First Lumbar Vertebra. Production of Compression. By H. J. McCurrich M.S. F.R.C.S. (With Plate) 424

Two Cases of Vaccinia. By Richard W. Taylor M.R.C.S. 424

REPORTS OF SOCIETIES

Royal Society of Medicine
The Epidemiology of Streptococcal Infections 425
The Movements of the Chest 426

Royal Society of Tropical Medicine and Hygiene
Tropical Typhus 427
Gambian Sleeping Sickness 427

Medical Officers of Schools Association
Abnormal Behaviour in Children 428

Manchester Medical Society
Treatment of Infantile Paralysis 429

REVIEWS

Pathology of Prostatic Enlargement 430
Clinical Physiology 430
A Textbook of General Bacteriology 430
The Art of Percussion 431
Operation and Miles Surgery 431
The Lady-in-Chief 431
Notes on Books 432

LETTERS AND ANSWERS

Wasp Stings and Bee Stings 435
Chronic Urticaria 436
Income Tax 436
Fate of Swallowed Needles 436
Doctors and District Nurses 436
Shoe Leather Dermatitis 436
Foreign Bodies in Alimentary Tract 436
Explanation of the Men of Death 436

LEADING ARTICLES

Importance of the Blood Groups 437
The Barbiturates in Anaesthesia 438
Toxic Products of the Tubercle Bacillus 438

THE WEEK

Payment of Visiting Staffs 439
Medical Research Council's Report 439
Defective Foods and Drugs 440
Antitoxin Treatment of Scarlet Fever 440
André Lhevet 440
Criminal Abortion 441
Road Traffic Signals (Illustrated) 441
Numbers of the Dental Profession 441

GENERAL ARTICLES AND NEWS

Malformations from a New Point of View Hunterian Lectures by Sir Arthur Keith M.D. F.R.S. 435

Atmospheric Pollution. The Smoke Menace in Industrial Towns 433

Health of the Army. Report for the Year 1930 434

Preparations and Appliances (Illustrated) 432

Medical Notes in Parliament
National Health Insurance 454
Tuberculosis 454
Post 454
Medical Notes 455

LOCAL NEWS

Scotland—
Health of Scotland 442
[illegible] Men 442
442
442

England and Wales—
Puerperal Sepsis. Bacteriological Investigations 442
Industrial Rheumatism 443
London County Laboratories 443

India—
Medical Administration in Madras 443
Public Health of the Punjab 444

OBITUARY

Sir Frederick Andrewes, M.D., F.R.S. (With Portrait) 451
Charles 452
W. F. H. 453
S. Stanley Block M.R.C.S. 453
A. D. Milne M.B. 453

UNIVERSITIES AND COLLEGES

Society of Apothecaries of London 450

THE SERVICES

Deaths in the Services 450

CORRESPONDENCE

Simulation of Heart Disease. By A. A. Fitzgerald Peel M.D. 444

Maternal Mortality. By Violet E. Hastings M.B. 445

Tonsils and Adenoid. By James Adam M.D. 445

Suction in Surgery. By Sir Robert Woods F.R.C.S.I., Norman C. Lake F.R.C.S. and R. B. Pinson M.B. and John A. McLauchlan M.B. 446

Ambulatory Treatment of Fractures. By R. Watson Jones F.R.C.S. 447

Operation for Congenital Epicanthus. By T. Harrison Butler M.D. 447

Shoe Leather Dermatitis. By F. A. E. Silcock M.D. 447

Colporrhaphy and Prolapse. By E. Hesketh Roberts F.R.C.S.Ed. 448

The Ministry of Pensions and Genito-Urinary Tuberculosis. By Sir E. Farquhar Buzzard M.D. F.R.C.P. 448

Exophthalmos and Sinusitis. By Sydney Pern M.R.C.S. 448

The Nasal Factor in Asthma. By Sir James Dundas Grant M.D., F.R.C.S. 449

The Common Cold. By J. H. Douglas, Webster M.D. F.R.C.P.Ed. and W. Annandale Troup M.B. 449

The Stroke in High Arterial Pressure. By K. Cobbin M.D. 449

Plumbism and Peptic Ulcer. By D. R. Lewis M.D., J. C. Edwards-Jones M.B. and J. P. Shirlaw M.D. 449

British Institute of Philosophy. By J. S. Mann M.D. 450

Early Treatment of Rheumatism. By Godfrey Lipscomb 450

Vacancies 456

(*See also page 82 of* SUPPLEMENT)

The SUPPLEMENT contains

Payment of Visiting Medical Staffs of Voluntary Hospitals
Report by Joint Committee

The Dangerous Drugs Bill Letter from Home Office

Conference of Spa Practitioners

Current Notes
The *Lecture Internationale* Conference on Medical Patents

National Health Insurance Notes

Association Notices, Correspondence, Vacancies and Appointments, Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Cambridge University Press
My r & Part ft—
Experimental P chology 6

Churchill J & A
Illingworth & Dick—
Surgical Pathology 6

C W Daniel Co
Millard C I Pathanatia 6

Kerr I A & Co
M lard A E—Cottage Hospitals 6

Lewis H K & Co Ltd
Elliott R H—
Cushing for Cataract 6
Glaucoma 6

Livingstone E & S
William on B —Di of Children 4

Oxford Medical Publications
Elliot R H—
Cure of Eye Co 6
Treatment Glaucoma 6
Tropical Ophthalmology 6

Saunders W B Co Ltd
Cecil's Text Book of Medicine 3
Christopher F—Minor Surgery 3
Herrick J F—Neurology 3
Jordan E O—Bacteriology 3
Pearl R—Medical Biometry 3
Peterz P S Gonorrhoea in Male and Female 3

The Practitioner 5

ASSURANCE COMPANIES—
Century Insurance Co Ltd 59

BANKS—
Westminster Bank 42

BRASS NAME PLATES &c—
Cooke Name Plat
Lord Name Plate 35
Herbert S J & A—Name Plates 35
Lewis & Co Ltd—Name Plates 35
Osborne J & Co—Name Plates 42

DEBT COLLECTION—
British Medical Protection Society 58

FOOD PREPARATIONS—
Bemax Laboratories—Bemax 15
Bovril Ltd 16
Brand 31
Brock Bentley & Co Ltd—
Chimney 17
Cow & Gate Ltd—Milk Food Cover iii
Hardwin Bros Industry Ltd—
Doctor Chimney 10
Valentine Meat-Juice 64
Virol 5
Wander A Ltd—Ovaltine 18

SURGICAL APPLIANCES—
Curtis Sons—Support 34
D'Arsonval & Co Ltd—
Inventions 33
Elmslie & Co—Surgical Equipment 47
Hilliard Nevill Adherent Bres 35
Medical Supply Association Ltd—
C Hanland Elastic Bandage 36
Variety Elastic Plaster Band 36
Medical Surgical Sundries—
Inhaling Apparatus 57
Millikin & Lawley—
40
36
37
40
Inhalation Apparatus 7
Sparklet Ltd—
Portable Reviving Apparatus 29
Surgical Instrument Ltd—Cover 9
Taylor F Ltd—Elastoplast 38

HOSPITAL, &c FURNITURE—
Bailey W H & Son—
Operating Table 39
Lawton Pratt—Bedsteads 40

MINERAL WATERS—
Apollinaris 6

CHEMISTS &c—
Allen & Hanburys Ltd—
Diabetic Flour Cover i
Eulaxine 19
Ophthalmine Products 40
Vapo Cresolene 36
American Apothecaries Co—
Salvitae 10
Bayer Product Ltd—Theumal 30
Bristol Myers Co—Sal Hepatica 41
British Drug Houses Ltd—
Calciferol 15
Ephedrine B D H Elixer 13
Burroughs Wellcome & Co—
Infundin 31
Carnrick C W Co—
Hormotone Cover iv
Christy T & Co—Magnesia Oil 11
Continental Labs Ltd—Botol 12
Crookes Laboratories—
Collosol F C V D 22
Denver Chemical Mfg Co—
Antiphlogistine Cover ii
Dimol Laboratories Ltd—
Dimol Tablinettes 14
Eno's Fruit Salt 32
[illegible] 26
18
28
41
10
Glaxo Laboratories—
Preparations 33
Hewlett & Son Ltd—
Preparation 21
Martindale W—
Methyl Aniodine 13
Sterules 36
Tolysin 14
May & Baker Ltd—Planoform 17
Mond Stafford hire Refining Co—
Monsol 12
Peat Products Ltd—Sphagnol 11
Pharmaceutical Corporation Ltd—
Novutox 23
Sanderson Corporation Ltd—
Novocain 20
Stenco Ltd—Mistol 16
Wyleys Ltd—Saylithin 20

MOTOR CARS TYRES &c—
Lodge Sparking Plug 6
Second hand Motor for Sale 57

PRINTING & STATIONERY—
Andersen & Son—Account Form 58
Barlocci Co—Barlett Typewriters 39
Lewis H K & Co Ltd—
Stationery Book etc 4
Taylor Typewriters 40

TAILORING & UNDERCLOTHING—
Carmichael—Sale 39
Hall H—Medical Service Dress 58

TOBACCO & CIGARETTES—
Players No 3 39

TRANSLATIONS TYPEWRITING—
Radford B—Typewriting etc 56

VACCINES & CULTURE MEDIA—
Corporation Ltd—Vaccines 24
Pasteur Institute 41
Institute 41

WINES & SPIRITS—
Gaymer's Cyder 13

X RAY & ELECTRO MEDICAL APPARATUS—
Kodak Ltd—
Duplitized X Ray Film 8
Medical Supply Association Ltd—
Diathermy Apparatus 34

INEBRIETY—
Bay Mount Paignton 43
Callecote Hall, near Nuneaton 43
Old Hill House Churchurst 43
Rendlesham Hall Woodbridge 43

HOTELS & HEALTH RESORTS—
Clifton Hotel 46
Margate 48
Majestic Hotel 46
Torquay 46

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 5

HOSPITAL &c VACANCIES—
[illegible] 51
[illegible] 55
[illegible] 50
[illegible] 55
[illegible] 51
[illegible] 54
[illegible] 53
[illegible] 54
[illegible] 53
Derbyshire Hospital for Women 52
[illegible] 50
[illegible] 52
[illegible] 52
[illegible] 54
[illegible] 52
[illegible] 50
[illegible] 52
Harrogate Infirmary 52
Heatherwood Hospital 49
Herefordshire General Hospital 52
Hertford County Hospital 52
[illegible] 49
[illegible] 51
[illegible] 50
[illegible] 53
Infant Hospital Westminster 55
Ipswich East Suffolk Hospital 53
Jewish Maternity Hospital E 1 52
Kent & Canterbury Hospital 43
Lancaster County Mental Hospital 55
Leeds St James's Hospital 53
[illegible] 53
[illegible] 54
[illegible] 50
[illegible] 54
[illegible] 51
[illegible] 52
Lowestoft & N Suffolk Hospital 0
Macclesfield General Infirmary 0
Manchester Babies Hospital 55
Manchester City 53
Manchester Royal Children's Hos 54 55
Manchester Royal Infirmary 53
Manchester & Salford Hospital 58
[illegible] 0

BATHS SPAS &c—
Bridge of Allan Spa 46
British Spas Federation 46

HYDROS & PRIVATE HOSPITALS—
[illegible] 45
[illegible] 49
[illegible] 4
[illegible] 45
[illegible] 42

HOMES & ASYLUMS—
Barnwood House Gloucester 47
Bishop tone House, Bedford 46
Boreatton Park Baschurch 4
Brighton Co Borough Mental Hos 45
Camberwell House S E 5 45
Cheadle Royal Cheshire 45
Chiswick House Tinner 43
City of London Mental Hospital 47
Clarence Lodge Clapham Park 44
[illegible] 44
[illegible] 44
[illegible] 44
[illegible] 44
Hardock Lodge, Lancashire 44
Highfield Hall St Albans 46
Lawn Lincoln 46
[illegible] 49
[illegible] 45
[illegible] 43
[illegible] 45
[illegible] 45
[illegible] 45
[illegible] 47
[illegible] 44
[illegible] 44
[illegible] 44
[illegible] 46
[illegible] 44
[illegible] 45
[illegible] 43

SANATORIA—
[illegible] 47
[illegible] 47
[illegible] 47
[illegible] 9

SCHOOLS &c—
Colthurst House School Ward 41
Paton—Schools for Boys & Girls 43
Taunton School 43

MEDICAL SCHOOLS &c—
[illegible] 43
[illegible] 43
[illegible] 43
[illegible] 43
[illegible] 43
[illegible] 43
[illegible] 45
[illegible] 43
[illegible] 43
[illegible] 43
[illegible] 43

TUTORS & LECTURERS—
Exams—Med Correspondence 43
F R C S Edin Class—H C Ormsby 43
[illegible] 43
[illegible] Pond 43
[illegible] 43
[illegible] 43
[illegible] ntion 43

TRANSFER AGENTS—
Bovril Medical Agency Ltd 63
British Medical Bureau 60 61
Lee & Martin Ltd 3
Manchester Medical & Schl Agency 58
Peacock & Hadley Ltd 58
The Medical Agency 58
Turner J Ltd 58
Western Medical Agency Bristol 59

ASSISTANTS PRACTICES &c—
Assistances Wanted and Vacant 56
Dispenser Medical Asst &c 6
Locum Wanted and Vacant 7
Partnerships Wanted and Vacant 57
Practices Wanted and Vacant 57

NURSING INSTITUTES—
Cavendish Nurses 3
New Mental Nurses Co Operation 58
Nurses Association 58
[illegible] 43
[illegible] 4
[illegible] 47
[illegible] 43
[illegible] 47
[illegible] 7
[illegible] 59
[illegible] 4
The British Asylum Nurses Organisation 4

It must be understood that the acceptance by the British Medical Association of an Advertisement does not imply a recommendation and that no responsibility is accepted with regard to the accuracy of the statements therein contained

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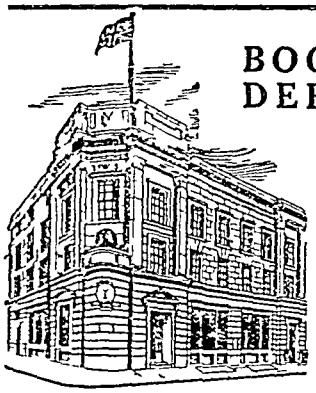
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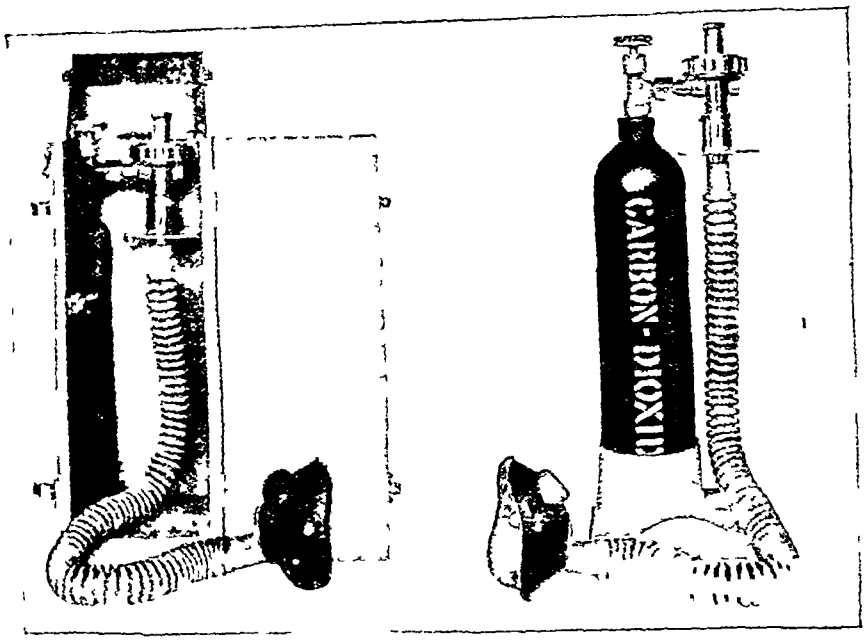
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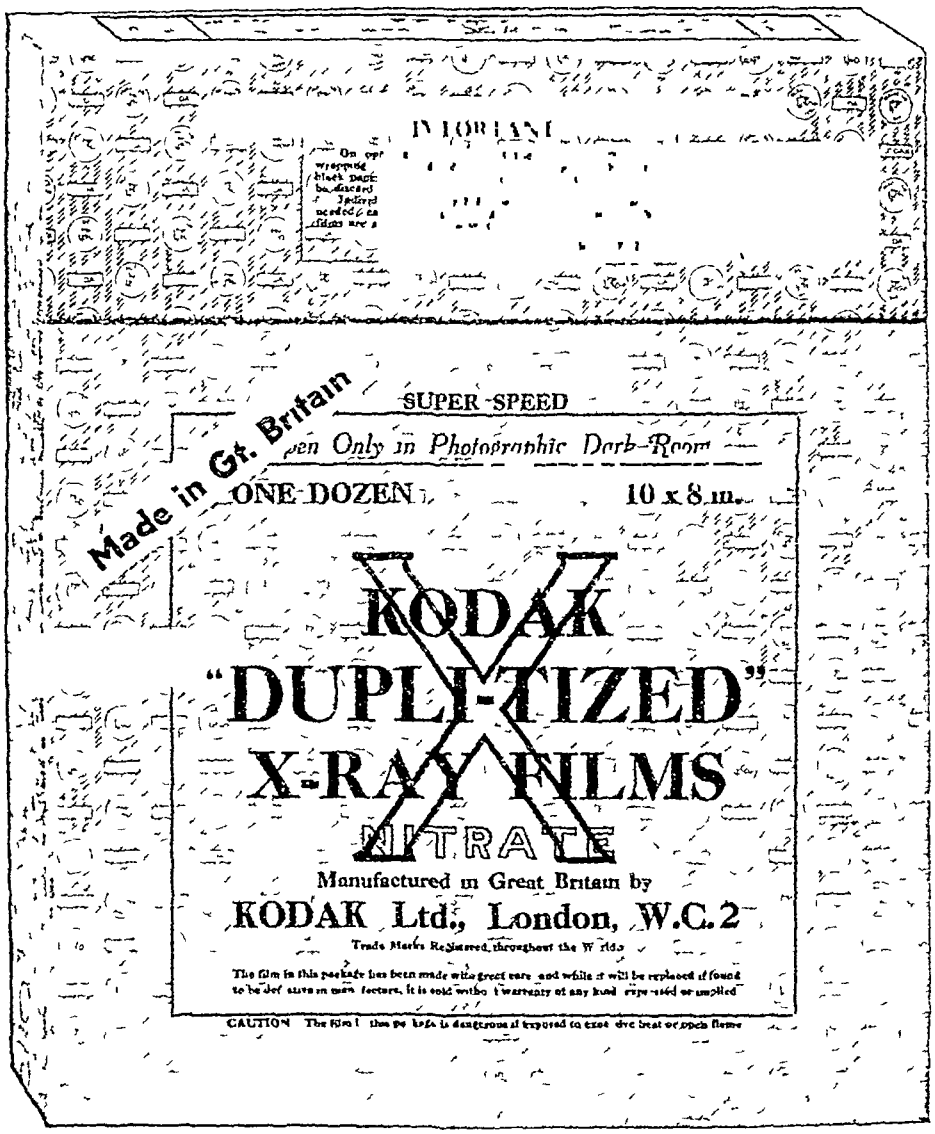
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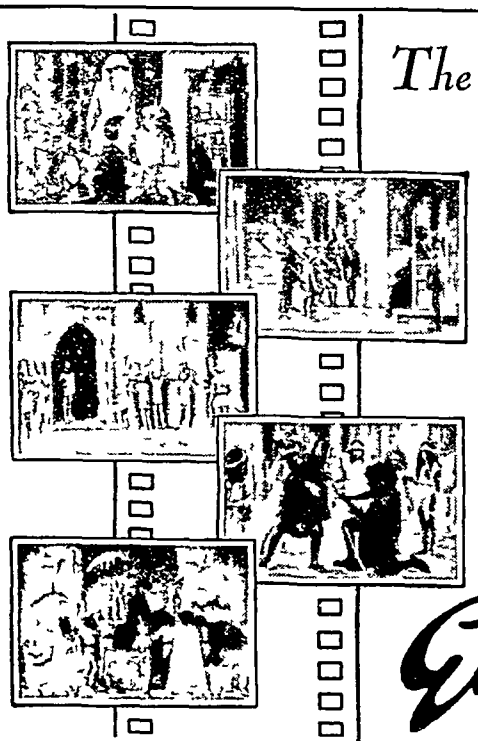
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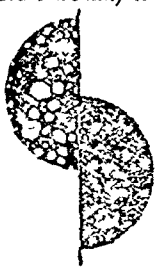
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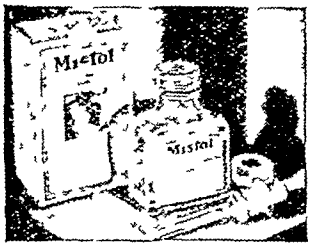
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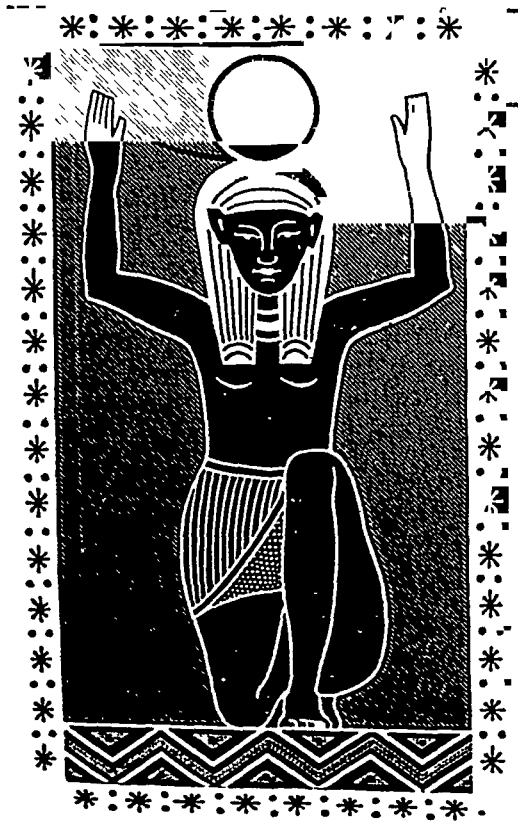
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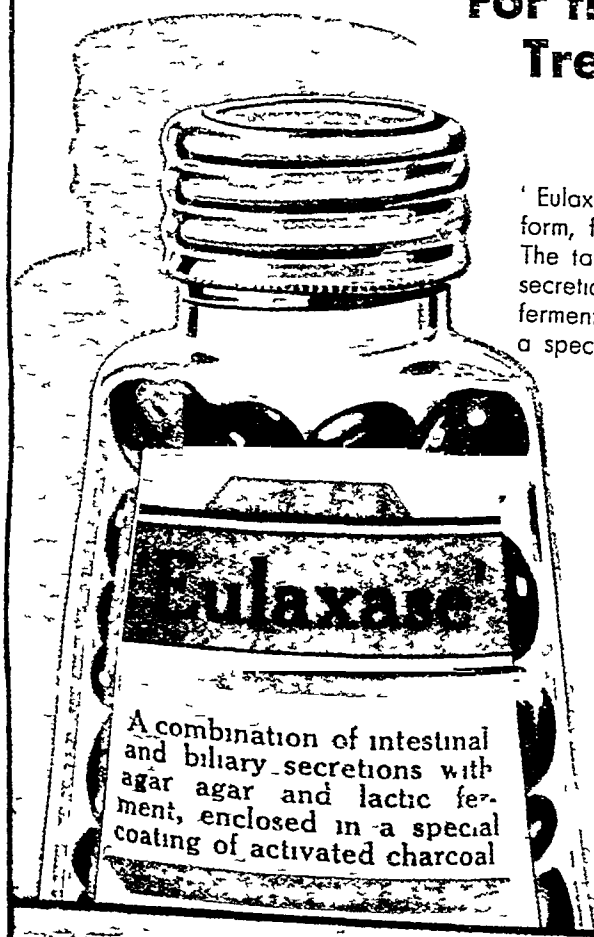
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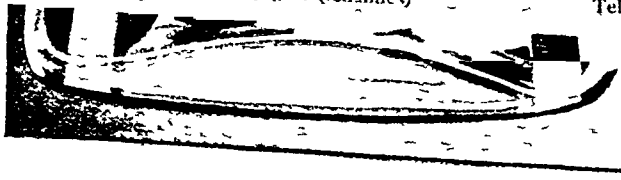
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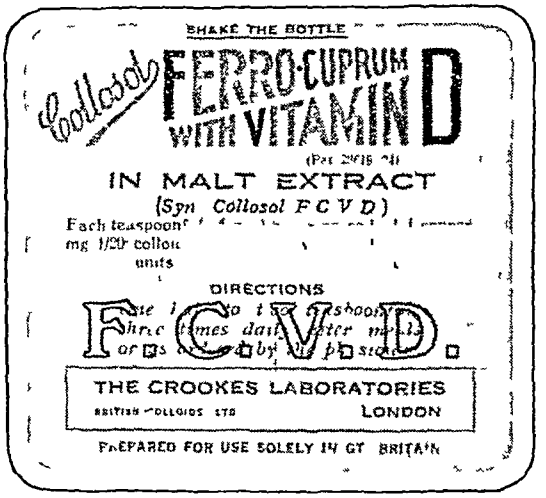
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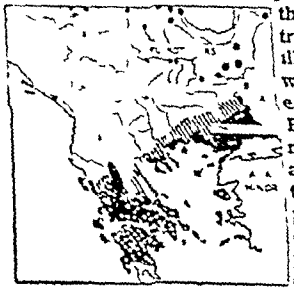
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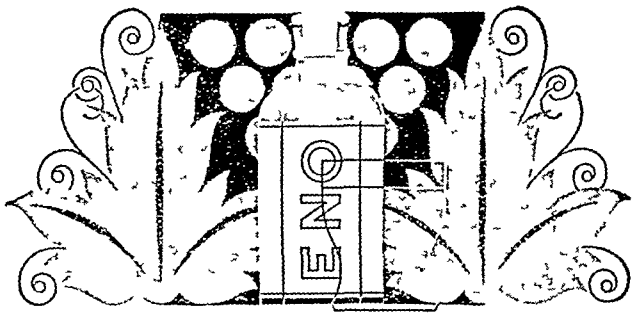
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THE BALKANS, SEVENTH AND EIGHTH CENTURIES A.D The accompanying map, showing the general southward trend of the Slavs, illustrates the danger which once threatened the Byzantine Empire Despite many interruptions and periods of stagnation the Slavs have persisted through the centuries to the present day Their exact numerical strength is not known but it must be upwards of a hundred and fifty millions Peasant industry has played a large part in the progress of the Slavs Ancient testimony records that 'the lands inhabited by them are the most fruitful and richest of all and they devote themselves zealously to agriculture and other kinds of industry wherein they surpass all northern peoples" In the map here reproduced the Slavs occupied all the territory except —(1) the small dark circular spaces which represent Byzantine and Turkotatar colonies, and (2) the darkest areas to the south, though the light circles and bars show their penetration in these regions also



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BI 173

Observations on TWO SPECIMENS OF EARLY HUMAN OVA

BY

WILFRED SHAW M.D. F.R.C.S.

ASSISTANT PHYSICIAN (OUT-PATIENTS) ST. BARTHOLOMEW'S HOSPITAL

(*With Special Plate*)

Specimens of young human ova are obtained only rarely and the early development of the human embryo is not known with great accuracy. Such specimens are therefore of some value, and the two described below may help to call attention to the main features of the human ovum in the first few weeks of its development.

THE FIRST SPECIMEN. CLINICAL HISTORY.

The ovum was obtained at St. Bartholomew's Hospital from a woman aged 32. She had had two previous pregnancies: a child had been born at term in 1922, and the patient had miscarried at the fourth month of her second pregnancy in 1926. Menorrhagia followed the birth of the first child, but the menstrual cycle was unaltered.

The patient came to the out-patient department on February 17th 1930 complaining of an abdominal tumour and abdominal pain. She had last menstruated between January 12th and 17th 1930. Her menstrual cycle was one of twenty-eight days, so the next period should have started on February 9th. The breasts showed no signs of activity. Rising from the pelvis there was an abdominal tumour 4 by 3 inches in diameter which, on bimanual examination, was located to the right cornu of the uterus. The tumour was extremely tender, and it was impossible at the time to determine its consistence with any accuracy.

The patient was carefully questioned, and it was pointed out to her that she had missed a period. She denied that she could be pregnant, and even refused to admit that she was late with her period. Nevertheless I thought she was gravid, and suspected that the tumour might be either an interstitial or an isthmus pregnancy. She was admitted to hospital at once. When I examined her again the next morning it was clear that the tumour was a cornual myoma. Again the patient stoutly denied the possibility of pregnancy. At the time the only evidence was the history of amenorrhoea, and even this was in some ways contradictory. I decided to operate, and obtained permission to remove the uterus if myomectomy was unstable.

A subtotal hysterectomy for the myomatous uterus was performed on February 19th. The left ovary contained a corpus luteum, and was removed. The convalescence was uneventful. The uterus was opened immediately after removal; it was lined by decidua, and there was a small prominence on the posterior wall about 1 cm. in diameter. This was carefully excised and fixed in Carnoy sublimate solution for one hour, then passed through alcohol, xylol, benzene, and wax in the usual way. I succeeded in cutting a complete series of sections of the whole ovum at 10 μ, and the histological preparations are exceptionally good for this class of material. The value of the specimen depends upon its perfect preservation and upon its non-pathological nature, for a large number of the other early specimens are either from abortion material or from necropsy.

The patient and her husband were subsequently questioned, and it was amusing to observe their relief when they learned that not only had the pregnancy been removed, but that the woman could not become pregnant again. It was important to obtain the date of insemination, and both parties took the view that they could best show their gratitude for the favour I had done them by offering all the help they could to give the information we required. The woman now admitted that she was afraid that she was pregnant when she came to see me, and her policy had been to distract my attention from the abnormal and to concentrate my investigation upon the abdominal tumour which she had noticed for some time previous to the interruptus had been practised frequently during January and February, and I am not convinced that absolute reliance can be placed upon the credited date of insemination as January 24th. However, the available data compare very favourably with the details of patients' sexual lives which one usually obtains.

The main discrepancy in the history was the patient's assertion that the February period was due on the 12th, whereas by calculation from the January period she should have menstruated on the 9th. The dating of the specimen is therefore as follows: (1) from the day of insemination the twenty-sixth day; (2) from the day menstruation was expected by the patient the seventh day; (3) from the calculated onset of menstruation the tenth day; and (4) from the date of the last menstrual period thirty-eight days from the onset of that period.

RELATION OF FERTILIZATION TO OVULATION.

It is now generally believed that ovulation is limited to the intermenstrual phase of the cycle, and I myself have produced evidence that ovulation is restricted to between the thirteenth and sixteenth days of the menstrual cycle, the first day of the period of bleeding being taken as the first day of the cycle.[1] I am perhaps more dogmatic than some other workers on this subject in that I maintain that ovulation is fixed in time with respect to the cycle and that it is uninfluenced by such external factors as coitus. I have accumulated much additional evidence since the original contribution in 1925, and it all supports this contention.

Knowledge of the time of ovulation is essential for dating the time of fertilization for it is obvious that fertilization cannot precede ovulation. In my view therefore the union of spermatozoon and ovum must be regarded as being restricted to the latter half of the menstrual cycle. This view does not imply that insemination before the date of ovulation must be sterile. Indeed there is much statistical and clinical evidence that coitus may be fertile during the first half of the cycle. Siegel's well-known work, in which his evidence was based on the carefully recorded leave periods of German soldiers during the war, is a case in point.[2] The discrepancy is cleared up quite easily by the assumption that spermatozoa may survive in the female genital tract for some time after coitus. There is no direct evidence as to what this survival period may be in the human subject, but on the other hand there are no grounds for believing that spermatozoa quickly die in the environment of the female genital tract. If it is assumed that spermatozoa are capable of fairly long survival periods the exceptional fertility of the human subject can be explained, and fertile insemination before the date of ovulation can be accounted for by the supposition that spermatozoa survive in the Fallopian tube and lie in wait for the ovum to be shed. The view also implies that the most fertile phase of the menstrual cycle is within a few days of the time of ovulation. Clinical evidence on this question is not convincing, but in my experience patients do not keep an accurate record of their sexual lives. On the other hand in the cases that I have had reason to regard as reliable there has been evidence that the middle of the intermenstrual phase of the cycle is the most fertile time. The phase of fertility does not synchronize necessarily with the phase of desire. In many women desire is most marked in the post-menstrual and pre-menstrual phases of the cycle.

In the case under consideration insemination corresponded to the twelfth day of the menstrual cycle—two days before the development of ovulation—thus bearing out the views I have expressed above.

OTHER EARLY SPECIMENS OF HUMAN OVA.

The most famous of the specimens of early human ova is that of *Bryce and Teacher*[3] in recent years other examples have been added to the list. The Miller ovum,

described by Streeter[4] in 1926 is certainly earlier, the Kleinhans ovum described by Grosser[5] and the von Mollendorff[6] specimen are about the same date. The Miller and Kleinhans specimens are incomplete, the Mollendorff is badly preserved, and the Teacher Bryce although perfectly cut has been regarded as pathological. It is surprising how small is the number of very early specimens on record, and one cannot help thinking that gynæcological material is not always carefully examined. Older ova are more numerous and a fair number have now been recorded. They have been conveniently classified by Bryce into groups according to the degrees of development. Bryce's classification is as follows:

Groups A and B include the early specimens already mentioned.

Group C includes ova in which the primitive streak has not yet appeared. The amniotic and yolk sac vesicles have been differentiated, and the magma reticulare is developed.

In Group D the primitive streak appears, the villi begin to branch, and the yolk sac becomes larger than the amnion.

In Group E the primitive streak and cloacal membrane are differentiated, and a complete chorda canal has been formed.

In Group F the neurenteric canal can be seen, together with the neural plate, neural folds, and notochordal plate.

Of the older specimens Peters's falls into Group C, and Graf von Spee's ovum belongs to Group D. The specimen described below belongs to Group E, but it is earlier than the majority of other ova of this group. Altogether there are probably between fifteen and twenty earlier specimens than my own, but as I pointed out above a large number of these are either pathological or are imperfectly preserved. Even in the earliest specimens of Miller, Kleinhans, and Teacher and Bryce the ovum is surrounded by trophoblast, and amniotic and yolk sac vesicles can already be seen. Later specimens sufficiently early to be included in Bryce's classification will retain this general form.

Description of First Specimen

General Features

The ovum is embedded in the compact layer of the decidua, and is almost completely covered by a decidua capsularis. It is surrounded by chorionic villi, and the blastocyst contains an embryo consisting of two vesicles, an amnion and a yolk sac. The dimensions of the embryo are 1·66 by 1·44 by 1 mm. Unfortunately the embryo has been cut obliquely (approximately at an angle of 45 degrees to the axis of the primitive streak), and although the material is well preserved the obliquity of the sections makes the interpretation of the features of the embryo difficult, and it is very doubtful if a reconstruction of the ovum would serve any useful purpose.

Trophoblast

Chorionic villi surround the ovum and are more plentiful on the lateral poles than beneath the operculum or adjacent to the decidua basalis. They show a minor degree of branching, but most of them are single and are not vascularized. Characteristic syncytium is relatively scanty. The simple division of the chorionic epithelium into syncytium and Langhans's cells is impossible at this stage of development, for although typical syncytium can be demonstrated, and the basal layer of chorionic epithelium recognized, the bulk of the trophoblast consists of solid clumps of cells resembling Langhans's cells more than they do syncytium. It is convenient to adopt the nomenclature of Hubrecht, and call the cells of the basal layer cytotrophoblast, and to call these masses of cells plasmodiotrophoblast. Plasmodiotrophoblast is plentiful, and the volume occupied by this tissue is as great as that taken up by the whole of the chorionic villi. The cells of the plasmodiotrophoblast are large and vacuolated, as is well known they are found in specimens of hydatidiform mole.

The Decidua

The decidual glands are hypertrophied, crenated, and filled with a pink staining coagulum. The gland cells are high columnar, and contain globules of secretion. The ovum lies embedded in the compact layer, and already the decidua capsularis is well defined. Most of the decidua which surrounds the ovum contains areas of necrotic tissue. Here the glands are disintegrated, decidual cells are degenerate, and there is much nuclear debris, interstitial haemorrhage, and leucocytic infiltration.

One of the most interesting features is the presence of trophoblastic cells immediately adjacent to the decidua. If the inner border of the decidua which surrounds the ovum is examined it is remarkable how extensively trophoblast can be seen adherent to it. In some places—particularly in the depressions between projecting masses of decidua—there are large areas of adherent plasmodiotrophoblast. This relation of trophoblast to decidua is not usually emphasized in descriptions of the development of the placenta. Again the specimen throws doubt upon the classical descriptions of the development of the chorio-decidual space. There is little maternal blood in the space between the chorionic villi and the decidua, certainly there is no suggestion of a blood sinus. On the other hand large maternal blood sinuses are found in the decidua in the immediate vicinity of the ovum: this suggests that the formation of the sinus of the chorio-decidual space is a later phenomenon of development than is usually believed. Furthermore my own impression from studying the sections is that there is no true chorio-decidual space at this stage of embedding, but that there is a direct connexion between the chorionic villi and the decidua by means of masses of plasmodiotrophoblast. It is quite possible that the plasmodiotrophoblast is much more intimately connected with the decidua in the living state than the sections would lead one to believe, for however carefully one preserves such embryonic material the delicate tissues must be disturbed in the preparation of slides.

My specimen suggests that the trophoblast is loosely connected with the decidua over the greater part of its periphery, and that these attachments have been disturbed in the preparation of the sections.

The Ovum

Magma Reticulare.—The trophoblast is distributed around a roughly ovoid cavity which contains the embryo and the magma reticulare (Fig. 1 on Plate). The embryo is attached to the peripheral chorionic epithelium by its connecting stalk. In earlier specimens the space around the embryo is filled by reticular embryonic tissue, but in my specimen it contains coagulated material which is completely acellular except in the situation of the body stalk and immediately beneath the chorionic epithelium. The formation of the magma reticulare is one of the peculiar features of the human ovum. Even in the Miller ovum the space is present, and the cells which it contains are described as belonging to extra-embryonic mesoderm. The embryonic mesoderm develops later in the orthodox way from the region of the primitive groove between ectoderm and entoderm. At the stage of development represented by the specimen the extra-embryonic mesoderm is collected to form a single layer of cells round the amnion and yolk sac of the embryo, and to form a thin indefinite layer beneath the chorionic epithelium. Elsewhere the

primitive reticulated tissue has disappeared and been replaced by coagulated material It is of interest to observe that the extra embryonic mesoderm is directly connected with the stroma of the chorionic villi The cells are elongated and faintly stellate in type some of them are vacuolated and there is an intercellular matrix No trace was found of a yolk sac duct connexion with the chorion nor were there any remains of the extra embryonic coelom which has been described in other specimens

The Connecting Stalk —This attaches the embryo to the chorionic epithelium and is made up of round cells with spherical nuclei which are quite different from those of the extra embryonic mesoderm Unlike the amnion and the yolk sac the connecting stalk has no covering layer of extra embryonic mesoderm but its rounded cells merge with those of the extra embryonic mesoderm at the periphery near the chorionic epithelium The connecting stalk contains the amniotic duct the allantois and the allantoic vessels The amniotic duct is well shown in the specimen it does not reach as far as the chorion and it is canalized for only a part of its length It represents a narrow prolongation of the amnion into the connecting stalk

The Allantois —This can be demonstrated in thirty-three sections and therefore measures 0 33 mm in length It is lined by high columnar epithelium and is a prolongation from the caudal end of the yolk sac into the connecting stalk It assumes the form of a narrow duct and it is characterized by the regularity of its high columnar epithelium It does not pass into the connecting stalk to the same extent as the amniotic duct The allantois is surrounded by the allantoic vessels which pass further into the body stalk than does the allantois They contain no blood cells and are less conspicuous than the blood islands of the yolk sac Vessels similar to those of the allantois are found in the extra embryonic mesoderm beneath the chorionic epithelium in the region of the connecting stalk but it was found impossible to trace a communication between the two systems A large and well defined blood island was identified in the wall of the yolk sac near the origin of the allantois Already therefore the mechanism by which the foetal vessels form the umbilical vessels and pass to the chorion has been initiated

The Vesicles —The general structure of the embryo is that two vesicles the amnion and the yolk sac are joined by the connecting stalk to the chorionic epithelium Both vesicles are small compared with the size of the magma reticulare They are fused together along the embryonic plate which gives rise on its amniotic side to the ectoderm Hensen's knot the opening of the blastopore the primitive streak and the cloacal membrane From the under surface develops the entoderm and between the ectoderm and entoderm the mesoderm proper and the notochordal plate develop

The Amnion —The dimensions of the amnion are 1 35 by 1 34 mm and it is 0 32 mm in height It is therefore roughly circular in shape It is longer than the yolk sac because it extends caudally to form a primitive caudal fold On the other hand the yolk sac extends further forwards than the amnion by 0 09 mm The lining cells of the amnion are flattened and elongated in type (Fig 2) but caudally the amniotic cells are irregular The covering extra embryonic mesoderm varies with its position Near the connecting stalk it is irregular near the middle of the embryonic plate it is differentiated into a single layer of flattened cells while cranially it is imperfectly developed

The Yolk Sac —The (Fig 1) measures 1 21 mm long 1 05 mm wide and 0 4 mm in height It therefore differs from the amnion in shape because of its depth for it is much more spherical than the amnion The yolk sac is lined by entodermal cells, which are flattened over the greater part of its length but in the vicinity of the allantois the cells become columnar Similar columnar cells are found in a small area of the yolk sac which perhaps corresponds to the site of the connecting strand of the Bryce MacIntyre ovum but which is not represented in my specimen In its caudal part the yolk sac is surrounded by a single layer of extra embryonic mesoderm so that two layers of cells the entoderm and the extra embryonic mesoderm form the wall Near the middle of the embryo blood islands are found between these two layers They contain large polygonal cells some of which possess deeply staining protoplasm The nuclei are large and show active mitoses The endothelial lining of the blood islands is incomplete The allantois passes backwards from the yolk sac as a small duct into the connecting stalk

The Embryonic Plate —This represents that part of the embryo which lies along the area of fusion of the amnion and yolk sac and it is in the embryonic plate that the important structures are to be found The plate is best described by tracing the individual structures from the caudal region of the connecting stalk to the cranial end of the embryo

To prevent confusion in the description it should be remembered that the primitive streak the cloacal membrane and the blastopore are found on the amniotic side of the plate The cloacal membrane lies at the caudal end of the primitive streak and is seen best where the allantois arises from the yolk sac It measures 0 09 mm in length and along the cloacal membrane the ectoderm and entoderm fuse The primitive streak (Fig 2) measures 0 43 mm in length and as the embryo has been cut obliquely it lies to one side of the mid line Cranially the streak ends at Hensen's knot The knot measures 0 04 mm in length in front of it lies the blastopore opening and the chorda canal The opening of the blastopore is luckily shown in one of the sections and the chorda canal can be traced from the blastopore opening downwards and forwards towards the entoderm It was not possible to trace a communication of the chorda canal with the entoderm although the direction of the canal and the arrangement of cells around it were very suggestive that such communication existed The blastopore is bounded cranially by a well marked dorsal lip Further cranially there is no evidence of neural folds but a neural plate is being formed It will be seen that the embryo is too early for a neurenteric canal to be present

Embryonic Mesoderm —This is quite different from the extra-embryonic mesoderm which as has already been pointed out is derived from the primitive cells of the magma reticulare The embryonic mesoderm lies between the entoderm and ectoderm to form lateral sheets of cells which arise mainly from the cells of the primitive streak (Fig 2) There is no evidence in my specimen that the cells of Hensen's knot play any part in the formation of the mesoderm The head process which surrounds the chorda canal is not well seen in the specimen because of the obliquity of the sections

The description which has been given above indicates the main features of the ovum and a more detailed account belongs to the province of the pure anatomist The general characters of the ovum allow the second specimen to be interpreted

THE SECOND SPECIMEN

The second specimen is grossly abnormal and represents an early stage of development of a human monster The material was very kindly handed over to me by Dr Malcolm Donaldson who had removed it by abdominal hysterotomy The patient was suffering from morbus cordis and was found to have a fimbrial cyst

in the first few weeks of her pregnancy The patient's last menstrual period began on December 30th 1930 and the operation was performed on February 12th 1931 forty four days after the onset of the last menstrual period The pregnancy had been perfectly normal, without symptoms of abortion and there was no reason to suspect any abnormality of the ovum The ovum was placed in spirit and reached me within two hours of removal it was then fixed in Carnoy's solution and passed through alcohol xylol benzene and wax in the usual way I did not detect any abnormality during its examination before fixation and because of this a complete series of sections was not made However, the majority of sections were kept and although no one regrets more than I that a complete series is not available the sections that have been obtained allow the essential features of the ovum to be recognized without much difficulty The embryo is seen in eighty six sections which were cut at 8 μ The maximum length of the larger embryo is 3 15 mm the maximum breadth 1 46 mm

The specimen is I believe unique and I can trace no record of any ovum which is at all comparable The nearest approach is the Mitter ovum described by Streeter [5] in which there are two small accessory vesicles in the extra embryonic mesoderm of an ovum of about the age of my first specimen but there is no connexion between the two embryos and the accessory vesicles are much smaller than those of the larger embryo

My specimen consists of two embryos which are fused together in the umbilical region (Fig 3) The larger of the two is normally developed except along the line of fusion and shows no gross abnormality The smaller embryo is incomplete for it consists only of a caudal part below the level of the umbilicus, and has no head, heart or liver (Figs 3 and 4) The monster has a single chorion and amnion and there is only one umbilical cord (Fig 3) The axes of the two embryos are parallel there is little difference of corresponding parts in the two embryos and the degrees of development are the same The embryo is therefore an example of a double monster and belongs to the very rare group of omphalopagus parasiticus The most illustrious example of this type of double monster was the Hindu Laloo whose umbilical hernia was reduced by Bland Sutton

Double monsters are uncommon but the majority of interesting specimens are recorded in the literature so a fairly comprehensive classification of the possible forms may be given They are classified into (*a*) symmetrical forms and (*b*) asymmetrical forms

GROUP A

The majority of double monsters belong to this group In most cases the embryos are fused along a vertical axis and are conjoined at the head thorax abdomen or pelvis theoretically the fusion may be dorsal lateral or ventral In rare cases the fusion may be about a horizontal axis either in the head region or in the situation of the breech Group A may therefore be subdivided as follows

Fused along a Vertical Axis

Upper Union—Dorsal craniopagus Lateral dipygus Ventral cephalothoracopagus

Middle Union—Dorsal and lateral conjoining are not recorded Ventral on the other hand forms the commonest variety of conjoined twins three types are recorded—namely thoracopagus sternopagus and xiphopagus

Lower Union—Dorsal pygopagus Lateral duplicitus superior Ventral ischiopagus

Fused along a Horizontal Axis

Craniopagus and ischiopagus are the two common forms In addition to the types indicated above modifications are known which depend upon more complete fusion—for example dicephalus dipus opus and dipygus

GROUP B

In this group are included such examples as acardiac foetus foetus acardiacus amorphus and teratomatous foetal inclusions

Among monsters the parasitic tumours such as epignathus parasitic craniopagus thoracopagus epigastricus omphalopagus and pygopagus belong to this group The essential feature of monsters of this group is that they consist of a well developed autosite with an incomplete parasitic foetus attached

ETIOLOGY

A satisfactory explanation of the origin of double monsters cannot be given at the present time for there is as yet insufficient knowledge of the segmentation of the mammalian ovum and of the method of production of the primitive vesicles The specimen described below offers some help because it indicates certain of the factors at work but at the same time it shows that the problem of the origin of double monsters is more difficult than was previously supposed

The origin of human double monsters cannot be explained by the assumption that the two embryos are derived from the two parts of the first blastomere division of the fertilized ovum For example in my specimen there is a common chorion amnion and umbilical cord The blastomere hypothesis necessitates the assumption that each embryo possesses its own trophoblast for both trophoblast and embryoblast (that is, inner cell mass) are developed from the fertilized ovum This difficulty is overcome, in the case of uniovular twins, by supposing that the two trophoblastic systems fuse at an early stage of development and in this way the common placenta with freely communicating vessels of uniovular twins is explained In the specimen described there is no evidence of duplicity of the trophoblast for there is no sign of fusion and the trophoblast is single Further the presence of a common amnion is conclusive evidence against the blastomere hypothesis for the ovum is at the stage of development when the amnion has only just encircled the embryo and it is inconceivable that two amnions could have developed originally and fused by the time the stage of development of the specimen was reached

The problem of the origin of double monsters must be attacked by considering the well established facts of embryological morphology and experiment The subject unfortunately lends itself to conjecture and many of the explanations that have been put forward in the past are purely hypothetical It is impossible to account for either uniovular twins or monsters with great precision and the views expressed below indicate the limit to which scientific evidence will allow any explanation to go

Since the blastomere hypothesis was first put forward much additional embryological evidence of the method of segmentation of the fertilized mammalian ovum has been found It has been shown that segmentation becomes asymmetrical soon after the first few divisions of the fertilized ovum and the daughter cells very soon differ in size and appearance As long ago as 1909 Hubrecht suggested that the cells of the trophoblast and embryoblast were differentiated in this way the smaller cells grouping themselves within the others to form the inner cell mass This view is generally accepted and it seems much more likely that the duplicity of conjoined twins is to be attributed to errors of development of these early cells of the embryoblast In this way the common trophoblast of my specimen and the common placenta of uniovular twins can be explained for the hypothesis limits the maldevelopment to the embryoblast and does not postulate any abnormality of the trophoblast

Experimental embryology has shown that monsters and maldeveloped embryos can be produced by environmental changes around the growing ovum Diminution of oxygen

tension lowering of temperature and alteration of the concentration of inorganic salts (such as sodium chloride and magnesium chloride) have been proved to be factors capable of causing maldevelopments and monstrosities It is possible that such factors influence abnormal growth of the fertilized human ovum

In my specimen the embryos have a common amnion and originally the yolk sac was probably single The next step is to link up these morphological features with the known facts about the development of the normal ovum Probably the extra-embryonic mesoderm becomes differentiated early in the growth of the ovum even before the yolk sac and amniotic vesicles are developed from the inner cell mass The two vesicles appear early in the development of the ovum and are undoubtedly derived from the embryoblast (inner cell mass) In the early stage of development they are closely related, and there is little difference in the size of the two vesicles It must be assumed that the early stage of my specimen was represented by a single amniotic vesicle Whether two yolk sacs were present is uncertain but there is no evidence of two yolk sacs in the specimen Similarly it must be postulated that only a single connecting stalk was present, for the umbilical cord is single and serves both embryos The early stage of the ovum can therefore be assumed to be represented by a single trophoblast extra-embryonic mesoderm amnion and connecting stalk

The specimen strongly suggests therefore that duplication arose actually in the embryonic plate for there is no reason to believe that the yolk sac was duplicated and the amnion certainly was not The important point to be grasped is that duplication must be attributed to a relatively late stage of development much later than is postulated by the blastomere hypothesis later indeed than the formation of the two vesicles Unless this point of view is accepted it is impossible to account for the appearances of the specimen

The most probable interpretation—though here one encroaches upon the field of conjecture—is that two embryonic axes arose in the embryonic plate I think it extremely unlikely that a single embryonic axis underwent fission to produce two embryos for the following reasons The area of fusion between the two embryos is small and the major organs such as the neural tube and intestine are separate without any sign of communication At the early stage of development illustrated by the specimen one would expect to find evidence of a communication between these structures if the two embryos had arisen by fission Again the two embryos are parallel and there is no divergence between the two axes These facts suggest that the embryos did not develop by fission of a single embryonic axis and the evidence though admittedly circumstantial is in favour of the view that two embryonic axes developed originally (one being imperfect in its cranial end) and that fusion was a later phenomenon

The specimen therefore supports the view that human uniovular twins and double monsters result from two embryonic axes developing on the embryonic disk This conception has already been put forward by Stockard[2] and others from embryological work on lower animals I will be seen that the hypothesis is quite at variance with the blastomere theory and that it attributes the formation of uniovular twins and monsters to a much later stage of development than has previously been supposed

DESCRIPTION OF THE SECOND SPECIMEN

The two embryos (Figs. 3 and 4) are joined to the chorion by a common umbilical cord and they have a single amnion The axes of the embryos are parallel but the smaller embryo is distorted by the large vessels of the umbilical cord The smaller embryo—embryo B—lies nearer to the chorion than embryo A and the curvature of the umbilical cord has produced a rotation of embryo B around a vertical axis Embryo B lies caudal to the cord, and no part of it cranial to the cord has developed

The larger embryo A measures 3·15 mm. long and is 1·46 mm. broad Embryo B measures 1·45 mm. long and 1·15 mm. broad The line of fusion between the two embryos is small and is in the region of the mesonephric tubules and duct it lies above the level of the lower limb bud of A and below the umbilical cord The two coelomic cavities communicate but the two mesenteries and intestines are separate It is not possible to calculate the number of segments which are fused but it is unlikely that more than two take part in the fusion The most difficult interpretation is the course of the vessels of the umbilical cord for most of the vessels seem to favour embryo B rather than embryo A

EMBRYO B

The embryo is imperfectly formed and is represented only by its caudal part below the level of the umbilicus The embryo has no head heart pharynx or liver Furthermore there is no evidence of lower limb buds in this respect the embryo differs from the parasite—*omphalopagus parasiticus* The neural tube notochord mesonephros mesentery and intestine are normally developed for the part of the embryo which is represented in the specimen The neural tube ends blindly in the cranial part of the embryo and is closed Six somites can be counted in the specimen, and they correspond in development with those of the larger embryo The intestine also ends blindly when traced cranially but there is a suggestion of division in its upper part which in some ways recalls the lung buds of the larger embryo The vascular system is represented by a single dorsal aorta and cardinal veins

EMBRYO A

The larger embryo is normally developed except along the line of fusion with the parasite Fortunately, the specimen is almost perfectly preserved and shows optic cups olfactory depressions otic vesicles and hypophyseal diverticulum The primitive heart and liver are well shown but there is as yet no sign of the suprarenal glands The limb buds are well formed and the vascular system is normally developed It is difficult to trace the vascular connexions between the two embryos, and it is unlikely that the parasitic foetus would have been vascularized from the host during extrauterine life except by way of the umbilical vessels

A detailed description of the larger embryo is beyond the scope of this contribution as it is a subject for the pure embryologist The essential features can easily be made out from the accompanying illustrations The main object of this contribution is to indicate the method of formation of monsters rather than to describe the embryological features of an early human embryo of the stage represented by embryo A

In conclusion I have to record my thanks to Professors J. P. Hill and H. H. Woollard for the help they have given me in the interpretation of the specimens

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A less well known disturbance of innervation associated with carcinoma of the lung is compression or invasion of the vagus There are several points in the mediastinum where malignant glands can exercise a serious influence on the vagus nerve The result of such influence is disturbance of the cardiac rhythm not to be distinguished ante mortem from malignant invasion of the heart muscle Much more often abdominal symptoms result from vagal irritation in the thorax The commonest abdominal symptom so produced is partial or complete gastrospasm with severe pain and vomiting very like the gastric crises of tabes dorsalis In rarer cases there may be spasm of the lower end of the oesophagus The clinical importance of this complication lies in the fact that the gastric symptoms completely overshadow the lung symptoms if indeed there are any symptoms referible to the lungs Fig 2 on plate illustrates a case of this nature

The patient was referred to the x ray department for investigation of the gastro intestinal tract He complained of pain in the epigastrium and vomiting and had lost three stone in weight during the previous few months A barium meal showed nothing nor did a screen examination of the chest made as a routine reveal any pulmonary abnormality A delay of ten days occurred between the barium meal and a barium enema The chest was again screened and an opacity which proved to be a primary pulmonary carcinoma was at once seen

This particular case raises the interesting point as to how long a carcinoma can remain latent in the bronchus Very rarely a lung cancer compresses the oesophagus directly and gives rise to vomiting

Pleural effusion as a complication of the pneumonic or lobar form of carcinoma is the bugbear of the radiologist for it masks nearly everything If the effusion is small it has no significance but if as so often happens in malignancy the effusion is large we are confronted with great difficulties Withdrawal of some of the fluid with the object of showing up the underlying lung condition is seldom of value for carcinoma involving the pleura causes such great thickening that it is impossible to come to a definite decision between the radiographic appearances of thickened pleura and diseased parenchyma Circumstantial evidence must be looked for and fortunately this is present in most cases If the heart and mediastinum are not displaced when there is evidence of a large pleural effusion it is clear that there is some underlying condition—providing of course that the heart has not previously been fixed by a pleurisy of the mediastinal leaves This latter possibility must be excluded by the history of the patient

The weakest point in the mediastinum is at the level of the third dorsal vertebra posteriorly It is here that one looks for evidence of excessive pressure when pneumothorax is being carried out If we find at this level displacement of the trachea and oesophagus to the healthy side while the heart below is displaced to the diseased side we can be certain of three facts (1) there is present a pleural effusion of at least 60 oz , (2) there is collapse or fibrosis of the greater part of the underlying lung (3) the collapse is not due to the fluid alone for if it were the heart would be displaced to the opposite side

We have now to find out whether the underlying lung disease is collapse or fibrosis As every radiologist is aware, the length of time necessary for the production of a fibrosis extensive enough to drag the heart and mediastinum well into the diseased side is many years Moreover such a fibrosis has certain well known accompaniments the chief of these being a scoliosis Scoliosis in itself is not of much help for lung cancer and scoliosis are not incompatible In fibrosis however the oesophagus is always pulled well away from the middle line and the trachea is always rotated In collapse the oesophagus leans slightly to the collapsed side and the trachea is not rotated but moves as a whole to the collapsed side

The possible association of pleural effusion and phrenic paralysis must be mentioned here The diaphragm when paralysed completely loses its tone and rises to the fourth interspace in front An effusion of any size pressing on an atonic diaphragm quickly depresses it and a very large effusion will so depress it that on the right side the liver

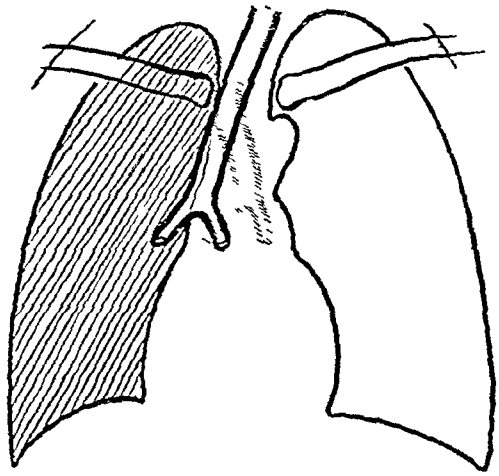


FIG 10.—Diagram showing type of tracheal displacement with collapse and fibrosis The black outline represents the trachea in collapse and the shaded outline the trachea in fibrosis

margin can be felt two or three fingerbreadths below its normal level This complication usually results in a clinical diagnosis of liver metastases The lung picture however in such a case shows the appearances of combined collapse and effusion as already described but in addition the apex of the heart is seen to be well above the left diaphragm On the left side a depressed diaphragm is easily identified with a very low gas bubble in the stomach

The visualization of enlarged bronchial or mediastinal glands is one of the most valuable diagnostic points and is, moreover of considerable clinical significance inasmuch as it contraindicates surgical intervention An accurate knowledge of the lymphatic drainage of the lungs solves many obscure problems and is essential for every radiologist The lung lymphatics with one exception have no valves and drain in the following manner The right upper lobe drains directly into two small glands lodged between the eparterial bronchus and the upper border of the main bronchus The right middle and lower lobes drain directly into a few small glands situated at the first bifurcation of the main lower lobe bronchi Between these two there are only a few rami communicantes, but both are richly connected with the main tracheo bronchial group which in its turn is connected up with the big group in the bifurcation of the trachea These three groups drain into the thoracic duct and have little or no connexion with the paratracheal glands which drain the mediastinum The tracheo bronchial group represent in part the dense opacity near the hilum the small bronchial glands are seldom seen because they are overshadowed by the diseased lung and the bifurcation group are rarely seen unless they are grossly enlarged Gross enlargement of the bifurcation group is most often seen in association with a carcinoma immediately on the bifurcation of the trachea If the paratracheal group are easily visible one should promptly suspect some source of primary disease other than the lungs or bronchi Lymphadenoma secondary sarcoma carcinoma of the thymus thyroid

and kidney and rarely carcinoma of the oesophagus are the usual causes of paratracheal gland enlargement

The chief conditions simulating this pneumonic type of carcinoma are tuberculosis pneumonia syphilis and aneurysm In tuberculosis pneumonia and syphilis there is usually considerable fibrosis and with reasonably good technique this is always demonstrable Aneurysm, causing collapse of the left lung or one of its lobes is a frequent source of error because the collapse pulls the aneurysm and heart into the shadow of the collapsed lobe A simple method of solving this problem is by taking a hard picture at a short distance with a Potter-Bucky diaphragm On such a picture the shadow of the aneurysm shows clearly through the collapsed lung tissue It must not be forgotten however, that a combination of aneurysm and growth is possible

Secondary infection of pneumonic carcinoma by pus forming organisms is frequent but it is exceptional for such infection to obscure the other radiographic signs of neoplasm The development of bronchiectasis in the area of lung distal to the carcinoma can seldom be seen on a radiograph because there is no air in the diseased part Fortunately the diagnosis of this complication is of little importance

Abscess formation is also frequent and occasionally the signs of abscess may obscure those of carcinoma In a great many cases an abscess develops shortly before death and in an area of lung tissue known to be collapsed Such an abscess is also invisible unless gas forming organisms are responsible for its formation A fluid level in the centre of a collapsed area is easily recognized and is diagnostic If the secondary infection is so severe that a large area of lung tissue is rapidly destroyed, the whole of a collapsed lobe may become necrotic It is in these cases that the abscess formation can obscure the growth If by chance an apparently simple abscess is complicated by phrenic paralysis or if grossly enlarged mediastinal glands are present the nature of the abscess is at once suspect In the absence of these obvious pointers to malignancy we must rely on two other signs

1 A simple lung abscess is usually surrounded symmetrically by a zone of solid lung tissue An abscess in a malignant lobe is usually placed asymmetrically relative to the surrounding lung consolidation

2 A simple abscess often has *no* direct communication with the main bronchus—or rather a simple abscess may lie completely clear of the mediastinal shadow A malignant abscess is invariably connected to the hilum by an area of dense solid lung tissue

THE HILAR FORM

An equally frequent radiological manifestation of bronchial carcinoma is the so called hilar form which is seen as a dense opacity around the root of the lung without collapse or consolidation in the peripheral parts of the affected lobe or lobes This type of the disease is easier to diagnose than the pneumonic type because there are few other lung diseases causing similar appearances In the early stages one sees a semicircular opacity with an ill defined outer border and thick irregular lines radiating into the lung parenchyma The growth in such cases is not causing stenosis of the bronchi but is infiltrating through the bronchial walls and directly invading the surrounding lung tissue Lung markings are visible in the opacity and in the normal tissue distal to the opacity If carefully sought for enlargement of the tracheobronchial glands can usually be demonstrated Pleurisy seldom complicates this type of the disease until the patient is moribund but abscess formation is very frequent The diagnosis is *not seriously* obscured by abscess formation because the growth steadily enlarges from week to week while the abscess remains more or less the same size and gradually becomes asymmetrical to the surrounding opacity

A sudden transition from the hilar type to the pneumonic type is not uncommon and probably if we saw the disease early enough we would find it first as a small hilar opacity later causing lobar or lung collapse Obstruction of the superior vena cava takes place earlier and more often with a growth of the hilar type than with one of the pneumonic type

There are only two conditions at all simulating the hilar type of carcinoma The first is lymphadenoma with invasion of the lung and the second is an unusual form of pulmonary syphilis Lymphadenoma or lymphosarcoma involving the lung is an advanced stage of such diseases, and by the time the lung is attacked there is usually generalized glandular enlargement Irrespective of whether the extrathoracic glands are palpable or not the paratracheal group are invariably visibly swollen This should arouse immediate suspicion To confirm the diagnosis in these cases give a test dose of x rays Lymphadenomatous or lymphosarcomatous glands respond at once metastases never respond If pulmonary syphilis manifests itself as a hilar opacity there is always gross emphysema in the neighbouring lung tissue Carcinoma so lowers the vitality of the patient and kills so quickly that there is rarely time for the development of emphysema or at least of emphysema as great as that seen in syphilis

OTHER FORMS OF LUNG CANCER

Occasionally a primary bronchial carcinoma causes no gross pneumonic changes, but diffuses itself through the pulmonary lymphatics An identical form of lymphatic invasion of the lungs is also seen secondary to scirrhous carcinoma of the stomach or to scirrhous carcinoma of the breast The radiological appearances in all three are the same and while the disease may be diagnosed as malignant from the radiograph of the chest its source can be ascertained only by a careful examination of the breast and stomach If these two organs can be passed as healthy the primary tumour is in the lung itself Because the lung parenchyma is untouched in lymphangitis carcinomatosa there are no clinical signs pointing to disease in the chest The patient has no cough or dyspnoea and there is good air entry all over with normal breath sounds On the radiograph we see a fine meshwork of thin white lines spread out all over the lungs *without* any loss of translucency In such a case we can speak with truth of increased lung markings because the lymphatics in the normal chest do not cast any shadow

Sometimes lung cancer remains limited to the bronchus, causes no obstruction and no mass about the hilum, but disseminates through the pulmonary veins and produces multiple round deposits in the lungs The secondary nodules then predominate and it is almost impossible to determine the primary disease This type of lung cancer is a source of great confusion In the American literature we find numerous reports of primary alveolar carcinoma of the lungs showing itself as round opacities in the peripheral parts of the lungs with coarse lines connecting these opacities to the hilum Similar records are few and far between in the European literature Either there is a form of lung cancer in America which is rare here or incomplete pathological examinations are causing an error A malignant deposit in the lung parenchyma will always assume alveolar characteristics irrespective of the primary growth and there are also good grounds for assuming that lung parenchyma is an unfavourable medium for neoplastic growth many lung metastases are simply lodged in lung tissue and are not invading the lung It seems reasonable therefore to think that this so called alveolar carcinoma is really a small bronchial carcinoma

with lung metastases Provided enough sections are cut in any one case both epithelial and alveolar types of growth can always be found

There is only one exception to this and that is seen in the rare mucoid carcinoma of the lung So far as I am aware no case of this nature has been published from the radiographic point of view Mucoid degeneration in neoplasms with a glandular origin is common enough but sometimes a primary neoplasm arising from alveolar tissue consists purely of adult cells secreting mucus or some mucoid material Because of the well developed cells with a definite function these growths are only semi malignant They do not metastasize widely nor do they cause cachexia They kill only by their slow replacement of normal tissue in a vital organ or organs The following case has excited considerable pathological discussion

The patient was an elderly man sent up for radiographic examination from the out patient department with a diagnosis of pleural effusion on the right side Figure 6 on Plate shows that there was such an effusion present but the mass in the left middle lung field was unsuspected nor could physical signs of it be detected until six months later On screening this patient at the first examination I noticed a very peculiar movement in the left sided mass and duly reported the triangular opacity on the left side quivers like a jelly on deep inspiration Three years later the patient died and at necropsy this triangular opacity was found to be a mucoid carcinoma in a third lobe of the left lung On shaking the specimen the movement of the mucoid mass was identical with that observed on the screen during life

A second case with similar movement has since come under my observation and has proved to be a bronchial carcinoma with advanced mucoid change

It is obviously impossible to describe all the varying appearances which are to be seen in radiographs of pulmonary carcinoma But there is one radiological feature common to all malignant growths of the lung There is never normal lung tissue between the shadow of the neoplasm and the shadow of the mediastinum

The characteristic radiographic appearances of multiple pulmonary metastases is so well known that a detailed description of them is unnecessary but few are aware that there is a form of pulmonary tuberculosis closely simulating secondary deposits in the lungs In pulmonary tuberculosis complicated by diabetes or bone tuberculosis the lung lesions are larger and better defined than those seen in uncomplicated phthisis or miliary tuberculosis The differential diagnosis from metastases is based on the demonstration of a cavity and the fact that tuberculous nodes are limited to the upper two thirds of the lung fields

In this paper I have as far as possible excluded descriptions of lipiodol injection and clinical and surgical methods of diagnosis—not because I under-estimate the value of these methods but because I feel that the radiologist should strive to get the last ounce of information from his films without outside help

INJURY OF THE RECTUM CAUSED BY THE FAULTY ADMINISTRATION OF AN ENEMA

BY

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(With Special Plate)

I am not sure that even the possibility of inflicting a severe injury on the rectum in the course of the administration of an enema is generally realized by members of the medical and nursing professions References to the injury in medical literature both in periodicals and books are extremely few in number and lacking in descriptive details Probably the injury is regarded as only likely to happen when an enema is administered by some bungling amateur or by the patient himself and therefore as not of much practical importance Now I have myself encountered three examples of it among my own patients within a period of six years and I find from personal communications that several other surgeons have had patients who have suffered this misfortune In my cases and so far as I could ascertain in those related to me by others the enema was administered by a trained nurse or a nurse undergoing training whose competence there was no reason to suspect Again at a meeting of the North of England Obstetrical and Gynaecological Society in 1929 W W King[1] described a case and it is noteworthy that in the discussion which followed three members recorded four similar cases that had been encountered in their own practices Further it is likely that the less severe types may not be recognized as cases of enema injury for there may be an interval of seven or eight days between the infliction of the injury and the first complaint of the patient to attract attention to the part unless the observer then has the possibility in mind he can easily overlook the real nature of the lesion in the rectum

I suspect therefore that the injury is by no means so very rare as it is believed to be and that the distress of inflicting it may befall any nurse but especially the junior nurse who is unaware of the possibility and therefore of the means by which it is to be avoided Because the mishap may have the most disastrous consequences and because it is entirely avoidable attention should be called to it with some emphasis—even if it is a very uncommon occurrence

The injury is always a grave one for it causes sloughing of the mucous membrane of the anal canal and rectum and it is commonly necessary to perform a temporary colostomy in order to promote healing of the extensive raw surface left after separation of the sloughs Sometimes in consequence of the dense cicatricial stricture which follows healing the colostomy may have to be a permanent one In some cases death has resulted from sloughing of the rectal wall into the peritoneal cavity or from spread of sepsis along the fascial planes of the pelvis In addition to the gravity of the injury there is another important consideration—the legal aspect I do not know that an action for damages has ever been brought under these circumstances but it is obvious that a patient could make a claim for damages with every prospect of success against the nurse or where circumstances permit more profitably against her employer and that the damage in terms of money might be considerable

MECHANISM OF PRODUCTION AND CLINICAL FEATURES OF THE INJURY

The essential factor in the production of the injury is the use of a hard conical nozzle usually of bone sometimes of glass The Higginson syringe is an important accessory though no objection can be taken to this very useful and well-established article if the unguarded nozzle with which it is fitted is not employed to deliver the enema into the rectum

The injury is caused by forcing the tip of the nozzle through the mucosa of the anal canal Penetration of the mucous membrane by the nozzle tip may occur in certain

circumstances without gross or unpardonable carelessness on the part of the administrator such circumstances for example as a poor exposure of the perineum from bad lighting and faulty position of the patient insufficient lubrication of the nozzle, the use of some force to overcome the resistance caused by inaccurate insertion of the nozzle and an everted condition of the anal mucous membrane as in prolapsed haemorrhoids any or all of these may combine to trap the nurse particularly if she is comparatively inexperienced and therefore handicapped by a feeling of awkwardness in the giving of an enema The nurse unaware of the perilous position of the nozzle—for the actual puncture of the anal mucosa gives the patient little pain—proceeds to inject with the considerable force which the Higginson syringe permits, a strong solution of soap and water into the submucous layers of the anal canal The enema fluid strips up the mucosa of the anus and rectum over a large area the extent of which depends upon the amount of the fluid which has been injected The injection of fluid under strong pressure into the submucosa causes such great pain to the patient that the nurse soon realizes something is amiss and stops the enema but not before some damage irrevocable damage it may be has been inflicted The patient may experience a sensation of nausea and faintness, or he may even collapse but in most cases these constitutional disturbances quickly pass off after the abandonment of the enema so too the intense pain diminishes and becomes a mere discomfort or bearing down sensation of which the patient makes no complaint no doubt he regards the discomfort as a natural consequence of a novel and very unpleasant experience At this stage then, to the nurse there may be no visible evidence of the injury—no swelling and no bleeding from the anus—and she ascribes the patient's distress during the injection to some abnormal sensitiveness on his part and so no report of the incident may reach the medical man

In a case reported by Fletcher Shaw —that of a woman in the early stages of labour—great swelling of the perineum and vulva occurred immediately after the enema and it seems probable that when the injury is inflicted on a woman in labour some of the fluid will tend to escape into the subcutaneous tissues of the perineum owing to the pressure of the descending head on the rectum In my three patients all men there was according to the nurse *no perceptible swelling at the time and in none was any* complaint made to me or to the resident officer until at least a week after the injury during the whole of this period each patient showed an irregular pyrexia beginning suddenly at the first record taken after the enema and a gradual deterioration in general condition The real cause of the pyrexia and illness in the absence of any distinctive symptoms or complaints remained unsuspected till a week or more after the enema when the patient first complained of pain about the anus and inspection of this part revealed at once the explanation of the patient's illness Examination of the anus showed a tear or gash apparently superficial of the anal margin and on inserting a finger into the anal canal the tear was found to continue upwards into a ragged excavated defect in the wall of the rectum this defect extended some three or four inches up the rectum and was from one to two inches in width The edges of the cavity were formed by indurated rectal mucosa and represented the line of survival of this tissue the floor consisted of sloughing tissue devoid of any mucous membrane The entrance to the uninjured rectum at the upper limit of the lesion could be recognized by the finger tip In one patient about ten days after the injury I drew out a slough which in size and appearance resembled a handful of dirty cotton waste The appearance of the parts some two weeks after the injury is well shown in the illustrations both of which were taken from the same patient

It is clear that this extensive sloughing is due to the injection beneath the rectal mucosa of a quantity of fluid under great pressure which strips up the mucosa and deprives it of its blood supply The initial injury—the puncture of the mucosa—is represented by the tear which is visible at the anal margin

Probably the nature of the enema fluid a strong solution of soap is also an important factor for it is likely that the soap used for this purpose contains an appreciable amount of sodium carbonate and possibly of caustic soda The interval between the injury and the first complaint of pain is no doubt due to the fact that it is not until the mucosa has sloughed away and a large area of cellular tissue has thus been exposed to infection from the faecal traffic that the inflammatory process reaches its height

Another and still more severe type of injury which I have not myself encountered is that in which the wall of the upper rectum is punctured and the fluid injected either directly into the peritoneal cavity or immediately under the peritoneum Such an injury will cause death within one or two days This injury can only happen when a hard tube of glass or metal several inches in length is employed or conceivably the ordinary bone nozzle without a flange might be responsible An injury of this type was reported nearly a hundred years ago [3] and I have heard of a similar catastrophe that happened to a patient a few years since

It is worth noting that when the existence of the lesion in the rectum is first discovered and one attempts to reconstruct the course of events which have led to it there may be some difficulty in doing this, obviously discretion has to be used in interrogating the patient and the nurse may not unnaturally be reluctant to offer information except in reply to direct questions When investigating the history of one of his patients whose injury had been sustained in the course of a pre operation enema, the surgeon was met by the disarming statement that no enema had been given but closer inquiry revealed the all important fact that an attempt had been made to administer an enema and had quickly been abandoned owing to the distress of the patient

It is unnecessary to say anything of the treatment of the injury Clearly its infliction can be prevented with certainty by avoiding always the use of the unguarded bone (or glass) nozzle in the giving of an enema and the sole purpose of this paper is to stress the need for this precaution Whether the Higginson syringe or tube and funnel is used to supply the injecting force does not matter provided the fluid is led into the rectum by a rubber catheter or tube but in the event of a puncture of the anal mucosa by an unguarded nozzle tip then it is certain that the Higginson syringe will inflict more damage than the tube and funnel owing to the greater pressure under which the fluid is injected by the syringe A rubber catheter or tube should then in all cases be fitted over the ordinary bone or glass nozzle Instead of the catheter a conical rubber tube about five inches in length procurable from most surgical stores may be used this is specially made to fit securely on the enema nozzle and being shorter and rather firmer than the ordinary catheter, it is easier to insert and control I am aware that many sisters do train the nurses in their charge to use a rubber catheter but there is no uniformity in this matter nor is the importance of *the precaution sufficiently appreciated*, it is probably a fact that the majority of nurses during some period of their training are taught or allowed to use the unguarded nozzle without even being warned of the lurking danger and this practice I submit cannot be too emphatically condemned I may be told by many very experienced nurses that they have used the method I

cond mn thousands of times without once inflicting the slighte t injury and I should not doubt such statements no more should I doubt my own conviction that as long as such a method is generally adopted so long shall we continue rarely it may be to meet with examples of this grave and easily avoidable injury

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PHARMACOLOGICAL PROPERTIES OF ISO-AMYL ETHYL BARBITURIC ACID (AMYTAL)*

BY

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Nearly thirty years ago veronal was first introduced as a hypnotic Since then the derivatives of barbituric acid have found progressive favour as hypnotics and in more recent times as premedication drugs in anaesthesia and even as general anaesthetics

One of the more recent derivatives is amytal (iso amyl ethyl barbituric acid) This drug was first described by Shonle and Moment[1] in 1923 and was promptly used by Page in pharmacological experimentation At first the difficulty of preparing the soluble sodium salt of amytal delayed the use of this drug as an anaesthetic for human beings Very recently however the presence on the market of the sodium salt of amytal in stable form has permitted its wide application as an anaesthetic in man[2] A full description of the clinical use of the barbituric acid group of drugs both in surgical and in non surgical cases may be found in the *Proceedings* of the staff meetings of the Mayo Clinic[3] Amytal since its introduction however has been widely used in physiological and pharmacological laboratories as an anaesthetic for animals Although the direct application of information derived from animals to man is notoriously unsafe yet the data from the clinical use of amytal resemble so closely the findings in the laboratory that a description of my own experience and that of other laboratory workers may be not irrelevant

ROUTE OF ADMINISTRATION

In laboratory animals at least oral administration of the drug is unsatisfactory The action is slow and uncertain Subcutaneous or intramuscular injection of a 10 per cent solution of sodium amytal is much to be preferred The injection itself causes no distress the onset of anaesthesia is quiet but it is somewhat slow being sometimes delayed for one hour or more Intraperitoneal injection of the 10 per cent solution is equally painless there is subsequently no sign of peritoneal irritation and the onset of anaesthesia is rapid—ten to fifteen minutes Frequently there are signs of nasal irritation the animal sneezing repeatedly and rubbing its snout with its fore paws Beyond this there is no disturbance and no distress Intravenous administration of the same strength of solution causes very rapid onset of anaesthesia but the injection must be carried out very slowly because of severe circulatory disturbances

In animals the subcutaneous or intraperitoneal is the route of election

DOSAGE

In the cat and in the dog the basic dose for complete surgical anaesthesia is 50 mg per kilogram of body weight In the rat and in the rabbit the dose is somewhat greater A slightly larger dose is necessary by the subcutaneous than by the intraperitoneal or intravenous route Twice the minimum effective dose may usually be given with safety even by the intravenous route In man a smaller dose seems to be effective 20 to 25 mg per kilogram of body weight given intravenously is adequate for complete surgical anaesthesia and 12 to 20 mg per kilogram of body weight is sufficient to lower the dose of such volatile anaesthetics as ether or N_2O and O_2 to one quarter of the usual amount required[4] Stormont Lampe and Barlow[5] working on rats showed that premedication with amytal or other barbituric acid derivatives permitted the production of full anaesthesia with a lower percentage of N_2O and a higher percentage of O_2 than is usually necessary All danger of oxygen deficiency during the anaesthesia was thus eliminated

DURATION OF ANAESTHESIA

In the cat and in the dog complete anaesthesia lasts two to three hours using the basic dose of the drug for anaesthesia The period of surgical anaesthesia is followed by an interval of drowsiness and sleep, which may last from twenty four to thirty six hours In the rabbit all the phases are very much shorter In man according to the dose there is post anaesthetic sleep and drowsiness for twelve to seventy two hours This considerably increases the necessary nursing attention Neither in animals nor in man are there signs of post-operative distress[6]

EFFECTS ON METABOLISM

The statement by early workers that carbohydrate metabolism is unaffected by amytal made this drug the anaesthetic of choice during the wave of experimental investigation into carbohydrate metabolism which followed on the discovery of insulin This sweeping claim for amytal as a true 'physiological' anaesthetic has not stood the test of time Glucose injected intravenously is not removed from the blood at the usual rate presumably due to inhibition of the storage of glycogen in the liver[8] Many workers claim that the blood sugar level remains unaltered under amytal anaesthesia and that the level of the sugar in the blood responds normally to the injection both of adrenaline and of insulin[9 10] It is possible that the abnormal blood sugar levels which have been reported under amytal anaesthesia may have been due to disturbance of the animal but this is denied by Weiss[11] However this may be there seems to be a general consensus of opinion that amytal anaesthesia has a less disturbing effect on carbohydrate metabolism than the majority of other anaesthetics in general use This may be not without significance in anaesthesia in man if damage to the liver is feared

As is to be expected amytal lowers the body temperature certainly by enforced inactivity and possibly by a direct depressor action on metabolism Shivering is very apt to occur[12]

Respiratory System.—All barbituric acid derivatives are respiratory sedatives Amytal however in anaesthetic dosage does not greatly diminish the minute volume of respiration and the respiratory centre remains sensitive to CO_2[13]

Circulatory System.—Amytal has a definitely toxic action on the heart and this is more marked the more rapid the administration[14] For this reason rapid intravenous exhibition of the drug is fraught with danger The blood pressure falls rapidly and one hour or more may elapse before it regains its previous level This fall in blood pressure is due both to dilatation of the heart with reduction in minute-output and also to vaso-dilatation[15 16] Large doses administered rapidly may cause heart-block ventricular fibrillation and death In clinical use amytal

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lowers the systolic and diastolic pressure and this fall in blood pressure may be alarming if the administration be rapid [4]

Nervous System.—Barbituric acid derivatives have a specific affinity for the nervous system, but amytal even in deep anaesthesia leaves the bulbo spinal reflexes of animals but little affected The action of amytal on the involuntary nervous system is peculiar The inhibitory action of the vagus on the heart is abolished and may not be restored to its previous vigour in the cat at least for several hours [11 12 18] This action of amytal is not comparable to that of atropine because amytal does not inhibit the action of acetylcholine [14] If this action on the vagus is present in human beings it may be of no small importance in connexion with vagus inhibition of the heart during the induction stages of anaesthesia with the more common volatile anaesthetics Several workers have suggested that amytal may have a specific paralysing action on the parasympathetic system in general [17 19] but this is not of universal application [14] The true sympathetic system seems to be unaffected by amytal

Gastro Intestinal System.—Amytal causes a definite decrease in intestinal motility and the pylorus is tightly closed This is possibly due to an action on the parasympathetic system Thus absorption of glucose when given by the mouth is negligible and is greatly delayed even when injected directly into the duodenum [19]

Reproductive System. *In vitro* amytal even in high concentration has no effect on the movements of the guinea pig uterus and the response to pitocin is unaffected [6] Amytal has been used successfully in obstetrics

Excretory System.—Barbituric acid derivatives do not all react in the same way they are excreted in variable amounts and with variable speed Amytal does not appear as such in the urine of dogs whatever the route of administration [1] There appears to be no detrimental effect on the kidneys Like other anaesthetics, amytal inhibits water diuresis

SUMMARY

The known effects of amytal (iso amyl ethyl barbituric acid) on laboratory animals are correlated with the more recent experiences of amytal as an anaesthetic in human beings Although amytal has been definitely disappointing as an anaesthetic in physiological research work yet when properly used its pharmacological actions may be of no hindrance to its use as an anaesthetic in man

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SOME INTERESTING DRUG ERUPTIONS*

BY

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Almost all active drugs are liable to cause cutaneous eruption and as new ones are introduced into medicine the list of drug eruptions grows longer These cutaneous manifestations are really only evidence of the activity of the medicine and it may almost be said that a drug which *never* causes an eruption is one which is not of much use The chief exceptions to this generalization are to be found among the aperients and among the various hormones One reason for the importance of diagnosing these eruptions as they occur is that if their true nature is not recognized they are quite likely to be mistaken for a manifestation of the disease which is being treated with the result that the very drug which is really causing the mischief is pushed with still greater vigour and to the increasing detriment of the patient

The mechanism of production in drug rashes is obscure and their distribution is often very capricious In some cases only those parts which are exposed to light suffer while in others the eruption appears to follow with some exactitude the distribution of the blood vessels in the skin Many drugs only affect a very small percentage of patients and can be given to the vast majority with impunity It is amusing to speculate as to the nature of the factor producing susceptibility To some extent this is a family characteristic I like to imagine that susceptibility to drug eruption depends on some chemical peculiarity of the protoplasmic molecule of the individual The modern conception of the protein molecule is that of a central nucleus more or less stable in character, to which are attached an indefinite number of side chains with unsatisfied chemical affinities Protoplasm which may be regarded as the protein molecule endowed with life must likewise possess similar affinities Chemists tell us that there are about twenty five different amino acids that may be concerned in the structure of the protein molecule and the permutations and combinations of these are quite sufficiently numerous to account for all the different varieties of protein and protoplasm met with in the world of life I think it is legitimate to imagine that there is a characteristic chemical formula for the protoplasm of every separate individual as well as of every different species but there will be slight variations in the chemistry of the protoplasmic molecule even between individuals of the same species The side chains of the protein molecule will have different unsatisfied affinities upon which the susceptibility of the individual to various drugs may well depend

To return to the more practical aspects of the subject, is there any satisfactory classification of drug eruptions? The drugs can at all events be separated into several different groups according to their peculiarities of action There are (1) drugs which are applied almost exclusively to the surface—for example, oil of turpentine sulphur and various rubefacients These are all irritants and if persisted in will sooner or later cause a traumatic dermatitis in almost all patients There is however, a wide individual variation in susceptibility (2) Drugs which when administered internally cause cutaneous manifestations in most patients if used for a sufficiently long time These are arsenic iodine bromides, belladonna etc Here again it must be remembered that there are the widest possible differences in susceptibility between various patients (3) Drugs which when administered to the vast majority of patients

* A lecture given to the London School of Dermatology St John's Hospital Leicester Square

have no effect upon the skin but are able in a very small percentage of cases to bring out a widespread and often characteristic eruption even when administered in very small quantity. Patients liable to such accidents are said to exhibit an idiosyncrasy to the drug in question. Unless the possibility of drug eruption is borne in mind cases of this sort may lead to serious errors in diagnosis and treatment. Quinine, medinial and also (although in their capacity as irritants they may also be included in Group 1) mercury and iodine are good examples.

Iodine has some features especially worthy of notice. Repeated application of its solutions causes an inflammatory action in almost everyone but in certain susceptible individuals the application of a single drop either to the skin or mucous membrane will cause a widespread erythematous eruption. Iodine is commonly used as an application to the gums and unsuspected cases of this idiosyncrasy occasionally crop up in dental practice and give rise to apprehension and alarm. Its internal administration is often followed by the symptoms of a common cold and the appearance of a mixed erythematous and pustular eruption on the skin. In exceptional cases there may be so much granulomatous formation as to give the appearance of tumours and the suggestion of mycosis fungoides. Parkes Weber states that at one time the diagnosis of tertiary syphilis was discussed in certain cases of this kind which he published, but after the abandonment of iodide medication all the masses disappeared. Pustular iodine rashes have also been seen after the injection of lipiodol as a preliminary to the *x* ray examination of the lungs, and at least once a fatality has followed. Similar to iodine both in chemical and in pharmacological behaviour is bromine. It is used exclusively for internal administration, and the essential characteristic of its action on the skin is the production of pustular lesions. Such cases may be found in quantity among neurological *out* patients. The lesions often occur on the face and then are known as bromide acne, a state which is almost normal in epileptics. The pustules of the bromide rash are always accompanied by the staphylococcus which is essential in their production. Bromide rashes may occur in infants born of epileptic mothers, but the eruption is never present at birth, and takes from fourteen to twenty one days to develop. No doubt this is because there are no staphylococci available in the maternal uterus. The eruption may take on capricious appearances. I remember one instance when it caused a single pustular patch on the calf of the leg, and another in a little girl where the only lesion was a circinate ulcer on the leg. As a rule bromide pustules have a sort of cribriform formation—a livid area of tumid skin pierced by a number of small openings through which pus slowly oozes.

It is a curious fact that the administration of arsenic inhibits to some extent the incidence of a bromide eruption, and advantage of this has been taken by neurologists with some success, though occasionally disaster has occurred. After all, arsenic too causes important cutaneous changes which may be much more serious than a mild degree of bromide acne. I remember the case of an epileptic lady who had taken for over twenty three years a mixture of bromide and arsenic. She had only two small bromide pustules behind the knee, but in addition there were arsenical warts all over her palms so that the hands felt like nutmeg graters. She had patches of arsenical hyperkeratosis and typical raindrop pigmentation on the abdomen, while she complained of cramps in the legs and anosmia of several years' duration due to arsenical neuritis. If arsenic was at once stopped and the palmar keratoses immediately began to disappear, while the bromide eruption grew. The keratoses on the abdomen persisted however and I have since heard that at least one of them has developed into a carcinoma. It is perhaps among sufferers from psoriasis that arsenical carcinomata most often develop. Some of these patients derive much benefit from arsenic and as they can keep the disease more or less under control by this means go on taking it for many years. I have a patient of this class from whom I recently removed two small tumours, one of which was of typical carcinomatous structure, while the other was merely a nodule of hyperkeratosis. Arsenic can produce very curious effects. It is only in a very small number of cases that it actually causes carcinoma, but arsenical pigmentation is fairly common and typically produces what is known as the raindrop effect. The affected skin looks as if dappled with drops of dirty water. Arsenical warts also well known are produced principally by deposits of hyperkeratosis round the mouths of the sweat ducts. In the exfoliative dermatitis which occurs from time to time after the administration of salvarsan and its modifications it is debatable as to how far the eruption is due to the arsenic and how far to the organic constituent of the drug. The eruption is certainly quite different from anything associated with the inorganic preparations of arsenic. It is an acute condition accompanied by great irritation and though as a rule the prognosis is good and the outbreak does not last very many weeks it may in some cases have a fatal termination. A curious and as yet unexplained phenomenon associated with the ingestion of arsenic is the appearance of herpes zoster—a fairly common incident. Zoster which makes its appearance under these conditions is indistinguishable from that which occurs spontaneously, and the mechanism of its association with arsenic is quite unknown.

Another drug which causes interesting pigmentary effects is silver. The type of eruption seen is a brownish or blackish stain of the subcutaneous tissues due to the deposition of metallic silver precipitated by the action of light. It may be produced by local application and in silversmiths it is not uncommon on the fingers and under the nails. It also occurs as a generalized pigmentation after the employment of silver compound for medical purposes. Silver may be introduced in a number of different ways and the characteristic pigmentation may develop with astonishing rapidity. For example the use of silver nitrate for ophthalmic purposes may be followed by local pigmentation but may also cause absorption into the system with the production of a generalized pigmentation. In one case a lady who had had her kidneys repeatedly washed out with weak silver compounds subsequently developed pigmentation on the hands. Another was affected on the face and neck after using protargol in a vaginal douche for a period less than four months in duration. Perhaps the most striking example of generalized silver pigmentation that I have ever seen was an old lady who for over twenty years had been regularly taking a pill containing silver nitrate for the relief of indigestion. Those areas of her skin which were exposed to light looked almost like a photographic negative and in addition the metal had impregnated the hair which resembled shining silver wire.

During recent years gold and its compounds have come into therapeutic prominence and have been found capable of causing unpleasant cutaneous phenomena. The double thiosulphate of gold and sodium generally known by the trade name of sanocrysin has been employed extensively in various tuberculous conditions including phthisis and a good many varieties of cutaneous eruptions have been ascribed to it. Most common is a pruritic follicular rash principally affecting the flexures of the limbs. Pustular eruptions on the scalp and severe ulcera-

tion of the tongue and pharynx may also be caused by it I have had a case in which it was pushed rather hard in an attempt to cure an obstinate lupus erythematosus of sixteen years duration A generalized exfoliative dermatitis supervened which lasted nearly six weeks before it ended in a disappearance of the lupus erythematosus As is always the case with drugs some patients are much more easily affected than others by sanocrysin, but it is widely recognized that it is a drug that must be handled cautiously Many attempts have been made to produce gold compounds of lesser toxicity but not, I think, with much success They are based on the hope that gold combined with an organic acid will provide a less toxic and more efficacious compound than sanocrysin The best known of these organic compounds is krysolgan Very few skin eruptions have been reported consequent upon its administration but it must be remembered that the dose recommended by manufacturers is only about one tenth of that of sanocrysin Recently the manufacturers of krysolgan have introduced another compound, known as solganal, which is administered in quantities comparable with the doses prescribed of sanocrysin I am not convinced that it is any less toxic There are several other organic compounds of gold also on the market but they are all very similar both in action and in toxicity

This by no means exhausts the subject of drug eruptions but it is hoped that these observations on some of the cutaneous phenomena that may follow the administration of modern chemical remedies are not without interest

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

COMPRESSED FRACTURE OF THE FIRST LUMBAR VERTEBRA SHOWING REDUCTION OF COMPRESSION

(With Special Plate)

A man aged 35 was admitted to the Brighton Infirmary on July 13th 1931 with a history of having attempted suicide by throwing himself off a bridge on to a railway line below The drop was said to be about 100 feet

On admission he was found to have a crush fracture of the body of the first lumbar vertebra a comminuted fracture of the right os calcis and a fracture of the left astragalus

In the *British Medical Journal* of February 21st 1931, there was an article by Mr R Watson Jones on the reduction of these spinal fractures by a very simple method which was both easy to understand and to apply This method of treatment was applied to this case and the x ray photographs show the reduction of the compression of the vertebral body The patient is now walking about well and at work, but is still wearing a light plaster support

Until the article referred to above was published I am afraid that I was one of those who displayed (as the author said) an apathy towards a condition for which I could do nothing Rest in bed and careful turning and nursing manipulations were the only directions for treatment The question of paralysis was regarded rather as a matter of luck In his plaster this patient could be turned about easily and divide his time between lying supine or prone or if he preferred he could be laid on his side and had it not been for his other injuries he could have been got up and allowed to walk after a few days

My object in publishing this case is to emphasize the possibilities of treatment on the lines laid down by Mr R Watson Jones and to direct to his article the attention of those who may have to treat these cases as well as of those who are responsible for the training of police and other first aid workers and also of doctors who may be called to an accident, so that the patient may be kept prone and never laid on his back in order that the sag of the stretcher may be used to extend and not flex the spine

I am indebted to Dr C Guy Whorlow for the skiagrams reproduced on the plate

Hove H J MCCURRICH MS FRCS

TWO CASES OF VACCINIA

In view of the recent articles concerning vaccinia the following two cases are of interest The disease at one time prevalent is now very rare I have shown the photograph of my second case to a large number of Leicestershire farmers and though many have seen ulcerated udders which were called cow pox none have ever seen the disease transmitted to the milkers This confirms Dr Tom Hare's remarks (*British Medical Journal* January 23rd) that so called cow pox is perhaps in most instances a streptococcal impetigo

CASE I

On December 19th 1931 I was called to see a man aged 34 who had a septic spot on his face His temperature and pulse were normal but he looked and felt ill On the right maxillary region of the face about one inch below the eye was a black scab about one third of an inch in diameter with pustular edges The face was red and swollen and the pre auricular gland was greatly enlarged as also were the anterior cervical glands on the same side

The condition had started as a small papule one week previously and had then become a blister The patient had felt ill during the blister stage but did not become anxious until the face began to swell Although the temperature and pulse were normal it seemed wise to exclude anthrax Smears were examined and only staphylococci were found One week later the adenitis subsided and the scab separated and healed the whole condition taking three weeks There was no accompanying rash

CASE II

A man aged 48 was seen on December 23rd he was ill in bed with a temperature of 102° F and pulse 110 On the left forearm were two vesicles one about the size of a threepenny piece and the other a little smaller Both were surrounded by indurated tissue and the axillary glands were swollen They were typical vaccination vesicles and took the course of ordinary vaccination There was a papular rash on the other forearm and a few scattered papules on the body A bacteriological examination was carried out and only staphylococci were found

COMMENTARY

Both these men who had been vaccinated during the war were farm labourers and had milked the same cow which they said had been ill I saw this cow in company with Dr H S Wallace of the Nottingham General Hospital The animal was thin and on its udders were several healing scars I attempted vaccination from the patient on unvaccinated and on vaccinated people but with no result I then vaccinated myself with the vesicular serum and developed a small papule which irritated for about five days and then disappeared

These two cases are of interest because of (1) the rarity of the condition—no farmer questioned had seen the disease nor had Dr Wallace in seventeen years of dermatological experience (2) bacteriological examination excluded streptococcal impetigo (3) there is no permanent immunity against vaccinia from ordinary vaccination

RICHARD W TAYLOR
Medical Officer Syston Small pox Hospital Leicestershire

Reports of Societies

THE EPIDEMIOLOGY OF STREPTOCOCCAL INFECTIONS

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on February 26th with *Professor* MAJOR GREENWOOD in the chair a discussion took place on the epidemiology of streptococcal infections

Dr V D ALLISON said that the genus Streptococcus in relation to human disease might be divided into *Streptococcus haemolyticus Streptococcus viridans* and *Streptococcus faecalis* The epidemiological importance of the haemolytic streptococcus was accepted The other two had not been found to produce any soluble exotoxin Griffith had described four main serological types of scarlatinal streptococci Among 700 cases of scarlet fever seen over a period of six years Dr Allison said that he had found that the relative distribution of the four types *in this country had not varied greatly* An examination of twenty six strains supplied by Professor Ulrich Friedemann *Berlin, had shown* an absence of the Type II strain American observers had also failed to find a representative of Type II and among isolated strains from America *Germany* and Yugoslavia Dr Allison said he had been unable to discover this type which appeared to be peculiar to this country Gunn and Griffith had suggested *three possible* explanations of changes occurring in the type of organism found during the course of a single case *first instability of the serological* characters of haemolytic streptococci secondly the influence of antibodies and local conditions *in vivo* might induce a change of type thirdly reinfection might occur from association with patients harbouring different types The weight of evidence was *in favour of reinfection patients* isolated in cubicles showed no change in the infecting type throughout the disease Working *with Dr Gunn, he had found* a carrier rate of 52 per cent The average number of return cases was 4 per cent *No change had* been found in the toxigenic powers of streptococci at various stages in the disease and it was possible that *the low* return-case rate was in some part due to the altered environment of home conditions leading *to early abolition of the* carrier state Haemolytic streptococci were isolated in ten instances from the desquamation *scales of thirty* seven patients and toxins sufficiently active to produce scarlet fever were prepared from each of the ten strains Working with twenty freshly *isolated strains of* scarlatinal streptococci (five strains from each of the four types) he had *found that the* toxins produced by the four types differed *quantitatively* from each other but that the content was constant for each type *The* toxin content of Type I was 25 000 S T D (skin test doses) per c cm of Type II 12 500 S T D per c cm of Type III 10,000 S T D *per c cm* and of Type IV 1 500 S T D per c cm The respective potencies of toxins obtained from the various types were found to be remarkably constant at any rate for the last three

It seemed probable that future work on the streptococcal toxins would show that while a considerable amount of overlapping occurred qualitative as well as quantitative differences existed between toxins from different strains of scarlatinal streptococci as well as between toxins from strains associated with conditions such as erysipelas *puerperal* fever and pyogenic infections

Tonsillitis was one of the most important local manifestations of infection with haemolytic streptococci and the similarity to scarlet fever apart from the rash was very striking Acute streptococcal tonsillitis was often a source of confusion *during a diphtheria* epidemic Scarlatinal types of streptococci had been isolated from the throat in some cases of severe tonsillitis There was evidence indicating that infection of the throat by haemolytic streptococci might range from a healthy carrier state through tonsillitis and pharyngitis to scarlet fever Recent work on puerperal fever had implicated the haemolytic streptococcus as the infecting agent in the majority of cases and the infecting strains often originated in the nose or throat of one of the attendants at labour Toxins prepared from strains of puerperal streptococci were found to be active though the potency as a rule was considerably below that of scarlatinal toxins Probably the puerperal streptococci depended for their pathogenic action on their invasive properties rather than on their toxigenic power Dr Allison said that he had been unable to recognize any scarlatinal types among a series of twelve erysipelas strains Statistics showed that there was a marked increase in the incidence of erysipelas when scarlet fever was epidemic while the case rate for puerperal fever showed no such fluctuations Haemolytic streptococci might occur as secondary invaders in almost any infective disease Among a hundred consecutive cases of diphtheria haemolytic streptococci were found in the throat swabs of sixty two and in a hundred cases of measles haemolytic streptococci were found in the throat on thirty-two occasions None of the *ninety four strains belonged* to the four scarlatinal types Fatal terminations occurring in acute respiratory diseases were frequently due to the implantation of a virulent strain of haemolytic *streptococci* on the primary infection

Dr W GUNN said that streptococcal infections were probably more common and more important in the production of human disease than *the sum of all other* acute infections To identify and prove the toxigenicity of the various strains required complicated human *tests as* animals were nearly all immune Haemolytic streptococci could be obtained from the throats of many *persons—not merely during* times of scarlet fever or tonsillitis epidemics The mode of spread was by droplet infection and a free current of air—even fresh air—if badly directed might prevent the organisms from falling rapidly to the ground *and so* increase infection The conditions most favourable *to spread* were to be found where too little space was allowed between beds in dormitories and where the ventilation was badly arranged *The diversity of strains* in the unclassified group of haemolytic streptococci was considerable It was believed at one time that toxigenicity and serological constitution were intimately *related in any* given strain and ran parallel courses but it had since been shown *that a strain* might suffer degradation of toxigenicity and remain serologically unaltered In schools epidemics of tonsillitis and scarlet fever sometimes arose at the same time but in different pupils *It might appear* that different disease entities were present simultaneously but serological tests in individual instances had shown that the whole epidemic was caused by one or more strains of haemolytic streptococcus In one school a Type IX heterogeneous haemolytic streptococcus was responsible for pyrexia of unknown origin influenza tonsillitis otitis pneumonia and complications *of measles In yet another* school the incidence of *scarlet fever* at unduly long intervals was kept up by outbreaks of pyrexia and feverish colds It was now certain that the toxigenicity of a *strain of haemolytic streptococci might* undergo degradation *even among the four* main types though when these were associated *with scarlet fever* the toxigenicity remained remarkably constant The erythrogenic toxin was only a *small fraction of the streptococcal toxin* in scarlet fever, and far *from being* dangerous provided a friendly warning in the absence of a rash cases *were missed* It had not been proved that nephritis was connected intimately with the erythrogenic fraction nephritis was not

an uncommon complication in non scarlatinal tonsillitis A reliable test of susceptibility to streptococcal invasion as distinct from susceptibility to streptococcal toxin would have a decided value

Dr J E MCCARTNEY thought it extraordinary that no representatives of Type II had yet been isolated from Continental strains of streptococci in view of the constant intercourse between this country and Europe He suggested that the examination of a larger number of strains was desirable If the haemolytic streptococcus was responsible for such different and distinctive conditions as scarlet fever erysipelas puerperal fever and tonsillitis other factors more important than the toxigenicity of the organism would appear to be active

Surgeon Captain S F DUDLEY said that members of families to which carriers returned might possibly develop latent immunization When carriers went home on leave from Greenwich diphtheria sometimes broke out in their homes though their colleagues in the college had resisted the infection

Dr J A GLOVER mentioned an epidemic of mastoid disease affecting 9 per cent of boys in a school and due to a Type II haemolytic streptococcus, the mastoid infection in these cases was preceded by tonsillitis but no rash

Sir GEORGE BUCHANAN said that the work of Dr Allison and Dr Gunn had begun to drive nails into the coffin of the dormitory system Public opinion might ultimately demand a campaign against dormitories beginning with the isolation hospital The isolation of carriers of haemolytic streptococci would be impracticable but the day was approaching when it would be required that midwives should be free of these organisms and when the use of masks would be a universal rule in obstetric practice

Dr E W GOODALL classified scarlet fever cases clinically as mild anginous or septic and malignant or toxic The third type was now unfortunately rare or it would provide an admirable field for further serological research Scarlet fever had vacillated in severity until about sixty years ago and since then it had been growing milder What had been happening to the streptococci to explain this change? Was it the seed or the soil which had altered?

Dr W BUTLER said that when it was assumed that certain strains of haemolytic streptococci were responsible for scarlet fever and when it was implied at the same time that a whole range of widely different clinical diseases which were known to breed true were also due to haemolytic streptococci he could not help feeling sceptical

The CHAIRMAN was inclined to share Dr Butler's view but paid tribute to the great value of Dr Allison's and Dr Gunn's work in clearing up some of the difficult problems in connexion with the haemolytic streptococcus

THE MOVEMENTS OF THE CHEST

At the meeting of the Section of Medicine of the Royal Society of Medicine on February 23rd with Dr H MORLEY FLETCHER in the chair a cinematograph film was shown to illustrate the method of ectoscopy whereby the movements of the chest are studied and recorded (as seen with the naked eye) with a view to determining certain pathological conditions The method is that of Dr Eduard Weisz of Pistany Czechoslovakia and was expounded by Dr L Schmidt of the same spa

Sir CHARLTON BRISCOE in some introductory remarks before Dr Schmidt gave his paper reminded the meeting that the mechanism of the movements of the chest was the cause of one of the most serious quarrels in medical history—namely that between Hamberger and Haller in the first half of the eighteenth century Hamberger's contention was that the diminution in size of the chest in expiration was produced by the contraction of the intercostal muscles drawing the ribs downwards and compressing the air which was in the pleura Haller on the other hand took the view of Galen that the intercostals were inspiratory and expanded the chest Physiological opinion favoured Haller and his rival was crushed when Haller was elected to the professorial chair which he had hoped to attain in the newly established university of Gottingen The intercostal muscles said Sir Charlton Briscoe as a source of interest were relegated to the past Their action was learned in the dissecting room and forgotten in the wards But the movements of the chest remained a subject of everyday clinical observation and there was as great a facility for a violent quarrel as ever before

Dr L SCHMIDT then expounded the method of ectoscopy showing how the chest on being suitably illuminated from the exterior revealed variations on breathing or speaking which were of service in determining the positions and limits of structures normal and abnormal He said that the part of the thoracic wall superficial to the liver and spleen was free from intercostal furrows visible elsewhere on the chest wall and thus the upper margins of those two organs could be mapped out By means of the snuff sign —a short sniffing inspiration—the level of the diaphragm could be ascertained The space between this and the costal margin showed the amount of reserve space available to the individual for emergencies This was diminished in emphysema and other pathological conditions By means of the intercostal speech sign it was possible to distinguish fluid effusion from surrounding thickened pleura and solid tumours which latter inhibited the speech movement in the intercostal spaces The speech sign appeared not like the snuff sign' as a primary depression but as a primary elevation at one or more points in certain intercostal spaces The most satisfactory method of demonstrating the speech signs was not to let the patient speak continuously but rather to make him repeat one suitable word such as kitt at intervals of two seconds and to illuminate the trunk by light falling sidewavs at an angle from a torch The fluid in effusion vibrated during speech the rest of the area of dullness remaining immobile Various pictures were shown of cases in which fluid was diagnosed by this means when other methods had failed to locate it In the abdomen peritoneal irritation produced reflex rigidity of the abdominal wall which in turn limited speech movement Pathological conditions were thus projected on to the surface A cinematograph film shown by Dr Schmidt illustrated how speech movements were inhibited on the right side in the case of duodenal ulcer and on the left in the case of perforated gastric carcinoma as well as similar changes in other pathological conditions in the abdomen The position of the liver abscess was diagnosed from the fact that the vibration of its fluid contents was visible on the trunk wall while the rest of the liver remained immobile Changes in the abdominal speech signs also occurred in spastic and flaccid paralysis In nervous diseases of the paretic type the affected part of the abdomen remained silent not moving during speech and this phenomenon might reveal an incipient paralysis before other objective signs betrayed its presence

Dr LEONARD FINDLAY said that evidently the day of observational medicine was not past It was refreshing at a time when most developments were in the direction of mechanical aids to have something which depended upon the power of the unaided eye

Dr E P POULTON pointed out that all sorts of changes within the abdomen due to dyspepsia and pain would produce reflex disturbances at the periphery which no doubt would show themselves by this particular speech

sign but he did not think it should be necessarily concluded that there was anything organic at the bottom Sir CHARLTON BRISCOE remarked that the snuff sign must be largely due to the action or lack of action of the intercostal muscles His own criticism was that no real judgement could be made when the individual was asked to do a voluntary act Directly a person knew that he was being observed he began to breathe in an abnormal way In an early case of pleurisy by observing muscles and their action one could make a diagnosis of the underlying condition but the patient must be observed without being asked to take voluntary breaths He thought that patients with acute peritonitis might object to doing anything which would bring the muscles into action Dr J F HALLS DALLY said that of the four diagnostic methods—namely inspection palpation percussion and auscultation—it always used to be said that the first was the most important but often inspection nowadays was ruled out He drew attention to one sign which was formerly talked about a good deal and still appeared in the text-books—namely Litten's sign (retraction of the lateral portion of the thorax)

Dr SCHMIDT in reply said that it was one of the merits of ectoscopy that distinctions could be made between troubles in the abdomen which were organic and others which were purely functional It was true as Sir Charlton Briscoe said that in the very painful cases of acute peritonitis there was difficulty in getting the patient to bring the muscles into action but it must not be forgotten that palpation was still more painful

TROPICAL TYPHUS

At a meeting of the Edinburgh Branch of the Royal Society of Tropical Medicine and Hygiene held on February 11th with Lieut-Colonel E D W GREIG I M S (ret.) in the chair Major T MENZIES R A M C read a short paper on tropical typhus in Europeans in Ranikhet Kumaon describing four cases in British troops occurring at 8 000 feet in the Himalayas at about thirty miles distance from the best known infected localities of Bhim Tal and Sat Tal

The cases under observation occurred during May and June in one small area where surrounding pine forests closely encroached on dwellings Two patients slept in adjoining beds but did not otherwise associate In two a tick had been removed from the body respectively three days and fourteen days prior to the onset of symptoms Onset was typical with malaise general headache backache and body pains slight sore throat and a fever rising to about 103° F with the appearance of the rash on the third or fourth day The rash appearing in three of the patients on the trunk and in the fourth on the forearms spread in twenty four hours over face trunk and limbs It consisted of abundant deep red blotchy maculo-papular spots about 1/4 inch in diameter at first fading on pressure later showing subcutaneous staining in distribution extensor rather than flexor spring the groins and axillae present on palms and soles on cheeks and forehead but not behind the ears and persisted especially on the legs and buttocks for over three weeks Other symptoms included toxaemia prostration and delirium slow pulse constipation incontinence or retention of urine and congestion of the palate and fauces The temperature fell by rapid lysis on six seven nine and eleven days to normal and convalescence was rapid One case showed marked generalized painless lymphadenitis No involvement of liver or spleen was seen and there was no albuminuria or jaundice

The Weil-Felix reaction (*B. proteus* X 19 Kasauli) and Widal reaction were negative Cultures of blood and faeces were negative for the enteric group but three cases showed a scanty growth in agglutination tube for *B. typhosus* para A and para B The blood showed initially no leucocytosis but a tendency toward an increase of large mononuclears and later a moderate leucocytosis with a relative decrease of the mononuclears Guinea-pig inoculation with whole blood produced no reaction

Bed bugs were prevalent but no lice were found on the patients No case was seen in non-immune Indians accompanying the troops from the plains

In the short discussion that followed it was pointed out that serum which failed to give the Weil-Felix reaction when fresh might give a positive reaction after being kept for some time After Major Menzies's paper a number of demonstrations were given including a case of *Entamoeba coli* in a child of 4 who had always lived in Edinburgh, and who had been admitted to hospital for giddiness and tissue of fatal cases of yellow fever and malaria by Colonel GREIG Lieut.-Colonel W F HARVEY and Mr T D HAMILTON commented on the prevailing poor technique shown in the making of blood films and demonstrated the use of Kouman's celluloid spreader for this purpose together with illustrations of whole film counts and the preparation of a simple accurate haemoglobinometric scale prepared from various dilutions of normal blood They also presented a demonstration on the specificity of cell reactions which they maintain is non-existent malarial and protozoal monocytoses etc are but a phase of a uniform sequence of events A knowledge of the parentage of the blood cells is required for the interpretation of these reactions and the subject of the stem cell was illustrated beginning with the reticulo-endothelial cell and passing through the stages of the primitive cell myeloblast lymphoblast and erythroblast to the mature cells of the blood Dr T W M CAMERON demonstrated the part played by the eosinophil cell in the formation of fibrous tissue reactions and also a method of keeping parasitic worms alive for considerable periods *in vitro* the worms shown being *Ascaris lumbricoides* the females of which were each laying over 30 000 eggs daily He also demonstrated the life history of the lesser liver fluke of sheep (and man) which he had shown to be carried by a land snail the latter swallows the eggs in the faeces and is in turn accidently swallowed in grass by the host In Scotland the particular snail is a small species which although readily swallowed by sheep is obviously too large to be easily overlooked on human food a fact which explains why man is so seldom affected

GAMBIAN SLEEPING SICKNESS

At a meeting of the Royal Society of Tropical Medicine and Hygiene at Manson House on February 18th with the president Dr CARMICHAEL LOW in the chair a paper on the results of tryparsamide and combined treatment of Gambian sleeping sickness was read by Dr C C CHESTERMAN

In his introductory remarks Dr Chesterman pointed out that although eleven years had elapsed since investigations on tryparsamide had commenced and although its superiority over other drugs in the treatment of Gambian trypanosomiasis had been recognized throughout Africa there still remained a good deal of uncertainty regarding its end results and the best methods of its administration The present series comprised seventeen first stage cases with unaltered cerebro-spinal fluid in which only lymph glands and blood were implicated and 251 second stage cases commencing probably from seven to twenty five months after infection in which the central nervous system was definitely involved There was no reason to believe that the strain of *T. gambiense* was other than of average and uniform virulence First stage cases were invariably cured six to eight weekly injections of medium sized doses graded from 0·07 to 0·045 gram per kilo of body weight according to age being advocated Of 140 second stage cases treated by tryparsamide alone forty

one (29 28 per cent) were cured The distribution of cures in these patients was significant for among those treated with large doses 51 85 per cent recovered, with medium doses 29 73 per cent and with small doses only 12 82 per cent Unfortunately visual trouble occurred in 30 20 and 15 per cent of the three series respectively The first few doses proved all important in eradicating trypanosomes During the second stage Dr Chesterman advised six to eight weekly injections of large doses (0 08 gram per kilo for children and 0 06 gram per kilo for adults) The maximum dose should be 4 grams Advanced second stage cases should receive two to three large doses at five days interval further injections being withheld until the condition of the eyes was ascertained In his opinion serious visual disturbance often leading to blindness must be expected in at least 30 per cent of second stage cases efficiently treated Of thirty seven cases treated during the second stage with tryparsamide after atoxyl and soamin had failed only seven survived The significant fact was that any soamin- or atoxyl resistant case could survive at all The association of tryparsamide with tartar emetic gave no better results than the former drug alone Tryparsamide preceded by two to three large doses of Bayer 205 however yielded more promising results than any other therapeutic measure and already it was being adopted in Uganda as a routine procedure There was an increased tendency to visual disturbances owing presumably to tryparsamide retention due to lessened renal efficiency occasioned by Bayer 205

Professor WARRINGTON YORKE summarizing the findings of the French Commission in November 1931 pointed out that its advice differed fundamentally from Dr Chesterman's in that it advocated initial treatment with atoxyl or arsamin graded doses of tryparsamide and a lower maximum dose His own experimental work on drug resistance showed that there was no such thing as antimony or arsenic fastness for the resistance developed to various complex compounds of these two elements was really a resistance to the benzene ring and its appendages This resistance could be demonstrated *in vitro* was definitely located in the parasite itself and was not dependent on the capacity of the parasite to take up the drug It was acquired by a gradual mutation and thereafter became a fixed character which passage did not affect Recently he had found in human strains derived from untreated African cases sent over in guinea pigs that some strains were fairly susceptible to arsenic while others were only slightly susceptible This was important for obviously patients infected with a naturally resistant strain could never be successfully treated with arsenicals His general impression was that the results of French workers were really no worse than those obtained by Dr Chesterman and he himself would think carefully before he ran the risk of making a patient blind

Dr CARMICHAEL LOW said that Dr Louisa Pearce in her large series of cases had not met with this great amount of optic atrophy, and asked if it was the same brand of tryparsamide In combined treatment he suggested that Bayer 205 should follow and not precede tryparsamide as owing to its action on the kidney it might lead to drug retention and so to optic atrophy He had seen cases resistant to tryparsamide cured subsequently by Bayer 205

Dr HENSHALL discussed the points raised concerning the treatment of syphilis by Dr Chesterman while Dr MURGATROYD reviewed the theories regarding the causation of optic atrophy As this complication did not occur with tartar emetic or Bayer 205 he concluded it must be essentially related to the toxic action of the arsenicals He inquired whether the optic nerve had ever been removed and examined during the stage of a visual accident.

In reply Dr CHESTERMAN stated that his supply of tryparsamide was all obtained from the Rockefeller Institute He had been very interested to hear that Professor Warrington Yorke had observed variations in the resistance of strains derived from untreated cases If confirmed this was a very important observation

ABNORMAL BEHAVIOUR IN CHILDREN

At a meeting of the Medical Officers of Schools Association on February 19th Dr WILLIAM MOODIE, medical director of the London Child Guidance Clinic, gave some account of the work of the clinic, which, after three years existence is about to accept its thousandth case

Many divergent views he said were held with regard to behaviour from the old idea of original sin to the very modern conception of the psycho analyst He did not think that either of these extreme attitudes was helpful, and the constant endeavour of those concerned in child guidance was to strike a mean between repression of the child for the sake of society and the granting of personal freedom to the child for its own sake Abnormal behaviour was not something fortuitous, and if enough was known about the individual and his environment the cause could be traced, although it might be far removed from the behaviour itself and have a quite different pattern One was only entitled to assume that a given factor was the cause if the removal or alteration of this factor resulted in an alteration of the behaviour The cases at the clinic came from all grades of society—half of them from the elementary schools and half of the remainder from the public schools The rest were children of pre school or post school age They were selected cases in the sense that the parents had at least realized the necessity for this kind of treatment instead of trying to knock something into their backward offspring Backwardness was the reason for reference in the greatest number of cases and after this came stealing nervousness unmanageability, lying premature neurosis stammering and inability to concentrate Sex problems were found in a very small proportion of cases—about 5 per cent Physical disorder of a serious kind was conspicuously absent there were some cases of carious teeth or septic throats but more important from the point of view of the clinic was the number of children who suffered from malnutrition due to improper feeding or from fatigue due to lost or disturbed sleep The results of encephalitis were seldom found, but in at least two cases where encephalitis appeared the behaviour problem yielded to adjustment The most important condition [illegible] with was the anxiety state evidenced by nervous [illegible]ated and irritability Often such children came from [illegible]environment in which they never knew what was going to happen—possibly because of alcoholic parents who petted them one moment and beat them the next or because of parents whose standards of discipline were at variance so that the children never knew where they stood But there was also some factor in the child which contributed to instability, because of two children from the same environment one would show the anxiety state and the other not Left handedness was present in a large number of the children about twice as many as the average of the community the association of left handedness with stammer occurred occasionally but not frequently A certain number of obsessional cases occurred usually in intelligent children the cause was discovered in practically all cases but the cure was difficult It was a constant puzzle why stress in the case of one child should make it steal while it made another shy and so forth but the determining factor was in part a regression to practices or conditions of an earlier period and in part the influence of example The stress was present and

the method of outlet or escape was suggested Dr Moodie did not think there was any evidence that these attitudes were inherited

Dr LETITIA FAIRFIELD commented on the fact that teachers standards often needed some inquiry and correction She mentioned an American investigation which had attempted to discover what standards of conduct the teachers had in mind when they described a child as troublesome The result showed so far as female teachers were concerned that the offence of first importance was swearing which however shocking it might be to a female teacher was not in a small boy the most significant of misbehaviours Generally the offences which had most importance in the eyes of teachers were offences against authority—disobedience disorderliness and so forth—while the withdrawal reactions of more importance from the side of the psychiatrist such as shyness fantasy building and inattention were largely overlooked

TREATMENT OF INFANTILE PARALYSIS

The meeting of the Manchester Medical Society on February 3rd was devoted to a discussion on advances in the treatment of infantile paralysis

Dr R W FAIRBROTHER said that poliomyelitis and its treatment presented a problem demanding the deepest consideration not only on account of the mortality of the disease but perhaps especially for the crippling nature of its after effects There seemed no doubt that the causative agent was an ultramicroscopic virus which passed through the ordinary bacterial filters and could not be cultivated *with certainty* by any of the usual technical procedures The only means at present available for its demonstration was by animal inoculation *and the only* animal susceptible was the monkey In order to reproduce the disease in monkeys the virus must be introduced as close as possible to the central nervous system Nevertheless the following properties of the virus had been established it was extremely resistant to freezing drying pure glycerol and 0·5 per cent phenol but it was readily destroyed by heat at 45° C and by oxidizing agent The epidemiology of poliomyelitis was a complex problem In this country cases were always cropping up but extensive epidemics had not appeared for some time small outbreaks were however frequently reported In other countries extensive epidemics had occurred within recent years It would seem that the virus was usually present in a community and infected a large number of people only a few of whom developed poliomyelitis The majority underwent subclinical infection and obtained a degree of immunity associated with the presence of antiviral bodies in the serum In isolated communities the chance of infection was less and so on introduction of a virulent virus alarming outbreaks arose The mode of spread of the virus was uncertain but evidence strongly suggested that it was a droplet infection from the nasopharyngeal mucosa It had been pointed out that healthy carriers played an important part in the epidemiology of the disease In other cases there was a definite reaction to the virus and many forms of polio virus had been described according to the site of the lesions It was important to recognize the preparalytic stage which probably represented the early reactive processes of the body particularly of the nervous tissues to invasion by the virus Early and intensive treatment was essential this was the best time to commence vaccine therapy *in the paralytic phase* General measures included the immediate isolation of all definite or suspected cases strict attention to the bowels fluid diet purges Spinal punctures also should be carried out Active immunization was of no value Passive immunization however had proved of great value and many types of serum had been advocated, the most useful were convalescent human serum immune horse serum and certain samples of normal human serum The serum must be adequately tested for the presence of antiviral bodies before being used As soon as the diagnosis was made and confirmed by examination of the cerebrospinal fluid serum should be administered The dose was *regulated by the* age of the patient but it should be as large as possible An average dose was 20 c.cm intrathecally and 30 c.cm intravenously If no improvement was observed this dose should be repeated every twenty four hours until improvement took place The usual response was a rapid fall of temperature with marked improvement in the patient's condition Where paralysis had occurred before the serum was given the outlook was not so good but there was always the possibility that the serum might limit the spread of the lesions The reports of serum therapy in different countries had been striking especially when it had been carried out in the pre paralytic stages Diagnosis was not always easy in the earliest stages of the disease and in some cases the muscular weakness cleared up *without serum treatment* In conclusion Dr Fairbrother emphasized the point that while the administration of serum was comparatively harmless failure to inoculate serum in poliomyelitis might result in permanent crippling with impairment for life

Mr E S BRENTNALL spoke of the treatment of the disease once paralysis had appeared The last few years he said had seen little distinct advance in the measures available for combating the results of severe paralysis but they had witnessed the thoughtful evaluation of existing methods It was also not to be forgotten that a much more adequate accommodation in country hospitals had become available in the last few years for the treatment of paralysis throughout its acute and convalescent stages with additional provision for its subsequent after care near the patient's home Complete rest with muscular relaxation and support in a full length plaster-of-Paris bed was the most effective and simple means for dealing with the acute stage and gave adequate protection against almost all deformity The value of various physical measures when the tenderness had gone was briefly discussed and the overwhelming importance of 'unloaded' re education was emphasized Support of the affected muscles was only to be discarded when tentative freedom produced no interruption or impairment of recovery As to the time for allowing weight-bearing Lovett had shown that that was a most critical question for the patient *with* lower limb paralysis and still more when spinal or abdominal weakness existed Operative treatment was often required to supplement conservative measures The stretching of contractures by traction or by a series of corrective plasters was not only now more popular but a more rational procedure than sudden correction by division of the tight structures though at times the rapid method was inevitable Still later operative treatment became necessary in order to improve the voluntary control at certain points or otherwise to give stability and balance Little progress seemed to have been made of late years in the treatment of paralysis of the upper limb In a restricted field tendon transplantation had proved of very considerable value particularly in the case of the hand but it appeared to have failed or almost so at the elbow and should not In the lower limb the disappointing behaviour of tendon transplantation in general as an isolated means of controlling paralysis was discussed together with the very practical suggestions of Naughton Dunn Mr Brentnall finally described some of the alternative methods in present use for the stabilizing of flail or loose joints

Reviews

PATHOLOGY OF PROSTATIC ENLARGEMENT

Dr ALEXANDER RANDALL professor of urology in the University of Pennsylvania is well known for his work on the pathology of prostatic enlargement His *Surgical Pathology of Prostatic Obstructions*[1] will therefore be read with interest by all who know his former views on this subject In the volume under review the author deals not only with cases of prostatic bar, but also with general enlargement His observations are based on some 1 215 necropsies from all ages of life among which were found 312 instances of gross pathological change in the prostate His figures concerning the incidence of prostatic enlargement among the 680 men examined are rather overwhelming It shows that of those past 50 years of age 28 per cent had enlarged prostates of those past 60 33 5 per cent of those past 70 43 4 per cent and of those past 80 53 3 per cent It must be realized however that these figures are taken from the post-mortem room and undoubtedly include many cases in which although the prostate was enlarged it had given rise to no symptoms Another interesting point that is brought out by Professor Randall is the fact that the negro is no more immune to the disease of prostatic enlargement than is the European Up till now authorities have held different opinions on this subject The probable explanation is that it has not been sufficiently realized that the expectation of life of the negro is less than that of the white man and in consequence as he more frequently dies before the prostatic age he is more likely to escape this malady Professor Randall's book is full of valuable matter on which those who are interested in that fascinating enigma the enlarged prostate may browse His work is illustrated by means of excellent plates

CLINICAL PHYSIOLOGY

The Science of Signs and Symptoms by Professor R J S MCDOWALL is based on an earlier work of the author's entitled *Clinical Physiology* The scope envisaged by the present work is as its new title shows considerably increased It is debatable whether a comprehensive analysis of symptoms and signs can be adequately made on a purely physiological basis Many—for instance the periodicity of malarial rigors and the crisis in pneumonia—have a zoological or an immunological basis for their characteristic appearance rather than a physiological or physical one Others are the result of processes so rarely dealt with in the physiological laboratory that although dependent upon physiological factors they tend to be omitted from a book of this kind The explanation of the symptoms and signs of embolism and infarction for example finds no place in these pages Pulmonary renal splenic and cardiac infarction are common in practice and are the source of a great variety of both signs and symptoms Again cardiac pain arises in a manner and is transmitted through paths known to the science of experimental medicine but it is not a subject upon which much pure physiological research has been done Cardiac hypertrophy also is a phenomenon of essential clinical importance That it varies with the rapidity with which a load is placed upon the heart and with the amount of anoxaemia or toxaemia of the muscle and that deductions about the degree or the duration of an associated lesion can be made from the amount of hypertrophy are commonplaces to the physician The subject is possibly pathological or physical rather than physiological, but its omission is a further indication that the science of signs and symptoms cannot be based on physiology alone

A work dealing with the science of physical signs should explain with some thoroughness the rationale of their production Lack of space should not be the reason for the presentation of the 'barest essentials' of a subject so important as the breath sounds (p 213) It is moreover disappointing to find in the discussion about breath sounds that the one most valuable physical sign of the presence of fluid that of absent vocal vibrations on palpation of the chest is altogether omitted A dull percussion note with distant or absent vesicular murmur is found with equal readiness in thickened pleura, massive collapse or neoplasm These are some of the many reasons why the previous title *Clinical Physiology* would have been more accurately descriptive

Disregarding the possibly over ambitious title there is much in Professor McDowall's book that will be of great value to the practitioner The chapters dealing with the central nervous system swallowing digestion intestinal movements basal metabolism jaundice oedema and hypersensitivity are especially clear The physiological basis for commonly observed signs and symptoms tends easily to be forgotten in practice and it is both salutary and of practical help to be reminded of them The comparative brevity with which the subjects are discussed as well as the manner is such as to facilitate their absorption by a tired practitioner without danger of mental dyspepsia

A TEXTBOOK OF GENERAL BACTERIOLOGY

The mere fact that Professor EDWIN O JORDAN'S textbook[2] first produced in 1908 has now reached a tenth edition is sufficient proof of its good qualities It is one of the standard American works on the subject of bacteriology—more properly microbiology since it embraces the pathogenic protozoa and fungi as well as the bacteria—whose popularity is not entirely limited to that country for it finds readers on this side of the Atlantic as well And when this book is examined more closely the reason for its popularity is not far to seek It is a clear and very well balanced account of the subject by one who has obviously kept in touch with that vast volume of research relating to the various aspects of microbiology Whether we turn to the section on streptococci the account of bacterial variation or (what is probably a more stringent test) the chapter on the filterable viruses we find the treatment of the subject equally up to date

The book is constructed on more or less orthodox lines commencing with chapters devoted to general considerations—such as methods of studying bacteria bacterial structure and physiology nomenclature and immunity—before proceeding to a detailed account of the different bacterial species Of these early chapters the one on immunity strikes us as particularly good This subject is presented to the student in a clear and straightforward manner and the side chain theory of Ehrlich is mentioned without being given that undue prominence which in the past has been a feature of chapters on immunity By the way there is a misleading statement in Chapter 3 (p 63) to the effect that the virus of foot and mouth disease 'can be cultivated by the usual laboratory

[1] *Surgical Pathology of Prostatic Obstructions* By Alexander Randall M D London J Bale Sons & Danielsson Ltd and Cox 1931 (Pp xiii + 266 78 plates 37s 6d net)

The Science of Signs and Symptoms in Relation to Modern Diagnosis and Treatment By Robert John Stewart McDowall D Sc M B F R C P I London W Heinemann (Medical Books) Ltd 1931 (Pp xvi + 440 7 figures 21s net)

[2] *A Text Book of General Bacteriology* By Edwin O Jordan Ph D Tenth edition entirely reset Philadelphia and London W B Saunders Company 1931 (Pp 819 200 figures 25s net)

procedures Of course tissue culture might rightly be termed a usual laboratory procedure nowadays but the student might conclude not unreasonably though incorrectly that foot and mouth virus can be grown on a simple artificial medium Chapters 9 to 25 are devoted to a systematic study of the pathogenic bacteria and following this are accounts of other pathogenic microbes such as spirochætes yeasts moulds protozoa filterable viruses and rickettsiæ The filterable viruses are given quite satisfactory treatment but we should doubt whether the remarks on the etiology of epidemic encephalitis would meet with general approval In view of McIntosh's experiments it is incorrect to say that monkeys are refractory and the reference to Flexner's work is misleading The only occasion on which he was able to demonstrate herpes virus in the central nervous system was from a case of neurosyphilis in fact all Flexner's work on this subject has gone definitely against the herpetic origin of encephalitis lethargica

The remainder of the book is devoted to matters of more general interest the bacteriology of milk and milk products bacteria and the nitrogen cycle and the rôle of bacteria in certain industrial processes It concludes with an interesting account of bacterial diseases of plants and there is an appendix in which infectious diseases of doubtful origin are discussed It is difficult to understand why measles and mumps should be relegated to the appendix when epidemic encephalitis finds inclusion in the *group of filterable viruses* We should have thought that the evidence in favour of the two former diseases being due to a filterable virus was stronger than in the case of epidemic encephalitis

THE ART OF PERCUSSION

Dr ALFRED WINKLER of Graz has written his book on the *Percussion of the Lung Fields*[1] to counteract the growing tendency to neglect this valuable method of examination Difficulties of technique the difficulty of differentiating normal from slightly abnormal sounds the frequent absence of abnormalities of percussion in the early stages of many pulmonary disorders together with the recent incursions of the radiologist into the realm of pulmonary diagnosis have all helped to overshadow the value of percussion Yet this method is just as reliable and indispensable as ever it was if taken in conjunction with inspection palpation and auscultation In many ways it is a pity to deal with *one method* of examination only—as though it could be discussed apart from the others—but the author gets over this difficulty somewhat by means of a short chapter on inspection and palpation He describes the fundamentals of percussion in normal and abnormal conditions with special reference to pulmonary tuberculosis He details—and this is perhaps the most interesting part of the book—the various methods of percussion that have been described His own large experience of practice and the teaching of students enables him to examine each method critically pointing out the advantages sources of error and faults in each The information is of a very practical nature and is illustrated by means of numerous clear photographs and diagrams This is a book that will interest the specialist by bringing to his notice new points of view It should also prove useful to practitioners and students for it deals with the fundamentals of an important subject in a highly practical way But it is only by diligent practice over a long period that a reliable technique can be acquired I doubt if a physician in this country once said it had taken him a fifty years of constant practice to master the subject

[1] [illegible] By Dr Alfred Winkler (Pp 120 with 70 figures RM 6)

THOMSON AND MILES SURGERY[2]

It is now twenty eight years since *Thomson and Miles Manual of Surgery* first saw the light and the publication of an eighth edition is proof if any were needed of the continued vitality of this admirable book In the preparation of the new edition the co operation of Mr D P D Wilkie the successor of Mr Alexis Thomson in the chair of surgery at Edinburgh has been enlisted to share in the general revision and editing of the text Some twenty other surgical colleagues of the editors have undertaken the revision of certain sections dealing with subjects in which they were specially interested, so that the manual may fairly be claimed to reflect the teaching of the Edinburgh school The work is divided into three handy volumes volume i dealing with general surgery volume ii the extremities and the head and neck and volume iii the thorax and abdomen The manual has always been very popular with students in England as well as in Scotland so that a detailed review of an eighth edition is not necessary The general characteristics of the previous editions have been maintained and some new illustrations have been added One very tangible advantage may be claimed for this manual—that is the convenient size of the volumes they can be read as easily and as comfortably on a couch as sitting up at a table and that cannot be said with equal truth of all books of this description

THE LADY IN CHIEF

Whether there is a need for another biography of *Florence* Nightingale or not we have no hesitation in commending the small book *Florence Nightingale*[3] by IRENE COOPER WILLIS Without gush or cynicism—and both have been applied to this subject by other writers—a clear and fair account is given of the great reformer of sick nursing and a just estimate of her character Miss Nightingale was a severe critic of her own sex She accused women of inability to 'state a fact accurately to another nor can that other attend to it accurately enough for it to become informative She herself had some of the weaknesses of her sex in a high degree as was shown by her self seclusion in her room or bed for many years long before old age deteriorated her mental powers We are glad to welcome the author of this book as an appreciator of the mud bespattered public men of Crimean days As she says There was a high standard of responsibility in Victorian times without it the many great reforms of those days could never have been achieved Florence for all the terrific horse power of her energy could have done but little had she not at her beck and call men who were in many cases as ready to be made use of in the public service as she was to make use of them Here we have the case in a nutshell Probably there was not another individual in Great Britain at that time so gifted and so circumstanced as to have been able to do what she did Some sympathy might have been afforded for the principal medical officer Sir John Hall who found himself pitchforked from the Cape to the Crimea without any staff or the opportunity of selecting one and who was morally tied hand and foot by red tape and the fear of his military superiors Luckily for the Army Florence Nightingale cared nothing for red tape nor for the combatants desire to keep the doctor in his place

[2] *Thomson and Miles Manual of Surgery* By Alexander Miles MD LLD FRCSEd and D P D Wilkie MD FRCS Volumes i ii and iii *Eighth edition* Oxford Medical Publications London Milford Oxford University Press 1931 (Vol i pp xvi + 574 176 figures vol ii pp xvi + 685 303 figures vol iii pp xii + 578 177 figures Each volume 12s 6d net)

[3] *Florence Nightingale* By Irene Cooper Willis London G Allen and Unwin Ltd 1931 (Pp 255 1 portrait 7s 6d net)

NOTES ON BOOKS

After a preface in which he raises several controversial points Dr CHARLES NEWMAN leaves debatable matter behind and devotes a hundred pages or so to excellent common sense advice on the treatment of *Medical Emergencies*[1] The first chapter on poisoning is refreshing for its new approach to a hackneyed subject and thence through coma and convulsions to circulatory failure haemorrhage asphyxia and colic the author leads the busy practitioner with a minimum of superfluous matter *and a maximum of straightforward things to do* A chapter on what to do in cases of sudden insanity is a useful inclusion and a miscellaneous assortment in the last section contains some surprising bedfellows such as migraine and lobar pneumonia On the whole however there is nothing to complain of in Dr Newman's choice of emergencies His style is readable and he can sum up a great deal of wisdom in a short sentence The purist will be irked by his tendency to use 'lie' when he means 'lay', but the practitioner in a hurry will not bother about this and for him the book should be very useful

The twenty-third enlarged edition of Dr R FORTESCUE FOX's well known annual survey of *British Spas and Seaside Resorts*[2] is of special interest this year in view of the movement on foot to popularize the health resorts of this country The introductory remarks on the choice of waters and climates of Great Britain will be found particularly valuable and the good point is made that in choosing a place the reactions of the individual to physical remedies are more important than the labels of health resorts The principal spas of Great Britain and New Zealand are described in some detail and the advertisement pages contain accounts of numerous suitable hotels etc in the various resorts It would be an advantage if the exact terms usually charged were indicated in every advertisement and if in the account of the different health resorts some statement were made about the motoring accessibility of the place and the possibility of motoring trips in the vicinity

Fighting Disease with Drugs The Story of Pharmacy[3] is a symposium the publication of which was organized by the National Conference of Pharmaceutical Research in the United States The general purpose of the volume is to instruct the lay reader in the importance of drugs and the services that pharmacy renders to the community An introduction has been provided by Dr J H BEAL who points out the great services that pharmacy has rendered in the past to chemistry and to medicine Among the distinguished scientists who were trained as apothecaries are Scheele Liebig Sir Humphry Davy and Sertürner The authors who have contributed chapters to this book deal with such varied aspects of the subject as the history of pharmacy the natural sources of drugs their manufacture and standardization the dispensing of drugs and laws regulating the sale of drugs

When the surgeon has ordered and seen fitted and has approved a walking appliance such as a Thomas calliper splint he is apt to dismiss the matter from his mind rather counting the case as done with But the patient finds that having survived the troubles of the sick-bed he is only at the beginning of a whole set of problems which he must solve as best he may These are apparently small matters but the finding or missing of the right solutions makes all the difference to the patient's comfort Miss OTTILIE WALLACE having had the misfortune to suffer from a pseudarthrosis of the femur which makes necessary a calliper splint tells us in simple terms of all the troubles which its use involves and of the devices and dodges which she has found valuable This little book[10] is we suppose, unique and certainly it is likely to be of the greatest use and comfort to many persons who may be crippled by stiff joints of *the lower extremity* The troubles of 'wayfaring in a splint' should be greatly lightened by the study of this pocket guide

Witte's peptone is renowned throughout the scientific world and the house of Friedr Witte of Rostock has *celebrated the seventy fifth anniversary* of its existence by publishing a Festschrift entitled Proteins, Enzymes and Lipoids[11] Many well known scientists have contributed articles Dr Abderhalden writes on the structure of protein and Dr Oppenheimer on protein splitting ferments An article on the use of peptone in asthma is contributed from this country by Dr A G Auld The volume concludes with a short history of the firm

[1] *Medical Emergencies* By Charles Newman M.D. M.R.C.P. Churchill's Empire Series London J. and A. Churchill 1931 (Pp. ix + 128. 5s. 6d. net.)

[2] *British Spas and Seaside Resorts* By R. Fortescue Fox M.D. F.R.C.P. F.R.Met.S. Twenty third annual edition London J. and A. Churchill 1932 (Pp. 96 illustrated. 1s.)

[3] *Fighting Disease with Drugs The Story of Pharmacy* Edited by John C. Krantz jun. Baltimore The Williams and Wilkins Company London Baillière Tindall and Cox 1931 (Pp. xv + 250. 4 figures. 10s. 6d. net.)

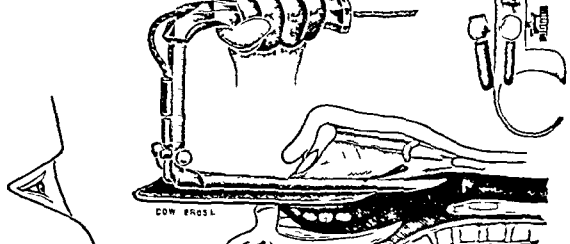
[10] *Wayfaring in a Splint* By Ottilie Wallace London Milford Oxford University Press 1931 (Pp. viii + 52. 1 plate. 2s. 6d. net.)

[11] *Ueber Proteïne Enzymen und Lipoiden* Festschrift zum 75 jährigen Bestehen der Firma Friedr. Witte Rostock Rostock Adlers Erben G.M.B.H. Rats und Universitäts Buchdruckerei 1931 (Pp. 333.)

PREPARATIONS AND APPLIANCES

ILLUMINATED DIRECT LARYNGO PHARYNGOSCOPE

Mr E. WATSON WILLIAMS (Clifton) writes The instrument here described I have been using for a considerable time and have found that it presents definite advantages It is longer than the usual pattern and adequate for the largest adult but owing to the tapering of the end is convenient for children of 2 years of age It gives very good exposure for examination of or operation on the larynx and the tip can be passed between the vocal cords it is useful also as an upper oesophageal speculum and will reach all foreign bodies in the common site of impaction immediately below the cricoid the slotting of the ventral surface near the tip enables the patient to respire through the lumen during such use The right side of the tube has been cut away completely facilitating the passage of instruments An anæsthetic tube



is built into the left wall abolishing the need for a separate anæsthetic tube and delivering the vapour well down the lumen The tube of the instrument is of stainless steel 20 cm. long and 16 by 20 mm. internal diameter the right wall is absent a slot of 1 cm. wide being left Commencing at 8 cm. from the tip the width is gradually tapered to 8 mm. at the tip which is blunt at the same time the ventral wall is discontinued so that the distal 5 cm. is definitely a concave spatula the concavity gradually lessening toward the tip Illumination is by means of a Jack on type lamp carrier taking the standard lamps (2.5 mm.) which are carried at the distal end The handle is also of the Jackson type but hollow so that the lamp flex is carried well away from the upper end during use

Messrs Down Bros. Ltd. London are the makers of the instrument

ATMOSPHERIC POLLUTION

THE SMOKE MENACE IN INDUSTRIAL TOWNS

John Evelyn's "presumptuous smoake" rising over Whitehall and endangering the health of Charles II shows no signs of diminution but quite the contrary and Whitehall or Charing Cross remains one of the smokiest spots in London. At Westminster City Hall north of Trafalgar Square the records show that a thickish smoke haze marked 135 days out of the 180 in the winter months of 1930-31. These were 2 days to use the description of the Department of Scientific and Industrial Research in its seventeenth annual report co-ordinating local observations of atmospheric pollution.* So curiously local is this pall that at Westminster Bridge one third of a mile away, similar records give only 79 such days at Victoria Street 63 at South Kensington 58 and at Kew 19. Outside London a Glasgow winter gave only 30 "Z" days Blackburn 13 Stoke-on-Trent 10 and Coventry none at all. Coventry is indeed the marvel of these statistics. The medical officer of health for that city gives several reasons for its smokelessness: it is surrounded by open country its population density is low some of its largest factories are in semi-rural surroundings electricity is cheap and used for power and the gas department has installed 41 000 gas cookers and 14 500 gas fires.

It may be the increasing domestic use of gas which explains the optimism of the Londoner who believes that his suffocating fogs *must grow less dense and less frequent*. The official report refuses to encourage this optimism. The important cause of smoke fogs in cities is the state of the atmosphere as to wind and temperature. *When* conditions occur which prevent the escape of *smoke from* the city so that it accumulates to form a *fog* small variations in the actual rate of emission of smoke are no great factor. Enough smoke is emitted *in London* during any two or three hours in a *winter morning to* produce the blackest fog of which Londoners have any experience. A reduction by one third in the *rate of smoke* emission would only mean that *the time which the fog* took to reach its maximum was prolonged by *one third*. It is also to be remarked that in November and December 1930 there were more and worse fogs than in the same months of 1922 a year *which for some* reason marked the end of a period of rapid improvement of the atmosphere.

In one respect the most recent figures are encouraging: *there has* been a diminution in the deposit of sulphur. It is well known that sulphur acids are the most actively destructive element of atmospheric pollution and that sulphur plays a considerable part in the damage done to buildings by *smoke*. But there are set-backs to be recorded: *and in* Ravenscourt Park a predominantly residential district of West London the volume of sulphur deposit during the year under review was almost three times as great as the average for the previous five years in that locality. No explanation is given of this increase. A routine method of measuring sulphur in the atmosphere has now been developed. It consists in passing a known volume of air through a solution of hydrogen peroxide the amount of sulphuric acid absorbed by the solution being determined afterwards by simple titration.

SOME LOCAL STATISTICS

Observations on atmospheric pollution are now systematically made at over forty important towns in Great Britain under the auspices of the Department of Scientific and Industrial Research which acts in co-operation with a number of municipalities and industrial and other bodies. About two-thirds of the stations show during the year under review a reduction in the amount of impurity as compared with the average of the previous five years. The heaviest tar deposits are recorded at Walsall Salford, and Burnley in London at the station in Golden Lane near Finsbury Circus the deposit of tar increased in the year by more than three times the previous five years average.

The total amount of solid matter deposited or brought down by rain amounted to 550 tons per square mile in the course of the year at one point in Lancashire, the average recorded is between 200 and 300 tons. We give for a few towns figures showing the total solids deposited from the atmosphere during the year 1930-31 together with the five-year average where this is available. The figures are only approximate because the tables in the report are worked out in grams per square decametre.

	1930-31	Five-year average
Birmingham (Central)	170 tons	185 to 18
Birmingham (West Heath)	121	—
Bournville (village)	104	127
Burnley (Town Hall)	532	—
Cheltenham	302	—
Edinburgh (Princes Street)	283	240
Liverpool (Netherfield Road)	583	699
London (Golden Lane)	410	491
London (South Kensington)	250	272
Newcastle-on-Tyne (St. Lawrence)	409	—
Sheffield (Attercliffe)	318	—

A piece of special research is recorded in the report. It was desired to ascertain the dissemination of pollution from an isolated industrial centre under various conditions of weather. Norwich was selected for the purpose and an investigator took daily observations for a period of a year noting each morning the direction of the wind selecting the road out of the city which most nearly corresponded to the wind direction and making observations at various points along the road up to a distance of ten miles. The results show that pollution from Norwich continues for five or six miles before its effect is indistinguishable with the apparatus used—a *jet dust* counter—from that of the *normal* pollution of the surrounding countryside. The *amount of pollution* decreased inversely with the distance from the centre and it is greatest in winter least in summer and intermediate in spring and autumn. Except with the light winds in autumn the amount of *pollution* measurably diminishes as *the wind* increases. It should be added that the air of Norwich is relatively clean. If the air were more polluted the distance to which the pollution would continue would be correspondingly greater. It is suggested that on this basis pollution from a group of towns twenty-*four miles* in diameter would be perceptible for between sixty and seventy miles.

The report draws attention to the relative proportions in which factory smoke and domestic smoke may be intermingled. Some *observations* have been made at Cheltenham which has 50 000 inhabitants and no industries producing factory smoke and at Wakefield, *which* has almost the same population but is an *industrial* area. The mean monthly deposit at *Cheltenham is 6·4* metric tons per square *kilometre and at Wakefield 15·6* metric tons. *This gives 9·2 tons as the contribution from industrial processes* so that the ratio of industrial to *domestic impurities* is nearly three to two—that is *60 per cent* of the total is from factories *and 40 per cent* from *dwelling houses*.

* *The Investigation of Atmospheric Pollution*. Report on Observations in the year ended March 31st 1931. *Department* of Scientific and Industrial Research. H.M. Stationery Office. (2s. 6d. net.)

SMOKE ABATEMENT

Official reports are not concerned with propaganda and to some extent may be discouraging But the cause of smoke abatement deserves all support and we were glad to receive by the same post as the compilation we have been reviewing some resolutions passed recently by the council of the National Smoke Abatement Society a body on which the British Medical Association has two representatives The society draws attention to the grave defects in the administration of the law relating to this subject Under the Public Health Act powers exist by which united districts may be constituted for the purposes of smoke abatement Up to the present only one such joint administrative district—Sheffield and Rotherham—has been formed though regional committees of an advisory character have been set up by the local authorities in the Midlands the West Riding and Manchester and district while a joint committee of a different nature has been formed in London The council urges that local authorities should combine for the purpose of setting up statutory regional organizations and, pending their formation should establish advisory committees It brings forward facts and figures to show that in a large number of localities at present the law relating to smoke emission is either completely ignored or is put into operation only intermittently and ineffectively The time standards of smoke emission also vary from district to district so that highly anomalous situations result

HEALTH OF THE ARMY

REPORT FOR THE YEAR 1930

The report[1] on the health of the Army for 1930 follows quickly on that of the Royal Air Force This is an undoubted advantage to the large body of men and women who are becoming more and more interested in the reports on the health services of the country It follows familiar lines being divided into three main sections general survey of the health of the Army at home and abroad special departments of medicine surgery hygiene pathology dental treatment and the medical examination of recruits and the health of the Army in the various commands The most noticeable change occurs in the first section which is characterized by an occasional glint of quiet humour well turned phrase graphic description and frankness in presenting the statistical picture for the year

The sick admission ratio among soldiers was 428 4 as compared with 468 5 per 1 000 for 1929 The fall of 40 1 was due mainly to a comparative freedom from influenza If the figures are examined in detail it will be seen that the ordinary diseases due to infection caused little or no trouble during the year The admissions per 1 000 of strength were diphtheria 1 4 enteric fever 1 4 measles 0 9 meningococcal infections 0 1 mumps 1 1 pneumonia 3 0 scarlet fever 0 8 pulmonary tuberculosis 1 0 influenza 8 8 compared with 36 8 in 1929 Referring to the mortality rate of 10 6 per cent in pneumonia the report points out that forty years ago the rate was 12 per cent and states It would be a weary task to compute the number of new treatments of pneumonia which have been vaunted in the past forty years a mountain of labour which up to the present has not yet produced even the proverbial mouse

The figures for many of the common ailments which interfere with military efficiency by causing the loss of several hundred thousand working days correspond very closely with those for 1929 For 1930 and 1929 respectively the admission ratios per 1 000 of strength were 52 7 and 52 1 for local and general injuries 41 3 and 41 2 for malaria 34 5 and 34 7 for diseases of the areolar tissue 34 5 and 35 for venereal diseases and 23 2 and 23 2 for diseases of the skin With a low incidence of influenza it is natural to expect a reduction in the admission ratios for tonsillitis of 30 9 against 37 9 and for diseases of the respiratory system of 18 2 against 20 4 The following Eastern diseases show a slight increase dysentery 7 6 against 6 5 sand fly fever 17 9 against 16 1 pyrexia of uncertain origin 0 9 against 0 6

These figures will cause many people to wonder whether the admission rate can be reduced below a certain figure and so make a medical service of greater value to the State or whether a time will come when science can offer no further benefits to a mass population leading the ordinary life of a soldier during peace It is interesting therefore to find the Army authorities facing these problems and frankly describing their difficulties and failures In the case of local and general injuries it is evident that preventive measures are of no avail and that reliance must be placed on the arts of medicine and surgery to diminish the constant wastage by reducing the time spent in hospital Some of the difficulties in carrying out modern preventive measures against malaria are humorously explained in the notes relating to the Shanghai area where oiling was objected to on account of the smell the Paris green on account of its lethal action on the local ducks while the predatory fish though in no way objected to only acted as an extra to the dietary of both Chinese and ducks

In discussing pyrexia of uncertain origin doubt is expressed at only 115 cases in which the diagnosis was not established beyond doubt being reported from India Diagnosis of certain cases of pyrexia of uncertain origin as intestinal toxaemia headache or myalgia may be short sighted darkening counsel and hampering the recognition and grouping of tropical fevers of unknown etiology but it is human and is experienced year after year during the hot weather by every officer serving in the East This has always been a vexed question in the Army and it is likely to remain so until a group of officers skilled in research are seconded to make their own investigations and returns The report adds that to label any case as pyrexia of uncertain origin which has not been thoroughly investigated by every means available is culpable negligence

The death ratio was 2 32 per 1 000 against 2 45 in 1929 while the invaliding rate fell from 10 1 per 1 000 in 1929 to 9 28 in 1930 The invaliding rate is gradually reaching the low level of 1913 this is an important point since invaliding means the loss of a trained or partially trained soldier with consequent expense to the State Attention has frequently been focused on the two chief causes of invaliding—namely diseases of the middle ear and pulmonary tuberculosis These still occupy the leading positions but the numbers have been reduced from 260 and 191 in 1929 to 182 and 161 in 1930 With regard to diseases of the middle ear the general improvement is attributed to the increased attention given to the subject and to the use of electric auriscopes It is to be hoped that officers will not rest content with this improvement, but will further their research by an analysis of the numbers invalided to show whether the disease was not detected on enlistment or whether it was due to bathing or to influenza or some other infectious disease The number invalided for nervous diseases including mental diseases was 336 or 20 3 per cent of the total—a high percentage in a carefully selected body of men this subject also is worthy of investigation

In Section II the main items of interest are under medicine—cysticercosis as a possible cause of epilepsy, under surgery—a review of the ancillary departments under hygiene—observations as to the effect of smoking on endurance and suggested alterations in the present pattern of service dress clothing In pathology research has been continued with a view to determining the varying immunizing properties of vaccines prepared from different strains of organisms or by different methods

In Section III the outstanding feature is the report on the health of the troops in India which follows along the lines of the main report and adds a valuable contribution to the yearly publications on Eastern diseases

[1] *Report on the Health of the Army for the Year 1930* Vol lxvi London H M Stationery Office 1932 (2s 6d net)

MALFORMATIONS OF THE HUMAN BODY FROM A NEW POINT OF VIEW

SIR ARTHUR KEITH'S HUNTERIAN LECTURES

The following are the second two of a series of six abstracts of Hunterian Lectures delivered in January at the Royal College of Surgeons of England by Sir Arthur Keith F.R.S. Conservator of the Museum.

III.—MALDEVELOPMENTS AT THE UMBILICUS

Some forty years ago Sir John Bland Sutton wrote an interesting and important book to prove that in making her great evolutionary advances Nature had at times used methods which were akin to those of disease. An illustration of this truth was to be seen in the human body during the second and third months of its development. During this period of time a developmental hernia was produced at the umbilicus and within the umbilical sac outside the cavity of the abdomen the greater part of the intestines underwent differentiation and growth. During the period in which the intestines occupied their hernial sac preparations were being carried forwards within the abdomen for their proper and final fixation there. For the radical cure of hernia in men and women an operation had to be performed. The sac had to be cut open, its contents pressed back into the abdomen, and the opening at which the rupture had occurred had to be sutured and thus closed. It was interesting to compare the modern surgeon's method of treating hernia with that which had been discovered by Nature. At the end of the third month of development the hernia at the umbilicus is cured automatically in the space of a few days: the intestines are drawn back into the abdomen and the opening closed. For a knowledge of these processes anatomists are indebted to the very exact investigations made in recent years by Professor J. E. S. Frazer. The processes which here play the part of surgeon are represented by the living growing tissues of the body. In the first place there is an expansion of the walls of the abdomen by growth so that room is made within for the intestine; in the second place the mesenteries which attach the intestine to the hinder wall of the abdomen shorten and widen their attachments. By these differential processes of growth the intestines are finally drawn within the abdomen. The withdrawal always takes place in a fixed and orderly manner. In this way the hernia after having served a developmental purpose is cured, but sometimes there is a failure. One child in every 3,000 is born with an uncured hernia at the navel, and it then becomes the duty of the surgeon to mend Nature's failure. Sometimes the failure is so gross that the whole contents of the abdomen protrude, presenting a state in which treatment is beyond surgical resources.

Although the surgeon gives his chief thoughts to the discovery of the best means of treating congenital hernia of the umbilicus, he cannot help inquiring how herniation at the umbilicus had become introduced as a normal process in the development of higher animals. The key to the problem lies not with the human embryologist but with the comparative anatomist. The series of events which rendered human beings liable to umbilical hernia commenced in the infancy of vertebrate animals. It began when a part of the intestines had to undergo a premature development to contain a store of yolk which would provide the developing fish or frog with a supply of nourishment until the immature animal had reached a state to fend for itself. The developing bowel of the dog fish grows over envelops and encloses its stock of yolk. In its earlier stages it swims with its purse or bag of nourishment suspended from its body. The yolk sac has an outer covering supplied by the body wall. The young fish is born with a congenital hernia. As the yolk sac empties the hernia is reduced, leaving no scar or trace behind.

When land living air breathing vertebrate animals were evolved the skin which covered the yolk sac became more important than the sac itself. By a precocious development and an enormous expansion of that part of the body wall which covered the yolk sac a hood or envelope was formed. This hood as it expanded, grew over and enclosed the developing embryo in a double covering or envelope—an outer and an inner. If we do not know as yet the manner in which the miracle of bringing these protective envelopes into being was performed, we do clearly see the use and need of the inner envelope. It contains water in which the delicate tissues of the embryo are submerged and by which they are supported. Eggs of fish and frog can develop only if surrounded and supported by a fluid medium. By the precocious development of part of the covering of the body wall Nature elaborated an inner envelope to serve as a bath in which the higher vertebrate embryo could develop in sheltered circumstances, and an outer envelope to serve as a lung for the exchange of air. When a chick is hatched it leaves behind it in the shell the parts of the body which represent the original coverings of the yolk sac. The navel or umbilicus marks the point of detachment. Part of the body wall has been sacrificed for the development of the individual: the umbilical scar is the token of the sacrifice.

In higher mammals, particularly in that strange group of which man is a member, matters are carried a stage further. In the earlier stages of development all efforts are expended on a precocious and extensive formation of that part of the body wall which in lower vertebrates—reptiles and birds—forms the envelopes round the body of the embryo. Development within a rigid shell and development within a living, moving, contractile *womb* require very different methods of procedure. The developing human egg has to burrow into the lining membrane of the womb and in this position throw out its envelopes—its inner envelope the amnion and its outer the chorion. During this early period from the eighth to the fourteenth day the embryo itself remains in abeyance: all efforts are expended on the development of the coverings and placenta which have been evolved out of that part of the body wall which covers the yolk sac of fish and frog. The epithelial covering of the skin becomes the wildly growing and devouring trophoblast. Part of the body wall becomes drawn out to form the umbilical cord. At birth the child parts company with cord and coverings—with all that part of its body wall which served the purposes of maintaining the intrauterine life of the infant—and the scar formed at the point of separation becomes the umbilicus. When we remember that the umbilical cord is in reality an extension of *tissue originally designed* to form part of the wall of the abdomen we need not be surprised that at a certain stage of development the cord is occupied by coils of intestine. Nor need we marvel when we consider the elaborate processes connected with the withdrawal of the intestines from the sac that children should occasionally be born with a developmental hernia still unreduced.

IV.—THE MIGRATION OF THE TESTIS

Embryology, the *study of the developing human embryo* has entered on a new era. Eighty years ago Sir Richard Owen taught that Nature in fashioning the animal body worked to plan—much as builders obey an architect's *specification*. Then came Darwin who convinced us all that every *embryo is its own architect*, that the powers which

shape the unfolding embryo are resident in its developing tissues. In later Victorian times although most embryologists had accepted Darwin's teaching they still attempted to explain developmental events as the result of mechanical happenings—of foldings and of bendings. It is only in quite recent years that embryologists began to escape from the bondage of mechanical interpretation. The way of escape was opened for them when it was discovered that parts of a living embryo could be detached and maintained alive and studied in various substances just as bacteria can be kept alive and studied in cultural media. It was found that certain parts contain growth-controlling substances by virtue of which they can compel neighbouring tissues to co-operate in producing a new and functional structure. In the light of this new knowledge we have to revise many of our older conceptions regarding the development of the human embryo.

There is scarcely an operation performed by modern surgeons that has not its parallel in the earlier stages of development. Extensive plastic operations are carried out, parts are shifted, altered in shape or entirely removed, and even amputations and mendings are effected performed. In all these operations the tissues themselves play the part of surgeon. But even in Nature's operating theatre there are occasional failures.

One of the commonest of the developmental devices used in the production of new structures is that of producing pockets or herniæ. In the previous lecture it was pointed out that a hernia or rupture was purposely kept open at the umbilicus during the second and third months of development and that it was closed and cured early in the fourth month. On the other hand a hernia or rupture is produced in each groin of a human foetus during the latter half of intrauterine life. In the human foetus this operation is carried out more completely than in any other of the higher mammals. The extrusion of the male gland from the body cavity is from an evolutionary point of view of very recent origin. The operation was introduced after the mammalian stock had made its appearance in the world. The male gland migrates in most mammals but by no means in all of them. In some it descends only for a special season at the end of that season the gland returns within the abdomen and the hernia is automatically reduced. In other orders of mammals the testes remain permanently within the abdomen as is the case in birds reptiles amphibia and fish. Even now we are not certain why this genital exodus is made but this amount we do know. If the exodus does not occur in man—and the statement holds true for sheep goat dog horse and bull—the gland rarely becomes perfectly functional it usually atrophies if it does not escape from the abdomen. Evidence has been brought forward in support of the theory that the atrophy is due to the higher temperature which prevails within the abdomen but on the evidence of comparative anatomy one would suspect that it is the high intra-abdominal pressures rather than a high intra-abdominal temperature that cause the damage. One cannot suppose that the elaborate machinery which is utilized in bringing about the exodus of the testes was introduced for a slight or unimportant reason for without doubt this developmental operation has made the groin of man a source of weakness to him.

Let us see how the inguinal hernia is brought about by developmental means. Although John Hunter wrote his account of the events concerned more than a century and a half ago his description is in my opinion still the nearest to fact. In the fourth month just as the umbilical hernia is being reduced the inguinal hernia begins to be produced. At this time a fold of peritoneum passes from the lower end of the male gland to the inner wall of the groin. The tissue within the fold begins to grow and gradually assumes the form of a peritoneum covered plug. The lower end of the plug reaches the groin and the peritoneum over its lower end expands into a process like the finger of a glove. The tip of this peritoneal pocket grows against the belly wall and as it grows the tissues recede and expand in front of it. Growing plug and peritoneal process bring about growth changes of all the tissues in the body wall and a tunnel is thus fashioned for the passage of the testis. To permit the testis to follow the advancing gubernaculum or growth plug all the vessels descending to it its duct the surrounding peritoneum to which the testis is anchored have to be elongated so as to accommodate themselves to the migration. They undergo a plastic reorganization to permit the movement to take place. The whole series of structures forms an advancing army by which the testis is guided to the tunnel opened in the belly wall by the gubernacular plug. It is true however that there are original strands in the belly wall which guide the plug towards the scrotum. The testis enters the tunnel in the belly wall at the beginning of the seventh month, by the end of that month it has made its exit by the end of the ninth month it should have reached the close of its journey and become lodged within the fundus of the scrotum. All the phenomena we can explain only when we presume a growth movement—a co-ordinated operation in which gubernaculum peritoneum vessels tissues of the belly wall and attachments of the testicle participate. It is a mass movement brought about by an elaborate co-ordination in the growth and atrophy of all the parts concerned. When the migratory movement is over the peritoneum and the subperitoneal tissue which surround the point of exit immediately set about the repair of the opening. If repair fails then there is a possibility of an escape of other contents of the abdomen and the production of a real or acquired hernia. The phenomena which attend the descent of the testicle cannot be explained on any simple mechanical principle all the resources of organized growth and repair are involved.

John Hunter not only recognized the anatomical means which were involved in bringing about the migration of the testes but he was two centuries ahead of the rest of the world in understanding the nature of the movement and how it was brought about. It is the case that he assigned failure of descent to an imperfection of the testis which remained within the abdomen. Now it is true that an arrested testis may mature we are also certain that a testis which will atrophy if left in the abdomen will mature if translated to the scrotum by surgical means. Nevertheless in the light of modern knowledge we may well assume that the failure is due to an imperfection if not of the testis then of the growth controlling mechanism which brings the descent about. We are coming by some knowledge of how substances formed in the ovary and in the pituitary work remarkable growth changes on uterus vagina and mammary glands. Now the earliest scrotal formation known to us occurs at the inguinal end of the mammary ridge. We know how substances formed in the testis can cause and also alter the growth of dozens of parts of the body—of beard larynx brain—in fact of every part of the body. Was Hunter then so far wrong when he associated the failure of descent of the testis 'to an imperfection in the growth controlling mechanism which is centred round the male gland of generation? No one can survey the elaborate organization by which a herniation of the body wall is produced and by which a massive translation of all the testicular parts is brought about without being convinced that it is the result not of any simple mechanical means but of an elaborate series of growth processes.



FIG 1.—Section through region of primitive streak of specimen

in wall of yolk sac. The
embryonic plate The ento
in the preparation of the specimen.

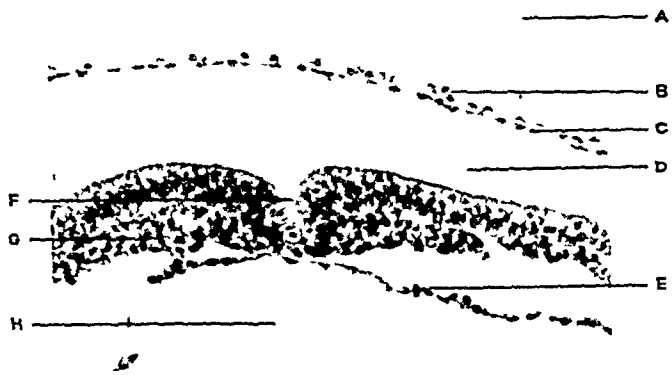
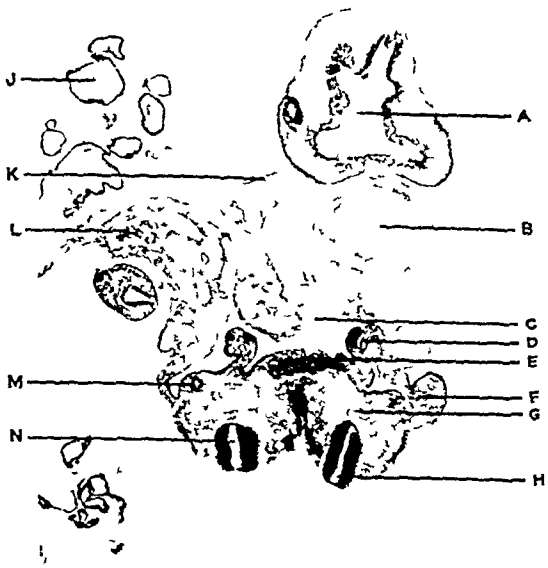
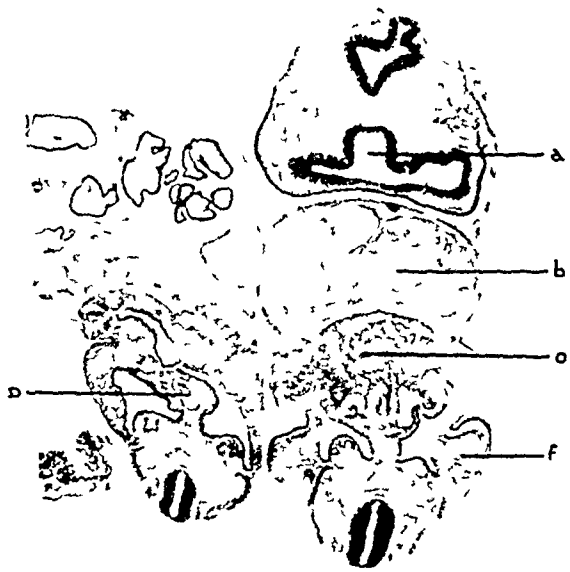


FIG 2.—Specimen No. 1 High power Section through the region of primitive streak and groove A magma reticulare B extra embryonic mesoderm C cells of amnion D amniotic sac E entoderm F primitive groove G embryonic mesoderm H cavity of yolk sac





FIGS 3 AND 4.—A cerebral vesicle B heart C coelom D intestine E primitive kidney F limb bud G dorsal aorta H neural canal J, chorionic villi K amnion L umbilical vessel M mesonephric duct N neural canal of parasitic embryo O liver The smaller embryo has no head heart or liver The area of fusion is in the region of the primitive kidney and umbilicus The amnion is single

PETER KERLEY MALIGNANT DISEASE OF THE LUNGS



FIG 1.—Carcinoma of the left upper lobe lobar or pneumonic type



FIG 2.—Carcinoma of right lower lobe causing no pulmonary symptoms but symptoms suggestive of carcinoma of stomach



FIG 3.—Carcinoma of right upper lobe and aneurysm of descending part of arch of aorta



FIG 4.—Malignant abscess of the right lower lobe



Fig 5.—Left upper lobe carcinoma, hilar type



Fig 6.—Mucoid carcinoma of lungs



Fig 7.—Pulmonary metastases



Fig 8.—Pulmonary tuberculosis simulating metastatic deposits

H H RAYNER INJURY OF RECTUM CAUSED BY FAULTY ADMINISTRATION OF AN ENEMA

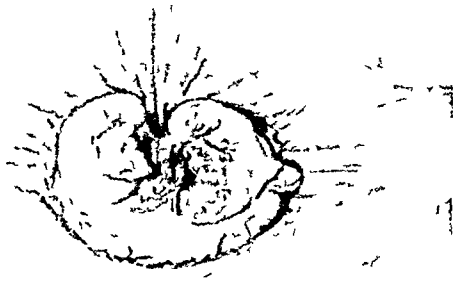


FIG 1.—Appearance of anal orifice two weeks after enema injury. The nozzle has evidently been plunged into a prolapsed haemorrhoid which was comparatively insignificant before infliction of the injury. Patient lying on left side.

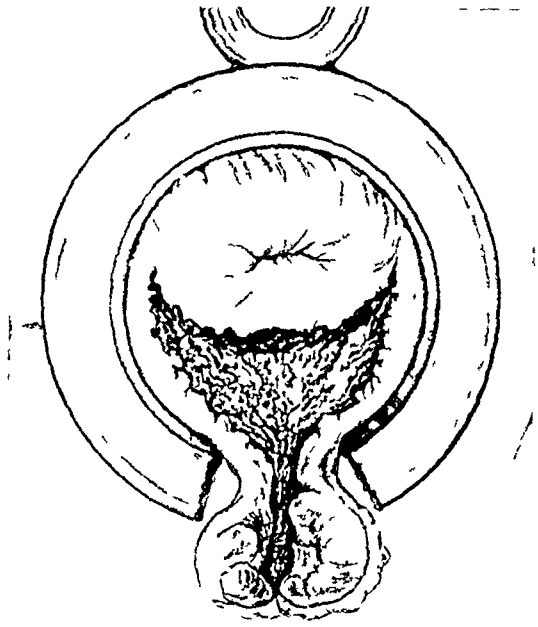


FIG 2.—Semi diagrammatic sketch from same patient of interior of rectum as seen through speculum.

H J McCURRICH COMPRESSED FRACTURE OF LUMBAR VERTEBRA

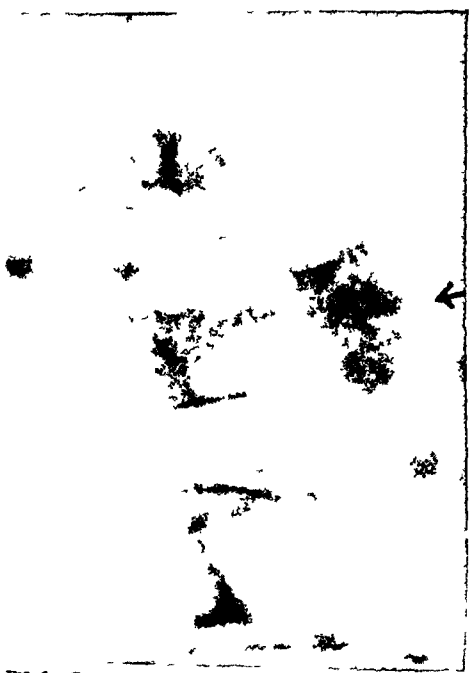


FIG 1.—Compressed fracture of first lumbar vertebra.



FIG 2.—Showing reduction of compression after treatment.

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SATURDAY, MARCH 5th, 1932

THE IMPORTANCE OF THE BLOOD GROUPS

The discovery of the four blood groups was made by Landsteiner in 1901 and remained unnoticed, or nearly so for many years Its practical importance was realized in the first years of the war when haematologists were forced to account for the sudden deaths which mysteriously took place in a certain proportion of patients undergoing transfusion The knowledge is gradually finding its way into the law courts as a means of helping to identify blood stains and to determine cases of disputed paternity In the future, it may give valuable assistance in the understanding of many problems of genetics, physiology, and pathology

The beginning of Landsteiner's work was the observation that the serum of one person often agglutinated the erythrocytes of another Previous workers had known that agglutination might take place in the corpuscles of one species when exposed to the serum of another but its occurrence within a single species had never before been noticed Landsteiner called the reaction 'isoagglutination' Working with a small number of subjects he identified three groups To explain his results he supposed that human serum could contain two specific isoagglutinins, which have been called *a* and *b*, and that the red corpuscles could contain two corresponding agglutinogens A and B These complementary factors do not appear together in the same blood if an agglutinin is present in the serum its corresponding agglutinogen is not present in the corpuscles Landsteiner found that some of his subjects had only one agglutinin in their serum, and that some had both he did not happen to find anyone who had neither His three groups, therefore consisted of persons whose serum contained agglutinin *a* and their corpuscles agglutinogen B, of persons whose serum contained *b* and their corpuscles A, and of persons whose serum contained *a* and *b* and their corpuscles neither A nor B The fourth group, that in which the serum contains neither agglutinin and the corpuscles contain both agglutinogens was discovered in 1902 by Decastello and Sturli, it is—in the white races at least—very rare, and was only detected when large numbers were investigated

The classification has become rather confused Jansky in 1907 named the groups I, II, III, and IV, his Group I being that in which the serum agglutinated the corpuscles of all the other groups, but in which the corpuscles were not agglutinated by any serum His Group IV was the opposite of his Group I Moss two years later put forward a classification, also numerical in which Groups II and III were the same as Jansky's but Groups I and IV were changed round This became the standard classification, but Jansky's was also used to an extent quite sufficient to cause ambiguity In an attempt to clear up the matter, Snyder has suggested a classification on the basis of the agglutinogens contained in the corpuscles To the group in which the serum contains no agglutinin and the corpuscles both agglutinogens he gives the name AB, this is Jansky's Group IV and Moss's Group I, and is the rare group that was discovered later than the others His Group A and Group B correspond respectively to II and III in the other classifications, and the group of 'universal donors" whose cells are not agglutinated by any serum, he calls Group O this corresponds to Jansky's Group I and Moss's Group IV Various workers have claimed to isolate other groups or variants of the main four The principal innovation was the discovery by Guthrie and Huck of another type of Group A corpuscles but this has not been shown to occur independently of the original Group A and as yet there is no evidence to believe that any of the putative variations are more than subgroups within the original four They are, however sufficiently important to make it necessary to match the bloods of each donor and recipient before transfusion, and not to rely upon a group test alone

The importance of the blood groups in genetics and anthropology lies in the fact that they are inherited as Mendelian dominants agglutinogens absent in both parents never appearing in the children Much work has been done on the manner of inheritance of these characteristics, and Snyder considers that his results bear out Bernstein's hypothesis of three multiple allelomorphs, A, B and O A vast field is opened for research into the connexion between them and their relation to susceptibility to various conditions

In the medico-legal sphere especially on the Continent the blood group test is becoming recognized as a useful means of eliminating certain possibilities in paternity cases It affords a means of determining with certainty, the groups of a given mother and child being known, to what groups the father must belong and to what groups he cannot belong The blood groups are also slowly but surely winning their place in criminal evidence Here again their value is mainly negative—for instance, if the police desire to connect two specimens of blood, the discovery that they belong to different groups will outweigh any circumstantial evidence on the other side This particular event has not yet occurred in an English court A case is however at present *sub judice* in which Dr E Roche Lynch, the Home Office analyst has given evidence that the blood found on a certain razor and that found on a necklace worn by a girl said to have been murdered both belong to Group I of Moss's classification, corresponding with Snyder's Group AB The interest of this case lies in the rarity of the group, which occurs in only 3 per cent of persons of English race It is highly improbable, therefore that a similar case will appear again for many years We cannot now comment upon the value of this evidence or upon the attitude which the court might be expected to adopt towards it, but the result will probably be of great importance to the future of the test in this direction

THE BARBITURATES IN ANAESTHESIA

Almost thirty years have passed since Fischer and von Mering synthesized veronal and so established a new series of hypnotic drugs, the more recent members of which have been of particular service as basal narcotics Sodium amytal nembutal and pernocton have all been employed for this purpose and Dr R C Garry's paper on the pharmacological properties of amytal (published this week at page 421) serves to remind medical practitioners employing this method in anaesthesia of the effects which can be produced by these compounds The advantages of basal narcosis, in general are well known and they may be summarized as follows (1) Induction is pleasant for the patient and there is little or no psychic shock (2) A minimal quantity of inhalation or local anaesthesia is employed (3) The recovery period is prolonged and the risk of post-operative vomiting is minimized The method, however lacks the precision and fine control which can be obtained by inhalation anaesthesia, and the possibility of toxic effects, particularly upon the liver and excretory organs cannot be disregarded

So far as the barbiturates are concerned, it is invidious to compare the relative values of the three constituents of the group under consideration for they act alike and possess similar properties The first clinical studies upon these compounds were made as recently as 1928 by Zerfas and McCallum [1] and since then a number of reports have been published There is a general consensus of opinion that the barbiturates are cardiac depressants, and that they lower the blood pressure to a degree dependent upon the amount rate, and manner of administration They may cause a paralysis of the vagus nerve control of the heart, variable in duration and due presumably to ganglionic depression It is believed that, in the dosage commonly employed to produce basal narcosis, they have little effect upon respiration The effect upon carbohydrate metabolism has been the subject of much controversy, for early investigators considered that carbohydrate metabolism was uninfluenced by amytal anaesthesia This belief has not been sustained but as Dr Garry points out, it seems that amytal produces a less disturbing effect upon carbohydrate metabolism than the majority of other anaesthetics in general use Reports vary concerning the incidence of restlessness following the administration of these drugs, Magill [2] estimates that this occurs in 10 per cent of cases in which nembutal is used as a basal narcotic and this figure will serve as a guide

The barbiturates can be administered in one of two ways either by the mouth or intravenously The former route has the advantage of simplicity but accurate dosage which is essential for successful basal anaesthesia and which varies with each individual patient is difficult to obtain The intravenous method is commonly employed because it allows the minimal effective dose to be determined accurately With this, a solution of the chosen drug is injected at a predetermined rate, ceasing when consciousness is lost The duration of administration varies according to the toxicity of the drug employed it is shortest with pernocton and longest with amytal A warning, however, has recently been issued by the Council of Pharmacy and Chemistry of the American Medical Association regarding the intravenous administration of barbiturates It is stated that these compounds require large amounts of alkali for solution amytal for example, requires a degree of alkalinity the equivalent of a buffer solution with pH 9 5, and therefore this drug (and for that matter any other barbiturate) will not remain in solution with the chemical reaction of the blood The compound is precipitated and then there is a foreign body, in the colloidal state, within a sensitive colloidal system—namely, the blood, whose physico-chemical properties and physiological functions are unintentionally and undesirably affected This action, which is not peculiar to the barbiturates is probably responsible for certain reflex effects arising either from the disturbed colloidal equilibrium of the blood or from marked alkalinity of the injected solution, or both These "intravenous reflexes," which may be invoked by irritation of the depressor nerve endings or of the vagus nerve terminations in the viscera, and which result in sudden circulatory and respiratory disturbances are unnecessary and undesirable, they complicate the ordinary hypnotic action of the barbiturates, and submit the patient to additional risk

In view of these facts the Council of Pharmacy and Chemistry maintains that any advantages that may exist in the employment of barbiturates as basal narcotics or hypnotics can be procured by giving them by the mouth, and that, in the present state of our knowledge, the intravenous route should be reserved for emergencies and for those cases in which oral administration is physically impossible The wisdom of this attitude will be generally recognized, for, although it is not in harmony with the favourable opinions (based upon clinical investigation rather than upon pharmacological experiment) originally entertained regarding the intravenous administration of these compounds, it is in the best interests of the patient

[1] Zerfas and McCallum *Journ Indiana Med Assoc* 1929 xxii 47
[2] Magill *Lancet* 1931 i 74

THE TOXIC PRODUCTS OF THE TUBERCLE BACILLUS

The recent invasion of biochemists into the field of bacteriology, and, in particular, the work of Landsteiner and his colleagues on the chemical analysis of antigens with the resulting elaboration of the concept of haptenes have opened up a new avenue of research which is already being explored by numerous investigators One of the most promising inquiries that have been made along these lines concerns the chemical structure of the highly complex tubercle bacillus and of the biological activities of the various fractions that have so far been

isolated from it An account of this work, much of which has been carried out by a co operative investigation in the United States by Anderson at Yale and Sabin at the Rockefeller Institute New York, forms the nucleus of Dr Jean Albert-Weil's treatise on the poisons of the tubercle bacillus and the cellular and humoral reactions in tuberculosis [1] While recording the results of these particular investigators in detail, Dr Albert Weil does not neglect the very able work carried out along similar lines by Bulloch and Macleod, Tamura, Laidlaw and Dudley, and Mueller he takes pains in fact to compare the results of all these different workers, and to point out the agreement that exists between them

It now seems clear that the proliferation of epithelial and giant cells which form the tubercle, and the subsequent caseation which it may undergo are determined by the phosphatide fractions of the lipoid constituents, that the protein of the tubercle bacillus is concerned in the production of the allergic state manifested by increased sensitivity to tuberculin, and that certain of the humoral antibody reactions notably the precipitin reaction depend on the presence of a polysaccharide The study of certain of these fractions is throwing a good deal of light on the cellular response in the blood and in the tissues Attention is being concentrated especially on the stimulation of the mononuclear cells, and on the interpretation of the monocyte-lymphocyte ratio in the blood There is evidence to suggest that a high ratio is indicative of activity in the local lesion and is of bad prognosis whereas a low ratio suggests that the defence mechanism is satisfactory, and the prognosis is good Dr Albert-Weil draws attention, likewise to the prognostic importance of a polymorphonuclear leucocytosis recounting in this connexion the interesting experiments of Madelaine on the deviation of polymorphonuclear leucocytes by the intravenous injection of dead staphylococci or aspergillus spores These leucocytes are held by many to be detrimental, since, owing to their wandering nature, they serve to distribute tubercle bacilli throughout the body Madelaine found that by engaging their activity by the inoculation of comparatively inert particles their phagocytosis of the tubercle bacilli was less active, and the experimental animals so treated lived considerably longer than control tuberculous animals

Work of this type and particularly work on the possibility of altering the toxic substances of the tubercle bacillus by modifying the composition of the humoral bodies in the tissues has obvious clinical applications The isolation too of certain fractions which may stimulate the cellular defence mechanism, without breaking down the bacilli themselves too rapidly and thus flooding the tissues with toxic products holds out a promise of preparing a vaccine which may replace the present crude substance tuberculin

[1] *Les Poisons du Bacille Tuberculeux et les Réactions Cellulaires et Humorales dans la Tuberculose* Par le Dr Jean Albert Weil Préface du Professeur Borrel Paris J B Baillière et Fils 1931 (54 fr)

PAYMENT OF VISITING STAFFS

An important document is published this week in the opening pages of our *Supplement* It is the unanimous report of a committee appointed jointly by the British Hospitals Association and the British Medical Association with Lord Linlithgow as chairman, to consider the payment of visiting medical staffs of voluntary hospitals The committee believes that the time has come to recognize the claim of these staffs to some share of the money raised for the treatment of patients in hospital, other than the money provided by voluntary subscription or donation for the treatment of free patients It recommends the institution of contributory schemes wherever such schemes do not already exist The ideal scheme in its opinion is one in which the individual contributor pays on a basis designed to provide (1) for the cost of maintenance of patients and (2) for a contribution towards the remuneration of the visiting medical staffs of the hospital or hospitals concerned It recommends that all suitable hospitals should have a sufficient number of rooms or wards for paying patients coupled with the strict application of a maximum means test for entry into general wards The final recommendation is that a standing joint committee of the two Associations should be set up to give advice to hospitals or medical boards seeking guidance to keep each body in touch with the views and experience of the other, and generally to watch the situation

MEDICAL RESEARCH COUNCIL'S REPORT

In presenting its seventeenth annual report this week [1] the Medical Research Council expresses some satisfaction at the "harvest of fruitful or encouraging results" reaped during the past year A close study of the many and various subjects dealt with will amply repay the reader As in previous years nutritional research has occupied a considerable amount of the time and money available for investigation Accurate knowledge of the chemical and physical properties of vitamin D is an investment which, though it may not at once pay big dividends promises a good return in the future, while the possession of a fixed stable substance, by comparison with which the vitamin D activity of any known foodstuff can be measured, is of immediate practical advantage Investigations upon viruses have covered a wide area, and it is interesting to note in this connexion the promising field opened by the study of the newly recognized mouse disease—infectious ectromelia Special features possessed by the virus in question have assisted in the pursuit of clues as to its intimate nature and behaviour Besides foot-and-mouth disease, vaccinia, encephalitis lethargica, canine distemper, herpes and fowl-tumours, the common cold has also been the subject of study Good opportunities for research in this field are offered by the generous supply of volunteers at St Bartholomew's Hospital and by the possession of a new culture method Other matters considered in the report are status lymphaticus, the results of insulin therapy organized trials of new remedies, the relations of the Council to manufacturing firms and the British patent law in connexion with

[1] Cmd 4008 Report of the Medical Research Council for the year 1930–1931 H M Stationery Office (2s 6d net)

medical research Further sections deal with the considerable range of subjects covered by external research schemes and work on industrial health The report will be considered in greater detail in subsequent issues of the *Journal*

DEFECTIVE FOODS AND DRUGS

The Ministry of Health publishes in pamphlet form, under the heading " Sale of Food and Drugs,"[1] extracts from its annual report for 1930–31 dealing with this subject, and an abstract of public analysts' reports for 1930 Of the 136 515 samples analysed during the year 4 8 per cent were reported to be adulterated or not up to standard, as compared with 5 4 and 5 8 per cent in the preceding two years, this percentage is the lowest ever recorded More than half the food samples examined were milk and of these 6 6 per cent were reported on adversely compared with 7 8 and 8 2 in 1929 and 1928 respectively Much interest was aroused by the reference in last year's report to cheese contaminated with tin from the tinfoil in which it had been wrapped and we learn that manufacturers and others concerned are making efforts to escape this reproach In nineteen of the samples examined last year contamination with tin was found in varying amounts up to 8 33 grains per lb, and in one instance —a " full cream " cheese said to have come from France—the analyst found not only 220 parts per million of tin but also 44 parts per million of antimony The widespread concern caused by the occurrence of illness due to eating sweets contaminated with arsenic appears to have led to an increased number of samples being taken of sweets and confectionery, in eighteen of these arsenic was found Two samples of " non-alcoholic " wine taken in 1930 contained more than 14 per cent of alcohol It has been said that a cockroach is neither cock nor roach, and neither black nor beetle It appears that ' rum and butter toffee " is no more happily named an article thus described contained no butter and the ' rum " was supplied by synthetic flavouring (No bull's-eyes were investigated for the presence of aqueous humour) Out of 5,697 samples of drugs examined 245 were reported against and fourteen prescriptions were inaccurately dispensed An unusual case occurred in which so called boric ointment proved on analysis to be weak soap jelly It was packed in boxes bearing the name of a well-known firm of chemists who had no knowledge of what was being done Heavy fines were inflicted upon the vendor and the person supplying him

ANTITOXIN TREATMENT OF SCARLET FEVER

M V Velder F E Stevenson and A G Mitchell[2] have recently recorded their observations at Cincinnati General Hospital on three groups of scarlet fever patients The first, consisting of 74 patients, were treated with a scarlet fever streptococcus antitoxin in which was a concentrated serum prepared from four strains of haemolytic streptococci isolated from scarlet fever patients the second consisting of 88 patients, were treated with an unconcentrated serum prepared from a single strain of haemolytic streptococcus isolated from a scarlet fever patient, while the third group of 82 patients served as controls The injections of antitoxin were given intramuscularly, and with four exceptions no patient received more than one dose The size of each dose was about 20 c cm in the case of one antitoxin, and 8 c cm in the other The results were as follows In the vast majority of cases the rashes had faded within twelve hours of administration of antitoxin to half or a quarter of its original intensity, and the mean duration of the rash was 4 8 days in the serum treated cases, as against 6 8 days in the controls The duration of the desquamation was five to six days less in the cases treated with antitoxin than in the controls and there was a tendency in the serum-treated cases for the desquamation to be moderate or mild in character, as compared with moderate or marked desquamation in the control group There were no differences in the mean temperature between the control and serum treated groups Of the controls 37 8 per cent developed at least one complication as compared with 10 9 per cent of the patients treated with serum, 71 (66 3 per cent) of the cases treated with antitoxin developed serum sickness of varying degrees of intensity The authors come to the conclusion that their clinical data fail to build up an irrefutable case for the use of scarlet fever streptococcus antitoxin in the treatment of scarlet fever, though they admit that the antitoxin has a specific action

[1] H M Stationery Office 1931 (4d)
[2] U S Public Health Report December 18th 1931 p 3023

ANDRÉ THEVET

In the January issue of *Aesculape* Dr Jean Avalon has published a sketch, freely illustrated, of the traveller and writer Andre Thevet, who was born at Angouleme in 1502 Of humble parentage his education was delayed and superficial, but he seems to have largely overcome this handicap by the facilities he enjoyed for travelling and by an infinite capacity for taking pains His clerical superiors, finding his interest in theology tepid in comparison with his passion for travel allowed him to scour the world for the greater glory of his order After some fifteen years of travelling he returned to France about 1544, and published an account of his peregrinations in *La Cosmographie du Levant* About this time Admiral Coligny fitted out an expedition to Brazil and Thevet joined it as chaplain His collection of birds insects, plants, and other objects, garnered with the greatest industry, formed the nucleus of a study published in 1558 under the title ' Les Singularitez de la France antarctique, autrement nommee Amerique et de plusieurs Terres et Isles decouvertes de nostres temps " In Chapter XLV, entitled, " Description d'une maladie nommée Pians, à laquelle sont sujets ces peuples de l'Amerique," Thevet dismisses as unconvincing the suggestion that this disease was caused by some faulty condition of the air He was more inclined to put the blame on some ' malversation, such as the too-frequent carnal intercourse of men with women, seeing that this people are very lascivious and more than brutal, the women in particular " After this none too gallant reference to the ladies of the country whose hospitality he had enjoyed Thevet concluded that this disease was probably none other than *ceste belle verolle*, " which is to day so common in our Europe and which is falsely ascribed to the French as if no other nation is subject

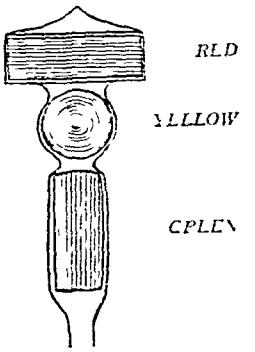
to it Dr Avalon suggests that Thevet's are the first recorded references to plans which he apparently identified with syphilis Among the plants brought back to France by Thevet was that of tobacco, and in the later editions of his *Cosmographie Universelle* he claimed priority in this field over Jean Nicot the French ambassador in Portugal Thevet's protests proved futile but in Dr Avalon's opinion it is to Thevet and to Thevet alone, that 'the public treasury owes the most magnificent of its revenues

CRIMINAL ABORTION

In these days of changing moral values and new ethical concepts when many of us are wondering whether the things we are accustomed to do are the proper things to do, and whether our conventions represent the real bulwarks against social destruction the author of a book on abortion might well have been expected to plunge into the deep waters of controversy Dr L A Parry however in his work on *Criminal Abortion*[1] keeps clear of such themes and confines himself to an exposition of the known facts about abortion its frequency in different countries, the methods used and the dangers of the practice He gives a readable account of the historical aspects of abortion, and discusses the evolution of the law pertaining thereto He approaches the ethical aspect in various parts of the book as for example, in advice to medical men in connexion with abortion cases and when discussing abortifacient advertisements and many other matters The general tone of the book however is medical and medico-legal rather than ethical or social The state of affairs in other parts of Europe and the legalization of abortion in Russia are mentioned but Dr Parry devotes little space to this part of the subject The question of contraception so closely associated with abortion is not touched upon at all Recent discussions in cases of abortion and pronouncements from the judicial bench on the subject indicate that the time is approaching when the medical profession may be required to give its opinion about induced abortion and in a book devoted to a specialized subject a dissertation thereon would have been welcome Dr Parry has nevertheless given his readers a very interesting and instructive volume and the full exposition of the law of abortion the description of actual cases and ample extracts from evidence will be of great value both to medical and to legal practitioners

ROAD TRAFFIC SIGNALS

The British Medical Association has submitted to the Departmental Committee on Road Traffic Signals the following suggestions on the desirability of having signals which depend upon form as well as upon colour Defects of colour vision should not in the opinion of the Association constitute any disability for driving either by day or by night but the growing use of coloured signal lamps at road crossings has introduced a real difficulty for the colour-blind Signal lamps of red yellow and green are springing up everywhere A mistake in reading one of these signals may bring the colour-blind driver into conflict with the police and possibly into collision with other drivers or pedestrians The Association therefore suggests that authorities should adopt simpler and safer signals which depend upon form as well as upon colour A horizontal bar of light would everywhere be recognized as a sign to stop, a round light would indicate the need for caution, and a vertical bar of light would indicate a clear road Such a plan would follow the long established precedent of the semaphore signal and could not lead to confusion A sketch of the Association's suggestion is reproduced herewith The horizontal lines represent red, the circular lines yellow the vertical lines green Mr Bishop Harman (whose paper on this subject was presented to the Section of Ophthalmology at Eastbourne last July) gave evidence in support of the Association's views at a meeting on February 26th, of the Departmental Committee's subcommittee on traffic control by light signals



THE NUMBERS OF THE DENTAL PROFESSION

A report by the Registrar of the Dental Board presented to a committee of the whole Board on February 9th, reveals that for the first time since the passing of the Dentists Act 1921 the number of practitioners registered with qualifications exceeds that of the 'Dentists 1921" The respective numbers are 7 041 and 6 794 It is interesting in view of recent legal proceedings to learn that there are still 556 Dentists, 1878" on the *Dentists Register* These three classes with 55 on the Colonial List and 26 on the Foreign List, bring up the total number on the *Register* on January 1st 1932, to 14 472, an increase of 50 on the year It is pointed out that while in recent years the rate of recruitment to the dental profession has balanced the wastage, now that the influx under the Act of 1921 has ceased, the decline in the numbers registered under that Act and under the Act of 1878 will more than outweigh the increase in the number of graduates and licentiates, unless the number of entrants to the profession increases

By an Order of the Committee of Privy Council Mr W S Morrison M P has been appointed a member of the Medical Research Council on the retirement of Mr A G Church

Manson House the new headquarters of the Royal Society of Tropical Medicine and Hygiene in Portland Place W, will be declared open by H R H the Prince of Wales on Thursday, March 17th at 5 30 o clock

Three Cantor Lectures on recent researches on the nature and function of vitamins will be given by Professor J C Drummond D Sc on Monday evenings April 18th and 25th and May 2nd at 8 p m at the Royal Society of Arts John Street Adelphi W C

[1] *Criminal Abortion* By L A Parry M D B S F R C S London J Bale Sons and Danielsson Ltd (10s 6d net)

Scotland

Health of Scotland

The chief features in the Registrar General's return for Scotland covering the quarter ending December 31st 1931 and containing a supplementary return for the past year are a birth rate for 1931 which is the lowest on record a general death rate from all causes equal to that of 1930 but showing a slight improvement on the previous quinquennial average and an infant mortality rate which is lower than on any previous occasion except the year 1923 The births registered during the year numbered 92 909 a rate of 19 per 1 000 of population, these were 2 340 fewer than for 1930 and 4 465 fewer than the mean annual number registered during the preceding five years Deaths from all causes numbered 64 230 being 1 787 less than the average for the previous quinquennium the death rate was 13 3 per 1 000 of the population, as in 1930 The infantile mortality rate was 82 per 1 000 births which was one less than the previous year and three less than the previous quinquennial average The death rate from all forms of tuberculosis was 87 per 100 000 of the population which was about the same as that of the previous year although lower than the previous quinquennial average Deaths from malignant disease totalled 7 159 giving an annual death rate of 148 per 100 000 these figures were the highest yet recorded for deaths from this cause Malignant disease as a cause of death has now become second only to heart disease The deaths attributed to bronchitis and pneumonia numbered 3 673 and 4 955 giving rates of 76 and 102 per 100 000 of population respectively these figures are lower than the corresponding figures for the previous year or for the previous five years Deaths of mothers from diseases and accidents of pregnancy numbered 544 corresponding to a mortality rate of 5 9 per 1 000 births, which is lower than the published rates both for 1930 and for the preceding five years It is pointed out, however that this decline is at least partly due to a modification in classifying puerperal deaths when some other cause has also been specified Deaths from accidents from motor vehicles numbered 621 and showed a small increase compared with the standard rate

Erskine Hospital for Limbless Men

At the annual meeting of subscribers to the Princess Louise Scottish Hospital for Limbless Sailors and Soldiers at Erskine held in Glasgow the Lord Provost who presided said that for fifteen years the hospital had been carrying on magnificent work on behalf of disabled ex service men The average daily number of patients was now seventy one and the annual report was a record of good work from every point of view Sir Harold Yarrow stated that the accounts showed a credit balance of £12 100 compared with £1 917 for the previous year Legacies and bequests during the year amounted to £13 630 The committee was glad to be able to report that in spite of a difficult year the net trading loss of the workshops was £645 less than in the previous year A shop had recently been opened at 296 Sauchiehall Street Glasgow which would involve more expenditure than the old premises but it was believed that this prominent position would result in augmented orders and would benefit the hospital by increased publicity

Glasgow Maternity Hospital

At the annual meeting of the Glasgow Royal Maternity and Women's Hospital the Lord Provost referred to the excellent work of this hospital Dr W D Macfarlane described the great advantages of the co operation which existed between the hospital and the public health department and which was leading to the development and unification of the obstetric services in the city During the year the hospital had treated 4 442 cases in the wards and 4 274 outdoor cases, while 938 cases had been sent to various municipal hospitals The hospital's mortality showed a satisfactory fall from 2 6 per cent in the previous year to 2 per cent in the year under review The ante natal department had provided a satisfactory service and training for students and nurses and was accordingly developing a system of supervision which would eliminate many of the abnormal cases that came into the hospitals for treatment A marked difference was to be seen between the mortality rate of patients who came into hospital after treatment in the ante natal department and the mortality rate of those who had not passed through that department the ratio which was 1 to 5 was evidence of the great services rendered to the hospital by the ante natal department

Edinburgh Health Exhibition

More than 93 000 persons visited the health exhibition held in the Waverley Market in aid of the Royal Infirmary of Edinburgh Bicentenary Extension Appeal Fund in addition 7 000 school children were admitted free of charge The receipts amounted to £2 759 The old charity box which has stood in the Infirmary for over two hundred years attracted collections amounting to £37 17s 2d including nine sovereigns and five half sovereigns

England and Wales

Puerperal Sepsis Bacteriological Investigations

Having decided that more frequent epidemiological and bacteriological investigations were desirable in cases of puerperal sepsis where the source of infection was in doubt the Departmental Committee on Maternal Mortality recently recommended the establishment of a central laboratory where a full time bacteriologist could carry out the necessary work In a communication dated February 25th Sir George Newman announces that, by arrangement with the Ministry of Health and the Medical Research Council Dr Dora Colebrook has been appointed for this purpose and investigations have been in progress since January 1st at the new laboratories of Queen Charlotte's Hospital at Hammersmith Administrative difficulties frequently arise from bacteriological uncertainty as to strains of streptococcus, and it is hoped that the new facilities offered by a laboratory where suitable agglutinating serums for the identification of different organisms are available will give prompt and valuable guidance to medical officers of health It is also hoped that light may be thrown on the responsibility of throat carriers and on the part played by other infective conditions in persons in contact with the patient suffering from puerperal sepsis As Dr Colebrook's time will be fully occupied with special typing it will not be possible for her, except in special circumstances to undertake the routine examination of strains from isolated cases Bacteriologists who isolate strains of haemolytic streptococci from such cases are asked to preserve them, however so that in the event of a second case occurring, such strains together with the new material may be sent without delay to the central laboratory Medical officers of health should communicate directly with Dr Colebrook and at the same time inform the Ministry The procedure for the sending of material for examination comprises determination of the bacteriological nature of the patient's infection a swab being taken from the cervix or upper vagina and tracing of the source of infection (if due to *Streptococcus pyogenes*) by swabs taken from the tonsils and nose of the patient herself and from those who were

most closely in contact with her during the confinement and for forty eight hours after delivery The attention of practitioners is drawn to the possibility of infection having arisen from streptococcal conditions such as septic sores of the skin running ears tonsillitis and erysipelas

Industrial Rheumatism

In a lecture on the organization of treatment for *industrial rheumatism* delivered on February 17th at the Royal Institute of Public Health Dr A R Nelligan said that the heavy toll of chronic rheumatism (arthritis lumbago sciatica fibrositis) was now widely recognized Its incidence was particularly large among industrial workers and led to great economic loss On the Continent especially in Germany it was regarded as a matter of public health Besides *facilities for insured persons* at the spas special clinics had been set up in cities for treatment of all kinds but especially by physical methods (baths heat massage electricity) These clinics offered a chance of the early diagnosis and treatment which was so important and moreover *treatment could be given* without interrupting the patient's work in many cases In the British Isles the provision of *treatment for insured* persons was quite inadequate Up till recently the hospitals at the spas alone provided full facilities Four years ago a *movement* was started to improve the position and the British Red Cross Society's clinic for the treatment of rheumatism at Regent's Park was *the first fruit* This clinic had been a great success and the approved societies attested to its value Already certain *municipalities* intended to open clinics and one firm the London General Omnibus Company had done so A *representative* central committee was needed to carry on propaganda collect information and give advice on *the many problems* of rheumatism Dr Nelligan recommended that wider use *should be made* of the existing arrangements at the spas that fully equipped town clinics should be set up either *at hospitals or as independent institutions* and be linked *with smaller clinics* and that health authorities approved societies and industry itself should concentrate upon the problem of providing adequate treatment *for chronic rheumatism* in every large centre of population The last *lecture of this series on* Rheumatism and arthritis as a *public health* problem was delivered by Dr W S C Copeman at the Institute on February 24th He gave the details of a scheme on which he had been working for some time whereby he believed it would be possible to *provide physical* and other auxiliary methods of treatment (which are necessary at some stage of the disease in most cases) *for the use of the* insured population He advocated centralization of treatment and decentralization of small advisory and investigation centres This would cost a fraction only of *the more usually* advocated scheme The basis of the *scheme was to be* the insurance practitioner who would be believed *welcome* the possibility of obtaining *for his patients* courses of systematic treatment for such a chronic disease They would after treatment automatically return to the practitioner referring them The spa hospitals would also come into the scheme—slightly modified *in their* scope and Dr Copeman in conclusion stressed the *need for* a short holiday after treatment *in the majority* of arthritic cases

London County Council Laboratories

It has been decided by the Mental Hospitals Committee of the London County Council to discontinue the existing *arrangements for the* seconding from the mental hospitals of three medical officers *for work* in connexion with the treatment of general paralysis of the *insane on post* encephalitic cases at West Park Mental Hospital and The Manor Epsom *and as liaison officer between the central* pathological laboratory and the mental hospitals Such of the work as it is necessary to continue *and particularly* that done in the co ordination of malarial treatment and the after care of patients so treated including the compilation of history records which is felt to be of great importance will be undertaken by the staff at the central pathological laboratory under the direction of Dr F L Golla director of the laboratory and pathologist to the London County Mental Hospitals This arrangement calls for the inclusion in the recognized staff of the laboratory of a qualified medical practitioner to act in the absence of the director and it is proposed that the services of an *unestablished* medical officer, whose appointment was *authorized a year ago primarily to assist in research* work should be made available The arrangement is to come into effect on April 1st and to be experimental for twelve months after which it will be reviewed The adoption of the proposals will result in a net saving of over *£1 100 in the financial year* owing to the discontinuance of the employment of locumtenents to replace seconded officers at the mental hospitals from which these officers have been drawn The additional duties and responsibilities *imposed on Dr Golla and his chief assistant* are to be recognized by the grant of special allowances

At the meeting of the L C C on February 16th Dr C W Brook asked the chairman of the Central Public Health Committee (Dr Barnie Lambert) whether her *attention had been directed* to a letter dealing with the Council's pathological services signed by the chairman and honorary secretary of the Voluntary Hospitals Committee and published in the *British Medical Journal* of February 13th (p 305) in which the Council's proposals for the establishment of five group laboratories were criticized and deprecated how many group laboratories had already been established by the Council and whether any more were to be established in the near future Dr Lambert replied that her attention had been called to the letter that three group laboratories had been established —namely at the Archway Lambeth and Lewisham Hospitals—and that two more were *projected* one at Mile End Hospital and another at a hospital in the western area of London

St Mary Abbots Hospital, where possibly *the fifth* group laboratory of the Council will be established is also to have its important maternity and gynæcological sections remodelled at an early date *It is stated that until* these improvements have been carried out *it will not be possible to* provide at the hospital the group laboratory already approved It is proposed *to remodel* two wards *on the third floor* of the female ward block so as to provide a maternity section The gynæcological section will be formed on the first floor of this block and the *sanitary arrangements* heating and electric lighting will be improved and modernized The estimated cost of the adaptation including equipment and furniture is £13 770

India

Medical Administration in Madras

In his report for 1930, Major General C A Sprawson I M S *Surgeon General to the Government of* Madras notes an apparent tendency to a decline in the death rate during the last six years *this may* be taken in some measure as an answer to the question occasionally asked —*whether* the increased cost per head in the hospitals is being followed by *any improvement in results* The total *number of medical institutions* of all kinds in the *Presidency at the beginning* of 1930 was 1 128 comprising 892 *in rural areas and 236 in towns* In the course of the year eighty six new dispensaries were opened twenty *were closed* and six were transferred to other authorities *The morbid conditions* most prevalent among the in-

patients were diseases of the digestive system injuries malaria and affections of the eye and of the generative system There was a considerable increase in the number of patients treated General Sprawson suggests that in several towns greater economy and more efficiency in administration could be achieved by co ordinating more fully the small general hospitals with the special hospitals or dispensaries restricted to women and children The subsidized rural practitioner scheme which originated in 1925 has been very successful and has won great popularity As an experiment medical officers in charge of regular dispensaries which do not provide full time work, are now visiting outlying villages to give medical aid on fixed days not less than twice a week This is being tried in six districts with a view to extension if found desirable The total number of persons treated for leprosy during the year was 28 272 Propaganda and survey work is continuing out-patient leper clinics are at work in certain districts and a number of medical officers have been specially trained in the treatment of this disease The Government has also authorized the medical officers of institutions to send at its expense indigent lepers for treatment to the nearest centre The plan of employing honorary medical officers in the Government hospitals has been developed further more private practitioners with special attainments in medicine and surgery being appointed in the city State and Government hospitals Special clinics for dental ophthalmic and venereal diseases have been working well under the charge of honorary medical officers and in a few instances are actually replacing Government medical officers a further expansion of this scheme is under consideration

Public Health of the Punjab

The climate during 1930 in the Punjab was favourable for health and for agriculture the monsoon being heavy but too early to encourage malaria while winter dryness militated against plague The problem of infant mortality however remains as serious as ever and in his report for the year Dr K A Rahman officiating director of public health urges the necessity of increasing the number of health centres Cholera appeared only in a mild form being imported as usual by pilgrims from fairs in other provinces vigorous preventive measures limited its spread Anti cholera depots were established at the chief railway stations and some success attended the efforts to persuade pilgrims to be inoculated before departing for such places as Allahabad measures for compulsory inoculation are held to be inadvisable Plague mortality showed a very welcome decrease to 554 this is by far the lowest rate during the last thirty years and the disease was confined to five districts only Intensive rat destruction was undertaken but the warning is given that there must be no slackening in this direction or there will probably be a recrudescence of the infection which has endemic centres within the provincial boundaries There was a rather high mortality for fevers including malaria and influenza but this is regarded as being in some measure merely the aftermath of the epidemic of malaria at the end of 1929 The urban death rate from respiratory diseases is high and Dr Rahman remarks that this is likely to continue until municipal administration reaches a higher standard of efficiency the narrow streets of tall houses and the archaic sanitation are most detrimental to the health of the inhabitants The number of vaccinators and superintendents of vaccination increased and the plan of appointing at least one vaccinator to every police station is nearing completion A steady and progressive increase in the total number of vaccinations and revaccinations during the last few years has followed the appointment of a medical officer of health for each district

Correspondence

SIMULATION OF HEART DISEASE

SIR —The recent article and correspondence on this subject prompt me to draw attention to certain physiological considerations which are of fundamental importance for the explanation of the symptoms

In the maintenance of an efficient circulation three factors co operate heart blood vessels and autonomic nervous system The result of defective action of heart or blood vessels in leading to an inefficient circulation is universally recognized Defective action of the autonomic nervous system is commonly recognized where its effects are local as in Raynaud's disease or universal as in *primary shock but it is almost invariably overlooked* where its effects are manifest in a failure to co ordinate the heart rate and blood pressure with one another and with the varying demands of the organism as a whole

The autonomic nervous system performs its functions by means of a series of reflexes occurring at different levels of integration Spinal centres subserve primitive local adaptations medullary centres adjust heart rate and blood pressure to one another, and bring them into line with the functions of respiration digestion, heat regulation etc higher centres (? in the basal ganglia) subordinate the medullary centres to cerebral activity, providing the basis for the circulatory responses to emotional and mental states The cardiac action and blood pressure can respond to muscular exertion by means of mechanical and chemical regulation (increased venous return increased CO) This rather coarse adaptation is rendered much more sensitive and the circulation is correspondingly more flexible as the result of the intervention of nervous control In the control of the heart two reflexes are involved The *cardio accelerator* reflex is evoked by distension of the right auricle, and results in acceleration of the pulse the nerve paths involved are the sympathetic connexions with the upper dorsal region of the cord This is the more primitive of the two reflexes and should be classed as a spinal reflex at the lowest level of integration The *cardio inhibitory* reflex is induced by rise of pressure in the left ventricle or aorta and results in slowing of the heart with a reflex fall in blood pressure—the nerve tracts involved are the vagal connexions with the medullary centres The phenomenon of second wind is probably associated with this reflex The reflex occurs at a higher level of integration its object is to prevent an undue load being thrown on the heart by unrestricted activity of the accelerator reflex

The more highly organized functions usually suffer first in disease thus the inhibitory reflex commonly fails before the accelerator reflex Clinically patients with evidence of unrestricted sympathetic activity are far more numerous than those showing excessive vagal tone In one group of cases the vago sympathetic balance is normal while the patient is at rest but the response to exertion is exaggerated the pulse rate showing a much greater rise than usual there may be little or no delay in the subsequent return to the resting value The syndrome strongly suggests the exaggerated knee jerks seen when normal inhibition by higher centres is inadequate implying that the condition is an exaggerated accelerator reflex due to deficient inhibition In a second group vagal tone is low even when the patient is resting these patients show a sinus tachycardia usually unstable in rate and often coupled with an exaggerated response to exertion In a third group hyperthyroidism causes primary over stimulation of the sympathetic mild cases may be impossible to distinguish from cases belonging to the second group without investigating the basal metabolic rate nevertheless the two conditions are dis

tinct The symptoms in all three groups are similar—palpitation on exertion or emotion often accompanied by breathlessness and precordial discomfort the blood pressure may be normal or raised and is commonly unstable

Though cardiac symptoms may occur alone additional evidence of disordered vasomotor function is often present abnormalities in the peripheral circulation range from cold clammy hands to typical Raynaud s disease and to flushes The autonomic nervous system controls digestion and respiration as well as the circulation consequently the patients frequently complain of dyspeptic symptoms probably referable to analogous defects in the reflexes The complaint of dyspnoea often out of all proportion to visible evidence of circulatory inadequacy may be associated with an abnormal response of the respiratory centre to normal stimuli as well as to the fact that an excessive heart rate involves a less efficient circulation Many of the patients show evidence of disordered function of other parts of the central nervous system they complain of insomnia the knee jerks are hyperactive muscular tremor is very frequent and excessive sweating common There is frequently a typical anxiety state The condition frequently dates from some mental or emotional shock forming part of an anxiety state It may follow an acute or chronic infection or may accompany focal sepsis Anaemia or hyperthyroidism accounts for some cases The association between the vasomotor system and the emotions the heat regulating centres (which are affected by fevers) and the endocrine glands is a suggestive link in the argument that in these cases the primary derangement is in the central autonomic nervous system

An identical syndrome may arise as the result of cardiac failure in organic cardiac disease in this case venous stasis and distension of the right auricle produce an increase in the stimuli which normally evoke the accelerator reflex (cases of cardiac failure with tachycardia and normal rhythm) In the cases of effort syndrome the condition arises in the absence of venous stasis as the result of a disorder of the central mechanism the inhibition of the opposing reflex is removed allowing unrestricted excessive sympathetic response to the normal stimuli Such disorder of the central autonomic system frequently occurs in persons with healthy heart and blood vessels but it may complicate organic cardiovascular disease as there is nothing to prevent a patient with organic disease from developing a central nervous disorder in response to emotional shock etc

These considerations explain the prevailing confusion regarding cases of effort syndrome —I am etc

A A FITZGERALD PEEL M D F R F P S
Professor of Medicine Ander on College of Medicine
Glasgow Feb 19th

MATERNAL MORTALITY

SIR —In spite of the many improvements in obstetrics the fact that maternal mortality has not decreased forces us to come to one of two conclusions (1) that these improvements are useless—a hypothesis hardly tenable and (2) that some unfavourable factor is increasing concurrently with and nullifying the effects of our better methods of midwifery Dr Kathleen Vaughan s article in the *Journal* of November 21st 1931 brings evidence to show that this unfavourable factor may be rickets If this is so we should expect to find that this complaint is increasing and also that maternal mortality is high in countries where rickets is common and low in countries where rickets is rare

Professor McCollum in *The Newer Knowledge of Nutrition* states that rickets is becoming more prevalent due to changes in the diet and living conditions of the people Countries where rickets is said to be rare—Denmark Italy Norway and Japan—have a maternal death rate of under 3 per 1 000 births Rickets is believed to be prevalent in South Africa Germany and Australia countries with a mortality of 4 9 5 and 5 6 respectively while Scotland and the United States which are noted for rickets have death rates of 6 3 and 7 9 In England Lancashire and Yorkshire have a high maternal mortality and here rickets is common Dr Hess, in his book *Rickets Including Osteomalacia and Tetany* states that shortly an accurate geographical survey of rickets will be possible based on x ray examination of bones and chemical tests of the blood When this is done the part that rickets plays in the maternal mortality of a country will be more definitely capable of proof

The history of the Maori is a good demonstration of the effects of civilized life on maternal mortality In pre European times a death in childbirth was practically unheard of Now that the Maori woman has adopted our mode of life the maternal mortality has risen to 10 6 per 1 000 births in the period from 1920 to 1929 Dr Kathleen Vaughan s observation that rickets shows first in the teeth is of interest here for it has been said that the Maori in the old days had the best teeth of any existing race but her perfect teeth have vanished along with her immunity to maternal dangers —I am etc

Auckland N Z Jan 6th VIOLET E HASTINGS

TONSILS AND ADENOIDS

SIR —Mr Layton s gospel[1] about the senseless war on tonsils and adenoids not only deserves but needs backing I have preached something similar for twenty years as he will see in my book on asthma (first edition p 93) but have received more opposition than backing The chief delinquents have been the school medical officer and the general practitioner aided by the laryngologist There is no doubt that many tonsils and adenoids need removal and there is probably no operation in surgery followed by so much benefit at so little risk as this This is not the place to specify the type of case calling for operation but to emphasize that the need for operation ought often to be prevented Here as elsewhere prophylaxis has come after—too long after—therapeusis

The reason is ignorance of function and neglect of obvious anatomical facts It is years since Kenelm Digby in his book *Immunity in Health* showed that the subepithelial lymph nodes as he calls them in connexion with the digestive tract abound most where there is stasis and therefore sepsis and are absent where these are absent Waldeyer s ring surrounds the digestive orifice Peyer s patches multiply in the ileum and the more the nearer the ileo-caecal valve the appendix is the tonsil of the caecal cesspool subepithelial lymph-nodes are absent from gullet upper end of stomach and jejunum where they are not normally needed as guards against sepsis there being no stasis

This idea receives support in various ways In the mouth the tonsils are set just at the back of the gutter of the mouth are constructed like sponges with crypts opening upwards and inwards and are placed between two muscular slips which wring them during the act of swallowing so that when these muscles relax they will absorb stuff from the gutter (The appendix is a lymphoid sump on the caecum with similar design) This is Nature s apparatus for vaccination in health Moreover the tonsils with the other members of Waldeyer s ring hypertrophy when normally oral sepsis is most to be expected—at the time of the second dentition when the milk teeth are being shed They normally atrophy after the permanent teeth have erupted When tonsils and adenoids are removed early there is a tendency

[1] *British Medical Journal* February 20th p 341

for the small lymph nodes under the neighbouring mucosa to enlarge Nature refuses to be expelled—even by a guillotine I have tried the experiment of leaving one tonsil its fellow enlarges to compensate If adenoids alone are removed the tonsils are apt to enlarge if no steps are taken to improve oral sepsis to cut down carbohydrate and to give sufficient vitamins That these structures are concerned with producing immunity in health is further supported by Hofer's observation[1] that in children with 'normal tonsils the reaction to tuberculin was positive in 75 per cent but only in 31 per cent of those with enlarged glands In America some thousands of cases examined after the tonsil and adenoid operation have been found more prone to infections than others

The general practitioner who is looking for something to be done can always find septic tonsils he has not yet been able to find aseptic ones since their function is to deal with sepsis The school medical officer must understand that tonsils normally enlarge between the ages of 6 and 12 that mere size does not indicate operation that enlarged tonsils do not in most cases block the airway and that the tonsil is sometimes normally so placed as to look forward rather than inward, and though staring at him is not asking for removal What both men need to do is to teach parents how to prevent tonsils being overcome by too gross sepsis But operation for adenoids is necessary when the airway is blocked, and should be done before the age of 8 else palate face and nose become deformed Whether tonsils ought also to be removed will depend on the individual case, but removal of adenoids by preventing mouth breathing helps to reduce oral sepsis and therefore strain on the tonsil —I am etc,

Glasgow Feb 23rd JAMES ADAM

SUCTION IN SURGERY

SIR —It is taking an amazingly long time for the value of suction in surgery to become generally recognized The electric pump, only now coming into favour, was in use in America ten years ago But the dental ejector which must have been invented shortly after Giffard made his astonishing discovery and which is quite as good a thing in its own way has remained since that time almost unexploited except by dentists I have had it in constant use for over thirty years and find it indispensable I explained its merits in the *Journal of Laryngology* of February 1906

But there is a simpler and more portable apparatus If an ordinary rubber enema syringe is attached tail on to a glass tube of about 4 mm bore, it will exert enough negative pressure to break up a blood clot—a good test of efficiency It is preferably used with the suction bottle described by Mr Armitage in your issue of February 20th, but this may be dispensed with if the cost of a new syringe is not a matter of consideration I first used it for cleft palate operations in 1893 and described its value in the nursing of a case of hemilaryngectomy in 1895 (*Trans Roy Acad Med Irel* 1896 p 155) It is an elegant means of clearing a patient's throat during anaesthesia and in the nurse's hands after throat operations it is invaluable There is, however, one point of the greatest practical importance The metal valve ordinarily supplied being a gravity valve, will only work if kept upright This is not always convenient This valve should therefore be removed and a rubber one of the same type as that in the neck of the syringe substituted It goes without saying that the valves must not be defective there must be no regurgitation —I am etc

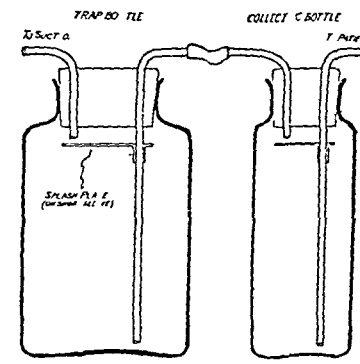
Dublin Feb 22nd ROBERT WOODS

[1] *R de La Journal* January 1932 p 130
[2] *Arch Int Med* April 1931 p 513

SIR —The correspondence at present occurring in your columns relative to the application of suction in surgery prompts me to mention that in the *Lancet* of December 6th 1924 I published an article entitled The use of suction in surgery in which many of the points now under consideration were discussed and where I described a small pump working directly off a compressed air cylinder on the ejector principle so having no moving parts The pump is easily portable since it weighs but 2 ounces and it would appear to meet many of the problems mentioned in Mr Struan Marshall's letter Although designed primarily as a portable pump for use in private houses and nursing homes it has stood up to daily use in the theatres of Charing Cross Hospital the original pumps made in 1924 being still in perfect working order Incidentally the publication of this article brought forth letters from surgeons who had been using suction in their practice for twenty five years in some cases the apparatus being nothing more complicated than a Higginson syringe —I am etc

London W 1 Feb 24th NORMAN C LAKE

SIR —Two of the chief drawbacks to suction apparatus at present are noise and lack of volume Most of them are very noisy especially the type of ejector attached to



a cylinder of compressed gas Volume is needed because the best suction end to use for abdominal work is a simple tube about 5/16 in diameter closed at the end and having for three or four inches a large number of small holes Air leaks in at all the holes not submerged and so there is never a great vacuum and all the holes never get blocked It works very well provided the suction apparatus has good capacity

A good jet ejector is apt to be noisy and to require a high pressure of water All the motor driven pumps we have seen are too small In these particularly it is important to have a fair sized trap (such as a bottle of two or three pints capacity) between the collecting bottle and the connexion to the pump to prevent any possibility of fluid getting into the machine by splashing or over filling—an occurrence of great frequency Heavy walled tubing should be used throughout We give a sketch of suitable bottle connexions

Recently at the Royal Manchester Children's Hospital in an attempt to overcome all disadvantages—with the help and advice of the hospital engineer Mr Cooper—the steam ejector on the sterilizer in an adjoining room has been piped to a position convenient to the operating table This provides ample suction with silence Of course two bottles are required as before and two valves—one between the ejector and the sterilizer (which is generally there already) and one between the ejector and the new pipe line For convenience a cock is attached at the end of the pipe line to which the rubber tubing is fitted so

connect it up with the collection bottles We think this arrangement might be advantageous in many hospitals — We are etc

K B PINSON MB MRCS
JOHN A McLAUCHLAN MB FRCS Ed

Manchester Feb 14th

AMBULATORY TREATMENT OF FRACTURES

SIR —In the notice of Major Maurice Sinclair's recent book on fractures in the *Journal* of February 20th (p 336) your reviewer states that the practice in hospitals of treating as many cases as possible on their feet is unsound It is dictated by the pressure on space but is not conducive to good results The general tenor of the review will be welcomed by all who know of Sinclair's work and his book but this particular statement with its sweeping condemnation of all post war advance cannot pass unchallenged

A fracture demands the treatment not of a bone but of a limb Of what avail is it that the fragments have firmly united in perfect position if the musculature is wasted and hypotonic the joints stiff with the dense adhesions of disuse the bones decalcified and atrophic and the circulation so impaired that severe oedema recurs nightly? The surgeon cannot shelve his responsibility by invoking the magical powers of massage and he must recognize that even six or twelve months of physiotherapy may fail to cure the disuse complications which were not present when he commenced treatment but which appeared despite it as the inevitable result of recumbency

It can never be disputed that traction is essential in the reduction of overriding fractures, but traction can easily be maintained after reduction by fixative apparatus which will allow weight bearing A skilfully applied unpadded plaster cast will maintain full length in a fracture of both leg bones while the patient walks with a single stick bearing body weight through the injured limb That the treatment may be difficult does not alter the fact that it prevents muscle wasting that it minimizes adhesion formation that it maintains the tone of the musculature of the vessels and so prevents recurring oedema and that it accelerates consolidation of the fracture The application of a walking plaster is a well recognized and most successful line of treatment for delayed union Why wait until union is delayed before instituting the necessary treatment? It must be emphasized that modern ambulatory treatment does not mean that the patient hobbles about on crutches carrying his fractured limb A special boot is made to cover his plaster he wears a normal dress and he walks without assistance By the time the fracture is united and fixation discarded the limb should be almost normal from all points of view and the indications for massage should never arise Prolonged recumbency may exert an adverse general as well as local influence The patient whose energetic and vigorous life is suddenly interrupted who finds himself lying week after week waited on hand and foot constantly visited by doctor and nurse surrounded by the appliances and paraphernalia of the fracture ward and propelled by spinal carriage and wheel chair cannot be blamed when it gradually dawns on him that he is beyond repair His fellow victim who also sustained a Pott's fracture but who walked from the second day onwards has no time to magnify his disability and is fully occupied in accelerating his recovery The malingerer is made not born and no more potent factor exists than excessive hospitalization Finally the convenience of the patient must be allowed to carry some weight One knows of individuals whose financial stability was threatened by the unexpected catastrophe of a fracture and who owe their solvency to ambulatory treatment

Experience in clinics dealing with 5 000 fractures a year leads one to an opinion which is the direct antithesis of that expressed by your reviewer Ambulatory treatment is dictated not by the pressure on hospital space but by the superior results so obtained The soundness of the practice is based on the following facts (1) consolidation of fractures is greatly accelerated (2) disuse complications do not appear (3) physiotherapy is rendered unnecessary, (4) disability periods are reduced by half (5) functional complications are avoided and (6) the inconvenience of a fracture is minimized —I am etc

R WATSON JONES

Liverpool Feb 23rd

OPERATION FOR CONGENITAL EPICANTHUS

SIR —I notice that in a memorandum on congenital epicanthus in your issue of February 27th Dr Norman Ross speaks of the ordinary plastic operation for removing an elliptical piece of skin from the root of the nose and suturing the edges of the skin together I sincerely hope that this operation is no longer ordinary It leaves a scar in the centre of the nose where if healing is not perfect it will be very unsightly It also rarely gives a good result The correct operation is to remove an arrow head shaped piece of skin from each side of the nose This operation is more efficient and any resulting scar is not so obvious As a rule there is no sign of any scar but the effect of either operation is often disappointing and the operation must be repeated — I am etc,

T HARRISON BUTLER D M Oxon

Birmingham Feb 24th

SHOE LEATHER DERMATITIS

SIR —I have been very much interested in the recent correspondence in the *Journal* on this subject more especially as I am situated in Leicester which by the nature of its two main industries—namely, boots and shoes and hosiery—allows one to follow the various trade processes used in tanning leather and wool mordanting with chrome etc

In the dressing of hat band leathers (dyed or undyed) it is customary in some tanneries to add to the sumach or other vegetable tanning materials a small amount of basic chrome sulphate with the object of improving the pliability of the leather It is very unusual for full chrome leather to be used for hat band linings It is probable that the comparatively small amount of chrome used in dressing the former type of leather is more easily removed by sweat than in the case of the latter I have at present two cases of hat band dermatitis under treatment both caused by vegetable tanned roan leathers which on analysis contained 0·27 per cent and 0·30 per cent chromium respectively With reference to the letter of Dr Elizabeth Hunt in your issue of February 20th I might state that many hat band leathers are undyed and therefore it can be assumed that no amino bodies are present in these owing to the absence of dye Cox in *The Analyst* 1929 (p 694) recorded a series of tests for diamines in connexion with dyeing furs Callan and Strafford in *The Analyst* 1931 (p 625) examining hat leathers for cases of suspected dermatitis found that tannins in the leather interfered with the tests and they produced another series of tests to get over this difficulty Recently Dr H Phillips of the Leather Manufacturers Association has devised a new method of extracting the dye from the leather I would therefore like to know the date of the analysis of the offending hat band that Dr Hunt refers to in view of these recent findings

Metaphenylene diamine is an intermediate product used in making dyes and is not a dyestuff itself and has no colouring properties For instance it is used in making Bismarck brown (triamido azo benzene or phenylene

brown) by treating metaphenylene diamine with nitrous acid Bismarck brown is occasionally used for staining and dyeing leather

It is well known that hydroxy acids will remove chromium from leather (H R Procter and J A Wilson *Journ Soc Chem Industry* xxxv, 3) Sweat contains hydroxy acids which have this action on the leather and the resulting product causes a dermatitis in some people I have often noticed that hat-band dermatitis is more frequently observed in people who perspire freely on the forehead and in one of my cases referred to above the man who was very stout and wore an artificial leg perspired profusely on slight exertion as a result

With reference to the letter of Dr A P Thomson in the *Journal* of February 20th on the absorption of gold-leaf paint causing a local neuritis of the left great toe it would appear difficult to understand how such paint, which is usually bronze powder in a solution of amyl acetate could be absorbed from the exterior of the dancing shoes through the various linings or backings of the uppers which are generally of an impermeable or semi permeable nature as regards such solutions as ordinarily applied or through the 'toe puff' which is put inside the toes of a shoe to give it a stiffening and is often made of canvas stiffened with gum in this type of shoe and would be more impervious than the rest of the shoe After getting through the shoe it would still have the stocking to cope with which although possibly very fine in texture would yet offer a slight barrier to the copper deposited from the gold leaf paint —I am etc

Leicester Feb 22nd F A E SILCOCK M D D P H

COLPORRHAPHY AND PROLAPSE

SIR —Dr W Fletcher Shaw has written that, in his paper published in the *Proceedings* of the Royal Society of Medicine June 1930 he has not included recurrence of uterine retroflexion after colporrhaphy among his small percentage of failures because it rarely causes symptoms In his description of the colporrhaphy operation, however he definitely states that one of the stages of the operation is so adapted that it cures any retroflexion of the uterus and one is justified in interpreting this to mean that cure of the retroflexion is desirable It is generally recognized that minor ailments of the uterus cease to be minor from the symptomatic standpoint when the uterus is retroflexed The small percentage of recurrence of retroflexion which is acknowledged together with the small percentage of recurrence of bladder symptoms referred to by other competent surgeons serves to demonstrate that in spite of its recognized success in the majority of cases the operation of simple double colporrhapny still leaves room for improvement Another drawback which is not usually referred to is the way the normal anatomy of the organs is distorted in this operation and leads to incorrect deductions For these reasons it ought to be more generally known that a modification of this operation is possible which will probably solve most of the defects in the older one This operation is combined abdomino perineal cystopexy and is particularly suitable for difficult cases such as cystoceles associated with a high cervix and extensive scarring of the vagina It enables the operator to work in the loose and almost avascular tissue between the base of the bladder and the genital tube speeds up the finding of the correct line of cleavage in anterior colporrhaphy reduces haemorrhage to a minimum while shock is lessened by avoiding contusion of the region of the cervico vaginal junction with its rich supply of sympathetic nerve tissue It is a simple measure to add an easy method of round ligament ventro suspension when this is indicated —I am etc

E HESKETH ROBERTS F R C S Ed

London W 1 Feb 17th

THE MINISTRY OF PENSIONS AND GENITO URINARY TUBERCULOSIS

SIR —I am glad to learn that Dr Gordon Taylor agrees with the Ministry of Pensions and with me that his patient's claim is devoid of supporting evidence He will no doubt agree therefore that the Ministry should not as a trustee of public money do otherwise than disclaim responsibility Dr Gordon Taylor returns however to the charge with another weapon, and accuses the Ministry of 'a too rigid insistence on documentary evidence, so that every award of a pension must appear absolutely water tight on paper' How the award of a pension can appear watertight on paper is not disclosed but again there is no evidence offered documentary or otherwise, to support the charge unless the case of his near relative is introduced for that purpose In view of the collapse of the first charge against the Ministry it is possible that the latter has a good answer to the second

If Dr Gordon Taylor cannot see what his port of registration has to do with the subject of our correspondence he will not understand the feelings of one who has the reputation of the Oxford Medical School at heart —I am etc

Oxford Feb 27th E FARQUHAR BUZZARD

EXOPHTHALMOS AND SINUSITIS

SIR —I have read with interest Dr Russell Brain's paper on exophthalmos of central origin published in your issue of November 21st 1931 as I have for many years interested myself in exophthalmos with goitres and otherwise Exophthalmos with goitre is a common occurrence it is also not uncommon to get all signs of exophthalmic goitre without any thyroid enlargement but accompanied with tremor tachycardia etc These belong to the same category The other type of purely central origin I am unacquainted with

The reason why some toxic goitres have exophthalmos and others not is a point of great interest and I have been much intrigued in the part that sinus infection has to play in this direction

Miss M aged 37 operated on for exophthalmic goitre thirteen years ago all symptoms improved except the exophthalmos which was very extreme caused diplopia and inability to sleep with the eyes closed She was found to have sinus infection and was treated with collosol manganese injections She improved rapidly and within three months her eyes had returned to practically normal

Miss H aged 20 had exophthalmos very pronounced of the left eye and no enlargement of the thyroid She had an infected antrum on that side She was advised operation of the antrum but declined and was not seen again

A number of other patients with exophthalmos who had relapsed after operation were found to be suffering from sinusitis and likewise responded to collosol manganese injections Two cases with obvious polypoid condition of the antra required radical operations which brought about complete recovery of the goitre conditions There are many indications for believing that encephalitis lethargica is a progressive infection and that its origin is in the nasopharynx and possibly tonsils so that even in these cases the presence of sinus infection must be first excluded before exophthalmos of purely central origin can be diagnosed Too much reliance must not be placed on x ray findings in the diagnosis of sinusitis but any yellow or creamy tinted post pharyngeal mucus of a chronic or even intermittent nature is practically definite evidence

It is a physiological fact that a lesion or irritation of the superior cervical ganglion will affect motor and secretory cells in the muscle of Muller the thyroid and the heart. Evidence of direct infection of the cervical ganglia has occasionally been found post mortem

Pottenger showed how in phthisis afferent noxious impulses passing from the lungs to the cervical portion of the cord set up irritation in the neighbouring nerve cells the efferent impulses from these resulted in increased tone of muscle wasting and atrophy of tissues The same mechanism must apply where infected sinuses are concerned causing increased tone of Muller's muscle and with the added irritation of the superior cervical ganglion from this source tachycardia with increased thyroid output would result So cervical ganglion irritation is possible from a direct as well as an indirect source A lesion of the middle cervical ganglion affects the thyroid and the heart and of the inferior the heart alone There is also no doubt that mild exophthalmos can arise from a general irritation of the sympathetic nervous system —I am etc

Melbourne Jan 11th SYDNEY PERRY

THE NASAL FACTOR IN ASTHMA

SIR —As the statement of the distinguished President of the Medical Society of London (reported in your issue of February 27th at page 380) that he has never seen a case of confirmed asthma cured by an intranasal operation although relief of symptoms for some months might certainly be obtained may deter others from resorting to the intranasal treatment of asthma I beg to offer a plea for its hopeful adoption in suitable cases At all events an investigation of the nasal condition in every case or at least in every case which does not yield to other treatment should not be omitted In support of my contention I would refer to my paper in the *British Medical Journal* of December 29th 1931 —I am etc

London W Feb 28th JAMES DUNDAS GRANT

THE COMMON COLD

SIR —I am greatly interested to see Colonel R H Elliot's letter in your issue of February 27th (p 403) on the possibility of cutting short colds by a method which he has found useful Personal experience for some years has shown me that a simpler method than his often suffices At the very first sign of the onset of a cold in nose or throat gargle with water as hot as can be borne for a minute or two every fifteen or twenty minutes for two hours or more At the same time immerse the hands (and forearms) in hot water and the feet as well if they have been chilled This artificial heating of the throat and blood probably activates the immunity powers of the tonsil and similar lymphoid structures An antiseptic toothpaste or fluid can be used to strengthen the gargle but the heat is the essential As adjuvants I value nasal sprays plenty of hot fluid drinks and a minimal erythema dose of ultra violet light —I am etc

London W Feb 27th J H DOUGLAS WEBSTER MD FRCPLd

SIR —I have read with interest in the *British Medical Journal* of February 13th your account of the discussion on the common cold I am surprised that Sir Thomas Horder in opening the discussion did not even mention the two most efficient and up to date methods of aborting the common cold—namely the therapeutic method of injecting S U P 36 and the physiotherapeutic method of ultra violet radiation Instead the methods mentioned are famed for their antiquity and should practically in their entirety be discarded By injection of S U P 36 the common cold can almost always be aborted A general bodily ultra violet radiation just sufficient to produce a faint erythema combined with local irradiation of the nostrils and the tonsillar areas by means of quartz applicators will almost always abort a cold in its early stages The general irradiation enhances the bactericidal power of the blood and the local infection is dealt with by the local bactericidal action of the ultra-violet rays Only one or two treatments are necessary usually only one —I am etc,

London W Feb 26th W ARMANDALE TROUP

THE STROKE IN HIGH ARTERIAL PRESSURE

SIR —In the essay for the Sir Charles Hastings Prize which you published on January 30th Dr Gunewardene states that he has never seen a minor cerebral attack (such as he describes) with a diastolic pressure of less than 115 mm Hg Possibly conditions in this country may be different from those in Ceylon but I have recently had a patient whose blood pressure readings were 190/110 His attack was a sensory one involving the left side of the body and resulting in numbness with a feeling of swelling and a loss of tactile discrimination The leg became normal again in twenty four hours but the arm and face had not fully recovered seven days later In another patient there was a similar condition involving one arm only The blood pressure here was 180/100 but conditions are not quite comparable as the attack occurred in the course of an influenzal infection

It is possible of course that the pressures may have been higher at the times of the attacks While in some cases of hypertension there seems to be remarkably little variation in both the systolic and diastolic pressures in other cases they fluctuate considerably should records be made at each visit —I am etc

Ashton in Makerfield Feb 21st K COBBAN

PLUMBISM AND PEPTIC ULCER

SIR —I refrained from any dogmatic utterance upon the significance of my observations and suggestions, and I welcome any authoritative criticism which they may evoke It pleases Dr Arbour Stephens, as a local factory surgeon to assume a position of authority on lead poisoning but his colleagues are not bound to defer to him accordingly May I inform him that the analyses of the organs which I have quoted in my article are those of an analyst upon whom he has frequently and rightly relied My purpose in publishing my paper upon the associations observed between lead poisoning and peptic ulcers was to arouse interest in the matter and to stimulate research —I am etc

Swansea Feb 21st DAVID R LEWIS

SIR —It is customary I presume to refer all gastric cases either to a general hospital or to a nursing home for investigation It is therefore not surprising that such cases should not have been brought to the attention of Dr Arbour Stephens Last year two of my patients (who were presumably examined by Dr Stephens and whose names I should be very pleased to give him) received compensation for plumbism As they did not respond to treatment I referred them to Swansea General Hospital where after investigation they were found to be suffering from gastric ulcer Later in the year another of my patients was certified to be suffering from plumbism and in view of the two cases just cited I referred him also to the hospital He too proved to be a case of peptic ulcer These were the only three lead cases ' I observed last year and it is significant that the three were proved to be suffering from gastric ulcer —I am etc

Swansea Feb 22nd J C EDWARDS JONES BA, MB ChB

SIR —I fear the creeping in of personalities in connexion with the above subject is stifling discussion of the interesting problem whether chronic plumbism is a pre-

disposing factor in the occurrence of peptic ulcers A consideration of the tissue changes which take place in lead poisoning suggests a positive conclusion For there is a thickening of the gastric and duodenal submucosae from a proliferation of their connective tissue with partial obliteration of the small blood vessels—the ischaemia of the mucous membrane thereby induced leads to local loss of vitality and a liability to its digestion by the gastric juice In the first part of the duodenum too, are Brunner's glands these have long ducts and their occlusion deprives the mucous membrane of protecting secretion during the passage of the acid chyme

In 1912 I published particulars of a patient with symptoms of chronic plumbism who died from a perforated duodenal ulcer and quoted five other authentic cases of a similar nature In one of these three duodenal ulcers were discovered post mortem in another the verdict at the inquest was syncope due to perforating ulcers of the duodenum whilst in a third the cause of death was 'perforation of a duodenal ulcer set up by chronic lead poisoning In the liver of this patient were 25 *mg* of lead, and a similar amount in the kidneys

The association of duodenal ulcer with chronic lead poisoning has been mentioned by several observers and I should imagine that the records at the Home Office would prove interesting reading Dr Stephens's contention that no cases of peptic ulcer in his district have been brought to his attention does not prove that they are non existent—I am etc,

Wigan Feb 29th J THOMSON SHIRLAW

BRITISH INSTITUTE OF PHILOSOPHY

SIR—As one of the early members of the British Institute of Philosophy which was founded by my friend the late Professor L T Hobhouse may I humbly support the appeal in your issue of February 20th? My reason for writing is that the very high distinction of the signatories to that appeal might deter the ordinary medical practitioner from supporting the institute on the ground that the subject was too abstract and remote from his everyday activities and interests and should therefore be left to a special group with tastes in that direction

It is probably true that the taste for abstract thought is a congenital mental trait and but sparsely distributed throughout the general population but in a selected group such as the medical profession this trait is likely to be concentrated and there is no doubt that it is so But it requires cultivation, and the British Institute of Philosophy offers this opportunity

If one in ten of the registered practitioners joined the institute then it would have an accession of about 5 000 members In view of the fact that medicine should be the most philosophic of the professions—it has been so in the past—for example the medical philosophers of the eighteenth century—surely this support is not too much to expect *The evolution of modern medicine has given* rise to many problems—political ethical scientific—and if these are to be faced with courage and insight the guidance of fundamental principles is a necessity This necessity is met by the British Institute of Philosophy—I am etc,

Warrington Feb 21st J S MANSON

EARLY TREATMENT OF RHEUMATISM

SIR—Attention is being very properly called to the world-wide suffering caused by rheumatic disease and to the necessity—from a medical point of view—of getting to closer grips with the problems of cause and cure

In this connexion I am writing on behalf of the committee of the Royal Mineral Water Hospital at Bath—a national institution nearly 200 years old—to point out to the medical profession the necessity of sending patients for treatment in the *early* stages of the disease If that is done there is hope of a cure but what so frequently happens is that the patient is sent to us as a last resource partially or entirely incapacitated, cure is out of the question, and a certain amount of alleviation is often all that can be done If however doctors would bear in mind the great good that can be effected in the early stages of the disease, and would advise their patients to apply for admission to this hospital as a *first* and not as a *last* resource very great good would without question result (1) to the patients themselves and (2) to the knowledge and treatment of the disease from a medical point of view

I venture to ask you to insert this appeal in the hope that this most important matter may receive the attention it deserves—I am etc,

GODFREY LIPSCOMB
President Royal Mineral Water Hospital Bath
February 18th

Universities and Colleges

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

SURGERY—A Kobylinker W W Parry
MEDICINE—R R Chipstein B Dayal W Hertzog J L F King M S Miles C F Nicholson G W Sturgess F A Trowbridge C I Vieyra L G Yendoll
FORENSIC MEDICINE—G A Dingemans W S Pitt Payne L R C Rose
MIDWIFERY—G W Aston I A De Dombal W Hertzog A Kobylinker

The diploma of the Society has been granted to Messrs R R Chipstein W Hertzog J L F King W W Parry G W Sturgess and C F Vieyra

The Services

A meeting of the subscribers to the Naval Medical Compassionate Fund will be held at the Medical Department of the Navy Archway Block N Admiralty S W 1 on March 31st at 3 p m to elect six directors of the fund

DEATHS IN THE SERVICES

Major General Harold Hendley C S I Bengal Medical Service (ret) died at Caxton Cambridge on January 21st aged 70 He was born on April 16th 1861 at Charlton Kent was educated at St John's College Hurstpierpoint and at Bart's and took the M R C S and L R C P Lond in 1882 and the L S A in 1883 subsequently taking the D P H Camb in 1894 and the M D Durh in 1904 Entering the I M S as surgeon on April 1st 1884 he attained the rank of colonel on April 7th 1911 and of major general on June 21st 1918 and retired on June 26th 1920 He served at Suakin in charge of a field hospital in the Sudan campaign of 1885 receiving the Egyptian medal with a clasp and the Khedive's bronze star and in the Burma campaign of 1886-87 with the 7th Bengal Cavalry in the operations of the First Brigade getting the frontier medal with two clasps From 1888 to 1911 he was in civil employ in the Punjab and was civil surgeon of Simla in 1898-1901 and medical officer of Patiala State in 1901-2 On promotion to administrative rank he served as D D M S in India in 1911-15 officiating as D M S in 1915 and in that year was appointed inspector general of civil hospitals and member of the Legislative Council in the Punjab acting for the late Sir Charles Pardey Lukis as Director General of the I M S in 1917 In 1918 he became D D M S of the 4th (Quetta) Division and of the Baluchistan Field Force and received the war medal with a clasp In 1919 he served as a member of the Medical Services in India Committee He was appointed honorary surgeon to the King on September 22nd 1915 and received the C S I on January 1st 1920 He married Emma Mary daughter of the late James Beal Esq she died in 1928 leaving one son and three daughters The late Colonel Thomas Holbein Hendley C I E I M S was his elder brother

Obituary

SIR FREDERICK ANDREWES F R S

M D D C L F R C P

Emeritus Professor of Pathology, University of London

We have to announce with great regret the death on February 24th at the age of 73 of Sir Frederick Andrewes for many years pathologist to St Bartholomew s Hospital and professor of pathology in the University of London Sir Frederick or (as he was affectionately known to generations of Bart s men) Freddie Andrewes was one of the leading exponents of pathology in this country and had the confidence and high regard of clinicians as well as of pathologists Possessed of first class ability an accurate and tenacious memory a well balanced mind and calm judgement he had a cultivated and extraordinary capacity for clear exposition and apt illustration that has seldom been equalled in teachers of pathology in this country Added to this he possessed a rare and delicate sense of humour that was used with great discretion and success to drive his points home to relieve boredom or on occasion to disarm opponents by making them laugh



Trained in the Oxford medical school in the late seventies Andrewes there came under the influence of teachers such as Rolleston and Hatchett Jackson who spared no pains to perfect him in biological knowledge and perspective and also in that capacity of clear thinking and exposition in which he afterwards so greatly excelled Jackson used to say that when Andrewes first came to him for tuition his writing of English was poor but that when he left him Andrewes was better than his teacher In 1878 he obtained a scholarship or as it is called a junior studentship at Christ Church, and in 1881 he took a first class in the final Honour School of Natural Science His membership of The House over this period was brought home to him later when on being appointed to a medical fellowship at Pembroke College he received so it is said a bill for the ringing of the Christ Church bells in his honour

In 1882 Andrewes began his career at St Bartholomew s by winning an open scholarship Dr Klein one of his examiners on that occasion afterwards remarked that Andrewes s papers were so perfectly written and composed that they were fit to print without any further emendation—a tribute to his beautiful handwriting no less than to his knowledge and style In 1883 he obtained the Burdett Coutts scholarship at Oxford in geology and in 1886 he was elected to the Sheppard Medical Fellowship at Pembroke College of which mention has been made At the hospital Andrewes became president of the Abernethian Society and in 1887 he took the M R C S and the Oxford M B He served as house physician to Dr Andrew and completed his medical education by a course of study in Vienna In 1891 he took the Cambridge D P H and thereafter held the post of sanitary officer to the hospital up to his retirement

For a time he devoted himself to practical medicine with conspicuous success and became assistant physician to the Royal Free Hospital and assistant demonstrator of practical medicine at St Bartholomew s but in 1897 Kanthack was translated to the chair of pathology at Cambridge and Andrewes was chosen to succeed him as pathologist to the hospital and lecturer on pathology in the medical school These two posts he held until his retirement the lectureship being made into a professorship by the University of London in 1913 For a time after receiving this appointment he also lectured on pathology at the Royal Free Hospital

It thus came about that it was as a teacher of pathology to successive waves of medical students over a period of thirty years that Andrewes was chiefly occupied He had been intimately associated with and he succeeded two masters in their respective subjects—Kanthack in pathology and Klein in bacteriology both men of outstanding ability well in touch with Continental progress and actively engaged in research Each had a single room to work in and carried on under conditions far from ideal Klein was mainly supported by a grant from the Local Government Board but Kanthack had to defray his laboratory expenses to a considerable extent out of his own meagre salary Andrewes was particularly fortunate in his demonstrators — J H Drysdale H Thursfield F Rose T J Horder W Girling Ball and others—who were always devoted to their chief and highly efficient teachers These in due course became members of the medical and surgical staff with the result that pathology received more attention than before The birth of serology at St Bartholomew s Hospital may be said to have taken place in Kanthack s time about 1896 when the agglutination test for typhoid was first tried on patients in the wards and found to be successful The value of blood counts blood cultures and lumbar punctures gradually became realized towards the end of the last century and the beginning of the present one The discovery of the spirochaete of syphilis by Schaudinn in 1905 followed by the Wassermann reaction and the introduction of salvarsan enhanced the value of the pathological laboratory for clinical purposes and in 1909 the present pathological block was opened with cold storage in the basement and three floors of laboratories crowned by a magnificent post mortem room on the top floor Through all these changes Andrewes presided over the department

and in the design and equipment of the new block played a leading part In addition he exercised general supervision over the post-mortem room and museum although the bulk of this work was taken off his hands by the registrars and the curators of the museum

In spite of the large organization that evolved in this way to meet the growing pathological requirements of the hospital and school Andrewes found time for research, and made a number of valuable contributions to pathology and bacteriology that earned for him the Fellowship of the Royal Society in 1915 and other honours including the honorary D C L of Durham University in 1924 It was his careful histological study of lymphadenoma over a number of years published in the *Transactions of the Pathological Society of London* in 1902 that furnished the first solid basis for the identification of the disease in this country and this work has stood the test of time His work on arterial degeneration published by the Local Government Board in 1912 was likewise a contribution of sterling value In bacteriology besides a number of papers in the reports of the medical officer of the Local Government Board on work carried out in Klein's laboratory Andrewes was the first in association with Horder to classify streptococci into three main groups—*pyogenes* or *haemolyticus salivarius* or *viridans* and *faecalis* or the enterococcus In 1910 he delivered the Croonian Lectures on immunity Latterly he became an ardent devotee at the shrine of agglutination and by his elaborate and sometimes intricate work with the saturation test he made valuable contributions to the study of antigenic structure and bacterial variation in the Salmonella group At the time of his final illness he was engaged in studying the streptococci along similar lines

At the Royal College of Physicians of which Andrewes became a Fellow in 1895 his services were in frequent demand He delivered the Horace Dobell Lectures in 1906 the Croonian Lectures in 1910 and was Harveian Orator in 1920 His open mindedness and his informed and well balanced judgement were of very special value in the various committees on which Andrewes was called to serve and on the Medical Research Council of which he was a member His work during the war for the War Office and the Medical Research Council both on the Cerebro spinal Fever Committee and on the Dysentery Committee were of much utility and importance to the State and were recognized by the honour of knighthood, which was conferred upon him in 1920 He was vice-president of the Section of Pathology at the Annual Meeting of the British Medical Association in London in 1910

His unassuming manner and humility and the high standard that he set for himself were an example and an inspiration to those who had the privilege to be associated with Sir Frederick Andrewes he had countless friends but no enemies M H G

[The photograph reproduced is by Russell London]

CHARLES WALKER CATHCART, C B E M A, M B F R C S Ed and Eng

Consulting Surgeon Edinburgh Royal Infirmary

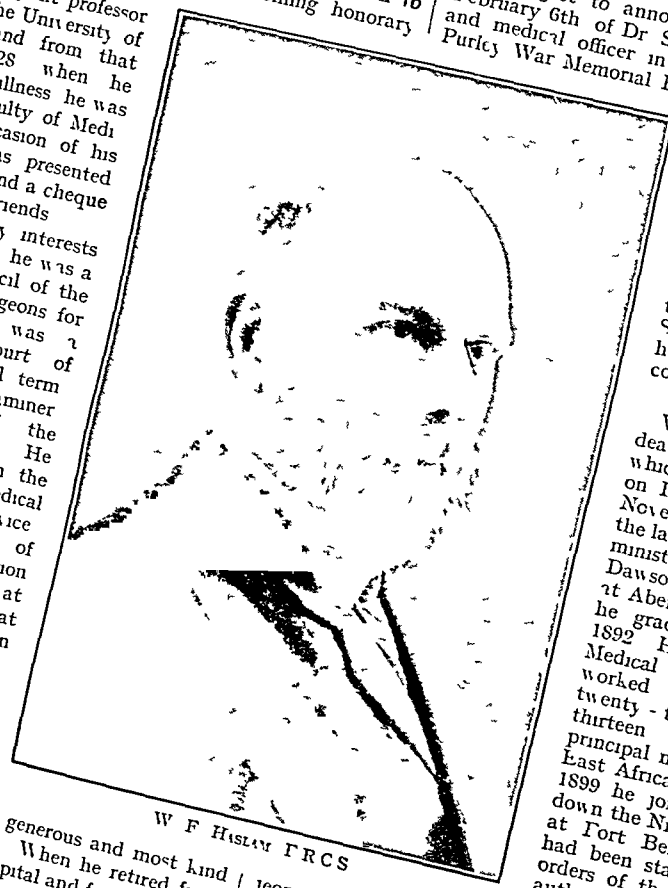
The death took place in a nursing home at Edinburgh on February 22nd of Mr C W Cathcart who for many years was a prominent surgeon in the Edinburgh Medical School After graduating M A in 1873 he commenced the study of medicine and qualified M B C M at Edinburgh in 1878 In the same summer he became resident surgeon with Professor Annandale at the Royal Infirmary having as one of his fellow residents the late Professor Francis M Caird He took the Fellowship of the Royal College of Surgeons of England in 1879 and in the following year that of Edinburgh Regarding a thorough knowledge of anatomy as an essential part of the surgeon's equipment he began to teach this subject and in 1882 took over the management of the anatomical department at Surgeons' Hall where he was succeeded in 1885 by Dr J Macdonald Brown He then became an extra academical lecturer on surgery, and was appointed an assistant surgeon to the Royal Infirmary , in 1899 he became full surgeon in charge of wards a position he occupied till 1916 Mr Cathcart interested himself especially in the subject of surgical pathology and when lecturer on surgery was conservator of the museum of the Royal College of Surgeons of Edinburgh As a lecturer in surgery and clinical surgery he devoted much time to the development of teaching methods and devised many ingenious pieces of apparatus his classes were accordingly popular with students and were highly successful Among his inventions and adaptations of existing apparatus may be mentioned his modification of Sprengel's suction pump for drainage of the bladder and a simple form of microtome for cutting sections after freezing with ether the latter proved of great use to surgeons for the rapid examination of pathological specimens, and was one of the first instruments of its type His contributions to the advancement of surgery were recognized in 1893 by the award of the Liston Victoria Jubilee Prize of the Royal College of Surgeons of Edinburgh Of his various contributions to current medical literature two call for special mention the first movements of the ulna in pronation and supination in the *Journal of Anatomy and Physiology* 1880 was based on the results of an investigation carried out during his time as an anatomical lecturer the second entitled Venereal warts a contagious form of tumour, in the *Journal of Pathology and Bacteriology* 1896 was written while he was in charge of the Lock wards in the Royal Infirmary His best known work was *The Surgical Handbook* prepared jointly with Professor F M Caird which went through many editions and was a *vade mecum* with many generations of students So recently as 1928 he brought out in collaboration with Mr J N Jackson Hartley a similar textbook entitled *Requisites and Methods in Surgery* Prior to the war Mr Cathcart had been one of the *a la suite* staff of the Second Scottish General Hospital with the rank of lieutenant colonel and immediately on the outbreak of war he took over duties at Craigleith Hospital Edinburgh where he interested himself greatly in the equipment of the surgical department On the opening of the Military Hospital at Bangour he was transferred there as the chief surgeon a post which he held till the conclusion of the war After demobilization he became surgeon to the Edenhall Hospital for Limbless Soldiers and Sailors an institution in which he took the greatest interest and for whose patients he devised many forms of useful artificial limb For his services in this connexion he received the C B E Mr Cathcart was respected by all who knew him as an excellent surgeon His work was characterized by care forethought and meticulous attention to details His conscientiousness and his rigid adherence to what he conceived to be his duty even in circumstances which might prove to be unpleasant were proverbial Mr Cathcart was possessed of a fine physique and had been a noted athlete—he had played Rugby football for Scotland and was a well known boxer The death of his only son, who was killed during the war came as a great blow to him and he subsequently took less interest in public work latterly he had lived in comparative retirement He is survived by a widow and daughters The interment took place at Warriston Cemetery Edinburgh on February 25th

W F HASLAM F R C S

Consulting Surgeon Birmingham General Hospital formerly Professor of Surgery Birmingham University

In our last issue we announced with regret the death of W F Haslam F R C S which occurred on February 18th at his residence at Edgbaston Birmingham Mr Haslam who was 74 years of age had been in ill health and confined to his room for the past four years

William Frederick Haslam who was a native of Reading studied medicine at St Thomas's Hospital where he gained the Cheselden medal and became an assistant demonstrator of anatomy in 1876 He obtained the Fellowship of the Royal College of Surgeons of England in 1881 and in 1882 was appointed assistant surgeon to the General Hospital Birmingham becoming honorary surgeon in 1891 From 1913 to 1919 he was joint professor of surgery in the University of Birmingham and from that year until 1928 when he retired owing to illness he was dean of the Faculty of Medicine On the occasion of his retirement he was presented with a silver tray and a cheque by colleagues and friends



W F HASLAM F R C S

Haslam had many interests outside Birmingham he was a member of the Council of the Royal College of Surgeons for sixteen years and was a member of the Court of Examiners for the full term and he also held examinerships in several of the provincial universities He served for two years on the Council of the British Medical Association and was vice president of the Section of Surgery when the Association held its Annual Meeting at Exeter in 1907 and again at the Birmingham meeting in 1911

A surgical colleague sends the following appreciation

To know Haslam was to appreciate his worth He was a man of fine character with an intense sense of honour most generous and most kind to his juniors and to his students When he retired from his active work at the General Hospital and from the chair of surgery he became dean of the Medical Faculty and lecturer in applied anatomy He made an admirable dean having the full confidence of the teaching staff and gaining the real devotion of the students

As a surgeon Haslam was noticeable for his skill as a diagnostician and for the soundness of his opinion He based his work on the accepted principles of surgery and has often been heard by the writer to say that all the fundamentals of surgery were to be found in Erichsen and that no one's surgical education was complete unless he had thoroughly digested all that Erichsen had to say This does not mean that Haslam's mind was not open to new ideas it was but he would not adopt new methods until their worth had been proved He was one of the few remaining men who could be called surgeon anatomists He was an excellent teacher of anatomy and was never tired of impressing on students the importance of the anatomical basis of surgery and he held that in all medical schools the junior members of the surgical staff should take part in the teaching of anatomy

Those of us who knew him intimately realize what a fine man Haslam was wise in advice generous and thorough The Birmingham Medical School is fortunate in that he was able to co operate in its work for nearly fifty years He set a great example and he has influenced for good many generations of students

L G

[The photograph reproduced is by Beaufort Birmingham]

We regret to announce the death at Mundesley on February 6th of Dr S STANLEY BROOK formerly surgeon and medical officer in charge of the x ray department and divisional surgeon to Purley War Memorial Hospital and the Metropolitan Police He was born in 1885 and from the City of London School went to study medicine at Guy's Hospital whence he qualified as M R C S L R C P in 1909 For some years Dr Brook was in general practice at Purley and medical officer to the infant welfare clinic at Southwark During the war he served with a temporary commission in the R A M C

We regret to announce the death of Dr A D MILNE which took place at Bridgnorth on February 12th Born on November 18th 1867 son of the late Very Rev A J Milne minister of Fyvie Arthur Dawson Milne was educated at Aberdeen University where he graduated M B C M in 1892 He entered the Uganda Medical Service in 1898 and worked in East Africa for twenty-three years during thirteen of which he was principal medical officer of the East African Protectorate In 1899 he joined an expedition down the Nile, leaving his post at Fort Berkeley where he had been stationed under the orders of the civilian medical authorities This decision justified by events was a bold one in that it might have jeopardized his career His devoted care for the sick of this expedition which was carried on under conditions of great hardship and during which he was himself ill with dysentery won him the admiration and affection of those concerned with it For his services in East Africa during the war he was mentioned in dispatches and was awarded the C M G He retired in 1921 In 1913 he married Alison Katherine Campbell third daughter of the late Colonel E J H Balfour and Lady Frances Balfour and leaves two daughters

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The following well known foreign medical men have recently died Professor KRYSTALOWICZ president of the Dermatological Society of Poland Dr ALPHONSE DELETREZ head of the Surgical Institute of Brussels which he founded in 1892 and member of the Belgian Royal Academy of Medicine Dr H DE BRUN professor of clinical medicine at the Beyrouth faculty of medicine aged 76 Professor ABERASTURY of Buenos Aires the doyen of dermatology in the Argentine Dr GIOACCHINO LAMBIAS professor of morbid anatomy at Buenos Aires aged 62 and Dr ARTHUR BORNSTEIN professor of pharmacology at Hamburg aged 50

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

In the House of Lords on February 29th the Imports Duties Bill was read a second time by 129 votes to 12 The measure then passed through its remaining stages and received the Royal Assent

The principal business before the House of Commons this week was the second reading of the Wheat Bill which was moved on Tuesday March 1st by Sir John Gilmour Dr Salter in proposing its rejection said millers, corn merchants and bakers agreed that the price of bread would go up ½d a quartern loaf as soon as the Bill was in full operation In the poorer quarters of London persons averaged from five to five and a half pounds of bread per head a week and in many families as much as six and a half pounds The well-to do population consumed only about one and a half pounds per head per week They substituted dairy produce fish fruit and vegetables for bread English flour was unsuitable for the loaf, and most of it was used in biscuit making and pastry

Among the amendments taken over by the Chancellor of the Exchequer for incorporation in the Import Duties Bill on the report stage on February 25th was one put down by Captain Ian Fraser which aimed at the exemption of cinematograph films certified by the Royal Society to be solely illustrative of scientific investigation for exhibition before members of a recognized scientific body and imported only for the purpose of such exhibition free of charge It will be remembered that during the debate on the Finance Act of 1928 Captain Fraser moved a similar amendment which was accepted and which proved a boon to medical men and scientific workers generally

During the report stage of the Import Duties Bill in the House of Commons cinchona bark was added to the Free List An amendment by Dr Salter to add drugs was not taken

National Health Insurance

Sir HILTON YOUNG told Dr Hillman on February 25th that he was glad to have an opportunity of repeating that the proposal to redraft the relevant parts of the Medical Benefit Regulations dealing with fee charging which was subsequently abandoned was initiated by his Department in September 1930 and was therefore entirely unconnected with the proposals for securing emergency economies in the cost of medical benefit which became necessary a year later The proposed redraft of the regulations was dropped because it was considered not to be necessary

In a reply to Mr Pickering on February 25th Sir HILTON YOUNG said he could not undertake to introduce legislation including the small trader as a voluntary contributor under the National Health Insurance Act

Tuberculosis

In reply to Mr D Grenfell on February 25th Sir HILTON YOUNG stated that the number of persons admitted for the treatment of tuberculosis to approved residential institutions in England and Wales in the year 1930 was 44 517 The number of persons discharged in the same year from such institutions with their disease quiescent was 9 410 The number who died in the institutions was 5 073 A person who had suffered from tuberculosis was not considered to be cured of the disease until it had been quiescent for five years if it was pulmonary or for three years if it was non pulmonary It was not therefore usually possible to say at the date of discharge from an institution whether the treatment had been permanently successful

Post-vaccinal Encephalitis

In a reply to Mr Groves on February 26th Sir HILTON YOUNG said that since November 1922 the period under consideration by the Andrewes Committee and the Rolleston Committee 202 cases of encephalitis following vaccination had come to the notice of the Ministry of Health Of these 197 were as a result of inquiry regarded as cases of post-vaccinal encephalitis and 102 proved fatal In the remaining five patients of whom two died there appeared to be no reason to associate the encephalitis with the antecedent vaccination

Industrial Dermatitis—Replying to Sir Vivian Henderson on February 18th Sir HERBERT SAMUEL said Workmen's Compensation statistics for 1928 1929 and 1930 showed an increase in the number of cases of dermatitis There were 1 170 cases in 1928 1 405 in 1929 and 1 499 in 1930 Various steps had been taken to enforce or encourage the wearing of gloves as a precaution against dermatitis and gloves were required for persons employed in various processes under the Chemical Works Regulations of 1922 the Chromium Plating Regulations of 1931 the Welfare Order of 1918 for use of bichromate of potassium or sodium in dyeing, the Hollow-ware and Galvanizing Welfare Order of 1921 and the Tanning Welfare Order of 1930 A general leaflet providing information as to the causes of dermatitis and recommending precautions including the use of gloves had been prepared and widely distributed among occupiers of works likely to be affected A cautionary notice which could be exhibited in workrooms had been issued and put on sale Gloves suitable for the purpose were on exhibition in the special Dermatitis Section at the Home Office Industrial Museum in Horseferry Road Westminster

Opium Traffic Commission's Report—Sir HERBERT SAMUEL stated on February 25th that the Commission sent by the League of Nations to investigate the opium traffic had published the first and second volumes of its report The fourth volume containing the replies of Governments to the questions issued by the Commission had now been released The third volume had not been completed It would contain the laws and regulations in force in various territories

Lighting in Mines—Mr ISAAC FOOT announced to the House of Commons on February 25th that the Mining Association and the National Association of Colliery Managers had both given him definite assurances that they would forthwith take energetic steps voluntarily to secure continued improvement of lighting in mines Relying on these assurances he had suspended for a limited period further action by legislation The matter would be reviewed at the end of the year

Shortage of Naval Surgeons—Lord STANLEY told Mr R Beaumont on February 24th that the establishment of naval surgeons was not complete the deficiency being approximately sixty The whole question of the conditions of service and recruitment in the medical branches of the three Services was under consideration by an interdepartmental committee

Imported Eggs—Sir HILTON YOUNG told Mr Drewe on February 25th that liquid or frozen eggs, not in shell imported from China were subject to examination in this country He had not received any reports that recent consignments had been found to be impure There was no special standard of purity but these eggs were required to be free from preservative and were liable to seizure and condemnation if found to be unsound

Milk—In reply to General Clifton Brown and Mr Glossop on February 25th Sir HILTON YOUNG said he had received representations on the fact that the Sale of Milk Regulations laid down that milk containing less than 3 per cent of fat was presumed to be adulterated until the contrary was proved He was considering the matter in consultation with the Minister of Agriculture

Disabilities due to War Service—On February 29th Mr McGOVERN asked the Secretary for War the number of persons who were blinded and driven insane as a result of service in the war and the numbers of those who lost either an arm or a leg or both arms or both legs Major TRYON who replied said that the approximate numbers of pensioners in the categories mentioned at the end of 1931 were cases of total blindness 975 cases of mental disorder in mental hospital 6 300 and cases of amputation of a leg or arm or of both arms or both legs 34 500

Census Reports—The series of Census Reports 1931 will begin to be published about the middle of this year Dr F E FREMANTLE has asked that the report on housing should be expedited

Medical News

The Sydney Ringer Memorial Lecture at University College Hospital Medical School will be delivered in the lecture theatre by Professor C R Harington F R S on Friday March 11th at 5 p m under the chairmanship of Sir Edward Sharpey Schafer F R S the subject will be The nature of the secretion of the thyroid gland and medical students The lecture is open to all qualified medical practitioners

At the meeting of the Paddington Medical Society to be held at the Great Western Royal Hotel on Tuesday March 8th at 9 p m Dr Alfred Cox (Medical Secretary British Medical Association) will deliver an address entitled Forty years experience of medical organization and its results

A dinner meeting of the West London Medico-Chirurgical Society will be held at the Hotel Rembrandt Brompton Road S W to day (Friday March 4th) at 7 30 p m A discussion on Rheumatism—especially in the child will be opened at 8 15 p m by Dr Halls Dally Dr Janet Aitken and Dr W S C Copeman

At a sessional meeting of the Royal Sanitary Institute to be held in the South Western Hotel Southampton on March 18th Dr E H Stancomb will open a discussion on the public health service in its relation to medical practitioners

A two weeks course in orthopaedics under the auspices of the Fellowship of Medicine will be given at the Royal National Orthopaedic Hospital Great Portland Street W from March 7th to March 19th Those taking part are invited to attend the practice of the hospital The course is open to all qualified medical practitioners fee three guineas

The annual meeting of the Italian Society of Experimental Biology will be held in the Institute of Physiology of Turin University on March 29th and 30th when the subjects for discussion will be the carbon c anhydride equilibrium in the blood introduced by R Margaria and pharmacological action and radioactivity introduced by A Benedicenti Further information can be obtained from the general secretary S Andrea delle Dame 21 Naples

The South Eastern Region (Southern Section) of the British Health Resorts Association is holding a conference this week end at the Queen s Hotel Hastings The morning session on Saturday will be presided over by Dr W G Willoughby President of the British Medical Association and the afternoon session by Lord Meston President of the British Health Resorts Association

The third International Congress of Hydrography will be held at Monaco at Easter

The March issue of the *Practitioner* published this week is devoted almost wholly to skin diseases its main contents being fifteen articles by dermatologists and a paper on radium treatment of carcinoma of the skin

At the February meeting of the Central Midwives Board for England and Wales a letter was received from the Cambridgeshire County Council stating that it had had under consideration the Board s observations passed at the conference between members of the Board and representatives of local supervising authorities held in March 1931 and that in connexion therewith it had resolved to call attention to the present state of the law which allows a local authority to suspend a midwife in the case of an infectious disease without any compensation being paid in the event of the nurse being employed by a nursing association It was agreed to inform the Cambridgeshire County Council that the question of the payment of compensation to a midwife who has been suspended from practice to prevent the spread of infection is not one which comes within the jurisdiction of the Board

Sir Humphry Rolleston has accepted the office of president of the Devonshire Hospital for Rheumatic Diseases Buxton

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1** ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs

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The **TELEPHONE NUMBERS** of the British Medical Association are MUSEUM 9861 9862 9863 and 9864 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are *Bacillus Dublin* telephone 62350 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 2,361 Edinburgh)

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QUERIES AND ANSWERS

Wasp Stings and Bee Stings

Lieut-Colonel C T Sagran (Ventnor) writes in answer to the inquiry about wasp stings (February 27th p 410) The latest research establishes that the venom of wasps and bees stings consists of two fluids secreted from different glands—one acid the other alkaline When the poison has been injected nothing applied locally will affect the constitutional symptoms as it is so rapidly absorbed but the local inflammation can be alleviated by the application of any preparation of opium this rarely being available quickly the juice of a fresh lettuce or onion seems to afford relief In the case of stings from bees the poison gland is usually attached to the sting so the latter should be immediately withdrawn either by the thumbnail or the back of a penknife otherwise the muscles of the poison sac keep on injecting more poison till the sac is empty To the majority of individuals I am convinced that a bee sting although unpleasant acts as a stimulant and is beneficial Beekeepers rarely suffer from rheumatism at all events I never do and I get thousands of stings annually

Dr Frederic Saunders (Higham s Park E) writes If the co ordination of Dr E H Wilkins s eye and hand is all that we hope it is there is no need for him to seek authoritative information Tea in the garden with raspberry jam and a selected swatter will easily enable him to hit down a wasp without killing it Soon he will see one lying on its back with the sting exposed fluttering impotently and if he now presses the body with a stick or used knife a small clear bead will appear at the end of the sting (if indeed it has not already done so) A piece of *red* litmus paper held against this will reveal the answer to his question It is inadvisable to allow ladies with handker chiefs or other extempore implements to join in this experiment

Professor A E Boycott writes A few years ago I put a crowd of wasps over the jam pot at tea in the garden to some use by teasing about fifty of them to sting litmus paper The majority were about neutral a few number frankly alkaline none were acid The books say that wasps have acid and alkaline glands as well as the poison gland

Dr William Srobie (Oxford) writes Rub site of sting gently with a raw cut onion for ten minutes or so The effect is dramatic and the swelling goes down under observation An onion should be in every picnic basket

Chronic Urticaria

E C M writes A child of three years was brought to me with a history of urticaria since the age of 6 months The eruptions were severe and very frequent also suppurative in character probably due to infection caused by scratching After eliminating all articles of diet salt free and otherwise I diagnosed the case a glandular deficiency and put the child upon thyroid extract commencing with half grain doses This however did not achieve much

improvement until I tried irradiations of ultra violet light in small doses given frequently three feet from the burner This boy made a dramatic recovery and in addition to the urticarial attacks disappearing he made most remarkable strides in speaking and in his intelligence generally He is now a healthy schoolboy of 10 and as far as I have heard has never had any recurrence of the skin trouble though thyroid extract was discontinued with the light treatment when the condition cleared up I have also tried ultra violet rays for a species of paroxysmal urticaria nervous in origin from which I myself have suffered with immediate relief

Income Tax

Appointment—Travelling Expenses

M O H is a local official and receives a travelling allowance for the use of his car The council has adopted the Treasury scale but allows him only a lower rate than the horse power of his car would warrant His assistant is allowed motor cycle rates but has to use a car owing to rheumatism The inspector of taxes has refused to allow as a deduction the excess of the sum expended over the amount allowed by the council

*** The precise words of the relevant statute are material Rule 9 Schedule E of the Income Tax Act 1918 provides as follows

If the holder of an office or employment of profit is necessarily obliged to incur and defray out of the emoluments thereof the expense of travelling in the performance of the duties of the office or employment or otherwise to expend money wholly exclusively and necessarily in the performance of the said duties there may be deducted from the emoluments to be assessed the expenses so necessarily incurred and defrayed

It will be observed that strictly M O H does not fall within the first portion of this section because his travelling expenses are not borne out of the emoluments of the office but prima facie out of the allowance made him by the council With regard to the second part of the rule the courts have repeatedly commented on the strict terms used and have construed it accordingly So far as M O H is concerned we think he has no prospect of success on appeal His assistant is in a somewhat different position as the car is necessary in view of his personal health But the tendency has been to relate the necessary quality of the expense to the office rather than to the circumstances of the individual office holder and we consider that the chances of success would be against him also though he might derive some help from the natural sympathy that any tribunal would have with his equitable claim

LETTERS, NOTES, ETC

Fate of Swallowed Needles

MR WILLIAM S STEVENS M R C V S writes I notice an article in the *Journal* of February 13th concerning the fate of a swallowed needle It may be of some interest for your readers to know that it is a comparatively common thing for cats when playing with their mistress's work basket to swallow needles usually threaded These pass out in all manner of places of the body usually without doing much harm

Doctors and District Nurses in Industrial Areas

NEST writes As a whole time M O H in an industrial area I have for long been curious to understand the views of family doctors with regard to district nursing In my district there is a long established flourishing (financially speaking) nursing association doing general and extensive midwifery work The doctors are in the main on the safe side of middle age and do not seem to lack quite legitimate tastes for the golf course or other extra professional fields With their modern equipment and hospital training one would look for close co operation with a fully trained district nursing staff My information however is to the effect that beyond asking them to give an enema for constipation it is very rare for the doctor to seek their help Local applications to the fauces in very young children for example are constantly being left to helpless relatives and it is quite a usual habit to advise anti phlogistine in pneumonias in the youngest infants—no nurse having been called in—with instructions to follow the directions given with the tin I mention these two instances but others could be cited Skins eyes abscesses etc are left to get along with it Frankly I am at a loss to assess the position there being no personal or professional hostility involved nor any lack of appreciation of nursing services on the part of patients I should add that my information is based upon wholly reliable observations made by my health visitors on their normal rounds

Shoe leather Dermatitis

DR F R WALTERS (Farnham Surrey) writes Referring to the note in your issue of February 20th by Dr Blair I find in an old book of references (*Trees and Shrubs of Great Britain* by J C Loudon London 1875) that Virginian sumach is a synonym for *Rhus typhina* stag's horn sumach whereas *Rhus coriaria* is stated to resemble *R typhina* in general habit but to be of much smaller growth in all its parts In Johnson's *Gardeners Dictionary* (London 1868) *R coriaria* is said to be of South American origin introduced into this country in 1640 and *R typhina* North American introduced here in 1629 but in the *Encyclopaedia Britannica* the former is described as being indigenous in the countries bordering on the Mediterranean and carefully cultivated for tanning purposes in Sicily whereas in America *R copallina* and *glabra* are grown in Virginia and neighbouring States for the same purpose I have no suitable modern botanical book of reference and cannot identify *R michauxi* Some botanical authority might be willing to say whether it is a modern synonym or not.

Foreign Bodies in the Alimentary Tract

DR H L BASU F R F P S (Calcutta) writes In his letter (November 7th) on Mr Gordon Bruce's paper in the *British Medical Journal* of October 24th 1931 Dr Feldman has given his experience of foreign bodies which have passed through the whole length of the alimentary tract either to be delivered per anum or to be expelled without any intervention I have had three cases of gall stones in which the stones passed out per anum The first was a European lady diagnosed and treated as a case of gall stones during my absence from headquarters she consulted others who e advice for an operation she refused On my return she was placed on a conservative line of treatment when after an attack of colic she passed hard lumps with great relief She has had no pain since and has now been living in England for over five years The second was that of a doctor friend of mine who after years of suffering agreed to undergo an operation To everybody's surprise and his great satisfaction he passed eighty five stones varying in size from a pea to a fair sized marble The third case was that of a workman who was reluctant to have an operation Subsequently he passed 123 stones varying in size from a millet seed to a fair sized cherry Besides these cases I have come upon a variety of foreign bodies in the intestines of the cadaver from among three thousand subjects—for example gall stones pins nails needles and fruit seed Lately a fakir (mendicant) has been giving demonstrations of swallowing poisons live cole and nails before eminent scientists and when examined on the screen the nails were found in the gastric mucosa

Captain of the Men of Death

DR H E KING REYNOLDS (York) writes Osler seems to have recognized several of these sinister captains because on page 156 of Osler and McCrae's *Principles and Practice of Medicine* (ninth edition) it is stated that Tuberculosis is his [man's] most universal scourge well deserving the epithet bestowed upon it by Bunyan of the Captain of the Men of Death Clearly this effective description was coined by Bunyan Whether tuberculosis is still entitled to the captaincy at the present day is a matter for the statistician

Corrigendum

DR GERALD SLOT wishes to correct a passage in the report received from the West London Medico Chirurgical Society and published in the *Supplement* of February 20th (p 64) What he said was When a panel patient is very seriously ill and/or needs a major operation his practitioner finds himself unable to look after him and he is sent into hospital

Disclaimer

MR CAMPBELL ORR (Wolverhampton) asks leave to say that he is in no way responsible for any notice which has appeared in the press in connexion with the theft of his car

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 49 50 51 52 53 54 55 and 58 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 56 and 57

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 82

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

205 Epidemic Lobar Pneumonia

A STROM (*Norsk Mag f Laegevid* November 1931 p 1208) describes an epidemic of lobar pneumonia in an orphanage caused by Type I pneumococcus which was found in the sputum and nose and throat cultures of the patients during their illness and as long as 73 days after the crisis In one case it was detected in the nose and throat cultures four days before the onset of symptoms Healthy carriers were discovered in 33 per cent of the contacts during the height of the epidemic and in 16 9 per cent two and a half months later The strains from the patients were more virulent to mice than the strains from the carriers The disease was more prevalent among the older than the younger boys presumably because the former represented a more rural type of population than the latter

206 Epidemiology of Influenza

R BIHLER (*Deut med Woch* December 25th 1931 p 2177) states that in contrast with previous pandemics of influenza and especially those of 1918–23 this infection in the summer during the last three years at Munster has only appeared in a sporadic form Thus in 1929 there were no cases in the summer of 1930 only six and in 1931 only one The absence of any cases in 1929 was probably due to the relatively severe outbreak of the previous winter having brought into being a certain degree of immunity During the last three years the disease has assumed mainly the purely febrile form The pneumonic form was seen in only 7 2 per cent of the cases and the abdominal form in only 2 8 per cent while the cerebral variety was never observed *B Influenzae* was detected in only 7 3 per cent of the cases a mixed flora being found in the rest Complications were relatively frequent in the 1929 epidemic while they were rare in 1930 31 they included broncho pneumonia enteritis appendicitis catarrhal *jaundice* pleurisy with and without effusion bronchitis otitis media parotitis frontal sinus catarrh arthritis and nephritis

207 Heart block Complicating Toxic Goitre

J D S CAMERON and I G W HILL (*Edinburgh Med Journ* January 1932 p 37) report in detail two cases of heart block in toxic goitre and review the literature on this and related subjects In both instances the hyperthyroidism was associated with septic infection of the throat and the onset of the heart block was definitely correlated with this complication with recovery from the infection the heart block disappeared In one patient a girl aged 18 with primary Graves s disease and sinus arrhythmia partial heart block was detected four days after the removal of the tonsils and adenoids under ethyl chloride anaesthesia Eserine and atropine had no significant effect on the pulse rate or conduction time so Lugol s iodine was given in small doses and reduced the pulse rate Ergotamine tartrate was injected intramuscularly and slowed the heart moderately but produced no demonstrable effects on conduction or on the P R and T waves The action was transient and was associated clinically with symptoms of intolerance (nausea and precordial constriction) after doses so small as 0 125 mg. though larger doses later had no untoward effects The drug was subsequently given by the mouth for some days again with symptoms of intolerance but with no results indicating that it had any therapeutic value The authors remark that the therapeutic use of this drug in hyperthyroidism is questionable, even on the premise that the cardiac effects of the disease arise from sympathetic overaction while the dangers of peripheral gangrene and of acute circulatory disturbances have to be borne in mind They believe that in their two cases the thyroid intoxication rendered the myocardium susceptible to the influence of the throat condition and that the infection was the precipitating cause of the heart-block Evidence is cited that the part played by the anaesthetic is less important than has been suggested The comparative rarity of heart block as a feature of such goitre cases is illustrated by a series of 1 744 cases collected from the literature

208 Paralysis in Rabies

S G MOFTAH and SHAHIN PACHA (*Bull Office Internat d Hyg Publ* November 1931 p 2007) state that among 27 060 patients who received antirabic treatment at the Cairo Institute 20 developed paralysis and another case occurred in a man who had only received a single injection of antirabic serum after being bitten by an animal found not to have rabies The first 13 cases were of the post-vaccinal type and varied in severity from slight facial paralysis to the Landry type These cases were sporadic and spread over a number of years All the patients recovered completely after a more or less prolonged convalescence The remaining 8 cases with one exception occurred within less than a year s time in all there was an acute onset a rapid course and a fatal termination The authors conclude that the paralysis was not due to the fixed virus nor to the street virus It is more probable that it was caused by a toxin as shown by the rise of temperature the clinical appearance of the patient and the necropsy findings

209 Cardiac Lesions associated with Hypertension

J R LISA (*Journ Lab and Clin Med* December 1931 p 211) describes the microscopical lesions in the heart in ten cases of hypertension with congestive cardiac failure The myocardium showed many small scars but no other marked gross changes Microscopically very numerous necrotic foci were found these were more frequent in the left ventricle and interventricular wall but were also noted in the other chambers The youngest lesion involves only one or very few fibres with or without cellular infiltration which occasionally is sharply polynuclear more frequently it consists of polynuclears monocytes and lymphocytes in varying proportions As connective tissue proliferation begins the lymphocytes tend to predominate and finally completely disappear leaving only a miliary scar Marked fragmentation and areas of fine wavy fibrillae were also found in the myocardium Syphilis present in three cases, was probably merely an associated disease unrelated to the hypertension In no case were spirochaetes or bacteria demonstrated

210 Albuminuria in Iodine Deficiency

E GRIMES (*Med Journ and Record* December 2nd 1931 p 523) observes that while goitre is the best known clinical manifestation of iodine deficiency there are many disturbances in the absence of goitre including albuminuria especially in the young retarded growth and development mild myxoedema general physical exhaustion recurring adenoids and juvenile adiposity anaemia and amenorrhoea The clinical history of the children of two families is reviewed In the first the elder girl aged 22 who had married and left home had been operated on for goitre The younger girl had started to menstruate at the age of 13 the flow being irregular and scanty She seemed listless and was not gaining weight When 15 years old her urine was found to contain a large amount of albumin and a few hyaline casts A boy aged 17 was underweight and subject to headaches he also had albuminuria Both the younger children were given 1 minim of a compound iodine solution daily for ten days and 3 minims weekly for two

months they were put on a high protein diet with mixed vegetables and cream In two months the urine was free from albumin and casts and the children had improved markedly The iodine medication was continued and four years later these two children were reported to be in full mental and physical health In the second group three children aged respectively 12 14 and 16 years presented a picture of retarded growth and development albuminuria was present in each case, and a similar treatment was instituted The albuminuria disappeared in one month two years later the children were without any signs of disease

Surgery

211 Thyroglossal Cysts and Fistulae

H G JARVIS (*New England Journ of Med* November 19th 1931 p 987) discussing the surgical aspect of thyroglossal cysts and fistulae states that their exact diagnosis and effective treatment involves a full understanding of their embryological development these cysts originating from the epithelium of the mouth The condition may be divided into two main groups heterotopic thyroid adenomata and median cysts and fistulae each of these is briefly considered Such cysts and fistulae may occur anywhere along the thyroglossal tract from the foramen caecum to the body of the thyroid gland Their diagnosis is usually simple but certain difficulties are occasionally encountered the chief being a peculiar liability of these cysts to infection Diagnosis is never complete without definitely determining the presence of a normally situated thyroid gland since an ectopic thyroid gland may be present To ensure cure the fistula must be dissected out from the neck to the foramen caecum and the Sistrunk method is described and recommended Markedly infected cysts should not be dissected at the first operation through the hyoid bone to the foramen caecum because there is considerable danger that the infection will travel down the mediastinum

212 Idiopathic Dilatation of the Oesophagus

F A C SCRIMGER (*Annals of Surgery* November 1931 p 801) describes idiopathic dilatation of the oesophagus as a considerable dilatation of the organ without an anatomical stenosis but associated with difficulty in the passage of food into the stomach The dilatation usually begins at the upper end and gradually increases in the lower third It may reach its maximum width in its middle portion and gradually taper to the hiatus of the diaphragm or it may be pear shaped with the maximum diameter immediately above the diaphragm or it may be S shaped with the dilated oesophagus lying over the upper surface of the right diaphragm The dilated portion may have a muscular wall that is normal thinner than normal or abnormally thick from hypertrophy of the muscular coat and inflammatory swelling of the mucous membrane The lining mucosa is often ulcerated and the submucosa thickened and infiltrated Diagnosis is not difficult and may be confirmed by a long history with remission of the symptoms the character of the regurgitated food the capacity of the oesophagus and the characteristic appearance under the fluoroscope Four cases are reported in which operative treatment was of two types the anastomosis of the dilated oesophagus to the fundus of the stomach and the procedure proposed by Heller which consists in cutting through the circular sphincter muscle of the subdiaphragmatic oesophagus but not entering the lumen of the organ In the first case Heller's extramucosal cardioplasty was tried but the patient died five days later from peritonitis mediastinitis and pericarditis due to a leak in the suture line In the second case an oesophagoplasty was performed following which the patient became able to swallow food normally if finely divided and mixed with water The oesophagus is nearly normal in size but requires a 6 inch head of fluid column before food enters the stomach In the third case an oesophagoplasty was attended with good results The patient, who was 58 years old, was able to swallow normally immediately after the operation and has continued in good health The fourth case occurred in a diabetic patient who was also alcoholic In this case also oesophagoplasty was tried liquid food was swallowed freely but it was found necessary to give finely divided food mixed with fluid and followed by water

213 Cancer Mortality among the Insane

V HAHNEMANN (*Ugeskrift for Laeger* November 12th 1931 p 1132) has compared the mortality from cancer in the public asylums in Denmark in the period 1920–27 with the cancer mortality in the general population in the same period the deaths in the two classes being put in comparable age groups Among the insane the highest incidence of deaths from cancer was in the age group 55–65, but even here the cancer mortality was about two and a half times less than in the general population of the same age the respective figures being 10 1 per cent and 25 1 per cent This low incidence of deaths from cancer among the insane is the more striking since the asylum returns in Denmark include benign as well as malignant tumours a cerebral tumour, for example being included under the heading of cancer Further post mortem examinations are made in about three quarters of all the deaths in asylums a much higher proportion than in the general population, yet cancer is comparatively rarely found among the inmates of asylums In the period under review 15 41 per cent of 113,579 male deaths in the general population could be traced to cancer whereas only 4 58 per cent of 1 309 deaths among male lunatics in asylums could be traced to this cause In the case of women of all ages the cancer mortality was 14 93 per cent for the sane and 6 43 for the insane The corresponding figures for both sexes together were 15 11 per cent and 5 51 per cent respectively This comparatively low cancer rate was fairly evenly distributed among the different organs, with the exception of the tongue and pancreas in which cancer occurred a little more frequently among the insane than among the sane Most striking was the complete absence of cancer of the skin among about 5,000 lunatics dying in asylums between 1915 and 1927 there was not one such case and had the incidence of skin cancer been that of the sane there should have been 15 such cases among these 5 000 The incidence of cancer in the insane was highest among the alcohol psychoses and lowest among the cases of dementia paralytica in which it was only 0 9 per cent (916 cases with only 8 of cancer)

214 Treatment of Cellulitis

G LAROCHE and LUCILNNE MEURS (*Paris Med* December 5th 1931, p 466) define cellulitis as an anatomical alteration of the loose cellular tissue consisting of congestion oedema and infiltration Objectively there is a particular thickening of the tissue or collection of nodosities in its mass The pain is characterized by its variability in intensity position and duration Although it is from the pain that the patients seek relief purely symptomatic treatment is of no avail the underlying general condition needs treatment in addition to the local treatment if relief is to be permanent Auto intoxications of various kinds—uric acid oxalic acid or cholesterin—are commonly associated Subjects of cellulitis are frequently obese or hepatic or suffer from chronic enteritis or endocrine disorders It is necessary to treat the predisposing conditions at the same time as the local focus The nervous system demands special attention, a calm regular life with abundance of fresh air being advisable Undue sensitiveness to changes of heat and cold which is commonly present may indicate a prolonged sojourn by the sea A hydropathic regime is good for certain types others improve with glandular therapy The only satisfactory local treatment is massage given under medical supervision by skilled masseurs the manipulations need to be varied with each subject It is unnecessary to impose complete immobility and absolute repose Infra red rays have a beneficial effect but only so long as the

treatment is continued Electrical treatment with continuous or interrupted current is useless Diathermy causes exacerbation of the pains and increases the tissue thickening The general reaction through reflex paths caused by skilled massage brings about diuresis which is an appreciable adjuvant in the disintoxication

215 Retrosternal Goitre

P LSAU (*Zentralbl f Chir* November 21st 1931 p 2963) records two cases of retrosternal goitre in women aged 55 and 39 respectively In the first case in which thyroidectomy was performed under local anaesthesia the goitre showed areas of calcification and ossification recovery followed In the second case the operation was performed when the patient was in a condition of asphyxia no anaesthetic was given but the administration of oxygen was continuous Thrombosis of the left subclavian vein ensued two days after the operation but ultimately the patient made a complete recovery

Therapeutics

216 Oxygen in Idiopathic Ulcerative Colitis

J FELSEN (*Arch Int Med* November 1931 p 786) discusses the treatment of idiopathic ulcerative colitis by oxygenation of the intestinal tract From a total of 117 cases including various control groups encouraging results were obtained in 40 patients from the use of oxygen only It was administered per rectum through a soft rubber catheter before breakfast after a free evacuation from castor oil given the night before It was found that the average adult although acutely ill with intramural abscess could tolerate without undue distension 250 c cm of oxygen this routine was never the cause of perforation Radiograms before and five minutes after the administration showed that the gas was distributed throughout the small and large intestine with the patient either sitting or recumbent it completely disappeared before the sixth hour Moderate distension of the bowel occurs as far as the pyloric sphincter but no escape into the stomach has been noted After from two to seven days of the treatment there followed diminution of the odour of the stools cessation of the bleeding reduction of the fever slowing of the movements of the bowel and improvement in the patient's condition When the stools gradually change from a liquid to a semi solid consistency the oxygen is diminished in amount and is finally stopped The treatment appears to exert an influence upon the intestinal flora and the intestinal tissue itself a prominent secondary effect noted in most cases was an increase in the haemoglobin and in the number of erythrocytes

217 Insulin and Sugar in Cardiac Therapy

L RIMBAUD A BALMES and G ANSELME MARTIN (*Presse Méd* November 11th 1931 p 1647) describe a technique for the treatment of various forms of cardiac insufficiency by means of large doses of sugar combined with insulin The oral route of sugar administration gave the best results Glucose or the disaccharides may be used with equally good results A course of treatment consists of daily injections of 5 units of insulin followed after fifteen minutes by 50 grams of sugar or sugar solution by the mouth This is continued for ten to twelve days if no improvement follows the dosage of both insulin and sugar may be doubled The authors believe that the rapid mobilization of sugar for use by the myocardium has a definite tonic effect on the latter lasting for a variable period after a course of treatment In cases of cardiac failure excellent results have been obtained particularly in the reduction of oedema and the relief of subjective symptoms A remarkable diuresis has been observed which seems due to a tonic effect a simple diuretic action does not seem probable since in two cases where there was no improvement in the heart action there was also no diuresis In some cases the combination of insulin and sugar with digitalis and ouabain therapy has given better results than either treatment alone Left ventricular insufficiency has been favourably influenced with improvement of the subjective symptoms and of the quality of auscultated sounds Treatment of various types of arrhythmia proved disappointing however though cases are recorded of the occurrence of extrasystoles being diminished in frequency and of a complete arrhythmia being converted into a fairly regular rhythm with frequent extrasystoles The cardiac failures of Graves's disease are not favourably influenced and the advance of acute endocardial disease is not arrested The treatment is most likely to succeed in the early stages of cardiac insufficiency before gross anatomical damage has been suffered by the myocardium In cases of arterial hypertension the improvement of symptoms is ascribed to the tonic effect of the treatment but the slight drop in blood pressure occasionally noted is regarded as a direct effect of the insulin The authors consider the insulin sugar combination worthy of trial in all cases where ordinary cardiac tonics have failed

218 Urinary Acidifiers

J M SCOTT and D R MITCHELL (*Canadian Med Assoc Journ* December 1931 p 668) record clinical and bacteriological investigations of methods of acidifying the urine They conclude that ammonium chloride or other urinary acidifiers of more effectiveness than acid sodium phosphate or even ammonium benzoate might well be given a trial in cases of urinary infection when it is proposed to use hexamine Ammonium chloride was given in doses of 20 grains four times daily in a well-diluted mixture containing the liquid extract of liquorice As in the case of the benzoate given in similar doses the ammonium radicle is transformed into urea leaving available the chlorine ions which by uniting with bases decrease the *p*H of the urine and also slightly of the blood stream The most pronounced effects in this respect followed the use of the chloride but the bacteriological contents of the urines underwent little change unless hexamine was given simultaneously These results led to a change in the post operative treatment of prostatectomy the patients being given ammonium chloride and hexamine immediately after the operation with the result that the urine usually became clear and acid to litmus the odour was less unpleasant and there was less of the distressing excoriation of the skin under the dressing The wounds also closed more rapidly The authors add that haemorrhage from the bladder occurs more readily when the urine is alkaline probably due to a secondary infective process this further justifies the palliative acidifying procedure In some cases during the ammonium chloride and hexamine treatment bladder irritation and pain was reported this may be remedied by the exhibition of hyoscyamus codeine phenacetin or aceto salicylic acid

219 J M SCOTT (ibid p 666) commends as a urinary acidifier the acid ammonium phosphate given in 20 grain doses with liquorice or lemon syrup This salt is more pleasant to take and the author found it to be as effective an adjuvant to hexamine as ammonium chloride In all cases the urine was collected and tested for two days before treatment was begun The salt was then administered after each meal and at bedtime for two days and resumed after an interval of two days the process being continued until the patients had been under treatment thus for three weeks

220 Spinal Medication in Syphilis

D C SMITH and J A WADDELL (*Arch Derm and Syph* November 1931 p 727) describe a method of jugular compression as an adjunct in the treatment of syphilis of the central nervous system In view of the discovery that the intracranial pressure and rate of flow of the spinal fluid were increased by jugular compression owing to the production of passive hyperaemia and venous stasis at

appeared probable that the process could cause a pouring forth of arsphenamized anti syphilitic serum into the ventricles subdural spaces and parenchyma thus increasing the effectiveness of anti syphilitic medicaments in these situations While such a procedure is contraindicated in haemorrhagic diseases rupture of an artery neoplasms glaucoma separation of the retina hydrocephalus and optic oedema the authors report that in twenty two selected cases an increase of 55 per cent in the arsenic content of the spinal fluid was found after jugular compression for thirty minutes following the intravenous injection of arsphenamine The compression is obtained by two adjustable leather pads attached to a woven strap encircling the neck the indications of proper adjustment being engorgement of the veins of the face and pulsation in the temporal arteries without causing the patient any or only very slight discomfort Without claiming that an increase in the arsenic content of the spinal fluid is a proof of the curative value of the method the authors believe that the procedure is worthy of consideration as a useful accessory in the treatment of neurosyphilis

Disease in Childhood

221 Hair Eating and Pica in Children

J SMITH (*Brit Journ Child Dis* October–December, 1931 p 262) records a case in a girl aged 3 years admitted to hospital for abdominal pain, who in the course of 6 weeks passed four hair balls per rectum The child had been in the habit of eating wall plaster and pieces of wood during the previous few months as well as nibbling a blanket and mattress Smith regards pica as a bad habit like thumb sucking nail biting masturbation and some cases of enuresis in which bad feeding lack of training poor surroundings and limitation of interests all play a part The value of radiological examination in determining the density size, and number of hair balls present in the stomach is emphasized If the ball fills the stomach operation is imperative but if several smaller balls are present as in Smith s case the treatment may be expectant provided that surgical help is always available in case acute obstruction should arise

222 The Feeding of School Children

C SCHIOTZ (*Nordisk Medicinsk Tidskrift* November 14th 1931 p 721) describes comparative experiments with what is known as the Oslo breakfast and the old fashioned overcooked school midday meal The Oslo breakfast consists of half or one third of a litre of whole milk, supplied in a sealed bottle and drunk through a straw wholemeal rusks or biscuits with margarine and goat s milk cheese the children eating as much of this solid food as they like and half an apple or as much raw carrot as each child desires or half an orange The children sit at table for half an hour over this meal eating the oranges at the beginning of it and the apples and carrots at the end so as to clean their teeth automatically The average number of calories of the Oslo breakfast is about 725 In one school in Oslo 450 children were given the usual over cooked midday school meal, the caloric value of which was approximately that of the Oslo breakfast In another school in Oslo where the children were recruited from the same *milieu* 510 were given the Oslo breakfast instead of the midday meal The boys who received the midday meal had gained after six weeks an average of 600 grams whereas the boys who had had the Oslo breakfast had gained in the same period an average of 886 grams The difference in favour of the Oslo breakfast was even greater in the case of the girls the figures being 429 and 1 029 grams respectively The superiority of the Oslo breakfast would seem to depend not only on its liberal supply of fat vitamins mineral salts and food in the natural state but also on its providing the children with a good nutritional start early in the day Of all the advances made during the past fifty years in medical research there is not one Schiotz remarks which approaches in importance vitamin research Thanks to it the ordinary fever diet in hospitals with its pasteurized milk, steam cooked barley soup rusks and finely sifted flour is now seen to be an amazing anomaly If fresh fruit and vegetables were included in the fever diet in the absence of valid contraindications, the patient would be much better fed

223 Neo natal Scurvy

K B LIU (*China Med Journ* October 1931 p 995) reports a case which presents unusual departures from the generally accepted description of scurvy A Chinese woman aged 27 years was admitted to hospital for her confinement She had had one pregnancy nine years previously the child was alive and well Physical examination revealed no gross abnormality The birth was normal and the post partum course uneventful The infant was perfectly well until the seventh day when the temperature rose to 100 2° F On the following day the temperature was 101 6° the right knee became swollen and the right leg was drawn up The child cried continuously when the knee was touched or the leg straightened but appeared quite comfortable when left undisturbed Feeding was not affected There had been no injury to the child and the urine examination was negative The blood count showed a leucocytosis of 17 800 with 82 per cent neutrophils 11 per cent small mononuclears, and 7 per cent large mononuclears no parasites were discovered An *x* ray examination of the right knee showed no abnormality The mother and child left the hospital on the twenty second day against advice the cause of the continued temperature being still undiagnosed Eleven days later the infant was brought back with swelling of both legs and feet , both legs were everted and there were two swellings about 3/4 inch in diameter on the left occipital region The middle phalanges of two fingers one on each hand were swollen and there was swelling of both legs just above the knee joints The child was pale but not wasted the gums were not spongy, and the temperature was 100 8° Since the physical findings suggested Barlow s disease treatment with orange lemon and tomato juice was instituted Five days later the condition of the child was much improved and treatment was subsequently continued at home two months later all the swellings had disappeared Since scurvy thus appeared in a breast fed infant 7 days old Liu raises the question whether it originated before birth

224 Spontaneous Pneumothorax in Early Life

P COCCHERI and V ROSSI (*Arch Path e Clin Med*, September, 1931 p 46) have studied the etiology, diagnosis prognosis and treatment of spontaneous pneumothorax in children up to the age of 12 They present a table of 300 cases mostly derived from the medical literature from 1844 to 1930, in which are set out the age sex cause and result The condition is less common in children than in adults though relatively more frequent under the age of 4 years than subsequently the more recent systematic use of *x* rays has increased the number of cases by including partial or latent types The general mortality is lowered to 60 per cent The chief causes are tuberculosis 26 15 per cent bronchopneumonia and pneumonia 23 07 per cent abscess of lung secondary to bronchopneumonia 13 46 per cent, and emphysema 11 15 per cent The possibility of pneumothorax should always be considered when there is a region of the thorax distinguished by diminution of the respiratory murmur associated with a normal or hyper sonorous percussion note, but a radiological examination will solve any doubtful case The prognosis depends on the disease or determining factor of the pneumothorax, on the condition of the lung in relation to the pleura and on the size shape and functioning of the fistula The treatment for uncomplicated cases is expectant for more serious forms complications must be combated and avoided by the evacuation of pus and injection of an antiseptic by the use of therapeutic pneumothorax or oleothorax and possibly by surgical operation

Obstetrics and Gynaecology

225 Uterine Rupture Following Caesarean Section

T A VAN BUREN (*Amer Journ of Surg* November 1931 p 458) believes that when Caesarean section is followed by a pyrexial period there is a real possibility of a subsequent rupture occurring and that therefore very careful supervision should be the rule during the entire course of the next pregnancy The usual signs of such an accident comprise a crisis of agonizing pain succeeded by cessation of the labour pains and collapse of the patient The author reports a case however in which labour pains continued up to the time of operation and there were no symptoms of collapse or even of mild shock so that rupture was not diagnosed the condition being only discovered when the abdomen was opened for a second Caesarean section He was impressed by the apparently slight amount of force which was concerned in producing the rupture and concludes that the primary cause was infection in the uterine incision at the time of the first Caesarean section For a long time it has been the general opinion that the uterine incision healed by scar tissue formation whether or not the incision was infected but Williams pointed out that there was no generation of the muscle tissue in those cases alone where healing had been uncomplicated As a preventive Van Buren commends suturing in tiers as introduced by Sänger and prefers the low cervical procedure He adds that cases are recorded where women after Caesarean section have gone through two normal deliveries to have early in the pregnancy the symptoms resemble those of a ruptured ectopic gestation and the mortality is lower than when the accident occurs in the later months

226 Pernocton in Obstetrics

R F MATTERS (*Med Journ of Australia* November 21st 1931 p 650) discusses the technique of administering pernocton which he commends as fulfilling all the requirements of obstetrical anaesthesia It is a 10 per cent solution of the sodium salt of secondary butyl β bromallyl barbituric acid and has the property of breaking down rapidly in the tissues with the formation of non toxic substances—a very valuable attribute of a hypnotic The toxic margin is high but intravenous injection must be slow in order that the concentration of the salt in the blood should not be raised too rapidly and that the hypertonic solution which has a *p*H of 9 5 should mix thoroughly with the blood The intravenous route of administration is preferred because it admits absolutely accurate dosage and the correct rate of absorption by the nerve cells the slower absorption obtained by intramuscular injection has its value since it enables additional doses to be given to maintain the concentration of the anaesthetic in the blood Matters emphasizes the importance of securing absolute quiet during the induction and of inducing by suggestion a satisfactory mental attitude in the patient he cites a case in which neglect in this respect resulted in troublesome restlessness although the amnesia was complete from the time of the first injection The dose of pernocton is 1 c cm for each 12 to 15 kilos of body weight the rate of intravenous injection being 0 75 c cm each minute Where labour is prolonged a second intravenous injection can be given If the first was 4 c cm the second should be 2 c cm if the first was 3 5 or 3 c cm the second should be 1 5 or 1 c cm The intramuscular injection ranges from 1 to 2 c cm

227 Delayed Post partum Haemorrhage

M METZGER (*Gynecol et Obstet* October 1931 p 581) reports the case of a patient in whom there was no exceptional haemorrhage until the thirteenth day after a normal confinement and signs of infection were entirely absent The haemorrhage was violent and the patient became very pale with a pulse of 110 the blood was red and contained no clots The uterus was somewhat enlarged reaching to a level three fingerbreadths above the pubis it was rather hard and not tender The cervix was partly open but no intrauterine exploration was undertaken The patient had given birth to one other child six years previously without any abnormal incident During the second pregnancy she had a slight loss of blood about the fourth month which lasted but a short time and was followed by a leucorrhoea During the delivery shortly after the expulsion of the infant there was a slight haemorrhage but the placenta came away easily and the haemorrhage stopped The membranes were complete but a part of a cotyledon about 1 square cm in size seemed to be missing The puerperium was normal in every respect Since at the moment of the haemorrhage on the thirteenth day the temperature was normal there was no further loss and the uterus was firm no ergotin or pituitrin was given The following day the temperature rose and rigors began The uterus was found to be soft and tender over the right horn There was no further loss of blood Ice was placed over the uterus to assist in the localization of the abscess During the five following days the general condition was poor slight rigors intense sweatings and tenderness continued to be localized over the right horn On the sixth day the abscess was incised after which the temperature fell to normal the lochia were fetid the vaginal haemorrhage ceased the uterus contracted and the vaginal that if the slightest intrauterine intervention had been undertaken serious septicaemia would have resulted

228 Mumps Complicating Pregnancy

J H MOORE (*Journ Amer Med Assoc* November 28th 1931 p 1625) records the case of a woman aged 23 who developed mumps in the seventh month of a second pregnancy The prodromal symptoms were very severe consisting in high temperature vomiting cyanosis and collapse About a month later she was delivered of a stillborn foetus showing signs of commencing maceration The puerperium was uneventful

229 Extirpation of the Full term Pregnant Uterus

W WERTENBAKER (*Annals of Surgery* December 1931 p 1066) records a case of the excision of the uterus at full term in a patient suffering from general paralysis and a gonococcal cervical discharge and discusses the indications for this operation He states that it is to be considered in those cases where a classical Caesarean section would be followed by hysterectomy—namely (1) where it is of primary and vital importance to avoid contamination of the abdomen (2) where it is deemed best to avoid subsequent pregnancies (3) where extirpation of the uterus would be otherwise indicated as in coexisting fibroid tumours and (4) where it is imperative to obviate all possible loss of blood It is not indicated where it is desired and feasible to continue the reproductive function The average duration of the operation is shorter than that of the classical Caesarean section the shock is no greater and may be less while a less complicated convalescence is the usual sequel When conservation of the tubes and ovaries is desired the operation is more difficult since the uterine extremities of the broad ligaments are pulled upwards by the enlarged organ and the pedicle to be clamped and ligatured is much wider Five additional cases are recorded in which the operation was undertaken and the steps in it are enumerated as follows abdominal incision freeing of any adhesions reflection of the utero vesical peritoneum and bladder application of clamps to the broad ligaments severing of these ligaments delivery of the uterus application of clamps to the cervix severing of the cervix Passage of the uterus to an assistant who immediately extracts the infant ligaturing of the broad ligaments suture of the cervical stump suture of pedicles to the cervical stump suture of the utero vesical peritoneum over the raw area drainage of the cul de sac at the discretion of the operator and closure of the abdominal incision

Pathology

230 Filterable Staphylococcal Haemolysin

H GROSS (*Zentralbl f Bakt* December 15th 1931 p 212) draws attention to the importance of the strain and of the medium in the production of haemolysin by staphylococci Classifying these organisms according to their haemolysis on 5 per cent rabbit or sheep blood agar plates their power of coagulating citrated rabbit plasma and their ability to cause severe necrosis when inoculated living into the rabbit's skin into three groups he finds that Group I which is most active in these three respects likewise produces the most active haemolytic filtrate that Group II which is less active produces only a mediocre haemolytic filtrate while Group III which is inactive produces no filterable haemolysin Not only is the filterable haemolysin formed by Group I strains more active than that formed by Group II strains it is also formed more rapidly Thus 25 strains of Group I produced haemolysin in 1 per cent peptone broth in one to seven days whereas a similar number of Group II strains took twelve to eighteen days to produce it In fluid media the haemolysin is formed well in peptone broth and in human or rabbit serum broth but poorly in horse sheep or ox serum broth presumably because these last three serums are high in normal antibodies The haemolysin can be obtained from solid media For this purpose a 24 hour agar culture is washed off with saline solution the suspension is left in the ice chest overnight then centrifuged and passed through a Seitz filter This filtrate contains the haemolysin in a purer state than broth filtrates For demonstrating the presence of the haemolysin the most suitable red cells are those of the rabbit ox sheep and goat human horse and guinea pig cells are insensitive In the rabbit haemolysis can be produced *in vivo* by the intravenous inoculation of a filtrate haematuria being manifest in a few hours An active anti haemolysin can be prepared by inoculation of horses and rabbits with a haemolytic filtrate, but not with whole staphylococci

231 Nitrogen Content of Gastric Juice

L MARTI (*Bull Johns Hopkins Hosp* November 1931 p 287) records observations on the total nitrogen and non protein nitrogen partition of gastric juice obtained after histamine stimulation He concludes that there is a constant secretion of uric acid urea ammonia, and amino acids into the normal stomach and that in normal health there are rough quantitative limits for each uric acid being present in the most regular amounts, and ammonia being the most variable It is quite possible that there may be some interchange between ammonia and urea within the stomach These non protein nitrogen constituents are found in higher concentration in the benign achylias, and in gastric carcinoma and nephritis they are markedly increased In nephritis it is possible that the stomach is an agent for removing metabolic products from the body Martin adds that if creatinine is present the amount is so small that it was not detected by the method of estimating the total creatin and creatinine

232 A Test for Early Renal Insufficiency

E G WAKEFIELD *et al* (*Journ Amer Med Assoc*, September 26th 1931 p 913) have investigated human serums with a view to determining the normal range of concentration of inorganic sulphates and to comparing this with the figures obtained in early renal insufficiency They found that these inorganic sulphates were increased in the serum before there was retention of urea or creatinine or lowered excretion of phenolsulphonephthalein In about half the patients studied there was a rise in the sulphate content before the kidney had lost its ability to concentrate urine to a specific gravity of 1025 or more but the kidney might be failing in this respect while the sulphates were still within the normal limits There was a fairly close agreement between the increased concentration of inorganic sulphates in the serum and the test of blood urea clearance as a measure of renal functional activity The authors conclude that it is apparent that there may be definite renal disease and yet all the tests of renal function may yield results within the range of normal variations They believe therefore that there are probably separate mechanisms of excretion of the various substances They add that some data were obtained regarding the 'washing out of sulphates' by giving excess of fluid by the mouth or injecting it intravenously In the presence of renal insufficiency the general rule appears to be that the sulphates in the serum rise before the urea and are apparently washed out with more difficulty The diagnostic values of such sulphate estimations and the blood urea clearance test are compared there are possible advantages and disadvantages in adopting either or both of these procedures as a routine measure

233 Filterable Anaerobic Bacteria in the Nose and Throat

E L BURKY and H L FREESE (*Journ Bacteriol*, November, 1931, p 309) have examined the naso pharyngeal flora of groups of persons in three isolated communities for the presence of filter passing anaerobic bacteria The communities were situated in Southern Alabama Labrador and St John one of the Virgin Islands in the West Indies In most instances nose and throat washings with hormone broth were taken, but some direct experiments were made using nasopharyngeal swabs and mouth washings separately The washings were filtered through a Berkefeld V candle under a pressure of at least 500 mm of mercury lower pressures yielded consistently negative results The filtrate was inoculated into glucose blood agar from which pour plates were prepared and into 5 per cent blood broth Cultures were incubated anaerobically for at least five days In Alabama the results were as follows anaerobic filter passing bacteria were recovered from 4 out of 5 normal persons from 6 out of 7 patients with colds and from 3 out of 8 persons with influenza In Labrador 21 normal persons and 17 patients with colds were examined all cultures proved negative The authors explain these negative results on technical grounds a pump being used for filtration that gave a negative pressure of only 300 mm In St John 16 normal persons and 18 patients with colds were examined positive results were obtained in all. Evidence was obtained that these organisms are present both in the nasopharynx and in the mouth Besides *Bact pneumosintes* the other types described by Olitsky were found as well as some that were not included in his classification

234 The Liver and Reticulo Endothelial System in Infectious Diseases

C W HERLITZ (*Acta Paediatrica* Supp V November 10th 1931 p 5) who records 106 illustrative cases in patients aged from 1 month to 35 years maintains that the pathogenesis of jaundice in infectious diseases is first and foremost to be found in the reticulo endothelial system in such diseases The primary cause of an increase in bilirubinaemia must be sought in the increased decomposition of the blood with a consequent increase in the formation of bile pigments in the reticulo endothelial system This increase is not compensated by a sufficient increase in the excretion of bile pigments to keep the bilirubin content at the normal level The principal reason for this may be that the uninjured liver cells are unable to respond to the increased demands on their capacity to excrete bile pigment It is also possible that the liver cells have been so injured by the toxaemia that their normal excretive capacity has been diminished giving rise to hyperbilirubinaemia It is also possible that the main obstruction to the excretion of bile is to be found not in the liver cells but in the finer bile passages either in the form of bile thrombi or other phenomena secondary to the excreted pathological bile or as the result of swelling proliferation or other inflammatory changes in the damaged Kupffer stellate cells

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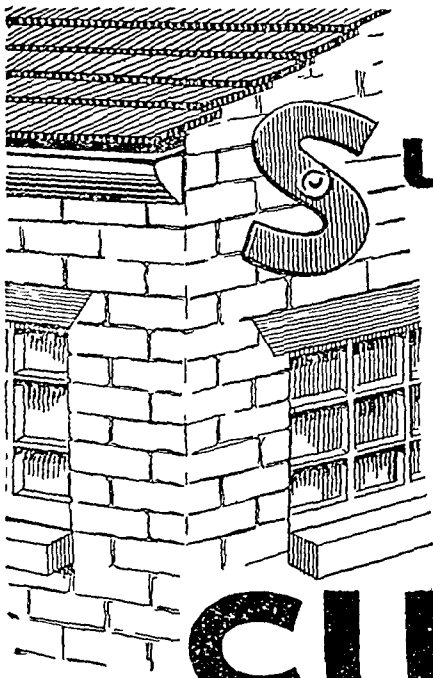
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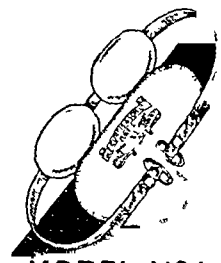
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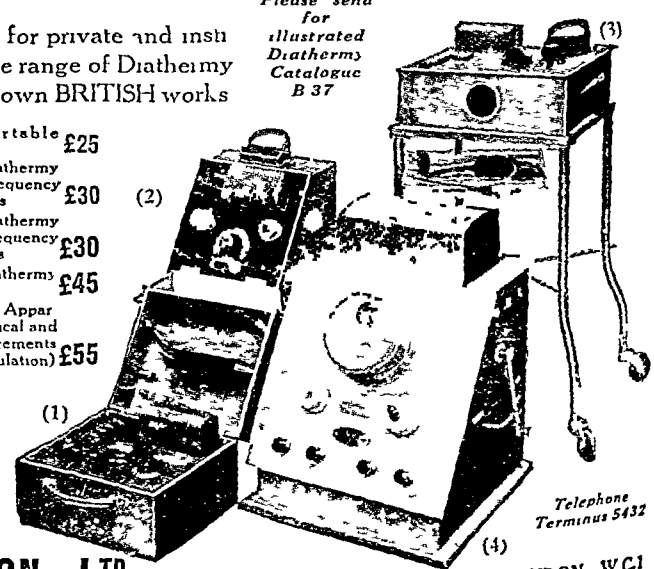
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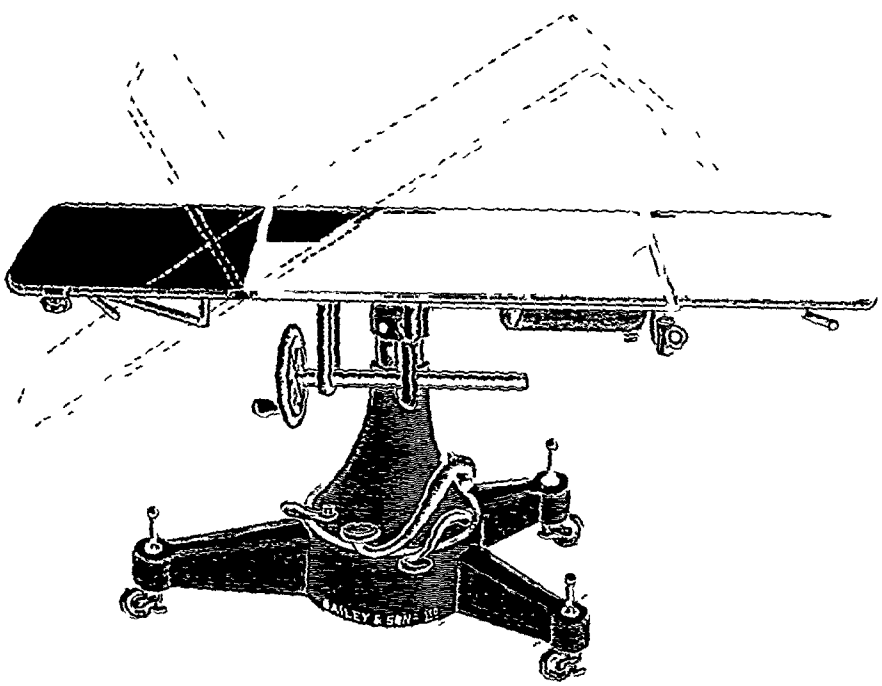
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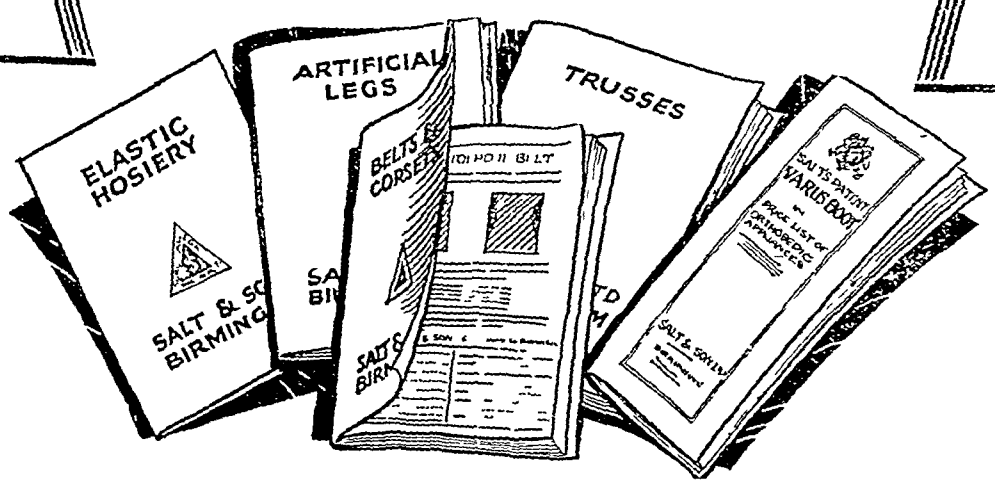
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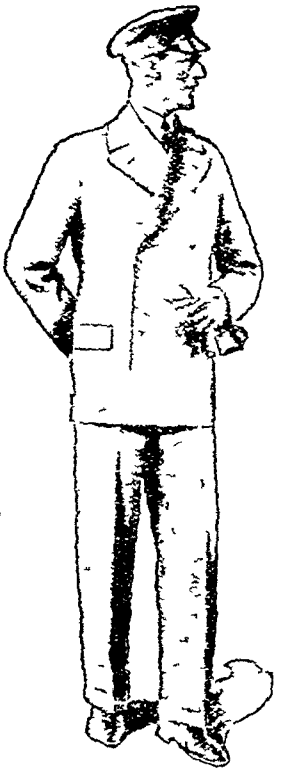
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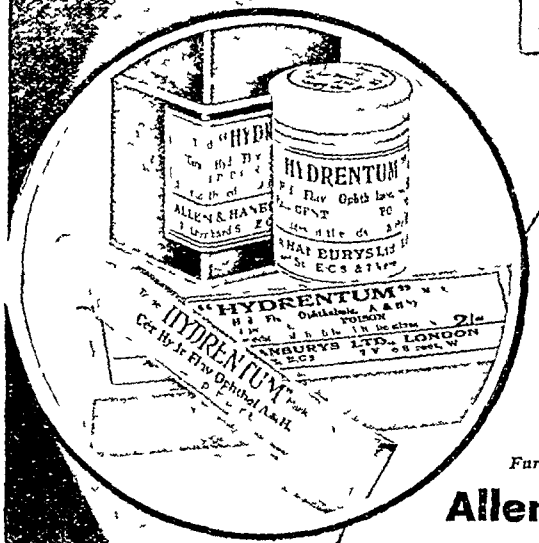
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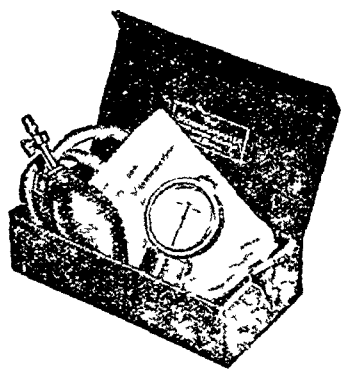
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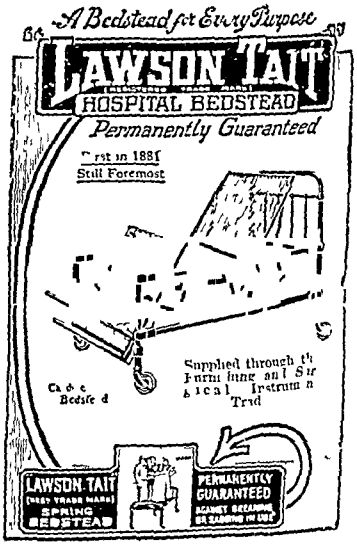
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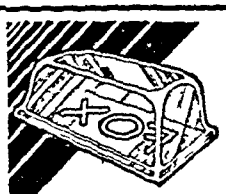


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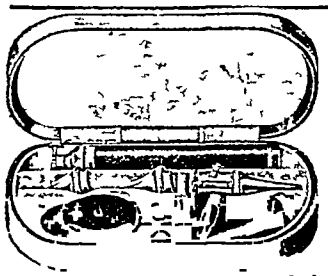
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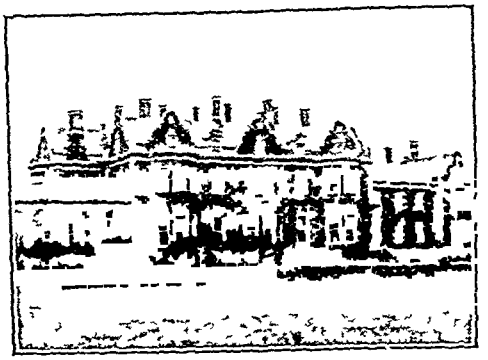
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The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological culture the ordinary x ray examination and electrocardiograph readings all treatment that may be prescribed such as special diets in ultra artificial sunlight electrical treatment bath massage nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales Telegrams CASTLE, RUTHIN Telephone RUTHIN 66

WOODSIDE NERVE HOSPITAL

WOODSIDE AVENUE MUSWELL HILL LONDON N10

Chairman THE RIGHT HON LORD BLANESBURGH G B E Opened November 8th 1930

Fully equipped with every modern appliance for the diagnosis and treatment of

FUNCTIONAL NERVOUS DISORDERS

Private Rooms Broad Verandahs Electrotherapy and Hydrotherapy X ray and Dental departments Laboratories for investigation and research For terms and particulars apply to the Physician in charge at the Hospital Telephone Tudor 4211

PECKHAM HOUSE, 112, Peckham Road, London, S E 15.

Telegrams "Alleviated, London" Telephone Rodney 4741-4742

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified *patients and voluntary* boarders are received Separate houses for treatment and accommodation of special cases *adjoin the Institution* There is a seaside branch Kearsney Court near Dover to which *patients* may be sent for treatment or on holiday Motor and carriage exercise is provided as required *Patients* can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON Telephone NORTH 0888

A PRIVATE HOME *for the treatment* of patients of both sexes *suffering from* Mental Illnesses Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification

Convalescent Home Kearsney Court Dover For further *particulars* apply to the Medical Superintendent

CAMBERWELL HOUSE, 33, Peckham Road, London, S E.5.

Telegrams PSYCHOLOGY, London FOR THE TREATMENT OF MENTAL DISORDERS Telephone RODNEY 3731—4732

Also completely detached *Villas for* mild cases with private suites if desired Voluntary Patients received Twenty acres of *grounds* Hard and Grass Tennis Courts Bowls Croquet Squash Racquets and all indoor amusements *including* Weekly and other Concerts Occupational Therapy Physical Drill and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers also resident and visiting *Consultants* An illustrated Prospectus may be obtained upon application to the Secretary

HOVE VILLA BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc., which Voluntary Temporary or Certified Patients may visit, by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury Telephone 51

THE LAWN, LINCOLN

[illegible] Hospital [illegible] large [illegible] MENTAL [illegible] PATIENTS [illegible] Mental [illegible] Detectives [illegible] and [illegible] Patients [illegible] for Prospectus apply to [illegible] [illegible] from the [illegible]

NORMANSFIELD

For Mental Defectives of all ages.

Under private management.

Apply to Dr Langdon Down,

Normansfield Teddington.

CHEADLE ROYAL,

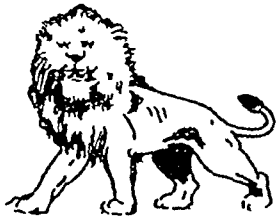
CHEADLE CHESHIRE

This Licensed Hospital for MENTAL DISEASES with the seaside branch Clan's Bay Colwyn Bay is for the treatment and care of PRIVATE PATIENTS of the UPPER and MIDDLE CLASSES Voluntary Temporary and certified Patients received

For terms etc apply to the Medical Superintendent J A C Roy MB who may also be seen in Manchester by appointment

Telephone 2231 GATLEY

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BRIDGE OF ALLAN
BUXTON
CHELTENHAM
DROITWICH
HARROGATE
LEAMINGTON
LLANDRINDOD WELLS
STRATHPEFFER
TREFRIW
WOODHALL



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NO Country in the world offers such a variety of natural mineral waters and Spa treatments as are available in your own Country The medical profession is assured of individual attention being given to their patients at the hands of trained staff

Hotel tariffs are cheaper during the winter, and special diet can be arranged without extra charge

Handbook and tariff charges with list of accommodation will gladly be sent on application to the Hon Secretary British Spas Federation Pump Room Leamington Spa or the Manager of any of the Spas here mentioned

Send your Patient to a British Spa

MD recommends—for convalescence and for efficient nursing and comfort—

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Phone—Weybridge 986

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Inhalation Treatment with vaporized Mineral Water highly recommended for Bronchitis Asthma, etc

Full particulars apply to The Spa Director

MASCOT HOTEL,
York Street, Baker Street, W1,

is within easy reach of Harley St Nursing Homes etc and Doctors may confidently recommend it to patient and their friends Inspection invited H and c water telephone and gas fire in bedroom Lift. Terms from 4 gns weekly en pension Bath bed and breakfast from 8/ to 10/6

Brochure sent free

A comfortable London Hotel convenient for Harley Street and Nursing Homes

THE CLIFTON HOTEL,
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gives comfort service and cuisine equal to larger Hotels at less cost. A visit will prove this Bedrooms with hot and cold water telephones Centrally situated close to Harley Street and Nursing Homes

Grams Cliftonia, London Monday Lord Tel Welbeck

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PRIVATE HOME for LADIES Ten only SANATORIUM MENTALLY AFFLICTED Officer or Mrs Little

The Brighton and County Borough MENTAL HOSPITAL, HAYWARDS HEATH SUSSEX

The Committee of recently opened BEECHMONT HOME for reception of Female from mental disorder and Certified Patients

Beechmont is a large situated on the outskirts of quite separate from the

The house is healthily an estate of 27 acres with gardens and lawns commanding of the South Downs It has of lighting and heating furnished on modern lines

The charges are from £3 3s to £10 10s per week including all necessaries except

Full particulars may be obtained from the Medical Superintendent

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Built specially to provide up to date accommodation for residents and visitors 3½ days from England Thoroughly modern and excellently equipped Resident Medical Officer Trained Nurses Every form of treatment available Glorious bracing climate Mental cases not taken

Apply—SUPERINTENDENT

PEEBLES

In the winter garden of Scotland facing the sun 600 feet up Tonic air beauty in every land up from sheltered balconies Dancing winter garden swimming bath tennis Golf putting Fully licensed Modern baths installation Thysiotherapeutic massage Electrical treatment ultra violet radiation Massage in attendance Write for prospectus

Among the Pine-clad Border Hills
PEEBLES HYDRO PEEBLES SCOTLAND

BOURNEMOUTH HYDRO,
with Vita glass Sun lounge and Marine Balcony on the South Coast

Every kind of Bath Hombiture Garage
Every kind of Massage Ultra violet Light
Every kind of Electricity Diathermy
Every kind of Diet
High Frequency Electric Lift.
Prospectus from Secretary Tele 341
Resident J W JOHNSTON SMYTH M D
Physicians J L T TOSH HUTCHISON M D

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson M.D., F.R.S.E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J. T. JOHNSTON M.B. D.P.H. etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK

PENDYFFRYN HALL SANATORIUM
PENMAENMAWR

Established 1900 for the treatment of Tuberculosis. Miles of carefully graduated walks through pine clad hills with sea and mountain views. Modern treatment including SANOCRYSIN, ARTIFICIAL PNEUMOTHORAX etc. X-ray plant, electric light, central heating, wireless. Special milk supply from tuberculin tested herd. Full day and night nursing staff. On L.M.S. Main Line to Holyhead 4½ hours from London. Resident Physicians Dennison Pickering, M.D. (Cantab.) J. A. Hennessey, M.B. Ch.B. Matron Miss S. A. Eddy, S.R.N. Late Sister in Charge Royal Hospital Annexe, Sheffield.

For particulars apply to the Secretary, Pendyffryn Hall, Penmaenmawr, N. Wales. (Phone 20.)

LINFORD SANATORIUM,
RINGWOOD, NEW FOREST, HANTS

Established 1902 for the treatment of Tuberculosis. Radiators and Electric Light throughout. Hot and cold water and shower bath in nearly all rooms. Powerful X-ray Plant. Ultra-violet Rays. Full Nursing Staff. All forms of treatment available. Farm of 120 acres including 40 acres of wood. Herd of Tuberculin tested Guernsey cows kept. Resident Physicians—Arthur de W. Snowden, M.D., B.Ch. (Cantab.), A. G. E. Wilcock, M.R.C.S., L.R.C.P. Colin Cassidy, M.B., B.Ch. (Cantab.).

NORDRACH-UPON-MENDIP SANATORIUM
FOR THE TREATMENT OF TUBERCULOSIS was opened in January, 1899, by ROWLAND THURNAM, M.D.

All modern forms of treatment are available. There are X-ray and ultra-violet ray installations. Full nursing staff. The Sanatorium stands in gardens and private grounds of 60 acres at an altitude of 862 feet above sea level, surrounded by woods and moorland. All rooms are heated by hot-water pipes and electrically lighted.

Fees 4, 5, and 6 guineas per week

CYRIL FRANCIS ASHBY, M.R.C.S., L.R.C.P., *Certificate of Sanatorium Stephani, Switzerland. President Medical Supt.*

For full particulars apply to *The Secretary*, Nordrach-upon-Mendip, Blagdon, Bristol. *Telegrams* Nordrach, Blagdon. Telephone Blagdon 23.

THE COTSWOLD SANATORIUM

First opened in 1892 and rebuilt in 1925. On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W. sheltered from North and East elevation 800 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X-ray controlled). Tuberculins Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra-Violet Rays is available when necessary, without extra charge. X-ray plant. Electric light. Radiators hot and cold basins and Wireless in all rooms.

Full day and night Nursing Staff.

Resident Physicians GEOFFREY A. HOFFMAN, B.A., M.B., T.C.Dub., and MARGARET L. HARRISON, M.B., B.S.Lond.

Secretary The Cotswold Sanatorium, Cranham, Gloucester. *Telephone* 41 WITCOMBE. *Telegrams* HOFFMAN, PAINSWICK.

"THE VICTORIA," BRITISH SANATORIUM
DAVOS-PLATZ SWITZERLAND

ALTERED AND MODERNISED IN SUMMER 1930

SPECIALLY REDUCED TERMS

The Board of Management is desirous of meeting the difficulty of the exchange in every possible way, and until this improves is willing to cash English Pounds at the uniform rate of Frs. 18.50 as far as the actual Sanatorium bill is concerned.

The Board hopes that this will meet with approval.

Medical Supt.

BERNARD HUDSON, M.D. Cantab., M.R.C.P. Lond., Swiss Federal Diploma.

SANATORIUM NEROTAL : WIESBADEN
RHINE (GERMANY)

Special treatment for Rheumatism, Gout, Diabetes, Heart and Nervous Complaints. Each patient specially dieted. Three Resident Doctors. Open all the year round. Early and beautiful Spring. English spoken.

Prospectus on application.

GRAMPIAN SANATORIUM,
KINGUSSIE, INVERNESS-SHIRE.

Specially built for the Open-air Treatment of *Tuberculosis*, and opened in 1902. Bracing mountain air. Elevation 860 ft. above sea level. Sheltered situation in pine wood. Graduated walk. Electric light throughout building and in shelter. Central heating. Fully equipped X-ray Plant. Inoculation Treatment available for patients. 24 bed. Trained Nurse on duty all night. Terms £4 4s. 6d. to £6 6s. per week inclusive. No extras. Med. Supt.—FELIX SAXY, M.D. For particulars apply to the Secretary.

CITY OF LONDON MENTAL HOSPITAL, DARTFORD, KENT.

Ladies and Gentlemen received for treatment under certificates and without certification as other VOLUNTARY or TEMPORARY PATIENTS, at a weekly fee of TWO GUINEAS and upwards.

Doctor's widow in North London having large house, garden, car, good staff, would like one PAYING GUEST. Terms moderate.—Address No. 3021, B.M.A. House, Tavistock Square, W.C.1.

Your patients will recover at-

In addition to the favourable climatic conditions of Margate there is an abundance of calcium in the chalk cliffs and iodine in the seaweed which will ensure a speedy recovery in cases of anaemia and neurasthenia During convalescence and for permanent residence there is no place like Margate

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MARGATE

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C F H 33

MONTANA HALL, Montana, Switzerland. Built 1929 1930 Opened October 1930

For the Treatment of Tuberculosis (all forms) Diseases of the Chest Asthma For patients requiring rest in the Alps under strict medical supervision and for medical conditions in which sun and air bathing are indicated

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

SPECIALLY REDUCED INCLUSIVE TERMS

For further particulars kindly apply to the Resident Medical Superintendent HILARY ROCHE M D (Melb) M R C P (London) Tuberculous Diseases Diploma (Wales)

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a m to 4 p m —Post Graduates may enrol at any time for any period from 1 week to 3 months —Special facilities for "Study Leave," and for those wishing to take a course under the "Grant aided Scheme for Post Graduate Study by Insurance Practitioners "—Anaesthetic Courses —Clinical Assistantships —Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

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MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admissions being primiparous cases) Over 2 400 patients are admitted to the Wards annually and in the Ante natal Department there are over 18 000 attendances per annum

Certificates awarded as required by the various Examining Bodies

For rules fees etc apply ARTHUR WATTS Secretary

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The Medical Correspondence College provides ample facilities under highly qualified tutors for oral practical and clinical instruction in preparation for the various higher qualifications and for Post Graduate Study irrespective of any examination

Diploma in Psychological Medicine
Diploma in Ophthalmology
Diploma in Radiology
Diploma in Laryngology, Otology, and Rhinology
Diploma in Public Health
Diploma in Tropical Medicine
F R C S Eng, and all higher Surgical Examinations
M R C P Lond, and all higher Medical Examinations
M D Thesis of all Universities

You can qualify for any of the above by our Courses of Combined Postal and Practical Courses

Write at once stating your requirements to the Secretary, MEDICAL CORRESPONDENCE COLLEGE, 19 Welbeck Street, W 1

WE SPECIALIZE IN POST-GRADUATE COACHING FOR ALL EXAMINATIONS

DEFECTIVE SPEECH.

Remedial Tuition on modern lines for Stammer Aphonia Cleft Palate Tracheotomy and Disturbed Co ordination by ERIC MIALL A L C M Speech Instructor at Middlesex Hospital

Short courses in elocution accent clarity and public speaking

17, CAVENDISH SQ, LONDON, W 1

Telephone Langham 1830

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Advice and legitimate assistance by an expert in preparation of Theses Also postal tuition for M R C P London and similar examinations —No 1001 B M A House Tavistock Sq W C 1

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Full PREP COURSE with Anatomical (Cadaver and Living Model) and Surgical Demonstrations for next Exam will commence shortly POSTAL TUITION at any time —H C O'BRIEN F R C S Surgeons Hall Edinburgh

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Special Classes for Pre Medical and Dental Exams Matric and Prelims Chemistry Physics and Biology Labs MANCHESTER TUTORIAL COLLEGE 327 Oxford Road Manchester

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The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March June September and December For Regulations apply to the Secretary College of Preceptors Bloomsbury Square London W C 1

UNIVERSITY EXAMINATION POSTAL INSTITUTION

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(FOUNDED IN 1882)

Principal Mr E S WEYMOUTH M A (Lond) POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

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F R C S (Eng),	*Primary*	173
	1906 31 *Final*	174
M R C P (Lond),	1914 31	199
D P H	(Various) 1906 31 (Completed Exam)	308
F R C S (Edin),	1918 31	50
M R C S L R C P	Final 1910 31 (Completed Exam)	501
M D	Various By Thesis	Numerous successes

Preparation for the above and also for Medical Preliminary and for all examinations leading up to M R C S L R C P or M B of various Universities also for D P M D O M S D T M & H D L O D C O D M R E M M S A L M S S A etc Numerous successes

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MEDICAL PROSPECTUS (48pp)

CONTENTS —The method and the cost of entering the Medical Profession *Particulars of all* Postal Courses and Oral the higher Medical for the higher Surgestions for the Special resher Courses Open r writing these s

Medical Prospectus gratis along with list of Tutors etc on application to the Principal Mr E S WEYMOUTH M A 17 Red Lion Sq London W C 1 (Telephone HOLBORN 6013)

ST MARY'S HOSPITAL MEDICAL SCHOOL, W 2

(University of London)

The SUMMER SESSION will begin on Tuesday April 19th 1932

The Medical Preliminary Science and Final Subjects and Students can join at once after matriculation

SITUATION.—Between a large population providing clinical material and one of the best residential districts thus enabling students to live in close proximity to their work.

CLINICAL UNITS: MEDICINE AND SURGERY.—Certain members of the Medical and Surgical staff devote their whole time to teaching and research.

NEARLY 1000 beds available for teaching additional clinical material being provided by affiliation to an Infirmary and other Institutions.

FREE OPEN and RESEARCH SCHOLARSHIPS to the value of £1400 are awarded annually.

APPOINTMENTS varying in value up to £750 per annum open to students after qualification.

Further particulars and illustrated prospectus apply to the School Secretary.

C. M. WILSON (RUGBY) M.D. F.R.C.P. Dean

LONDON SCHOOL OF DERMATOLOGY

St John's Hospital for Diseases of the Skin,

Leicester Square, W.C.2

Conducted by the Honorary Staff of the Hospital together with the Physicians in charge of the Dermatological Departments of the Post-Graduate Medical Hospitals. Lectures and Demonstrations every Tuesday and Thursday at 5 p.m. from October to March and four times weekly during May. Clinics daily at 2 p.m. and 6 p.m. Saturdays 2 p.m. only. Pathological Laboratory for Instruction or Research.

For further particulars fees etc. apply to J. J. M. Whitty, M.B., Dean.

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CITY ROAD, E.C.1

MIDWIFERY TRAINING SCHOOL

MEDICAL STUDENTS admitted to Hospital practice with classes in Midwifery and Obstetrical Nursing. Monthly or Fortnightly Courses.

LECTURES, TRAINING, Midwives and Monthly Nurses, preparing for the C.M.B. certificates.

PRIVATE CASES for Pupil Midwives.

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TAUNTON SCHOOL, TAUNTON

A PUBLIC SCHOOL FOR BOYS

Boys are prepared for the First M.B. Examination. University Scholarships in Classics, Science, etc.

Special facilities are offered for the teaching of Chemistry, Physics, Botany and Zoology.

New Science Buildings containing seven Laboratories, two lecture rooms, etc. Library, Gymnasium, Chapel, Swimming Bath, etc.

Terms £63 per annum.

Entrance Scholarships, value £40 to £20, will be offered for competition in July next to boys entering the School in September 1932.

Further particulars may be obtained from the Rev. the Headmaster, or from the Secretary, Taunton School.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (leading also to the Diploma in Tropical Medicine and Hygiene) commence January 14th and October 9th. The Diploma in Tropical Hygiene commences January 11th and April 10th. A Course in DENTAL SURGERY commences January 11th.

Further particulars may be obtained from the Hon. Dean, Medical Faculty, School of Tropical Medicine, Liverpool.

SCHOOLS for BOYS and GIRLS

TUTORS FOR MEDICALS

[illegible] have [illegible] to-day [illegible] Tutors [illegible] Tutors [illegible] Tutors

THE MEDICAL AND DENTAL DEFENCE UNION OF SCOTLAND, LIMITED

Secretaries and Registered Office Millar, Thomson & Dunlop, C A , 113, St Vincent Street, Glasgow

ANNUAL SUBSCRIPTION £1 ENTRANCE FEE 10/

No entrance fee to those joining within 12 months of obtaining qualification Benefits include defence of claims for alleged negligence in professional work including indemnity of £2 500 and costs and advice on professional difficulties

Particulars and forms of application can be obtained from the Secretaries at the above address

County Council of Middlesex

WEST MIDDLESEX COUNTY HOSPITAL ISLEWORTH

RESIDENT ASSISTANT MEDICAL OFFICER

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners unmarried and must have held resident appointments in a General Hospital The officer appointed will work under the control of the Medical Superintendent and will devote his whole time to his official duties

Salary is at the rate of £400 per annum rising by annual increments of £50 to £600 per annum together with board lodging and laundry subject to a small temporary abatement in view of the national situation

The successful candidate will be required to pass such medical examination as the County Council may direct and unless subject to Poor Law Officers Superannuation Act 1896 to contribute to the County Council's Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) age (2) qualifications and (3) experience together with copies of not more than three recent testimonials must be received by the undersigned not later than March 19th

No special application forms are provided Envelopes must be endorsed Resident Assistant Medical Officer

Canvassing directly or indirectly will be a disqualification

N B —West Middlesex County Hospital is a modern General Hospital with accommodation for over 500 cases chiefly acute Some 650 beds for chronic cases in Warlworth House an adjoining institution also are under the care of the medical staff of the Hospital

ERNEST S W HART
Clerk of the County Council
Middlesex Guildhall Westminster S W 1
February 29th 1932

Corporation of London

PUBLIC HEALTH DEPARTMENT

THE PUBLIC HEALTH (LONDON) ACT 1891

COMPULSORY NOTIFICATION OF CHICKEN POX

Notice is hereby given that the Mayor and Commonalty and Citizens of the City of London as the Sanitary Authority for the City of London do hereby by virtue of the powers vested in them by Section 56 of the Public Health (London) Act 1891 and with the approval of the Minister of Health ORDER that the provisions of the said Act with respect to Infectious disease shall apply in the City of London to the disease known as CHICKEN POX in addition to the diseases specifically mentioned in Section 55 of the said Act (or any Order extending or amending the same) and that for a period of twelve months from the 18th day of March 1932 Chicken pox shall be a compulsorily notifiable disease within the City of London

Guildhall E C 2 BELL
February 26th 1932

County Borough of Halifax

ST LUKE'S HOSPITAL

SENIOR RESIDENT MEDICAL OFFICER

The Health Committee of the Halifax Corporation invite applications for the above position The salary will be £350 per annum rising by annual increments of £25 to £450 together with board lodging washing and attendance

Applicants must be duly qualified registered Medical Practitioners and preference will be given to those who have held a Resident appointment in a General Hospital

Forms of application with further particulars may be obtained from the undersigned and must be completed and returned to him not later than Monday March 14th

B Orler
Town Clerk's Office PERCY SAUNDERS
(Caution Street Branch) Town Clerk
Halifax February 24th 1932

City of Cardiff

ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the post of Assistant Medical Officer (male) under the Health and Education Committees of the Cardiff City Council

Candidates must have had not less than three years experience since graduation and must hold a Diploma in Public Health

The person appointed who will be called upon to carry out any duties appropriate to his status associated with the work of general health administration port sanitation school medical service and maternity and child welfare and will act under the direction of the Medical Officer of Health and School Medical Officer must devote his whole time to official duties and reside within the City of Cardiff

The salary will be £500 per annum rising by annual increments of £25 to £700 (subject to the terms of the agreed Memorandum on salaries and to a temporary percentage deduction at present amounting to less than 5 per cent) The officer appointed will be required satisfactorily to pass a medical examination and to contribute to the funds of the Cardiff Corporation Superannuation Scheme

Forms of application and information as to the duties attached to the appointment may be obtained from the undersigned by whom applications (endorsed Assistant Medical Officer) together with copies of three recent testimonials must be received not later than March 17th

City Hall RALPH M F PICKEN
Cardiff Medical Officer of Health
February 27th 1932

The Welsh National School of Medicine

The Council of the Welsh National School of Medicine invites applications for the post of JUNIOR ASSISTANT in the Medical Unit The appointment is a temporary one for a period not exceeding two years is subject to three months notice on either side and the salary is £250 per annum The successful applicant will be expected to take up duties as soon as possible and will be required to devote his whole time to the duties of the office

Applications accompanied by not more than four testimonials must be received by the undersigned on or before March 26th

Thirty copies of applications and testimonials are required

S C EDWARDS Secretary
The Welsh National School of Medicine
The Parade Cardiff

Warwickshire and Coventry

JOINT COMMITTEE FOR TUBERCULOSIS

KING EDWARD VII MEMORIAL SANATORIUM HERTFORD HILL near WARWICK

Applications are invited for the post of JUNIOR MEDICAL OFFICER (male) at the above Institution of 195 beds The successful candidate will be appointed for six months and will have special opportunity of gaining experience in treatment by Artificial Pneumothorax by Ultra violet Light and in X ray work

The salary will be at the rate of £200 per annum with board lodging and laundry and promotion is probable at the end of six months

Applications with recent testimonials should reach the Medical Superintendent by Monday March 14th

Victoria Hospital for Sick CHILDREN HULL (Incorporated)

RESIDENT HOUSE SURGEON (salary £105) and HOUSE PHYSICIAN (£100) (ladies) required with board residence and laundry

Applications with copies of recent testimonial stating age qualifications experience and other particulars to be sent to the Secretary not later than March 16th

Lowestoft and North Suffolk HOSPITAL

TWO HOUSE SURGEONS (men or women) required Commencing salary £120 per annum with board residence and laundry

Applications together with copies of three recent testimonials to be sent to the Honorary Medical Superintendent

County Councils of Midlothian, WESTLOTHIAN and PEEBLES

Applications are invited for the post of ASSISTANT MEDICAL OFFICER OF HEALTH and TUBERCULOSIS OFFICER for the above Counties

The salary will be at the rate of £650 per annum (less a temporary economy cut of 7½ per cent) together with travelling expenses

Six copies of applications stating age qualifications and previous experience together with six copies of not more than three recent testimonials must be lodged with the undersigned not later than March 16th

Canvassing is a disqualification

County Rooms G J McGREGOR
Edinburgh County Clerk
February 18th 1932

East Lancs Tuberculosis Colony, BARLOWMOOR HALL GT BARROW near CHESTER

(Under the direction of the British Red Cross Society and Order of St John of Jerusalem)

ASSISTANT MEDICAL OFFICER (male) required Salary £275 rising to £300 at end of six months with board residence and laundry

The appointment will be terminable by one months notice Preference will be given to candidates with experience in Tuberculosis

Applications married Assistant Medical Officer with copies of three recent testimonials to be sent to the Medical Superintendent at the above address before Thursday March 10th

East Lancashire Tuberculosis COLONY

Barrowmore Hall Gt Barrow nr CHESTER Under the direction of the British Red Cross Society and Order of St John of Jerusalem

HOUSE PHYSICIAN (male) required The appointment is for six months and is renewable Salary £100 per annum with board residence and laundry The appointment is terminable by one months notice

The Institution deals with all stages of Pulmonary Tuberculosis and comprises Hospital accommodation Sanatorium accommodation extensive workshops for graduated work and settlement

Applications with copies of three recent testimonials to be sent to the Medical Superintendent at the above address by March 10th

York Dispensary

Applications are invited for the post of RESIDENT MEDICAL OFFICER (female) to commence duties as soon as possible

The Resident Staff consists of two Medical Officers who duties are to visit and attend the sick poor in their own homes and to assist the Honorary Staff Candidates must be duly qualified registered and have some experience of the th is essential S e board lodging and attendance and an for laundry

Applications with testimonials to be on or before March 12th to—

4 New Street JOHN C PETERS
York Secretary

Doncaster Royal Infirmary (185 Beds)

SENIOR CASUALTY HOUSE SURGEON (male) required immediately Previous Hospital experience necessary

Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewal Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER P SMITH
Secretary Superintendent

North Devon Infirmary, BARNSTAPLE (70 Beds)

Wanted end of March duly qualified RESIDENT MEDICAL OFFICER (male or female) Salary £150 per annum with board apartments and laundry Appointment not to be less than six months

Applications stating age qualifications and copies of recent testimonials to be sent with to the Honorary Secretary

The Hospital for Sick Children,
Great Ormond Street London W C 1

A CASUALTY OFFICER is required on March 17th

Candidates must be registered Medical Practitioners and are invited to send in their applications addressed to the Secretary before 1 o'clock on Monday March 7th accompanied by not more than three testimonials which will be returned

The appointment is made for one year but may be terminated subject to re-election annually for a period of three years but not necessarily for the same condition

The appointment is non-residential and wholetime

A copy of the conditions and rules for this appointment may be seen and a form on which the salary will be at the rate of £400 per annum for the first six months with lunch and tea provided and annual allowance at the rate of 24 guineas for the first six months for substitute for annual holiday of four weeks

All candidates must appear before the Joint Committee at their Meeting on Wednesday March 16th at 4 45 p m precisely

Forms of application and copies of the rules may be obtained from the Secretary at the Hospital

By Order of the Board of Management
JAMES McKAY
January, 1932 Secretary

Hospital Convalescent Home,
LARKWOOD SWANLEY KENT

For the reception of patients (women and children) in an early state of convalescence from the London Hospitals (120 Beds)

The Trustees of the Hospital Convalescent Home invite applications for the post of LADY RESIDENT MEDICAL OFFICER which will become vacant on April 1st

The appointment is for a period of six months and may be renewed for a further period

The salary is at the rate of £200 per annum with quarters and full board

Candidates should have had recent Hospital experience

Applications stating age qualifications and full details of experience should be accompanied by copies of three recent testimonials and forwarded to C M Power Esq Secretary Hospital Convalescent Home 18 Wallbrook London E C 4 on or before Wednesday March 9th

The Royal Sea-Bathing Hospital,
MARGATE
(For Surgical Tuberculosis)
(308 Beds)

Applications are invited for the post of ASSISTANT MEDICAL SUPERINTENDENT at the Royal Sea Bathing Hospital Margate at a salary of £300 a year with furnished quarters light fuel and laundry The appointment is tenable for two years

The candidate must be unmarried and have had a year's surgical appointment at a General Hospital This should have had some experience of Pathology and Orthopædic Surgery The selected candidate will be required to take up his duties on May 1st next

Applications with three recent testimonials should be sent on or before March 18th to the RESIDENT SECRETARY Wellington House Waterloo Buildings Adelphi W C 2

Tynemouth Victoria Jubilee
INFIRMARY

ONE HOUSE SURGEON (male) required about March 21st Applicants must be duly qualified registered Salary £150 per annum board residence and laundry

Applications stating age and whether resident or not together with copies of recent testimonials to be sent to the undersigned from whom all further particulars may be obtained

CHARLES POWELL
Hon Secretary

Clayton Hospital Wakefield
(General Hospital 160 Beds)

The Committee invite applications for TWO RESIDENT HOUSE SURGEONS (Registered Practitioners) to be appointed on April 1st for a period of six months

The salary is at the rate of £150 per annum with board residence and laundry

Applications stating age and qualifications with copies of testimonials to be sent to the undersigned not later than March 12th

W J LANCASTER
General Secretary and Solicitor

Salford Royal Hospital
(263 Beds)

Applications are invited for the following vacancies which will occur in the Resident Medical Staff (male) on March 31st

HOUSE SURGEON (who will also be in charge of the Orthopædic Department) Salary at the rate of £125 per annum

HOUSE SURGEON (who will also be in charge of the Neurological Department) Salary at the rate of £125 per annum

HOUSE SURGEON (attached to the Aural Skin and Gynæcological Department) Salary at the rate of £125 per annum

CASUALTY HOUSE SURGEON Salary at the rate of £125 per annum

The appointments are for a period of six months with board and residence

Candidates must be registered under the Medical Act

The Hospital has the approval of the Royal College of Surgeons of England and appointments here are recognised for the English Fellowship (Final)

Forms of application which may be obtained from the undersigned must be delivered on or before March 9th

By Order of the Board
RICHARD NEWALL
Salford Royal Hospital Assistant Secretary
February 29th 1932

Northampton General Hospital
(246 Beds)

There will be vacancies on April 1st next for one HOUSE PHYSICIAN and THREE HOUSE SURGEONS British nationality Salary £150 per annum with board residence and laundry

The successful candidates will be appointed for a period of six months and will be eligible for re-election for a further period

Candidates must be duly qualified and registered

Applications stating age sex qualifications etc with copies of testimonials to reach the undersigned not later than first post on March 16th

There will also be a vacancy for a Resident Dresser on April 1st An honorarium of £10 will be given for six months satisfactory service

H ST JOHN WOOD
Feb 22nd 1932 Secretary Supt

Royal London Ophthalmic
HOSPITAL (Moorfields Eye Hospital)
City Road E C 1

TWO OUT PATIENT OFFICERS

Applications are invited for the post of Out patient Officer one to attend on Mondays and Thursdays and one on Tuesdays and Fridays each week

Candidates must be registered Medical Practitioners

Salary at the rate of £100 per annum The Out patient Officers will be appointed for a period of one year and will be eligible for re appointment

Copies of regulations governing the appointment can be obtained on application

Applications with testimonial stating age and qualifications must be received not later than March 7th by—

A J M TAPPANT Secretary

Walsall General Hospital

The Committee invite applications from men or women for the posts of

(1) HOUSE PHYSICIAN and RESIDENT PATHOLOGIST

(2) HOUSE SURGEON

Salaries at the rate of £150 per annum

Candidates who must be registered under the Medical Acts must produce three recent testimonials

The appointments will be for six months

The Hospital contains 100 beds and is equipped in all its special departments

Application stating age qualification and nationality must be received by the undersigned not later than the first post Tuesday March 8th

WALTER FRANCOMBE
Secretary

North Riding Infirmary,
MIDDLESBROUGH
(General Hospital—150 Beds)

Applications are invited for the post of SECOND HOUSE SURGEON (Female) to take up duties April 1st

The appointment will be for a definite period of six months

Salary at the rate of £150 per annum with board residence and laundry

Applications stating age and qualifications with copies of recent testimonials to be sent to the undersigned from whom further particulars may be obtained

CHARLES TEST ATT
Secretary's Office Albert Road

London Homœopathic Hospital
(Incorporated by Royal Charter)
Great Ormond Street and Queen Square
Bloomsbury W C 1
(172 Beds)

The Board of Management are prepared to receive applications male or female for the following appointment

PHYSICIAN TO THE HOSPITAL

The successful candidate must possess or obtain a registrable University Degree and become a Member of the British Homœopathic Society It is required that successful candidates for posts on the Honorary Medical and Surgical Staff of the Hospital should show evidence of knowledge of the Theory and Practice of Homœopathy within one year of appointment by having attended one or more of the Systematic Courses of Lectures at the Hospital

Candidates may be required to attend a meeting of the Medical Committee

Application stating age with copies of testimonials (35 copies of each testimonial) should be sent addressed to the Secretary of whom further particulars may be obtained

EDWARD T ATTWOOD Secretary

West London Hospital,
Hammersmith Road W 6 (234 Beds)

Required one HOUSE PHYSICIAN one HOUSE SURGEON (General and Gynæcological) one HOUSE SURGEON (General and some deep X Ray Therapy) one HOUSE SURGEON to Throat Nose and Ear Department (with some Anæsthetic duties) and one RESIDENT ANÆSTHETIST The five appointments (males) are tenable for six months from April 1st next subject to one month's notice on either side Salary at the rate of £100 per annum with board lodging and laundry allowance

Candidates must be registered under the Medical Act Applications (which must be on printed form obtained from me) must reach me not later than first post on Friday March 18th Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a meeting of the Medical Council on Wednesday March 23rd at 4 15 p m and the House Committee meeting at 4 45 p m the same day when the appointments will be made

H A MADGE Secretary

Hampstead General and North-
WEST LONDON HOSPITAL
Haverstock Hill N W 3

APPOINTMENT OF CASUALTY SURGICAL OFFICER

Applications are invited from unmarried registered Medical Women for the position of Casualty Surgical Officer at the Out patient Department of the Hospital Bayham Street Camden Town which will become vacant on April 1st next The salary will be at the rate of £160 per annum together with board residence etc and the term will be for six months

Application to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on March 16th inst

Elsie Inglis Memorial Maternity
HOSPITAL Spring Garden
EDINBURGH (60 Beds)

Applications are invited from fully qualified Medical Women for the following appointment

(1) DISTRICT MEDICAL OFFICER rising to Senior House Surgeon for six months from April 1st Honorarium at rate of £50 per annum

(2) JUNIOR HOUSE SURGEON for six months from April 1st Honorarium at rate of £25 per annum

Board residence and laundry provided

Applications with copies of testimonials to be sent on or before March 11th to the Secretary of the Hospital

Aberdeen City District Asylum,
NEWMACHAR ABERDEENSHIRE.

JUNIOR ASSISTANT PHYSICIAN required Commencing salary £300 per annum with board residence and laundry

The appointment will be subject to the Asylum Officers Superannuation Act 1909

Applications stating age and qualifications with copies of recent testimonials to be addressed to the Physician Superintendent

Birmingham and Midland
HOSPITAL FOR WOMEN

HOUSE SURGEON (man or woman) wanted for six months from April 1 Salary to be at the rate of £75 per annum

Application with full particulars and copies of testimonials to be sent not later than March 12th to HUGH C ASTON 80 Newhall St Birmingham

The Willesden General Hospital
(Incorporated) NW 10

Appointment of (a) CASUALTY OFFICER (b) HOUSE SURGEON (c) HOUSE PHYSICIAN

Applications are invited from fully qualified and registered candidates for each of the above resident appointment Candidates must be unmarried

The appointments are for a period of four months from April 1st

Salary Casualty Officer at the rate of £120 per annum House Surgeon at the rate of £110 per annum House Physician at the rate of £100 per annum

Detailed applications with copies of testimonials should be addressed to the Secretary The Willesden General Hospital NW 10 not later than Wednesday March 16th

February 29th 1932

Cardiff City Mental Hospital,
WHITCHURCH Nr CARDIFF

The post of CLINICAL ASSISTANT AND RESEARCH STUDENT is available for one year with possibility of renewal The candidate who must be medically qualified in addition to clinical work in the wards is expected to undertake researches either in Biochemistry or Pathology The research laboratories are under the directorship of J H QUASTEL D Sc PhD (late Fellow of Trinity College Cambridge) and the Hospital is attached for teaching purposes to the University of Wales

The studentship carries besides full board and accommodation an honorarium of £200 per *annum*

Applications with copies of three recent testimonials to be sent to the Medical Superintendent not later than March 21st

Miller General Hospital,
Greenwich Road SE 10

AMENDED ADVERTISEMENT FOR THE POST OF ANAESTHETIST

Applications are invited for the post of Anaesthetist (male) from those who are specially engaged in the practice of anaesthetics Attendance on Friday mornings and not Tuesday mornings as previously stated

Honorarium at the rate of 52 guineas for one attendance a week Applications *together with* copies of not more than three recent testimonials to be sent to the Secretary

February 29th 1932

Miller General Hospital,
Greenwich Road SE 10

Applications are invited for the post of HOUSE PHYSICIAN Candidates (male) must be unmarried Salary £100 per annum with board residence and laundry Duties to commence on April 1st next Applications stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials to be sent to the Secretary as soon as possible

February 29th 1932

The Staffordshire General Infirmary Stafford

Applications are invited for the post of HOUSE PHYSICIAN (*either* sex) which will become vacant at the end of March Candidates *must be duly qualified* and registered under the Medical Acts Salary at the rate of £150 per annum with board residence and laundry The appointment must be held for at least six months Applications stating age accompanied by copies of three recent testimonials should be sent forthwith to the undersigned

Stafford A E COLLINS
March 1st 1932 Secretary

East Ham Memorial Hospital,
Shrewsbury Road E 7 (100 Beds)

Applications are invited for the post of HOUSE SURGEON to Special Departments and CASUALTY OFFICER for six months commencing April 1st Salary at the rate of £120 per annum with board residence and laundry

Application stating age experience and full particulars together with copies of testimonials should reach the undersigned by first post on March 7th

REGINALD PERRY
Secretary

East Ham Memorial Hospital,
Shrewsbury Road E 7 (100 Beds)

Applications are invited for the post of HOUSE PHYSICIAN to Special Departments commencing April 1st Salary at the rate of £150 per annum with board residence and laundry

Application stating age experience and full particulars together with copies of testimonials should reach the undersigned by first post on March 7th

REGINALD PERRY
Secretary

Seamen's Hospital Society,
GREENWICH

The Committee invite candidates for the appointment of HOUSE PHYSICIAN at the HOSPITAL FOR TROPICAL DISEASES Endsleigh Gardens W C Candidates must be male doubly qualified and registered The elected candidate will be required to take up duty on April 1st Salary at the rate of £150 per annum with board residence and washing The appointment will be for six months

Applications stating age together with copies of not more than three recent testimonials to be sent in on or before March 8th to the undersigned from whom further particulars can be obtained

Greenwich R F V BAY
February 22nd 1932 Secretary

Seamen's Hospital Society,
GREENWICH

HOUSE PHYSICIAN and HOUSE SURGEON *required at* DREADNOUGHT HOSPITAL *Greenwich* for six months from April 1st Salary £110 per annum and a proportion of fees with board residence and washing Candidates must be male Applications with copies of three testimonials to be sent in by March 8th to the undersigned

Greenwich R F V BAY
February 22nd 1932 Secretary

Seamen's Hospital Society
POST GRADUATE COURSES FOR SHIP SURGEONS

The Seamen's Hospital Society announces that PART 2 of these courses—that is Tropical Medicine and Hygiene will be held from April 11th to May 6th 1932 at the Hospital for Tropical Diseases Endsleigh Gardens W C and the London School of Hygiene and Tropical *Medicine* W C 1

Further particulars may be obtained on application to the Secretary Seamen's Hospital Society Greenwich S E 10

Royal Albert Edward Infirmary
AND DISPENSARY WIGAN (180 Beds)

THREE HOUSE SURGEONS (male) required One for March 16th 1932 and two for April 1st for a period of six months Salary £150 per annum with board apartments and washing Resident staff consists of an R S O and three House Surgeons Applications stating age and qualifications together with copies of three recent testimonials should be addressed to the undersigned as soon as possible

A STANLEY BRUNT
Feb 22nd 1932 Gen Supt & Sec

London Hospital, E 1

Applications are invited for the post of MEDICAL FIRST ASSISTANT AND REGISTRAR The appointment is for one year but is renewable annually on application for two further periods of one year Salary £300 per *annum* payable by the Hospital and Medical College jointly

Candidates must be fully qualified medically

Applications should arrive at the Hospital not later than by the first post on Saturday March 12th

Further applications may be obtained from the House Governor

ARTHUR G ELLIOTT
House Governor

London Hospital, E 1

There is a vacancy for an HONORARY CLINICAL ASSISTANT in the Radiological Department Candidates must be fully qualified medically and must possess clinical as well as radiological experience

Applications should be sent to the undersigned from whom further particular may be obtained

ARTHUR G ELLIOTT
House Governor

Greenock Royal Infirmary

Wanted a HOUSE PHYSICIAN (lady) to enter towards the end of March Salary £100 p a including board residence and laundry Other two Residents (ladies) on staff 150 beds Good experience Applications invited with testimonials to be sent to the Secretary 2 Hamilton *Street Greenock*

JAS A IOVF Secretary

Jewish Maternity Hospital,
Underwood Street Vallance Road E 1

Applications are invited for the post of RESIDENT MEDICAL OFFICER

Duties commence April 1st *for* a period of six months Salary at the rate of £50 per annum

Application together with *copies* of three recent testimonials to be sent to the undersigned not later than March 15th

ALICE MODEL
Hon Org Secretary

St Bartholomew's Hospital
APPOINTMENT OF DENTAL HOUSE SURGEON

Applications are invited for the office of House Surgeon to the Dental Department Candidates must hold a registrable Dental qualification and a Medical qualification in addition is desirable but not essential

Appointment will be made for six or twelve months from May 1st

The salary attaching to the office is £80 per annum non resident

Application must be left with the undersigned on or before Saturday March 19th

THOMAS HAVIS
Feb 23rd 1932 Clerk to the Governors

The Queen's Hospital for CHILDREN Hackney Road London E 2

The Committee invite applications for the post of *SURGEON for the Ear Nose and Throat* Department with charge of beds Two attendances required weekly An honorarium to cover travelling expenses will be paid Candidates must be Fellows by examination of the Royal College of Surgeons

Applications with copies of three recent testimonials which may be printed or typewritten should be sent on or before March 31st to the undersigned from whom further particulars may be obtained

CHARLES H BESSELL
March 1st 1932 Secretary

Queen's Hospital for Children,
Hackney Road London E 2

HOUSE PHYSICIAN required April 7th
CASUALTY OFFICER with some Ophthalmic work required April 7th

Six months appointments Salary at the rate of £100 per year with board lodging and washing

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials on or before March 10th

CHARLES H BESSELL
Feb 8th 1932 Secretary

Derbyshire Hospital for Women,
Friar Gate DERBY (54 Beds)

Applications are invited for the post of HOUSE SURGEON (male or female) Salary £150 per annum with apartments board etc

The appointment is tenable for six months with a possibility of extension for a further period of six months

Applications with copies of not more than three testimonial to be sent to the undersigned not later than March 18th Duties to commence April 1st

W T COCKER Secretary

Coventry and Warwickshire
HOSPITAL COVENTRY (307 Beds)

RESIDENT HOUSE PHYSICIAN (male) wanted Also RESIDENT HOUSE SURGEON (male) Salaries £160 and £125 per annum *respectively Board laundry and attendance* provided Candidates must be duly qualified and registered

Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately

(Mrs) P HOOPER Secretary

Hertford County Hospital

Applications are invited for the post of HOUSE SURGEON (male) Salary £200 per annum with board residence and laundry The appointment is for six months in the first instance

Applications with copies of three recent testimonials should be sent to the undersigned not later than Wednesday March 9th

LEPOY C BROOKS
Secretary

Harrogate Infirmary

Applications are invited from British subjects (male) for the post of SENIOR HOUSE SURGEON for the *period commencing* April 1st and terminating September 30th Salary at the rate of £150 per annum with board and lodging Applications to be made on official form *to be had from the undersigned should be sent* in not later than March 19th

CPO BALLANTYNE
The Infirmary Secretary

Herefordshire General Hospital,
HEREFORD (140 Beds)

Applications are invited for the post of HONORARY ANAESTHETIST at the above Hospital

Applications stating age and qualifications should be forwarded to the undersigned on or before Friday March 11th

T W HIPTON Secretary

City of Manchester

PUBLIC HEALTH DEPARTMENT

WITHINGTON HOSPITAL AND INSTITUTION

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer at the Withington Hospital (1 290 beds) and Institution (1 200 beds) Nell Lane West Didsbury Manchester

Every applicant must be a registered Medical Practitioner and unmarried

Preference will be given to applicants with previous Hospital experience

The Hospital is a recognised Training School for Nurses and is equipped with all modern Hospital requirements

Salary £275 per annum subject to a temporary deduction of £7 10 per annum The amount payable is therefore £267 10 with board residence and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme No bonus

The appointment will be made in the first instance for a period of five months The successful candidate however will be eligible for reappointment for a further period of six months at the end of that period

Every application stating fully the training qualification and experience of the candidate and his age with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Withington Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester only and not to members of the Committee or Council and must be received by him not later than Friday March 11th

The candidate appointed will be expected to commence duties as soon as possible after appointment to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall F E WARBRECK HOWELL
Manchester Town Clerk
March 1st 1932

City of Manchester

PUBLIC HEALTH DEPARTMENT

BOOTH HALL HOSPITAL

APPOINTMENT OF TWO ASSISTANT MEDICAL OFFICERS

The Public Health Committee invites applications from qualified Medical Men for the positions of Assistant Medical Officers at the Booth Hall Hospital for Children (760 beds) Charles town Road Blackley Manchester

Every applicant must be a registered Medical Practitioner and unmarried

Preference will be given to applicants with previous Hospital experience

The Hospital is a recognised Training School for Nurses and is equipped with all modern Hospital requirements

Salary £220 per annum subject to a temporary deduction of £6 10s per annum The amount payable is therefore £243 10s with board residence and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme No bonus

The appointments will be made in the first instance for a period of six months The successful candidates however will be eligible for reappointment for a further period of six months at the end of that period

Every application stating fully the training qualification and experience of the candidate and his age with copies of three recent testimonial and endorsed on the envelope Assistant Medical Officer Booth Hall Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester only and not to members of the Committee or Council and must be received by him not later than Thursday March 10th

The candidates appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall F E WARBRECK HOWELL
Manchester Town Clerk
February 29th 1932

Bristol Eye Hospital

Applications are invited for the post of ASSISTANT RESIDENT HOUSE SURGEON Salary £100 per annum Vacant immediately Applications to be received by the Secretary by Friday March 18th

County Borough of St Helens

DEPUTY MEDICAL OFFICER OF HEALTH

Applications are invited for the post of Deputy Medical Officer of Health (male) to the above Authority Candidates must be registered Medical Practitioner and the possession of the D P H or its equivalent is essential

Duties will be mainly in connection with School Medical work the control of Infectious Diseases and the Diagnosis and Treatment of Venereal Diseases but as the selected candidate will be frequently called upon to perform duties in other branches of public health work and to take charge of the whole of the Health Department in the absence of the Medical Officer of Health experience in other branches is desirable and will be deemed an additional qualification

The salary will be at the rate of £700 per annum plus travelling expenses rising by two annual increments of £25 to a maximum of £750 per annum and subject at present to a temporary deduction amounting on a salary of £700 to £33 10 per annum

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to the successful candidate passing the necessary medical examination

Form of application may be obtained from the Medical Officer of Health, Town Hall St Helens and completed applications accompanied by copies of not more than three recent testimonial should be forwarded to him not later than Monday March 21st

FRANK HAUWELL
Medical Officer of Health

St James's Hospital, Leeds

Applications are invited from members of the medical profession for the post of HOUSE PHYSICIAN at the above Hospital Applicants must be fully qualified and registered The Hospital contains 1 126 beds with special departments for Radiology Pathology Midwifery and the diseases of children The appointment will be for a period of six months and the successful candidate will be required to act as House Physician under the Medical Superintendent and the visiting staff and to perform such other duties as the Medical Superintendent may direct Salary at the rate of £150 per annum with full residential emoluments (subject to an economy deduction in accordance with the City Council's scale at present 2½ per cent of salary and value of emoluments)

Applications stating age and qualifications together with copies of three recent testimonial to be forwarded to me not later than noon on Monday March 14th Selected candidates will receive due notice to attend

11 South Parade H FIELDHOUSE
Leeds Public Assistance Officer
February 23rd 1932

County Mental Hospital,

RAINHILL near LIVERPOOL

Wanted ASSISTANT MEDICAL OFFICER Salary £500 per annum rising by annual increment of £25 to £600 per annum subject to a 3 per cent deduction under the Superannuation Act The salary is subject to a temporary abatement which amounts to £18 15 per annum on the commencing salary

A deduction of £150 per annum is made from the salary for board furnished apartments and washing

Facilities for laboratory and research work

Preference given to one who has held a resident post in a general hospital

The successful candidate will be expected to take his Diploma in Psychological Medicine as soon as possible

Application with testimonials and full particulars to be sent to the Medical Superintendent as soon as possible

North Staffordshire Royal INFIRMARY STOKE ON TRENT

ORTHOPAEDIC HOUSE SURGEON

The Committee invite applications for the post of Orthopaedic House Surgeon Salary £150 per annum with board residence and laundry Previous orthopaedic experience not essential Fractures constitute 80 per cent of cases Applications with two copies of recent testimonials to be sent to the undersigned immediately

W STEVENSON
March 1st 1932 Sec & House Governor

Bristol Eye Hospital

Applications are invited for the post of HONORARY ASSISTANT SURGEON

Candidates must be Fellows of one of the Royal Colleges of Surgeons or hold a Special

sh three testimonial
th Secretary not later

Manchester Royal Infirmary

NON RESIDENT MEDICAL REGISTRAR TO OUT PATIENTS

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment vacant on April 1st Applicants must be registered and hold a Medical and Surgical qualification and have held a hospital appointment

The appointment is for six months renewable for further periods subject to the provisions of the By laws as to notice etc Salary £150 per annum

Applications with testimonials stating age to be sent to the Chairman of the Medical Board not later than March 16th

By Order
FRANK G HAZELL
Feb 1932 Gen Supt & Secretary

Royal Northern Hospital,

Holloway London N

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Candidates must be registered Medical Practitioners of at least two years standing The appointment is for one year from May 1st

Salary £200 per annum plus an allowance for work undertaken in connection with the National Insurance Act with board residence and laundry Preference will be given to candidates experienced in practical operative surgery

Application accompanied by copies of testimonials should be sent on or before March 14th to the undersigned from whom forms of application and rules can be obtained

GILBERT G PANTER
Secretary

Royal Northern Hospital,

Holloway N

Applications are invited for the post of HOUSE SURGEON The appointment is for nine months (six month as House Surgeon and three months as Casualty Officer) from April 15th Salary at the rate of £70 per annum with board residence and laundry

Application with copies of testimonial should be sent by March 12th to the undersigned from whom forms of application and rules can be obtained

GILBERT G PANTER
Secretary

The Royal Dental Hospital of LONDON

32 Leicester Square W C 2

The post of ASSISTANT DENTAL SURGEON to the above Institution is vacant Candidates for the same who must be Graduates or Licentiates of Dental Surgery of one of the Universities or licensing bodies recognised by the General Medical Council of the United Kingdom are requested to send in forty copies of applications and testimonials on or before March 19th to the undersigned from whom further particulars may be obtained

W J WADHAM Secretary

The Royal Dental Hospital of LONDON

32 Leicester Square W C 2

TWO PART TIME HOUSE ANAESTHETISTS required for In patient and Out patient duties at this Institution The post is a non resident one Honorarium 10/6 per session Candidates are requested to send in forty copies of applications and testimonials on or before March 19th to the undersigned from whom further particulars may be obtained

W J WADHAM Secretary

East Suffolk and Ipswich HOSPITAL IPSWICH

(265 Beds—7 Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN vacant April 1st Salary at the rate of £120 per annum Board residence and laundry Previous experience essential

Applications from British (male) candidates stating age qualifications and experience and accompanied by three recent testimonials to be sent to the undersigned

The Hospital ARTHUR GRIFFITHS
Ipswich Secretary

Bradford Royal Infirmary

HOUSE SURGEON (male) wanted from April 1st to November 30th Candidates must be single and legally qualified Salary £135 per annum with board residence and washing There are 215 beds and six Resident Officers

Applications stating age qualifications and previous experience if any with copies of recent testimonial to be received by the undersigned not later than March 8th

J J BARROW Secretary Supt.

Valentine's Meat-Juice

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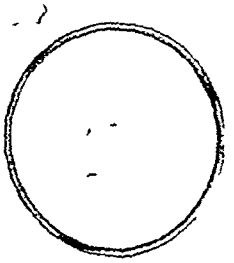
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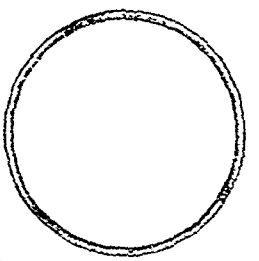
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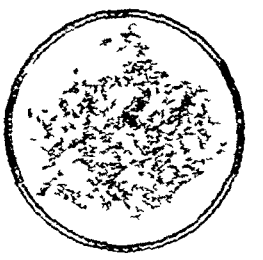
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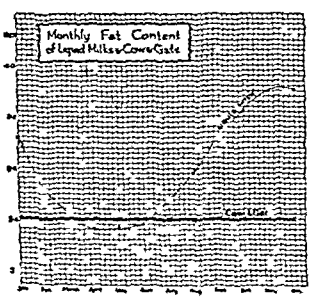
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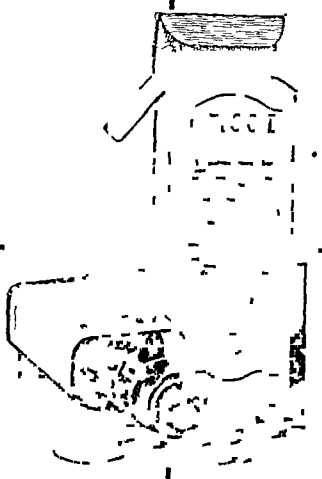
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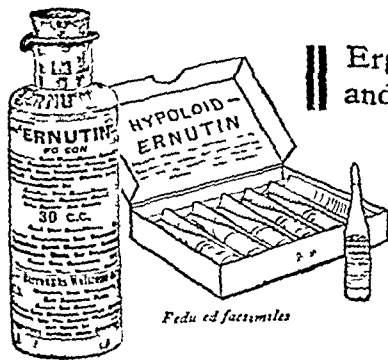
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CONTENTS

ORIGINAL ARTICLES

Recent Work on the Afferent Control of the Circulation in Health and Disease. By Samson Wright M D M R C P (With Chart) 457

Flat Foot By M Forrester Brown M S, M D 463

The Blood Sedimentation Rate in Pulmonary Tuberculosis By Hilary Roche, M D M R C P 466

Essential Hypertension By Robert Marshall, M D F R C P I 468

Conservative Mastoidectomy for Chronic Otitis Media. By I Graham Brown M D, F R C S 470

MEMORANDA

The First Case of Sprue in Malta By James Milne M B 471

CLINICAL PROCEEDINGS

South Middlesex Division Chronic Rheumatism and the Endocrines 472

REPORTS OF SOCIETIES

Royal Society of Medicine
Fractures about the Ankle joint 473

REVIEWS

Radiological Evidence 474
Foundations of Medical History 474
Clinical Laboratory Methods 474
Books on Psychology 474
Some Textbooks for Nurses 475
Notes on Books 476

OBITUARY

R H Todd, M D F R C S I 499
George Blair F R C S Ed 501
H W Cunningham M D 501
Hugh R Mcintyre M D 501
Malcolm John Rattray M R C S 501

UNIVERSITIES AND COLLEGES

University of Cambridge 503
University of London 503

THE SERVICES

R A V P Officers Decoration 503
Territorial Medical Officers Association 503
Deaths in the Services 503
(For Naval Military and Air Force Appointments see Supplement)

LEADING ARTICLES

Some Aspects of Rickets 479
Suppuration in the Antrum 480
Foot Troubles 481

THE WEEK

Recent Advances in Biological Standardization 481
Treatment of Sprue 482
Industrial Psychology 482
Domestic and Clinical Use of Coal Gas 483
Old Cultures for New 483
The Lubeck Trial 484
France and the French Canadian 484
Victor Horsley Memorial Lecture 484

GENERAL ARTICLES AND NEWS

"The Student in Irons" By C M Wilson M D F R C P 485

Malformations from a New Point of View Hunterian Lectures by Sir Arthur Keith, M D F R S 489

Medical Research Council Annual Report for 1930 31 487

British Sea-Coast Resorts Conference at Hastings 478

Preparations and Appliances (Illustrated) 477

Medical Notes in Parliament
National Health Insurance 502
Radium 502
Inspection of Food 502
Pensions in the Indian Services 503
Medical News 504

LOCAL NEWS

Scotland— 491
491
492
492
492

England and Wales—
Cancer Research in Manchester 492
The Cinematograph and Child Psychology 492
District Nursing in London 493
A Housing Survey 493

Ireland—
Child Welfare in Ireland 493
Health of Co Armagh School Children 494
A Cork Medical Appointment 494

MEDICO LEGAL

Withdrawal of Charge of Negligence Against Surgeon 504

CORRESPONDENCE

Birmingham Medical School and the Hospitals Centre Scheme By Douglas Stanley M D F R C P 494
Aetiology of Cancer By J C Mottram M B, and W E Gye M D 495
Ambulatory Treatment of Fractures By R Wood Power F R C S I and Eric I Lloyd F R C S 495
The Barbiturates in Anaesthesia By Sir Harold Gillies F R C S 496
Hyperthyroidism with Achlorhydria By H H Moll M D 496
Raw Milk and Dental Caries By Harry Campbell M D F R C P 496
Plumbism and Peptic Ulcer By Sir Thomas Legge M D 497
The Problem of Tuberculosis By J Middleton Martin, M D C O S Blyth Brooke M R C S and Archibald Ferguson M B 497
Antagonistic Diseases By J A Henderson M B and A L d'Abreu M B 498
Puerperal Septicaemia and C M B Nurses By Sidney Wolff M R C S 498
First X Ray Photographs in the Navy By Surg Rear Admiral Charles M Beadnell M R C S 498

LETTERS AND ANSWERS

Income Tax 506
Shortening an Elongated Uvula for the Cure of Cough 506
The Common Cold 506
The Insanity of Cowper the Poet 506
Rickets in Scotland 506
Found An Anaesthetist's Case 506

Vacancies 506
(See also page 91 of Supplement)

The SUPPLEMENT contains

National Health Insurance
Warwickshire Conference on Medical Benefit
London Insurance Committee
Correspondence
The Capitation Fee
Anaesthetic Fees under the Insurance Act
Another Doctor's Dilemma
Current Notes
Treasurer's Cup Golf Competition
Books Added to the Library
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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Churchill J & A
Barton Wright F C — Botany 3
Flint Physiology
Bramson V D — Medicine
Bourne A W — Obstetric 3
Brain & Strain — Anæsthe
Brig C W — Allergy 3
Burn J H — Materia Medica
Burrell L S T — Pneumonia Tub
Culpin M — Psychoneuroses 3
Dunn H — Psychiatry 3
Dulle J H — Bacteriology
Dust Elder W S — Ophthalmology 3
Fox & Bain — Cardiology 3
Evan C I — Physiology 3
Findlay G M — Chemotherapy
Clayton S — Physical Chemistry
Hallam F C — Preventive Medicine 3
Imms A D — Entomology 3
Kerley P — Radiology 3
Mitchell C A — Analytical Chem 3
Newman F H — Physics 3
Ogilvie W H — Surgery 3
Pearson & Willie — Diseases of Children 3
Pinco A — Haematology
Piney Cryes MacBride Hewer & Burton Wright — Micro copy 3

Constable & Co Ltd
Bankart A S B — Manipulative Surgery
Dodd & White — Laboratory in Surgical Practice 3
Sinclair M — Pictures

Kimpton H
Dike Elder W S — Ophthalmology 5

Lewis H K & Co Ltd
Dorland W A — Rheumatoid Arthritis 5
Scott C I — Morphine Habit 43

Wright & Sons Ltd
French H — Differential Diagnosis 5

ASSURANCE COMPANIES—
London Motor Traction Society 1
Medical Insurance Agency 45
Medical Sickness Annuity etc 37

BOOTMAKERS &c —
Hollard & Son Foot Support 36

BRASS NAME PLATES &c —
Cook Name Plate 38
Hall S J & Co Name Plates 38
Lund & Co Ltd Name Plate 38
Osborn F & Co — Name Plates 38

DEBT COLLECTION—
British Medical Protection Society 37

FOOD PREPARATIONS—
Lemco Malt Extract Bemax 21
Brand Invalid Food 28
Brook Bond & Co Ltd — Chimax Tea 18
Cow & Gate Ltd Milk Food
Hay & Coffee 24
Horlick Malted Milk 21
Melin Food 19
Robinson Nursery Biscuits 11
Savory & Moore Ltd — Infant Food 16
Summer Tea 30
Trufood Ltd Horlicks Tablets Truf 10
Vitamin Malt Jelly 15
Wincarnis 11

HOSPITAL, &c FURNITURE—
Furniture & Decoration Ltd — Sanitary Equipment Furniture 36
Stuart Motor 31

HOUSE AGENTS—
Knight & Co 52
Knight & Sons Bazalgette 1

PRINTING & STATIONERY—
Jones & Co — Bookbinders
Hunt & Mills — Stationery
Taylor Typewriters 37

CHEMISTS &c —
Allen & Hanbury Ltd — Dextrum Maltose 17
Inulin A B 10
Stomach Tonic 16
Anglo French Drug Co Ltd — Biratol 30
Boot Product 26 27
British Drug Houses Ltd — Cuprokol 13
Inulin A B 10
Radio Malt 17
Burroughs Wellcome & Co — Frimutin Cover iii
Coates & Cooper — Diaphanin 13
Continental Lab Ltd — Venotrope 12
Dumol Laboratories Ltd —
Duncan Flockhart & Co — Ethyl Chloride 15
Evans Sons Lescher & Webb Ltd — Arcum 22
Fellows Compound Syrup of Hypophosphites — Fellows 14
Hommel's Haemato gen & Drug Co Preparation 10
Hough Hoskyn & Co Ltd — Formamint & Arthritone 12
Laylene Ltd — Laylene oil 20
Martindale W — Preparations 11
Sterules 31 32
Matthew Lab Ltd — Sterilla 36
May & Baker Ltd — Cardenal 18
Midgley Ltd — Medicinal Therapy 20
Newbery & Son Ltd — Agarol Cover iii
Haemorrhoidal Suppositories 19
Robert & Co — Dimenol 36
Saccharin Corporation Ltd — Novocain & Clanocain 32
Sharp & Dohme Ltd — Carrol oil 15
Wander A Ltd — Alacil 14

SURGICAL APPLIANCES—
Allen & Hanbury Ltd — London Hospital Eyelets Needles 33
Carson Gerrard & Co Ltd — Elastic 34
Zulca Jacket 34
Davidson & Co — Surgical Appliances Cover iv
Ferry J F Ltd — Artificial Limb 38
Hilliard New Abdominal Belt 38
Holborn Surgical Instrument Co Ltd 9
Sparklet Ltd — Portable Resuscitating Apparatus 29
Thermogene Electric Pad 37
Thermogene Medicated Wadding 34

MOTOR CARS TYRES &c —
Mann Egerton & Co Ltd — Meters Cover i
Riley Cars 7
Second hand Motors for Sale 52

TAILORING & UNDERCLOTHING—
Lewis Card Index System 5
Hall H — Medical Service Dress 52
Regent Dress Co — Tailors 38

TOBACCO & CIGARETTES—
Player's Navy Cut 6

TRANSLATIONS TYPEWRITING—
Ralfe L — Typewriting etc. 50

VACCINES & CULTURE MEDIA—
Laboratories of Pathology & Public Health 36

WINES & SPIRITS—
Andrew Duncan & Co Ltd — Ackermann Laurie 5

X RAY & ELECTRO MEDICAL APPARATUS—
Cox & Ltd Distributing Agents 9
Newton & Wright Ltd — Diathermy Apparatus 8
Ltd X Ray Ltd — Accessories 8

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 10

HOSPITAL &c VACANCIES—
Aylesbury Royal Bucks Hospital 49
46
48
47
52
45
52
53
48
46
48
48
46
49
52
Bristol Eye Hospital 47
Bristol Royal Hospital for Women 47
Bristol Royal Infirmary 47
Cardiff City 46
Carlisle Cumberland Infirmary 45
Coventry & Warwick Hospital 48
Doncaster Royal Infirmary 46
Dublin Union 45
45
45
45
43
47
48
47
47
47
48
46
47
45
49
48
52
46
45
52
52
48
47
43
45
48
45
46
46
49
47
47
53
47
47
48
48
45
49
52
Salford City 52
Salford Royal Hospital 48
46
46
49
46
53
47
47
46

BATHS SPAS &c —
Bad Nauheim 43
Hindenburg Well 38
Hungarian Szechenyi Royal 43

INEBRIETY—
Bay Mount Paignton 49
Cold Cote Hall near Nuneaton 49
Dalrymple House Rickmansworth 49
Old Hill House Chobham 49

HOTELS & HEALTH RESORTS—
Clifton Hotel 3
Margate 43
Mount Hotel 3
Pembroke Court Hotel 50

HOMES & ASYLUMS—
Bailbrook House Bath 3
Barnwood House Gloucester
41
49
41
Chiswick House Lunacy 33
City of London Mental Hospital 33
Clarence Lodge Clapham 49
College Nottingham 39
Court Hall, Kenton Exeter 39
39
39
49
49
49
Lawn Lincoln 38
38
41
41
49
49
49

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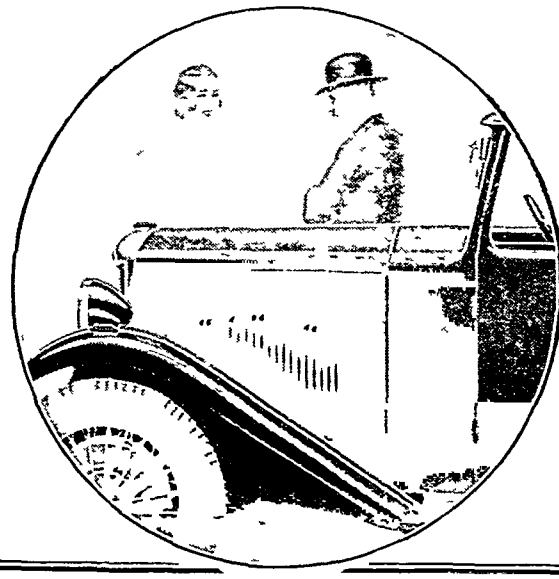
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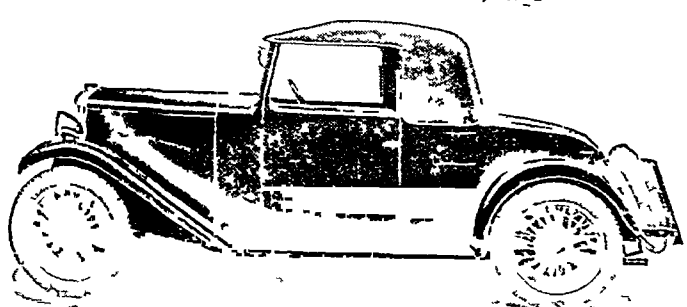
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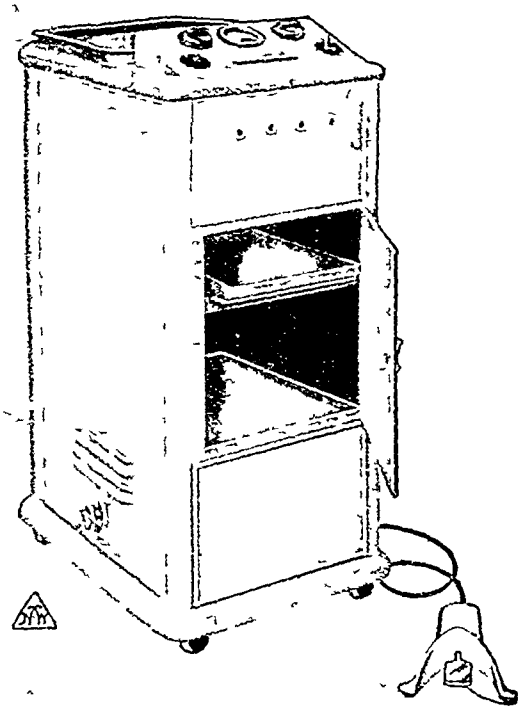
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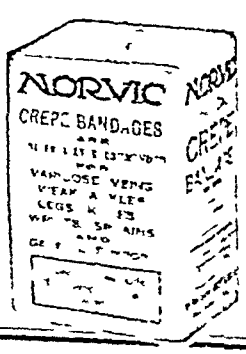
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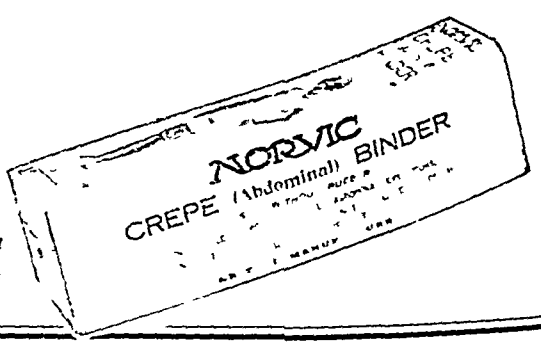


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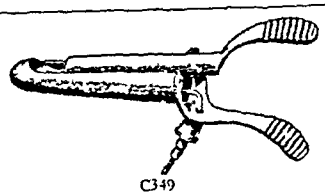
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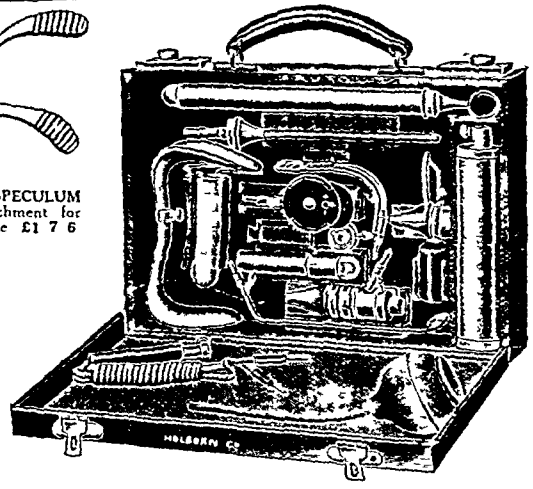


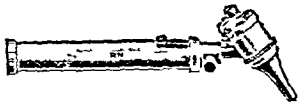
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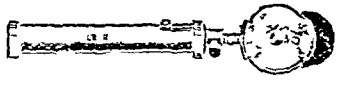


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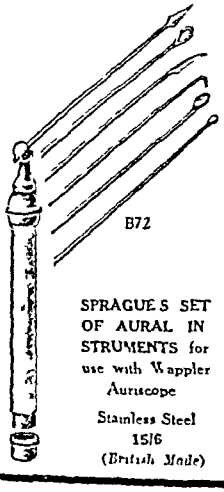




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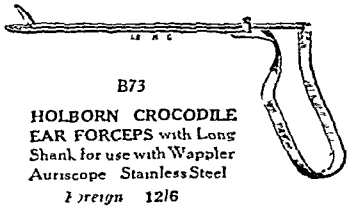
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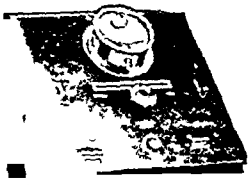


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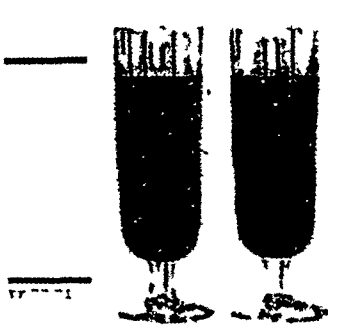
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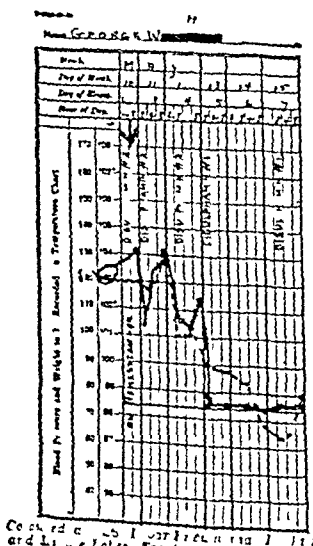
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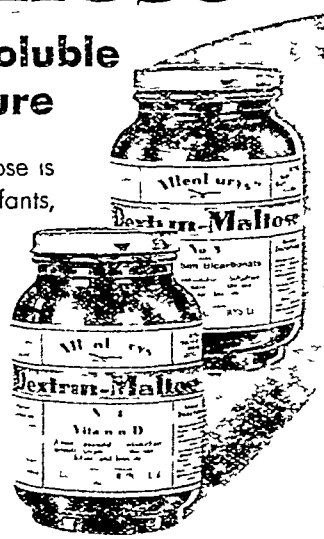
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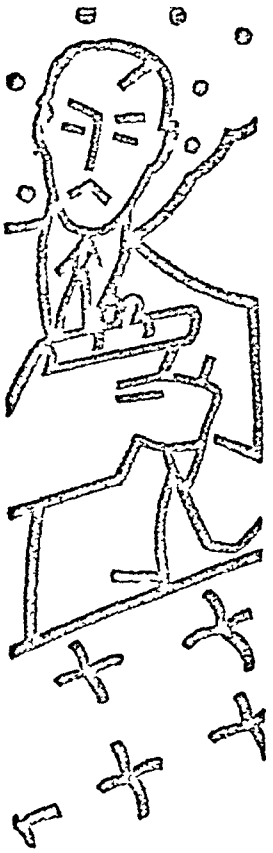
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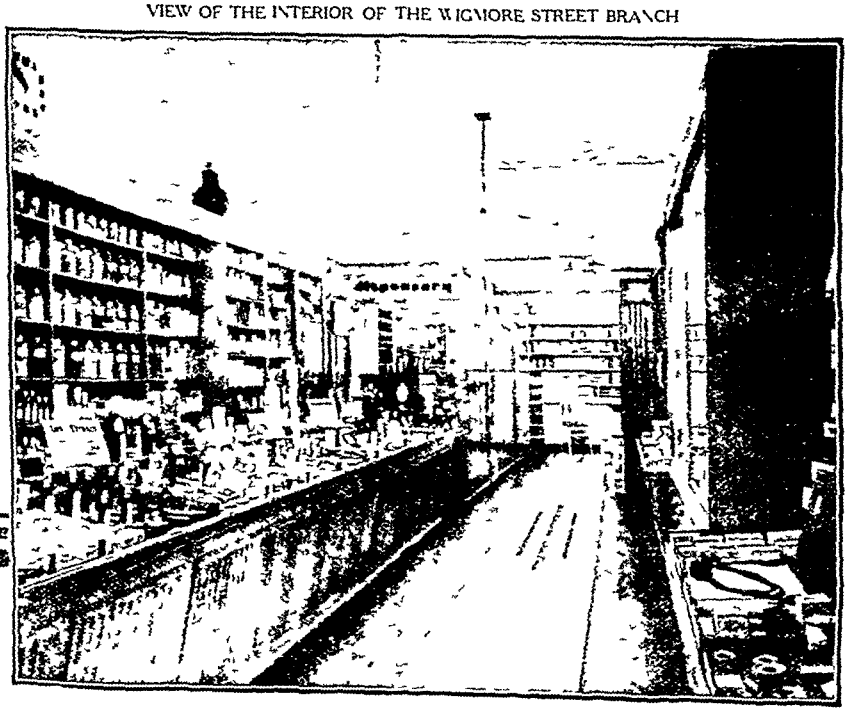
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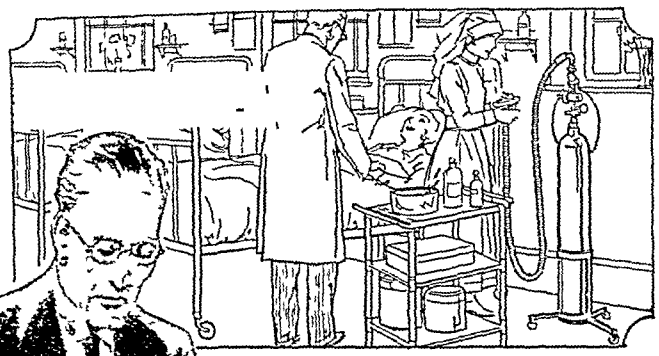
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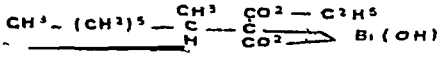
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References —Communications to the Societe de Dermatologie et de Syphiligraphie (July 1928)
Etude experimentale du Bismuth lipo soluble par M C Levaditi en collaboration avec M V Sanchis Bayarri et Mlle R Schoen (pour la partie experimentale et histologique) Mlle Y Manin (pour la partie chimico analytique)

Traitement de la Syphilis par le Bismuth lipo soluble par MM L Fournier I Guenot Schwartz and Yovanovitch

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Le Traitement d'Attaque de la Syphilis par le Bismuth Lipo oluble par A Schwartz *La Presse Medical* (3rd June 1931)

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A Lecture
ON
RECENT WORK ON THE AFFERENT CONTROL OF THE CIRCULATION IN HEALTH AND DISEASE*

BY
SAMSON WRIGHT M.D. M.R.C.P.
PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF LONDON AT MIDDLESEX HOSPITAL MEDICAL SCHOOL

In recent years renewed attention has been paid by many investigators to the part played by the nervous system in the control of the circulation under various conditions and as a consequence of this work discoveries of great importance have been made which are not only of physiological interest but promise to throw light on a number of imperfectly understood clinical states. I will attempt in this lecture to summarize very briefly the outstanding results of these researches.

AFFERENT NERVES FROM THE HEART AND AORTA

The best known of the vascular afferent nerves is the so-called depressor nerve discovered by Ludwig and Cyon in 1866. It is for various reasons however preferable to use a purely morphological expression such as aortic nerve or cardio-aortic nerve. The exact site of peripheral termination of the nerve has been the subject of considerable controversy and the matter is still unsettled. It is quite certain from embryological (Tello 1924) and degeneration studies that the fibres end in the adventitia of the arch of the aorta and the beginning of its main branches in a complex ramification leading to sense organs which resemble the Golgi organs of tendon. What is undecided is whether any of the fibres reach the wall of the ventricles. These aortic fibres reach the medulla oblongata by various paths they may run for a considerable distance as a separate nerve (rabbit) or form an early junction with the vagus or sympathetic. Their route in man is unknown but probably they do not restrict themselves to any special branch of the vagus. We shall see later that the receptors in the aortic wall are sensitive to changes in pressure and send up impulses which reflexly regulate blood pressure heart rate and adrenaline secretion.

It must be borne in mind that another group of afferents arise from the *venous* side of the heart (right and left auricles and the roots of the great veins) and pass in the vagus nerve to the medulla. These fibres reflexly adjust the rate of the heart so that it may deal effectively with variations in the venous return.

SYMPATHETIC NERVES AND ANGINA

There is good anatomical evidence that large sensory medullated fibres leave the heart in the inferior and middle cervical branches of the sympathetic to join the corresponding ganglia and thence in the ansa to the first thoracic ganglion or the fused upper two thoracic ganglia (stellate ganglion) other fibres go direct to the upper thoracic ganglia. These afferents travel in the white rami to the upper four (or more) thoracic posterior nerve roots and thus into the spinal cord. No sensory medullated afferents have yet been demonstrated in man above the level of the middle cervical ganglion. The afferents in the sympathetic appear especially to subserve *pain* sensibility. The referred pain in angina pectoris and coronary disease is felt in the arm and chest chiefly in the distribution of the eighth cervical to the fourth thoracic posterior roots. There is thus agreement with the anatomical findings given previously. In this connexion it is worth recalling that according to Leriche (1925) the anginal syndrome may be reproduced in man by stimulation of the stellate ganglion injection of novocain into which may arrest a spontaneous attack of angina.

Various operations have been devised for angina pectoris with the object of dividing the path subserving the distressing pain sensibility. Jonnesco (1920) with this end in view has removed the cervical sympathetic and first thoracic ganglion on the left side or on both sides and claims to have obtained relief. Other workers (Cutler 1927) have carried out similar though less extensive procedures. Although the published results are on the whole favourable there can be little doubt that such drastic intervention is fraught with real danger in patients with heart disease. Operations limited to the *upper* part of the cervical sympathetic have been recently carried out. According to Coffey and Brown (1923) and Levene and Newton (1925) relief of pain has been effectively obtained by these measures although the main afferents in the sympathetic have undoubtedly been left intact. It is very difficult in the present state of our knowledge to account for these results.

STRUCTURE AND INNERVATION OF THE CAROTID SINUS

The physiological and morphological studies of Hering (1927) Heymans (1929) de Castro (1928), Koch (1931) and others have clearly shown the great importance of the sinus caroticus in the control of the circulation and have opened up a field of study rich in application to many practical problems. The term carotid sinus (sinus caroticus) is applied to a dilatation normally present at the bifurcation of the common carotid artery and well known to anatomists for over fifty years. The exact situation of the dilatation varies slightly in different species and in different individuals of the same species. In man it is most commonly restricted to the first part of the internal carotid but it may chiefly involve the common carotid or commence in the common and extend to the internal carotid. It is seen not only in healthy young adults but also in young infants it is absent in the foetus. There is no doubt that it is a perfectly normal structure. The wall of the sinus is thinner than that of adjacent parts of the artery owing to a decrease in the number of muscle fibres in the media.

Numerous sensory receptors lie in the deeper part of the adventitia (de Castro). They are derived from large medullated fibres which break up into an extensive and diffuse arborization. The terminal filaments wind spirally through the adventitia or give off branches which lying between the concentrically arranged fibrous lamellae terminate in characteristic menisci. This sensory network is restricted to the wall of the sinus and does not extend beyond it to the contiguous part of the artery. The sensory fibres are most numerous where the media is thinnest their general arrangement closely resembles that found in the aortic wall and the terminals appear well adapted to respond to changes in the internal pressure of the artery.

The nerve which leaves the sinus—n. intercarotidien (de Castro) r. caroticus glossopharyngei sinus nerve (Hering)—joins the glossopharyngeal connexions may also be made with the neighbouring structures such as the vagus and perhaps the superior cervical ganglion and the hypoglossal nerve.

There is little doubt that the sinus nerves form the physiological complement of the aortic nerves and function as pressure receptors in the same manner. It seems strange at first sight that this special part of the arterial bed should be singled out. One might suppose that the rich sensory innervation of the internal carotid was associated with its relation to the cerebral circulation but the sinus is equally well developed in animals like the rabbit or cat in which the internal carotid is very minute and supplies the brain only to a slight extent. Embryological considerations again help to make the position

* Delivered on February 4th 1932 to the Glasgow Medical Society.

clearer (Koch 1931) The first part of the internal carotid artery is derived from the third arch It is found that all the arteries having a rich sensory innervation are those which represent the original arterial arches—namely the aorta and its innominate branch and the first part of the internal carotid

AORTIC NERVES AND SINUS CAROTICUS PHYSIOLOGY AND PATHOLOGY

The aortic and sinus nerves through the connexions they establish with the bulbar centres exert a most important controlling and stabilizing influence over the circulation It is useful to have a single term to describe these four nerves they have been called *Blutdruckzugler* (Hering) *Blutdruckregler Pressorezeptorische Nerven* (Koch) Perhaps a convenient English equivalent may be the buffer nerves of the circulation

AORTIC NERVES

It is well known that central stimulation of the separate aortic (depressor) nerve of the rabbit reflexly produces slowing and diminution in the force of the heart vaso dilatation and a fall of blood pressure The heart effect is due mainly to an increase in vagus activity to a less extent to depression of accelerator tone, and perhaps also to decreased adrenaline secretion The fall of blood pressure is partly cardiac in origin and partly the result of widespread vaso dilatation in the splanchnic area skin mucous membranes and glands The cerebral vessels definitely share in the relaxation but the effect on the kidney is doubtful It is probable that the capillaries and the veins (Fleisch 1930) may also be involved The dilatation is caused by reflex inhibition of the vaso constrictors and stimulation of the vaso dilators especially (Bayliss) the antidromic dilators in the posterior nerve roots There is little doubt that in the main the aortic nerves in the normal resting animal exert a *tonic inhibitory* influence on the bulbar centres Section of these nerves causes acceleration of the heart, a rise of blood pressure and an increase in adrenaline secretion (*vide infra*)

It can be demonstrated by means of capillary electrometer studies (Adrian 1926) that nervous impulses do not flow continuously along these nerves A series of large electrical oscillations is set up at the beginning of systole coincident with the onset of ventricular ejection and a further small discharge coincides with the dicrotic wave there are no further action currents during the rest of diastole

By means of cross circulation experiments (Heymans 1929) it can be readily shown that the sensory receptors of the aortic nerves are stimulated by changes in the cardio aortic pressure and that a rise of pressure increases their inhibitory activity There is also evidence suggesting that the aortic nerves contain pressor fibres which come into action when the arterial blood pressure is low and produce the reverse effects on the bulbar centres

PHYSIOLOGY OF THE SINUS CAROTICUS

Czermak (1866) noted that pressure on the carotid artery at the level of the upper margin of the sterno mastoid (where a definite round swelling of the vessel could be felt) brought about slowing of the heart He believed that the swelling which he attributed to dilatation and thickening of the artery mechanically stimulated the inhibitory efferents in the vagus and thus produced the effect Doubt was first cast on this interpretation by Hering (1908) and soon Koch pointed out that the reaction could only be obtained from the region of the bifurcation of the carotid Finally Hering (1927) showed that pressure on the sinus caroticus without any mechanical involvement of the vagus gave identical results and concluded that the *Druckversuch* of Czermak merely served to afferent inhibitory impulses arising in the sinus later it was observed that vaso dilatation formed part of the reflex response The question of the sensitivity of the vagus nerve is of considerable importance Direct experiment shows that the efferent cardiac fibres of the vagus are very insensitive to mechanical stimulation The afferent fibres under certain conditions of animal experimentation may respond readily to both mechanical and thermal stimuli with depressor and sometimes pressor, effects These afferents judged by the results of direct stimulation at operations are less sensitive in man but it is possible that during carotid compression stimulation of the afferent fibres in the vagus may contribute somewhat to the total reaction

So called vagus compression has been employed as a therapeutic measure in a number of conditions It is obviously desirable in the light of these facts that the form of treatment should be re examined

Compression of the freely exposed sinus caroticus in animals and man (Budde 1926) is followed as stated by a fall of blood pressure and slowing of the heart the same is true of electrical stimulation After injection of atropine to paralyse the vagal terminals no slowing of the heart is produced but the blood pressure is still lowered this proves that vaso dilatation also occurs The response can only be elicited from the sinus region and not from adjacent parts of the artery , it is abolished by section of the sinus nerves and so is undoubtedly reflex in character Interference with the cerebral circulation is not a factor for the same result is obtained if the carotids are previously occluded It must be borne in mind that the method of stimulation employed is not physiological and can never come into operation in the normal body

TRACTION ON THE CAROTID ARTERY

Sollmann and Brown (1912) observed that downward traction on the head end of the common carotid artery lowers the blood pressure and slows the heart the fall is greater when both arteries are pulled on simultaneously and occurs equally well after ligation of the vessels Traction on the central end of the common carotid artery headwards was found to be ineffective By examining various structures in turn they found that the reaction was brought about by traction on the internal carotid artery alone and was abolished by denervation of the vessel After the discovery of the sinus caroticus it was easy to demonstrate that traction mechanically stimulated the sensory depressor receptors in the sinus and that the reflex—as it obviously is—was abolished by section of the sinus nerves Budde (1926) showed that operative procedures in man involving traction on the neck similarly cause lowering of blood pressure (down to 80 mm) Morphine certain stages of chloroform anaesthesia and digitalis all exaggerate the degree of cardiac slowing which may be obtained when the depressor sinus reflex is set up It may be sometimes worth while in order to minimize the degree of surgical shock from operations on the neck to paralyse the sinus nerve endings by means of the local application of cocaine

PHYSIOLOGICAL STIMULATION OF THE SINUS CAROTICUS

The endings in the sinus caroticus can easily be stimulated by the introduction of a sound into the artery (Hering 1927) but the more physiological procedure is to vary the pressure of fluid within the vessel All the branches of the common carotid artery are tied care being taken to ligate the internal carotid distal to the sinus and not to damage the nerve filaments A cannula is inserted into the common carotid and attached to a pressure reservoir so that the internal pressure may be varied at will (Koch 1929) or else the artery and sinus are perfused from a Dale Schuster pump or from another animal the fluid being led away by means of another

cannula in the central end of the lingual artery (Heymans 1929) Under these conditions the sinuses are isolated from the circulation and are only connected with the central nervous system by means of their afferent nerves The type of stimulation employed closely resembles that which might come into operation in the body It can thus be readily shown that the receptors in the wall of the sinus caroticus are very sensitive to changes of internal pressure an increase of which reflexly produces vaso dilatation and slowing of the heart a fall reflexly giving rise to vaso constriction and acceleration of the heart The cardiac slowing (resulting from raised sinus pressure) is due mainly to reflex increase in vagus tone but when the sinus pressure is very high some inhibition of accelerator tone also occurs The vaso dilatation involves the splanchnic area (spleen intestine kidney) and the cerebral vessels probably also share in the relaxation A detailed report on these changes has recently been made by Heymans Bouckaert and Dautrebande (1931) The sinus reflexes just described are abolished on section of the nerves arising from the sinus

Occlusion of the Carotid Arteries

It has been known since the earliest days of physiology that occlusion of the carotid arteries produces a rise of blood pressure and acceleration of the heart and that on disocclusion the blood pressure falls and the heart slows (sometimes temporarily below the original level) and then gradually returns to normal The rise of blood pressure is to some extent mechanical in origin (Magendie 1837) and it is also possible that a certain degree of cerebral anaemia develops during the period of occlusion and stimulates the bulbar centres (Couty 1876) The principal factor however is the fall of pressure in the sinus caroticus with its characteristic pressor reaction If the occlusion is practised after denervation of the sinuses a far smaller rise of pressure is obtained The reflex constriction involves the splanchnic area but similar pressor effects are observed after previous section of the splanchnic nerves so that doubtless other parts of the vascular bed are involved There is a marked rise of pressure in the portal vein and evidence of increased venous tone (Heymans and Bouckaert 1930)

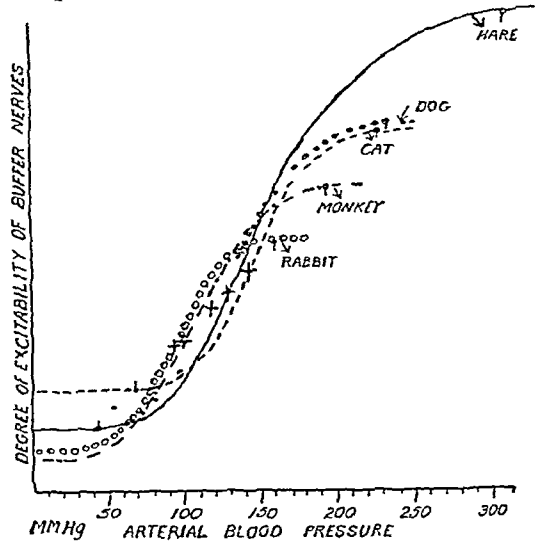
The effects following the re establishment of the carotid blood flow are due mainly to distension of the sinuses and to a minor degree to the removal of the anaemia and of the mechanical resistance

The Inhibitory Influence of the Sinus Nerves

Hering (1927) and Koch (1931) consider that the sinus nerves exercise solely a tonic *inhibitory* influence on the circulation and that the afferent discharge in them is dependent on an adequate degree of distension of the sinus caroticus by the blood pressure They regard the rise of pressure and acceleration on carotid occlusion as due to a decrease or abolition of sinus inhibitory action owing to a fall of the sinus pressure below threshold value they suppose that afferent impulses cease to pass up to the bulbar centres which consequently overact In support of this view is the fact that section of the sinus nerves or cocainization of the sinuses produces similar pressor effects But it does not seem possible as yet to exclude conclusively the existence in the wall of the sinus of pressor fibres which are stimulated by the fall of pressure

Sinus Pressure Blood Pressure and Heart Rate

The sensitivity of the sinus to internal pressure change is remarkable a deviation of 10 mm is sufficient to cause a reflex response Koch (1929) studied the reflex effect on blood pressure of raising the pressure from zero to various levels in the isolated innervated carotid sinus The other buffer nerves (that is the other sinus nerve and the two aortic nerves) were severed to prevent them setting up compensatory reactions and the vagi were cut to exclude cardiac effects The results were plotted with the pressure in the sinus along the abscissa and the percentage fall of blood pressure on the ordinate (see Fig) The curve is S shaped in all the species examined (cat dog rabbit, hare monkey) though with important differences of detail The smoothness of the curve is noteworthy in view of the complexity of the reflex path involved and the extensive effector organ



Blood pressure characteristics in different species (after Koch)

employed The main features are these there is a threshold value for the sinus pressure below which no reflex is set up (this varies from 30 to 70 mm Hg) at the other extreme there is a maximum effective pressure beyond which there is no additional response (this varies between 150 and 300 mm) The curve is steepest in the normal blood pressure range and it is interesting to note that the actual turning point (*Wendepunkt*) marked with + on the tracings agrees very closely with the normal average level of blood pressure in the particular species studied—the figure for the monkey is 85 to 95 the rabbit 90 to 95 the dog 110 to 135 and for the cat 145 mm Hg This finding is probably related to some extent to the elastic properties of the wall of the artery Inspection of the curve shows that variations in sinus pressure on either side of the *Wendepunkt* cause the greatest reactions In the intact animal therefore when the blood pressure tends to deviate from the normal the receptors in the sinuses will respond in a very sensitive manner will affect the bulbar centres appropriately and will rapidly restore the blood pressure to its usual level

These results have been substantially confirmed by Heymans and Bouckaert (1929) for the dog except that they find that when the pressure in the sinus was raised from 0 to 50 mm instead of getting no response (as claimed by Koch) they obtained a reflex rise of pressure This surprising reaction which is difficult to explain may I have found also be seen in the cat

Further studies have been made in animals with intact vagi to determine the relation beween sinus pressure and heart rate the results are plotted in the same way except that the ordinate represents the duration of the cardiac cycle (Koch 1929) The type of curve is very similar and again the turning point of the curve and the region of most sensitive reactions is at about the normal resting heart rate The sinus caroticus can thus efficiently

maintain reflexly the normal resting heart rate as well as the resting blood pressure

Like the tension receptors in skeletal muscle and tendon the sensory endings in the wall of the sinus do not show adaptation (in Adrian's sense) to any degree in other words if the pressure in the isolated sinus is raised to a certain height for some time the reflex fall of blood pressure and the cardiac slowing persist throughout this period at a fairly steady level

RELATION OF SINUS CAROTICUS TO HEART RHYTHM

Occlusion of the carotids is very apt to set up various lines of cardiac irregularities especially in the rabbit (Kisch 1921 Kisch and Sakai 1923) less commonly in the cat or dog The disturbance of rhythm is facilitated by certain concentrations of morphine and by previous section of the aortic nerves It cannot be attributed to the rise of blood pressure adversely affecting the heart because it may occur without rise of blood pressure Further hypertension produced in other ways does not produce this arrhythmia Nor can it be said to be due to cerebral anaemia for the arrhythmia is abolished by central stimulation of the aortic nerve or of the sinus nerves—procedures which lower the blood pressure and further decrease the cerebral blood supply A similar arrhythmia is set up by denervation of the sinuses The arrhythmia persists after section of the vagi but is abolished by section of the cardiac sympathetics or by paralysing them with ergotamine (Regniers 1930) These results strongly suggest that the sinus nerves exert a tonic inhibitory influence over the cardiac sympathetic and thus help to maintain the normal cardiac rhythm

The irregularity most commonly observed during carotid occlusion is the onset of extrasystoles they may be solitary or form runs of varying length and may arise from the right or left ventricle or from both They do not necessarily persist throughout the period of occlusion and may be less marked or absent during subsequent occlusion Occasionally fibrillation sets in and proves fatal

There is much evidence (that cannot be quoted here) that the sympathetic increases cardiac irritability Carotid occlusion probably removes the normal afferent inhibitory influences which are exerted on the cardiac sympathetic and may also set up pressor impulses which reflexly stimulate the sympathetic and thus the arrhythmia noted above is produced

CAROTID SINUS AORTIC NERVES AND ADRENALINE SECRETION

It has hitherto been generally believed that adrenaline is not secreted in the resting condition of the body but is only poured out in states of stress and emergency It is becoming difficult however to maintain this position in the face of the recent evidence When both adrenals are removed in an acute experiment the blood pressure usually tends to fall gradually—for a time at any rate—though recovery may later set in If the nerves to the heart have been previously divided (and the hepatic nerves cut to prevent the formation of an unknown accelerator substance made in the liver) adrenalectomy is also followed by a definite decrease in the pulse rate By means of the technique of Tournade and his co-workers it is possible to drain the blood from the suprarenal vein of one animal—the donor (A)—into the jugular vein and thus into the general circulation of an adrenalectomized animal—the recipient (B)—(suprarenal jugular anastomosis) It is found that the entrance of the suprarenal blood into B causes the blood pressure to rise the arterioles to constrict (the volume of the spleen decreases) and the rate of the heart to go up These observations [illegible] that a resting secretion of adrenaline goes [illegible] which is compensate for the loss of the [illegible] in B Cannon and Rapport (1921) found that the rate of the denervated heart in the adrenalectomized animal may be restored by perfusing 0 00007 mg adrenaline per kg per minute and this is probably a rough measure of the amount of the resting secretion

It has been shown by Tournade and his co-workers that adrenaline secretion is adjusted in such a manner as to assist in steadily maintaining the normal resting blood pressure Thus if the blood pressure of the donor (A) is lowered by haemorrhage or by stimulation of the peripheral end of the vagus adrenaline secretion is increased if the blood pressure is raised (for example by injection of a large volume of blood) the secretion is arrested Even very slight changes in the blood pressure may appropriately modify adrenaline secretion

Developing this work Heymans (1929) found that the regulation of adrenaline secretion to blood pressure needs is reflexly controlled by the aortic and sinus nerves Richards and Wood (1915) and Cannon and Rapport (1921) had found that central depressor or central vagus stimulation could arrest adrenaline secretion while Houssay and Molinelli (1924) were able to show that the vagus nerve also contains afferents which can increase the secretion Heymans perfused the isolated sinus caroticus (connected only by its nerve supply to the central nervous system) of an animal (A) connected by means of a suprarenal jugular anastomosis with an adrenalectomized recipient (B) He was able to demonstrate that a rise of pressure in the sinus inhibited and a fall of pressure in the sinus stimulated adrenaline secretion in A Using Tournade's technique he further showed that occlusion of the carotids when the sinuses were innervated stimulated adrenaline secretion but not when the experiment was repeated with the sinus nerves destroyed—in other words pressure changes in the circle of Willis do not directly affect the centres regulating adrenaline secretion If the sinuses are denervated changes in the general blood pressure can still reflexly modify adrenaline secretion when the vagi are intact but produce no effect when the vagi are cut These experiments prove convincingly that adrenaline secretion is reflexly adjusted by means of the aortic and sinus nerves and that neither the glands nor the bulbar centres controlling them are acted on directly by the level of the blood pressure

At rest the aortic and sinus nerves seem to exert in the main a tonic inhibitory influence over adrenal activity it is found that denervation of the sinuses stimulates adrenaline secretion Goormaghtigh and Lhuit (1929) have made confirmatory histological observations

SINUS CAROTICUS REFLEXES IN MAN

Pressure applied to the sinus region in normal man is succeeded by reflex depressor effects consisting of slowing of the heart and a fall of blood pressure (Koch 1923 Mandelstamm and others 1929) When sinus compression (sinus reflex) and pressure on the eyeballs (oculo cardiac reflex) are carried out on a large series it is found that the latter is most easily elicited in young healthy subjects while the former is especially observed in old people with arterio sclerosis in whom the neck vessels are thick and can be readily rolled under the finger

The marked reflexes which are obtained in arterio sclerotic cases may be due to the fact that the sensory nerve endings in the adventitia of the sinus are pressed against the hardened media and so are vigorously stimulated possibly too the thickened sinus may excite the afferent fibres in the subjacent vagus nerve

Electrocardiographic studies (Mandelstamm 1929) show that pressure on the sinus may reflexly arrest the heart completely in some cases for as long as eleven seconds the heart may not resume beating for some seconds after stimulation is discontinued and syncopal symptoms may develop Auriculo-ventricular conduction may be interfered with and the heart block may be partial or com-

plete The effect on ectopic beats is inconstant—they may be decreased (as is found experimentally) but sometimes they are unaffected or even increased in number Attack of paroxysmal tachycardia may be arrested (Danielopolu 1929) though as a rule only for a short time sinus tachycardia is however little affected

Sometimes the sinus region appears to be hyperexcitable and the reflex may be elicited with extraordinary ease Thus in a case recorded by Roskam (1930) the slightest pressure on the skin over the sinus or the introduction of the fingers between a stiff collar and the neck, was liable to produce complete stopping of the heart (sometimes for as long as fifteen seconds) and consequently epileptiform convulsions When the heart resumed beating the rate was rapid and numerous ectopic beats were present This patient also suffered from numerous apparently spontaneous syncopal attacks Careful investigation showed that the heart stopped only when there was contact with the sinus but not from pressure on the common carotid artery or the adjacent structures Roskam suggests that hypersensitivity of the sinus nerve endings may be a factor in certain types of syncope or epileptiform convulsions

Chronic Effects of Extirpation of Aortic and Sinus Nerves

As has already been pointed out if both aortic and sinus nerves are cut the heart accelerates and may become irregular the blood pressure rises and adrenaline secretion is increased If the operation is carried out at one sitting the animals do not as a rule survive long and soon die from ventricular fibrillation or oedema of the lung

Koch and Mies (1929) extirpated the aortic and sinus nerves first on one side and then after an interval of about one week on the other side Most of the animals (usually rabbits) survived and were kept under observation for long periods The initial effect of the operation was often a fall of blood pressure Following on this however the blood pressure gradually mounted up and in animals examined at intervals varying from 14 to 511 days after the double denervation the blood pressure was found to range between 125 and 180 mm Hg (the normal pressure for the rabbit is 95 to 100 mm Hg) In 9 out of 16 animals the pressure exceeded 150 mm Hg A persistent hypertension had therefore been produced

As a variable number of aortic depressor fibres run in the vagus nerve even in the rabbit the operation which has been described cannot be regarded as always successfully destroying all the buffer afferents In conformity with this it is found that when the hypertension is not marked section of the vagi causes a further considerable rise of blood pressure but when the blood pressure is already high the rise produced is small In other words the more complete the operation the greater is the resultant hypertension Some acceleration of the heart is noted but it must be borne in mind that vagus tone in the rabbit is normally slight The venous pressure may rise up to 30 cm H O (Mies 1930) Histological examination of the heart revealed a diffuse connective tissue proliferation or the presence of more discrete patches of fibrosis where the cardiac muscle fibres had disappeared the latter lesion was found in proximity to small arteries which had become narrowed from intimal thickening (Nordmann 1929)

The pathological changes observed by these workers in the blood vessels are very interesting The aorta down to the origin of the renals shows structural changes which are marked in proportion to the degree of arterial hypertension present In the media there are thinned patches where the muscle and elastic fibres have been destroyed and replaced by a very hard cartilage like tissue over these areas the intima is thickened from proliferation of cells and elastic fibres It is claimed that sclerosis may be noted in the pulmonary arteries The surface of the kidneys is often irregular The glomeruli under the capsule singly or in groups may show various degrees of destructive change in addition there is a certain amount of diffuse fibrosis The renal vessels however are not altered (Nordmann 1929)

It is impossible yet to say definitely whether the structural changes thus said to be produced in the arteries are secondary to the hypertension or whether both result from one common factor Hering (1929) points out that the arterial changes closely resemble those occurring after injection of adrenaline and is inclined to attribute them (and also the hypertension in part) to the hyperadrenalaemia following the division of the buffer nerves He also points out that the arterial changes have not yet been produced by prolonged injection of other pressor bodies like ephedrine These results though they await thorough confirmation [1] are obviously of the greatest interest and importance and arouse many stimulating questions To what extent for example, may hypertension or arterio sclerosis in man be attributed to loss of afferent control of the bulbar centres? It is conceivable that if the aortic arch and the carotid sinuses were both markedly sclerosed the local sensory nerve endings might be put out of action and in this way a primary change in the large arteries might lead secondarily to the development of hypertension But it is not usual clinically for gross structural changes in the large arteries to be followed secondarily by hypertension It has been suggested on the other hand that some temporarily acting cause may lead to arterial spasm hypertension and arterio sclerosis the changes in the aorta and sinuses thus induced may throw the buffer nerves out of action and so the hypertension becomes perpetuated It is clearly not profitable to theorize further along these lines but there is little doubt that a most promising field for future study has been opened up by these researches

Reflex Regulation of Heart Rate and Blood Pressure

It is tolerably clear that the aortic and sinus nerves under resting conditions play an essential part in stabilizing the heart rate and blood pressure within normal limits principally by means of the tonic inhibitory influence which they exert on the cardiac and vasomotor centres and on adrenaline secretion A rise of blood pressure at rest increases their inhibitory activity a fall of blood pressure lessens it and may also bring into action pressor fibres which possibly arise from the aorta and carotid sinuses It may be supposed too that the ventricular afferents which pass up in the vagi act in the same sense but the evidence is slender and their functional importance is perhaps not great The cardiac afferents which return along the sympathetic do not appear to play a great part in the regulation of the circulation it has already been argued that their nerve ends may be pain receptors rather than pressure-receptors The receptors on the venous side of the heart are mainly concerned with the acceleration of the heart which occurs in exercise

All four buffer nerves form a functioning entity their role in the body can be illustrated from many observations Occlusion of the carotids produces a greater rise of blood pressure after the aortic nerves have been cut and their restraining influence removed (Sewall and Steiner) When the carotids are successively occluded a greater rise of pressure is obtained from occlusion of the second than from the first because the occlusion of the

[1] A considerable amount of unpublished work on this subject has been carried out in this laboratory (Kremer Scarff and Wright) and the results obtained are in substantial agreement with those reported by the German workers

first carotid abolishes its tonic inhibitory influence (Hering 1927). The rise of blood pressure after stimulation of the peripheral end of the splanchnic nerves is greater after cutting all the buffer nerves although the initial blood pressure is higher (Izquierdo 1930). Stimulation of the central end of the aortic nerve in the rabbit brings about a larger fall of blood pressure and a more sustained slowing of the heart when the other buffer nerves have been divided; the same is true of stimulation or distension of the sinus caroticus (Koch 1930). According to Izquierdo and Koch (1930) if the splanchnic nerves in the rabbit are cut with the buffer nerves intact the fall of blood pressure is slight, transient and soon recovered from. If the buffer nerves have been previously divided splanchnic section produces a larger absolute and percentage fall of blood pressure (70 per cent.) and in chronic experiments there is little evidence of recovery. Similar observations have been made in the cat (Kremer and Wright 1932). After haemorrhage it is found that section of the vagi may produce a further fall of blood pressure (McDowall) owing to removal of the compensatory afferent pressor influence of these nerves.

After section of all four buffer nerves besides the hypertension which has been fully considered there is cardiac acceleration to an extent which is dependent on the initial degree of vagal tone; there is little increase in heart rate in the rabbit but in the dog the increase may be from 50 to 220 per minute, in the monkey from 150 to 230, and in the cat from 190 to 220. Subsequent section of the vagi (when they contain no aortic afferents) may then produce no further acceleration so that it would appear that vagus tone is normally exclusively reflex in origin. From some observations of Koch (1931) it would appear that the aortic afferents exert a great inhibitory influence on heart rate and a small effect on blood pressure, while for the sinus nerves the reverse is true.

Contrary to the belief of Anrep and Starling (1925) it has been shown apparently conclusively that the pressure in the cerebral vessels does not act directly on the cardiac or on the vasomotor centre.

The variation in heart rate which occurs with *respiration*—sinus arrhythmia—is still not quite adequately accounted for. There is no doubt that it depends on variations in vagus tone, and that it is abolished by vagal section. It has been attributed to afferent impulses from the lungs to variations in pressure on the venous side of the heart (Bainbridge) or to some central influence. If the isolated head connected with the trunk only by means of the vagi is artificially perfused it is found that the sinus arrhythmia does not follow the rate of the artificial respiration which is applied to the trunk, but it corresponds to the respiratory rate of the *head*; this becomes even more evident if the respiratory movements in the head are stimulated. The arrhythmia also persists after denervation of the lungs. The arrhythmia is independent of the fluctuations in the cerebral perfusion pressure. Heymans (1929) concludes from these observations that the arrhythmia is to an important degree due to direct *reflexes from the respiratory to the cardiac centre*.

In exercise the greatly increased venous return raises the auricular pressure and reflexly produces a quickening which enables the heart to cope effectively with a larger [illegible]. The consequent increased heart output mechanically raises the blood pressure, and this presumably tends to reduce tonic inhibitory tone of the buffer nerves, but to what extent it is impossible to say. During severe exercise the sympathetic predominates and the heart accelerates [illegible] whether the heart quickens or [illegible] will presumably depend to a [illegible] comparative potency of the two [illegible]. It is now known to [illegible] factor in preventing an excessive rise of blood pressure in exercise. When one remembers that the output of the heart may increase threefold or fourfold in exercise the actual rise of blood pressure observed is comparatively trivial; it is conceivable that the buffer nerves play a part in the necessary damping operations.

Finally, the influence which is exerted by the basal ganglia and the upper brain stem on the bulbar circulatory centres must not be ignored. A number of illustrative observations will be quoted. Stimulation of the hypothalamus may produce a rise of blood pressure (Karplus and Kreidl 1927) and secretion of adrenaline (Hou-Yu and Molinelli 1925) with evidence of increased cardiac sympathetic activity such as acceleration of the heart, shortening of the A-V conduction time and extrasystoles. The liability to the occurrence of extrasystoles spontaneously or on afferent stimulation which is so characteristic of the lightly chloroformed animal is abolished by removal of the hypothalamus (Beattie, Brow and Lon[illegible] 1930). Penfield (1929) has described a case of thalamic tumour involving the mesial nuclei on the two sides in which attacks occurred characterized by a great rise of blood pressure (from 110 to 210 mm. Hg), cutaneous vasodilatation in the distribution of the cervical sympathetic and cardiac acceleration. In the acute decorticate animal there is widespread sympathetic activity—sweating, exophthalmos, a large rise of blood pressure, cardiac acceleration and increased adrenaline secretion (Cannon and Briton); the centre for these reactions is in the ventral part of the thalamus and in the adjacent hypothalamus (Bard 1930). Cannon has co-ordinated many of these observations and has shown that the rage reaction with its striking circulatory changes is in all probability fundamentally dependent on a thalamic reflex. When the thalamus is cut off from cortical control this reaction occurs in an exaggerated form in response to quite trivial sensory stimuli. Normally, however, the activity of this thalamic centre is kept in check to a varying extent by means of impulses from the cerebral cortex. Future research may show that the higher level control of the circulatory centres is of especial importance in the human subject.

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FLAT-FOOT*

BY

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VISITING SURGEON BATH AND WESSEX ORTHOPAEDIC HOSPITAL

Although the term flat foot is commonly applied by the laity and the profession to the various conditions which cause discomfort in the feet for the majority of the ailments inducing patients to consult a medical practitioner—or rather to consult a bootmaker or chiropodist when they ought to be consulting a medical practitioner—it is definitely a misnomer Nevertheless it is difficult entirely to avoid terms which have acquired such a wide currency so the term flat foot has been chosen for this paper though such an expression as incompetent feet would probably be preferable

Seeing that some estimates have placed the proportion of individuals in a civilized community suffering from foot symptoms as high as 70 to 90 per cent it is a subject well worth study from the financial and humane points of view Unfortunately though the principles involved are simple their practical application will not be found easy There are many types of defect and more over the equilibrium of the foot mechanism is disturbed by such very slight mechanical alterations that to produce accurate balance is most difficult It is my aim not so much to provide a fool proof method for the treatment of all foot defects as to encourage a more careful consideration of a subject that is too apt to be left by the profession in the hands of unqualified experimenters whose primary outlook is commercial

CAUSE OF FUNCTIONAL INCOMPETENCE

The functions of the normal foot which is certainly one of the most marvellous machines in Nature are weight-bearing during standing and locomotion the provision of a spring to reduce jars and assist propulsion during movement and action as a pivot to assist the turning of the body There are few movements which do not combine all three of these An important point often overlooked is that these functions do not reside primarily in the foot itself but in the brain and spinal cord so that an anatomically intact foot does not ensure a perfectly functioning foot This is where our friends the bootmakers fail to comprehend the position and also explains why so many family practitioners rashly cheer anxious parents by assuring them that their child has a perfect foot and that the orthopaedic surgeon is making a fuss about nothing This paper is concerned with a particular application of the general thesis so admirably brought out in Dr Charles's presidential address that integrity of structure and function are not identical

Nothing is more startling than to examine the painful foot of a convalescent pneumonia case probably a young foot perfectly proportioned and displaying an admirable arch as it lies on the bed When the patient stands up the inner border of the foot is seen to sink to the ground in an attitude just as deformed as that of a congenital calcaneo valgus Unfortunately very few practitioners are on the look out for this initial functional error and it is only after many months or years when the deformity has become rigid and when a faulty habit makes restoration slow that the patient seeks treatment for a perfectly preventable condition No patient should get up after acute illness in soft bedroom slippers but should wear a firm boot or shoe with laces

Any factor which depresses the nervous system as a whole or the muscles locally (by interference with their blood supply) is liable to cause flat foot An anatomically sound foot may thus become functionally incompetent under the influence of

1 Toxins (*a*) of acute illnesses especially pneumonia diphtheria and scarlet fever (*b*) chronic sepsis such as foci in the tonsils or teeth

2 Lack of oxygen

3 Excessive heat—for example in stokers etc

4 Excessive cold general or more especially local—for example trench feet and when shoes and stockings are too thin

5 General fatigue from any cause—for example over marching standing hard pavements shoes unscientifically balanced—for example those with small high heels

6 Malnutrition (*a*) general especially vitamin deficiency—for example in rickets poor muscle tone is associated with abnormal lines of stress due to bony deformity (*b*) local from cramped footgear

More direct causes of functional as opposed to mechanical incompetence are poliomyelitis affecting the tibialis posticus and anticus spastic paralysis whether from cerebral haemorrhage or congenital causes congenital deficiency of the invertors and calf muscles (calcaneo valgus) the exact opposite of typical club-foot and often found associated with an equino varus club foot on the opposite limb

ANATOMICAL CONSIDERATIONS

The numerous small bones of the foot and the joints connecting them to one another tiresome as they were in our early student days in virtue of their names and relations are still likely to trouble us to the end of our careers because the significance of their association does not at once become obvious as we study them more thoroughly One may summarize this tedious piece of anatomy as follows

The ankle joint is almost a pure hinge joint moving upward into dorsiflexion the amount of which varies enormously in different individuals (angles of from 90 to 45 degrees between foot and leg) and downward into plantar flexion which also varies but usually allows the top of the foot to be brought into line with the front of the leg The ankle has this important peculiarity that dorsiflexion can be limited by the tendo Achillis which is most taut when the foot is brought slightly inwards and accordingly strain on a tight tendo Achillis tends to pull the foot into an everted valgus position while if one desires to stretch the tendon to the maximum extent, one must do so with the foot inwards On the contrary in an untreated congenital club foot the tendon is displaced inwards in relation to the ankle and is most relaxed in this position becoming tighter in eversion After treatment the normal relation usually recurs

The subastragaloid joints next below the ankle allow movements chiefly between the astragalus and os calcis —that is allow the heel to be rocked inward (inverted) or outward (everted) about a horizontal axis roughly at right angles to that of the ankle hinge This joint the range of which varies with different individuals may be considered the key to the function of the whole foot below the ankle Its normal attitude of slight inversion during weight bearing is maintained in direct opposition to gravity (that is the whole body weight) by two muscles —the tibialis posticus and anticus—so that it is very sensitive to slight defects of muscle tone or faults of muscle balance The muscles acting on it favoured by gravity are the peroneus longus and brevis If these once gain the preponderance no mechanical adjustment to the front of the foot will restore the normal relation of the foot to the leg Conversely if this subastragaloid joint is maintained correctly whether by appliances or

* Paper read before the Bath and Bristol Branch of the British Medical Association November 5th 1931

of cases in which an improvement of symptoms was found a diminution in blood pressure was also found in a much smaller group improvement of symptoms occurred with no change or even with a rise in pressure Such apparent improvement in symptoms did not always coincide with an improvement from the physician's point of view

Again many of these patients have not only labile systolic pressures but also have an optimum level—that is a level at which they are most free from symptoms I have known this level to be as high as 280 mm Hg One possible reason for this is that the pressure must be maintained at a certain height in order to maintain an efficient coronary circulation As a corollary to this I suggest that one should always try to obtain evidence of the condition of the circulation in the coronary arteries before attempting any treatment which may suddenly reduce the pressure—for example in some patients venesection lowers the systolic pressure more rapidly than in others and I have seen a very alarming syncopal attack follow venesection for the relief of hypertension in a patient with an unsuspected coronary lesion

While a sudden lowering of tension is one of the most characteristic features of a coronary embolism it is not a constant one but to find that a patient's systolic pressure has dropped 60 mm since his last examination should always prompt careful inquiries as to an unusual bilious attack or unexplained sternal or epigastric pain suggestive of an unsuspected coronary catastrophe

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CONSERVATIVE MASTOIDECTOMY FOR CHRONIC SUPPURATIVE OTITIS MEDIA

BY

L GRAHAM BROWN MD FRCS

ASSISTANT SURGEON EAR NOSE AND THROAT DEPARTMENT CHARING CROSS HOSPITAL

Although preventive measures such as the establishment of aural clinics at schools and hospitals the removal of tonsils and adenoids or other sources of infection in the nose and nasopharynx of children and the proper care of patients during the exanthematous fevers have done much to reduce considerably the prevalence of chronic otorrhoea both in children and adults there still remain a large number of individuals who continue to suffer from this distressing and potentially dangerous complaint

Sometimes this chronic condition is due to disregard of cleansing methods of treatment during the early stages of the disease or to the failure to remove from the naso pharynx those causes which tend to maintain the source of infection More often in spite of the many well known methods of dealing with the local infection such as cleansing treatment of the ear use of vaccines ionization with zinc or other metallic compounds introduction of various powders or operative measures for the removal of polypi and granulation or the incision of the drumhead, the inherent chronicity of the disease prevails and few if any of these methods of treatment have any effect This chronicity depends upon the fact that after eliminating the possibility of constant re infection via the Eustachian tube the pathological anatomy of the attic and antral regions of the middle ear is such that it does not permit easy access of cleansing or bactericidal fluids to these areas whether the disease is established in the mucosal lining alone or as is more commonly the case in both the mucosa and underlying bone Even the advocates of treatment by ionization do not claim success in these cases but confine themselves rather to the treatment of those regions of the middle ear—that is the tympanum proper—where the disease is readily accessible to the influence of the zinc ions What then is to be done further for those cases which do not respond to any of the simple methods of treatment but which drag on interminably from year to year the patients suffering not only the discomforts of a discharge and of impaired hearing but also the effects of a chronic systemic infection and in which there is always the possibility of extension of the infection to the mastoid the labyrinth or the intracranial contents?

It is the purpose of this article to advocate in such cases an operation which aims not only at the eradication of the disease and its possible sequelae but also at the preservation of hearing The operation is a modified form of the so called conservative mastoidectomy first advocated by Heath in this country more than twenty years ago and nowadays termed transantral attico tympanotomy It is an extension of the simple (Schwartze) mastoid operation to include the opening up of the attic and tympanic regions of the middle ear by removal of the bridge of bone over the aditus together with the bone that forms the outer wall of the attic conserving at the same time the integrity of the soft parts of the external auditory meatus and the continuity of the latter with the tympanic membrane Thus diseased areas of osteitis in the antrum or attic can be exposed and curetted granulations and necrosed ossicles removed if necessary the whole area cleansed and the soft structures replaced almost in their former anatomical positions Fresh adhesions will have to be formed between the postero superior margin of the tympanic membrane and the denuded inner wall of the attic the aim of this being to restore to the tympanic cavity its former closed state containing air that is shut off from the external auditory meatus To promote these adhesions the meatus is kept firmly packed for a few days with narrow ribbon gauze soaked in spirit, the mastoid wound is drained posteriorly in the usual manner The daily dressing is simple causing a minimum of discomfort or pain to the patient Healing is generally complete in two to three weeks when the patient is able to resume his normal occupation

The advantage of this operation over the older classical radical or complete mastoidectomy is beyond question hearing is preserved and there is a better prospect of obtaining a dry ear

The types of cases most suitable for operation are those in which the greater part of the tympanic membrane remains intact and where the perforation usually marginal is situated either in the superior or attic area or posteriorly when a chronic antritis may be suspected Cases of chronic suppuration with a very large destruction of tympanic membrane are not suitable for this form of operation moreover since the condition is usually a safe one owing to the free drainage that exists treatment by simple cleansing methods is adopted The classical radical operation is becoming a relic of the past and should now be reserved only for those exceptional cases where a cholesteatoma has totally destroyed the middle ear contents or where a graver complication such

as a labyrinthitis with meningeal symptoms demands, as a means of approach a greater exposure of the inner tympanic wall

In this short article it is not possible to give a detailed description of the types of case suitable for operation of the technique of the operation itself and post operative treatment nor to enter into the arguments upon which is based the preference for this form of operation these are matters for the aural surgeon himself My main purpose is to draw the attention of the general practitioner to the fact that in spite of the prejudice that still unfortunately prevails against any form of mastoidectomy as a means of treatment in cases of long standing chronic discharge of the middle ear the results of transantral attico tympanotomy are sufficient to justify him where practicable in advising patients to undergo this form of treatment

The following six cases which were described at a *meeting of the Section of Otology* Royal Society of Medicine on December 4th 1931 illustrate the results of treatment

CASE I

Female aged 36 with discharge from right ear since childhood October 24th 1930 tympanic membrane showed marginal perforation in post superior quadrant granulations present October 29th operation performed stay in hospital three weeks November 16th ear dry hearing of right ear—low whisper at 1 ft

CASE II

Female aged 21 with discharge from both ears intermittently for eleven years December 20th 1929 hearing—right ear watch heard close left whisper at 1 ft Both tympanic membranes showed marginal perforations post superiorly right ear discharging left dry February 5th 1930 operation on right ear incus removed Stay in hospital three weeks November 16th 1931 both ears dry hearing—right ear low whisper at 1 ft

CASE III

Female aged 10 with chronic otorrhoea of left ear since measles at the age of 3 tonsils and adenoids removed June 20th 1930 tympanic membranes showed posterior marginal perforation hearing—watch heard close to ear July 16th operation stay in hospital three weeks January 20th 1931 ear dry hearing—watch heard close to ear

CASE IV

Male aged 30 with left chronic otorrhoea since the age of 14 June 17th 1930 tympanic membrane showed a post superior marginal perforation with granulations and a thick discharge hearing—low whisper at 1 ft August 13th operation wound healed completely in two weeks November 20th 1931 ear dry but a very small central perforation still exists posteriorly hearing—watch heard close to ear

CASE V

Female aged 29 with chronic suppuration of right ear since measles at the age of 12 October 22nd 1931 attic perforation with granulations hearing—watch heard close to ear November 5th operation wound healed completely in three weeks November 28th ear dry hearing—watch close

CASE VI

Female aged 28 bilateral chronic suppuration since early childhood following measles October 29th 1929 symptoms of toxaemia recent exacerbation following cold Right ear marginal perforation with granulations in post inferior quadrant foul discharge mastoid tenderness Left ear posterior marginal perforation reddened membrane Hearing of both ear good November 1st operation on right ear lateral sinus exposed after removal of diseased bone November 11th operation on left ear incus removed and middle fossa exposed by removal of diseased bone Both ears healed and dry within two weeks after operation December 4th 1931 right ear dry hearing—watch close to ear Left ear dry hearing—low whisper at 6 in

When demonstrating the above series of cases I drew attention particularly to the following points the long period of chronicity in each case the site of the post-auricular incision in the hair line giving rise to practically no deformity the conservative treatment of external auditory meatus, tympanic membrane and middle-ear contents (in two cases only was the incus removed) the short stay in hospital and the successful preservation of useful hearing after eradication of the disease

SUMMARY

1 Chronic suppurative otitis media (in reality chronic mastoid disease) still remains far too prevalent in spite of its admitted dangers to the patient and the loss of national efficiency due to deafness

2 Conservative mastoidectomy though devised and advocated as long ago as 1907 by Charles Heath has not yet gained that universal support it deserves

3 A modification of Heath's operation termed transantral attico tympanotomy is now advocated and the successful results in a series of cases are described

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

THE FIRST CASE OF SPRUE IN MALTA

The record of a first case from any given locality has its own peculiar interest and as we are not aware of any previous case of sprue having been recorded from Malta the following description seems warranted It is interesting to note incidentally that Rogers (1929) refers to cases of sprue reported from South Italy and Sicily

The patient was a retired Army officer of pure Maltese race aged 52 years Symptoms commenced in October 1929 with two or three loose motions daily these were often frothy and usually occurred in the mornings Six months later he began to lose weight and from September 1930 till January 1931 he noticed some soreness of the tongue Various lines of treatment were tried without lasting benefit We did not see him until December 1930 and he could not come into hospital until the New Year There was a previous history of typhoid in 1904 and bacillary and amoebic dysentery during the late war The patient had spent all his life in Malta except four years on war service in the Near East

On admission there was considerable emaciation the abdomen being distended with gas the muscles thin and flabby and the skin darkly pigmented stools were loose muddy coloured offensive very bulky and sometimes frothy At first their reaction was alkaline later it became acid

Detailed Investigation

After dental extractions for pyorrhoea detailed investigations were carried out An x ray with barium meal showed no evidence of malignant or other organic disease of the alimentary tract The fractional test meal showed marked hypochlorhydria only a trace of free HCl being present Both the urinary diastase test and Loewi's adrenaline eye test were negative Blood examination showed red blood cells 3 750 000 per c mm haemoglobin 75 per cent colour index 1 The leucocytes were normal Bacteriological examination of the faeces showed no evidence of dysentery organisms or of tubercle bacilli Streptococci were isolated both from stools and from the roots of extracted teeth Fat analysis of the faeces showed that the total fats varied from 28 to 43 6 per cent of which approximately 36 to 48 per cent was split and 52 to 64 per cent unsplit

These results excluded such conditions as malignant disease chronic pancreatitis pernicious anaemia and tuberculous infection Taken with the clinical picture they provided very strong evidence for a diagnosis of sprue so the patient was treated accordingly

Subsequent History

Milk diet and later meat diet were both tried but without improvement. We then put the patient on Hurley's high protein low fat and low carbohydrate diet (1930). The patient's weight was 6 st. 10 lb. at the beginning of this treatment. Dilute HCl was administered throughout and also for a time calcium lactate. Shortly afterwards the stool became formed and he began to gain weight. By the beginning of May a convalescent sprue diet was given along with insulin—6 to 9 units daily. At the end of May his weight had reached 8 st. the stools were formed and the general condition greatly improved. He was then discharged from hospital and it was arranged that he should proceed to England for a change. There he consulted Dr. Hamilton Hurley who confirmed the diagnosis of sprue on clinical grounds and further reported that the blood calcium was low (8·7 mg. per 100 c.cm.) while the sugar tolerance curve showed only a very limited rise following the ingestion of glucose.

The patient has since returned to Malta treatment being continued on the above lines. Progress has been maintained and the general condition remains satisfactory.

COMMENTARY

The chief interest of this case lies in its being the first authenticated instance of sprue reported in Malta. From the clinical point of view the presence of sore tongue associated with loose gaseous fatty stools the distended abdomen the marked loss of weight and pigmentation of the skin are all characteristic. The low blood calcium the hypochlorhydria and the limited rise in the blood sugar following the administration of glucose are typical. This is also true of the high total fat content in the stool. Even deficient fat splitting though unusual does sometimes occur in this disease.

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British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

SOUTH MIDDLESEX DIVISION

Chronic Rheumatism and the Endocrines

At a meeting of the South Middlesex Division held at the Teddington and District Memorial Hospital on February 4th Dr. H. GARDINER HILL discussed the relationship between the endocrine glands and chronic rheumatism both the non-articular and articular forms. Under articular rheumatism he included rheumatoid arthritis (the atrophic type) infective arthritis with a definite septic focus and osteo-arthritis (the hypertrophic form). He doubted whether the relationship between the endocrine glands and these conditions was as close as some authorities had suggested. It had been pointed out that the incidence of rheumatism was high in patients who suffered from goitre. It was also said that rheumatism and [illegible] were frequently associated. In myxœdema it had been found that relaxation and mucoid [illegible] of articular ligaments tendons and fascia. The relationship of hyperthyroidism to chronic [illegible] was still obscure but a form of [illegible] had been described. It was also [illegible] often developed after pregnancy or in association with amenorrhœa. A relationship between arthritis and the pituitary had been postulated because it was known that overactivity of the anterior lobe growth cells produced hypertrophic changes in bones. There was little evidence however to suggest that arthritis was a frequent finding in acromegaly.

Dr. Gardiner Hill then gave figures showing the incidence of arthritis in a series of endocrine cases. A series of cases of thyroid disease showed the following results. 10 per cent. of 61 patients with myxœdema complained of chronic rheumatism though in the large majority of these it was of the non-articular type. Among 82 cases of simple goitre and 184 cases of primary Graves's disease there were only one or two instances of articular rheumatism. Where arthritis was found in Graves's disease he thought the evidence suggested that both conditions were probably due to one common factor—a septic focus. With regard to pituitary disease in a series of 26 cases of acromegaly only 4 per cent. showed arthritic changes—namely lipping of the bones of the small joints of the hands. A series of cases of sex gland deficiency gave the following results. In eunuchoid primary sex gland deficiency 13 cases were examined and there were only one or two instances of articular rheumatism. In 32 cases of castration the incidence was higher one fifth suffering from articular rheumatism. In this series there was almost invariably obesity and the joint changes were usually in the lower limbs. Of forty-three cases of secondary amenorrhœa examined there were no examples of arthritis.

In obese persons the incidence of articular rheumatism was high. In 40 cases of obesity dating from birth one quarter suffered from rheumatism. In half of these it was of the articular type and in the other half non-articular. In 117 cases of obesity developing in later life not including the form which developed at the climacteric one fifth suffered from chronic rheumatism. Here in one half of the cases it was of the articular type and almost invariably in the large joints of the lower limbs. In 37 cases of obesity which developed at the climacteric 43 per cent. complained of rheumatism. In 44 per cent. of these it was of the articular type and nearly always in the lower limbs. Dr. Gardiner Hill concluded therefore that obesity was the most common endocrine symptom associated with arthritis. It was difficult to say exactly what the relation was between obesity and the endocrine glands. It might occur as a result of thyroid deficiency sex gland deficiency and changes in the pituitary or it might be of the constitutional type and inherited. In some of these cases there was a low metabolism.

Discussing endocrine treatment in arthritis Dr. Gardiner Hill suggested that in cases of the hypertrophic type with obesity and low metabolism dietetic restriction in conjunction with thyroid extract was often beneficial. In his experience extracts of the pituitary and sex glands had not produced any striking changes either in obesity or arthritis. There had been a tendency of late to treat certain cases of the atrophic form of arthritis (rheumatoid arthritis) with insulin. This form of treatment had been adopted because in a number of cases of rheumatoid arthritis it was found that the sugar tolerance was decreased. He thought this was a common finding in a large number of conditions and did not think that it was necessarily the result of any pancreatic deficiency. There was moreover little evidence to suggest that arthritis was a common finding in diabetes. He thought that the benefit which had been observed from this form of treatment was probably due to the fact that in certain of these patients appetite was poor and nutrition low. Insulin probably acted by creating an artificial appetite and increasing storage of carbohydrate. It might be worth trying in certain cases with poor nutrition.

Reports of Societies

FRACTURES IN THE REGION OF THE ANKLE JOINT

At a meeting of the Section of Orthopaedics of the Royal Society of Medicine, on March 1st with the president Mr HARRY PLATT of Manchester in the chair Mr R BROOMHEAD of Leeds opened a discussion on fractures in the region of the ankle joint

Mr Broomhead said the most convenient classification of fractures of this joint was into abduction and adduction fractures Both were due to indirect violence The abduction variety was due to torsion of the leg with the foot fixed and the knee slightly flexed the adduction variety was caused by simple leverage The type of fracture depended on the character of the force the displacement depended on the extent and duration of the force exerted There were three degrees of abduction fracture of this joint In the first degree the internal lateral ligament was intact, while the lower end of the fibula was fractured from above downwards and from behind forwards there was no displacement In the second degree the fibula was fractured and in addition there was a tearing of the internal lateral ligament of the ankle joint or a fracture of the internal malleolus Sometimes there was a tearing of the inferior tibio fibular ligament In the third degree the fracture was very similar to that in the second there was also a posterior displacement of the astragalus and there might be fracture of the posterior margin of the lower part of the fibula Fractures without displacement did not require to be immobilized and the patient could resume walking early The treatment in the other forms depended on the displacement which had occurred If swelling was present when the patient was first seen it was wisest to let the swelling subside before the patient was allowed to walk And when the patient started to walk he should be given support in the form of a crepe or preferably a starch bandage In cases of fracture with displacement when the latter was reducible it was easily done When replacement was very difficult or impossible an open operation was needed Some surgeons advised full inversion of the foot while others said it was important to bring about lateral displacement correction In the adduction type of fracture the foot should be fixed at a right angle with neither inversion nor eversion If an ordinary Pott's fracture could be reduced it stayed in its reduced position well In the ambulatory treatment of fractures one of the best methods was to apply the Delbet plaster With the use of this Delbet advised walking immediately But if the patient walked while swelling was still present the plaster became loose and required readjusting when the swelling had subsided When carrying out the recumbent method after reduction a plaster case was applied and the limb was kept immobilized for three weeks and physiotherapy was instituted after the plaster was taken off While the patient was walking the circulation should be aided by the wearing of a starch or crepe bandage He favoured the recumbent method When plaster was used as a corrective splint pressure troubles were liable to occur

OPERATIVE TREATMENT

The cases which required operative treatment for the deformity correction were some of the third degree abduction fractures particularly when the posterior malleolus had been broken some cases of adduction fracture especially when the anterior margin of the tibia had been torn and all compound fractures There was a great likelihood of sepsis occurring in the skin of the foot and until the skin had been thoroughly prepared perhaps over a period of seven days no open operation should be attempted In some compound fractures immediate amputation of the foot was the wise measure In cases with separated epiphyses it was most important to bring about complete reduction as union occurred early and in the absence of proper reduction a crippling deformity would result In the speaker's hospital general anaesthesia was the custom local anaesthesia had proved disappointing in these fracture cases A disadvantage of local anaesthesia was that one had to inject some 20 c.cm. of fluid into an already swollen limb, and this imposed increased strain on an already embarrassed circulation Also in many cases the local anaesthetic did not abolish spasm of the peroneal muscles

Mr J P HOSFORD discussed fractures of the astragalus of the three bones in the ankle joint this was the least commonly fractured In the last ten years the cases of astragaloid fracture at St Bartholomew's only totalled fifteen There were two reasons for the rarity of this accident the protracted position the bone occupied and the compactness of its shape The common method of fracture was by a fall in which the impact of the body weight was borne by the heel Nine out of thirteen patients with this fracture—in one it was bilateral—fell from a height He considered four kinds of astragalus fracture (1) fractures of its neck (2) crush fracture of the body of the bone (3) fracture of the posterior process and (4) chipped fracture of some portion of the bone He illustrated them with slides

Mr E P BROCKMAN spoke of chronic arthritis following Pott's fracture and described cases in which arthrodesis was done on that account All had lost their pain since the operation and had been able to resume work If such patients were left they were miserable and were a trouble to themselves and to those around them If the operation however successful was delayed for a year or longer it was harder to get them back to working capacity than if they had been dealt with earlier

The PRESIDENT said that in his hospital at Ancoats the functional or industrial results of treatment had on the whole been very satisfactory He was most favourably inclined towards the Delbet plaster but it was largely discontinued in his hospital of late on the ground of expense This plaster could well be employed as a primary method of fixation a statement he amplified by showing a number of slides He emphasized that the ambulatory treatment of these fractures meant an earlier return to full functional capacity Mr G PERKINS spoke highly of Ashhurst's classification which was valuable not only for treatment but also for prognosis Mr ST J D BUXTON advocated a longer period of immobilization for these cases than seemed to be favoured by the speakers The important matter in all cases was to effect complete reduction Mr DONALD BARLOW particularized the points which favoured the more general use of the Delbet plaster for cases of the kind under discussion He objected to local anaesthesia especially as the use of the needle might convert a simple case into a compound one Mr NAUGHTON DUNN said the essentials of treatment were to secure dorsiflexion of the foot and inversion He had never plated any fracture Mr BRISTOW also commended Ashhurst's classification and said that accurate reduction was essential

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We are asked to state that hospitals situated within eleven miles of St Paul's desiring to participate in the grants made by King Edward's Hospital Fund for London for the year 1932 must make application before March 31st to the honorary secretaries of the Fund at 7 Walbrook E.C.4 (G.P.O. Box 465A) Applications will also be considered from convalescent homes which are situated within the above area or which being situated outside take a large proportion of patients from London

Reviews

RADIOLOGICAL EVIDENCE IN THE WITNESS BOX

The necessity of radiological examination of all injuries affecting the skeletal tissues especially when such injuries occur in the vicinity of joints is undisputed Nowhere is this more essential than in cases dealt with under the Workmen's Compensation Act As the evidence of the radiologist is often of the utmost importance any book which gives help in these matters is to be welcomed Dr S GILBERT SCOTT in his *Radiology in Relation to Medical Jurisprudence*[1] has attempted to give aid and instruction in the difficult task of preparing radiographic evidence and of explaining it efficiently in the witness box He gives a simple description of the properties of x rays and the technique of x ray examination and follows this with two chapters on skeletal variations and certain normal and abnormal conditions which may be mistaken for the results of trauma or disease He concludes with a short chapter on bone diseases There are twenty four excellent radiographic plates The book is well written and should be of value to the medical practitioner who has occasionally to give evidence in accident cases it is not sufficiently extensive to be of much value to the expert radiographer

FOUNDATIONS OF MEDICAL HISTORY

The lectures delivered by Sir D'ARCY POWER to the Institute of the History of Medicine of the Johns Hopkins University in November and December 1930 have been published in book form under the title of *The Foundations of Medical History* From the introductory note written by Professor William H Welch it is evident that the audience at the Johns Hopkins University fell willing victims to that charm of lecturing that we in England know so well There are six lectures in the book of which the first deals with the history of St Bartholomew's Hospital in London this is a delightful illustration of Sir D'Arcy's gift of brevity and comprehensiveness His word picture of the hospital is complete and those who know the old hospital best will be the first to appreciate the simple and informing story is told here The second lecture on Dining with our ancestors furnished a conspectus of the pleasures of the table throughout the ages that would have made the mouth of Brillat Savarin water The next three lectures contain solid instruction as well as entertainment In Biography the essentials are carefully thought out and sound advice is offered to the intending biographer with ample acknowledgement of the surpassing brilliance of Aubrey's *Brief Lives*

Iconography deals with a by path of history less well trodden This may be due to the need for considerable artistic knowledge a critical faculty and literary ability In this chapter Sir D'Arcy Power shows how thoroughly equipped he is despite his modest disclaimer with all three requisites He describes how at Sir William Osler's behest he collected for publication by the Historical Section of the Royal Society of Medicine in 1913 all the known portraits of Harvey His favourite portraits of Harvey are that owned by Dr Francis Bright and the Kingsweston picture While mentioning the latter he does not refer to the version (replica copy or original) in the possession of the Kent and Canterbury Hospital which is in a much better state of preservation than the Kingsweston portrait and was reproduced in the *British Medical Journal* on October 22nd 1921 Surprisingly enough he has no word of praise for the equally attractive and best known of all the likenesses of Harvey, the one presented to the Royal Society by Mapletoft

The fifth lecture on 'Bibliography' will have a value not only for would be writers but also and even to a greater degree for every prospective book collector The final lecture on Aristotle's *Masterpiece*' is a delicious notice of a book which Sir D'Arcy calls a hoary old debauchee acknowledged by no one It is astonishing to read that this book has been through at least sixty six editions and is still being continually reprinted So that he comments drily There must be a large class of persons in England possessed of prurient minds and so uneducated that the pseudo science of the Middle Ages still appeals to them As an example of bibliographical research this chapter is most admirable even though the *Maste piece* at its best is a mere catchpenny production written for the prurient-minded and the less said about it the better But that is the worst or the best of Sir D'Arcy Power he can write a bibliographical thriller even on that brazen old cony catch

CLINICAL LABORATORY METHODS

The third edition of CUMMER'S *Manual of Clinical Laboratory Methods*[2] has now been published and contains many new features, such as the description of the Kahn and Kline tests for syphilis and several other advances in clinical pathology This book gives a good general review of those procedures which are included within the somewhat ill defined scope of clinical pathology and provides a good description of most of the tests which are useful in the diagnosis of disease The book is well illustrated and contains a useful bibliography and a fairly satisfactory index On the other hand it must be admitted that some hospital pathologists would look here in vain for descriptions of some simple tests of proved utility For instance the author gives several unnecessarily complicated tests for acetone and diacetic acid in the urine and does not mention Rothera's test No description appears of the hypobromite method of estimating urea in the urine although three urease methods too laborious for clinical work are described Some subjects of considerable importance are given inadequate treatment such, for instance as glycosuria which receives only four short paragraphs on page 276 There is apparently no mention of gas gangrene and its laboratory diagnosis or at any rate there is no reference to it in the index However in any compendium on clinical pathology one would expect to miss some familiar laboratory method and these are only minor criticisms of what is obviously a very useful manual

BOOKS ON PSYCHOLOGY

Students of psychology and philosophy will welcome the inclusion in the International Library of Psychology of an English translation of *Philosophy of the Unconscious*[3] by EDUARD VON HARTMANN The first English edition of this classical work has been out of print for some years The theories associated with the various schools of medical psychology represent one of the later developments of Hartmann's formulations and the psychopathologist will

[1] *Radiology in Relation to Medical Jurisprudence* By S Gilbert Scott MD DPH London C Lewis 1931 (Demy 8vo pp xii + 172 illustrations 15s net)

[2] *Manual of Clinical Laboratory Methods* By Clyde Lamb Cummer PhD MD FACP London H Kimpton [and Cincinnati Harold Vyse] Third edition thoroughly revised (Demy 8vo pp xx + 565 171 figures 25s net)

[3] *Philosophy of the Unconscious* By Eduard von Hartmann With a preface by C K Ogden New edition The International Library of Psychology Philosophy and Scientific Method London Kegan Paul French Trubner and Co Ltd 1931 (Demy 8vo pp xxviii + 438 3 portraits 15s net)

read with interest and advantage the sections of this impressive volume which have a bearing upon the problems of psychology

Experimental Psychology[5] is the translation into English of the fourth edition of a volume by Dr JOHANNES LINDWORSKY the eminent professor of psychology in the German University of Prague This book provides the student with an account of the latest experimental studies of the higher thought processes It will be appreciated more particularly by students of the classical school of psychology but it also serves to remind those whose psychological interests are directed along other lines that the experimental school in which introspection is the primary method of approach still maintains a position of usefulness and dignity It is true that the structural psychologist deliberately restricts his field of investigation but at the same time the study of consciousness by scientific methods is both necessary and useful and the psychologist cannot afford to ignore one of the fundamental phenomena of life

Though the psychiatrist naturally tends to interest himself more especially in what is termed medical psychology it is essential that he should not neglect to make himself acquainted with the developments which are taking place in general psychology since these will inevitably influence our conceptions of abnormal as well as normal behaviour The three books to which we shall now briefly refer make it abundantly evident that the term academic is in these days no longer applicable to the modern methods of approach to the problems of mental life

Wider in its scope than the usual psychological text book is a volume entitled *Fields of Psychology A Study of Man and his Environment*[6] by Mr GLENN DEVERE HIGGINSON assistant professor of psychology University of Illinois It is especially the aim of the author to place the major emphasis upon the biological relations of psychology and with this purpose in view consideration is given to the doctrine of evolution the laws of heredity the psychology of the animal and the development of the human race He thus covers a very wide ground and his book includes chapters dealing with such subjects as psychology and law and abnormal psychology This is a useful book for students who wish to gain at the outset a comprehensive impression of the aims methods and divisions of modern psychology

The Science of Psychology[7] by Dr RAYMOND H WHEELER is an introductory textbook admirably suited to the needs of the student It is readable thoroughly up to date and includes much recent experimental work As a textbook it is probably unique for the author throughout has been influenced by the Gestalt configuration or organismic school of psychology—a movement still in its infancy but undoubtedly one of outstanding importance In order to apply all through this book the fundamental Gestalt principle that the whole is genetically and logically prior to its parts the subject matter is presented in the reverse order to what is customary in textbooks of psychology Thus the volume begins with the study of the whole of which the human being is psychologically a part—namely the social group later chapters are devoted to such partial reactions as emotions learning sensations and reflexes and it concludes with an account of the nervous system in relation to behaviour

Dr Wheeler is responsible also for a monograph entitled *The Laws of Human Nature*[8] in which he endeavours to show how the relativity movement in physics the organismic movement in biology and the Gestalt movement in psychology represent advances in a new conception of Nature This lucidly written essay is a definitely important contribution to our conceptions of life and mind and one which the psychologist cannot afford to ignore Dr Wheeler sets himself the difficult task of convincing the reader that dynamically human nature is like any form of Nature and he is to be congratulated on the arrangement of the material upon which his arguments are based He possesses a wide knowledge of the matters on which he writes and moreover has a fresh and attractive style which makes his book pleasant as well as profitable to read

SOME TEXTBOOKS FOR NURSES

With a foreword of high commendation by Miss E M Musson chairman of the General Nursing Council for England and Wales a new *Text Book of Medicine for Nurses*[9] by Dr E NOBLE CHAMBERLAIN scarcely needs further introduction either to the nursing profession or to those members of the medical profession who lecture to nurses In just over four hundred pages the author has packed a vast amount of information judiciously pruned of details of pathology or physical signs and with very full emphasis on treatment and nursing aspects The sections on the less common diseases are marked with an asterisk so that the beginner can omit them while a summary of just over thirty pages will facilitate rapid revision for examination purposes An appendix contains accounts of many clinical procedures including the testing of urine while the chapter on therapeutics has been constructed in a skilful manner Well produced on good paper illustrated with several coloured plates and nearly forty black and white figures and photographs this volume should prove a tower of strength to nurses preparing for examinations and as a work of reference in their practice

Dr J K WATSON's well known *Handbook for Nurses*[10] has reached its ninth edition and its hundred and first thousand Many changes have been made such as the introduction of new matter on diathermy and radium, and the author has had the assistance of three nursing experts in the revision of the section on practical nursing It is no small feat of publishing to produce this volume of over a thousand pages in a compact form and at the modest price of half a guinea and it will remain the most popular textbook of general nursing The caption on page 684 in association with an illustration of a small radiant heat bath needs revision

The same author's *Handbook for Senior Nurses and Midwives*[11] may be regarded as a supplement to the preceding volume and its second edition has been prepared simultaneously The section on midwifery has been extended but since it is still scarcely adequate for those working for the midwives examinations its value for general nurses may be doubted Similarly the 125 pages

[5] *Experimental Psychology* By Johannes Lindworsky S J Translated from the German (1930) by Harry R DeSilva D Phil London G Allen and Unwin Ltd 1931 (Pp xiv + 406 5s net)

[6] *Fields of Psychology A Study of Man and his Environment* By Glenn Devere Higginson London G Allen and Unwin Ltd 1931 (Pp xiii + 614 47 figures 10s net)

[7] *Science of Psychology* By Raymond H Wheeler M D London Jarrolds Ltd 1931 (Pp xvii + 556 68 figures 21s net)

[8] *The Laws of Human Nature* By Raymond H Wheeler M D Contemporary Library of Psychology London Kegan Paul Trench Trubner and Co and the Cambridge University Press 1931 (Pp xv + 232 5s net)

[9] *A Text Book of Medicine for Nurses* By E Noble Chamberlain M D M Sc M R C P Oxford Medical Publications London Milford Oxford University Press (Pp xv + 409 38 figures 8 plates 20s net)

[10] *Handbook for Nurses* By J K Watson M D Ninth edition London Faber and Faber The Scientific Press (Pp viii + 1035 323 figures 10s 6d net)

[11] *A Handbook for Senior Nurses and Midwives* By J K Watson M D Second edition Oxford Medical Publications London Milford Oxford University Press (Pp xxx + 676 225 figures 12s 6d net)

on diseases of children are not enough for the syllabus for the special diploma for children's nurses. Nevertheless as a work of reference for senior nurses the book is a useful addition to the nursing library and Dr. Watson's pleasant manner of imparting information makes the work of reading his book as light as possible.

NOTES ON BOOKS

Mr. CHRISTOPHER MARTIN consulting surgeon to the Hospital for Women Birmingham has reprinted from the *Birmingham Medical Review* the substance of two lectures giving an account of *Lawson Tait: his Life and Work with Personal Reminiscences*.[1] This he is well qualified to do for he was intimately associated with this great pioneer of abdominal surgery when at the zenith of his career between 1889 and 1893 as pupil assistant partner and hospital colleague. He ranks him with Lister and Simpson as outstanding in the history of the surgery of the last century. Robert Lawson Tait (1845–1899) to give him his full name was a forcible and striking character revelled in wordy warfare had a violent temper and physically resembled Sir James Simpson but Mr. Martin does not subscribe to the legend that he was the natural son of the father of chloroform anaesthesia. Few if any of those now living could have known this remarkable man so well and though brief his account is a useful footnote to biography.

The work entitled *Phantastica*[2] by the late Professor LOUIS LEWIN of Berlin which has been translated from the second German edition by P. H. A. Wirth of Munich deals as its subtitle states with the use and abuse of narcotic and stimulating drugs. The author claims that this book is the first of its kind as it not only sets forth the results of his own pharmacological theories and practices but also seeks to enlighten those seeking true information about drugs and the drug habit. After an introduction in which he discusses the motives for the use of narcotic and stimulating drugs and emphasizes the importance of the mental constitution of the individual in relation to external stimuli as well as tolerance and immunity to poisons the author gives a systematic account including short historical sketches of the various narcotic and stimulating drugs. These substances are divided into five groups entitled respectively euphorica or mental sedatives of which opium and its derivatives and cocaine are representatives phantastica or hallucinating substances represented by mescal buttons to which the author's name has been given (*Anhalonium Lewinii*) *Cannabis indica Agaricus muscarius* the Solanaceae *Banisteria caapi* and the loco herbs inebriantia such as alcohol chloroform ether and benzine hypnotica which include chloral veronal sulphonal potassium bromide kava kava and kanna and lastly excitantia or mental stimulants which include camphor betel kat coffee tea kola nut cocoa and tobacco. The work is written with the tone of authority which a long experience justifies though occasionally the author oversteps the mark.

The 3rd East Anglian Field Ambulance 1914–1919[14] is a record of service of the four lines of a Territorial medical unit during the great war. Although only the 1/3rd East Anglian Field Ambulance had the good fortune to proceed overseas as a separate command individual members of the other three lines served on various fronts. The greater part of the present volume consists of a description of the first line from its mobilization on August 4th 1914 until the end of the war. The Ambulance landed at Suvla Bay on August 15th 1915 as part of the 54th Division. There it remained until the final evacuation seventeen weeks later. It subsequently saw service against the Senussi in Egypt and in Palestine. This little book gives an interesting account of the trials and vicissitudes of a field ambulance on active service. The story of the unit during mobilization in training camps on troopships on the beaches of Gallipoli and in the Holy Land is well told. It is a narrative of discomforts and hardships endured with philosophic cheerfulness. Much information is to be gleaned from the description of the various changes in equipment and in transport and the difficulties encountered and surmounted through the unexpected disappearance of stores and baggage. At the same time the humours of the campaign have not been neglected. There are several good stories showing that the war was not entirely objectionable and that it had a lighter side. This short memorial has been compiled by former non-commissioned officers of the Field Ambulance. Evidently its production has been a labour of love. Here again the old echoes are ringing and bring back the loyalties and enthusiasms of the war days. The pages breathe a spirit of comradeship born under the stress of war and fostered in the succeeding years of peace. They will strengthen the bond of union of those who in a common memory of great days have something none can rob them of. It is good to know that the old spirit still lives in the hearts of the veterans of the 3rd East Anglian Field Ambulance.

The South and East African Year Book and Guide[15] for 1932 contains all the usual features that have made this volume a standard work of reference for the prospective immigrant and tourist. Of special interest to the medical profession are notes on climatic conditions referring to which the editors point out that the unrestricted entry to South Africa of tuberculous invalids is no longer permitted. A special section dealing with sport and research includes sixty four coloured maps and a bibliography of about 150 books relating to South and East Africa that have appeared during the last twelve months.

Doctors who like stories by doctors about doctors will be interested to learn of the publication of another novel by the medical man whose literary pseudonym is SIDNEY FAIRWAY. Many of the professional episodes in *The Doctor's Defence*[16] are obviously founded on fact and in his foreword Lord Moynihan pays a deserved tribute to the author's sincerity of purpose and of diction.

Professor FRASER HARRIS has published under the heading *Jokes Seen and Unseen*[17] and subheading The Lighter Side of University Life, a collection of anecdotes (some of which have not appeared in print before) in the hope that this small volume may contribute to the gaiety of at least one nation.

Where the Spring Salmon Run[18] is a volume of reminiscence which will delight not only the angler but the general reader for Mr. PATRICK CHALMERS knows how to combine zest and humour with an unobtrusive knowledge of his subject. He can write learnedly for his fellow fisherman on rods lines gaffs on strange baits and on problems of anglers' morality while describing his triumphs defeats and forbearances on many wild and lovely Scottish rivers. We can recommend this book for its entertainment and instruction (such is the order the author would prefer) and for those acute and vivid observations of natural surroundings which have distinguished his notes on other field sports.

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[1] *Lawson Tait: His Life and Work with Personal Reminiscences*. By Christopher Martin MB. FRCS. Birmingham: Cornish Bros. Ltd. 1931. (Pp. 72 24 figures. 2s. net.)

[2] *Phantastica: Narcotic and Stimulating Drugs: Their Use and Abuse*. By Louis Lewin. Translated from the fourth German edition by P. H. A. Wirth. (Kegan Paul. 18s. net.)

[14] *The 3rd East Anglian Field Ambulance 1914–1919*. (Formerly 1st Eastern Counties Field Ambulance.) Compiled by Members of the Unit. Norwich: Goose and Son. 1931. (Pp. 128 illustrated. 10s. 6d. net.)

[15] *The South and East African Year Book and Guide*. Edited by A. Sampke Brown and C. Carlton Brown. Thirty fifth edition. London: Sampson Low Marston and Co. Ltd. 1932. (Pp. lix + 921. 64 maps. 2. 6d. 3. post free.)

[16] *The Doctor's Defence*. By Sidney Fairway. With foreword by Lord Moynihan of Leeds. London: Stanley Paul and Co. (1928) Ltd. 1931. (Pp. 288. 7s. 6d. net.)

[17] *Jokes Seen and Unseen*. The Lighter Side of University Life. By David Fraser Fraser Harris, D.Sc. M.D. D.Sc. Edin. Alexander Gardner Ltd. 1931. (2s. net.)

[18] *Where the Spring Salmon Run*. By Patrick J. Chalmers. London: P. Allan and Co. Ltd. 1931. (Pp. xii + 276. 12 plates. 12s. 6d. net.)

PREPARATIONS AND APPLIANCES

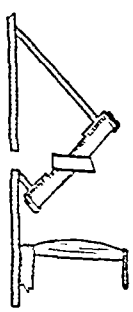
A DEVICE FOR PREVENTING GLARE IN ELECTRIC OPHTHALMOSCOPES

Mr N BISHOP HARMAN F R C S writes The introduction of the electric ophthalmoscope has greatly increased facilities for the examination of the interior of the eye but the internal position of the source of the illumination within the instrument has produced certain new difficulties which the older reflecting ophthalmoscope did not possess The electric lamp within the stem of the electric ophthalmoscope throws a beam of light parallel to the instrument and this beam must be bent at right angles to enter the eye of the patient Prisms and mirrors of various designs have been used to effect this bending The desideratum is such a complete bending of the rays of light into the eye of the patient that the surgeon has a clear peep hole through the instrument along the beam of light and free from all such disturbances as will be caused by rays of light that may be diverted backward from the instrument so as to reach his own eye If there are such aberrant rays the surgeon cannot see the fundus clearly by reason of the haze that is caused by the rays The effect is somewhat similar to that disturbance to visibility produced by the rays of the headlamps of a car when there is a slight mist at night These disturbing effects have become more evident with the increase in power of the light available

The aberrant rays are brought about by several conditions If a glass mirror with a drilled hole be used in the ophthalmoscope the beam of light will impinge upon the upper edge of this hole and no matter how it may be blackened this edge will catter a blaze of disturbing light If the mirror has no drilled hole but only a gap in the silvering the hinder surface of the glass itself will reflect any light that may fall upon it from above the ophthalmoscope and the slightest imperfection in the glass or dust upon it will increase the disturbance

To overcome this defect Marple cut out the upper edge of the mirror and used one of U shape It was very successful but the mirror was too fragile A polished stainless steel mirror of U shape was substituted but this has two drawbacks in that it has a lower reflecting power and soon scratches—still further reducing the amount of light reflected Prisms such as were used in the first ophthalmoscopes avoided some of the difficulties but if they are well designed they are costly and permit very little variation of the beam while the inexpensive ones are inefficient

Recently in discussing electric ophthalmoscopes with Mr J W Tudor Thomas of Cardiff he told me that there had come into his possession an instrument—the origin of which he did not know—which was free from these defects A small tube had been fitted into the drilled hole of the glass mirror



Section through mirror fitted with glare shield

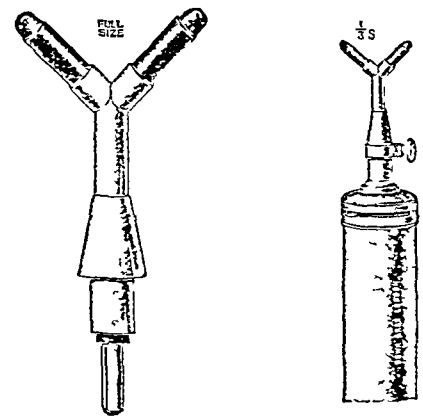
This device is the simplest most natural and most effective correction of the one difficulty of the electric ophthalmoscope It does exactly what we instinctively do to protect our eyes from the glare We shield them with our hands or with hat brims or we fit vizors to the wind screens of our cars

A small thin walled tube is mounted within the hole of the mirror of the ophthalmoscope the forward end of the tube is cut at an angle so that there projects from the hole of the mirror a crescentic ledge or shield This shield fits the lower edge of the drilled hole and projects just sufficiently to cast a shadow over the hole When the shield is in position no aberrant rays can be diverted into the surgeon's eye and he gets a perfectly clear view into the patient's eye For a mirror set at an angle of 45 degrees to the beam from the lamp and a hole of 2 mm diameter the shield fitted to the lower edge of the hole must project 2·5 mm to provide complete protection The shield is made of metal and is fitted to the metal bed plate of the mirror but is independent of the mirror glass so that it is secure and not liable to be broken Also the mirror glass can be detached without disturbing the metal shield

One small difficulty arose in the use of the device When the beam from the lamp was exactly centred to the mirror it was found that the shield cut out the focused rays when they met at the position of the shield This difficulty was overcome by slightly decentring the lamp so that the beam when exactly focused on the mirror impinged upon it to one side of the drilled hole This decentring has no drawback Messrs Rayner of New Bond Street have fitted this shield to the new electric ophthalmoscope made by them for me and which was described in the *British Medical Journal* of January 30th (p 197) The device is a real advantage and it will be the standard pattern It has been fitted to other instruments and has effected a great improvement in each case

ELECTRIC FITTING FOR TESTING TEMPERATURE SENSATION

Dr H WOLFE CORNER (Maida Vale Hospital) writes The instrument shown in the accompanying figures consists of a neat plated metal piece forked at one end to carry two special blackened electric lamps and fitted at the other to slip into the ordinary ophthalmoscope type of battery handle



One of the blackened lamps can be heated from the battery while the other remains cold the heated surface is sufficiently large to give a definite area of fairly high temperature It is specially designed to be always available easily carried inside the ophthalmoscope case and of no great weight or size it is extremely valuable in those cases where the more accurate determination of temperature sense is required

The makers are Messrs Down Bros Ltd St Thomas's Street London S E

A RUBBER OESOPHAGEAL RADIUM TUBE

Mr E MUSGRAVE WOODMAN (Birmingham) writes The use of rigid or metal tubes has long seemed to me a mistake in oesophageal work and for this purpose I have had made for me the rubber tube illustrated herewith It is hexagonal in section with a shoulder which rests on the upper end of the growth and is made of fairly firm rubber Parallel grooves



extend along the sides in which the radium is designed to rest and it is retained in position by a thin rubber covering tube

There are two advantages in these tubes In the first place there is no secondary radiation from the rubber a fact of importance when metal carrying tubes are used In the second place the tubes being elastic move with the patient and there is no danger of injury to the rest of the oesophagus The accompanying illustration shows these points quite well

The tubes are being made for me by Messrs Maver and Phelps

BRITISH SEA-COAST RESORTS

CONFERENCE AT HASTINGS

A further step in the project to formulate and make known the medical value of British marine health resorts was taken last week-end at Hastings by the setting up of a South Eastern Region (Southern Section) Branch of the British Health Resorts Association

The proceedings began on the evening of March 4th with a banquet at the reconstructed and modernized Queen's Hotel with the Mayor of Hastings (Alderman G H ORMEROD) in the chair and the principal speakers were Lord Meston Sir StClair Thomson Alderman Dymond and Mr L A Meredith secretary of the Travel Association of Great Britain and Ireland Sir STCLAIR THOMSON in a speech of characteristic humour and urbanity confessed that the medical profession had not hitherto done all it might for the home resorts and therefore he welcomed the formation of the association He congratulated Hastings on its renaissance it had become a real garden city by the sea with many new amenities and a magnificent sea-water swimming bath He would not have to send his patients abroad when he could find in England hotels like that in which they were met on this occasion

MORNING SESSION

The conference held its first business session on Saturday under the chairmanship of Dr W G WILLOUGHBY President of the British Medical Association who expressed appreciation of the hospitality provided by the Mayor and Corporation of Hastings The coast resorts he said must follow the example of the spas He hoped that the work of organization now that it had begun would be continued and systematized so that the profession and the public could have authentic information about the medical advantages of British seaside resorts both regionally and individually The holding of a Section of Climatology at the B M A Meeting at Eastbourne last summer was a start in the right direction Exaggeration and optimism should alike be avoided Speaking generally it was true that the foreign resorts had been overvalued in the past and the English resorts undervalued Dr E P POULTON in a short paper on the medical value of winter coast resorts amplified the tribute paid by Dr Willoughby to the climates of South East England analysed the beneficial effects of sea air on the metabolism of people accustomed to living in inland towns and emphasized the psychological benefit of a seaside holiday

Dr R A YOUNG speaking on the value of winter resorts for catarrhal and chest affections said that the conditions of to-day offered an unrivalled opportunity to our inland spas and coastal resorts to make their attractions better known and appreciated They played a great part in preventing chronicity of chest diseases and clearing up residual catarrhs their value in convalescence from influenza and kindred complaints was often dramatic On the south coast chronic bronchitics could spend the greater part of the day in the open air in winter There was room for research into the ways in which the seaside resorts produced such profound changes in bodily health and activities It was important for the local doctors at coastal stations to pool their experience and inform the profession generally not only of the type of case for which their own locality was suitable but also of the contraindications Lastly Dr Young urged his non-medical hearers to study Continental methods and apply them to the analysis and advertisement of the manifold merits of home resorts

Dr [illegible] FRIDAY in a note on the value of winter resorts for delicate children stressed the importance of [illegible] in the treatment of rheumatism and tuberculosis If ample time were allowed for a cure just as good results could be obtained on the English sea coast as on the Continental resort Not to allow a temporary improvement from hurriedly advised visits to [illegible] Dr WILFRED HARRIS dealt [illegible] with [illegible] Dr [illegible] the [illegible] influenza were the most frequent causes of breakdown The southern and south-eastern coast of England presented the most favourable terrain for the nursing and treatment of patients with disordered nervous systems but climate alone was not enough and the attractions provided to-day at many places left room for further improvement to aid the recovery of nervous wrecks

In the discussion that followed these papers Dr G R Bruce medical officer of health for Hastings Dr Hill Joseph (Bexhill) and Dr Percy Lewis (Folkestone) briefly outlined the medical advantages of their local climates

AFTERNOON SESSION

At the afternoon session Lord MESTON, president of the British Health Resorts Association took the chair and Lieut-Colonel R H ELLIOT, I M S (ret) gave a vigorous address entitled Some points in connexion with the movement in the course of which he pressed home the need for developing national resources and for scientific organization and wise propaganda He was well aware of the combined effort that responsible hotel directors were making to meet the urgent need to challenge Continental hotels in the matter of tariffs but infinite harm was being done by a few sea-coast hotels which at this moment were deliberately profiteering if they persisted in this unpatriotic course the movement would be ruined Again it was idle for doctors to advise patients accustomed to foreign freedom to go to home resorts where golf and tennis were forbidden in public places on Sunday Mr R C VAUGHAN in a paper on the hotel question took up some of the points raised by Colonel Elliot One of the main reasons he said for high hotel charges was the absurdly short season at some resorts It was clearly in the interest of every seaside town to have the best possible hotels at the lowest possible charges and if corporations and county councils were more merciful in their rating assessments prices would certainly fall One reason for the yearly rush to the Continent had been the passionate desire to escape if only for a fortnight from the irritating restrictions in Britain Two architects Mr CLOUGH WILLIAMS ELLIS and Mr MARSHALL SISSON expounded verbally and visually their ideals for recreation pavilions at the seaside and Dr R FORTESCUE FOX (chairman of the Medical Advisory Committee) recapitulated the aims of himself and his professional colleagues for the organization of the coastal regions so that these might play in future a more effective part in the prevention and cure of disease

Lord MESTON in his address from the chair explained that the immediate objective of this association (which had no commercial aims whatsoever on its own behalf) was to make a comprehensive survey of the curative agencies the amenities the charges and the general conditions at the better known seaside places in the British Isles It was a movement that depended for success on the constant guidance and co-operation of the Medical Advisory Committee The haphazard way in which patients were sent to and treated at most resorts in this country contrasted sharply with the systematic care given at Continental health centres

The business of the conference ended with resolutions formally establishing a local branch of the British Health Resorts Association embracing Folkestone Hythe, Hastings and St Leonards Bexhill-on-Sea and Eastbourne

VISIT TO EASTBOURNE AND BEXHILL

On Sunday a large party of medical men and ladies travelled in fine weather to Eastbourne where they were entertained to luncheon at the Grand Hotel by invitation of the local hotels Brief speeches of welcome were made by the mayor Alderman MacLachlan and by Dr Willoughby and the hospitality of Eastbourne (well known to all who attended the 1931 Annual Meeting of the British Medical Association) was acknowledged by Sir StClair Thomson and Dr Douglas Stanley The return journey was broken at Bexhill where the mayor Mrs Meads entertained the visitors to tea at the Granville Hotel and a most enjoyable day ended with a concert at the new White Rock Pavilion which now graces the sea-front at Hastings

British Medical Journal

SATURDAY, MARCH 12th, 1932

SOME ASPECTS OF RICKETS

The Canadian Medical Association has had the happy inspiration to establish the Blackader Lectureship in Diseases of Children as a tangible expression of deep and abiding appreciation of Dr Blackader's efforts as a mark of recognition also of his 82nd birthday, and finally to signalize his pioneer and long-sustained interest in the field of diseases in children and his devotion to the highest ideals in medicine.[1] The tradition of Dr Blackader's leadership in Canadian paediatric circles is as well recognized in England as in his own country, but the Canadian Medical Association owes him a particular debt of gratitude for his work as editor of its journal. Volunteering for this post in the difficult days following the war in ten years he had successfully established the journal in the position of influence and popularity which it enjoys to day. He has now relinquished the post in which he worked so valiantly but remains as emeritus editor. As is very fitting the *Canadian Medical Association Journal* enjoys the privilege of printing the first Blackader Lecture given by Dr E. A. Park professor of paediatrics at Johns Hopkins University.[2]

Professor Park took rickets as the subject of his lecture, and by boldly concentrating only on certain aspects of that disease was able to say much that was interesting and valuable. His first point concerned the connexion between physical growth and rickets and he was probably correct in stating that the fact that growth is an essential factor in the production of rickets has hardly received adequate recognition. Rickets it may be said is not so much a disease of bone as one of growing bone for unless growth is occurring there is no need for the deposition of lime salts and hence no opportunity for their defective deposition, which is the essence of rickets. This aspect of the problem has certainly received attention in England—notably by Professor Leonard Parsons[3] who emphasized it some years ago in his studies of the late rickets of renal and coeliac infantilism—yet its full implications can hardly be said to have been sufficiently grasped. These as expounded by Professor Park are full of interest. He shows for instance that mere readings of the serum calcium and phosphorus concentrations are no true criterion of the presence or absence of active rickets unless we know at the same time the rate of growth proceeding, for the occurrence of rickets depends upon a disturbance of the ratio between the rate of growth and the concentration of calcium and phosphorus in the serum. The recognition of this fact not only explains why rickets may be present or unexpectedly absent but determines the distribution of the osseous manifestations of the disease. It is for example not uncommon for the blood concentration to be sufficient to prevent the appearance of rickets in a slowly growing bone while it is insufficient to avoid its development in the rapidly growing end of a rib. In this connexion Professor Park gives a list of the various sites for the disease in the order of their rate of growth and susceptibility. It is worth noting that at the top of the list come the costochondral junctions of the middle ribs, while the lower ends of the radius and ulna—the parts conveniently tested for radiographic evidence of rickets—come considerably lower in the scale. Changes in the rate of growth too are to some extent responsible for the variations in the degree of rickets: this was the second point raised by Professor Park. Other variable factors such as alterations in the diet, chance exposure to ultra-violet light, the presence of complicating diseases and so on conduce to the same end. In most cases of this disorder there are therefore fluctuations in the deposition of lime salts and unless this is borne in mind there is danger of misreading skiagrams especially with regard to evidences of healing and quiescence of the disease.

On the origin of the various deformities Professor Park had much that was of interest to say. These he said followed different patterns at different age-periods depending entirely on the time in the child's life when the rickets develops and flourishes. The reasons for this are: first that stress and strain are differently applied as the posture and activity change with increasing age; and secondly that rickets affects different parts of the skeleton at different ages according to the changing rates of growth. Although he was here hardly traversing new ground the lecturer contrived to make this part of his subject particularly fascinating. By studying the types and exact positions of the bony deformities and correlating them with the rates of growth and the postures at various ages, he sketched pictures or patterns of rickets from which the whole course of the disease could clearly be deduced.

Finally, in the published report though not we are given to understand, in the lecture as delivered Professor Park dealt in some detail with the association between ultra-violet rays and rickets. How far the annual amounts of sunshine in different parts of the world affect the incidence of the disease is an interesting question, which will need a large number of reports from various localities to settle. Some of the evidence on this aspect of the problem was considered by Professor Park and a recent paper by Dr Kempson Maddox[4] on rickets in Sydney, Australia may be quoted as dealing with the same subject. Sydney enjoys an annual rate of sunshine amounting roughly to 2 000 hours as well as plentiful space for sea-bathing. Yet far from being an unknown condition amongst the children so favoured Dr Maddox found evidence of rickets in rather over half the children coming to hospital between the ages of 6 months and 2 years. Before a statement of this sort is accepted, what is meant by 'evidence of rickets' must be carefully defined and in his paper Dr Maddox attends to

[1] Canadian Med. Ass. Journ. 1932, xxvi, 1.
[2] Am. Dis. Child. 1932, xliii, 198.
[3] Ibid. 1925, xxix, 9.

BRITISH SEA-COAST RESORTS

CONFERENCE AT HASTINGS

A further step in the project to formulate and make known the medical value of British marine health resorts was taken last week-end at Hastings by the setting up of a South Eastern Region (Southern Section) Branch of the British Health Resorts Association

The proceedings began on the evening of March 4th with a banquet at the reconstructed and modernized Queen's Hotel with the Mayor of Hastings (Alderman G H ORMEROD) in the chair and the principal speakers were Lord Meston Sir StClair Thomson Alderman Dymond and Mr L A Meredith secretary of the Travel Association of Great Britain and Ireland Sir STCLAIR THOMSON in a speech of characteristic humour and urbanity confessed that the medical profession had not hitherto done all it might for the home resorts and therefore he welcomed the formation of the association He congratulated Hastings on its renaissance it had become a real garden city by the sea with many new amenities and a magnificent sea water swimming bath He would not have to send his patients abroad when he could find in England hotels like that in which they were met on this occasion

MORNING SESSION

The conference held its first business session on Saturday under the chairmanship of Dr W G WILLOUGHBY President of the British Medical Association who expressed appreciation of the hospitality provided by the Mayor and Corporation of Hastings The coast resorts he said must follow the example of the spas He hoped that the work of organization now that it had begun would be continued and systematized so that the profession and the public could have authentic information about the medical advantages of British seaside resorts both regionally and individually The holding of a Section of Climatology at the B M A Meeting at Eastbourne last summer was a start in the right direction Exaggeration and optimism should alike be avoided Speaking generally it was true that the foreign resorts had been over-valued in the past and the English resorts under-valued Dr E P POULTON in a short paper on the medical value of winter coast resorts amplified the tribute paid by Dr Willoughby to the climates of South East England analysed the beneficial effects of sea air on the metabolism of people accustomed to living in inland towns and emphasized the psychological benefit of a seaside holiday

Dr R A YOUNG speaking on the value of winter resorts for catarrhal and chest affections said that the conditions of to-day offered an unrivalled opportunity to our inland spas and coastal resorts to make their attractions better known and appreciated They played a great part in preventing chronicity of chest diseases and clearing up residual catarrhs their value in convalescence from influenza and kindred complaints was often dramatic On the south coast chronic bronchitics could spend the greater part of the day in the open air in winter There was room for research into the ways in which the seaside resorts produced such profound changes in bodily health and activities It was important for the local doctors at coastal stations to pool their experience and inform the profession generally not only of the type of case for which their own locality was suitable but also of the contra-indications Lastly Dr Young urged his non-medical hearers to study Continental methods and apply them to the analysis and advertisement of the manifold merits of home resorts

Dr LEONARD FINDLAY in a note on the value of winter resorts for delicate children stressed the importance of fresh air and sunshine in the treatment of rheumatism and tuberculosis If triple time were allowed for a cure just as good results could be obtained on the English sea coast as in any Continental resort Not too low a temperature and protection from northerly and easterly winds were valuable factors Dr WILFRED HARRIS discussed the requirements of patients with nervous fatigue and showed the debilitating effect of illness in the influenza were the most frequent causes of breakdown The southern and south-eastern coast of England presented the most favourable terrain for the nursing and treatment of patients with disordered nervous systems but climate alone was not enough and the attractions provided to-day at many places left room for further improvement to aid the recovery of nervous wrecks

In the discussion that followed these papers Dr G R Bruce medical officer of health for Hastings Dr Hill Joseph (Bexhill) and Dr Percy Lewis (Folkestone) briefly outlined the medical advantages of their local climates

AFTERNOON SESSION

At the afternoon session Lord MESTON president of the British Health Resorts Association took the chair and Lieut-Colonel R H ELLIOT I M S (ret.), gave a vigorous address entitled Some points in connexion with the movement in the course of which he pressed home the need for developing national resources and for scientific organization and wise propaganda He was well aware of the combined effort that responsible hotel directors were making to meet the urgent need to challenge Continental hotels in the matter of tariffs but infinite harm was being done by a few sea coast hotels which at this moment were deliberately profiteering if they persisted in this unpatriotic course the movement would be ruined Again it was idle for doctors to advise patients accustomed to foreign freedom to go to home resorts where golf and tennis were forbidden in public places on Sunday Mr R C VAUGHAN in a paper on the hotel question took up some of the points raised by Colonel Elliot One of the main reasons he said for high hotel charges was the absurdly short season at some resorts It was clearly in the interest of every seaside town to have the best possible hotels at the lowest possible charges and if corporations and county councils were more merciful in their rating assessments prices would certainly fall One reason for the yearly rush to the Continent had been the passionate desire to escape if only for a fortnight, from the irritating restrictions in Britain Two architects Mr CLOUGH WILLIAMS ELLIS and Mr MAXWELL SISSON expounded verbally and visually their ideals for recreation pavilions at the seaside and Dr R FORTESCUE FOX (chairman of the Medical Advisory Committee) recapitulated the aims of himself and his professional colleagues for the organization of the coastal regions so that these might play in future a more effective part in the prevention and cure of disease

Lord MESTON in his address from the chair explained that the immediate objective of this association (which had no commercial aims whatsoever on its own behalf) was to make a comprehensive survey of the curative agencies the amenities the charges and the general conditions at the better known seaside places in the British Isles It was a movement that depended for success on the constant guidance and co-operation of the Medical Advisory Committee The haphazard way in which patients were sent to and treated at most resorts in this country contrasted sharply with the systematic care given at Continental health centres

The business of the conference ended with resolutions formally establishing a local branch of the British Health Resorts Association embracing Folkestone Hythe Hastings and St Leonards Bexhill-on-Sea and Eastbourne

VISIT TO EASTBOURNE AND BEXHILL

On Sunday a large party of medical men and ladies travelled in fine weather to Eastbourne where they were entertained to luncheon at the Grand Hotel by invitation of the local hotels Brief speeches of welcome were made by the mayor Alderman MacLachlan and by Dr Willoughby and the hospitality of Eastbourne (well known to all who attended the 1931 Annual Meeting of the British Medical Association) was acknowledged by Sir StClair Thomson and Dr Douglas Starkey The return journey was broken at Bexhill where the mayor Mrs Meads entertained the visitors to tea at the Granville Hotel and a most enjoyable day ended with a concert at the new White Rock Pavilion which now graces the sea front at Hastings

British Medical Journal

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[1] [illegible]

[2] [illegible]

[3] Ibid 1932 vii 9

this point accurately and acceptably While it is true to say that in his cases the disease was almost invariably mild, it is interesting that even in such a climate social conditions can give rise to rickets in so considerable a proportion of the children Dr Maddox's investigations brought to light the curious point that cod-liver oil seemed to possess less antirachitic power than fresh cow's milk Although the author acknowledges that this effect might be due to the use of a poor type of oil, or to its administration in too small doses, he makes the rather novel suggestion that milk from cows feeding on sun-bathed land may be richer in protective qualities than milk as we know it in England

SUPPURATION IN THE MAXILLARY ANTRUM

The discussion on acute and chronic suppuration in the antrum of Highmore introduced by Mr W M Mollison at the Laryngological Section of the Royal Society of Medicine on March 4th indicates a wholesome discontent with the orthodox methods of treatment Acute suppuration is in great measure an elusive malady, because a vast number of cases recover spontaneously It is only the exceptional case in which neuralgia occurring in the course of an ordinary cold or an attack of influenza is not relieved by a sudden but transient discharge from the nose which calls for active treatment Expressed a little differently, recovery follows without treatment unless the paralysis of the cilia on the mucous lining of the antrum is too severe and too prolonged, and the drainage into the nose is insufficient The problem here is to restore the activity of the ciliated epithelium and the natural drainage The application of cocaine or cocaine with adrenaline to the middle meatus in order to shrink the swollen mucous membrane at the openings of the anterior group of accessory sinuses usually restores the natural drainage, and if that is insufficient lavage of the antrum by puncture with trocar and cannula through the inferior meatus will give the cilia the necessary aid to recovery There are some who think that even the latter manœuvre is rarely necessary, but most agree and we believe rightly, that it is of established value in treatment as well as in diagnosis and prevents many cases from drifting into a condition of chronic suppuration It is generally agreed also that operation is contraindicated as unnecessary as not without danger of osteomyelitis and as liable to perpetuate a chronic nasal discharge

Greater difficulty, and a corresponding increase of diversity in opinion arises in the treatment of chronic suppuration The majority of such cases have no doubt originated in an unresolved attack of acute suppuration but there are in addition chronic cases of dental origin and a few due to exceptional causes such as a foreign body The view is gaining ground also that allergic states affecting the nasal mucosa eventually cause polypi and this change may include the lining of the antrum sometimes with a secondary purulent infection from the stagnation caused by obstructed ventilation and drainage In recent years intranasal drainage of the antrum formerly practised by the most conservative operators only, has been found capable of relieving most cases of nasal origin which have become chronic or semi chronic Even here there is doubt whether a portion of the inferior turbinal should be removed or whether it should be completely preserved Mr Mollison is an outspoken advocate of complete preservation, an ideal against which it is impossible to bring theoretical arguments, but in practice there are cases in which the anterior end of an enlarged turbinal may or even must be removed to allow a proper opening to be made, and this is often done without producing that drying and crusting which is so much feared as the result of an excessive ablation of the nasal mucosa

Still further difficulty is experienced in selecting the cases which require the radical operation by the canine fossa route for their relief The underlying factor is the uncertainty which hangs over the ultimate fate of the antrum lining If it is hopelessly diseased and incapable for the future of anything but a perpetual secretion of pus, it must be right to remove it On the other hand, if ventilation and drainage are capable of allowing the ciliated epithelium to regenerate however much it appears to be damaged, then conservation of the mucous lining is not merely permissible but imperative Experimental work suggests that the ciliated epithelium can be reproduced even after total removal, and the former view, that after the radical operation the antrum simply becomes lined with a smooth scar, must be qualified Mr Mollison may be quoted, as his words here fit the situation exactly

The epithelium arises either from the microscopic lining left after operation or it grows in from the nose Evidently the more islands of epithelium that can be left the better, for this reason it would appear important not to scrape away the antral lining too vigorously, better probably only to nip off the exuberant polypoid lining ' Having made this reservation there will be general agreement with the indications given by Mr Mollison for the radical operation These include cases in which the intranasal operation has failed when the antrum contains cholesteatomatous material, foreign bodies including teeth, or polypi, and when there is a fistula The popularity of alveolar drainage seems to have reached its lowest ebb so much so that it will probably soon find a fresh advocate as there are some dental cases in which it proves safe and sufficient

The most recent difficulty which has been discovered relates to the treatment of the infected antrum when the origin of the disease is allergic The antrum may contain nothing but mucus, but radiography shows changes in the mucous membrane which may have undergone extensive polypoid degeneration One school, especially in America advocates the radical operation with removal of the lining membrane as the only cure More are likely to follow the advice of Mr A J Wright who advocates reliance on constitutional measures combined with any operative treatment necessary to ensure nasal drainage and ventilation

FOOT TROUBLES

We publish elsewhere in this week's issue a paper read before the Bath and Bristol Branch of the British Medical Association by Dr Maud Forrester-Brown of Bath under the title of "Flat-foot." In it the author treats in considerable detail of incompetent feet as she prefers to call them. Though we do not suppose it is possible in the present state of knowledge to decide whether the estimate is correct that from 70 to 90 per cent. of civilized mankind suffer from foot trouble surgeons concerned with deformities will freely admit that such trouble is very widely prevalent, on the lowest estimate. Anatomically a foot may seem perfectly normal but functionally it may not be so, and among various causes the chief is lack of neuro-muscular control. The sub-astragaloid joint in the erect position is in almost unstable equilibrium—an equilibrium that may be nullified by apparently slight causes. In preventing this as well as many other disadvantages of the erect position, postural tone of muscles plays a very important part.

Dr. Forrester-Brown points out to begin with that in dealing with foot troubles it must be ever borne in mind that integrity of structure and of function do not always coexist. The converse is also sometimes true—namely, that functional integrity may exist without anatomical perfection. As a matter of fact however it will be found on examination that the vast majority of adults who have habitually worn boots or shoes exhibit some abnormality such as hallux valgus and restriction of the range of movement of joints, as compared with the unimpaired infantile foot. Yet a large number of such persons will not complain of any resulting disability. The average adult cannot by volition adduct his great toe beyond the sagittal line but he does not feel this loss because wearing more or less stiff shoes he has no need of such a movement. One of the difficulties in estimating normality arises from the wide range of types of feet which are admissible as normal between the too high arch of pes cavus and the undoubtedly flat and over-pronated foot. Appearances are deceptive, and the muscular foot of low arch but good tone must not hastily be considered pathological. The muscles of the legs and feet of the ladies of the corps de ballet are well developed and well innervated yet when they come down to earth (or rather to the boards) before walking off these professional dancers are in general markedly splay-footed yet no one would style their feet incompetent.

Notwithstanding the amount of attention which has been devoted to the study of the foot and its disabilities there are still points on which physiologists anatomists and surgeons fall short of complete agreement. Not all Dr. Forrester-Brown's postulates will be universally granted nor will the actiology of Dr. S. D. Fairweather whose book on *Flat foot*[1] is before us for review. Dr. Fairweather would convict boot heels—not high heels only but any heels—as the source and origin of flat-foot and other disabilities. We are all—or nearly all—agreed in condemning high heels but there should we think, be more proof before the dictum is generally accepted that the half-inch raising of the heel which is the net effect in most men's walking boots, must be held responsible for so many foot troubles as Dr. Fairweather would have us believe. Nevertheless he has produced an interesting and suggestive study of flat-foot and his conclusions to which he has come after many years observation and investigation are deserving of respectful consideration. Facts, as we have been told are stubborn things and the facts brought forward by Dr. Fairweather are no exception. All the same it should be remembered that some women can and do walk long distances in high-heeled and pointed shoes without suffering for it as the physiologist and the surgeon think they should. In summing up some correspondence in these columns in 1930 on "The foot and the shoe"[2] we came to the despairing conclusion that nothing less than a change of heart and an orthopaedic Wesley could effect the necessary revolution in woman's footgear and bring her to abandon a tiptoe gait. But after all who can tell? Woman has abandoned tight-lacing and she may yet astonish the low-heeled male by giving up high heels and pointed toes, even as the Chinese have given up foot-binding and queues.

[1] *The True Nature, Cause, and Rational Cure of Flat-foot.* By S. D. Fairweather, MB, ChB. With foreword by Sir Robert Jones, Bt., FRCS. London: J. Bale, Sons and Danielsson, Ltd. (7s. 6d. net.)

RECENT ADVANCES IN BIOLOGICAL STANDARDIZATION

The sixth annual report of the Pharmacological Laboratories of the Pharmaceutical Society shows that this institution under the direction of Dr. J. H. Burn, is continuing its valuable but difficult work of developing ways of quantitatively estimating the biological activity of drugs. Among the new tests is that for the measurement of the antidiuretic potency of posterior pituitary extracts. It is based on the duration of inhibition of water diuresis in rats. The following ingenious method has been devised for the measurement of calcium absorption. Mice can be narcotized by subcutaneous injection of magnesium sulphate but this effect is antagonized by injections of calcium. Hence if calcium is given by mouth and magnesium sulphate is injected the incidence of narcosis indicates the amount of calcium absorbed. An interesting and somewhat unexpected discovery was made about the influence of diet on a biological assay. Tests of the toxicity of mercurochrome made in two institutions differed by no less than 50 per cent. and this difference was found to depend on the fact that the mice in one institution were fed on mixed grain and in the other on bread-and-milk. These examples illustrate the refinements in methods of biological assay that are occurring and also the obstacles this new science has to overcome. There is no doubt that accurate quantitative measurement of the actions produced by drugs will have a fundamental effect on the whole science of pharmacology for it is

[2] *British Medical Journal*, 1930, ii, 27.

constantly revealing new factors influencing the action of drugs which were missed by the cruder qualitative tests The delicacy and difficulty of the technique of biological assay makes it however, undesirable for routine use and there is a constant effort to develop chemical methods to replace the biological ones The biological test for activity of ergot is in process of substitution by a chemical colour test Similarly, a colour test for vitamin A is becoming established in place of the feeding test On the subject of vitamin standardization Dr Burn points out the great importance of the international conference held in June under the auspices of the League of Nations [1] This conference laid down international standards of reference previously each country had adopted its own This was objected to for two reasons In the first place the units varied widely and in the second place many of the measures employed were faulty The only satisfactory method of biological standardization is to standardize the unknown against a preparation of known strength, for only by such means is it possible to eliminate the effect of the dozens of minor variations in technique that may affect the result Secondly, all methods must make allowance for animal variation, for this occurs even with inbred animals of the same age that have been reared together The new international standards that have been adopted for the vitamins A, B_1 C and D have been framed in accordance with these general principles For example the unit of vitamin D recommended is the vitamin D activity of 1 mg of the international standard solution of irradiated ergosterol This quantity is equivalent to 0 1 microgram of irradiated ergosterol It is proposed that at least twenty rats be used for a determination half of which receive the standard and the remaining litter mates the unknown substance These directions are simple, but they eliminate various sources of error that have affected previous methods The essential fact is that the activity of the unknown is compared with that of a constant standard in two groups of animals as nearly identical as possible

TREATMENT OF SPRUE

Largely as the outcome of researches undertaken under a grant from the Colonial Medical Research Council by Dr Hamilton Fairley and his colleagues at the Hospital for Tropical Diseases Endsleigh Gardens, the view is gaining ground that tropical sprue is essentially a disease of the alimentary tract characterized by deficient production in the stomach of both HCl and Castle's bone-marrow-stimulating factor, as well as by malabsorption of fats glucose and calcium in the small intestine But while the mechanism in the production of the sprue syndrome has been revealed by recent investigation the fundamental aetiological agency underlying this gastro intestinal derangement remains unknown The essentials of treatment as defined by Fairley consist of rest in bed appropriate dietary the control of megalocytic anaemia by liver extract and the reinforcement of demonstrable deficiencies by such means as HCl calcium and vitamin D Alimentary rest has long been recognized as the therapeutic ideal the fruit treatment of Van der Burg the classical milk treatment of Manson, and the red-meat treatment of Cantlie, all bear witness to the recognition of the fact that dietary is an all important factor in recovery Diverse foodstuffs have in the past been employed empirically On the basis of the demonstrable inability of sprue patients to deal adequately with fats and carbohydrates Fairley[1] (1930) introduced graded high meat protein low fat low carbohydrate diets the ratio of the three constituents being 1 0 0 3 1 3 When combined with an adequate dosage of liver extract this dietary yielded highly satisfactory results In a more recent paper[2] (1932) the results obtained with a high milk protein powder containing the same ratio of protein, fat, and carbohydrate are recorded in a series of ten consecutive cases Though the alimentary features were not always as dramatically relieved as with a high meat protein diet, the end-results were quite satisfactory in all cases, and, provided adequate quantities of liver extract were administered, the reticulocyte response and blood restoration proved equally great whether meat or milk protein was being given High protein milk powder should have a special field of usefulness among vegetarians on board ship and in the Tropics where good quality meat in a satisfactory condition is often unprocurable, and where buffalo milk owing to the high fat and bacterial content often proves an unsuitable dietary We understand that Cow & Gate Ltd prepared the high protein milk powder according to the formula stated above and that the product is now available under the trade name "sprulac"

INDUSTRIAL PSYCHOLOGY

Last week the eleventh annual general meeting of the National Institute of Industrial Psychology was held The report for the year 1931 presented to that meeting is of much interest, and will be found in the March number of the Institute's journal, *The Human Factor* which is henceforth to be published monthly instead of quarterly The report contains a record of activities which, under present circumstances, may properly be described as amazing, and of results which have in some cases been surprisingly successful The field covered by the Institute is wide It is fourfold and comprises investigation, vocational guidance, research and education A brief outline of the industrial investigations undertaken during the past year is given They include inquiries, inspections and experiments on behalf of an advertising agency, of various manufacturing and distributing firms large and small of gold-mining undertakings of the General Post Office, and of the National Union of Teachers in co operation with the Essex Education Committee Most valuable and financially advantageous results have emerged from these In addition to many individual cases in which skilled advice as to the choice of a career has been given perhaps the chief work under the heading of vocational guidance was the publication in July last of the results of the Carnegie London experiment A review of this work was published in our issue of October 24th last (p 756) Another interesting experiment which has now been undertaken arranged by H M Prison Commissioners is designed to ascertain whether the application of the Institute's methods of vocational guidance

[1] [illegible] of Pe[illegible] Ce[illegible] on P[illegible] [illegible]ndi[illegible]tion [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] See *Br Medical Journal* [illegible]

[1] *Trn Roy Soc Trop Med and Hyg* 1930 xx v 131
[2] *Ibid* 1932 xxv 257

would make for a more suitable distribution of lads among the different working parties in the Borstal institutions A good deal of research is being pursued two of the studies at present in progress being concerned with tests for motor drivers, and with the relation of rhythm to muscular activity Lectures, demonstrations and conferences have been provided under the auspices of the Institute and the facilities offered by its library are an important part of its work All these activities are not merely of great scientific interest, but are directed to a thoroughly practical purpose The aim is to reduce the waste of human energy throughout industry by improving the conditions of work and the general contentment of the worker, and by discovering and removing various causes physical or mental which prevent the worker from giving his best The appeal for financial and other support for an enterprise of this nature ought to evoke a satisfactory response even in these difficult times

DOMESTIC AND CLINICAL USE OF COAL GAS

In 1832—or it may have been 1830—one James Sharp of Northampton demonstrated the use of coal gas for cooking in his own home To day gas is used in more than nine million homes in this country and probably in seven million of these the cooking is done by its means Just before the close of the British Industries Fair a company of journalists were the guests of the British Commercial Gas Association, and had the opportunity at Castle Bromwich of inspecting the comprehensive gas exhibit displayed there The new gas cooker must have robbed the kitchen of many terrors It is a highly scientific piece of domestic engineering with thermostatic control of the oven temperature enabling any desired heat to be obtained by the turn of a numbered dial Another application of gas in the house is for water heating The hot tap turned on in any part of the house puts the heater into operation, so that a hot bath can be secured almost immediately Nowadays there are gas fires with cunningly polished reflectors whereby both heat and glow are greatly increased, gas fires constructed with a synthetic cinder so as to give the illusion of a coal fire, and gas fires incorporating an original disposition of the radiating surface It is claimed for some of the newer fires that they are specially rich in the infra-red part of the spectrum Even gas operated wash coppers drying and airing cupboards, ironing boards, and central-heating plants are now used while a further innovation is the gas larder made for building into the wall of the smallest kitchen this comprises a refrigerator capable of providing a domestic supply of ice The radiation clinical gas lamp, as recommended by Sir Leonard Hill and others for the treatment of conditions benefited by radiant heat was also on view In this an incandescent radiant treated with a material which ensures increased emission of infra red energy and the provision of heat of good penetrating value is placed near the focus of a parabolic mirror so that the energy travels outwards in a slowly diverging beam The lamp is placed two or three feet from the patient who is exposed usually for an hour or so Figures are available to show that the energy transmitted from the clinical gas lamp and penetrating an ox horn screen is almost twice as great as that from a gas bowl heater and from this penetration of the ox horn some idea may be gained of the possible penetration through the superficial layers of the epidermis One left Castle Bromwich with the impression of a progressive industry keeping a combative eye upon its great rival electricity

OLD CULTURES FOR NEW

Ex Africa aliquid semper novi However true this generalization may be it would be truer still to say that there is always something new going *in to* Africa—and apparently among the comparatively new things must be placed the negro The original home of the negro still remains an anthropological puzzle but, wherever that may have been research has made it quite clear that the earlier inhabitants of Africa were not even negroid while even as late as 3000 B C the human inhabitants of Eastern Africa were almost certainly Hamitic and were of the same stock as the pre-Dynastic Egyptians Not till the Eighteenth Dynasty do we find any sure recognition by a higher culture of the negro in Africa though by that time he must have been domiciled for a considerable period Mr Leakey's excavations in Kenya have made the comparative modernity of the negro in that area reasonably certain and they serve to confirm the views which others notably Sergi have advanced to the effect that even if the Hamites did not originate in the Horn of Africa, at any rate there has been a continuous influx of Hamitic invaders into North-East Africa for several thousands of years One of the notable results of Mr Leakey's discoveries has been a correlation of the pluvial periods of Africa and European glaciations which serve to link together the human history and the Pleistocene fauna of the two continents It is possible that further research may find in climatic variations the eventual substitution of negro for Hamitic culture in East Africa In a recent volume[1] Mr Leakey has given a full though to the layman an arid account of the stone implements which his excavations have yielded and here again it appears that a remarkable equation is possible between the cultural achievements of African and European man with the proviso that whereas in Europe there seems to have been no necessary sequence of development, in Africa the succession of cultures may be traced in the almost causal relationship which exists between the stone tools which Mr Leakey's expeditions have unearthed In the circumstances therefore, while we may be intrigued to know that there is this uniformity we should have felt far more gratified to find in a book professedly written for the general reader some account however speculative of the users of these tools Such an account moreover need not have placed an undue strain on speculation After all there are very definite facts to go upon The geographical configuration of East Africa has made it the natural corridor for the enterprising discoverer of all ages it is the one route from North to South Africa which has always been open and the evidence of terraced cultivation and of graded roads—which could only have been made for wheeled traffic—and of ancient buildings in stone such as the present inhabitants never construct points to the exploitation of Africa by an earlier and a higher civilization than

[1] *The Stone Age Cultures of Kenya Colony* By L S B Leakey London Cambridge University Press 1931 (Cr 8vo pp

exists to-day. When we take into consideration the human remains that have also come to light in East Africa it is not too romantic a speculation to suggest that there we find the traces of a civilization which was technically white. The black man had not yet come into his own. There was still new wine to be poured into the old bottle and the Hamites who have made the present day negro what he is were also the precursors of the same negro driven south at first by climatic conditions and in less prehistoric times by their search for gold and the rich economic gifts that Africa has always offered to the adventurer and to the exploiter.

THE LUBECK TRIAL

The review and commentary on this case in the German medical journals is now almost complete. It is again pointed out that Bruno Lange and Kolle were of opinion that contamination of the Lubeck vaccine with the Kiel culture had certainly occurred while Uhlenhuth and Much though admitting that most investigators had found B.C.G. to be avirulent felt that the positive results obtained in a number of investigations—including those of Watson and Seiffert—in which virulent strains had made their appearance or active tuberculosis had been produced could not be disregarded. It was not easy to explain these positive results rare though they were. Poll said that on general biological grounds no living organism could be regarded as having fixed qualities of all kinds resistant to all conditions of change of environment. Schuermann's necropsy results are again mentioned. It will be remembered that in 97 per cent. of the unfortunate children active tuberculosis of the intestine was present the time between the oral administration of the B.C.G. and death being from nine to thirty four weeks. In the earlier comments by the medical journals the disaster had been attributed to an erroneous mistake. This phrase has been objected to by counsel for Professor Deycke and Dr. Altstaedt. The German medical reviewer in his comment emphasized the need for specially trained investigators and properly equipped laboratories to control the investigation and the making of new biological preparations in order to relieve the general practitioner of his grave responsibility. His final remark was that the use of vaccines containing living organisms will in the future find no advocate in Germany.

American workers and American science he is full of American speed upsetting traditions based on experience, and in this connexion he remarks: I prefer ten observations conducted from beginning to end by the same sage clinicians to 500 observations harvested in a central dossier by a compiler who has no personal knowledge of any of them. As sometimes happens to conscientious missionaries Professor Sergent admits that in the field in which he labours he found things in several respects better than at home. On each visit to Canada he observed new signs of progress—magnificent hospitals superb laboratories and a sustained wave of progress. And every time he returned home he was painfully struck by the lack and impediments to the advance of medical science. His recommendations for the furthering of co-operation in medical science between Canada and France include provision for French Canadian medical students and doctors to hold temporary hospital appointments in France. These appointments would have to be looked upon as not substitutes for appointments of Lecturers men and they would not carry with them the right to practise permanently in France. Professor Sergent succeeds in not losing himself in any profound admiration for conferences and exhibitions as a method of international co-operation he has more faith in the individual contact of the medical house officer.

VICTOR HORSLEY MEMORIAL LECTURE

The Victor Horsley Memorial Fund was raised in 1929 to commemorate the services of Sir Victor Horsley to science and the British Empire and is devoted to the giving of a lecture triennially in London entitled the Victor Horsley Memorial Lecture. The fourth lecture is due to be delivered in 1932 and the trustees (who consist of the Presidents of the Royal Society the Royal College of Surgeons of England and the British Medical Association the senior physician to the National Hospital Queen Square the senior surgeon to University College Hospital and Mr Stanley G. Robinson son in law of Sir Victor Horsley) have invited Professor E. D. Adrian M.D. F.R.S. F.R.C.P. of Cambridge to give the lecture and he has consented to do so. It will be delivered on July 20th next on the Visceral sense organs. It is hoped that Sir Frederick Gowland Hopkins D.Sc. LL.D. F.R.C.P. (President of the Royal Society) will take the chair. The

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It is nowhere denied that we ask impossible tasks of students who are bewildered by hours of listening and that we stamp out the habit of reflection by a ceaseless drill. And this is done in the name of education: it is the soil which we deliberately design as the happy breeding ground of a scientific way of thought that can thrive only on faithful and accurate and patient observation and has its roots in meditation, the loneliest habit of man.

So strange an anomaly may set us thinking how we are come to such a pass. The blunt truth would appear to be that the handling and revision of the curriculum are based on a misconception of what we can and ought to attempt in a medical school. The one purpose of the student's years is, it seems, not to train and test habits of thought, but to collect and store a set of facts as squirrels hoard the nuts on which they hibernate. These facts are his capital, and he must perforce live on it throughout his working life, for he has not been put in the way of adding to his possessions as time passes. Presently it shrinks, and he must needs replace it by a stock of worldly wisdom built upon a growing discernment of the ways of human nature, so that soon he is as cunning in the management of men as he is helpless in the control of their diseases. And this the end for the system ensures, that it often is the end of that which should have no ending, but death itself, of an education we call it such which comes to its grand climax in this manner at that time commonly in the twenty-third year when it should be but beginning. It may be conceded that such a policy was reasonable when medicine was a slowly progressing science that did not greatly alter in a man's lifetime. To-day it leaves him bankrupt when he has scarcely begun. The little he knows is soon antiquated, and he cannot keep up with a rapidly changing science, for we have so contrived to educate him that he cannot educate himself.

The English student, it is said, is safer, more responsible, more practical at the time of graduation, more accustomed to handling patients than the graduate in other lands at the same stage. But it is also said that he has little power of growth; ten years later he stands much where he did, while his contemporary abroad is forging ahead, because those who taught him had never for one moment forgotten that one day he must reason for himself. They knew that without the perpetual activity of a disciplined mind he must fall a victim to every passing fashion and live among the credulous. The student with a disposition to think for himself caught in the clinical years in a blind rush to meet the tyranny of signing up is hurried out of thought. We trust neither his industry nor his capacity. He must be driven into different pens for every hour of the day, along with a drifting flock that presses now this way and now that. And this, if I may be allowed a change of metaphor, in the hope that he may one day recognize a disease because he has seen it before, as a sleepy traveller marks his destination at night.

If this is right, if this is the true gospel of education, the problem of the curriculum is not only insoluble; it must quickly create confusion. New departures are in fact initiated with bewildering haste while we remain reluctant to sweep away much that has slowly fallen into discredit. There is an obvious limit to a steady growth of that kind. Even as far back as 1906 more than half the medical students in England required seven years or more in which to qualify. If we allow the curriculum to go on growing it will soon be no longer necessary to argue that it is educationally unsound because as a physical feat it will have become impossible.

THE WAY OF SALVATION

There is no way of escape from our present distresses that will or can be found until we recognize in theory and in practice admit that the making of a physician is primarily an educational and not a professional question. What do we ask of him? Is it not that he be trained not only in the observation of facts but also in the habit of handling them—in a word, in methods of reasoning which alone supply any solution to the problems of professional life? We can in any event teach but a fraction of what is known, and it is not possible to foresee all the situations that the student will meet hereafter to arm him with facts proof against any and every emergency. When we think of all the mistakes we have made, and of those we have seen others make, when we remember that these were made not often from faulty observation of facts but more from errors in deduction from those facts, in short from defective reasoning, we shall have to admit that a certain activity of mind is as helpful in protecting the public from errors in diagnosis as the mastery of physical signs. Certainly we may not meddle with the admirable manner in which these physical signs are taught in English schools of medicine, for they are admittedly the alphabet of our art. But it is another matter with the glut of tall that is grafted on to that practical basis.

Facts the student must have—they are the food on which he must live—but a system which has become concerned too narrowly, too exclusively with their mechanical acquisition is as surely a misconception. It is a pitiable substitute for a living policy only recalling those pathetic figures who are to be seen immersed in their books between the morning and afternoon papers of an examination. They think it shall profit them more to goad their poor weary memories to one final effort than to enter upon their ordeal with a clear head and a cool judgement.

Custom is the principal magistrate of a man's life, and education is in effect but an early custom. We seek to establish habits to test and form ways of thought. If we ask of the student that he learn everything he may in the issue learn nothing, nothing of value. But if we frankly own the futility of such endeavour then we as teachers freed from that bondage may discover that it is within our competence to foster his natural power of collecting such facts—a power that remains and abides long after the actual information we impart has been forgotten or has proved misleading. We shall be satisfied if he go away keen and curious and disposed to remedy his deficiencies. If he realizes those deficiencies and has learnt a sound method of remedying them we shall not anxiously measure how little he knows, but rather help him by drastically limiting what he must do, content to persuade him to push ahead in whatsoever direction he has a disposition to go. Let him do something thoroughly and let that something be of his own choosing. If he does not want to do things we may be sure that the system has dried up and stifled the natural curiosity of his years. The student who is not curious is surely no student at all; he is already old and his thoughts are borrowed thoughts and his mind has taken on the passive acceptance of age.

If this is a faithful picture of conditions as they are we shall ask what has been done by way of amendment—what can be done.

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If this is right, if this is the true gospel of education, the problem of the *curriculum* is not only insoluble it is quickly rather comic. New departures are indeed heralded with heartening phrases while we remain resigned to the way in which that has slowly fallen into disrepute. There is an obvious limit to a steady growth of that kind. Even as far back as 1906 more than half the medical students in England required seven years or more in which to qualify. If we allow the curriculum to go on growing it will soon be no longer necessary to argue that it is educationally unsound because as a physical feat it will have become impossible.

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The report and [illegible] on this case in the German medical [illegible] is now almost complete. It is again printed on that Brown Lange and Bell [illegible] of cyanide that [illegible] the Lübeck [illegible] with the BCG [illegible] and certainly proved [illegible] Calmette and Weill-Hallé admitting that [illegible] had found BCG to be avirulent [illegible] that the positive results obtained in a number of investigations—including those of Watson and Sutherland—could [illegible] strains had [illegible] their [illegible] or [illegible] had been produced could not be [illegible]. It was [illegible] to obtain [illegible] positive results [illegible] by the use of [illegible] Bell said that no [illegible] [illegible] [illegible] [illegible] could be regarded as having [illegible] qualities of all [illegible] resistant to all [illegible] of [illegible] tuberculosis. Sometimes [illegible] results are [illegible] obtained. It will be remembered that in 8 per cent. of the [illegible] children [illegible] [illegible] [illegible] of the [illegible] who [illegible] the oral administration of the BCG and [illegible] [illegible] [illegible] [illegible]

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ROADS TO FREEDOM

In England the various universities have not been blind to what is afoot For at least a quarter of a century they have sought a way of escape and have found none They have called to their help many a committee with its neat terms of reference, its patient industry its committee habit, and it has availed them nothing As often as they conclude that the overcrowding of the curriculum is foreign to the educational purposes that all men desire and that a solution of a position so intolerable can be delayed no longer so often their deliberations end in a capitulation to the clamour of sectional interests for the inclusion among compulsory subjects of the last addition to therapeutics and the like which it is plain should be reserved for study after graduation

Some years ago a determined effort was made to cut the Gordian knot Committees met much evidence was taken and at last the results were published A little later new regulations of the London University appeared

> The practical teaching of therapeutics including sero and vaccine therapeutics actino and radio therapeutics mechano therapeutics and dietetics should take place during the clinical period

This was and is the final paragraph laying down the course in surgery this the last bold bid for freedom What is the problem that has defeated them? The past fifty years that have seen the development of the modern laboratory have multiplied the student's task Much has been added little taken away and the situation that has arisen no nation has frankly faced Our educational roads are blocked by cars and lorries and great motor buses by victorias drawn by high stepping horses and tricycles and old high bicycles with here and there a sedan chair all jumbled up anyhow and quite out of control What is needed is not patchwork but something that smacks of revolution something like a recasting of the whole of our studies that only such be kept as help towards broad educational ends But who is to say what helps and what does not help? Can we look to any committee to show us a way out of the tangle?

In the political world a few years ago we saw an example of the comparative ineptitude of a strong Government to control the expenditure of the Departments of State To put a term to the plausible arguments of the permanent officials it was necessary at last to bring in from outside men with big maps who determined what proportion each Department properly bore to the whole and laid down what in it might stand and what must go It may even be necessary to turn to some Geddes or Inchcape of science that he may run amuck with shining axe among those articles of belief and hoary rites and too fashionable cures which trip our feet like a thick undergrowth of weeds He may not be found in the medical schools for out of them came those committees which have failed besides if we who staff them can discriminate between what is valuable in developing the habit of thought and what is merely profitable in a narrow professional sense we have still to rid ourselves of the absorbing zeal for our own subject which makes us forgetful that the student's time is not unlimited

If we find him at all he need not—more he cannot—know everything This only must he know—what in the final resort is most worth while His eye will wander over all the field of medical study preserving only what fosters growth It will not be left to an American novelist to play with the ideal of a scientific medical school that is precise and cautious where spectacle fitting and most of the surgery are omitted and nothing is left but what is good reason and food for the mind It is not that the reformer supposes that the needs of the student who is shortly to be at the beck and call of the public can ever be reduced to that ideal He is only mindful of what in the curriculum is most helpful in stirring up a man to think for himself in exciting his curiosity and in persuading him to use such gifts as have been given him Wherefore he will not need to waste his time with the business of technique though it is an admirable and necessary accomplishment for it is in no danger of neglect

His attitude to surgery is expressive of all that he has come to think of what we require of him He does not deny its practical benefits to humanity only he is not concerned with them But even within his own narrow terms of reference he is not so certain as the American writer that surgery will play this humble part in a school of to morrow He is interested in it just in so far as it brings into this most credulous world a cold douche of realism He respects its craving for proof that alone entitles it to a place in his plan for the architecture of a liberal education and it is from that angle that he sees the whole edifice that we have put up and watching decides what must come down

THE TYRANNY OF TALK

Such a body—if it is not left to an individual—when it comes into being may decide what pruning can be safely done it will never endow us with the power of making the best use of what is left There is something in anatomy something more in surgery for which there is no place in a system of education that has to do many things in a limited time without robbing the student of the opportunity of thinking for himself The curriculum needs cutting but when that is done not all that the knife spares will be of equal value It is our function as teachers to point out what is worth while saying Look here and here, and there We all too readily delude ourselves that the curriculum or examinations are responsible for the hours the student wastes in what is of no moment The last thing that occurs to us is that we ourselves may be at fault

Do we always recognize what is of moment have we done all that is possible to sharpen and bring out the natural intelligence and youthful curiosity of students or have we like a frost nipped these tender shoots when they appeared? Are we prepared to acknowledge that in science the art of teaching is as yet in its infancy? When we reflect on the contrast between the native curiosity of the ordinary child and the apathy and intellectual indifference of the average medical student in the final years —not a mere want of diligence there is enough of that but a dreadful mental indolence like a sickness—when we turn over in our hearts the disparity between what we have done and what we have left undone we are driven back to the beginning to question again where we are going

We cannot take refuge behind the curriculum it was our doing we made it as a means of duress and the criticism responsible and universal that it has provoked should serve as a reminder that we have not always exercised that power with discretion The student's liberty is not to be won by the acts of committees but only by the education of his masters Some there are who weary of the present chaos have turned away from such easy remedies as committees seem to offer to the building of machinery for raising the level of teaching and of examining They have come to look to the unit system to train a body of men who shall be more sensitive to what is really helpful in moulding the fluid mind of youth less obsessed with what is merely profitable in a narrow professional sense And yet in so doing we need not exaggerate the part we can play in the development of the student mind It is what he brings to his task and not what we lend him that counts We cannot endow

...ber with the capacity for reflection but if he has it we can do something to see that he makes use of it No teacher shall ever persuade a man to think for himself if that gift is withheld from him in the hour of his birth but a thoughtless teacher may hustle him away from any habits of reflection that are latent in him In our fussy preoccupation with our pedagogic duties we have done grave hurt to those finer qualities that to a greater or a lesser degree are present in us all—the power to reason the critical instinct the overwhelming curiosity of all young things

Writers on educational matters grow fond of words they become the slaves of metaphor and often lose themselves in a mist of peculation till we can no longer see which way the arrow is telling us The practical man if he has read so far may ask In concrete and in detail what do you suggest Take this blue pencil sit down and mark in the curriculum what is necessary and what is unnecessary I shall answer that I have tried to show why an attempt spread over a quarter of a century to obtain that information from committees of teachers and examiners has failed and will always fail I have even dared to suggest where that information might be sought In the words of John Stuart Mill The initiation of all wise and noble things comes and must come from individuals generally at first from some one individual

The periodical survey of the curriculum by a luminous intelligence watching the student's education from some point of detachment must have a value because it will pull up the teacher and make him reflect on his methods And that after all is what is wanted in the impasse into which we have drifted The seniors of our calling have built up a method of bedside teaching the means beautifully adapted to the end Now the increase of knowledge and the growth of the laboratory demand something *more* that something is the contribution which the next generation will make to medical education It is no less than the discovery of a new technique in teaching

MEDICAL RESEARCH COUNCIL

ANNUAL REPORT FOR 1930–31

Some features of the seventeenth annual report of the Medical Research Council to which a preliminary reference was made last week (p. 430) are new advances in nutritional science the relation of vitamin D to dental decay progress in the study of virus diseases pathological conditions associated with obstetrics and gynæcology and the result of insulin treatment A grant in aid of £148 000 was provided by Parliament for the year This was allocated for research grants to scientific workers in different parts of the United Kingdom and for the investigations of the Industrial Health Research Board (£30 000) for the expenses of the National Institute for Medical Research at Hampstead and its farm laboratories at Mill Hill (£52 000) and for general administration £10 000 Payments towards the cost of particular investigations were made by the Empire Marketing Board the Development Board of the United Kingdom (to which payment of dental practitioners contributes) the British Empire Cancer Campaign the Dyspepsia Research Committee of the Royal College of Physicians and the Leprosy and Mouth Disease Research Committee The great number of grants made by the Medical Research Council during the year and its ordinary financial resources [illegible] were unprecedented and [illegible] by all the workers in the [illegible] service of the Council submitting to a reduced remuneration for the duration of the present financial emergency In this issue of the *Journal* and the following one an outline will be given of various scientific advances which have been made

Accessory Food Factors

Mention has been made in the *British Medical Journal* from time to time of the recent dramatic progress in the isolation and standardization of vitamin D a substance which has a preventive and curative effect upon rickets A group of workers at the National Institute at Hampstead have been continuously engaged in studying the process by which this vitamin is produced from ergosterol by the action of ultra violet radiations of particular wave lengths The procedures used in purifying the ergosterol irradiating it in solution in the complete absence of oxygen and separating the antirachitic constituent from the mixed product have required the regular and close co operation of physicists physical chemists and organic chemists in addition to other workers concerned with the breeding dieting and dosing of large numbers of rats for the estimation of the curative results produced by the different fractions Dr R K Callow isolated and purified ergosterol by special methods a new type of photo electric microphotometer was devised to speed up the very numerous measurements which the work on vitamin D demands and a new and more satisfactory form of spectrograph has been constructed As the result of these various measures it appears that the isolation of vitamin D as a chemical entity has now been achieved

A crystalline antirachitic substance was obtained by Dr R B Bourdillon and his associates by distilling fractionally in a high vacuum the mixture of products yielded by ergosterol on irradiation They provisionally named this substance calciferol in view of its characteristic activity From the distilled calciferol Dr Callow has obtained two crystalline esters differing in shape and colour One yielded a sterol having about twice the antirachitic activity of the most potent substance hitherto obtained and to this accordingly the name calciferol has now been applied This substance appears to be the true antirachitic vitamin in practically pure form It has the same empirical formula as the parent ergosterol but must differ from it and from the various inactive concomitants which so readily crystallize out with it in the details of molecular structure A problem of much interest though great difficulty for future investigation has thus been laid bare

Weight for weight crystalline calciferol has 400 000 times the value of a good sample of cod liver oil in preventing or curing rickets and a single ounce dissolved in a suitable liquid would provide the necessary daily ration for more than one million children making all the difference between crippling and disease on the one hand and healthy life and development on the other The obtaining of still more accurate knowledge of vitamin D in terms of its chemical structure and physical properties will afford an insight into the processes within the body by which this substance fits into the intimate biochemical machinery of the growing cell and the developing organism

Reference was made last year (*Journal* 1931 ii 857) to the attainment of accurate standardization in respect of vitamin A and to the international agreement that was [illegible] reached From the clinical standpoint the matter is of importance since the medical practitioner will be enabled to control the dosage accurately while those concerned with the manufacture of food substances will be able to have preparations standardized in respect of their effective vitamin D value In view of the fact that the majority of the population living under urban conditions appear to be receiving only a minimum or even less

of adequate vitamin D supply, it is obvious that the expense of this particular line of investigation will eventually bring about a great national saving in health and money

Vitamin D and Dental Decay

The report contains a note on the progress made in estimating the importance of vitamin D in preventing the attacks of micro organisms which give rise to dental caries A series of children was examined and it was found that there was a striking difference in the rate of the increase of decay between the groups receiving vitamin D, either in the form of cod liver oil or of artificially manufactured vitamin D (radiostol) on the one hand and those who were only receiving treacle or olive oil Between the first inspection of the teeth and the final inspection two years later the percentage of increase in decay in the olive oil and treacle groups was nearly 46 per cent , while in the cod liver oil and radiostol groups it was about 10 per cent

Convulsive Ergotism and Vitamin A

Professor E Mellanby and his co workers at Sheffield have thrown light on the causation of convulsive ergotism and the change in the nervous system found in pellagra and lathyrism Epidemic attacks of convulsive ergotism occasionally appear in rye eating communities due to the toxic action of ergotized rye and the rye germ itself They only occur however when the diet of the community is deficient in vitamin A or carotene This agrees with and explains the phenomenon that this disease appears only among the poorer people and in times of famine and drought when dairy products and vegetables are almost unobtainable Convulsive ergotism therefore is not a simple form of deficiency disease it develops when a toxic agent attacks the nervous system and only when this attack in the absence of the protective vitamin succeeds

VIRUS DISEASES

The Institute has now taken into regular use filters designed by Dr W J Elford in which graded collodion membranes (called gradocol ' membranes) are employed The pores through which the filtrate passes are closely uniform in size and in each grade of filter they vary in diameter within only a very narrow range It has thus been possible to gain a close estimate of the absolute and relative dimensions of the infective particles in the case of each virus examined A given virus moreover can be separated from other particles whether of another virus or not that are coarser than its own by a first filtration and then be itself concentrated and washed from finer particles on the surface of a second higher graded filter membrane By such a selective concentration the chance of finding and identifying the particles of a specific virus by special microscopical methods has been greatly increased Mr J E Barnard, F R S and Mr J Smiles have produced a dark ground illuminator using quartz for the refractive elements and magnalium for the reflecting surfaces With ultra violet rays of a single wave length and only short exposures it has thus been possible to obtain the accurate photographic images of objects so small that real images of them cannot be formed by visible light

Infectious Ectromelia of Mice

The methods just referred to have been applied to the virus of this disease and it has been possible to obtain a description of the size and morphology of its ultimate units probably more complete than any which is yet available for any other virus The employment of Dr Elford s filter proved that the virus was composed of particles which were uniform in size within narrow limits having a diameter not less than 0 1 or more than 0 15 μ Mr Barnard s microscopical methods revealed in similar organic extracts the presence of minute bodies of like size of uniform appearance, and having in ultra violet photographs the form and aspect of submicroscopical cocci Some forms were seen which suggested multiplication by fission Particular interest attaches to the fact that the so called inclusion bodies ' which appear in epidermal cells infected with this, as with many other viruses are closely packed with minute bodies indistinguishable from those found in the infective extracts made from other organs There now appears to be no reasonable doubt that this typical virus consists of definite self reproducing organisms differing from ordinary bacteria in being so minute that their diameter is much less than the wave length of visible light rays The combined observations by ultra-violet light photography and refined filtration methods have defined more accurately than was formerly possible the exact size and shape of the particles and have established their intimate and apparently inseparable connexion with the virus

Foot and Mouth Disease

Three types of the foot and mouth virus have previously been postulated distinguishable from each other by the fact that recovery from an attack by any one leaves the animal immune to renewed infection by that one but not immune to the others It has been stated also that these types of the virus differ in the size of their infective particles Filtration of the virus however through the graded membranes gives no support to the existence of such differences of magnitude The particles in this disease did not measure more than one eighth to one twelfth of the estimated diameter of the ectromelia organism and are therefore far below the range of any method of microscopical demonstration which can yet be anticipated The question arises whether particles so minute can be regarded as living organisms

Other Virus Researches

Dr Elford and Mr Galloway have been investigating the assertion that the bacteriophage is really a toxic principle in solution its particles being smaller than those of any true virus They have found on the contrary that the bacteriophage which they studied is retained by a membrane which allows the foot and mouth virus to pass completely They have estimated its particles as having a diameter of 0 02 to 0 08 μ Dr C H Andrewes working with Dr Elford has discovered that the addition to the bacteriophage of the serum of a rabbit artificially immunized against a culture of *B coli* in insufficient quantity to abolish the lytic or dissolving action prevents it (the bacteriophage) from passing through a filtering membrane through which either the bacteriophage or the antibody will by itself pass freely The phenomenon might suggest that the antibody prevents the action of the bacteriophage by some aggregating effect which renders its units too large to enter the bacillus On the other hand whereas in the case of several viruses the antibody appears to be ineffective on a virus which has once entered and infected a cell the antibody for a bacteriophage is found under appropriate conditions still to arrest the action of bacteriophage which has already become attached to or has entered the body of the susceptible bacillus As regards vaccinia Dr Andrewes and Dr Elford have now estimated the size of its units, which appear to have a diameter of 0 125 to 0 175 μ It is highly probable therefore that the vaccinia virus like that of ectromelia will be proved to consist of submicroscopical organisms but there is a possibility nevertheless of obtaining photographs of them by the use of ultra violet rays There is reason to believe also that the units of the herpes virus are of a size comparable with those of vaccinia and ectromelia

(To be concluded)

MALFORMATIONS OF THE HUMAN BODY FROM A NEW POINT OF VIEW

SIR ARTHUR KEITH'S HUNTERIAN LECTURES

The following are the last two of a series of six abstracts of Hunterian Lectures delivered in January at the Royal College of Surgeons of England by Sir Arthur Keith F.R.S. Conservator of the Museum.

V.—ECTOPIAE VESICAE

The various anomalies of the human body are referable to two quite different calendars. There is the calendar of embryonic development. Failures may occur at any point in the unfolding of the various organs and systems, as a rule the earlier the failure the more serious is the lesion which ensues. Then there is the geological calendar. Every transformation we see taking place in the body of the human embryo began at a certain point of the world's history, as reported to us in the long sequence of geological strata. The developmental and geological or evolutionary calendars need not correspond. Indeed we know they are often at variance, for early geological occurrences may appear late in the developmental record. A good example of this discrepancy is apparent in the subject just dealt with—the formation of a scrotum and its reception of the testes. We must suppose that descent of the testes first made its appearance in the bodies of mammalian types which were in existence before the great chalk deposits were laid down, but in the human body the developmental events which bring about the exodus of the male genital glands are relegated to the latter half of foetal life. The formation of a partition between mouth and nose is one of the later evolutionary events appearing in the geological calendar at perhaps a somewhat earlier date than the formation of the scrotum. The palatal partition is completed early in the third month of development. Umbilical hernia is brought into being by processes which are referable to a very ancient date in both evolutionary and developmental calendars. From its first appearance the human embryo suffers from a relatively vast ventral or umbilical hernia. The evolutionary events which led up to the state of the early human embryo have to be counted for before even the vertebrate type of animal body came into existence—at a time when larval forms began to be provided with a yolk sac to provide sustenance for the first period of life. The evolutionary events which render the human body liable to the malformation known as ectopia vesicae are still older; it is only when we presume that during the course of geological time a simple invertebrate has been transformed into human form that we can explain the developmental cleavage in the body from umbilicus to penis. Ectopia vesicae represents the earliest and oldest of human malformations.

A child which has the misfortune to be born with this vast extravagance of malformations has its urethra and bladder exposed on the surface of the body from umbilicus to the site of the symphysis pubis (which remains uncompleted) and the margins of the mucous membrane of the bladder become continuous with the adjacent skin of the belly wall; the ureters open their contents on the surface of the body. As the bony defect extends to-day we must look for that cleft which exposes the bladder and urethra to represent the hinder end of what once was the primitive mouth of a cold-blooded vertebrate ancestor. After hundreds of millions of years a ventral state returns to us in the children of to-day.

If we [illegible] one of these [illegible] such as the exstrophy of the bladder, called by the Greeks [illegible] which covered by skin. Hence it was natural to conceive that even the embryo or larva passed through this purse-like or gastrula stage in its development; but the realization that practically the whole body of vertebrate animals—and higher invertebrates too—has been evolved by an endless series of specializations of the original or primitive mouth is a harvest reaped since his time.

If a surgeon were to reopen the old gastrula mouth in the human body his incision would have to pass along the median line of the back, commencing in the crown of the head and after encircling the rump ending at the umbilicus. It would have to lay open the base of the skull behind the pituitary gland, cleave the vertebral column from atlas to coccyx; it would have to open the alimentary tract from pharynx to anus and the urino-genital tract from anus to umbilicus. The primitive streak which is to be seen on the dorsal surface of the human embryo during the third, fourth and fifth weeks represents a fusion of the right and left lips of the old gastrula mouth. It is very unusual for any part of the primitive mouth to remain unclosed along the spine, but occasionally failures do occur, thus permitting some part of the alimentary tract to open on the back. In the unfolding of the medullary plates to form the brain and spinal cord the process of closure finishes in the sacral region; if defect occurs it usually affects only the site of final closure, giving rise to a spina bifida. It is so with the closure of the primitive mouth; it is its hinder end which is the last to close, and it is this end which is the most liable to failure, producing the condition of ectopia vesicae.

Lately Dr. J. Florian has published (*Journ. of Anat.* 1930, lxv. 454) a series of observations on the anatomy of the hinder end of very early human embryos during the third, fourth and fifth weeks of development. At this time the embryo is attached to its intrauterine coverings by a very short anchorage—the body stalk—subsequently modified to form the infra-umbilical part of the belly wall and the umbilical cord. There is a precocious development of the bladder which extends into the body stalk. Along the body stalk following the ventral wall of the bladder runs the hinder end of the primitive mouth—represented by the cloacal membrane. The usual thing is for the cloacal membrane to be filled up everywhere by connective tissue except where the cloacal openings are to form—openings for the urethra and for the anus. Dr. Florian found however that along the ventral wall of the bladder parts of the cloacal membrane may persist, and if these anomalous parts of the cloacal membrane were to persist and then to give way—the normal course for a cloacal membrane to take—then the whole ventral wall of the bladder and of the urogenital sinus would be laid open. It is a persistence of this cloacal membrane in an anomalous site which gives rise to ectopia vesicae. The hinder end of the old primitive gastrula mouth remains open.

Sometimes ectopia vesicae is complicated by a further anomaly which has been elucidated by Professor F. Wood Jones of Melbourne. Not only do the ureters open on the exposed vesical membrane but between them there is an area of intestinal epithelium on which opens the bowel—urine and faeces being expelled from the same exposed area. In this case the yolk sac and bladder which both represent parts of the original alimentary canal instead of separating as they should do early in the third week have remained conjoined. Hence when the cloacal membrane which provides a temporary closure for the hinder end of the primary mouth gives way not only is the ventral wall of the bladder opened but the yolk sac as well. Thus the lesion of ectopia vesicae carries the memory of the evolutionary bond to those early days when the highest living animal was as low in the scale as the Hydrozoa are of to-day.

VI.—MALFORMATIONS OF THE PERINEUM

In the latter half of the second month of development of the human body transformations are being effected at both ends of the alimentary tract. At the buccal end the mouth is being separated from the nasal cavity by growth of the palatal septa. At the same time a new joint is being formed for the lower jaw: both palatal and articular changes making sucking and mastication possible. The breath way and food way are thus separated. At the same period changes are occurring in the perineal region of the body which end in transforming the cloaca, so as to give the contents of the bowel an independent passage separate from that which serves the needs of kidneys and genital glands. All of these developmental operations involve processes akin to those which bring about the healing of wounds. If the developmental operations fail the surgeon has to do his best to remedy Nature's failures. Why these developmental operations are sometimes unsuccessful we do not yet know: but the *cause of failure must be of the same order as that which* prevents union in ordinary wounds.

If palatal folds are not formed in the mouth of a human foetus a condition results which is similar to that found in the Amphibia. If the separation of rectum from urogenital passage fails, a common passage of cloaca thus persisting we have in this case also the persistence of an amphibian—or at least a pre-mammalian—state of matters. Now the geological record points to the later coal-forming period as the hey-day of amphibian vertebrates. If we accept the Osborn-Gregory geological calendar as our guide then we may regard the palateless child with a persistent cloaca as reverting to a condition which prevailed in the highest vertebrates 250 millions of years ago. In the Triassic period some 100 millions of years later reptile-like beasts in South Africa were assuming *mammalian palates and jaws, and we may also infer that* corresponding changes were at work in the opposite end of their bodies. Thus evolutionary changes which were being effected in the line of man's remote ancestors some 150 millions of years ago make their appearance in his developing body during the *eighth, ninth and tenth weeks*. The biological processes which introduced these structural improvements so long ago are still operative in his embryonic body. Medical men recognize the facts of development and of palaeontology, but are reluctant to draw from them *their logical conclusion*.

Many valuable additions to our knowledge of the developmental transformation of the pelvic organs of the human foetus have lately appeared in publications issued by the Carnegie Institution of Washington under the directorship of Dr. George Streeter. Three of these recent *Contributions to Embryology* may be cited: one on the changes which the human genito-urinary system passes through during the first eight weeks by Dr. J. Shikinami; another on the changes in the uterus and vagina by Dr. R. H. Hunter; and a third by Dr. K. M. Wilson on early development of testis and ovary and how far changes in these glands are reflected in development of penis and of vulva. More helpful still in determining the manner in which the rectum is separated from the urinary passage is Professor J. E. S. Frazer's new *Manual of Embryology*. In the fifth week when the Wolffian body still serves as kidney, rectum and bladder join together high above the point at which the Wolffian duct (vas deferens) terminates in the common cloacal passage. A few days later changes have occurred: the renal (or ureteric) bud has sprung from the Wolffian duct and the termination of the rectum has moved down on the common passage so that it ends level with the termination of the Wolffian duct. It has reached what will be the site of the prostate before the end of the seventh week and by the eighth it has reached and fused with the cloacal membrane—although epithelial debris still unites the terminal part of the rectum with the adjacent wall of the old cloacal passage. It is usual to describe the separation of the rectum from the urogenital passage as taking place by means of a septal formation: but the fact is that the terminal part of the developmental rectum is enveloped by a cortex or mass of rapidly growing embryonic tissue. The whole represents a migrating mass, which carries the termination of the rectum along the cloaca until the surface of the perineum is reached. It is a mass movement of tissue exactly of the same nature as that which brings about the migration of the testicle. The cloaca is not cleft: it passes into the service of kidneys and of genital glands.

The rectum may be arrested at any point of its three weeks' migration. It may open high up in the bladder but usually if the cloacal anus persists it opens into the prostatic urethra of the male or the hinder angle of the *vulval cleft of the female just below the hymen. Alterna*tively it may cut its connexion with the cloaca at any point in its descent, ceasing at the same time to grow. Hence the rectum in such cases may terminate at any point between the recto-vesical pouch and the perineum. The external anal depression may be formed in such cases or it may not. The better it is demarcated the better hope there is of finding the rectum low in the pelvis.

What brought about the migration of the rectum in the ancestry of mammals so long ago? It must have been the same processes as we now see at work in the human pelvis during the sixth, seventh and eighth weeks of development. I ask the question merely to reveal how much further we have still to go before we can really understand the manner in which these developmental and evolutionary movements are brought about. But if we do not know the machinery of development which came into being and resulted in the migration of the rectum we can see that the movement was connected with reproduction. With the appearance of reptiles there took place a revolution in the methods of producing young. Long oviducts came into being along which had to pass yolk-laden *fertilized* eggs and therefore there had to be intromission of spermatozoa within the cloaca. The lips of the cloaca underwent changes which helped to make the cloaca of the male serve as the intromittent organ. In early mammals the cloacal margins became converted into a penis—first to serve as an intracloacal or implicate penis, if we accept the phraseology of Professor Wood Jones and then as an external or explicate penis. In the lowest of mammals—the monotremes—we see this change taking place. Clearly the passage which was to serve for semen and urine could not also serve the needs of the alimentary canal. We thus see the reason for the exclusion of the rectum from the cloaca and though we know the outward developmental changes which bring about the separation of parts of the inner workings of the developmental movements we have as yet no certain knowledge. We can only guess that in these cloacal changes we see some of the many transformations brought about by growth-controlling substances formed in the developing genital glands.

That these rectal changes are dependent on the sex organs may be inferred from what happens as soon as the permanent anus is established in the developing human foetus. In the female the cloacal margins become the boundaries of the vulval cleft and the cloaca remains open giving exit to the urethra and to the vagina. In the male—I should say in the perfect male for if the male gland is imperfect a different state of affairs exists—the margins of the cloacal orifice begin to unite: the process of union always beginning behind at the margin of the

ings The opposing margins of the cloacal folds covered by epithelium come together The first bond between the lateral folds which are to form the floor of the male urethra is epithelial the epithelial bond serves as a scaffolding into which the mesoderm of the folds grows and unites Union of the urethral folds begins behind in the eighth week by the sixteenth week it has reached the glans penis where by a secondary operation a terminal part of the male urethra is formed Likewise the lateral labial or scrotal folds come together and unite It is because of the late period of union that so distinct a raphe or scar is left along the line of scrotal fusion In cases of *intermediate sex* the *process of union* is arrested at various stages leaving the condition known surgically as hypospadias Arrest may occur however when the testes are perfectly formed As to the reason why the urethral folds should sometimes fail to form when the testes are perfect we have as yet no explanation

I have selected for description only some of the developmental operations carried out in the pelvic viscera during the second and third months of development Other instances can be cited Until the eighth week the uterus and vagina are represented by the right and left Mullerian *ducts*—in all vertebrates from monotremes downwards In the human foetus the two Mullerian ducts come together in the eighth week and their adjacent sides unite by a process of union akin to wound healing The process of fusion affects their walls until by the sixteenth week a common vagina and uterus are formed In the human foetus the opening of the vagina undergoes a migration accompanied by extensive changes in its epithelial lining very similar to that which carries the rectum to the *definite anus* There are also the more wonderful unions between the two parts of the kidney whereby secretory tubules seek out and unite with collecting tubules All of these are examples of the strange phenomena which have to be explained before embryology can claim to be more than a descriptive science

Surgeons are apt to regard embryology as a subject which has little direct bearing on their art In these lectures I have sought to demonstrate that the opposite is the case that all the changes which bring about the development of the body are instances of superb surgery Parts are perfectly apposed and as a rule exact and orderly *union* occurs in a manner which surgeons may dream of but can hardly hope to attain in practice and yet these operations are carried out by means which are ascertainable and it is in the hope that a further extension of the methods of experimental embryology may be applied to the problem of surgery that I have made the Malformations of the Human Body the subject of my lectures for the present year

Scotland

Certification of Mental Disorder

Professor G M Robertson in his annual report for 1931 of the Royal Edinburgh Hospital for Mental and Nervous Disorders makes a forcible plea for the abolition of the sheriff's order in cases certified to be of unsound mind the sheriff's order in Scotland being the equivalent of the magistrate's order in England *Professor Robertson* argues that in no other kind of sick person is ordered medical treatment by a sheriff those who are subjected to this exceptional usage are naturally looked upon as a peculiar class and the institutions to which they are committed are regarded not as hospitals but as places of confinement It is admitted that no form of magisterial intervention of such is necessary could be less objectionable for the sheriff never interviews the patient himself but merely examines the written petition and the two medical certificates placed before him It is the social effect of the intervention to which exception is taken—the intervention of a judge in what is essentially a question of medical treatment—and the commitment of a sick person to an institution as if he were a delinquent to end his detention not in a prison As almost all the duties connected with the care of the mentally sick in Scotland are already performed by the General Board of Control for Scotland it is suggested that the duty of [illegible] should be transferred from the sheriff to the board a procedure which could be adopted without the creation of any new machinery Professor Robertson looks even further ahead and says that he would welcome the abolition of the liberty of the subject to [illegible] certificates and temporary internment [illegible] both should be regulated by medical [illegible] by supervision of the General Board of Control No [illegible] required to render the [illegible] effective—only the extension of the [illegible] of the Mental Deficiency (Scotland) Act of 1913 [illegible] to all classes of patients and to mental hospitals This schedule consists of a recommendation by a doctor that the patient should be placed in a home for treatment with a view to recovery for a period not exceeding six months The procedure is similar to that for temporary treatment in England under the Mental Treatment Act of 1930 The temporary treatment clause of the 1930 Act exemplifies the trend of present day thought with regard to mental treatment but Professor Robertson looks for a much greater advance in the event of a new Act being granted to Scotland

Victoria Infirmary, Glasgow

At the annual meeting of the Victoria Infirmary of Glasgow the Lord Provost Sir Thomas Kelly who presided said that the wisdom of the directors in adding a new wing to the institution during the past year had been reflected in the larger number of patients treated The Infirmary had taken a pioneer step in reserving a special block for the accommodation of patients of limited means at a moderate rate of payment He thought that every effort should be made to emphasize the obligations of persons who came from outside Glasgow to receive benefit from its Infirmaries Like all other institutions in Glasgow the Victoria Infirmary was suffering from the results of trade depression and the directors were appealing for increased financial assistance The chairman of the board of governors said that the most interesting feature of the past year's work had been the opening of the department for paying patients The governors had entered upon this experiment with diffidence but it had proved an unqualified success Patients had asked why such facilities had not been made available twenty years ago since there were many thousands of people in the city who wanted treatment but who could not afford the high charges of the nursing homes He was quite satisfied that there would be an extension of this service in the future Another source of revenue which might well be tried was that of a voluntary contribution from patients in recognition of services and benefit received in the hospital *If* patients gave a small amount say 10 per cent of the cost of their maintenance in the institution *there would be no deficit in funds* at the end of the year He did not mean to suggest an assessed charge but there

were surely few patients who could not give 5s and many others might give 10s which would go a little way towards the cost of board and lodging The report shows that the annexe for paying patients which was opened in April 1931 by the Rt Hon William Adamson then Secretary of State for Scotland contains 32 beds and has been fully occupied since its opening—the number of patients treated being 448 During the past year the total number of patients treated in the wards was 8 616 as compared with 7,480 in the previous year The auxiliary infirmary has again proved of great advantage in relieving the beds in the Victoria Infirmary and in affording patients an opportunity for open air treatment in favourable environment With regard to finance the income for the Victoria Infirmary the auxiliary infirmary the dispensary and the convalescent home was £51 343 while the expenditure was £71 816 The extraordinary income from legacies donations etc had amounted to £27 013 Attention is drawn to the fact that during the year 217 persons were admitted as the result of motor accidents while 317 received treatment at the out patient department Payments received from insurance companies under the Road Traffic Act had amounted to £631

Edinburgh Orthopaedic Clinic

At the first annual meeting of the Edinburgh Orthopaedic Clinic held on March 1st Miss Gertrude Herzfeld who presided said that the clinic was originally formed in 1926 under the control of the Edinburgh branch of the Chartered Society of Massage and Medical Gymnastics but at a meeting of contributors held in January 1931, the clinic was constituted an independent body with the object of providing massage, medical electricity, and ultra violet ray treatment for people of limited means at moderate fees During the past year 258 patients had been admitted and 5 899 treatments had been administered The capital funds of the clinic had been increased by £41 during the year and the institution had been approved by the Department of Health for Scotland as an institution at which insured patients might now obtain benefit through their approved societies Mr William A Cochrane said that the clinic had become so popular that it already had a waiting list One interesting feature of the work was a home service patients being treated at their homes until they were able to come to the clinic

Red Cross Society in Edinburgh

Presiding at the annual meeting of the Edinburgh branch of the Red Cross Society on March 2nd the Lord Provost Sir Thomas Whitson said that the various sections of this branch were all doing excellent work among them was an emergency help scheme which assisted ex-service men in their claims for pensions The voluntary aid detachments were well organized as indicated by the success of their teams in winning various trophies Colonel A N Fleming honorary secretary and county director in submitting the annual report referred to the Territorial camp hospital which had been established last July at Dunfermline attached to the 156th Infantry Brigade For the first time the War Office had sanctioned the loan of tents and medical equipment for this hospital 32 cot cases and 527 out-patients had been treated during the fortnight of its mobilization

Training of Medical Missionaries

At the annual meeting of the Edinburgh Medical Missionary Society the chairman Dr R A Fleming referring to the society's hospitals in Damascus and Nazareth said that it was proposed to extend the latter the funds to be derived from the Abercrombie Benefaction The financial statement of the society showed that while the ordinary income for the past year had been £9 107 expenditure had been £11 318 so that in spite of the aid of legacies there was a deficit of £668 Dr F O Lasbrey secretary of the society referred to the most important of the society's activities—the training of students for medical missionary work The Cowgate medical mission in Edinburgh was a most favourable training ground for this purpose The work overseas was intensely interesting and the society endeavoured to make its hospitals at Damascus and Nazareth institutions of the highest efficiency In the annual report of a year ago the number of medical students under training was 34 the number this year had risen to 40 Dr H T Holland of Quetta and Dr Donald Robertson of Rajputana described medical mission work in their respective fields

England and Wales

Cancer Research in Manchester

In the report of the Manchester Committee on Cancer for the year ending October 31st 1931 details are given of the progress made in investigating the cancer producing properties of mineral lubricating oils It has been shown that if the locality from which an oil has originated is known with certainty the power of this oil to excite the formation of a cancerous growth can often be foreseen with a moderate degree of accuracy even before tests are made The fact that crude oils have a less active carcinogenic effect than the refined lubricating oils prepared from them is held to be partly due to the removal of the spirits with low boiling points, and also to the presence in crude oils of certain substances which may to a certain extent neutralize the harmful effect of the carcinogenic compounds The addition of a small quantity of saponifiable oil to mineral lubricating oils has consistently yielded favourable results in the form of a reduction in the number of experimental tumours subsequently induced No oil has been found so far to surpass lanoline in this respect and evidence was obtained that this substance was definitely useful as a protective measure against the dermatitis to which workers exposed to the active dangers of mineral oils are liable Apart from this preventive effect lanoline was shown to have no influence on the production of tumours if applied late, and it did not retard the progress of a benign tumour to malignancy An inquiry into the length of service of spinners engaged at the present time in the 'mule rooms of the mills operating in Lancashire and Yorkshire revealed the necessity of paying special attention to long service employees at all medical inspections men who had been employed for fifty years being five hundred times as liable to develop cancer as those who had recently started this occupation The Manchester Committee on Cancer has assisted by a small grant the work done by Dr Susman at the University on the relation of cancer growths to the endocrine glands From his experiments reported in the *Journal* of October 31st 1931 Dr Susman has concluded that certain ductless glands have the power of controlling the development of malignancy in cells Preparations of these glands have been employed therapeutically with good results so far

The Cinematograph and Child Psychology

The Birmingham Cinema Inquiry Committee which has been investigating the effect of the picture theatre upon the child mind summoned a national conference at Birmingham on February 27th under the chairmanship of Sir Charles Grant Robertson Principal and Vice Chancellor of the University to consider the failures and possibilities of the film censorship and the moral influence of the type of presentation which has come to be known as Hollywood The conference which was attended by 400 representatives of public authorities and of religious

social and educational organizations passed a resolution calling for a comprehensive inquiry into the arrangements by which films are licensed for public exhibition and asking the Home Secretary as an urgent matter to receive a deputation on the subject The present film censorship received some criticism although the Chief Constable of Cardiff declared that a real effort had been made to keep films clean His remark however that the parent after all was best qualified to judge what his children should be allowed to see was received with dissent

A paper on The cinema from the psychological standpoint was read by Dr W A Potts psychological expert to the Birmingham justices He agreed with a previous speaker Mr Lovat Fraser M P that there was ample evidence that pictures were sometimes demoralizing and that children were led into delinquency as a result of what they saw on the film Some films he said were suggestive indecent and even obscene Combating the easy going idea that the matter might be safely left to parents Dr Potts pointed out that many parents were apathetic and uninterested and many more were uneducated with regard to the psychological effect The authorities did not trust to the judgement of parents on the question of the need for attendance at school or the necessity for dental treatment and treatment for tonsils and adenoids nor on the question of sufficient protection from contaminated food and from alcohol children should be similarly protected from pictures which did them possibly lifelong moral or psychological injury Dr Potts also pointed out the harm to the adolescent by the presentation of erotic and suggestive scenes which seemed often to be inserted deliberately to apply stimulation to the sex instinct Many social organizations were at work for the protection of the young and adolescent some of which were definitely concerned with the ravages of venereal diseases but in spite of their efforts those diseases were not decreasing and every medical practitioner knew how far reaching were their effects About 10 per cent of the beds in mental hospitals were occupied by victims of syphilis the result of wrongful indulgence of the sex instinct Why should that instinct strong enough already be subject to this artificial stimulation? He pleaded that pictures which showed unbridled love scenes should not be put in a separate category nor be left to the chances of local censorship but should be stopped at the source

The conference refused a further resolution urging the expediency of placing the censorship of films in the hands of the Lord Chamberlain or other permanent Government official The present British Board of Film Censors a body appointed by the film trade has no statutory authority but it has taken a responsible view of its duties and is not to blame for the low moral standard of the film The effect on the London child's mind of constant visits to the picture theatre has recently been the subject of an interesting report (which is on sale) by the chief inspector of schools to the London County Council

District Nursing in London

At the annual meeting of the Central Council for District Nursing in London on February 25th it was mentioned that discussions had been proceeding at intervals with the London County Council with a view to obtaining a more regular system of subsidies in aid of district nursing in London than the inadequate and unequal grants previously made by boards of guardians Although no decision had been definitely announced the hope was expressed that there might be an increase in the amount available for the nursing of the outdoor poor who had hitherto come within the scope of the Poor Law Act The executive committee of the Central Council had been forced to recognize that the Directory of District Nursing for London had become too seriously out of date to be of any practical use It had decided therefore to ask for special contributions towards the cost of republication and had received a donation of £200 from the trustees of the City Parochial Charities Other smaller donations had also been made for this purpose and it was agreed to proceed with the issue of 1 000 copies of a new edition based on the lists of streets compiled by the London County Council It is expected that the new directory will be found very useful to hospital almoners and also to medical practitioners and social workers needing information as to the district nurses available in London and in Middlesex It is now on sale and costs 4s The annual report of the Central Council contains the usual details of the progress of nursing in various parts of London and Middlesex Despite the present financial stringency generous donations and subscriptions have been received enabling the work of the Central Council to be carried on efficiently Midwifery training bursaries have been awarded as in previous years Further information about the work of the Central Council can be obtained from its office 12 Whitehall S W 1

A Housing Survey

The Westminster Survey Group which has been responsible for a number of housing surveys in different parts of London has co operated with the Survey Committee of the Kensington Housing Association in inquiring into conditions of life in some of the black spots in Kensington and the report compiled by Mrs Irene Barclay and Miss Evelyn Perry is now published at 3d by the Weardale Press Ltd, 26 Gordon Street W C 1 The chief trouble appears to be overcrowding Legal overcrowding is unusual but the legal standard is so low that it is possible for parents and eight children to live in two rooms of an ordinary Kensington house—rooms moreover that are dark damp and verminous In some cases parents and children and adult brothers and sisters have to share the same sleeping quarters In one mews dwelling visited by the surveyors two small rooms and a landing housed eleven people—man and wife boys of 10 9 8 6 5 and girls of 16 12, and 2 The L C C medical officers find that children coming from this type of home are nearly always subnormal in health and compare very unfavourably with the children of less congested localities The report is however not pessimistic The Royal Borough of Kensington possesses several available building sites and plans are already in hand for extensive rehousing schemes

Ireland

Child Welfare in Ireland

In an interesting account of the foundation and work of the Dublin Babies Club Dr Andrew Horne said that a campaign to reduce the infantile mortality in the country was one of the first public health undertakings of the Women's National Health Association which was founded in 1907 Early in 1908 the Dublin branch of that body called a conference which was attended by the medical heads of maternity hospitals, the doctors of the city dispensaries and many social workers As a result during the summer of that year 180 lectures on health with special reference to the means of lessening infant mortality were given to mothers and older girls through out the city Pasteurized milk was supplied to delicate infants and a special nurse and doctor were always in attendance The Dublin branch then founded a Babies Club the object of which was to care for the health of expectant and nursing mothers and for the health of children from birth to school age or to the age of 5

Similar clubs were established in different parts of the city, and by 1926 there were nine in all Each of the clubs was managed by a voluntary committee of ladies who organized the work and who up to 1916 raised the necessary funds Nurses visited the homes assisting mothers to carry out the doctors advice lectures on mothercraft home nursing sewing, and cooking were given by qualified lecturers and milk foods of the purest kind drugs etc, were available at low cost, or in necessitous cases free Infant clothing was supplied, and dinners were given to expectant mothers In 1916 the first school medical clinic in Ireland was opened in conjunction with St Patrick's Club Whitefriar Street Dr Horne stated that a scheme to establish a child welfare committee for the city was adopted in 1925 and the salaries of nurses and other expenses were defrayed by a corporation grant The year 1928 saw the appointment of a medical superintendent, who attended the clubs and controlled the child welfare work of the city The attendances at the nine clubs for the past year were mothers, 39 207, children and infants 46,996

Health of County Armagh School Children

The health of the children of County Armagh is causing anxiety not only to parents but to all connected with the welfare of the county In his monthly reports, Dr R I G Reid, who was appointed about a year ago by the County Regional Committee to examine children (approximately 18 000) attending the public elementary schools and to collect data on which the committee could draft a scheme for their medical care, comments on the number of children suffering from bad teeth defective eyesight and abnormalities such as flat feet Defective eyesight is, he suggests in some instances due to badly lighted schools but even in well lighted schools there are too many cases of children with weak eyes He has now completed his survey of the county and is at the moment tabulating his findings but he has started a re examination of the children, beginning in Armagh city Children whose ailments were specially noted on the first occasion are again being brought up and also those in their first year those in their last year (between the ages of 13 and 14) and those at two intermediate stages (between the ages of 8 and 9 and 11 and 12) These groups in Armagh city comprised 979 children among whom were found 1 528 instances of physical defect as follows 139 cases of serious eye trouble 135 minor defects and 82 other faults of the eye 69 cases of seriously enlarged tonsils and 148 minor enlargements 48 cases of serious adenoids and 220 slight cases 72 children had such abnormalities as flat feet or knock knees and 122 other defects 493 had defective teeth This last figure Dr Reid states is better than that for the county where two thirds of the children were found to have bad teeth Dr Reid also states that the appointment of a county dentist is necessary Little wonder therefore that the committee is anxiously considering the best course to pursue especially as the Education Act only gives it authority to examine the children and advise the parents it has no power to compel parents to adopt the advice although in some cases this may be done under the Children's Acts should unnecessary suffering be caused

A Cork Medical Appointment

A motion on behalf of the Minister for Local Government to make absolute a conditional order of mandamus compelling the Joint Committee of Management of the Cork District Mental Hospital to appoint as resident medical superintendent Dr B F Honan the person who had been recommended pursuant to Section 6 of the Local Authorities (Officers and Employees) Act 1926 has come before the court It appears that after the death of Dr McCarthy the resident medical superintendent of the hospital notice of motion was given for a meeting of the Joint Committee to appoint Dr Cashman senior assistant medical officer to fill the vacancy The Local Government Department refused to sanction the appointment of Dr Cashman and the Local Appointments Commission recommended the appointment of Dr Honan The Joint Committee adjourned consideration of the whole question, and stated that it was about to take legal advice on its position in the matter Mr T A Finlay K C for the Minister for Local Government and Public Health said that the real point in the case was whether the Minister had power to veto appointments by promotion in a public institution under Section 5 of the Local Authorities (Officers and Employees) Act, or whether such an appointment was subject to his approval or disapproval of the particular person The Minister objected to the vacancy being filled by promotion from the staff, and the committee contended that his approval or disapproval was confined to the person appointed and did not apply to the method of appointment Mr J Fitzgerald K C for the Mental Hospital Committee submitted that the local authority had acted in accordance with what it conceived to be the law, and that he said, was the committee's case The Minister had no authority to intervene in the method of appointment, but subsequently the appointment could only be made effective subject to his sanction Mr Lavery K C also for the Mental Hospital Committee said that if its interpretation of the section was correct the position was that Dr Cashman had a valid appointment from the committee which must be effective with the sanction of the Minister If it was incorrect then the Minister through the Appointments Commission had chosen a particular person and it rested with the committee to implement that appointment The Minister in this case had usurped functions that did not belong to him this was an office to which Section 5 of the Local Authorities Act applied Judgement of the court is reserved

Correspondence

BIRMINGHAM MEDICAL SCHOOL AND THE HOSPITALS CENTRE SCHEME

SIR,—The annotation on this subject that appears in the *Journal* of February 27th (p 393) is liable to give an erroneous impression to those not familiar with the facts and local feeling in Birmingham

The statement that building operations are not to be started until January of next year" is not accurate Beginning in November last a sharp controversy arose in Birmingham as to the wisdom of proceeding with the Hospitals Centre Scheme (*a*) on grounds of financial expediency (*b*) on the questionable policy of building a large hospital at a considerable distance outside the city—on a site situate S W whereas the great increase of industrial Birmingham is to the N E Among the opponents of the scheme were a great many of the leading business and medical men in the city while others (including the Chancellor of the Exchequer) equally influential were strongly in favour of definite postponement The tide of opposition increased in volume and force but was ignored by the executive board entrusted with the carrying out of the scheme (and of which the Vice Chancellor of the University was the chairman) until public opinion became so acute that a meeting of subscribers was demanded—a meeting so managed as only to deserve the courtesy title of a subscribers meeting A resolution to proceed at once was carried by a very small majority The position of the executive board received trenchant criticism in the *Birmingham Post* (January 22nd 1932), which said that the board had lost

the confidence of the public The result of this together with the withdrawal of many subscriptions (some of five figures) was that the board decided to postpone any further action till January 1933 In the meantime another board was to be set up to review the whole position and to inform the public from time to time This board may or may not decide to proceed with the building

Now the Vice Chancellor (and his friends) having failed to carry the public with him tries to stampede the University and the public into a scheme for a new medical school adjacent to the proposed hospital site knowing full well that the school away out of the town would necessitate the building of the hospital But his criticism of the school in his annual report to the University on which your article is based is neither accurate nor fair and acknowledged inconveniences are grossly exaggerated The school is not in the parlous state the Vice Chancellor represents Well trained and practical men and women are graduated every year the clinical facilities are enormous—there are 800 beds excluding special hospitals That there is room for improvement is perfectly true that larger laboratory accommodation would be welcome is a fact—the same can be said of most schools But as I have taken pains to ascertain the conditions here compare more than well with some London schools One would think from the Vice Chancellor's report where he says Postponement for twelve months is more than unfortunate Postponement beyond that date would be—I speak deliberately—disastrous that the school will close down in a year or two The idea is preposterous The school has increased its efficiency yearly for years in spite of want of space in laboratories

This raises another point—the University owns much land on the Edmund Street site that is occupied by buildings private and commercial some of which are in poor condition It is possible to take in a space quite *sufficient to* double the size of the medical school buildings and at a relatively smaller cost than building *de novo* outside the city This is of course a matter of opinion but an opinion held by very many practical people It would have the supreme advantage of keeping the medical school in the centre of the city The Vice Chancellor does not realize that imposing buildings and teak benched laboratories do not and never will make a medical school The unwarranted attack on the medical school by the Vice Chancellor has given rise to great indignation aptly summed up by the *Birmingham Post* (February 18th 1932) in a leader on the report in these words

> It is to be regretted that any advocate of the Hospitals Centre scheme should seek to strengthen his case by argument of such a nature as to destroy confidence in the existing Medical School It seems to us especially to be regretted that the example of confidence shaking disparagement should be set by the Principal of the University

It may be explained that the titles Vice Chancellor and Principal are held by the same person —I am etc

Birmingham March 4th DOUGLAS STANLEY M D

AETIOLOGY OF CANCER

SIR —In a short synopsis of Dr W E Gye's post graduate lecture on the aetiology of cancer in the *Journal* of February 27th the following information is given

Serum	Chick tumour Filtrate	Duck tumour Filtrate
Anti-duck	No action	Neutralizes filtrate
Anti fowl	Neutralizes filtrate	No action
Anti-duck tumour	(A) No action	Neutralizes filtrate
Anti fowl tumour	Neutralizes filtrate	(B) No action

From these facts Dr Gye draws the conclusion that in the chick-tumour filtrate there are two agents—a virus and a fowl element—necessary for the production of a tumour on inoculation into a fowl It is evident that there is a fowl element since anti fowl serum—and of course also anti fowl tumour serum (since it is also anti-fowl)—neutralizes the chick tumour filtrate I anticipated that Dr Gye was going to show that anti duck-tumour serum neutralizes chick tumour filtrate (A) and anti fowl-tumour serum neutralizes duck-tumour filtrate (B) Then indeed there would have been clear evidence of two agents But this apparently (perhaps the synopsis is incorrect) is not the case Where then is the evidence for a virus? —I am etc

Northwood Feb 29th J C MOTTRAM

*** We have referred Dr Mottram's letter to Dr Gye whose reply is as follows

SIR —The information which I tried to give in the post-graduate lecture at the Hampstead General Hospital is summarized in the following table

Serum	Fowl tumour Filtrate	Duck tumour Filtrate
Anti duck	No action	Neutralizes filtrate
Anti fowl	Neutralizes filtrate	No action
Anti-duck tumour	Neutralizes filtrate	Neutralizes filtrate
Anti fowl tumour	Neutralizes filtrate	Neutralizes filtrate

The antibodies which are formed in response to injections of extracts of normal tissues are absorbed by emulsions of normal tissues of the same species Thus anti fowl serum loses its neutralizing power when treated with an emulsion of fowl tissue but is unaffected by absorption with duck tissue and vice versa In anti-tumour serums there is an antibody which cannot be absorbed by normal tissues

The conclusion was drawn that the antigen which is derived from both duck and fowl tumours and which is neither duck nor fowl in nature and therefore of extrinsic origin must be a virus —I am etc

Mill Hill March 4th W E GYE

AMBULATORY TREATMENT OF FRACTURES

SIR —I should like to endorse every word of Mr Watson Jones's letter on the above subject in the *Journal* of March 5th

Böhler was perhaps the first to treat fractures of the lower leg by the ambulatory treatment on a large scale and anyone who pays a visit to his clinic cannot come away without being entirely convinced of the soundness of his methods I visited this clinic nearly two years ago and since then I have adopted the ambulatory treatment for all fractures of the tibia and fibula and during that time I have not had a single case of oedema of the leg whereas under the older method of treatment in plaster it was the exception not to meet with troublesome oedema afterwards Perhaps a greater contrast is to be found in the condition of the joints and only those who have tried the ambulatory treatment can appreciate the excellent function of the ankle joint *after the treatment of a Pott's fracture* There can be no greater proof of these statements than the fact that at Böhler's clinic there is no massage department What a *contrast to the massage* departments of our own hospitals where *patients* attend daily for months after the fracture has soundly healed!

The success of the ambulatory treatment depends first on accurate apposition of the fragments (walking should not be allowed until this is confirmed by an r ray photo-

graph) and secondly on the application of an unpadded plaster as slipping of the fragments may occur within a thickly padded one —I am etc ,

Hereford March 5th R WOOD POWER

SIR —Surely anyone who has experience of both ancient and modern methods in treating fractures will agree with every word that Mr R Watson Jones writes in favour of the ambulatory ideal It is indeed amazing to see the change in outlook that early walking has given to these patients the smiling satisfaction with which they stump about in their plasters speaks of success and x-ray appearances and clinical results set the seal upon it As a student I was told that no policeman had ever returned to duty after a Pott s fracture I do not know whether this was true but from what I saw of my own and other people s results I never had occasion to doubt it Nowadays such a statement would be quickly challenged and it would not be surprising to learn that steeplejacks ballet dancers and cat burglars have practised their callings after a fracture-dislocation of the ankle joint

If there is one single change which has brought this about it is the unpadded plaster splint which Professor Bohler has done so much to popularize It is true that any one who puts plaster of Paris next the skin (or for that matter puts it anywhere else) shoulders a certain responsibility but the technique is easily learned and more easily applied Reduction of a Pott s fracture is often the work of a moment but fractures higher up the leg need continued pull and it is here that skeletal traction comes to our aid not as a substitute for the walking plaster but as a prelude to it

We live at a time when fracture treatment is changing before our eyes though this is probably not due to any one single discovery It is none the less important to realize that modern methods demand the hospitalization of a large number of patients for a small number of days and adequate supervision afterwards —I am etc

London W March 5th ERIC I LLOYD

THE BARBITURATES IN ANAESTHESIA

SIR —From the leading article in the last issue of the *British Medical Journal* it seems that up to the present time all argument on the use of the barbiturates in anaesthesia has been left to pharmacologists and anaesthetists The experience of a surgeon in this connexion may therefore be of some interest

In plastic surgery the attainment of a successful result depends not infrequently on more than one operation The question of repeated anaesthetics then becomes a matter for serious consideration Modern methods of administration have done much to facilitate the work of the surgeon but the avoidance or alleviation of all undesirable factors commonly connected with anaesthesia—*especially with general anaesthesia—is equally important*

From September 1930 up to the present time nembutal has been administered to a large number of my patients before operation The intravenous route has been used when practicable except in young children As far as unbiased clinical observation goes the results obtained have been eminently satisfactory There has been no case of thrombosis or injury of any kind following the injection and in no case have I observed any alarming symptoms in connexion with respiration or circulation On the other hand this easy and pleasant transit from consciousness to unconsciousness and the lessened tendency to vomiting have proved a boon to many patients particularly those who have had previous experience of the older methods of anaesthesia I sincerely trust that no bias against the use of this remarkable drug will be unjustifiably encouraged on theoretical grounds alone —I am etc ,

London W 1 March 7th H D GILLIES

HYPERTHYROIDISM WITH ACHLORHYDRIA

SIR —*In* his interesting study of achlorhydria which appears in the *Journal* of February 27th Professor H Moore refers to the high incidence of achlorhydria *in cases* of hyperthyroidism and states that in his series of 47 cases it occurred in 78 7 per cent In 1927 in collaboration with Dr R A M Scott,[1] I investigated the gastric secretion of 50 cases of hyperthyroidism of these 22 showed achlorhydria 15 hypochlorhydria and 13 normal or high normal chlorhydria The lower percentage (that is 44 per cent) of cases of hyperthyroidism with achlorhydria in our series of cases may be explained by the fact that cases were not chosen according to symptoms or signs suggestive of achlorhydria but were taken consecutively It was also noted that achlorhydria was more frequently found in chronic cases of over two years standing than in the acute forms thus suggesting that achlorhydria in hyperthyroidism occurs in the course of the disease and is not a predisposing cause —I am etc

Leeds March 2nd H H MOLL

RAW MILK AND DENTAL CARIES

SIR —I am gratified to find that so distinguished an authority as Mr Evelyn Sprawson confirms my two propositions—namely that in the endeavour to prevent dental caries the main objects to be kept in view are (1) to secure ample development of the jaws by providing the growing human with a due proportion of such vegetable foods as tend to promote adequate mastication and (2) to keep the dental enamel free from protracted contact at retention areas with fermentable saccharide food (I cannot agree with Mr Robert H McKeag that in the present state of civilization it is not possible for the mass of the public to observe the[se] rules It is surely simply a matter of adequate nurture)

Inasmuch as due attention to both these requisites will obviate dental caries the question whether the dental enamel of different persons differs in its resistance to lactic acid is a subsidiary one of little more than scholastic interest available evidence seems to suggest that it has no practical significance Mr Sprawson evidently thinks that defective enamel resistance to acid is an *important* factor in predisposing to caries *and this is the strangely* illogical argument he uses

Most dental surgeons who have had the observation of large numbers of children over prolonged periods can inform him from clinical experience that some individuals are far more prone to dental caries than others—a difficult thing to prove in private or hospital practice but easy in institutional children where they are all on the same diet

This is no proof that the greater proneness of some children to caries than others is due to a greater susceptibility on the part of the dental enamel *to* the corrosive action of lactic acid Is it not obvious that to justify *such a conclusion* all the influences operating on the enamel from without would need to be identical? But this is far from being the case in some children owing to irregularities or jamming of the teeth *or peculiarities* of form (such as prominent molar cusps) retention areas are more pronounced than in others again *some* children masticate more thoroughly and use their tongue and lips *more actively* in cleansing the teeth than others F Breese has in fact shown that some children have dirtier post prandial mouths than in others and that the teeth of such are correspondingly more carious

Mr Sprawson questions my chemistry when I express doubt as to the enamel (by which of course I mean the naked enamel) of some persons offering a greater resistance to acid than that of others It would appear that the composition of the enamel is practically the same in all mammals and that the amount of organic matter in

[1] *Lancet* 1927 i 68

enamel is infinitesimal Given then a mailed enamel surface why should the action of lactic acid on Smith's enamel be different from that on Jones's? Is it not simply a question of the affinity of the acid for calcium? I find that this *a priori* conclusion is borne out by experiment

Careful experiments recently carried out by Drs S Thurlow and H H Bunzell showed that there was no distinct difference in the so-called good and bad teeth in their behaviour to lactic acid (*Oral Hygiene* by J Sim Wallace D Sc second edition p 168)

Regarding the suggested influence of raw milk in preventing dental caries I would draw attention to an investigation carried out by the late Dr J Wheatley (1910–14) on several thousands of *children* Caries appeared to be almost equally rampant in breast fed and bottle fed children' (article on the aetiology of dental caries by Dr Sim Wallace in Sir Norman Bennett's *System of Dental Surgery*) As regards experiments devised to show the influence of different diets on the resisting power of the teeth to caries I am frankly mistrustful of them so great are the opportunities which they afford for error Such of the recorded experiments of this kind as I have studied I have found wholly unconvincing Professor Barker of the Johns Hopkins University warns us that

Investigation work to be of value should be well devised must as a rule be slowly and painstakingly conducted even by workers that are competent and ought to be rigorously controlled by those who have a right to be authoritative persons in domains with which the researches deal (My italics)

Finally may I utter a word of protest against the view held by both Mr Spraw on and Mr McKeag that the normal civilized human needs to be a foster child of the cow up to the age of 14? Sound cow's milk and its products are good foods for the growing child but it is quite possible to rear a normal child so that it shall grow up into a vigorous healthy adult with perfect jaws and teeth on a diet from which milk is entirely excluded after the first year —I am etc,

London Feb 28th HARRY CAMPBELL

PLUMBISM AND PEPTIC ULCER

SIR —As bearing on a hint thrown out in Dr Shirlaw's letter (published in your issue of March 5th) I may perhaps be allowed to quote a paragraph from one I sent to Dr Lewis on February 22nd

Your article interested me much because when at the Home Office with thousands of reports from certifying surgeons on cases of lead poisoning passing through my hands I was sometimes—I cannot say frequently—arrested by the appearance of gastric ulcer among the symptoms The certifying surgeons reports were brief but the occurrence of peptic ulcer as associated with lead poisoning came to be definitely behind my mind

The proportion in these cases could easily be worked out as the salient features of every notified case from the year 1900 onwards have been copied into a Lead Poisoning Register In Swansea last week I satisfied myself that the cases of perforated ulcer dealt with by Dr Lewis were fully documented and Dr Arbour Stephens's remarks unwarranted —I am etc

London S W March 7th T M LEGGE

THE PROBLEM OF TUBERCULOSIS

SIR —The communications of Dr Nathan Raw and Dr W M Cumming in the *Journal* of February 27th simplify certain aspects of the problem which were included in my note in the *Journal* of January 9th The former considers evidence is in favour of mutation of tubercle bacilli in a new host though it does not occur on artificial media Dr Cumming believes that none of the experimental evidence conclusively proves or disproves the theory of transmutation in the human body These two communications are interesting evidence of the feeling now somewhat general that the time has arrived for taking stock of the situation in view of our increased knowledge since Koch discovered the organism fifty years ago It is not however a bacteriological question only but one which must be weighed from every point of view For example it must not be assumed—as Dr Cumming seems to consider that I suggested—that if bovine tuberculosis were abolished the population would be freed from the disease On the contrary the experience of non-immunized races appears to prove the reverse It is not conceivable that all centres of infection will ever be extinguished and consequently we shall continue to need some form of protection as is presumably given by minimal doses such as are obtainable from commercial pasteurization of milk But further we shall still need to persevere in our efforts towards healthy conditions of life which have been stimulated so effectively by the dangers of tuberculosis and which have led to an improved standard of living and coincidently to a reduction of illness and death not alone from tuberculous conditions but also from other affections —I am etc

Gloucester Feb 29th J MIDDLETON MARTIN

SIR —The subject raised in the *Journal* of February 27th by Dr Nathan Raw concerning possible mutation of the tubercle bacillus of bovine origin is certainly most interesting and important One statement however on which some of his conclusions are based appears to me rather sweeping and personally I beg most respectfully to disagree with it I refer to this sentence It is now generally accepted by clinicians that all cervical gland infections are caused by the bovine bacillus conveyed by milk Now most tuberculosis officers I feel sure are very familiar with families where tuberculous infections among several members have appeared at about the same time and where it seems difficult to imagine but that there has been one source of infection for all the cases One member may develop pulmonary tuberculosis raising a high probability that the infection is of human type others may develop cervical adenitis and other forms of surgical tuberculosis These manifestations point to a not uncommon cervical adenitis where the infection is the bacillus of human type especially as the possibility of infection from human beings is not confined to families in which there is a known case of active pulmonary tuberculosis —I am etc

C O S BLYTH BROOKE
Belfast Feb 29th Chief Tuberculosis Medical Officer Antrim County Council

SIR —Dr Nathan Raw mentions two vital questions (1) When does infection occur? and (2) How does it take place? I would like to ask a third question Why does infection in some cases lead to actual active disease while in others no such disease develops? Most tuberculosis officers must have come across families which are strictly comparable families living under similar conditions of housing feeding habits etc in which one of the parents is suffering from a similar clinical type of chronic pulmonary tuberculosis In some of these families the young adult members develop pulmonary tuberculosis one after the other and die off like flies in spite of all precautions and treatment Yet in other families few if any develop the disease and if they do so their disease is chronic The infection appears to be the same but the result is so different Should we be content to say that the reason is lack of immunity and to leave it at that? Are we not stressing the problem of infection too much and so losing sight of the possibility of a still unknown something

which allows infection to progress to actual disease either by failing to inhibit the growth of the tubercle bacillus and its toxins or by encouraging that growth? The search for this 'something' need not be confined to the bacteriologist We are a long way from abolishing infection (at any rate by the human bacillus) so must we not look rather towards finding a specific method of increasing the resistance of the human body to that infection?—I am etc

Stepney E 1 Feb 29th ARCHIBALD FERGUSON

ANTAGONISTIC DISEASES

SIR —The letter by Dr Granger in your issue of February 27th recalls to my mind another rather striking instance of apparent antagonism in disease An individual whom I knew very well developed a severe attack of malaria on the Gold Coast in the late nineties After return to this country in spite of quinine treatment the attacks of ague continued with the usual deterioration of health Then he developed an attack of measles the malaria disappeared immediately without any further treatment and there has been no recurrence since —I am etc

Darlington March 6th J A HENDERSON M B

SIR —I was extremely interested by Dr Granger's letter on antagonistic diseases The recession of a disease usually chronic and often affecting the central nervous system after the onset of a new malady especially if it be associated with a marked pyrexia must have been noted by all doctors Dr Granger's case of epilepsy being ousted by the intercurrence of scarlet fever is an excellent example while the results of malarial treatment of general paralysis of the insane provide a more widely known and established instance I well remember a case of profound melancholia in a young woman Neither the nurses nor I could ever persuade her to speak even in monosyllables She thought only of her own misery and would share her trouble with no one Suddenly she developed acute erysipelas of the face with a marked temperature at once she altered She made every attempt to assist us in examining her she spoke and answered questions Unfortunately the disease spread so rapidly and widely that no treatment helped and she died One had every hope that had she lived her melancholia might have been overcome

The occasional disappearances of sarcoma and carcinoma after streptococcal infections whether accidental or instituted, as by the use of Coley's fluid remain medical mysteries of tremendous interest

The recently suggested influence of pyrexia upon the cholesterol elements in the central nervous system in cases of general paralysis of the insane treated by malarial induction is being investigated by several workers and may produce interesting results bearing upon the question of antagonistic diseases —I am etc

Birmingham March 6th A L D ABREU M B Ch B

PUERPERAL SEPTICAEMIA AND C M B NURSES

SIR —I was present last week at a meeting of the London Jewish Hospital Society when the Master of the Rotunda (Dr Bethel Solomons) and Dame Louise McIlroy gave statistics of the mortality of mothers at childbirth Professor McIlroy stressed the point that the death rate in Kensington was higher than the death rate in Shoreditch or in any other slum area of London and both speakers agreed (as all statistics show) that the highest proportion of deaths was due to sepsis and that these figures were on the increase

I would like to offer a suggestion which seems a very important factor in producing the higher proportion of deaths from sepsis occurring in districts other than slums In the poorer districts—Poplar etc —women in labour are attended by a midwife who goes from one home to another doing nothing else In Kensington or any other richer borough where in most cases a sterile drum is ordered containing gown towels mask and every accessory necessary for the confinement and where the doctor is quite aseptic (that is scrubbed up and with sterile gloves) we know as a fact that the death rate is greater But in these districts there is no midwife instead a nurse is engaged—a C M B She comes from one or other co operation where she does not only midwifery work but also general nursing! She may have been attending a pneumonia or septic surgical case or even a gangrenous appendix but she still is sent out because she holds the C M B certificate My humble opinion is that were C M B nurses forbidden to do other work than that which their special qualification entitles them to do there would be fewer cases of septicaemia I do not attach any blame to the nurses themselves nor do I accuse them of being less aseptic on the contrary they are in all cases most satisfactory and efficient To quote a case in point I rang up a co operation of nurses for a nurse specifying that she must be a C M B That same evening a nurse arrived who to my own knowledge had only the previous day left a person who died from septic pneumonia following an operation I promptly dismissed her

My suggestion is that all C M B nurses should do nothing but midwifery and that they should be prohibited from doing any other nursing Should a case of puerperal sepsis arise this would be known and the right measures taken to ensure disinfection and quarantine —I am etc,

London W 1 March 1st SIDNEY WOLFF

FIRST X RAY PHOTOGRAPHS IN THE NAVY

SIR —Recent correspondence upon the subject of x rays in the lay press recalls certain personal experiences in this connexion which may be of interest to medical readers

At the time of the public announcement of Professor Rontgen's epoch making discovery I was working in the electrical department of Guy's Hospital under Dr Newton Pitt A vacuum tube was borrowed from the physics laboratory and an x ray photograph taken of the bones of an out-patient's hand—the first I believe ever seen at Guy's Shortly after this—namely in May 1896—I entered the Navy and in consequence of the manœuvres and a shortage of medical officers was appointed to Chatham R N Hospital instead of being sent to Haslar for the usual curriculum for newly joined surgeons At my own expense I purchased a four inch spark Ruhmkorff coil a battery and a Crookes's tube and with these took several skiagrams—as the photographs were then termed—of fracture cases in hospital The Director General Sir James Dick after seeing these asked me to go down to Plymouth R N Hospital and x ray some wounded men who had just returned from the Benin expedition adding that my railway expenses would be borne by the Crown if the photographs were a success! For several months after this mine was the only x ray outfit in the whole Navy for it was not until about a year later that the Admiralty, very tentatively began to supply hospitals with the apparatus To day an excellent x ray installation is part equipment of practically every ship in H M Navy —I am etc

Ringwood Feb 28th CHARLES M BEADNELL, Surgeon Rear Admiral

Obituary

R H TODD M D F R C S I

Honorary Secretary New South Wales Branch 1908-31

In our issue of December 19th last (p 1149) we announced with deep regret the death of Dr R H Todd of which news had reached London by cable On January 2nd and February 20th we published appreciations by Professor R J A Berry and Sir Henry Newland The following memoir and further appreciations have now been received from Australia

Robert Henry Todd who died on December 14th 1931 was the beloved friend of medical practitioners throughout Australia whose immense work for the medical profession and the Australian Branches of the British Medical Association can never be measured at its full value He had just returned from a visit to England where he had attended the Annual Meeting of the British Medical Association at Eastbourne as the representative of the New South Wales Branch The warmth of the welcome home accorded him at a recent meeting of the New South Wales Branch was an indication of the affection and esteem in which he was held It is difficult to realize that he has passed and what his passing may mean

He was the elder son of Armstrong Todd M D and was born in London on July 10th 1859 From Christ's Hospital he went to Hertford College Oxford and after graduating B A proceeded to Trinity College Dublin where he received the degrees of M B and B S and the Diploma in State Medicine in 1886 in the same year he proceeded M D and in the following year obtained the Fellowship of the Royal College of Surgeons of Ireland He had an outstanding athletic career he excelled at rowing swimming and running and won many trophies He rowed in the Hertford College crew that was head of the river and his oar may still be seen in the Hertford College barge on the river at Oxford In June 1887 he married and shortly afterwards sailed for Australia as surgeon aboard the ship *Hawkesbury* He practised medicine for several years first in Sydney then at Maclean on the Clarence River New South Wales but an old infection of the left wrist was against him and he determined to study law He was admitted to the New South Wales Bar in December 1894 He was the first honorary anaesthetist appointed to the Royal Prince Alfred Hospital Sydney, and while occupying that post he effected a reorganization of the anaesthetics department For some time he acted as city coroner in Sydney and was chairman of many industrial boards before the introduction of the Arbitration Act In 1904 he acted as associate to the president (Sir Charles Mackellar) of a Royal Commission on the decline of the birth rate in New South Wales and was largely responsible for the Commission's report

He was elected a member of the New South Wales Branch of the British Medical Association in 1891 and to membership of the Branch Council in 1906 remaining on the Council until the time of his death He occupied the position of honorary secretary of the Branch from 1908 until his retirement in March 1931 when he was made president elect It was in his capacity of honorary secretary that some of his most important work was carried out It is not proposed to attempt here to enumerate his achievements or to discuss with any precision to fullness his many activities this would be too severe a task and one rendered all the more difficult by Todd's natural modesty which prevented him from making widely known the part he played in many important movements He was largely responsible for the satisfactory relations that now exist between the various New South Wales friendly society lodges and the members of the British Medical Association It was to a great extent through his efforts that in 1913 a common form of agreement between medical officers and friendly societies was accepted At that time there were many difficulties in the way of a friendly settlement of the dispute between the friendly societies and medical officers but largely through Todd's tact foresight and powers of organization these were gradually surmounted He took a keen interest in the formation of the local associations of members of the New South Wales Branch of the B M A in various sections of the State of New South Wales He attached great importance to the annual meetings with the Branch Council of delegates from these local associations and he gave much thought and care to their organization Thus largely through his efforts representatives of groups of members in near and remote parts are able to come into actual contact with the Council and to discuss their difficulties and problems in a manner that would not otherwise be possible

For many years during Todd's term of office the New South Wales Branch was housed in a building in Elizabeth Street, Sydney In 1929 the foundation stone was laid on the site of the new house in Macquarie Street by Sir Ewen Maclean President of the British Medical Association In 1930 the house was completed an imposing structure, twelve stories high within which is the Robert H Todd Assembly Hall—a lasting monument to the man who did more than any other in Australia for the advancement of the British Medical Association and the medical profession as a whole In 1912 it was deemed advisable to constitute a Federal Committee of the British Medical Association in Australia the object of which was to co ordinate the work of the six Australian Branches The chairman of the first committee was Dr W T Hayward and the honorary secretary was Dr G H Abbott Todd was appointed assessor to the committee and in this capacity was responsible for drafting its constitution which was approved by the Council of the British Medical Association in 1914 The greater part of the work of the committee almost from its inception was done under Todd's direction and control In 1918 he became honorary secretary to the committee One of the earliest tasks of the Federal Committee was the institution of a common medical journal for all the Branches of the British Medical Association in Australia Not being a corporate organization the committee itself could not own a journal To Todd then fell the task of drafting the constitution of the Australasian Medical Publishing Company Limited which was duly registered in 1913 at Sydney On July 4th 1914 the first number of the *Medical Journal of Australia* was published Since that date the activities of the publishing company have increased enormously, it now has its own printing house and undertakes printing and publishing work of all kinds Todd was the company's secretary for the time of its formation until his death

In 1921 a conference was summoned by the Annual Representative Meeting of the British Medical Association to discuss the alterations in the Articles and By laws of the Association necessary to give effect to the proposals to grant greater autonomy and freedom of action to the Oversea Branches Todd was appointed by the Federal Committee to act as representative of the Branches in Australia He accordingly attended the conference at Newcastle upon Tyne in July 1921 As an outcome of his representations provision was made in the constitution of the British Medical Association to allow the Oversea Branches to retain the character and status rights powers and duties of Branches although incorporated at the same time the Association was protected from liability for any of their acts This must be regarded as one of Todd's most important achievements In 1921 Todd was instrumental in having the constitution of the Australasian Medical Congress so altered as to provide for its conduc-

tion as a congress of the British Medical Association He drafted the new constitution which was approved and adopted by the Federal Committee It is hardly necessary to add that the organization possible under the new system was largely responsible for the increased success of later meetings In 1923 the Federal Committee made provision for a gold medal to be awarded from time to time to any member who had rendered signal service to the medical profession to the Association, or to the community Todd along with Dr W T Hayward, was the first recipient and at the inaugural meeting of the first session of the Australasian Medical Congress (B M A) in November 1923 he was presented with the medal by the President of the Congress (Sir George Syme) In 1928 on nomination by the Federal Committee, Todd was appointed by the Commonwealth Government one of five members of a Royal Commission on Public Health under the chairmanship of Sir George Syme The Commission took evidence in the capital cities of the Commonwealth and in many important country centres

From 1922 until the time of his death Todd was a Vice President of the British Medical Association He was a member of the *New South Wales Medical Board* from 1907 to 1928 and was lecturer in medical jurisprudence at the University of Sydney for many years relinquishing the post at the beginning of 1931 He also held the lectureship in the ethics of medical practice from the time of its institution a few years back until his death For several years he was a member of the Disablement and Training Committee of the State War Council examining and reporting on disabled soldiers and recommending treatment and vocational training for them

He was intensely fond of music and for many years acted as honorary secretary of the Sydney Amateur Orchestral Society He had a great love for animals and appeared to possess a rare understanding of them Strange dogs came to him at his bidding, and savage dogs were quiet at his voice and touch He was an expert horseman and a good horse master No doubt had he lived in the Australian Bush he would have proved himself one of those strangely gifted men who are able to walk bare handed into the midst of a mob of trembling unbroken horses and in a few minutes fondle the colt of their choice For many years he was a member of the Board of Trustees of the Taronga Zoological Park Trust Sydney and much of his spare time was spent among the animals at the Zoological Gardens When the Taronga Park Zoological Gardens were being equipped he gave considerable assistance in the transport of the animals from the old gardens at Moore Park Despite his wide activities and the tremendous amount of work he had to do he was never so busy that he could not find time to chat for a minute with a visitor (whoever he might be) or occasionally to scribble a line or so at the foot of an official letter His tact and kindly courtesy were unfailing This personal touch meant a great deal to the New South Wales Branch of the British Medical Association and to its members In the latter part of his life his erect bearing his rapid decisive movements and his steady tread belied his years His death came as a shock all the greater because it was so unexpected Todd was eloquent strong fearless and kind he was a true friend of the medical profession and it is difficult to conceive how his place may be filled

Dr T W LIPSCOMB chairman of directors of the Australasian Medical Publishing Company Ltd writes

It was ever Todd's ideal that the profession in Australia should be closely united in a federal spirit and that any possible inter State jealousies should disappear It was in furtherance of this ideal that it was eventually brought about that this company was formed Two well established medical journals were handed over and the company published the *Medical Journal of Australia* the one journal for the whole of Australia speaking for a united profession It was largely due to Todd's endeavour that the company not only was formed and became active but that extra capital was obtained and the company's own printing house was erected and the plant installed for an up to date high quality printing establishment for the production of our own journal and other particularly scientific work He was the first secretary of the company and remained so till his death and was able to see the project through an anxious time become what it is now —firmly and substantially established As an instance of his federal way of looking at things the Memorandum and Articles of Association of the company drawn up through Todd's legal spectacles, provide that the board shall consist of six directors one from each State no matter how big or small each individual State may be numerically and any profits made by the company after paying debenture interest shall be devoted to some aspect of medicine or science Those who now carry on the affairs of the publishing company will ever have before them the high ideals set by Robert Henry Todd I would *like to add my own personal sense of loss for my association* with him on the New South Wales Branch Council the printing company's affairs and professionally in his own home has made his death a great sorrow to me I learned to love him as a man and appreciate his wide vision on all matters affecting medicine and those who practise it and ever to admire his generous and charitable view of those who perhaps had less ethical knowledge than he had

Dr W N ROBERTSON ex-chairman of directors of the Australasian Medical Publishing Company formerly President of the Queensland Branch of the B M A and member of the Federal Committee of the B M A in Australia writes

Robert H Todd filled a unique place in the medical life of Australia A double first in his final year, he did not practise medicine long An injury to his wrist proved a drag upon his ambition to practise surgery for which he had strenuously striven to equip himself He turned to the law graduating as a barrister He found it hard to wean himself from his old love and was persuaded to undertake the heavy duty of secretary of the New South Wales Branch His success in this position immediately marked him out as adviser in the foundation of the Federal Committee of the Branches To his wisdom we owe in a large measure the sound foundations upon which this unique committee was established When it was decided to publish one journal for Australia his was the mind that evolved the scheme that made it possible Both these institutions owe an incalculable debt to his wise guidance and advice All the Branches in Australia took many of their troubles to him Queensland in particular leant upon him heavily We could always rely upon him for sound and well reasoned advice, ungrudgingly given The Council of the parent Association will remember his helpfulness in bridging difficulties between it and the Branches overseas Australia has been fortunate in having as a counsellor a man of such outstanding capacity trained in the two professions of medicine and law a man of such unselfish and generous instincts that he was unsparing in his toil to forward anything that would advance the honour and interests of the profession His sacrifices for the profession were quixotic indeed he gave his life to and for the work he loved so much To know Todd was to love him to get close to him was to enjoy a happiness not often experienced from a friendship begun in the later years of life He had a white soul full of generosity and love for all In return he experienced the trust and affection of all his colleagues

GEORGE BLAIR F R C S Ed

Surgeon to the North Staffordshire Royal Infirmary

By the sad and untimely death of Mr George Blair North Staffordshire has lost a very valuable and highly esteemed surgeon A native of Fife he graduated M B and Ch B Edinburgh University in 1905, and was admitted F R C S Ed in 1912 After serving as house surgeon at Lancaster Royal Infirmary in 1909 he went to the North Staffordshire Royal Infirmary as house surgeon then became honorary assistant surgeon and lastly full surgeon in May last In 1912 he bought a practice in Burslem He was honorary surgeon to the Haywood Hospital for many years and also honorary assistant surgeon to the Stoke on Trent Union Hospital

During the war as soon as the Government wished to have men who were engaged in civil practice Mr Blair was among the first to volunteer In March 1918 he was badly gassed near Amiens being the only survivor of the medical men in the whole brigade Although advised to go back he insisted on remaining with his battalion until he dropped down unconscious His health was never fully restored and it was obvious to his friends that often he had a hard struggle to carry on But his courage and determination and high sense of duty led him to work far too hard and to sacrifice himself for others His final illness lasted about two months and after much suffering he died on January 31st last He was 48 years of age and unmarried

A friend writes George Blair was a striking example of Scottish virtues His colleagues cannot speak too highly of him He was an exceptionally hard working and conscientious surgeon He made no enemies was always reliable self effacing self sacrificing kindly and helpful to the last degree And now that he has passed away we cannot regret that a hopeless and very painful illness bravely borne was not further prolonged Why a life so good and so useful should thus be cut off—just when he had reached the fruition of his powers and was reaping a well deserved reward—we cannot explain Lamenting his death we are thankful for the memory of a noble character and great services

H W CUNNINGHAM M D

Londonderry

We regret to record the death of Dr Herbert William Cunningham of Londonderry aged 63 years He was the son of a well known Derry man Mr William Cunningham manager of the local branch of the Ulster Bank After studying medicine at Queen's College Belfast he graduated M B B Ch B A O in 1892 and proceeded M D three years later For thirty three years he held the appointment of dispensary medical officer for the Derry No 1 District and in the course of his duties always showed the utmost consideration and sympathy to the poor with whom he was brought into contact Dr Cunningham took great interest in the work of the British Medical Association he held the office of president of the Ulster Branch in 1923–24 and was chairman of the Portadown Division in 1924–25 He leaves a widow and two sons the elder Dr Ronald Cunningham is in practice in Derry

His oldest friend and colleague J G C writes The medical profession in Londonderry and the neighbourhood has sustained an almost irreparable loss in the sudden death of Dr H W Cunningham He died as he would have wished at his work and with all his faculties unimpaired As dispensary doctor for part of the city and for over twenty years honorary physician to the City and County Hospital his work unselfish and highly skilled as it was was ever at the service of the poorer class to whom he gave of his best he lived up to the teaching of his Master the Great Physician Inasmuch as we have done it unto one of the least of these my brethren we have done it unto Me To the medical man he was a true friend scrupulously professional and always ready with his advice and counsel As a colleague patient and friend I can testify to his skill kindness and unvarying selflessness He will be sadly missed by his large clientele rich and poor and not least by his medical brethren to whom he was a tower of strength

Dr R KING BROWN writes As a fellow student and intimate friend of the late Dr H W Cunningham I would like to add my tribute to the general sorrow aroused not only in Londonderry but in the North West of Ulster through his sudden and tragic death He and I passed through our medical course together and often shared the same apartment and a more loyal friend and companion I never knew We were also companions in sport and played regularly in the same football team for Queen's College Belfast We have always kept in touch since those happy days and have never missed an opportunity of seeing one another when he passed through London as he often did He was an excellent student and always kept abreast of the times and I have reason to know that he was much beloved in the city of Londonderry where he was born and practically spent his whole life His loss will be deeply mourned not only by his wife and family to whom our sympathy goes out but by a large circle of patients and friends

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Dr HUGH R MACINTYRE who died suddenly on February 23rd graduated M B Ch B Ed in 1904 and proceeded M D in 1908 when he entered the service of the corporation of Liverpool as resident medical officer at the City Hospital Fazakerley From this office he was selected to undertake special duties in connexion with the Welsh National Memorial Association returning subsequently to Liverpool for duty at the Parkhill Sanatorium Soon after the outbreak of war in 1914 Dr Macintyre joined the British Expeditionary Force with a temporary commission in the R A M C On the Somme and in the Ypres salient he won the Military Cross and Bar for conspicuous gallantry and devotion to duty when in command of a bearer party He led his men repeatedly through heavy hostile barrage until all the wounded had been carried into safety He was fearless in the place of danger and by his coolness and courage he showed a splendid example to his men Subsequently while serving with his field ambulance in Italy he was awarded the D S O in recognition of conspicuous valour at the crossing of the Piave River Dr Macintyre's more recent services as medical superintendent of the Parkhill and Broadgreen Sanatoriums ensure him a permanent place in the memory of his colleagues and of all who came under his care

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Dr MALCOLM JOHN RATTRAY who died in January at Singapore was born at Frome in November 1883 After studying at Guy's Hospital he obtained the diplomas of the English Conjoint Board in 1907 He subsequently proceeded to the East where he served during 1909–10 with the Straits Settlements Government Medical Service and was afterwards appointed medical officer to several rubber companies in Malacca In 1912–13 he served as a member of the Sanitary and Malarial Board of Negri Sembilan During the war he received a commission in the R A M C and served in France in 1914–15 On his return to Malaya in 1919 he joined the Malacca Agricultural Medical Board and later established himself in practice in Singapore where he became a member of the Hospitals Board and honorary secretary of the Singapore Council for Combating Venereal Diseases Dr Rattray was a member of the British Medical Association and took an active part in its local work In 1924 he was a member of the executive committee of the Far Eastern Association of Tropical Medicine which arranged the congress at Singapore in that year By his wish the funeral was at sea in the presence of a number of friends

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week debated the Estimates for the Army Navy and Air Force and went into committee on the Wheat Bill The Dangerous Drugs Bill and Destructive Imported Animals Bill which had come from the House of Lords and had been read a first time were set down for second reading on March 11th

On March 1st Mr Groves presented a petition against the legal practice of vivisection and the use of poison gas in warfare The petition was signed by over 160,000 citizens

National Health Insurance

Replying on March 2nd to Mr Buchanan Mr ERNEST BROWN said that since the issue in 1929 of leaflets and instructions to approved societies doctors and insurance committees there had been a decrease in the rate of expenditure and it might be inferred that there was also a decrease in the number of persons receiving health insurance benefit This decrease could not be stated without examining the books of 8 000 approved societies It would be unwise to conclude that the issue of the circular was the only factor to be considered

On March 7th Sir HILTON YOUNG informed Dr O Donovan that hypodermic syringes for patients suffering from asthma were not included in the list of appliances contained in the second schedule to the Medical Benefit Consolidated Regulations 1928 They could not therefore be supplied as part of medical benefit

Radium

In reply to Mr John on March 3rd Sir HILTON YOUNG said he was informed by the National Radium Trust that the total amount received by the Trust from its inception in July 1929 to December 31st 1931 from public subscriptions moneys voted by Parliament and interest on temporary investments was £258 536 13s 1d The payments made in the same period (excluding those made by way of temporary investment) were

	£	s	d
Purchase of radium and containers	217 726	11	2
Advances to Radium Commission	2 700	0	0
Testing and measurement of radium	1 616	0	0
Other expenses of the Trust	562	8	2
	222 604	19	4

Inspection of Food

When the second reading of the London County Council Bill was moved in the House of Commons on March 3rd Mr GEORGE HARVEY proposed its rejection He objected to a clause which provided that all meat shops must be registered if they dealt in potted pressed preserved or pickled meat This clause expressly excluded clubs hotels and restaurants The Bill also proposed to authorize the inspection of these shops which were already under a Statutory Order relating to meat under the Public Health Act Mr H G WILLIAMS seconded the rejection

Sir CYRIL COBB for the London County Council said he could give an undertaking that the by laws to be drawn up under this Bill would be based on Section 72 of the Public Health Act 1925 They would have to devise a by law to regulate meat transport Ice cream makers had been registered in London since 1928 but not sausage makers The powers over ice cream makers had proved to be insufficient Registration did not prevent the ice cream maker from making his ice cream under unclean and insanitary conditions They could only proceed against him if he poisoned someone and information reached the Council through the medical officer of health They could not refuse to register an ice cream maker though they knew from the beginning that his premises were insanitary Therefore they needed the powers which were asked for in the Bill With regard to sausages the powers were less They did not know in all cases where the premises were situated in which sausages were made The same was true of other kinds of preserved meats So far as the authorities were able to deal with them they were obliged to fall back on the ordinary regulations of the Ministry of Health and on the Public Health Act 1891 This particular legislation was not for the London County Council but for the borough councils of London and the City Corporation No extra inspectors would be needed to carry out the provisions of the Bill

Sir HILTON YOUNG said the powers asked for by the London County Council were not without precedent and their exercise had given rise to no complaint in the provinces The points under discussion could be adjusted in committee

Dr O DONOVAN said that Clause 18 instructed every medical practitioner to sign a declaration if he suspected or became aware of food poisoning He was accustomed to notifying small pox but that he should be compelled to notify a suspicion of disease was too much The doctors were to be the first cause to initiate punitive measures and the Bill placed on the Minister of Health the responsibility of setting out the certificate on which their notifications must be made What would be the position of a doctor who had committed his suspicions to paper when he was later cross examined by the most skilful counsel that the food trade association could put up? This Bill further perpetrated a wrong by assessing a doctor at two values If a free and untrammelled practitioner his certificate was to be worth 2s 6d but if he took service under an authority as medical officer or if he worked for nothing in a dispensary or hospital his opinion was worth not 2s 6d but 1s Although the practitioner must notify forthwith there was no arrangement for paying forthwith The practice of many local bodies was to accumulate these small debts these half crowns or shillings that were acceptable to young doctors starting in practice and then to send a cheque six or nine months after when the doctor had left the hospital to which he was attached so that the cheque became a derelict Hitherto in cases of notification there had been no compulsion upon a consultant to certify but this Bill said every medical practitioner attending Yet it missed the most useful source of information The pathologist who might let the authorities know of the beginnings of a fatal epidemic was excluded by words from the Bill

Mr JAMES DUNCAN said that in 1927 cases of food poisoning in London were attributed to ice cream and clauses dealing with ice cream were included in the Council's General Powers Act of 1928 but had not been effective He did not know definitely of poisoning cases from sausages or potted pressed pickled or preserved meat fish or other food but the medical officer of health for Kensington said As regards sausages and preserved food few articles of food are so likely to be contaminated and to spread serious food poisoning as sausages cooked foods etc In the case of sausages the skin masks decomposition The other foods mentioned unlike butchers meat are generally eaten without being washed or cooked after they leave the shops That medical officer had made representations to him on behalf of Kensington in favour of the Bill

Captain FRASER said Clause 18 provided that every medical practitioner should inform forthwith the medical officer of his sanitary authority if he suspected or became aware of a case of food poisoning What was food poisoning? No inspector could find botulism one of the most violent poisons which could be found in food for this took eighteen months to grow in a sealed container Then there were forms of poisoning which were due to excess of substances added for the purpose of preserving the food or added by accident Many cases of so called food poisoning arose from these causes but they were all slight The commonest form of food poisoning was produced by the Gaertner bacillus That bacillus existed in clean as well as in dirty surroundings The removal of dirty surroundings would not remove the possibility of it being present It was present in certain kinds of meat and in rodents it was also present in human beings It poisoned immediately Persons were carriers of this bacillus They became immune but could transmit it to any food they touched Food was liable to become contaminated in a clean kitchen if the cook was a carrier of the Gaertner bacillus The Bill would not do what was claimed for it Every stomach ache was a case of suspected food poisoning Never before had a medical man been asked to notify a disease so ill defined as food poisoning In chronic food poisoning there was not acute abdominal pain but loss of appetite

latitude etc If any person went to a doctor these symptoms would cause him to suspect food poisoning and he would notify it at 2s 6d a time The clause was unworkable and should be withdrawn

Sir GEORGE HARVEY said that as the Minister of Health desired these matters to be discussed in committee he withdrew his amendment for the rejection of the Bill

The Bill was then read a second time without a division

Pensions in the Indian Services

On March 7th Sir S HOARE replying to Mr Kirkpatrick said that for some time there had been anxiety among officers of the Indian Services generally as to the security of their pensions He had not received any special representations from officers of the Indian Medical Service The pensions of officers of the Indian Services were not guaranteed by the British Government they were a charge on Indian revenues and the responsibility for ensuring that the necessary funds were forthcoming rested with the Secretary of State for India The Services Subcommittee of the Indian Round Table Conference recommended that when a new constitution for India was drawn up suitable safeguards for the payment of pensions should be provided and the Prime Minister in the statement made by him on behalf of the British Government at the final meeting of the first Conference laid it down that the transfer to a responsible Government in India of responsibility for the finances of that country must necessarily be subject to such conditions as would ensure the fulfilment of the obligations incurred under the authority of the Secretary of State The consent of Parliament would be required to any change in the present position

Death Rate among Boys Employed in Mines.—On March 2nd Mr ISAAC FOOT replying to Mr Tinker said it was estimated that in 1931 the death rate among boys *under* 16 years of age employed below ground in mines was 1 13 per 1 000 employed in Great Britain and 0 83 in Lancashire The corresponding rates for all persons employed below ground were 1 14 and 0 96 respectively

Foot and mouth Disease and Imported Hay.—Sir J CHAMOUR told Dr O Donovan on March 3rd that the importation of hay and straw from all countries except those known to be free from foot and mouth disease was prohibited by the Foreign Hay and Straw Orders with the exception of hay and straw used at the time of importation as packing for merchandise and manufactured straw not intended for use as fodder or litter for animals The Foot and Mouth Disease (Packing Materials) Order of 1925 prohibited any hay and straw imported as packing for merchandise from being brought into contact with animals

Imported Fresh Milk.—Replying to Mr Kimball on March 3rd Sir HILTON YOUNG said inquiries made by officers of his Department afforded no evidence that fresh milk imported from abroad which had been pasteurized once before exportation and a second time after importation had been sold in this country as pasteurized milk

Vaccination Act.—Sir H SAMUEL told Mr Groves on March 3rd that he had received no complaints of the refusal of certain London stipendiary magistrates to take statutory declarations under the Vaccination Act 1907 when sitting in open court but if particulars could be sent him he would consider whether any action was required

Leeds Hospital.—Major TRYON answering Mr Logan on March 5th said that four hospital under the Ministry of Health—namely Fernbank near London Highbury Hospital Birmingham Blackrock Hospital Dublin and Kirkburton an institution for mental cases near Huddersfield—had been closed during the past twelve months Another institution might be closed in the current year if alternative arrangements for the treatment of patients could satisfactorily be made The policy of the Ministry was to make use of local hospitals as far as possible consistently with the interests of the Ministry's patient but there were certain types of facility—as for example of leper mental disorder tuberculosis and certain types of surgical cases—for which specialized treatment was desirable in the interest of the patients

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The following candidates have been approved at the examination indicated

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.—P C Bax S Bridbury H W Davie (Mrs) Elfrida L G Filon

UNIVERSITY OF LONDON

The following have been recognized as teachers of the University in the subjects indicated.—*King's College Hospital Medical School* Dr M Critchley (neurology) Dr J L Livingstone and Dr C E Newman (medicine) Mr H A Lucas (pathology) Dr M S Thomson (dermatology)

The Senate has approved in principle the institution of an academic diploma in radiology

The regulations for the M B B S examination have been amended by the substitution of the following for the third footnote on page 199 of the Red Book 1931-32 and page 259 of the Blue Book September 1931

The certificate in this subject must state that the person signing it has instructed and examined the student in the practice of vaccination and that he is a person authorized by the Minister of Health to issue such a certificate

The regulations for the M D Examination (Red Book 1931-32 p 204 Blue Book September 1931 p 264) have been amended so that the first paragraph dealing with the date of examination reads as follows

The Examination for the Degree of Doctor of Medicine will be held twice in each year commencing on the second Monday in December and on the first Monday in July except that the Examination for Branch V (State Medicine) shall commence on the second Monday in December and on the second Monday in July

Sir E Graham Little M D has been appointed a member of the court of governors of the London School of Hygiene and Tropical Medicine, and Mr C J Bond F R C S a governor of University College Leicester

Sir William Collins M D will be the representative of the University at the celebrations of the tercentenary of the University of Amsterdam in June next and Professor W W Jameson at the Royal Sanitary Institute Congress at Brighton in July

The William Julius Mickle Fellowship for 1932 has been awarded to P Eggleton (University College) for his research on the labile compounds of phosphorus in muscle

The Services

R N V R OFFICERS DECORATION

The Royal Naval Volunteer Reserve Officers Decoration has been awarded to Surgeon Commander A G Elder D S C

TERRITORIAL MEDICAL OFFICERS ASSOCIATION

A general meeting of the Territorial Army Medical Officers Association will be held at 37 Russell Square London W C 1 on Thursday March 17th at 3 p m at which all Territorial Army medical officers (active and retired) are invited to be present

DEATHS IN THE SERVICES

Colonel William John Reid Rumsford C I E late R A M C died at Exmouth on February 4 aged 80 He was born at Grenada on January 26th 1852 the son of the late William Ireland Rumsford of Cruden Bay in Hope County Kildare and was educated at Portarlington School and in Dublin taking the L R C P and L R C S I in 1874 as well as the L R C S I in 1888 Entering the Army as surgeon on February 4th 1877 he attained the rank of colonel on December 14th 1903 and retired January 26th 1909 He served in the Afghan war of 1879-80 with the Khyber Field Force (medal) in the Egyptian war of 1882 (medal and Khedive's bronze star) in the Sudan in 1885-86 with the Frontier Field Force and in the China war of 1900 when he was mentioned in dispatches in the *London Gazette* of May 14th 1901 and received the medal with a clasp and the C I F In the administrative grade he served as P M O in Bermuda Canada and the West Indies and after retirement rejoined for service in the war of 1914-18

Medico-Legal

WITHDRAWAL OF CHARGE OF NEGLIGENCE AGAINST SURGEON

Before Mr Justice McCardie and a special jury on March 2nd and 3rd an action was heard in which Mr J G Tudor bank manager of Bridgend on behalf of his daughter a child of 11 claimed damages from Mr W A Mein surgeon of Bournemouth alleging negligence in the performance of an operation on the child for appendicitis Negligence was denied and Mr Mein was defended by Mr J E Singleton K C and Mr Thomas Carthew on the instructions of Messrs Le Brasseur and Oakley for the London and Counties Medical Protection Society

Mr Kirkhouse Jenkins K C in opening the case said that Mr Mein operated on the child in May 1930 when she was taken ill while on holiday at Bournemouth and according to him he then removed her appendix In September however it was found that the appendix was still causing trouble and a second operation was performed by Mr J O D Wade consulting surgeon of Cardiff who found the appendix and removed it It was alleged that to repair the hernia caused by the first operation scar still another operation would be necessary Mr Tudor and his wife gave evidence as to Mr Mein s statement to them that he had removed the appendix

Dr Jeffrey Woodward Jones of Bridgend testified that when he saw the child in September five months after Mr Mein s operation her condition suggested appendicitis He gave the anaesthetic at the second operation performed by Mr Wade and saw Mr Wade remove what he believed to be the whole appendix There was no sign of the stump of an appendix having been left from the former operation He agreed on cross examination that without any fault on the part of the surgeon hernia might have followed such an operation as Mr Mein had conducted also that where an appendix had been removed the patient might suffer from a residual abscess necessitating a further operation Mr J O D Wade who said that in 1931 he had performed nearly 1 600 operations including 405 for appendicitis stated that he discovered no indication in this case of previous interference with the appendix The appendix which he removed was 3½ inches in length and had two perforations in size and shape it was quite usual and did not indicate that any part of it had been cut off He agreed that it was a very difficult matter to be certain of the appendix when there was a matting together of the tissues as there might have been when Mr Mein performed the operation Dr Harold Alfred Scholberg consulting pathologist of Cardiff said that he had examined the appendix removed by Mr Wade and in his opinion the tip was that of an original appendix not a stump after part had been removed

For the defence Mr Singleton said that there could be no doubt that Mr Mein s immediate diagnosis of a burst appendix and his prompt operation had saved the girl s life The complaint against him was that hernia had resulted after the operation and that he had not removed the whole appendix With inflammatory trouble and general peritonitis as was indicated in this case a weakening of the muscular tissue making hernia more likely to develop often occurred and hernia again was likely to follow if an abscess had to be drained Mr Mein had been faced with a dangerous state of things in which over interference might cause serious injury If he had merely drained the abscess and left the appendix for further operation no one could have complained and even had he removed the appendix completely a further operation might still have been necessary to deal with residual abscess

Mr Mein in evidence stated that he had performed between 2 000 and 3 000 operations for appendicitis This child was in a dangerous condition and he had operated on her within two hours of making the examination He found a mass of adhesions in which it was impossible at first to distinguish the appendix but on enlarging the opening he found the tip of the appendix which was gangrenous and perforated The appendix appeared to attach itself at 4½ inches from the tip to the large intestine and he cut it off at that point As he found it impossible to invaginate the stump he tied a ligature round it and left it Sir Charles Gordon Watson said that judging by the evidence he had heard Mr Mein had done the right thing In an abscess of the appendix the first essential was to drain it and where there were adhesions it might be almost impossible to find Mr V Warren Low testified to the same effect and said that hernia might follow any abdominal incision without the surgeon being at fault

After this evidence Mr Jenkins on behalf of the plaintiff withdrew the allegations of negligence against Mr Mein Mr and Mrs Tudor had desired him to say that the withdrawal was unreserved They recognized the difficulties which an operating surgeon must encounter and they wished further to say that they appreciated more than words could express the fact that Mr Mein had saved their child s life Mr Singleton accepted the withdrawal pointing out that the issue was a serious one to Mr Mein as a professional man so long as allegations of negligence were made he was bound to contest the case In the circumstances which had arisen however he thought it right to pay to Mr Tudor a sum which would completely indemnify him against the costs of the action He added that Dr Woolmer Davies of Bournemouth who had called in Mr Mein in the first instance and also the nurse who had been present at the operation were in court and would have been prepared to testify that they had seen the appendix which Mr Mein had removed

Mr Justice McCardie said that he was glad the charge of negligence had been completely withdrawn and that it was recognized by Mr Tudor that the defendant was a most able and experienced surgeon He was glad also that the defendant had shown the generous good will which marked his great profession and had indemnified the plaintiff in respect of costs The settlement reflected the greatest credit on both sides He also agreed with Mr Singleton that there was no suggestion against Mr Wade and Dr Jeffrey Jones who had given their evidence for the plaintiff with a fairness that was a credit to them

Medical News

The second Congress of the International Society of Orthopaedic Surgery will be held in London at the Royal Society of Medicine on July 19th 20th 21st and 22nd 1933 under the presidency of Professor Nove Josserand of Lyons

Lord Moynihan of Leeds has been elected a member of the committee of the Radium Institute London in the place of Sir Hugh M Rigby Bt who has resigned on his retirement from practice and removal from London

H R H the Prince of Wales will declare open Manson House Portland Place W the new headquarters of the Royal Society of Tropical Medicine on Thursday next March 17th at 5 30 p m The Prince will be received by Sir Austen Chamberlain and Dr G Carmichael Low president of the society Admission will be by ticket only

The Irish Medical Schools and Graduates Association will hold a dinner in London on St Patrick s Day Thursday March 17th at 7 45 o clock at the Piccadilly Hotel when the guests of honour will be H E the Envoy Extraordinary and Minister Plenipotentiary for Egypt, and Mr P J H Hannon M P

At the meeting of the Royal Microscopical Society to be held at B M A House Tavistock Square W C on March 16th at 5 30 p m Dr Wilfrid Marshall will read a paper on the influence of refractive index on mounting media

A meeting of the Medico Legal Society will be held at 11 Chandos Street W 1 on Tuesday March 15th at 8 30 p m Dr L A Parry will give an address on some medical legal and sociological aspects of abortion which will be followed by a discussion

The ninety sixth annual general meeting of the Royal Medical Benevolent Fund will be held in the lecture room of the Medical Society of London 11 Chandos Street Cavendish Square W on Tuesday March 15th at 5 p m with the president Sir Thomas Barlow Bt in the chair

The next monthly clinical meeting for medical practitioners at the Hospital for Epilepsy and Paralysis Maida Vale, W 9 will be held on Thursday March 24th at 3 p m when Dr F L Golla will give a clinical demonstration Tea will be provided, and it will be a convenience if those intending to be present will notify the secretary beforehand

The Fellowship of Medicine and Post Graduate Medical Association has arranged a course in proctology at the Gordon Hospital Vauxhall Bridge Road from March 14th to 19th In connexion with the M R C P course there will be pathological evenings on March 14th and 18th at 6 o'clock at the London Temperance Hospital Dr Donald Hunter will give a lecture on the significance to clinical medicine of calcium metabolism on March 16th at 8 30 at 11 Chandos Street Cavendish Square open only to members apply to the Fellowship of Medicine Courses in April will include ophthalmology at the Central London Ophthalmic Hospital diseases of children at the Hospital for Sick Children venereal diseases at the London Lock Hospital diseases of the chest (week end course) at the Brompton Hospital oto rhino laryngology at the Central London Throat Nose and Ear Hospital Detailed syllabuses of each of these courses which are open only to members will be available shortly from the Fellowship of Medicine 1 Wimpole Street W 1

The second part of the post graduate course in tropical medicine and hygiene for ship surgeons will be held at the Hospital for Tropical Diseases Endsleigh Gardens W C and the London School of Hygiene and Tropical Medicine Keppel Street W C from April 11th to May 6th Particulars can be obtained on application to the secretary Seamen's Hospital Society Greenwich S E

An international congress on syphilis will be held in Paris from May 9th to 12th on the occasion of the celebration of the centenary of the birth of Professor Alfred Fournier who died in 1914

An election of Junior Fellows under the Beit Memorial Fellowships for Medical Research will take place in July next They are of the annual value of £400 and the usual tenure is for three years The elected Fellows will be required to begin work on October 1st Applications should be received by May 18th though late entries will be accepted up to June 1st Forms of application and all information may be obtained by letter only addressed to Professor T R Elliott M D F R S honorary secretary Beit Memorial Fellowships for Medical Research University College Hospital Medical School University Street W C 1

The Sorbonne announces two summer courses in the French language to be held from July 3rd to August 24th and from August 1st to 28th They include six or four weeks preparation work in the university coupled with afternoon visits to places of interest in Paris and thirty-six more advanced afternoon lectures on prominent present day questions The longer course includes also a journey into Western France occupying eight days Full particulars may be obtained from M Henri Gov Directeur du Bureau des Renseignements Scientifiques la Sorbonne Rue des Ecoles Paris Ve

A useful pamphlet dealing with the provisions made for the professional and middle classes at voluntary hospitals in London has been issued by the King Edward's Hospital Fund The introduction states that many of the London voluntary hospitals have recognized that there is a growing demand for suitable accommodation for people who while unable to pay the charges of a nursing home desire more privacy and perhaps better accommodation than is available in the ordinary wards and who are willing to pay for it according to their means and also for medical attention Special provision has therefore been made for such patients and the King's Fund has set forth in this pamphlet a complete list of the pay beds now available together with information as to the nature of the accommodation—whether cubicles single rooms or small wards for two or four persons—and the normal weekly charge In the introduction to the pamphlet attention is drawn to the fact that the weekly charge does not include medical and surgical fees these being usually arranged between the patient and the consultant and that application for admission is in most cases made through the patient's own doctor Useful information is also given regarding the Hospital Saving Association and the British Provident Association The pamphlet can be obtained from George Barber and Son Ltd Furnival Street E C 4 (3d post free)

An Alfred Fripp Memorial Fellowship endowed with the sum of £7 000 has been established at Guy's Hospital for promoting the advancement of knowledge and research in psychology through the study of children in health and disease The Fellowship will be awarded by a board of electors consisting of the physician for diseases of children the superintendent and the dean of the medical school as *ex officio* members and five others co opted by the *ex-officio* members It will be open to either sex but candidates must be unmarried not more than 30 years of age and be qualified to practise medicine or surgery they will be expected to submit with their application a scheme of advanced study or research work The appointment will be whole-time—it may be held concurrently with a demonstratorship—for a period of two years which may be extended for a further period not exceeding three years at the discretion of the board of electors The Fripp Fellow will be allowed opportunities for study in the children's department of the hospital, and the salary will be £300 per annum

The March issue of the *Edinburgh Medical Journal* contains several of the papers read at the meetings of the Tuberculosis Society of Scotland in October 1931 and last month The subjects treated include the cause and treatment of displacements of the heart in pulmonary tuberculosis by Dr C Clayson the administrative and clinical aspects of tuberculosis schemes by Dr A S M Macgregor observations on the death rate from tuberculosis in Glasgow by Dr J A Wilson underlying principles in the treatment of bone and joint tuberculosis by Dr A Dale tuberculides by Dr R Cranston Low, pregnancy in tuberculosis by Dr J Haig Ferguson human tuberculosis of bovine origin by Dr A Stanley Griffith and types of tuberculous infection in children living in the West of Scotland by Dr J W S Blacklock

We have received the first issue published in Madrid in January of a new monthly Spanish journal entitled *Anales de Medicina Interna* and edited by a committee which includes six professors of the medical faculty of Madrid The issue contains articles on diabetes migraine treatment of anaemia clinical records and reviews of books

A new issue of the *New Zealand Official Year Book* is now available Although mainly statistical in character the various sections are elaborated by discussion and explanations so that the volume presents a vivid and concise picture of the life welfare development occupation and interests of the Dominion and its people It is published by the Government Printing and Stationery Department (7s 6d postage extra)

A stained glass window in memory of the late Dr S H A Lambert for fourteen years chairman of the panel of Harrow School doctors and official medical adviser to the head master has been placed in Roxeth Parish Church Harrow The cost has been defrayed by past and present Harrovians

The chair of medicine at the College de France vacated by the retirement of Professor D Arsonval will be occupied by Professor Nicolle of Tunis

A Societe d Hematologie has been recently founded in Paris with Professor Hayem as president of honour Professor Chauffard as president and Professors Vaquez Achard and Joltz as vice presidents Meetings will be held once a month at the Hotel Dieu

Professor Anton Eiselsberg the eminent surgeon has been presented with the freedom of the city of Vienna

Dr Pierre Lereboullet professor of children's diseases in the Paris Faculty of Medicine has been elected an officer of the Legion of Honour

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House, Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are *MUSEUM* 9861 9862 9863 and 9864 (internal exchange four lines)

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The address of the Irish Office of the British Medical Association is 16 South Frederick Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh*, telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Stethoscope for Deaf Doctor

SCOT writes Can some practitioner kindly advise me as to the best stethoscope chest piece for a doctor getting slightly deaf?

Varicose Veins Oedema of Ankle

J A L G writes In the chronic condition of varicose veins often complicated by dermatitis and ulcer I have dealt with the veins by injection and the complications by the support of zinc gelatin or elastoplast bandaging A stage is reached when these are no longer required but oedema always tends to return despite dietetic restriction mainly of carbohydrates and seasonings and the use of an alkaline laxative Another condition is the oedema of young women not yet complicated by varicose veins or by ulceration I should be glad of some references to treatment of these states

Income Tax

Sale of Share in Partnership

Dr A —The questions asked are (1) whether the consent of the remaining partner is necessary for a revision of the assessments to the earnings basis and (2) whether that revision would involve lodging fresh accounts as far back as 1922

*** (1) No The bookings basis (less a proper allowance for probable bad debts) is legally correct and no one's consent can be necessary for the adoption of the correct basis (2) Yes The statutory period for revision is limited to six years The earliest year now open to revision is therefore the financial year ending April 5th 1926 Unfortunately the basis of assessment for that year was the average of the three previous years earnings—that is of the three years 1922 1923 and 1924

Use of Residence for Practice

R N bought an industrial panel practice in February 1931 His predecessor saw no patients at his residence but R N has bought a house in a new residential area has put up a plate and is gradually building up a non panel practice there He asks what allowance he can claim for rent rates etc of his residence?

*** So much depends on the individual circumstances that advice in particular cases is difficult The guiding principle is what proportion of the premises are set aside and used for professional purposes Seeing that the main surgery is elsewhere it is assumed that the professional part of the premises would be the consulting room and garage and perhaps a waiting room in addition This would point to something like one third of the general expenses including light and heat as being a fair charge against private professional receipts

LETTERS, NOTES, ETC

Shortening an Elongated Uvula for the Cure of Cough

Dr A D GORMAN (Blackburn) writes I was much interested in the article on the above subject in the *Journal* of February 27th by Sir James Dundas Grant During the course of a number of years in general practice in Scotland I had four cases exactly similar to those he describes Previous to doing the operation for the first time I had neither seen nor read of such a procedure although no doubt the operation is well known and is apparently an old one In each of my four cases the cough was very persistent and it was only after careful and repeated physical examination that I formed the opinion that the elongated uvula must be the exciting cause I persevered with sedative cough mixtures especially in the first case—a highly neurotic young man who firmly believed that he was afflicted with pulmonary tuberculosis and who was incidentally a non smoker It was with some hesitation that I decided to try the effect of shortening the uvula in my first case owing to the possible failure of giving the patient any relief The results however were highly satisfactory and more than justified my expectations The actual operation is simplicity itself and in each case I simply removed what I considered to be the redundant portion

The Common Cold

Surgeon Rear Admiral V G THORPE writes I am surprised that no mention has been made of calcium in the treatment of a common cold In my experience a 5 grain tablet of calcium lactate tucked between the cheek and upper jaw where it will readily adhere to the back teeth and takes two or three hours to dissolve will abort a cold in a most satisfactory manner The sneezing and running from the nose ceases entirely especially if the tablet is taken in time A remedy so simple is really worth trying in this annoying complaint

The Insanity of Cowper the Poet

Dr J LIVINGSTONE LOUDON (Hamilton) writes The interesting notes in the *Journal* of February 21st and 27th by Dr J R Whitwell and Dr J B Davidson recall to me a passage in the Greville Diary

> September 18 1834 Henry Taylor brought me a parcel of letters to Southey the other day they are from Newton Cowper's nephew (I think to W Thornton) and they are to supply Southey with materials for Cowper's Life which he is writing There is one curious fact revealed in these letters which accounts for much of Cowper's morbid state of mind and fits of depression as well as for the circumstances of his running away from his place in the House of Lords He was a hermaphrodite It relates to some defect in his physical conformation somebody found out his secret and probably threatened its exposure

Rickets in Scotland

Dr W L ENGLISH (Crewe) referring to Dr Violet Hastings's observations on rickets in Scotland notes the fact that a rachitogenic factor is held to be present in oats and refers to the belief held solely by people who have never been to Scotland that the natives eat nothing else but this rickety diet Similarly in the United States cereals and ice cream seem to be the main sustenance

Found An Anaesthetist's Case

The Commissioner of Police of the Metropolis asks us to state that a brown leather anaesthetist's case about 18 in by 12 in by 6 in bearing the maker's name (Messrs W H Bailey and Son Oxford Street) on the lid was found in the West Central district on January 28th and that the property will be restored to the rightful owner at the Lost Property Office 109 Lambeth Road S E 1 on any week day between 10 a m and 4 p m (Saturdays 10 a m to 1 p m) on satisfactory proof of ownership being given

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 45 46 47 48 49 52 and 53 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 91

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

235 Diffuse Spontaneous Subarachnoid Haemorrhage

O HESS (*Deut med Woch* January 8th 1932 p 45) reviews recent literature and records six additional cases of subarachnoid haemorrhage a condition which may occur in apparently healthy persons It is not uncommon in children (from 2 to 8½ years) and in adolescents The onset is sudden like that of apoplexy with violent headache vertigo and vomiting unconsciousness may follow or the mind remain clear Within two days symptoms of meningeal irritation occur such as fever pupillary changes paresis paresthesiæ convulsions and mental disturbance A peculiar symptom is massive albuminuria the albumin figure sometimes rising to 30 per cent The typical apoplectiform onset contraindicates meningitis In favourable cases improvement occurs in six or seven days but the average duration is three or four weeks Recurrences are frequent The cardinal clinical symptom is blood-stained cerebro-spinal fluid The bleeding comes from the pial or subarachnoid vessels but subdural pressure is not common owing to the arachnoid resistance The cerebro-spinal fluid is under great pressure it is uniformly mixed with blood dull red and not coagulated Subsequent punctures yield a reddish-yellow and finally a clear fluid The globulin and colloidal reactions are feebly positive but the bacteriological examination is negative Xanthochromia the uniform admixture of cerebro-spinal fluid with non-coagulated blood and the consistent results from punctures at different levels afford reliable indications of spontaneous subarachnoid haemorrhage the cause of which is frequently a slight physical or mental strain The etiology is obscure Hess predicates a vaso-neurotic diathesis and states that migraine and essential hypertension play an important part In fatal cases the sites of the vascular lesions were seldom found Subarachnoid haemorrhage may follow influenza and it must be differentiated from apoplexy syphilis tuberculosis and plumbism The most reliable method of treatment is repeated lumbar puncture Hess mentions a case in which twelve lumbar punctures were performed he has employed it nine and ten times respectively in two other cases which subsequently recovered

236 The Blood Pressure in Pulmonary Tuberculosis

A V BLASCO (*La Med Ibera* December 19th, 1931 p 787) maintains that the diagnostic value of arterial hypotension should not be exaggerated since a low blood pressure is often found in vigorous persons who are absolutely free from any tuberculous taint Hypotension can only be regarded as a sign of real value when it is associated with more definite signs of tuberculous infection On the other hand considerable prognostic value must be assigned to hypotension in pulmonary tuberculosis It is generally agreed that a low arterial pressure which continues to fall is a bad sign and heralds a fatal issue On the other hand a rise of blood pressure which has been low at first is a favourable sign and the same may be said of a blood pressure which remains normal throughout the disease

237 Purpura in Scarlet Fever

F C WOOD SMITH (*Brit Journ Child Dis* October December 1931 p 274) who records an illustrative case states that purpura is a rare complication of scarlet fever both sexes are equally affected but children more commonly than adults The complication which is probably due to capillary damage caused by the toxin of the scarlatinal streptococcus may appear in any type of mild fever the usual time for its occurrence being the third week of the disease The platelet count is often decreased but may be normal All forms of purpura in varying degrees of severity may be found Wood Smith's patient was a man aged 26 who on the fifteenth day of a severe attack of scarlet fever treated by antitoxin developed a purpuric rash on the limbs preceded by a rise of temperature cervical adenitis and albuminuria Apart from a moderate thrombopenia the blood count was normal Fresh crops of purpura appeared on the twenty first thirty first and forty fifth days of the disease after which the convalescence was straightforward

238 Acute Transverse Myelitis in Measles

F G MILLER and A G ROSS (*Canadian Med Assoc Journ* December 1931 p 709) record the case of a girl, aged 11 in whom during the eruptive stage of measles from which her two brothers were suffering symptoms of acute transverse myelitis developed Gradual improvement followed and when seen two and a half years after the attack she had grown normally had complete control of the sphincters could walk freely though with slight irregularity of gait and could run on level ground but was apt to stumble if it was at all rough

Surgery

239 Chronic Subdural Haematoma

H W FLEMING and O W JONES jun (*Surg Gynecol and Obstet* January 1932 p 81) report eight cases of chronic subdural hæmatoma treated by simple drainage The condition which occurs most frequently in young adult males following insignificant head injuries affords no typical clinical picture the onset of symptoms ranges from a few days to many months The lesion was bilateral in half the cases Under local anæsthesia four small trephine openings are made in the fronto-parietal and parieto-occipital regions on each side they are placed so that they may be incorporated later in an osteoplastic flap if necessary Through small openings in the dura the sac of the hæmatoma is exposed and torn open and the contents are allowed to escape this is followed by through and through irrigation of the sac with Ringer's solution The scalp incisions are then closed without drainage Although this method of simple drainage is open to criticism the authors point out that a relatively minor procedure is substituted for a formidable operation By exploration anteriorly and posteriorly the possibility of overlooking the condition is minimized while a negative bilateral exploration can be followed at once by the diagnostic procedure of injecting air into the ventricular system The operation can always be performed under local anæsthesia and the evacuation of the hæmatomata through small openings proved efficacious and the immediate and remote results warrant its adoption in place of more radical measures After four years there have been no recurrences of symptoms only one patient died a woman who was *in extremis* at the time of the operation The authors conclude that such exploration is indicated in all suspected cases of chronic subdural hæmatoma

240 Osteomyelitis of the Jaws in Infants

A O WILENSKY (*Annals of Surgery* January 1932 p 33) discusses cases of acute osteomyelitis of the jaw occurring in the first few months of life These are characterized by pathological manifestations associated with osteomyelitis referable to the mouth nose nasal sinuses and the orbit by clinical signs associated with an acute infection of severe intensity by sequestrum and loss of the entire jaw and teeth with subsequent deformity and by a high mortality Osteomyelitis of the jaws is due to bacterial infection *Staphylococcus aureus* being the organism which is most frequently found The infection may pass through the vaginal canal the nipples or breast of the mother the fingers of the nurse or be introduced

during the cleansing of the baby's mouth after birth It is believed that this form of osteomyelitis of the jaws in nurslings and infants is a primary lesion the alveolar border being the spot where the bacteria enter by means of small superficial abrasions Having once settled in the maxilla, the bacteria develop further in the spongiosa of the bone, followed by suppuration necrosis and sequestrum formation In 82 5 per cent of the cases reported the disease occurred in the first two months of life, the majority of cases being within the second and third week The superior maxilla was most frequently diseased the right and left sides being about equally involved The disease usually affects healthy infants the first symptoms being a slight rise in temperature and refusal of food with diarrhoea or constipation Later symptoms may be high temperature vomiting and convulsions A swelling subsequently appears in the cheek or in the infra orbital region and is accompanied by oedema of the lower eyelid Sometimes there is exophthalmos from oedema of the orbit with inflammation of the sclera conjunctivitis and sometimes chemosis The local manifestations correspond to those of a sequestra containing abscess As a final stage a large abscess cavity exists which contains the major portion of the necrotic upper jaw In the most severe cases death occurs from toxaemia and treatment can only be palliative but in less acute cases the early treatment consists of the careful cleansing of the mouth nose and eyes Later the areas of fluctuation must be conservatively incised Sequestra should not be removed until involucrum formation is abundant

241 Primary Carcinoma of the Lung

B M FRIED (*Medicine*, December 1931 p 373) who reports his observations on forty seven cases is of opinion that the increase in cancer of the lung in recent years is more apparent than real and can be explained by the improved clinical and pathological methods of diagnosis the increased attention paid latterly to the disease, and the lengthening of the span of human life a much larger proportion of persons reaching the cancer age In his series thirty nine patients were males and eight were females Their ages ranged from the third to the eighth decade but the great majority (thirty eight) were between 40 and 69 In twenty nine the right and in eighteen the left lung was involved only one patient gave a history of influenza The onset of this condition is usually insidious one of the first symptoms being a cough with mucoid or muco purulent sputum some slight haemoptysis is not infrequent and a sharp stabbing pain in the chest is characteristic Loss of weight appetite, and strength probably occurs in the more advanced stages Very many patients show asymmetry of the thorax with narrowing of the affected side The physical signs are scanty and not characteristic Of Fried's cases sixteen showed cerebral metastases the onset of which is generally abrupt The diagnosis of carcinoma of the lung is best made by x ray examination in conjunction with the intratracheal injection of lipiodol

Therapeutics

242 Pituitary Therapy in Alopecia

B N BERGTSON (*Journ Amer Med Assoc*, November 7th 1931 p 1355) found that during the treatment of a woman suffering from Frohlich's syndrome with pituitary preparations she developed a luxuriant hair growth This was particularly noticeable in that the patient and all her immediate female relations had had since early youth a scanty atrophic type of hair prone to dryness and splitting at the ends Inferring from this the possibility of a relation between hair growth and pituitary therapy sixteen patients have now been treated for baldness They were taken in order of admittance and without preference or selection but the results were striking their ages ranged from 18 to 60 years Only one had a positive Wassermann reaction Frohlich's syndrome was present twice and rheumatism once The period of baldness had lasted for several months to seventeen years Five patients had had severe headaches but after treatment with pituitary extract they were entirely relieved a case of rheumatic arthritis also responded similarly In addition to a good growth of normal coloured hair it was found that patients who had been thin put on weight and those who were overweight lost flesh the blood pressure was raised if subnormal and decreased in patients with hypertension The anterior lobe of the gland was apparently the effective agent, hypodermic injections brought about more satisfactory and more rapid growth than did oral administration Combination hypodermic injections (2 c cm) with oral administration resulted in the most speedy response The routine followed was to give a hypodermic injection of 2 c cm of the anterior pituitary extract three to four times weekly or in some cases, 1 c cm daily accompanied by 0 5 gram daily of oral anterior pituitary The number of injections required varied considerably but all the results were good one did not respond until 0 1 gram of thyroid extract was added on five days a week

243 Treatment of Spasmodic Cough

KOWLER (*Rev de Laringol d Otol et de Rhinol* December 15th 1931 p 624) describes a case of spasmodic cough which was unrelieved by a prolonged exhibition of a series of sedative drugs including codeine belladonna aconite and luminal The patient a man aged 72 was found to have left recurrent nerve paralysis associated with a blood pressure of 220 mm of mercury pallor and grave loss of strength The middle turbinates were in contact with the nasal septum Kowler separated the turbinates from the septum by means of a long nasal speculum and applied to the posterior ends of the middle turbinates wool carriers which had been dipped in a mixture of cocaine, phenol and menthol The result was dramatic the cough ceased at once strength returned, and the patient was able to travel by train a week later This case is unique in the author's experience, and is recorded without comment on the possible mechanism of the treatment

244 Prolonged Treatment of Syphilis

A GALLIOT (*Bull Soc Franç de Derm et de Syph*, December 1931 p 1516) deprecates the modern tendency to prolong the period of treatment of syphilis after the disappearance of all symptoms While all syphilitic patients who have not received effective initial treatment, as well as all resistant and recurrent cases should be treated for a long time there are cases in which this is unnecessary—for example those younger patients who have had energetic treatment, to which they have reacted favourably Galliot considers that in the following conditions treatment for more than two years is unnecessary (1) if intensive treatment has been continued during the primary period or from the commencement of the secondary period (2) if clinical symptoms have disappeared in the normal course (3) if the serum reactions remain negative after the termination of the first course of treatment and (4) if no clinical or serological relapse has occurred during two years intensive treatment It is important to keep the patient under clinical and serological observation (including that of the cerebro spinal fluid) for many years The author bases these principles on the observation of eight patients treated thus before 1914 and who had been under observation until 1931 without requiring further treatment on six others who have not required treatment since 1921 and on twelve dispensary patients who were not observed as closely as the preceding cases He believes that repeated courses of arsenic bismuth and mercury must endanger the liver and kidneys and has seen recently two very suggestive cases A young man with chronic syphilis succumbed rapidly with hepatic symptoms which were probably due to prolonged arsenical treatment Another patient had nephritis apparently caused by repeated courses of bismuth Galliot remarks that these are risks that must be run in anti syphilitic treatment but they should not be incurred unnecessarily

Neurology and Psychology

245 The Posterior Fossa in Epilepsy

Studies of epileptics have revealed that there are certain peak years of the onset the majority of cases occur during the first year of life Encephalograms show that the first change is an accumulation of cerebro spinal fluid over the cortex in the region of the anterior frontal lobes and next in the cisterns this is followed by ventricular dilatation and cerebral atrophy G W SWIFT (*Journ Ner and Ment Dis* December 1931, p 689) reviews the literature on this subject touching on such points as the embryology of the cranial cavity the occipital fossa and bone with its relations to the transverse sinus The following facts are fairly well established Anomalous sinuses and asymmetrical development of the transverse and sigmoid cavities are common in epilepsy The occipital bone in epileptics is frequently smaller than normal resulting in a small posterior fossa The accumulation of cerebro spinal fluid occurs first over the cerebral hemispheres beginning in the frontal regions and extending backward with resulting dilatation of the ventricles Swift advises that encephalograms should be taken as a routine procedure in cases of epilepsy to reveal changes in the venous sinuses to define the size of the occipital fossa and to indicate the distribution of the cerebro spinal fluid He is at present investigating the possibility of operative measures to relieve the pressure upon the sigmoid sinus and to stimulate in this way the cerebral venous return Cure has been obtained in 10 per cent and marked benefit in 50 per cent of 104 cases by operation A detailed report of these results is to be published later

246 Progressive Hypertrophic Polyneuritis

W GORDON SEARS (*Journ Neurol and Psychopathol* October 1931 p 147) records three cases of progressive hypertrophic polyneuritis a rare disease which was first recognized as an entity by Déjerine and Sottas in 1893 French authors have defined three types of the disease to the first fourth a recurrent type has been added by certain English authorities The main feature of the affection which may be manifest at any age and is frequently familial and hereditary is thickening of the peripheral nerves these are often palpable and even visible and present characteristic histological changes Muscular atrophy of the feet or hands or of both but usually more marked in the feet is present The condition tends to progress and the muscles of the legs and forearms may be involved later Deformities ensue not uncommonly of which pes cavus claw hand and kyphoscoliosis are the most common Diminution or absence of the tendon reflexes is the rule sensory changes are not infrequent changes in the electrical reactions occur as the disease progresses cerebellar signs (nystagmus intentional tremor scanning speech) and pupil reactions have been noted The nerves most frequently enlarged are the internal cutaneous of the forearm the ulnar the saphenous and the superficial cervical nerves The pathological changes in these and the spinal ganglia are briefly summarized The condition must be differentiated from hereditary ataxia (*Friedreich's disease*) and peroneal muscular atrophy of the Charcot Marie Tooth type The disease is very chronic and slowly progressive It usually commences in childhood and many patients live to an advanced age No treatment is known which influences its progress

247 Cerebellar Symptoms in Frontal Lobe Tumours

No generally accepted explanation of the occurrence of cerebellar symptoms in tumours or other lesions in the frontal lobes has been advanced C C HARE (*Bull Neur Inst of N York* November 1931 p 592) reviews the literature on this subject and briefly describes the anatomy of the fronto ponto cerebellar pathways and the occurrence of cerebellar symptoms in the conditions under discussion Brief notes are given of an illustrative case and a study is recorded of fifty patients with frontal lobe tumours forty five had no cerebellar symptoms and in forty three of these the tumour was unilateral Five patients had marked cerebellar disturbances In four instances bilateral growths or lesions were found at operation or necropsy in the fifth the clinical and ventriculographic signs indicated a bilateral involvement Two leading theories have been proposed to explain these symptoms One is that the disturbances are the result of involvement of fronto ponto cerebellar pathways and the second that they are produced by distant pressure on the cerebellum Hare believes the former to be correct The origin of each pathway is probably from cells in the frontal cortex and the axones pass backwards close to the mid line to the pontine nuclei from which secondary neurones travel to the opposite cerebellar hemisphere and a few to that of the same side If the pathway of one side only is involved that of the other side may compensate so that cerebellar disturbances will not occur if both are involved this compensation may be impossible and disturbances may result These disturbances may be bilateral or on the same side as the neoplasm or opposite to it Cerebellar symptoms are of diagnostic and operative significance their presence suggests a neoplastic rather than vascular lesion Hare adds that his investigations support Lisberg's theory that cerebellar symptoms in frontal lobe tumours occur as the result of direct or indirect involvement of both frontal lobes by the tumour or tumours due to interference with the fronto ponto-cerebellar pathways of both sides of the brain

Obstetrics and Gynaecology

248 Laceration of the Pelvic Diaphragm

H HILL and D T VAN DEL (*Surg Gynecol and Obstet* January 1932 p 108) review the development and anatomical structure of the pelvic diaphragm and suggest a method of repair in cases of lacerations of different degrees They commend buried layer sutures and point out that through and through sutures which include the urogenital trigone and pubo rectalis muscle interfere with the free play of the latter They give details of a blunt dissection which affords a large space on both sides between the vaginal wall and the underlying fascia and muscles the levator muscles are thus easily palpated by the thumb and index finger and sutured after approximation The number of sutures used is three to five and the lowest includes a few fibres of the sphincter ani Before tying this suture is held taut in order to ensure that the lowest portion of the levator is evenly approximated that a portion of it covers the sphincter and that any dead space is obliterated The repaired muscles are then palpated and additional sutures are inserted at any sites of unequal tension The urogenital trigone is similarly sutured next the first suture including fascia and the skin is closed by a continuous mattress or subcuticular suture of plain catgut The skin edges must be carefully approximated without too much tension in order to prevent wrinkling and eversion of the edges A dressing is not needed

249 Treatment of Uterine Perforation

J GOVAERTS (*Le Scalpel* January 9th 1932 p 45) states that perforation of the uterus may occur during surgical interventions (dilatation of the cervix and curettage or as the result of attempted abortion and reports six cases of this condition Certain prophylactic measures can be adopted When the cervix is long and rigid dilatation should be obtained by the use of laminaria and completed with Hegar's sounds Curetting should be performed with a large soft curette Govaerts reserves digital curetting for the large gravid uterus of five or six months where uterine contractions have already caused some dilatation The treatment of perforations depends on the presence or absence of pregnancy In the case of the non gravid uterus when perforation has been inflicted with a soft instrument rest ice applications and the

administration of morphine are sufficiently effective In the pregnant uterus and in those in which the presence of visceral lesions tumours, or uterine infection is suspected laparotomy should be performed immediately, followed by suturing of the perforation or hysterectomy Indications for each of these procedures are discussed If hysterectomy is necessary, Govaerts prefers the abdominal subtotal technique and performs the vaginal operation only when the perforation has been caused by the operator himself and when suturing is contraindicated He emphasizes that curetting should be performed only after fully ascertaining the nature of the existing conditions by a minute examination

250 Gonorrhoeal Salpingitis and Perihepatic Adhesions

A H CURTIS has reported that perihepatic adhesions which may cause symptoms occur sometimes in patients who have gonorrhoeal salpingitis C BEARSE (*Journ Amer Med Assoc* November 7th 1931 p 1385) records a case of this kind in which two weeks after the onset of the salpingitis sharp and knife like pains developed in the right upper quadrant of the abdomen These pains were localized and were accompanied by nausea and vomiting Since there was no evidence at the time of acute tubal inflammation and the possibility of an acutely inflamed high retrocaecal appendix could not be ruled out an operation was performed Exploration of the pelvic organs revealed the presence of many cobweb like adhesions but the tubes were not distended and the uterus and ovaries were normal The appendix which was retrocaecal markedly injected and distended was removed but many adhesions resembling those in the pelvis were seen between the liver and the peritoneum The author remarks that while these adhesions were not of the firm violin string type described by Curtis and Hinton they were probably in an earlier stage their detection having been made only three weeks after the onset of pelvic symptoms The relation between such adhesions and gonorrhoeal salpingitis has not yet been established but Bearse thinks that his own case is of some significance in this connexion

Pathology

251 The Transmission of Typhus Fever by Infected Flea Faeces

E T CEDER, R E DYER A RUMREICH, and L F BADGER (*Pub Health Reports* December 25th 1931, p 3103) have studied the mechanism of transmission from rat to rat of the endemic typhus fever of the United States In previous work they found that the faeces of fleas infected by feeding on white rats which had been inoculated with the virus of endemic typhus were infectious In the present paper an experiment is recorded in which white rats inoculated with typhus were introduced into a box containing fleas (*Xenopsylla cheopis*) After two weeks a few fleas were removed, ground up in saline and inoculated into two guinea pigs both animals showed the typical typhus reaction Approximately fifty of the remaining fleas were then removed, and placed in a test tube overnight The following morning the faeces that had been deposited on the walls of the tube were taken up in saline and injected into two guinea pigs both of which developed typical endemic typhus This faeces strain was carried through animals for four generations twenty two guinea pigs eighteen and two rabbits being used Of the guinea pigs eighteen reacted typically of the two rabbits both developed agglutinins to *B proteus* X 19 in their serum This experiment was repeated with similarly successful results Guinea pigs inoculated with the faeces strain were later found to be immune to the endemic typhus virus and *vice versa* Further work showed that the virus might remain alive in fleas for at least thirty six days after the last feeding No evidence was obtained that infection could be transmitted by infected fleas to their offspring through the egg Experiments made to infect guinea pigs by feeding fleas on them in such a way that the animals skin was protected from the fleas' faeces were negative but if crushed infected fleas were smeared on the abraded abdomen of a guinea pig infection resulted The authors therefore conclude that endemic typhus may be transmitted by the rubbing of infected flea faeces into wounds made by the biting of the flea or by scratching

252 Relative Incidence of Human and Bovine Tubercle Bacilli in Tuberculous Meningitis

A S GRIFFITH (*Journ Path and Bact* January 1932 p 97) has examined cultures of tubercle bacilli from the cerebro spinal fluid of thirty new cases of tuberculous meningitis in England occurring during 1930 and 1931 Of these cases twenty nine were in children under 10 years of age the remaining patient was an adult Ten of the cultures proved to be of bovine and twenty of human type In fourteen cases the tracheo bronchial glands showed greater enlargement and more extensive caseation than the cervical or mesenteric glands of these cases in which infection had presumably occurred by the respiratory tract thirteen were due to human and one to bovine bacilli In four cases the mesenteric glands were most affected , all of these primary abdominal cases were infected with the bovine type Taking all cases in which tubercle bacilli isolated from the cerebro spinal fluid of patients with tuberculous meningitis in England have been typed the author finds that of sixty three cases nineteen were infected with the bovine type The proportion of bovine infections at all ages is therefore 30 2 per cent in children under 15 years of age it is 33 per cent and in persons over 15 it is about 18 per cent On the basis of these figures and those given by the Registrar General it is calculated that in England and Wales upwards of 700 persons died from tuberculosis of the central nervous system caused by bovine bacilli in each of the three years 1928–29–30

253 The Coronary Circulation

R ROSSLER and W PASCUAL (*Journ of Physiol* January 14th 1932 p 1) from experiments on the isolated hearts of the cat and the rabbit perfused with oxygenated Ringer solution find that the inflow of fluid into the coronary arteries is diminished or stopped during the ventricular contraction When the cardiac contraction is very strong in comparison with the perfusion pressure there is a certain amount of coronary regurgitation which is especially obvious after the injection of some cardiac stimulant such as adrenaline or ephedrine Immediately after the relaxation of the heart when the coronary blood vessels have just been partially emptied by the preceding contraction, these blood vessels show the smallest resistance to the inflow of the perfusing fluid The stronger the contraction of the heart the greater is the likelihood of this overshoot During a simple cardiac cycle several changes in the coronary circulation follow one another with rapid succession The amount of fluid passing through the coronary system per unit of time at a constant perfusion pressure will be determined by the state of the coronary blood vessels and by the effect of the cardiac contraction upon the coronary circulation This is especially the case when drugs are used since most of the drugs which affect the coronary blood vessels also exert some action upon the heart muscle These actions may interfere with each other the vaso dilator response for example becoming completely masked or unduly augmented by the cardiac effect

254 Tobacco Smoke and Phagocytosis

A BRUNI (*Lo Sperimentale* December 12th 1931 p 523) studied the effect of intoxication by tobacco smoke on phagocytosis in rabbits and came to the following conclusions In acute or chronic intoxication by tobacco smoke there was a considerable diminution of phagocytosis The opsonic power of the blood serum did not however undergo any change the phagocytic activity of the leucocytes on the other hand was affected The diminution of phagocytosis was therefore connected with the action directly exercised by tobacco smoke on the leucocytes

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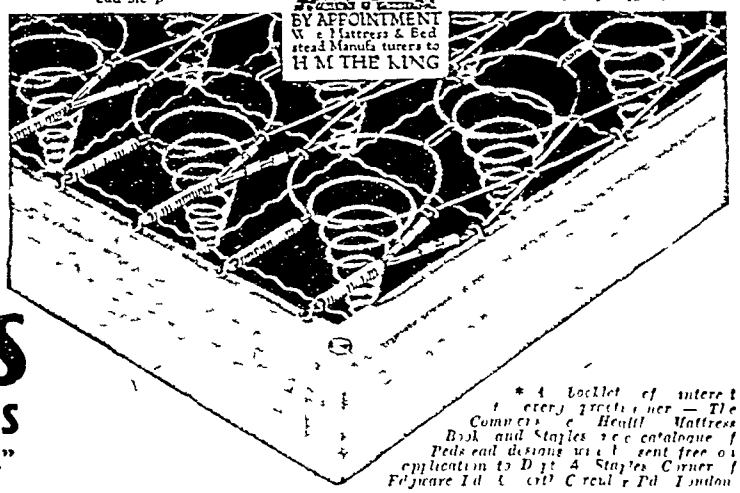


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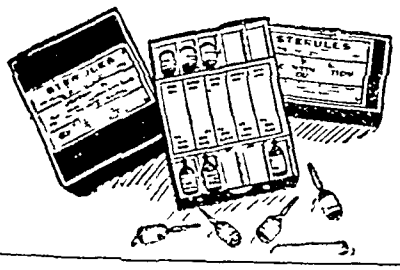


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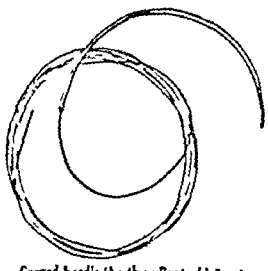
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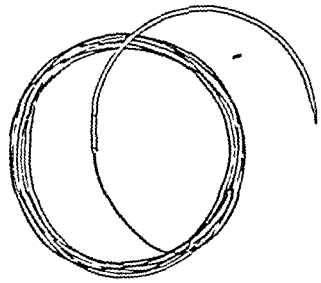
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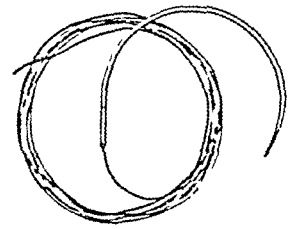
The London Hospital Eyeless Needles have been specially designed to avoid the doubling of the suture necessary in using needles with pierced eyes. They are fitted with tubular ends into which the sutures are firmly fixed thus enabling the needles to be used with single strands. These needles are finely ground sharp pointed and packed sterile in tubes for immediate use. Special precautions are taken to avoid any rusting of the needle after it has been packed.



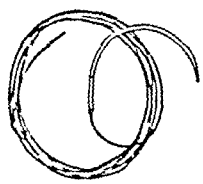
Curved Needle (Keith or Bantock) 3 sizes cutting edge sizes 3 0 ? 0 0 1 3
In boxes of 3 tubes, 4/6



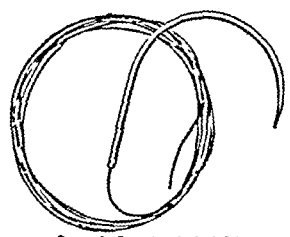
Curved Mayo Robson Stomach Needle, Size 4/0 3/0 2/0 0 1 2 3 In boxes of 3 tubes 4/6



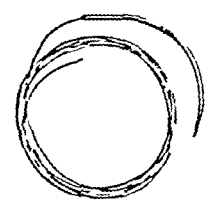
Moynihan's Model. In boxes x 4 6



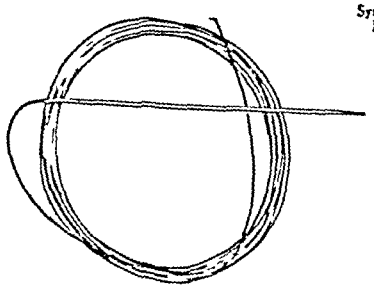
Small Curved Intestinal Needle
Size 0 In boxes of 3 tubes 4/6



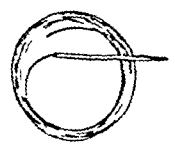
Symond's Round Bodied Model.
In boxes of 3 tubes 4/6



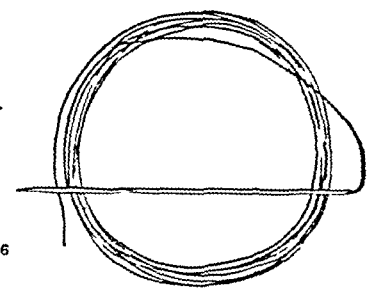
Curved Ophthalmic Needle (also for [illegible] Size 0
In boxes of 3 tubes, 4/6



Straight Stomach and Intestinal Needle Sizes 4/0 3/0 1 2
In boxes of 3 tubes with 2 needles 4 6
" 3 " " 16
" 12 " " 25/



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Size 0
In boxes of 3 tubes, 4 6
" 12 " 16/



Straight Needle (Keith or Bantock) [illegible]
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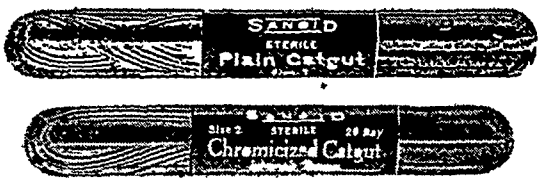
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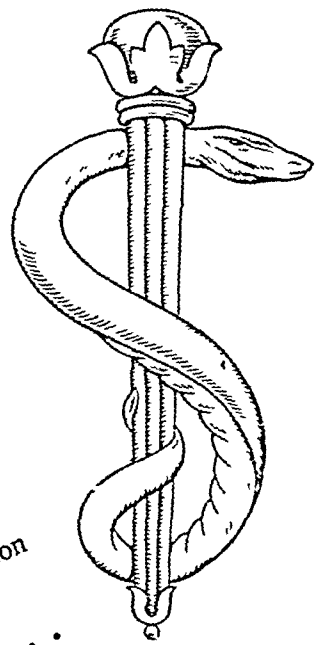
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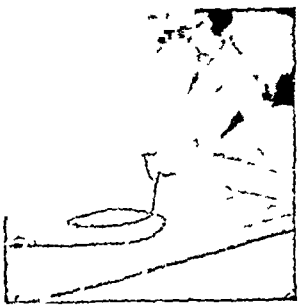
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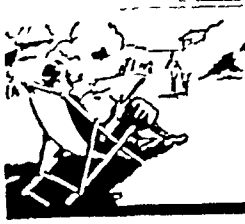
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Diseases of the Eye—A H H Sinclair M D H M Traquair M D E H Cameron M B, C W Graham M B
Clinical Medicine—D Chalmers Watson M D Edwin Bramwell M D Edwin Matthew M D W F Ritchie M D John Eason M D D Murray Lyon M D J D Comrie M D Alex Goodall M D G D Matheweson M B A Fergus Hewat M D, H L Watson

Practical Instruction is afforded under the superintendence of the Professors in Laboratories with the necessary appliances and in Tutorial and Practical Classes connected with the above Chairs and opportunities are afforded to Students to extend their practical know ledge and engage in original research

Opportunities for Hospital Practice are afforded at the Royal Infirmary the Ho pital for Sick Children Maternity Ho pital the City Fever Hospital and the Royal Edinburgh Hospital for Mental Disorders Upwards of 2 760 beds are available for the Clinical Instruction of Students of the University

Four Degrees in Medicine and Surgery are conferred by the University of Edinburgh viz Bachelor of Medicine (M B) Bachelor of Surgery (Ch B) Doctor of Medicine (M D) and Master of Surgery (Ch M)

The minimum Class Fees for M B and Ch B including Hospital Fee (£12) amount to about £260 and the Matriculation and Examination fees to £47 15s 6d An additional Fee of £21 is payable by those who proceed to M D and £21 by those who proceed to Ch M

The annual value of the Bursaries Prizes Scholarships and Fellowships in the Faculty of Medicine amounts to about £3 600 and that of the other Bursaries etc tenable by Students of Medicine amounts to about £1,820

POST GRAD urses of instruction are given for the University Diplomas in Public Health Tropical Medicine and Hygiene These Diplomas are open to approved regi tered practitioners as well as to graduates in Medicine and Surgery of instruction for the Diploma in Tropical Veterinary Medicine are also given This Diploma is open to those holdir qualification registrable by the Royal College of Veterinary Surgeons The Univer ity also takes part in the Courses of uate Course in Medicine In the departments of the Faculty of Medicin provision is made for research by students n the University laboratories facilities will be provided for candidates for the Degree of Ph D who e applications to been accepted by the Senatus

A Syllabus and further information as rricula of Study for Degrees etc may be obtained from the Dean of the Faculty of Medicine and for Degrees in nce Divinity Law and Music from the Deans of these Faculties or from the Secretary and full details ar given in published by James Thin 55 South Bridge Edinburgh Price by post 6d.

March 1932

By authority of the Senatus W A FLEMING Secretary

University of Birmingham

(Faculty of Medicine)

CLINICAL BOARD

POST GRADUATE DEMONSTRATIONS 1932

A Course of Po t Graduate Demon trations will be given at the General Hospital Birmingham on Tuesdays from 3 30 to 5 p m and at the Queen s Ho pital Birmingham on Fridays 3 30 to 5 p m April to July 1932 commencing on April 2nd at the G neral Hospital and on April 8th at the Queen s Hos pital The Course will be given by Members of the Medical and Surgical Staffs and will include D monstrations on Medical Surgical Obstetrical and Gynaecological Cases Nervous Disorders Ophthalmic Cas s Diseases of Ear Nose and Throat Radiology Venereal Diseases Child ren s Diseases etc

(Two of the Demon trations (on Tue days) will be given at the Children s Ho pital Lady W

d on payment of th ld be made pay l mingham and s ical Board the U Birmingham

Medical Practitioners are requested to show their Admission Card at each of the Demonstrations

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TAUNTON SCHOOL,

TAUNTON

A PUBLIC SCHOOL FOR BOYS

Boys are regularly prepared for the First M B Examinations Univer ity Scholarships in Chemistry Biolo y etc

Special facilities are offered for the teaching of Chemistry Physics Botany and Zoology

New Science Buildings containing seven laboratories two lecture rooms science library store rooms etc *opened in* September 1925 Prospectus from Head Master

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LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D T H must posse s the D T M of this University)

For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pem broke Place Liverpool.

BEIT MEMORIAL FELLOWSHIPS FOR MEDICAL RESEARCH

Notice is hereby given that an ELECTION of JUNIOR FELLOWS will take place in July 1932 The Fellows then elected will be require d to begin work on October 1st Junior Fellow ships are of the annual value of £400 the usual tenure is for three years Applications from candidates should be received by May 18th though late entries will be accepted up to June 1st

Forms of application and all information may be obtained by letter only addressed to—

Professor T R ELLIOTT M D F R S
Hon Secretary

Beit Memorial Fellowships for Medical Re ear h
University College Hospital Medical School
University Str et London W C 1

London School of Dermatology

The EXAMINATION for the CHESTERFIELD M F D M will be held at St John s Ho pital for Diseases of the Skin Leicester Square W C 2 on MONDAY and TUESDAY March 21 t and 22nd at 10 a m Open to all qualified practi tioners Full particulars from th D an

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

(University of London)

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE (Eng.)

Dates of the Courses 1931-32

(Subject to certain modifications)

SECTION A (CLINICAL AND LABORATORY)—a 3-months Course
January 4th—March 24th 1932
April 11th—June 17th 1932
September 26th—December 17th 1932

SECTION B (LABORATORY)—a 2-months Course
January 4th—February 27th 1932
April 11th—June 17th 1932
September 26th—December 17th 1932

FEES (inclusive):
Section A £25 Section B £15

DIPLOMA IN PUBLIC HEALTH

(University of London)

Courses of Study (extending over four academic years) in Tropical Medicine and Hygiene are held at the School.

DIPLOMA IN BACTERIOLOGY

(University of London)

Courses of Study (each extending over one academic year) in Bacteriology are held at the School.

EPIDEMIOLOGY AND VITAL STATISTICS

Lectures (by Appointment) Courses of Instruction.

Prospectus and Syllabus of Lectures etc. may be obtained on application to the SECRETARY, LONDON SCHOOL OF TROPICAL MEDICINE, Royal Albert Dock, LONDON, E.16.

WELLINGTON SCHOOL, SOMERSET

The School has made a resolute effort to solve the pressing question of fees and upholds every good modern development. Entrance Scholarship Examination June 15th and 16th.

Full information to apply BURSAR WELLINGTON SCHOOL SOMERSET

ABERDEEN MEDICAL SCHOOL

[illegible] SCHOOL OF POST-GRADUATE STUDY in [illegible] Session 1932-33 [illegible] March 31st to [illegible] Courses will be held [illegible]

Doctor Schoolmaster [illegible] Public

[illegible]

The London Hospital [illegible]

[illegible]

County Council of Middlesex

WEST MIDDLESEX COUNTY HOSPITAL ISLEWORTH

RESIDENT ASSISTANT MEDICAL OFFICER

The County Council invite applications for the above appointment. Candidates must be registered Members of the Royal College of Physicians of London and must have had experience in Medicine and Pathology. The appointment will be subject to the Rules of the Council and will be made by the Council. The appointment will be for one year in the first instance, but may be terminated by either party by three months' notice in writing.

Salary at the rate of £400 per annum, rising by annual increments of £50 to £600 per annum, together with board, lodging and laundry, subject to a small contribution towards the cost of board, according to the scale in force at the time of appointment in view of the financial situation.

The successful candidate will be required to pass the preliminary examination in Medicine of the Conjoint Board of the Royal Colleges of Physicians and Surgeons of England, unless he has already passed the Conjoint Board Examination in Medicine.

The appointment will be held during the pleasure of the Council and subject to three months' notice on either side.

Applications (1) on forms (2) qualifications and (3) experience together with copies of not more than three recent testimonials must be sent to the undersigned not later than March 19th.

No special application forms are provided. Envelopes must be endorsed "Resident Assistant Medical Officer."

Canvassing directly or indirectly will be a disqualification.

The West Middlesex County Hospital is a modern General Hospital with accommodation for over 500 cases, chiefly acute. Some 6,500 beds for in-patients in Workhouse Hospitals, Institutions, &c., are under the care of the medical staff of the Hospital.

ERNEST S. W. HART
Clerk of the County Council
Middlesex Guildhall, Westminster, S.W.1
February 24th, 1932.

County Borough of Middlesbrough

POLICE MUNICIPAL HOSPITAL (253 Beds)

Applications are invited for the post of JUNIOR RESIDENT MALE MEDICAL OFFICER to commence duty forthwith. The appointment will be for six months with a possibility of extension to six months. Salary at the rate of £100 per annum for the first six months and £170 per annum for the second six months, with board, residence and laundry. The appointment is open to graduates of the Hospital's post-graduate course in Medical and Electrical Treatment.

Applications, stating age, experience and qualifications, together with copies of three recent testimonials, must be received by the undersigned not later than Monday, March 21.

Municipal Buildings, ERNEST KITCHEN
Middlesbrough. Town Clerk.
March 4th, 1932.

London County Council

Applications invited for appointment to position of RESIDENT ASSISTANT MEDICAL OFFICER at ST. ALBANS HOSPITAL, Harperbury Hill, Greenwich, S.E.10. Duties are prescribed by the Medical Superintendent and include attendance at other establishments under the control of the Council.

Salary, at present rate, £350 per annum, rising by £25 to £425 per annum, with board, residence, laundry, &c.

Candidates must be registered Members of the Medical Profession and have had experience in General Hospital practice, including special experience of infectious diseases.

Forms of application, which must be returned to the Medical Superintendent, Public Health (Port of London) Department, Clock House, West Ferry Road, Isle of Dogs, E.14, not later than March 18th, can be obtained from the Medical Superintendent.

East Cheshire Tuberculosis [illegible]

CLIFTON
East Cheshire Tuberculosis Hospital, CHESTER
[illegible]

RESIDENT PHYSICIAN [illegible]

County Borough of St. Helens

DEPUTY MEDICAL OFFICER OF HEALTH

Applications are invited for the post of Deputy Medical Officer of Health (assistant to Senior Authority Consultant) under the Local Government Act, 1929.

Duties will be mainly in connection with School Medical Service, Infectious Diseases and the Duties and Powers of Midwives, but the selected candidate will be required to undertake such other duties as may be allotted to him in the Department by the Medical Officer of Health, and will be expected to take charge of the Medical Officer of Health's Department in the absence of the Medical Officer of Health.

The salary will be at the rate of £700 per annum, plus travelling expenses, by twelve annual increments of £25 to a maximum of £800 per annum, and subject to ten years' additional increments of £25 to £1,000 per annum.

The appointment will be subject to the provisions of the Local Government Officers' Superannuation Act, 1922, and to the satisfactory conditions governing the necessary medical examination.

Forms of application may be obtained from the Medical Officer of Health, Town Hall, St. Helens, and completed applications, accompanied by copies of not more than three recent testimonials, should be forwarded to him not later than Friday, March 21st.

FRANK HALLWELL
Medical Officer of Health.

Dublin Union

APPOINTMENT OF A RADIOLOGIST

The Dublin Board of Assistance at their Meeting to be held on Wednesday, March 23rd, will appoint a Visiting Medical Practitioner to have charge of the X-ray and Deep Therapy Department.

Applicants must have obtained Knowledge and Experience of Diagnostic and Therapeutic Radiology. The appointment, if accepted, will require duties (and at any time when not the requisite to examine, treat and report on patients referred to him by the Board's Medical officers and the Resident Institutional Authorities under arrangement with the Board of Assistance.

The Medical Practitioner appointed will be allowed to use the apparatus for his own private practice, but will be paid at the rate of £2,000 per annum. The appointment will be for a period of three months.

Applications, by letter with a statement of qualifications, to be delivered to the undersigned not later than 12 o'clock noon on Monday, March 21st.

By Order,
Clerk's Office, J. J. COLGAN
Board Room, Clerk of the Union
James's Street, Dublin.
March 5th, 1932.

The Welsh National School of Medicine

The Council of the Welsh National School of Medicine invite applications for the post of JUNIOR ASSISTANT in the Medical Unit. The appointment is for one year in the first instance, but may be renewed for a further period of two years. The salary will be £200 per annum, rising by annual increments of £25 to £250 per annum. The successful candidate will be required to devote his whole time to the duties of the post, and will not be allowed to undertake private practice.

Applications, together with three recent testimonials, must be received by the undersigned not later than March 21st.

[illegible] of appointment [illegible]

[illegible] SECRETARY.

The [illegible]

[illegible]

Lancashire County Council

ASSISTANT CLERK (Grade [illegible])

[illegible] DISTINCTION [illegible] ESSEX HALL, PRESTON, LANCS.

[illegible]

[illegible] £[illegible] per annum [illegible]

[illegible] CERTIFICATE [illegible]

[illegible] 1932.

County Borough of Blackburn

PUBLIC ASSISTANCE COMMITTEE

Applications are invited from Medical Practitioners (male) for th
RESIDENT ASSISTAN
and (b) JUNIOR
OFFICER at QUEEN S PARK INSTITUTION & INFIRMARY The applicants must be registered as Medical Practitioners

The staff consists of a Resident Medical Officer a Consulting Surgeon a Laboratory Assistant and X ray Attendant

There is a separate Infirmary separate Mental Block and a separate Sanatorium for Children and there is opportunity for experience in all Departments including Medical Surgical and Midwifery cases An X ray apparatus is installed

The persons appointed will be required to devote their whole time to the duties, and also to act as may be directed by the Resident Medical Officer

Salary

(a) Assistant Medical Officer who must have had Hospital experience £350 per annum (subject to a temporary economy deduction of £10 12s 6d per annum) increasing by £25 per annum to £450 per annum together with board apartments and attendance

(b) Junior Assistant Medical Officer, whose appointment will be limited to a term not exceeding one year £150 per annum (subject to a temporary economy deduction of £3 5s) together with board apartments and attendance

Applications stating age qualifications and experience and accompanied by copies of not more than three recent testimonials must be sent so as to reach the Public Assistance Officer Public Assistance Offices Cardwell Place Blackburn not later than March 21st

Town Hall BRIGGS H MARSDEN
Blackburn Town Clerk
March 7th 1932

Miller General Hospital,

Greenwich Road S E 10
(151 Beds)

Applications are invited for the post of HONORARY ORTHOPAEDIC SURGEON Candidates must be Fellows of the Royal College of Surgeons of England and not engaged in general practice and they are expected to call upon the Members of the Honorary Medical and Surgical Staff a list of whom can be obtained from the Secretary An honorarium of 20 gns per annum is allowed towards travelling expenses

Applications which must be printed or type written together with copies of not more than three recent testimonials should be sent to the Chairman of the Hospital as soon as possible

March 8th 1932

North Staffordshire Royal

INFIRMARY STOKE ON TRENT
(350 Beds)

HOUSE SURGEON

The Committee invite applications for the post of House Surgeon Salary £150 per annum with board residence and laundry Previous Hospital surgical staff number be for warded to the stating qualifications copies of two recent testimonials

W STEVENSON
Secretary & House Governor

The Royal Eye and Ear Hospital,

BRADFORD

Wanted JUNIOR HOUSE SURGEON (male) Salary £150 with board residence and laundry Applications stating qualifications age etc with copies of recent testimonials to be forwarded to the undersigned on or before March 14th

F BRIGGS Secretary Superintendent

Samaritan Free Hospital for

WOMEN Marylebone Road N W 1

Applications are invited for the post of ANAESTHETIST to attend on Monday afternoons and Friday morning

Applications accompanied by copies only of three testimonials must reach the Secretary at the Hospital on or before Thursday March 31st

G H HAWKINS Secretary

King George Hospital, Ilford

(8 miles from London)

Applications are invited for the appointment of CASUALTY HOUSE SURGEON (male) as from April 1st Salary £100 per annum with board residence etc Term six months with eligibility for a further period Applications should be sent at once to the Secretary

City of Cardiff

ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the post of Assistant Medical Officer (male) under the Health and Education Committees of the Cardiff City Council

Candidates must have had not less than three years experience since graduation and must hold a Diploma in Public Health

The person appointed who will be called upon to carry out any duties appropriate to his status associated with the work of general health administration port sanitation school medical service, and maternity and child welfare and will act under the direction of the Medical Officer of Health and School Medical Officer must devote his whole time to official duties and reside within the City of Cardiff

The salary will be £500 per annum rising by annual increments of £25 to £700 (subject to the terms of the agreed Memorandum on salaries and to a temporary percentage deduction at present amounting to less than 5 per cent) The officer appointed will be required satisfactorily to pass a medical examination and to contribute to the funds of the Cardiff Corporation Superannuation Scheme

Forms of application and information as to the duties attached to the appointment may be obtained by whom application nt Medical Officer) three recent testimonials must be received not later than March 17th

City Hall RALPH M F PICKEN
Cardiff Medical Officer of Health
February 27th 1932

Birkenhead & Wirral Children's

HOSPITAL
Woodchurch Road BIRKENHEAD

HOUSE SURGEON

The Board invite applications for the post of House Surgeon (m or f) for a period of six months from April 1st Honorarium at the rate of £100 per annum with board residence and laundry

SECOND HOUSE SURGEON

The Board invite applications for the post of Second House Surgeon (m or f) for a period of six months from April 1st Honorarium at the rate of £75 per annum with board residence and laundry

Applications for above posts together with *copies of testimonials, to be addressed to the* Secretary at the Hospital not later than March 21st

Evelina Hospital for Children,

Southwark, S E 1

Applications are invited for the post of HOUSE SURGEON (male) for six months from April 12th (first two months in the Casualty and Out patient Department) Salary at the rate of £120 per annum with board and residence

Applications stating age experience and qualifications accompanied by copies of four testimonials to be sent to the undersigned not later than March 28th from whom rules and other particulars can be obtained

By Order of the Committee of Management
W H SIDNELL
March 7th 1932 Secretary Supt

Norfolk and Norwich Hospital,

NORWICH

Applications are invited for the post of HOUSE PHYSICIAN Salary £120 per annum with board residence and laundry Candidates (male) who must lifica tions should forw age nationality etc testi monials to the undersigned as soon as possible

FRANK INCH
House Governor & Secretary
March 4th 1932

North Devon Infirmary,

BARNSTAPLE (70 Beds)

Wanted end of March duly qualified RESIDENT MEDICAL OFFICER (male or female) Salary £150 per annum with board apartments and laundry Appointment to be for not less than six months

Applications stating age qualifications with copies of recent testimonials to be sent forth with to the Honorary Secretary

Manchester & Salford Hospital

FOR SKIN DISEASES

ASSISTANT MEDICAL OFFICER wanted Fully qualified and registered To attend three mornings each week Salary £100 per annum

Applications with copies of testimonials to be sent to the undersigned on or before March 19th

JOHN WALLI Secretary

County Borough of Southend on SEA

SOUTHEND MUNICIPAL HOSPITAL

JUNIOR ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the appointment of Junior Assistant Medical Officer at the Southend Municipal Hospital Rochford Essex

Salary at the rate of £275 per annum with full residential emoluments, the salary and value of the emoluments being subject to deductions under the Local Government and Other Officers *Superannuation Act* 1922

The appointment is for 12 months and is subject to one month's notice on either side

Preference will be given to applicants with resident Hospital experience

Further information relating to the appointment may be obtained from the Medical Superintendent Southend Municipal Hospital Rochford Essex to whom applications with full particulars and copies of three recent testimonials should be sent not later than Wednesday March 23rd

H J WORWOOD
Town Clerk's Office Town Clerk
Southend on Sea. March 1932

Royal Albert Edward Infirmary

AND DISPENSARY WIGAN
(180 Beds)

HOUSE SURGEON (male) required to commence April 1st for a period of six months Salary £150 per annum with board apartments and washing Resident staff consists of an R S O and Three House Surgeons Applications stating age and qualifications together with copies of three recent testimonials should be addressed to the undersigned as soon as possible

A STANLEY BRUNT
General Supt & Secretary
March 8th 1932

Cumberland Infirmary, Carlisle

(160 Beds)
Resident Medical Staff—Four Qualified Officers

Required on April 1st HOUSE SURGEON to Special Departments (Eyes Ear Nose and Throat) male six months appointment Previous experience desirable Salary at the rate of £155 per annum board residence etc

Applications stating age nationality qualifications etc with copies of not more than four testimonials should be sent immediately to the undersigned

J G HOWITT Secretary

Doncaster Royal Infirmary

(185 Beds)

SENIOR CASUALTY HOUSE SURGEON (male) required immediately Previous Hospital experience necessary

Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable

Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Superintendent

Scarborough Hospital and

DISPENSARY (70 Beds)

Wanted May 1st TWO HOUSE SURGEONS (male or female) Duties include Home Visiting Salary £175 per annum with board residence x months Applica opies of testimonials to be sent to the from whom further ed

J BOOTH Hon Secretary

Liverpool Stanley Hospital,

Stanley Road LIVERPOOL

There will be a vacancy for a GYNAECOLOGICAL HOUSE SURGEON (female) on April 1st next The appointment will be for three months Salary at rate of £100 per annum with board laundry etc Candidates must be *fully qualified* and submit their applications with copies of three recent testimonials to the undersigned by March 19th

F W OSBORN Secretary

The National Institute for

RESEARCH IN DAIRYING

UNIVERSITY OF READING

The Board of the Institute will shortly appoint a DIRECTOR to succeed the late Dr Stenhouse Williams Further particulars may be obtained from the Secretary of the Institute Shinfield nr Reading

The Victoria Hospital for Children

[illegible]

The Royal Waterloo Hospital for Children and Women

[illegible]

The Royal Waterloo Hospital for Children and Women

[illegible]

The Royal Waterloo Hospital for Children and Women

[illegible]

The Princess Beatrice Hospital, [illegible]

[illegible]

The Princess Beatrice Hospital, [illegible]

[illegible]

The Princess Beatrice Hospital, [illegible]

[illegible]

The Poplar Infirmary, [illegible]

[illegible]

South London Hospital for Women and Children

Clapham Common S.W.4

Applications are invited from duly qualified Medical Women for the appointments of

HOUSE PHYSICIAN TWO HOUSE SURGEONS each for a period of six months from May.

Salary at the rate of £100 per annum with board, residence and laundry. Candidates are required to call on members of the Honorary Medical Staff before April 2nd by which date applications and copies of testimonials must reach the Secretary at the Hospital.

The Staffordshire General Infirmary, Stafford

Applications are invited for the post of HOUSE PHYSICIAN (either sex) which will commence about the end of March. Candidates must be duly qualified and registered under the Medical Act. Salary at the rate of £150 per annum with board, residence and laundry. The appointment must be held for at least six months. Application, stating age, accompanied by copies of three recent testimonials, should be sent forthwith to the undersigned.

Stafford, March 1st 1932. A. P. COLLIS, Secretary.

Royal Mineral Water Hospital, Bath

A vacancy in the office of PHYSICIAN to the Hospital will be filled at a General Court of the President and Governors to be held on Monday, May 2nd, at noon.

The conditions of the appointment may be seen at the Hospital. Candidates who must be graduates in Medicine of a University of Great Britain or Ireland are requested to send their application, with not more than three testimonials, to the Registrar of the Hospital on or before Wednesday, April 13th.

Personal canvassing is prohibited.

March 6th, 1932.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.3

The Committee of Management invite applications for the post of whole-time qualified RESEARCH WORKER (Hadley Stewart Grant for Investigation of Pulmonary Tuberculosis in Children). Salary £350 per annum. Further particulars may be obtained at the Hospital. Applications, with copies of testimonials, must reach the undersigned not later than Saturday, March 19th.

Brompton, S.W.3. FREDERICK WOOD, Secretary.

March, 1932.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.3

The Committee of Management invite applications for the office of MEDICAL REGISTRAR (Hall Tutor). Salary £200 per annum. Candidates must be graduates in Medicine of a British University. Applications, enclosing copies of testimonials, must reach the undersigned not later than Saturday, March 19th.

Brompton, S.W.3. FREDERICK WOOD, Secretary.

March 10, 1932.

Jewish Maternity Hospital, Ilford

Applications are invited for the post of RESIDENT MEDICAL OFFICER.

Duties commence April 1st for a period of six months. Salary at the rate of £100 per annum.

Applications, together with copies of three testimonials, to be sent to the undersigned not later than March 15th.

MURE MODEL, Hon. Org. Secretary.

Bristol Royal Hospital for Sick Children and Women, St. Michael's Hill

[illegible]

Bristol Eye Hospital

[illegible]

Heatherwood Hospital (Joint Services Hospital) for Orthopædic Children, Ascot

(140 beds)

The post of RESIDENT MEDICAL SUPERINTENDENT will shortly be vacant. Salary £400 per annum with board and [illegible].

Applications, with copies of three testimonials, should be sent to the Matron, Heatherwood Hospital, Ascot, Berks, from whom further particulars can be obtained.

East Suffolk and Ipswich Hospital, Ipswich

(260 beds—[illegible])

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN, each appointment being at the rate of £120 per annum. Board, residence and laundry.

Applications, in Britain (may be sent by cable), stating age, qualifications and experience, and accompanied by three recent testimonials, to be sent to the undersigned.

The Hospital, Ipswich. ARTHUR CHERRIS, Secretary.

Putney Hospital, Lower Common, Putney, S.W.15

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) to commence duties on March 31st next.

The appointment is for a period of six months, renewable on the recommendation of the Medical Board, and carries emoluments.

Applications, stating age, with copies of testimonials, to the Secretary not later than March 19th.

Herefordshire General Hospital, Hereford (140 Beds)

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary £100 per annum with board, residence and laundry. Appointment to be for twelve months. Candidates must be registered under the Medical Acts.

Applications, stating age and qualifications, together with copies of recent testimonials, to reach the undersigned not later than March 19th.

T. W. LITTON, Secretary.

Bristol Royal Infirmary

Applications are invited for the post of HOUSE SURGEON to the Junior Honorary Surgical Out-Patient Department and Orthopædic Department. Salary at the rate of £90 per annum, plus [illegible].

Candidates, who must be duly qualified, to send in their applications, together with the names of not more than three testimonials, to the undersigned.

ELLIS C. SMITH, F.C.I.S., Secretary & House Governor.

Harrogate Infirmary

Applications are invited from British subjects (male) for the post of SENIOR HOUSE SURGEON for the period commencing April 1st and terminating September 30th. Salary at the rate of £150 per annum will be allowed. Applications, to be made on a form to be had from the undersigned, should reach him not later than March 14th.

GEO. FALLANTY, [illegible].

The Infirmary.

Nottingham and Midland Eye Infirmary

RESIDENT HOUSE SURGEON required at once. April (or May) Quarter. Salary £[illegible] per annum with [illegible]. Applications (by letter) [illegible].

Royal Edinburgh Hospital for Mind and Nervous Disorders

[illegible]

Royal Surrey County Hospital, Guildford

[illegible]

The Hospital for Sick Children,
Great Ormond Street London W C 1

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on April 14th

Gentlemen are invited to send in their applications addressed to the Secretary before 12 o'clock on Monday April 4th with copies of not more than three testimonials given especially for the purpose and also evidence of their having held a responsible Hospital appointment

The appointments are made for six months Salaries at the rate of £100 per annum laundry allowance £5 board and residence in the Hospital

Candidates must be unmarried and possess a legal qualification to practice

All candidates must be in attendance to appear before the Joint Committee if required at their meeting on Wednesday April 6th at 5 p m precisely

Forms of application and copies of the Rules may be obtained from the Secretary

By Order of the Board of Management
JAMES McKAY
March 1932 Secretary

County Mental Hospital,
RAINHILL near LIVERPOOL

Wanted ASSISTANT MEDICAL OFFICER Salary £500 per annum rising by annual increments of £25 to £600 per annum subject to a 3 per cent deduction under the Superannuation Act The salary is subject to a temporary abatement which amounts to £18 15s per annum on the commencing salary

A deduction of £150 per annum is made from the salary for board furnished apartments and washing

Facilities for laboratory and research work

Preference given to one who has held a resident post in a general hospital

The successful candidate will be expected to take his Diploma in Psychological Medicine as soon as possible

Applications with testimonials and full particulars to be sent to the Medical Superintendent as soon as possible

The Royal Sea-Bathing Hospital,
MARGATE
(For Surgical Tuberculosis)
(308 Beds)

Applications are invited for the post of ASSISTANT MEDICAL SUPERINTENDENT at the Royal Sea Bathing Hospital Margate at a salary of £500 a year with furnished quarters light fuel and laundry The appointment is tenable for two years

The candidate must be unmarried and have held a resident surgical appointment at a General Hospital They should have had some experience of Pathology and Orthopaedic Surgery The selected candidate will be required to take up his duty on May 1st next

Applications with three recent testimonials should be sent on or before March 18th to the HONORARY SECRETARY Watergate House York Building Adelphi W C 2

Tynemouth Victoria Jubilee
INFIRMARY

ONE HOUSE SURGEON (male) required about March 24th Applicants must be double qualified and registered Salary £150 per annum with board residence and laundry

Applications stating age and other essential particulars and accompanied by copies of recent testimonials to be addressed to the undersigned from whom all particulars may be obtained

The Hospital has two Resident House Surgeons and contains 80 beds and cots an X-ray Dept and an Out-patient Department where accident cases are received

CHARLES LOWELL
1 Northumberland Place Assistant Secretary
North Shields

Bath and Wessex Children's
ORTHOPAEDIC HOSPITAL
Combe Park BATH

HOUSE SURGEON required immediately

The appointment will be for not less than six months with salary at the rate of £120 per annum together with quarters board and laundry

Candidates must have had special experience in administering anæsthetics

Applications with copies of three recent testimonials should be forwarded to the undersigned

HAROLD J FRICKER
March 2nd 1932 Secretary

Birmingham Maternity Hospital

HOUSE SURGEON (man or woman) wanted for six months from May 1st (Six months on Dermatological Hospital) Salary to be settled £50 per annum Applications fully stating particulars and copies of testimonials to be sent to reach Mr HUGH ASTON Hall Street Birmingham not later than March 17th

Salford Royal Hospital
(265 Beds)

HONORARY PHYSICIAN

The Board of Management invite applications for the above appointment

Every candidate for the office of Honorary Physician must be a Graduate of a University requiring examination for its degree and a Fellow or Member of the Royal College of Physicians of London

All candidates for this appointment must be on the *Medical Register* and must not practise midwifery or pharmacy

The present Honorary Assistant Physician is a candidate for the appointment

Applications accompanied by certificates of age and of registration and by not more than six testimonials must be delivered to the undersigned on or before March 25th

By Order of the Board of Management
RICHARD NEWALL
March 2nd 1932 Assistant Secretary

Bolton Infirmary & Dispensary
(301 Beds including Two Auxiliary Hospitals)

Applications are invited for the post of HOUSE PHYSICIAN Salary £150 per annum with board residence and attendance Duty to commence May 1st

The Infirmary has a very well equipped Pathological Department and this post offers an exceptional opportunity for experience in clinical pathology

Preference will be shown to applicants who have had some experience in laboratory work

Applications stating age nationality and previous experience together with copies of testimonial should be forwarded to the undersigned not later than Monday March 21st

ALBERT E BRISCOE Secretary

Hampstead General and North-West London Hospital
Haverstock Hill N W 3

APPOINTMENT OF CASUALTY SURGICAL OFFICER

Applications are invited from unmarried registered Medical Women for the position of Casualty Surgical Officer at the Out-patient Department of the Hospital Basham Street Camden Town which will become vacant on April 1st next The salary will be at the rate of £100 per annum together with board residence etc and the term will be for six months

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on March 16th next

North Riding Infirmary,
MIDDLESBROUGH
(General Hospital—150 Beds)

Applications are invited for the post of SECOND HOUSE SURGEON (gentleman) to take up duties April 1st

The appointment will be for a definite period of six months renewable

Salary at the rate of £150 per annum with board residence and laundry

Applications stating age nationality and previous experience with three recent testimonial should be sent forthwith to the undersigned

CHARLES POSTGATE
Secretary Superintendent

Macclesfield General Infirmary

Wanted SENIOR HOUSE SURGEON Salary at the rate of £180 per annum with board and residence To commence duties April 1st SECOND HOUSE SURGEON Salary at the rate of £150 per annum with board and residence Experience in the administration of Anæsthetics essential To commence duties at once

The appointment are for a period of six months subject to one months notice on either side

C

(General Hospital of 166 Beds)

There will be vacancies on April 1st for TWO JUNIOR HOUSE SURGEONS (male British) for which posts applications are invited The appointments are for six months in the first instance and the salary for each is at the rate of £150 per annum together with board residence and laundry

Application stating age qualification and experience together with copies of three recent testimonials should be sent to the undersigned as early as possible

H J LANCASTER
General Superintendent & Secretary

Manchester Royal Infirmary
CENTRAL BRANCH LOBY STREET MANCHESTER

HOUSE SURGEON (Lady)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment Applicant must be registered and hold a Medical and Surgical qualification

The appointment is tenable for eight months commencing May 1st two months as Junior at £100 per annum three months as Assistant at £100 per annum and three months as Senior at £200 per annum together with board and allowance for laundry

Applicant must state age and qualifications and send twelve copies of their application and testimonials to the undersigned by 9 a m on Thursday March 31st

By Order
FRANK C HAZELL
General Supt & Secretary

The Willesden General Hospital
(Incorporated) N W 10

Appointment of (a) CASUALTY OFFICER (b) HOUSE SURGEON (c) HOUSE PHYSICIAN

Applications are invited from fully qualified and registered candidates for each of the above resident appointments Candidates must be unmarried

The appointments are for a period of four months from April 1st

Salary Casualty Officer at the rate of £100 per annum House Surgeon at the rate of £110 per annum House Physician at the rate of £100 per annum

Detailed application with copies of testimonials should be addressed to the Secretary The Willesden General Hospital N W 10 not later than Wednesday March 16th

February 29th 1932

The Queen's Hospital for
CHILDREN Hackney Road London E 2

The Committee invite application for the post of SURGEON for the Ear Nose and Throat Department with charge of beds Two attendance required weekly An honorarium to cover travelling expenses will be paid Candidates must be Fellows by examination of the Royal College of Surgeons

Applications with copies of three recent testimonials which may be printed or typewritten should be sent on or before March 31st to the undersigned from whom further particulars may be obtained

CHARLES H BESSELL
March 1st 1932 Secretary

The Gloucestershire Royal
INFIRMARY AND EAR INSTITUTION
GLOUCESTER

There is a vacancy for a SURGEON on the Acting Medical Staff of the Institution

The candidate appointed will have charge of the Orthopaedic Department of the Hospital including all injuries and diseases of bones and joints

Candidates should send in their applications diplomas and testimonials under cover to the undersigned on or before Tuesday April 12th next

F J SIMONS
February 25th 1932 Secretary

Coventry and Warwickshire
HOSPITAL COVENTRY (307 Beds)

RESIDENT HOUSE PHYSICIAN (male) wanted Also RESIDENT HOUSE SURGEON (male) Salaries £100 and £120 per annum respectively Board laundry and attendance provided Candidates must be duly qualified and registered

Applications stating age and enclosing copies of recent testimonial should be sent to the undersigned immediately

(Miss) R HOOPER Secretary

Cossham Memorial Hospital,
KINGSWOOD BRISTOL

The post of HOUSE SURGEON will be vacant at the end of March Applicants must be fully qualified and registered in Great Britain nationality Salary £150 per annum with board and laundry

Applications with copies of three recent testimonials to be sent to the Secretary

Buchanan Hospital,
ST LEONARDS-ON-SEA (115 beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON (male) at a salary of £125 per annum for a term of six months commencing on April 1st Eligibility for superposition after six months Applications with copies of testimonials should be sent to the undersigned by March 16th

S C W DISNEY
Secretary

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Garden, Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
GENERAL POST OFFICE. *(Assistant Medical Officer—Woman)*	**CONTRACT PRACTICE** *(contd)*	**CONTRACT PRACTICE** *(contd)*
CONTRACT PRACTICE	LLWYNYPIA CLYDACH VALE PENYGRAIG GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society) (Workmen's Medical Scheme)*
FERN VALE MON *(Workmen's Medical Society)*	MARDY GLAMORGAN *(Workmen's Medical Scheme)*	**PUBLIC HEALTH**
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE *(Medical Practitioner)*	DEVON COUNTY COUNCIL *(School Medical Inspector—Male)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme)*	KENT COUNTY COUNCIL *(Assistant Medical Officer of Health and Tuberculosis Officer)*
	NEATH AND DISTRICT *(Medical Aid Association)*	NORTH OXFORDSHIRE UNITED DISTRICTS JOINT COMMITTEE *(Medical Officer of Health)*
	OAKDALE MON *(Medical Officer for Medical Aid Association*	STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS *(Tuberculosis Officer)*

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Societies Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	**SOUTH AUSTRALIA** *(Lodge Appointments)*	Secretary South Australian Branch B M A House 206 North Terrace Adelaide.	**WELLINGTON NEW ZEALAND** *(Contract Practice Appointments)*	Dr G T WANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
QUEENSLAND *(Friendly Societies Registered Friendly Societies Institute)* *(Townsville Australian Friendly Societies Medical Institute Toowoomba)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane.	**VICTORIA.** *(All Institute or Medical Dispensaries)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria.	**WESTERN AUSTRALIA** *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St. Georges Terr Perth Western Australia.

March 9th 1932 By Order of the Council ALFRED COX Medical Secretary

West London Hospital,
Hammersmith Road W 6 (234 Bed)

Required one HOUSE PHYSICIAN one HOUSE SURGEON (General and Gynaecology) one HOUSE SURGEON (General and one deep X Ray Therapy) one HOUSE SURGEON to Throat Nose and Ear Department (with some Anaesthetic duties) and one RESIDENT ANAESTHETIST These five appointment (males) are tenable for six months from April 1st next subject to one months notice on either side Salary at the rate of £100 per annum with board lodgings and laundry allowance

Candidates must be registered under the Medical Act Applications (which must be on printed forms to be obtained from me) must reach me not later than first post on Friday March 18th Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a time to be fixed by the Medical Council on Wednesday March 23rd at 4.15 p m and the House Committee sometime at 4.45 p m the same day when the appointments will be made

H V MADGE, Secretary

Northampton General Hospital
(250 Beds)

There will be vacancies on April 1st next for one HOUSE PHYSICIAN and THREE HOUSE SURGEONS British nationality Salary £150 per annum with board residence and laundry The Council can at their option appoint for a period of six months and will be eligible for re-appointment for a further period

Candidates must be duly qualified and registered

Applications stating age and qualifications with copies of testimonials to reach the Undersigned not later than noon on Wednesday March 30th

There will also be vacancies for Resident Officers on April 1st Minimum of £110 will be given to successful candidates

H ST JOHN WOOD
Feb 22nd 1932 Secretary Supt.

West London Hospital,
Hammersmith Road W 6 (234 Bed)

Applications are invited for the post of HONORARY MEDICAL RADIOLOGIST (Diagnostic) Candidates must be duly qualified Medical Practitioners and have had experience of Radiological work especially X ray Diagnosis The successful candidate will have full control of and be fully responsible for this Department in all matters relating to X ray Diagnosis

Application accompanied by copies of testimonials should reach me not later than Wednesday April 6th Candidates must attend a Meeting of the Medical Council on Friday April 8th at 4.30 p m and prior to that date call upon and send copies of application and testimonials to each Member thereof They must not canvass Members of the Board of Management but nevertheless must send copies of application and testimonials to each Member thereof and be in attendance at a Meeting of the Board at 5 p m on Tuesday April 12th when the election will be made

H V MADGE Secretary

County Mental Hospital,
LANCASTER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER Candidates must be single and under thirty five years of age Commencing salary £500 rising by annual increments of £25 to £600 with further increase on promotion subject to a deduction of 3 per cent under the Asylum Officers Superannuation Act There are no emoluments The selected candidate will be required to live in the Hospital and will be provided with board lodging etc for which a charge of £150 a year is made

A temporary abatement from the gross salary will be made the amount of the abatement on £500 being £18 15

The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum

Applications giving full particulars of testimonials (copies only) should be forwarded to the Medical Superintendent before March 29th

Monmouthshire Mental Hospital,
ABERGAVENNY

Wanted a JUNIOR ASSISTANT MEDICAL OFFICER (male) Candidates must be registered Practitioners and unmarried Salary £350 per annum rising by £25 to £450 (less a temporary deduction of £11 5 per annum) plus £50 for D P M with board, apartment laundry and attendance

The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909

Application stating age qualifications etc and accompanied by copies of two recent testimonials to be sent to the Medical Superintendent on or before the 15th instant

Royal South Hants and
SOUTHAMPTON HOSPITAL

The Committee of Management invite applications for the post of HONORARY ASSISTANT SURGEON All candidates must possess the diplomas of Fellow of the Royal College of Surgeons of England Edinburgh or Dublin or be on the Register of Surgeons of some University recognised by the General Medical Council Application accompanied by copies of testimonials should be sent on or before March 16th to the undersigned from whom any further particulars may be obtained

HY TRUSSON Secretary

Royal Buckinghamshire Hospital,
AYLESBURY

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) for six months To commence duty on March 31 Salary £200 per annum with board residence and laundry Candidates must be fully qualified and registered

Application stating age qualifications and experience with copies of not more than three testimonials should be sent to the Undersigned at once

M W BROWN Secretary

(Appointments continued on p 52)

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
T/A ARTICULATE WESTCENT LONDON
Tel MUSEUM 9861 (4 lines)

SMALL ADVERTISEMENT RATES

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Each Additional Line, 1s 6d

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All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

Wanted —May 1st —Assistant, male indoor for mixed Practice in Yorks West Riding Suit recently qualified man Salary £250 but according to experience up to £350 —Address giving all necessary particulars No 1405 B M A House Tavistock Square W C 1

Wanted — Assistant till June end prospect of further engagement Work light Car when necessary Usual bond Male or female Comfortable rooms —Address stating age and nationality also references No 1109 B M A House Tavistock Sq W C 1

Wanted — Assistant (male), outdoor central country town Good appearance young single ex H S preferred State age testimonials Commence duties April 1st —Address No 1410 B M A House Tavistock Square W C 1

Wanted — Assistant, male, single able to drive car country Practice North Wales Salary £300 with rooms board and attendance Usual bond State full particulars age nationality etc — No 1411 B M A House Tavistock Sq W C 1

Wanted —Assistantship, with or without view by M B Glas g 29 energetic abstainer good appearance with 4 years experience in C I Anæsthetics Midwifery Good testimonials —Address No 1403 B M A House Tavistock Square W C 1

Wanted —Indoor male Assistant, country Practice North Midlands Able to drive car Salary according to experience State age nationality reference photo etc —Address No 1416 B M A House Tavistock Square W C 1

Wanted — Outdoor Assistantship aged 33 married ex H S and H P experienced 7 years private panel and colliery work Lost grad midwifery T I — Address No 1417 B M A House Tavistock Square W C 1

Wanted — Outdoor Assistant, male young active unmarried Residential Country Town Cheshire Able to drive car Salary £350 to £400 according to experience Usual bond Disp kept Full particulars —No 1424 B M A House Tavistock Sq W C 1

Wanted — Assistantship or LOCUM by male M R C S L R C P D L O Ex H S C O and R S O Good practical general and E N T experience —Address No 1437 B M A House Tavistock Sq W C 1

Wanted — Assistantship or LOCUMS by Woman Doctor Five years experience private and panel practice dispensing Able to drive car —Address No 1433 B M A House Tavistock Square W C 1

Wanted — Assistantship (outdoor) London or suburbs by gentleman M R C S L R C P single aet 28 H S H P experience C P Free now Good ref —Address No 1508 B M A House Tavistock Sq W C 1

Wanted —Assistant with some M R or young and energetic willing T T All to drive a car Photo (returnable) State essential particular —Address No 1507 B M A House Tavistock Square W C 1

Wanted immediately — Indoor and Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cross Street Manchester

Wanted — Assistantship by Woman Graduate Experience in general practice and hospital work —Address No 1426 B M A House Tavistock Square W C 1

Wanted at once, at East End of London Surgery male ASSISTANT British — Address No 1438 B M A House Tavistock Square W C 1

Assistant required by Indian Doctor London East Light work Moderate remuneration — Address No 1506 B M A House Tavistock Square W C 1

Assistant, Part-time, wanted, London S W —Addres No 1420 B M A House Tavistock Square W C 1

Keen, energetic Aberdeen Graduate M B Ch B age 29 wants ASSISTANTSHIP with view Excellent testimonials Own car Interview House or flat desirable — Address No 1430 B M A House Tavistock Square W C 1

Near Chester and Liverpool — Outdoor ASSISTANTS male Able to drive car —Send full parties to CHEMICALS 40 Hamilton St Hoole Chester

Outdoor Assistant required in Liverpool capable and with some experience of general practice — Reply stating full particulars to X c o Messrs I SUMNER & Co Ltd Manufacturing Chemists 40 Hanover Street Liverpool

Part-time Assistantship wanted by M R C S L R C P in or near London Anything in reason Englsh Aet 32 Ex Colonies —Address No 1434 B M A House Tavistock Square W C 1

Pathological and Bacteriological LABORATORY ASSISTANTS ASSOCIATION —Pathology SKILLED ASSISTANTS at H GOODING Ho Crove Victoria Park Manchester No fees

LOCUMS

FOR LOCUM TENENS APPLY TO PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4 ADAM ST Strand London W C 2
Teleg Epsomian Lond Phone Temple Bar 9011
After Office Hours Epsom 9142

Wanted —Locums, institutional, or otherwise by M B age 32 with good Sanatorium Hospital and G P experience Highest references Own car Free shortly Usual fees Assistantship considered —Address No 1423 B M A House Tavistock Sq W C 1

PARTNERSHIPS

Wanted —Partnership in Practice with cottage hospital by M B (Cantab) aet 29 unmarried 2½ years hospital appointments mainly surgical —Address No 1414 B M A House Tavistock Sq W C 1

Devon — Partner required in good class non panel non dispensing TOWN PRACTICE Share about £800 p a to commence — Mr C S MOORES Incorporated Accountant 15 Bedford Circus Exeter

London, W 2 — Junior Partner wanted with view to taking over Practice in about three year Initial premium £700 —Address No 1439 B M A House Tavistock Square W C 1

M D, M R C P (Lond), Guy's, aged 29 seeks PARTNERSHIP well established Practice West of England Premium part down Balance out of income —Address No 1431 B M A House Tavistock Sq W C 1

MEDICAL POSTS DISPENSERS etc.

Wanted for Mission Hospitals in BOMBAY PRESIDENCY next Autumn for term of at least two years fully qualified LADY DOCTORS
The Hospitals equipped and conducted on the most modern lines are training schools for nurses and offer unrivalled experience in Midwifery Surgery Tropical Medicine and Laboratory work
Salary £200 per annum with travelling expenses furnished hou and other allowances Applications stating age qualifications experience etc with three recent testimonials should be sent before April 1st to Mrs McGEEPY Hon Sec Women's Association for Foreign Missions Langford Dunamore Park Belfast who will give further information

DISPENSERS SUPPLIED TO DOCTORS and HOSPITALS AT SHORT NOTICE WITHOUT FEE
Qualified and experienced in private and panel practice Permanent and part time Book keeper Dispensers Secretary Dispensers Nurse Dispensers Chauffeuse Dispensers and Receptionists
Write wire or phone Central 3679
The Reliance Bureau for Dispensers 12, Holborn Viaduct E C 1

A Lady Dispenser-Bookkeeper *supplied immediately on request* qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

Dispenser - Secretary (Hall), aged 26 excellent references used to large Practice DESIRES POST similar capacity Can drive car Free now —CHANNON 10 Brambledown Road Wallington Surrey Tel Wallington 1758

Doctors requiring qualified Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5808 THE DISPENSERS BUREAU 15 Lindsay House 139 Shaftesbury Avenue London W C 2

Lady Dispenser - Bookkeeper desires RE-ENGAGEMENT thoroughly experienced competent bookkeeper can do accounts parish returns etc Good testimonials Disengaged now — Address Miss DANIEL 72 Gower Road Haywards Heath

Lady Dispenser - Bookkeeper Secretary Hall certificate experienced excellent testimonials desires POSITION London or district Personal interview if required Able to help minor operations dressings etc Moderate remuneration —No 1435 B M A House Tavistock Sq W C 1

Lady (Doctor's widow) seeks — Good personal B M A Hou

Lady requires post with Doctor as RECEPTIONIST SECRETARY Has had 14 years experience as chauffeuse clean licence and two years nursing Good references— Address No 1413 B M A House Tavistock Square W C 1

Post as Secretary-Dispenser (unqualified) required by ex Sick Berth Chief Petty Officer R N Age 42 years Highest references —Address No 1510 B M A House Tavistock Square W C 1

Secretary, Receptionist, Bookkeeper young lady (Brit) capable tact ful Two large medical f district Ire tele No 143 B M A W C 1

S age 26, SECRETARY shorthand exp A House typist — Address No 1404 Tavistock Square W C 1

Surgical Attendant, with considerable V D experience requires POST Age 42 years 1011 B M A

Duplicating undertaken by Expert Testimonial Theses Legal Documents Numerous Letters of appreciation from Doctors —BRATTICE DUPLICATING (B) 341 Finchley Road N W 3 Phone Hampstead 6430

The Royal Army Medical Corps ASSOCIATION 85 Eccleston Square S W 1 (Telephone Victoria 2022) supplies qualified Dispensers Technicians Laboratory Assistants Male Nurses Mental and Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dental Clerks Orderlies Porters Caretakers etc without charge to progressive employer

PRACTICES

Wanted, a good class Practice in or near London with an income of £1 500 to £2 500 a year Small panel not objected to Applicant is an experienced married man with ample means and ready to settle promptly Good house essential—Apply B B c/o PERCIVAL TURNER LTD 4 Adam St Adelphi Strand W C 2

Wanted, by experienced Practitioner good class private PRACTICE with scope South or South East Coast Town income £1 000 p a upwards Capital available Small panel not objected—Address No 1115 B M A House Tavistock Square W C 1

Wanted — Good established PRACTICE inc £1 400 upward London suburb or easy reach Good schools and good 6/8 roomed house essential Free autumn Ample capital—Address No 1469 B M A House Tavistock Square W C 1

Wanted in Aberdeen during next six months well established PRACTICE (panel 2 000 or over) Capital available —Address in strict confidence No 1427 B M A House Tavistock Square W C 1

Wanted in Glasgow, a general PRACTICE with substantial panel Capital available Write in strict confidence—Address No 1436 B M A House Tavistock Square W C 1

Wanted—Scotland — Practice in non industrial area Income about £1 000 North preferred Ample capital—Address No 1406 B M A House Tavistock Square W C 1

Wanted — This summer or autumn by experienced Practitioner general and panel PRACTICE bringing in at first £1 500 a year West or South West England preferred — Address No 1428 B M A House Tavistock Square W C 1

Wanted, in Scotland, General PRACTICE preferably in a town Capital available — Address No 1419 B M A House Tavistock Square W C 1

Devon —Lady Doctor desires to Dispose of SMALL COUNTRY PRACTICE Income from panel £210 appointments £90 private fully nets £375 Particularly suitable for a Doctor (either sex) desiring to commence practice — Mr C S MOORES F S V A 15 Bideford Circus Exeter

East Coast — Old-established Country PRACTICE Receipts over £1 700 including panel 900 and transferable appointment £140 Educational and sporting facilities Excellent built for doctor Large garden with orchard tennis lawn £3 000 1¼ yrs purchase —No 1502 B M A House Tavistock Sq W C 1

Exceptional opportunity in great west part of Western City—Middle and working class PRACTICE Last year £400 panel 850 Price £675 Good house might rent Plenty of scope —THE WESTERN MEDICAL AGENCY 22 Clare Street Bristol

Fashionable Seaside Health Resort North Yorks—Small PRACTICE with HOUSE one of best and most convenient positions for sale Doctor retiring Excellent introduction Suit lady or gentleman—No 1422 B M A House Tavistock Sq W C 1

For Sale — Practice in growing suburban district within 12 miles of London About £1 200 per annum increasing panel of 1 300 Unlimited scope Convenient houses for sale at £1 050 Substantial mortgage arranged if required for Practice £1 800 Full details in confidence—Address No 1401 B M A House Tavistock Square W C 1

For Sale — Middle and better class panel PRACTICE in residential district of Leicester Low rates Income £1 000 to £1 100 Quarter Good scope for extension Price £650 or offer Full particulars from A MEMBER B M A House Tavistock Square W C 1

North Wales —Country, seaside, and residential PRACTICES for SALE also one in Liverpool — CHRISTIANS 80 Hamilton Road Chester

For Sale — Unopposed Practice in South Midlands industrial and agricultural area recently extended over 1 900 Receipts over £2 100 (£1 930 contract) Panel and Insurance appointment Good house garage garden Introduction if desired —No 1138 B M A House Tavistock Sq W C 1

For early Sale (resident Practitioner taking appointment) attractive PRACTICE in country town £750 likely to expand Fine modern house (1928) with extensive & well stocked garden 1½ yrs purchase £160 Book with complete record for inspect —No 1304 B M A House Tavistock Sq W C 1

Lancs Town — Very good and old established Receipts £1 700 panel 1 500 and increasing Transferable appts £140 Price £2 400 or near offer part deferred—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

Liverpool — Compact easily worked better working class PRACTICE in nice district for immediate sale Low exes House to rent Scope Receipts £800 p a (half panel) Price 1½ years purchase—Address No 1429 B M A House Tavistock Sq W C 1

Near Cardiff — Old-established —Average receipts over £1 100 yearly Nice house electric light garden etc rent £12 quarterly Panel over 1 000 Appointments £50 Price 1 yrs purchase—MANCHESTER MEDICAL & SCHOLASTIC ASSOC 6 Brown St

N E Midlands —Old-established rural PRACTICE over receipts £1 211 panel about £440 transferable appts £52 10 Minds unopposed Good house on lease Premium 1½ years — Address No 1421 B M A House Tavistock Square W C 1

Nucleus, with excellent pros- pect for Sale just beyond eastern border of London pleasant new district 25 mins Charing Cross Doctor with large Practice 2 miles away started this branch about 4 months ago but finds it awkward to carry on Private cab taking average about £5 per week 70 panel patients Extensive building is being carried on Suitable house improving position of practice could be obtained Premium £100 —Address No 1509 B M A House Tavistock Square W C 1

Nucleus, London, S W, excel- lent position (corner) well populated locality Receipts for 12 months about £200 Ample scope Surgery and four rooms etc very moderate rental — Address No 1512 B M A House Tavistock Square W C 1

One of the busiest and finest East End PRACTICES for Sale Panel 2 600 with extensive private work Average gross receipt well over £2 500 per annum Large waiting room with two commodious consulting rooms and dispensary Large and modernised house above Sun vita glass lounge etc 7 rooms bath and h and c water throughout 1/4 hour West End Direct through illness Price 2½ years on £2 500—Address No 1415 B M A House Tavistock Square W C 1

Oxfordshire — Old-established, unopposed country PRACTICE Average £1 200 p a Panel over 600 Good house Premium 1½ years purchase — THE WESTERN MEDICAL AGENCY 25 South Molton Street London W 1

To Purchasers — Do not buy without expert assistance With 50 yrs experience Mr PERCIVAL TURNER can advise in all cases Terms free on application to 4 Adam St Strand W C 2 Telephone Temple Bar 9011 Telegrams Epsomian London

Woman Practitioner requires small PRACTICE panel mid class From £400 p annum Ample scope essential House 7—9 room small garden garage opt purchase Suburb or seaside South or West—No 1407 B M A House Tavistock Sq W C 1

HOUSES CONSULTING ROOMS

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At 56, Gloucester Gardens, W 2 Well furnished SUITE—Sitting room 2 or 3 bedrooms Full or plain Maid service required Also BED SITTING ROOMS and beautifully fitted unfurnished Panelled Room Suit above for Laboratory Paddington 0780

Sterilized Accouchement Dressings Messrs Savory & Moore Ltd desire to draw attention to error which appeared in their announcement of Feb 27th The first item of contents of Outfit should have read—1 Surgeon's Mask No Surgeon's Coat is supplied in their 21/ Outfit but can be supplied ready sterilized at an extra cost for sterilizing

ESTABLISHED 1865

ELLIOTT, SON & BOYTON

(H H Holt H F Allpress H C Howe)

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APPOINTMENTS —Contd

The London Lock Hospital, 91 Dean Street London W 1

The Board of Management invite applications for the post of HOUSE SURGEON at the Male Lock Hospital
Candidate must be doubly qualified and duly registered The appointment is at the rate of £175 per annum with furnished rooms full board and laundry The appointment is for six months Duties to commence April 9th
Application enclosing copies (only) of three recent testimonials to be sent to the undersigned on or before 10 a m March 29th
By Order of the Board
H Y J FASON
March 7th 1932 Secretary

Bristol Eye Dispensary

Vacancy for HONORARY OPHTHALMIC SURGEON Duties light and could be combined with general work if desired Would suit retiring medical man or woman with good knowledge Eye work wishing light work in pleasant educational centre Apply stating age and experience to Secretary (Medical) 17 Orchard St Bristol

Liverpool and District Hospital FOR DISEASES OF THE HEART

HOUSE PHYSICIAN (male or female) required for period of six months from April 15th Salary at rate of £100 per annum with board residence and laundry Application not later than March 19th to Miss LEWIS Secretary 14 Cook St Liverpool

Lowestoft and North Suffolk HOSPITAL

TWO HOUSE SURGEONS (men or women) required Commencing salary £120 per annum with board residence and laundry
Applications together with copies of three recent testimonials to be sent to the Honorary Medical Superintendent

Taunton and Somerset Hospital, TAUNTON (104 Beds)

SENIOR HOUSE MEDICAL OFFICER and a HOUSE SURGEON required at the end of March Three Residents on staff The present House Surgeon is applying for the Senior post Salaries at the rate of £150 and £100 per annum respectively Applications with testimonials to J F STACEY Secretary

Victoria Hospital, Blackpool

The Board of Management invite applications for the post of SENIOR HOUSE SURGEON male (six months) Salary at the rate of £250 per annum with residence board and laundry Beds 132 Applicants must be fully qualified
Application together with copies of three recent testimonials should reach the undersigned on or before Saturday March 19th
JOHN HACKING
March 8th 1932 Hon Secretary

(REVISED ADVERTISEMENT)
City of Birmingham Mental HOSPITAL
WINSON GREEN DIVISION

SENIOR ASSISTANT MEDICAL OFFICER AND DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the above appointment from gentlemen who are duly qualified and registered Medical Practitioners with several years experience in Mental Hospital Practice and who possess the D P M or who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification
The successful candidate should be a good manager
The commencing salary will be £625 per annum Unfurnished quarters coal light and washing will be provided for a married man valued for superannuation purposes at £120 per annum If single man emoluments will consist of board lodging and laundry The salary and emolument will be subject to a temporary deduction of £27 10s per annum in accordance with the scale of Temporary Abatements from salaries approved by the City Council The salary is inclusive of the D P M and of all fees received in respect of attendances at inquests post mortem examinations etc Fees received must be accounted for and paid into the hospital account
The appointment is a whole time one and the person appointed will not be permitted to engage in any other work
The appointment is subject to the successful candidate passing satisfactorily a medical examination to the Valuers Officers Superannuation Act 1909 and to one months notice on either side
The person appointed will be required to serve in any institution belonging to the Mental Hospitals Committee
Application stating full particulars of qualifications experience and appointment held accompanied by copies of three recent testimonials must be addressed to the undersigned endorsed City Mental Hospital—Deputy Medical Superintendent so as to be received not later than March 25th
F H C WHITSHIPP
Town Clerk's Office Clerk to the
Council House Committee of Visitors
Birmingham

Urban Districts of Beddington and WALLINGTON and COULSDON and PURLEY

MEDICAL OFFICER OF HEALTH

The above mentioned Councils invite applications for the appointment of a Temporary Medical Officer of Health for the combined districts for a period of not less than six months Salary at the rate of £800 per annum plus a travelling allowance of £50 per annum
Candidates must be duly qualified Medical Practitioners possessing a recognised diploma in Public Health and the requisite qualifications required by the Regulations of the Ministry of Health
Applications (endorsed Medical Officer of Health) stating age qualifications and experience accompanied by copies of not more than three recent testimonials to be sent to the Clerk to the Council Council Office Purley not later than noon of Monday March 21st
Canvassing will be a disqualification
Council Offices ERNEST C KING
Purley Clerk to the Council
March 8th 1932

City of Salford
ASSISTANT RESIDENT MEDICAL OFFICER HOPE HOSPITAL (1 000 beds)

Applications are invited for the post of Assistant Medical Officer (male) at the Hope Hospital The appointment will be for six months at the rate of £250 per annum plus board residence and laundry Further information regarding the Hospital may be obtained from the Medical Superintendent Forms of application may be obtained from the Medical Officer of Health 143 Regent Road Salford to whom it should be returned by March 26th
H H TOMSON Town Clerk

St Thomas's Hospital
VACANCY

The appointment of an OPHTHALMIC REGISTRAR and REFRACTIONIST for one year with possible extension for further two years Salary £200 per annum Candidates must be registered Practitioners
Applications with full details of career to be forwarded to the Clerk to the Governors on or before March 18th

Southend-on-Sea New General
(VOLUNTARY) HOSPITAL (221 Beds)
TO BE OPENED IN JUNE 1932

Applications are invited for the post of PATHOLOGIST The successful candidate will be required to devote the whole of his time to the Hospital but will be allowed to undertake private work in the Hospital Laboratory on terms as set out in the regulations Salary £500 per annum

Application are invited for the post of RADIOLOGIST The successful candidate will be required to devote the whole of his time to the Hospital but will be allowed to undertake private work with the Hospital apparatus on terms as set out in the regulation Salary £600 p a

Applications are invited for the post of PHARMACIST The successful candidate will be required to devote the whole of his time to the Hospital Salary £350 p a rising by yearly increments of £15 to £400 p a

Application forms with regulations governing the appointment may be obtained on application and must be returned to the Secretary over leaf before April 10th

Southend-on-Sea New General
(VOLUNTARY) HOSPITAL (221 Beds)
TO BE OPENED IN JUNE 1932

Applications are invited for the following Honorary posts

ONE SURGEON *Candidates must be FRCS* (Eng)
ONE OR MORE PHYSICIANS Candidates must be FRCP [illegible] ond)
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Appli rning

the appointment may be obtained on application stating the appointment desired and must be returned to the Secretary on or before April 10th

South Devon and East Cornwall
HOSPITAL PLYMOUTH (240 Beds)

Applications are invited for the post of HONORARY RADIOLOGIST

Candidates who must be registered under the Medical Acts and hold the D M R E should submit applications stating age experience and qualifications accompanied by copies of not less than three recent testimonials to the undersigned on or before March 20th

The appointed candidate will have charge of the X-ray and Deep Therapy Departments

Further information will be supplied upon application

ARTHUR P CASH
Supt Secretary

The General Hospital, BIRMINGHAM

Applications are invited for the following resident appointments from April 15 h

HOUSE SURGEON (TWO) Salary £70 per annum

Applications giving full details of qualifications and accompanied by testimonials (if desired) should reach the undersigned by March 21 t

March 7th 1932 A H LEANEY
Hon Secretary

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London, East — About £2,500 p a Panel 2 600 Not much midwifery Visits 3/6 to 5/ Surg 2/ to 2/6 Shop front in excellent position on main road Two cons wait and disps Very comfortable Living over 2 sitting 3 bed bath etc — No 9001

Attractive little seaside resort, within 50 miles of Town Average over £1 300 inc panel 1 100 worth nearly £600 About 20 mid p a 2 to 8 gns Visits 5/ to 21/ Specially built house main road prominent position 2 recep 3 profc rooms 5 beds etc garden and garage £2 000 f hd — No 9000

Middlesex — Outlying Suburb, on Tube £1 200 and ample scope, Panel 400 increasing Mids fees 4 to 5 gns, *about 10 p a* Visits 5 to 10/6 *Modern* house 2 recep 3 bed sep surg and consroom Small gard Freehold £1 700 — No 8998

Lancs Town — Old-estd — £2,100 p a Panel 1 460 Very little mids fees £3 3 Visit 2/6 medicine 2 6 Surg 2/6 Specially built house with splendid surgery large waiting room and 2 consrooms and disp 2 recep 5 bed etc Rent £100 Premium one year's purchase — No 8997

Bucks, nr London — Estab nearly 2 years £600 increasing Panel about 800 Midwifery fees 3 to 5 gns Visits 3/6 to 7/6 Surg 2/6 to 3/6 Detached house in own grounds cons dining and waiting room 3 bed bath etc Rent £65 p a 14 years pur — No 8996

Outlying Suburb, W — Partnership about £2 000 p a rapidly increasing Panel over 650 Fees 4/ to 7/6 One third to two fifths share at 2 years purchase Choice of house — No 8995

West of England — Within 1½ hours £550—£600 p a Panel worth £200 Appt £300 Fees 5 to 10 6 Large detached house 3 recep 7 bed etc to rent at £80 Premium £600 — No 8984

Market Town, nr S Coast — Av receipts over £1 000 a year Panel 815 Old estab appt worth over £100 Fees 5/ to 7/6 Charming detached house in own grounds half an acre 6 bedrooms 2 attic 2 recep surg etc Recently overhauled Price for house and practice £3 500 — No 8979

Norfolk — Partnership — One-third share Very old estab Country Practice Average £3 582 Panel over 1 900 Appts about £330 Mids fees 2 gns up Visits 5/ to 21/ Detached house 6 good and 2 small bed 3 recep large surgery etc (sep) Garage and chauffeur's cottage One acre of garden Only £1 250 Prem for share 2 yrs. purchase — No 8983

London, S W 5 — Residential locality £400 p a Small panel Non dispensing No appt of midwifery Visits 5/ to 10/6 Consultations 5/ to 7/6 Ground floor maisonette at £200 p a including rates 2 recep 2 bed bath cons room and good garden Premium £600 — No 8982

Favourite South Coast Resort — Non panel PRACTICE estab only 2½ yrs returning already £650 p a. Fees 5/ to 21/ Excellent detached house with 9 bedrooms passenger lift 2 bathrooms etc Very suitable for resident patients Rent £140 or sell at £2 000 Goodwill £650 — No 8973

Sussex, favourite part on high ground about £1 300 p a Non panel non dispensing Little or no midwifery Visiting fees 5/ to 21/ Large house with 9 bed 3 recep and cons rooms and 4 acre to rent at £200 Smaller house at £120 p a with cons room 2 recep and 4 bedrooms Premium £2 000 cash — No 8954

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LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment Premium 2 years purchase or near offer

LONDON N E —Mixed suburban G P —Medium sized corner house Receipts nearly £800 Panel approx 1 000 Increasing scope Premium £1 340 for Practice leasehold house £900 or near offer

ESSEX —Mixed PRACTICE situated within 12 miles of London in growing locality with excellent scope for full further increase Medium sized house available Receipts approx £1 200 Panel 1 200 Premium £1 800 cash

LONDON W —Within 20 minutes of West End PARTNERSHIP in suburban middle class G P situated in rapidly developing locality Excellent scope for young and energetic man Panel approx 2 000 Receipt £2 500—£2 600 Premium for one third share 2 years purchase

LONDON E —PARTNERSHIP in middle and working class Practice Receipts over £2 000 Large panel Scope for increase especially midwifery Premium for 2/5ths share 2 years purchase with view to larger share

LONDON S E —Lady Doctor's PRACTICE situated in busy working class locality Flat available at low rental Receipts approx £350 Panel 160 Fees 2 6d up *Premium £350 or near offer*

DURHAM —Middle class and industrial PRACTICE Average receipts approx £500 Panel 370 Medium sized house Branch surgery Fees 2 6 up No appointments Prem £725 or offer Excellent scope

YORKS —PARTNERSHIP in middle and working class Town Practice Receipts approx £3 000 Panel over 2 000 House to rent Premium for 1/4 share 2 years purchase

ESSEX —Seaside Resort —Good mixed class G P with scope for increase Excellent modern house to rent on lease or for sale Fees 3/6 up Appointments over £200 Receipts over £1 000 Small select panel Premium £1 150 to include drugs

LONDON S E —Near West End —Cash and panel PRACTICE (Lock up) Shop fronted surgery held on lease at £70 p a part sublet Receipts average approx £400 Panel 517 Excellent scope for one giving whole time and undertaking midwifery Premium 1½ years purchase or near offer

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[illegible] mixed rural [illegible] ous available [illegible] prox £1 000

Panel 620 Fees 3/6 up One appointment *Premium 1½ years purchase*

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MIDDLESEX W —PARTNERSHIP in Suburban Practice situated in rapidly growing residential locality Receipts (approx) £2 000 Panel (increasing) 650 Medium sized house available Premium for 1/3 or 2/5 share 2 years purchase

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2 BIRMINGHAM (Good class Suburb) —Private PRACTICE with small panel but ample scope if encouraged Receipts nearly £600 p a Good house to rent Garage etc

3 LANCS —SEASIDE TOWN —Panel and private PRACTICE Receipts last year nearly £900 Small panel Both increasing Good fees House to rent (5 beds) Garage etc

4 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Garage etc

5 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

6 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

7 SOUTH WALES —Contract and middle class PRACTICE. Receipts average £1 100 Panel about 1 000 Good house to rent Lawn garage etc.

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1 OXFORDSHIRE —Old established unopposed Country PRACTICE Over £1 200 p a Panel over 600 Good house Prem 1½ yrs purchase

2 WESTERN CITY —Middle and working class PRACTICE Last year £490 Panel 850 Price £675 Good house Might rent Plenty of scope

3 DEVON —Unopposed Country PRACTICE Last year £675 Panel 250 Scope for increase M O £71 Rent £32 p a Prem 1½ years purchase Suit for man or woman

4 MIDLAND CITY — Old established general and venereal PRACTICE Receipts last year £2 740 Panel 500 recently established increasing Excellent house to rent Prem £3 250

5 DEVON —PARTNERSHIP for well qualified Physician 2/5 share returning at present £800 p a Good class non panel Practice Excellent house to rent Prem 2 yrs purchase

6 COUNTRY TOWN — PRACTICE £900 p a in Carmarthen Prem £850 Good house to rent £45 p a

7 DEVON —Seaport Town — In growing district £520 in last 15 months Panel 300 Good house to rent Prem £400 Great scope Selling owing to ill health

8 COUNTRY PRACTICE —Old established in pleasant country Last year £1 750 accounts Panel 946 Appts £120 In present hands 23 years Good house garage large garden House & Practice £5 000 Borders Scotland scope shire—Third later Last 2 yrs purchase

10 PRACTICE and 40 yrs Good house Selling owing to ill health Populous dist £1 000 for house & Practice

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3 *LONDON N* (near St Pancras) — Well established cash and panel PRACTICE Receipts last year £406 panel 350 Rent of surgery £1 weekly inclusive Premium £850 including drugs and furniture

4 *NICE SEASIDE TOWN* — 60 mins from *London — Old-established* PRACTICE Receipts average nearly £1 000 a year including panel *Nice house to be sold* with Practice Combined price £2 900

5 *LONDON S E* (7 mins Westminster Bdge) —Well established Lady Doctor's PRACTICE Receipts estimated at £550 per annum including panel of 157 Nice flat available rent £60 *per annum* Premium £450 including drugs and equipment

6 10 mins Paddington — Old established PRACTICE *Receipts* £1 600 p a Panel 2 177 Nice house rent £100 p a Premium little over two years purchase

7 LARGE MIDLAND TOWN — Old-established mixed class PRACTICE Receipts average £600 per annum including small panel Nice house rent £60 per annum Premium 1½ years purchase or near offer

8 Near BRIXTON S W —Well established cash and panel PRACTICE Receipts average about £424 p a panel 270 Rent of surgery £1 p a Premium £250 *Good scope*

9 LONDON S W (7 mins Victoria) — Old established *Practice* Receipts average £800 a year including panel 650 Nice large house on long lease rent £3 per week Prem £1 400 Practice readily increasing

No charge to purchasers or for enquiries

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CHESHIRE TOWN near MANCHESTER—PARTNERSHIP in old-established Practice Average cash receipts £2 151 p.a. Panel 1 500 Excellent house 2 reception 3 bedrooms Garage and garden Premium—£1 700—No 333

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LIVERPOOL—PRACTICE [illegible] Average Cash receipts £2 [illegible] Panel 800 Scope for increase Consulting 4 bedrooms Rent £50 p.a. Premium £1 000—No 331

LANCS TOWN—Old-established mixed PRACTICE Average cash receipts £995 p.a. Panel 710 Part of house 3 reception 4 bedrooms Garage and garden Premium 1½ years purchase—No 298

LIVERPOOL—Mixed General PRACTICE. Cash receipts last year £1 080 Panel 950 Scope for increase Consulting house 3 reception 5 bedrooms Rent £75 p.a. or would sell for £1 250 Premium 1 years purchase—No 324

NEAR MANCHESTER—Small Residential Town—Old-established (non-dispensing) middle-class PRACTICE Average cash receipts £1 400 p.a. Small Panel of 450 Well situated freehold detached house 2 reception 5 bedrooms Garage Premium—Practice—1 year purchase—No 329

CHESHIRE TOWN — NEAR MANCHESTER — PARTNERSHIP in mixed Practice Average cash receipts £2 250 p.a. Panel 1 100 Consulting house available 2 reception rooms 5 bedrooms Garage and small garden Premium—one third share—1½ years purchase after one month's assistantship Half share in three years—No 318

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1 LONDON SOUTH EAST—Old established good mixed class PRACTICE producing for last twelve months nearly £1 700 Panel of over 1 700 Fees chiefly 2/6 to 10/6 Very convenient ten roomed house with nice garden and garage Can be obtained on long lease at exception ally low rental Efficient introduction given

2 PARTNERSHIP—LINCS—Attractive Market Town within easy reach of Coast—A share representing about £750 p a is offered in an exceptionally good mixed class Practice established many years Average gross cash receipts for last three years over £3 600 This year at the rate of over £4 000 Panel of 1 600 Fees from 3/6 to 2 gns Midwifery 1½ to 10 gns Suitable house can be obtained or Purchaser could reside in rooms to begin with Premium for share £1 500 Ingoing Partner should be experienced able to undertake surgery and preferably hold the D P H in which latter case appts could be obtained which would increase the income of the share up to about £1 000 p a

3 ABERDEENSHIRE COAST—Old established mixed class PRACTICE in attractive district averaging £759 p a including panel of over 500 and appts worth about £220 Fees from 3/6 Suitable house with 2 reception 5 bedrooms and professional rooms Good garden Garage Rent £35 p a or could be purchased Premium £850

4 MANCHESTER—Old established PRACTICE averaging £640 p a Panel of 154 Offers good scope Fees 3/6 to 10/6 Midwifery 3 to 7 gns House contains 4 reception 5 bedrooms bathroom etc Rent on lease £70 p a Premium for immediate sale £450

5 NORFOLK—UNOPPOSED COUNTRY PRACTICE—PARTNERSHIP—A one third share is offered in an old established good mixed class Practice in attractive district There is an up to date Ho pital and good scope for major surgery Average gross cash receipts for the last three years over £3 500 Panel of nearly 2 000 Appts worth nearly £300 p a Fees from 2/6 to 21/ Nice house facing south with 3 reception and 6 to 8 bedrooms bathroom etc good garden In excellent repair Price for freehold £1 250 Sport of all kinds and schools within reach Premium 2 years purchase

6 DEATH VACANCY—*Town and Country PRACTICE on the outskirts* of Lincoln offering very good scope Cash receipts for the last twelve months approximately £1 400 including panel of over 1 000 Fees from 3/6 Very nice house standing in its own grounds with ample accommodation Premium £1,500

7 SOMERSET—SUBURB OF FAVOURITE TOWN—PARTNERSHIP—A one third share (after a preliminary Assistantship of about six months at £300 p a indoor) is offered in an old established mixed class Practice averaging for the last three years £2 371 p a Panel of over 2 400 Fees from 3/ Suitable house with 2 reception 4 bedrooms dressing room separate entrance to professional rooms electric light Fair sized garden Garage Price for freehold £1 000 part on mortgage Prem for share one and a half years purchase

8 PARTNERSHIP—LONDON SUBURB (SOUTH EAST)—Owing to the retirement of one of three partners the third share of an old established middle and working class Practice situated in a well populated district is for immediate disposal Cash receipts for past three years average £4 862 p a, including appts over £500 p a and panel of about 5 300 Very little midwifery Expenses small Suitable house available Rent £40 p a Premium 2 years purchase

9 SOUTH WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP—A share producing about £800 p a, with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Mid wifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be [illegible] London

10 FAVOURITE SOUTH WESTERN [illegible]—A two thirds or three fifths share is offe[illegible] Practice situated within easy reach of good residential town Gross cash receipts for last 12 months £2 522 Panel of 1 500 Visits 3/6 to 10/6 Very up to date attractive house with 2 reception 6 bedrooms Price for freehold £2 500 payable £1 000 down and £1 500 on mortgage Premium for share two years purchase Good sporting social and educational facilities Surgical scope if desired

11 YORKSHIRE—COAST TOWN—Old established mixed class PRACTICE in attractive seaside and holiday resort offering good scope for increase and surgical work Average gross cash receipts for last three years over £1 822 Panel of 500 Fees from 5/ to 21/ Mid from 2 to 5 g[illegible] saving house specially built with 2 separate entrance to professional rooms arage Freehold for £1 800 for prompt

12 -PARTNERSHIP—A one ed in an old e tablished e past three years £2 766 idwifery 2 gns upwards ent social sporting and £2 000

13 T TOWN—Old established bout £1 800 p a Small much midwifery Good hou[illegible] with ample accommodation and garden Freehold for sale Premium £3 000

14 WITHIN 60 MILES OF LONDON, near County Town—Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p a and offering good scope Selected panel of about 170 and appts worth £160 p a Fees 2/6 to 10/6 Very little mid Exceptionally nice house with beautiful garden containing 3 reception 4 bedrooms etc Separate entrance to professional rooms Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

15 WEST OF ENGLAND—LARGE TOWN—Well established PRACTICE producing nearly £900 p a including panel of over 1 300 Suitable house in excellent position Price £700 or can be rented at £60 p a Premium £1 450 Good scope for increase

16 NORTH MIDLAND CITY—PARTNERSHIP—Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 3 years purchase Excellent sport and chools

17 LONDON NORTH WEST—Well established middle class non di pen in PRACTICE averaging for the past three years £840 including appts worth about £300 p a and panel of 120 Fees 3/6 to 21/ Pur chaser can choo e his own residence Premium £1 250

18 NORTH WALES—Very old established good mixed class PRACTICE, averaging £880 p a including panel of 433 Fees 2/6 to 10/6 medicine extra Suitable house with reception 6 bedrooms etc Can be rented on lease at £50 p a Good sport Premium to include motor car £1 200 £400 down and balance by arrangement Ill health reason for sale

19 LONDON S W—Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 Including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for lease hold (94 years to run) £1 200 part on mortgage Premium £1 050

20 MIDLANDS—PARTNERSHIP—A one third share is offered in a very sound middle and working class Practice held by the senior partner for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Prem 2 years pur

21 MID WALES—Agricultural District—Mixed class PRACTICE producing about £880 p a including small panel of 130 Fees 5/6 to 21/ Small house with 2 reception 3 bedrooms etc Price £550 Fishing shooting and other sport Premium 1 years purchase

22 WOMAN DOCTOR'S PRACTICE—YORKS—LARGE TOWN—Established eight years easily worked and producing nearly £700 p a Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns Compact house with 2 sitting 3 bedrooms 4 attics etc Garden Gara e Rent on lease £42 10s p a Prem 1½ years purchas or near offer

23 CHESHIRE—NEAR COAST—Old established middle and working class PRACTICE averaging for the past three years over £1 300 Panel of 550 Fees from 3/6 Good house with 3 reception 7 b d rooms etc Price for freehold £1 200 part on mortgage Premium 2 years purchase

24 WITHIN FOUR MILES OF THE BANK—Old established working cla s PRACTICE producing for the last 12 months £2 300 including panel of over 2 800 Appts worth about £160 Visits from 2/6 Low expenses Suitable house can be rented or bought Sur ery premises on rental Premium £4 000 cash

25 LONDON SOUTH [illegible]—A one fourth share (after Preliminary Assist at a salary of £540 p a) is offered in an l working cla s Practice Average gross ea ee years £4 177 Panel of about 4 500 Midwifery from 3 gns House contains 3 sitting rooms 3 bedrooms bathroom etc Garden Can be rented at £55 p a Premium for share 2 years purchas half down and balance by instalments

26 SOUTH OF ENGLAND—Pleasant Town near Coast—Very old established middle and upp r class PRACTICE Cash receipts avera e nearly £1 750 p a including panel of 500 Visits 3/6 to 21/ Very little midwifery House including consulting room waiting room and dispensary in well situated part of town Price freehold £1 500

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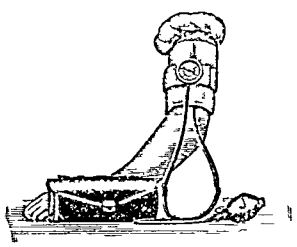
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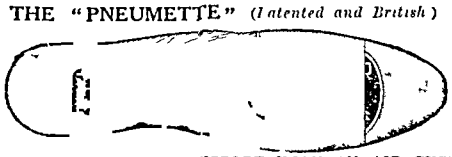
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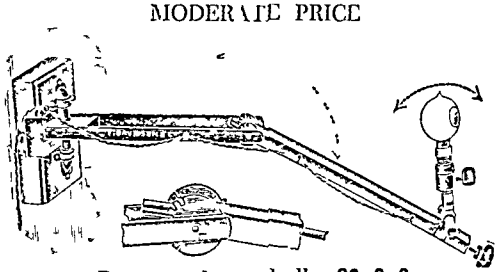
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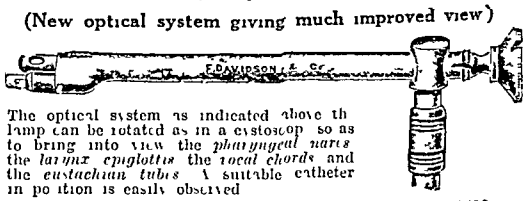
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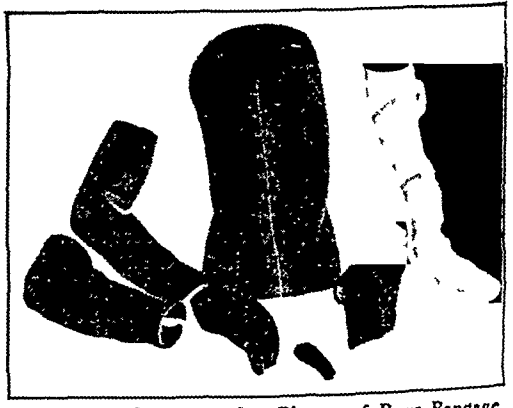
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CONTENTS

MARCH 19, 1932

ORIGINAL ARTICLES

Influence of a Cereal Free Diet Rich in Vitamin D and Calcium on Caries in Children. By Mrs Mellanby and C Ivy Latti on M B B S 507

Malignant Disease of the Hypopharynx and its Treatment by Excision By Wilfred Trotter, M S F R C S F R S (Illustrated) 510

The Management of Urinary Calculi. By Arthur Jacobs F R F P S 513

Conditioned Reflexes and Habit Formation. By W Horsley Gantt B Sc M D 517

Thoracic Metastases in Ovarian Carcinoma. By Herbert L Evans M D M R C P and Cuthbert L Strachan M D F R C I 519

MEMORANDA

Elevation of Depressed Fracture of the Skull in a Newborn Child By Peter W Edith M B 521

Spontaneous Haemorrhage of the New Born By A G B Duncan M D 521

REPORTS OF SOCIETIES

Medical Society of London
Non Infective Nephritis 522

Royal Society of Medicine
Ano-Rectal Fistula 523
Biochemistry in Medicine 523

Edinburgh Obstetrical Society
Menstruation in Mental Disease 524

Aberdeen Medico Chirurgical Society
Cortical Extract in Addison's Disease 525

Brighton and Sussex Medico-Chirurgical Society Backache in Women 526

REVIEWS

Surgical Pathology 527
Diseases of the Skin 527
Electro-Surgery 528
Bacteriological Technique 528
Unlimited Error 528
Notes on Books 529

OBITUARY

J H Parkes V C I I D 540
Lieut Hylmstone Lodwick M B 540
James Graeme Slater M B 547
Lt Ferguson Campbell M B 547
Mr J I Churchill 547

LEADING ARTICLES

Diphtheria Past and Present 533
Diet and Dental Disease 534

THE WEEK

Tuberculosis Among Nurses 534
League of Nations and Opium Smoking 535
Pain in Peptic Ulcer 535
British Social Hygiene Council 536
L'Enseignement Médical en France 536
Nietzsche's Mental Breakdown 537
Biochemical Aspects of Bacteriology 537
The Medical Secretariat 537

GENERAL ARTICLES AND NEWS

Tristan da Cunha. Dental Condition of the Islanders 538

Medical Research Council Annual Report for 1930 31 530

The Entrance Upon Practice Address by P H Mitchiner M S F R C S 531

Preparations and Appliances (Illustrated) 529

Medical Notes in Parliament 548
548
548
548

Medical News 549

LOCAL NEWS

Scotland—
Edinburgh Tuberculosis Trust 540
Anderson's College 540
Glasgow Hospital Sunday Fund 540
New Infirmary Buildings Aberdeen 540

England and Wales—
Serum Treatment in Cerebro-spinal Fever 540
Society of Public Analysts 541

THE SERVICES

Honorary Surgeon to the King 547
I A Medical Club 547
Commissions in the R A M C 547
(For Naval Military and Air Force Appointments see SUPPLEMENT*)*

LETTERS AND ANSWERS

Income Tax 550
Achlorhydria 550
Doctors and District Nurses 550
Raw Milk and Dental Caries 550
Vacancies and Courtesies 550
The Common Cold 550

CORRESPONDENCE

The Student in Irons By Major Greenwood F I C P F R S 541

Public Health and the Future By D J Gair Johnston M B 541

Hydrochloric Acid in Diabetes Mellitus By Evelyn McPherson M D 542

Fractures of the Spine By C I Elli M D C M 542

Ambulatory Treatment of Fractures By B McFarland M D F R C S Ed 542

The Barbiturates in Anaesthesia By I W Magill M B 543

The Common Cold By John F O'Malley F R C S and W R D Fairbairn M D 543

Colporrhaphy and Prolapse By Wm Fletcher Shaw M D 544

Aseptic Meningitis By E Thorp M B 544

Genito-Urinary Tuberculosis and the Ministry of Pensions By James C Watt M B 544

Pathological Service of the L C C By Sir E Graham Little M D F R C P 545

Puerperal Septicaemia and C M B Nurses By L W Heffernan M P C S 546

The Tuberculosis Problem By W M Cumming M D 546

UNIVERSITIES AND COLLEGES

University of Cambridge 547
National University of Ireland 547
Royal College of Surgeons of England 547

Vacancies 550
(See also page 103 of SUPPLEMENT*)*

The SUPPLEMENT contains

A Confession of Faith Address by Dr Alfred Cox

National Health Insurance
Insurance Problems Abroad

Correspondence
Insurance Practice as Seen by a Young Practitioner
The Capitation Fee
The Future of Panel Practice

Hospital Services Scheme in Sussex
Proposals by Brighton Division

Current Notes
Centenary Meeting Masonic Welcome
The Midland Medical and Surgical Reporter

Association Notices Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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EASTER HOLIDAYS.

All Communications and Advertisements intended for our issue of March 26th 1932 should reach this office not later than first post on MONDAY, MARCH 21st

INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible classes will for the most part be found on the pages indicated

PUBLISHERS

Bailliere Tindall & Cox
T [illegible] 5
[illegible] 5
[illegible] 5
Jewell & Kauntze—Tropical Fever 5
Konikow A F—Birth Control 5
Spencer H A—Lightning etc 5
Wakeley C P G—Surg Diagnosis 5

Churchill J & A
Bannister J B—Man for Midwives 4

Lewis H K & Co Ltd
[illegible] 3
[illegible] 3
[illegible] 3
[illegible] 3
[illegible] 4
[illegible] 3
[illegible] 3
mination of the Nervous System 3
Parkes & Kenwood's Hygiene etc 3
Pillsbury H C—United States Army X Ray Manual 3
Porter's Sanitary Law 3
Powell & Hartley—Diseases of the Lungs etc 3
[illegible] 39
[illegible] 3
White R I—Affections of Skin 5

Wright & Sons Ltd
Medical Annual 1932 4

ASSURANCE COMPANIES—
Century Insurance Co Ltd 55

BOOTMAKERS &c—
Dowie & Marshall—Bootmaker 34

BRASS NAME PLATES &c—
Cook [illegible] Name Plates 38
Ford's Name Plates 38
Herd S J & A—Name Plates 36
Lewis & Co Ltd—Name Plates 4
Osborne F & Co—Name Plates 36

DEBT COLLECTION—
British Medical Protection Society 34

DISPENSING BOTTLES &c—
United Class Bottle Manufr Ltd—Dispensing Bottles 6

FOOD PREPARATIONS—
Bemax Laboratories—Bemax 21
Benger's Food 26
Cow & Gate Ltd—Milk Food 28
Hardon Bros & Lindsay Ltd—Doctor's China Tea 37
Valentine's Meat Juice Cover iii
Wander A Ltd—Ovaltine 22

SURGICAL APPLIANCES—
Aerograph Co Ltd—Nose Spray 8
Allen & Hanburys Ltd—Pond Hospital Catgut 27
Bailey W H & Son—Patent Belt 35
Curtis & Son—Supports 9
[illegible]

MINERAL WATERS—
Ingram & Royle Ltd—Carlsbad Mineral Waters 19
Vichy Celestin 22

CHEMISTS &c—
Allen & Hanburys Ltd—
Bynin Amara 15
Diabetic Flour Cover iv
Sugarless Pastilles Cover iv
Vapo Cresolene 39
American Apothecaries Co—Salvitae 33
Bayer Products Ltd—Lacarnol Cover iii
Bengard Ltd—
[illegible] 30
14 21
[illegible] 17
Lingen 20
Burroughs Wellcome & Co—Digimutin 29
Clayton Aniline Co Ltd—Resyl Clyx 30
Continental Labs Ltd—Botol 16
Nemotrope 24
Dimol Laboratories Ltd—
Dimol [illegible] 18
19
18
[illegible] 11
[illegible] 32
Hoyt [illegible] Ltd— 31
37
32
May & Baker Ltd—Novarsenobillon 15
Morley & James Ltd—Pyronum 17
Mond Stafford lime Refining Co—Monsol 16
Newbery & Sons Ltd—Alka Zane 14
Parke Davis & Co—Metatone Cover i
Peat Products Ltd—Sphagnol 6
Saccharin Corporation Ltd—Novocain 33
S P Charles Co—Sulphaqua 36
Wyleys Ltd—Naphithin 32

MOTOR CARS TYRES &c—
Lodge Sparking Plugs 4
Riley Cars 7
Second hand Motors for Sale 54

PRINTING & STATIONERY—
[illegible]

TAILORING & UNDERCLOTHING—
Hall H—Medical Service Dress 54

TOBACCO & CIGARETTES—
Player's No 3 37

TRANSLATIONS TYPEWRITING—
Radford B—Typewriting etc 52

VACCINES & CULTURE MEDIA—
Evans Sons Lescher & Webb Ltd—Diphtheria Antitoxin 25
Laboratories of Pathology & Public Health 36
Sharp & Dohme Ltd—Antipneumococcal Serum 20

X RAY & ELECTRO MEDICAL APPARATUS—
British Hanovia Quartz Lamp Co—Actinotherapy 11
Dean & Co—X Ray Apparatus 8
Kodak Ltd—Duplitized X Ray Film 10
Medical Supply Association Ltd—Diathermy Apparatus 9

SANATORIA—
[illegible] 43
[illegible] 44
43
Montana Hall Switzerland 43
Nordrach upon Mendip Sanatorium 43
Pendyffryn Hall Sanatorium 43
Sanatorium Nerotal 44
Torna Dee Sanatorium 43
Victoria Sanatorium Davos-Platz 44

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—RE APPOINTMENTS 1

HOSPITAL &c VACANCIES—
Alpa Infirmary 4
[illegible]
Blackburn County Borough 49
Bolton Infirmary 51
Bootle Corp Hospitals 28
[illegible]
[illegible]
[illegible]

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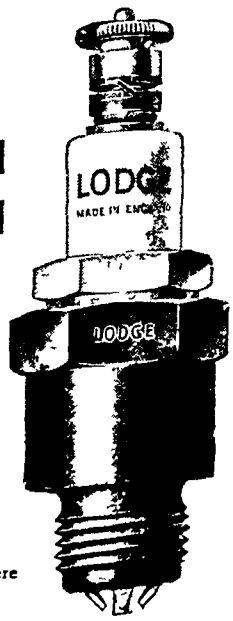
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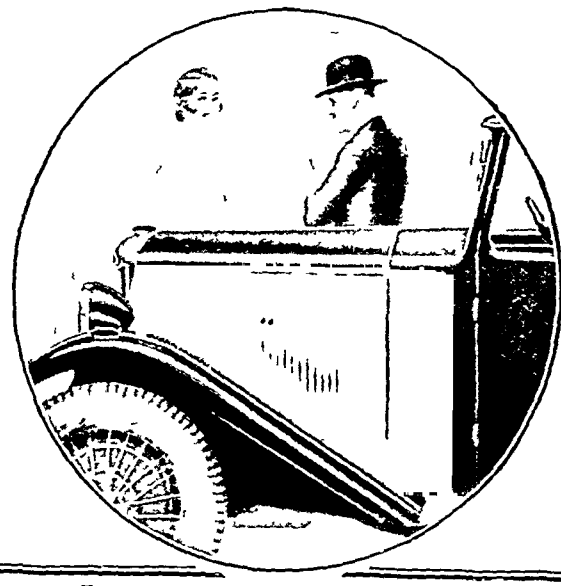
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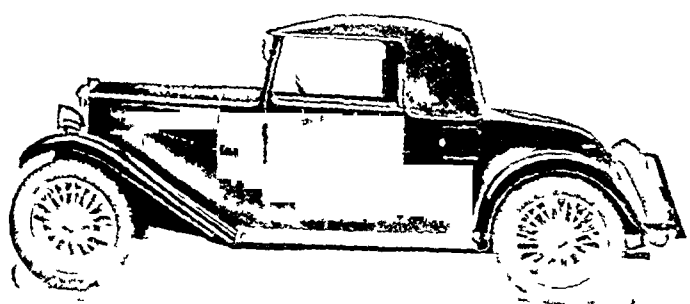
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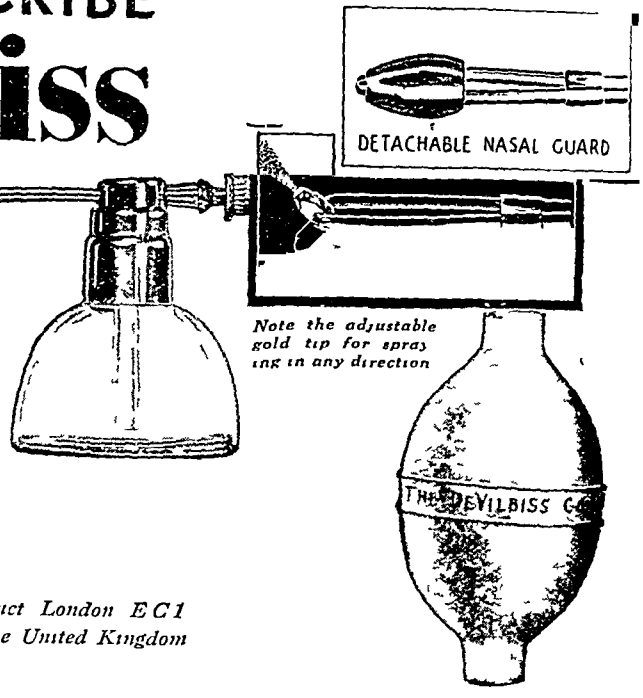
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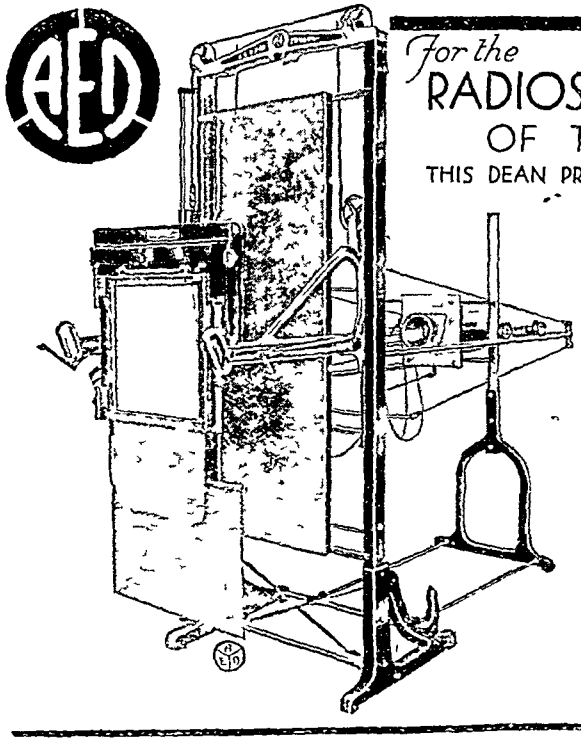


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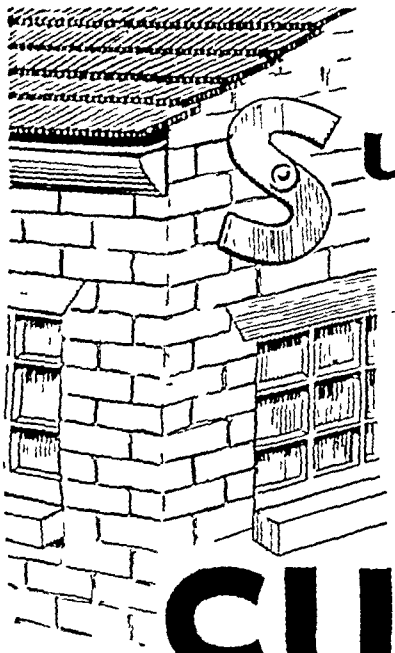
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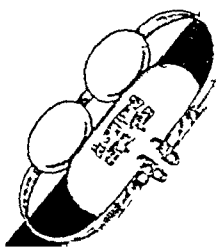


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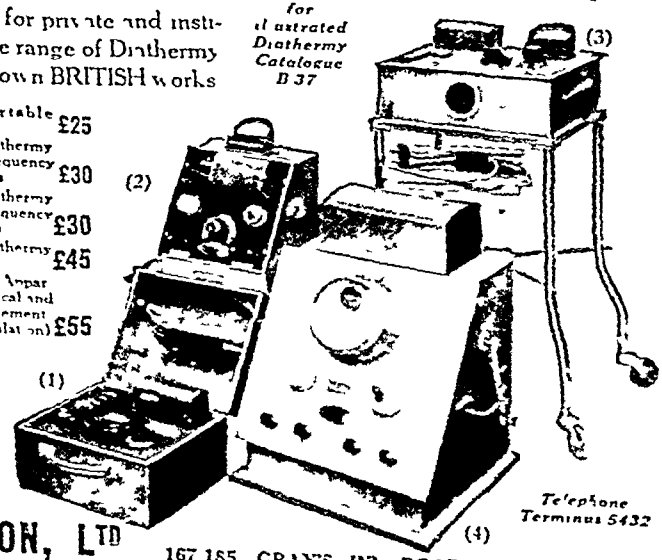
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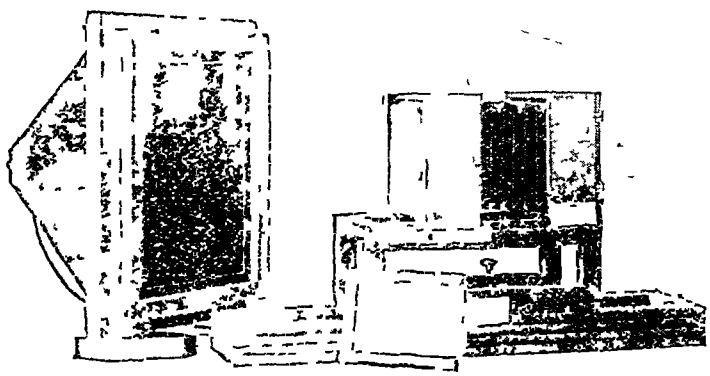
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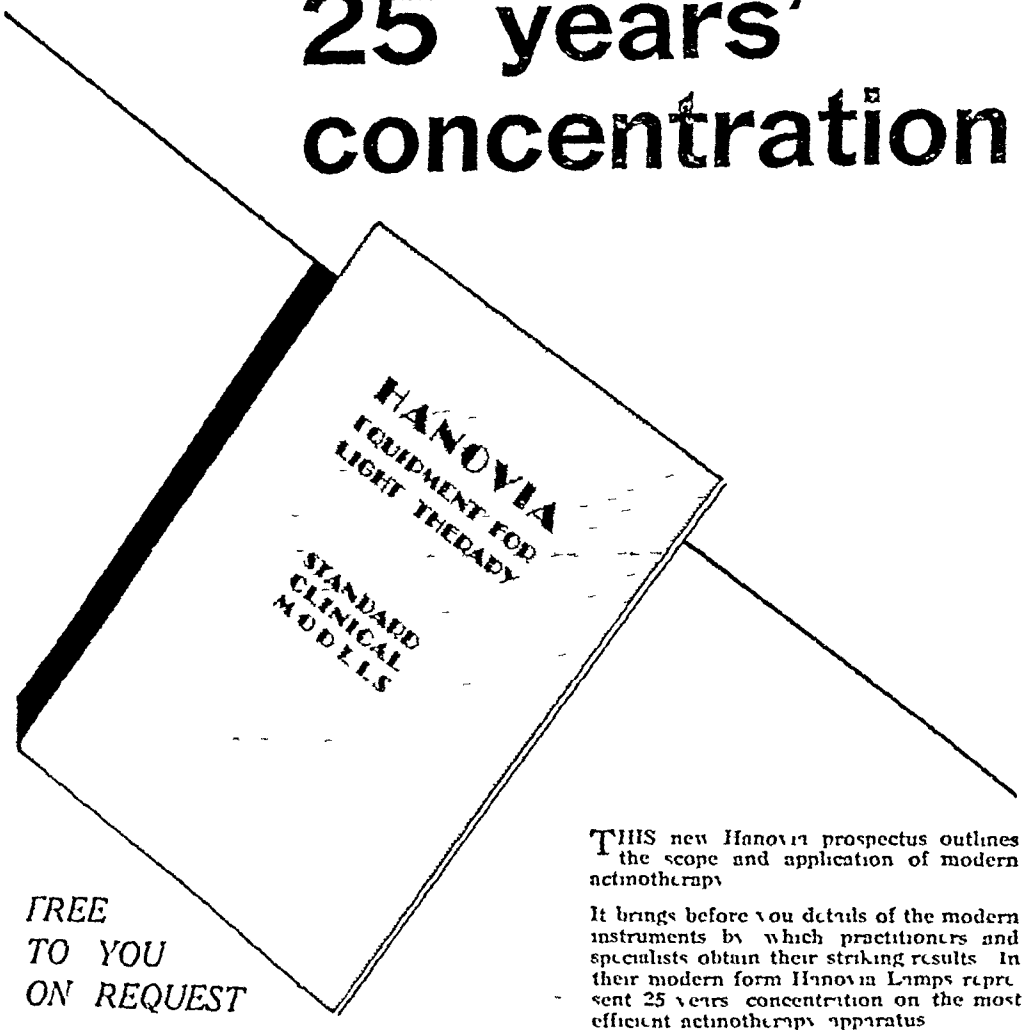
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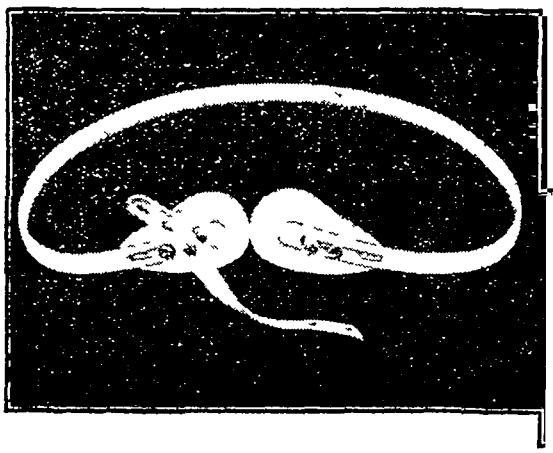
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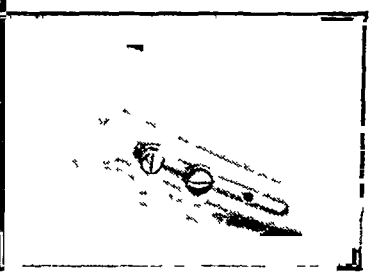
"SALTAIR SURGICAL SERVICE"

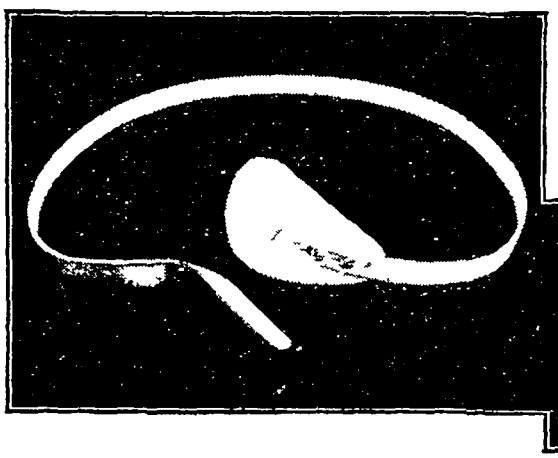
SALT'S CELLULOID TRUSSES



1 Double Truss for Inguinal Hernia

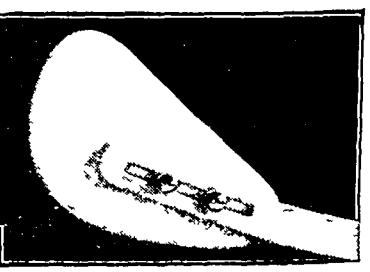
Not fitting for ease of adjustment of pad





2 For Advanced Cases of Inguinal Hernia

Not fitting for ease of adjustment of pad



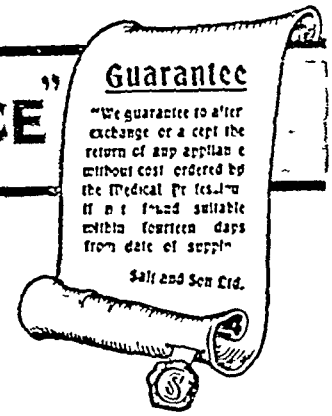
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Clean
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For the athletic man too, this difficulty arises, and for both types we would strongly advocate our

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CELLULOID TRUSSES

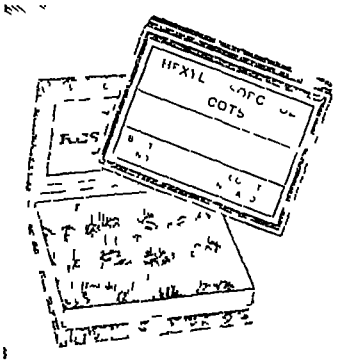
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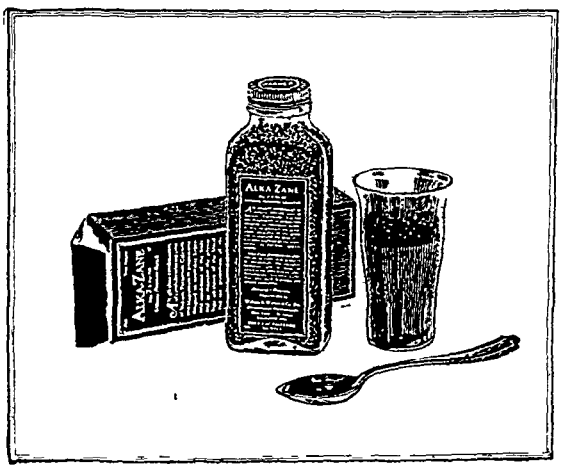
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H. W. I. Walther, M.D., New Orleans ("Modern Treatment of Gonorrhoea," *New Orleans Medical and Surgical Journal*, Sept. 1928.)

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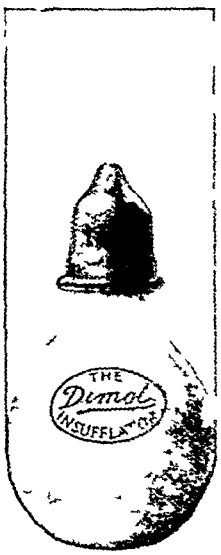
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It is easily digested, wholly nourishing, and does not convey any noxious or unpalatable substances to the breast milk. For these reasons "Ovaltine will be found a most dependable prescription for establishing galactosis

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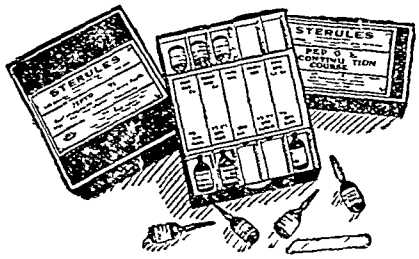
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Parathyroid	0gr 001
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Pancreas	0gr 100
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Extract of Hamamelis virginiana L.	0gr 030
Powder of nux vomica	0gr 005
Excipient qs for a compressed tablet of	0gr 25

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DOSE

Usually two tablets one hour before the two principal meals or according to physician's orders. Swallow without crunching

DURATION OF TREATMENT

Three weeks in each month. Discontinue during menses

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Extract of Hamamelis virginiana L.	0gr 030
Powder of nux vomica	0gr 005
Excipient qs for a compressed tablet of	0gr 25

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Clinical samples gladly sent on request

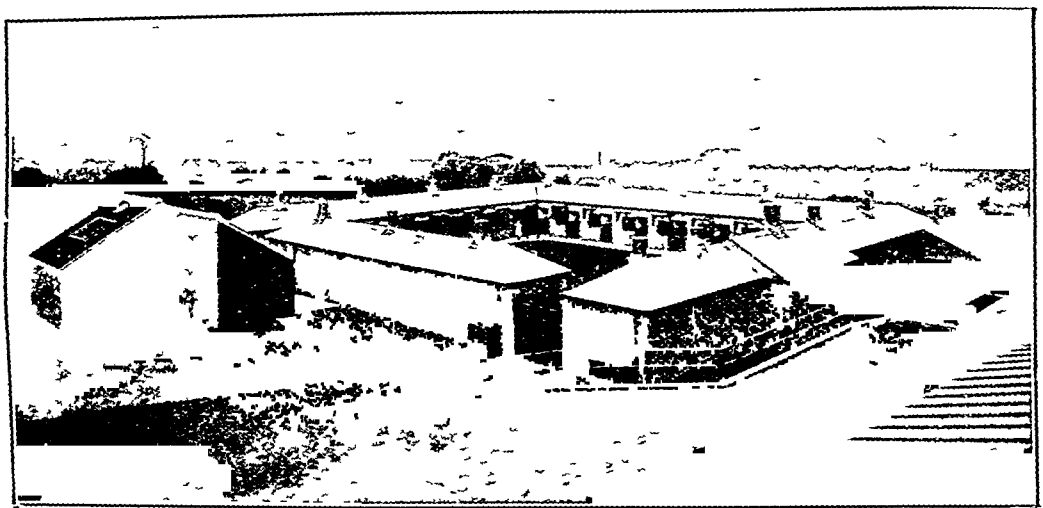
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IN TWO GRADES

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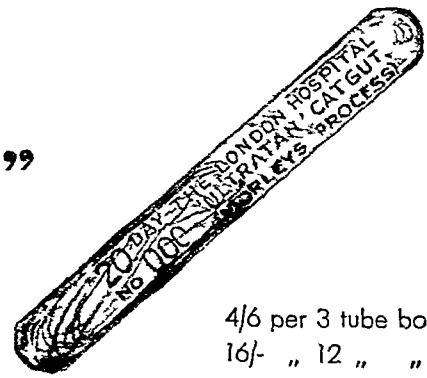
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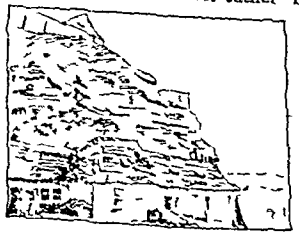
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Remarks
ON
THE INFLUENCE OF A CEREAL FREE DIET RICH IN VITAMIN D AND CALCIUM ON DENTAL CARIES IN CHILDREN

BY
MAY MELLANBY
AND
C LEE PATTISON M B B S
(Pharmacology Department University of Sheffield and King Edward VII Hospital Sheffield)

Throughout a series of investigations upon dental disease our aim has been to correlate animal experiments and investigations on man the former serving as a basis for the latter It is obvious that these two means, taken in conjunction, hold out the best hope for the discovery of the aetiology of dental disease and for the evolution of suitable methods for its elimination

It has been shown[1] that normal well developed teeth are more resistant to caries than poorly developed (hypoplastic) teeth Since the majority of human teeth in this country are defective in structure[2] it would seem that one method of reducing the incidence of dental caries should be the production of teeth of good structure by suitable diets both for mothers during pregnancy and lactation and for their offspring during the period of tooth calcification * This is essentially the prophylactic method of attacking dental caries

A problem of no less immediate importance is that of arresting the development of dental caries in teeth already erupted When teeth are attacked by caries or when they are injured by some other agent a protective barrier of secondary dentine is frequently formed in the pulp chamber opposite the site of injury The strength of the defence depends partly on the original structure of the tooth for the better the structure the less the tendency to caries[1] and partly as shown by animal experiments[3] on the dietetic conditions existing during the period of injury For instance if the diet contains abundant vitamin D the power of resistance of the living tooth is augmented the tooth responds to injury by producing a large amount of well formed secondary dentine and in the case of attack by caries the infective process may be either delayed or arrested

PREVIOUS INVESTIGATIONS

We have previously reported three successive investigations[4 6 7] upon the effect of diets rich in calcifying properties on the progress of caries In the later investigations the energy value and the protein carbohydrate fat calcium and phosphorus content of the diets were similar and only the fat soluble vitamin content varied to an appreciable extent These investigations showed that vitamin D had a dominant influence in delaying the spread and even in arresting the progress of active caries

[It has only been possible by degrees to differentiate between the various vitamins and owing to this fact and to the method adopted of naming newly discovered vitamins confusion has sometimes arisen At first only one fat soluble vitamin known as vitamin A was recognized When the antirachitic vitamin was discovered (1918) and its properties and distribution were seen to be similar to those of vitamin A as then known it still seemed necessary only to postulate one fat soluble vitamin Later however this original vitamin A was found to be a complex of at least two fat soluble vitamins for one of which the name vitamin A was retained while for the other the antirachitic factor the name vitamin D was adopted In the first of this series of publications (1924) the term vitamin A refers to the complex—that is vitamins A and D—and not to vitamin A (sometimes called the anti infective vitamin) as now recognized In the third of the series (1928) the same term refers only to one factor of the complex]

As a consequence of these results the Medical Research Council on the advice of the Dental Disease Committee decided that an investigation on a larger scale and extending over a longer period should be initiated The investigation was made in Birmingham and the interim findings have recently been published[8] They corroborate our observations and particularly emphasize the help afforded by irradiated ergosterol (vitamin D) in combating dental caries In our investigations the percentage increases of carious teeth in children having olive oil and irradiated ergosterol as additions to the basal diet were 10 and 1 respectively and the corresponding figures obtained in the Medical Research Council's investigation were 7 6 and 2

The chief problem with which we were concerned—namely the possibility of retarding or arresting dental caries by dietetic measures—was now solved We were however still faced with the problem why caries is not arrested in *all* children on a given diet In the first place the original structure of a tooth affects its resistance[1 2] and not only do the teeth in different individuals vary in structure but the types of teeth in any one individual may also vary for instance the structure of the incisors is usually better than that of the molars, and they are also more resistant to caries Again during the period of the investigation the blood supply to one deciduous tooth may differ from that to another owing to dissimilar stages of absorption It appeared however that there might well be dietetic factors apart from vitamin D influencing the carious processes We recognized that some local chemico parasitic condition in the mouth might explain the continued activity of caries at some points but we were not then concerned with that aspect of the problem our purpose was to ascertain the metabolic influences of food constituents acting on the teeth via the dental pulp after digestion

Two facts suggested that the cereal intake might tend to neutralize the effect of vitamin D in checking or inhibiting the spread of caries in children (1) Experiments had shown[7] that cereals, especially oatmeal tended to counteract vitamin D in producing perfect calcification of the teeth in dogs unless this vitamin were present in abundance (2) In our first investigation on children we had observed that the diet containing most cereal especially oatmeal was associated with the greatest spread of caries This observation seemed to receive support in some investigations of Boyd and Drain[10] who found that in the teeth of forty-five diabetic children who were being fed on the standard diets used for the treatment of this disease caries was arrested later in conjunction with Nelson[11] they fed thirteen non diabetic children on a similar diet and again found that any active caries present at the beginning of the investigation was arrested The diabetic diet given was devoid of cereals and rich in vitamin D Although these authors did not themselves ascribe their results to any particular ingredients in the diets given but attributed them to richness in minerals and vitamins and good balance we assumed on the basis of the previous animal experiments and clinical observations that the lack of cereals and abundance of vitamin D and calcium was probably responsible for the results observed We therefore decided to test our assumption in a fourth clinical investigation

* Experimental work on dogs and other animals has shown that for the normal development of the teeth the diet should include abundant vitamin D and calcium and not be overweighted with cereals

TABLE I—*Average Daily Consumption of Food (in Grams)*

	Present Investigation (IV)	Investigation III (1928)	Investigation II (1926)			Investigation I (1924)		
	Diet 8 Cereal free Rich in Vitamin D	*Diet 7* Rich in Vitamin D	*Diet 6* Rich in Vitamins A and D	*Diet 5* Some Extra Vitamins A and D	*Diet 4* No Extra Vitamins A and D Increased Oatmeal	*Diet 3* Rich in Vitamins A and D	*Diet 2* Some Extra Vitamins A and D	*Diet 1* No Extra Vitamins A and D Increased Oatmeal
Milk whole	1,199·7	893·0	1 071·6	744·2	535·8	1 190·7 to 893·0	893·0	496·5 to 297·7
Milk separated	—	—	—	—	164·3	—	—	—
Bread	—	283·5	251·1	283·5	226·8	56·7 to 14·2	ad lib	141·8
Butter and cream	70·9	28·4	28·4	28·4	28·4	28·4	—	—
Cooking fat	14·2	7·1	7·1	7·1	7·1	—	28·4	28·4
Sugar jam syrup	56·7	56·7	56·7	56·7	56·7	42·5	85·0	85·0
Oatmeal	—	—	—	—	51·0	—	Occasionally	56·7 to 113·4
Rice tapioca sago	—	14·2	14·2	14·2	14·2	14·2	14·2	14·2
Meat	141·8	113·4	127·6	127·6	127·6	42·5	70·9	42·5
Fish	28·4	—	—	—	—	—	—	—
Bacon	14·2	28·4	28·4	28·4	28·4	—	—	—
Potatoes	212·6	141·8	141·8	141·8	141·8	56·7	113·4	113·4
Vegetables other than potatoes	212·6	141·8	141·8	141·8	141·8	56·7	14·2	14·2
Cocoa	14·2	14·2	14·2	14·2	14·2	14·2	14·2	14·2
Eggs	56·7	28·4	45·0	14·0	6·0	56·7	Very little	Sometimes
Sodium bicarbonate	—	—	—	—	1·3	—	—	—
Cod liver oil	5·6	—	21·0	10·5	—	10·5 to 21·0	7·0 to 10·5	—
Olive oil	—	—	—	10·5	21·0	—	—	—
Radiostol	0·4	2·5	—	—	—	—	—	—
	2 022·1	1 753·5	1 953·0	1 565·5	1 623·0	1 580·3 to 1 229·6	?	?

Fruit additional to above in each case

TABLE II—*Analysis of Daily Diets*

	Present Investigation (IV)	Investigation III (1928)	Investigation II (1926)		
	Diet 8 Cereal free Rich in Vitamin D	*Diet 7* Rich in Vitamin D (Irradiated Ergosterol)	*Diet 6* Rich in Fat soluble Vitamins A and D (Cod liver Oil)	*Diet 5* Contained some Extra Fat-soluble Vitamins A and D (Cod liver Oil)	*Diet 4* Contained no Extra Fat soluble Vitamins A and D Increased Oatmeal
Energy value	2,424 calories	2 477 calories	2 680 calories	2 490 calories	2 450 calories
Protein	87 grams	89 grams	96 grams	85 grams	85 grams
Carbohydrate	354 „	287	284	281	283
Fat	159 „	116	133	117	111
*Calcium	1·7	1·3	1·5	1·1	1·0
Phosphorus	1·9 „	1·6	1·8	1·4	1·5
Ca : P ratio	0·89	0·81	0·84	0·69	0·76

The majority of the above data were obtained from Sherman's *Chemistry of Food and Nutrition*

*The average amount of calcium required by growing children between 6 and 13 years of age is stated by Sherman to be about 1 gram daily and by high school workers the minimum is said to be 0·67 gram daily

METHOD OF PRESENT INVESTIGATION

The purpose of this investigation was to test the effect of a cereal free diet on the incidence and extension of dental caries in children and to compare the results with those obtained in the third investigation the diet in each case was rich in vitamin D and calcium but whereas in the present investigation it was devoid of cereals in the third it contained a fair amount of these substances A few children receiving only the hospital diet were used as controls but the results are not given here they corroborate those obtained with the ordinary hospital diet in the earlier investigations[4 6] As in the previous investigations the children were under our direct supervision in an institution where diets could be closely controlled and varied at will consistent with their health They had not been dentally treated except in relation to the investigation

Contrary to expectations surprisingly little difficulty was experienced in providing substitutes for cereal especially for bread which forms the bulk of the day's food in the homes of the poorer classes and to which these children were accustomed The following are two sample diets given on consecutive days

1 *Breakfast*—Omelette cocoa with milk
Lunch—Milk
Dinner—Potatoes steamed minced meat carrots stewed fruit milk
Tea—Fresh fruit salad cocoa made with milk
Supper—Fish and potatoes fried in dripping milk

2 *Breakfast*—Scrambled egg milk fresh salad
Dinner—Irish stew potatoes cabbage stewed fruit milk
Tea—Minced meat warmed with bovril green salad milk
Supper—Thick potato soup made with milk

Some alternative dishes used
Breakfast—Egg—boiled fried poached
Omelette containing 2 oz minced meat
Fish fried or steamed or fish cake with potatoes dipped in egg and fried
Bacon fried or finely chopped with parsley and scrambled egg
Dinner—Meat boiled or steamed
Cold meat cut into small pieces with cold dried carrot onion and potato and served on a lettuce leaf
Fresh fruit salad with egg custard or cream
Tinned pineapple with jelly or mixed tinned fruit with jelly
Baked apple centre filled with golden syrup before cooking
Junket and milk jelly or honeycomb mould which contains eggs
Tea—Potato cakes or fish cakes
Eggs cooked in various ways
Supper—Lentil or celery soup made with milk minced meat etc

An approximate analysis of the diet in this (Diet 8) and in the earlier investigations is given in Tables I and II The energy value and the protein content of the diet are seen to be similar to those of the diet given in the previous investigation (Diet 7) the amount of fat however is greater and the carbohydrate content is less Examination of Table I shows that instead of cereals—for example, bread oatmeal rice and tapioca—an increased allowance of potatoes and other vegetables milk fat meat and eggs was given The total sugar jam and syrup intake was the same as before Vitamin D was present in abundance in either cod liver oil or irradiated ergosterol and in egg yolk butter milk etc The diet of these children was thus rich in those factors especially *vitamin D and calcium* which experimental evidence has shown to assist calcification and was devoid of those factors—namely cereals—which interfere with the process

According to our present knowledge therefore, the diet was optimal for the suppression and cure of active dental caries On the other hand it must be pointed out that the teeth of these children were fully erupted, for the most part badly formed and often carious before the investigation was begun and that the effects of the diet were tested at a time of life (that is 5½ years) when dental caries tends to develop rapidly This cereal-free diet rich in vitamin D was given to twenty two children for an average period of twenty six weeks The methods of appraising the results were identical with those used in the previous investigations details of which were given in the earlier publications [1 6 7] The mouth of each child was charted before the diet was introduced, the number

TABLE III

	Present Investigation (IV)	Investigation III (1928)	Investigation II (1926)			Investigation I (1924)		
	Diet 8 Cereal free Rich in Vitamin D	*Diet 7* Rich in Vitamin D (Irradiated Ergosterol)	*Diet 6* Rich in Fat soluble Vitamins *A and D (Cod liver Oil)*	*Diet 5* Contained some Extra Fat soluble Vitamins A and D (Cod liver Oil)	*Diet 4* Contained no Extra Fat soluble Vitamins A and D Increased Oatmeal	*Diet 3* Rich in Fat soluble Vitamins A and D (Cod liver Oil)	*Diet 2* Contained some Extra Fat soluble Vitamins A and D (Cod liver Oil)	*Diet 1* Contained no Extra Fat soluble Vitamins A and D Increased Oatmeal
Number of children in group	92	21	23	24	24	9	13	10
Number of weeks on diet	26	8	28	28	29	31	33	31
Average age (years) of children at beginning	5·4	5·4	8·7	8·8	9·0	7·5	7·1	7·5
Average number of carious teeth per child at beginning	9·1	9·1	9·3	8·8	5·5	6·5	7·0	6·1
Average number of new carious teeth per child at end	0·0,	0·2	0·5	0·6	2·4	0·65	1·54	2·8
Average number of teeth per child *showing* increase of old caries	0·2	0·8	1·3	2·4	3·4	0·75	1·4	2·3
Average No of teeth per child showing initiation or spread *of caries*	**0·37**	**1·0**	**1·8**	**3·0**	**5·8**	**1·4**	**2·94**	**5·1**
Average degree of increase of caries per child	0·02	1·1	2·0	4·0	5·7	—	—	—
The percentage increase of degree of caries	1·80	6·57	10·23	23·42	62·13	—	—	—
	4·7	**3·9**	**2·0**	**1·2**	Less than **0·1**	**1·6**	**1·0**	**0·7**
	0·0	0·0	0·3	0·1	0·5	0·0	0·1	0·4

TABLE IV (*average age of children under 6 years*)

	Present Investigation (IV)	Investigation III (1928)	Investigations II and I (1925 and 1924)		
	Diet 8 Cereal free Rich in Vitamin D	*Diet 7* Rich in Vitamin D (Irradiated Ergosterol)	*Diets 6 and 5* Rich in Fat soluble Vitamins A and D (Cod liver Oil)	*Diet 5 and 3* Contained some Extra Fat soluble Vitamins A and D (Cod liver Oil)	*Diets 4 and 1* Contained no Extra Fat soluble Vitamins A and D Increased Oatmeal
Number of children in group	22	21	18	20	19
Average number of teeth per child showing initiation of caries	0	1·0	1·4	3·3	5·0
Average degree of extent of increase of caries per child	0·02	1·1	1·7	4·5	6·0
Average number of teeth per child in which caries is well hardening	4	3·0	3·7	1·2	0·2

of carious teeth the amount and extent of each carious area and the degree of hardness or softness noted

The main results are summarized in Table III, and are compared with those obtained in the previous investigations They indicate that a diet rich in vitamin D and calcium and devoid of cereals has greater inhibitory and curative effects on dental caries than any previously tested Thus the new carious points observed to develop during the feeding period were only 0 05 per child as compared with the previous best result of 0 2 per child The figure 0 05 is so small that it probably falls within the margin of error of this type of observation and new caries may be considered therefore to have been suppressed Only 0 32 teeth per child as compared with the previous best figure of 0 8 showed an extension of the areas which were carious at the beginning of the investigation this figure also probably comes within the margin of error The average age of the children in the third and fourth investigations was under 6 while the average in the first and second was approximately 8 years In order to make the figures more comparable therefore, the results for the children of about 6 years in the first and second investigations have been grouped together in Table IV with the results of the later investigations The hardening of carious areas which indicates the diminution in activity of the carious process and ultimate arrest was one of the characteristic changes brought about by the diets used It will be observed that the removal of cereals from the diet also increased the amount of arrest of caries as compared with that produced by the diets containing this food The average number of teeth per child in which some hardening of active carious areas was found was 4 7 as compared with 3 9 teeth per child the best result previously obtained It is doubtful whether better results are attainable in hypoplastic teeth on the basis of our present knowledge

The practicability of giving a cereal free diet to children has of course to be considered In the present investigation no difficulty was encountered in the elimination of cereals from the food although the children did not like giving up bread These children were in an institution, and were confined to bed but it would obviously be more difficult to give the diet to active children especially if living at home The tests do not indicate that in order to prevent dental caries children must live on a cereal free diet, but in association with the results of the other investigations on animals and children they do indicate that the amount of cereal eaten should be reduced particularly during infancy and in the earlier years of life and should be replaced by an increased consumption of milk eggs butter potatoes, and other vegetables They also indicate that a sufficiency of vitamin D and calcium should be given from birth and before birth by supplying a suitable diet to the pregnant mother The teeth of the children would be well formed and more resistant to dental caries instead of being hypoplastic and badly calcified as were those in this investigation

SUMMARY

1 A group of children averaging 5½ years of age were given a cereal free diet rich in vitamin D and calcium for a period of six months The teeth of the children were defective in structure (hypoplastic) and much active dental caries was present at the beginning of the investigation

2 Initiation and spread of caries were almost eliminated by these diets and the results were better than those of the previous investigation in which the vitamin D alone was increased in a diet containing bread and other cereals

3 Active caries was arrested on this cereal free diet to a greater extent than in the previous investigations when cereals were extensively used

We wish to express our gratitude to the Medical Research Council for making this investigation possible

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MALIGNANT DISEASE OF THE HYPOPHARYNX AND ITS TREATMENT BY EXCISION *

BY

WILFRED TROTTER MS FRCS, FRS

SURGEON UNIVERSITY COLLEGE HOSPITAL

Cancer of the pharynx presents to the surgeon a problem as urgent as it is difficult The disease is far from uncommon and its natural course is painful repulsive and always fatal so that it may well be regarded as one of the very worst affections of middle age For the surgeon the pharynx combines three of the most formidable obstacles to the exercise of his art it is inaccessible in a high degree it is the seat of delicate and concentrated function and it contains septic material to which the surrounding tissues are in no way immune

In spite of these difficulties it can fairly be said that in the last twenty years a certain degree of progress in the attack on the problem has been made so that a not wholly inconsiderable number of persons have enjoyed a substantial number of years of good health or are still living all of whom without treatment would have died within a few months Two lines of treatment have contributed to this modicum of success first surgical excision of the disease and secondly radiotherapy, usually combined with some form of surgical intervention In this paper I shall deal solely with the method of plain excision with the knife This will be because a single theme lends itself to easy exposition and because my experience of this method is by far the longer and the more extensive, and not at all because I have any doubt that radiotherapy is a most valuable addition to our resources in treating cancer of the pharynx

DEFINITIONS

The term 'hypopharynx' is not always used in the same sense I have been accustomed to denote by it the tubular or post cricoid part of the pharynx a segment which from the physiological and the clinical points of view deserves a distinct name For the purposes of the discussion however it may be more convenient to accept the extension of the word to all the pharynx that lies below the epiglottis—that is to the so called laryngeal part of the pharynx The region thus denoted has from the surgical point of view moreover a unitary character in that access to the whole of it is to be got by a single operative method—the lateral transthyroid pharyngotomy

*Introductory paper to a discussion in the Section of Laryngology Royal Society of Medicine

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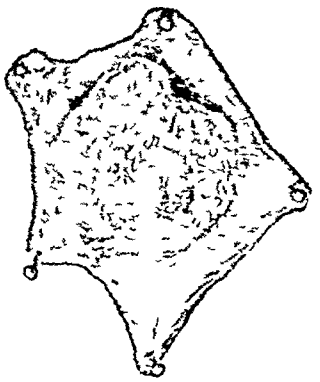
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of carious teeth the amount and extent of each carious area and the degree of hardness or softness noted

The main results are summarized in Table III and are compared with those obtained in the previous investigations They indicate that a diet rich in vitamin D and calcium and devoid of cereals has greater inhibitory and curative effects on dental caries than any previously tested Thus the new carious points observed to develop during the feeding period were only 0 05 per child as compared with the previous best result of 0 2 per child The figure 0 05 is so small that it probably falls within the margin of error of this type of observation and new caries may be considered therefore to have been suppressed Only 0 12 teeth per child as compared with the previous best figure of 0 8 showed an extension of the areas which were carious at the beginning of the investigation this figure also probably comes within the margin of error The average age of the children in the third and fourth investigations was under 6 while the average in the first and second was approximately 8 years In order to make the figures more comparable therefore the results for the children of about 6 years in the first and second investigations have been grouped together in Table IV with the results of the later investigations The hardening of carious areas which indicates the diminution in activity of the carious process and ultimate arrest was one of the characteristic changes brought about by the diets used It will be observed that the removal of cereals from the diet also increased the amount of arrest of caries as compared with that produced by the diets containing this food The average number of teeth per child in which some hardening of active carious areas was found was 4 7 as compared with 3 9 teeth per child, the best result previously obtained It is doubtful whether better results are attainable in hypoplastic teeth on the basis of our present knowledge

The practicability of giving a cereal free diet to children has of course to be considered In the present investigation no difficulty was encountered in the elimination of cereals from the food although the children did not like giving up bread These children were in an institution and were confined to bed but it would obviously be more difficult to give the diet to active children especially if living at home The tests do not indicate that in order to prevent dental caries children must live on a cereal free diet but in association with the results of the other investigations on animals and children they do indicate that the amount of cereal eaten should be reduced particularly during infancy and in the earlier years of life and should be replaced by an increased consumption of milk eggs butter potatoes and other vegetables They also indicate that a sufficiency of vitamin D and calcium should be given from birth and before birth by supplying a suitable diet to the pregnant mother The teeth of the children would be well formed and more resistant to dental caries instead of being hypoplastic and badly calcified as were those in this investigation

SUMMARY

1 A group of children averaging 5½ years of age were given a cereal free diet rich in vitamin D and calcium for a period of six months The teeth of the children were defective in structure (hypoplastic) and much active dental caries was present at the beginning of the investigation

2 Initiation and spread of caries were almost eliminated by these diets and the results were better than those of the previous investigation in which the vitamin D alone was increased in a diet containing bread and other cereals

3 Active caries was arrested on this cereal free diet to a greater extent than in the previous investigations when cereals were extensively used

We wish to express our gratitude to the Medical Research Council for making this investigation possible

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MALIGNANT DISEASE OF THE HYPOPHARYNX AND ITS TREATMENT BY EXCISION *

BY

WILFRED TROTTER MS FRCS, FRS

SURGEON UNIVERSITY COLLEGE HOSPITAL

Cancer of the pharynx presents to the surgeon a problem as urgent as it is difficult The disease is far from uncommon and its natural course is painful repulsive and always fatal so that it may well be regarded as one of the very worst affections of middle age For the surgeon the pharynx combines three of the most formidable obstacles to the exercise of his art it is inaccessible in a high degree it is the seat of delicate and concentrated function and it contains septic material to which the surrounding tissues are in no way immune

In spite of these difficulties it can fairly be said that in the last twenty years a certain degree of progress in the attack on the problem has been made so that a not wholly inconsiderable number of persons have enjoyed a substantial number of years of good health or are still living all of whom without treatment would have died within a few months Two lines of treatment have contributed to this modicum of success first surgical excision of the disease and secondly radiotherapy usually combined with some form of surgical intervention In this paper I shall deal solely with the method of plain excision with the knife This will be because a single theme lends itself to easy exposition and because my experience of this method is by far the longer and the more extensive and not at all because I have any doubt that radiotherapy is a most valuable addition to our resources in treating cancer of the pharynx

DEFINITIONS

The term 'hypopharynx' is not always used in the same sense I have been accustomed to denote by it the tubular or post cricoid part of the pharynx a segment which from the physiological and the clinical points of view deserves a distinct name For the purposes of this discussion however it may be more convenient to accept the extension of the word to all the pharynx that lies below the epiglottis—that is to the so called laryngeal part of the pharynx The region thus denoted has from the surgical point of view moreover a unitary character in that access to the whole of it is to be got by a single operative method—the lateral transthyroid pharyngotomy

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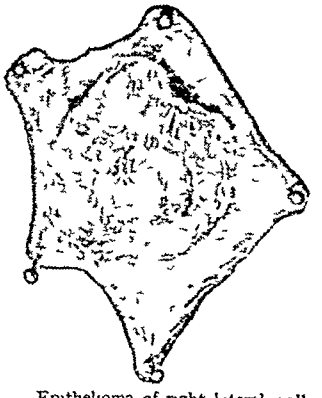
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wall growth of large size was present A very large mass of glands extended from the mastoid to the clavicle This was on the whole the most formidable looking case of pharyngeal malignant disease I have ever operated on The glands and primary growth were dealt with at one operation The primary growth had come through the pharynx wall and was fixed to the ala of the thyroid which was therefore removed in continuity with it The patient recovered with normal function apart from a partial fixation of the right cord Six years after the operation he developed an epithelioma of the gum on the upper jaw where a dental plate had caused ulceration This responded to radiotherapy at the hands of Dr Finzi There has never been any sign of recurrence in the pharynx or glands up to the present time—one month short of seven years since the operation

Case 6—A man of 56 with a really early lateral wall growth well away from the arytenoid region Treated by local excision with immediate closure of the pharynx Recovery with normal function The patient remains free from recurrence three and a half years after operation The case is mentioned after the comparatively insignificant period of three and a half years only to illustrate my confidence that with this type of growth treated in this way one may regard a cure as practically certain

Growths of the Posterior Wall

The three types we have already considered are practically confined to men With the posterior wall we come to a region where the liability of women to carcinoma of the pharynx begins to appear, though in this type men still predominate The growth is seated on the posterior wall with but little inclination to one side its upper limit may be at or a little above the level of the tip of the epiglottis its lower limit may extend into the post cricoid region Although it is sometimes visible by direct inspection through the mouth the disease is often overlooked in the early stages The technical interest of this type lies in the fact that any excision of the posterior pharyngeal wall calls for an immediate plastic reconstitution by a skin flap

Case 7—A middle aged female hospital patient There was a large epithelioma on the posterior wall opposite the upper opening of the larynx Palpable glands later proved not to be epitheliomatous unilateral gland dissection followed at once by lateral pharyngotomy A large area of the posterior pharyngeal wall was excised with the growth and immediately replaced by a pedicled skin flap A secondary operation a few weeks later divided the pedicle of the skin flap and closed the pharynx The patient recovered with normal speech and swallowing Eight years later a rapid and extensive local recurrence took place

Growths of the Post cricoid Region

This type has three very remarkable peculiarities it is a disease of women it occurs in them at an age a good deal younger than does cancer of the pharynx in men and it is often preceded by difficulty in swallowing of slight degree but of many years duration It is a disease of symptoms and its leading symptom is a rapidly increasing dysphagia which may be well marked when any examination short of direct endoscopy yields no evidence Post cricoid carcinoma contrasts strikingly with the disease in the next common seat below it—carcinoma of the cervical oesophagus This is a disease of men and a disease of physical signs rather than of symptoms for it causes no early dysphagia and usually shows itself first by causing paralysis of a vocal cord and enlargement of the thyroid gland

The post cricoid carcinoma seems to vary in malignancy a great deal and its appearance is sometimes misleading as is shown in the following illustrative case

Case 8—Hospital patient middle aged woman of excellent physical and mental character Typical post-cricoid carcinoma diagnosis easily made by ordinary laryngoscopy Lateral transthyroid pharyngotomy The growth was extensive and almost encircled the pharynx A very unfavourable opinion was formed but the operation was carried out a complete annular resection of the tube being done extending from the arytenoids well into the cervical oesophagus Immediate reconstruction by a pedicled skin flap with separation of flap and closure of pharynx some weeks later Patient recovered with good function Apart from some occasional trouble from a fibrous stricture where the reconstructed pharynx joins the oesophagus the patient remains well and free from recurrence nine years after the operation

Operability

The operation of local excision for cancer of the pharynx can be recommended with reasonable confidence only where the patient is edentulous the growth is still confined within the pharyngeal wall and gland involvement is limited the glands being hard well defined and not fixed It must be confessed that I have often defied these restrictions with impunity and even in the illustrative cases I have mentioned there will be found two examples of very extensive gland involvement and one example of extension through the pharynx to the thyroid cartilage This impunity however merely tends to show that within the requirements I have laid down the margin of safety is good A greater severity must however be insisted on with the post cricoid carcinoma There any gland involvement is very grave and the other restrictions are indispensable to reasonable safety and a fair prospect of success My experience suggests that apart from post cricoid cases the seriousness of lymphatic gland involvement has been a good deal exaggerated

Late Recurrences

Every advance in the surgical treatment of malignant disease has revealed a liability to recurrence at periods far later than had been suspected as possible from experience with more imperfect methods This possibility is strongly shown even in the few cases I have quoted to illustrate my theme I have mentioned a case of direct local recurrence after eight years a case of an epithelioma near but not at the site of the original growth after seven years a case of an epithelioma appearing in the mouth six years after excision of one from the pharynx and a case of an epithelioma in the pharynx six years after the excision of one in the mouth In such a small group these four cases form a remarkable little series in that the narrow limitation of the time of reappearance of the disease to the period between six and eight years after the primary operation applies both to true local recurrence and to apparently fresh outbreaks of the disease

The hypothesis that seems most satisfactorily to account for these facts is as follows The growth of a cancer arouses resistance in the body of the patient This immunity is not strong enough except in rare cases to check seriously the progress of the disease, but when the cancer is as we say successfully removed the relative immunity survives and can keep in check the minute doses of the tumour left behind or the tendency for fresh cancers (of the same type) to start In time however this immunity gradually declines and in the case of the pharyngeal epithelioma reaches so low a grade in about seven years that surviving relics of the original tumour can assert themselves or a fresh outbreak occur

However we may regard such a hypothesis it is plain that estimates of the final results of treatment based on periods of much less than seven years freedom from recurrence can have only a limited value This criticism must not of course be pressed too far since periods of freedom much shorter than seven years and in no sense deserving to be called cures may from the patient's point of view, be very well worth having

RESULTS

The final results of operative treatment must be considered from two points of view first freedom from recurrence and secondly the condition in which the patient survives Throughout the foregoing remarks I have tried to lay all possible emphasis on the value of precise local knowledge of the epitheliomas of the pharynx in dealing with them by operation Such knowledge makes possible the exact orientation of any necessary operation and so increases the prospect of cure and at the same time diminishes the need for mutilation The view is sometimes expressed that the more extensive an excision the more likely is it to be successful this is by no means necessarily true for if the operation is not exactly oriented in regard to the growth its mere extent is unlikely to save it from failure This criticism applies to many cases in which extirpation of the larynx is practised in dealing with pharyngeal growths There are in my opinion very few cases in which that formidable mutilation is of use in the treatment of such growths Most of the cases in which the tumour cannot be got away without laryngectomy are incurable by any operation and where the tumour can be got away by local excision the mere addition of laryngectomy in my opinion gives no further security It will be noticed that in the small number of illustrative cases I have mentioned the only residual disabilities left have been the occasional fixation of one vocal cord and in one case some fibrous constriction of the oesophagus I should not feel able to record as a true success the cure of a pharyngeal carcinoma won at the expense of laryngectomy One of the most beneficent effects of the introduction of radiotherapy has been its tendency to make us look with increasingly critical eyes at treatment by crudely mutilating operations

With regard to the small number of actual results I have quoted it must be understood that they are intended to be illustrative of the various clinical types of disease rather than to embody a full statement of experience Such a statement to be satisfactory would have to be much more detailed and extensive It would include a certain number more of successful results a good many partial successes with freedom from recurrence up to some such trivial period as three years and a considerable number in which the operation was fatal or a failure The cases I have actually quoted may such as they are be put together in a list with a statement of the length of freedom from recurrence that followed in each case on the simple excision of the growth In this way a more general view is obtained

Case		Free from Recurrence
1	Ary epiglottic fold (extensive glands)	7 years
2	Pyriform sinus	20
3	Lateral wall (large primary growth)	5
4	Lateral wall (moderately early)	7
5	Lateral wall (large primary extensive glands)	7
6	Lateral wall (early)	31
7	Posterior wall	8
8	Post cricoid (extensive)	9

The eight cases thus show an average freedom from recurrence of over eight years Even a group so small as this especially when it is remembered that none of the patients suffered any serious mutilation does I think suggest that in suitable circumstances the method of plain local excision with the knife has a definite usefulness

THE MANAGEMENT OF URINARY CALCULI*

BY

ARTHUR JACOBS F.R.F.P.S.GLAS

UROLOGIST GLASGOW ROYAL INFIRMARY

The symptomatology of stone in the kidney and ureter is legion Briefly enumerated the characteristic symptoms are pain which is often agonizing haematuria increased frequency of urination nausea and vomiting and when infection supervenes pyuria During an attack of colic it is impossible to say what position the stone occupies but the more pronounced the bladder symptoms of frequency and dysuria the more probable it is that the stone is lying in the lower segment of the ureter A stone slowly passing down the ureter is characterized by intermittent attacks of colic As the attacks recur the point of maximum pain gradually shifts from the back to the anterior abdominal wall and follows a course downwards along the line of the ureter Should the stone reach the lowest limit of the ureter and partly project through the ureteric orifice into the bladder pain is felt at the tip of the penis at the end of urination

When a stone becomes impacted in the ureter the acute attacks give place to a fixed pain usually in front at an area along the outer border of the rectus abdominis muscle If such a pain in front is accompanied by an ache in the posterior renal area commencing dilatation in the kidney is probably taking place as a result of back pressure If the impaction occurs in the terminal end of the ureter immediately outside the bladder wall symptoms referred to the genital organs may result owing to the anatomical proximity of the ureter to the genitalia and the intimate relationship between the nerve supply of these structures In both sexes the stone may cause pain during or after coitus In the male painful nocturnal emissions and pain in the testicle or along the course of the vas may also be felt The following case illustrates this symptom complex in addition to some other interesting features

A man aged 55 was referred to me in January 1930 complaining of a continuous ache on the right side of the perineum and pain along the urethra following coitus In 1927 he had had severe attacks of colic in the upper right abdomen In October of that year an *x* ray examination had shown two small calculi in the right kidney Three months later these were found to have travelled down the ureter to the level of the iliac crest Four months after that no shadows were observed on further radiographic examination The patient however continued to have pain at first in the right iliac region and then in the perineum I found on cystoscopic examination a marked delay in the secretion of indigo-carmine from the right kidney and a catheter which I passed into the right ureter was obstructed 4 cm up A radiogram taken with the ureteric catheter in position showed that the two calculi first seen in the right kidney some thirty months previously had become impacted in the lower end of the ureter They were successfully removed by cystoscopic manipulations and the patient has been free from all symptoms since

Sometimes a calculus may give rise to no pain or colic at all and is only discovered on investigating the cause of a chronic pyuria or haematuria This absence of pain is usually associated with a large renal calculus The smaller stones tend to move about and block the outlet of the kidney pelvis Pain from over distension follows A stone may however pass from the kidney to the vesical end of the ureter without causing pain

In February 1928 I cysto-scoped a doctor who had had intermittent symptomless haematuria for seven days It was thought that he was probably suffering from a bladder papilloma The bladder was quite normal however but a catheter passed into the left ureteric orifice which looked

* A lecture delivered before the Northern Medical Society Glasgow December 1931

inflamed was obstructed at 3 cm. A radiogram showed a stone lying against the tip of the catheter. Several attempts were made without success to remove the stone by non-operative measures. A few days after the third attempt the stone could not be seen in the ureter but was found on x-ray examination to have ascended into the kidney. Two days later a further x-ray showed that the stone had passed back into the lower ureter yet no pain or colic had resulted from these excursions.

Pain is sometimes felt on the opposite side to that in which the stone lies. This may be due to a compensatory hypertrophy occurring in the healthy kidney or to a reno-renal reflex. In September 1927 I removed a small stone from the right kidney of a man who had been suffering from severe attacks of left renal colic. Incidentally this patient returned in May 1930 suffering from further attacks of left-sided colic. On this occasion a stone was found in the left kidney and was also removed. There is also a possibility of pain occurring in the opposite side as a result of a simultaneous lesion in the non-calculus kidney. For example I recently saw in the medical wards a female patient who was considered to be suffering from a right-sided pyelonephritis. She had had intermittent attacks of right renal pain over a period of six years. A pyelogram and analysis of the secretion from the right kidney confirmed the diagnosis of pyelonephritis but the x-ray films also revealed a stone in the left kidney. These cases emphasize the necessity of x-raying the whole urinary tract in every case of suspected calculus.

DIAGNOSIS

A mere radiographic examination of the urinary tract however by no means completes the investigation. Urological surgery is very fortunate in the accuracy of the various means available for diagnosis and it holds its present prestige because of the efficiency of these methods.

If the diagnosis of calculus has been made by finding a shadow in the urinary tract on x-ray examination what further investigation is required before deciding on the mode of treatment? It is first of all necessary to be certain that the shadow is really that of a calculus and not some other opaque body such as a calcified lymphatic gland a gall-stone a phlebolith or a faecalith. Thomson Walker some years ago, drew attention to the fact that calcified glands which in an x-ray may look very like calculi are frequently found in the vicinity of the kidney or ureter in patients who are suffering from symptoms which point to some disorder of the urinary tract. An x-ray examination after passing an opaque catheter into the ureter, will differentiate a ureteric calculus from other doubtful shadows while a pyelogram will show whether or not the suspicious shadow is within the kidney or is extrarenal. Other information will also be obtained from the pyelogram which may greatly influence the mode of treatment. It will usually reveal the exact situation which the stone occupies and so allow of its removal with the minimum damage to the kidney. It will demonstrate the degree of damage which the stone has inflicted on the kidney and thus show whether removal of the kidney rather than the stone is indicated. Not infrequently the pyelogram will show that the kidney in which the stone lies is an anomalous one. In several of the cases on which I have operated for stone there has been a double renal pelvis and ureter and in two cases the stone was lying in one segment of a horseshoe kidney. A previous recognition of the existence of a renal anomaly particularly when it is of the horseshoe variety is of distinct aid to the surgeon when operating for calculus.

X-ray examination cystoscopy ureteral catheterization and pyelography should tell us therefore the number size and position of the calculi whether or not there is present a congenital renal anomaly and the amount of damage that has been caused to the host. The secretion from the kidney can also be collected through the ureteral catheter for analysis, and the presence and type of infection ascertained. It is further necessary to confirm the presence and health of the second kidney. This can be done most expeditiously by giving the patient an intravenous injection of indigo carmine when carrying out the ureteral catheterization. If the second kidney is healthy the dye will appear strongly concentrated at the corresponding ureteric orifice in about four minutes.

Excretion urography is the most recent addition to the diagnostic aids at the disposal of urology and it has a useful place in the investigation of calculus disease. Following the intravenous injection of a contrast substance containing iodine in stable organic combination the drug is almost entirely eliminated by the kidneys and satisfactory x-ray visualization of the whole urinary tract is frequently obtained. Uroselectan B and abrodil are the best preparations available for carrying out the examination. It is possible in some cases to identify suspected shadows by this method alone to determine their intrarenal situation demonstrate any coincident disease or anomaly in both kidneys and at the same time to ascertain the differential renal function.[3] The procedure however has definite limitations and if used exclusively for this type of case will certainly result in diagnostic errors. When there is marked destruction of kidney tissue visualization is absent or so poor that it is impossible to interpret the pyelogram. Owing to lack of detail which is frequent in an intravenous pyelogram suspected small shadows which are intrarenal may appear to lie outside the kidney, and conversely shadows without the kidney may appear to be intrarenal. The interpretation of shadows lying over an area of the lower ureters is also frequently impossible owing to the difficulty of visualizing accurately this part of the urinary tract. The method can be of great value however when the stone is impacted in the lower ureter obstructs the passage of a ureteral catheter and possibly prevents the injection of opaque medium above it. It is important in these cases to ascertain the condition of the kidney and of the ureter particularly as regards the degree of dilatation that is present. As the calculus will frequently hold up the contrast substance after intravenous injection excellent visualization often results and the required information is obtained.

TREATMENT OF RENAL CALCULI

Except in some special circumstances which I shall mention stones in the kidney should be removed. If that is not done destruction of the organ will generally result bringing in its train chronic ill-health and possibly death from renal failure. It should also be remembered that the irritation produced by a calculus of long standing may predispose to squamous carcinoma of the renal pelvis. I have had two patients whom I consider confirm this hypothesis. In both the kidney was removed because of extensive destruction resulting from multiple calculi, and histological examination revealed the presence of a squamous carcinoma which had not been suspected prior to operation. One patient was a man of 54 whose history suggested that calculus formation had started eighteen years previously. The other patient was a man of 69 who dated back the onset of his symptoms to boyhood.

If a minute renal calculus is not causing the patient much pain an expectant attitude may be adopted particularly when the pyelogram shows that no damage is being caused to the kidney. The patient should take abundant bland fluids and be kept on urinary antiseptics. Periodic lavage of the renal pelvis through a ureteric catheter followed by an instillation of silver nitrate may help to mobilize the stone and keep the kidney free from

infection A case which I treated in this way had two calculi not much bigger than match heads in the right kidney The pyelogram showed no dilatation and the patient after some initial attacks of fairly severe colic merely experienced an occasional ache in the back To have removed these small calculi by operation would have caused more damage to the kidney than was already resulting from their presence One of the stones was passed four months after the patient came under my observation nearly a year elapsed before the second one came away It is not often however that stones as small as these are seen in the kidney and in most cases operation is necessary for their removal The procedure to be adopted will vary according to the position which the stone occupies the condition of the kidney in which it lies and the health of the second kidney If it lies in the pelvis of the kidney or in the proximal part of a calyx the stone should be removed through an incision in the wall of the pelvis always providing that the kidney can be efficiently mobilized and displaced through the lumbar wound to an extent which allows a direct view of the line of incision The advantage of a pyelolithotomy as this procedure is termed is that no renal parenchymatous tissue is destroyed If however the stone has impacted in the distal end of the calyx or if as occasionally occurs the stone is situated in the renal substance it should be removed by an incision through the cortex made directly over the stone at right-angles to the convex border of the kidney This is termed a nephrolithotomy Should a short renal pedicle render mobilization of the kidney impossible a nephrolithotomy may be necessary even when the stone is in the renal pelvis It may also happen particularly when dealing with multiple calculi that one is compelled both to open the renal pelvis and to incise the cortex When a large calculus has destroyed the kidney to such an extent that only a thin shell of fibrosed renal tissue is left or if a widespread infection or dilatation has resulted there is no object in leaving the kidney Providing the condition of the second kidney is satisfactory it is better to perform a nephrectomy When both kidneys are the seat of large calculi and there is much destruction of renal tissue the tendency should be towards conservatism for in these cases there is a strong possibility of recurrence If however the outlet of the kidney is blocked on one or both sides the obstructing stone should be removed the side with the better function being operated on first In cases of bilateral calculus where a stone is present in the kidney on one side and in the ureter on the other it is essential to remove the ureteral calculus first If this is not done the work of both kidneys is temporarily thrown on the one with a blocked ureter and an anuria may follow

TREATMENT OF URETERIC CALCULI

The most common sites of impaction of a stone in the ureter are at the upper end at the brim of the pelvis or just outside the bladder Stones impacted in the upper end should be removed by operation but conservative methods should always be tried for those impacted in the lower ureter The procedure which I adopt is as follows The condition of the kidney and ureter above the site of impaction is first ascertained for if gross hydroureter and hydronephrosis have resulted a nephrectomy or a nephro ureterectomy is indicated particularly if infection is present in the dilated kidney The patient is always warned beforehand that the conservative treatment may not be successful A catheter is passed up the ureter if the stone obstructs its progress novocain 4 per cent is injected The antispasmodic effect of this injection sometimes allows of the immediate passing of the catheter beyond the stone Having got above the level of the stone 3 c cm or 4 c cm of liquid paraffin or olive oil is injected The cystoscope is withdrawn and the catheter left in place for an hour longer The process is repeated four or five times if necessary at about weekly intervals the ureter being usually dilated at each sitting with ureteral bougies prior to inserting the catheter If after two or three attempts it is found impossible to get a catheter or bougie above the level of the stone operation is usually advised If after four or five successful catheterizations the stone remains undisturbed operation is also advised

When a part of the stone is projecting out of the ureteric orifice it is usually possible to displace it into the bladder by means of a ureteric bougie or to pull it out with rongeur forceps passed through an operating cystoscope Sometimes the stone is impacted just within the ureteric orifice and the contracted state of the orifice prevents its passage into the bladder In these cases the orifice can be enlarged by cutting with scissors through the operating cystoscope or by diathermy which is the method I prefer

When operation is necessary to remove a stone from the ureter exposure of the upper end is obtained by a lumbar incision exactly the same as that used for exposure of the kidney When the stone is in the abdominal or pelvic segments of the ureter the approach is made through a vertical paramedian abdominal incision The peritoneum is not opened but is stripped off the abdominal wall and displaced inwards until the ureter is reached In the pelvis the ureter is best identified as it crosses the bifurcation of the iliac vessels whence if necessary it can be traced down to the bladder The stone is removed through a small vertical incision which is usually made directly over it The opening in the ureter is closed by two or three fine catgut sutures which avoid the mucous coat A drain is placed down to the wound in the ureter and is left in position for at least four days Some urinary leakage often occurs for the first few days, and occasionally this may continue for two weeks or even longer I have never had a permanent fistula result from carrying out a ureterolithotomy

SUMMARY OF CASES

In order that an idea may be formed as to what proportion of cases are treated by the different methods just outlined I have gone over the records of all calculus cases treated by me at the Royal Infirmary Glasgow from the inception of the urological department there in May 1928 until the end of October 1931 Cases that were sent to me by other surgeons for diagnosis only are not included in my figures In this period there were ninety-seven cases of renal and ureteric calculi Fifty five of these were renal Of these four patients passed their stones without any surgical intervention In three cases operation was not advised because of old age in one case the presence of bilateral branching calculi in another and the existence of a renal tuberculosis in the opposite kidney in the third One patient refused operation Out of forty seven cases operated on seventeen had a nephrectomy done In twenty two cases a pyelolithotomy was performed in three a nephrolithotomy and in four a pyelonephrolithotomy In one case in which there was a perirenal abscess drainage of the abscess alone was carried out There were two post operative deaths both of these following nephrectomies one resulted from delayed chloroform poisoning and the other from general asthenia This latter patient was a debilitated old man who died two weeks after the operation

Of the forty two cases of ureteric calculus the stone was partly extruded through the ureteric orifice and could be observed through the cystoscope projecting into the bladder in six One of these stones was passed

spontaneously after the cystoscopic examination Four were prised out into the bladder by a ureteral catheter or bougie and then passed by the patient In the sixth case the stones (there were two) lay within a cystic dilatation of the lower end of the ureter which was seen as a semi-translucent prominence about the size of a walnut on the bladder wall In this case the ureter was reached through a suprapubic opening into the bladder, and the stones extracted by slitting up the ureteric orifice In twenty five cases the stone was held up just outside the bladder wall—that is about 3 cm or 4 cm above the ureteric orifice Three of these were passed without any intervention In eleven ureteral dilatations were successful in removing the stone seven of these required one treatment only three had two treatments and one had three treatments In ten cases dilatation was not successful and ureterolithotomy was performed In one case a nephrectomy was done because of a coexisting pyonephrosis In five cases the stone was impacted higher up occupying positions between the brim of the pelvis and the fourth lumbar vertebra Two of these were removed by dilatation, one requiring two treatments and the other three Two others had a ureterolithotomy, and in one the kidney and the ureter to below the level of the calculus, were removed because of a hydronephrosis In six cases the stone was impacted in the upper or abdominal segment These were all removed by operation There was no post operative mortality in the ureteric cases It will thus be seen that in thirty one of the forty-two cases the ureteric calculus was held up at the lower segment and only eleven of these required open operation

BLADDER STONES

A vesical calculus may form in the bladder as a result of infective changes there or it may have its origin in the kidney whence it passes along the ureter into the bladder If it is not expelled by the urethra it will increase in size by the deposit on its surface of uric acid urates oxalates or phosphates [1]

Urinary frequency is the most common symptom Unlike the frequency due to enlarged prostate it is most noticeable during the day when the patient is moving about Pain is another common symptom It is usually referred to the back of the glans and is particularly felt after passing urine because then the mucous membrane of the bladder is in contact with the stone Haematuria when present usually occurs towards the end of urination It is increased by exercise but is rarely so profuse as is that associated with neoplasm of the bladder Sudden stoppage of the urinary flow in the middle of the act is also sometimes complained of

In the majority of cases the presence of a bladder stone can be confirmed by a plain x ray examination As however uric acid stones may not be opaque enough to give a shadow the veracity of a radiogram in a suspected case of bladder calculus should only be accepted when a shadow is present The use of a bladder sound is also a fairly accurate way of confirming the diagnosis If however the stone is lying in a diverticulum or in a post prostatic pouch if a tumour of the bladder is simultaneously present or if the stone is covered with thick muco pus this method may fail A cystoscopic examination will give the most accurate information regarding the size shape, and number of stones present and will also reveal any coexisting bladder lesion An ulcerative growth covered by phosphatic deposit may cause some confusion in the diagnosis but this can usually be cleared up by touching the part either with the beak of the cystoscope or with a ureteric catheter An encrusted growth unlike a stone will yield to the touch of the instrument

TREATMENT

Litholapaxy—that is, crushing the stone or stones within the bladder and completely evacuating the fragments—is the operation of choice in all uncomplicated cases I have been surprised to find that many regard this procedure as 'old fashioned' I think the reason for this attitude is that most general surgeons prefer the cutting operation and students pass through their course of surgical study without ever having seen a stone in the bladder crushed It is stated as an argument against litholapaxy that recurrence is more likely to take place because some fragments may be left behind This fear is without foundation At the completion of a crushing operation a cystoscopic examination will show whether any fragments have been left behind and, if so, they can be dealt with immediately If the condition which brought about the formation of the original stone persists—for example a urethral stricture—recurrences may certainly take place, but this will also happen after the suprapubic operation The mortality from litholapaxy is practically *nil* and convalescence is very short The patient should be quite fit again in two or three days The operation is contraindicated in the following circumstances

1 When there is present some other condition requiring operation—for example enlarged prostate or bladder tumour

2 When the stone is encysted in a diverticulum

3 When the stone is very large so that it almost fills the bladder the walls of which are contracted down to the calculus

4 When sepsis of the bladder severe enough to demand suprapubic drainage is present

5 When there exists a tight stricture of the urethra which cannot be dilated sufficiently to admit a lithotrite

In the presence of these complications a suprapubic lithotomy is usually indicated I had to resort to this in nine cases out of nineteen in spite of my preference for litholapaxy for the following reasons

	Cases
Urethral stricture	3
Enlarged prostate requiring prostatectomy	1
Stone in diverticulum	1
Carcinoma of bladder requiring partial cystectomy	1
Large stone in female patient filling the bladder so that it blocked the passage of any instrument	1
Stone impacted at bladder neck following previous prostatectomy	2

The last two patients both died as a result of the operation In one the prostatectomy had been carried out by myself three years previously The patient died suddenly a fortnight after removal of the stone from pulmonary embolism the cause of death being confirmed at necropsy In the other the prostatectomy had been carried out elsewhere and the patient subsequently developed multiple calculi some of which were incarcerated in the posterior urethra The cause of death which occurred twenty four hours after operation was shock and haemorrhage These two fatalities occurring in this series of nineteen cases emphasize that the operative risk of suprapubic lithotomy is a very real one although the operation itself is quite simple I feel therefore that if the stone can be removed by crushing it is not fair to subject the patient to the risk of the open operation

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CONDITIONED REFLEXES AND HABIT FORMATION

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Habits are but chains of conditioned reflexes Pavlov says It is obvious that the different kinds of habits based on training education and discipline are nothing more than a long chain of conditioned reflexes Even as far back as 1890 William James recognized the reflex character of habit that of course a simple habit like every other nervous event—the habit of snuffling for example or of putting one s hands into one s pockets or of biting one s nails—is mechanically nothing but a reflex discharge and its anatomical substratum must be a path in the nervous system In habit we have a situation a response and a reward which may be either distant or immediate In the conditioned reflex terminology there is a signal or conditioned stimulus (situation) and the conditioned reflex and usually immediately (in our experimental room) there follows the unconditioned stimulus plus unconditioned reflex

Definition of Conditioned Reflex

The conditioned reflex is formed during the life of the animal is subject to fluctuation and is a peculiarity of the individual rather than of the species It is much less stable than the unconditioned reflex Some of the very old and well formed conditioned reflexes are difficult to distinguish from those unconditioned For example is the winking of the eye when an object is brought suddenly in front of it a conditioned or an unconditioned reflex? It is present in practically every one of us and is relatively stable and unchanging Is the secretion of saliva in a dog to the odour and sight of fresh meat that is presented to it conditioned or unconditioned? Volborth has shown that in newborn calves there is no winking until the object has impinged upon the eye but once this has happened there is ever after the winking reflex Puppies that have never eaten fresh meat do not salivate when it is presented to them for the first time but once they have had it in their mouths and the odour and sight are associated with the unconditioned flow produced by the presence of the meat in the mouth chewing etc the odour and sight become conditioned stimuli or signals for the unconditioned stimulus (meat in the mouth) and they call out an unconditioned reflex On the other hand there are certain pungent odours such as that of ammonia which from the beginning produce unconditioned buccal and nasal secretions

Essentials of Conditioned Reflexes

Let us see in what circumstances the conditioned reflexes or simple habit patterns are formed First there must be some emotional disturbance (I employ emotion here in the rather broad sense of a fundamental subcortical excitation as used by the Pavlov school) an excitation in the centre to which we desire to elaborate the conditioned reflex The more intense the emotion the stronger will be the resulting conditioned reflex and the quicker its elaboration This emotion however must be in that centre with which we are working and not in another For example if we are using the food reflex the dog must be hungry if the defence centre the unconditioned stimulus of pain—or as Pavlov says destructive stimulus—must be strong enough to produce the necessary excitation in that centre an electric current that is too weak will not suffice

Then our conditioned reflex must be formed on the basis of some unconditioned reflex with which the animal is supplied we must take into account the kind of unconditioned reflexes with which our experimental organism is stocked These naturally are different for different species for man and dog In the latter we generally employ the food reflex because it is the salivary component which is easily measured We sometimes use the defence reflex but the muscular movements are not nearly so adaptable for our purpose as they are difficult to measure quantitatively Other reflexes of which we may avail ourselves are the investigating or orienting reflex —the turning of the animal to any new stimulus—and this is present in a wide range of organisms The task of studying and classifying the unconditioned reflexes is yet to be performed

Next we must have an indifferent signal as our conditioned stimulus—one that does not of itself evoke any marked emotional state This is in general true although it is possible to convert a strong current into a stimulus for food so that even when the skin is burned the dog shows the food reaction but not the pain reaction the food centre being of more physiologic importance to the animal than the destructive pain stimulus No agent is really indifferent because even though it may not naturally call forth any reaction and though it may be new for the dog and have no preformed connexions it always provokes the orienting or investigating reflex Then the conditioned stimulus must precede the unconditioned This was thought to be essential until recently when Pavlov showed that the conditioned stimulus following the unconditioned may eventually acquire a slight conditioned value However this may cause a hypnotic state in the animal

Formation of Conditioned Reflex

What is the mechanism of the formation of the conditioned reflex? Not simply the repetition alone Pavlov explains it by saying that the excited food centre draws all simultaneous stimuli to itself and so a path is made in the cortex between all changes in the *milieu* and the excited centre Then the organism must be in the proper state for example we cannot form a conditioned food reflex if the animal has just satiated itself

Now we come to the formation of the conditioned reflexes The conditioned stimulus—that is any change in the internal or external *milieu* of the dog—must be repeated one or more times with the unconditioned stimulus The number of repetitions varies with the species the intelligence age etc In fish it may be necessary to repeat the laboratory stimulus three hundred times to form the conditioned reflex for the dog ten to fifty times and in a child four to ten times Old animals elaborate conditioned reflexes very slowly or not at all An idiot may not form the conditioned reflex as quickly as a fish These cortical reflexes about which we are speaking are continually coming into existence fluctuating in intensity diminishing increasing and disappearing that is they are conditional This brings us to the question of inhibition

Indirect Inhibition

The conditioned reflex may be subject to two kinds of inhibition One sort is that described by Sherrington and is analogous to spinal inhibition It occurs when two centres are in activity at the same time a conflict arises for the dominance of the field As the activity is in a different centre from the one with which we are working Pavlov calls it *external or indirect inhibition* Examples are occurring every minute of our lives We have given the conditioned food stimulus and the dog turns toward the place where the food is if we enter the room our presence there inhibits the food reflex and he turns away from the food toward the newcomer Or the rumble of

a passing truck the sight through the window of a moving body may do the same thing Internal conditions act similarly For example the tension of a full bladder or some irritating lesion in the mouth or on the body of the animal may diminish or inhibit all the conditioned food reflexes till this factor is removed

DIRECT INHIBITION

The other type of inhibition is a distinctive cortical phenomenon It has entirely different properties from the external inhibition First it develops as a gradual process and does not reach a maximum until some lapse of time perhaps hours days or weeks while external inhibition has its full effect the first time it is used The second kind of inhibition has the property of becoming diffuse spreading over the cortex remaining a long time and then concentrating again It does not arise in a separate centre (centre being employed in a functional sense) but it is in the same receptory region with which we are concerned—where the excitation is It is closely connected with the process of excitation from which it arises This is the *internal direct or cortical inhibition*

The simplest way in which it is brought about is by *extinction* of the conditioned reflex—that is by repetition of the conditioned stimulus and failure to support it by the unconditioned stimulus (giving food in the case of the food reflex) When the conditioned stimulus is thus applied a certain number of times without reinforcement the flow of saliva gradually decreases with each repetition and finally drops to zero Just as with elaboration of conditioned reflexes so with extinction the number of repetitions varies with the animal age and intelligence Children are much more plastic than dogs in that conditioned reflexes are elaborated quicker and disappear faster when they are not reinforced—the salivary for example after five to ten trials as compared with ten to sixty for the dog The conditioned reflex thus extinguished after a lapse of a certain time undergoes *restoration* In two dogs in which Dr Wolff and I extinguished three reflexes completely by August 1st 1930 when they were tried on October 1st 1930 the salivary secretion was as active as before the extinction though no work had been done on the animals in the interim When the first conditioned reflex has been extinguished others are extinguished after a fewer number of trials and it is so even with those for other receptors Then when the conditioned reflexes are restored extinction is much easier than it was the first time

ASSOCIATIVE INHIBITION

The second kind of internal inhibition is associative or conditioned inhibition which occurs when the indifferent agent is given together with the positive conditioned stimulus and the combination is reinforced Suppose we have a metronome (M) which we have made into a positive conditioned stimulus Every time we use it we give food Now we give the metronome plus the light (L) (which has never been used before) with this combination we do not give food although each time we give M alone we do feed the animal At first the animal reacts to the combination of M and L as it does to M alone but as this stimulus is repeated the salivary secretion to it gradually diminishes to zero although M alone gives the same effect as before L which was indifferent for the food centre has now acquired an inhibitory value not only for the stimulus with which it was used but for other food stimuli and also for stimuli of other centres For example if we now combine L with a bell (B) which is a positive food stimulus the combination L plus B produces no salivary flow the first time it is used L from its association with M now has a different significance for the animal from what it had before it was used with M Or even if L is given with a conditioned stimulus —not for food but for the introduction of acid into the mouth—it will inhibit the conditioned reflex to the acid Thus we come to see that all extraneous and accidental stimuli or changes in the environment coinciding with an inhibitory state of the animal in time acquire the property of themselves calling out this inhibition

CHAIN CONDITIONED REFLEXES

How closely related internal inhibition and excitation and how slight a change in temporal relations constitute the determining factor as to whether the same indifferent agent under otherwise identical conditions becomes positive or negative— a hair perhaps divides the false from the true as the poet has it—are seen in this example If we combine the positive conditioned stimulus M with some agent L so that M coincides with it and overlaps it then L becomes an inhibitory signal—a conditioned inhibition But if L precedes M by a few seconds then L takes on the character of a positive conditioned stimulus although M here is not accompanied by food In this way *chain conditioned reflexes* are established L becomes a signal for M this has already been made a signal for food so L eventually calls out the same food reaction though a weaker one than M Conditioned reflexes are thus four dimensional

DIFFERENTIATION

Say we elaborated a positive conditioned reflex with a metronome of 100 beats per minute (M 100) Let us try one of 200 beats and not accompany it with food The first time M 200 is used the dog reacts to it as he did to M 100 and only when it is repeated a number of times without food does it become inhibitory—that is does the flow of saliva cease Pavlov has performed experiments which show that the process of excitation set up by M 100 spreads over a certain area of the cortex and contracts only after M 200 has been presented If we bring the positive and negative conditioned stimuli close enough together—for example by using M 110 instead of M 200—we might produce a neurosis by a 'collision' of the processes of excitation and inhibition

WILLIAM JAMES ON HABIT FORMATION

What are the implications of the teaching of conditioned reflexes for habit formation? What support do they give to the rules for habit training formulated by William James? First he says

> *We must make automatic and habitual as early as possible as many useful acts as we can*

That is we must elaborate conditioned reflexes to the proper stimuli or situations (complex stimuli) and as early as possible because young animals form them more easily than older and the first reflexes are the strongest Secondly

> *Launch ourselves on as strong and decided an initiative as possible* Accumulate all the possible circumstances which will reinforce the right motives envelop your resolution with every aid you know

Here we have the bringing of emotion into play and we know that a certain emotional tension is necessary for the elaboration of conditioned reflexes a dog which is not hungry will not form a conditioned food reflex Thirdly

> *Never suffer an exception to occur until the new habit is securely rooted in your life* Each lapse is like the letting fall of a ball of string which one is carefully winding up a single slip undoes more than a great many turns will wind up again

We have just seen how extinction of the conditioned reflex may easily occur when the conditioned stimulus is given too often without supporting it by the unconditioned In the habits of adults the unconditioned stimulus is perhaps far removed from the conditioned

stimulus and is linked up to it through a long chain The alarm clock rings we do not get up and it ceases to stimulate us to call out the conditioned reflex of arising The unconditioned stimulus here is not so easy to detect as in the dog which fails to react to the bell connected with food and it is probably a compound one (the fear of falling into disrepute losing one's job meeting with disapproval—which is quite likely an unconditioned stimulus for man just as an overpowering frightful enemy is for an animal)

Again

Seize the very first opportunity to act on every resolution you make and on every emotional prompting you may experience in the direction of the habits you aspire to gain It is not in the moment of their forming but in the moment of their producing motor effects [that is conditioned reflexes] when resolves and aspirations communicate the new set to the brain No matter how full a reservoir of maxims one may possess and no matter how good one's sentiments may be if one has not taken advantage of every concrete opportunity to act one's character may remain entirely unaffected for the better

This is just the same way of stating the preceding rule from the standpoint of conditioned reflex elaboration James's final rule of keeping the faculty of effort alive in you by a little gratuitous exercise every day involves both the emotional state and the value of repetition in the elaboration of conditioned reflexes and in the prevention of their gradual spontaneous extinction

MORALS AND PREJUDICES

Besides these maxims we wish to make several direct applications from the study of conditioned reflexes to habit formation It will be seen that after the first *conditioned* reflex in a certain centre is elaborated it takes fewer trials for each succeeding one up to a certain point This is a basic law of education That extinction of the second *conditioned* reflex is much easier than of the first and that when once it has been extinguished and restored it is never so stable as it was *before* extinction has an enormous significance in the destruction of moral codes explaining why a *person untrustworthy* in one thing is usually *so* in another *the chaos produced* by revolutions and wars the difficulty of bringing about permanent cures in drunkards culprits etc

How strong the old conditioned reflexes are and their spontaneous restoration *after extinction* and how quickly recently elaborated conditioned reflexes disappear is seen in the readiness with which habits cultivated late in life are abandoned and in how inevitably and easily a man who has acquired new manners and culture removed *from* his early surroundings lapses back into his former habits *ungrammatical slips of the tongue* accent etc (though they may not have been used *for* years) when he returns to the old situation The fact that a delayed reflex is weaker than an immediate *one* explains the demoralizing effect of the action of procrastination and the nervous tension (*conflict between* excitation and inhibition) when rewards (unconditioned stimuli) are too long withheld in those unaccustomed to maintaining a balance between the processes of excitation and inhibition And cannot many of our *prejudices* find an explanation in the phenomena of conditioned *inhibition*? Here all accidental stimuli or changes in the environment which may be entirely *without* significance for the organism will if they coincide with an inhibitory state in the animal after a certain number of coincidences *of* times provoke the same state when they occur alone

DANGER OF REPEATED STIMULI

Perhaps we *might learn* something from the laboratory concerning the repetition of conditioned reflexes Too frequent use of the same conditioned stimulus may become *injurious* Instead of leading to the successful elaboration and establishment of the desired conditioned reflex (habit) its weakening and disappearance may ensue —that is it may pass over into an inhibitory agent despite reinforcement each time This is especially true of certain kinds of weak stimuli (tactile and thermal for the dog) Between such failing stimuli it is necessary to interpose other positive conditioned stimuli or better negative conditioned stimuli which evoke the process of induction causing the opposite stimuli to act better These interposed conditioned stimuli may be ones connected with the same unconditioned reflex

CONDITIONED REFLEXES AND BEHAVIOUR

The behaviour of man can be viewed from the standpoint of Pavlov as a long chain of *conditioned reflexes* In the laboratory we can form chains of only two or three conditioned reflexes in the dog—that is where one signal is not the immediate signal for the unconditioned stimulus but for another conditioned stimulus and so on through the chain of conditioned stimuli till the unconditioned stimulus is reached In the child chains of much greater length have been elaborated The child is more plastic than the dog and in it conditioned reflexes are more readily and more easily lost This is true for the food reflex but there is doubtless a variation for the different unconditioned reflexes The fund of unconditioned reflexes varies markedly in each animal so that the results obtained by working with one unconditioned reflex may not be comparable in different species as a measure of intelligence capability etc A child would hardly be expected to establish easily a positive conditioned food reflex to a worm nor a fish as readily as a child an investigating reflex to a drawing on a piece of white paper

Although Pavlov has opened up a vast untrodden territory for exploration by his method of *conditioned* reflexes and though we may find it of great aid in the investigation of psycho biologic fields we must remember that much caution and perseverance and further study is necessary before we can use it with confidence in the general explanation of psycho-biologic reactions (behaviour) He says It would be the height of presumption to regard these first steps in elucidating the physiology of the cortex as solving the intricate problem of the higher psychic activity in man when in fact at the present stage of our work no detailed application of its results to man is yet permissible

THORACIC METASTASES IN OVARIAN CARCINOMA

REPORT OF A CASE WITH REMARKS

BY

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AND

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The particular feature of the case to be described is that all the symptoms and signs were pulmonary and for this reason the patient was admitted to and treated in a medical ward by one of us (H T E) There were no abdomino pelvic signs of any physical abnormality and only on post-mortem examination was the primary ovarian lesion made evident

CLINICAL HISTORY

The patient aged 53 years was seen on July 6th 1931 in the out patient department and was admitted to hospital the same day

The history given was one of increasing malaise since the beginning of the year. Palpitation and dyspnoea on exertion gradually appeared while for the last two months there had been pain over the right side of the chest. This had been diagnosed as pleurisy. The pain was described as beginning in the back, gradually working round to the lower ribs of the right side and the right costal margin and extending down the right flank, while the dyspnoea was becoming more marked. There was very little cough and practically no sputum. The appetite was poor, the bowels regular, no vomiting and no urinary trouble. Sleep was often disturbed by the pain. She usually felt worse about 5 a.m. and 5 p.m. She thought she was losing weight. There was occasional swelling of the ankles towards evening.

The patient was married at an early age and had never had any children. The menopause appeared when she was 42 years old. She had an operation for "womb trouble" thirty years ago and was subject to bronchitis nearly every winter.

Examination showed a stout woman with a somewhat cyanosed face and dyspnoeic respirations 24 per minute. She looked ill and perspired freely. The voice was husky and she spoke as if with difficulty. The most comfortable position was resting half propped up in bed.

The heart was normal in size and position, with no murmurs, first sound at apex rather accentuated, rhythm regular, rate 104 per minute.

Inspection of the chest showed no asymmetry or abnormality other than delay and limitation of movement of the right side more so over the lower part and this was confirmed by palpation. On percussion there was marked dullness to the top of the fourth rib in front and posteriorly to just above the root of the lung. The breath sounds were much diminished over the more anterior portion of the above area, nearly absent over the axillary and posterior portions. Above the level of dullness only slight signs of compression were present. There was no friction rub. The left lung showed the ordinary signs of compensation. The lower part of the right chest particularly in front was very tender and so also was the costal margin.

The abdomen moved freely and was not distended. There was no abnormal dullness, no rigidity, no palpable tumour and no tenderness except along the right costal margin. The liver was not enlarged and the spleen could not be palpated. The urine contained no albumin and no oedema was to be seen.

On the day following admission to hospital the right chest was aspirated and several ounces of blood stained fluid were removed. Microscopical examination showed clumps of cells very suggestive of malignancy. The fluid contained also an excess of albumin, while culture showed only a few staphylococci.

Considerable relief was experienced after the aspiration, the dyspnoea and cyanosis diminishing, while the physical signs over the upper lobe became more normal. This condition continued for the next five days, when the temperature rose to 101·8° F. and the dyspnoea increased but the cyanosis remained unchanged. At the end of twenty-four hours the temperature dropped. The pain along the costal margin was now almost continuous, though less severe. Soreness was experienced in the back round the site of aspiration and a small, rather firm swelling with a reddened centre began to develop. This slowly increased in size, retained its firmness and appeared fixed. The surrounding tissues became indurated and the whole mass was very tender and painful. There was no pitting on pressure. The temperature continued about normal and the pulse showed no variation. With the development of the tumour a solitary enlarged gland was found in the right supraclavicular fossa. Two attempts were made to x-ray the chest, but on each occasion the patient collapsed on arriving at the department, so that no information from this point of view was obtained.

The cyanosis became more marked. A second aspiration was performed a month after the first, as the fluid had rapidly increased and was causing much dyspnoea. This brought temporary relief, and during the interval the breath sounds could be heard over the upper lobe in front and as far down as the seventh rib behind, but the chest movements did not improve. The pain along the costal margin had now become continuous. The swelling in the back was still painful but unchanged in size, its outline remained indefinite. No further glandular enlargements could be found, and the liver showed no increase in size. The patient gradually became weaker, but did not seem to be losing weight rapidly. The end came very suddenly, the patient who had been talking cheerfully all at once collapsed and died within a couple of minutes.

The diagnosis suggested initially was neoplasm of the lung with pleural effusion. The question of malignancy received confirmation from the report on the pleural fluid. A point of great interest was the advent of the tumour over the site of puncture for aspiration. This was adjudged to be also malignant in view of the absence of pyrexia, disturbance of pulse rate and profuse sweats. For this reason the tumour was not disturbed.

POST MORTEM FINDINGS

At necropsy the most evident lesions were thoracic. In the right chest carcinomatous deposits were present on the diaphragmatic pleura and on the parietal surface but to a lesser degree and mainly in relation to the inner aspects of the ribs. The visceral pleura was thickened but showed no evident malignant deposits. There was a large quantity of blood stained fluid in the pleural cavity so that the lung was collapsed and completely shrunken.

On the left side the pleura was normal, and the lung apart from some emphysema towards the anterior edges was also apparently normal. The anterior mediastinum was extensively infiltrated with growth obviously malignant. A certain amount of free turbid fluid was present in the abdomen, while the mesentery and omentum were completely infiltrated with growth similar to that found in the chest, but more extensive.

The alimentary tract, liver, gall-bladder and kidneys were free, but some injection of the gastric mucosa was present.

The uterus and cervix were found normal, but the right ovary was enlarged to about the size of a tangerine orange and of irregular shape. It appeared on section to be composed mainly of oedematous fibrous tissue, with breaking down patches and also mucoid areas, scattered throughout it. The left ovary was enlarged but not so much as the right; its contents on section were of a similar fibro-mucoid character.

On microscopical examination the ovarian tissue was largely occupied by masses of carcinoma cells which in some areas retained an original adenocarcinomatous appearance, but owing to proliferative growth and anaplastic retrogression of the cells this appearance had been destroyed over the greater part of the sections, and merely accumulations of masses of carcinoma cells of various shapes and sizes were seen with frequent mitotic figures.

In sections from the secondary growths a similar extreme degree of infiltration with carcinomatous cells was seen. They were of identical appearance with those of the ovary, and with the tendency to be arranged in definite groups rather than to be generally infiltrative throughout the tissue.

COMMENTARY

This case shows the importance of seeking carefully for a primary focus in cases of thoracic carcinoma. But a more important feature here was the lack of any physical signs of abdominal involvement, although later examination showed free fluid and extensive omental and mesenteric involvement.

The insidious growth and extension characteristic of so many ovarian malignant tumours is well illustrated by this case, and it is in the experience of all gynaecologists that patients well nourished and complaining of but few symptoms present themselves from time to time in whom evidence of widespread peritoneal involvement is found.

A point worthy of consideration is whether the growth was primarily ovarian or whether the ovaries were

involved secondarily by transcoelomic transplantation of carcinoma cells from some unsuspected primary focus The main primary foci in this connexion are the stomach and intestines and these structures were here found to be normal as well as the breast from which a lymphatic and later transcoelomic spread may occur Again the microscopical features were essentially those seen in ovarian carcinoma

Cases of ovarian carcinoma with multiple metastases in some of which the ovarian origin was unsuspected have been reported from time to time Thus Bankart[1] in 1926 reported such a case in which the secondaries were in the scapula while Simard and Gagnon[2] in 1928 published a case in which secondary ovarian malignant tissue was found in the arm In both of these cases microscopical examination of the secondary growth showed malignant tissue morphologically similar in structure to that found in the primary ovarian growth In Muller's case[3] reported in 1929 multiple extensions were present in the serous membranes with a microscopical structure resembling mesothelioma while Cavour[4] in 1920 and van Dongen[5] in 1922 described similar cases in which the ovarian origin was unsuspected

We are indebted to Professor Dugud for the post mortem and histological material concerned in the case

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

ELEVATION OF DEPRESSED FRACTURE OF THE SKULL IN A NEWBORN CHILD

The following case may be of some interest Mrs Mack is a case of flat pelvis She has had six children—four stillborn one died after fourteen days, and one is still alive as the result of induction of premature labour Most of the children from what I can gather, died of fractured skull Certainly the child who lived a fortnight had a severe skull injury and suffered from fits during its short life One which I delivered had a definite depressed fracture of the skull but was stillborn

On the morning of January 28th 1932 I learned that Mrs Mack was again pregnant and almost due I went to see her at once and on bimanual examination found that disproportion was marked With quinine sulphate castor oil and pituitrin I induced premature labour and delivered an asphyxiated female child weighing eight pounds at 5 40 a m on the following day

It was a high forceps case and the head seemed as if it would not enter the pelvis Then something cracked and the head came through easily and was delivered A large depressed fracture of the left frontal bone 2½ inches long by 2 inches at its widest margins became evident It had been caused by the promontory of the sacrum and was angled upwards and backwards across the frontal bone After some delay with the shoulders the child was ultimately born—stillborn as I thought but the heart was beating and after resuscitation it came round The cut was the depression of the left frontal bone a strong left eye a flexed right arm and leg in a nine pound infant

Deciding upon immediate operation I boiled a small scalp hair pin dissecting forceps used for packing tooth sockets The scalp was prepared with iodine A small incision was made over the lower margin of the left frontal bone but I could not get the handle of the forceps under the bone so I made an incision half an inch long over the frontal suture one inch in front of the large fontanelle and managed to get the handle of the forceps between the membranes and the bone Gently but firmly I insinuated the forceps until under the central furrow of the depression Then with a lifting levering movement of the forceps handle the depression became elevated to the normal Since the child bore the operation well, I boiled a small needle one strand of silkworm gut and a pair of scissors and completed the operation by putting one stitch in each incision

Before I left this one-roomed home at 7 a m the child was crying lustily shutting both eyes equally and using both arms and legs freely The child has been carefully watched it takes the breast has not been fevered and has altogether made an uneventful recovery

Huntly Aberdeenshire PETER W PHILIP M B, Ch B

SPONTANEOUS HAEMORRHAGE OF THE NEWBORN

As the spontaneous haemorrhages of the newborn constitute such a grave emergency and probably occur at some time in the experience of most family doctors perhaps it will not be out of place for even a fourth rate practitioner in a third rate practice to record a case with recovery

REPORT OF A CASE

The confinement a first one was normal and unassisted I merely supervised progress The whole course of the pregnancy was perfectly normal and uneventful The family history and antecedents of the parents form a dull record of rude health and blameless conduct The child was a boy and seemed beyond criticism until a few hours after birth he vomited a little faintly brown fluid suggestive of a trace of altered blood These two abnormalities—the vomiting and the colour—were repeated on the second day so I gave a weak mixture of bismuth and salol On the third day there was no vomiting and the stools seemed to me to be quite normal But I was not altogether surprised when called in hurriedly while visiting nearby on the fourth day to find the child blanched pulseless and quite collapsed—apparently dead until I felt a faint apex beat—with his gown saturated in front with bright red blood from the mouth and the napkin full of tarry stools

With a syringe I drew blood from the mother and injected the greater part of 10 c cm into the deeper tissue of the child's buttocks and thighs The baby began to revive and I asked that he should be given sweetened water freely his mixture as before and that he should be kept as warm and undisturbed as possible Later I added a few drops of liq adrenalin hydrochlor to the mixture but the child had recovered sufficiently to recognize and resent this addition Next morning there was a further haemorrhage so I gave another injection of the mother's blood I used a very wide bore intramuscular needle and had the barrel of the syringe filmed over inside with soft paraffin as I found that otherwise it was likely to seize In the evening I gave a third injection and also injected a rough fourth of a 5 c cm ampoule of a new liver extract I happened to have in my bag Next day there was no haemorrhage but I gave a similar injection of the liver extract and repeated it on the two succeeding days Thereafter the child was doing so well that treatment seemed superfluous—he was suckling well sleeping well and having normal bowel action A day or two later he was out of doors and in a couple of weeks seemed no more anaemic than many babies of that age

Another time confronted with a brownish tint in fluid vomited within a few hours of birth I should not hesitate to inject whole blood or even any of the usual serums if parents blood could not be got Waiting is too dangerous and only good luck saved this child Nothing could be simpler or cheaper The liver extract may have

helped certainly it did no harm It does seem like a very little knowledge making the village idiot the man of the moment For the little knowledge I make acknowledgement to *The Clinical Study and Treatment of Sick Children* by Hugh Thomson

Kidsgrove Staffs A G B DUNCAN M D, D P H

Reports of Societies

NON INFECTIVE NEPHRITIS

At the meeting of the Medical Society of London on March 14th with Mr HERBERT TILLEY president in the chair a discussion took place on non infective nephritis

Dr ARTHUR A OSMAN drew attention to the prevalence of nephritis It was one of the most frequent causes of death in this country and was steadily increasing He gave figures of the mortality incidence for 1926–27 in different countries Japan had the highest mortality—9 9 per 10 000 of population the United States 9 1 Spain 6 0 England and Wales 3 34 Netherlands 3 25 Sweden 2 37 and Belgium 1 75 The number of deaths classified as due to nephritis in the Registrar General's returns in 1929 was 15 542 or 42 per diem making nephritis seventh on the list of killing diseases but in the American tables nephritis was fourth being preceded only by heart disease respiratory diseases and cancer He gave some reasons for supposing that a proportion of the deaths attributed to cerebral haemorrhage and to cirrhosis of the liver were really due to nephritis

Dr O L V DE WESSELOW spoke in particular of acute glomerular nephritis as the one form which presented certain possibilities in preventive work He discussed tonsillitis and scarlet fever as the starting point and said that the development of nephritis did not appear to depend upon the type of organism or the severity of the infection or as far as could be ascertained the individual peculiarity of the patient He believed that cold was an important factor and this would explain the epidemics of trench nephritis in war He also believed that a large number of people after an attack of tonsillitis had a transitory bout of acute glomerular nephritis At the present moment the treatment of tonsillitis was a little irrational This condition probably carried as big a risk of secondary nephritis as scarlet fever yet very little trouble was taken about it once the temperature had settled He would not advocate three weeks in bed in every case of tonsillitis but an occasional examination of the urine in the second and third weeks after the attack might be of value Acute glomerular nephritis was more likely to clear up completely if the patient was put to bed early and kept there for some time The remarkable point about the disease was that although its progress was often measurable in decades rather than in years in many cases there appeared to be a steady deterioration of the kidneys

Dr BERNARD MYERS said that nearly all cases of this type of nephritis which he had come across in children had been due to scarlet fever and on following them up he found that the majority had died within a few years The treatment had been intensely disappointing With regard to adults he knew of several families in which the individuals at the age of 50 had begun to show symptoms of nephritis and had died before 60 He had always looked upon these people as having vulnerable kidneys failing under the stress of the ordinary functions of life

Dr H MORLEY FLETCHER after expressing doubt as to the value of statistics in nephritis said with regard to haemorrhagic nephritis that his experience had been that the acute condition associated with tonsillitis in children very often terminated quite favourably and the child recovered without any permanent damage to the kidney He pleaded for more light on obscure and non infective cases

Dr A F HURST said on the subject of the removal of foci of infection such as tonsils and teeth that there was a very definite danger of an acute exacerbation of the disease This was one of the respects in which vaccination was really of value If before removing the tonsils two or three doses of vaccine were given any returning haemorrhage was greatly reduced He also mentioned the definite familial tendency to nephritis

Sir WILLIAM WILLCOX said that no cases were so difficult as those of glomerular nephritis He thought that in a great number of cases tonsillar infection was the starting point If a case of chronic glomerular nephritis were left alone it would steadily go downhill In his own practice he always watched for any focus of infection and removed it He insisted on *x* ray examinations of the nasal sinuses because chronic inflammation was often overlooked Colon irrigations were often of value and the administration of alkalis was of great importance He did not quite agree with Dr Hurst about vaccines in his experience patients with nephritis were extremely susceptible to a vaccine and if a vaccine were given it should be a very small dose

Dr E P POULTON illustrated the inadequacy of the urea concentration test the rate of urea output was the more important factor Dr JENNER HOSKIN asked about diet in these cases Was it customary to keep the patients on low protein diet or was a more generous dietary now favoured? Dr BERNARD SCHLESINGER asked why it was if the tonsils played such an important part in the causation of nephritis that rheumatic children who had such a high incidence of tonsillitis very rarely suffered from nephritis Another point was that in streptococcal infections there always appeared a latent period of about a fortnight between the initial tonsillar infection and the onset of the nephritis Might not the streptococcal nephritis be placed in the same category as rheumatic relapses and possibly have an allergic factor in the causation? Dr J GIBBENS urged the importance of studying the condition in children in adults too many factors came in such as alcoholism syphilis and stress and strain He also pleaded for a sharp differentiation between those cases which showed haematuria simply and those which showed high blood pressure and oedema in addition Dr H GAINSBOROUGH instanced cases of diffuse nephritis in men over 50 which recovered after the disease had progressed to the extent of definite vascular change The PRESIDENT mentioned cases in which the removal of septic foci from elderly people had proved disastrous

Dr OSMAN replying on the discussion said that it was difficult to escape the impression that sometimes the giving of a vaccine had turned a case into a definitely chronic type Alkali treatment was of value in the prophylaxis of many if not most forms of acute diffuse glomerular nephritis but the difficulty was to know when to give it because except for a certain presumption in the case of some scarlet fever patients one never knew what patients were likely to develop the condition As to diet most of their ideas were at present in the melting pot It was customary to give a low protein diet in cases where there was difficulty in nitrogenous excretion and a high protein diet where there was no such difficulty and where oedema was present It had been more recently suggested that it was sodium which had to be eliminated from the diet Dr DE WESSELOW also in reply thought there was too much pessimism about the adult case If the milder adult cases which did not come up to the doctor at all were seen the same impression of good prognosis in acute glomerular nephritis in adults would be obtained as was already obtained in the case of children

ANO RECTAL FISTULA

In the Subsection of Proctology of the Royal Society of Medicine on March 9th Mr W ERNEST MILES gave an address on Ano rectal fistulae

The term fistula he said was used to denote an abnormal communication between the skin surface and any adjacent hollow viscera but the organ which was most affected by fistulous communication was the rectum The surface openings of ano rectal fistulae were found in the perineum but it must not be assumed that all fistulous openings found in the perineum were in connexion with ano rectal fistulae some of them were points of exit of abscess in the neighbourhood of the rectum Apart from those which arose as a result of penetrating wounds from without there were fistulae which came about in connexion with advanced rectal carcinoma and others which followed in the wake of fibro stricture of the rectum But the true ano rectal fistulae were always preceded by an abscess which was the outcome of infection by micro organisms reaching the tissues chiefly by way of the lymphatics These organisms were staphylococci streptococci *B coli communis* and *B proteus* The infections usually took place in some lesion of the anal canal or rectum such as a thrombosed internal haemorrhoid a torn down anal valve or an ulceration at the base of a polypus Any lesion occurring in the lower part of the rectum might become infected but it must not be assumed that every lesion did so Although the majority of fistulae arose from infection from within micro organisms sometimes infected the fat of the ischio rectal fossa fat being of particularly low resistance and vitality But in whatever way the infection arose the result was the same—namely the appearance of the initial lesion followed by lymphangitis or phlebitis as a result of the infection of micro-organisms this leading to suppuration eventuating in the formation of a localized abscess The abscess extended along the line of least resistance the pus being guided between various layers of fascia and circumventing such blood vessels as were of sufficient size to resist thrombosis and dissolution Remembering the anatomy and environment of the terminal rectum and the disposition of the muscles one could readily understand the circuitous route which the pus would take before finding an exit either on the skin surface or in the rectum In this way an incomplete or a complete fistula arose

Classification

Four varieties of fistula were commonly named blind external fistula with opening on the surface but none in the rectum blind internal *fistula* with opening in the rectum but none on the surface complete fistula with openings in both situations, as well as a *fourth* variety known as horseshoe fistula involving both sides Mr Miles thought this classification not *satisfactory* Every fistula was preceded by an abscess and the main tract of a fistula was nothing but a contracted original abscess cavity unobliterated Therefore an anatomical basis of classification seemed advisable Infection like cancer spread chiefly by the lymphatics Given the initial lesion and an infection of micro organisms the lymphatic areas were those in which these organisms would be likely to spread and the lymphatic areas connected with the rectum were the subcutaneous lymphatic plexus the submucous the *internal* muscular coat the lymphatic sinus of the rectum and the lymphatics passing through the ischio rectal *fossa* He therefore classified fistulae on this basis as follows (1) subcutaneous (2) submucous (3) intermuscular (4) pararectal (5) subsphincteric and (6) ischio rectal About 40 per cent of fistulae were subcutaneous 30 per cent submucous and the remainder divided between the other classes The different results obtained on treatment were entirely due to the anatomical disposition of the main tract of the fistula Every complete fistula presented four points of interest the external opening the internal opening the main tract and any offshoot from the main tract If the fistulous opening was within 1/2 in of the anal margin one might be quite sure that one was dealing with a submucous fistula if it was about 1½ in from the margin at the upper border of the external sphincter it was likely to be a sub sphincteric fistula

Treatment

The treatment of these fistulae was entirely surgical and the technique was comparable to the conversion of a subterranean tunnel into an open trench by taking away the earth from the tunnel and then having laid the whole thing open filling it up with new material If all fistulae were of the *same* type this operation would effect a cure but *in some cases* if such operation were done it would be found that the patient had no sphincteric control As *to the* advisability of laying open fistulae if there was a high internal opening this depended on the tract of the fistula and the muscles which were divided If division were made at the point of fusion of the levator ani control would be lost One of the principles in operating on fistulae was to ensure that the square area of the surface wound was greater than the square area of the rest of the wound Mr Miles discussed his methods of treatment in relation to the different types of fistulae and especially emphasized the great importance of not overlooking submucous extensions One golden rule was never to promise to cure fistulae in one operation There were fistulae and fistulae some were quite simple but others would tax the skill and patience of the surgeon to the utmost

Mr J P LOCKHART-MUMMERY said that the ordinary general surgeon was often very inefficient *in dealing with* fistulae About 60 per cent of all the fistula cases that came to him had already been operated on at least once The common mistakes were two not opening up properly at all or opening up much too freely with the result *that* the musculature was cut through with loss of control He had been impressed by Mr Miles s courage in classify*ing fistulae* for his own part he would not like to attempt it for hardly any two fistulae were alike In his *opinion* neither the internal nor the external sphincter *should ever* be divided at primary operation He illustrated the manner in which he retained the muscle as a bridge right across the centre of the wound with a silver thread around it

Mr MILES in reply to Dr CUTHBERT DUKES who asked whether it was possible to tell before operation where the *tract* of these fistulae came and their relation to the muscles said that it was only with the pararectal and the deep seated mucous varieties that there was difficulty and here digital examination would generally differentiate In ischio rectal fistulae the probe passed parallel to the skin surface

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BIOCHEMISTRY IN MEDICINE

At the meeting of the Historical Section of the Royal Society of Medicine on March 2nd the subject for discussion was the history of the introduction of biochemistry in medicine

Dr W LANGDON BROWN in his opening paper described biochemistry as a modern subject which had sprung from physiological chemistry but which owed the refinement of its technique to pure chemists In attempting to study the changes which chemical substances underwent in the living body in relation to the tissue cell

biochemistry concentrated its attention on the internal medium of exchange—the blood In 1828 Wohler synthesized urea in the laboratory thus making the first gap in the wall between the organic and inorganic compounds and dealing a shrewd blow at vitalism Dr Langdon Brown dealt briefly with Van Helmont, founder of the iatrochemical school which rose to its full stature with Sylvius Stahl and his tragic phlogiston theory and John Mayow Reference was made to Beaumont's observations on Alexis St Martin in 1822 to Prout's discovery of hydrochloric acid in the gastric juice two years later and to the perfection of the fractional test meal with which were associated the names of Einhorn Rehfuss Bennett and Ryle The history of diabetes exemplified the way in which the theory of internal secretions had always been in advance of the facts A study of the relations between the pigments of the body had had a great influence on medicine Dr Langdon Brown regarded Haldane and Priestley's paper in 1905 on the composition of alveolar air as inaugurating a new outlook on the biochemistry of respiration carbon dioxide was now recognized as the great stimulus to the respiratory centre

Sir ARCHIBALD GARROD expressed his appreciation of the paper dwelling especially on its excellent wit and its thread of satire His own brief contribution to the discussion consisted of sketches of some London medical chemists at the beginning of the nineteenth century Wollaston Alexander Marcet and Prout Sir Archibald took exception to the expression introduction of biochemistry into medicine he preferred to look upon biochemistry as growing up as a branch of medicine

Sir F GOWLAND HOPKINS President of the Royal Society, emphasized the debt which biochemistry owed to medicine He had difficulty in making up his mind as to the identity of the Father of biochemistry, and decided in the end that so complex a subject deserved two Liebig and Sir Archibald Garrod Liebig had he had a biological training and had he possessed the biological instincts of a Pasteur might have given to biochemistry that status for which it had so long to wait

The other speakers included Sir WILLIAM WILLCOX who stressed the importance of exact chemical methods in biochemistry Professor E C DODDS who gave a brief account of the work of Hoppe Seyler Dr T IZOD BENNETT who dealt with the biochemical history of nephritis Dr A P CAWADIAS who reviewed the subject generally and Dr J A RYLE

MENSTRUATION IN MENTAL DISEASE

At a meeting of the Edinburgh Obstetrical Society with the president Dr JAMES YOUNG in the chair Dr G I STRACHAN (Cardiff) read a paper by himself and Dr Ian Skottowe on menstruation in mental disease The authors pointed out that the literature on this subject was scanty and rather vague and that in general two main views were held that in mental disease amenorrhoea was usual, and that on occasions when menstruation persisted exacerbations of mental upset were to be expected

The paper was based on observations made on 250 adult female patients admitted to the Cardiff City Mental Hospital Of these 61 were beyond the menopause while 189 were in menstrual life A simple mental classification was adopted in which the cases were divided into six groups schizophrenics (54) affective disorders (101) paranoid state (45) organic psychoses (26) mental deficiency (17) and miscellaneous cases (7)—this included the epileptics In the cases in menstrual life it was found that menstrual disorders were present in only 26·4 per cent and that menorrhagia was the most common lesion in this respect being present in 14 cases The majority of these were nulliparous and under 35 years of age Scanty menstruation was found in 13 cases mainly associated with affective mental disorders Amenorrhoea came only third in order of frequency, and again the main association was with the affective disorders It was present in 11 cases and had lasted from three to six months in patients varying in age from 19 to 45 years, in the majority of these cases the onset of mental symptoms was the first event It was not found in the patients in whom the menstrual condition cleared up that a corresponding improvement in the mental state necessarily occurred Other menstrual conditions such as dysmenorrhoea and irregular menstruation not so commonly met with were also discussed From the mental point of view the conditions most commonly associated with menstrual disorders were the schizophrenics the affective disorders and the paranoids It was found that exacerbations of mental upset occurred in only 36 observed cases and of these 12 were schizophrenics it was noted that other observers had usually recorded a higher proportion in this respect Epilepsy occurred in six cases and was of varying usually long duration In none of these cases were the fits found to occur only at or even mostly at the menstrual time

The general findings of Drs Strachan and Skottowe were to the effect that menstrual lesions were not so commonly found in their series as in the reports of other observers that amenorrhoea was present in only 11 cases out of 189 that mental exacerbations at menstrual times occurred in only a small proportion of the cases and that in the epileptics there was no tendency shown for the fits to be especially associated with menstruation The opinions and observations of other workers in this field often to the contrary effect were quoted and reviewed

Prevention of Puerperal Sepsis

Dr S J CAMERON (Glasgow) in a paper entitled An aid in the prevention of puerperal sepsis gave elaborate statistics from Bellshill Hospital of the action of anti streptococcal serum alone or in combination with vitamins A and D in the form of adexolin in preventing puerperal sepsis The serum was used as a prophylactic being administered to patients who had any interference or whose perineums were torn during labour Less frequently it was given a day or two before the onset of labour in cases that were likely to be complicated By this means he reduced the morbidity according to the British Medical Association standard from an average of 7 per cent in all cases and 3·5 per cent in normal cases to an average in two years of 2·4 per cent in all cases and 0·15 per cent in normal cases The total number of findings per annum was somewhere in the region of 700 During the last twelve months there had only been one death from sepsis, and that in a case of criminal abortion Remarking that it was not to be thought that only simple cases were admitted to the hospital Dr Cameron gave an exhaustive list of all the complicated cases received during the last fifteen months and the operative measures performed during the same period These complications and operations differed in no way from the experiences of any other general maternity hospital For the last three months he took four equal groups of cases in which he gave (1) no serum (2) adexolin alone (3) serum and adexolin and (4) serum alone The incidence of pyrexia was of great interest 14 per cent in the no serum group developing pyrexia 5 per cent of the adexolin group 1·7 per cent of the serum and adexolin and 1·6 per cent of the serum alone In the first

group however three cases had pyrexia on admission and if these were excluded the incidence was 8 7 per cent whereas in the last two groups the only notified cases were admitted with pyelitis and thus if these were excluded the incidence of pyrexia would have been nil

CORTICAL EXTRACT IN ADDISON'S DISEASE

At a meeting of the Aberdeen Medico Chirurgical Society held on March 3rd with the president Mr F K SMITH in the chair two papers were read on the subject of the cortical extract of suprarenal glands and its use in the treatment of Addison s disease

Professor L S P DAVIDSON gave a historical summary of the study of the suprarenals from the first description of the organs by Eustachius in 1563 to the co ordination of the clinical symptoms of adrenal insufficiency and the pathological changes of the adrenal glands by Addison in 1885 and the later recognition and isolation of the active principles of the medulla and finally of the cortex From the study of available statistics Addison s disease was found to be a rare condition the figures for the Mayo Clinic from 1908 to 1929 inclusive giving an incidence of one case in approximately 6 500 patients The incidence of Addison s disease had not been found to be higher in sanatoriums although tuberculosis was by far the commonest cause of the disease Males were affected twice as frequently as females the main age incidence being between 30 and 50 years Pathological examination showed the two main causes of destruction of the suprarenal capsule in Addison s disease to be tuberculosis and atrophy the origin of the latter being unknown Of a total of 82 recorded cases where a careful pathological examination was made 66 had died of tubercle and 16 from atrophy Apart from the recognition and appreciation of the loss of weight and decrease of blood pressure nothing of importance had been added to Addison s original epitome of the symptoms and signs The leading and characteristic features of the morbid state to which I would draw attention are anaemia general languor and debility remarkable feebleness of the heart s action irritability of the stomach and a peculiar change in the colour of the skin Professor Davidson then gave the clinical history of a patient in his ward who had recently died of Addison s disease

The patient a mason s labourer aged 27 years was admitted to hospital on October 31st 1931 with a complaint of increasing weakness of about five months duration The family history was negative for tubercle and the only point of note in the patient s previous history was frequent attacks of tonsilitis prior to the removal of his tonsils two years before In addition to being easily tired the patient found his skin began to turn yellow and small raised whitish marks appeared on the arms lower abdomen and back pruritus was present Then a severe pain like a stitch developed in the right iliac fossa on walking any distance and the patient became dizzy on sitting up quickly and felt very weak Nausea and vomiting occurred The condition became progressively worse but recently a remission of several weeks duration occurred Following this the condition had been growing steadily worse the skin had been getting progressively darker and some of the white spots had been replaced by dark brown patches Nausea and vomiting had become severe and the patient stated that he had lost 12 lb in weight in the last two months Professor Davidson emphasised the fact that a remission was not unusual and this should be taken into account in assessing the value of any treatment On examination of the patient on admission to hospital the skin was found to be smooth soft and elastic Asthenia languor and debility were present in a marked degree The tongue was smooth and atrophic exactly as in simple achylia gastrica anaemia and in pernicious anaemia (In Addison s disease no free hydrochloric acid was found in the stomach contents in 50 per cent of cases) A generalized brownish pigmentation of the skin was present least marked on the legs there were several large dark brown patches on the skin and buccal mucous membrane Patches of leucoderma were visible Pigmentation was present in over 90 per cent of cases and the most important point was the history of acquisition of pigment or of changes in the colour of the skin from time to time A history of pigmentation for months or years before the onset of symptoms indicated a very slowly progressive lesion while pigmentation might be lacking in very acute cases The pigmentation occurred particularly on exposed surfaces and on points of pressure friction or trauma Oral pigmentation was common The patient was easily tired and rendered breathless on the slightest exertion Palpitation giddiness and exhaustion were prominent features The pulse rate on admission was 82 but it rose considerably later while the blood pressure fell within the first few days from 96/56 to below 60/40 The blood pressure was little affected by treatment with cortical extract or adrenaline Nausea and vomiting were present along with a severe hiccup One bout of diarrhoea was recorded but constipation was much more common The haemoglobin was found to be 106 per cent and the blood count normal due probably to the reduction of blood volume These readings were in accord with the statistics of the Mayo Clinic where the evidence was in favour of the statement that anaemia was not a prominent feature

Professor Davidson discussed the treatment of Addison s disease under three headings (1) treatment of the underlying cause (for example tuberculosis) (2) general symptomatic treatment (3) specific organotherapy this latter by two methods—first the Muirhead treatment by maximum doses of adrenaline by injection per rectum with dried suprarenal cortex by mouth secondly by the suprarenal cortex extract prepared by the method of Swingle and Pfiffner His patient received 100 c cm of cortex extract in five days with improvement clinically but the preparation ran out and by the time a further supply arrived the patient was in as bad a state as ever, and failed to respond to injections of 25 c cm intravenously In addition to cortex extract 5 minims of adrenaline and 0 5 c cm of pituitrin were injected alternately every four hours and fluid and glucose were given by mouth and by rectum and on two occasions a pint of 5 per cent glucose in normal saline was injected intravenously In spite of all treatment the patient died and at the necropsy the suprarenal glands were found to be almost completely atrophied The weight of the two glands was 3 2 grams compared with the normal 11 6 grams The results of treatment by cortical extract were analysed and comment was made on the superior results obtained in America as compared with this country

Dr R A CLEGHORN discussed the physiological effects of extracts of adrenal cortex The fact that the cortex and medulla should be thought of as two organs was emphasized in the lower animals the two were actually separate as for example in the skate The only thing certain about the cortex was that unlike the medulla it was essential to life so that the only proof of activity of cortical extracts was the prolongation of life of adrenalectomized animals beyond the period of survival normally obtaining for that animal Dr Cleghorn demonstrated from the statistics of the best results of adrenalectomy reported that cats and dogs qualified for use in testing the activity of cortex extracts while rats and rabbits were unsuitable owing to their indefinite survival the latter animals frequently possessed accessory cortical tissue Stewart and Rogoff s results illustrated the beneficial effect of fluid on the survival of adrenalectomized dogs and this factor had to be kept in mind Dr Cleghorn described the symptoms of adrenal insufficiency in the animals and the method of preparation of the extract and the dosage The cortical extract had as far as was known no effect on the normal animal but in those suffering from adrenal insufficiency normality was

regained in the blood chemistry and the basal metabolic rate which was lowered in adrenal insufficiency Individuals suffering from hyperthyroidism injected with adrenal cortical extract had shown a fall in basal metabolic rate this was in keeping with Marine's belief that the cortex acts in a restraining capacity on the thyroid In the clinical use of cortex extract the potency of the extract might vary with the preparation and a complicating factor was certain untoward reactions noted by Benham and others as histamine was present in even protein free extracts this substance might be the cause of the reactions At least 5 c cm of the most potent extract were necessary to bring round a prostrate cat so that calculated on this basis a 60 kilogram patient should receive 100 c cm in a crisis Since the yield of active material of beef glands was disappointingly low Dr Cleghorn working on the analogy of the obtaining of insulin from fish made an extract from the interrenal bodies of the skate but this extract was found to be totally inactive

BACKACHE IN WOMEN

At a meeting of the Brighton and Sussex Medico Chirurgical Society on February 4th a discussion was held on backache in women from the gynaecological and orthopaedic points of view Mr HAROLD F SEYMOUR dealing with the problem from the gynaecological standpoint said that he thought there was now less backache in women than there used to be twenty or thirty years ago this being due to the much healthier bringing up of girls to day Whilst approving of sport and gymnastics for women he deprecated excess and said there was a danger in producing a male type of pelvis with its obstetrical disadvantages in young women where sport was indulged in excessively He stressed the point that there never could be physical equality between the sexes His remarks were confined to low backache in the sacral region and he referred only briefly to gross disease causing backache such as large fibroid tumours filling up the pelvis and causing pressure incarcerated ovarian cysts and the different types of salpingitis and of carcinoma whether of the body of the uterus or of the cervix Where gross pelvic disease had been excluded he considered there were three main causes of backache (1) retroversion and retroflexion of the uterus (2) chronic cervicitis and (3) prolapse In considering the treatment of retroversion he said that pessaries should be used only temporarily in the treatment of the condition A Hodge pessary would often cure a retroversion occurring after the puerperium Persistent retroversion causing backache and other symptoms should be treated by a round ligament shortening operation Chronic cervicitis another frequent cause of backache was best treated by anaesthetizing the patient and deeply cauterizing the cervical canal after dilatation Diathermy too was good but he preferred the actual cautery Bad cases not yielding to such treatment were best dealt with by amputation of the cervix In discussing prolapse he considered that the trouble except in a very few cases was due to injuries to the cervix and pelvic floor during childbirth He thought it an obstetrical disgrace to allow small women to give birth to large children In women with only the bare normal pelvic measurements where the child was obviously over 7 lb induction should be done much prolapse being therefore avoided Primigravidae over 40 years of age should always be given the chance of a Caesarean operation In the treatment of prolapse he again emphasized that pessaries should only be used as a temporary measure where the condition occurred after the puerperium and was simply due to lack of muscular tone Persistent prolapse should be operated on and by the vaginal route He thought the surgical treatment of prolapse was perhaps the most satisfactory of all operative procedures at any rate it gave the patient complete satisfaction She felt after the cure of her prolapse that she had returned to the time when she was a nullipara He hoped the profession would point out the advantages of the vaginal operations for prolapse and not allow women to go on wearing insanitary pessaries for years and years when they could be made clean and well by an operation which cured their backache into the bargain

Mr R BROOKE dealing with the orthopaedic aspect suggested that 80 per cent of cases of low back pain were gynaecological in origin and the remaining 20 per cent orthopaedic He pointed out that in the female the posterior pelvic or sacro iliac joints remained comparatively lax throughout life an adaptation to function—namely that of parturition Sacro iliac disorders occurred far more commonly in the female sex and at a period when the joints were most movable Pregnancy had a great influence on the sacro iliac diseases and injuries owing amongst other things to the increased mobility of the joint at that period At term the range of movement was increased approximately two and a half times above the maximum occurring in the non pregnant woman Evidence was produced to show that the return of stability of the pelvic joints was closely related to the normal uterine involutionary changes and that uterine subinvolution was associated with a persistence of the lax conditions of these joints which was present at term The practical application of this was seen in women who rose too early after a labour complicated by uterine subinvolution Here low back pain of other than uterine origin was a persistent symptom Disparity between the size of the foetal head and the maternal pelvis was another cause of disturbance in the normal anatomical and functional state of the pelvic joints and the passage of an abnormally large head through the pelvis might lead to over stretching of the sacro iliac ligaments with the associated symptoms of joint strain followed later on by those of a partial subluxation or a secondary traumatic arthritis Partial subluxation of the joint might occur in women after pregnancy and was usually traumatic in origin *X* ray examination was not of great assistance in the diagnosis of partial sacro iliac subluxations or displacements Arthritic changes could be demonstrated with greater certainty Joint laxity might be treated by means of a light brace or in less severe cases a strong corset Manipulation under anaesthesia was useful both as a curative measure in cases of partial subluxation and when the pathological change was in the nature of a peri arthritis It was also useful in the differential diagnosis of strain and subluxation from early arthritis In the latter a temporary increase in the amount of pain resulted from the manœuvre but this was easily controlled by a light brace with a pelvic band and sacro iliac pads Operative fixation was not on the whole indicated and should be regarded as a last resort when all other measures had failed Much could be done to prevent the many years of intractable backache and pain which many women suffered after pregnancy if the period of rest in bed after childbirth was governed by the state of the pelvic joints Persons suffering from delayed involution of the uterus required a much longer period of rest in the prone position than normal cases The same thing applied if the child was of large size or the head showed marked moulding

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At the meeting of the Zoological Society of London on March 1st Miss IDA MANN F R C S honorary ophthalmologist to the society exhibited and made remarks upon a series of drawings and photographs illustrating the iris pattern of Sphenodon (reptilia)

Reviews

SURGICAL PATHOLOGY

The *Text Book of Surgical Pathology*[1] by ILLINGWORTH and DICK emanating from the Edinburgh school is written on somewhat special lines It is intended for graduates and senior students and deals particularly with many aspects of the subject outside the scope of the ordinary textbooks on general pathology Only passing reference is made to such fundamental processes as inflammation suppuration ulceration and repair and the omission of these matters has made room for certain others likely to interest those whose knowledge has passed beyond the preliminary stages Thus in the chapter on tumours an account of experimental researches is given at some length and modern theories on the precancerous state and on the nature of tumour formation are reviewed Again in the chapter on diseases of bones the authors have discussed the various theories of the growth modelling and repair of bone and in that on diseases of the thorax much is included that is usually dealt with only in special treatises Certain subjects falling under the head of general pathology are retained —namely shock burns tuberculosis actinomycosis gas gangrene hydatid disease tumours and the effects of irradiation The remaining twenty six chapters follow the usual anatomical classification into regions and organs In accordance with the authors plan while the ordinary diseases receive a curtailed though adequate treatment pathogenesis and affections of relatively rare occurrence are fully considered Thus under diseases of bone will be found an account of Leriche and Policard's theory of ossification of heterotopic ossification, of diaphyseal aclasis and of Kummell's and Kienbock's diseases Ewing's tumour also appears for the first time in an English textbook under a separate heading and would seem from the accompanying photomicrograph to be of the nature of a round celled sarcoma Much space is likewise given to a description of the nature and the various types of chronic mastitis and their relation to fibroadenomata and carcinoma to the lymphatic supply of the breast to the spread of mammary carcinoma and its further dissemination to the normal and deranged rotation of the intestine to cholesterosis of the gall bladder and to the etiology of acute pancreatitis A similar line of treatment is adopted throughout the work where a more exact study of the subject is likely to prove of interest

The second volume[2] of the series of Monographs on Surgical Pathology in course of publication by Professor HUETZLER deals with the skin, fasciae muscles tendons and vessels As to its general character the work is essentially clinical with the addition of such microscopical details as bear on diagnosis and classification It is entirely original almost every statement being evidently based on personal observation and owing to the author's concise diction much information is condensed within a relatively small compass The text is illustrated by a large number of photographs of clinical cases these may be regarded as a special feature of the work and are of a quality that could hardly be improved upon in themselves they render the book one of great value The preface calls attention to aspects of the subject upon which the author desires to lay particular stress—namely the simpler lesions of the skin as possible precursors of malignant disease the classification of melanotic tumours and the genesis of thrombosis In the author's experience more patients present themselves with malignant disease resulting from neglected or maltreated simple lesions of the skin than from cancer of the uterus mammary gland or lip The difficulty seems to be that those who treat these simple lesions do not see the end-results and consequently remain ignorant of their significance The term precancerous used in connexion with these lesions is not devoid of ambiguity it is sometimes merely used to indicate a doubt whether the lesion may become cancerous whereas if it is to be employed at all it should only be used to designate lesions which we know may become malignant or to quote the author's metaphor they should be regarded as the small boy with a new gun who has not shot anybody—yet In order to bring precancerous lesions into the prominence which they deserve they are conveniently described immediately before the malignant groups to which they are severally related As to malignant melanotic tumours the author contends that there is no justification for placing them among the epithelial growths All that can be said is that they spring from undifferentiated cells which, if normal development had followed would have become epithelial cells but that there is more evidence of a neurogenic than of an epithelial origin The occasional alveolar structure is not regarded as warranting any conclusion about the origin of the tumours it serves however to separate such forms clinically from the more slowly growing spindle cell form A third group is added —chromomas—defined as arising not from previous lesions but in the normal dermal or subcutaneous tissues and as tending to recur locally and to produce early metastases by way of the lymphatics The chapter on thrombosis and embolism contains interesting original views on the causes and pathogenesis of thrombosis the ordinary opinion that thrombosis depends on damage to the endothelial lining of the vessels being discarded on what appear to be good grounds

DISEASES OF THE SKIN

The seventh edition of Sutton's well known textbook of dermatology was the first to appear in two volumes and now the eighth after an interval of less than three years has arrived in two slightly larger volumes The characteristics of this valuable textbook have been well maintained and accentuated in the present edition[3] Accurate description wealth of detail and a full bibliography are all provided and Dr SUTTON and his band of helpers have kept up the reputation they have always enjoyed of being well abreast of all modern research To do this is no light task as anyone will bear witness whose duty it is to keep himself moderately well acquainted with the contemporary dermatological literature which seems to multiply itself in each successive year Among recently developed branches of medicine none has filled a larger place in the public eye than the various and complex phenomena commonly grouped together under the title allergy To show the quality of Dr Sutton's talent for adequately presenting a topic of current interest we would refer the reader to the section on this subject It is not very long but it provides a succinct account from the dermatological point of view and it is furnished with a bibliography including contributions as recent as those

[1] *A Text Book of Surgical Pathology* By Charles F W Illingworth MD FRCS Ed and Bruce M Dick MB FRCS Ed Churchill's Empire Series London J and A Churchill 1931 (Pp viii + 280 figures 9s)

[2] *Surgical Pathology of the Skin Fascia Muscles Tendons Bursæ and Nerves* By Arthur F Hertzler MD Hertzler's Manual of Surgical Pathology London J B Lippincott Company 1931 (Pp xvi + 301 200 figures 21s net)

[3] *Diseases of the Skin* By Richard L Sutton MD Sc D LL D FRS Ed Eighth edition revised and enlarged London H Kimpton 1931 (Pp 1352 1200 figures 11 plates 52s net the two volumes)

of the second half of 1930 The illustrations which always form a highly important section of a textbook of skin diseases are as usual excellent and numerous Though the photographs are particularly good and clear the coloured plates are not quite so convincing This however is almost the only feature of the work at which we can cavil and we commend these two excellent volumes to the dermatological public without reservation

ELECTRO SURGERY

In the absence of new principles in medicine and surgery progress must to a large extent be restricted to the perfection of technical methods Indeed a famous surgeon expressed the view not long ago that the future of surgery lay entirely in this direction Perhaps this will turn out to be as little true as the similar forecast made about 1895 by a famous physicist that the future of physical science lay in a perfection of stoichiometry a statement which in less than a year was followed by the discovery of uranium rays and the opening of the vast field of radio activity Improvement of technical methods is needless to say of very great importance and nowhere more so than in the treatment of malignant disease by surgical measures Here the problem is especially complicated by the danger of opening up channels for the dissemination of secondaries so that no extirpation however radical is an assurance of non recurrence unless such channels have been effectively blocked The application of the thermic effects of electric discharges to this end is well known and the publication of Professor FRANZ KEYSSER'S experiences in electro surgery[1] will be greeted as an important contribution to modern surgery and as an index of the enormous mechanical improvement in this field since the introduction of diathermy twenty five or so years ago The methods of electro surgery described in this book are concerned with the application of low tension high frequency discharges particularly to inoperable malignant disease The apparatus and the theory of electro coagulation of tissues are dealt with very fully and magnificent photographs and diagrams are an outstanding feature of the volume From its nature this method of operation electrotomy and electro coagulation is bloodless the lymphatics and capillaries being completely occluded whilst the tissues are being cut Knowledge of the electrical resistance of the various tissues in which operation is to be undertaken is necessary and rapid easy adjustment of the current and frequency can be brought about by special devices on the apparatus which can be operated with a minimum of assistance The ingenious appliances for gaining access to difficult regions and without injury to neighbouring parts are fully described and will attract wide attention

Professor Keysser's clinical material has been of the most varied and he gives full details with excellent pictures of the condition before soon after and long after the operation Some of his cases were of such advanced and inoperable carcinomata that no improvement seemed possible yet the application of this radical method produced apparent arrest of the process and great improvement lasting for years Tissue defects were made good by Thiersch grafts As an adherent of the virus theory of malignant disease the author considers the degree of malignancy of a neoplasm as the result int of the virulence of the infective agent and the powers of resistance of the infected subject He therefore discusses the use of such adjuvant methods of treatment as radiation with Thor X the injection of dyes of bismuth of lead iodide and of suspensions made from malignant tissues these method being supposed to call forth greater resistance in the subject or to diminish the virulence of the infection

The book is of great value as a direct demonstration of what can be achieved by this very drastic method in an otherwise hopeless field

BACTERIOLOGICAL TECHNIQUE

The Essentials of Bacteriological Technique[2] by R T HUNWICKE scarcely lives up to its title for although the majority of technical procedures which the routine bacteriologist requires are clearly and adequately dealt with there are some important omissions One can hardly imagine for example that a bacteriologist would get very far in everyday routine work be it medical or public health without recourse to serological reactions yet serology receives no mention apart from the occasional statement that such and such an organism is identified by agglutination Then again it seems rather pointless to describe the technique of section cutting with the avowed object of the demonstration of bacteria in the tissues and omit to describe how these sections should be stained Moreover we think that the arrangement of the book leaves something to be desired For it is surely more logical to consider microscopy and staining methods before proceeding to the study of micro organisms and yet these subjects are treated in the reverse order It is of course infinitely easier to write a comprehensive treatise on bacteriological technique than one in which the essentials are to be described in a strictly limited space because it is so difficult to decide what must be included and what can safely be left out But if Chapter XI on the diagnosis of certain diseases (containing a purely arbitrary selection of six diseases which includes cholera) were replaced by a chapter on serological technique the value of this handbook would be definitely enhanced

UNDULANT FEVER

The appearance of Dr H VIOLLE'S book on undulant fever[3] is symptomatic of the increasing interest shown in this disease Those acquainted with the literature will find nothing new in this publication nor will they be impressed by the author's rather personal and one sided treatment of the subject So far as the section on bacteriology is concerned there are so many important omissions and so many dubious statements that little attention need be paid to it The symptomatology of classical undulant fever is already well known and the subject of diagnosis which is of very real importance, is imperfectly treated interpretations being lent to the agglutination reaction and the intradermal melitin test which would certainly not find favour with those who have had most experience of their use in practice For treatment the author recommends the intravenous injection of gonacrine or trypaflavine Vaccines prepared with lysed organisms he considers to be valuable partly by virtue of their specific antigens and partly by virtue of the shock to which they give rise *Undulant fever* due to *Br abortus* as distinct from *Br melitensis* is not specially considered and it is doubtful therefore whether the book will prove of much interest to practitioners in this country

[1] *Die Elektrochirurgie* Von Professor Dr Franz Keysser Leipzig Fischer 1931 (Pp x + 238 262 figures 2 plates M 52)

[2] *The Essentials of Bacteriological Technique* By R T Hunwicke B Sc A I C With an introduction by William J Savage M D B Sc D P H London Williams and Norgate Ltd 1931 (Pp 108 22 figures 6s 6d net)

[3] *La Fièvre Ondulante* Par H Violle Médecine et Chirurgie Pratique Paris Masson et Cie 1931 (Pp 114 4 figures 18 fr)

NOTES ON BOOKS

Mr W M Mollison has contrived to condense a surprising amount of information into seventy one small pages in *Acute Otitis Media*[1] one of the Pocket Monographs on Practical Medicine A straightforward clinical and pathological account is given with notes of a few cases illustrative of particular points and variations The most modern views on bacteriology and pathology are those adopted and the lines of treatment are both strictly orthodox and strictly in accordance with the true principles of surgery There is here no attempt to exploit any fanciful methods either of diagnosis or of treatment nor has the author been caught in the pitfall of advertising such methods by going out of his way to attack them he has wisely ignored them The illustrations are few but are well chosen to show the anatomical points essential for a proper understanding of the course of acute inflammation in the middle ear The book should be most helpful to the student and the practitioner

In his little book entitled *Humour among the Doctors*[2] which forms part of a series dealing with humour in different professions Lieut Colonel J Atkinson (John Ayre) has collected a number of amusing anecdotes concerning doctors and patients from classical antiquity down to the present day Although we find a good many old favourites quite a large proportion of the stories are new enough to be a source of merriment to the reader and to provide material for the after dinner speaker

The volume of the Practical Medicine Series on *General Surgery*[3] edited by Dr Evarts A Graham contains an interesting survey of recent progress in all branches of surgery including orthopædics The subjects of special interest discussed are the frequency of post operative thrombosis and embolism in various clinics Baer's treatment of osteomyelitis by maggots the delay in the healing of operation wounds produced by electro surgical methods as observed by J D Ellis of Chicago the various aspects of surgical shock the complications of spinal anæsthesia and the unfavourable results of phrenicectomy reported by I R Berry of Bellevue

[1] *Acute Otitis Media* By Wm Mayhew Mollison C B E M Ch R C S Lock Monographs on Practical Medicine London J Bale Sons and Danielsson Ltd 1932 (Pp 71 9 figures 4s 6d net)

[2] *Humour among the Doctors* By John Ayre London The Universal Press 1931 (Pp 158 3s net)

[3] *General Surgery* Edited by Evarts A Graham M D The Practical Medicine Series 1931 Chicago The Year Book Publishers Ltd (Pp 804 177 figures 64 plates 3 dol)

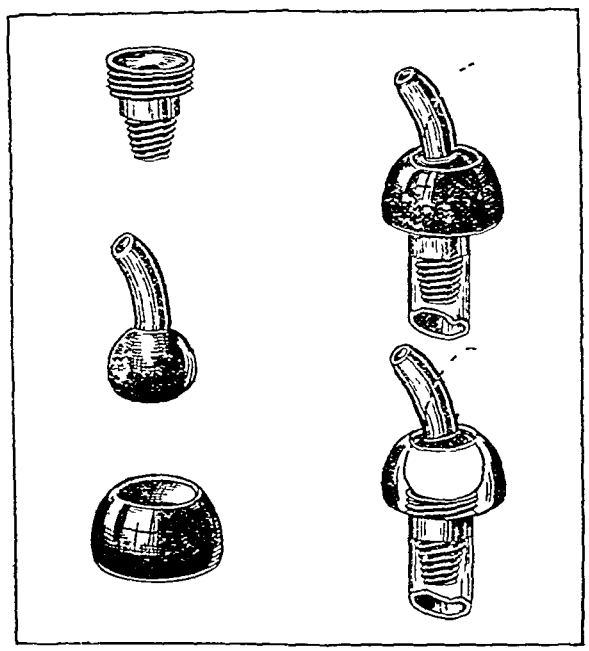
PREPARATIONS AND APPLIANCES

An Accessory Instrument in Microscopy

A new accessory instrument to the microscope known as the ultropak illuminator has been introduced by E Leitz (London) of 20 Mortimer Street W The microscopical objective is now an almost perfect instrument and it is in the illumination of the microscope rather than in the magnifying system that further improvement is indicated Dark ground illumination by means of which some noteworthy triumphs have been won has enhanced the visibility of feebly differentiated detail but it has its limitations In this new device the formation of micro-copical images of opaque objects is obtained through the action of incident light of rays lying entirely outside the path of the rays of the microscope Such an illumination system so arranged that no direct light falls upon or enters the front of the lens of the objective does away with reflections in the path of the rays and even when the objectives are used at full aperture there is no glare or haze in the microscope image It is not exclusively dark ground effects which are produced by an illumination of this kind and images are formed which may differ widely in character according to the nature of the object and the aperture of the illuminating pencils in relation to that of the objective Certain structures may show features typical of these several bright ground while others and this are only revealed in dark ground illumination The ultropak furnishes this ultra illumination as it is called by simple light up to high magnifications and can be so set and the illuminating rays so selected and cut off as to adjust the illumination in each case to meet the requirements of the object under observation A set of fifteen new objectives is available comprising six achromatic dry objectives four water immersions and five oil immersions and these can be rapidly interchanged without readjusting the illuminant One striking feature of the instrument is the way in which successive strata can be illuminated and viewed in rotation or some deep seated tissue examined despite overlying strata

Non Electrical Aids for the Deaf

A range of non electrical aids for the deaf has been produced by Scaland Trading Limited (24 Holborn London E C 1) the outstanding feature of which is an earpiece adapted to individual conformations and requirements The recognized unwillingness of the partially deaf to use an instrument may have been due as much to the discomfort of a standardized and therefore probably ill fitting earpiece as to a feeling of sensitiveness with regard to a rather conspicuous appliance It seems to have been assumed that the external auditory meatus is of like structure in every individual whereas in



fact it differs in length and (what is more important from this point of view) in diameter and curvature The earpiece which has been evolved in connexion with these instruments consists of an ebonite sterilizable meatus fitting made in three thicknesses and for each thickness in three lengths so that the deaf person can be reasonably sure of a well adapted fitting making for comfort and such accession of hearing power as is possible To the meatus fitting a concha fitting is attached which at the turn of a finger locks the inserted piece in position thereby eliminating interferences and vibrations The auricle earshell or horn made in imitation shell or mother of pearl is not unpleasing and in some of the patterns in the case of women particularly may be almost wholly concealed though there may well come a time when instrumental aid for imperfect hearing will be no more remarked than instrumental aid for imperfect vision We understand that the earpiece which owes much to the advice of a well known London otologist has met with the approval of the aural surgeons to whom it has been shown The firm proposes to offer its instruments to the deaf only through medical recommendation and to furnish them at a price which while maintaining the standard of British material and workmanship will bring them within the reach of people of most modest means This is much to be desired since there is evidence that defective hearing is increasing in this noisy age while at the same time with wireless and other developments the preservation of auditory sensitiveness was never a greater blessing

MEDICAL RESEARCH COUNCIL

ANNUAL REPORT FOR 1930-31[1]

(*Concluded from page 488*)

MATERNAL MORTALITY AND PUERPERAL FEVER

The Medical Research Council has been co operating in a systematic study of puerperal fever with the staff of Queen Charlotte s Hospital at Hammersmith, where a new isolation block has been erected for treatment, having research laboratories in close association with it The Rockefeller Foundation of New York is making a grant of £3 000 a year for seven years to the Council for the fuller development of this work Dr Leonard Colebrook and Dr R Hare have been conducting a special investigation on the therapeutic value of arsenical preparations in puerperal fever and the problem of bacteriotropic immunity to streptococci Further work has also been done on the biological characters of anaerobic streptococci and on the efficacy of antiseptics in midwifery Dr R M Fry and Miss E Cooper are studying the different factors predisposing to puerperal sepsis and the relative importance of haemolytic and anaerobic streptococci in its causation With Mr A T Fuller Dr Fry is also investigating the bacteriology and treatment of urinary tract infections in the puerperium At Sheffield a group of 550 women attending the ante-natal clinic of the Jessop Hospital and the Sheffield Municipal Clinic have been under observation Alternate cases were given a preparation rich in vitamins A and D throughout the last month of pregnancy , other cases did not receive this supplement and thus afforded controls for comparison It was found that in the group receiving added vitamins only 1 1 per cent developed pyrexia of the British Medical Association standard, while in the control group 4 7 per cent of the women developed pyrexia Other methods of comparison confirmed the protective power of the vitamin preparation It is remarked in the report that these results give a new emphasis to the importance of suitable diet during pregnancy as a means of increasing the resistance to bacterial infection and so lowering the maternal morbidity and mortality rates In a series of twenty seven cases of septicaemia bacteriologically diagnosed and treated with diets very rich in vitamin A, there was a mortality of seven cases In sixteen cases *Streptococcus haemolyticus* was found in the blood and there were five deaths This mortality is well below that usually ascribed to this infection but, in the absence of sufficient control cases, any definite conclusion as to the efficacy of the treatment would be premature

In Edinburgh a further study has been made of the after-histories of women who have suffered from the toxaemias of pregnancy Special attention is being given to the problem of reducing by dietetic and other measures the risk of permanent disablement from these conditions At Glasgow Dr D Baird aided by a part time grant for work on infections of the urinary tract in pregnant women, has been employing the intravenous injections of substances opaque to x rays to gain additional knowledge of the physiology of the kidney and ureter This method has been found to be particularly suitable for pregnancy, since it provides a satisfactory picture without any need for the passage of instruments At University College Hospital London Mrs J Taylor with a part time grant, is investigating a large series of obstetrical cases before and after delivery to trace the sources of bacterial infection Special attention has been given to the pathological significance of the anaerobic streptococci and an attempt has been made at their classification

RESULTS OF INSULIN TREATMENT

In its report last year the Medical Research Council commented on the slowness of the advance in the use of insulin in this country, and on the fact that many patients were not being thus treated under such conditions of biochemical control and dietetic balance as would secure results equal to those obtained at the chief medical centres Reference was also made to the difficulties of interpreting the official figures given for death rates for diabetes in succeeding years after the introduction of insulin The Council has since been instituting an inquiry into the results of insulin treatment at special centres with a view to determining more precisely the standard of success attainable under the best conditions A series of more than 1 000 cases of diabetes under treatment at one centre between 1925 and 1931 is now being submitted to statistical analysis The evidence and findings of this inquiry will be published separately at an early date, but it is mentioned in the present report that the figures for young and middle aged patients show a great preponderance of cases where good health is still being maintained against all expectation based on previous experience The real gain it is added is much greater than any figures can show Without insulin the patient during his brief period of survival, soon falls into a state of ever increasing and distressing invalidism under dietetic restrictions amounting almost to starvation The patient receiving insulin on the other hand retains or recovers in the great majority of cases a close equivalent of normal health a full measure of bodily and mental vigour and the capacity to enjoy an active life

TRIAL OF NEW REMEDIES

In view of the steady increase in the production of new therapeutic agents the Council last year set up a more regular machinery for the conducting of clinical investigations as might be required from time to time The chemotherapy committee which was originally appointed jointly by the Council and by the Council of Scientific and Industrial Research has been engaged in promoting the production of new synthetic substances of therapeutic importance and in their biological examination From this committee new synthetic compounds are submitted periodically for biological study in the laboratory or for clinical trial Other committees under the Council—for example, the sex hormone committee—will similarly bring to notice biological products when laboratory investigations seem to indicate the advisability of arranging for clinical study under controlled conditions The committee has recently been discussing with representatives of the Association of British Chemical Manufacturers the problem of arranging trustworthy clinical trials of substances produced by manufacturing firms A new standing committee of the Council of which Professor T R Elliott is chairman contains representatives of general medicine and surgery, and is empowered to obtain assistance as occasion may demand from specialists in particular branches It will work in close touch with the chemotherapy committee and as a result of consultation between the chemotherapy committee and the Association of British Chemical Manufacturers agreed conditions have been defined under which new substances may be submitted to the therapeutic trials committee for clinical study Investigations of this kind have already been organized at suitable hospital centres and are now in progress Acknowledgement is made in the report of the generous aid afforded to the work of the Council by the chief manufacturing firms

EXTERNAL RESEARCH SCHEMES

A large number of part time grants are being made to workers at hospitals and medical institutions and brief notes are given of the lines of research thus being

[1] Cmd 4008 Report of the Medical Research Council for the Year 1930-1931 London H M Stationery Office (2s 6d net)

nded At Guy s Hospital and Queen Mary s Hospital Stratford further work has been done on the value of alkalis in the prevention and treatment of nephritis and on the renal complications of pregnancy It has been found that throughout pregnancy the plasma bicarbonate is consistently lowered while the plasma chlorides and water content of the body are increased The administration of alkalis in pre eclamptic toxaemia promotes diuresis and aids in the control of albuminuria Study of the water and electrolyte balance of the tissues in health and disease has been extended with special reference to epilepsy and uraemic convulsions Investigations of the acid base balance in patients with bronchial asthma have shown that while between the attacks a slight acidosis is usual at the time of the attacks a condition of alkalosis is present which is probably due to hyperventilation At Edinburgh Dr A R Gilchrist has studied the local fat atrophy that may follow repeated injections of insulin It has been found that repeated injections of normal saline solution may produce a similar effect in the diabetic but not in the normal person It appears therefore that the subcutaneous fat of some of these patients is abnormally susceptible to injury and that the regeneration of the fat so destroyed may take as long as three years An attempt is being made at St Mark s Hospital London to compile useful statistical data regarding the prognosis in rectal cancer treated at different stages and by different methods At Cardiff experiments consisting of the grafting of healthy corneal tissue on the eye to replace tissue that has become opaque through disease or accident give some hope that a radical cure by surgical means may be discovered for blindness due to corneal opacity At the Royal Free Hospital London special attention is being paid to the composition of milk samples obtained from mothers whose infants are not making satisfactory progress Attempts are being made to correlate work on the iron content of milk with the observations of Dr Helen Mackay at the Queen s Hospital for Children on nutritional anaemia in breast fed infants In Sir Charles Sherrington s department at Oxford Dr J C Eccles has continued his studies of reflex action and new light has been thrown on some of the events in a motor neurone before and during the setting up of a reflex discharge The rhythmic responses are now being investigated and a mathematical study of the conditions underlying rhythmic discharge has been undertaken An attempt is also being made to determine whether the behaviour of the rhythmic centre of the heart conforms with that of a motor neurone At St Bartholomew s Hospital it has been shown that minute doses of curare may abolish parathyroid tetany without causing paralysis Work is in progress to test the action of curare in different nervous diseases in man At Sheffield further observations on chronic epidemic encephalitis have revealed that even in cases of long duration there is little wastage of the brain and little loss of phosphorus compounds though there is an increase of calcium salts This is in contrast with what is found in degenerative nervous diseases such as general paralysis of the insane and Huntington s chorea

PUBLICATIONS

During the past year the Medical Research Council has completed the publication of a *System of Bacteriology* under the joint editorship of Dr Paul Fildes and Professor J C G Ledingham and notices of the separate volumes of this important work have appeared in these columns It has also united with the Imperial Agricultural Bureaux and the Lord Library of the Rowett Institute Aberdeen in starting the new periodical *Nutrition Abstracts* which will bring together the publications of workers who approach the subject from the medical agricultural or other points of view

THE PATENT LAW AND MEDICAL RESEARCH

A memorandum on the patent law in relation to medical research is published in full as an appendix to the report Study of the special relations of patent law to medical discoveries the operation of the existing law the problem of universities and patent rights and of the unsuitability of applying this law to the fields of biology and medicine has led the Council to conclude that some amendment is necessary to extend still further the special treatment already given by the law to medical discoveries and as in some other countries to abolish altogether the rights of patenting these While admitting that there are considerable difficulties in the way it is thought that such a modification of the provisions of the law might possibly be devised as would remove the present disabilities and thus further research

THE ENTRANCE UPON PRACTICE

ADDRESS BY MR P H MITCHINER

The annual reception to final year students and newly qualified practitioners in the metropolitan area given by the Metropolitan Counties Branch of the British Medical Association took place at the Association s House on March 8th A gratifying number accepted the invitation of the Branch and the body of the Great Hall was filled with a company of about 500 After tea and conversation the chair was taken by Dr F W GOODBODY president of the Branch supporting whom were many of the other officers and members of the Branch Council together with some distinguished visitors including Lieut-General Sir Harold Fawcus Director General Army Medical Services The CHAIRMAN reminded those present that for the first four years after registration membership of the British Medical Association was at a reduced subscription He also gave particulars of the prize competition mentioning that the time for sending in the essays had been extended to March 31st He reminded the gathering of the forthcoming Centenary Meeting and of the arrangements made with a view to that event for liaison officers between the various London teaching hospitals and the Association

An address on The pitfalls of practice seasoned with much humour and greatly to the taste of the gathering was then delivered by Mr Philip H Mitchiner surgeon to out patients St Thomas s Hospital

After thanking Mr McAdam Eccles who had been his sponsor and godfather on this occasion Mr MITCHINER described certain things which a man or woman should do as soon after qualification as possible The first was obviously to register and on behalf of the Registrar of the General Medical Council he begged that that official might be notified also of any subsequent change of address The second thing was to join one of the medical defence societies which protected their members interests in any legal proceedings which might be taken against them by ungrateful or possibly maltreated patients One necessary precaution on becoming a member of such a society was never to continue any correspondence with a disgruntled patient but to hand it over to the secretary of the society another was in dealing with any cases of sprains or suspected fractures to have a radiograph of the patient taken or at least to obtain the patient s written refusal of such a course A third step in prudence was to insure against sickness Unless covered for sickness the man or woman newly established in practice was liable to be heavily handicapped in the event of being laid aside from work Another thing which should be done was to join the British Medical Association It was always a very wise thing for any member of a profession to join the body which looked after his general professional interests The B M A moreover through its

local organization would effect introduction to practitioners in his neighbourhood and through its *Journal* and in other ways would keep him abreast of developments in the science and art of medicine Another thing which it was wise to do was to join a medical graduates association connected with his university because this enabled the practitioner to get to know a large number of people and to retain a connexion which was useful to him in many ways Still one other thing should be done as soon as means allowed—namely to subscribe to medical charities

After recovering from the exuberance of finding that you are really a doctor the practitioner was faced with the problem of what course to follow The first thing to do was to try and get practical experience by means of a house appointment at some hospital There was a tendency in these times when competition was keen and money was not easy to get for men recently qualified to go to small hospitals which had to offer pecuniary recompense in order to get house officers A man might in such hospitals be £50 in pocket but he would receive no teaching and in future years might bitterly regret the fact that he had only worried through instead of having been taught properly Mr Mitchiner's advice to the newly qualified man was to try and get a job in his own hospital or if that was not possible in some other teaching hospital It was also extremely valuable if one had the means after having finished the house appointment to take a tour abroad The study of Continental work was always valuable and interesting If this could not be managed at least there was a great deal to be said for visiting other hospitals than one's own

Three courses were open to the newly qualified man or woman—namely to go into general practice to enter one of the many medical services now open or to set to work for a higher degree or diploma with a view to specialization If he were asked what was the outstanding feature of British medicine he would say that it was the very high standard reached by the general practitioners of this country (Applause) In no other country did the general practitioners hold the esteem of the public to such an extent nor did they devote themselves so whole heartedly to the care of the people or possess the same breadth of knowledge as they did here He considered that the finest thing that any man or woman could do was to go into general practice but he advised that a start be made either by working for a time as a locum tenent or as an assistant the same advice might be given to the man who intended to specialize It might be wise also on taking an assistantship to settle down with a view to a partnership but one should be careful to see that that was specified in the legal agreement drawn up There were two ways of entering in practice on one's own account One was in a new district to put up a brass plate and wait for patients the other was to buy a practice There again caution must be exercised in the purchase On the whole he thought a man was better in partnership than on his own Two doctors working together are as useful as eight doctors working separately

The public services offered a career to the ambitious man One great advantage held out by them was that work and a sure future were provided with a pension at the end But many of the public services to day were overcrowded It was well not to look entirely at the commencing pay but rather at the number of men already in the service so as to ascertain whether one's career was likely to be blocked by a large number of earlier entrants Another desirable thing was to join the service as soon as one could after being qualified Any good service would always allow a man to be seconded to do a year's house appointment and thus he could gain experience while at the same time adding to his seniority The value of the fighting Services was that they had the ideal—which he was sure was a right one—of taking fit people and keeping them fit and that was the job of the medical officer The Royal Naval Medical Service was an excellent one but it had the great disadvantage that the officer was always and necessarily under the command of a layman—namely the captain of the ship The R A M C presented the very best opportunity for promotion at the present time because there had recently been a shortage of officers joining that Service The Royal Air Force Medical Service was also good but at present rather overcrowded There were a number of other medical services like the prison medical service which offered limited opportunities or the school medical service under various local authorities which was very popular with medical women who were doing excellent work in it and then there were the various borough or county health appointments in which quite a good name might be made and much useful work done He mentioned also the Mercantile Marine and the Colonial Medical Service The latter was attractive especially for the first year or two but overcrowded The Sudan Medical Service was a little separate service very good and efficient and well worth considering if one did not mind somewhat wild and isolated conditions

If one wished to specialize one had to take high qualifications, but it was most desirable to take a general education in medicine and surgery before specializing One of the distinguishing things about British medical education was that specialism was properly and sanely approached from the basis of general medical and surgical experience He regretted to say that there was now some tendency to recede from that ideal He indicated briefly the various specialties which might be taken up Diplomas might be sought for example in public health and in tropical medicine Ophthalmology was another field in which to specialize, and radiology offered many openings There were always vacancies in different towns for the man who could take *x* ray photographs which did not look like The Thames early in November There was also a very good opening for those so minded in anatomy A good many senior professors in anatomy were dropping out and there were few people at the present moment to take their places

In conclusion Mr Mitchiner commended the *Handbook* of the Association which put much more fully and ably than he could the matters on which he had been speaking He urged that the *Handbook* should be studied by the newly qualified man or woman in search of a career He also hoped that those who were going into general practice would see their way to take a commission in the local R A M C Territorial unit where some useful experience might be gained and many interesting people met He begged the young people before him not to think of the making of money as the be all and end all of a career

The man who is going to be a great doctor who is going to be loved and respected by his patients is the man who is not going to worry about his fees The fees will come all right—there may be some bad debts of course—but they are not the things to seek first

Mr QUENTIN EVANS (St Thomas's) proposed a hearty vote of thanks to Mr Mitchiner for his very helpful and interesting address He felt that having listened to it no newly qualified men or women could have any doubt as to the wisdom of joining the British Medical Association at the outset of their careers Mr R BENNETT (St Bartholomew's) seconded the vote of thanks and mentioned Mr Mitchiner's work as a colonel on the medical side of the Officers Training Corps of which he had made a very great success

The vote of thanks was enthusiastically accorded and the meeting terminated

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A symposium on 'Robert Koch the man the years the harvest' was held at the East London Children's Hospital on March 11th, under the chairmanship of Sir Percival Hartley Mr W R Bett gave an account of the historic evening fifty years ago, when Koch announced his discovery to the Berlin Physiological Society Dr Harley Williams spoke of the reception and results of Koch's discovery Sir Henry Gauvain paid a tribute to Koch's genius as measured by the prevention rather than cure of tuberculosis and Dr A S MacNalty dealt with Koch as a bacteriologist Sir Percival Hartley concluded the meeting with personal reminiscences An exhibition had been arranged of Koch's photographs and works and of portraits of his co workers and disciples

British Medical Journal

SATURDAY, MARCH 19th, 1932

DIPHTHERIA PAST AND PRESENT

Dr J Graham Forbes in his treatise on *Diphtheria its Distribution and Prevention* brings up to date the story of one of the most interesting, historically of the acute infectious diseases of this country Though the disease had without question, been present locally from time to time under various aliases in England and Scotland during the eighteenth century it had died out by the beginning of the nineteenth Fifty years later it reappeared and from that time gradually invaded the kingdom finally entrenching itself firmly as a formidable enemy Nor did the efforts of the public health administrator have the slightest effect in checking its progress Hospital isolation of cases carried out on a large scale at one time a perfectly logical procedure proved a failure as also did all those measures which brought about an improvement in the conditions of life of the nation as a whole The introduction of the antitoxin treatment served only to mitigate the havoc caused by the disease it could not stay and indeed was not designed to stay, its spread The discovery of the carrier though it accounted for much that had been unexplained in the epidemiology of the disease was of no avail in stemming its prevalence for the utterly illogical and wasteful practice of wholesale swabbing to detect and isolate carriers proved quite useless, save in special local instances These and kindred subjects are fully discussed by Dr Forbes in those sections of the book devoted to aetiology (apart from the bacteriology) transmission and distribution of the disease His exhaustive and detailed account of its distribution affords ample evidence of the hold diphtheria has obtained not only on our own country but on every nation in the temperate zones It is interesting to note that of recent years the opinion seems to have gained ground that the influence of the weather or the season in the prevalence of the disease is to be attributed more to its action in modifying the susceptibility of the individual to the invasion of the causative micro organisms than to its effect on the micro organisms themselves—in the soil that is to say rather than on the seed

The portion of the book which will doubtless attract most interest is that which deals with prevention for it heralds an entirely new phase in the history of the disease By prevention Dr Forbes means prevention by active immunization with diphtheria toxoid or a toxoid antitoxin mixture—the diphtheria prophylactic of our Therapeutic Substances Act In the Schick test for immunity and the prophylactic by which immunity can be induced in a susceptible person

[illegible] By J Graham Forbes MD [illegible] With a note by the late Sir Frederick [illegible] London J Bale Son and Danielsson [illegible]

public health authorities have at last found trusty weapons of defence—weapons moreover of wonderful precision for in no disease has such accuracy in measuring the susceptibility of any given person been attained as in diphtheria The test and the prophylactic began to be used first on a large scale in 1921 in certain cities in the United States Since that year they have been employed more or less extensively in many parts of the world and a vast body of evidence now exists which is set forth by Dr Forbes in detail From the mass of facts collected by him several important points emerge We can do no more here than state them, for the proofs the book itself must be consulted The Schick test properly applied is a trustworthy test Attacks of diphtheria in Schick-negative persons are very rare and when they occur are extremely mild It is advisable to retest every immunized person about four months after the completion of the immunizing course In most cases the induced immunity persists for seven years, and very probably longer As diphtheria is most frequent and fatal among children the protection of only the child population would rob the all-pervading causative organism of the greater part of its baneful influence The use of the test and the prophylactic, recently much improved is a perfectly safe and harmless procedure There can be no question that immunization has been the means of abolishing diphtheria from a large number of small communities such as schools and orphanages, and from among the staffs of hospitals, especially fever hospitals in most of which it has now become a routine practice Though no such confident assertion can be made in respect of large populations yet there is trustworthy statistical evidence that in certain cities in the United States in which a very high proportion of the children have been immunized a definite reduction of endemic diphtheria has been observed On the whole it can be truthfully stated that in nearly every place in which the method has been tried a favourable opinion has been formed The only discordant notes come from certain observers in Germany Argentina and Australia—and in Germany the prophylactic employed appears in some instances to have been at fault In Great Britain and Ireland there has not been a sufficiently extensive use of immunization to justify a final verdict The experience of the United States goes to show that before a noticeable diminution in the prevalence of diphtheria can be effected at least 30 per cent of the child population must be immune Even in Edinburgh where immunization appears to have been more widely practised than in any other place in these islands only about 14 per cent of the children are known to be protected

Dr Forbes gives it as his opinion that immunization has come to stay and we do not dispute his view It is however clear that much propaganda work is necessary in this country at any rate, before its adoption becomes general Should Löwenstein's inunction method prove to be efficacious a more rapid extension of the measure might be expected To the propagandist this monograph should prove of the utmost value It

is a mine rich in information concerning the epidemiology and prevention of diphtheria Dr Forbes well deserves the gratitude of every person interested in those subjects for having evidently with laborious yet careful research, collected into one volume an enormous store of facts from sources to many of which only a few investigators can have access

DIET AND DENTAL DISEASE

Two papers on this subject are published in our present issue One paper (p 507) describes the effect of feeding children for six months on a cereal-free diet , the other (p 538) describes the dental condition and general health of the inhabitants of Tristan da Cunha in the South Atlantic The two investigations deal with very widely diverse circumstances, and yet the two sets of results confirm each other in a remarkable manner

Mrs Mellanby has devoted more than ten years to the study of the effects of diet on dental disease She worked first with dogs, and showed that deficiency in vitamin D caused maldevelopment of the teeth and that deficiency in vitamin A caused maldevelopment and predisposed to infection of the gums These conclusions were next applied to the prevention of caries in children, and Mrs Mellanby and Dr C Lee Pattison showed that the addition of cod-liver oil to children's diet had a pronounced effect in retarding or arresting the progress of dental caries At the same time they found that the addition of oatmeal to an ordinary diet favoured the spread of caries Other observers noted independently that caries was arrested in children on a diabetic diet These facts led Mellanby and Pattison to study the effect of feeding children on a diet in which cereals, such as bread, oatmeal etc , were excluded, and their place taken by potatoes, vegetables milk, etc A full supply of vitamin D was ensured by giving cod-liver oil or irradiated ergosterol The children, who numbered twenty-two, with an average age of 5½ years lived in an institution and were fed on the diet described for six months Routine examination of the teeth showed an almost complete arrest of both incidence and spread of dental caries during this period Previous investigations of the same duration with children of the same age fed on an ordinary diet with increased oatmeal had given an incidence of five teeth per child showing initiation or spread of caries The omission of oatmeal and provision of abundant vitamin D in another similar experiment reduced this incidence to one tooth per child The latest investigation yields, however, an even more favourable result than the one last mentioned and the authors conclude that cutting down the cereal content of the diet definitely favours the arrest of caries

The report of Surgeon Lieutenant Commander Sampson on the dental condition of the inhabitants of Tristan da Cunha provides even more striking evidence This community of about a hundred and sixty people is one of the most isolated in the world They live under conditions very like those of Highland crofters, while the climate resembles that of the Cape , they are mostly of British or Dutch descent The use of tooth brushes is unknown in the island, but the teeth are almost perfect Out of 156 mouths examined 130 were perfect The figures show that in the population examined 43 teeth had failed to erupt, 119 had been lost, 75 had become carious, and 3,985 were perfect There were only two cases of pyorrhoea and neither of these inhabitants was island-born No cases of rickets were observed among the children As the author remarks, it would be difficult to find any other white community in the world showing this dental perfection The outstanding peculiarity of the conditions of life of the Tristan islanders is that they are forced by circumstances to live on a cereal-free diet About the year 1885 rats were introduced on to the island and ever since have prevented the growth of cereals The staple food of the islanders is potatoes, fish milk, and eggs This community therefore presents a large scale, long distance experiment in dietetics, and the results seem to be almost conclusive, for the dental condition of these people is utterly unlike that of any other community of the same race in the world

The obvious variables that may influence the incidence of dental caries are dental hygiene race, amount of sunlight, calcium supply and diet The Cape peninsula in some respects serves as a control for here there is a community of the same race living on the sea coast at the same latitude as Tristan da Cunha Dental caries is, however, at least as prevalent in the Cape as in Great Britain Their peculiar diet appears to be the only likely explanation for the dental integrity of these islanders As regards this diet, the fish, eggs, and milk would provide an abundant supply of vitamin D but there are plenty of other seaboard populations that are similar in this respect and yet suffer from caries Hence the dental condition of this community appears to provide strong support for the theory advanced by Mellanby and Pattison—namely that a cereal free diet favours the normal development of the teeth

TUBERCULOSIS AMONG NURSES

Since the classical investigations of Villemin in the 'sixties of last century tuberculosis has been recognized as an infectious disease The frequent absence of any obvious source of infection, in contrast with experience with the acute exanthemata and the low incidence of clinical symptoms among those who acquire infection have however tended to obscure this fact, and to create an impression, which is far too general, that infection, *per se*, plays very little part in the development of tuberculosis A paper by Dr Everett K Geer[1] of St Paul, Minnesota affords a valuable corrective to this attitude The Ancker Hospital in St Paul is a hospital with 975 beds of which 215 are devoted to patients with tuberculosis The nurses are recruited at the age of 18 to 20 years and spend four months of their three years training in the care of tuberculous patients part of this special training being given in their first

[1] Geer E K *Arch Int Med* 1932 xlix 77

year Of 934 nurses in the hospital between 1920 and 1928 no fewer than 42 (4 5 per cent) developed tuberculosis either during training or shortly afterwards Impressed by this high incidence Dr Geer commenced, in September 1928 the examination of all probationer nurses by the intradermal tuberculin test using doses of 1 10 mg followed in forty eight hours if the reaction was negative by a dose of 1 mg Of the first thirty two nurses tested twenty two reacted negatively whereas amongst 147 nurses who had been in training in the same hospital for six months or longer only four negative reactions were recorded Retests of the probationer nurses at six monthly intervals conducted on a total of ninety four nurses showed that 90 to 100 per cent of them reacted positively to tuberculin within a year the reactions obtained were moreover all of the strongly positive type, indicating recent infection On the other hand among 219 nurses in other hospitals in St Paul not taking care of tuberculosis patients only 41 5 per cent reacted positively analysis showed practically no difference between the first- second , and third year groups of nurses the actual figures for the three groups being 40 43 1 and 42 3 per cent These observations are of very great interest demonstrating the frequency of infection of susceptible persons employed in the care of tuberculous patients That this infection is not without danger is shown by the fact that of 110 probationer nurses coming to the Ancker Hospital during the last two years six developed clinical tuberculosis three of them being cases of pleurisy with effusion—five of these six nurses had a negative tuberculin reaction on arrival It would appear from the results and from the earlier observations made by Heimbeck at Oslo that nurses recruited from districts where the incidence of tuberculosis is low frequently react negatively to tuberculin and that during their course of training if they are exposed to contact with tuberculous patients most of them become infected with the tubercle bacillus a certain proportion of these developing actual clinical disease On the other hand the risk of clinical tuberculosis in nurses who are positive reactors on arrival at the hospital seems to be very much less To protect the tuberculin negative probationer nurses and incidentally medical students two possible measures are available Heimbeck advocates their inoculation with B C G and both he and Scheel have reported very favourable results from its use though it is still too early to assess their real significance Geer recommends that nurses and students should be sheltered from infection by means of a mask technique such as that used in fever hospitals Both methods present certain difficulties They do however emphasize the desirability of testing with tuberculin all persons who are likely to be unduly exposed to infection of warning the negative reactors of the very real danger they run of contracting clinical disease and of endeavouring so far as possible the widespread distribution of tubercle bacilli by patients with open lesions and tubercle in clinics It must be pointed out that these measures afford except in favourable circumstances for stimulating the protective power of the tuberculous organism the small amount of immunity that it will probably confer may not be sufficient to tide them over the dangerous period of their training thus enabling them to develop sufficient resistance to prevent the tubercle bacillus from giving rise to active clinical disease

THE LEAGUE OF NATIONS AND OPIUM SMOKING

Both the Hague Opium Convention of 1912 and the Geneva Agreement and Protocol of 1925 contemplated the reduction of the consumption of opium prepared " for smoking and its eventual suppression While the earlier treaty spoke of that achievement being effected so far as traffic in ' prepared opium was concerned either immediately ' or as soon as possible ' the later agreement modified that obligation It provided by Protocol for the appointment of a commission by the League of Nations to decide when the export of opium from producing countries no longer constituted an obstacle to the arrest of opium smoking in consuming countries The decision of such commission was to initiate a period not exceeding fifteen years, within which the consumption of prepared,' or smoking, opium was to be ' completely suppressed The commission reported in 1930 It stressed the need for international co operation , it held that the suppression of opium smoking and of illicit traffic in opium was dependent on the limitation and control of poppy cultivation It drew attention to the revenue derived from opium which in some cases amounted to one third of the Government s income and it made many suggestions for the limitation and control of opium smoking It did not however fix any date for the beginning of the fifteen years within which total suppression of opium smoking was to be achieved In November 1931 an international conference organized by the League was held at Bangkok by the invitation of the Siamese Government at which Great Britain France India Japan the Netherlands Portugal and Siam were represented , the United States sent an observer ' The report of the Far East Commission above referred to was considered A new Agreement and Final Act were adopted These recommend inter alia a Government monopoly of opium the prohibition of smoking by minors the registration licensing and rationing of smokers the limitation of poppy cultivation and the furnishing of reports to the League of Nations on opium smoking and the revenue derived therefrom It is understood that the observer from the United States was opposed to Government monopoly and urged statutory prohibition of the import export sale manufacture use or possession of prepared ' opium

PAIN IN PEPTIC ULCER

Of the symptoms of disease pain is perhaps the most important It acts as a warning that something is wrong and as a guide post to the deranged organ Of the complaints of a patient pain is that which troubles him most and from which he desires most of all to be freed The origin and distribution of pain has probably received closer attention in the stomach and duodenum healthy and diseased than in any other organ That the final analysis has not yet been reached is evident from two communications recently made in the *Proceedings of the Staff Meetings of the Mayo Clinic* (vol iii No 9) Dr L E Pinckman reported the case of a man aged 51 who had had a gastro-

enterostomy for duodenal ulcer in 1924 In August, 1930, he began to have attacks resembling left ureteral colic, with severe pain to the left of the umbilicus radiating along the course of the left ureter, to the left testis, and occasionally to the back, there was some frequency of micturition Thorough examination excluded a lesion of the urinary tract After the patient's admission to the clinic a diagnosis of perforated gastro-jejunal ulcer was made and confirmed by operation when it was found that a jejunal ulcer had perforated just below the suture line into the fat Dr Prickman refers to Weir's observation in 1929 of the occasional radiation of pain to the genitalia in post-operative jejunal ulcer In discussing the distribution of pain in peptic ulcer, Dr A B Rivers points out that the discomfort produced by a balloon in the duodenum is similar in situation and lack of definition to that associated with shallow duodenal ulcers With extension of the lesion to the serous coat and peri-duodenal tissues there is a shift of the pain towards the right costal margin, it may be referred to the back or even to the chest In complicated lesions of the jejunum pain is not infrequently referred to the lower abdomen, but, Dr Rivers observes the pain of gastro-jejunal ulcer, if uncomplicated, may be identical with that of the pre-operative condition The intensity and radiation of pain in peptic ulcer should, he suggests, be correlated with the depth and extent of the lesion Further study along these lines would lead to more exact pre-operative knowledge of the nature of an ulcer, a knowledge which can be gained be it noted, by a careful clinical history Work of this kind is a happy indication that the clinical method will return, through the laboratory and the *x*-ray department, to the standard of accurate observation set by Hippocrates

BRITISH SOCIAL HYGIENE COUNCIL

The year 1930–31 was an important one in the history of the British Social Hygiene Council and the sixteenth annual report contains some valuable information on the progress made in certain directions The operation of the Local Government Act of 1929 meant that the Council had to face the task of stimulating local authorities to take a more active part in the campaign against venereal disease by providing further facilities for detection and treatment especially among women and children The Minister of Health was interviewed and a memorandum was prepared by the Medical Advisory Board after consultation with Sir George Newman This document sums up the present position with regard to venereal disease in this country and outlines a sane policy for the future Emphasis is laid on the need for public education—the reduction in the incidence of syphilis in the past ten years being quoted in support of this—and attention is directed to the increased effort required in many directions, as, for example in rural areas and in the treatment and management of infected mental defectives During the year under review the Council authorized the careful examination and consideration of the next step in social hygiene education—namely instruction in preparation for marriage The report of the Lambeth Conference focused public attention on different aspects of this problem and the Council has been in touch with the Church authorities Co-operation with the Archbishop's Advisory Board has already been achieved in relation to instruction in preparation for marriage and social hygiene teaching for students at the theological colleges It is often complained that the Churches give no active support to the campaign for social hygiene education carried on by the Council and this may largely be due to a lack of definite opportunity in obtaining scientific information on problems of sex during the training of theological students A member of the Council's committee is now lecturing in several of the colleges In order to meet a demand for more definite instruction in the early diagnosis of congenital syphilis a special post-graduate course has been organized, and is already in progress at the Hospital for Sick Children, Great Ormond Street This need for better recognition of the early manifestations of the congenital forms of venereal disease is one of the points especially urged by the Medical Advisory Committee in its memorandum

L'ENSEIGNEMENT MÉDICAL EN FRANCE

The French medical guide-book and directory which owes its origin to the enterprise of *La Presse Medicale*, has recently appeared in a new edition[1] The scope of this work is, to a certain extent, that of our own Educational Number But beyond that one of the principal objects of the French work is to serve the medical foreigner visiting France or its outposts After all, the Frenchman usually picks up what he wants to know from his neighbour, whereas the foreigner has often to plan his studies at home with no other guide than a work such as this It advises him as soon as he reaches Paris to turn his steps to La Salle Beclard of the Faculty of Medicine, 12, Rue de l'Ecole de Medecine where between the hours of 9 and 11 and 14 and 17, the multi-lingual presiding genius Mademoiselle Hure, takes the wayfarer by the hand and directs him along the paths he should follow A perusal of this guide-book shows how greatly medical education in France has become a post-graduate affair Only a generation or two ago the professional curriculum was completed in four or five years and the "perpetual student" was then the incorrigible dunce Now the dunce is he who completes his studies for good and all on receiving his diploma, his more gifted and conscientious colleagues are condemned to studies which do not, or should not, end before the retiring age It is characteristic of the cosmopolitan outlook of the French and of their compassion for the average Anglo Saxon, with his distaste for any language but his own, that a course of lectures on various specialties has been organized for his particular benefit Thanks to these lectures which in 1931 were given in June and July, he can exercise his critical faculties while listening to a Frenchman speaking English instead of developing an inferiority complex by listening to perfect French of which his ignorance may also be perfect It will probably come as a surprise to many who study this guide-book to find how numerous are the French centres of medical education which exist outside France This is not the place in which to refer to them all, and mention need only be made of the schools of medicine in Pondicherry and Shanghai The origin of the former dates as far back as 1823

[1] *L'Enseignement de la Medecine en France* Publié par les soins de *La Presse Medicale* 1932 Paris 120 Boulevard Saint-Germain (A copy will be supplied free on application)

NIETZSCHE'S MENTAL BREAKDOWN

The medical reader confronted with the clinical record so far as it is known, of Nietzsche's illness will no doubt be hard put to it to arrive at an exact diagnosis of the mental ailment from which he suffered, but he will have considerably more data to guide him than had his predecessors by reason of Dr E F Podach's work, *The Madness of Nietzsche*,[1] a revised and enlarged English edition of Nietzsche's Zusammenbruch translated by Mr F A Voigt Dr Podach has been at pains to gather together all the relevant facts of Nietzsche's breakdown as witnessed by the entries in the clinical case books of the mental hospitals at Basel and Jena His researches are of great interest but they do not afford us sufficient evidence of the real nature of Nietzsche's malady Although there is suspicion of a syphilitic causation one would be reluctant to make a retrospective diagnosis of general paralysis which indeed the facts do not seem to warrant The author has submitted his findings to several experts Dr Stutz of Basel does not hesitate to say that the data confirm the diagnosis of general paralysis Dr Michaelis regards the absence of any speech disturbance as noteworthy The dementia paralytica is at any rate, not typical He considers that the available records are too fragmentary for an exact diagnosis to be made, but suggests that the derangement was of the schizophrenic character Dr Emanuel does not believe that the diagnosis of general paralysis has been proven but admits that neurologically considered the evidence indicates the possibility of a nervous disorder of syphilitic origin It is not likely that any more exact conclusions will be reached As to the sanity of Nietzsche's philosophy, widely divergent opinions have been held some regarding it as the prelude and manifestation of the mental derangement which later overcame its author Others have accepted such philosophy as a profound and revelatory statement of truth in no wise to be explained away by the occurrence of a subsequent psychosis Nietzsche's quarrel with his polar opposite Wagner, his loneliness of spirit and his supreme intellectual courage foreshadow the introversion which in the end was to engulf him But the tragedy of his collapse must not be allowed to obscure the worth of his philosophy

BIOCHEMICAL ASPECTS OF BACTERIOLOGY

Dr A J Kluyver of Delft has published three lectures, delivered in the University of London on the chemical activities of micro organisms His subject is one of great interest at the present time for bacteriology is developing rapidly along biochemical lines The outstanding fact about the chemical activity of micro-organisms is their remarkable complexity and diversity This is illustrated by a tabulation of about eighty chemical compounds each of which can serve as the sole source of carbon in the development of *Pseudomonas putida* The first lecture deals chiefly with the process of alcoholic fermentation and the author shows that it is possible to distinguish four main stages in the fermentation of glucose The second lecture is devoted to glucose fermentations carried out by various bacteria, and to a consideration of a variety of anaerobic activities of bacteria Dr Kluyver's general view is that these fermentation processes are really a chain of consecutive primary reactions of a catalytic nature, and that the links of this chain all present a common character—namely a coupled dehydrogenation and hydrogenation reaction The results are none the less marvellous, for example the tubercle bacillus has been shown to produce lipoids in a synthetic medium in which asparagine and glycerol were the only organic compounds In the last lecture some of the chemical activities of micro organisms are compared with processes that occur in the carbohydrate metabolism of muscle Dr Kluyver suggests a scheme for the aerobic recovery process with pyruvic acid and acetaldehyde as intermediate products The scheme implies that from three molecules of lactic acid which disappear in the recovery stage one molecule is oxidized while two are resynthesized to glycogen It will be seen that in these three lectures he managed to deal with a remarkably wide range of subjects of fundamental biochemical interest

[1] London and New York Putnam (7s 6d net)
The Chemical Activities of Micro-organisms By Dr A J Kluyver London University of London Press Ltd (4s 6d net)

THE MEDICAL SECRETARIAT

As briefly announced in our report of the last meeting of the Council Dr G C Anderson has been appointed to succeed Dr Alfred Cox in the post of Medical Secretary of the British Medical Association on October 1st next Dr Anderson became Deputy Medical Secretary in 1919, and the Council has appointed Dr Robert Forbes as his successor in that post Many references have appeared in these columns to the steps that are being taken to recognize in a fitting manner Dr Cox's retirement which coincides with this year's Centenary celebrations His portrait painted by Sir Arthur Cope R A will be presented to the Association during the Meeting, and he will receive as personal gifts a cheque and a book containing the names of all subscribers to the testimonial fund The executive committee of the appeal hopes that members in all parts of the world who have not yet done so will give their active support to this excellent project Contributions may be made through the Branch and Divisional organizations or sent direct to the treasurer, Cox Testimonial Fund B M A House, Tavistock Square W C 1

We much regret to announce that Dr Alexander D Blackader emeritus editor of the *Canadian Medical Association Journal* died at Montreal on March 14th in his eighty-fifth year By a sad coincidence his death occurred within two days of the publication of our leading article on the Blackader Lecture in diseases of children Dr Blackader was lecturer in paediatrics at McGill University for thirty-eight years professor of pharmacology and therapeutics for thirty years and physician to the Montreal General Hospital for twenty-seven years He was elected a Vice-President of the British Medical Association in 1930

Lord Moynihan P R C S will deliver the Romanes Lecture for 1932 on Wednesday June 1st at noon in the Sheldonian Theatre Oxford His subject is The advance of medicine

TRISTAN DA CUNHA

DENTAL CONDITION OF THE ISLANDERS

During the recent visit of H M S *Carlisle* to the island of Tristan da Cunha Surgeon Lieutenant Commander (D) W E A Sampson R N acting under the orders of the Commander in Chief of the Africa Station carried out a detailed dental examination of the inhabitants of the island A copy of his report has been sent to us through the courtesy of the Medical Director General R N As the information obtained seems to be of considerable scientific interest we publish it below substantially in full The proposal to carry out this investigation emanated from the Dental Society of the Cape Province in 1924 and it will be noted that Mr J R A Moore, L D S, and others associated with this inquiry, were afforded the necessary facilities by the local naval authorities to visit the island

SURGEON LIEUT COMMANDER SAMPSON S REPORT

In accordance with instructions I joined H M S *Carlisle* at Simonstown at 8 a m on January 2nd 1932 for passage to Tristan da Cunha arriving there about 4 30 p m on January 7th The sea was too rough to allow us to land on that day so arrangements were made to proceed to the lee side of the island and to land stores on the following day The landing-party consisted of Surgeon Commander Bee, Surgeon Lieutenant Egan Mr Friedman of Reuters Mr Snell of the Education Department Mr J R A Moore who is a dental surgeon of Capetown and president of the Cape Province Dental Society and myself Mr Hagen who is a native of the island but is now living in Capetown also joined us After various adventures we arrived at the Settlement at about 6 30 p m on January 8th We found that we were to be billeted in the school house, and decided to examine the inhabitants there That evening we made arrangements through Mr Hagen for the inhabitants to be paraded at the school house at 6 o clock the following morning and the remainder of the evening was spent in making inquiries into diet housing sanitation, etc Next morning we started work at 6 o clock and carried out the dental and medical examinations simultaneously entering the results on forms designed by Mr Moore which gave us at the same time a complete census of the island both of the inhabitants and of their cattle The examination continued into the late afternoon when we found that there were about thirty people unaccounted for Arrangements were made for these to attend at 5 30 a m on the following day These persons duly arrived as arranged and we were able to complete our work and return to the ship

GENERAL CONDITIONS ON TRISTAN DA CUNHA

The settlement is situated on the north west side of the island and occupies a grassy slope about one mile wide and nine miles long stretching from the base of the mountains behind and sloping gradually towards the sea The houses number about thirty with a church and school and they are clustered together on the grassy slope Running down between the houses are several streams

Housing.—The houses are very like Scottish crofters cottages They are built of soft black stone hewn from the mountain side and dressed with axes The walls are made 3 to 4 feet thick at the bottom the stones being cemented together with a mixture of ashes from the fire and water The roof beams are made from tree trunks and the roof thatched with flax or tussock grass with sods of turf on the apex of the roof The number of rooms depends somewhat on the size of the family The individual rooms are about 15 feet by 10 feet The living room and kitchen have large open fireplaces The windows are small and not made to open but in spite of this the ventilation is quite good being effected by an almost permanently open door and the large fireplace The houses are very clean inside the windows have little curtains and the walls are decorated by pictures cut from magazines In front of each house is a stone walled garden in which flax is grown for repairing the roof At the back there is a stone kraal for the cattle, and various sheds Sanitation is very crude and unsatisfactory The pail system is used in one house only the contents being eventually emptied anywhere on the land behind the house Lighting is effected by means of small paraffin lamps When the supply of paraffin fails and this is frequent, they burn the oil obtained from seals in lamps made from any old tin such as golden syrup tins the wick being made from strips of cotton from an old shirt The water supply from a spring in the mountain side is abundant and the stream runs down through the settlement Whilst the water probably is pure at the source it is most certainly contaminated in its course by the excreta of animals birds and probably human being Samples from the source and the stream have been taken for analysis

Clothing.—The inhabitants seem as a whole well clad The men wear moccasins made by themselves from cow hide long thick woollen stockings which they draw up outside their trousers woollen sweaters and a varied assortment of coats and hats obtained by bartering from visiting ships The women wear long skirts with white or brightly coloured waistbands and scarves over their heads They also wear moccasins and woollen stockings These stockings are made by the women direct from the sheep s wool which they spin and knit Both men and women seem to have a suit of best clothes which they reserve for special occasions The children also are well and warmly clad

Population.—Total 163 Males 90 females 73 Springing from ancestors of English Scotch Dutch Italian and St Helena origin the people naturally show a great divergence of types Some are distinctly coloured others particularly children have fair complexions and blue eyes whilst one man is typically Mongolian Personally they are as clean as they can be under the circumstances Soap is a great luxury and not often obtainable hence when this is lacking they wash themselves and their clothes with ashes from the fire mixed with water They are quite an industrious community The men are engaged in farming fishing boat building collecting penguin eggs etc while they are expert at handling their boats which are made of canvas The women help on the potato patches spin the wool to make stockings and sweaters and do housework When stores arrive they are shared out according to the numbers in the family when things are bad they all help one another Important questions affecting the community are dealt with by a parliament consisting of the men over 18 and presided over by the Rev Mr Partridge the resident missionary The women are in complete subjection to the men and take no part in the affairs Their education is poor only a few can read and write Men women and children are extremely polite and courteous almost embarrassingly so This I believe is an improvement noted since the visit of H M S *Dublin* and is no doubt due to Mr Partridge s influence

Climate.—The climatic conditions are rather like those at the Cape The winters are mild and rain falls chiefly in June and July—that is during the winter The best months are December March and June The prevailing wind is westerly Potato patches are planted in September and dug in February

GENERAL PHYSIQUE OF THE ISLANDERS

The medical examination shows the islanders to be of good physique well nourished and moderately clean Among the children there is no evidence of rickets The specific infective diseases—scarlatina diphtheria mumps measles whooping cough etc are unknown Colds sometimes occur after the visit of a ship and some year (1929) an outbreak of influenza is reported to have occurred after the visit of the *Saxonia* The most prevalent complaint appears to be asthma but Surgeon Commander Bee considers this to be more likely subacute attacks of bronchitis All the chests examined were free from physical signs—even two islanders who complained

of haemoptysis One man is deformed having shortened upper extremities and is an epileptic Another man is dumb and mentally deficient Naturally marriage between cousins is frequent in this small community but this does not seem to have caused any marked mental deterioration

DENTAL FINDINGS

The dental examination has given some remarkable results Our main object was to find out (1) if dental caries was present among the inhabitants, and (2) if so, to what extent?

Dental caries is present but the incidence is so low that I think it would be difficult to find any other community in the world so dentally perfect and this in spite of the fact that not one of them has ever cleaned his or her teeth Another peculiar feature is that the two cases of pyorrhoea mentioned in the statistics occur in the only two of the inhabitants who are Europeans One born in Geneva was shipwrecked on the island and settled there the other was born in Capetown The children of these two people born in the island and living the island life are dentally perfect Nearly every adult examined has a certain amount of tartar which in many cases has set up a localized gingivitis but this would clear up with scaling The teeth are strong and well formed of a yellowish colour have flat cusps and are well calcified and no hypoplasia of the teeth was seen The irregularities were negligible instanding laterals being the commonest A large proportion of the people have an edge to edge bite and there was one case of open bite The arches and palate were well formed and normal no cases of acute or chronic abscesses were seen

From the foregoing list it will be seen that the staple diet is fish and potatoes the other articles being in the nature of luxuries Therefore the diet is rich in carbohydrates and phosphates

Summary of Dental Examination

Total persons examined	156	
Total temporary teeth examined	879	Total teeth examined
Total permanent teeth examined	3 181	4 060
Total carious temporary teeth examined	1	
Total carious permanent teeth examined	74	
Total temporary teeth lost	nil	
Total permanent teeth lost	119	
Total permanent teeth unerupted	43	
Normal palates	150	plus 2 under 6 months
High palates	4	
Normal arches	150	plus 2 under 6 months
Contracted arches	4	
Gums Healthy	147	plus 2 under 6 months
Gingivitis	5	
Pyorrhoea	2	
Tartar None	97	plus 2 under 6 months
Moderate	57	
Much	10	
Perfect mouths	130	

		Per cent	
Caries	Total	1 84	
	Temporary teeth	0 113	
	Permanent teeth	1 82	
Teeth lost	Temporary	100 00	Sound
	Permanent teeth	2 84	
Palates	Normal	97 43	
Arches	Normal	97 43	
Gums	Healthy	95 51	
	Gingivitis	3 21	
	Pyorrhoea	1 22	
Perfect mouths		83 33	

Percentage of Caries and of Perfect Mouths in Age Groups

Age Group	Number Examined	Permanent Teeth Examined	Carious Temporary Teeth	Percentage of Caries	Temporary Teeth Examined	Carious Permanent Teeth	Percentage of Caries	Permanent Teeth Lost	Percentage of Permanent Teeth Lost	Temporary Teeth Lost	Percentage of Temporary Teeth Lost	Permanent Teeth Unerupted	Percentage Unerupted	Number of Perfect Mouths	Percentage of Perfect Mouths	Remarks
1-5	22	6	Nil	Nil	372	Nil	Nil	Nil	Nil	Nil	Nil	—	—	22	100	Two babies under 6 months were examined in this group
6-13	40	444	Nil	Nil	503	1	0 198	Nil	Nil	Nil	Nil	—	—	40	100	The one carious tooth in this group was being shed
14-21	16	462	Nil	Nil	Nil	Nil	Nil	1	0 212	—	—	2	0 212	15	93 75	—
22-32	32	991	5	0 504	2	Nil	Nil	2	0 202	—	—	23	2 32	30	93 75	—
33-45	22	688	8	2 61	1	Nil	Nil	10	1 57	—	—	7	1 02	14	63 64	—
46-55	6	161	19	11 8	1	Nil	Nil	30	18 63	—	—	1	0 62	2	33 33	—
56 and over	18	429	32	7 46	Nil	Nil	Nil	76	17 71	—	—	1	2 56	5	31 25	This group includes one man aged 75 —perfect teeth one female aged 92

Every case examined was breast fed and the infants are weaned at twelve to fifteen months No dummies are used and no cases of thumb sucking were noted

DIET OF THE ISLANDERS

Flesh Food.—Fish is the main article in this category, and is their staple food In the winter they occasionally have beef or mutton but it is rather a luxury

Cereals.—No wheat is grown on the island They never have any bread or flour unless a ship happens to call (One year has elapsed since the last ship called)

Potatoes.—These form together with fish the staple food

Milk.—Plentiful and is used freely

Eggs.—Hens eggs and penguins eggs form a fair proportion of their diet

Sugar.—Hardly ever used they can get it only from ships

Green Vegetables.—Some cabbages turnips etc are grown and used while they last

Salt is scarce they make it by evaporating sea water They have no condiments Tea coffee and cocoa are obtained from ships and used sparingly Alcohol is never used

The results of the dental examination are shown in tabular form The points of special interest appear to be (1) The splendid condition of the mouths in age groups 1 to 5 6 to 13, 14 to 21 and 22 to 32 (2) That the islanders are all breast fed in infancy (3) That they never clean their teeth (4) The large proportion of carbohydrate in their diet

As so many eminent research workers are investigating the causation of dental caries I hesitate to express an opinion on the value of the figures and facts obtained but submit them for their consideration

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The International Labour Office has issued two further collections of brochures of the general series entitled *Occupation and Health* Nos 260 to 268 deal with nail works native labour (hygiene) titanium watch and clock makers occupational diseases of the eye and circulatory system mines (hygiene in) and oxalyl chloride Nos 269 to 279 with rope works selenium and selenuretted hydrogen starch manufacture tortoiseshell pyridine and pyrolygneous acid salicylic acid molybdenum and mother of pearl, shoddy, and occupational diseases of the respiratory system locomotor system and ear nose and throat The brochures can be obtained from the London office of the organization 12 Victoria Street S W 1

Scotland

Edinburgh Tuberculosis Trust

At the annual meeting of the Royal Victoria Hospital Tuberculosis Trust Edinburgh Sir Ralph Anstruther who presided drew attention to the statistics of work done as indicating the mastery of tuberculosis which was being achieved Research work was one of the main objects of the Trust s existence and he referred to an appeal in the annual report for an endowment sufficient to ensure an annual income for this purpose of between £600 and £800 for the next five years The report recalls the fact that we are within a few days of the jubilee of Koch s discovery of the bacillus of tuberculosis This discovery and the necessity which then became evident of detecting the disease at an early stage led to the activities of the Royal Victoria Hospital Tuberculosis Trust The Tuberculosis Dispensary was founded in 1887 as an intelligence centre where information would be received and guidance given concerning the disease This was followed by the establishment of the sanatorium in 1894 and the school for tuberculous children in 1895 The municipality opened a pavilion for advanced cases in 1906, and a farm colony for more continuous care in 1910 Classroom and laboratory accommodation for teaching was provided in 1912 and a chair of tuberculosis in the University of Edinburgh was established in 1917 More recently in 1922 a sanatorium colony at Southfield had been established by the Trust and in 1923 a tubercle free herd of cattle The report points out that in 1882, when the discovery of the tubercle bacillus was announced the mortality from tuberculosis in Scotland was 311 per 100 000 while in 1930 that figure had been reduced to 88 Although the number of deaths from all causes had decreased by about one half in this period the number of deaths from tuberculosis had declined by more than two-thirds and the decline had been especially accelerated within recent years Mr W J Stuart said that tuberculosis had ceased to be a fatal disease and that Edinburgh had been taken as a model for the anti tuberculosis campaign all over the world Sir Robert Philip speaking of Koch s discovery said that fifty years ago there had been an atmosphere of hopelessness and helplessness, and a fatalistic view that the disease ran in families Such a view had been exploded by the discovery of the tubercle bacillus and it was now known that the disease was a very simple infection which if taken at the right time could be successfully resisted They now knew that the disease was practically universal and that infection was very largely taken in childhood

Anderson's College, Glasgow

The closing address for the winter session of the Anderson College of Medicine was delivered on March 11th by Professor G Elliot Smith Dr J Bruce Murray who presided said that the year had been one of the most successful in the history of the college 430 students having matriculated during the session Professor Elliot Smith said that he did not intend to deal with the medical curriculum but with the wider problem of the necessity for medical students to study mankind In the rush of modern medical education the student too often turned to books instead of relying upon his personal observations He should not study the individual structures in the human body so much as the construction of the body as a living whole The medical practitioner had to deal less with injuries and diseases of particular parts than with human beings They were now beginning to appreciate how the whole nervous system was built up into a complex instrument for the purpose of making possible the acquisition of skill and that it was integrated into a machine of enormous complexity, which was capable of almost infinite variety of skilled action The student of medicine should be a student of mankind and not merely of those aspects of the humanities which he saw in the classroom

Glasgow Hospital Sunday Fund

Moving the adoption of the report at the annual meeting of contributors to the Glasgow Hospital Sunday Fund on March 7th Colonel J A Roxburgh who presided, said that since the fund was instituted in 1894 more than £257 700 had been collected for the benefit of the three infirmaries of Glasgow The highest annual collection in 1920, had been £11 877 but since that time there had been a gradual decrease and last year the amount subscribed had been £9 103 He added that the combined shortage in the ordinary revenue of these three institutions for the past year had amounted to £57 000 This deficit had been covered by legacies, but it was generally admitted that to be indebted to legacies for such a large proportion of annual income was undesirable Reference was made to the paying wards, which were now being started in the infirmaries The total number of persons who received help from the three infirmaries during the past year was equivalent to one fifth of the population of Glasgow

New Infirmary Buildings at Aberdeen

The Town Planning Committee of Aberdeen Town Council at a meeting on March 11th approved plans involving an estimated expenditure of £112 000 for new buildings of the Aberdeen Royal Infirmary at Foresterhill The plans now passed are for three blocks—the administration block, kitchen departments and quarters for the resident medical officers—to be erected east of the medical block which is already in course of erection The buildings are to be constructed of granite roofed and floored with reinforced concrete

England and Wales

Serum Treatment in Cerebro spinal Fever

A memorandum just issued by Sir George Newman as Chief Medical Officer of the Ministry of Health deals with a problem arising out of the records received from medical officers of health in over 300 cases of cerebro spinal fever The scheme for an inquiry to determine the value of serum treatment was recently instituted with a view among other things to comparing the potency of different serums in current use and utilizing the strains obtained from recent cases in serum preparation Analysis of the cases reported has emphasized the difficulty to which the Ministry now wishes to draw attention It appears that the doses of serum given the period of the disease at which serum treatment was begun and the time during which it was continued have differed widely from the recommendations outlined by Flexner and other authorities with special experience in treating this disease and set out in the Review of certain aspects of the control of cerebro spinal fever published by the Ministry Briefly their advice was as follows (1) That lumbar puncture should be performed as soon as there was any suspicion of fever and serum should be injected intrathecally without waiting for bacteriological confirmation or typing (2) that intrathecal doses should be in the region of 30 c cm (in concentrated serum 10 c cm) for the adult case and that the administration of a general anaesthetic would greatly increase the amount of cerebro-spinal fluid obtained thus enabling the operator to give a full dose of serum without risk of increasing intrathecal pressure (3) injection should be repeated every twenty

four hours for at least three or four days or until convalescence is obviously established Where the latter does not occur and also in cases of relapse injections should be recommenced

The memorandum points out that it would be impossible to expect the treatment of all cases to fulfil exactly the above criteria for individual cases may require exceptional treatment whilst intravenous or intramuscular injections may have supplemented or replaced the intrathecal method Nevertheless the divergence from accepted practice as shown by the case records in question can hardly be accounted for solely by such considerations If approximate compliance with the three criteria is *essential* the cases now available for analysis form less than half of the total and data for assessing therapeutic potency of serum and comparing its individual curative effects are consequently reduced It is suggested that *further case records* during the present year be accompanied where necessary by notes explaining the reasons which in the opinion of the practitioners have contraindicated the giving of serum early enough in sufficient amounts and for a sufficiently long period to secure its full benefit Medical officers of health would it is stated, greatly assist the inquiry by bringing the above considerations to the notice of hospital medical officers and others concerned with the serum treatment of cerebro spinal fever

Society of Public Analysts

The Society of Public Analysts held a dinner at the Trocadero Restaurant on March 4th to celebrate the fifty sixth anniversary of its foundation with the president Dr J T Dunn in the chair Sir Ernley Blackwell, replying to the toast of His Majesty s Civil Service referred to the connexion between the Home Office and the society and said that it was almost fifty years since the first two official analysts to the Home Office were appointed One of the most distinguished of these analysts was the late Sir Thomas Stevenson a former president of the society He pointed out that the evidence in court that was based on the facts provided by analysis was, as a rule accepted by both sides though the inferences to be drawn from those facts were sometimes challenged Lord Atkin in proposing the toast of The Society spoke of the value of the services of public analysts to the community and contrasted the condition of the purity of food at the present time with that which was prevalent before the passing of the first Food and Drugs Act He expressed the view that definite standards should be fixed for foods and in particular for milk and that the onus should be upon the vendor to prove that the article sold conformed to that standard The fact that vendors could defy the recognized standard for milk with an explanation about the idiosyncrasies of the cow was due not to legislation but to a decision of three out of five judges in a certain criminal case He had always longed for the time when an enterprising municipal authority would really fight this cause in a civil case and take it if necessary through the Court of Appeal to the House of Lords for the benefit of the community

In replying to the toast of The Kindred Societies proposed by Mr A Chaston Chapman Sir F Gowland Hopkins paid a tribute to the usefulness of the journal of the Society of Public Analysts (*The Analyst*) to workers in biochemical laboratories

Correspondence

THE STUDENT IN IRONS

SIR —Dr C M Wilson s gallant effort to bring the subject of the medical curriculum out of the atmosphere of prize day orations deserves our sympathy

My experience as a medical student and teacher in London has been a practically continuous experience of thirty three years At the beginning of the century when I was an undergraduate or junior teacher of physiology the problem our teachers and seniors were trying to solve was this Their material consisted of young men whose general standard of culture was defined by the requirements of the old London Matriculation examination, and they tried through the medium of the preliminary and intermediate subjects to cultivate their pupils powers of thinking Their *primary* object was not so much to convey technically useful information as to inculcate a reasonable attitude Junior teachers were not discouraged from trying—they were even encouraged to try—to explain the pros and cons of rival theories—for example of colour vision which had little practical importance but great intellectual interest

With the passing years the solution of this educational problem has become more difficult Not only has part of the preliminary scientific teaching been pushed back to an earlier age but owing to the unceasing demand for more and yet more technical instruction many teachers wish to see the intermediate instruction used more as a vehicle for conveying technically valuable knowledge and less as a means of general culture

We seem to be faced by three choices (1) We might insist upon a preliminary educational standard at least equivalent to a pass degree in arts or science and modify the professional training on the assumption that entrants will be generally educated youths of 21 (2) We might abandon the purely educational side of the curriculum and train medical students *mutatis mutandis* as motor garage apprentices or working electricians are trained (3) We might admit that it is not possible to turn out at the age of 23 young Admirable Crichtons competent to do all things which the general public might in theory expect a doctor to be able to do and concentrate on the task of training these young people how to learn

(1) Is economically fantastic (2) is the logical outcome of present tendencies (3) is what Dr Wilson proposes As a teacher of young post graduates I have not the least doubt that in adopting (3) is our only hope of improvement I think the general educational standard of our profession is falling not merely its literary standard but its logical standard Fallacies which ought not to deceive a properly educated boy are frequent in the writings of men who clearly possess much technical knowledge Only very few people can reason accurately without being taught there is no time to teach them —I am etc

Loughton March 12th MAJOR GREENWOOD

PUBLIC HEALTH AND THE FUTURE

SIR —I had hoped that someone with a readier pen and a more authoritative position than I can claim would have commented on the views expressed by the late Dr Parlane Kinloch in his letter to Sir Arthur Newsholme published in the *Journal* of February 27th As one who has had considerable experience of public health work I believe implicitly in the soundness of his views and deeply regret the death of one who was in a position to do something to change the present trend of preventive medicine which is passing more and more into the hands of local authorities and their officials

To be exact the present system involves much more indiscriminate treatment than preventive Recent legislation gives every encouragement to proceed further along the same path It is a relatively simple matter to protect the *community* from mass infection, and the comparative

ease with which it has been accomplished has apparently blinded those in authority to the far greater difficulties of dealing with the ill health of the *individual* The two are worlds apart The wholesale removal of tonsils and decayed teeth has done surprisingly little to raise the standard of fitness They are only aggravating factors the roots of disease go much deeper and are, at present little understood

The future of *real* preventive medicine does not lie in the hands of public officials but depends on the efforts of the eminent research workers who are striving not unsuccessfully to throw a little light on the mysterious workings of the human body and no one is in a better position to give practical application to their work than the private doctor The general practitioner is the true link between the research worker and the public The personal touch and the sympathetic understanding and confidence which binds doctor and patient together are indispensable This is an age of machinery, and the public health machine is trying to produce health by mass production methods clinics, and more clinics, is the never ending cry statistics and even more statistics—yet disease goes merrily on There is bound to be a swing back to the family doctor sooner or later and whoever will show the way will deserve well of his day and generation The reversal of the present unprofitable policy will not now be easy but I personally see no insuperable difficulties —I am etc ,

Birkenhead March 6th D J GAIR JOHNSTON

HYDROCHLORIC ACID IN DIABETES MELLITUS

SIR —While deeply interested in Professor Henry Moore s study of achlorhydria published in your issue of February 27th I cannot agree with his observations on the administration by mouth of hydrochloric acid in diabetes mellitus

Since my investigations on gastric secretion in diabetes (a short communication on which in the *Glasgow Medical Journal* June 1927 appears to have escaped Professor Moore s notice) I have treated with the acid in addition to whatever dietetic or other measures may be necessary for the individual patient practically every case of this disease coming under my care In the out patient department I find a large proportion of diabetic patients do quite well on quantitative diet plus hydrochloric acid by mouth only a relatively small number requiring insulin in addition

During the last five years in Dr Henderson s wards in Glasgow Royal Infirmary 145 diabetic patients have been treated on similar lines These being as a rule more severe cases a somewhat larger proportion required insulin treatment In some cases hydrochloric acid has been withheld till the patient has shown a more or less constant blood sugar concentration and urinary excretion of sugar under known conditions of diet and insulin administration Thus we have been enabled to obtain charts showing the response on adding hydrochloric acid by mouth The results though not invariable are very encouraging and a noteworthy point is that several patients who have come back for observation monthly over a period of years can keep clear of urinary sugar and show normal blood sugar concentration on much smaller dosage of insulin so long as the acid is being taken

After the first few months there is no difficulty in getting the patients to continue the treatment as they have a greater feeling of well being when taking regular doses of the acid —I am etc

Glasgow March 12th EVELYN MCPHERSON M D

FRACTURES OF THE SPINE

SIR —With reference to Mr R Watson Jones s article in the *British Medical Journal* of February 21st 1931 and Mr H J McCurrich s clinical memorandum published on March 5th 1932 I should like to ask them if they think the prone position on the stretcher would be detrimental to the patient as regards his breathing and the action of the heart bearing in mind that the patient is shocked Certain experienced teachers of first aid of our organization think it would In fact some of the foremost leaders in the first-aid movement whose opinion is entitled to consideration inform me they would rather run the risk of the spinal injury and all that this means than the risk of failure of the respiration or the circulation of the blood Others equally deserving of being listened to are in favour of transport in the prone (extended or hyper extended) position giving every chance to the fracture and disregarding (or risking) cardiac or respiratory failure as the lesser of two evils Could Messrs Watson Jones and McCurrich reassure the first mentioned that they might disregard cardiac or respiratory failure? Do the above authorities recommend turning the patient face downwards (1) if found on his back with the lower limbs paralysed? (2) when lying on his back if a fracture of the spine is only suspected and there is no apparent paralysis of the lower limbs?

Some members of the Revision Committee of *First Aid to the Injured* would not allow first aiders to run what they consider to be a risk in turning the patient If I remember correctly Mr Watson Jones laid it down that all first aid workers should be taught in the future that a patient with an injured spine *must* be carried face downwards May one assume that he does not qualify this ruling at all?—I am etc

Torquay March 12th C I ELLIS Colonel Surgeon in Chief St John Ambulance Brigade

AMBULATORY TREATMENT OF FRACTURES

SIR —It was a pleasure to read Mr R Watson Jones s letter in your issue of March 5th Mr Jones has experience in clinics dealing annually with 5 000 fractures many of which he probably sees himself and his opinion must receive great attention It seems however that his meaning must be divined by reading between the lines of his letter rather than by accepting his words as they stand Interpreted in an understanding way his remarks, which apparently apply to fractures of both bones of the lower leg should receive very wide support

It is quite true that many people keep such cases recumbent for an unnecessarily long period Practically all lower leg fractures can be discharged from hospital in a few days they soon cease to be recumbent and at the end of about six weeks are freely walking in suitable splints If for financial reasons the patient must be able to start weight bearing earlier it is easily arranged for him to do so by fitting a suitable plaster with a protected heel But a manual worker (say a dock labourer) recumbent for a few days and then allowed weight bearing at the end of six weeks will not return to full work later than a similar case allowed to walk at the end of two days Surely Mr Jones does not mean that the absence of weight bearing for a few weeks entails the dreadful complications which he has so dramatically described nor can he mean that he believes in dense adhesions arising as a result of disuse *per se* True rest in a normal position is beneficial and cannot give rise to adhesions though these may result from trauma whether accidental or deliberate and stiffness is usual if a joint is fixed in a faulty or strained position Similarly decalcification of bone never occurs with rest for a reason

able time and why is it not seen in non fracture cases in which recumbency is essential? As for the oedema due to lack of tone in the musculature of the vessels this is an attractive though highly speculative suggestion

Common sense must be used in the treatment of fractures as in any other branch of medicine Each case should be treated on its merits and should be treated not as a bone nor as a limb but as a whole person The procedure suggested of immediate weight bearing though yielding in skilled hands results just as good as moderate recumbency has many pitfalls as a universal practice and if used indiscriminately must lead to unfortunate results —I am etc

Liverpool March 12th BRYAN MCFARLAND

THE BARBITURATES IN ANAESTHESIA

SIR —The leading article in the *British Medical Journal* of March 5th impresses me as a wholesale condemnation of the intravenous injection of barbiturates in basal hypnotic doses If this interpretation be correct it is unlikely to meet with the support of those who have had any considerable clinical experience with barbiturates of proven value irrespective of pharmacological evidence

With regard to basal hypnosis generally it is stated in this article that the possibility of toxic effects particularly upon the liver and excretory organs cannot be disregarded and that the barbiturates are cardiac depressants Chloroform has similar properties nevertheless it is still in common use on the basis of clinical merit Some further points require comment It is said for instance that the method [basal hypnosis] lacks the precision and fine control which can be obtained by inhalation anaesthesia and then the intravenous method allows the minimal effective dose to be determined accurately Surely this is a little contradictory? The endorsement of the opinion of the Council of Pharmacy and Chemistry that any advantages in the employment of barbiturates as basal narcotics or hypnotics can be procured by giving them by the mouth does not help us much since accurate dosage which is essential for successful basal anaesthesia and which varies with each individual patient is difficult to obtain How then is accurate dosage to be arrived at in a practical manner other than by intravenous injection?

My own experience of intravenous administration of the barbiturates is based on nembutal (pentobarbital sodium) which has proved superior as a basal hypnotic to other members of the group in a recent series of pharmacological experiments [1] An account of 180 cases has already been published These administrations were by no means experimental as nembutal had already established its worth in the hands of Lundy at the Mayo Clinic Lundy informed me recently that he continues to use it Since then I have given in addition 683 injections The operations cover a wide field They include simple procedures such as dissection of tonsils in which the presence of active throat reflexes at the end of the operation is all-important They include such operations as lobectomy and drainage of lung abscess in which depression of respiration or circulation is a matter for grave concern In none of these cases has there been any sign or symptom of the sudden circulatory and respiratory disturbances referred to in your article as intravenous reflexes In none has there been any clinical evidence of damage to the liver or excretory organs On the other hand the approval of the method by patients is unqualified as evidenced by the demand for its repetition when a subsequent operation has been necessary

The merits and disadvantages of basal hypnosis in anaesthesia need not be discussed here They are already well known The agent or combination of agents to be used may be a question of choice No matter what the choice may be since individuals vary in their reaction to most drugs the question of accurate dosage will remain a matter for fine discernment on the part of the anaesthetist where safe and effective results are essential I am satisfied that intravenous injection of nembutal combined with a suitable dose of morphine hypodermically provides at least one safe and accurate method —I am etc

London W 1 March 12th I W MAGILL

[1] Barlow and others *Anesthesia and Analgesia* 1931 x No 6 299

[2] Magill *Lancet* 1931 i 74

THE COMMON COLD

SIR —Since the report in the *Journal* of February 13th of a discussion on The common cold opened by Sir Thomas Horder at the Royal Society of Medicine some very interesting letters have appeared in later issues particularly those of Lieut Colonel R H Elliot on February 27th and Dr Douglas Webster on March 5th

Colonel Elliot's treatment seems to be rather complex and from a scientific point of view leaves one guessing which of the many activities is the effective agent in relieving the complaint Personally if I were asked to choose the factor of greatest value I would say wearing the inhaler and mask—this without giving any credit to the medicament employed On the principle of assisting Nature's efforts their use seems to be scientifically correct because it keeps the entering air warm and maintains warm moisture in the nose pharynx and larynx This ensures the full activity of the cilia and respiratory currents both of which keep these cavities scavenged and ventilated

The first effect of a cold is to dry the lining of the nose and upper airway and in the absence of moisture the cilia become paralysed and motionless There is considerable evidence to show that this paralysis is not due to any toxins resulting from the infection as ciliary motion can persist so long as ample fluid is present in which the cilia can move In the dry nose the respiratory air currents make no physiological contact with the mucous membrane thus preventing evaporation and so causing stagnation of air in the sinuses with defective ventilation Sneezing and spasmodic cough are Nature's way of producing the necessary secretion to moisten the uncomfortable dry mucous membrane and both cease when sufficient is poured out The use of fluids in the nose in an acute nasal infection is a potent source of evil as it is liable to cause sinus and middle ear trouble and removes the physiological secretion which Nature soon supplies as a protective measure and for which washes are a poor substitute

Dr Webster emphasizes the use of heat as an activating agent in bringing about immunity to the infection and I am in complete agreement with him in this A hot bath —as hot as bearable and of sufficient heat to cause momentary goosiness of the skin of the limbs—to which is added about two pounds of common washing soda and taken before the last meal of the day and some hours after the previous meal (for digestive circulatory reasons) is invaluable The immersion must not exceed one minute so that the skin becomes absolutely dry after towelling because if perspiration follows the bath the immunity effect seems to be greatly diminished probably due to a fresh loss of heat To arrive at the best heat for the bath the thermometer is of less value than the hand for testing the tolerance of any given individual

Insert at intervals of five seconds and if, on the third trial the hand and arm to the elbow can just bear the heat this will be the proper temperature

If therefore I were asked for the minimum of effective treatment I would suggest that should the pyrexia be less than 100° F and one's occupation indoors and more or less in one temperature wear a mask or inhaler much of the time and without any medicament and take the hot bath and a lighter diet than usual, and the result in the upper airway will be gratifying very soon If the pyrexia is over 100° F, or one's occupation is out of doors or one sweats during sleep on the first night of the attack it will be prudent to remain in the room temperature and treat as indicated above

These remarks refer entirely to a true cold in a previously more or less normal nose in which there is an inflammation of the mucous membrane as indicated by some pain heat swelling redness and pyrexia A pseudo cold—sometimes mistaken for the true common cold and often allergic in origin such as attacks of vasomotor rhinitis—is quite a different matter This can be relieved rapidly by using a very weak cocaine oily preparation to paint the intranasal mucous membrane a few times If a true cold occurs in persons with allergic tendencies, the combined treatment is indicated

Can colds be prevented? In the light of our present knowledge I fear that the answer is not in the affirmative, and is likely to continue thus so long as our respiratory airway tissues react to infection as they are intended by Nature to do and our habits under the varying conditions of civilization remain much as they are to day There are many reasons for this view but the subject is too large to pursue here —I am etc

London March 7th JOHN F O'MALLEY F R C S

SIR —I desire to emphasize the value of gold and silver preparations for the abortion of colds in their initial stages In your issue of February 27th Colonel R H Elliot drew attention to the value of a gold silver preparation called orargol in this connexion I can testify to its value from my own experience I have found it possible to abort a cold almost infallibly by spraying the throat and nose with orargol as soon as the first symptoms make their appearance I have also found argyrol 10 per cent a satisfactory preparation for the same purpose I find the desired effect to be obtained by spraying the nose and throat three or four times at intervals of two or three hours These preparations are unsuitable for habitual use as prophylactics owing to the risk of argyrism Their value as abortives of the common cold is however, insufficiently recognized It is important of course that treatment should be commenced at the first appearance of symptoms otherwise the desired effect is not obtained —I am etc

W R D FAIRBAIRN M A M D

Edinburgh March 12th

COLPORRHAPHY AND PROLAPSE

SIR —If Mr Hesketh Roberts would give a detailed description of the operation he mentions with the results in a few hundred consecutive cases we should be in a better position to understand his letter and to estimate whether or not the operation is really an advance upon the older one Up to then I must retain my present opinion—that the [illegible] of prolapsus uteri does not necessitate the opening of the abdomen —I am etc

Manchester March 11th WM FLETCHER SHAW

ASEPTIC MENINGITIS

SIR —Various cases of aseptic meningitis have recently been recorded in the *British Medical Journal* and elsewhere which leave room for doubt as to their real origin In my experience many diagnoses of aseptic meningitis are accepted on insufficient grounds and if fully investigated it will be found that at least 99 per cent of such cases can be properly classified For the past two years or more cases of cerebro spinal fever have been occurring and in many of these repeated examinations of cerebro spinal fluid obtained by lumbar puncture showed clear fluid and absence of meningococci in spite of strong clinical signs being present I disliked the diagnosis of aseptic meningitis and eventually performed cistern punctures on the very ill patients or post mortem The examination by Dr Cookson of the fluid thus obtained led to a diagnosis being made in almost every case of clinical meningitis in which the previous findings by lumbar puncture were negative, the majority of cases proved to be meningococcal

Being desirous of avoiding cistern puncture in the milder cases whenever possible it became necessary to have some other form of confirmatory test and Dr Cookson undertook the examination of the blood in every case by means of a complement fixation test the results of which were entirely satisfactory to the clinician—they are about to be published in the *Edinburgh Medical Journal*

It is my opinion that no case of aseptic meningitis can be accepted the diagnosis of which rests solely on the results of lumbar puncture Cistern puncture is necessary either post mortem or ante mortem The complement fixation test is very important and frequently confirms the septicaemic form of cerebro spinal meningitis or the so called cases of Still's disease Here we find that by adopting the above methods aseptic meningitis becomes so rare as to make one doubt that it occurs at all, but two or more cases are so unusual as to make inquiries as to the investigations essential negative lumbar puncture findings are frequent and we have eventually obtained the causative organism in every case of so called aseptic meningitis occurring during the last eighteen months in this district This is a most interesting study showing the vagaries of cerebro spinal meningitis tuberculous meningitis streptococcal and pneumococcal meningitis etc and proving that aseptic meningitis is indeed very rare—so rare that if more than one turns up beware! —I am etc

Sunderland March 6th E THORP M B D P H

GENITO URINARY TUBERCULOSIS AND THE MINISTRY OF PENSIONS

SIR —Will you permit me as a war pensioner and as one who has been a medical officer to the Ministry of Pensions to discuss this matter? For these reasons (1) that the contention of Dr C J Gordon Taylor is in my opinion correct (2) that the argument of Sir I Farquhar Buzzard is obviously wrong and (3) that it would be a pity if as a result of the pronouncement of a man in Sir E Farquhar Buzzard's position it were accepted by the public and by the profession that the average pensioner is treated with generosity I think I shall be able to show that large numbers of war pensioners are exposed to hardship as a result of the official interpretation of their claims

I need hardly say that I do not attribute intentional harshness to any official of the Ministry of Pensions I do say however that the consideration of claims is commonly unscientific and therefore inhumane The essential error in Sir E Farquhar Buzzard's letter of February 20th is contained in the third item of his

arbitrary tabulation of Dr Gordon Taylor's argument

The Ministry of Pensions says there is no evidence that the disease was either contracted or aggravated by war service What else could the Ministry of Pensions possibly say on that evidence? I will tell Sir Farquhar Buzzard what they could very well say, and what any decent person would say if he were sufficiently acquainted with war conditions to realize their effects He would say

This man, having served on various fronts in the war from 1915 until the armistice must inevitably have been so damaged as to be rendered liable to chronic disease That is, whatever disease he may develop within post war years must be regarded as aggravated at the very least by war service The argument in considering all the claims of men who have become chronic invalids after the war provided their records show actual active service should scientifically be this No human body, with few exceptions is fit to stand the strain that was imposed on this man's body by conditions of service in the great war therefore whatever disease he developed in post war years must be regarded in the narrowest interpretation as aggravated by his war service

Great hardship accrues to the war pensioner through his being assessed by people no matter how academic all eminent who are ignorant of actual war service They cannot apparently realize the body as a whole Even if *a man is supposed to* have been damaged in one organ or part it is *commonly* denied that this can have any *influence on the rest of his body* If anyone chooses to deny that *this* is actually so in thousands of cases of war pensioners I can easily provide instances Briefly in my opinion no one who has not experienced the strain of *actual front line service* is capable of justly assessing the disabilities of war pensioners

I beg the favour of your columns to put on record that in my opinion a great majority of war pensioners are simply being compelled to go on working—being utterly unfit to carry on regularly—*until they kill* themselves owing to the exceedingly low *assessments* commonly awarded In my own case for example when I was totally disabled and known to be so on the *certificates* of distinguished (and truly generous) members of the profession I was awarded 30 per cent If I had not had a valuable friend in the person of the late Dr X I doubt very much whether I should ever have got any more Dr X privately exerted himself and promoted my claim I was much too ill to have done anything for myself One of the least generous provisions of the Ministry of Pensions is that sick and gravely ill men are compelled to forward their own claims *In my own case I have* had to wait as much as a fortnight after claiming medical attention when seriously ill —I am etc

JAMES C WATT *M C* M B Ch B

London W 1 March 10th

PATHOLOGICAL SERVICE OF THE L C C

SIR —I have been waiting for a statement from the London County Council in answer to my letter in your issue of February 6th but in the absence of any more official reply we may perhaps take Dr Gordon Goodhart's letter in your issue of February *20th* as expounding views endorsed by his chiefs of the London County Council

One important thesis is maintained in that letter—the claim that a laboratory *to be of* any use must as Dr Goodhart says be in the immediate vicinity of the wards and by this I mean not farther away than just across the road If it is one mile away it might almost as well be five or ten This argument surely makes the plan to provide five elaborate (that is the description used in the Council report) group laboratories contemplated by the London County Council even more vulnerable than I represented it to be, it is impossible to suppose that all the hospitals to be served by the group laboratory would be just across the road from that laboratory The fact that where agreements with the voluntary hospitals to undertake laboratory investigations for the Council hospitals have been in existence and have been cancelled that step has in every case been taken not by the voluntary hospitals but by the London County Council disposes of Dr Goodhart's suggestion (for which he offers no evidence) that the voluntary hospitals were anxious to be rid of the service they were giving And yet Dr Goodhart says there is no reason for 'antagonism between the Council and the voluntary hospitals' I may remind him of the old rhyme Le chat est un animal mechant quand on l'attaque il se defend Can Dr Goodhart be surprised that chairmen of boards of management and staffs of voluntary hospitals are uneasy at encroachments on the work of voluntary hospitals, of which the present instance is an example?

But the main purpose of this letter is again to draw attention to the fact now placed beyond controversy by the statement over the signature of the chairman and secretary of the Voluntary Hospitals Committee (in your issue of February 13th) that the decision to provide these laboratories was taken in opposition to the advice tendered by the Voluntary Hospitals Committee in accordance with Section 13 of the Local Government Act 1929 The position thus reached bears out I submit very precisely the prophecy which I ventured to make in a letter to the *Times* of December 14th 1929 when the Local Government Bill was still before Parliament I pointed out in that letter that the machinery provided by the Bill for consultation of the county hospitals with the voluntary hospitals bore a disconcerting resemblance to the machinery which had long been in operation under the Education Acts, and that this resemblance was disconcerting because the consultations similarly provided for by the Education Acts of Education Committees with the London County Council had long become *farcical the advisory* memoranda furnished to the County Council by these Education Committees having been for the most part regarded by the Council as proper provender for waste paper baskets It is clear from the letter signed by *Lord Riddell* and Dr Geoffrey Evans that the L C C has now in fact treated the advice tendered by the *Voluntary* Hospitals Committee in the matter of group laboratories with the same lighthearted contempt

The position has I think come about (as I in fact predicted that it would from the failure of Section 13 of the *English* Act to enforce the measure of co operation secured by Section 27 of the Scottish Act That section in the *Scottish* Act chiefly owed its genesis to the insistence of a medical M P Major Walter Elliot *then* Under Secretary for Scotland *During the progress through* Parliament of the English Act the medical members in both Houses made a vigorous effort to induce the then Minister of Health Mr Neville Chamberlain *to accept* in the English Act the safeguards provided by *Section 27* of the Scottish Act and although a personal appeal in this sense was made to the Minister *Section 13* remained unmodified I may say that in an answer from the Ministry of *Health* privately conveyed to me within the last few days the Ministry states that it has no jurisdiction in actio taken by the London County Council and therefore cannot even make representations to that body *pointing out* the present failure to implement the undertaking *clearly implicit* in Section *13*—namely that the *Council hospitals would not attempt to duplicate* services which the accredited authority appointed by the voluntary *hospitals declared to be already* available at the voluntary hospitals —I am etc

House of Commons March 15th E GRAHAM LITTLE

PUERPERAL SEPTICAEMIA AND C M B NURSES

SIR —With reference to Dr Sidney Wolff s letter in the *Journal* of March 12th the remarks that apply to a C M B nurse doing general work as well as mid wifery must surely apply to a general practitioner attending obstetrical cases I attend about forty to fifty cases a year some with midwives who do no other work and some with district nurses who do general work as well Personally I have been fortunate in not having had any maternal death since qualification (1920) and find that the incidence of puerperal infection works out about the same with the two classes of nurses The returns of the medical officers of health of each district should be definite on this point—admittedly an important one Furthermore surely it is agreed that many puerperal infections are autogenous?—I am etc ,

Swansea March 12th L W HEFFERMAN

THE TUBERCULOSIS PROBLEM

SIR —I do not wish to take any further part in the correspondence on this subject except to draw the attention of Dr Middleton Martin to the March 1932 number of the *Edinburgh Medical Journal* This number contains a most masterly exposition by Dr A Stanley Griffith of our present knowledge of the role of the bovine type of the tubercle bacillus in human tuberculosis I would commend this article to all tuberculosis workers medical and veterinary In this article it will be found that Dr Griffith most certainly does not subscribe to Dr Middleton Martin s interpretation of his (Dr Griffith s) findings

Might I just add that I had no foreknowledge of the contents of Dr Griffith s communication other than that I knew it would concern the bovine type of the bacillus and that he had asked permission (which was gladly given) to use some of my unpublished figures?—I am etc ,

Bradford City Sanatorium March 15th W M CUMMING

Obituary

J H REYNOLDS V C LL D

Lieut Colonel R A M C (ret)

Lieut Colonel James Henry Reynolds V C died on March 4th aged 88 He was born on February 3rd 1844 the second son of Laurence Reynolds J P of Dalyston House County Longford and was educated at Castle Knock and at Trinity College Dublin where he graduated M B and Ch B in 1867 He entered the Army as assistant surgeon in 1868 and was posted to the 36th Foot now the 2nd Battalion of the Worcestershire Regiment He became surgeon in 1873 on the abolition of the rank of assistant surgeon and surgeon major in 1879, by a special promotion for his services at Rorke s Drift He was then however only one year short of promotion by length of service in the ordinary course He became brigade surgeon lieutenant colonel in December 1892 and retired in January 1896 After his retirement he was employed for some time in medical charge of the Royal Army Clothing Factory at Pimlico

He served in South Africa in the Griqualand expedition of 1875 in the Kaffir war of 1877–78 taking part in the action with the Galekas at Impetu and in the Zulu war of 1879 when he was one of the three officers in the fort at Rorke s Drift which withstood the attack of the Zulu army after the annihilation of a British force chiefly consisting of the 24th Foot the South Wales Borderers at Isandhlwana and saved the colony of Natal from invasion by the rush of the triumphant army of Zulus under King Cetewayo The other two officers were Lieutenant Chard R E and Lieutenant Bromhead 24th Foot all three got the V C He was also present at the battle of Ulundi where the Zulu army was completely defeated and the Zulu kingdom brought to an end He was mentioned in dispatches in the *London Gazette* of March 15th 1879 and received the medal with a clasp as well as the V C He was also given the LL D by Trinity College Dublin the Honorary Fellowship of the Royal College of Physicians, Ireland and the Gold Medal of the British Medical Association His V C was gazetted in June, 1879 as follows

For the conspicuous bravery during the attack at Rorke s Drift on January 22nd and 23rd 1879 which he exhibited in his constant attention to the wounded under fire and in his voluntarily conveying ammunition from the store to the defenders of the hospital whereby he exposed himself to a cross fire from the enemy both in going and returning

Colonel Reynolds was one of the three oldest V C s who attended the dinner in the Royal Gallery of the House of Lords at which the Prince of Wales presided on November 9th 1929 In 1880 he married Elizabeth daughter of Dr M Cormick

Mr WALTER G SPENCER writes

Whilst Colonel Reynolds was in charge of the Pimlico Clothing Department he frequently sent workers to Westminster Hospital for treatment and later he came to me about his health the last time at the beginning of 1929 Then a cancer for which a grave operation would previously have been called for disappeared in about ten days under radium Colonel Reynolds was thus able to walk at the head of the V C s at the Thanksgiving Ceremony and to be present at the dinner in the House of Lords Our conversations often returned to Rorke s Drift and from notes I jotted down I have picked out a few of his reminiscences which I have not noticed in print There were thirty six patients in hospital most in different stages of typhoid fever No preparations had been made for the defence of the station Reynolds was senior officer having been already six years in South Africa Bromhead and Chard were young subalterns just out from England Dalton an army non commissioned officer who had rejoined had had experience in the methods of defence employed by the Boers When fugitives from Isandhlwana reached Rorke s Drift it was first proposed to evacuate the place but Reynolds declared that to be impossible Even if the convoy could cross the river the ascent of the opposite bank was so long and steep that the Zulus would certainly catch it up It was Dalton who arranged the defence with mealie bags When the Zulus came into view there appeared horsemen in scarlet and the cry was that the cavalry were returning but Reynolds pointed out that the riders were not rising in their saddles but sat the horses as did the natives Coming nearer the Zulu impi drew up and ceremoniously took snuff heralding a charge to the uttermost A few Zulus got into the garden and into the hospital before two patients in bed could be got within the laager a third lost his head took a wrong turning and was also killed The remaining thirty three cases were saved and survived the subsequent stench

We regret to record the death of Dr BOSTON FLEMINGSTONE FORDYCE at a Cambridge nursing home on February 14th He was born at Duns Berwickshire in 1858 the son of the Rev John Fordyce a prominent minister and missionary of the Presbyterian Church of Scotland After graduating M B Ed in 1883 he sailed as a ship surgeon to India and later held assistantships at Henley on Thames Northampton and Cambridge On the death

of his principal at Cambridge he succeeded to the practice and soon became known as an able and reliable general practitioner especially on the Chesterton side of the town where he worked for over forty years He held the medical officership to the Chesterton Union Workhouse and none cherish his memory more than the poor in that district He retired to Bournemouth in 1929 and so general was the sorrow at his death that a request was made by his old parish of St Luke's Cambridge for a memorial service, which was accordingly held at that church on February 23rd Dr Fordyce represented the Cambridge and Huntingdon and East Anglian Branches on the British Medical Association Council in 1912–14 and was a representative in the Representative Body in 1920–22 During the Insurance Bill struggle he was unanimously acclaimed leader of the profession locally and spared neither time nor trouble in acting as an efficient chairman at the meetings For long after the passing of the Act he served with great success as secretary of the Panel Committee besides sitting as medical representative on the Insurance Committee He also took an active part in local affairs He became a member of the Cambridge County Council in 1895 and an alderman in 1907 Re elected in 1913 he remained on the council for one year when he resigned He represented West Chesterton Ward on the Town Council in 1922 retiring in 1926 During these years of public service he rendered abundant professional aid on various committees Following his labours in connexion with the Insurance Bill the respect and gratitude of his professional brethren were expressed by a public luncheon and presentation of plate the first to pay tribute to his worth being Sir Clifford Allbutt He is survived by his widow two daughters and one son His loss is mourned by all sections of the community with whom he came into contact

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Dr JAMES GREIG SOUTAR of Cheltenham died on February 29th He received his education at the University and at the school of the Royal College of Surgeons of Edinburgh and graduated M B C M in 1881 After holding the offices of resident surgeon at the Edinburgh Royal Infirmary and demonstrator of anatomy in the University he specialized in mental diseases and subsequently became medical superintendent of Barnwood House Gloucester He was a member and past president of the Royal Medico Psychological Association He took great interest in the work of the British Medical Association and was a member of the deputation which waited upon the Central Council during the annual meeting at Ipswich in 1900 with an invitation which was accepted from the Gloucestershire Branch for the Association to meet in Cheltenham in 1901 Dr Soutar was appointed a member of the Arrangements Committee and also of the local Executive and Reception Committee he was also a vice president of the Psychological Medicine Section

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We have to announce the death of ROY FERGUSON CAMPBELL M B B Ch Ed D T M and H D P H Cantab aged 37 who died on March 1st at the Brompton Hospital Dr Campbell was until invalided from Sierra Leone the medical officer of health for Freetown where his genial character and application to work earned for him a warm place in the hearts of Europeans and Africans alike Joining the Australian Forces in 1914 as a private he subsequently rose to the rank of sergeant after fighting in Gallipoli and France Extensive injuries to his shoulder sustained from a shell wound in 1917 ultimately led to his death from toxic myocarditis He leaves a widow but no children

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Mr J T CHURCHILL whose death occurred at Matlock last week was a partner in the firm of J and A Churchill medical and scientific publishers of 40 Gloucester Place Portman Square For thirty five years the cousins Mr J T Churchill and Mr A W Churchill M A have worked together in partnership in the business established by their grandfather John Churchill in the year 1825

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on March 12th the following medical degrees were conferred

M D—A W C Mellor
M Chir—M F Nicholls
M B B Chir—W Radcliffe G H Sanderson

NATIONAL UNIVERSITY OF IRELAND

A meeting of the Senate was held on March 10th under the chairmanship of the Vice Chancellor Dr Denis J Coffey

A letter of regret for inability to attend was received from the Chancellor Mr Eamon de Valera A resolution was adopted expressing appreciation of the intimation received from the Chancellor of his intention to remain associated with the work of the University as far as his new duties will permit and conveying the best wishes of the Senate for the success of Mr de Valera's public services as President of the Executive Council of the Saorstat Eireann

It was decided that travelling studentships in (1) chemistry (2) pathology should be offered among others for competition in 1934 Professor W D O Kelly was appointed to represent the University at the Royal Sanitary Institute Congresses at Brighton in July next

The degree of M D has been awarded to Peter J Kerley

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons was held on March 10th with Lord Moynihan the President in the chair

The Right Hon Lord Dawson of Penn P C G C V O K C B K C M G President of the Royal College of Physicians and Sir Henry S Wellcome L L D F S A founder of the Wellcome Research Institution were elected Honorary Fellows of the College

Mr Francis James Steward was elected the representative of the College on the General Medical Council

It was reported that the Mackenzie Mackinnon Research Fellowships of Dr G Scott Williamson M C and Dr T C Hunt had been renewed for another year

Diplomas in ophthalmic medicine and surgery were granted jointly with the Royal College of Physicians to twelve candidates

Licences in Dental Surgery were granted to thirty four candidates who were successful at the February examination

The Services

HONORARY SURGEON TO THE KING

The King has approved the appointment of Colonel A C H Gray O B E M B as Honorary Surgeon to the King in succession to Colonel G De la Cour O B E, M B who has retired

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R N MEDICAL CLUB

The annual dinner of the Royal Navy Medical Club will be held at the Trocadero Restaurant on Thursday March 31st at 8 p m General meeting at 7 30 p m Information can be obtained on application to the honorary secretary (Surgeon Commander R J G Parnell R N) Medical Department Admiralty S W 1

COMMISSIONS IN THE R A M C

The War Office announces that twenty five permanent commissions in the Royal Army Medical Corps are being offered to qualified medical practitioners under 28 years of age registered under the Medical Acts There will be no entrance examination but candidates will be required to present themselves in London for interview and medical examination on April 15th Applications should reach the War Office not later than April 12th All information as to conditions of service and emoluments may be obtained from the Assistant Director General Army Medical Services War Office Whitehall S W 1

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House, Tavistock Square W C 1**

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All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are *MUSEUM* 9861 9862 9863 and 9864 (internal exchange four lines)

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MEDICAL SECRETARY *Mediocra Westcent London*

The address of the Irish Office of the British Medical Association is 16 South Frederick Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Stethoscope for Deaf Doctor

Dr F R W K ALLEN (Killiney) writes I suggest that Scot whose query appears in the *Journal* of March 12th should try the original type of de Lee's stethoscope Solomon's modification although more convenient in many ways does not transmit sound so well

Income Tax

Resident Hospital Director

J R occupies rent free a house adjoining a hospital which is recognized as a charity for income tax purposes Is he liable to pay tax on the annual value of the house he occupies?

*** The matter arises on the statutory exemption of hospital premises which extends to the public buildings offices and premises so far as not occupied by any individual officer whose total income amounts to £150 or more

The position therefore seems to be that the hospital is not exempt from tax on the dwelling house attached to the hospital and unless J R has a right to let the house it would seem probable—the point is not beyond doubt—that it is the hospital authorities who are liable to pay the tax in question

LETTERS, NOTES, ETC

Achlorhydria

Correction

Professor HENRY MOORE (Dublin) writes Through a mistake the galley proofs of my paper entitled A clinical study of achlorhydria were returned too late to have my corrections made in the text in your issue of February 27th last In Table II page 365 L should read Fe with reference to the treatment of Case 6 and there should be no L in the treatment column for Case 8

Doctors and District Nurses

Dr M GRAHAM DILL (Alloway Ayr) writes Nest (March 5th p 456) as a whole time medical officer of health would seem to be curiously out of touch with the relative positions of (*a*) doctor (*b*) district nurse and (*c*) patient A district nurse is neither an employee nor an assistant to the family doctor but is perfectly independent of him so far as the engagement of her services is concerned The onus of calling her in as also the meeting of the expenses incurred thereby rests with the patient not with the doctor When a doctor is asked to attend and the nurse's services have not already been availed of the calling of her in is done at the recommendation of or at any rate with the acquiescence of the doctor The nurse then carries out the doctor's instructions in relation to the patient by whom she is summoned but only (and this is important) in so far as they conform with the local nursing association's rules It by no means follows however that because a doctor advises the services of the district nurse that his recommendation is necessarily acceptable from the patient's point of view One reason for not employing the nurse in cases where the value of her services would seem to be obvious is the patient's omission to become a 'member (annual subscriber) of the local association and/or may even be found to be already in debt in respect of fees due to the association for previous nursing visits or confinements A reason of this nature is rarely stated to the doctor and I should imagine is most unlikely such is human frailty to be given to your correspondent's 'health visitors on their normal rounds True the doctor in cases where he knows his patients may and frequently does as a matter of convenience convey the message asking the nurse to attend but on such occasions he is merely acting as the agent of the patient and if he is wise will be careful to make this clear at the time

Raw Milk and Dental Caries

Dr R J HOOKER (Brighton) writes I was interested to read in the *Journal* of January 30th the report of Mr Sprawson's paper My daughter now aged 3½ years has had about a pint of raw certified milk daily since she was 1½ It has always been difficult to persuade her to eat anything hard or fibrous and so to provide her with the necessary nourishment she has had to have a diet which consisted chiefly of soft foods She did not cut her first tooth until she was 11 months of age and at 1½ years still had only her upper and lower incisors present At present her teeth show no sign whatever of caries Here is a case of a child who might have been expected to have caries on account of the nature of her diet but who has no sign of it The fact that she has had raw milk would seem to support Sprawson's deductions

Vacancies and Courtesies

M B B S writes In every number of the *Journal* vacant resident appointments are advertised In early February I answered one of these advertisements May I quote the result? The applications had to be in by February 15th From another candidate I learned that the short list was out on February 16th and that on February 18th the appointment was made And now on March 5th I get a reply to my application! In these days when resident appointments to many candidates are an ill afforded luxury is it too much to expect the courtesy of an early refusal?

The Common Cold

Dr W M JACKSON (Falmouth) writes I have read with much interest the correspondence on the common cold My own experience of the use of the following is that it is remarkably efficient in preventing the onset of a cold if taken at once or at the appearance of the very first suggestion of a cold The mixture is Ammon carb gr v pot chlor gr v vin ipecac m v sp chlorof m v sp aeth nit m xx aq ad ʒ ss This should be taken in about a wineglassful of water It is much more effective if taken half to one hour before meals and it may be repeated in two or three hours if any suggestion of a cold remains It is better to take light meals during the time the medicine is being used I have found this for myself and family almost uniformly successful and moreover it is never necessary to take more than one or two doses When the cold has once definitely set in the mixture is apparently of no use

The Student in Irons

A LECTURER writes Examiners seem to be of two kinds those who try to find out what a candidate knows and those who do find out something he does not know—a much easier task To the activities of the latter class are due the cramming of masses of isolated facts even between papers and vivas It is quite notorious that examinations in which the candidate has to run the gauntlet of half a dozen examiners are generally known as 'tricky' and produce results which surprise even the examiners themselves and sometimes astonish teachers No wonder students in their last years become weary and apathetic talk of luck trust to chance and only read books written by examiners

Vacancies

Notification of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48 49 50 51 54 and 55 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 52 and 53

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 103

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

255 The Diagnosis of Coronary Occlusion

A M WEDD (*New York State Journ of Med* January 1st 1932 p 11) believes that the diagnosis of coronary occlusion tends now to be made too frequently and erroneously, and he reviews its diagnostic criteria and differential diagnosis Substernal or epigastric pain of cardiac or aortic origin is related to effort and radiates into the shoulders and arms it has to be distinguished from pain referred to the same sites but originating in other thoracic or alimentary viscera Pain due to coronary occlusion is usually severer more persistent and more refractory than cardiac pain not associated with the obliteration of a vessel the status anginosus is characteristic of occlusion subsequent pyrexia leucocytosis pericardial friction rub and signs of myocardial insufficiency comprise the evidence of cardiac infarction secondary to occlusion The onset of auricular fibrillation when accompanied by pain and other vascular accidents (rupture of the aorta pulmonary thrombosis or embolism or occlusion of certain abdominal vessels) may simulate coronary occlusion Occasionally coronary occlusion must be differentiated from an acute abdomen lesion The former is characterized by the radiation of pain to the arms the absence of abdominal rigidity and signs of cardiac failure the latter is indicated by early rigidity and signs of peritoneal involvement Electrocardiograms may be of great diagnostic help and may also aid in distinguishing cardiac from abdominal lesions by indicating myocardial disease Coronary occlusion frequently occurs without pain but with severe dyspnoea this should be recognized and not mistaken for asthma C C WOLFERTH and F C WOOD (*Amer Journ Med Sci* January 1932 p 30) discuss the electrocardiographic diagnosis of coronary occlusion and emphasize the value of the chest leads particularly of Lead IV

256 Diplopia in Hypoglycaemia

H ZERVIK (*Deut med Woch* January 1st 1932 p 12) who records three illustrative cases in patients aged 33 36 and 41 respectively states that though diplopia has often been noted as one of the symptoms of hypoglycaemia it has never been described previously as the first and sometimes the only manifestation of that condition It is important therefore to be on the look out for this sign in diabetic patients treated by insulin so as to prevent the occurrence of severe hypoglycaemia

257 Hypotension of Pituitary Origin

F SCHELLONG (*Klin Woch* January 9th 1932 p 53) reports cases of disturbance in the regulation of the blood pressure resembling the condition described by Simmonds in 1914 and attributed by him to pituitary defect There is a fall in the blood pressure after physical exercise which is accompanied by giddiness and attacks of faintness In some instances the fall in pressure and the symptoms were noted only after standing still or after light work while heavier work had no effect This is taken as indicating only slight damage to the anterior lobe of the pituitary body A necropsy was obtained in the case of one patient who had this symptom moderately well developed and a cyst of the anterior lobe of the pituitary was found The effect of treatment when successful is first to restore the blood pressure increase which is normally produced by heavy work with lighter work and especially when standing still a considerable fall in pressure may continue to occur Schellong considers that constitutional or endogenous wasting the so called constitutional hypotonia and Simmonds's disease are closely related the essential feature of the latter is however not a continuously low blood pressure, but a faulty adaptation of the pressure to changing conditions The symptom was found in a large number of cases of thyrotoxicosis (in which disease anatomical changes have been found in the pituitary) and in some cases of tabes dorsalis but in only a small number of young patients with hypertension and the vascular forms of neurosis Treatment with pituitary gland substance was in many cases successful, injections of anterior lobe substance are best Tablets of this substance containing some thyroid extract were also used with good results

258 Mouth Lesions caused by Artificial Dentures

E S LAIN (*Arch Derm and Syph* January 1932 p 21) discusses the lesions of the mouth produced by poisonous chemical constituents of artificial dentures and those arising from electro chemical action between dentures crowns or fillings composed of different metallic elements In forty five consecutive cases of adults wearing full plates stomatitis or glossitis was present in 42 per cent while many of these were due to neglected oral hygiene or trauma caused by imperfect adaptation in several instances the poisonous constituents of the dentures were incriminated Two dentures showed porosity with free mercuric sulphide and sulphur in one and aluminium powder with a trace of zinc in the other while examination of others showed undercutting with porosity In thirty consecutive cases in which two or more metals of different electrical potentialities were present from 1 to 40 degrees of galvanic current were registered one case in which the patient had a metallic upper plate with amalgam fillings below registered a dangerously high degree of current A large percentage of the patients complained of symptoms which included metallic taste, burning tongue and acute dental nerve sensations many presented visible mucous lesions adjacent to or between metallic dentures After a process of elimination it was concluded that galvanic discharges were the causative factors

Surgery

259 Primary Bronchial Carcinoma

P P VINSON (*Minnesota Med* January 1932 p 15) describes primary malignant growths of the lung as originating usually in one of the larger bronchi, in the last five years there has been a rapid increase in the number of recorded cases More frequent use of the bronchoscope has added to the knowledge of this condition and more accurate diagnosis and appropriate treatment have resulted Vinson has seen seventy one cases during six years the diagnosis was confirmed histologically by removing tissue at broncho-copical examinations Fifty seven patients were men fourteen were women The youngest was 20 years old and the oldest 72 The aetiology of bronchial carcinoma is obscure many patients had had prolonged respiratory symptoms probably the result of chronic bronchiectasis Only two patients had had tuberculosis less than half were smokers but eight gave a family history of carcinoma The symptoms may simulate those of any pulmonary disease and may exist for periods of from ten weeks to forty years Five patients did not cough sixty had frequent purulent sputum and in forty-three cases the sputum contained blood In 70 per cent there was dyspnoea and 69 per cent had thoracic pain while 90 per cent had lost weight Stridor occurred in twenty three cases Suppuration always follows partial bronchial obstruction and simulates abscess or bronchiectasis there may be rigors clubbing of the fingers and leucocytosis Broncho stenosis was the most common physical sign Metastases occurred in ten cases Skiagraphy revealed tumours in all but two cases The diagnosis was made at the first broncho copy in seventy

cases Vinson insists that a histological examination is essential since tuberculosis or inflammatory lesions may simulate neoplasms The prognosis is almost hopeless but deep irradiation and radium treatment should be employed except when cachexia or extensive metastases are present One patient remained well for four years after *x* ray and radium treatment ten patients were cured or improved by these methods The author adds that the operative treatment of bronchial neoplasms is hardly justifiable

260 Cholecysto gastrostomy for Chronic Pancreatitis

R LERICHE and A WEISS (*Bull et Mem Soc Nat de Chir* January 16th 1932 p 29) report a case of chronic pancreatitis in a man aged 45 At first the symptoms which resembled gastritis were slight the chief discomfort being felt in the epigastrium after meals During the following year the pain became more severe and also more frequent and the patient suffered from diarrhoea two or three times every month The faeces were at first putty-coloured but afterwards they became dark brown and it appeared that the patient was suffering from attacks of pancreatic insufficiency He became slightly jaundiced although his urine contained neither pigment nor bile Bad headaches were frequent, with heaviness in the epigastric region liquid stools and a feeling of intense fatigue accompanied by loss in weight After two years during which the symptoms became increasingly severe the patient came under observation and as no definite diagnosis could be made laparotomy was performed At the head of the pancreas a hard mass was found about the size of a large nut Since it was impossible to determine whether this was a tumour or pancreatitis a cholecysto gastrostomy was undertaken in preference to cholecystostomy The appendix was also removed The second day after operation the patient evacuated an enormous quantity of black bile by rectum immediately afterwards the symptoms were relieved and a good recovery was made Two years after the operation the patient finds that he is able to carry out his ordinary work although he still suffers from periods of fatigue, occasional diarrhoea and epigastric distension On rising in the morning he frequently vomits a small quantity of bile after which he feels well for the rest of the day He is definitely of the opinion that these symptoms are gradually lessening in frequency and intensity and that he is slowly becoming quite normal In view of this result the authors consider that the cholecysto gastrostomy has given quite as good results as a cholecystostomy without the inconvenient consequences of the latter operation

261 Section of the Suprarenal Nerves in Diabetes

A CIMINATA (*Klin Woch* January 23rd, 1932 p 150) as the results of experiments on dogs and of an operation performed by Donati on a woman aged 50 maintains that section of the suprarenal nerves can be safely carried out in diabetes mellitus and that the operation has an undoubted effect on the carbohydrate metabolism in that it reduces the sugar content of the blood and urine He claims that the success of the operation in the human subject can be improved by section of the suprarenal nerves on both sides instead of on one side only as in Donati's case

262 Gas Gangrene from Hypodermic Injections

U POLERI (*Il Policlinico* Sez Chir January 15th 1932 p 57) who records an illustrative case, states that the first example of gas gangrene following a hypodermic injection was recorded by Fraenkel in 1893 since when about 22 have been published A study of the literature shows that bronchial asthma constitutes an excellent soil for the development of the organisms of gas gangrene Although adrenaline does not by itself favour the development of *B perfringens* and *B perfringens sanitis* it exercises a favourable action if it is employed on a person with an asthmatic constitution The possibility of gas gangrene should be suspected if a hypodermic or intramuscular injection is followed by pain of a distensive character and a spreading local oedema The diagnosis can be confirmed by x ray examination and is suggested by the presence of subcutaneous emphysema The prognosis depends on the rapidity of the diagnosis and the date at which treatment is started The treatment is exclusively surgical

Therapeutics

263 Oil Instillations in Bladder Infections

B E GREENBERG and M L BRODNY (*New England Journ of Med* January 21st 1932 p 122) record notes of five cases of pathological bladder conditions in which instillations of warm sterile mineral oil proved to be therapeutically effective The oil after being sterilized in an autoclave, was cooled it was then heated to body temperature, and about four ounces were injected slowly through a catheter and allowed to remain in the bladder In spite of the fact that these patients were on forced fluids with consequent excessive urination the oil was not completely washed out for from five to seven days it probably produces a soothing effect by adhering to the mucous membrane In a case of ordinary cystitis the dysuria was completely relieved almost immediately after daily irrigations and instillations into the bladder of warm sterile mineral oil The treatment was effective in a case of haematuria after nephrectomy for tuberculosis By the use of oil as a dilating medium in the post operative treatment in this case it was found that a tuberculous bladder will tolerate twice as much oil as boric solution thus enabling the capacity to be increased with greater ease less pain and about twice as rapidly Good results have followed its use in cases of alkaline encrusted cystitis the oil detaching the incrustations, and leaving irregular pale islands of mucosa which are subsequently replaced by scar tissue Its use in chronic gonorrhoeal posterior infections in patients in whom catheterization is safe has been tried with good results

264 Treatment of Tetanus

T TEICHMANN (*Munch med Woch* January 22nd 1932 p 135) who records two successful cases in men aged 52 and 54 respectively, maintains that when tetanus is fully developed the wound should be excised immediately Large doses of antitoxin containing only a small quantity of albumin should be injected intravenously intramuscularly and intrathecally Avertin should be administered in doses ranging from 0 05 to 0 1 gram During the avertin anaesthesia the numerous injections required can be made without any resistance on the patient's part As the result of serum treatment the violent convulsions in the first case became much less severe in the course of three days, and in the second case they soon lost their alarming character

265 Colonic Irrigation Therapy in Pemphigus

J F SCHAMBERG (*Arch Derm and Syph* January 1932, p 134) reports a case of complete recovery from pemphigus in which the disease had advanced so far that the patient was almost *in extremis* No benefit resulted from blood transfusions, or from injections of anti streptococcal serum neoarsphenamine and iron cacodylate Potassium arsenite was then administered by the mouth and colonic irrigations of eight gallons of water were ordered three times a week Improvement in the general septic condition began and in nine months the patient was free from lesions but he was much emaciated and had false ankylosis of the knee joints which gradually yielded to forced movements The author also records another case of severe pemphigus which had resisted arsenic and other methods of treatment After six weeks of colonic irrigations and the internal administration of stovarsol he had improved sufficiently to return home from hospital In these cases meat fish fowls and eggs were excluded from the diet Schamberg discusses the part that might have been played by arsenic in these cases but concludes that the recoveries were mainly attributable to the colonic irrigations He suggests therefore, that pemphigus may be due to alimentary infection

Laryngology

266 Mastoiditis in Scarlet Fever

H L BABCOCK (*New England Journ of Med* December 10th 1931 p 1149) states that among 2 260 cases of scarlet fever treated at the Haynes Memorial Hospital 185 (8 19 per cent) had purulent otitis media and of these 21 or 11 3 per cent developed mastoiditis The period at which this complication developed after otitis media ranged from 4 to 51 days but the majority did not occur until more than two weeks after the primary aural infection Of the 21 cases 7 had a myringotomy performed and in 14 the drumhead ruptured spontaneously which is definite evidence in favour of myringotomy Babcock stresses the importance of this procedure not only from the standpoint of surgical drainage and the prevention of mastoiditis but also in view of the permanent damage which is done to middle ear structures through necrosis when an abscess is left to evacuate itself through a sloughing tympanic membrane

267 Brachial Monoplegia in Cerebellar Abscess

A PERONI (*Arch Ital di Otol Rinol e Laringol* December 1931 p 654) who records three illustrative cases in patients aged 41 52 and 10 years respectively draws attention to the importance of homologous brachial monoplegia as an early sign of otogenic cerebellar abscess He points out that this form of monoplegia is a focal symptom quite distinct from the paralysis which occurs at a late stage from compression of the pyramidal tract in the medulla and pons and is usually crossed The brachial monoplegia on the other hand is not a true paralysis but a symptom due to brachial ataxia and loss of power in the limb Peroni refers to Barany's views on the cerebellar centres which direct the tone of the various movements of the arm and are localized in the favourite sites for an otogenic cerebellar abscess

268 Treatment of Rhinophyma

According to A MARIN (*Canadian Med Assoc Journ* November 1931 p 589) the local treatment of rhinophyma (hypertrophy of the end of the nose) differs according to its stage of development This deformity is the final consequence of rosacea with folliculitis At the onset when it is still in the rosacea stage strong sulphurated lotions and notably cryotherapy are excellent Carbon dioxide snow is the treatment of choice when but little folliculitis and fine telangiectasiae are present Massage is a good adjuvant measure At a later stage when the skin is hypertrophied and the small veins entering it are numerous and dilated more active measures are needed Decortication is then the operation of choice This consists in removing the excess of tissue but not too deeply a sufficient amount must be left for epithelialization A new nose is carved with the scalpel this when well done will leave a normal epidermis Rhinophyma is mostly composed of enormously hypertrophied sebaceous glands the deep portion of the sectioned glands should be left to act as islets of epithelialization If the resection is carried too deeply cicatricial tissue and not true skin will spread over the nose High frequency currents should not be used and x rays and radium are useless When decorticating Marin also employs electrocoagulation to assure haemostasis A short history of a case thus treated is appended

269 Post operative Nasal Haemorrhages

H ANTONETTI (*Presse Med* December 2nd 1931 p 1766) records a case which illustrates the possible gravity of haemorrhages occurring some days after nasal operations the pathogenesis of these is fully discussed and two facts are emphasized Before a serious haemorrhage the human body prepares two main defensive mechanisms—namely a fall in blood pressure and an increase in blood coagulability These haemorrhages always occur in patients with a blood dyscrasia particularly in connexion with hepatic disease Antonetti believes that post operative nasal haemorrhage is not caused solely at any rate by separation of the crust but by the carrying by the blood of infection from the operative site to the liver this causes a certain degree of hepatitis The resulting hepatic insufficiency brings about the haemorrhage by increasing the superficial circulation and diminishing the blood coagulability As shock produces increased coagulability of the blood and a fall in blood pressure Antonetti recommends this measure as a treatment for such nasal haemorrhages He gives intravenous injections of electrargol and has found a single dose of 5 c cm sufficient in most cases Cardiac tonics and serum injections are markedly contraindicated Notes on two cases are appended to illustrate the efficacy of this treatment

Obstetrics and Gynaecology

270 Primary Carcinoma of the Fallopian Tube

P J KEARNS (*Canadian Med Assoc Journ* January 1932 p 73) who reports a case of primary carcinoma of the Fallopian tube in a woman aged 56 states that five years after supravaginal hysterectomy and bilateral salpingo oöphorectomy there was recurrence The second operation then revealed that there had been metastasis by invasion of the sub epithelial structures of the meso salpinx and by spread along the lymphatic channels in this region which passed to the retroperitoneal lumbar glands These glands were found to be enlarged and at the sigmoid flexure there was a nodular mass which partly surrounded the bowel Microscopical examination of this mass showed the presence of a growth similar to that demonstrated in the Fallopian tube five years previously Kearns believes that in view of the larger and more numerous folds together with a greater proliferation of epithelium in the outer portion of the ampulla near the fimbriated end the increased hyperaemia of the cavernous portion of the tube associated with menstrual changes and the vulnerability of the ampulla to bacterial hyperaemia carcinomatous growth of the Fallopian tube should not be rare

271 Vaginal Sarcoma

J W T WILLINK (*Nederl Tijdschr v Geneesk* January 23rd 1932 p 369) remarks that the rarity of vaginal sarcoma is indicated by the fact that out of 9 226 tumours in women 54 were in the vagina and only two of these were sarcomatous Two kinds of vaginal sarcoma are described—namely sarcoma in the adult which in its origin morphology and clinical course closely resembles other sarcomatous growths and sarcoma in children which is present at birth Two forms of vaginal sarcoma in the adult can be distinguished clinically a diffuse form arising in the mucous membrane and as the result of progressive infiltration causing considerable stenosis of the vagina and a circumscribed form giving rise to a more or less hard tumour Vaginal sarcoma is very malignant The average duration of life after the appearance of the first symptoms is about ten months Histologically the condition is usually a spindle celled sarcoma In Willink's patients who were aged 17 and 53 respectively the tumour was situated in the anterior wall of the vagina Both were treated by extensive excision of the tumour followed by x ray therapy In neither case were metastases found At the time of publication the patients had survived the operation for 18 and 5 months respectively without showing signs of recurrence

272 Late Results of Resection of the Presacral Nerve

G COTTE (*Lyon Med* January 10th 1932 p 29) states that in the twelve months following his first operation in December 1924 he resected the presacral nerve in thirty six cases of dysmenorrhoea Of these patients twenty two had no morbid lesion in the genital organs but fourteen had adnexal abnormalities necessitating a con

comitant tubal or ovarian operation In addition to the nerve resection the appendix was usually removed and a ligamentary fixation of the uterus was invariably undertaken The results were reviewed from time to time during six years and are collated by Cotte In the first group of twenty two one patient was lost sight of one was improved thirteen had six years of freedom from dysmenorrhoea and the rest were freed from this for shorter periods the full extent of which could not be traced In the second group of fourteen operation or radiotherapy suppressed the menses in three the rest were found to be free from dysmenorrhoea In addition an amelioration of dyspareunia was a constant report In discussing the scope of his operation Cotte remarks that a woman having backache for five or six days before menses which are not accompanied by spasmodic pain is an unsuitable subject that intermenstrual (ovulation) pain is not relieved and that the menstrual time cycle is not likely to be altered

Pathology

273 Vaccination of Cattle with B C G

W E COTTON and A B CRAWFORD (*Journ Amer Vet Med Assoc* January 1932 p 18) continuing the work previously reported on by Schroeder and Crawford at the United States Bureau of Animal Industry Experiment Station describe the results of three experiments made to test the efficacy of vaccinating cattle with B C G In the first experiment three animals born in a tuberculous environment were vaccinated subcutaneously at birth with 100 mg of B C G and were revaccinated on two subsequent occasions at yearly intervals with the same dose They were kept for rather over a year in contact with tuberculous animals in a field and were then removed to a non infected environment They were killed for examination three to five years after birth Three control animals born and kept under the same environmental conditions were left unvaccinated In the second experiment three calves born in a tuberculous environment were vaccinated orally with B C G three doses of 120 mg each being given during the first eight days of life Three control calves were not vaccinated The animals remained exposed to infection for rather over a year when they were removed to healthy surroundings they were killed for examination two to three years after birth except in the case of two of the control animals which died as the result of lead poisoning In the third experiment two calves born in non infected surroundings received three doses of B C G each of 120 mg by the mouth during the first week of life Two similar animals were left unvaccinated Four months later all the animals were transferred to a tuberculous environment and kept there until they either died by misadventure or were removed eleven months later The only animal that survived was killed a year after removal from the infected environment The results of these three experiments were disappointing The lesions in the vaccinated animals were very similar to those in the control animals The authors conclude that B C G vaccination at best merely inhibits the progress of tuberculous processes and that it is unable to bring about retrogression of lesions which have once become established in tuberculous animals

274 Innervation of the Renal Capsule

M S S EARLAM and R K LEE BROWN (*Australian and New Zealand Journ of Surg* December, 1931 p 266) record the results of an investigation designed to determine whether the renal capsule has an afferent nerve supply which may be concerned with the production of localized renal pain By special staining methods it was proved decisively that the fibrous tissue of the renal capsule in mammals such as the dog and the sheep as well as in man does actually receive a specific afferent nervous innervation comprising both medullated and non medullated fibres These nerves, it is concluded are concerned with the transmission to the central nervous system of impulses which result in the sensation of pain localized in the kidneys As in the case of other sensory nerves stimulation of this renal innervation was found to result in reflex alterations in the rate of the blood flow through the organ Evidence was obtained furthermore that the sensation of localized renal pain is usually the result of increased renal tension but that it sometimes follows irritation of the capsular nerves by perinephritis The impulses producing the sensation were found to originate both in the pelvis and the capsule or in the capsule alone according to the nature of the pathological condition producing them In many cases the nerve endings in both pelvis and capsule would be stimulated simultaneously—as in hydronephrosis due to obstructive lesions of the upper part of the ureter or of its junction with the renal pelvis Here the increased intrapelvic tension would primarily give rise to pain of pelvic origin During development of the hydronephrosis however, the intraparenchymal tension rises first obstructing the venous capillaries and later the glomerular circulation, and finally leading to atrophy of all except the largest arterial trunks This increased tension is transmitted to the capsule and pain of capsular origin is thus superadded being further emphasized often by the congestion following acute obstruction or secondary infection Similarly, inflammatory conditions of the renal pelvis also probably give rise to some capsular pain as a result of the accompanying parenchymal congestion In other conditions the pain must be purely capsular Examples cited are the aching pain in a healthy kidney when the other one has been removed or is being rapidly disorganized renal cyst acute nephritis renal carbuncle and tuberculosis, and multiple cortical abscesses

275 The Influence of Vitamins on the Course of Infections

H C A LASSEN (*Zeit f Immunitats* January 28th 1932 p 221) has studied the effect of various vitamin deficient diets on the course of experimental typhoid infection in the rat The general technique was identical with that used by Örskov and consisted in giving the animals a dose of rat typhoid bacilli by the mouth killing them one by one at intervals making cultures from the various lymphatic glands viscera and blood and determining the degree of infection in each of the tissues studied In the first experiment one group of animals was fed on a diet deficient in vitamin A After forty days when all the animals showed xerophthalmia they were infected with rat typhoid bacilli as also was a control group of rats fed on normal diet The difference in response of the two groups was very striking Six out of the seven experimental rats died the tissues usually being heavily infected, none of the seven control rats died and when killed they were either only lightly infected or were entirely free from infection In subsequent experiments it was found that deprivation of vitamin B had no effect on the course of experimental rat typhoid infection unless the animals were so ill as to be nearly at the point of death Rats fed on a diet deficient in vitamin D and suffering from severe rickets showed no diminution in resistance to infection Persistent under feeding for six to seventeen weeks appeared to lower the resistance to only a very slight extent It would therefore appear that deprivation of vitamin A had a very marked effect in diminishing the resistance whereas deprivation of the other vitamins had little or no effect Experiments performed to ascertain the mechanism by which vitamin A deprivation acts indicated that rats with xerophthalmia were less resistant to intravenous inoculation of rat typhoid bacilli than control rats though the difference between the two groups was not nearly so striking as when the infection was *per os* The author concludes that vitamin A deficiency results in a lowered activity of the reticulo epithelial system in bringing about a destruction of the bacteria that have been taken up by it.

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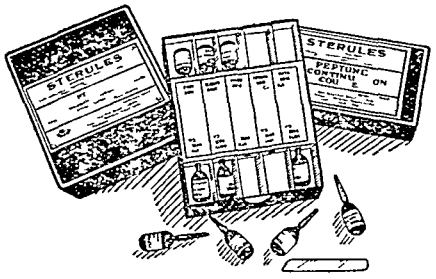
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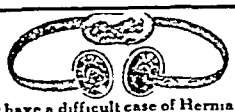
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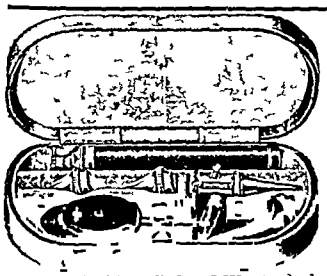
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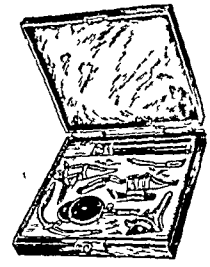
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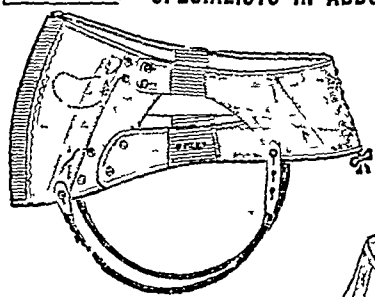
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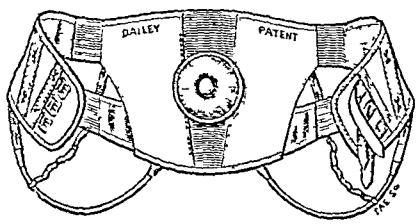
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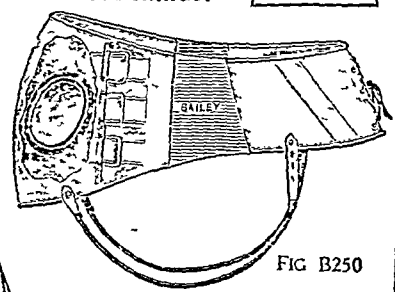


FIG B250
(Showing Interior of Cup)
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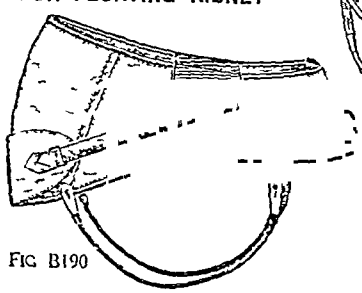


FIG B190
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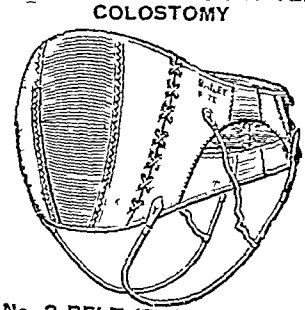
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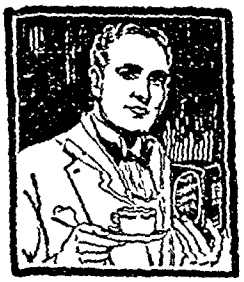
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The Committee of the above Hospital have recently opened BEECHMONT HOUSE for the reception of Female Private Patients suffering from mental disorder Voluntary Temporary and Certified Patients will be received

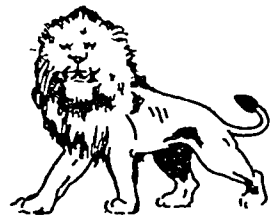
Beechmont is a large country house situated on the outskirts of Haywards Heath and quite separate from the Hospital

The house is healthily situated and stands on an estate of 27 acres with beautifully laid out gardens and lawns commanding extensive views of the South Downs It has up-to-date systems of lighting and heating and is attractively furnished and modernised

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RESIDENT MEDICAL SUPERINTENDENT

Telegrams and Telephone Wickham Market 16 *(Toll Call from London)*



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The Mansion, Beckenham Park, Beckenham,

as carried on for the last twenty years is available Booklets and particulars from the Resident Medical Superintendent

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A comfortable private HOME *charmingly situated* overlooking Torbay near Torquay Main line 3½ hours from Paddington Both Ladies and Gentlemen admitted as voluntary patients

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PRIVATE HOME for MENTALLY AFFLICTED LADIES Ten only received Apply Medical Officer or Mrs PEELE *Telephone* 708

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Physician Superintendent R DODS BROWN, M D, F R C P Ed

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This Home which has been recently established, is equipped for the treatment of those suffering from early mental and nervous disorders and is under the charge of the Physician Superintendent, Aberdeen Royal Mental Hospital

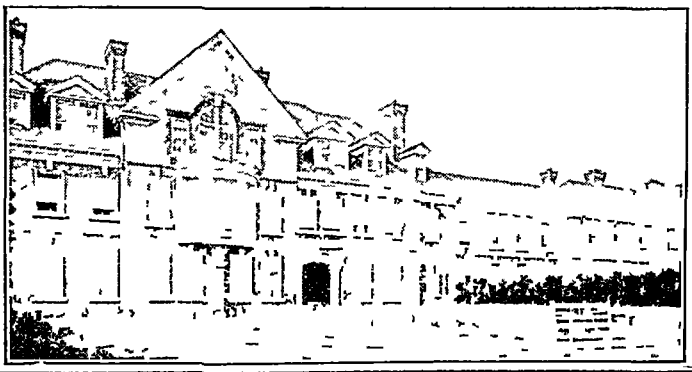
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Term include (*with rare exceptions*) *all forms of treatment for which usual facilities exist*—there being a staff of consultant specialists and the central laboratories of London County Mental Hospitals being attached to the Hospital.

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A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both sexes

Now removed to

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A modern country house 12 miles from Marble Arch in beautiful and secluded grounds

Fees from 10 guineas per week

Voluntary Patients received for treatment

Special provision for Temporary patients under the new Mental Treatment Act

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Registered Hospital for Nervous and Mental Diseases for the Upper and Middle Classes

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A hospital which provides modern investigation and treatment for Voluntary, Temporary and Certified Patients of both sexes. Special attention is paid to occupation.

Accommodation provides for the separate treatment of early recoverable and of convalescent patients.

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A LICENSED HOSPITAL for the CARE and TREATMENT of LADIES *and* GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. *Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester. The Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 280 acres. Voluntary boarders of both sexes are also received for treatment.*

Special accommodation for Lady Voluntary boarders is also provided at the MANOR HOUSE, *which has its own private grounds and is entirely separate from the main Hospital.*

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GRISONS, SWITZERLAND. 4,000 ft. above sea level.

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FOR THE UPPER AND MIDDLE CLASSES ONLY

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Medical Superintendent DANIEL F. RAMBAUT, M.A., M.D.

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Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit and vegetables are supplied to the Hospital from the farm, gardens and orchards of Moulton Park. Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming, gardening and fruit-growing.

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres at Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. *Patients may visit this branch for a short seaside change or for longer period.* The Hospital has its own private bathing house on the sea shore. There is trout fishing in the park.

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FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

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Apply Dr. D. E. M. DOUGLAS-MORRIS. *Telephone* Newport Pagnell 221.

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A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods

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Telegrams "Alleviated, London" Telephone Rodney 4741-4742

The above House which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

NORTHUMBERLAND HOUSE,

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Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground, highly situated, facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

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Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Bowls Croquet Squash Racquets and all indoor amusements including Wireless and other Concerts Occupational Therapy Physical Drill and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery, and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers also resident and visiting Consultants An illustrated Prospectus may be obtained upon application to the Secretary

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NORMANSFIELD

For Mental Defectives of all ages

Under private management

Apply to Dr Langdon Down,

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A Private HOME for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients Large Mansion with 12 acres of ground (See *Medical Directory* p 2234) Apply J H EARLS M D Resident Physician Telephone Streatham 8430

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Particulars from the MEDICAL SUPT

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A first class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted

Large park golf links fishing Grounds extend to over 200 acres Voluntary Boarders accepted

Apply for particulars to Dr SANKEY

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This Registered Hospital situated in large grounds near the Cathedral receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders conditions in Psychotherapy in

All particulars may be obtained from the Resident Medical Superintendent Dr MARY I BARKAS M D D P M

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Situated in 3½ acres of secluded gardens

HOME FOR TWELVE MENTAL PATIENTS (LADIES)

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Station Telephone Brixton 0494

Clapham Common Tube Apply MISS THWAITES

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SPRINGFIELD HOUSE,

Near BEDFORD (Phone 3417)

For Mental Disorders with or without certificates

Resident Physician CEDRIC W BOWEN

Ordinary Terms Five Guineas per week

(Including Separate Bedrooms where suitable)

Interviews in London by appointment

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For the treatment of Ladies and Gentlemen mentally afflicted Voluntary Boarders received Situated 1 200 ft above sea level facing S 14 acres of grounds—For terms apply to the Resident Medical Superintendent W W HORTON M D Nat Tel 130

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For terms etc apply to the Medical Superintendent J A C ROY M B who may also be seen in Manchester by appointment Telephone 2231 CHEAD

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A Private Home for the care and treatment of a limited number of ladies mentally afflicted Climate healthy and bracing

Medical Superintendent Dr MCCLINTOCK

Tel & Telegrams Haynes Brentwood 145

Littleton Hall, Brentwood, Essex

Large grounds 400 ft above sea HOME for ladies Mentally afflicted Voluntary Boarders received Station Brentwood and Shenfield 1 mile Liverpool St 26 min—Apply Dr HAYNES

Wanted — Invalid Nurse's

comfortable Home DELICATE or CONVALESCENT LADY Doctors references Terms from £4 4s per week Central for shops—Address Howard Avondale Road Bognor Regis

Doctor's widow in North London

having large house garden car port would like some PAYING GUESTS Terms moderate — Address 372 L M A House Tavistock Square W C 1

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J. M. JOHNSTON, M.B., D.P.H., etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK

MONTANA HALL, Montana, Switzerland.

Built 1929-1930
Opened October 1930

For the Treatment of Tuberculosis (all forms). Diseases of the Chest. Asthma. For patients requiring rest in the Alps under strict medical supervision and for medical conditions in which sun and air bathing are indicated.

THE ONLY MEDICAL ESTABLISHMENT IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL AND WITH A FULL DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS

SPECIALLY REDUCED INCLUSIVE TERMS

For further particulars kindly apply to the Resident Medical Superintendent HILDA POCHE, M.D. (Melb.), M.R.C.P. (London), Tuberculous Diseases Diploma (Wales).

PENDYFFRYN HALL SANATORIUM
PENMAENMAWR

Established 1900 for the treatment of Tuberculosis. Miles of carefully graduated walks through pine clad hills with sea and mountain views. Modern treatment including SANOCRYSIN, ARTIFICIAL PNEUMOTHORAX, etc. X-ray plant, electric light, central heating, wireless. Special milk supply from tuberculin tested herd. Full day and night nursing staff. On L.M.S. Main Line to Holyhead 4½ hours from London. Resident Physicians Dennison Pickering, M.D. (Cantab.), J. A. Hennessey, M.B., Ch.B. Matron Miss S. A. Eddy, S.R.N., Late Sister in Charge Royal Hospital Annexe, Sheffield.

For particulars apply to the Secretary, Pendyffryn Hall, Penmaenmawr, N. Wales. (Phone 20.)

THE COTSWOLD SANATORIUM

First opened in 1893 and rebuilt in 1925. *On the Cotswold Hills*, seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., *sheltered from North and East*, elevation 800 feet. Pure bracing air. Special Treatment by artificial *Pneumothorax* (*X ray controlled*). Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and *Ultra Violet Rays* is available when necessary, without extra charge. X-ray plant. Electric light. Radiators, hot and cold baths and Wireless in all rooms.

Full day and night Nursing Staff.

Resident Physicians—GEOFFREY A. HOFFMAN, B.A., M.B., T.C. Dub., and MARGARET A. HARRISON, M.B., B.S. Lond.

Apply The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone* 41 WITCOMBE. *Telegram* HOFFMAN, PAINSWICK.

LINFORD SANATORIUM,
RINGWOOD, NEW FOREST, HANTS

Established 1898 for the treatment of Tuberculosis. Radiators and Electric Light throughout. Hot and cold water and shower bath in nearly all rooms. Powerful X-ray Plant. Ultra-violet Rays. Full Nursing Staff. All forms of treatment available. *Farm of 140 acres, including 40 acres of wood.* Herd of Tuberculin tested Guernsey cows. Dept. Resident Physicians—Arthur de W. Snowden, M.D., B.Ch. (Cantab.), A. G. E. Wilcock, M.R.C.S., L.R.C.P., Colin Cassidy, M.B., B.Ch. (Cantab.).

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FOR THE TREATMENT OF *TUBERCULOSIS* was opened in January, 1899, by ROWLAND THURNAM, M.D.

All modern forms of treatment are available. There are X-ray and ultra-violet ray installations. Full nursing staff. The Sanatorium stands in gardens and private grounds of 60 acres at an altitude of 862 feet above sea level, surrounded by woods and moorland. All rooms are heated by hot water pipes and electrically lighted.

Fees 4, 5, and 6 guineas per week

CYRIL FRANCIS ASHBY, M.R.C.S., L.R.C.P., Certificate of Sanatorium Stephan, Switzerland. *Resident Medical Supt.*

Full particulars apply to The Secretary, Nordrach-upon-Mendip, Blagdon, Bristol. *Telegrams* Nordrach, Blagdon. *Telephone* Blagdon 23.

It's Margate air your patients need!

Margate air is ocean borne, comes in direct from the sea without passing over populous lands. It is full of health giving ozone. Your patients will get better at Margate.

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CLIFTONVILLE & WESTBROOK

C.P.H. 32

Booklet free from—
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BRIDGE OF ALLAN SPA, Stirlingshire

MINERAL WATERS with high Calcium, Iodine and Bromine Content
Indicated in Rheumatism, Gastric Complaints, Asthma, Bronchitis, Debility, etc.

Full particulars from Spa Director HYDROTHERAPY, ELECTROTHERAPY, Massage, Inhalation, Intestinal Lavage

TWYFORD ABBEY.



PARK ROYAL, N W 10

TWYFORD ABBEY under the care of the Alexian Brothers a Catholic Community devoted to the care of the infirm is a Convalescent Home and for aged and infirm gentlemen It is conveniently situated 1¼ miles from Ealing Common W 4 and stands in its own wooded grounds of 20 acres Park Royal Station (Underground) 10 mins The medical arrangements are complete for the care and treatment of the residents—but gentlemen wishing to have their own Medical attendants may do so Denomination unrestricted

Terms from £2 10s per week

For further particulars apply—
BROTHER SUPERIOR
Phone Willesden 0994

SMEDLEY'S

Unrivalled suites of Baths for Ladies and Gentlemen including Turkish and Russian Baths Vi and Vichy Douches Massage and Hombieres Treatment and Electric Installation for Baths and other Medical purposes Dowsing Radiant Heat D Arsonval High Frequency Diathermy Nauheim Baths New Soapless Foam Baths etc Special provision for invalids Milk from our farm of 300 acres Large Winter Garden Night Attendance Rooms well ventilated and all bedrooms warmed in Winter A large Staff (upwards of 60) of trained Male and Female Nurses Masseurs and Attendants

Grams Smedley Matlock
'Phone No 17
For Prospectus and full information please write MANAGER M J

GREAT BRITAIN'S GREATEST HYDRO

Resident Physicians
G C R HARBINSON
M B B Ch B A O (R U I)
R MACLELLAND
M D C M (Edin)

MATLOCK

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127, Avenue de Grasse Tel 1300

HELIOTHERAPY CURES DIETARY
VERY REPOSEFUL

Magnificent view of sea and mountains Large park

SANATORIUM NEROTAL : WIESBADEN

RHINE (GERMANY)

Special treatment for Rheumatism, Gout, Diabetes Heart and Nervous Complaints Each patient specially dieted Three Resident Doctors Open all the year round Early and beautiful Spring English spoken

Prospectus on application

"THE VICTORIA," BRITISH SANATORIUM

DAVOS-PLATZ SWITZERLAND

ALTERED AND MODERNISED IN SUMMER 1930

SPECIALLY REDUCED TERMS

The Board of Management is desirous of meeting the difficulty of the exchange in every possible way and until this improves is willing to cash English Pounds at the uniform rate of Frs 22 as far as the Sanatorium bill is concerned

The Board hopes that this will meet with approval

Medical Supt
BERNARD HUDSON M D Cantab., M.R.C.P Lond Swiss Federal Diploma

THE LONDON HOSPITAL MEDICAL COLLEGE.

(University of London)

ADVANCED MEDICINE

A Course in Advanced Medicine suitable for candidates preparing for the M D and M R C P Examinations will begin on Monday April 25th Early application for admission is advisable

Further particulars may be obtained on application to the Dean Professor WILLIAM WRIGHT, M B D Sc F R C S London Hospital Medical College Mile End E

CHELTENHAM COLLEGE

TWELVE SCHOLARSHIPS AND EXHIBITIONS (not open to Members of College or Junior School) These include Five of £80 (increased to £100 for special merit) James of Hereford Scholarship of £35 for Boys born or brought up in Herefordshire Mod I A M C Scholarship of £50 (preference to sons of Fallen Officers) Awards made for all round excellence or special proficiency in any main subject including music Preliminary Examination (at Candidates own Schools) on Monday and Tuesday May 3rd and 24th 1932 Final Examination (at Cheltenham) on Tuesday and Wednesday May 31 to 1 June 1st 1932 Apply Bursar Cheltenham College

Post-Graduate Courses on Contraceptive Methods

LECTURES AND DEMONSTRATIONS on the Theory and Practice of Contraception are being arranged at the North Kensington Women's Welfare Centre The teaching will be given by Medical Members of the Staffs of Birth Control Clinics and the first two courses will be held at the Clinic at 6 p m as follows

APRIL 14th and 21st
JUNE 23rd and 30th

Fee One Guinea per course Further information from Mrs LLOYD North Kensington Women's Welfare Centre 12 Pelford Road Ladbroke Grove W 10 (Tel Park 4945)

GRAMPIAN SANATORIUM,

KINGUSSIE INVERNESS SHIRE

Specially built for the Open air Treatment of Tuberculosis and opened in 1901 Bracing mountain air Elevation 860 ft above sea level Sheltered situation in pine wood Graduated walks Electric light throughout buildings and in shelters Central heating Fully equipped X ray Plant Inoculation Treatment available for patients—24 beds Trained Nurse on duty all night Terms £4 7s 6d to £6 6s p w inclusive No extras Med Supt—FELIX SAVY M D

For particulars apply to the Secretary

CITY OF LONDON MENTAL HOSPITAL DARTFORD KENT

Ladies and Gentlemen received for treatment under certificates and without certification as either VOLUNTARY or TEMPORARY PATIENTS at a weekly fee of TWO GUINEAS and upwards

Hampstead — Lady having com

fortable well appointed house in quiet road with garden and sun verandah can take as paying guest INVALID requiring Special Care Good staff and excellent food Terms Specialists reference — Address No 1000 B M A House Tavistock Square W C 1

Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric and Prelim Sci Chemistry Physics and Biology Labs MANCHESTER TUTORIAL COLLEGE 327 Oxford Road Manchester

Refraction and the Ordering of

CLASSES taught by Practising Ophthalmic Surgeon in London £3 3s for 10 lessons Address No 123 B M A House Tavistock Square W C 1

MIDDLESEX HOSPITAL MEDICAL SCHOOL

LONDON W 1

(University of London)

The WINTER SESSION will begin during the first week in OCTOBER and new students should apply for admission at an early date

The Medical School and Hospital occupy a central position within a few minutes walk of Oxford Circus They are fully equipped for teaching the entire Medical curriculum both for University Degrees and the Conjoint Course

ENTRANCE SCHOLARSHIPS examinations in Arts and Science will be held in July

The new West Wing of the Hospital is fully occupied the rebuilding of the remainder is proceeding without the loss of a single bed the remodelled Out Patient Department continues to expand the newly built Residents Block affords greatly improved facilities the Nurses Home is the finest in London These with other new buildings including magnificent Laboratories give to the Middlesex Hospital and its Medical School the most modern facilities obtainable in Great Britain

THERE IS NO ACCOMMODATION FOR WOMEN STUDENTS

THIRTY-ONE RESIDENT APPOINTMENTS are offered annually to students recently qualified NINE REGISTRARS are also appointed annually SCHOLARSHIPS AND PRIZES of a value exceeding £1 000 are awarded each year Large Athletic Grounds Common Rooms Squash Racquets Court and a well-equipped Restaurant are provided

The Sports Clubs include Rugby and Association Football, Hockey Cricket, Sailing Fencing etc

For further particulars and Prospectus apply to the Dean T LODD BENNETT, MD, FRCP or to the School Secretary Middlesex Hospital Mortimer Street London, W 1

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a m to 4 p m —Post Graduates may enrol at any time for any period from 1 week to 3 months —Special facilities for "Study Leave," and for those wishing to take a course under the 'Grant aided Scheme for Post Graduate Study by Insurance Practitioners —Anaesthetic Courses —Clinical Assistantships —Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital Unusual opportunities are afforded for following Obstetrical Complications and Operative Midwifery (about one half of the total admissions being primiparous cases) Over 2 400 patients are admitted to the Wards annually and in the Antenatal Department there are over 18 000 attendances per annum

Certificates awarded as required by the various Examining Bodies.

Further details for the apply ARTHUR WATTS Secretary

MEDICAL CORRESPONDENCE COLLEGE,

19 Welbeck Street, London W 1

M.D. THESIS

All Universities

Skilled coaching guidance and advice by specialist tutors

Recent successes include Gold Medals at M D Edinburgh 1929 and 1930 and at M D Belfast 1930 and many High Commendations and Commendations at other Universities

Write for free booklet How to Write a Thesis for the M D degree

M.D. LONDON

Courses by skilled tutors for each branch of the M D London

Oral clinical and practical work arranged

Special courses postal oral and clinical for all higher medical examinations M R C P London Edinburgh F R C P S Glasgow Many successes

Write for free Guide to the M D Degree to the Secretary Medical Correspondence College 19 Welbeck Street London W

CITY OF LONDON MATERNITY HOSPITAL,

CITY ROAD E C.1

MIDWIFERY TRAINING SCHOOL

MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complications Monthly or Fortnightly Courses

PUPILS TRAINED as Midwives and Monthly Nurses in accordance with C M B regulation

PRIVATE WARDS for paying patients

MATERNITY NURSES sent out to private cases

STAMMERING SPEECH DEFECTS

BEHNKE METHOD Estab 1882 Cases not resident treated at 39 Earl's Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE's home on the Chilterns

"Pre-eminent success in the education and treatment of stammering and other speech defect — Times

"Thoroughly fully coloured pictures" — Lancet

"The method is scientifically correct and perfectly effective — Gov Hospital Gazette

STAMMERING CLEFT PALATE SPEECH LISPING 3/9 of Miss BEHNKE 39 Earl's Court Sq S W 5

SOCIETY OF APOTHECARIES OF LONDON

MASTERY OF MIDWIFERY

Examinations will be held beginning Tuesday May 17th and Monday November 21st 1932 For regulations apply to the Registrar Water Lane E C 4

M D THESIS

Advice and legitimate assistance by an expert in preparation of Thesis Also postal tuition for M R C P London and similar examinations —No. 1001 B M A House Tavistock Sq W C 1

F R C S (Edin)

Full PREP COURSE with Anatomical (Cadaver and Living Models) and Surg Path Demonstrations for next Exam. will commence shortly POSTAL TUITION at any time —H C ORTON F R C S Surgeons Hall Edinburgh

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17 RED LION SQ LONDON W C 1.

(FOUNDED 1882)

Principal Mr E S WEYMOUTH M A (Lond)

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

M D (Lond),	1901-31 (9 Gold Medallists during 1913 31)	355
M S (Lond),	1901 31 (including 4 Gold Medallists)	22
M B, B S (Lond),	*Final* 1906 31 (Completed Exam)	280
F R C S (Eng),	*Primary* 1900 31	173
	Final	174
M R C P (Lond),	1914 31	199
D P H	(Various) 1906 31 (Completed Exam.)	308
F R C S (Edin),	1918 31	50
M R C S L R C P	Final 1910 31 (Completed Exam)	501
M D	Various By Thesis	Numerous successes

Preparation for the above and also for Medical Preliminary and for all examinations leading up to M R C S L R C P or M B of various Universities also for D P M D O M S D T M & H D L O D G O D M R E M M S A L M S S A etc Numerous successes.

ORAL CLASSES

M R C P M D Primary and Final F R C S F I C S (Edin) Final M B B S and M I C E L R C P Museum and Microscope Work Also Private Tuition

MEDICAL PROSPECTUS (48pp)

CONTENTS —*The method* and the cost of entering the Medical Profession *Particulars of all Medical Examinations* Postal Courses and Oral Classes *Suggestions for the higher Medical Examinations* Suggestions for the higher Surgical Examinations. *Suggestions for the Special Diploma Examinations.* Preliminary Courses. Openings for Women Hints for writing theses

Medical Prospectus gratis along with list of Tutors etc on application to the Principal Mr E S WEYMOUTH M A 17 Red Lion Sq London W C 1 (Telephone HOLBORN 6313)

BRACEBRIDGE MENTAL HOSPITAL, near LINCOLN

d for the post of
MEDICAL OFFICER
experience essential
a candidate holding
the D P H Salary commencing at £425 per annum rising by four annual increments of £25 to £525 per annum with furnished apartments board laundry and attendance Emoluments are valued at £125 per annum for superannuation purposes In addition £50 per annum will be paid if the successful candidate holds the D P H The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909

Applications stating age qualifications experience etc with copies of three recent testimonials should be received by the Medical Superintendent not later than March 31st

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ROYAL VICTORIA AND WEST HANTS HOSPITAL BOURNEMOUTH

HOUSE SURGEON (male British nationality) required to commence duty the first week in April Salary £150 per annum, with board lodging and washing The appointment is tenable for six months and candidates must be registered according to the provisions of the Medical Act Applications stating place of birth with copies of three testimonials to be sent immediately to the undersigned

Women and married men are ineligible

GORDON M SAUL
March 10th 1932 Secretary

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKE ON TRENT
(350 Beds)

HOUSE SURGEON

The Committee invite applications for the post of House Surgeon Salary £150 per annum with board residence and laundry Previous Hospital surgical experience desirable Resident staff numbers seven Applications to be forwarded to the undersigned immediately stating qualifications age and experience with copies of two recent testimonials

W STEVENSON
Secretary & House Governor

KENT AND CANTERBURY HOSPITAL CANTERBURY
(Recognized by the University of London for the purpose of M D Examination)

HOUSE PHYSICIAN (male) required to commence duties on April 16th Six months appointment Salary payable at the rate of £125 per annum plus board residence and laundry

Applications stating age and particulars of qualifications and enclosing copies of testimonials should be forwarded to the undersigned W T SOUTHWOOD
Superintendent & Secretary

BOOTLE GENERAL HOSPITAL BOOTLE nr LIVERPOOL (100 Beds)

Applications are invited for the post of HOUSE SURGEON for the six months ending September 30th

Salary at the rate of £150 per annum with board laundry etc

Duties to commence April 1st

Applications stating age and qualifications with copies of testimonial to be sent to the undersigned immediately

J A BEARDSALL Secretary Supt

COSSHAM MEMORIAL HOSPITAL KINGSWOOD BRISTOL

The post of HOUSE SURGEON will be vacant at the end of March Applicants must be fully qualified and registered and of British nationality Salary £150 per annum with board and laundry

Applications with copies of three recent testimonials to be sent to the Secretary

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KING GEORGE HOSPITAL ILFORD
(8 miles from London)

Applications are invited for the appointment of CASUALTY HOUSE SURGEON (male) as from April 1st Salary £100 per annum with board residence etc Term six months with eligibility for a further period Applications should be sent at once to the Secretary

---

LEAF HOMOEOPATHIC COTTAGE HOSPITAL EASTBOURNE

APPOINTMENT OF HONORARY SURGEON

Applications are invited for the above vacancy which will occur early in July next

Candidates are requested to kindly send particulars of their qualifications experience and testimonial to the Chairman Leaf Homoeopathic Cottage Hospital Eastbourne

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BRISTOL DISPENSARY

The Committee are prepared to appoint a non resident MEDICAL OFFICER on the Staff of this Institution Candidates must be duly registered according to the provisions of the Medical Acts and not over the age of 35

The candidate appointed will be required to commence duty as soon as possible and must give his or her time to the service of the Institution in such a way as may be directed The Committee may give permission for private practice

For particulars apply to the Secretary to whom testimonials must be sent on or before April 1st Card with address should be enclosed H MERRETT STOCK Secretary
47 St Nicholas Street Bristol
March 14th 193.

MANCHESTER ROYAL INFIRMARY

HOUSE SURGEON (Male)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment

Applicants must be registered and hold a Medical and Surgical qualification

The appointment is for five months subject to the provisions of the by laws as to notice etc Salary £50 per annum with board residence and allowance for laundry

Applications stating age to be sent to the Chairman of the Medical Board not later than Thursday March 31st

FRANK G HAZELL
General Supt and Secretary

THE VICTORIA HOSPITAL FOR CHILDREN, Tite Street Chelsea S W 3

The Committee of Management invite applications for the office of DENTAL SURGEON now vacant

Every candidate should be a Fellow or Member of the Royal College of Surgeons of the United Kingdom or a Graduate of Medicine of any University recognised by the Medical Council and shall be licensed to practise Dental Surgery

Applications with three testimonials must be sent to the Secretary on or before Thursday March 31st

By Order
D ST JOHN BAMFORD
Secretary

CHARING CROSS HOSPITAL

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer from male candidates (unmarried) who must be registered Medical Practitioners Salary £350 per annum plus additional fees amounting to approximately £75 per annum The rules of the office may be obtained from the undersigned to whom applications accompanied by copies of three recent testimonials must be delivered not later than Saturday March 26th

PHILIP INMAN House Governor
Charing Cross Hospital London, W C 2

PRINCE OF WALES HOSPITAL FOR LIMBLESS AND CRIPPLED CARDIFF
(CARDIFF AND CROSSWAYS—135 Beds)

A LOCUM TENENS for the Resident Surgeon will be required for twelve weeks from April 20th It is desirable that applicants shall have had experience as a Resident in an Orthopaedic Hospital The remuneration will be Four Guineas a week

Applications stating age qualifications and experience, accompanied by copies of two recent testimonials should be sent to the Secretary Mr GILBERT D SHEPHERD F C A by March 31st

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SOUTHAMPTON CHILDREN'S HOSPITAL AND DISPENSARY FOR WOMEN
(45 Beds)

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER (lady) Six months appointment vacant April 30th Salary at the rate of £100 per annum with board residence and laundry

Applications stating age and accompanied by copies of testimonials to be sent to the undersigned as soon as possible

ELLEN MATTHEWS Secretary

THE MOUNT VERNON HOSPITAL
(National Centre for the Study and Treatment of Cancer)

There is a vacancy for a RESIDENT MEDICAL OFFICER Candidates must be fully qualified and registered Salary at the rate of £250 per annum with board lodging etc

Applications with copies of three testimonials to be sent to the undersigned not later than March 25th

Offices W J MORTON
32 Fitzroy Square W 1 Secretary

THE LONDON LOCK HOSPITAL, 91 Dean Street London W 1

The Board of Management invite applications for the post of HOUSE SURGEON at the Male Lock Hospital

Candidate must be doubly qualified and duly registered The appointment is at the rate of £175 per annum with furnished rooms full board and laundry The appointment is for six months Duties to commence April 9th

Applications enclosing copies (only) of three recent testimonials to be sent to the undersigned on or before 10 a m March 29th

By Order of the Board
HY J LASON
March 7th 1932 Secretary

ROCHDALE INFIRMARY AND DISPENSARY
(110 Beds)

The B applications
for the HOUSE SUR
GEON appointment
is £200 p a including board residence and laundry

Applications stating age nationality etc together with copies of three recent testimonials to be sent to the Secretary endorsed Hon Surgeon Particulars of duties and conditions of appointment may be had on application to the Secretary

Infirmary Office W WYNNE
Rochdale June Secretary

EAST SUFFOLK AND IPSWICH HOSPITAL IPSWICH
(205 Beds—7 Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN vacant April 1st Salary at the rate of £1 per annum Board residence and laundry Previous experience essential

Applications from British (male) candidates stating age qualifications and experience and accompanied by three recent testimonials to be sent to the undersigned

The Hospital ARTHUR GRIFFITHS
Ipswich Secretary

CROYDON GENERAL HOSPITAL

from qualified and
the post of CAS
Salary £175 per
ice and laundry

Applications stating age qualification accompanied by copies (which will not be returned) of three testimonials to reach the undersigned not later than Saturday April 2nd

GEORGE H DAWS
March 14th 1932 House Gov & Sec

JEWISH MATERNITY HOSPITAL
Underwood Street Whitechapel E 1

There is a vacancy for an HONORARY PHYSICIAN Applicants who must be Members of the Royal College of Physicians of London should submit their applications together with copies of three recent testimonials to the undersigned not later than March 23rd

ALICE MODEL
Organising Secretary

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN

The Directors of this Hospital will meet on Wednesday April 13th to elect an ASSISTANT PHYSICIAN to the Institution Letters of application not more than four
dged with Messrs
Fredrick Street
ch 21st
rectors
W S Hon Secs

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of SURGICAL REGISTRAR which will become vacant on May 1st Candidates must be Graduates in Surgery of a University of the United Kingdom or Fellows of the Royal College of Surgeons Honorarium 40 guineas

Applications accompanied by not more than three testimonials to be addressed to the Secretary by April 7th

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COUNTY BOROUGH OF BRIGHTON
SANATORIUM AND INFECTIOUS DISEASE HOSPITAL

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER Salary £150 per annum with board and lodging The appointment is for a period of six months

Particulars and forms of application can be had from the undersigned

Latest date for application April 4th

Brighton JAS H LOTHIAN
March 14th, 1932 Town Clerk

ROYAL ARMY MEDICAL CORPS.

TWENTY FIVE permanent COMMISSIONS in the ROYAL ARMY MEDICAL CORPS will be offered on April 15th 1932 Applications should reach the War Office not later than April 12th 1932

Candidates will be selected for Commissions without competitive examination and will be required to present themselves in London for interview and medical examination on April 15th 1932 They must be under 28 years of age on May 1st, 1932, and registered under the Medical Acts

Officers of the R A M C are liable to serve in any part of the world where British troops are quartered

Ample opportunities exist in the Army for clinical professional work both Medical and Surgical as well as for the study and practice of Hygiene Pathology and all the special branches

The cost of Post Graduate study which is compulsory is met from Army Funds

Emoluments Pay—From £356 to £1 542 a year according to rank **Allowances**—Free quarters fuel and light, servant and rations, or a cash allowance in lieu totalling from 6/5d to 23/3d a day according to rank (£117 to £424 a year)

Candidates who have held a full time house appointment in a recognised civil hospital before appointment to a permanent Commission in the R A M C may subject to certain conditions, be allowed to count the period of service in such an appointment, up to a maximum of 12 months, as Army service for promotion and increase of pay

Gratuities on Retirement—After 7 years' service £1 000
" 15 " " £2 800
" 18 " " £3,500

Current rates of retired pay range from £352 10s per annum normally earned by a Major after 20 years service, to £890 per annum the maximum for which a Major General is eligible The rates of pay and retired pay are subject to periodical variation consequent on fluctuations in the cost of living

Outfit Grant—An officer on joining receives £50 as outfit allowance

Marriage Allowances—Officers of 30 years of age and over who are married are entitled to draw special rates of allowances

A Voluntary Widows' and Orphans Fund exists for officers of the Corps

All particulars may be obtained by application in writing or personally to the Under-Secretary of State The War Office (A M D 1) Whitehall London S W 1

BOROUGH OF CHELMSFORD

MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified Medical Practitioners possessing the Diploma of Public Health for the appointment of Medical Officer of Health for the Borough subject to the provisions of the *Public Health Officers* Act 1921 the Sanitary Officers Order 1926 and the Local Government (Qualifications of Medical Officers and Health Visitors) Regulation 1930

The officer appointed will be required to perform all the duties generally appertaining to the position of Medical Officer of Health to act as School Medical Officer to undertake work in connection with Maternity and Child Welfare and to carry out all such duties as the Council may from time to time direct He will be required to reside in the Borough unless otherwise authorised by the Council and must devote his whole time to the duties of the Office and must not engage in private practice

He may be appointed to that position also to be required to perform such duties to undertake the medical supervision of the Infectious Diseases Hospital which is under the control of the Chelmsford Joint Hospital Board in which event a proportion of his total salary will be paid by the Joint Hospital Board

The salary offered to cover all the duties appertaining to the office (including the Infectious Diseases Hospital) will be £800 per annum but such salary will be subject to a temporary economy abatement according to the scale approved by the Council

Full particulars and terms of appointment may be obtained upon application to the undersigned and the application on the form provided must reach me not later than Friday March 25th

Canvassing will disqualify

Municipal Offices, C E PAFFORD
Baddow Road, Town Clerk
Chelmsford March 10th 1932

ROYAL VICTORIA HOSPITAL DOVER

WANTED RESIDENT MEDICAL OFFICER (male unmarried) duties qualified Anæsthetist Full particulars of experience and Salary £200 per annum and Board and Residence (40 hours)

Applications should be received on or before Friday April 2nd by the Hon Secretary Royal Victoria Hospital Dover on a form to be obtained from him

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COUNTY BOROUGH OF BLACKBURN

PUBLIC ASSISTANCE COMMITTEE

Applications are invited from Medical Practitioners (male) for the appointments of (a) RESIDENT ASSISTANT MEDICAL OFFICER and (b) JUNIOR ASSISTANT MEDICAL OFFICER at QUEEN'S PARK INSTITUTION & INFIRMARY The applicants must be registered as Medical Practitioners

The staff consists of a Resident Medical Officer a Consulting Surgeon a Laboratory Assistant and X ray Attendant

There is a separate Infirmary separate Mental Block and a Children and there is an all Departments and Midwifery case with X ray apparatus is installed

The persons appointed will be required to devote their whole time to the duties and also to act as may be directed by the President Medical Officer

Salary

(a) Assistant Medical Officer who must have had Hospital experience £380 *per annum* (subject to a temporary economy deduction of £10 12s 6d per annum) increasing by £25 per annum to £450 per annum together with board apartments and attendance

(b) Junior Assistant Medical Officer whose appointment will be limited to a term not exceeding one year £150 per annum (subject to a temporary economy deduction of £3 5) together with board and apartment and attendance

Application stating age qualifications and experience and accompanied by copies of not more than three recent testimonials must be sent to and to reach the Public Assistance Officer Public Assistance Office Cardwell Place Blackburn not later than March 21st

Town Hall BRIGGS H MARSDEN
Blackburn Town Clerk.
March 7th 1932

SAMARITAN FREE HOSPITAL FOR WOMEN

Marylebone Road N W 1

Applications are invited for the post of ANÆSTHETIST to attend on Monday afternoons and Friday mornings

Applications accompanied by copies only of three testimonials to reach the Secretary of the Hospital on or before Thursday March 31st

G H HAWKINS Secretary

CITY OF LIVERPOOL

RESIDENT ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the above appointment at the MILL ROAD INFIRMARY (800 beds) Liverpool for a period of one year at a salary of £200 per annum (subject to a temporary deduction as authorised by the Council) together with the usual residential allowances Canvassing will be deemed a disqualification

Applications to be made upon *forms* obtainable from the Medical Officer of Health Municipal Annexe to be endorsed Resident Assistant Medical Officer and returned to the undersigned so as to be received no later than Tuesday March 29th

Municipal Buildings, WALTER MOON
Liverpool Town Clerk
March 14th 1932

COUNTY BOROUGH OF MIDDLESBROUGH

HOLGATE MUNICIPAL HOSPITAL (273 Beds.)

Applications are invited for the post of JUNIOR RESIDENT MALE MEDICAL OFFICER, to commence duties forthwith The appointment will be for six months with a possible continuation for a second six months Salary at the rate of £160 per annum for the first six months and £170 per annum for the second six months with board residence and laundry

The appointment affords good opportunities for gaining experience as the Hospital is equipped for modern X ray Electrical Medical and Operative treatment

Applications stating age experience and qualification together with copies of three recent testimonials must be forwarded to the undersigned not later than Monday March 21st

Municipal Buildings PRESTON KITCHEN
Middlesbrough Town Clerk
March 4th 1932

LIVERPOOL STANLEY HOSPITAL

STANLEY ROAD LIVERPOOL

There will be a vacancy for a HOUSE SURGEON (male) on April 1st next *The appointment will be for a period of six months* Salary at rate of £100 per annum with board laundry etc *Candidates must be on the Medical Register* and submit their applications with copies of three recent testimonials to the undersigned

E W OSBORN Secretary

COVENTRY & WARWICKSHIRE HOSPITAL

Applications are invited for the post of HONORARY ASSISTANT RADIOLOGIST

Candidates must be duly qualified Practitioner

The appointments will be made for one year subject to re-appointment annually

Candidates shall be resident in the City of Coventry or within six miles radius thereof or shall take up their residence within that radius within six months from date of appointment

Canvassing either directly or indirectly will be deemed a disqualification

Applications with original testimonials and registration certificates must reach the undersigned on or before March 29th

Candidates will in due course receive notice of their eligibility or otherwise from the Secretary and after receipt of such notice eligible candidates are at liberty to send through the post printed copies of their application and testimonial to the Members of the Board of Management of the Hospital a list of whose names and addresses will be furnished by the Secretary No such application or copies of testimonials shall be sent until receipt of such notification from the Secretary

By Order of the Committee
(Miss) R HOOPER
March 14th 1932 Secretary

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL MAIDSTONE (110 Beds)

Applications are invited for the post of HOUSE SURGEON (male) to the Ear Nose and Throat Department which post will become vacant on April 14th Candidates must be duly qualified and registered Medical Practitioners single and of British birth and nationality and should have had some experience in the treatment of diseases of the Ear Nose and Throat The Hospital is recognized by the Examining Board for the D L O The appointment will be for six months but may be renewed for a second six months Salary at the rate of £200 per annum with board residence and washing

Applications stating age together with copies of not more than three testimonials should be sent to the undersigned

JOHN W SIDEBOTHAM Secretary

ROYAL SUSSEX COUNTY HOSPITAL BRIGHTON

Notice is hereby given that a MEETING of the ELECTIVE COMMITTEE will be held in the BOARD ROOM at the Hospital on Wednesday May 4th at 12 15 p m for the purpose of electing an HONORARY CLINICAL ASSISTANT to the OPHTHALMIC DEPARTMENT and such Elective Committee is hereby convened accordingly

Applications are invited for this office from gentlemen who are Fellows or Members of the Royal College of Surgeons of England Edinburgh or Ireland or Masters or Bachelors of Surgery of one of the Universities of the British Empire and who are duly registered under the Medical Acts

Applications with proof of the necessary qualification must reach the Secretary Superintendent at the Hospital before 12 noon on April 22nd

By Order of the Board of Management
L L W LANCASTER CAVE
Secretary Superintendent

ROYAL SURREY COUNTY HOSPITAL GUILDFORD (182 Beds)

Wanted April 1st HOUSE SURGEON Salary £150 per annum with board residence and laundry

Applications stating essential particulars with copies of testimonials to be sent to the Secretary Superintendent at as early as possible

ELLINA HOSPITAL FOR CHILDREN Southwark S E 1

Applications are invited for the post of HOUSE SURGEON (male) for six months from April 12th (first two months in the Casualty and Out patient Department) Salary at the rate of £120 per annum with board and residence

Applications stating age experience and qualification accompanied by copies of four testimonials to be sent to the undersigned not later than March 28th from whom rules and other particulars can be obtained

By Order of the Committee of Management
W H SIDNELL
March 7th 1932 Secretary Superintendent

TAUNTON AND SOMERSET HOSPITAL TAUNTON (104 Beds)

SENIOR HOUSE MEDICAL OFFICER and a HOUSE SURGEON required at the end of March The Medical staff consists of Physicians and Surgeons Those applying for the Senior post Salary at the rate of £150 and £100 per annum respectively Applications with testimonials to E J J STACEY Secretary

METROPOLITAN HOSPITAL Kingsland Road E 8

There are vacancies for the following
(a) SENIOR HOUSE PHYSICIAN (male)
(b) SENIOR HOUSE SURGEON (male)
(c) JUNIOR HOUSE PHYSICIAN (male)
(d) JUNIOR HOUSE SURGEON (male)
(e) TWO CASUALTY OFFICERS (male)
Salary £100 per annum

Appointments in the first place will be for a period of six months dating from May 1st

Candidates must possess a registered Medical and Surgical qualification of the United Kingdom

Applications with copies of three recent testimonials and a certificate of ability to administer anæsthetics should be sent to the undersigned not later than first post on Thursday April 7th

Two Members of the Resident Staff are candidates for the two Senior appointments

HERBERT F RUTHERFORD
Secretary & House Governor

ROYAL MINERAL WATER HOSPITAL BATH

Notice is hereby given that a vacancy in the office of REGISTRAR AND SECRETARY to this Hospital (non medical and non resident) will be filled at a General Court of the President and Governors to be held at the Hospital

Candidates are requested to send in their applications in their own handwriting (stating age qualifications and previous hospital experience if any) with their testimonials not later than Thursday March 31st for the consideration of the Committee

Salary £250 per annum

Rules and regulations relating to the office may be obtained at the Hospital

Applications to be addressed to the President Royal Mineral Water Hospital Bath

March 10th 1932

ROYAL MINERAL WATER HOSPITAL BATH

A vacancy in the office of PHYSICIAN to this Hospital will be filled at a General Court of the President and Governors to be held on Monday May 2nd at noon

The conditions of the appointment may be seen at the Hospital Candidates who must be graduates in Medicine of a University of Great Britain or Ireland are requested to send their applications with not more than three testimonial to the Registrar of the Hospital on or before Wednesday April 13th

Personal canvassing is prohibited

March 6th 1932

THE ROYAL DEVON & EXETER HOSPITAL EXETER (225 Beds)

APPOINTMENT OF HOUSE SURGEON TO SPECIAL DEPTS

Applications are invited from male qualified and registered candidates for this appointment vacant on April 1st next

Engagement for six months candidates being eligible for subsequent appointments

Salary at the rate of £150 per annum with board residence and laundry

Applications with copy testimonials should be sent to the undersigned as soon as possible

S S COLE
Secretary & Manager

THE PRINCESS BEATRICE HOSPITAL Richmond Rd Earls Court S W 5

This Hospital recently rebuilt is now open and in full working order with 76 Beds and Out Patients Department There is a vacancy for a SURGEON in Charge of the Throat Nose and Ear Department for which applications are invited

Applicants must be Fellows of the Royal College of Surgeons

Applications accompanied by three recent testimonials should reach the Secretary not later than April 1st

THE PRINCESS BEATRICE HOSPITAL Richmond Rd Earls Court S W 5

This Hospital recently rebuilt is now open and in full working order with 76 Beds and Out Patients Department There is a vacancy for a PHYSICIAN for which applications are invited

Applicants must be Fellows (or Members) of the Royal College of Physicians (London)

Application accompanied by three recent testimonial should reach the Secretary not later than April 1st

KILMARNOCK INFIRMARY AYRSHIRE (130 Beds)

Wanted TWO HOUSE SURGEONS male one for April 11th and one for May 11th Previous experience preferred Salary £140 per annum with board and residence Apply with testimonials to Secretary

ROYAL [illegible] HOSPITAL

Applications are invited for the office of SENIOR RESIDENT OFFICER

Candidates must be registered Medical Practitioners and must be prepared to begin duties on May 1st

Salary at the rate of £150 a year with board and residence in the Hospital Additional income will accrue to this post the care of private patients being included in the duties

In the event of the First House Surgeon being appointed other candidates are requested to state whether they would accept the office of First House Surgeon at the rate of £150 a year Second House Surgeon at the rate of £1 a year or Third House Surgeon at the rate of £100 a year

The appointments are for a period of six months

Applications with testimonials stating age and qualifications must be received not later than April 5th

A J M TARRANT Secretary

ST PAUL'S HOSPITAL FOR DISEASES (INCLUDING CANCER) OF THE GENITO URINARY ORGANS AND SKIN Endell Street Holborn W C 2

Applications are invited for the undermentioned position

HOUSE SURGEON (vacant April 1st)

Candidates must be qualified and registered Salary at the rate of £150 per annum with board and residence The appointment is for a period of six months on the termination of which the holder is eligible for the position of Resident Medical Officer in which capacity he will have charge of the Surgical beds During his appointment as House Surgeon the duties will involve work in the Surgical Wards and in the Out patient Department

Applications with copies of recent testimonials to be sent forthwith to the Chairman of the Medical Committee

MILLER GENERAL HOSPITAL Greenwich Road S E 10 (151 Beds)

Applications are invited for the post of HONORARY ORTHOPAEDIC SURGEON Candidates must be Fellows of the Royal College of Surgeons of England and not engaged in general practice and they are expected to call upon the Member of the Honorary Medical and Surgical Staff on a list of whom can be obtained from the Secretary An honorarium of 20 guineas per annum is allowed towards travelling expenses

Applications which must be printed or type written together with copies of not more than three recent testimonials should be sent to the Chairman of the Hospital as soon as possible

March 8th 1932

LIVERPOOL ROYAL INFIRMARY (Medical School—335 Beds)

HOUSE SURGEON to Eye Department and Casualties

HOUSE SURGEON to Skin Department and Casualties

Applications are invited for the above appointments for six months commencing April 1st

Candidates must be duly registered under the Medical Acts

Salary at the rate of £60 per annum board etc

Applications stating age qualifications where graduated nationality and enclosing copies of testimonials to be sent to the undersigned by Saturday March 26th

WM RUTTER
March 11th 1932 Gen Supt & Sec

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER

There is a vacancy for a SURGEON on the Acting Medical Staff of this Institution

The candidate appointed will have charge of the Orthopaedic Department of the Hospital including all injuries and diseases of bones and joints

Candidates should send in their applications diplomas and testimonials and refer to the undersigned on or before Tuesday April 5th next

F J SYMONS
February 25th 1932 Secretary

THE ST HELENS HOSPITAL

Applications are invited for the position of HOUSE SURGEON (male) to this Hospital at a salary of £200 per annum Board residence and laundry Applications stating age with three recent testimonials to be sent to the Secretary St Helens Hospital not later than March 28th

The successful candidate will be required to commence his duties on April 1st.

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square, W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
GP PART POST OFFICE. (*Assistant Medical Officer—Woman*)	**CONTRACT PRACTICE** (*contd*)	**CONTRACT PRACTICE** (*contd*)
CONTRACT PRACTICE.	LLWYNYPIA CLYDACH VALE PENYCAE VG GLAMORGAN (*Workmen's Medical Scheme*)	OGMORE VALLEY GLAMORGAN (*Wyndham Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)
FFRW VALE MON (*Workmen's Medical Society*)	MARDY GLAMORGAN (*Workmen's Medical Scheme*)	**PUBLIC HEALTH**
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	MARKHAM MAIN SICK AND ACCIDENT SOCIETY MATHOPPE (*Medical Practitioner*)	DEVON COUNTY COUNCIL. (*School Medical Inspector—Male*)
LOWESTOFT MEDICAL INSTITUTE (*Medical Officer*)	MELTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE (*Workmen's Medical Scheme*)	LANARK COUNTY COUNCIL (*Assistant Medical Officer of Health and Tuberculosis Officer*)
	NEATH AND DISTRICT (*Medical Aid Association*)	NORTH OXFORDSHIRE UNITED DISTRICTS JOINT COMMITTEE (*Medical Officer of Health*)
	OAKDALE MON (*Medical Officer for Medical Aid Association*)	PTON AND E FOR

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having, first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District.	Hon Sec of Division or Branch	Town or District.	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (*All Friendly Society Appointments*)	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	SOUTH AUSTRALIA (*Lodge Appointments*)	Secretary South Australian Branch B M A House 206 North Terrace Adelaide	WELLINGTON NEW ZEALAND (*Contract Practice Appointments*)	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
QUEENSLAND (Brisbane Associated Friendly Societies Institute) (Toowoomba Associated Friendly Societies Medical Institute Toowoomba)	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	VICTORIA. (*All Institute or Medical Dispensaries*)	Dr J P MAJOR (Hon Sec. Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria.	WESTERN AUSTRALIA (*Contract and Lodge Practices*)	Hon Sec. Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St George's Terr Perth Western Australia.

March 16th 1932 By Order of the Council ALFRED COX Medical Secretary

BOLTON INFIRMARY AND DISPENSARY (301 Beds including Two Auxiliary Hospitals)

Applications are invited for the post of HOUSE PHYSICIAN Salary £150 per annum with board residence and attendance Duty to commence May 2nd

The Infirmary has a very well equipped Pathological Department and this post offers an exceptional opportunity for experience in clinical pathology

Preference will be shown to applicants who have had some experience in laboratory work

Applications stating age nationality and previous experience together with copies of testimonials should be forwarded to the undersigned not later than Monday March 21st

ALBERT P BRISCOE Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E 2

The Committee invite applications for the post of SURGEON for the Ear Nose and Throat Department with the charge of 4 beds Two attendances per week will be paid Candidates must have passed the examination of the Royal College of Surgeons

Applications with copies of three recent testimonials which must be printed or typewritten should be sent to me not later than March 31st to the undersigned from whom further particulars may be obtained

CHARLES H PESSELL Secretary

March 1 1932

THE ROYAL INFIRMARY SUNDERLAND (280 Beds) Six Resident

Wanted immediately a HOUSE SURGEON for six months at £150 per annum with board residence and laundry Applications stating age qualifications and experience together with copies of testimonials to be sent to the undersigned

S E FIRTH Hon Secretary

WEST LONDON HOSPITAL Hammersmith Road W 6 (234 Beds.)

Applications are invited for the post of HONORARY MEDICAL RADIOLOGIST (Diagnosis) Candidates must be duly qualified Medical Practitioners and have had experience of Radiological work especially X ray Diagnosis The successful candidate will have full control of and be fully responsible for his Department in all matters relating to X ray Diagnosis

Applications accompanied by copies of testimonials should reach me not later than Wednesday April 6th Candidates must attend a Meeting of the Medical Council on Friday April 8th at 4 30 p m and prior to that date call upon and send copies of application and testimonials to each Member thereof They must not canvass Members of the Board of Management but nevertheless must send copies of application and testimonials to each Member thereof and be in attendance at a Meeting of the Board at 5 p m on Tuesday April 12th when the election will be made

H A MADGE Secretary

COUNTY MENTAL HOSPITAL LANCASTER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER Candidates must be single and under thirty five years of age Commencing salary £500 rising by annual increments of £25 to £600 with further increases on promotion subject to a deduction of 5 per cent under the Asylums Officers Superannuation Act There are no emoluments The elected candidate will be required to live in the Hospital and will be provided with board lodging etc for which a charge of £150 a year is made

A temporary abatement from the gross salary will be made the amount of the abatement at present being £18 10

The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum

Applications giving full particulars with testimonials (copies only) should be forwarded to the Medical Superintendent before March 29th.

MANCHESTER ROYAL INFIRMARY CENTRAL BRANCH ROBY STREET MANCHESTER

HOUSE SURGEON (Lady)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment Applicant must be registered and hold a Medical and Surgical qualification

The appointment is tenable for eight months commencing May 1st two months as Junior at £100 per annum three months as Assistant at £100 per annum and three months as Senior at £200 per annum together with board and allowance for laundry

Applicant must state age and qualifications and send twelve copies of their application and testimonials to the undersigned by 9 a.m. on Thursday March 31st

By Order

FRANK G HAZELL General Superintendent & Secretary

DONCASTER ROYAL INFIRMARY (185 Beds)

SENIOR CASUALTY HOUSE SURGEON (male) required immediately Previous Hospital experience necessary

Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable

Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER R SMITH Secretary Superintendent

LOWESTOFT AND NORTH SUFFOLK HOSPITAL

TWO HOUSE SURGEONS (men or women) required Commencing salary £120 per annum with board residence and laundry

Applications together with copies of three recent testimonials to be sent to the Honorary Medical Superintendent

(*Appointments continued on p 54.*)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
T/A ARTICULATE WESTCENT LONDON
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Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

WANTED—ASSISTANTSHIP IN SCOTLAND by Aberd n Graduate age 35 married at present engineered anæsthetics midwifery Now in Partnership Practice in England Salary required £500—Address No 1612 B M A House Tavistock Square W C 1

WANTED—ASSISTANTSHIP OR LOCUM BY male M B B Ch B A O N U I 1924 Age 30 9 months H S Mental Hospital and good general and practical experience Major and minor surgery—Address No 1630 B M A House Tavistock Square W C 1

WANTED—ASSISTANTSHIP WITH VIEW to PARTNERSHIP by woman qualified 1927 Preferably with scope x rays and electro therapy (D M R E 1930) Able drive car Free end June—Address No 1610 B M A House Tavistock Square W C 1

WANTED MAY 1st — ASSISTANT FOR pleasant Midland town Outdoor (£350) single man or woman British State exams particulars Dispenser kept Usual bond—Address No 1623 B M A House Tavistock Square W C 1

WANTED — INDOOR MALE ASSISTANT Country Practice Midlands own car preferable but not essential no objection newly qualified salary according to experience reference nationality age photo—Address No 1614 B M A House Tavistock Square W C 1

WANTED — THOROUGHLY RELIABLE ASSISTANT to take charge of Surgery in salubrious suburb Well light Commencing salary £5 p w with review later Free modern house Opening for energetic man—No 1609 B M A House Tavistock Sq W C 1

WANTED—AN INDOOR ASSISTANT FOR A practice in a pleasant country district in the North of England—Address stating age qualification experience etc No 1628 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP (OUTDOOR) London or suburb by gentleman M R C S L R C P single age 28 H S H Capt C I Free now Good refs—Address No 1633 B M A House Tavistock Sq W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WANTED—ASSISTANT MALE OUTDOOR Small country town Home Counties State age full particulars etc—Address No 1608 B M A House Tavistock Square W C 1

WANTED—PART TIME ASSISTANTSHIP IN London by Doctor Experienced in panel and private practice dispensing etc—Address No 1626 B M A House Tavistock Sq W C 1

ASSISTANTSHIP WITH VIEW IN WOMANS Hospital North London Well qualified woman with Hospital experience essential Half to all of time Vacancy early summer—Address No 1655 B M A House Tavistock Square W C 1

LONDON—ASSISTANTSHIP (WITH VIEW TO early succession if in medical woman's practice) wanted by experienced Scotch woman graduate from shortly Part time work considered—Address No 1635 B M A House Tavistock Square W C 1

LOCUMS

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PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4 ADAM ST Strand, London W C 2
Teleg Ephesian Lond Phone Temple Bar 9011
After Office Hours Epsom 9142

WANTED—LOCUMS INSTITUTIONAL OR otherwise by M B age 32 with good Sanatorium Hospital and G P experience Highest references Own car Free shortly Usual fees Assistantship considered—Address No 1423 B M A House Tavistock Sq W C 1

GENERAL MEDICAL PRACTITIONER (RET) life abstainer undertakes LOCUM TENENS work Free for Easter Fee 6 gns weekly—Address No 1603 B M A House Tavistock Square W C 1

LOCUM TENENS — NOW AVAILABLE FOR ENGAGEMENTS for Easter Experienced in G P and panel and Mental work Recent refs Qual 1907 St Barts — Apply stating term Locum The Red House Lancing Sussex Phone Lancing 57

LOCUM WORK REQUIRED BY DOCTOR now engaged in Lot graduate work Free any time Good references Guys trained—Address No 1652 B M A House Tavistock Square W C 1

PARTNERSHIPS

WANTED BY M B B S M R C P E AGE 32 SALARIED PARTNERSHIP in good class Practice or APPOINTMENT Extensive experience in Hospital and G P Keen on Medicine—Address No 1654 B M A House Tavistock Square W C 1

AN EXCEPTIONAL OPPORTUNITY OCCURS of securing a PARTNERSHIP in an old established Practice in good neighbourhood near London Gross receipts last year over £8 000 A 1/8th share would be sold to a third partner with further share later Premium 2 years purchase Applicants should be well qualified preferably married and about 30 years of age —No 1613 B M A House Tavistock Sq W C 1

LANCS TOWN—PARTNERSHIP IN GOOD and old established Practice with receipts of over £1 700 yearly and increasing Panel 2 550 Price for one third to commence £1 000 —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

PARTNERSHIP FOR DISPOSAL IN LARGE Practice in Wiltshire Receipts over £5 000 per annum panel 3 000 Share for disposal one fifth Maternity Home and Cottage Hospital locally—For further particulars apply to Messrs R SUMNER & Co Ltd Manufacturing Chemists 40 Hanover Street Liverpool

SOUTH COAST—PARTNERSHIP IN FIRST class non disp Practice of £3 000 p a in fav seaside resort succession from £2 350 fine mod house £3 500 Applicant should be exp Grad in medicine not under 40 —No 822 B M A House Tavistock Sq W C 1

MEDICAL POSTS DISPENSERS etc

DISPENSERS SUPPLIED TO
DOCTORS and HOSPITALS
AT SHORT NOTICE WITHOUT FEE
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Write wire or phone Central 3678
The Reliance Bureau for Dispensers
12 Holborn Viaduct E C 1

A LADY DISPENSER BOOKKEEPER supplied immediately on request quantified and with practical experience in private practice and dispensary work also trained in bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

A FULLY TRAINED NURSE SRN CMB also DISPENSER (Apothecaries Hall) desires outside post with Doctor or Institution —Apply ELLA FENTON 61 Shalimar Gardens Acton W 3

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5853 THE DISPENSERS BUREAU 15 Tind ay House 141 Shaftesbury Avenue London W C 2

LADY (28) DESIRES POSITION SECRETARY HOUSEKEEPER experience same with doctor cultured reliable intelligent good cook domesticated Salary £26 Excellent ref —Address No 1615 B M A House Tavistock Square W C 1

LADY DISPENSER BOOKKEEPER SECRETARY 15 years experience good general practitioner at liberty now for LOCUMS or PERMANENT POST Good bookkeeper typist Excellent references—Address No 1633 B M A House Tavistock Square W C 1

LADY DESIRES POST AS CARETAKER or or dentist recommend Mr QUENSETT Western 508

LADY SEEKS POSITION AS RECEPTIONIST to Doctor or Dentist Harley St experience London or Country —Please write Miss JOHNSON 82 King Henry's Road Hampstead London N W 3

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION 85 Lockston Square S W 1 (telephone Victoria 2722) supplies qualified Dispensers Bookkeepers Laboratory Assistants Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dental Clerks Orderlies Porters Caretakers etc without charge to prospective employers

TYPEWRITING AND DUPLICATING undertaken by Expert Testimonials Theses Legal Documents Numerous letters of appreciation from Doctors—BEATRICE RADFORD (B) 341 Finchley Road N W 3 Phone Hampstead 6450

WELL EDUCATED YOUNG LADY DESIRES SECRETARIAL POST Expert shorthand typist thoroughly experienced capable within —Address No 1601 B M A House Tavistock Square W C 1

£2 2s WEEKLY WILL BE PAID BY LADY 27 (cheerful) qualified Secretary domiciled musical offering these services in return for congenial home Cannot afford nerve trouble requiring treatment but is used to seek occupation —No 1603 B M A House Tavistock Sq W C 1

PRACTICES

WANTED — PRACTICE INCOME ABOUT £700 town or suburban London residential of London House 3 or 4 bedrooms modern conveniences must have professional room with separate entrance (to rent preferred)—No 1637 B M A House Tavistock Sq W C 1

WANTED—GENERAL MIXED PRACTICE IN Leeds Bradford Sheffield or other Northern Cities £1 200 up Good panel and house essential Ample capital waiting Details in confidence—Address No 1631 B M A House Tavistock Square W C 1

WANTED AT ONCE WELL ESTABLISHED private PRACTICE Greater London £2 000 up no panel House with garage to rent—Address No 1602 B M A House Tavistock Square W C 1

BEDS—PRACTICE IN THRIVING DISTRICT Nice house electric light garden Receipts £500 annum panel 3 Price £400 or will rent House rent or sell Price £400 or will rent House £1 200 MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

WANTED — PRACTICE OR PARTNERSHIP in London (area) and Provinces by experienced Woman Doctor Suitable living accommodation if required Income £600—£800 —Address 1627 BMA House Tavistock Sq WC1

WANTED — MIDDLE CLASS PRACTICE with panel income about £1 500 Capital available to purchase immediately —Address 1611 BMA House Tavistock Sq WC1

WANTED — PRACTICE IN SCOTLAND Capital available Assistantship with succession considered — Address No 1607 BMA House Tavistock Square WC1

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FOR DISPOSAL OWING TO HEALTH reasons middle-class PRACTICE in nice suburb of Manchester established 12 years Average receipts last three years £1 270 (income tax figures) Fees 5/6 to 7/6 midwifery from £3 3 Good scope Nice convenient house for sale Price £1 000 £600 could be on mortgage Premium for Practice 1½ years purchase cash — Address No 1662 BMA House Tavistock Square WC1

FOR SALE — MIDDLE AND BETTER working-class PRACTICE in residential district of Leeds Panel over 440 Private work at present about £100 per quarter Good scope for increase especially if whole time is devoted Fees £4 0 or offer Further particulars on application —No 1501 BMA House Tavistock Sq WC1

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HOLIDAY EXCHANGE —LONDON (REGENTS Park) G P would exchange Practice in July (3 weeks) with Doctor at Seaside Mixed Practice Visiting optional —Address No 1622 BMA House Tavistock Square WC1

LANCS —LARGE TOWN —DEATH VACANCY —Old established non-panel PRACTICE held 30 years by late Vendor Receipts average £620 pa House to be sold with Practice Combined price for both £1 000 — Apply PEACOCK & HADLEY LTD 19 Craven Street Strand Strand WC2

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NORTH MIDLANDS —IN RAPIDLY GROWING village with 2 large housing schemes being developed Established over 4 years Panel 41[illegible] Average receipts last 3 years £569 House for sale lease or rent —Address No 1619 BMA House Tavistock Square WC1

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HOUSE PHYSICIAN required immediately Applicants must be registered and preference will be given to those who have held a previous House post and having pathological experience
Salary £200 per annum with board residence and laundry
Applications together with testimonials should be sent

March 15th 1932

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MANCHESTER ROYAL EYE HOSPITAL

JUNIOR HOUSE SURGEON required Salary £120 per annum with residence board etc
Applications (with copies of testimonials) endorsed House Surgeon to be addressed to the Chairman of the Board of Management not later than April 1st

H B NORTH Secretary

ROYAL EDINBURGH HOSPITAL FOR MENTAL AND NERVOUS DISORDERS

ASSISTANT PHYSICIAN male wanted Salary £300 per annum with board and lodging Applications with copies of three testimonials addressed to Prof R G M ROBERTSON Physician Superintendent

LONDON COUNTY COUNCIL

Applications invited for undermentioned positions

Form of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 4a) County Hall Westminster Bridge S E 1 returnable April 1st Canvassing disqualifies Further inquiries should be addressed to Medical Superintendents at the Hospitals

For appointments (1) and (2) the duties which are of a general nature are assigned by the Medical Superintendent and include if necessary assistance at other establishments under the control of the Council Board lodging and washing are provided Candidates must be qualified Medical Practitioners of at least one year standing and have held a resident appointment in a general hospital for six months

The salaries and value of emoluments are subject to temporary reduction

(1) RESIDENT ASSISTANT MEDICAL OFFICER (men only) £250
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ST GEORGE'S IN THE EAST *HOSPITAL* Raine Street *Wapping* E 1
ST MARY ABBOTT'S HOSPITAL Marloes Road Kensington W 8
ST NICHOLAS HOSPITAL Plumstead S E 18

One form of application only is required for these vacancies and successful candidates will be allocated in accordance with the requirements of the service Consideration will however be given to any preference which candidates may express Appointments are for one year only

(2) RESIDENT ASSISTANT MEDICAL OFFICER (men only) at HAMMERSMITH HOSPITAL Ducane Road W 12 Salary £350 rising annually by £25 to £400 a year Experience in obstetrics and children's diseases desirable

(3) VISITING MEDICAL OFFICER at Edmonton Colony for Sane Male Epileptics Silver Street Edmonton N Salary £ 30 a year for an average of one hour's visit daily and emergency visits

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Waterloo Road S E 1

Applications are invited from qualified Practitioners for the post of CASUALTY OFFICER vacant on April 1st to work in the *Out patient Department* on weekdays at £ 50 per annum lunch and tea provided Applications with copies of testimonials should be forwarded not later than Tuesday morning March 22nd to the Secretary at the Hospital from whom further particulars can be obtained

THE ROYAL WATERLOO HOSPITAL *for* CHILDREN AND WOMEN
Waterloo Road S E 1

There will be a vacancy on April 1st for a HOUSE SURGEON (male) at the above Hospital The appointment is in the first instance for a period of six months Salary at the rate of £100 per annum with board and residence
Application with copies of testimonials should be forwarded not later than Tuesday morning March 22nd to the Secretary at the above address *from* whom further particulars can be obtained

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237 Fulham Road Chelsea S W 3

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Candidates must be unmarried and possess a legal qualification to practice

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LONDON W —Within 20 minutes of West End PARTNERSHIP in suburban middle class G P situated in rapidly developing locality Excellent scope for young and energetic man Panel approx 2 000 Receipts £2 500—£2 600 Premium for one third share 2 years purchase

LONDON E —PARTNERSHIP in middle and working class Practice Receipts over £2 000 Large panel Scope for increase especially midwifery Premium for 2/5ths share 2 year purchase with view to larger share

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MIDDLESEX W —PARTNERSHIP in Suburban Practice situated in rapidly growing residential locality Receipts (approx) £2 000 Panel (increasing) 650 Medium sized house available Premium for 1/3 or 2/5 share 2 years purchase

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2 DEVON —Unopposed Country PRACTICE Last year £675 Panel 250 Scope for increase MO £71 Rent £32 p a Prem 1½ years purchase Suit for man or woman
3 MONMOUTH — Old established PRACTICE Receipts £300 p a In same hands 40 yrs Good house Selling owing to ill health Populous district £1 000 for house & Practice
4 COUNTRY TOWN — Glouce ter hire—Third Share with incr to half share later Last yr £1 800 Choice of hse Prem 2 yrs pur
5 ed p a pur
6 in ect s ings Panel 946 Appts £120 In present hands 23 years Good house garage large yard House Practice £5 000 Borders of Monmouthshire No Collieries Cl scope
7 WESTERN CITY Middle and working class PRACTICE Last year £490 Panel 850 Price £675 Good house Might rent Plenty of scope
8 DEVON —PARTNERSHIP for well-qualified Physician 2/5 share returning at present £800 p a Good class non panel Practice Excellent house to rent Prem 2 yrs pur
9 MIDLAND CITY — Old established general and Surgical PRACTICE Receipts last year £2 740 Panel 1 500 recently established increasing Fine house to rent Prem £3 250
10 DEVON — Sport Town — In growing district £320 in last 15 months Panel 300 Good house to rent Prem £400 Great scope Selling owing to ill health
11 LANCASHIRE —Good class PRACTICE in pleasant seaside resort Panel 1 250 Receipts £870 p a Price £1 000 Cl house

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1 MIDLANDS —COUNTY BOROUGH —PARTNERSHIP (One Third Share) in old established panel and industrial Practice Receipts £4 200 Panel 4 700 Good house to rent
2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Gar etc
3 NORTH OF ENGLAND—Panel Colliery and Club PRACTICE. Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man
4 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc
5 SOUTH WALES —Contract and middle class PRACTICE Receipts average £1 100 Panel about 1 000 Good house to rent Lawn garage etc
6 LANCS —Old estat and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent
7 BERKS —(Country Town) —PARTNERSHIP (2 5ths share) with short prelim Assistantship and ultimate succession Receipts over £1 200 Panel 530 and good scope Appts worth about £250 Good house

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FOR DISPOSAL

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MANCHESTER—Good Suburb—Sound mixed PRACTICE Cash receipts last year £1 292 Panel 1 170 Scope Excellent house 2 reception 5 bedrooms Premium 1½ years purchase—No 339

LIVERPOOL—PRACTICE in good Industrial area Cash receipts 1931 £685 Panel nearly 800 Scope for increase Good house 2 reception 4 bedrooms Rent £52 pa Premium £1 000—No 331

DEVILS VALANCE LANCS TOWN—Suit good Surgeon—Mixed class PRACTICE Average cash receipt £1 634 pa Panel 829 Premium £4 000 payable by arrangement (to include Surgery and Nursing Home (freehold) equipped Operating Theatre fittings, Ward furniture, drugs and book debts about £1 300)—No 335

MANCHESTER Old established PRACTICE Cash receipts last year £1 913 Panel 1 697 Scope for increase Good house 2 reception 4 bedrooms Premium—Practice ½ years purchase—No 323

LINCOLNSHIRE—SEASIDE TOWN—Old established mixed PRACTICE Average cash receipts £1 701 pa Panel 686 Excellent housing and practice and accommodation 2 reception 6 bedrooms Garage and small garden Rent £100 pa or on lease Premium 1½ years purchase—No 332

NORTH STAFFS—LARGE TOWN—Old established PRACTICE Average cash receipts £2 078 pa Panel 1 130 Exceptional freehold house 4 reception 5 bedrooms Garage and garden Premium 1½ years purchase—No 314

VENEREAL DISEASES PRACTICE—SOUTHERN CITY—Cash receipts £1 800 pa House to rent Valuation afterall Will accept generous small offer immediately—No 340

WELSH BORDER—UNOPPOSED COUNTRY PRACTICE in favourite district Average cash receipts £1 100 pa including panel appointment £300 pa Panel 756 Cottage Hospital Excellent house 4 reception 4 bedrooms Garage and garden Rent £70 pa or would sell for £1 250 Premium 1½ years purchase Will not restrict—No 337

Residential Town—Old established PRACTICE Average cash receipts of 450 Well situated freehold detached house 3 reception 5 bedrooms Garage Premium—Practice ½ year purchase—No 329

LANCS—PLEASANT COUNTY TOWN—Sound mixed PRACTICE Average cash receipts £1 309 pa Appointment in the transfer at approximately £265 pa Panel 1 035 Excellent house 3 reception 6 bedrooms garage and large garden Premium—Practice 14 years purchase—No 326

MEDICAL WOMANS PRACTICE—MANCHESTER—Old established Cash receipts 1931 £645 Panel 450 Good connection Excellent house 3 reception 6 bedroom Garage Rent £80 pa or offer Premium 1 year purchase—No 330

LIVERPOOL—Mixed General PRACTICE Cash receipts last year £1 090 Panel 930 Scope for increase Good house 3 reception 6 bedrooms Rent £75 pa or would sell for £1 250 Premium 1½ years purchase—No 324

MANCHESTER—Residential Suburb—Middle class PRACTICE Suitable for a good Surgeon) Cash receipts 1931 with ample Excellent houses to rent 10 years purchase—No 277

CHESHIRE TOWN near MANCHESTER—PARTNERSHIP in old established Practice Average cash receipt £5 151 pa Panel 3 600 Excellent house 2 reception 5 bedrooms garage and garden Premium—one fifth share—£1 700—No 333

MANCHESTER—Middle class PRACTICE in pleasant suburb Cash receipts 1931 £1 327 Panel 450 Charming house 3 reception 6 bedrooms billiard room Large garden and garage Premium—Practice—1½ years purchase—No 322

CHESHIRE COAST TOWN near LIVERPOOL—Middle class PRACTICE Average cash receipts £1 184 pa Appointment £80 pa Small select panel Excellent corner house 3 reception 5 bedrooms Premium—Practice—1½ years purchase No 317

MANCHESTER—INDUSTRIAL PRACTICE Cash receipts last year £889 Panel 721 Suit RC Clients of Good house 2 reception 5 bedrooms Rent £50 pa Premium—better offer—No 190

LANCS TOWN Old established mixed PRACTICE Average cash receipts £995 pa Panel 710 Excellent house to rent in Premium to right 2 reception 4 bedrooms Garage and garden Premium 1½ years purchase—No 298

MANCHESTER — Old established PRACTICE in prominent business area 30 years Cash receipts last year £1 409 Panel 885 Scope for increase Rent of surgery premises £50 pa Premium 1½ years purchase—No 328

MANCHESTER—PARTNERSHIP in Practice of about £1 600 pa Panel 1 550 House available to rent Premium—half share—1½ years purchase—No 303

NEAR PRESTON—PRACTICE offering Cash receipts 1930 £700 Panel 300 Good house 2 reception 4 bedrooms Rent £70 pa Premium 1½ years purchase—No 254

SOUTH WEST COAST—SEASIDE RESORT—Old established PRACTICE Cash receipts 1930 £874 Panel 250 Rent freehold House 2 reception 5 bedrooms Garage and garden—No 265

MANCHESTER—MIXED PRACTICE needed for two in Partnership Cash receipts last year £2 840 Panel 2 156 Good scope Two excellent houses with ample accommodation Premium—Practice—1½ years purchase—No 321

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British Medical Bureau

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(FOUNDED 1880)

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending its members to consult Mr A V STOREY the General Manager, in all transactions requiring the services of a Medical Agent

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them

The business undertaken by the British Medical Bureau is divided under the following heads—

TRANSFER OF PRACTICES, PARTNERSHIPS, etc

Medical Practitioners wishing to dispose of Practices, or desiring to take Partners, are advised to negotiate the business through the British Medical Bureau Vendors may depend upon receiving introductions only to eligible and bona fide purchasers All information is treated in strictest confidence Full and trustworthy information regarding Practices Partnerships, etc for disposal, supplied gratis to Purchasers

ASSISTANTS AND LOCUM TENENS.

Assistants and Locum Tenens can be secured at short notice It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out

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Medical Men wishing to receive Resident Patients should enrol their names on the books of the British Medical Bureau A large number of Patients are placed yearly through this medium

ACCOUNTANCY

The British Medical Bureau has its own staff of qualified Accountants wholly engaged on medical work—i e Investigation of Practices for purchasers Income Tax Auditing Accounts etc

Practices and Partnerships for Disposal — **Full particulars sent free**

1 DEATH VACANCY—E MIDLANDS—PRACTICE in small industrial district easy distance of two good towns Receipts 1931 £1 600 Panel 1 235 Large house with surgery etc garage and good garden for sale Beautiful surrounding country and sport of most kind

2 DEVON — Country Practice in delightful and attractive part Receipts 1931 over £1 300 including appointments worth £170 p a and a panel of 687 Well situated modern house (7 bedrooms) garage and about three acres of grounds including orchard for sale Good educational facilities and sport Premium £1 900

3 LONDON, N W —Non-dispensing Practice of £2 400 p a in good residential part No panel Practically no midwifery Large well built residence (8 bedrooms and 2 attics), garage and good garden for sale Premium for Practice 1½ years' purchase

4 WITHIN 70 MILES OF LONDON—Lucrative PRACTICE of over £2 200 p a in flourishing county town Panel 1 830 Excellent house (6 bedrooms) in best part for sale or rent Premium 1½ years purchase

5 ESSEX —Partnership in Practice of £5,400 p a in developing country district easy distance of coast Panel 3 600 Detached house (6 bedrooms) garage and good garden for sale Scope for increase One fourth share 2 years purchase

6 BRISTOL —Practice averaging over £500 p a in growing district on outskirts of town Panel 850 Small house, with garage and garden for sale Great scope for increase Premium £600

7 S COAST —Lock-up Practice between £450—£500 p a in rural district on outskirts of popular holiday resort Panel 400 Rent of Surgery premises 10/ weekly Prem £550

8 LONDON, N W —Non-dispensing Practice averaging over £1 450 p a No panel Large house (7 bed and dressing rooms) with garage and small garden for sale or rent Premium £2 000

9 EASTERN COUNTIES — Partnership in Practice averaging £4 400 p a in market town Suitable house available Share of £750 p a at first at 2 years purchase Cottage Hospital Applicant must have surgical experience and if holding the D P H could obtain M O H Appointment in addition

10 W OF ENGLAND —Partnership in Practice nearly £2 600 p a in country town Panel about 1 000 Good house (5 bedrooms) garage and garden of about half acre to rent Good educational facilities Cottage Hospital Premium one third share £1 750

11 MIDLANDS —Practice over £1,700 p a in growing town with nice surroundings Panel 1 100 House available later Good hospital and scope for surgery Premium 1½ yrs purchase

12 HOME COUNTIES —Non-dispensing Practice averaging £1 150 p a in growing residential watering place No panel Detached house (3 bedrooms) with every modern convenience and attractive garden to rent Premium 1½ years purchase

13 MIDLANDS —Practice averaging £727 p a in clean flourishing manufacturing town Panel 570 House (3 bedrooms) garage to rent Premium 1½ years purchase

14 SHROPSHIRE — Practice £800 p a in Market Town Panel 170 Suitable house to purchase Premium 1½ years purchase

15 STAFFS — Partnership in Practice over £4 000 p a in manufacturing town Panel 4 700 Suitable house to rent Premium one third share at 1½ years purchase

16 S WALES — Mixed Practice in growing district of seaport town Receipts last year over £800 Panel 750 House (3 bedrooms) garage and garden to rent Good prospects for scope Premium £1 200

17 MIDLANDS — Partnership in Practice, averaging over £3 000 p a in a most progressive manufacturing town Panel about 4 000 Expenses light House (4 bedrooms and 3 attics) for sale Premium one half share £3 000

18 MIDDLESEX —Practice in growing residential district Receipts 1931 £1 250 Panel 400 Modern house (5 bedrooms) garage and large garden for sale Great scope Premium 1½ years purchase

19 LANCASHIRE —Practice averaging £2,100 p a in industrial district on outskirts of manufacturing town Panel 1 460 House (5 bedrooms) with garage to rent or sale Premium 1 years purchase

20 EAST ANGLIA — Partnership in unopposed Practice of £3 580 p a in small market town in beautiful part Panel 1 900 Good house (6 bedrooms) in excellent order with three quarters of acre of garden for sale Cottage Hospital and ample scope for surgery Premium one third share 2 years purchase

21 W OF ENGLAND —Partnership in Practice averaging £2 350 p a on outskirts of first rate town Panel 2 400 House with 5 bed and dressing rooms for sale Preliminary years third share at 1½ years purchase

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1880)

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Practices and Partnerships for Disposal (continued)

22 N WALES.—Practice in small Watering-place. Receipts 1931 £575. Panel 238. Modern house very central; run with ample accommodation at nominal rent. Very bracing climate. Excellent shooting, fishing. Scope for increase. Premium £450. Well worth consideration.

23 MIDLANDS.—Partnership in sound non-dispensing Practice of over £5,700 p.a. in beautifully situated county town. Land £2,000. Good well qualified Physician required aged 30-35. One-fifth share at 2 years purchase with early increase. Hospital with prospect of appointment on Staff at an early date.

24 WITHIN 30 MILES OF LONDON.—PARTNERSHIP in non-dispensing Practice of about £5,000 p.a. in first-rate country town. Panel 1,750. Good house (4 bedrooms etc.) to rent. Partner should be aged 30-35 and must hold the F.R.C.S. Premium one-half share 2 years purchase.

25 YORKSHIRE — Country Practice in delightful and picturesque part easy access of favourite coastal resort. Receipts average £1,500 p.a. including £650 p.a. from the panel. House (5 bedrooms) with electric light, garage and large garden, and good water supply for sale. Hunting, shooting, fishing. Premium £2,150.

26 BIRMINGHAM — Practice averaging £684 p.a. in good class suburb. Small panel but ample cope. Very little midwifery. Low expense. House with garage to rent. Premium 1 years purchase or near offer for quick sale.

27 WILTSHIRE — Country Practice over £1,300 p.a. in a most picturesque village. Land about 700. Cosy detached house (6 bed and dressing rooms), garage and large garden to rent. Premium £2,200.

28 HALY.—Old established Practice in an attractive City. Receipts last 2 years averaged £1,400 p.a. No midwifery or night work. Suit gentleman of experience married and with good social attainments. Peasonable premium.

29 W. OF ENGLAND.—Partnership in Practice in pleasant country town. Cash receipts average about £2,200 p.a. (including panel and appointments over £1,500 p.a.). Charming old house (5 bedrooms and attics etc.), garage and beautiful garden. Plenty of sport. Scope for increase. Premium for one-fifth share 2 years purchase.

30 S.E. COAST — Popular Resort.—Partnership in mixed class Practice about £3,600 p.a. Land about 2,000. Excellently situated house (5 bedrooms etc.) with garden and garage for sale. Twenty-fifths share for disposal at 2 years purchase.

31 LONDON, S.E. — Partnership (with succession) in old-established middle-class Practice averaging with £2,400 p.a. in pleasant open suburb. Panel about 820. Little night work. Good house with garage and nice garden for sale or rent. Premium one-half share 1½ years purchase.

32 MIDLANDS — Partnership in Country Town Practice averaging about £3,500 p.a. Panel over 1,500. Scope for increase. Premium for one-fourth share 2 years purchase. Immediate vacant hip if desired.

33 LONDON, N.W. — Practice in suburban district. Receipts 1931 £700. Panel 300. Corner house (5 bedrooms) garage and garden to rent on lease. Premium £250.

34 SUSSEX — Country Practice between £1,200 and £1,300 p.a. in delightful part. No panel. Large residence (9 bedrooms etc.) garage and garden of four acres to rent on lease. Premium £1,800.

35 EASTERN COUNTIES — Partnership in Practice of about £3,650 p.a. in country town. No panel. Suitable house available. Good educational facilities. Premium one-half share £2,500.

36 SURREY — Partnership in increasing middle-class Town Practice of £2,300. Panel over 1,200. Modern detached Corner house (5-6 drooms) garage and garden for sale. Partner should be 26-30 and have held Hospital appointments. Share of £1,000 p.a. at 2 years purchase.

37 N. OF ENGLAND — Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgery, anaesthetics and obstetrics. Share of three-fifteenths at 2 years purchase.

38 LONDON, N.W.—Non-dispensing Practice over £950 p.a. in good residential district. No panel. Ten roomed house with garage and large garden. Rent £200 p.a. Premium £1,200.

39 N. MIDLANDS.—Partnership in Practice, about £3,000 p.a. in country district near two important towns. Land over 1,600. Small house (5 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years purchase.

40 EAST ANGLIA — Partnership in sound non-dispensing Practice of about £3,000 p.a. in favourite Seaside Resort. Partner should be a Varsity man about 30 years of age, experienced in Medicine and Anaesthetics. Good up-to-date Hospital. Premium for one-third share 2 years purchase.

41 W. OF ENGLAND.—Practice about £800 p.a. in first-rate City. Panel 1,324. Well-built house (4 bed and three sitting rooms) to let. Excellent scope. Premium £1,450.

42 S. WALES.—Increasing Practice of £900 p.a. in pleasant Market Town. Panel 150. Well situated house (non-basement) with 3 bedrooms for sale. Cottage Hospital. Premium.

43 LONDON, S.W. — Small Practice of nearly £400 p.a. close to the West End. Select panel about 417, with scope. Corner house with ample accommodation to rent on lease. Premium 1½ years purchase or near offer.

44 DURHAM.—Practice of over £500 p.a. in residential and colliery district near large town. Panel 370. *Substantially built 9-roomed house for sale. Scope for increase.*

45 NEW ZEALAND.—NORTH ISLAND.—Non-dispensing PRACTICE about £1,800 p.a. in first-rate Town. Modern detached house (*4 bedrooms etc.*) garage and garden for sale. Equable climate. Good educational facilities. Premium only £1,250.

46 NORTH OF ENGLAND — Small Season PRACTICE in Inland Health Resort capable of increase by one practising all the year round. Receipts about £150. No panel or midwifery. House in own grounds with 6 bedrooms etc. Price—house and Practice—£1,250.

47 EAST ANGLIA.—Partnership in Practice over £4,500 p.a. in beautiful *country* district, easy access of important town. Panel 3,000. Nice detached house (7 bedrooms), garage etc., garden and grounds of 10 acres for sale. Sport of most kinds. Considerable scope. Premium two-thirds or four-ninths share 2 years purchase.

48 SOUTH AFRICA.—Easily worked Country PRACTICE in healthy district (elevation 2,000 ft.) in Cape Colony. Cash receipts year ended June 1931 over £1,000. Sport of all kind. Well-built house. Premium—*house and Practice*—£1,225.

49 KENT.—Country Practice of over £800 p.a. in beautiful part. Panel *nearly 400*. Very attractive residence (5 bedrooms), central heating, grounds of 2½ acres; cricket, tennis for sale. Sport. Premium 1½ years purchase.

50 S. OF ENGLAND.—Partnership in Ophthalmic Practice about £1,300 p.a. in small but delightful resort. Considerable scope to one able to operate. Premium one-half share 12 years purchase.

51 HOME COUNTIES.—Partnership in exceptionally good and rapidly increasing Practice about £6,000 p.a. in delightfully situated Country Town, easy distance of coast. Attractive house (7 bedrooms) to rent. Partner must hold the F.R.C.S. and be aged about 30. *Appointment on Hospital Staff.* Premium for one-fifth to one-fourth share 2 years purchase. Preliminary Assistantship.

52 KENT — Country Practice of about £850 p.a. *Panel 550. Good house and garden for sale.* Prem. £1,100.

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 WITHIN 150 MILES NORTH OF LONDON —COUNTY TOWN —Very well established chiefly better class non panel PRACTICE in favourite town Average gross cash receipts for last three years £3 201 last year £3 309 No appointments Fees 5/ to 21/ Only about 20 cases of midwifery from 5 to 25 gns Very nice house with 2 reception 6 bedrooms dressing room etc and professional rooms Price for freehold £2 000 half on mortgage Premium £5 000 Hospital of over 200 beds and good surgical scope if desired Ill health sole reason for sale

2 WEST MIDLANDS —GOOD TOWN —Old established middle and working class PRACTICE held by Vendor (who is retiring) over 30 years Average gross cash receipts for past 3 years nearly £3 000 This year at the rate of about £3 500 Panel of 1 350 Consultations 3/6 and 5/ Visits 5/ to 21/ No dispensing Not much midwifery House contains 2 reception 5 bedrooms consulting and waiting rooms Price for freehold £2 000 or might be rented Premium £4 500 payable £1 500 down and balance within 12 months

3 LANCS —LARGE TOWN — PARTNERSHIP — A one third share is offered in an old established mixed class Practice averaging approximately £2 000 p a Panel of 2 550 Fees from 2/6 Suitable house with 2 reception 3 bedrooms etc Surgery and waiting room Rent on long lease £50 p a Premium £1 000 to include book debts etc

4 LONDON SOUTH WEST —Old established middle and working class PRACTICE averaging about £2 100 p a Panel of over 2 000 Fees 2/6 to 10/6 Very little midwifery Rent of house £75 p a Premium £4 250

5 WESTERN CITY —Well established middle and working class PRACTICE averaging for last 3 years over £500 including panel of 850 Fees from 2/6 Suitable house with dining room waiting and consulting rooms 4 bedrooms and bathroom etc Price £1 000 or can be rented Premium £600

6 LONDON SOUTH EAST —Old established good mixed class PRACTICE producing for last twelve months nearly £1 700 Panel of over 1 700 Fees chiefly 2/6 to 10/6 Very convenient ten roomed house with nice garden and garage Can be obtained on long lease at exceptionally low rental Efficient introduction given

7 PARTNERSHIP —LINCS —Attractive Market Town within easy reach of Coast —A share representing about £750 p a (with increase up to one half in 3 or 4 years) is offered in an exceptionally good mixed class Practice established many years Average gross cash receipts for last three years over £3 600 This year at the rate of over £4 000 Panel of 1 600 Fees from 3/6 to 2 gns Midwifery 14 to 10 gns Choice of houses or Purchaser could reside in rooms to begin with Premium for share £1 500 Ingoing Partner should be experienced able to undertake surgery and preferably hold the D P H in which latter case appts could be obtained which would increase the income of the share up to about £1 000 p a

8 ABERDEENSHIRE COAST — class PRACTICE in attractive district averaging panel of over 500 and appts worth about suitable house with 2 reception 5 bedrooms and professional rooms Good garden Garage Rent £35 p a or could be purchased Premium £850

9 MANCHESTER —Old established PRACTICE averaging £640 p a Panel of 154 Offers good scope Fees 3/6 to 10/6 Midwifery 3 to 7 gns House contains 4 reception 5 bedrooms bathroom etc Rent on lease £70 p a Premium for immediate sale £450

10 NORFOLK —UNOPPOSED COUNTRY PRACTICE —PARTNERSHIP — A one third share is offered in an old established good mixed class Practice in attractive district There is an up to date Hospital and good scope for major surgery Average gross cash receipts for the last three years over £3 500 Panel of nearly 2 000 Appts worth nearly £300 p a Fees from 2/6 to 21/ Nice house facing south with 3 reception and 6 to 8 bedrooms bathroom etc good garden In excellent repair Price for freehold £1 250 Sport of all kinds and schools within reach Premium 2 years purchase

11 DEATH VACANCY —Town and Country PRACTICE on the outskirts of Lincoln offering very good scope Cash receipts for the last twelve months approximately £1 400 including panel of over 1 000 Fees from 3/6 Very nice house standing in its own grounds with ample accommodation Premium £1 500

12 SOMERSET —SUBURB OF FAVOURITE TOWN —PARTNERSHIP — A one third share (after a preliminary Assistantship of about six months at £500 p a indoor) is offered in an old established mixed class Practice averaging for the last three years £2 371 p a Panel of over 2 400 Fees from 3/ Suitable house with 2 reception 4 bedrooms dressing room separate entrance to professional rooms electric light Fair sized garden Garage Price for freehold £1 000, part on mortgage Prem for share one and a half years purchase

13 PARTNERSHIP —LONDON SUBURB (SOUTH EAST) —Owing to the retirement of one of three partners the third share of an old established middle and working class Practice situated in a well populated district is for immediate disposal Cash receipts for past three years average £4 862 p a including appts over £500 p a and panel of about 300 Very little midwifery Expenses small Suitable house available. Rent £40 p a Premium 2 years purchase

14 SOUTH WEST OF ENGLAND —FAVOURITE TOWN —PARTNERSHIP —A share producing about £800 p a with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Midwifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be experienced and hold M D Lond or

15 FAVOURITE SOUTH WESTERN COUNTY —PARTNERSHIP —A two thirds or three fifths share is offered in a well established Practice situated within easy reach of good residential town Gross cash receipts for last 12 months £2 522 Panel of 1 500 Visits 3/6 to 10/6 Very up to date attractive house with 2 reception 6 bedrooms Price for freehold £2 500 payable £1 000 down and £1 500 on mortgage Premium for share two years purchase Good sporting social and educational facilities Surgical scope if desired

16 SOUTH OF ENGLAND —FAVOURITE COAST TOWN —Old established chiefly better class PRACTICE producing about £1 800 p a Small selected panel Fees 3/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

17 WITHIN 60 MILES OF LONDON near County Town —Very old established middle and better class PRACTICE in delightful country district averaging approximately £800 p a and offering good opp Selected panel of about 170 and appts worth £160 p a Fees 5/ to 10/6 Very little mid Exceptionally nice house with beautiful garden containing 3 reception 4 bedrooms etc Separate entrance to professional rooms Electric light Garage for 2 cars Price for freehold £1 800 Premium £800

18 WEST OF ENGLAND —LARGE TOWN —Well established PRACTICE producing nearly £900 p a including panel of over 1 300 Suitable house in excellent position Price £700 or can be rented at £60 p a Premium £1 450 Good scope for increase

19 NORTH MIDLAND CITY — PARTNERSHIP — Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

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CONTENTS

MARCH 26, 1932

ORIGINAL ARTICLES

The Chronic Pelvic Woman By ALBAN DOUGLAS, MB FRCS 551

Oleothorax with Observations on Twenty Cases By NORMAN M MUNRO MD 554

Fulminating Meningococcal Meningitis By J N C FORD BM GEOFFREY SHERA MD and Sir JAMES PURVES STEWART MD FRCP (With Charts) 558

Points in Connexion with the Successful Issue of Simple Prostatectomy By A. RALPH THOMPSON ChM FRCS 560

CO_2 in Post Anaesthetic Respiratory Complications By J ROSS MACKENZIE MD 561

MEMORANDA

A Method of Recording Maximum Arterial Pressure By I HARRIS MD 563

Herpes Zoster Involving the Urinary Bladder By C C CHESTERMAN MD 563

Infective Jaundice By E C MACDONALD MB 564

An Unusual [illegible] 564

REPORTS OF SOCIETIES

HARVEIAN SOCIETY OF LONDON
Pulmonary Embolism 564

ROYAL SOCIETY OF MEDICINE
Functions of Sympathetic System 565
Cholecystography 567

MANCHESTER AND LIVERPOOL MEDICAL SOCIETIES
Surgery of Sympathetic System 568

[illegible]
[illegible] 568

[illegible]
[illegible]
Deep X Rays for Breast Cancer 569

REVIEWS

The Laboratory in Surgical Practice 570
Radium at the Middlesex Hospital 570
The Pathogenic Streptococci 570
Physiology of Digestion 571
Social Effects of Alcoholism 571
Notes on Books 572

OBITUARY

Sir William Robert Smith MD 592
Mary Constance Tugman MRCS 593
Arthur Oliver Holbeche MRCS 593
Thomas George Stran MD 593
Edward Lumsden Brunton MB 593
William Noble MB 593

LEADING ARTICLES

THE GROWTH OF POPULATION 573
ARTERIAL ENCEPHALOGRAPHY 573

THE WEEK

The Royal Medical Benevolent Fund's Best Year 574
Koch's Discovery of *Bacillus tuberculosis* (Illustrated) 575
Aluminium and Health 576
Cremation in Great Britain 576
Medical Presidents of the Royal Society 576
Memorial to W E Dixon 577

GENERAL ARTICLES AND NEWS

The First Hundred Years NOTES ON THE ASSOCIATION'S HISTORY 578

Brain of the East African Native By J H SEQUEIRA MD FRCP 581

Manson House Opening by the Prince of Wales 582

MEDICAL CONGRESSES 1932 577

PREPARATIONS AND APPLIANCES (Illustrated) 572

MEDICAL NOTES IN PARLIAMENT
National Health Insurance 595
Dangerous Drugs Bill 595

MEDICAL NEWS 596

LOCAL NEWS

IRELAND—
[illegible] 583
[illegible] 583
[illegible] 583
[illegible] 584

ENGLAND AND WALES—
Dust in the Cotton Industry 584
Red Cross Clinic Annual Report 584
London Coroners 585

SCOTLAND—
Glasgow Children's Hospital 585
[illegible] 586
[illegible] 586
[illegible] 586
Leith Royal Infirmary 586

BELGIUM—
Courses in Tropical Medicine 586
Centres of Preventive Medicine 586
Legislation for Abnormal Persons 586

MEDICO LEGAL

Negligence Alleged Against Insurance Practitioners Charges Withdrawn 594

UNIVERSITIES AND COLLEGES

University of London 595
University of Dublin 595
University of Durham 595
University of Liverpool 595
University of Sheffield 595
Royal College of Physicians of London 595
Royal College of Surgeons of England 595

CORRESPONDENCE

The Student in Irons By J A Ryle MD FRCP 587

Ambulatory Treatment of Fractures By Maurice Sinclair MB ChB 587

The Barbiturates in Anaesthesia By Cecil Rowntree FRCS 588

Diet and Dental Disease By F W Broderick MRCS DHC Given MD and F H Smith MPCS 588

Vitamin Potency of Milk By H M Walker MD 590

Essential Hypertension By Frewen Moor MD CM 590

Aetiology of Cancer By J C Mottram MB 590

Cramped Footgear By W W Shrubsall DPH 591

Road Traffic Signal By E J Primrose MD 591

Philosophy and the Medical Man By F C Eve MD FRCP 591

Preparation for Marriage By Kenneth Walker FRCS and A H Harkness MRCS 592

Syntactic Aphasia By A S C Ross 592

THE SERVICES

Deaths in the Services 596
(*For Naval, Military and Air Force Appointments see* SUPPLEMENT)

LETTERS AND ANSWERS

[illegible] tor 597
[illegible] 598
[illegible] ces 598
Cheselden's Death 598
A Convenient Gas Stand 598
Raw Milk and Teeth 598
Vacancies and Courtesies 598
Premiums for Motor Car Insurance 598

VACANCIES 598
(*See also page 112 of* SUPPLEMENT)

The SUPPLEMENT contains

Notice of Election of Representative Body

Women in Industry
Medical Aspects of Legislation

General Medical Council EXECUTIVE COMMITTEE BUSINESS

NATIONAL HEALTH INSURANCE
Deputation from Approved Societies

CORRESPONDENCE

CURRENT NOTES
Reduced Railway Vouchers to London
Centenary Meeting Masonic Welcome

Association Notices Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Baillière Tindall & Cox
Irwin W K —Urinary Surgery 4

Churchill J & A
Bull Exam —Diseases of the Kidney 4

Lewis H K & Co Ltd
Diet for Hoodoo 1932 4

Saunders W B Co Ltd
[illegible] 3
[illegible] 3
[illegible] 3
[illegible] 3
[illegible] 3
[illegible] 3
Pearl's Medical Biometry 3
Ranson Anatomy of Nervous System 3
Stevens Practice of Medicine 3
Todd & Sanford's Clinical Diagnosis 3

Oxford University Press
Price F W —Diseases of the Heart 4

Wright & Sons Ltd
Hutchinson R —
Index of Treatment 5
Marshall C F —Cancer 5
Medical Annual 1932 4

ASSURANCE COMPANIES—
London Medical Protection Society 1
Medical Insurance Agency 44

BRASS NAME PLATES &c—
Cooke Name Plates 28
Herbert J A —Name Plate 28
Lewis & Co Ltd —Name Plates 28
Osborne F & Co —Name Plates 28

DEBT COLLECTION—
British Medical Protection Society 26

FOOD PREPARATIONS—
Bemax Laboratories Bemax 13
Brand's Invalid Food 17
Cow & Gate Ltd —Milk Food Cover iii
Horlick Malted Milk 16
National Dried Milk Co Lactogen 18
Nutritine Meat Juice 14

SURGICAL APPLIANCES—
Allen & Hanburys Ltd —
Arthrocel Limit 28
Hawkins & Son Ltd —
Steele 28
Hilliard New Abdominal Belt 28
Medical Supply Association Ltd —
Cordeau Bandage 26
Sanol Catgut 26
Medical Surgical Sundries—
Pulmotor Inhalation Apparatus 42
Potts Malham —Corset Belt 26
Salt Surgical Service 29
Smith & Nephew Ltd —
Elastoplast etc 24

HOSPITAL &c FURNITURE—
Fenmans Sectional Furniture Ltd —
Sectional Furniture 28

HOUSE AGENTS—
Hall [illegible] 41
Hall & Sons Brighton 41

MOTOR CARS TYRES &c—
[illegible] 41

CHEMISTS &c—
Allen & Hanburys Ltd —
Eulaxine 19
Insulin A B 12
Armour & Co Ltd —Liver Extract 20
Bell & Croydon—
Medical Supplies 28
Boots Products 10 12
British Drug Houses Ltd —
Caprokol 10
Insulin A B 12
Radiostolenum 9
Burroughs Wellcome & Co —
Hypoloid 23
Continental Lab Ltd —
Lactobyl 11
Crinbus Ltd —Odol 25
Dimol Laboratories Ltd —
Dimol Snuff 13
Dunneford & Co Ltd —Magnesia 7
Duncan Flockhart & Co —
Ethyl Chloride 14
Evans Sons Lescher & Webb Ltd —
Thyroxin Co 22
Fellow Compound Syrup of Hypophosphites—Fellow 16
Glaxo Laboratories—
Preparations Cover i
Hoffmann La Roche Chem Works—
Sedobrol 27
[illegible] 8
[illegible] 7
[illegible] 5
[illegible] 6
[illegible] 28
[illegible] 11
[illegible] 8
[illegible] 9
Newbery & Sons Ltd —
Agents Cover ii
[illegible] 6
[illegible] 10
[illegible] over ii
[illegible] Ltd —Amidin & Alocol 15
Wright Layman & Umney—
Coal Tar Preparations 27

PRINTING & STATIONERY—
Barlock Co —Barlock Typewriters 41
Hamilton —Medical Stationery 28
Taylor Typewriters 30

TAILORING & UNDERCLOTHING—
Hall H —Medical Service Dress 4
Regent Dress Co —Tailors 28

TOBACCO & CIGARETTES—
Player's Navy Cut 5

TRANSLATIONS TYPEWRITING—
Radford B —Typewriting etc 40

VACCINES & CULTURE MEDIA—
Allen & Hanburys Ltd —
Vaccin 21
Laboratories of Pathology & Public Health 28

X RAY & ELECTRO MEDICAL APPARATUS—
Hamilton Ltd —
Intranasal Ionizer 30
Portable X Ray Ltd —
X Ray Car Service 26

HOTELS & HEALTH RESORTS—
Clifton Hotel 31
Margate 34
Mount Hotel 31
Pembroke Court Hotel 31

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 39

HOSPITAL &c VACANCIES—
Altrincham General Hospital 38
Bath Royal Mineral Water Hosp 43
Blackburn Royal Infirmary 42
Blackpool County Borough 43
[illegible] 38
Ilford King George Hospital 42
[illegible] 38
[illegible] 1
[illegible] 1
[illegible] 1
[illegible] 1
Samaritan Free Hosp for Women 42

HYDROS & PRIVATE HOSPITALS—
[illegible] 34
[illegible] 34
[illegible] 33
[illegible] 34
[illegible] 34

SANATORIA—
[illegible] 34
[illegible] 33
[illegible] 33
[illegible] 34
[illegible] 33
[illegible] 34
[illegible] 33

MEDICAL SCHOOLS &c—
Aberdeen Medical School 35
City of London Maternity Hospital 35
Durham University 35
[illegible] 1
[illegible] 1
[illegible] 1

HOMES & ASYLUMS—
Balbrook House Bath [illegible]
Barnwood House Gloucester [illegible]
[illegible] [illegible]
[illegible] [illegible]
[illegible]

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DISEASES OF THE
B Sc F R C P
ITY KENNETH M
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ORENSIC MEDICINE
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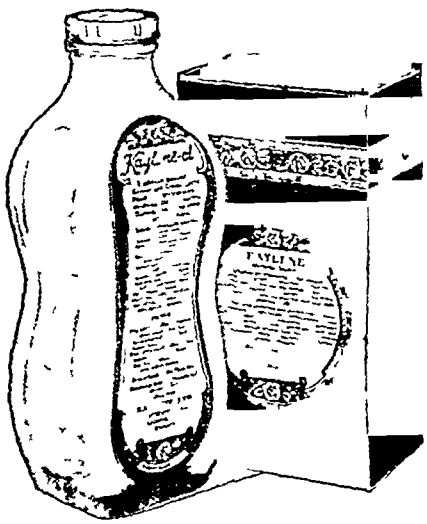
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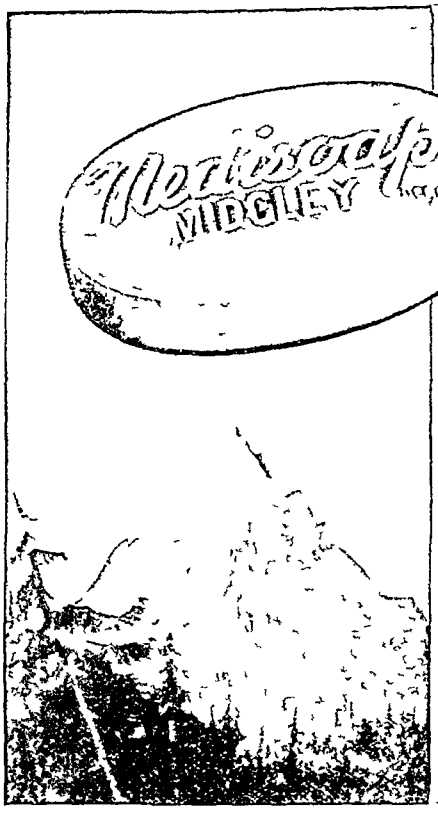
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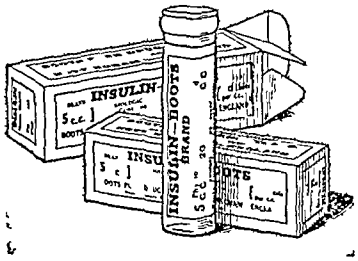
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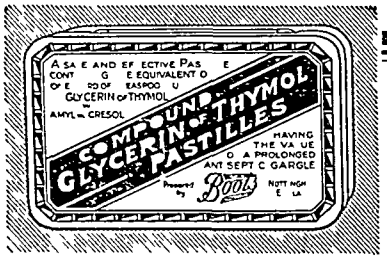
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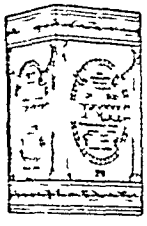
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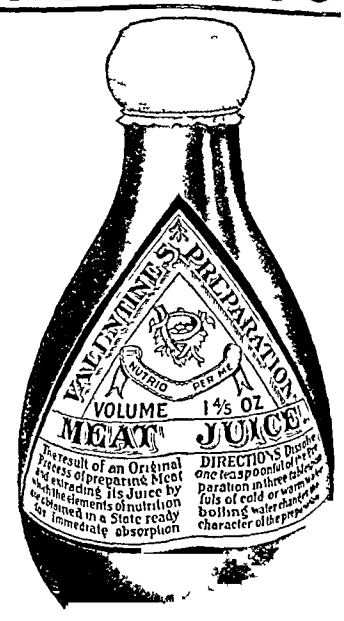
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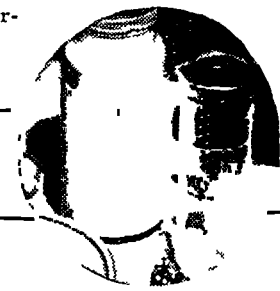
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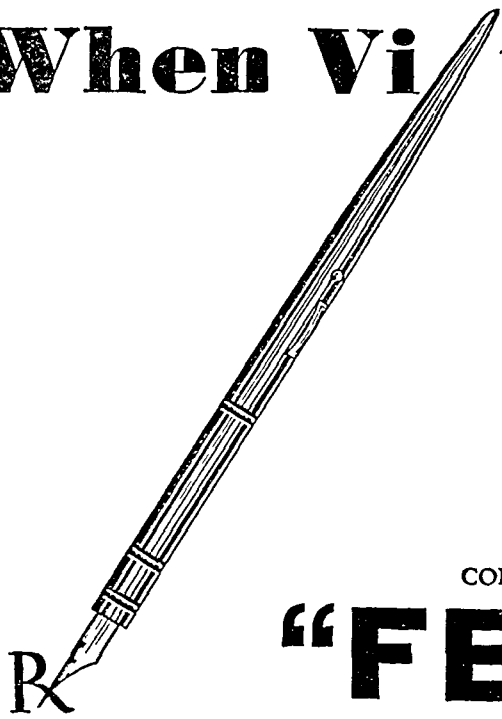
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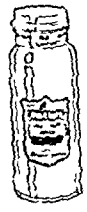
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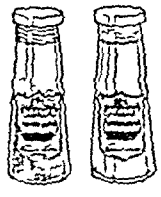
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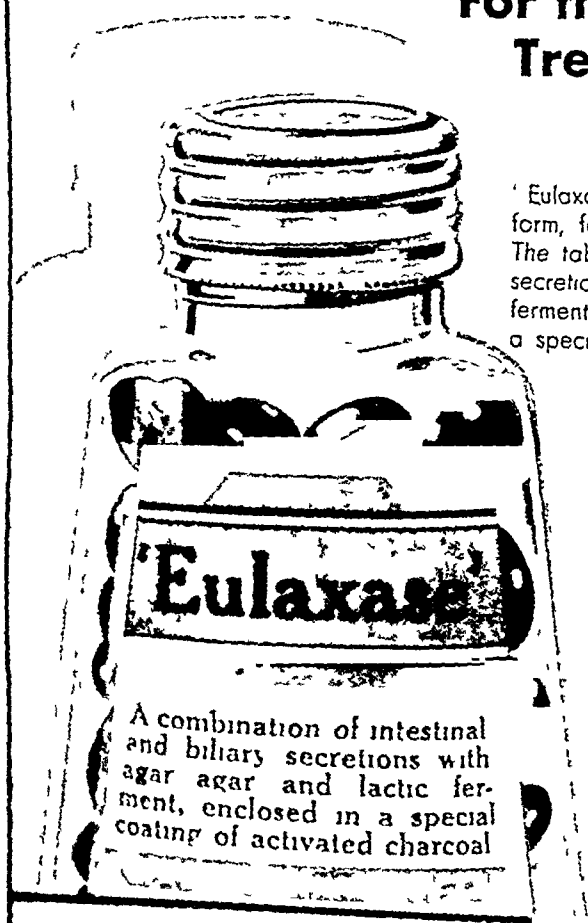
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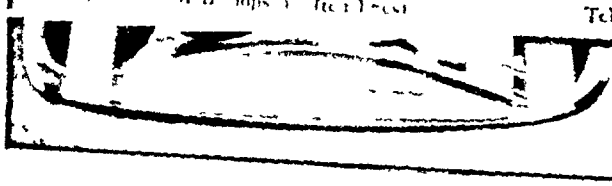
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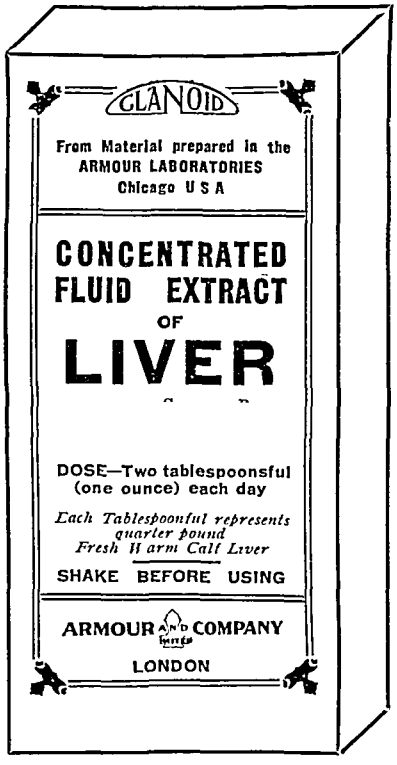
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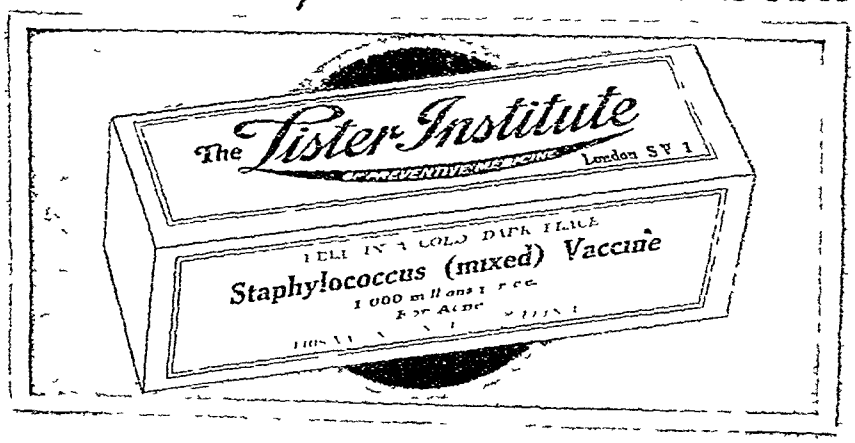
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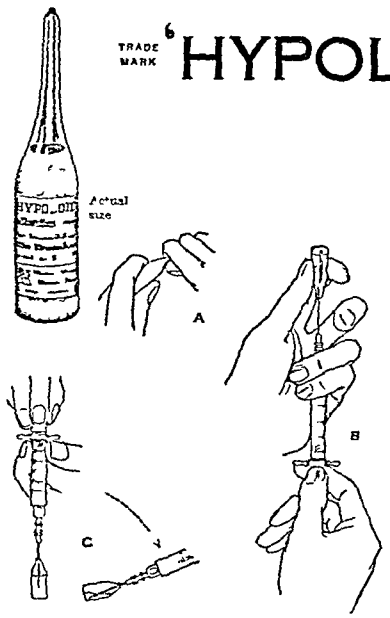
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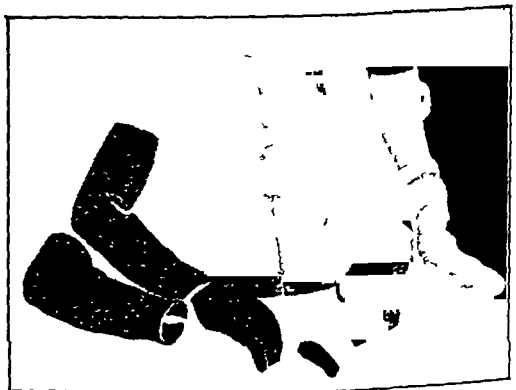


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A Paper

ON

THE CHRONIC PELVIC WOMAN*

BY

ALECK BOURNE M.B., B.Ch., F.R.C.S.

OBSTETRIC SURGEON TO OUT-PATIENTS, ST. MARY'S HOSPITAL; SENIOR OBSTETRIC SURGEON, QUEEN CHARLOTTE'S HOSPITAL

At the outset I should apologize for or explain the title of this paper. When thinking of a true medical description of the conditions to be discussed it seemed impossible to find a sufficiently inclusive term and resort to a colloquialism was necessary. I can however claim justification both by precedent and by the more important reason that it describes a well-known clinical type. Some years ago Dr. Hutchison gave us an analysis of what he called the *chronic abdominal woman* and showed her to be a very real medical problem with whom we were only too familiar. In this paper I am dealing with a similar condition in which genital rather than alimentary symptoms predominate. The difficulties of diagnosis and management are in many ways the same but there are sufficiently important differences to justify an account of how these patients are viewed by the gynaecologist.

DISORDERS OF MENSTRUATION

The condition we are considering may comprise any or all of the common pelvic symptoms together with others referred to any part of the body. The paramount importance of the reproductive system in women is the reason for the usual prevalence of pelvic symptoms and of these the most marked are those of menstrual disorder. Pain for several days before the period is felt in the back, abdomen and thighs with headache and breast ache followed by pain lasting the whole *time of menstruation* and perhaps for a few days after it. The persistence of pain throughout the period is characteristic of the functional or non-organic type of dysmenorrhoea. True spasmodic dysmenorrhoea may be intense but it seldom lasts more than a few hours while the congestive dysmenorrhoea of *organic pelvic lesions* is pre-menstrual in time and usually disappears soon after menstruation starts. Another feature of the dysmenorrhoea of the menstrual invalid is the existence of other aches and pains all over the body often with *nausea* and vomiting and frequency and pain on micturition. Menstruation is reported by the patient to last *longer* than normal sometimes for ten or twelve days and to *return in three* or even two weeks. The loss is described as excessive with large clots though usually these patients do not appear to be as anaemic as one would expect from their description. The intermenstrual interval is a period of recovery from the debility produced by the last menstruation followed by a few days of fear and preparation for the next. During this time she is likely to complain of fatigue backache and lower abdominal pain. These vague pains are commonly unrelated to the ordinary causes of discomfort and an attempt to trace their origin fails. Backache is one of the chief complaints but instead of conforming to what we should expect it may to our surprise be worse on lying or sitting down. There is not the ordinary relation between cause and effect in other words the pains are capricious in their onset and behaviour.

SIGNS AND SYMPTOMS OF DYSMENORRHOEA

In an attempt to emphasize the reality of symptoms these patients describe them with a great wealth of detail. Particularly is pain minutely described—its site of origin to where it radiates and how it is burning shooting stabbing or aching. For the same reason the word terrible is commonly used to ensure that the doctor will regard the pain as a very real trouble. Other symptoms which are frequent are leucorrhoea and dyspareunia. The latter is important as it is often the cause of marital unhappiness which serves further to aggravate the patient's distress. A careful consideration of the nature of the dyspareunia will sometimes give the clue to the true aetiology of the whole condition. To this I shall refer later.

An examination of the pelvis often reveals no lesion but a general survey of the patient usually finds her anxious tired and thin with abdominal laxity toneless muscles and flatulent dyspepsia. There may be general or local abdominal tenderness but no muscular defence and nothing but a spastic colon mobile kidney or inflated tender caecum can be discovered. The scars of surgical operations are often to be seen. Other patients (parous women) may have some prolapse of the vagina with a soft relaxed perineum corresponding to the similar condition of the abdominal wall. Almost inevitably there will be a torn cervix with leucorrhoeal discharge. The uterus may be a little retroverted enlarged and soft. It is always tender and pain is caused by moving the cervix this may give the impression of adnexal disease but thickened tubes can seldom be felt. The ovaries are often low lying easily palpable and always extremely tender to the gentlest touch. Indeed a feature of the vaginal examination is the general increased sensitivity of the whole pelvis so that the pain is out of all proportion to the pressure or thrust of the finger. This pelvic tenderness is noticeably present without the fixity induration or adventitious swellings which are the organic accompaniments of painful vaginal examination.

TYPES OF PATIENTS

The chronic pelvic woman is found among the married and the single parous and nulliparous and at any age between 20 and the menopause. They are represented in all social grades. Hospital out-patients provide nearly as many examples as the *private consulting room* though the types are different. Of the hospital class a moment's thought will recall the tired middle-aged woman with the lax abdomen and perineum after many confinements. Poverty forces her to work away from home where again she will find no rest with a large family of young children. Prolapse pain menstrual excess and frequency visceroptosis flatulence and constipation all reduce her to a state of physical and mental misery.

On the other hand we have the young woman who largely because of foolish upbringing and little real occupation has become a menstrual invalid. Or again the unmarried woman in the thirties or early forties who has been disappointed in love and starved of sex and who lives a life of wearisome monotony as a household drudge to tedious and exacting parents. These are some of the types. We can think of others but they all have the chief features in common though they may emphasize different groups of symptoms.

SIGNIFICANCE OF PAIN AND TENDERNESS

The underlying cause of the chronic pelvic condition may be obvious or obscure but in no other disease is it more important to arrive at the truth for on a knowledge of the cause will hang the decision of alternative and diametrically opposite treatments. *In spite of the diversity of complaints and social types there are two main groups. In the first no physical signs can be found in the second there is a sufficient organic cause to explain adequately all the symptoms. If all patients were so sharply divided as this there would be no difficulty in*

* Read to the West Suffolk Division of the British Medical Association, November 21, 1931.

diagnosis but the practical clinical difficulty is to assess the value of what may be a trifling lesion as a possible cause of pain Or sometimes there is the uncertainty lest some deeper trouble in the pelvis or abdomen should be missed even though a careful examination has been made The emphasis of a trivial condition often known and exaggerated by the patient is the commonest mistake made Examples are the incrimination of a harmless retroversion of a normal uterus or invention of the hypothetical ovaritis In forming a judgement on this important matter it is necessary to keep a sense of proportion and to stop and ask oneself if it is likely or even possible that so profound a disturbance as has been described with so much physical and mental misery and pain can conceivably be caused by a lesion so unimportant The presence of tenderness on examination is regarded too seriously Tenderness so often means nothing and should seldom be considered if there are no other physical signs For example, tenderness means nothing if it is universal or if the organs are otherwise normal on vaginal examination Tenderness is not sufficient for diagnosis of chronic salpingitis and ovaritis There must be swelling induration, or fixity A misinterpretation of tenderness is a fruitful source of error

Psychology of the Pelvic Woman

There will probably be clear localization of pain and well defined menstrual complaints This is the type of patient who is so often labelled 'ovaritis' or 'retroversion' because consideration goes no further than her pelvic organs We so easily assume that a pelvic pain means a pelvic disease and we find it so difficult to realize that symptoms so strongly expressive of organic disease may be entirely explained on a nervous basis It is only after a long touch with practical medicine that we appreciate the reality of the neuroses as causes of physical ill-health The great physiological importance of the reproductive system in women offers an explanation of why neuroses in women so often manifest themselves through functional disorders of the pelvic organs We must be alert therefore to suspect a neurotic basis in all those cases in which there are detailed complaints but no definite physical signs to support them The remainder of the consultation should be devoted to an attempt to find the mental stress or emotional blow which has shaken the woman's mental stability and undermined her confidence In many simple cases it is easy to discover quickly an obvious emotional cause of the trouble

It is not really within my province to deal in detail with the clinical aspects of neurasthenia but all of us, especially those who have much to do with women's diseases should have a sufficient knowledge to enable us to recognize a neurosis and treat the simple cases Perhaps in no other branch of medicine are the baleful effects of specialism more plainly seen than in the attitude of mind of the gynaecologist who regards his work as primarily a branch of surgery Whatever may be his surgical dexterity no man should practise gynaecology unless he is alive to the reality and importance of its association with the neuroses Only by this wide outlook can he regard the diseases of women as a whole involving not only a knowledge of surgical technique, but also a sympathetic familiarity with the emotional structure of a woman's mind and temperament I make no apology, therefore for asking you to think of the psychological aspect of our subject even though I am not a psychologist

Let us first consider some of the common forms of mental stress met with in the gynaecological consulting room It is well to remember first that resistance to emotional stresses varies according to the mental constitution Some are made of poor material and will bend easily while others are so tough as to yield only under utmost provocation It is important therefore, to estimate how far the patient's mental and nervous make up and upbringing are weaker than normal and thus, her liability to suffer strain We find in our consulting rooms either the feeble woman reacting excessively to the ordinary stresses of life or, what is a rare event, the normal woman who has broken down under intensity of stress It is not difficult to find out the type of patient we are dealing with A little conversation and knowledge of their past and family life will be sufficient to estimate the character

Upbringing and Family Relationships

Not only may the raw material be poor and weak or strong and resistant, but the upbringing throughout childhood may have implanted a wrong view of life The child may have been spoilt and pampered, and thus have grown up egocentric with a mental gaze turned inwards on itself If in addition to a childhood and adolescence of excessive mother care the individual becomes a pampered adult shielded from life's normal stresses, and without any great mental ability and resource which will provide external interests, the stage is indeed set for a succession of functional symptoms which may well defy all attempts at treatment If therefore, we can trace pains and other symptoms to the operation of emotional stresses let us consider for a moment what such stresses may be, particularly those which may produce the chronic pelvic woman" As I have already said, human, family, and sex relationships play a predominating part in the life of a woman, and just as there is a tendency for the symptom reaction to be pelvic, so the emotional stresses spring chiefly from family relationships Perhaps the commonest is the distress arising not only from marital infidelity but from the ordinary conjugal coolness which will follow after a few years of humdrum domestic monotony Even the lack of demonstrative affection which obvious during the first months of married life, naturally diminishes in intensity as the years pass, may, to some women be a source of constant daily unhappiness They feel that love and romance are buried under a weight of daily routine with its petty cares and worries and therefore that life now holds little or nothing of what they hoped for during the opening months of married life Those women who suffer from the effects of this form of sex monotony are often childless The normal hunger for affection is satisfied by the demands made by the helplessness of young children entirely dependent on her The care of children will also help to save her by providing a work which will afford little opportunity for dwelling too much on her own imagined misfortunes

Childlessness can also act alone as a severe stress by the acute disappointment and constantly recurring dashing of hope It is only a few women who, after the excitement of early marriage has passed are content to be childless, to most it is the source of the bitterest private grief From being a mere disappointment it becomes a reason for a critical self examination and inarticulate assumption that she cannot be as other women It is natural that a result of this self accusation must often be a series of symptoms arising in the pelvic organs A further example is the emotional stress set up by lack of love or by active dislike of her husband, especially if the affections are placed elsewhere Here we often find the chief complaint is dyspareunia, which is an unconscious defence against sexual attentions which are unattractive or even resented

Unmarried women who have either no work or perhaps the uncongenial monotony of their aged mother's household suffer a sex starvation which is a common cause of pelvic disorders As in the childless married woman we have here the long continued action of a bitter disappoint

ment both in the lack of normal sexual life and sometimes in the absence of children which she fears may never be hers There are other examples of the nature of emotional stresses but I have given enough to illustrate my purpose

OVER REACTION AND FATIGUE

One clinical feature of all these patients is fatigue Whatever may be their other symptoms they are all tired Weariness is perhaps a better term as it conveys in addition to fatigue the idea of mental tiredness and even hopelessness They are nervously tired, partly by effort to withstand their anxieties and partly by the physical over action which is a feature of neurasthenia and of which their symptoms are the obvious manifestation In his book *The Common Neuroses* Ross gives as an illustration of excessive reaction the vomiting which may be induced by a foul smell Here is a sufficiently positive and obvious symptom but nobody would deduce from it that the victim must necessarily have some organic disease of the stomach In a similar way the physical accompaniments of anger and fear are the symptomatic reactions to these emotions So we have particularly in women a series of functional symptoms referred to the pelvis and its organs which are a response to an excessive emotional stimulus Of all patients we are called upon to treat other than the fatal organic diseases there is no more difficult group to cure but with care sympathy and great trouble much can be done to bring them back to normal life At the beginning of any treatment the first essential without which nothing can be done is to be able after the most careful physical examination to reassure the woman that she has no organic disease of the pelvic organs I am assuming that we are dealing with the neurasthenic group which have either a normal pelvis or one which cannot possibly be a source of trouble Unlike the hysterical patients most of our present group want to be well and therefore if they can be reassured as to the physical integrity of their pelvic organs the basis of a successful treatment has been laid

In this connexion it is well to add that a vaginal examination especially if aided by a simple speculum will give the impression that a real exploration has been made Additional examination such as of the urine and blood pressure will serve to increase the feeling of confidence It is impossible to emphasize too much the importance of giving the patient real assurance that great care and thoroughness have been used to exclude every possible mistake

ANXIETY AND ASSURANCE

After having emphatically reassured the patient on the condition of her pelvis and physical state generally the decks are cleared for a simple explanation of how local symptoms and fatigue can be the result of anxiety and emotional stress Common illustrations of reactions to great emotion such as the flushing in anger the palpitation and pallor of fear and the collapse of grief will assist in bringing home the idea of the intimate connexion of emotional states with physical symptoms Another good illustration which has been the experience of most people at some time or other in their lives is the atonic flatulent indigestion which accompanies worry and no less its sudden and complete disappearance when the anxiety has been lifted We all know the sense of physical well being which follows the exaltation of good news or relief from deep anxiety If these common illustrations of everyday experiences are set before an intelligent patient after reassurance of her pelvic state there will begin to dawn on her mind that there is probably a true explanation of her own condition and from this moment another step in recovery has been taken The next advance is a consideration of the nature of her anxiety and the encouragement to face it and examine it Here we are almost led to a dissertation on the philosophy of living and I believe that it is not a small part of a doctor's duty to inculcate both by example and by precept the right way of life Anxiety is one of the most pernicious of all the influences which act upon ourselves not excluding alcohol food and overwork It is useless and generally proved baseless by the outcome of future events but while it lasts it depresses and inhibits all vitality Its continued action will even so alter metabolism that the subject will lose weight to the point of emaciation while its influence on the mind is such that the springs of energy are drained It is scarcely possible to make this indictment of any other of the evil influences which surround the modern individual and it is no exaggeration to say that anxiety is the most insidious foe which each of us has to face—

CHANGE OF ATTITUDE NECESSARY

The debilitated subject of whom we are speaking cannot be expected either to realize the effects of her worries or to make any successful attack on them without the help of confidential talk with some understanding guide and mentor in whom complete confidence is found It is possible however to show the way by teaching the patient to realize that nothing matters very much The care free attitude of laughing at life so difficult for some to attain is the end in view and we lose nothing by adopting it Most anxiety is about the possibility of future events of terror which seldom materialize and in any case the realization is never so bad as its anxious anticipation

The simpler cases can be treated by sympathetic assistance in overcoming anxiety by reassurance and an effort to put the cause of anxiety in its true place It is astonishing how many of these women are helped by encouragement afforded by sympathetic conversation with their trusted doctor Where no real cause of anxiety or distress exists they can be restored to a normal view of life especially if opportunity is taken of a confidential interview with her husband or grown up daughter Indeed it is in this latter direction that tension in family life so often the underlying cause of trouble can be eased and a new harmony created More than one interview with the patient is needed in fact repeated consultations may be necessary to ensure that no relapse back into the anxiety state should happen The influence of the first conversational treatment is unlikely to last long unless further moral support is given at frequent intervals But sooner or later the patient is able to stand on her own legs to take a healthier view of life and to lose her pelvic consciousness

In those cases where there is distress beyond our control some of which I have already referred to our possibilities of treatment are limited Something can be done however by encouragement and creation of new interests to divert the mind from its obsession and to enable the patient to gain some measure of happiness

In describing to you these so called functional cases, I have tried to emphasize the mental and human aspects of the problem So often we find that they are ignored or overlooked by thinking too much in terms of viscera and not enough in terms of the mind and nervous system It is difficult even for us who are doctors to be aware that pelvic symptoms can be forcibly prominent in the entire absence of pelvic disease and where we find no pelvic physical signs beyond tenderness we must be ready to consider the patient from an entirely different angle

PATIENTS WITH ORGANIC DISEASE

The second group of patients we are discussing present quite a different problem Here there is definite organic disease which by causing long standing pain disability and constantly recurring menstrual distress produces a

nervous exhaustion or reaction which is not unlike that of the first group It is essential however to realize by physical examination that there are real lesions present which are an obvious and sufficient cause of symptoms

The majority are women whose troubles date from child bearing in which the essential event was injury of uterine or vaginal supports with infection The end result is some variety of prolapse perhaps not severe together with chronic cervicitis and intractable leucorrhoea The uterus is usually bulky due to subinvolution and is often lying back in the pouch of Douglas The perineum is deficient and relaxed allowing protrusion of the vagina on straining The symptoms are familiar—constant pelvic discomfort and backache relieved on lying down worse on standing and for a few days before menstruation There may be a sensation of prolapse or perineal weakness with weight and aching after any physical effort Menstruation is excessive prolonged and too frequent Congestive pain may trouble the woman for several days before the period and at the end of it she will be left in an exhausted condition There will be scarcely time to recover from one menstruation before the beginning of the premenstrual discomfort of the next The abdomen is loose tumid and toneless sagging forwards and downwards on standing Flatulent dyspepsia and constipation are the constant associated conditions The woman is tired and depressed and unable to respond to external interests but she differs essentially from the first type we have considered inasmuch as her nervous state is secondary to the organic trouble and unless it has been of too long standing it will clear up rapidly after successful treatment of the organic lesion

TREATMENT BY RADIUM

The treatment usually offers little difficulty It is seldom possible to cure these patients except by operation and in most cases the operation must be radical The large group of patients suffering from long standing menstrual malaise pain excess and frequency must have menstruation finally arrested if they are to improve Drugs rest douches and tampons are of little if any real use The constant application of one treatment or another produces a kind of devotion to the pelvic organs which serves only to fix the attention thereon The patients cannot be well so long as the pelvis attracts any attention whatever and therefore if the menstrual trouble cannot be entirely cured the function must be arrested Where there is nothing more than a bulky probably subinvoluted uterus without prolapse or salpingitis and the patient is over 40 a good treatment is by radium but I am opposed to radium in younger women and if there are the associated conditions of prolapse old tubal adhesions or fibroids

OPERATIVE TREATMENT

For these latter patients and they are the common group showing the brunt of child bearing I believe that only hysterectomy combined if necessary with repair of prolapse will effect a certain cure Where the patient is past 40 years a radical operation is not objectionable but there is a certain amount of reluctance to perform hysterectomy between 30 and 40 especially if the woman still has a desire for children Nevertheless should the symptoms be sufficiently distressing to force the patient to be willing to have the uterus removed and should there be accompanying objective signs of anaemia and loss of weight and muscle tone to support the story of subjective symptoms I believe the surgeon is entirely justified in doing a radical operation I do not remember regretting having been too radical in the treatment of these patients but I have more than once regretted time wasted on ineffective medical treatment or an operation not sufficiently extensive to cure all pelvic symptoms Such an operation must include at least a total hysterectomy for leucorrhoea is a constant feature of chronic pelvic symptoms and if the cervix is left *in situ* remaining the discharge which has been so obvious a source of discomfort the patient will still complain that she is not cured

Gynaecological surgeons have a considerable advantage over those operating in other parts of the body inasmuch as their field is not a vital essential to life We can be radical in our methods without causing a disabling mutilation The results of the post operative menopause after 40 years have been greatly exaggerated and are not comparable to the previous symptomatic distress for which the operation was done Retention of some ovarian tissue is usually possible and though it may not persist for long as a useful organ yet it often affords the patient a certain sense of satisfaction that she has not entirely lost her essential sex organs

In conclusion I would repeat that diagnosis of the cause of chronic pelvic symptoms is of so great importance because the treatments are opposite Where the origin lies in the nervous or temperamental system, operation is likely to be a disaster but where the trouble springs from actual pelvic lesions then the only hope lies in radical surgery

OLEOTHORAX, WITH OBSERVATIONS ON TWENTY CASES

BY

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Ever since Bernou [1] using large quantities of medicated oil for intrapleural injection reported in 1922 on his first successful application of oleothorax this treatment has been gaining prominence, and now claims a definite place in pneumothorax therapy Following on the recognition of various difficulties and complications of artificial pneumothorax (associated chiefly with pulmonary tuberculosis) the list of indications for oleothorax has increased and the technique has been modified and improved upon Convincing results from this treatment have been reported on the Continent chiefly by Kuss Weil [2] and Burnand [4] and more recently in this country by Chandler [5] Gloyne [6] and Burrell [7] In 1929 Fontaine [8] published a treatise on oleothorax with reports on one hundred cases collected from various Continental sanatoriums For fuller information the reader is referred to this publication and the above mentioned reports This paper is only a brief outline of the treatment based on personal observations from a series of twenty cases

OILS USED AND THEIR PROPERTIES

The choice rests between olive oil and liquid paraffin Both were employed in the early cases of the series but on account of the invariable reaction after liquid paraffin I abandoned it in favour of olive oil Less frequent oil refills are necessary with liquid paraffin because of its slow absorption from the pleural cavity but this advantage holds only at the beginning of treatment Both are found to be absorbed at an almost equal rate once the pleural surfaces have become saturated It is usually advised that for all cases a small quantity of gomenol should be added for its antiseptic properties Having discovered that gomenol acted as an irritant to a virgin pleura — that is where no effusion has existed—I used it only where antiseptic oil was to replace an effusion The strength varied according to the degree of purulence of the effusion with 5 per cent as the maximum

METHOD OF PREPARATION

Olive oil of the finest grade was sterilized at a temperature of 165° C. for one and a half hours. *Gomenol* was added when required after sterilization and cooling of the oil, and the mixture was then placed in a cool atmosphere where it kept well for several weeks. It was occasionally found that gomenol separated out from the mixture in the form of oil droplets, but was easily restored to solution by gentle shaking and reheating. Before use the oil was warmed to body temperature and kept there during the proceedings by means of a water bath. A graduated glass beaker was employed as a container in order to tell the amount at a glance.

PROPERTIES OF ANTISEPTIC OIL

In order to substantiate the claims for oleothorax treatment numerous investigations have been carried out to determine the bactericidal and other properties of gomenol oil. Chandler and Gloyne[6] reported on tests performed on rabbits both normal and those experimentally infected with tuberculosis. In addition to other liquids gomenol was injected into the pleural sacs of these animals and the results compared; these were rather inconclusive. In determining the bactericidal properties of the oils Tulloch and Ross[7] found that while olive oil was lethal to the tubercle bacillus after twenty-four hours' exposure at 37° C. liquid paraffin exerted only an inhibitory action on a culture growth of the same organism. This factor further substantiated my preference for olive oil.

Regarding the properties of gomenol, Clerc of Neuchatel[10] proved by means of carefully controlled laboratory experiments that it had a specific bactericidal effect on the tubercle bacillus. It inhibited the growth and even killed living bacilli not only *in vitro* but also in the organs of tuberculized guinea-pigs. From experience I am inclined to think that such properties of antiseptic oil are *maintained in vivo*. The obvious detoxication and improved general condition of several cases undergoing oleothorax treatment might be thus explained. Also where oil replaced an effusion rich in tubercle bacilli, any subsequent formation of fluid was always found to be tubercle-free.

INDICATIONS FOR OLEOTHORAX

Tuberculous Empyema

In only a very few cases is gas replacement of the pus satisfactory treatment. A reaccumulation of pus usually follows with the harmful effects of toxic absorption and possible waxy disease. Repeated gas replacements are likely to be complicated by sinuses at the site of aspiration. The surgical measure of draining the pleural cavity by means of resection of part of a rib is, for obvious reasons, not the correct treatment for this variety of empyema. In one case of my series this operation had been performed with the result that a large discharging sinus occupied the site of the operation wound. No local treatment made any impression on this sinus and the patient was reduced to a state of chronic invalidism. By rather unorthodox technique oleothorax treatment was applied, various types of plugs being used to retain the oil in the pleural cavity. At the end of nine months the wound had firmly healed and the patient's general condition markedly improved. When seen one year later the patient had returned to light work, a sound scar marking the site of operation.

The beneficial results which follow oleothorax treatment in tuberculous empyema are probably due to its mechanical and disinfectant modes of action described originally by Bernou. By reason of its bulk the oil maintains compression of the underlying lung which invariably is the site of tuberculous infiltration. That pus accumulates rarely or only in small quantities after having been replaced by gomenol oil, goes to prove a satisfactory disinfectant action. My most favourable impressions of oleothorax therapy were got from the results of its application in tuberculous empyema, and I consider it the treatment of choice in suitable cases.

Effusions Complicating Artificial Pneumothorax

In more than half the cases receiving artificial pneumothorax treatment for pulmonary tuberculosis a pleural effusion results and tends adversely to affect the prognosis. It cannot be said that at the present time satisfactory treatment exists for all cases with this complication probably because of the various causative factors. A small effusion may become absorbed in course of time but more often it tends to accumulate and eventually to give rise to pressure symptoms. A gas replacement may then be quite adequate treatment, but the frequent reaccumulation of fluid necessitates repeated aspirations. In such cases the fluid becomes progressively purulent and sinus formation at the site of the needle tracts inevitably follows. It is for such a condition that oleothorax treatment has proved beneficial by disinfecting the pleural cavity and preventing further pus formation. In addition the lung collapse originally produced by the artificial pneumothorax is maintained by the oil. My experience of oleothorax in this condition is limited. The one case in which it was tried could not be regarded as altogether suitable since tuberculous enteritis had previously existed and eventually proved fatal.

Pleuro-pulmonary Perforations

Cases have been described in which oleothorax has been the means of closing a broncho-pleural fistula, but in my opinion the risk of aspiration of oil into the lung is so great as to make thoracoplasty the treatment of choice. An effusion which follows a pulmonary perforation indicates treatment by oleothorax under conditions similar to those complicating an artificial pneumothorax. In practically all cases the perforation is the result of an active cortical lesion of the lung, and for this reason lung collapse should be maintained. Of four such cases in the series one had sinuses at the site of previous gas replacements. These cleared up completely after the second injection of antiseptic oil.

Obliterative Pneumothorax

This is another unfortunate complication of an artificial pneumothorax and is usually associated with adhesions, the formation of which may or may not have been excited by the presence of fluid. A dry plastic pleurisy commencing at the base is a common cause for re-expansion of the diseased lung and obliteration of the air space. Frequent air refills even under high pressure are found to be useless in arresting the obliterative process. Reappearance of symptoms with expansion of the lung will depend on the length of time the lung has been collapsed. Any reactivity in the diseased lung at a future date cannot however be dealt with by artificial pneumothorax because of adherent pleura.

To interpose a cushion of oil between the re-expanding lung and chest wall is found to be a very satisfactory method of dealing with this condition. In seven such cases oleothorax successfully arrested the obliterative process and where the general condition of the patient did not benefit another factor was responsible. One patient died of acute bronchitis. In two cases an unsatisfactory result was obtained because the treatment was late in being applied. It certainly prevented further obliteration of the air space but not before the lung had re-expanded sufficiently to cause symptoms. Whenever an obliterative pneumothorax is determined it seems wise not to delay instituting oleothorax treatment.

Ineffective Artificial Pneumothorax

Insufficient Compression—Repeated air refills, even under a high positive pressure do not give the optimum collapse of a lung in which cavities cannot retract because of the strong fibrous envelope surrounding them. Oil by reason of its weight and bulk exerts a greater compression than air on a lung and this factor is made use of when such a condition arises. For a similar reason Burrell[11] has applied oleothorax treatment in cases of basal bronchiectasis where a permanent collapse is required. One case coming under this heading was that of an elderly lady who had unilateral pulmonary tuberculosis with cavitation. An artificial pneumothorax was induced and maintained for several months but the profuse expectoration (T.B. positive) and toxæmic features persisted. X-ray examination revealed a large thick-walled cavity remaining patent in spite of complete collapse of the surrounding lung. Thoracoplasty was considered but in view of the patient's age oleothorax treatment was applied as a less drastic procedure. When the oil was drained away six months later a skiagram revealed complete collapse of the cavity. This had been suspected clinically from the progressive diminution of sputum (now tubercle free) and improvement in the patient's general condition.

Laxity of Mediastinum—Cases are met with where an exaggerated pleural elasticity prevents effective pulmonary collapse. Dislocation of the mediastinum follows any attempt at lung compression even by the introduction of small quantities of air with a resultant negative intrapleural pressure. Oil probably in virtue of an irritant action thickens and increases the rigidity of the pleura. Oleothorax in such conditions gives necessary tone to the mediastinum and so prevents its displacement while the lung is being collapsed. This result was obtained in one of my cases but the previous dislocation of mediastinum had activated an old focus in the other lung and rather counteracted the beneficial effects of oleothorax treatment.

To Replace Artificial Pneumothorax

I have seen patients who when outside hospital control abandon artificial pneumothorax treatment because of the dread of pain associated with air refills. They are usually of the neurotic type and it is conceivable that because of the necessity of less frequent refills with oleothorax oil might replace air in the treatment of such cases. Provided the treatment was fully established the same harm would not befall the patient if the oleothorax were to be abandoned since oil is absorbed much more slowly than air and the diseased lung would remain longer collapsed.

Where a patient has not the facility for continuing with air refills—for example on a sea voyage or in an isolated part of the country—it would be justifiable to consider substituting an oleothorax for artificial pneumothorax. Here again the oleothorax must be fully established to be without risk of complications. I have had no experience with this treatment in either of the above types of case.

TECHNIQUE

Syringe—Various types of apparatus have been devised for introducing oil into the pleural cavity but in my opinion none of these can claim any advantage over the ordinary Dieulafoy two-way syringe. With this the technique is simple and speedy especially when an effusion is to be aspirated before injecting the oil. The rubber tubing usually supplied with a Dieulafoy set is apt to perish after contact with oil and also proves unsuitable when the oil is injected under slightly increased pressure. For these reasons I used flexible metal tubing of similar length and size of connexions and found it very satisfactory.

Needle—The largest sized needle supplied with a Dieulafoy set was the one generally employed. The bore is sufficient to allow of a fairly rapid injection of oil and small enough to make the formation of a pleuro-cutaneous fistula less possible.

Manometer—In order to measure the pressure of oil in the pleural cavity different types of oleo-manometers have been used but none seem to have proved satisfactory. In my opinion the only important essential for the control of an oleothorax is to know the intrapleural air pressure above the oil. Even when no air is present as in a complete oil blockage a ray and clinical examination will indicate any important change in the intrapleural oil pressure.

Position of Patient—The most comfortable position for the patient seems to be sitting up in bed supported in front by a small bed table. This allows free access to the upper chest for the introduction of the pneumothorax needle and to the base for the oil needle. When the pneumothorax is partial a slight change of position may be necessary according to the required sites for needle punctures.

Preliminary Oil Injection—Where no effusion has previously existed the virgin pleura should be tested for its sensitiveness to oil. For this I used an ordinary 10 c.cm. syringe the needle of which was previously connected with a manometer to make certain that the oil would be injected into the pleural cavity.

Disinfectant Oleothorax—In all cases where oil was replacing pus pleural lavage was performed as an intermediary part of the technique. After gas replacement of the pus and before the introduction of oil the pleural cavity was washed out with Jessen's fluid (iodine 1 part potassium iodide 2 parts distilled water 40 parts—of this 5 c.cm. is added to one litre of sterile water at 37° C.). This solution is a good solvent for tuberculous pus and so cleanses the pleural cavity for the reception of antiseptic oil. For pleural lavage the same Dieulafoy syringe and needle was employed.

COURSE OF TREATMENT

Bearing in mind the possibility of a fluid reaction I never exceeded 300 c.cm. as the amount of the first oil injection. Regarding refills each case had to be considered separately. The amount given depended largely on the requirements of the case but rarely exceeded 500 c.cm. The interval between refills was governed by the presence of any reactionary features and general condition of the patient and varied from one to several weeks.

To determine when an oleothorax is fully established is a matter of judgement in every case. Treatment cannot be regarded as complete without first ascertaining that no serous or purulent fluid is being formed in the pleural cavity. At least three negative punctures at monthly intervals are essential before this is certain. In my opinion a fully established oleothorax should consist where possible of a complete oil blockage of the pleural cavity. Any small quantity of air remaining above the oil becomes absorbed and a cushion of oil is left between the chest wall and compressed lung. The expanding lung forces the oil into the upper part of the pleural cavity and so the blockage becomes complete. Generally speaking therefore the amount of oil to be introduced is that which when blocking the pleural cavity will keep the lung in the required state of compression.

When the pleural cavity is of large capacity or when the collapsed lung is fixed and shows no tendency to expand an oil blockage is not practicable. The large amount of oil required would give rise to pressure symptoms. In such cases the optimum quantity of oil seems to be that amount which will occupy about two

thirds of the pleural cavity stopping short of any pressure features Air refills can be given above the oil if required

In course of time the pleura appears to get saturated and ceases to absorb oil or if it does only in very small quantities The question as to how long after this the oil should be left in the chest cannot at present be satisfactorily answered in view of this therapy being comparatively recent When repeated reactions occur with the oil it is advisable to abandon the treatment and empty the pleural cavity This had to be done in the case previously described under Compression oleothorax The patient was elderly and of poor general condition and these factors probably accounted for the prolonged fever and tendency to fluid formation which accompanied the oleothorax Fortunately the oil during its short stay in the pleural cavity had done what was required of it before having to be aspirated

It has been shown that oil undergoes no degenerative change in the pleural cavity even after several years For this reason and also because in most cases compression of the diseased lung is desirable I am of the opinion that the oil should remain in the pleural cavity for at least two or three years If at the end of this time it is considered advisable to aspirate the oil expansion of the lung can be controlled by pneumothorax

As it is less than two years since I first applied oleothorax treatment I cannot speak from experience of its terminal stage

My routine management of oleothorax cases was an examination of each one daily for the first week and then clinical and *x* ray examination weekly until the treatment was fully established After the initial injection of oil each case was kept on absolute rest for a minimum of four weeks followed by slowly increased exercise and graded work On discharge from hospital patients were *instructed to report monthly* any further treatment considered necessary meant their readmission to hospital for a few days Out patient treatment of these cases does not seem to be practicable or satisfactory

Complications

These can be considered more in the nature of reactionary features due to the presence of oil in the pleural cavity In most of my cases a slight temperature followed the first one or two oil injections but seldom lasted for longer than forty eight hours A more prolonged fever in one case was probably due to the patient's age and poor general condition and in three other cases to the irritant action of liquid paraffin since the temperature subsided when olive oil was substituted

Pleural effusions following the oil injections proved a troublesome complication and demanded patience until such time as the pleural surfaces became desensitized to the presence of oil Some could be ascribed to the effect of gomenol on a virgin pleura and others to the liquid paraffin employed In my later cases where modifications were made regarding the oil used this complication was not so prominent All the effusions experienced were of the insidious variety I never met with the more immediate type described

A pleurocutaneous fistula never complicated any of my cases Manipulation of the tissues at the site of injection application of pad and bandage and the patient being made to lie on the sound side for a few hours after each oil injection—all seemed to prove satisfactory preventive measures

It is reasonable to suppose that oil in the pleural cavity might cause the patient to experience a sense of weight in the chest and also by depressing the diaphragm to give rise to gastro intestinal disturbance I have heard this put forward as grounds for objection to the treatment but in my opinion such an objection must be theoretical and from practical experience is unjustified None of my patients suffered from any such discomfort even after their return to work A few certainly had a mild attack of gastro enteritis after each oil injection but this was probably due to the absorption of gomenol and usually subsided in forty eight hours

Limitations of Oleothorax

Before a case can be considered suitable for treatment it seems to demand requirements similar to those governing artificial pneumothorax therapy Thus the condition of the contralateral lung and of other tissues regarding tuberculous involvement has to be considered before instituting treatment The ideal cases are naturally few and I was occasionally tempted to overlook quiescent foci in other organs for the sake of determining the more immediate results of this treatment The outlook for the more advanced case of tuberculosis is so hopeless that the patient's gratification at knowing that some treatment is being attempted seems to justify such liberties with oleothorax

Of the six fatal cases in the series five died as a result of either a reactivation of an old focus or an extension of the tuberculous process None could be directly attributed to the treatment As mentioned before the deaths were not unexpected but each one made me consider how different the result might have been had this treatment been applied earlier Where a case offers any indication it seems unwise to delay until such time as it proves unsuitable

Summary of Cases

Case	Indication	Result of Treatment
1	Tuberculous empyema	Improved returned to work
2	Tuberculous empyema	Died pulmonary tuberculosis
3	Tuberculous empyema	Much improved returned to work
4	Tuberculous empyema	Improved
5	Tuberculous empyema post operative sinus	Improved returned to work
6	Artificial pneumothorax purulent effusion	Died generalized tuberculosis
7	Spontaneous pneumothorax effusion	Died pulmonary tuberculosis
8	Spontaneous pneumothorax effusion	Much improved returned to work
9	Spontaneous pneumothorax effusion	Died pulmonary tuberculosis
10	[illegible]	Much improved returned to work
11	...	Died acute bronchitis
12	Obliterative pneumothorax plastic pleurisy	Improved returned to work
13	Obliterative pneumothorax adhesions	Improved
14	Obliterative pneumothorax plastic pleurisy	Stationary
15	Obliterative pneumothorax effusion	Worse
16	Obliterative pneumothorax plastic pleurisy	Much improved returned to work
17	Obliterative pneumothorax plastic pleurisy	Much improved returned to work
18	Ineffective artificial pneumothorax mediastinal laxity	Worse
19	Ineffective artificial pneumothorax cavitation	Improved
20	Ineffective artificial pneumothorax cavitation	Died amyloid disease

Conclusions

1 Oleothorax is the treatment of choice in suitable cases of tuberculous empyema and proves an alternative to the more drastic procedure of thoracoplasty in certain conditions complicating a spontaneous or artificial pneumothorax

2 The technique is simple and speedy with a Dieulafoy two way syringe and flexible metal attachments

3 Olive oil is to be preferred to liquid paraffin because the latter is a pleural irritant

4 Because of its irritant properties gomenol should be added to the oil only when an effusion is being replaced and then in graduated strengths

5 Discretion regarding the oil used makes complications negligible

6 Of twenty cases eight improved sufficiently to allow of their return to work

I am indebted to Drs Crowe and Costello for assisting in the treatment also to Drs McCartney and Allison for the bacteriological investigations

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FULMINATING MENINGOCOCCAL MENINGITIS

RECOVERY FOLLOWING SYSTEMATIC CISTERNAL PUNCTURES AND POLYVALENT SERUM

BY

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In view of the high mortality rate of fulminating cases of cerebro spinal fever the following case seems worthy of record

HISTORY OF THE CASE

September 11th 1931 —A strong healthy girl of 22 was watching a tennis match in the morning though she confessed to having got up feeling not too fit In the afternoon she had an attack of shivering and was brought home and put to bed At 6 p m she complained of feeling feverish of headache of pains in the limbs and of a slight sore throat She was restless very flushed and perspired freely There were a few small petechial haemorrhages on the trunk and limbs The fauces were red The temperature was 106° and the pulse rapid and full During the night the patient slept fairly well for some hours but about 3 a m she became very restless and vomited severely several times A few hours later she was in a violent delirium and began to cry out

September 12th —The delirium and typical meningeal cry was now accompanied by spasm of the facial muscles which soon became very pronounced There was rigidity of the neck and Kernig's sign was positive Abdominal reflexes were present at this time Knee jerks and ankle jerks were exaggerated plantar responses were indefinite The temperature dropped to subnormal during the night but in the morning rose to 100° (see Chart I) Lumbar puncture put the diagnosis beyond doubt The spinal fluid was extremely turbid and under high pressure After centrifuging there was a heavy deposit of pus with intracellular and extracellular plump Gram negative diplococci Pandy's and the Nonne Apelt globulin tests were strongly positive The total protein was 0 3 per cent and the cell count 19 360 per c mm the cells were nearly all neutrophils A count of the organisms showed 144 per 100 fields Glucose was absent

By the evening the full picture had developed There was marked rigidity (though no head retraction) of the neck and back Violent spasms of all muscles caused constant movements of the limbs and a typical risus sardonicus The meningeal cry was intensified No strabismus or any cranial nerve paralysis occurred at any time The abdominal reflexes were absent and the knee and ankle jerks were present though no longer exaggerated The plantar responses remained doubtful and in fact were never definitely extensor But Kernig's sign was very marked

The tongue was dry and furred but the skin extremely moist The eruption had developed into quite large purpuric spots all over the trunk and limbs (A few days later a typical herpes arose on the upper lip) The spleen was not enlarged and never became palpable Vomiting was not repeated after the first night, but the bowels were very constipated and had to be regulated by enemata throughout the illness The temperature was 101° and except at the onset was never particularly high The pulse rate was 115 regular and full and remained some

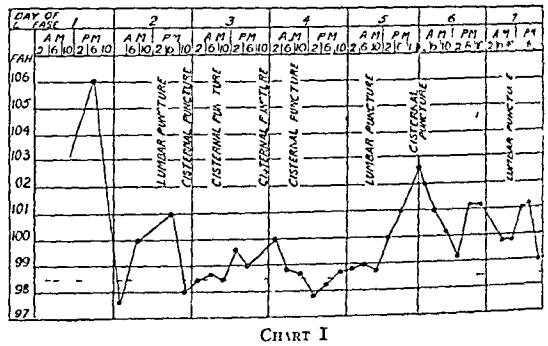


CHART I

what rapid for several weeks (even after the temperature had fallen) There was at no time any evidence of cardiac involvement

A menstrual period was missed at this acute stage but the next one appeared as usual the following month The patient had to be catheterized on two occasions but thereafter normal control returned The urine was acid specific gravity 1022 a fair cloud of albumin was present and the deposit showed many hyaline casts there was no haematuria

Cisternal puncture was performed by Sir James Purves Stewart under light general anaesthesia and 40 c cm of turbid cerebro spinal fluid was withdrawn under pressure Fluid showed 28 160 cells per c mm and 136 organisms per 100 fields Possibly the greater number of cells in the cisternal as compared with the spinal fluid was accounted for by the nearer approach to the maximum local incidence of infection via the cisternal route

After a slow intracisternal injection of 20 c cm of warmed polyvalent anti meningococcal serum the respirations became very shallow and slow and finally ceased Artificial respiration and a hypodermic of camphor restarted the breathing after a few minutes In addition 10 c cm of the serum was given intravenously to counteract the severe septicaemia (See table and notes below)

On coming round from the anaesthetic the patient once more became violently restless

September 13th —The condition was much the same there being no change in the physical signs though the temperature and pulse rate were both down Cisternal puncture was repeated under general anaesthesia when 50 c cm of cerebro spinal fluid was obtained and 20 c cm of carefully warmed serum slowly injected This time there was no mishap though the respirations became very rapid and shallow 10 c cm of serum was also given intravenously

The fluid showed increased cellular content but fewer organisms and more marked phagocytosis cells 44 800 per c mm organisms 128 per 100 fields

In the evening the patient was rather less violent Cisternal puncture was repeated 32 c cm of cerebro spinal fluid being withdrawn 20 c cm of serum was injected together with 12 c cm intravenously The fluid was now blood stained and tinged yellow on centrifuging Glucose was still absent and the total protein was 0 4 per cent The cells averaged 28 160 per c mm No organisms were visible and the amount of pus present in deposit was

obviously less The higher protein content was probably due to some traces of old haemorrhage or temporary localization

September 14th —The delirium lasted until the early hours of the morning when the patient fell into a natural sleep for a few hours to awaken conscious though dazed

Table showing Clinical and Pathological Improvement with Serum

Day of Disease	Clinical Condition	Amount of C S F Withdrawn in c cm		Cell Count per c mm	Organisms per 100 Fields	Serum Administered—	
		I I	C I			Intrathecally in c cm	Intravenously in c cm
2nd —	—	50	—	19 360	144	—	—
3rd 1 p m	Violent delirium Incoherent	—	40	23 160	136	20	10
3rd a m	Violent delirium	—	50	44 800	108	20	10
1 p m	Less violent Rigidity	—	32	28 160	Nil	20	12
4th a m	Quiet and conscious Rigidity	—	50	48 800	4	20	10
1 p m	Talking well Rigidity	—	—	—	—	—	—
5 h a m	Mentally alert Rigidity	15	—	Less	Nil	10	10
1 p m	Less rigidity	—	7	279	Nil	—	15
6 h	Left lower abdominal reflex returned	—	—	—	—	—	—
7th	General further improvement	5	—	99	Nil	—	15
10 h	Still further improvement	A few	—	210 (lymphocytes)	Nil	—	—
3 rd	Arthritis	A few	—	5	Nil	—	—
	Total	70 +	179	—	—	90	82

She recognized her relations and could swallow and speak complaining only of slight headache The spots which had by now run together into large purpuric patches were beginning to fade The reflexes were unchanged

Cisternal puncture was again undertaken under general anaesthesia when 50 c cm of cerebro spinal fluid was obtained and 20 c cm of serum was injected and 10 c cm given intravenously Glucose was still absent from the fluid The cells had risen to 48 800 per c mm and the organisms reappeared to the extent of 4 per 100 fields

By the evening she was quite conscious and had taken fluids freely throughout the day so that it was possible to give her 10 grains of hexamine every four hours (From now onwards she continued to take nourishment exceedingly well and thus wasting never became a prominent feature) No serum was given this night

September 15th —The patient had a good night and was more mentally alert in the morning As she was still very rigid lumbar puncture under general anaesthesia was performed and 15 c cm of blood stained cerebro spinal fluid was drawn off but it was not under pressure 10 c cm of serum was injected with 10 c cm intravenously The purulent fluid by lumbar puncture showed fewer cells and no visible organisms A count of the cells was not made The pain gradually got less rigid during the day and was able to turn in bed unaided The temperature and pulse rate were however up in the evening accordingly external puncture was again repeated The fluid was not under pressure and only 7 c cm was obtained it was much clearer 15 c cm of serum was injected The fluid now showed glucose for the first time The cells numbered 279 per c mm There were no visible organisms and cultures were sterile

September 16th —After another good night the patient was still further improved in the morning and was able to remember the onset of her illness The left lower abdominal reflex was just obtained and Kernig's sign was less marked The other reflexes were unchanged

In the evening she complained of stiffness in the back and limbs and pain and swelling of both wrists

September 17th —From now onwards there was a gradual general improvement and the central nervous system slowly returned to normal But both wrists both knees and both ankles were painful and swollen with limitation of movement There was also a faint serum rash on the trunk which lasted some twelve hours

Lumbar puncture produced only 5 c cm of yellowish fluid so 15 c cm of serum was given intravenously This was the last dose of serum administered The fluid showed 90 cells per c mm It was sterile

September 19th —By now the urine contained only a slight trace of albumin and no hyaline casts but red blood cells epithelial cells and coliform bacilli were present

September 23rd —Both lower abdominal reflexes had returned But the arthritis was still troublesome now involving the fingers wrists knees and ankles For a few days pain was caused by enlarged glands in the posterior triangles of the neck at this stage there was some catarrh of the nose and throat

September 29th —The temperature had settled to normal and the right upper abdominal reflex had returned The patient was started on full doses of potassium iodide with iron and strychnine injections

Lumbar puncture (without an anaesthetic) resulted in a clear fluid which was under brisk pressure at first Cells were 210 per c mm of these 100 per cent were small lymphocytes The total protein was 0 18 per cent and the sugar 0 068 per cent The Pandy and Nonne Apelt globulin tests were positive

October 1st —Patient sat up in bed A few days later two negative throat swabs were obtained and she was declared free from infection though the arthritis continued

October 10th —The temperature after being normal for twelve days began to rise again Four days later the patient did not feel so well complaining of occipital headache and increased pain in the knees This was relieved by radiant heat and an occasional dose of aspirin All the abdominal reflexes had by now returned and the knee and ankle jerks were brisker

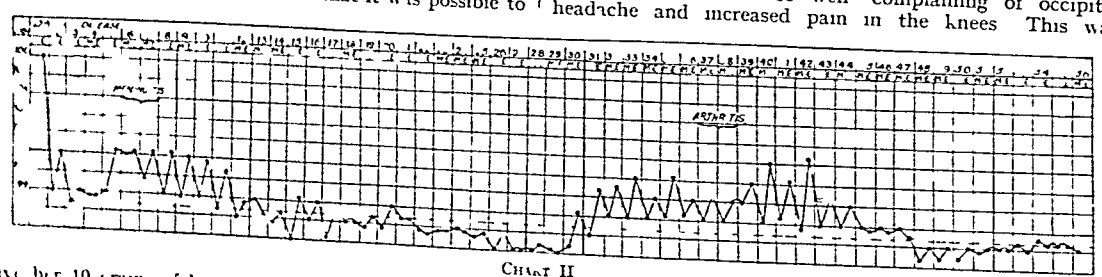


CHART II

October 18th —Lumbar puncture revealed a normal cerebro spinal fluid There were 5 cells per c mm one lymphocyte was seen The total protein was 0 025 per cent The Pandy and Nonne Apelt tests were negative and glucose was present But as the temperature continued and there was obvious fluid in both knees the right joint was aspirated and a greenish pus withdrawn The fluid contained many neutrophil cells No meningococci were seen or cultured *(on tryptagar)*

October 22nd —Both knees were aspirated and the same greenish pus was withdrawn one drachm of sterile glycerin was injected into each joint After this, improvement started

October 25th—The left knee was again aspirated and one drachm of glycerin injected

November 4th—Finally, after the temperature had been normal again for seven days the arthritis ended with all pain and swelling gone and the return of full movement

November 7th—The patient was allowed out of bed and started a slow convalescence which continued without further interruption

January 10th 1932—Four months from the onset of the illness she was in perfectly good health with no trouble from headaches or stiff joints and leading a quiet but normal life

FEATURES OF INTEREST

1 The very sudden and acute onset

2 There was no history of known contact This was the only case in the district and no others occurred

3 The comparatively low temperature after the initial rise It was normal again on the eighteenth day

4 The rapid improvement resulting from early cisternal drainage and injection of serum

5 When injecting serum into the cisterna magna it is advisable to do so very slowly and with carefully warmed serum to avoid interfering with the respiratory centre but in any case some degree of apnoea occurs

6 The cell count and percentage of organisms in specimens of the cerebro spinal fluid were of the greatest prognostic value and largely determined whether further serum was or was not required

7 The patient took nourishment very well as soon as consciousness returned and there was never any marked wasting

8 The only complication was multiple arthritis This started on the sixth day of the illness and finally ended with pus in both knee joints associated with a further rise of temperature (after this had been down for ten days) during the fifth and sixth weeks Each joint was aspirated twice

9 Convalescence started at the beginning of the eighth week

10 There have been no sequels (four months after the onset) and recovery has been complete

11 Attempts to culture the meningococci were only made comparatively late Warmed trypagar plates were used

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POINTS IN CONNEXION WITH THE SUCCESSFUL ISSUE OF SIMPLE PROSTATECTOMY*

BY

A RALPH THOMPSON CHM FRCS

SURGEON IN CHARGE OF THE GENITO URINARY DEPARTMENT GUY'S HOSPITAL

The subjects discussed in this address are based upon twenty one years experience of the operation of prostatectomy at Guy's Hospital The same general features are observed in both methods of operating—namely suprapubic and perineal

PRECAUTIONS BEFORE OPERATION

Before the operation the renal function must be carefully estimated but there are other examinations to be made—namely the form of respiration and the local condition of the penis and urethra The elderly man with the barrel shaped chest has also a bowed back and the thoracic muscles are hardly doing any work The diaphragm is doing all the work and the prominent abdomen is produced partly by this and partly by the development of much fat in the great omentum in order that a counter pressure may be provided for the diaphragm For some time past at Guy's Hospital the massage sister has given instruction in thoracic breathing to all the patients who are going to have prostatectomy performed on them and the improvement in breathing before and after the operation is most striking

The penis and urethra should always be most carefully examined in order to make certain that first there is absolute cleanliness in the parts especially with a long foreskin and, secondly in order to make sure that there is no obstruction such as is associated with slight degrees of hypospadias and the more common one of gonorrhoeal stricture The importance of the latter is twofold First the actual obstruction may lead to delay in the healing of the suprapubic wound and secondly because at Guy's Hospital from the years 1910 to 1916 syphilis and gonorrhoea occurred together in 20 per cent of all cases of venereal infection, and exacerbations of syphilis may occur after such a proceeding as suprapubic prostatectomy

Of necessity a catheter is frequently used in the out patient department at Guy's in order to relieve the patient of urgent symptoms and I have never regretted its use Undoubtedly the passage of a catheter twice a day may improve the functioning powers of the kidneys and make the patient much more suitable for operation

THE OPERATION

At the operation the bladder is distended with boric lotion till it can be felt above the pubes and after the catheter has been removed a light tourniquet is tied round the penis, this is removed directly the bladder has been opened When the bladder has been exposed a roll of gauze is carefully packed in round the bladder and the viscus itself is opened by a transverse incision There is less bleeding when veins are cut across than when they are nicked as may happen with the vertical incision which is, of course parallel to the course of the veins Moreover when the bladder is opened the peritoneum comes down into its usual position and with a transverse incision through the bladder wall the incision can be lengthened if desired much more safely than with a vertical cut

During the actual removal of the adenomata of the prostate it is desirable that the patient should be deeply under the anaesthetic Sir John Thomson Walker has shown how bleeding may be adequately dealt with but short of this much benefit will result from the irrigation of the bladder with liquor hamamelidis at a temperature of 110° F Careful massage of the prostatic cavity may also do much good expediting as it does the contraction of the tissues which lie round the space from which the adenomata have been removed Messrs Down Bros have made for me a special glass drain with an oblique movable flange upon it which is capable of being adjusted to the correct level and it is introduced into the prostatic cavity which is the only part that needs to be drained

No catheter is inserted into the urethra and many cases have healed up in as short a time as fourteen days without any catheter having to be introduced Special attention is paid to two points on the operating table first the testicles scrotum and penis are brought up as far as possible on the abdominal wall and kept there by dressings and bandage and secondly 1 c.cm of pituitrin is injected as a routine practice The patient is put back to bed and sleep is as far as possible induced by one injection of morphine

* Abstract of a clinical address to the Section of Urology Roy Soc Med on January 28th 1932

Post-operative Care

The first dressing after the operation is done at the end of twenty-four hours the plan of packing the original dressing being resorted to if needed There is a good deal of blood with the first dressing and an ounce of neat brandy is always given ten minutes after the dressing has been completed

The patient is allowed to assume whatever position he finds comfortable and this is one of the advantages that are claimed for the omission of the catheter after the operation At Guy's the practice in my hands is to allow the bladder to fall back into its usual position as an anatomically correct bladder is much more likely to work naturally and physiologically than if it be anchored to the abdominal wall

An important point (an anatomical one) to which my attention was first called by Dr Le Vieux of Mauritius is that across the very centre of the suprapubic wound there runs a deepish furrow that is really a line of abdominal flexion and this groove tends to open up the wound Therefore if it be desired that the wound should close as soon as possible it is essential that the patient should lie flat upon his back at the end of fourteen days with a catheter *in situ* so as to get rid of the groove and its tendency to open up the wound A catheter is thus sometimes used whilst the final process of closing of the wound is taking place

If bleeding should occur a little time after the operation as it sometimes does a good position for the patient is that in which the buttocks are raised and the legs and body depressed This position causes the prostatic region to be much higher as far as gravity is concerned than it is usually and thus the bleeding may diminish or cease

After the operation careful attention must be paid to getting the bowels to open properly For this purpose the laxative that the patient is accustomed to is tried first but if this fails to act castor oil is given and if this also does not act then a turpentine enema Ileus must be prevented It is very dangerous in itself and also dangerous as indicating that the patient is weaker than may have been supposed and that other organs besides the bowels are failing Therefore it must be treated assiduously

The lungs must be watched There is too great a tendency for the medical attendant to wait for signs of pneumonia to show themselves Various symptoms arise after such an operation By some people various alkaloids are ordered one for each separate symptom This is a bad method of treating such cases Far better with some old and tried medicine to anticipate symptoms and prevent worse ones occurring

Since the employment of boric crystals which are used to fill up the wound there has not been a case in Guy's Hospital genito-urinary department of sloughing of the wound but if it does occur the sloughs should never be forcibly removed Such a procedure will only lead to further infection of the wound and perhaps to the death of the patient It is possible that this sloughing may follow the use of india rubber drainage tubes for such tubes coated with sulphur which has its uses in certain septic urinary cases but is not wanted after prostatectomy The second point to remember is that sloughing may indicate that the patient is dying and in these circumstances there may be actual gangrene of the wound

Lastly stress may be laid upon two additional details (1) in a certain number of cases it is important that the wife should be kept away from the patient for two or three days after the operation (2) as soon as the patient is to be allowed up a carefully fitted suspensory bandage should be properly applied as it is not an uncommon experience for orchitis to occur some time after the operation and even when the patient has gone home

CO$_2$ IN PROPHYLAXIS AND CURE OF POST-ANAESTHETIC RESPIRATORY COMPLICATIONS *

BY

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These notes are based on an experience of 5 000 cases in which carbon dioxide was administered in combination with general anaesthesia Among the advantages which accrue to the surgical patient three stand out prominently

1 The prophylactic action of carbon dioxide against the onset of respiratory complications irrespective of the anaesthetic agent

2 The protection afforded to patients who come up for operation with concomitant respiratory disability

3 The curative action of carbon dioxide when post-anaesthetic respiratory complications have occurred

For purposes of observation I arranged these cases in four groups In the first and largest group carbon dioxide to the extent that appeared advantageous to the patient was administered in the theatre during the induction the maintenance and the recovery stages of gas oxygen and ether anaesthesia In the second group carbon dioxide was used in the induction and recovery stages of deep ether anaesthesia In the third group carbon dioxide was used as a prophylactic against respiratory complications during the recovery stage of anaesthesia in the theatre and in the ward after the operation In the fourth group carbon dioxide was administered as a therapeutic agent in cases of post anaesthetic respiratory complications The tendency has been for the first three groups to merge into one and recently as far as it has been possible my cases have had carbon dioxide during the induction of and recovery from anaesthesia in the theatre and in the ward at regular intervals throughout the first twenty four to thirty six hours after the operation

Abnormal Respiratory Function During and After Anaesthesia

The function of respiration is ultimately dependent on the integrity of the respiratory centre which lies in the floor of the fourth ventricle Near to it the nuclei of the vagus nerves take their origin and a proper appreciation of the close relation of these nuclei to the centre is of considerable importance in anaesthesia The vagi distribute fibres to the pharynx the larynx the pulmonary and cardiac plexuses and the abdominal viscera Afferent stimuli from these systems excited either by the anaesthetic agent or by surgical trauma profoundly disturb the respiratory function In one case the clinical result is hyperpnoea followed by apnoea while in another the effect is expressed in slow shallow and irregular respiration Unilateral or bilateral inhibition of the diaphragm frequently occurs in abdominal operations as a result of reflexes through one or both phrenic nerves The volume of the pulmonary ventilation is chemically controlled by the percentage of carbon dioxide in the alveolar air the blood and the tissues Normally any increase or decrease of this percentage will increase or decrease the volume of the respiration to such an extent as will maintain the carbon dioxide in the alveolar air at about 5 to 5 5 per cent Apnoea is a condition in which the percentage of carbon dioxide in the blood and in the alveolar air is subnormal and apnoea supervenes when the carbon dioxide tension in the respiratory centre falls[1] below the

* Read in the Section of Anaesthetics at the Annual Meeting of the British Medical Association La Baume 1931

point required for stimulation provided always that the oxygen tension is sufficient to prevent stimulation of the respiratory centre by anoxaemia If the oxygen pressure in the inspired air continues below 13 per cent of an atmosphere the respiratory centre becomes excited and its function stimulated Every degree of acapnia is possible in the surgical patient Such factors as fear pain morphine purgation vomiting starvation anaesthetic agent and surgical trauma militate against the normal carbon dioxide content of the blood and tissues

The pulmonary alveoli at the base and periphery[4] of the lung are larger than those at the root and apex On inspiration the lower and peripheral parts of the lung expand and function more readily than do the central and upper parts The inflation of the lower and peripheral alveoli is almost entirely dependent on the action of the diaphragm Any interference, therefore with the mobility of the diaphragm such as may occur from exposing the abdominal cavity to atmospheric pressure[5] or from manipulation of the abdominal viscera will result in defective expansion of the lungs particularly of the bases and periphery When apnoea supervenes on a period of deep breathing it is observed that the respiratory function[6] finally comes to rest at the end of an expiration and therefore in the position of deflation During and after deep ether anaesthesia in post anaesthetic sleep and as the result of prolonged surgical trauma or post operative pain the respiration is frequently maintained at a minimum excursion In this type of respiration expiration is more active than inspiration and the residual air of the respiratory system is gradually expelled with collapse of the pulmonary alveoli It has been demonstrated[7] that the normal pulmonary vital capacity is reduced 60 per cent in upper abdominal and 40 per cent in lower abdominal operations In similar cases it is found that the normal expansion of the chest may be reduced by 75 per cent and the descent of the diaphragm by 50 per cent

Inadequate pulmonary ventilation is the primary aetiological factor in post operative respiratory complications It is the precursor[8] to the accumulation of viscid and tenacious exudates which partially or completely obstruct the bronchi or the bronchioles The absorption of the alveolar air and the collapse of the pulmonary alveoli or the infection of the obstructing exudate by pathogenic organisms results in the cases of atelectasis or of cellulitis of lung tissue[1] which follow on surgical procedures

Prophylactic and Curative Value of CO

If the intrapulmonary movements are observed with the fluoroscopic screen after lipiodol has been passed through the trachea into the bronchi it will be seen that the bronchi and the bronchioles expand and lengthen during the act of inspiration and contract and shorten during expiration This stretching and recoiling of the elastic tissue and this relaxation and contraction of the muscular tissue of the respiratory system are particularly well seen in cases of bronchiectasis It will also be observed that during hyperventilation with carbon dioxide the inspiratory phase is more active and prolonged than the expiratory phase This activity of the inspiration is less obvious during normal respiration and is definitely reversed to a short inspiratory phase and a prolonged expiratory phase during hyperventilation If these observations are carried out during deep ether anaesthesia or after prolonged surgical trauma or in post anaesthetic sleep the mobility of the diaphragm will frequently be found to be reduced to as little as 25 per cent of the normal As a direct result of hyperventilation with carbon dioxide the respiratory system is continuously in the position of inspiration with the bronchioles expanded and the air sacs inflated and there is evidence that the activity of the respiratory cilia[9] and bronchial peristalsis is much increased by the same factor

Hyperventilation appears to be a highly efficient method of stimulating drainage of the pulmonary system and is essential for the successful expulsion[10] of exudates from the respiratory tubes

Chart of 400 Abdominal Operations

Number of cases	100	100	100	100
Age	18–40 years	20 40 years	20 50 years	19 50 years
Sex	Male	Male	Male	Male
Season	Nov Feb	Nov Feb	Nov March	Nov March
Anaesthetic agents	N_2O+O_2+E	N_2O+O_2+E	Ether ethyl chloride and ether	Ether ethyl chloride and ether
Operation	Exploratory laparotomy	Exploratory laparotomy	Exploratory laparotomy	Exploratory laparotomy
Prophylactic CO	Used in theatre and ward	Not used	Used in theatre and ward	Not used
Respiratory sequelae	Four cases	Ten cases (four serious)	Eight cases	Twelve cases (five serious)
Therapeutic CO	Used for 24 hours	Not used	Used for 24 hours	Not used
Result	All rapidly recovered	1 atelectasis 3 pneumonia 1 died	All rapidly recovered	1 massive collapse 4 pneumonia 2 died
Average illness	36 hours	4 days	48 hours	5 days
Mortality	0 per cent	1 per cent	0 per cent	2 per cent

Note—The term exploratory laparotomy included cases of partial gastrectomy ... and gastrostomy, ... sphincterectomy and excision of ... appeared within thirty ... confirmed in the serious ...

The records of a series of consecutive abdominal operations have demonstrated the extreme rarity of serious respiratory sequelae provided the pulmonary system is kept patent during the surgical procedure and for twenty four hours afterwards and provided that free egress is assured for any secretions that may have accumulated during and for twenty four hours after the operation Such respiratory complications as have occurred have been treated by hyperventilation and have invariably cleared up rapidly with the expulsion of liquefied secretion Included in this series are patients who came up for urgent operation and had acute or chronic respiratory conditions In my experience the chest condition was not aggravated by a nitrous oxide oxygen carbon dioxide and ether anaesthesia and frequently on subsequent visits information was volunteered by the patient that the chest condition appeared to have actually improved since the anaesthetic was administered Carbon dioxide is slightly less powerful as a curative than as a prophylactic agent To be rapidly effective as a therapeutic agent the administration must commence on the earliest evidence of respiratory sequelae It is not contended that carbon dioxide will prevent post anaesthetic cough and temperature and pain if catarrh and pathogenic organisms are present in the respiratory tract before operation but it is maintained that carbon dioxide will minimize the untoward effects of the operation and the anaesthetic agent by stimulating the liquefaction and the expulsion of the viscid secretion

Technique of Administration

The following procedure has been evolved

(*a*) Pulmonary ventilation is controlled and regulated to the normal during the induction and maintenance of anaesthesia

(*b*) During the closing stages of the operation hyperventilation and deetherization is carried out until the patient leaves the operation theatre

(*c*) In the ward the administration consists of the inhalation of carbon dioxide and oxygen for five minute periods These periods are continued at four to six

hourly intervals throughout the first twenty four to thirty six hours after the operation

(*d*) This periodical administration is continued if there is any evidence of respiratory complications

The percentage of carbon dioxide the duration of the period and frequency of administration should be regulated according to the toleration of the individual patient The apparatus used in the ward consists of a small platform on castors to carry one cylinder of carbon dioxide and one cylinder of oxygen with a central standard to carry a right feed bottle It has proved eminently simple and satisfactory The freedom from pain in abdominal wounds during hyperventilation with carbon dioxide as compared with the pain and distress which the patient endures in voluntary deep breathing is a marked feature of the administration Adult patients readily volunteer their appreciation of the relief the administrations give and children rarely object to it

It is stated that the only effect on the organism[11] as the result of the inhalation of 6 per cent carbon dioxide during a period of two hours was diuresis and increased acidity of the urine

Conclusions

1 Carbon dioxide gas should be available in every operation theatre and in every surgical ward

2 This gas used with discrimination is a valuable adjunct to general anæsthesia

3 The maintenance of a patent and inflated respiratory tract protects the patient against serious post operative respiratory complications

4 The therapeutic application of carbon dioxide in respiratory disease rapidly drains the pulmonary system

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

A METHOD OF RECORDING MAXIMUM ARTERIAL PRESSURE

It is generally recognized that the methods now employed of taking blood pressures may under certain circumstances give misleading readings At present it is quite impossible to determine how far diseased arterial vessels – for example those due to sclerosis—may affect blood pressure readings The following accurate method of recording maximum blood pressures actually measures the internal pressure in the vessels It is based on the simple conception that if the flow of blood in the veins of a limb is obstructed the pressure in the veins will rapidly rise till it equals the pressure of the arteries supplying the limb It is only necessary then to insert a needle into a vein and connect it with a manometer

A tourniquet is attached to the arm and at the elbow with a very large bore needle inserted in the basilic vein the needle is connected with a manometer containing a solution of potassium citrate and salt The pressure is gradually raised in the armlet *pari passu* there is a rise in the water manometer Soon the fluid in the manometer reaches a certain level and then momentarily there is a slight but definite fall this coincides with the closure of the arterial vessels owing to compression of the armlet The highest level attained in the water manometer records the maximum arterial pressure The record of the mercury sphygmomanometer at the moment when the slight fall in pressure in the water manometer has taken place measures the external force necessary to occlude the vessel wall and to overcome the internal pressure of the arteries These two readings are practically identical in some cases and not quite so close in others

In order to study the events which take place in the distal portion of the extremity after the occlusion of the veins the limb is enclosed in a plethysmograph (made of tyre rubber connected with a water manometer) this part of the procedure however is not essential for ascertaining the maximum pressure It is necessary to raise the pressure in the armlet slowly so that the veins may have time to fill properly A sample reading is as follows systolic pressure by the auditory method 135 mm mercury sphygmomanometer reading at the time of closure of the arteries 120 mm record of water manometer in terms of mercury 115 (water is lighter of course by 13 6 than mercury)

I HARRIS M D Konigsberg
Hon Physician Liverpool Heart Hospital

HERPES ZOSTER INVOLVING THE URINARY BLADDER

The following case of what can undoubtedly be regarded as herpes zoster involving both the skin and the vesical mucous membrane is of considerable interest not merely from the rarity of records of such a condition but because it is probable that cases are frequently overlooked

In May 1931 I was called to see an English lady aged 64 who complained of intolerable irritation *and frequency* of micturition (every half to one hour night and day) The onset had been sudden and I saw her on the second day Suspecting syphilis I examined the urine and was surprised to find only very scanty pus cells and erythrocytes Later in the day she confessed *to a rash just below the left buttock* which on examination proved to be typical herpes zoster affecting areas innervated by the second and third sacral roots When questioned she admitted *feeling irritation on* the ball of the left foot and between the hallux and second toe although no cutaneous lesions were visible An alkaline diuretic mixture together with hyoscyamus was prescribed and calamine lotion applied to the vesicles the condition cleared up in four days Cystoscopy was not available

About one year previously I had treated her husband for herpes zoster on the right side of the penis (not glans) which was associated some weeks later with an epidemic of chicken pox among the young (black) staff of the household There was also an epidemic of chicken pox on the station at the time of the case here recorded The patient had not been taking arsenic

Discussion

Herpes zoster of the urethra has frequently been recorded and its association with herpes progenitalis noted but I have only been able to find references to three cases of herpes of the bladder

Dubois[1] reports the *case of a man aged 40 who* together with cutaneous lesions of the *left buttock com*plained of frequency dysuria and eventually of *retention* cystoscopy revealed *typical vesicles on the left side of* the base and left lateral wall of the bladder *symptoms lasted ten days* Dubois also quotes Wolbart as figuring *in his translation of Long's treatise* on cystoscopy and uroscopy an illustration of *herpes of the ureteric orifice*

Darget[2] describes two cases one in a woman aged 65, who complained of symptoms of acute cystitis of sudden onset with blood stained urine and had a cutaneous crop of vesicles along the inguinal branch of the ilio inguinal nerve on the *right* side Cystoscopy revealed a raised area on the *left* side of the base of the bladder with greyish vesicles and a grey exudate His second case was similar but there were no cutaneous lesions

In the English translation of Oppenheim's textbook of nervous diseases it is noted (p 575) that transient paralysis of the bladder sometimes accompanies gluteal and sacral herpes zoster

In the case here reported the sensory innervation of the skin affected (S 2 and S 3) corresponds with the nerve supply of the base of the bladder motor fibres from which segments cause active contraction of the muscle of the bladder wall The podalgia might have been due to referred pain which is known to occur in cases of cystitis or stone but it is more probable that it was due to morbid changes in the posterior root ganglion caused by the virus of zona

Since herpes zoster of the mucous membranes of the mouth and pharynx has also been recorded it is interesting to speculate whether the stomach and duodenum might not also suffer therefrom Here is scope for the enthusiast with the gastric camera to contribute to the study of gastric ulcer by taking serial photographs of the mucosa of patients suffering from lower intercostal herpes zoster!

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INFECTIVE JAUNDICE

I note with interest a memorandum on spirochaetosis icterohaemorrhagica by Drs E K Brown and A J Cleveland in the *Journal* of February 13th and as a similar case has come under my notice I send the following details

During the recent epidemic of influenza I was called in to see a man aged 21 on January 5th He was employed as a labourer in a piggery but on January 4th he had to cease work on account of pain in the back shivering and weakness When I saw him on January 5th he complained of headache shivering and pain in the back and legs His temperature was 103·2° F pulse rate 124 All other signs being negative I concluded he was suffering from influenza His temperature however remained at a high level for five days and on the third day of illness he complained of pain in the umbilical region and vomiting

On the fifth day the temperature had fallen to 100° F but he suffered from diarrhoea the stools were pale in colour On the next day the temperature had reached normal but severe jaundice was evident also haemorrhages into the skin of the arms and legs The conjunctivae were injected and slight nystagmus was present The headache was very severe at this stage and slight epistaxis took place The urine was heavily bile stained and contained albumin

No leptospirae were recovered from the urine but it seemed a clear case of infective jaundice There was gradual diminution of the jaundice and the patient made a good recovery (only symptomatic treatment being employed) although he has lost considerable weight and albuminuria still persists

In this case there was no evident channel of infection by the skin route such as the bite of the infected ferret described by Drs Brown and Cleveland so I concluded that the mode of entry of the leptospira was either by the alimentary tract or by a minute skin abrasion The source of infection was more evident, as the piggery in which he was employed seemed to be overrun with rats

Ardrossan E C MACDONALD, M B Ch B D P H

AN UNUSUAL METHOD OF ENUCLEATING THE TONSIL

While acting as house surgeon at Paddington Green Hospital for Sick Children the following accident case was admitted

A boy aged 5 years was playing in the street blown a cardboard trumpet He tripped and fell forward on his face ramming the trumpet into his mouth Later in the day he complained of discomfort in swallowing and was brought to hospital

On examination the left tonsil was found to be attached to its fossa by its lowest extremity only The anterior pillar of the fossa was very slightly lacerated at its junction with the soft palate and there were some slight superficial abrasions of the palate The right tonsil was enlarged and septic but not traumatized in any way There were septic teeth

It was decided to complete the operation remove the left tonsil with a snare enucleate the right tonsil with the guillotine and curette the adenoids The capsule of both tonsils proved on examination to be intact

On the following morning the temperature was 101° F and rose in the evening to 105 6° That night 15 c cm of anti scarlatinal serum were given and a further 15 c cm the following day The temperature dropped to normal on the sixth day after operation and the patient was discharged on the twelfth day the appearance of the throat in no way differing from that following a normal enucleation except for a very slight laceration of the anterior pillar of the left tonsillar fossa

I am indebted to Mr Elphick for permission to publish this case

Southend E BRIAN RAYNER M B Ch B

Reports of Societies

PULMONARY EMBOLISM

The Harveian Oration was delivered before the Harveian Society of London on March 17th by Sir BERNARD SPILSBURY who took for his subject pulmonary embolism

Sir Bernard Spilsbury confined himself to those forms of massive embolism which by producing mechanical obstruction of the pulmonary circulation were liable to bring about sudden death He had collected 120 cases of pulmonary embolism in which he had made or assisted at the post mortem examination Pulmonary embolism was responsible for a fair number of sudden and unexpected deaths in apparently healthy persons The main factor in the production of the thrombi causing pulmonary embolism was an alteration in the flow of blood in the veins This might arise as a result of enfeeblement of the general circulation Weak action of the heart in elderly persons predisposed to a certain extent towards such thrombosis Diminished suction of the chest owing to poor respiratory movements also played its part in reducing flow in the veins, and the decrease or absence of muscular contractions had its influence in thrombosis in the limbs In addition to general modifications in the circulation there were many more cases in which local interference determined thrombosis such as pressure upon veins the pressure of a tumour haemorrhage around a vein abscess in the neighbourhood of a vein and many other conditions In analysing his cases he found that sepsis hardly entered at all as a factor Not more than

25 per cent of the 120 cases he had analysed had any element of sepsis One component in the production of venous thrombosis which was most difficult to assess was altered coagulability of the blood The knowledge of this phenomenon was not extensive but it was known that there were conditions in which loss of blood to any serious extent raised the coagulability Haemorrhage into the tissues and crushing of tissues by injury also increased the coagulability that probably was a factor which had to be considered but it was very doubtful whether altered coagulability of the blood alone could bring about thrombosis and embolism

The Origin of Thrombi

Thrombi which gave rise to pulmonary embolism might be found in any of the veins of the body with the exception of those of the portal area but in a very large proportion of cases of pulmonary embolism the original clot had arisen in the veins of the lower limb generally the femoral or in the veins of the pelvic wall Rarely did it arise elsewhere but he had had a few cases in which the thrombus had been in the veins of the upper limb Sometimes but not always an indication of the site might be obtained after death by the presence of oedema in the affected limb Mistakes were sometimes made in confusing ante mortem clots with post mortem clots The latter conformed in their distribution and shape pretty accurately with the vessels in which they lay There were only two forms usually seen one the characteristic well formed pale elastic clot seen frequently in cases of lobar pneumonia after death and the other (the blood being clotted *in situ* in the main pulmonary artery) in which there were masses of dark clot so soft as generally to break up when the artery itself was opened The clots were sometimes solid and sometimes hollow where the vein was not completely thrombosed and were occasionally so thin in some parts as to form fine marginal thrombi which flattened out when they got into the pulmonary artery so that ribbon like emboli were seen The ante mortem clots were firmer than the post mortem and in most of them the surface had a lighter pattern upon it—a fine mottled appearance due to the pale clot deposited on the red surface which was one of the most distinctive characters of a thrombus formed in a vein and transported into the pulmonary artery In addition to these ante-mortem clots in the pulmonary artery it was not unusual to find others which had not reached the artery at all—sometimes an embolus lying in the right ventricle the right auricle or in one of the veins In a certain number of cases of fatal embolism infarcts were found in the lungs

How was death caused in these cases? The evidence was conflicting There was a choice of two causes one the sudden strain thrown on the right heart by blocking a large part of the pulmonary circulation with paralysis of the heart and arrest of its action and the other a rapid fall of blood pressure as a result of the arrest of the flow of blood through the lesser circulation Where pulmonary embolism had occurred while patients were under the anaesthetic he had found that in some cases it had been noted by the observer that the pulse suddenly ceased the heart apparently stopped beating but respiration went on faithfully for a short time while in certain other cases the first sign of anything wrong was in the breathing the heart for a while continuing to beat

Classification of Cases

Sir Bernard Spilsbury went on to say that he had attempted to divide his 120 cases into groups illustrating the different conditions in which pulmonary embolism was apt to arise The first group consisted of the ambulatory cases He had had eighteen cases in which pulmonary embolism had caused death suddenly in persons apparently in their ordinary health Some of these patients were suffering from varicose veins in which it was pretty evident thrombosis had started and had gone up the thigh In feeble old persons comparatively slight accidents might be followed by pulmonary embolism and the size of the emboli required to cause death was much smaller than in the young healthy person In younger persons serious cardiac disease would occasionally terminate in pulmonary embolism and he had had a number of cases where that had been the explanation of death Another group consisted of complete paralysis in which pulmonary embolism had brought about the fatal result He had seen only four cases with this condition and in three there had been injury to the central nervous system Local immobilization of a part might bring about the same result In quite a number in his series there had been injury to the leg requiring immobilization of the limb Pressure upon the veins from outside was an important factor in certain instances He had had three cases in which death from pulmonary embolism had resulted during treatment of varicose veins by the injection method in two of these sodium salicylate was used and in the other sodium morrhuate He thought the rarity of this complication was a testimony to the comparative safety of the method as to which originally he had had some misgivings In another important group puerperal conditions had been responsible for death He had had ten such cases altogether in which death had happened suddenly during the puerperium from pulmonary embolism In these patients death occurred usually between the seventh and twelfth days after labour in one instance it occurred on the fifth day and in another later than the twelfth With two exceptions these were ordinary puerperal cases without any sign of sepsis In some there was a certain amount of blood clot about the uterus One was a case of septic abortion Although he had made post mortem examinations in 300 cases of septic abortion that was the only instance of this complication He had seen several cases in which pulmonary embolism had arisen during pregnancy generally about the seventh month when presumably pressure on the veins had been the factor concerned In another distinct group of twelve death had happened just before or during an operation while the patient was under the influence of the anaesthetic Not uncommonly the embolism appeared to have occurred quite vicariously and to have had no relation at all to the operation which was being performed In some cases the manipulation during the operation appeared to have dislodged a thrombus which was present In a prostatectomy in which the patient died during operation the clot had obviously come from the prostatic network of veins The last principal group was the post-operative In this the association of sepsis was much commoner than in the other groups A fair proportion of the fatalities had been in cases where the operation was for appendicectomy In the majority death had happened suddenly about ten days after operation

Preventive Measures

In conclusion Sir Bernard Spilsbury said that he felt he had established the thesis that sepsis played a comparatively minor part in bringing about this condition When it did play a part it was by raising the coagulability of the blood and even in septic cases he thought the slowing of the blood stream was far more important than any other factor The problem of pulmonary embolism had been discussed a good deal in recent years and efforts had been made to try to overcome the danger in operations One question to be investigated was as to when the thrombosis arose in operation cases In all

probability it started very early, within twenty four hours of the giving of the anaesthetic The clots which formed appeared often to originate in the femoral veins, especially at the upper end near Poupart s ligament where he could not help thinking the posture of the body promoted thrombosis by interfering with the flow of blood through that part of the vein It was from that region especially that he suspected many thrombi took their origin As to measures for preventing post operative thrombosis one of the most important was to adopt a posture which would not tend to compress or flatten out the femoral veins As there was little or no muscular movement at the time the promotion of circulation by massage might be an important procedure as well as the raising of the limbs above the level of the body Some had gone so far as to take further steps to reduce the coagulability of the blood before operation but he thought that posture and massage were the main preventive methods

In reply to a vote of thanks which was proposed by Dr A H Douthwaite seconded by Professor F T G Hobday and supported by the president of the society Mr Cecil Wakeley Sir Bernard Spilsbury said that he doubted whether there had been any real increase in the number of these cases but there was no doubt that in earlier days many were missed

FUNCTIONS OF THE SYMPATHETIC NERVOUS SYSTEM

At a joint meeting of the Sections of Neurology and Medicine of the Royal Society of Medicine on March 17th with the president of the Section of Neurology Professor A Stanley Barnes in the chair Professor H H Woollard opened a discussion on the functions of the sympathetic nervous system

Recent experience showed he said that large portions of the sympathetic nervous system could be removed without apparently influencing the patient or interfering with the economy of the body Starling s work on this system had indicated that Auerbach s plexus in the walls of the gut was not influenced by the extrinsic nerves to the gut and his own experience confirmed this this must be borne in mind when attempts were made to influence the motility of the gut by operations on the sympathetic The maintenance of muscle tone had been attributed to sympathetic action but this view broke down on anatomical grounds Cannon had shown that if almost the whole of the peripheral sympathetic nervous system was removed the animal manifested no signs of abnormality unless exposed to cold or undue fatigue There were grounds in comparative anatomy for regarding the hypothalamus in conjunction with its connexions in the midbrain as the centre of the autonomic system The effects of stimulation of the cervical sympathetic could be obtained by stimulation of the hypothalamus Destruction of all brain tissue in front of the diencephalon produced a condition of sham rage in the mutilated animal rise of blood pressure sweating lashing of the tail and other symptoms of anger appeared The pituitary body was probably intimately concerned with the hypothalamus and its connexions Some observers believed that the pars intermedia produced a secretion which passed into the third ventricle and affected the sympathetic fibres The evidence of a hypothalamic pituitary system was however uncertain

Professor Samson Wright described experiments in which a glass plate was inserted over a region of the brain in an animal and observations made on the effect of stimulation of the cervical sympathetic on the pial vessels constriction of the vessels amounted to 7 per cent of the original diameter Brown Sequard in 1870 had shown that the pulmonary vessels were under sympathetic control and recent perfusion experiments confirmed this All the arteries and veins of the body were under vasomotor control and recent experiment went to show that the sympathetic system acted by liberating peripherally a chemical substance probably adrenaline and the parasympathetic by liberating some substance in the nature of acetylcholine Nerve endings in the carotid sinus and the aortic arch were extremely sensitive to slight pressure changes The sinus and aortic nerves might be described as buffer nerves and exerted a tonic inhibitory influence on the bulbar circulatory centres reflexly adjusting the heart rate arterial tone and adrenaline secretion to the bodily needs Section of these nerves might give rise to persistent arterial hypertension and in the rabbit to structural changes chiefly in the form of degeneration of the media with disintegration of elastic tissue fibres and ultimate calcification

Dr A F Hurst said that evidence obtained by radiography showed that the ileo caecal valve remained closed until the entry of a meal into the stomach when it opened in response to a reflex impulse Similarly movement was only seen in the colon immediately after a meal and for this a gastro colic reflex was responsible depending on an intact sympathetic nervous system The gut was insensible to all stimuli except the stimulus of distension Experimental distension of the pelvic colon produced a feeling of fullness in the lower abdomen, distension in the rectum produced a desire to defaecate He had found in tabetic patients that the desire to defaecate could only be obtained by a degree of distension of the rectum considerably greater than that required to produce the desire in a normal person but that the sensation when provoked was abnormally prolonged in such patients Achalasia of the oesophagus was the only malady known definitely to be due to organic disease of the sympathetic nervous system About eighteen cases had now been recorded of necropsies performed on patients with achalasia in which inflammation or degeneration of Auerbach s plexus in the cardiac sphincter had been found

Dr W Russell Brain described several cases of organic disease of the central nervous system in man in which symptoms had developed analogous to the sham rage produced experimentally in animals In one case the patient after a fracture of the right parietal bone developed aggressive attacks if thwarted another patient who had suffered from convulsions in infancy developed acute attacks of terror in adult life thought to be due to a lesion in the hypothalamus In other cases physiological symptoms were present such as sweating and rise of temperature and in some cases the symptoms of exophthalmic goitre were simulated by retraction of the eyelids and protrusion of the eyeballs In paralysis of the ocular sympathetic fibres enophthalmos occurred Retraction of the eyelids was associated with lesions along the posterior commissure and might occur in tabes and in Parkinsonism following encephalitis lethargica Retraction of one lid might be the first symptom of Graves disease and might precede other signs by some months Exophthalmos was often associated with other symptoms of sympathetic overaction not associated with enlargement of the thyroid There was clinical evidence that lid retraction and exophthalmos might be produced by organic lesions in the hypothalamus and upper part of the midbrain

Dr W Langdon Brown said that the sympathetic nervous system was designed to act over large areas and disturbances associated with it were often due to the fact that it ought to act in a widespread way The general work of this system was to activate the mechanism of defence to raise the blood pressure and to redistribute the blood in the skeletal muscles lungs and brain To

the parasympathetic fell the task of building up reserves it slowed the heart and increased the blood supply and tone of the alimentary canal. The two systems were antagonistic: some animals showed rage or took to flight when surprised, others took refuge in immobility, sham dead. The first two were sympathetic responses, the second parasympathetic, and the two types of response were mutually exclusive. The continuous action of fear was capable of producing symptoms which persisted even when the exciting cause had passed—for example, of functional paralysis which was not infrequently seen during the war.

Prof. E. D. ADRIAN said that in experiments on the relation of the sympathetic system to respiration he had found that there was a rhythmic tonic discharge to the blood-vessels working in phase with the respiratory centre, with which the vasomotor centre was closely coupled. The tonus of the vessels was not therefore smoothly persistent but delicately poised. The vasomotor centre discharged its impulse and then was inhibited temporarily by impulses from the aortic and carotid sinus nerves. There were no nerves designed to excite the vasomotor centre which received its stimuli from the respiratory centre only. Sometimes the rhythm of the impulses followed the heart-beats not the respiration, because the inhibitory impulses from the aortic and sinus nerves reached it with the rhythm of the heart.

CHOLECYSTOGRAPHY

At the Section of Radiology of the Royal Society of Medicine on March 18th, with Professor J. WOODBURN MORRIS in the chair, a paper on cholecystography was read by Dr. J. F. BRAILSFORD.

Dr. Brailsford said that no branch of radiology required more attention to technique and interpretation than that which was concerned with the gall-bladder. A-ray examination should always include a preliminary radiograph (before any opaque material was introduced) so that any trace of abnormality which the opaque medium might obscure could be carefully noted. A number of gall-stones could be shown on the preliminary radiograph and others by cholecystography, but there still remained a proportion not demonstrable by radiological means. The greater the care taken in technique the smaller would be the number of gall-stones escaping such demonstration. Dr. Brailsford carefully described the method of examination and discussed the points to look for in the preliminary radiograph (which he took with the patient lying prone on the Potter-Bucky diaphragm and with a slight rotation of the body to the right) and the interpretation of the shadows. With regard to the technique of cholecystography he remarked upon the gradual improvement in the chemicals used. When he read his first paper on the subject in 1924 sodium tribromphenolphthalein was given intravenously; he [illegible] the drug was toxic for a relatively large number of patients and the gall-bladder shadow relatively faint. The dye had been replaced by tetriodophenol phthalein which could be given in smaller quantities produced little reaction and yielded greater density of shadow. Gradually the oral administration of the dye had been introduced and improved upon. At the beginning this was always used as a substitute for the intravenous method which Dr. Brailsford still considered the more accurate. [illegible] results of oral administration now fell little [illegible] arguments in favour of the intravenous [illegible] that a large amount of dye was administered [illegible] concentration the degrees of concentration [illegible] gall-bladder were so confusing [illegible] shadows was not obscured by [illegible] in the dye in one instance the hepatic function test could be made at the same time and the dye could be given to a patient with nausea who would not tolerate oral administration. With oral administration on the other hand the patient could take the dye at home and come up next morning for radiography and the trouble and worry of an intravenous injection and its complications were spared. The reactions to the dye were relatively slight or absent. The preparation he was now using with the oral method was the one known as opacol which was stable, not too unpleasant to take, British made and less expensive than some others. Non-filling of the gall-bladder indicated in about 96 per cent. of cases a pathological condition of the organ often accompanied by stones, though these might not be shown on the radiograph; poor filling on repeated examination also indicated a pathological condition. A good gall-bladder shadow which was normal in size, shape and position, uniform in outline and density, and which contracted after a meal to a much smaller size indicated in a high percentage of cases a normal gall-bladder, though a small proportion of such gall-bladders might be pathological and even contain a small collection of stones. Any abnormality in the area of the gall-bladder before or after it had been filled with dye should be investigated by further radiographs taken according to the type of abnormality seen.

Mr. STANFORD CADE based his remarks on 1,018 cholecystographs taken at the Westminster Hospital, of which number about half related to his own patients, on whom not only cholecystography but other methods of investigation of the biliary tract were carried out simultaneously. Of these 512 personal cases 118 subsequently underwent cholecystectomy, so that there was opportunity of verifying the radiological diagnosis under the microscope. The technique employed differed somewhat from that described by Dr. Brailsford. Although during the last few years the oral method of cholecystography had reached a high degree of reliability he was still of opinion that the intravenous method was the more accurate and to judge from this series was entirely safe. In the interpretation of the skiagrams the main point was the presence or absence of a shadow. Absence of a shadow was due mostly to non-patency of the cystic duct. He stressed the importance of comparing skiagrams taken at stated intervals after the injection, the shadow diminishing in size and increasing in intensity. Slow emptying, poor concentration and lack of power of contraction indicated the condition of chronic cholecystitis—not necessarily infective. The importance of cholecystography in such cases lay not only in the aid it afforded to diagnosis but in the information given with a view to control in non-operative treatment.

Dr. S. C. SHANKS said that with regard to the rival methods of administration in the past he had been a firm believer in the intravenous method, the oral method seeming to be so inconsistent in its results. With the introduction of the modern soluble acid dye, however, the situation had changed very considerably. Nowadays in the majority of cholecystographic examinations with which he had to deal the dye was given orally. With the increased reliability of this method went an increasing disinclination on the part of clinicians to incur the trouble and possible risk of an intravenous injection. The speaker dealt with contraindications, the first of which was obstructive jaundice. He hesitated to apply either method with a developed cirrhosis of the liver with ascites. Dr. Brailsford had said that he believed the ill-defined flaky shadow could be demonstrated in about 30 per cent. of cases in which gall-stones were present. The speaker had not been able to approximate to this figure, 5 per cent. would be nearer to his own.

Dr. BRAILSFORD briefly replied and showed a number of radiographs in further exemplification of the points raised in his paper.

SURGERY OF THE SYMPATHETIC SYSTEM

At a joint meeting of the Manchester Medical Society and the Liverpool Medical Society held on March 2nd Mr J BAGOT OLDHAM read a paper on Some aspects of the surgery of the sympathetic nervous system The subject was limited to a consideration of the relation of the sympathetic to Hirschsprung's disease and to certain renal conditions For the anatomical and physiological basis of the operation and its technical details the audience was referred to the articles by Wade Adson and Learmonth while the speaker considered mainly the indications for sympathectomy the choice of operation and the late results Mr Oldham laid stress on the use of spinal anæsthesia as an index of the results obtainable by sympathectomy particularly in cases of simple colonic or rectal stasis He discussed Wade's reasons for preferring a unilateral sympathectomy and brought both theory and personal clinical experience to contradict Wade's arguments—in his view whenever possible bilateral sympathectomy should be done The speaker preferred Adson's operation for children between 1 and 8 Learmonth's operation in children over 8 and Wade's operation if as he believed unlikely one was compelled to operate on an infant less than 12 months old The end results in two cases operated on three and three and a half years ago were described Clinically the results were perfect—namely regular daily motions without aperients though the colon was very little diminished in size One patient had started to menstruate before the operation and the operation had caused no change In neither case was there any urinary frequency after operation Seven cases of severe renal pain were then described All had normal urine and cystoscopic appearances in some there was mobility of the kidney in others small non obstructive hydronephrosis All cases have remained cured after stripping of the renal pedicle and upper ureter Then followed a brief review of the fundamentals of renal nerve physiology and of the experimental evidence that renal denervation would produce no ill results The theoretical indications for the operation were (1) nephralgia (2) non obstructive hydronephrosis (3) essential haematuria (4) early renal tuberculosis (5) to prevent the reformation of calculi after nephrolithotomy (6) as a substitute for nephropexy (7) for grave hypertension (8) for reflex anuria and (9) certain forms of nephritis

Mr Oldham suggested that the occasional good results following nephropexy were due to a partial denervation and decapsulation being done during the operation Finally he reviewed methods of denervation and expressed the belief that only a partial denervation was necessary and that this could be secured most easily by Pavone's method of clinical denervation with 5 per cent carbolic or by De Lucia's method of paravertebral injections of alcohol stovaine and carbolic

A Diet Clinic

Another paper was read by Dr H S PEMBERTON on the working of the diet clinic at the Northern Hospital in Liverpool Originally a diabetic clinic it had now been enlarged to include the dietetic treatment and control of such conditions as dyspepsia arthritis hyperpiesia obesity hyperthyroidism pernicious anæmia renal disease and nephrosis—although diabetics still constituted more than half the number of patients attending the clinic Its scope and organization including the role of the hospital dietitian was described and mention was made of the saving of beds which was being effected by direct admission to the clinic of selected cases—certain types of diabetic menopausal arthritis and obesity hyperpieties, and the more obvious dyspeptics In the non diabetic section the system of standard diets was described In the dyspeptic group and particularly in the post operative and hypotonic cases a good deal of difficulty was being encountered the arthritic group was giving much more encouraging results particularly from the use of diets poor in carbohydrates but high in calories and in vitamin A and D content menopausal or overweight arthritis was perhaps the easiest condition to treat Of other conditions pernicious anæmia gave better results than subacute combined degeneration

MATERNAL MORBIDITY AND MORTALITY

At a meeting of the London Jewish Hospital Medical Society on February 25th, with Mr MAURICE SORSBY in the chair Dame LOUISE MCILROY opened a discussion on maternal morbidity and mortality

Professor McIlroy demonstrated, with the aid of lantern slides the proportion of maternal deaths due to sepsis which were recorded in various statistical reports including those of the obstetrical unit of the Royal Free Hospital In that institution the total maternal deaths from all causes for a period of eight years was 2 7 per 1 000 Sepsis was the commonest cause of maternal deaths and in the majority of cases was responsible for subsequent ill health and sterility The problem of the aetiology of puerperal sepsis the speaker said was still unsolved Social conditions seemed to have little effect as the maternal death rate was no higher in slum areas than in better class districts The importance of accurate diagnosis in ante natal examinations was illustrated by a series of lantern slides The various types of sedatives and anæsthetics were discussed opium derivatives being of value in the first stage and gas and oxygen in the second stage of labour Abstention from manipulating the uterus in the third stage gave good results and prevented hæmorrhage and retention of placenta or membranes The risk of sepsis after exploration of the uterus for retained placenta or membranes was shown by a record of a series of cases The advantages of glycerin injections instead of hot water for post partum haemorrhage and a method of glycerin application to the uterus in cases of hæmorrhage during Cæsarean section were discussed In the treatment of acute sepsis with blood infection fresh or quinine serum and colon lavage were of great importance In some cases blood transfusion was of value In local sepsis glycerin drainage gave most successful results

Dr BETHEL SOLOMONS said that he had decided not to bother with statistics especially as he had discovered that in one country eclamptic deaths were not recorded under maternal mortality but were classified as renal disease Every reliable maternity hospital gave details of all their cases Pre natal care was important but manipulation of any kind operations and other factors counted He said a hospital run on one man show lines was best this was demonstrated in reports from the Continent The percentage death rate for four years at the Rotunda taking intern and extern department together was 0 425 and for the intern alone 0 72 In the latter there were 58 deaths in 8 393 labours Puerperal sepsis accounted for ten deaths and toxæmic conditions for nineteen at least there were two anæsthetic deaths Dr Solomons stressed the dangers of the use of pituitary extract and allied substances during labour He wished to make it clear that he still employed chloroform in private practice as he believed it to be safe In a hospital where junior assistants often gave anæsthetics and where there was no danger from fire etc ether is safe therefore chloroform had been discontinued at the

Rotunda Hospital Morbidity and mortality would be lowered if qualified doctors were not allowed to practise midwifery until they had done post graduate study followed by a post graduate examination in obstetrics Dr Solomons added that he was not convinced of the great danger of throats and believed that a moist nose might harbour and distribute more germs than the unprotected mouth

A paper by Dr REMINGTON HOBBS was read in his absence by Dr J BURFORD In this Dr Hobbs pointed out that hot intrauterine douches coagulated the tissues and prevented the uterine wall from draining On the other hand glycerin irrigations stimulated the uterine musculature to contract Large quantities should be used 600 to 1 000 c cm gave better results in cleaning up septic ulcers than 20 c cm Treatment should be preventive (1) erosions should be detected early in pregnancy and treated by means of cervical instillations periodically throughout and (2) the urine should be examined early in pregnancy for *B coli* If they were found the whole genital tract was probably infected often causing fever during pregnancy In the labour room glycerin was a great prophylactic agent for a contracted uterus free from blood clot especially where sepsis was to be feared was an important preventive measure Washing out the uterus after the third stage of labour with 600 c cm of glycerin seemed to do good while for post partum haemorrhage glycerin irrigation was less dangerous than the hot douche When severe general infection such as pneumonia was also present, it was essential not to neglect local treatment Glycerin treatment was also useful in cases of eclampsia It must be remembered that the completely emptied uterus free from inflammation did not give rise to any pain When pain was present treatment was indicated During the past ten years over 4 000 women had been delivered at St Mary Abbots Hospital and the glycerin method of treatment had established itself securely It was only now being realized how frequent sepsis was in labour and how much internal manipulations contributed to it Of 910 deliveries at the hospital during the past two years 12 per cent of cases had been given glycerin treatment immediately after the third stage of labour Only thirty six cases (3·9 per cent) required notification for puerperal pyrexia There were two fatalities—one following a laparotomy and the other due to myocardial degeneration There were twelve cases of thrombo phlebitis and six of broncho pneumonia otherwise there were no serious puerperal complications The treatment after the third stage was continued for several days some required more prolonged treatment Glycerin treatment had proved itself very efficacious for retained placenta obviating the necessity for manual removal It was also useful after miscarriage and in the treatment of cervical erosions

After discussion in which Professor STANDER of Cornell University took part Dr SOLOMONS in reply said that fatal sepsis might occur from germs other than the hands He believed the wearing of gloves and the knowledge of how to put them on was essential but a safe delivery could be done without overalls He did not believe in abdominal shock It meant that the patient had died from some undiagnosed cause To compare the statistics of patients attended by midwives and by doctors was useless He had employed hyoscine and had but the patients were difficult to manage and it was not safe for the infant Nembutal appeared to be satisfactory but he had not tried it out yet While Holmes Sellors's report might mean prevention of [illegible] He received the glycerin [illegible] which the local solution was about

DEEP X RAYS FOR BREAST CANCER

At the meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland held on February 19th with Mr W PEARSON in the chair Dr R STUPPLE read a paper on deep x ray therapy in advanced mammary carcinoma

He said that in reviewing a series of selected cases the results which might reasonably be expected to follow from this treatment were demonstrated and a classification of advanced cases was made as follows (1) Primary inoperable cases (2) post operative recurrences and metastases The results in the first group were in exceptional cases a disappearance of all existing symptoms others were helped in a more palliative way in some cases the tumour being rendered operable On the whole lasting good results were difficult to achieve but it was hoped that the number of such cases would increase with improved technique In Group 2 results were more encouraging In several cases there was retrogression with freedom from symptoms for a considerable period while in others improvement in local and general condition with relief from pain and prolongation of life was obtained Any little help derived by these advanced cases must be credited to deep *x* ray therapy

Mr SETON PRINGLE said that the results were particularly good in recurrences whether local or in the supraclavicular glands Where operation was contraindicated by some intercurrent condition radiation would so reduce the extent of the growth as to allow of a local removal under local anæsthesia being carried out with some hope of cure In many cases which were inoperable on account of the extent of the growth and the glandular involvement radiation would bring about remarkable improvement large tumours shrivelling up into small hard plaques malignant ulcers healing up and enlarged glands apparently disappearing However no attempt at a radical operation should be made in these primarily inoperable cases as cancer cells which were locked up in the fibrous tissue would be disseminated At most local removal of the fibrosed original tumour should be done

Dr OLIVER CHANCE mentioned the treatment carried out on these cases in Stockholm and said that he tried as far as possible to follow that method He gave a course of deep x rays and in most cases it was possible to take away the breast by diathermy three weeks later In operable cases he gave a course of deep *x* rays first then the radical operation was performed and then another course of treatment was given During the last six months he had so treated four operable cases The pathological report in two cases was that the tumour was not malignant but fibrous in the third there were a few malignant cells surrounded by debris and in the fourth the pathologist said it was not possible to state definitely whether the tumour was malignant or not

Mr W PEARSON said that in operable cases of cancer of the breast whether he had done a radical operation or not he had never seen a recurrence in the skin or subcutaneous tissue He had seen a few cases in which a small nodule could be felt on one of the ribs eighteen months after operation This he regarded as a secondary

BIOCHEMISTRY IN MEDICINE CORRECTION

In our account of the discussion on biochemistry in medicine printed last week (p 524) Sir Frederick Gowland Hopkins was incorrectly reported He had commented upon the generosity and courtesy of Sir Archibald Garrod had referred to biochemistry as [illegible] given on to discuss the influence of Liebig who he said should perhaps share with Lavoisier the title of the Father of Biochemistry

Reviews

THE LABORATORY IN SURGICAL PRACTICE

The little volume[1] on this subject by Professor DODDS and Dr WHITBY contains an immense amount of information in a convenient and accessible form It should prove of great use to surgeons who wish to understand all the most modern methods of laboratory practice available for the service of their patients and although they may not have time or training to carry these out for themselves many of them will be grateful for the detailed explanations which will enable them to appreciate the difficulties and possibilities of the methods described A brief chapter on routine examinations is followed by an admirable description of blood transfusion the details of its technique its possibilities and its dangers Serums and vaccines are next dealt with in some detail and there follows a short but valuable account of precautions to be taken in operations associated with such pathological difficulties as diabetes and jaundice Two chapters are devoted to genito urinary affections and the investigation of renal function with full details as to the use of uroselectan and an excellent series of illustrative x rays The gastro intestinal tract is next discussed, and there is a valuable account of the technique of cholecystography by Graham's method Short chapters follow on the thyroid on the general examination of body fluids on special tests and on laboratory technique Although the book is expressly written for surgeons there are few practitioners who will not find it valuable as a book of reference and we congratulate the authors on the production of a really useful monograph

RADIUM AT THE MIDDLESEX HOSPITAL

In his record of *Some Radium Cases at the Middlesex Hospital* Mr CAMERON MACLEOD has collected a series which is especially to be commended because it fairly records failures as well as successes The photographs are untouched and we are therefore enabled to form a just appreciation of the results of treatment while as each page contains a photograph and a complete case commentary the collection readily lends itself for projection by the epidiascope

The book opens with a short historical review of the technique employed at the Middlesex Hospital from 1912 onwards An account is given of the older methods of massive dosage for comparatively short periods and of the effects observed The earlier results following treatment by the intensive gamma radiation from about five grams of radium bromide also receive a brief notice the conclusion reached at the time being that The results obtained on the whole did not appear to justify a continuation of the method employed and treatment by this large quantity of radium was therefore discontinued Since the end of 1919 Sampson Handley's method of combining radium treatment with radical operation in cases of mammary carcinoma has been in use and as a consequence it is claimed that recurrence in the parasternal glands is markedly diminished In the summer of 1925 radon was first introduced into the hospital practice At the beginning the seeds were applied unscreened but although the result in a case of carcinoma of the tongue was recorded as successful there was the inevitable sloughing due to large amounts of beta radiation The patient was reported as showing no signs of recurrence six years afterwards Muir's technique of screening the seeds with platinum (whereby most of the beta radiation is eliminated and sloughing consequently avoided) has been employed since 1927

The cases illustrated are classified in groups according to their histological characters and form a valuable and informative series It is difficult to select instances of special interest but among those which appear to us most instructive may be mentioned a case of carcinoma of the superior maxilla exhibiting bone necrosis two and a half years after treatment (pp 50–55) Separation of the sequestrum followed after a further eighteen months the wound closed and there was no evidence of recurrence The local beneficial results of radium in ulcerated carcinoma of the breast are well shown on pp 94–96 while successful examples of treatment of the locally infiltrating parotid tumour are given on pp 115–125 At the end of the book are recorded two cases of carcinoma of sites previously attacked by lupus which had been treated with repeated doses of x rays (*not* at the Middlesex Hospital) Both cases well show the disastrous effects of x ray treatment in such conditions in one case radium treatment was apparently successful in treating the carcinoma in the other the growth was intractable both to operation and to radiation and the patient died from massive recurrence

Mr Cameron Macleod and the Middlesex Hospital Press are to be congratulated on the production of a most instructive series of cases well illustrated and carefully reported

THE PATHOGENIC STREPTOCOCCI

The fifth volume of D and R THOMSON'S work on the pathogenic streptococci forming vol VII of the *Annals of the Pickett Thomson Research Laboratory*[2] comprises three monographs dealing respectively with the streptococci of erysipelas, of measles and of various other skin diseases Reference has already been made in the *Journal* to previous volumes of this colossal work which when completed will form an encyclopaedia of bacteriological research, containing thousands of research papers classified and epitomized by workers from all over the world It is anticipated that several more volumes will be required to complete the work and these will be followed by one or two volumes of photographic plates which will serve to illustrate the authors contention that the varieties of streptococci are to be numbered by hundreds

As with the other monographs that on erysipelas covers the entire subject from every point of view and in the greatest detail The haemolytic streptococcus which is the cause of erysipelas is considered to be specific on the ground of chemical serological and skin tests and from the action of a special bacteriophage which is found to attack only the true *Streptococcus erysipelatis* Of the numerous methods of treating the disease no one in particular appears to stand out as pre eminently effective Local applications of such agents as ichthyol iodine and picric acid are said to give good results and ultra violet rays x rays heat protein therapy antitoxic serums and blood transfusion have been tried with varying success Recently Birkhaug has prepared a specific antiserum giving striking results and its action has been confirmed by several investigators The subject of measles is discussed at great length in correspondence with its impor

[1] *The Laboratory in Surgical Practice* By J C Dodds MVO MD and Lionel H Whitby CVO MD MRCP DPH Modern Surgical Monographs London Constable and Co Ltd 1931 (Demy 8vo pp xi + 187 13 figures 9 plates 8s 6d net)

Some Radium Cases at the Middlesex Hospital By A Cameron Macleod MB BS FRCS London J Murray 1932 (Pp xi + 134 12 plates 7s 6d net)

[2] *Annals of the Pickett Thomson Research Laboratory* Vol VII The Pathogenic Streptococci The Role of the Streptococcus in Erysipelas Skin Diseases and Measles London Bailliere Tindall and Cox Baltimore The Williams and Wilkins Company 1931 (Pp viii + 441 35 plates 42s)

tance It is estimated that no fewer than a million children died from the disease in Europe during the first decade of the present century the death rate is, however falling probably as the result of improved social conditions Serum and vaccine treatment appear to be of doubtful value With regard to prophylaxis, the authors consider that the relinquishment of notification which was given up in 1919 was mistaken policy It is very important to aim at the prevention of the disease in children before the age of 3 years since by far the greatest number of deaths occur under that age this will never be effected without a thorough system of early diagnosis and notification The aetiological significance of streptococci in various other skin diseases discussed in the volume is somewhat indefinite Considerable difficulties are met with in the culture and isolation of the organisms concerned and a valuable section is devoted to instructions on the best mode of conducting observations in this branch of the subject An interesting and instructive article deals with the relationship of oral, tonsillar and dental sepsis to diseases of the skin

PHYSIOLOGY OF DIGESTION

A comprehensive treatise on food and its digestion forms the second volume of ROGER and BINET'S treatise of normal and pathological physiology [4] The work of fifteen authors it is a reasonably detailed presentation of the subject that may be valuable to British readers since there is no recent book in our language which approaches it for size The chapters on food and the vitamins (classified as A A, B and C) are contributed rather briefly by MM Desgrez Bierry Wollmann and Vaglano Interesting and novel chapters on hunger and thirst are provided by MM Pi Suner and Binet and on the salivary glands by M Battez The sections on the stomach and intestine by MM Bardier and Hallion and Gavet contain a good deal of matter devoted to pathological aspects of the subject and the same applies to that on the pancreatic juice and its secretion by M Delezenne about half the volume is occupied with these chapters Absorption in general is dealt with by M Combemale and the movements of the alimentary canal by MM Binet and Carnot and Glenard A most interesting and useful chapter on the micro organisms of the alimentary tract and their actions is contributed by M Lisbonne The liver and the biliary system are considered in another volume of the series

To do justice to a work of so comprehensive a nature is not easy In the first place multiple authorship cannot but lead to patchiness and scattering of interest as well as to the creation of gaps and perhaps (though not evident here) to overlapping In the second place it is not clear for whom the volume is intended Obviously so large a treatise can be of little use to medical students For the professional physiologist the articles are on the whole not sufficiently up to date There are relatively few references to work less than ten years old The continent of America is almost entirely ignored and the only English reference in the chapter on the stomach is to Beaumont (*1833*) It is difficult to believe that there is no British or American work of sufficient importance to receive mention in the seventy seven pages which are devoted to this subject The chapter on the pancreatic juice does not suffer from these defects to so great an extent as most other chapters though even here the subject of secretion appears to have been viewed very much as Bayliss and Starling left it Library facilities in France must be bad and to that extent we must sympathize with the authors in their task The question of references is certainly a very difficult one on which to pass an opinion To give anything like a full bibliography is manifestly impossible and not to be expected if the book is intended for students it is certainly not necessary But when some 557 pages are devoted to the subject of digestion and diet it should not be too much to expect that enough references should be given to enable the diligent reader to get in touch with the literature up to within a year or two of the date of publication Though interesting historically the book cannot, we hope and believe be considered to represent the present state of knowledge of the subject in France

[4] *Traité de Physiologie Normale et Pathologique* Publié sous la direction de G H Roger et L on Binet Tome II *Alimentation et Digestion* Paris Masson et Cie 1931 (Pp 565 illustrated Paper cover 80 fr bound 100 fr)

SOCIAL EFFECTS OF ALCOHOLISM

A book entitled *The Social and Economic Aspects* of the *Drink Problem*[5] is a companion volume to *A review of the Effects of Alcohol on Man* which was noticed in our issue of October 17th last (p 707) It is not so important or authoritative as its predecessor but it is a useful compendium of opinion Both volumes are published under the auspices of a representative body of eminent persons who set up two committees one to deal with the medical the other with the social and economic data The earlier volume embodied the conclusions of the former of these committees the present volume is the report of the latter whose membership included such men as Professor Bowley Professor Carr Saunders, and Mr Seebohm Rowntree This committee acknowledged its debt to Mr Arthur Sherwell and Mr Hamilton Whyte for the help they have given in the preparation of the book and the inquiries leading up to it It has been compiled with great care with every regard for impartiality and with some attempt to build upon a scientific and statistical foundation The definite inquiries set on foot were not very wide though effective as far as they went and the number of cases on which tabulated results are set out was not always large enough to establish definite conclusions A broad consensus of opinion upon the matters under discussion has however been obtained and this is on the whole reliable and reassuring There is no doubt at all as to the great reduction in the consumption of alcoholic drinks since pre war days or during the last decade Associated with this general conclusion however there are two or three others of importance Owing to advances in price it seems that the proportion of national or of working class income spent on alcoholic drinks has not in fact diminished so that in so far as such spending is a cause of poverty it may be said to be operative to nearly as great an extent as formerly Again it is noted in some places that there has lately been an increase in the drinking habits of young women and that gambling has sometimes replaced alcohol in producing similar industrial or economic effects Of course the higher price of alcoholic liquor and restrictions upon its sale have contributed to decreased consumption but it is gratifying to be told that the main causes of improvement are education the provision of alternative occupations and recreations and changes in industrial organization and methods The younger people are reported as specially free from drinking habits and as not voicing any demand for the abolition of present restrictions The book discusses the relations of drink and industrial efficiency of drink and poverty and of drink and crime and the conclusions arrived at in each case are interesting and are stated with moderation and with due regard to necessary provisos As an addendum to its companion volume the book is valuable

[5] *The Social and Economic Aspects of the Drink Problem* London V Gollancz Ltd 1931 (Pp 180 5s net)

NOTES ON BOOKS

The revision of the fourteenth edition of DELAFIELD and PRUDDEN'S well known *Text Book of Pathology*[6] has been undertaken by Dr F C WOOD During the four years since the publication of that edition there has been no considerable addition to morphological pathology the revising of which—from the point of view of the student of the rudiments of the subject—is limited to certain changes in the chapters on the blood the circulatory and urinary organs and the bones In other branches of pathology, however many notable advances have been made requiring notice in the new volume Among these may be mentioned the recent elucidation of the structure of thyroxine and its synthesis, the further investigation of the parathyroid hormone and its relation to certain diseases of bone the studies of Aschheim Zondek and others on the secretion of the anterior lobe of the pituitary gland in its relation to various pathological changes in the female generative organs the rapidly increasing knowledge concerning vitamins and the potent extract of the adrenal cortex prepared by Swingle which promises to parallel in Addison's disease the effectiveness of insulin in the treatment of diabetes Apart from these additions the volume remains unchanged and no alteration has been made in the general plan of the work That it should have reached a fifteenth edition is sufficient evidence that it continues to be a favourite with students

The fourth edition of Dr HANS ZINSSER'S work on *Resistance to Infectious Diseases*[7] of which the last was published about eight years ago (see *Journal* 1924 ii 579) has been brought up to date by a thorough revision The principal changes in the present edition are as follows Antigens and antibodies are each discussed in separate chapters The omission of theories now obsolete has enabled many chapters to be considerably shortened Technical details of diagnostic reactions and experimental methods have been almost completely eliminated the chapters on hypersensitiveness have been almost entirely rewritten the section dealing with immunity in diseases due to ultra microscopic virus has undergone marked change minor alterations have been made in the sections on immunity in syphilis and tuberculosis and the chapters on the practical applications of immunology in the diagnosis and treatment of infectious diseases have been revised and enlarged The work should prove a useful handbook to the clinician and epidemiologist as well as to the laboratory worker

In her work on *The Black Death and Men of Learning*[8] which forms the first volume of the History of Science Society Publications Miss ANNA MONTGOMERY CAMPBELL has made a study of the Black Death in its relation to the intellectual classes She first discusses the sixteen plague tractates of 1348–1350 which originated almost exclusively in Southern Europe—namely in Italy Spain France and Germany—and dealt mainly with the causes prevention and treatment of the disease In the following chapter the effects of the Black Death on medicine surgery and hygiene are considered The high mortality among medical practitioners is emphasized several authors of the tractates and physicians to the royal and papal households being among the victims On the other hand the visitation of the plague had a stimulating effect upon public hygiene inasmuch as it led to the institution of quarantine for infectious diseases and the establishment of lazarets and the appointment of special officers to provide for the removal of decaying matter and infected persons from the city and to supervise the markets The establishment of post mortem examinations and of anatomical investigation in general seems also to have been stimulated by the plague The effect of the plague on other fields of intellectual endeavour is illustrated by the increased attention given to the study of astronomy and astrology which were hardly distinct from one another at that time in order to determine the part played by the heavenly bodies in the production of the disease In other branches of learning such as mathematics physics, law history, the chief effect of plague was the heavy mortality among the workers in these fields In the final chapter which deals with the effects of the Black Death upon universities and education the decline of learning and decrease of students and teachers were to some extent compensated for by the efforts made to counteract these consequences of the pestilence by the foundation of additional colleges and universities the extension of university privileges the growth of student rights university participation in political affairs changes in secondary education and increasing use of the vernacular in the field of learning The text is accompanied by numerous portraits and an important bibliography is appended

[6] *A Text Book of Pathology* By Francis Delafield M D LL D and T Mitchell Prudden M D LL D Fourteenth edition revised by Francis Carter Wood M D Edinburgh E and S Livingstone 1931 (Pp xvi + 1439 830 figures 20 plates 35 net)

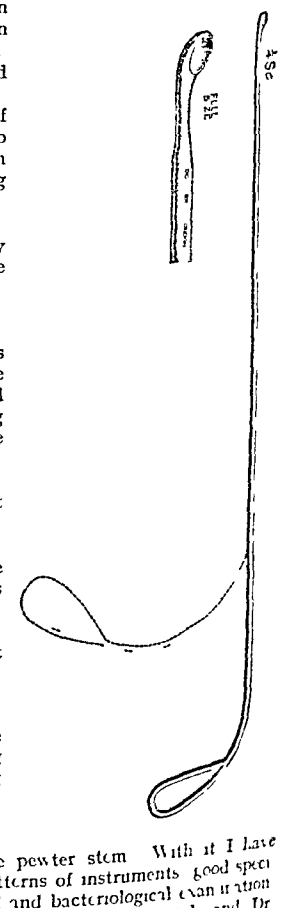
[7] *Resistance to Infectious Diseases* By Hans Zinsser M D Fourth edition completely revised and reset New York The Macmillan Company London Macmillan and Co Ltd 1931 (Pp xiii + 691 illustrated 35 net)

[8] *The Black Death and Men of Learning* By Anna Montgomery Campbell Assistant Professor of History New Jersey College for Women Columbia University Press London Milford 1931 (Pp xii + 210 17 61 net)

PREPARATIONS AND APPLIANCES

A SIGMOIDOSCOPIC SCOOP

Dr M A ARAFA M R C P (Guy's Hospital London) writes The necessity of getting a good specimen of the scraping of ulcers commonly found in the rectum and sigmoid in various conditions of ulcerative colitis and proctitis and the different types of dysenteries or a fresh specimen of the stools has led me to devise a special scoop which would be easy to use during a proctoscopic or sigmoidoscopic examination



The spoon devised by Strauss and in general use in sigmoidoscopic examinations has certain disadvantages limiting its application The Strauss spoon is not in one piece with the stem and has to be screwed on before use and the fitting of the handle makes the instrument unsteady Moreover being of a fixed length the spoon is not convenient to use with a shorter sigmoidoscope or proctoscope

The scoop which I have devised (see illustration) is in one piece handy to use and steady in operation being flexible it can be bent to use with short proctoscopes like those employed by Dr Arthur Hurst and Dr Bensaude and can also be of service when taking scrapings through the long proctoscopes and sigmoidoscopes of Strauss and others The spoon is made of steel and mounted on a malleable pewter stem With it I have obtained through various patterns of instruments good specimens for immediate cytological and bacteriological examination

I have to thank Dr Hurst of Guy's Hospital and Dr Bigham of Kasr el Aini Hospital Cairo for their kind encouragement and assistance

Messrs Down Bros London S E are the makers of the instrument

British Medical Journal

SATURDAY, MARCH 26th, 1932

THE GROWTH OF POPULATION

The issue for November 15th 1931 of the Monthly Epidemiological Reports prepared by the Health Section of the League of Nations includes an interesting study of the trend of population in a number of countries which together contain about a third of the inhabitants of the world It is common knowledge that in Great Britain and in most western or northern Europe in countries on the same cultural level the excess of births over deaths has fallen greatly since pre war days because although the death rates have decreased the birth rates have decreased still more In Germany in 1901–5 the excess of births over deaths amounted to 14 4 per 1 000 of the population in 1930 it was only 6 5 In England and Wales the fall has been from 12 2 to 4 9 per 1 000 The only important exceptions to the rule in Western Europe are France where the low rate of natural increase—2 4 per 1 000 in 1930—since the war differs but little from the pre-war figure if anything indeed is higher and Holland where although there has been a considerable fall in the birth rate the falling death rate has almost kept step so that in 1930 the natural increase was as much as 14 per 1 000 a relatively slight change from the 15 5 of 1901–5

There is a great contrast between the west and the east or south east of Europe In Poland the rate of natural increase is either stationary or increasing and amounted to 17 per 1 000 in 1930 In European Soviet Russia the rate of natural increase in 1928—the latest available data—was 23 9 In 1928 England and Wales gained by natural increase just under 200 000 new citizens Germany more than 440 000 Italy almost as many nearly 427 000 France only a few more than 70 000 actually more than 30 000 short of Holland's quota Turn to Eastern Europe In 1928 Poland acquired by natural increase 479 151 inhabitants the European territories of the Union of Soviet Republics 2 853 220 The only Asiatic people included in the table the Japanese had a natural increase of 899 141, which is greater than the excess of births over deaths in the registration area of the United States of America These are the most interesting features of the tabulation The Health Section's views on the future of population are neither novel nor supported by any detailed analysis which indeed would not be in place in an epidemiological bulletin The changes in age structure and fertility of a population which is still increasing but at a slackening rate have been well studied by Lotka in an important paper [1] where he illustrates the manner of approach of the death rate to the birth rate (*a*) when the death rates are unchanging and (*b*) when the death rates are improving to the extent that successive national life tables imply In the second case the streams keep apart longer but sooner or later, they meet unless we assume impossible improvements of mortality Lotka's calculations are based on the assumption that the population growth is logistic meaning that its increase follows a graceful sinuous path from a lower to an upper limiting size This hypothesis is known to be true to a first approximation for many populations

Returning to the crude and striking facts of absolute increase there is a certain rather dreadful irony in the reflection that one of the psychological factors of the great war was fear in Central European countries of the teeming multitudes of Slavs Far from stemming the tide the direct and indirect results of the war have been immensely to augment the balance In the European part of Russia (exclusive of the Ukraine and White Russia where the increase has not been so great) the rate of growth has increased from 1911–13 to 1928 by 7 6 per 1 000—that is the mere increment is larger than the whole natural increase of Germany in 1928 and more than twice that of Austria Perhaps too some light is thrown on the Far Eastern situation by the fact that the population of Japan is increasing annually by not far short of a million One wonders whether the half suggestion that the gloomy forecast of Malthus will never be realized may not be too optimistic Mankind says the report has already suffered from periodical crises such as the one prevailing now and if it is still menaced by some scourges it is no longer by famine and penury This perhaps is no more than a misleading half-truth We are told no doubt correctly by economists that the cause of the present discontents is not a shortage of necessities or even luxuries but a breakdown of methods of distribution That however is a distinction without a difference so far as those who are actually starving in some countries and going short in many others are concerned We should like some more convincing assurance that even in our own country nobody is menaced by 'famine and penury'

[1] Lotka A J *Human Biology* 1931 iii 459

ARTERIAL ENCEPHALOGRAPHY

It is a commonplace of neurological experience that the most careful clinical investigation may fail to determine the situation of an intracranial tumour of whose presence there are clear indications It is scarcely surprising therefore that the neuro-surgeon should have turned early to radiography in the hope of obtaining by its means evidence more direct and less equivocal than that sometimes provided by the older method In his treatise on the diagnosis of cerebral tumours and the method of arterial encephalography [1] Professor Egas Moniz of Lisbon describes a new application of radiography that he has elaborated to this end

It may not be without interest briefly to trace the progress of radiographic diagnosis in this connexion With its steadily increasing technical resources simple

[1] *Diagnostic des Tumeurs Cérébrales et Épreuve de l'Encéphalographie Artérielle* Par Egas Moniz Préface de M le Dr Babinski Paris Masson et Cie (100 fr)

radiography of the skull has now become capable of revealing the situation of a tumour in a proportion of cases, thus, the shadow cast by calcified material may betray the situation of the tumour containing it, while deformities of the sella turcica and localized variations in the thickness and density of the skull and in the number and size of the diploic vascular channels may serve the same end The interpretation of radiograms still remains difficult and errors of diagnosis are common Nevertheless the method is free from danger or discomfort to the patient and even though it fails us in a given instance nothing is lost The next step was the elaboration by Dandy of the method of ventriculography by which air is injected directly into the ventricular system, or as in a later modification, into the subarachnoid space and the ventricles by the lumbar route By these means the situation of new growths may be revealed by the abnormalities of ventricular and convolutional pattern due to their presence and shown in the radiogram With this striking advance in technique came certain dangers and discomforts to the patient inherent in its employment, and a sound balance of opinion has yet to be reached as to the sphere of usefulness of the procedure and as to its value At best it can never be more than a useful subsidiary aid to localizing diagnosis in selected cases

After the most extensive and careful experimentation Professor Moniz has devised yet another radiographic method, depending upon the intravascular injection of solutions opaque to *x* rays By a technique which he gives in full detail he injects several cubic centimetres of a 25 per cent solution of sodium iodide into the common carotid artery Clamping of the external carotid ensures that the solution shall pass into the internal carotid The head is then instantly radiographed during the few seconds in which the solution fills the cerebral arteries on the injected side of the head By these means he obtains a beautiful silhouette of the cerebral arterial tree in one hemisphere By a careful study of deviations from the normal arterial plan of displacements of the branches by the presence of abnormal vascular arrangements in vascular tumours, and by the blanks in the arterial map produced by the presence of non-vascular tumours he has succeeded in a high proportion of the cases studied in localizing the tumour The reader will find it impossible to withhold his admiration for the author's skill or for his beautiful arterial photographs, but he will find himself equally unable to deny that just as the advance from simple radiography to ventriculography has had to be paid for in the increased hazards and discomforts of the newer method so also arterial encephalography appears to have its price in pain and danger to the patient—a price that must often be an unduly high one For the author tells us that injection into the artery near its bifurcation may be extremely painful often giving rise to violent epileptiform convulsions at the moment of injection also to slowing of the pulse and to dyspnoea and sometimes to transient syncopal attacks Further in the subjects of cerebral arterial disease focal vascular lesions of the brain—occasionally with a fatal issue—may ensue To avert some and to minimize others of these unpleasant effects, it is customary to give the patient 5 grains of luminal the night before injection, and a second dose of 5 grains on the morning of injection, followed by morphine and atropine While a local anaesthetic suffices in many cases for the operative procedure the presence of pain may necessitate a general anaesthetic It appears, however, that since the publication of this book a solution of thorium dioxide has been substituted for one of sodium iodide, and has been found free from the serious objections involved in the employment of the latter Nevertheless, not every patient can expediently be subjected to these drastic diagnostic procedures which should be reserved for carefully selected cases in which the less hazardous methods have failed to provide adequate localizing information and in which a general survey of the case offers reasonable prospects of surgical success without grossly disabling sequels

Professor Moniz is a neurologist of distinction, and will not over-estimate the scope or importance of the method he has so skilfully devised Yet his numerous case records show quite clearly that in many instances adequate localizing indications had already been obtained by clinical examination and simple radiography, before arterial encephalography was undertaken During the course of his investigations Moniz may have found this general use both necessary and valuable, but the method is now clearly one for discrimination We should perhaps make this clear, for it is probable that many will be tempted to employ the method who will seek in it—as they sought in ventriculography—little more than a seductive short cut to diagnosis, an easy substitute at last for the necessary but arduous discipline of clinical investigation It is by this path that technique scores its facile triumphs over reason, triumphs in which too often the patients—who after all are most deeply concerned in the fruits of our activities—will find little enough reason for self congratulation

THE ROYAL MEDICAL BENEVOLENT FUND'S BEST YEAR

At the annual meeting of the Royal Medical Benevolent Fund, held on March 15th, with Sir Thomas Barlow in the chair Sir Charters Symonds, the treasurer, was able to give a very encouraging account of the financial position He said that the amount received in subscriptions and donations during the year—namely, £10 682—was an increase of over £600 on the previous year and the largest ever received in the history of the Fund A steady increase in income had taken place during the last ten years, especially during the last four—evidence of a well-directed appreciation on the part of the profession of the need for helping the less fortunate The progress of the Fund was due to the very satisfactory organization of the office, to the work of the local secretaries and among outside agencies to the help of the British Medical Association A sum of £1 781 sent by members with their subscriptions to the Asso-

ciation had been received by the Fund and in addition the B M A Charities Committee had allocated £1 275 The Medical Insurance Agency had again made handsome contributions both to the Fund and to the Ladies Guild—money which in an ordinary business would have gone to the directors and shareholders The total amount distributed in grants during the year was £16 475 an increase of £1 566 Including the Guild which is in future to be called The Ladies Guild of the Royal Medical Benevolent Fund ' the total income for the year apart from legacies had been £24 214 and the total amount distributed £20 092 not counting £1 600 which had been received as a legacy and which by the terms of the will had been used for the purchase of annuities Sir Percy Sargent one of the honorary secretaries mentioned that receipts from legacies during the year were smaller than usual—namely £4 430 Among some noteworthy donations were £630 from the Medical Insurance Agency £400 from the Torquay Division of the British Medical Association—the result of a ' sweep —£50 from the Southport Division £41 from the Malaya Branch and considerable sums from Local Medical and Panel Committees On the motion of Sir D Arcy Power seconded by Dr C E Douglas the honorary officers were re elected as also was the committee of management New members of the committee are Dr Alfred Cox and Mr W C Bull Sir Thomas Barlow in proposing a comprehensive vote of thanks which included the outside helpers and the medical and lay press spoke in complimentary terms of the work done by the staff of the Fund especially in interviewing applicants for relief He said that he had never considered it part of the work of the Fund to take the place of the ordinary relieving officers The only logical and sensible way of dealing with extreme cases of destitution was to refer them to the public assistance authority The Fund could not carry such cases on its shoulders The people who could be helped to the best purpose were those who had a little coming in but not enough by the help which the Fund was able to give they received what was approximately adequate to their needs But every applicant was assured of the most courteous and kindly treatment Dr C O Hawthorne replying on behalf of the British Medical Association and its Charities Committee and also to a remark by Dr Herbert Spencer that he hoped the claims of the Fund would be pressed at the Centenary Meeting of the Association this year said that the Centenary programme would necessarily be very crowded but an endeavour was being made to introduce into the programme an occasion on which all the medical charities would be represented and he was pretty sure that Dr Douglas the chairman of the Charities Committee would see that that was done

KOCH S DISCOVERY OF BACILLUS TUBERCULOSIS

The fiftieth anniversary of Koch s discovery of the tubercle bacillus to which we alluded in our issue of February 20th (p 343) was commemorated on March 5th at the Robert Koch Institute Berlin when addresses were delivered by Professor F K Kleine president of the institute and others We are indebted to Dr P Wolff co editor of the *Deutsche medizinische Wochenschrift* and organizing secretary of the Committee for Commemorating Robert Koch for the following summary of Professor Kleine s address On March 24th, 1882 Robert Koch reported his discovery of the tubercle bacillus to the Berlin Physiological Society Although the experiments of Villemin Cohnheim and Salomonsen had made it clear to most investigators that tuberculosis was an infectious disease the nature of the infective agent had hitherto been completely unknown Koch s discovery was all the more remarkable as it afforded the first convincing proof of the practical importance of the new methods of bacteriological examination The foundation of these methods was first laid by Koch in the seventies when he was a young district medical officer in the small town of Wollstein and had an opportunity of gaining some experience of anthrax Although Pollender Brauell and Davaine had shown that on microscopical examination small rods were to be found in the blood of animals suffering from anthrax and that the disease could be transmitted to other animals by inoculation of the blood the problem of the apparently spontaneous origin of anthrax was still unsolved Many therefore regarded the anthrax bacillus as something inorganic or accidental or at most of only secondary importance in relation to the cause of the disease Koch however made a microscopical examination of living specimens and observed the development of bacilli into filaments and the formation of spores When he inoculated mice with material free from bacilli but containing spores they always died of typical anthrax The discovery of the spores therefore explained the aetiology of the disease In addition to these studies during his residence at Wollstein Koch by experiments on animals furnished the proof of the parasitic origin of wound infections By injection of putrid fluids he succeeded in producing different characteristic diseases each of which corresponded to a different micro-organism and could be produced by further inoculation of fresh animals He also demonstrated the causal bacteria in sections of the various organs stained with aniline dyes and was thus able to explain the clinical symptoms and fatal issue in each case After his appointment to the Imperial Health Office in Berlin he invented the ingenious but simple method of pure cultures whereby he was able to isolate a definite organism from a mixture of several In order to realize the importance of Koch s discoveries it should be remembered that in those days most botanists vigorously denied the existence of definite bacteria The well-known Munich botanist C von Naegeli in 1877 wrote that the sober physiological mind regarded the theory of specific causes of disease as almost fantastically simple and resembling the personifications created by native races to explain important natural phenomena Koch s new method proved to be the key for the further investigation of micro organisms with the result that he himself his collaborators and his former pupils throughout the world soon made many more important discoveries Among his other discoveries may be mentioned the



cholera bacillus (1883) tuberculin (1890), and the investigation and successful control of rinderpest (1897) Although tuberculin did not have the desired therapeutic effect, its diagnostic value is incontestable It also possesses special theoretical interest, in that it was the first substance which produced a specific reaction of hypersensitiveness It is therefore to a certain extent connected with his most brilliant achievement—namely, the proof of the specificity of definite micro organisms

ALUMINIUM AND HEALTH

In recent months we have had many inquiries from readers about a pamphlet entitled "The Danger of Food Contamination by Aluminium," written by Dr R M le Hunte Cooper [1] The author quotes certain cases of deranged digestion which improved when the use of aluminium cooking utensils was discontinued He concludes (p 27) that aluminium has "irritative inflammatory ulcerative and paretic effects upon the gastric and intestinal mucosa and apparently seriously deranges the nervous system" These alarming conclusions are surprising because aluminium is one of the most widely distributed elements present in the crust of the earth, and it is difficult to imagine how any animal that was easily poisoned by aluminium salts could survive It is of interest to note that there is little evidence that exposure to aluminium dust causes disease The *Journal of the American Medical Association* states that out of nearly 3 000 cases of occupational disease in Ohio during two and a half years not one was attributed to aluminium [2] Again, the addition of alum is a recognized method for cleaning turbid waters to render them fit for drinking while the administration of aluminium salts, such as alumina and kaolin is a common medical practice It so happens that the effect on the health of the regular intake of small amounts of aluminium salts is a problem that has been investigated by the public health authorities of many nations The results have been remarkably concordant In the United States in 1914[3] a consultant board of experts agreed that aluminium compounds in quantities less than 0 2 gram a day had no injurious effect on health More recently the German Federal Bureau of Health examined this problem [4] and found that doses of aluminium up to 1 gram had no effect on the health of dogs or man Another investigation has lately been made at the Rowett Institute at Aberdeen [5] In one set of experiments pigs were given 25 grams of alum daily for seventy-five days and the conclusion drawn was that no harmful effect on general growth and metabolism resulted from feeding with comparatively large amounts of aluminium In a second series of experiments rats were fed on aluminium compounds for short periods and no evidence of absorption of aluminium was obtained The above references provide a few samples of the very large literature that has accumulated on the effect of aluminium on health In general the uniformity of the results is remarkable It is scarcely necessary to say that if large enough quantities of aluminium compounds are given then toxic effects can be produced but it should be remembered that the same statement holds true for table salt This is not the first time that aluminium has been indicted as a general source of disease for, according to a pamphlet issued by the British Aluminium Company a Swiss journal in 1925 started the hare that aluminium caused cancer This led to a short-lived anti aluminium campaign, with the slogan "aluminium cancer" in the United States

[1] London Bale Sons and Danielsson Ltd 1931
1929 xcii 1870 1928 xc 1515
[2] *U S Dept Agric Bull* 1914 p 103
[4] *Deutsch Reich gesundheitsbl* 1930 No 41
[5] Mackenzie K *Biochem Journ* 1930 xxiv 1433 1931 xxv 287

CREMATION IN GREAT BRITAIN

At the annual meeting of the Cremation Society, held on March 16th, Mr Murray N Phelps, who presided stressed the comparative neglect of cremation in Great Britain in spite of its growing importance as a factor in public health When it was remembered, he said that every year something like half a million bodies were buried in our midst, it was certainly remarkable that no legislative measure of reform had been attempted since the Burial Act of 1885 One cemetery in the heart of London, which was opened in 1840, and in which over 155,000 burials had taken place in the following half-century, was still being used for interments Public money which could be more usefully employed was being expended in the wasteful acquisition of large areas of valuable land for the purposes of burial in and around large centres of population The annual report of the society states that during the past year 5 195 cremations were carried out in the twenty two crematoriums in Great Britain as against 4,533 in 1930, bringing the total since the Woking crematorium was opened in 1885 to 58 152 Although this is an increase of 14½ per cent on the figure for 1930 it represents only 1 per cent of the actual deaths which occurred during 1931, and indicates the slow progress of the cremation movement in Great Britain in comparison with Central European and Scandinavian countries The society was founded largely through the efforts of medical men and it has always been supported in these columns, yet when it comes to the point how many members of the medical profession leave directions that their own bodies are to be burned after death, and how often do they use their influence in the homes of their patients on behalf of cremation?

MEDICAL PRESIDENTS OF THE ROYAL SOCIETY

Medicine has been described as 'the mother of the sciences,' and in the seventeenth and eighteenth centuries many of those prominent in natural science were medical men this was true of the Oxford "Philosophicall Clubbe" which just preceded the foundation of the Royal Society and in the early days of that Society a much higher percentage than at present were medical men This is largely the natural outcome of the enormous expansion of knowledge which has necessitated specialization and narrowing of the individual's mental horizon to correspond with its deeper penetration Although the number of medical F R S's has diminished in modern times it happens that of the nine presidents of the Society with medical degrees about whom Professor D F Fraser Harris has written pleasantly in the *Dalhousie Review* under the title Medical Pioneers in Science,' five—Hooker Huxley Lister Sherrington and Hopkins—have been elected since 1870 William Hyde Wollaston is included among the nine, but when on the illness of Sir Joseph Banks

the Council of the Society, in accordance with Banks's wish proposed to nominate him, Wollaston declined a contest with Sir Humphry Davy but consented to act as president *ad interim* from June 29th 1820 until the following November 30th, the election day. Wollaston was admitted M.B. in 1788 and M.D. Cambridge in 1793, practised for a time in Huntingdon and Bury St. Edmunds, and in 1797 came to town and, like William Heberden the elder in 1748, settled in Cecil Street, Strand. He was a Fellow of the Royal College of Physicians, a censor in 1798 and in 1824 an Elect, or one of eight senior Fellows who chose the president from among their number. In 1800 he gave up medical practice; this has been ascribed to his want of success in a contest with Dr. C. R. Pemberton for the post of physician to St. George's Hospital, but it is more probable that it was because his sensitive temperament made him over-anxious about his patients. Of the remaining eight presidents with medical degrees four were actively engaged in practice. Hans Sloane and Pringle as physicians, and Benjamin Brodie and Lister as surgeons. Hooker and Huxley both began their scientific career as nominally assistant surgeons in Her Majesty's ships. The last two presidents with medical degrees—Sir Charles Sherrington and Sir Frederick Gowland Hopkins—are Fellows and past Baly medallists of the Royal College of Physicians of London. The intervening president, Lord Rutherford, was in 1928 elected an honorary F.R.C.P. as in the seventeenth century was the Marquess of Dorchester, who left his library containing 1,547 folios, 1,250 quartos, 432 octavos, then valued at upwards of four thousand pounds, to the College—a noble example!

MEMORIAL TO W. E. DIXON

Professor W. E. Dixon, M.D., F.R.S., who died last August, was a staunch friend of the British Medical Association, and the help he gave it on committees and in many other ways is fresh in our minds. We are glad to announce the setting on foot of a scheme to commemorate his work and personality by the establishment of a Dixon lectureship in therapeutics. Colleagues, former pupils at Cambridge and at King's College, London, and other friends have already been approached, but it is inevitable that a number of names of likely supporters would be missed by those in charge of the preliminaries. Any reader who is interested in this project and has received no communication is asked to send a line to the secretary, Dixon Memorial Committee, Pharmacological Laboratory, Cambridge.

In the paragraph published on March 12th (p. 484) mentioning some of those who have been nominated for election as Fellows of the Royal Society we should have included the name of Dr. Davidson Black, professor of anatomy, Peking Union Medical College, whose recent writings on *Sinanthropus pekinensis* have attracted so much attention.

We regret to record the death on March 19th of Dr. G. B. Hillman, M.P. for Wakefield, who had taken an active part for some years in the work of the British Medical Association. An obituary notice will appear in a later issue.

MEDICAL CONGRESSES, 1932

The following congresses and conferences on medical and allied subjects have been announced for 1932. Particulars are given below in the following order: date, name of organizing body, place of meeting, name of person to whom inquiries should be addressed. More detailed information about these meetings is given from time to time as it becomes available in the news columns of the *British Medical Journal*.

April 8–11.—Eleventh Congress of German Pharmacological Society, Wiesbaden. Professor W. Lipschitz, Pharmakologisches Institut, Frankfort on Main.

April 11–14.—German Society for Internal Medicine, Wiesbaden.

April.—German Society for Urology, Vienna.

May 9–13.—American Medical Association, New Orleans. Secretary of Association, 535 North Dearborn Street, Chicago.

May 10–15.—Royal Institute of Public Health, Belfast. Secretary of Institute, 37 Russell Square, W.C.1.

May 19–21.—German Ophthalmological Society, Leipzig.

May 23.—International Union of Local Authorities, England and. Mr. G. M. Harris, Ministry of Health, Whitehall, S.W.1.

May.—Italian Congress of Hydrology, Climatology, and Physical Therapy, Viareggio. Professor Gennaro Fiore, R. Clinica Pediatrica, Pisa.

June 20.—Canadian Medical Association, Toronto. Dr. T. C. Routley, 184 College Street, Toronto.

June 25–28.—Journées Médicales de Bruxelles, Brussels.

June.—British Hospitals Association, Liverpool. Secretary of Association, 12 Grosvenor Crescent, S.W.1.

July 9–16.—Royal Sanitary Institute, Brighton. Secretary of Institute, 90 Buckingham Palace Road, S.W.1.

July 21–23.—National Association for the Prevention of Tuberculosis, London. Secretary of Association, Tavistock House North, Tavistock Square, W.C.1.

July 24–29.—British Medical Association Centenary Meeting, London. Medical Secretary, B.M.A. House, Tavistock Square, W.C.1.

July.—Congress on Paediatrics, Geneva. Secretary of Save the Children International Union, Geneva.

August 15–18.—International Congress on Light, Copenhagen. Dr. W. Kerr Russell, 126 Harley Street, W.1.

September 6–9.—International Union against Tuberculosis, The Hague. Secretary of Union, 2 Avenue Velasquez, Paris VIII.

September 20–25.—International Congress of Mediterranean Hygiene, Marseilles. Dr. Violle, 40 Allées Léon Gambetta, Marseilles, or Dr. Broquet, 195 Boulevard St. Germain, Paris VII.

September 25–29.—German Association for Natural Science and Medicine, Wiesbaden.

September.—International Congress on Biliary Lithiasis, Vichy.

September.—International Congress of the History of Medicine, Bucarest.

October.—French Congress of Stomatology, Paris.

Other congresses announced to take place during the present year include: International Congress of Oto-rhino-laryngology, Madrid. Italian Congress of Urology, Bari. Pedagogic Medical Congress, Rome. German Dermatological Society, Vienna. Society for the Study of Diseases of Digestion and Metabolism, Vienna (Professor von den Velden, Bambergerstrasse 49, Berlin W. 30). International Conference on Tuberculosis, Davos (Secretary, Medical Society, Davos Platz, Switzerland). German Society for Psychiatry, Bonn.

The First Hundred Years

NOTES ON THE HISTORY OF THE ASSOCIATION

THE British Medical Association founded at Worcester in 1832 by Sir Charles Hastings celebrates its centenary next July under the Presidency of Lord Dawson of Penn. In anticipation of this landmark in professional history the Council invited Mr. D. Murrhead Little, F.R.C.S., to undertake the task of annalist. We publish below the fourth of a series of advance extracts from the *History of the Association* which Mr. Murrhead Little is preparing for publication at the time of the commemorative proceedings in Worcester and London. The first article appeared on December 5th 1931, the second on January 2nd 1932, and the third on January 30th.

CHANGES IN THE CONSTITUTION

An association of people so independent in outlook and in their daily work as medical men was bound to have occasional disturbances of its equilibrium. In the history of the British Medical Association two such disturbances seemed likely to cause a disruption or at best a serious secession, but on each occasion good sense and toleration prevailed, and the organization emerged from the struggle stronger and more united than before. The first of these occurred when it was proposed to change the name from Provincial to British. This change involved more than a name, for it connoted an expansion of the Association to include the metropolis, and as the older members foresaw it also meant the shifting sooner or later of the centre of activity from the provinces to London. Naturally the founder and his friends wished, on sentimental grounds, that Worcester should retain its proud position of cradle of the Association, but they also feared that the inclusion of London and the influence of London physicians and surgeons might lead to a change in the character of the Association. It is to be remembered that one of the factors which led to the foundation of the Association had been dissatisfaction with the preponderance and pretensions of London medical and surgical institutions and those concerned in their direction and management. Sir Charles Hastings gracefully yielded to the opinion of the majority, as ascertained by a referendum, and the subsequent history of the Association has shown that its scope has been widened and not narrowed since the assumption (in 1856) of the more comprehensive title. The Council was rendered more truly representative. The second occasion arose half a century later, when it had become apparent that the votes of the few members who took part in Annual Meetings could not be considered as representative of the whole Association, and after considerable time and trouble the present representative system was established. The Association has thus shown that it is not opposed to change when change is necessary, and we may with confidence foretell that the same spirit will lead to future changes when these are shown to be desirable.

In the original prospectus of the Provincial Association it was stated that the Association was to be managed by a president, two secretaries, a Council, and Branch committees, but no details were given as to the mode of election of the Council. At the inaugural meeting in Worcester a Council of 70 members was elected, and at each anniversary meeting afterwards this number was increased by the election of local members. Since no machinery was provided for retirement the Council soon became of an unwieldy size. Officials of Branches were *ex officio* members, and as the number of Branches increased so the number of members of the Council increased, by 1853 when there were 1,853 members the Council had swollen to a membership of 312.

In effect the Association was governed by the members living in and near Worcester where the President and the two secretaries lived and where the *Journal* was published. In 1854 however the publication of the *Journal* was transferred to London, and at the meeting in Manchester in that year an attempt was made to regularize the position by passing the following resolution:

> That the members of the General Council resident in and within twenty miles of Worcester be requested to act as an Executive Council, and to continue their services as hitherto in furtherance of the business of the Association, to which Executive Council the Editor of the *Journal* and the Secretary of the Association shall be responsible.

There had been indications during the previous two or three years that members of the Association were not quite satisfied with the management of affairs, and that the rather informal arrangements which were adequate for the government of a small local association of a few hundred members were unsuited to a widespread organization of over two thousand. Accordingly a further resolution was proposed and carried as follows:

> That in the opinion of this meeting the representative principle ought to be fully adopted in the constitution of the governing Council, and that a committee be appointed to examine, revise, alter, and amend the laws of the Association, especially those relating to the members of the Council and the constitution of the Branches.

This committee was also instructed to ascertain the opinion of each member of the Association on the changes recommended, and to report at least four weeks before the next Annual Meeting. The report is to be found in the *Journal* of May 25th 1855.

At the Annual Meeting held in York in 1855 there were animated discussions on the report, and on finance, and a proposal to change the name of the Association was defeated by 50 votes to 31. Sir Charles Hastings was re-elected President of the Council and treasurer for life, and it was resolved that the Council should consist of the officers of the Association and of members elected by the Branches according to their size—Branches with less than thirty members being represented by their presidents, only those with over thirty by their president and secretary, and for every twenty members beyond thirty one additional representative. It was further proposed that the Annual Meeting should elect an additional member of Council for every twenty members not belonging to any Branch. The Council thus to be formed was to elect an Executive Council to consist of two central officers, ten members of Council chosen by that body, and one secretary from each Branch. This Executive Council could delegate its powers to any five members. The proposal of an Executive Council shows that it was recognized that even as reformed the Council would be too unwieldy to be efficient.

A large majority of the members who did not record their votes at York were still unsatisfied with the measure of reform, and did not accept the vote on the proposed change of name as representing the real opinion of the 2,188 members. Several Branches sent in requisitions for a special general meeting for the reconsideration

of these questions This was summoned and at the same time the Council issued voting papers on the question of the proposed change of name, thus putting into practice the principle of the referendum

RENAMING THE ASSOCIATION

The special meeting was held at Birmingham in November 1855 when Sir Charles Hastings announced that the voting papers returned showed a decisive majority in favour of the change of name which expression of opinion he and the Council accepted frankly There was some discussion as to whether the name should be British Medical Association or British Medical and Surgical Asso ciation but the former was adopted there being only three or four dissentients Sir Charles Hastings himself pro posed at the next Annual Meeting that the name should be changed and further that the principle of absolute repre sentation in electing the Council should be adopted so that each member of the general body may have by his representative a voice in the management of affairs Threats of resignation which had been made were there- upon withdrawn and peace was restored At the ensuing Annual Meeting in 1856 which also was held at Birming ham a new code of laws was unanimously adopted which has been summarized by Dr John C McVail as follows

1 Name British Medical Association
2 Council excepting as to *ex officio* members to be elected solely by the Branches one for every twenty besides the honorary secretary of each Branch
3 Every candidate for membership of the Association to be recommended by three members
4 The Executive Council to be called the Committee of Council and to have *no* power to delegate its functions to five members

It is to be noted that the representation of members who did not belong to any Branch which had been provided for a year before was now abandoned The constitution thus established continued unaltered for twelve years

INCORPORATION

During the five years 1868–73 various alterations were made in the constitution of the Council and in the methods of representation of members unattached to Branches These changes and proposals of change showed that there was a certain amount of dissatisfaction with the prevailing administration and in 1873 conditions seemed ripe for alteration At the Annual Meeting held in London in that year the Council announced that a proposal to register the Association as a limited company under the Public Companies Act had been under consideration and with a view to this revision of the laws was recommended The incorporation was carried out in 1874 and at the Annual Meeting held at Norwich a Memorandum and Articles of Association were adopted and the preparation of By laws was entrusted to a subcommittee The members of Council became directors and the liability of a member was limited to one guinea should the company at any time be wound up Voting by proxy (as in other limited companies) was allowed the proxy to be a member of the Association The weak point in this scheme which in ensuing years became very obvious was the fact that the Association having a membership of 6 000 which was steadily increasing was placed under the absolute control of the General Meeting held in various and sometimes remote parts of the country and whose quorum was only twenty five In theory the proxy vote might have acted as a counter weight but in practice this did not occur

The Council was to elect annually twenty members of its own body to act as the Committee of Council Representa tion of the Branches was provided for but did not give universal satisfaction so that at the Jubilee Meeting at Worcester in 1882 it was resolved that the Committee of Council be requested to consider in what way direct representation of Branches can best be secured The Committee of Council which met quarterly and was in practice the real governing body except for the control of the General Meeting appointed a special subcommittee to carry out the inquiry enjoined on it by this resolution The Council considered the report of this subcommittee at Birmingham in May 1883 and adopted various recom- mendations as to the representation of Branches which involved the formation of a new governing and representa- tive body elected directly by the representatives— one for each Branch A recommendation that the travelling expenses of the elected representatives should be paid by the parent Association was rejected by the General Meeting at Liverpool later in the year but a lengthy by law was adopted detailing the method of election and the powers and duties of the Council which it was decreed shall manage the general affairs and business of the Association except as otherwise provided by the Articles or By laws

The constitution remained unchanged until 1896 when once more it became evident to many members that it was not entirely suited to the needs of the day This feeling of dissatisfaction with the organization led to the calling of an Extraordinary General Meeting at Birming- ham in 1896 preliminary to the Annual Meeting at Carlisle when Sir Willoughly Wade and Dr Ward Cousins brought forward a resolution which led to the appointment of a Constitution Committee The report of this Com- mittee[1] was submitted to the Annual Meeting in 1897 which referred it back to the Council for reference to the Branches and to a reformed Constitution Committee The result of this reference to the Branches was that only eighteen of them replied and only one of these approved the committee s first resolution proposing that unattached members should have votes for Branch representatives to the Council This lack of interest on the part of the Branches led to the subject being dropped for a time with the approval of the Annual Meeting at Edinburgh in 1898

LATER CONSTITUTIONAL REFORMS

A year later the question of constitutional reform was brought up again this time by a movement which originated outside the ranks of the Association In 1899 the Medical Guild of Manchester called a conference of delegates from societies and associations of general prac- titioners throughout the country The objects of the conference were

1 To promote greater adhesion and better organization of general practitioners
2 To provide opportunities for meeting and for discussion of all matters concerning their welfare
3 To exert influence on public opinion
4 To provide machinery whereby the advantages of an annual conference might be secured to the profession

These objects were to a great extent the same as those which Hastings and his friends had in view when they founded the Provincial Association and it was obvious that there was a grave danger of the proposed conference leading to the formation of a rival society The Guild s action was directed by dissatisfaction with the Association s record in the sphere of political and ethical work The conference was duly held in May 1900 at which it was reported fifty four delegates representing the same number of medical bodies including seven Branches of the Association as well as representatives of its Council, were present The first speaker called upon was Victor Horsley who although he was not nor had been a general practitioner held strong views upon medical reform

Henceforth he played a great part in medical politics and the movement in favour of reform On this occasion

[1] *British Medical Journal* 1897 ii 302.

he criticized the British Medical Association and the General Medical Council and urged amendment of the Medical Acts Various grievances of the profession and defects in the protection of the public afforded by the Medical Acts as well as public health questions were debated on the first two days of the meeting, but the important work of the conference was done on the third day The secretary to the Conference Committee Dr Crawshaw of Ashton under Lyne proposed three resolutions designed to secure the appointment of local or district associations whose delegates should meet annually at a conference *at which only medico ethical and medico political topics should be discussed and voted upon* and the election for a period of three years of a Central Executive Committee one third to retire annually

No reference was made to the British Medical Association in these resolutions and this was pointed out by Dr Alfred Cox of Gateshead who effectively argued the case for reform within the Association The following resolutions which embody substantially the proposals of Dr Cox were passed

That this Conference is of opinion

1 That the present need in medical organization is concentration

2 That the multiplication of associations other than those purely local is to be deprecated

3 That the size position and wealth of the British Medical Association make it the most suitable national medical organization

4 That the efforts of all medico ethical and similar associations and of the conference should be directed to the conversion of the British Medical Association into an energetic body really representative of the majority of the members of the profession

The Council of the Association was no doubt spurred by the discussions at Manchester as well as by its own sense of the dangers and difficulties inherent in a constitution under which twenty five members at a remote Annual Meeting could dictate the policy of the whole or change its constitution It therefore proposed a scheme whereby out of one hundred members three fourths would be elected by the Branches The new Articles of Association which were proposed would have placed the power of deciding the policy and constitution of the Association in the hands of a Council thus rendered more genuinely representative instead of in the hands of the Annual Meeting This scheme however did not provide for the localization of meetings of members throughout the country for medico political purposes which the Manchester conference had desired The local unit was still to be the Branch and the Branches generally speaking covered too much ground for busy practitioners to be able to attend their meetings regularly

The Council submitted the new Articles to an Extraordinary General Meeting held in Exeter Hall (*London*) in July, 1900 but the resolution in favour was not carried As Dr McVail says It is doubtful indeed whether the members of Council throughout the United Kingdom realized the strength of feeling behind the Manchester movement even if they had read in the *Journal* the account of that three days conference

RECONSTITUTION

At the Annual Meeting at Ipswich later in the same year the following resolution was carried unanimously

That a committee be appointed to consider and report upon the best means of reorganizing the constitution of the British Medical Association such committee to furnish a provisional report to the Branches by March 1st 1901

It was also resolved

That the committee be invited to consider and report upon the question of delegation in their deliberations but that they be not instructed that they must evolve such a principle

A committee of twenty four members was appointed twelve being elected by the meeting and twelve by the Council The first resolution of this Committee was 'That the primary unit of the Association should be such that every member thereof shall have a reasonable opportunity of attending every important meeting This was a fundamental resolution and its adoption paved the way for the whole scheme of reform The first decision that the area covered by the unit should correspond to a parliamentary constituency was however rescinded in favour of smaller districts—the present Divisions Another radical reform was contained in the resolution That every member of the Association be *ipso facto* a member of the unit in whose area he resides

Formerly subscriptions to Branches had been additional to the annual subscription to the Association and the amount of a Branch subscription was fixed by each Branch The Constitution Committee resolved that the subscription be uniform and inclusive and the necessary working expenses of Branches and other subdivisions be defrayed out of the general funds of the Association It was further recommended that the primary units should be called Divisions and the groups of units Branches

The crucial question and that which divided the committee most concerned the relative powers to be given to the new form of Annual Meeting which has now become the Representative Meeting and the Council Those who were in sympathy with the views expressed by the Manchester Guild meeting such as Dr Cox Mr Horsley and Dr Smith Whitaker desired to place the direction of policy in the hands of the Representative Meeting while the older and more conservative members of Council on the committee wished the Council to retain the power of direction Issue was joined over the following resolution

Political and Ethical Work—That the work of the Association in maintaining the honour and interests of the medical profession apart from that carried on in the Branches and Divisions be conducted by the Council and other executive bodies (if any) in accordance with the competent decisions of an Annual Meeting of representatives of the Divisions

After much discussion which included a suggestion of winding up the company and obtaining a Charter in place of registration under the Acts this important motion was carried by ten votes to five Thus the Council was no longer to be administratively supreme but only executively the Representative Meeting being the governing body for the maintenance of the honour and interests of the profession The general and sectional scientific meetings were to remain under the sole charge of the Council The composition of the Council was to be fixed not by Articles, but by By laws

A resolution was also proposed which regarded as a constitutional safeguard reconciled some of those who were apprehensive of the possible results of the new recommendations by providing machinery for a referendum to the members at large The referendum principle had been acted on before with good effect when the question of a change of name had become acute although there was no provision made for it in the original simple organization As now embodied in one of the Articles of Association of a limited company it has only once been called into action—namely in the year 1907 The committee made recommendations regarding the minimum membership of Branches their representation on the Council and the conduct of Branch meetings and of the Annual Representative Meeting it also recommended that the travelling expenses of elected representatives should be paid by the Association

At the Annual Meeting at Cheltenham in 1901 a resolution approving of the report of the Constitution

Committee in general terms was passed A committee was appointed to prepare new Articles of Association and By laws Under the Companies Acts the new Articles had to be approved at an Extraordinary General Meeting called for the purpose by a three fourths majority and if so approved the decision had to be confirmed by a bare majority at a subsequent meeting The first of these meetings was held on June 18th 1902 Although by law no amendments could be made a very free discussion was allowed at the end of which the resolution in favour of the new Articles was passed by 96 to 28 thus securing the necessary majority but not with many votes to spare A minority of 33 would have meant the defeat of the resolution and probable disruption of the Association At the confirmatory meeting on July 9th when 146 members were present the necessary majority was secured and the new Articles of Association came into force The By laws could be altered at any time by a simpler procedure

Since 1902 many changes have been made most of them dealing with matters of detail but one of them was of primary importance In 1907 the Council had resort to the referendum on two questions—namely the constitution and mode of election of the Central Council and the question of the appointment of separate Finance and Journal Standing Committees The Representative Meeting had resolved on a change in the election of the Council—namely the appointment of twelve members by itself The Council objected on the ground that such a change would take the management of affairs out of its hands and place it in that of the Representative Meeting On the referendum the Council was defeated and the separation of the functions of the two committees was agreed upon each committee having representatives elected by the Council and by the Representative Body

THE BRAIN OF THE EAST AFRICAN NATIVE

Dr H L Gordon the retiring president of the Kenya Branch of the British Medical Association in a lecture recently given in Nairobi made public some remarkable facts concerning the brains of East African natives For the past two years he has without assistance from State or other funds carried out an investigation involving thousands of physical measurements and physiological tests Some of his observations have already been published in the *Kenya and East African Medical Journal* and others will appear shortly Dr Gordon has found that a low degree of mentality is widely prevalent constituting what in a European community would be a social danger and that there are not only remarkable physical differences between the East African and the European but that there are striking variations in different tribes Dr Gordon's work has now been supplemented by that of Dr F W Vint of the Pathological Research Laboratory in Nairobi on the cranial capacity and the weight of the brain of African natives and the comparison of these with European and other standards

The average cranial capacity of the European is 1 490 c cm while that of the East African is only 1 310 c cm The average weight of the brains is set out in the following table

Caucasoid (white)	1 380 grams
Mongoloid (yellow brown)	1 300
East African	1 280
Negroid	1 240
Australoid	1 180

It is recognized that in Kenya most of the tribes have a mixed origin and it is interesting to note that the average weight of the brain while considerably below that of the white man is distinctly above that of the negro It is also probably significant that it is exactly midway between that of the white man and the Australian aborigine

In the examination of the layers of the frontal cortex the admirable work of Shaw-Bolton of Leeds which was published in 1914 and which has not perhaps owing to the war received due recognition has been followed Professor Berry's researches on the same lines and still later those of the late Professor von Economo on the cyto architecture of the cortex have furnished standards of comparison Woollard's observations on the brain of the Australian aborigine have also been of value in estimating the relative importance of the various layers Dr Vint's observations on the frontal cortex may be summarized as follows

	East African	European
The infragranular layer	106	100
The granular layer	98 7	100
The supragranular layer	92	100

The infragranular layer is held to be the seat of the representation—the physical basis—of the animal instincts reproduction self preservation etc the granular layer that of the perception of sensations while the supragranular layer is concerned with will intellect control etc The two latter may be looked upon as the physical basis of mind In the East African therefore animal instincts are provided with 6 per cent more physical basis than in the European but the physical basis of mind shows a preponderance in favour of the European of 9 3 per cent

These facts which are the result of careful measurement are obviously of importance but the microscope revealed that there are very evident differences in the cyto architecture of the frontal cortex The essential difference is the paucity of the large pyramidal neurons in the East African and the excess of small primitive type cells Summarizing the evidence afforded by the microscope Dr Gordon stated In the first series of brains examined microscopically only 6 per cent appeared to approach in *quality* the average of the European brain and not one was above that average These observations are not offered as conclusive but as indicating the need for further inquiry which to be of value must be comprehensive That there are marked variations in the intellectual stature of different races in East and Central Africa is patent and it would appear that research might be a guide to the origin of this differentiation If the research were prolonged sufficiently it might be possible to determine how far environment educative influences etc might overcome inherited characters One point especially would appear to favour the pursuit of this line of research Both the cerebral cortex and the epidermis are derived from the same elementary embryonic layer—the epiblast Ethnologists tell us that the characters of the skin and the hair afford better criteria for the differentiation of the various races of mankind than any other feature It should therefore not be surprising on embryological grounds to find differences in the characters of the cerebral cortex in different races

Educational authorities dealing with backward native races cannot afford to neglect the teachings of anthropology and psychology If it is proved that the physical basis of mind in the East African differs from that of the European it seems quite possible that efforts to educate these backward races on European lines will prove ineffective and possibly disastrous It has long been recognized among highly civilized races that the educational methods applied to the normal child cannot be applied to the backward and defective

It is quite obvious that private enterprise is inadequate to continue this research upon comprehensive lines It is an international matter which might possibly appeal to the League of Nations In East and Central Africa the need for guidance is urgent and help might be obtained for the initial efforts from such bodies as the Carnegie or Rockefeller trusts

JAMES H SEQUEIRA M D F R C P I R C S
Nairobi

MANSON HOUSE

OPENING BY THE PRINCE OF WALES

The opening ceremony at Manson House (26, Portland Place W) by H R H the Prince of Wales took place on March 17th though the house has been in occupation by the Royal Society of Tropical Medicine and Hygiene since the beginning of the year

The acquisition of this new home marks a great step forward in the history of the society For more than twenty years it has been a tenant of the Medical Society of London A House Fund was started in 1923 and slowly accumulated until 1929 when a more general appeal was launched In 1930 the opportunity of acquiring the Portland Place property was offered and the council decided to buy it and to make the house a memorial of Sir Patrick Manson the great pioneer of tropical medicine The house as reconstructed includes a handsome hall for meetings together with a Fellows room and library One of the outstanding gifts to the society has been made by its president (Dr G Carmichael Low) who has furnished a rostrum chairs, and lectern containing some beautiful woodwork for the meeting room To the library an anonymous donor has presented a very fine bookcase in memory of a former president the late Sir Andrew Balfour and the Fellows room contains a portrait of Sir Patrick Manson the gift of Mrs Manson-Bahr A further sum of £15 000 is required to meet the obligations on the house

The Prince of Wales was received by Sir Austen Chamberlain M P and Dr Carmichael Low and conducted to the Fellows room where presentations were made Dr CARMICHAEL LOW presented an address to the Prince remarking upon His Royal Highness s appreciation of the importance of tropical medicine and the fact that as himself a sufferer from malaria he had had an intimate knowledge of one of the chief of tropical maladies

THE PRINCE S ADDRESS

HIS ROYAL HIGHNESS after mentioning that as at times a sufferer from malaria he could claim at any rate some experience and some knowledge of the nature of one tropical disease said that it might amuse his audience to know that when he was convalescent after his first attack in Kenya Colony, some of his more hardened friends out there even said to him that they were pleased that he had had the attack, because it would be a good advertisement for the colony! One of the great obstacles to the development of tropical countries was not so much the climatic conditions as the tropical diseases which were prevalent A great deal of progress and improvement had taken place in this respect during the last thirty years This improvement was due to the discoveries made by pioneer investigators who had devoted their lives to the study of tropical medicine and had revealed the cause of many unknown diseases the way in which they were spread and the method of their successful treatment The name which came into all their minds that afternoon was naturally that of Patrick Manson, who was the first to associate experimentally a blood sucking insect with the transmission of human disease It was he who inspired Ross to carry out investigations which led to the detection of the anopheles mosquito as the carrier of malaria and he also inspired Bruce who experimented in Africa and many workers in other fields He was in fact the father of modern tropical medicine Not only was Manson a brilliant scientific investigator but with the help of Mr Joseph Chamberlain he helped to found the School of Tropical Medicine in London and it was Manson also who realizing the need for a clearing house of knowledge founded the Royal Society of Tropical Medicine and Hygiene in 1907

'This society the Prince continued unlike the other societies of medical science has up to now had no home of its own, and I know the very useful work that this house will be able to do Conditions in these tropical countries are changing, sometimes even more rapidly than in this country and one of the most striking changes I think during the last ten years has been the improvement in communications Where people had to trek there are now roads 'and they can cover long distances by motor, and we know that flying routes and many aeroplanes are to be found in those distant lands The improved communications have had curiously enough, two opposite effects Improved communications will unless precautions are taken tend to increase the spread of disease in the Tropics but these same improved communications will on the other hand, increase the facilities for the control of these diseases That control can be brought about first of all I think by making possible the rapid collection of pathological material for investigation and secondly by allowing centralization of research and dispatch of help from centres for the investigation and control of epidemics This is I feel almost a new era in the history of investigation of tropical diseases, and I feel that in this house those who have made discoveries and have gained great experience in all these tropical lands will be able to pool their information for the help of those who will have to face these problems when they come to them' The Prince then declared the house open

VOTES OF THANKS

Mr AUSTEN CHAMBERLAIN in moving a vote of thanks to the Prince said that it was difficult to realize that only about forty years ago there were only the very smallest facilities for the study of tropical disease in this country and medical officers who went out to practise in tropical climates could obtain but little information as to the diseases they would meet or the treatment that was appropriate to them The invitation to him to be present that day was due to the fact that he was his father s son He well remembered the horror and anguish with which Joseph Chamberlain in his early days at the Colonial Office learned how heavy was the toll of life taken by tropical disease from the young men whom it was his duty to appoint to the Colonial Service When a year or two after he had received the seals of office the appointment of medical adviser to the Colonial Office fell vacant he set himself to discover who in London knew most about tropical disease and that inquiry rapidly made him acquainted with Sir Patrick Manson Sir Patrick found in the Colonial Secretary a man with a great capacity for getting things done and the immediate result of that first co operation was the establishment of the School of Tropical Medicine in London and a similar school in Liverpool To day in the capital city of the Empire there were facilities for the study of tropical diseases which he believed were unrivalled in any part of the world His Royal Highness had spoken of the nature of Sir Patrick s discovery For his own part he (Sir Austen) would say that the discovery itself was almost the least part of the work that Manson did for the outstanding fact in relation to the discovery was that it opened up entirely new lines of inquiry and led to so many further discoveries by other men for whose work Manson had always the most generous appreciation One fact which gave some measure of the result of these discoveries in the relief of human suffering and the saving of life might be mentioned In 1896 at the time when his father was first troubled by the mortality among young men going out to the Gold Coast and the West of Africa the death rate was 100 per 1 000 and to day the rate had fallen to between 8 and 9 per 1 000 He believed that in the period which those present covered in their memories no work more beneficent for mankind had been achieved than in the field in which Sir Patrick Manson was such an outstanding figure

Colonel W P MACARTHUR in seconding the vote of thanks said that wide as had been the range of the Prince s travels he had visited no tropical or subtropical country British or foreign where the society was not represented He might mention that among the many letters received in response to the appeal for the Manson House Fund was one from the secretary of a cricket club

in Rhodesia who explained that his members playing their matches in conditions but little less healthy than those enjoyed in England felt compelled to send a donation to Sir Patrick Manson's memorial because they realized that but for him his work and his inspiration they would not be playing cricket in Rhodesia to-day He wished that Sir Austen Chamberlain's proposal could have been seconded by some friend of Manson who would thus have linked together the present and the past It is my lasting regret that I spoke only once with that great man Time then had bowed his shoulders and staved his labours but his eyes had still the look of one who had been privileged to stand like stout Cortes on his feet and view the new world that he himself had discovered Manson needs no poor praise of mine His name is written in fame eternal His monument is around us and through this his own society Sir Patrick Manson though dead yet *speaks*

With a few words of acknowledgement from the PRINCE OF WALES the proceedings concluded

Ireland

Progress in Obstetrics at the Rotunda Hospital

Dr Bethel Solomons contributes to the February issue of the *Irish Journal of Medical Science* (official journal of the Royal Academy of Medicine in Ireland) a valuable comparison of the state of obstetrical diagnosis and treatment at the Rotunda Hospital in 1909 with that prevailing in 1929 Commenting on the great change in midwifery during these twenty years he emphasizes the point that while good work can be done in a small labour ward a large one simplifies teaching The instruction of students has advanced considerably and it is suggested that a committee of practising obstetricians actually engaged in teaching post graduates and students in maternity hospitals might well be consulted by the General Medical Council before new rules are promulgated Dr Solomons states that it is not a general rule for the head to become fixed three weeks before the commencement of labour in primigravidae non fixation amounting in his series of cases to 19 5 per cent of all head presentations In three-quarters of these the patients delivered themselves spontaneously of a live child the labour being on the average slightly longer than in cases in which the head was fixed Such non fixation is attributed to lack of tone in the abdominal muscles or to flaccidity in the uterine muscle Oxytocic drugs are no longer used in the treatment of inertia having been replaced by watchful expectancy attention to the general hygiene and the administration of the ordinary soporifics With the abolition of the use of oxytocic drugs contraction ring dystocia has also ceased Dr Solomons remarks that although small doses of pituitrin may be given with safety in early labour it requires a large experience to determine when these are safe and the type of inertia case to which they are applicable As to Caesarean section the increase from one such operation in 1909 to forty three in 1929 is described as a big step easily overlapping the increase in cases of disproportion It is suggested that this may be due to the fact that the present mothers were the growing children of the war period it is also in some measure attributable he thinks to improved facilities for transport Dr Solomons believes that the peak in this respect has now been reached and that perhaps in another twenty years the annual number will again be one He adds that Bartholomew Mosse was wise before his time when he planned the existing Rotunda buildings very little change could be recommended to-day if another institution of the kind were to be erected

County Hospitals in Northern Ireland

A conference of representatives consisting of members of the boards of management medical surgical and administrative staffs of the county infirmaries was held recently in the Medical Institute Belfast to consider the position of the infirmaries in relation to the recommendations made by the Commission on Local Government Administration It was decided to ask the Minister of Home Affairs (Rt Hon Sir Dawson Bates) to receive a deputation which would place before him certain proposals concerning better access for treatment and intercounty arrangements The delegates agreed that if the medical services were to be run on a county basis each county should have one or more county or central hospitals supported by a county at-large charge equipped with all necessary modern apparatus for the treatment of medical and surgical cases They further agreed that where distances and population justified them there should be district and/or cottage hospitals as auxiliaries that these auxiliary hospitals should not be as elaborately and expensively equipped as the central hospitals and should not have a resident medical officer On the question of reciprocal intercounty arrangement the meeting endorsed the proposal that persons should be treated in the nearest institution Regarding the committees of management it was agreed that in any county where the existing county hospital or the one substituted for it was retained the greatest number of representatives should be nominated by the county council It was also agreed that admission should be made as simple and easy as possible and that recommendations for admissions might be made by any medical practitioner attending the case by the officer of the Assistance Committee by members of the County Health Board by the committee of management and by the governors of the hospital As rural areas cannot support private nursing homes it was agreed that every county hospital should have some provision for paying patients who would be charged a figure representing a profit to the institution and further that each county hospital should have a maternity department including provision for private patients who desired to be attended by their own doctor Each county or central hospital should constitute a treatment and consultation centre arrangements being made for the periodic visits of dental eye ear and other specialists Surgeons and physicians appointed to such hospitals should have special qualifications and experience and could on retirement be appointed honorary consultants It was the opinion of the conference that a joint convalescent home for all the county hospitals should be established in some suitable place near the seaside It was also suggested that chronic cases of tuberculous disease of bones and joints requiring treatment for anything from six months to six years and also requiring special apparatus and skill in treatment whether in adults or in children should be sent to a special institution such as that at Graymount near Belfast which could be enlarged to meet the needs of all the six counties In regard to early pulmonary cases it was thought that two or three suitable institutions on selected sites would be sufficient for the whole of Ulster

Down County Mental Hospital

The Duke of Abercorn Governor of Northern Ireland opened the new electric power station electro hydrotherapy department and occupational therapy department at the Down County Mental Hospital Downpatrick on March 10th This hospital came into being in 1869 and at present affords accommodation for 435 men and 420 women It is arranged on the block system which facilitates the segregation of patients in independent

departments and permits of constant supervision by the medical and nursing staff Special accommodation is available for all newly admitted patients, and for the treatment of others who become acutely ill In connexion with this institution there is a farm with gardens occupying 212 acres and thus employment is supplied for a large number of patients who have been accustomed to agricultural work Other men practise such trades as shoe making tailoring carpentry and upholstery in special workshops while the female patients are afforded facilities in the sewing rooms for making up articles of bedding clothing and for knitting The new occupational therapy departments have been designed for such activities as weaving basket making, rug making, and art work of all kinds—forms of additional employment for patients who are convalescent and also for those suffering from chronic forms of mental disease

Vital Statistics for Northern Ireland

During the quarter ending December 31st 1931 5 857 births were registered in Northern Ireland, representing an annual rate of 18 8 per 1 000 of the estimated population This rate is 0 8 below the rate for the corresponding quarter of 1930 and 1 6 below the average rate for the fourth quarters of the ten years 1921–30 In the Irish Free State the number of births registered during the quarter was 13 222 or an annual rate of 17 9 per 1 000 , in England and Wales and Scotland, the rates were 14 6 and 17 9 per 1 000 respectively Deaths registered during the quarter numbered 4 024 (or 12 9 per 1 000) of which 364 were of infants under 1 year the infant mortality being 62 in every 1 000 births registered The number of deaths from the principal epidemic diseases and tuberculosis shows a decrease when compared with the average number in the fourth quarters of the preceding five years Deaths from cancer however continue to increase 391 cases being reported The summary of the quarterly returns for the whole year shows that the annual birth rate was 20 7 per 1,000 population as compared with an average of 22 1 for the ten years 1921–30 and the death rate was 14 5 as compared with an average of 15 1 for the previous ten years The mortality rate of children under 1 year was 73 per 1 000 births the average for the preceding ten years being 81 per 1 000

England and Wales

Dust in the Cotton Industry

Recommendations designed to eliminate or reduce considerably the present excess of sickness among card room operators are found in the report issued by the Home Office of the Departmental Committee on Dust in Card Rooms in the Cotton Industry [1] The committee finds that dust is still a cause of some discomfort and ill health among workers though the extent of this is not so marked as was the case before the introduction of improvements in ventilation and in dust reduction during the stripping process The nature of the prevailing ill health is respiratory and results from the inhalation of dust which however has not been proved to possess any *specific* properties causing ill health or disease The effects of the inhalation are progressive and can be considered in three stages (1) Irritation resulting in cough and a tight feeling in the chest these effects pass off in a few days though operatives returning to work after short absences may find their susceptibility renewed Disablement and incapacity for work are unusual and entirely disappear on removal of workers from the dusty atmosphere (2) Temporary disablement This occurs after the operative has been exposed to dust for ten or more years and results in early bronchitis or asthma, or a combination of the two associated with cough and mucous expectoration (3) Total disablement or incapacity In this advanced stage there is chronic bronchitis and emphysema with dyspnoea on exertion The condition is incurable but improvement may result if the worker is removed from the card room Radiological examination fails to reveal any specific condition, the fibrosis of the lung sometimes found being indistinguishable from that occurring in bronchitis sufferers among the general population The men examined showed no marked evidence of tuberculosis (the mortality returns for this disease being, in fact rather less in male card room operators than in the general population) nor any sign of fibrosis of the silicosis type Aspergillosis or similar lung disease due to fungus mycelium, conidia or spore inhalation was not found A comparison of sickness rates from respiratory disease in male card room operatives and other male cotton-workers shows that after the age of 30 the rates of the former are two or three times as high as those of the latter The constituents of the dust are *fragments of cotton hairs leaf and seed* coat fungus mycelium conidia or spores bacteria and mineral matter Pharmacological examination of aqueous extracts of the finer portions of the dust showed the presence of histamine and/or an allied compound and it is thought that further research may provide information of value

Various technical changes are recommended as a means of bettering working conditions These include an improved method of extracting dust from raw cotton in the machines used in the cotton cotton mixing and blowing rooms This would have the effect of reducing the *amount of dust in the material* passed through to the card room It is also suggested that the process of ginning carried out in cotton growing countries might be improved and so make the imported cotton cleaner Other suggestions are for the general ventilation of card rooms by downward draft and the wearing of respirators—the design of which is at present under consideration—by men engaged in cleaning dust and dirt from underneath the engines and machinery and by those whose duty it is to empty receivers Medical examinations too would make it possible to prevent those already suffering from respiratory abnormalities from being employed in a carding process while others susceptible to the dust could be stopped from working in the card room for an unduly long period Owing to the difficulties experienced in testing periodically the amount and nature of the dust in the card room the sickness rate of operatives could be taken instead as a measure of inefficiency in ventilation or dust removal in the blowing room process

Red Cross Clinic Annual Report

In the annual report of the medical board just published satisfaction is expressed by Sir Arthur Stanley at the progress of the British Red Cross Rheumatism Clinic during the past year During the period ending December 31st 1931 the scope of the routine work has been gradually extended and increasing attention has been paid to the importance of detailed investigations in dealing with the various diseases seen at the clinic In the year under review 3 046 new cases were seen in the general out patient department and 659 in the private patients department There has been a total of 77 892 attendances with 128 343 treatments in the former department and 9 000 attendances with 16 896 treatments in the latter The women patients have been in excess of the men The greater proportion of early cases of rheumatism now attending for diagnosis and treatment is probably

[1] Report of the Departmental Committee on Dust in Card Rooms in the Cotton Industry London H M Stationery Office 1s - (1 6d net)

accounted for partly by the establishment of evening clinics which make it possible for sufferers to attend without inconvenience through absence from work Analysis of the different types of disease met with is of interest Classified according to a scheme approved by the visiting physicians the patients fall into the following groups Group A—sequels of rheumatic fever 1 9 per cent Group B—non articular rheumatism 36 4 per cent Group C—articular rheumatism 52 8 per cent (in the latter group rheumatoid arthritis accounts for 9 3 per cent arthritis due to a known specific infective organism 1 85 per cent osteo arthritis 17 9 per cent gout 2 9 per cent and unclassified chronic joint changes 20 84 per cent) Group D comprises non rheumatic conditions—8 90 per cent of the total As regards the results of treatment an investigation in 500 consecutive unselected cases shows that 0 8 per cent were worse 22 6 per cent unchanged 16 2 per cent slightly improved 46 6 per cent greatly improved and 13 8 per cent cured

A considerable number of the cases which came up for treatment have required special investigations and over 750 examinations have been conducted by the pathologist Amongst these were sedimentation rate tests which have afforded interesting information as regards the activity of infective processes glucose tolerance tests blood uric acid estimations blood counts Wassermann reactions etc In the general out patient department 45 per cent of cases were radiographed and it is of interest to note that a large number of pathological conditions in no way connected with rheumatism were revealed The standard radiograph of the hand has proved of value in differential diagnosis A new method of treatment by x rays is referred to Promising results have been obtained with it in some cases of spondylitis deformans in young patients osteo arthritis of the knee and hip and fibrositis of the back A number of patients have been referred to the laryngologist 75 per cent of these showed tonsillar disease 18 per cent sinus infection and 2 per cent chronic ear discharge Of those in whom tonsillectomy was carried out definite improvement resulted in 84 per cent while the remaining 16 per cent appeared to derive no benefit The commonest gynaecological condition met with was chronic cervicitis The cases were of every grade of severity and in most instances were a sequel of trauma and mild asepsis during childbirth Many of these patients were treated with diathermy A comparatively large number of cases have been examined by the orthopaedist

Several papers dealing with different aspects of rheumatism have been published during the course of the year and the following items are taken from the list of research investigations now being undertaken at the clinic arthritis in women of middle age protein shock methods in chronic rheumatism the neurological and psychological factor in rheumatism and pelvic diathermy in treatment Another matter of interest is an investigation to show the relative value of diathermy and Kromayer lamp applications to infected tonsils in ascertaining whether they can be used as an alternative to tonsillectomy and the degree of improvement resulting from its application in cases of rheumatism

London Coroners

Mr F Danford Thomas barrister at law has been elected coroner for the City of London on the retirement of Dr F J Waldo who has held the office since 1901 and has continued to preside over City inquests until his eightieth year Mr Danford Thomas has been deputy coroner during almost the whole of Dr Waldo's tenure of the principal office and has also acted as deputy coroner of the Central London district since 1910 and of the Tower of London Liberty since 1920 Some changes have been made with this appointment It was laid down in the Coroners (Amendment) Act 1926 that the provisions of that measure were to apply to the City of London from the occurrence of the next vacancy after the passing of the Act so that the City coronership now falls into line with the other coronerships of the county Moreover the office of coroner for Southwark which has been linked with the City passes from under the City Corporation to the London County Council Accordingly it has been held that the new City coroner need no longer give his whole time to the duties and the salary—£700 with £100 expenses—has been fixed on the basis of a part time appointment Dr Waldo has been heartily thanked for his long service and seven years is to be added to the period of his service for the purpose of computing pension

The London County Council also has been making rearrangements in connexion with its coroners courts For many years past there has been a steady decline in the number of inquests held in the county of London—a decline which has become more marked since the operation of the Coroners (Amendment) Act which confers on coroners the power of ordering a post mortem examination without necessarily holding an inquest The number of inquests now held in London represents less than 50 per cent of the deaths reported to the coroners The average annual number of inquests held for the seventeen years to 1900 was 7 516 and the average for the ten years to 1930 was 4 629 During 1931 the number of inquests fell to 3 603 In view of this decline and having regard to the revision of the coroners districts which took place about eighteen months ago and the decrease from seven to six in the number of county coroners it is considered that on grounds both of economy and of efficient administration a reduction should be made in the number of places at which inquests are held The scheme provides for dispensing with about ten of the thirty premises used as coroners courts

Scotland

Glasgow Children's Hospital

At the annual meeting of the Royal Hospital for Sick Children at Glasgow Sir D M Stevenson Bt speaking of modern hospital tendencies expressed the view that hospitals such as this for sick children should be maintained by the whole community and not by benevolent people it was most unfair and improper that services which were essential to the public weal should be more or less at the mercy of voluntary contributors Voluntary contributions fell in bad times and people who might be expected to support the hospital did not do so Mr J R Richmond said that a sum of £50 000 was required for the equipment of the proposed orthopaedic department and a donation of £10 000 had given this scheme an excellent start In view of the prevailing economic conditions the directors did not intend to launch a special appeal but having regard to the importance of the work they thought it proper to set out their requirements in the annual report in the hope that other generous individuals might add to this donation Dr A S M Macgregor medical officer of health for the city stated that the demand for orthopaedic treatment was growing rapidly and this new department was urgently needed—a situation which the directors desired to see remedied as soon as possible The department would be used for the cure or alleviation of physical defects among children in the large area which the hospital served

Glasgow Royal Mental Hospital

At the annual meeting of the Glasgow Royal Mental Hospital Dr David K Henderson medical superintendent of the institution submitted his report which showed that there had been 555 patients in the hospital at the commencement of the year and 545 at the end while the total number under treatment during the year had been 682 and the average daily number of residents 542 There had been 127 admissions and 137 discharges, among which there had been 40 deaths It was pointed out that of the 127 admissions 79 had been as voluntary patients The voluntary patient although he had no special privileges had a status distinct from a certified patient and the fact that a voluntary patient could come or go freely influenced the public s estimation of a mental hospital as a place for treatment rather than a place of confinement

Odonto Chirurgical Society of Scotland

At the annual meeting of the Odonto Chirurgical Society of Scotland held in Edinburgh Mr J H Badcock of London in proposing the toast of The Society said that he believed the need for dental treatment would continue to increase for some time In Scotland at present they had one qualified dentist for every 14,000 school children, who were inspected three times during their school career After 1878 when the first Dental Act was passed and a dental register was formed the registered dental practi tioners were absorbed by the well to do and the working classes were left to the unregistered By 1891 there was 1 dentist to 3 000 of the population and half of the dentists were qualified men No one could now practise who was not qualified and if the register was to be kept up to its present strength twice as many men must qualify as in the past , otherwise there would not be a sufficient number of qualified dentists to supply the needs of patients under the Insurance Act and the working population He thought there might be a qualifying examination after a curriculum sufficiently long to ensure that the dentist was thoroughly competent for the work he had to do and there might also be a higher examination for those who were more ambitious

Measles Epidemic in Edinburgh

A widespread though mild epidemic of measles has prevailed in Edinburgh since the end of January During the past six weeks 3 211 cases have been notified these included the first cases notified in each family but not subsequent cases The number of cases notified each week is increasing whereas the figure for the week ending February 6th was 226 for the week ending March 12th it was 846 There have been only twenty one fatal cases during the whole epidemic and of these twelve occurred in the past week No schools have been closed and an inquiry made towards the end of February into the effect on attendances showed that only 2 per cent of the pupils were absent on account of measles

Perth Royal Infirmary

At the annual general meeting of Perth City and County Royal Infirmary Mr F Norie Miller of Cleeve who presided emphasized the necessity for increased subscriptions to the institution The directors had viewed with much concern a deficit of £3 488 on the working of the institution for the past year This had been due to a marked decrease in the income from every source except that of invested property During the past year a home for nurses had been erected at a cost of £22 000 and only about £3 000 had been received in subscriptions for this purpose the balance would require to be provided from the capital fund

Belgium

[FROM OUR CORRESPONDENT]

Courses in Tropical Medicine

The Prince Leopold Institute of Tropical Medicine which has just been established at Antwerp will provide instruction for doctors and sanitary experts for service in the colonies and will investigate all problems regarding the aetiology and therapeutics of tropical diseases Laboratories and clinics will be established in connexion with the institute The courses are designed to comply with the requirements for colonial appointments as laid down by the Minister for the Colonies For the time being they will be given according to the needs of those attending them in one or other, or both, of the national languages

Centres of Preventive Medicine

The Belgian Society of Preventive Medicine and Eugenics has decided to establish within the next few months a series of clinics in the principal parts of the country and before the end of the year it is hoped that fifty such clinics will be in existence The first has already been opened at Ghent and at the inauguration ceremony it was announced that mobile clinics for the purpose of visiting sick persons at home and for propaganda, would shortly be put into operation The vehicles intended for this service will contain a consulting room and powerful x ray apparatus They will cost 250 000 francs each and will be the first of their kind in Europe One vehicle will be allotted to each province

Legislation for Abnormal Persons

Only the first two sections—dealing with the abnormal and with habitual criminals—of the Bill recently before Parliament have passed the Chamber The third concerning juvenile crime, aroused very lively controversy because it provided for indeterminate sentences and the application of an educational regime timorous legislators feared that the adoption of indeterminate sentences might lead to abuses and the Minister of Justice preferred to withdraw the third part of the Bill in order not to endanger the rest The Bill classifies abnormal persons into the insane, the feeble minded and the unbalanced By insanity must be understood a mental illness in course of development whatever its nature duration or consequences There is therefore no question of the degree of responsibility of a subject As regards the feeble minded the Bill provides that such a person must be incapable of appreciating the gravity of his acts Strictly interpreted the Bill is less liberal than the existing law Provision is made for treatment in the psychiatric department of prisons but only persons under arrest can be sent to the department The duration of confinement is one month subject to five renewals If the prisoner is reported to be insane or definitely feeble minded he returns to prison pending removal to an asylum The question of removal to an asylum is not for a mental specialist but for the court it must be shown that the prisoner is a danger to society and the offence alleged against him must be proved The mental condition of the accused at the time he is before the court alone counts regardless of the fact that certain epileptics and alcoholics often appear normal when in court and yet would constitute a social danger if set at liberty and also that an individual predisposed to psychoses may commit a criminal act when in a normal state of mind he may become deranged in prison by reason of the fact that he is there and if he appears deranged when before the court the chances are that he will be acquitted The person who has been acquitted cannot be sent to an asylum on a conditional order as

would logically be desirable This is all the more strange seeing that if he does not submit to the conditions of his release he may be sent to a penal colony Detention may be prolonged if a social danger still exists at the expiration of the sentence The law provides for the establishment of special commissions attached to the psychiatric departments consisting of three persons the magistrate nominated by the president of the local court of appeal a member of the Bar and a doctor The commission decides as to the discharge of abnormal persons and determines the conditions of such discharge In regard to convicts the law recognizes their removal to an asylum

Correspondence

"THE STUDENT IN IRONS"

SIR,—Dr C M Wilson albeit a little too dolefully has voiced the opinions of many of us in the course of his timely reflections on the curriculum and the present burdens of the medical student There has been a growing sense of discomfort and dissatisfaction in the minds of medical educationists for some time past and it becomes yearly more evident that drastic reforms must soon be planned There will be general agreement that the curriculum is overburdened, and that it cannot be further extended that the student is unhappily compelled to memorize especially in the preclinical period a mass of facts and technicalities which are of small use to him afterwards and are in large part rapidly forgotten that he is given all too little opportunity for thought and observation and for self training in the method of thought and observation so fully is his time occupied in cramming many subjects in order to reach a stipulated examination standard in each that he wastes many hours watching operations from afar which he will never be called upon to perform or in regard to which he would be better advised to seek instruction later in the post graduate period and, finally that there is far too little interchange between his departments and periods of instruction so that anatomy and physiology are less utilitarian and applied than they might be, and even pathology is acquiring the character of a special subject instead of remaining an integral part of medicine which embodies the whole science of man in disease

If we turn to those who control the activities of the student there will again be agreement that there is a lack of co operation between teachers in the various periods and the various subjects Many teachers of anatomy physiology and pathology (and perhaps this obtains more particularly at the universities devoid of clinical schools) instruct their students as though they too were destined to become anatomists physiologists and pathologists whereas nine out of ten of them are destined to be doctors Many clinicians adopt too low a standard in the study of evidence or forgetful of the outstanding contributions of physiology to bedside medicine neglect their opportunities of encouraging thoughtful applications of earlier training to the everyday problems of diagnosis and practice Although the preclinical teachers are primarily concerned with education the clinical teachers whose vision is or should be constantly broadened by practice are hampered in their duty to the student by many other public and private claims upon their energy and sometimes by a very real mental weariness The whole time clinical teachers on the other hand suffer the disadvantage of living in the atmosphere of hospital medicine with its superfluity of end result diseases and comparative rarities its slow and deliberate decisions its safeguards in the shape of expert laboratory and specialist opinion and its lack of contact with many common disorders and diseases and a host of intimate human difficulties encountered in the home and in the consulting room

The central purpose of medical education is presumably to train good doctors Wherein does our present failure lie? First only three years (and not the whole of that) out of the six or seven are at present devoted to clinical study Secondly we are insisting more and more on training in what may be called broadly the experimental method and less and less on training in the observational method Both are essential to mental fitness and practical equipment but they should be complementary No amount of education in physiology pathology bacteriology biochemistry and radiology will ever make a physician or a surgeon In all of these subjects we need less detail more broad principle and more applied study From a much earlier stage and in as many ways as possible we need closer contact with the patient and with the problems of the 'living disease

In his Hunterian Oration for 1921 Sir Charters Symonds wisely said

> What characterizes the man of ability is the power to observe to co ordinate to contrast and to draw deductions The average man possesses his share of these powers but they have not been exercised and our problem especially in the clinical period is to develop the power of observation *The only opportunity the student of medicine has for independent observation it seems to me is in the clinical field and the sooner he is brought there the better* My opinion is that we should reduce the time spent on the preliminary sciences introduce clinical opportunities from the very first and secure three years out of the five for the final course

Personally I should like to see a weekly period set aside for elementary clinical instruction starting from the day the student enters the dissecting room Clinical problems and the clinical period give the best training for the mind and evoke the deepest interest The intimate relations between clinical science and the ancillary sciences should be in evidence from the beginning

Dr Wilson rightly reminds us how hard it is to achieve ideals through the agency of committees It is difficult however to see how important reforms can be even reviewed without committees Whatever means are to be envisaged there will surely be common consent that the time has come for the universities and medical schools and the examining bodies preferably in a co operative manner to give earnest thought to the whole subject of medical education and its present shortcomings in this country.—I am etc

London W 1 March 21st J A RYLE

AMBULATORY TREATMENT OF FRACTURES

SIR,—I have noted that as an outcome of your review on my book on *Fractures* in the *Journal* of February 20th there have been several communications advocating the use of ambulatory methods for the treatment of lower limb fractures The statements made by your correspondents tend towards a condemnation of all methods connected with leg and ankle fractures except those which involve the use of a walking plaster No one would deny the advantages of ambulatory measures whenever they can be practised with safety and even with those surgeons who can obtain reduction and keep it by means of an unpadded plaster there must be a happy mean between social convenience and the integrity of the fragments

Perhaps it has been my misfortune to encounter cases in which the effects of ambulatory methods and unpadded walking plasters have been disastrous—displacement of fragments shortening atrophic changes pressure sores and even the penetration of skin by a fractured end have occurred Treatment in these cases had to be started

again at a greater disadvantage than in the first instance where the desire for ambulatory treatment overcame the skill that was available for the reduction of the fracture and its maintenance Your correspondents admit that anyone who puts an unpadded plaster next the skin shoulders a certain responsibility and that skilful application is necessary moreover if fractures are situated higher up the leg than the ankle sustained pull with skeletal traction is required as a prelude to and not as a substitute for the walking plaster These admissions are in themselves significant and are much more in accord with my own views on the matter Having obtained reduction and maintained it by methods of extension which I have described I have the majority of patients on to their feet and walking with moving joints in some form of retentive apparatus within three to four weeks of their accident Physiotherapeutic measures are reduced and an early return to work is the rule Treatment is in no way prolonged and the security of the fracture and freedom of the skin from trauma is guaranteed These statements are not made with the view of disparaging the advocates and modifiers of Dr Bohler's methods but to point out that good results are consistently obtained by a simple and safe measure which enables the large majority of patients to return to work at an early date

To those who persistently urge the advantages of allowing patients with fractured legs to walk about in plaster immediately after reduction I would only ask the question Would it be safe to let a fully reduced oblique or spiral fracture of the tibia stand any weight bearing strain as soon as the plaster casing had been applied? Plaster splints even though unpadded are not applied direct to the fragments and if there is not careful observation the slightest degree of wasting will cause the plaster to lose its hold on the soft tissues *over* bone Application of a new plaster is not always a simple procedure and loss of position or angulation has been known to occur in experienced hands

The ambulatory ideal must be compatible with safety and unless surgeons are sufficiently dexterous to ensure that walking is possible as soon as the fracture has been reduced it is better to employ less active measures which ensure safety The term ambulatory treatment ' should be used more discriminately than it is at the present time since many surgeons employ it to include treatment which simply allows the patient out of bed before union has occurred and does not require the use of his limb while for others it means that the patient must be bearing weight on the injured limb almost immediately after reduction has been effected I do not decry the employment of early weight bearing through an unpadded plaster if it can be guaranteed that the correctly reduced position of the fracture is never lost but I also urge that the patients can be treated with a minimum of discomfort and can obtain an early return to work by methods which involve confinement to bed for a week or so When walking is started untoward events are almost unknown Safety comfort and early return of function are essential in the treatment in any fracture —I am etc

London W March 15th MEURICE SINCLAIR

THE BARBITURATES IN ANAESTHESIA

SIR —Every surgeon and every patient who has had experience of the intravenous injection of one or other of the barbiturates will be grateful to Dr Magill for his letter

It would appear that the warnings of the Council of Pharmacy and Chemistry are a little late in the field for it is probable that experiments with the human subject carried out in the ordinary routine of surgical work already far outnumber those conducted by the pharmacologists on experimental animals and the clinical observations leave no room for doubt

For myself I regard the introduction of the intravenous injection of pernocton or nembutal as the greatest advance in the practice of anaesthetics during my professional life I do not think it is too much to claim that it has revolutionized the psychic aspect of surgical operations and immensely minimized the discomfort of the post operative period I confidently look forward to a time in the near future when what has been described as the catch as catch can ' method of anaesthesia by open ether without adequate basal hypnosis will cease to be employed in any surgical clinic worthy of the name

Pernocton preceded by morphine or omnopon has been the method of choice in my own practice ever since it was first brought to my notice by Dr Macintosh and I find for it a field of usefulness far beyond the normal pre anaesthetic medication For example an injection of pernocton may be all that is necessary in setting fractures passing sounds cystoscopes or sigmoidoscopes extracting radium needles and many other procedures not commonly regarded as particularly painful but nearly always most unpleasant It is even possible to insert radium needles with pernocton hypnosis alone without the patient knowing or remembering anything about it as I found a few weeks ago when operating upon a man of 92 to whom it was not desired to administer inhalation anaesthesia

For more considerable surgical procedures it is obvious that the intravenous use of the barbiturates in conjunction with local anaesthesia is a natural development that will find increasing scope —I am etc

London W 1 March 19th CECIL ROWNTREE

DIET AND DENTAL DISEASE

SIR —You conclude your leading article on diet and dental disease in the *Journal* of March 19th with the words Hence the dental condition of this community [Tristan da Cunha] appears to provide strong support for the theory advanced by Mellanby and Pattison—namely that a cereal free diet favours the normal development of the teeth Surely the theory of Mrs Mellanby put forward through a number of years and given the greatest publicity was not this at all but rather that dental caries was caused through a lack of vitamin D It would seem that only since her own work as published in the Medical Research Council's Report No 159 has thrown great doubt upon this has she fallen back upon the matter of cereals as being the most important factor

Now as cereals are essentially acid forming foods it will be obvious that an excess of these in the diet will tend to make the acid end metabolites of the food definitely overbalance the alkalis—in other words that the important factor in the production of dental caries is a chronic acidosis There is no occasion to hypothesize as Mrs Mellanby does an anti calcifying factor Yet this suggestion particularly stressed by me Mrs Mellanby has fought strenuously for many years Nevertheless the theory that the acid base balance of the blood is a matter considerably affected though not entirely covered by an alkali forming diet has received a great amount of support from the work of a number of observers In addition to my own writings on the subject the Toverud[1] of Norway have proved that in pregnant women the common negative calcium balance can be replaced by a positive balance by feeding additional vegetables and fruits and not by cod liver oil and they expressly state that this is an important factor in tooth development Hess shows that vitamin deficiency plays no part in the production of

[1] Toverud K and G *Acta Paed* xii Sup 11
[2] Hess and Abramson *Dental Cosmos* September 1931

caries but that the amount of alkaline end products of the food does Boyd and Drain show that a perfectly balanced diet whatever its constituents may be brings about an arrest of caries even though cereals be present in considerable amounts the balance of the diet being not only in its constituent parts but also in amount to produce just the correct amount of energy Jones Larcen and Pritchard[4] show that excess of vitamins in the presence of an acid forming diet will not prevent rampant caries And Helen Mackay and Rose[5] have recently published work showing that vitamin D has no relation whatever to dental caries

All this moreover is upheld by Mrs Mellanby s own work in which the replacement of olive oil by cod liver oil saved only one tooth in every two children each year or if temporary teeth alone are considered five teeth in every 200 children each year[6] Her figures are not pre sented like this but a critical analysis shows that this is what they amount to Mrs Mellanby herself is evidently dissatisfied with these results for she says in her article in the *Journal* It appeared however that there might be other factors apart from vitamin D influencing the carious processes as well there might be in face of these figures In these circumstances it seems hardly right to give the credit of the theory that a diet containing an excess of cereals is the cause of caries to Mrs Mellanby when such a worker as Dr Eric Pritchard for example has been preaching for years that the whole matter is a question of the acid base balance of the blood

There are however items other than those of diet which will come into the problem items which are of importance in the lives of the islanders of Tristan da Cunha An acidosis may come about irrespective of the diet if the other side of the metabolic equation intake versus output is upset The expenditure of energy voluntarily or in voluntarily is an important factor in the balance and as this is very much affected by all the circumstances of civilization this also must receive consideration if the best results are to be obtained The children in Mrs Mellanby s experiment were all in bed their energy expenditure therefore would be reduced to a minimum and consequently the diet factor would be the most important With children up and about however this would add a very serious disturbing factor and make the obtaining of a perfect balance much more difficult —I am etc

F W BRODERICK MRCS
LRCP LDS

London W 1 March 19th

SIR —I cannot let the leading article in the *Journal* of March 19th on the subject of diet and caries pass without comment Having spent the last eight years in the study of health in Asiatic races the following were my findings

According to my personal experience in the Indian labourer the proportion of perfect teeth free from defect was 68 per cent in one group of 400 to 84 2 in another of 1 000 in the Chinese from 48 per cent to 69 per cent in corresponding groups The second group in each case represented new immigrant labour to Malaya and the first labour coolies who had been some years in the country I found also that there were three classes of Chinese as regards dental standard (1) Northern Chinese with a standard on a par with the Indian (2) Cantonese and Southern China inhabitants and (3) Straits born with the lowest standard The women had a dental standard about on a par with the men that of the children between the ages of 2 and 14 years was very defective the proportions with sound teeth being Indian 27 per cent and Chinese 4 per cent This appeared to be the state of affairs in every Eastern country visited—that is good teeth in the parents and extensive caries in the rising generation Mr Mummery school dental officer Malaya has reported to that effect in the *Malaya Medical Journal* I got information of the same kind during tours in Java Sumatra Ceylon and Siam Even in North Siam which is well off the beaten track 46 per cent of the school children suffered from caries These appeared to be the common features in all countries Caries is greatest in the larger centres of population where the sellers of delicacies pleasing to the young palate are most abundant and it affects most those children who have pennies to spend

In fact dental caries would appear to be the first influence of the spreading tentacles of civilization on the outposts There can be no question of vitamin D deficiency among children who bake and play in the tropical sun Rice is the staple article of diet both of child and of parent If cereal is the cause of caries why is caries a recent development Why have not the parents got as bad teeth as their children?

Another line of inquiry that appears to have escaped the notice of our investigators is that of our pampered pets These animals suffer excessively not only from caries and pyorrhoea but also from septic ulceration of tonsils and stomach from obesity rheumatism skin diseases and premature old age There is something strangely familiar about this picture It would be interesting to know if these animals suffer from rickets and from vitamin D deficiency and if excessive cereal is the chief defect in their dietary

Referring to the inhabitants of Tristan da Cunha they also are unable to acquire the sweet tooth because no sugar is grown or imported into the country Caries has become very prevalent among young Japanese who are put to sleep with a dummy consisting of a sweet wrapped up in linen One can only arrive at one conclusion from these observations and that is that the cause of caries among primitive races is the same as it has been in this country—history repeats itself on the outposts—namely the growing use of refined carbohydrates both as sugar and as sweet biscuits etc This also is the conclusion of the British dental authorities I hope to submit further evidence on this subject at an early date —I am etc

D H C GIVEN MD DPH DTM,
Surgeon Commander R N

March 19th

SIR —Letters have recently appeared in the *Journal* and also in the *Times* stressing the importance of general factors in the aetiology of dental disease While not wishing to belittle the work which is being done in this connexion I think there is some danger that we may forget the more important factor of local cleanliness Caries occurs mainly in the teeth of the young while pyorrhoea affects chiefly those who are getting on in years On this account some authorities consider that there must be some form of antagonism between the two I suggest however that this antagonism is more apparent than real

The local condition predisposing towards caries and pyorrhoea is the same—namely stagnation When this occurs in pits and fissures of the enamel caries is the result When it occurs round the necks of the teeth pyorrhoea is the result but as this is a much slower process it does not usually become troublesome before middle life Now by the time middle life is reached most of the vulnerable spots on the teeth have either been filled or the teeth lost the result being that the individual enjoys a comparative immunity to caries The organic content of the teeth also probably becomes less as age advances with the result that they become less palatable to the micro organisms concerned

[4] Boyd and Drain *Amer Journ Dis Child* October 1928
Jones Larcen and Pritchard *Dental Cosmos* 1930
[5] Mackay and Rose *Dental Record* January 1932
[6] Medical Research Council Report No 159

All authorities agree that cleanliness is a most important factor in preventing both caries and pyorrhoea But the toothbrush important as it is is by no means the only way of attaining this object Equally important is the action of the tongue and cheeks Many people who never brush their teeth have cleaner mouths than some who do This is where the psychological factor comes into play Just as some individuals do not mind having sticky fingers and others cannot bear it, so food sticking around the teeth is not noticed by some but is unbearable to others Many parents make a great mistake in reproving their children for exercising the natural cleansing action of tongue and cheeks after meals A badly shaped and overcrowded dental arch is much more difficult to keep clean than one which is well formed and evenly spaced — I am etc

F H SMITH M A M R C S, L D S

Cambridge March 13th

VITAMIN POTENCY OF MILK

SIR —In your leading article in the *Journal* of March 12th entitled Some aspects of rickets you describe as rather novel the suggestion that milk from cows feeding on sun bathed lands may possess better anti rachitic qualities than milk as we know it in England But is this suggestion so novel? Surely the classical experiments of Dr Harriett Chick and her co workers at the Lister Institute of Preventive Medicine have shown conclusively that milk produced from cows fed on poorly lit pastures is seriously deficient in vitamin D and that milk produced by stall fed cows lacks vitamin A Changes in the environment and food of the cows they found, had a profound effect in remedying these defects Sunlight and pasture feeding increased the content of vitamin D and A respectively to a valuable extent

The bearing of these findings on the nutritive value of milk produced in this country during the winter months is too obvious to require stressing —I am etc

H M WALKER M D

Harrow March 15th

ESSENTIAL HYPERTENSION

SIR —Dr Robert Marshall's interesting article in the *Journal* of March 12th brings out several points that do not seem to be generally recognized In the first place the disease seems to be commoner in women than in men I have notes on 183 cases met with in the ordinary run of general practice in the last nine years with systolic pressure over 160 mm Hg—127 women and 56 men The maximum age incidence in women was in the fifties and in the sixties in men

To Dr Marshall's list of symptoms I should like to add severe vomiting attacks I was called to see several patients for the first time on this account The illness may last from one to four days is often accompanied by transient albuminuria and is very resistant to treatment but complete recovery is the rule and the immediate prognosis is good The first patient I saw in such an attack is alive and well eight and a half years later he is now 77 and has never had a systolic pressure under 230 nor a diastolic under 130 Hyperpiesis is a much commoner cause of gastric crises than is tabes (probably because it is a much commoner disease) In the last 36 cases I have seen headache occurred in 17 epistaxis in 11 and vomiting attacks in 11

I have myself been struck by the fact that Dr Marshall points out—namely that the symptoms of hyperpiesis may die out though the disease remains Thus a woman of 75 with a blood pressure of 230/110 used to have bilious attacks associated with headache every week until ten years ago but has been free from them since A man of 66 used at one time to have nose bleeding every morning when leaning over the washing basin but not during the last seven or eight years his blood pressure is 210/130 This may possibly account for that type of hyperpietic I have never seen—the menopausal Hyperpietics are very liable to floodings at the menopause and when they leave off the patient considers herself well, but the pressure is still as high as ever

Thus in 1928 a woman of 45 with a blood pressure of 220/115 had pain in the chest diagnosed by a cardiologist as angina in 1930 she was troubled by floodings and pain thought to be due to the left ovary artificial menopause was induced by x rays and for fourteen months she enjoyed better health than she had known for years The chest pain disappeared and I only saw her twice in 1931 the pressure was 268/140 and she had no complaints In January 1932 she had a cerebral haemorrhage and died in a fortnight

It is surprising that Dr Marshall should not have had one case of auricular fibrillation in his series although Clark Kennedy has pointed out that it is uncommon in hyperpiesis Twelve of my 183 cases had this arrhythmia paroxysmal or permanent Aortic disease is also rather common it was found in 6 of the 56 men two gave positive and two negative Wassermann reactions and in one it was a terminal event this man also had a paroxysm of fibrillation one other man had that rare combination of aortic disease and auricular fibrillation Only one woman had aortic disease She was first seen in 1926 with a blood pressure of 220/134 in 1930 an aortic diastolic murmur was noticed and she had a paroxysm of auricular fibrillation lasting a week the Wassermann reaction was negative I last saw her in October 1931 and the diastolic murmur was very loud blood pressure 220/130 heart's apex six inches from mid line pulse rate 88 regular

Of the 56 men 18 are known to be dead from clinical causes as follows heart failure 7 cerebral haemorrhage or thrombosis 6 influenza 1 pneumonia 1 metabolic failure (uraemia) 2 operation 1 Of the 127 women 26 are dead heart failure (including 2 of angina and 2 of coronary thrombosis) 9 cerebral haemorrhage 5 terminal lung infection 3 metabolic failure 3 malignant disease 2, diabetes 1 sudden death from unknown cause 3 Sudden death or death within twenty four hours occurred in 6 of the 18 men and in 9 of the 26 women one of whom died in the street and four were found dead in their rooms —I am etc

FREWEN MOOR M D

Westgate on Sea March 13th

AETIOLOGY OF CANCER

SIR —I am grateful for and I feel sure that all who have read Dr Gye's (may I say) bewildering book will also be pleased with his concise and almost convincing statement in his recent letter (*Journal* March 12th p 495) The reason I say almost convincing is that there still remains an item of doubt He inoculates a goat with a fowl grown Fujinami tumour and thus obtains it is assumed an anti-fowl and an anti virus serum He allows this to act upon a filtrate of a duck grown Fujinami tumour and thus avoids the action of the anti fowl immune agent Unfortunately however he uses as his test animal a fowl

Now it is quite possible that the anti fowl immune agent will act upon the fowl cells in the test bird at the site of the inoculation and injuring them prevent the occurrence of a tumour I have shown that filtrates of Rous tumour will not take in a region previously exposed to radium for the reason that the local fibroblasts are injured and incapable of cell division and so cannot produce a tumour The test animal should have been a duck when all possible opportunity for the action of

an anti fowl immune body would have been ruled out Perhaps Dr Gye will kindly tell us if this still more convincing experiment has been carried out —I am etc

Mount Vernon Hospital Northwood March 14th — J C MOTTRAM

"CRAMPED FOOTGEAR

SIR —In Dr Forrester Brown's interesting and practical paper (*British Medical Journal* March 12th) one cause of incompetent feet is given as cramped footgear The early stage in the life of an infant in which this cramped footgear may exert its baneful effects is possibly sometimes unnoticed With *children only* a few months old one has seen *socks* which due to repeated washings have become so small—evidenced by the almost Herculean efforts required for their removal—that they produce the effect of a tight bandage and cause distorting compression of the bones of the toes This is not uncommonly met in practice among poorer folks though not confined to them and requires the attention of parents to be drawn to it —I am etc

Burgess Hill March 14th — W W SHRUBSHALL D P H

ROAD TRAFFIC SIGNALS

SIR —Consideration of the paragraph in the *British Medical Journal* of March 5th on the above subject gives rise to grave doubt as to how far the views there expressed really represent correctly informed opinion on the part of those of the Association who are qualified in this matter While ophthalmologists and the medical profession as well as many of the lay public are ready to own their indebtedness to Mr Bishop Harman for the many things he has done for them one cannot help wondering how it comes that he should swerve so far from the clear teachings of the physiology of the eye and of vision as to lend his support to the stabilizing upon the roads of the country a method of light signalling transferred from a system so different in its conditions of working as that of the railways—quite unsuitable for the roads

On the railways the track is fixed so that there is no steering the driver has to observe (and that from a considerable distance) what signal is showing for him He is also selected by severe colour and other visual tests which are repeated annually There are no other users of the tracks for him to worry about On the road the signals need to be such as shall at once arrest the attention and give informative direction to an unselected public scattered over considerable breadth and length of road and side path Those who are colour blind would seem to have excited some concern The form of a signal whose colour is not distinctive to them is not likely to show any very distinctive form to them either A coloured light is such by reason of other colour of light being not transmitted hence no light *no vision* There remain the other visual defectives a much more numerous class when we remember that these include *uncorrected* high myopes astigmatics hyperopes presbyopes those with opacities of the *media* and those with retinal choroidal and nerve defects either extending *uniformly* or in separate areas over the parts concerned or of such a degree as to materially dull their appreciation of form and of colour as well Many of the latter conditions act within the eye precisely as fog without in the atmosphere acts on those whose vision is normal Many again cannot wear their corrections outside in all weathers Others will have various areas of their retina insensitive to light The field for distinct form perception is a small one

All people have a wider field of vision for white than for colours and have a much greater sensitiveness for movement of light than for lights that are still and this greater sensitiveness extends extremely widely into the periphery of their visual fields The sense of position of a light goes with its perception as an object and the resulting momentary glance towards it shows this That done white light and its flashing or movement can be appreciated by peripheral retinal sensation leaving the central areas free for attention to the road in front

What will get at all people with any useful vision however is a bright white light of large surface in a selected suggestive position Manipulation of this simple white may be made to give (1) steady light (2) flashing —that is, alternation of light and dark (3) movement as of bands or of separate elements of light and dark (4) direction (implied in No 3) which might be such as to suggest to the public the direction that is clear — I am etc

Glasgow March 15th — ED J PRIMROSE

PHILOSOPHY AND THE MEDICAL MAN

SIR —In a letter in your issue of February 20th signed by eleven very great names there is the suggestion—implied if not expressed—that medical men would be improved by their cultivation of systematic thought through joining the British Institute of Philosophy

At first sight this seems excellent for few will deny that medical men are loose thinkers (sometimes distressingly so) their special weakness being to rob *post* to pay *propter* Nevertheless I would fearfully raise the question and leave my betters to decide whether doctors would improve their usefulness by cultivating systematic philosophical methods of thought It is not by such methods that doctors have to seek for clinical truth Usually they cannot make their evidence as can laboratory investigators they have to grope their way with the often meagre evidence available following up scents as it were When I take into consideration the crudeness of their methods (for example stethoscopic) I never cease to be amazed not that doctors make mistakes but that they make so few

I dare say that *some training for doctors* in their own peculiar flexible methods of thought might be desirable though I have not seen it attempted or even discussed A good illustration of the unscientific methods imposed on doctors is seen in the concluding sentence of a learned and elaborate analysis of The mechanism of abdominal pain by C H Mayo (*British Medical Journal* 1929 ii p 704) He says

> I think I have said enough to convince you that when the character and site of an abdominal pain tells something to the surgeon it does so not because he knows much about the underlying anatomy and physiology but because he has noted that particular type of pain many times before and he remembers what he found when he opened the abdomen

Scientists and philosophers are not in the habit of writing as this great surgeon is compelled to do

The doctor however learned has to steer himself and his patient among the quicksands by peculiar perceptions and thought processes—such as summation of experiences shrewd assessment of *things immeasurable* giving weight to imponderables which may prove decisive distinguishing between the rare (that is improbable) and the common separating sharply what he knows from what he barely knows before he brings the diagnostic evidence to a focus and balancing arithmetical odds which cannot even be measured when advising an operation of choice rather than of necessity His learning avails little without sagacity and humanity Even the medical mind must be specialized into types—for example *the surgeon* with his objective quick action anatomical mind and the physician with his subjective ruminating physiological mind

Oddly enough we are never taught the types of mind we should cultivate they are the product of our work—chiefly post graduate If a doctor has the time for reading outside his usual subjects I would suggest that his most urgent necessity would be clinical psychology commencing with *The Science of Living* by Adler a little book full of knowledge applicable in practice but neither scientific nor philosophical in style As to logic I mis trust it in practical affairs Consistently logical conduct would lead a man into prison or the mad house (see O Flaherty s great recent novel *The Puritan*) Does their logic make the French better doctors than the illogical English? I know whose patient I would rather be—a practical but alas! illogical reply

In the case of the horse it has been found desirable to breed different types adapted to different purposes If you want strength you must sacrifice speed you cannot have an animal (or human mind) perfect for all purposes For hunting an intermediate type is bred and is perfected by training him for his special work This hunter would not be improved but harmed by being trained between shafts in blinkers drawing heavy weights along well worn roads Similarly the hunting mind of the doctor would not I think be improved by the blinkers of orthodoxy the ponderous load of philosophy and the safe and beaten road of science The doctor s mind comes an occasional cropper of course but he generally gets where he wants and often where orthodoxy could not follow Analogies are not proofs but this one helps to define the nature of my doubt —I am etc

Hull March 11th F C EVE M D , F R C P

PREPARATION FOR MARRIAGE

SIR —Public attention is being drawn to a subject which has long been of concern to the medical profession Many troubles arise in marriage that could have been prevented by fuller knowledge Some of these can be dealt with by a layman with special experience of marriage problems whilst others are of a definitely medical nature which if brought to light at an early stage and directed to the right medical authority would respond promptly to treatment Many marry with so little knowledge of its physiology that their future happiness is imperilled for until recently such questions as the sex education of children and adolescents have received scant attention

Recognizing this fact for the last year the British Social Hygiene Council has enlisted the help of a committee of experts in order that a handbook on preparation for marriage might be available This work is shortly to be published by Messrs Jonathan Cape But valuable though a book of this nature will undoubtedly be there is no doubt that in many cases it is a personal consultation on an individual problem that is required In order to meet this need Mrs Neville Rolfe the secretary general of the British Social Hygiene Council and also of the committee for the preparation of this handbook has been asked to establish a Personal Problems Bureau This enterprise will be run on an economically self supporting basis with the full support and approval of the Council Consultations will be by interview and letter for which it is proposed to charge a fee of £2 2s for a personal consultation in London and £1 1s by correspondence To all cases requiring medical assistance a list of authorities in the special field will be given to the client for submission to her medical adviser A private consulting room in Prince s Gate has been secured —We are etc

KENNETH WALKER
A H HARKNESS
Honorary Medical Secretaries British Social Hygiene Council

Cartwright House Cartwright Street S W 1 March 16th

'SYNTACTIC APHASIA"

SIR —I am a philologist and I am very anxious to investigate syntactic aphasia from the philological point of view as this condition (in which the linguistic expression of the relations between ideas is primarily affected rather than the linguistic expressions of the ideas themselves as in other types of aphasia) presents many points of great interest to the student of general linguistics Head (*Aphasia and Kindred Disorders of Speech* 1926 vol ii p 200) gives a few short sentences spoken by such an aphasic Unfortunately in order to make a ' philological analysis of the language of a syntactic aphasic at least 1 000 words of more or less connected speech would be necessary Moreover cases in which the syntactic aphasia is accompanied by a considerable impairment of the general intelligence are obviously unsuitable I wondered whether by some chance any of your readers might have records of a suitable case —I am etc ,

University of Leeds March 16th ALAN S C ROSS

Obituary

SIR WILLIAM ROBERT SMITH M D

Principal Royal Institute of Public Health

The death of Sir W R Smith whose name is most prominently identified with the Royal Institute of Public Health took place in London on March 17th

William Robert Smith was born in 1850 and educated at the universities of Aberdeen and Edinburgh and at University College London He early devoted himself to a career in the public health service and in 1886 was chiefly instrumental in founding the British (now the Royal) Institute of Public Health with the work of which he was identified until the end of his life The purpose for which the Institute was formed was to promote the interests of those engaged in the public health service and to aid investigation and study in all branches of State medicine He was president of the Public Health Congress held in association with the Institute in London in 1894 and again in Paris in 1913 He was also an early worker in the school medical service having been a medical officer of the old London School Board in which capacity he did much to place the hygiene of the school child on a better footing

It is difficult to catalogue Smith s multifarious public activities Many years ago he entered on municipal life as a member of the Holborn Borough Council and became in 1895–96 mayor of Holborn in which borough he resided For more than twenty years he represented the ward of Farringdon Without in the Court of the Common Council of the City of London and in 1918–19 attained the dignity of sheriff on which occasion he received his knighthood At the time of his death he was Deputy Lieutenant and J P of the County of London He served for thirty five years on the Metropolitan Asylums Board and was its vice chairman from 1910 to 1913 Another of his active interests was military organization He was a medical officer in the old Volunteer Force and became a major in the Territorial Force when that was constituted in 1908 During the war he served with the rank of colonel R A M C (T) as specialist sanitary officer of the 67th Division He had parliamentary aspirations but his candidature on more than one occasion for Scottish university seats did not meet with success He was a member of various departmental committees notably one on feeble minded children and he took great interest in the setting up of special schools for that class of the community Not much time was left in so busy a life for work with the pen but in addition to editing the *Journal*

of *State Medicine* he published a *Laboratory Textbook of Public Health* and also edited the seventh edition of Guy and Ferrier's *Forensic Medicine* He was emeritus professor of forensic medicine and toxicology at King's College, London For two years 1904-5 and 1906-7 he was a member of the Council of the British Medical Association

A remarkable number of foreign distinctions came his way He held honorary doctorates of Athens Geneva Padua and Ghent as well as orders and decorations from about ten different countries He possessed unusual personal command was an organizer of exceptional ability as well as an effective speaker and although he spread his energies over a wide field he suffered no flagging and was at work until the end

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Medical work in South Africa among the native and coloured people of the Rand has suffered a severe loss by the death of Dr MARY CONSTANCE TUGMAN who with her mother Mr Ethel Tugman was knocked down and killed by a motor lorry at Newbury Berks on March 6th two days after their arrival in England on furlough Dr Mary Tugman was 33 She received her medical education at the London School of Medicine and St Mary's Hospital and five years ago at the call of her uncle the Venerable O W L Shey Archdeacon of Johannesburg decided to go to the Rand as a medical missionary and do what she could to reduce the appalling infant mortality rate of something like 750 per 1 000 among the native and coloured population there On her own responsibility she opened a clinic in the back room of a native priest's house at Sophiatown and there she and her mother who had previously done a great deal of rescue work both in England and in South Africa and was a trained midwife weighed babies instructed native mothers dispensed medicines and treated sick cases Then Dr Tugman would pack up her equipment and put it in a motor car and drive herself with perhaps a native helper out to the primitive homes of the sick people who could not come to her Gradually the work developed until there were ten clinics on the Rand with Dr Tugman in charge of the central group and Dr Janet Robertson and Dr Marjorie Storr in charge of two other groups Finally work on a nursing home in Sophiatown was started Dr Tugman's grandfather was Frederic Shey F R S *surgeon to* St Bartholomew's Hospital and President *of the* Royal College of Surgeons in 1863

ARTHUR OLIVER HOLBECHE L R C P Ed M R C S Eng *died* at the age of 76 on Christmas Day 1931 at his home Prior's Croft Great Malvern Dr Holbeche who could trace his ancestry back to the town of Holbeach in Lincolnshire was the son of the late Thomas Vincent Holbeche of Sutton Coldfield After qualifying in 1879 he went to Malvern Wells in 1882 and later moved to Great Malvern Apart from a busy professional life he also took an active part in local affairs He was a warden of Malvern Priory a vice president of the Malvern Development Association and a member of the Health Committee of the Worcester County Council In his professional career he had been senior resident surgeon at the Birmingham General Hospital and surgeon captain to the Queen's Own Worcestershire Hussars and at the time of his death was honorary consulting surgeon to the Malvern Hospital In his younger days he was a keen horseman riding with the Croome and Ledbury hounds and at point to point meetings He was a man highly respected and loved both by his medical colleagues and by his patients and was characterized by an old world courtesy and kindliness of manner seldom met with now Dr Holbeche was always an active member of the British Medical Association serving as chairman of Division president of Branch Representative and on Division Committee and Branch Council In 1921-22 he was a member of the Central Council of the Association and of the Medico Political Committee Mrs Holbeche who survives him was the daughter of the Rev J Eastwood vicar of Hope in Staffordshire The funeral service held in Malvern Priory was attended by a large and representative congregation amongst whom was Mr Stanley Baldwin

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Dr THOMAS GEORGE STYAN who died at Sevenoaks on March 13th aged 75 was for thirty or forty years one of the best known and most respected medical practitioners in the Isle of Thanet Educated at Uppingham Cambridge and St Bartholomew's Hospital where he was house physician he took the M D degree in 1887 Succeeding to the practice of Dr Woodman of Ramsgate he was appointed surgeon to the Ramsgate and St Lawrence Royal Dispensary and to the Ramsgate General Hospital and Seamen's Infirmary and was medical officer of health to the borough and port of Ramsgate and school medical officer During the war Dr Styan was surgeon to the Kent 2nd V A D Auxiliary Military Hospital at Ramsgate as from October 10th 1914 and gave valuable advice and assistance in the conversion of Nether Court Manor House into a hospital The majority of patients passing through the hospital were acute surgical cases direct from France Up to the end of the war great demands were made upon Dr Styan's services by the local general hospital which also received many military patients as well as victims from the constant air raids His life was passed in the performance of a service which was a record of thorough and most painstaking work

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Dr EDWARD JAMES BRUCE of Huddersfield died on March 6th at the age of 52 He was a native of Insch in Aberdeenshire and received his medical education at Aberdeen University where he graduated M B Ch B in 1901 and obtained the D P H in 1904 After practising for some years at Retford he went to Huddersfield and was appointed medical officer to St Luke's Hospital He had served on the committee of the Huddersfield Medical Society and was a member of the Huddersfield Division of the British Medical Association he was also a life member of the St John Ambulance Association

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We regret to announce the death of Dr WATSON NOBLE which took place at Bailleston Lanarkshire on March 6th On the previous day although complaining of headache he went out as usual on his rounds but had to be assisted home By the late afternoon it was evident he was suffering from a cerebral haemorrhage On two occasions within the past few years he had been laid aside with duodenal ulcer Before taking up the study of medicine Dr Noble had qualified as a dispensing chemist so that when in 1908 he graduated M B Ch B from Glasgow University he was well qualified for general practice He then went to Bailleston as assistant to the late Dr William Willis whom he succeeded in 1914 and he was able by exceptional hard work and conscientiousness to conserve this old established and widespread practice The war years especially entailed very strenuous work By nature he was shy and reserved withal he was a loyal friend and staunch colleague The funeral service was attended by a large and representative congregation of friends and patients Dr Noble was 55 years of age and unmarried

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The following well known foreign medical men have recently died Professor ALFRED PINKUSS an eminent gynaecologist and authority on cancer of Berlin aged 62, Dr RUDOLF ESCHWEILER extraordinary professor of oto-rhino-laryngology at Bonn aged 61 Professor GEORG JOANNOVITCH director of the Pathological Institute at Belgrade aged 60 Dr MAX VON FREY formerly professor of physiology at Würzburg University aged 79 Professor ERNST FRIEDBERGER director of the Institute for Hygiene at Berlin Dahlem and a vigorous opponent of inoculation against typhoid fever and diphtheria of renal disease acquired in the war aged 57 and Lieutenant-General MELIS honorary inspector-general of the health service of the Belgian Army

Medico-Legal

NEGLIGENCE ALLEGED AGAINST INSURANCE PRACTITIONERS CHARGES WITHDRAWN AFTER HEARING

Before Mr Justice Horridge and a special jury on March 10th the hearing was begun of an action in which Mr G Boon a gardener of Highgate claimed damages from Dr S C Pritchard of North Road Highgate and Dr F Allen of Highgate Village for alleged negligence and want of skill in their treatment of him as an insured patient The allegation was denied and it was declared on behalf of the defendants that the plaintiff had been properly examined and had received careful treatment

Mr Croom Johnson K C who appeared with Mr Richard O Sullivan for the plaintiff said that Mr Boon's case was that the defendants had not exercised in their treatment of him even elementary precautions and that as a result of such want of care he had suffered wholly unnecessary pain anguish of mind and expense In 1930 the plaintiff who was then 65 years of age was an insured person on the list of Dr Pritchard and for some time he was treated by Dr Pritchard and his partner Dr Allen for gout when in fact he was suffering not from gout at all but from a disease of the foot which with careful examination could have been discovered at once As a result of the negligence he had had to undergo two or three operations was laid up for a year and was now a lamed man There was no history of gout in the plaintiff's family and he himself was an abstemious and active man of regular habits For some time before September 1930 he suffered from an in growing toe nail which from time to time caused him pain and inflammation He consulted Dr Pritchard who diagnosed gout and treated him for that complaint The pain increased and he sent for Dr Pritchard again Dr Pritchard came and looked at the foot but asked for no history of the complaint made no inquiry as to the plaintiff's habits and gave a prescription for a case of gout and a lead lotion to be applied to the foot The pain got worse and Dr Pritchard then prescribed an ointment with an ingredient to deaden the pain but this aggravated the condition and was discontinued During all this time no manual examination of the foot had been made Dr Pritchard then left town and the case was left to his partner Dr Allen who calling on the day after he had had a telephonic summons made no examination did not take the temperature said the case was one of gout and ordered hot fomentations Later the foot becoming worse a Dr Long who was staying at the house of the plaintiff's employer was asked to examine the foot Dr Long made a careful examination took the patient's temperature found out all he could about the history of the disorder and then tried to communicate with Dr Allen who was out Dr Long made a further examination of the foot and got his assistant Dr Plowright to make an independent examination Then he telephoned again to Dr Allen and eventually got in touch with Mrs Allen to whom he said that he thought an operation was necessary and Mrs Allen said that she was sure her husband would be glad if Dr Long performed it Meanwhile Dr Allen had visited the house and on being told that Dr Long had seen the patient said that he had no right to interfere walked out and never saw the patient again Dr Long made an incision and two ounces of pus were drained off On the following day the plaintiff was removed to a nursing home and a second operation was performed Two or three incisions were made and it was found that the foot was considerably damaged by disease A third operation took place in November at Guy's Hospital from which the plaintiff was discharged in December He had to walk about on crutches until the following October and underwent massage treatment until January 1932 He was still unable to walk without a stick and could not work He had incurred an expense of £180 including loss of wages

The plaintiff gave evidence in support of this statement by counsel In cross examination he agreed that he had never found Dr Pritchard neglectful before he was a careful and kindly man The wife of the plaintiff stated that when Dr Pritchard first called he asked her what was the matter with her husband and she told him that she thought it was a slight attack of rheumatic gout The doctor looked at the foot put his thumb across the toes and said It is gout decidedly He made no further examination then or at any other time and no inquiries Three days after Dr Pritchard last visited her husband she telephoned three times to Dr Allen and when eventually he came she handed him a note which Dr Pritchard had left for him Dr Allen used the same words as his partner Gout decidedly and made no examination with his hands According to this witness Dr Allen inadvertently put down his attaché case on the bed on the patient's bad foot and after apologizing told how he had cured his *father in law of gout by accidentally dropping* a pile of books on him the shock curing the complaint In cross examination she agreed that Dr Pritchard was a kind and sympathetic man who had always shown her husband the greatest care She denied however that he had made any careful examination of the foot or that he took the temperature or pulse or imposed restrictions as to food and drink

Dr H O Long of Highgate related the facts already given in counsel's opening statement of his intervention in the matter He said that he found the foot swollen and considerably discoloured There were indications of a septic condition and a danger of spread He believed that the foot required opening at the earliest possible moment and tried unavailingly to get in touch with Dr Allen When eventually he opened the foot he drew out two ounces of thick pus and on the following day performed a second operation when he found a series of abscesses There was no evidence that the plaintiff had suffered from gout In cross examination he said that the foot was so swollen that it was impossible to see the ingrowing toe nail which was subsequently removed He based his diagnosis of septic poisoning on a combination of symptoms signs and history the symptoms including temperature pulse red lines on the foot and the fluctuating nature of the swelling He agreed that Dr Pritchard who had the reputation of being a careful man if he made a diagnosis of gout was right in his treatment and that in its early stages inflammation from gout would be very difficult to distinguish from inflammation from other causes He believed that had he postponed operation the patient's life might have been endangered Evidence for the plaintiff was also given by Dr O Plowright and by Mr F J Steward consulting surgeon to Guy's Hospital

For the defence Mr Roland Oliver K C who appeared with Mr Russell Vick for Dr Pritchard (instructed by Messrs Hempsons) said that Dr Pritchard made a careful examination of the foot and finding no abrasion or septic infection diagnosed gout and treated the patient for that ailment The diagnosis was wrong but that did not mean that Dr Pritchard was negligent Dr Pritchard had attended the plaintiff for years and knew his history He made a most careful examination of the foot bearing the two possibilities in mind —septic inflammation and gout He took the temperature and also made a minute examination to see whether there was any injury whereby poison could have entered He examined the foot at each visit and on the last occasion the patient was so much better that he went away without any suspicion of anything wrong leaving for his partner the provisional diagnosis and the last prescription

Dr Pritchard in evidence bore out his counsel's statement He said that while he suspected sepsis there was no wound or sore to confirm that suspicion He described the examinations which he made at his various visits In cross examination he said that the prescriptions which he gave were the ordinary ones for cases of gout He was attending about seventeen patients for gout at that time He had attended the plaintiff nine times in ten years but never previously for gout and the possibility that gout was not the complaint from which he was suffering was not absent from his mind Indeed in his visiting list he had put against Mr Boon's name Query gout In reply to Mr Justice Horridge he said that it was not very unusual for gout to appear first at the age of 65 He had no doubt now that the plaintiff was not suffering from gout at the time of his attendance on him He understood until he came to court that the real case against him was that he had made a mistaken diagnosis not that he had been negligent He also stated that although Mr and Mr Boon alleged that he did not take the patient's temperature he distinctly remembered putting the thermometer into the mouth he admitted that he did not inquire as to any history of gout in the family

Sir Charlton Briscoe said that if Dr Pritchard's account of the plaintiff's symptoms was correct there was nothing medically wrong in his diagnosis and treatment He would be right to look for a wound or scratch on the foot and in its absence a diagnosis of gout would be justifiable The fact that Dr Pritchard had been the plaintiff's insurance doctor for twenty years would give him sufficient knowledge of his medical history without the need for asking questions He also said that pain for some weeks previously in the heel (from which according to Dr Pritchard Mr Boon had told him that he suffered) would be consistent with gout as would a slight rise in temperature and quickening of the pulse Dr Long's account of the case when he first saw it was consistent with the septic condition of the foot not being discoverable by Dr Pritchard when he last saw the patient The witness himself would not have operated on the plaintiff's foot either by needle or incision if he had been in doubt whether the patient was suffering from gout or a septic condition He agreed that an operation was necessary at the time Dr Long saw the patient though he would not say that it was urgently necessary

Withdrawal of Charges

On the fourth day of the hearing it was announced by counsel for the plaintiff that certain terms had been agreed between the parties and the only order asked was that a juror be withdrawn and that plaintiff's costs be taxed The plaintiff said Mr Croom Johnson desired him to add that having heard Dr Pritchard's evidence and his statement as to the care which he desired to give to him in his illness he was ready and willing to accept the explanations which Dr Pritchard had given In the circumstances it was his (counsel's) duty on behalf of Mr Boon to withdraw the charges of negligence which had been made against Dr Pritchard With regard to Dr Allen it was perhaps sufficient to say that the case having been settled before he had been enabled to give evidence it would be unfair to draw any inference whatever against him

Mr Oliver for Dr Pritchard pointed out that Dr Pritchard was not a party to the paying of anything by way of damages or costs

Dr Allen who had been prepared to give evidence had the case not abruptly terminated was represented by Mr R K Chappell K C and Mr T Carthew instructed by Messrs Le Brasseur and Oakley

Universities and Colleges

UNIVERSITY OF LONDON

Professor Carl Prausnitz has on the recommendation of the Board of Management of the London School of Hygiene and Tropical Medicine been appointed Heath Clark Lecturer for the year 1932

The University College Committee has re-elected Viscount Chelmsford as its chairman and Sir John Rose Bradford Bt M D as its vice-chairman for the year 1932-33

UNIVERSITY OF DUBLIN

TRINITY COLLEGE

The following candidates have been approved at the examinations indicated

FINAL MEDICAL EXAMINATION.—*Part I* (*Materia Medica and Therapeutics Medical Jurisprudence and Hygiene Pathology and Bacteriology*) *D M Mitchell *R B Hunter Mary E Mansfield C Hannigan M J Roberts J S Ruddell Marion A G Kennedy C S S Harty R C B Winder L S A Abe W P Griffin C N Taylor

Part II (*Medicine*) D C Evans J C Wilson H J Garland H B Wright M A Shapiro (*Surgery*) D B Bradshaw H S Mason I J Neil A J O'Connor H J Garland Kathleen R Byrne T J O'Sullivan J Ellman P H Peacock L S Samuel M A Shapiro I Morrison (*Midwifery*) *J A Concannon S A Varian H B Wright J A Mallie W M T Anderson D T Annesley W T Birmingham Elizabeth G Graham

* Passed on high marks

UNIVERSITY OF DURHAM

At the special convocation in June next the degree of D C L will be conferred on Sir Frederick Gowland Hopkins Sc D F R C P President of the Royal Society

UNIVERSITY OF LIVERPOOL

Dr Herbert E Roaf professor of physiology in the London Hospital Medical College has accepted the appointment to the George Holt chair in physiology in the University of Liverpool in succession to Professor J S Macdonald who retires at the end of the present session

UNIVERSITY OF SHEFFIELD

Dr Dorothy Brown and Dr C G Paine have been appointed lecturers in bacteriology and Dr James Clark lecturer in public health

ROYAL COLLEGE OF PHYSICIANS OF LONDON

At a meeting of the Royal College of Physicians held on March 21st Lord Dawson of Penn was re-elected President of the College

Diplomas in ophthalmic medicine and surgery were granted jointly with the Royal College of Surgeons to the following G P Barua W M Box T A D'Arcy A A Al R Falmy K Ghosh A Grant A M Khan S Mitter P McG Moffatt G E Plowright A L Taylor E H Walker

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Council Election

The secretary of the Royal College of Surgeons has sent out the usual announcement which on this occasion states that on Thursday July 7th at 11 a m there will take place an election of three Fellows into the Council in the vacancies occasioned by the retirement in rotation of Mr W McAdam Eccles Mr Wilfred Trotter and Sir Charles Gordon Watson K B E C M G

A voting paper will be sent by post to each Fellow whose address is registered at the College on April 6th Fellows are requested to give notice without delay of any change of address so that voting papers may not be mis sent

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The Easter Recess of the House of Commons began on March 24th and will end on April 5th Before adjourning the House completed the committee stage of the Wheat Bill It also discussed disarmament unemployment and foreign affairs The second reading of the Edinburgh Corporation Bill was set down for March 22nd a clause in this measure was concerned with the superannuation allowance of a medical officer

National Health Insurance

Mr ERNEST BROWN told Mr Rhys Davies on March 17th that Sir Hilton Young was giving as a matter of urgency most careful consideration to problems connected with national health insurance but was not yet in a position to make any statement about the introduction of legislation concerning them Mr RHYS DAVIES in a supplementary question pointed out that the Prolongation of Insurance Act would lapse at the end of the year Mr ERNEST BROWN repeated that the subject was one of urgency

Replying to Captain Strickland on March 17th Mr BROWN said the national health insurance scheme had from the first been based on the provision of benefits to insured persons through approved societies and the full advantages of the scheme could only be obtained through membership of a society The Act already contained special provision to meet the case of insured persons who by reason of ill health were unable to secure admission to an approved society and he saw no reason for amending it in that respect

Dangerous Drugs Bill

On March 21st the Dangerous Drugs Bill was considered in committee Mr C WILLIAMS moved to omit dihydrohydroxycodeinone from the list of drugs to which Section 8 of the Dangerous Drugs Act 1920 should apply Mr OLIVER STANLEY said that this drug was well known It was a drug

which was the base of eucodeine a common drug of addiction The amendment was negatived

Mr Williams next moved to omit acetyldihydrocodeinone from the list of drugs He said that if this was one of the drugs which the League of Nations wished to prohibit he was quite willing to allow it to be included in the list Mr Oliver Stanley said that this was one of the drugs which the Health Committee of the League of Nations had recommended should be included in an Order of this kind It was a drug which was only recently placed on the market It was liable to be used as a drug of addiction The amendment was negatived

The Bill passed through committee and was read the third time

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Dental Officers in the Navy —Sir Bolton Eyres Monsell told Mr Parkinson on March 16th that there were no dental officers of the rank of surgeon captain at a remuneration of £3 9s a day in the Navy One surgeon captain (D) only was allowed in the establishment of dental officers this officer being employed at the Admiralty on the staff of the Medical Director General His duties necessarily included those of a supervisory character His pay was at the rate of £3 a day plus the usual allowances

Medical Officers in Ministry of Health —In reply to Mr J Duncan on March 17th Mr Ernest Brown said that in March 1925 there were 56 salaried persons holding medical qualifications on the headquarters staffs of the Ministry of Health as against 52 in March 1932

Government Grants for Training in Midwifery —Replying to Dr Fremantle on March 17th Mr E Brown said the grants disbursed by the Ministry of Health during the year ended April 5th 1931 towards the training of midwives amounted to £21 363 These grants were paid direct to training schools Of the 752 pupils in respect of whom grants were paid 717 proposed to practise as midwives and 35 as health visitors No regulations concerning the payment of grants had been made under the Local Government Act 1929 the conditions were settled and published in 1925 Asked by Dr Fremantle whether provision was made in the Act for a revision of these regulations Mr Brown referred him to Memorandum 102 of 1925 for particulars

Milk and Dairies Act —Mr E Brown told Mr Thorne on March 17th that he had been unable to trace any recent cases of failure to conform with the regulations of the Milk and Dairies Act so far as cowsheds and cowhouses were concerned The enforcement of the provisions of the Milk and Dairies Order was a matter for the local authorities and not for his Department and where any alleged contravention was known the first action was to communicate with the responsible local authority

Kettering Gas Bill —Dr A B Howitt made his maiden speech on March 14th on the motion for the second reading of the Kettering Gas Bill He said that if the Bill was not passed the poorer tenants of the council houses in Kettering who could not afford electric light would have to use candles and oil lamps Speaking from many years experience in Lambeth he assured the House that it was difficult indeed for a doctor to attend adequately to any patient in distress under such conditions He had been told that in certain council houses in this country to day this condition of affairs existed and that doctors who had been called in to confinement cases had had to carry on their work by the spluttering light of a candle That was a monstrous thing to happen in these days and he supported the Bill The Bill was read a second time

Shortage of Naval Medical Officers —On March 15th Lord Stanley replying to Mr Price said that the establishment of naval medical officers was not complete and there was a deficiency of approximately sixty The entrance examination was at present in abeyance and entries were being made for short service by selection after interview The number of dental officers was one short of establishment When the number of vacancies did not justify the holding of a competitive examination entries were made by selection after interview in the same manner as for the entry of medical officers for short service

Bacon cured with Borax —Mr E Brown told Mr Thorne on March 17th that the importation of bacon cured with borax was prohibited under the Preservatives Regulations He was unaware of any recent contravention of the Regulations but inquiries would be made if particulars were given

Notes in Brief

The Attorney General has refused to introduce legislation to facilitate divorce where one of the spouses has become insane after marriage

The Services

DEATHS IN THE SERVICES

Brevet Lieut Colonel Charles George Spencer R A M C (ret) died in Queen Alexandra's Military Hospital Millbank on February 8th aged 68 He was born in New Zealand on December 25th 1868 was educated at University College Hospital and took the M B Lond M R C S and L R C P Lond in 1892 also the F R C S in 1895 He entered the Army as surgeon lieutenant on July 29th 1893 became major on January 30th 1905 and retired on July 29th 1913 He served in the Ashanti campaign of 1895-96 (star) in the China war of 1900 (medal) and also rejoined for service in the war of 1914-18 from August 6th 1914 receiving a brevet lieutenant colonelcy He was professor of military surgery in the Royal Army Medical College from August 1st 1905 to July 31st 1910 and was the author of *Gunshot Wounds* (1908) and of *Military Surgery* in Choyce's *System of Surgery*, also of many contributions to the *Journal of the R A M C* and other scientific journals

Lieut Colonel John Patrick Joseph Murphy R A M C (ret) died on December 25th 1931 aged 57 He was born on March 17th 1874 was educated at Queen's College Cork where he held an exhibition in surgery and graduated as M B B Ch and B A O in the Royal University of Ireland in 1897 After filling the post of resident medical officer of the Northern Infirmary Cork he entered the R A M C as lieutenant on June 21st 1900 He became lieutenant colonel on December 26th 1917 was placed on half pay on account of ill health on January 28th 1920 and retired on July 15th 1920

Medical News

The Royal College of Physicians of London will be closed from Friday March 25th till Tuesday March 29th both days inclusive

The fifth annual dinner of the University of London Medical Graduates Society will be held on Wednesday May 11th at the Langham Hotel, with Sir John Rose Bradford in the chair The Chancellor of the University has accepted an invitation to attend All medical graduates of the University are eligible for membership of the society and are invited to join life subscription £1 Particulars from the honorary secretaries 11 Chandos Street Cavendish Square W 1

At the meeting of the Paddington Medical Society on April 12th a debate on a State medical service will be opened by Mr Somerville Hastings and Sir Ernest Graham Little and the other speakers will include Dr G C Anderson Dr A Welply and Dr C L Batteson

A three months course of lectures and demonstrations on clinical practice and in hospital administration will be given at the Brook Hospital Shooter's Hill S E, by the medical superintendent Dr J B Byles on Tuesdays and Fridays at 3 p m and alternate Saturdays at 11 a m, beginning on April 5th The fee for the course is £3 13s 6d It is intended for those studying for the D P H and complies with the requirements of the General Medical Council's revised regulations which came into force on October 1st 1931 A course may however be taken under the previous regulations for £4 4s The fees should be paid to the Medical Officer of Health L C C Public Health Department (Special Hospitals) Victoria Embankment E C 4 Cheques should be made payable to the London County Council

The Royal Sanitary Institute will hold a sessional meeting at York in conjunction with the Yorkshire branch of the Society of Medical Officers of Health and the North Eastern Centre of the Sanitary Inspectors Association on April 1st and 2nd when papers will be read on Medical and social conditions in Soviet Russia by Dr W W A Kelly on York's experience with tuberculous milk by Mr Frank Fishburn and on Non-pulmonary tuberculosis in York by Dr P R McNaught

A post graduate course will be held at the Dundee Royal Infirmary on Thursdays at 3 15 p m from April 7th to May 26th inclusive No fees will be charged for the lectures and demonstrations but there will be a registration fee of £1 1s to cover expenses of printing etc Tea will be provided at 4 p m

A specially equipped ward for the treatment of children suffering from hare lip and cleft palate will be opened in association with the Royal Free Hospital early in April It is proposed to provide not only for the surgical treatment of these conditions but for all necessary dental appliances as well as instruction in speech production

The first Italian Congress of Medicine in Relation to Sport will be held at Rome from April 19th to 21st when the chief subject for discussion will be physical examination of the athlete from the morphological and anthropometric, neuro muscular cardio vascular and respiratory aspects

The annual dinner of the Medical Superintendents Society was held on March 19th at the Langham Hotel London Some seventy five members and guests were present the president Dr J Basil Cook being in the chair The health of the society was proposed by Mr H L Eason M S and responded to by Dr Cook who outlined the part the society had taken during the past forty five years in the evolution of the municipal hospitals and urged the importance of making their vast storehouses of clinical material available for medical students The health of the visitors was proposed by Dr Clifford Ellingworth and was responded to in an amusing manner by Dr F R Seymour Among the medical guests were Professor Jameson Drs J Tate Daley Seymour Fairfield J Neal and J W Bell

A seventy page report just received from the Royal Institution gives an account of the Faraday celebrations in London in September last The commemoration took the form of a series of events arranged by the Royal Institution together with a great exhibition at the Royal Albert Hall where historic apparatus was displayed, modern electrical machines and processes being also exhibited A number of distinguished delegates were received in the lecture theatre by the Royal Institution on September 21st their native countries including the U S A Germany France Italy Switzerland Belgium Holland Finland and Japan At the commemorative meeting which took place the same evening at the Queen's Hall speeches were made by the Prime Minister Lord Eustace Percy the Marchese Marconi Lord Rutherford and many others The commemorative oration was delivered by Sir William Bragg

A short notice in the *Proceedings of the Staff Meetings of the Mayo Clinic* for February 17th announces that Dr R M Wilder introduced to the meeting one of the first patients to receive insulin The patient was admitted as a severe case of diabetes in December 1922 The subject of a number of experiments on the action of insulin which were reported with the *Proceedings* of the Insulin Committee organized to present insulin to the profession he has remained well and at work in a steam fitting business in Indianapolis

The issue of *Forschungen und Fortschritte* for March 1st 10th and 20th which is devoted to Goethe and his relations to various departments of science and foreign countries contains articles by Professor Karl Sudhoff of Leipzig on Goethe and the Rhine by Professor G Stucker of Würzburg on Goethe at 50 by Dr Ernst Darmstaedter of Munich on Goethe and the alchemists by Professor Othenio Abel of Vienna on Goethe as biologist by Professor Victor Franz of Jena on Goethe's zoological studies by Professor Emil Starkenstein of Prague on drugs and poison in Goethe's life and by Dr Martin Muller of Munich on Goethe and therapeutics and Goethe and England by Professor Alois Brandl of Berlin This special issue can be obtained from J A Barth Leipzig price 1 mark

We have received the first number of the *Journal de l'Hotel Dieu de Montreal* published in January this year and printed throughout in French This enterprise follows the example of the sister Hopital Sainte Justine whose publication of *Annales* began two years ago The new periodical contains matter of general medical historical and research interest The hospital was founded in 1644 to minister to the needs of a young and growing colony

The Duddell medal awarded for the ninth time by the council of the Physical Society was presented to Professor C T R Wilson of Cambridge by Sir Arthur Eddington at the annual general meeting of the Physical Society on March 18th Professor Wilson's work has been mainly associated with the investigation of the tracks of ionizing particles and of atmospheric electricity It is interesting to recall that Professor Wilson made use of an *x* ray tube made by Mr Everett in the Cavendish Laboratory shortly after Rontgen's discovery in 1895 He was joint Nobel Prizeman for Physics in 1927

A chair of clinical dentistry has recently been founded at the Bordeaux combined faculty of medicine and pharmacy with Dr Cavalie as its first occupant

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

Prominent Ears

C D asks for practical suggestions for the treatment of large prominent ears

Stethoscope for Deaf Doctor

Dr A T BRAND (Driffield) writes in reply to Scot (p 506) I strongly recommend the original phonendoscope (Bazzi and Bianchi of Rome) It can be procured from any good instrument makers such as Allen and Hanburys It is extremely sensitive so much so that one can hear by it through clothing as well as on the exposed chest by the ordinary binaural stethoscope

F C H M writes I would suggest that Scot uses the old fashioned wooden stethoscope he will get on much better with it especially for heart sounds Would Dr F R W K Allen kindly say where the original de Lee stethoscope can be obtained?

Income Tax

Expenditure on Medical Books and Apparatus

R L M holds an appointment under a local authority and inquires whether he can deduct as professional expenses £10 expended on medical books and apparatus

*** Yes provided both the following conditions are fulfilled (*a*) that he is required to maintain the medical reference books and apparatus under the terms of his engagement and (*b*) that the expenditure is incurred by way of maintenance and replacement and not for improvement of the equipment

Replacement of Car

A E W inquires for which year an allowance should be made for the cost of replacing a car—the year in which the expense is incurred or the following year?

*** Such expenses are treated as part of the cost of earning the receipts of the year in which the transaction occurs Thus if the professional accounts are made up to December 31st a car replacement in July 1931 will operate to reduce the net profits of the year ending December 31st 1931 As however income tax assessments for a financial year are based on the profits of the *preceding* accounts year the transaction mentioned would affect the assessment for the year commencing April 5th 1932

Payment for Recommendation

M D explains that a friend of his—a radiologist—went out of practice and recommended his clients to transfer their confidence to M D who undertook to pay him 50 per cent of the fees accruing How should M D treat these payments for income tax purposes?

*** We assume that the former radiologist has ceased to practise in the neighbourhood and that the facts negative any suggestion that he is in partnership with M D The payments cannot be deducted as professional expenses—that much is clear What may be open to doubt is whether M D can deduct tax from the payments made and so recoup himself The case of Delage *v* The Nugget Polish Company lends some support to the contention that such a deduction can be made but a good deal would depend on the precise terms of the arrangement made

Shares in a Colonial Company

X L has some shares in a colonial company which this year have paid a reduced dividend

*** The reduction in the 1931–32 dividend does not affect the liability for the current financial year because income from foreign or colonial shares is assessable on the basis of the amount of income arising in the year *previous* to the year of assessment

LETTERS NOTES ETC

Doctors and District Nurses

G P writes from Devonshire Nest has written an interesting letter from the point of view of the average general practitioner First of all his outlook on life from the sheltered position of whole time medical officer of health is entirely different from that of the keenly competitive life of the general practitioner Both he and the general public and those who enjoy promoting philanthropic institutions ought to realize that the general practitioner has a hard job in these days to pay rents rates taxes and school fees if he can afford children The district nurse now takes most of his midwifery does ante natal and post natal work and during these and other visits is consulted on every ailment which she diagnoses and treats If she does not she is told they will not in future contribute their pence to the association She then is up before her committee who are themselves often her most exacting and troublesome patients all use her to save a doctor's bill She does minor surgery and sends patients to hospital for advice and treatment She takes the stitches out of perineums without sanction and if asked to massage a fracture is untrained in that or too busy with her confinement cases She has been known to diagnose and treat a pneumonia case In other words she is one of the general practitioner's most dangerous opponents and therefore he treats her as such and prefers the old Gamp who is under his control If the nurse will stick to her rules the general practitioner will be only too pleased to co operate with her

Cheselden's Death

Dr JOHN S CLARKE (Weobley Herefordshire) writes In R R J's article Bygone medical obituaries (February 13th p 302) he states that Cheselden accelerated his demise by taking ale on the top of hot Bath buns Did Cheselden die about Eastertide? In 1913 the custom still existed at Kingston upon Thames among those at work on Good Friday of having hot cross buns and beer provided at the expense of the employer In the case that came to my notice the foreman pointed out to the employer that it was not a feast that they were after but that it was an old custom Might not Cheselden have been observing an old established custom of hot cross buns and beer on Good Friday?

A Convenient Gas Stand

Dr J L BLONSTEIN (Battersea) writes My attention has been drawn to an apparatus invented by a dentist for whom I have given a good many general anaesthetic administrations This apparatus seems to have overcome the usual difficulties experienced in the connecting of angle cylinders in emergencies in which gas runs out or oxygen has to be administered A yoke piece attached to a floor stand by a swivel device enables the neck of the cylinder valve to pass into the yoke Two or three turns of the thumbscrew force the cylinder valve into place it is then ready for use So speedily can the change over be made that it has been carried out during the administration of the anaesthesia When I recall the amount of time trouble frayed temper etc experienced by dentists—and no doubt by some doctors—in replacing empty gas cylinders (in emergencies) and compare it with the ease with which such cylinders are changed in the case of this new Harrison gas stand I think it has only to be seen in order to be appreciated I understand that this apparatus is being marketed by the Surgical Manufacturing Company Ltd of Mortimer Street W 1

Raw Milk and Teeth

Dr F H FULLER (Hove) writes The following particulars of a case which came under my care may be of interest A girl at the age of 2½ years developed a tuberculous knee joint After this all milk given to the child was boiled or pasteurized Though all her deciduous teeth were entirely free from caries quite a number of her second dentition have been attacked These latter teeth were of course forming during the time in which the supply of raw milk had been stopped These facts seem to support the theory advanced by Mr Sprawson

Vacancies and Courtesies

Dr FRANK LANGFORD writes In that he eventually received a reply to his application M B B S (March 19th p 550) may regard himself as more fortunate than some candidates A few years ago I was doing the round of various advertised posts and although most of my applications were dealt with in a businesslike manner two advertisers sent neither acknowledgement nor notification that the post was filled A gentle remonstrance (five weeks later) in one case produced the reply that the gentleman responsible had been very busy ! The difficulty could be easily avoided with mutual convenience by a method I have only seen adopted on one occasion The advertisement in question contained a note to the effect that candidates receiving no intimation by [such and such a date] may assume that their applications have been unsuccessful

Premiums for Motor Car Insurance

It appears that many readers have been led to suppose that there is an intention on the part of insurance companies and underwriters to penalize medical practitioners by increasing materially the premiums on their motor car insurances We are informed on the best authority that there is no likelihood whatsoever of motor car insurance premiums being increased so far as the medical profession is concerned Any doctor who has heard otherwise should communicate with the secretary of the Medical Insurance Agency (c o the British Medical Association Tavistock Square W C 1) who will forward a statement of the position as it affects himself and the Doctors Special Policy underwritten at Lloyd's

Vacancies

Notification of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 36 37 38 39 42 and 43 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 40 and 41

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 112

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

276 Clinical Significance of Tuberculous Bacillaemia

L POPPER (*Deut med Woch* January 15th 1932 p 89) states that Lowenstein has recently devised a method by which tubercle bacilli can be cultivated from the blood in a number of diseases Two explanations of the presence of tubercle bacilli under these conditions are possible The first is that the bacilli have no clinical significance and that their presence is merely a coincidence Such a view however is in contradiction with all the existing knowledge about the clinical aspects and pathology of tuberculosis The second explanation is that the presence of tubercle bacilli indicates a tuberculous process Popper records his observations on the use of Lowenstein's method in 100 cases of various diseases 17 of these were obvious cases of tuberculosis (in 3 of which tubercle bacilli were found in the blood) 44 were rheumatic patients and in 7 of these the blood showed tubercle bacilli The remaining cases which included septicaemia influenza and other diseases gave a positive result in 9 instances Tuberculous bacillaemia therefore was associated with acute febrile diseases and was obviously an expression of a transient activation of a quiescent tuberculous process

277 Typhoid Cholecystitis

A AGUECI (*Pathologica* January 15th 1932 p 34) made a bacteriological examination of the bile in 160 cases of cholecystitis in patients aged from 15 to 74 in thirteen cases (8 12 per cent) he found *B typhosus* present —a somewhat higher percentage than that recorded by most observers In two of the thirteen cases there was no previous history of typhoid fever but the patient had probably had an ambulant attack in the remaining eleven there was a definite history of a previous attack In four cases the lesions involved the mucous membrane of the gall bladder only in one the mucous membrane and the muscular coat were affected in another the muscular coat only was attacked in four cases all the coats were implicated and in one case none It is noteworthy that in 20 6 per cent of the cases in which there was a previous history of typhoid fever *B typhosus* was not found in the bile possibly because the interval between the attack of typhoid fever and the development of cholecystitis had been too long The practical conclusion drawn from these observations is on the one hand that the possibility of cholecystitis being a metatyphoid affection should be considered and on the other hand the risk of typhoid fever being followed many years later by cholecystitis should be borne in mind

278 Abdominal Pain of Sympathetic Origin

D TADDEI of Pisa (*Presse Med* January 23rd 1932 p 124) discusses the condition which is present in persons mostly young women from 20 to 30 years old who complain of vague symptoms referred to the digestive organs but usually with no definite relation to food The patients are mostly under weight and frequently have visceroptosis Six years ago G FANTOZZI described a sign demonstrable in a majority of these cases it consisted of a definite tenderness on pressure over the abdominal aorta and the iliac vessels and was ascribed by him to hypersensitivity of the perivascular sympathetic nerves Since then Taddei has considered Fantozzi's sign as being of great diagnostic importance and has observed many cases In spite of negative results from barium examinations and gastric analyses many of these patients have been subjected to laparotomy gastro enterostomy cholecystectomy appendicectomy and visceropexies without benefit The author considers that the most important region for further investigation is the thorax Many subjects show pulmonary lesions of a minor nature both as regards symptoms and physical signs though x rays may reveal abnormalities unsuspected on physical examination so unaided a history of past cervical adenitis or of pleurisy is often elicited and there is often a slight evening rise of temperature to be found if a record is kept Constipation is common and may be obstinate While not denying that in some cases toxic absorption from the intestines may be a possible cause Taddei considers that the most common origin of the syndrome is irritation of the abdominal sympathetic system by tuberculous toxins and that the only effective means of treatment is in a sanatorium or failing this a period of complete rest with good feeding Although the results of such treatment may not be dramatic and relapses may occur it saves the patients from unnecessary and often harmful surgical intervention

279 The Age Incidence of Venereal Disease

G KJELLBERG (*Nordisk Medicinsk Tidskrift* December 12th 1931 p 797) of the St Goran Hospital in Stockholm has of late been impressed by the marked decline in the number of adult patients suffering from venereal disease in her private as well as in her hospital practice while their place has been largely taken by progressively younger generations To check this general impression she has studied the age incidence of venereal disease between 1919 and 1930 in the light of statistics provided by the health authorities of Stockholm The total number of notifications fell in Stockholm from 10 146 in 1919 to 5 434 in 1930 These figures when correlated with the population of Stockholm in these two years showed a decline from 2 44 per cent to 1 08 per cent of the total population But when the notifications were classified in age groups it was found that between the ages of 15 and 20 the proportion of new infections had actually risen from 5 76 per cent of all the infections in 1920 to 9 40 per cent in 1930 For the age group 20 to 25 there was also a rise during the same period Under the age of 15 and over the age of 24 the number of new cases of venereal disease has declined steadily The author offers no explanation of this phenomenon

Surgery

280 Tumours of the Small Intestine

C P G WAKELEY and M A PAUL (*Australian and New Zealand Journ of Surg* December 1931 p 227) record nine cases of neoplasms in the small intestine which are comparatively rare Benign tumours appear to be less common than malignant growths Fibromyomas are the commonest innocent tumours of the small intestine they may be pedunculated or sessile and occur most frequently in the ileum Fibromas are very rare they may be multiple and either submucous or subserous Lipomas occur as pedunculated or sessile submucous or subperitoneal tumours they rarely become larger than a walnut Haemangiomas are cavernous and may produce no symptoms they may however give rise to severe haemorrhage or even intussusception Endometriomas are rare tumours found in the pouch of Douglas or in the walls of the pelvic viscera they are sometimes regarded as implantation tumours from haemorrhagic cysts of the ovary Adenomas may be multiple when the mucous membrane is studded with myriads of small sessile or pedunculated tumours or there may be isolated adenomas which are single or few in number The latter are sometimes found with a carcinomatous change in some part of the tumour Of the malignant tumours of the small intestine the sarcomas are less common than the car-

cinomas and occur more frequently in men than women the ileum being the commonest site of the disease Carcinoma of the small intestine is rare and is found twice as often in men as in women The most common types are the annular stenosing and the polypoid varieties Argentaffin tumours occur most commonly in the appendix and small intestine they are composed of clumps of polygonal cells embedded in a fibrous tissue matrix These growths produce local intestinal symptoms Tumours of the small intestine give rise to symptoms which vary with the type of growth A small tumour produces no symptoms or physical signs but larger growths may cause intussusception or intestinal obstruction with intestinal colic bile stained vomiting and visible peristalsis Treatment can only be by operation and it is then that a diagnosis as to the type of tumour can be made An annular stenosing tumour is always malignant a submucous pedunculated tumour may produce a characteristic dimple on the peritoneal surface An intussusception is usually associated with a benign tumour while a subperitoneal lipoma is diagnosable at sight Local excision of the growth is only possible in a few cases but resection of the affected loop of gut with end to end anastomosis gives good results Resection of the mesentery includes resection of the mesenteric lymphatic glands An inoperable, fixed growth requires a short circuit operation to prolong life if only for a short time

281 Spurs of the Os Calcis

G MAZZACUVA (*Chir d Org di Movimento* December 1931 p 557) records six cases of calcaneum spurs and reviews recent literature on the subject There is a wide difference of opinion as to its frequency the figures ranging from as high as 9 per cent to 3 per cent but there is general agreement as to its much greater frequency in the male than in the female Of the various theories propounded to explain the pathology or aetiology of this complaint none cover all cases in some instances the condition seems to be associated with infective processes such as gonorrhoea but it is not possible to distinguish these by examination from those due to diathetic or more obscure causes The presence of a bursa near the spur is probably an attempt at protection and is not common Symptoms may be entirely absent, or give rise to such pain as to cripple the patient In the milder cases removal is not necessary for these may respond to non operative treatment especially if any infective substratum of disease can be detected As regards the radiography of such spurs the author emphasizes the importance of securing that the patient s foot is truly horizontal on the plate otherwise a shadow may hide the spur Excision, when necessary is almost always followed by good results

282 Surgical Treatment of Angioma

E HEYMANN (*Rev de Chir Plast que* January 1932 p 253) compares the surgical treatment of angioma with that of lipoma neuroma and fibroma and emphasizes the fact that great care must be taken to guard against any facial or other disfigurement which might be caused by injury to the nerves Unsightly scars must also be avoided whenever possible Angiomas are of a congenital origin and should be treated as early as possible since better results are then obtained than in later life The greatest difficulty is experienced in the treatment of angioma of the face Radical treatment is advisable because there is always the possibility of malignant degeneration On the other hand a large and extensive excision may give rise to facial paralysis or retraction of the lips or cheek Conservative treatment lasting over a long period carries with it the danger that the angioma may be converted into a penetrating scar The author distinguishes between the large angioma the lymph angioma and the cavernous type of angioma which occurs on the mucous membrane of the lip In the last case high frequency treatment has proved satisfactory Haemangiomas are nearly always congenital in origin and owing to their rapid development should be treated surgically at an early date Co operation between the surgeon and the dermatologist is of great value

Therapeutics

283 Vaccine Treatment of Hay Fever

A report on the incidence and treatment of hay fever in New Zealand by C E HERCUS and M N WATT (*New Zealand Med Journ* December 1931 p 351) states that the symptoms of a great majority of persons susceptible to hay fever bear a direct relationship to the abundance of pollen (chiefly of grasses) in the air Treatment on the lines thus indicated in 286 cases resulted in over 32 per cent being completely freed from symptoms while more than 51 per cent received considerable relief, about 10 per cent were moderately benefited and 5 per cent were unaffected The authors found that one course of injections was usually inadequate to confer full immunity, and they are uncertain whether permanent relief is obtainable in any case Constitutional reactions occurred in 31 per cent of the cases so treated they were usually associated with the employment of the strongest pollen extracts or with the changing over from an old to a new bottle of nominally the same strength The authors advise therefore that in such circumstances the initial doses should be diminished The patient is kept under observation for fifteen minutes after an injection, adrenaline being readily available for any such emergency Ephedrine did not prove satisfactory as an alternative to adrenaline, and in some cases tremor nervousness palpitation and nausea followed its exhibition The authors recommend the continuation of weekly pollen injections during the hay fever season train and motor travelling should be reduced to a minimum and the mucous membrane of the eyes and throat be protected as far as possible by the use of closely fitting goggles and insistence on nose-breathing The nasal mucous membrane may be safeguarded by the insertion of small pledgets of cotton wool though these are uncomfortable After a period of exposure the patient should retire to a quiet dust free room with closed windows The administration of hydrochloric acid to these patients may be beneficial

284 Detoxifying Properties of Sodium Amytal

Pursuing the work of other investigators E L SWANSON (*Journ Lab and Clin Med* January 1932 p 329) has endeavoured by animal experiments to ascertain whether sodium amytal detoxifies convulsant drugs which act on parts of the central nervous system other than the cerebrum and whether the protection is greater when the intravenous route of administration rather than the oral is employed He has also tested the efficacy of sodium amytal in preventing convulsions induced by these drugs Picrotoxin and strychnine were selected since the former causes convulsions by stimulation of the medulla and the latter by acting on the spinal cord Cocaine which produces convulsions by its action on the cerebrum was also studied in comparison The results showed that protection is afforded by sodium amytal against the intoxication by certain poisons acting on the central nervous system that the protection is more effective when the drug is given intravenously and that it is both an anticonvulsant and a detoxifying agent for the three poisons

285 Sodium Chloride in Renal Insufficiency

E G WAKEFIELD and N M KEITH (*Arch Int Med* January 1932 p 165) report two cases of renal insufficiency in which untoward effects followed the intravenous administration of sodium chloride solution Both the patients had a severe degree of insufficiency, with azotaemia and isosthenuria but there was no oedema and the intravenous administration of fluids in large amounts was clearly indicated Injections of 1 000 to 2 000 c cm of 10 per cent dextrose in 1 per cent sodium chloride solution were accordingly given In the first case a woman aged 28 improvement followed for a fortnight but after that oliguria was succeeded by anuria and the sodium chloride was omitted only the dextrose being continued The second patient a man aged 37 seemed to be harmed by the sodium chloride Although

marked polyuria occurred there was no decrease in the azotaemia the blood urea and creatinine remained high and there was a lowering of the alkali reserve of the plasma on the twentieth and twenty third days 200 c cm of a 5 per cent sodium bicarbonate solution were given on the twentieth day followed by 500 c cm on the twenty fourth day Marked diuresis resulted with general clinical improvement The authors believe that these cases show that when the solution contains too much sodium chloride evidences of renal failure may develop they advocate 10 per cent dextrose solution for use in such conditions

Anaesthetics

286 Nitrous Oxide Oxygen Anaesthesia in Dental and Oral Surgery

G FLEXER LAWTON (*Anesthesia and Analgesia* January–February 1932 p 45) recommends the more general employment of this anaesthetic in preference to local agents She states that at least 150 times the amount of nitrous oxide is used in Great Britain as compared with that administered in France In the United States the consumption is still greater Nitrous oxide oxygen anaesthesia is safer than any other since there is no b o chemical action nor is there any depressant effect on the heart The author believes that the fear of an asphyxial effect has been exaggerated and that any danger of this kind can be prevented by appropriate dilution with oxygen Local anaesthetics in oral and dental surgery are more dangerous than general anaesthetics since there is greater risk of conveying infection especially in children Nitrous oxide-oxygen can be administered safely to patients suffering from diabetes nephritis or heart disease Symptoms of shock are less likely to occur after nitrous oxide oxygen anaesthesia than after the administration of chloroform or of ether

287 Spinal Anaesthesia for Gynaecological Operations

P TAGLIAFERRO (*Ann Ostet e Ginecol* September 30th 1931 p 1295) records 151 cases of major gynaecological operations (including 106 abdominal and vaginal coeliotomies) performed under spinal anaesthesia with novocain in twenty cases only had the spinal injection to be supplemented or replaced by inhalation narcosis Patients with haemorrhage or collapse were regarded as unsuitable subjects as well as those who suffered from headaches The percentage of failures has been considerably less since the preliminary exhibition of scopolamine and morphine has been replaced by that of morphine alone Post-operative headache occurred in 17 per cent and was not especially associated with the Trendelenburg position it responded best to intravenous injection of caffeine Those patients who had received an intravenous injection of urotropine for prevention of urinary retention did not suffer from headache after operation Post operative complications included two cases of bronchitis one transitory palsy of the abducent nerve and one of transitory apnoea and bradycardia there was one death

288 Ether and Nitrous Oxide Oxygen Anaesthesia

According to J H EVANS (*New York State Journ of Med* February 1st 1932 p 125) anaesthetics as a whole can be usefully classified as revocable and irrevocable The first group contains those which are under the direct control of the anaesthetist the dosage can be varied at will and if an overdose is accidentally given the drug can be eliminated and the patient be brought back to the zone of safety Examples of this group are ether nitrous oxide ethylene chloroform and ethyl chloride The author states that the reason why nitrous oxide oxygen anaesthesia is not safe except in the hands of those who have been properly trained is that the signs of deep anaesthesia and approaching consciousness closely resemble each other and the novice is consequently inclined to increase the nitrous oxide when he should be administering pure oxygen In the hands of the qualified anaesthetist the death rate from combined ether and nitrous oxide should be practically nil the one having no advantage over the other so far as the safety of the patient during the operation is concerned Evans concludes however from an experience of 30 000 inductions that the post operative mortality and morbidity are less with nitrous oxide oxygen than with ether He records the figures of other anaesthetists in support of this view but emphasizes the value of associating the two anaesthetic procedures and of avoiding when possible the employment of the irrevocable group of anaesthetics other than novocain and quinine urea hydrochloride the toxicity of which is low when used to induce local anaesthesia

289 Pernocton Anaesthesia

R PFEILER (*Schmerz Narkose Anaesthesie* December 1931–January 1932 p 273) records his observations on 135 major operations carried out under pernocton anaesthesia in patients aged from 20 to over 80 In 74 cases (52 per cent) pernocton was the only anaesthetic used while in the other cases ether was employed as well although from 60 to 90 per cent less than usual was required Since the introduction of pernocton deaths from post operative pneumonia have become much rarer so that their frequency is now about the same as in operations under local anaesthesia A greater advantage still is the absence of anaesthetic shock which is so dangerous in old people The only contraindication to the use of pernocton is the presence of renal disease which interferes with the rapid excretion of the drug M H G A THOLEN J H HAGENBEEK and B VON OCHSEE (*Nederl Tijdschr v Geneesk* January 30th 1932 p 452) who have used injections of pernocton in about 600 obstetrical cases of which 37 per cent were primiparae and 63 per cent multiparae conclude that this is a valuable drug for preceding and accompanying inhalation anaesthesia In obstetric practice it is the best anaesthetic for multiparae but special caution should be taken in its use for primiparae The use of pernocton in eclampsia is very promising The technique of its injection demands considerable experience since success depends on choosing the right moment for its application At present it is not a suitable anaesthetic for use in private houses

Obstetrics and Gynaecology

290 Calcified Ovarian Tumour causing Intestinal Occlusion

J C BLOCH and G BERTHIER (*Bull Soc d Obstet et de Gynecol de Paris* December 1931 p 755) report a case in which intestinal occlusion was caused by a completely calcified ovarian tumour The patient aged 61 first sought advice in 1927 for stubborn constipation from which she had suffered for two months She had previously had a series of irradiations for uterine fibroids Examination revealed the existence of a hard irregular tumour which appeared attached to the body of the fibroid uterus and was extrarectal Radiography showed an opaque tumour which occupied the greater part of the pelvis but a bismuth meal passed perfectly Calcified fibroma was diagnosed and an operation was advised but it was refused by the patient Nothing further was heard of the patient until 1931 During the period 1927 to 1931 she had suffered from constipation and certain stercoral intoxications but no symptoms of serious import were present until she again sought advice when she presented the typical picture of chronic occlusion Vaginal examination revealed a very hard tumour occupying the whole of the pouch of Douglas Without a knowledge of the patient's previous history and condition a neoplasm of the pelvis involving the rectum would probably have been diagnosed The patient now agreed to an operation and behind the fibroid uterus a large completely calcified tumour of the left ovary was found The right ovary also was partly calcified Supravaginal hysterectomy was performed and the patient made an uninterrupted recovery Whether the ovary was calcified before or

after the irradiation could not be determined but the authors emphasize their opinion that surgical intervention is the only practical course in all cases except those in which there is an indisputable diagnosis of mobile fibroma

291 Primary Abdominal Pregnancy

P W BEST (*Journ Amer Med Assoc* November 21st 1931 p 1521) believes that most reported cases of primary abdominal pregnancy are not essentially a primary implantation of the ovum on the peritoneum but are secondary to tubal abortion or ruptured tubal pregnancy Four criteria of this condition are a normal appearance of the tubes ovaries and of the broad ligaments except at the site of implantation of the ovum, absence of evidence of penetration of the space between the broad ligaments by the fimbriated extremity of the tube absence of intraligamentary rupture of the tube and lack of evidence of the escape of ova from the uterine cavity A case is recorded which conformed to these criteria and which presented interesting features The best method of treatment is discussed In the present case the presenting mass was first punctured through the rectum instead of through the vagina and laparotomy was subsequently performed Three methods are recommended for the management of the placenta separation and removal, marsupialization as was undertaken in the present case and leaving the placenta *in situ* with or without drainage

292 Acute Ulcer of the Vulva

P CHEVALLIER (*Presse Med* January 20th 1932 p 98) gives a full description of acute ulcer of the vulva and records two illustrative cases This is an acute benign non contagious and non venereal affection no analogous condition occurs in the male The age of the patients ranges between 3 and 50 years most patients being between the ages of 14 and 20 With a predilection for virgins the disease has however been noted in other conditions such as pregnancy Though apparently menstruation is not a factor many cases occur during a menstrual period The exciting cause appears to be *B crassus* Most frequently multiple the ulcers may involve both the skin and mucosa of the whole vulvar region The onset which usually coexists with perfect health is marked by itching and burning sensations in this region and slight fever pain is absent The acute stage is afebrile and lasts from a few days to several weeks The pathological anatomy and bacteriology are briefly discussed The disease must be distinguished from syphilis soft chancre herpes and phagedaenic or blennorrhagic lesions The ulcers usually heal spontaneously and active treatment is unnecessary the application of an antiseptic powder or a sedative solution such as methylene blue usually suffices The affection shows a tendency to recur the injection of *B crassus* vaccine as a prophylactic has been found of no avail

Pathology

293 A Water borne Outbreak of Weil's Disease

R JORGE (*Office Internat d Hyg Publique* January 1932 p 88) reports an outbreak of *Spirochaetosis ictero haemorrhagica* which if the interpretation put upon its source of origin is correct appears to be unique On August 10th 1931 in the north east quarter of Lisbon two cases of Weil's disease were recognized During the succeeding days these were quickly followed by fresh cases till on August 22nd sixteen cases occurred The epidemic rapidly died down and the last case occurred on September 5th When plotted graphically a very symmetrical type of curve was obtained the fall of the epidemic having proceeded at about the same rate as the rise Four late cases developed between September 20th and November 1st Excluding these 126 cases were reported though there is reason to believe that the actual number of patients affected was much higher than this figure The infection was commonest in adult males there were 94 cases in men and only 32 in women and 91 per cent of all the patients were between the ages of 20 and 60 years The case mortality was 24 6 per cent being considerably higher in men than women—27 6 per cent as compared with 15 9 per cent—and was much higher in patients over the age of 40 than under The great majority of the cases occurred in a particular quarter of the town and were grouped around a fountain The epidemiological evidence that the water of this fountain was responsible for spreading the disease was very strong and investigation showed that the water had become soiled in its passage through an underground conduit by rats from a neighbouring sewer The bacteriological evidence to confirm this conclusion was however not obtained though the nature of the disease was proved bacteriologically The author considers that the epidemic was undoubtedly attributable to infection of the fountain and that it is unique in being the only instance in which infection on a large scale has followed the drinking of contaminated water

294 The Pituitary Gland and Ovulation

J C BURCH *et al* (*Journ Amer Med Assoc* December 19th 1931 p 1859) record experimental evidence in further support of the report of Smith and Engle that there is a cyclical variation in that hormonic activity of the anterior hypophysis which produces ovulation In a first series of experiments the hypophyses from two groups of spayed female rats were transplanted into immature female mice The ovaries became much larger in the case of mice into which the pituitary glands had been transplanted from rats previously injected with human placental extract In other experiments extracts of sows hypophyses injected into female rabbits showed that the proportions of hypophysis required to induce ovulation (1) when the ovaries of the donor sows contained corpora lutea (2) when the sows were in oestrus and (3) when they were in pro oestrus were respectively 40 10 and 1

295 P E SMITH and W E WHITE (ibid p 1861) quote the report of Fee and Parkes that in the rabbit in which coitus induces ovulation the latter occurs if the hypophysis has been removed about one hour or longer after mating but is absent if the excision is performed before an hour has elapsed They have confirmed this finding in animals in which the hypophysis has been removed by an oral approach through the soft palate instead of by decerebration They find that in such animals the corpora lutea develop normally for about two days but subsequently show regressive changes with devascularization

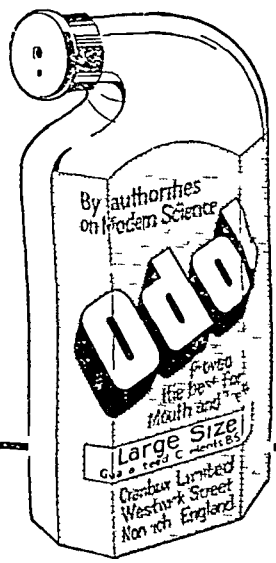
296 Acetonuria and the Acute Abdomen

S E KOROED (*Hospitalstidende* November 19th 1931, p 1119) has examined for acetonuria 445 patients admitted to hospital for various complaints and has employed Rudoy's modification of the Legal Lange test Among the 101 patients with acute abdominal complaints were 57 suffering from acute appendicitis of these 52 had acetonuria In 37 patients suffering from various other acute abdominal conditions such as salpingitis pyelitis renal colic intestinal obstruction extrauterine pregnancy incarcerated hernia torsion of an ovarian cyst perforation of an ulcer and pancreatitis there were only five in whom a positive reaction was obtained There were however, four cases of acute cholecystitis and three cases of vomiting with acetonaemia in which the reaction was also positive In a second group of 40 patients with abdominal complaints which were not acute (chronic appendicitis and salpingitis cancer and gastric and duodenal ulcer) the reaction was invariably negative In a third and mixed group of 333 patients the reaction was in most cases negative the exceptions being four cases of diabetes mellitus six of trauma with shock one of very recent apoplexy two of anal abscess two of inflammation of the mouth with inanition one of the vomiting of pregnancy and four cases of definite inanition associated with various non abdominal ailments The conclusion is drawn that the demonstration of acetonuria may be of considerable value in the diagnosis of acute appendicitis particularly on the first day when the factor of hunger has not yet come into play

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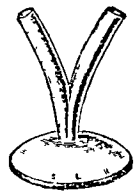
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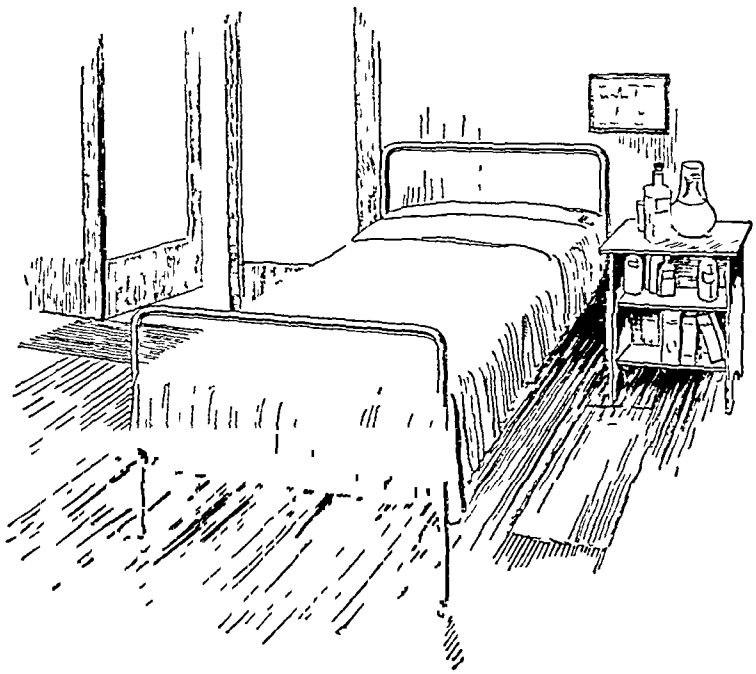
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Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit and vegetables are supplied to the Hospital from the farm, garden and orchards of Moulton Park. Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming, gardening and fruit growing.

BRYN-Y-NEUADD HALL

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres at Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for long period. The Hospital has its own private bathing house on the sea shore. There is trout fishing in the park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds, lawn tennis courts (grass and hard courts), croquet grounds, golf courses and bowling greens. Ladies and gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry, etc.

For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton) who can be seen in London by appointment.

HAYDOCK LODGE,

NEWTON-LE-WILLOWS, LANCASHIRE.

Floor 11 Ashton-in-Makerfield

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and ground of 400 acres. Self supported by its own farm and gardens, in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms, prospectus, etc., apply MEDICAL SUPERINTENDENT.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

Telephone 6411. *For terms, etc., apply to the Medical Superintendent.*

TYKEFORD ABBEY, NEWPORT PAGNELL,

BUCKS

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The House is a Mansion of Historical interest, standing in 9 acres of garden and ground and is situated 2½ miles from Northampton and 12 miles from Bedford on the main London to Northampton Road, 61 miles from London. Public buses are accommodated. Psychotherapeutic treatment is used extensively in suitable cases. Radiant Heat, Violet and Ultra Violet Light, Diathermy and Loam Baths. Billiard tables, etc. Fees from five guineas per week.

Apply Dr. D. E. M. DOUGLAS MORRIS. Telephone Newport Pagnell 121.

COURT HALL, KENTON, EXETER,

SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Diseases. Limited to eight patients. Telephone Starcross 19

CLIFFDEN, TEIGNMOUTH, in connection with Court Hall for early and convalescent cases. Cliffden is a large well-appointed house with lovely views of the South Devon Coast. It is beautifully situated in grounds of 19 acres. The gardens are very attractive and there is a private path to the sea.

Resident Physicians PERCIVAL MILES, M.D., B.S. ANNIE S. MILES, M.R.C.S., L.R.C.P. *Telephone* Teignmouth 289

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Reg Tel Address Bethlem Beckenham *Telephone* Springpark 1180—1181

Station Eden Park (Southern Railway)

President LORD WAKEFIELD OF HYTHE C B E LL D
Treasurer SIR LIONEL FAUDEL PHILLIPS Bart
Physician Supt J G PORTER PHILLIPS M D F R C P

This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm grounds
Applications can be considered on behalf of patients of the educated classes in a presumably curable condition
With a view to early treatment voluntary or uncertified patients are admitted
Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise
The Committee will also consider applications for admission at lower rates and in certain cases will be prepared to admit patients free of charge
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this Unit is found the X ray and Dental Departments and the Bio-Chemical Pathological and Psychological Laboratories
Furthermore provision is made for Electro-Therapy and Hydro Therapy to be carried out in all their forms
In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms
For forms and further particulars apply to the Physician Superintendent at the Hospital

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor Salisbury Telephone 51

PECKHAM HOUSE, 112, Peckham Road, London, S E 15

Telegrams ' Alleviated, London Telephone Rodney 4741-4742

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover, to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis courts Entertainments dances and indoor amusements held throughout the year
Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0883

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated, facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

Convalescent Home **Kearsney Court Dover** For further particulars apply to the **Medical Superintendent**

CAMBERWELL HOUSE, 33, Peckham Road, London, S E.5.

Telegrams PSYCHOLIA LONDON FOR THE TREATMENT OF MENTAL DISORDERS *Telephone* RODNEY 4731—4732.

Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Bowls Croquet Squash Racquets and all indoor amusements including Wireless and other Concerts Occupational Therapy Physical Drill and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr Hubert James Norman, assisted by three Medical Officers also resident and visiting Consultants An illustrated Prospectus may be obtained upon application to the Secretary

HOVE VILLA BRIGHTON—CONVALESCENT BRANCH OF THE ABOVE

THE LAWN, LINCOLN.

This Registered Hospital situated in large grounds near the Cathedral receives VOLUNTARY and PRIVATE PATIENTS of both sexes Nervous Disorders conditions in Psychotherapy in

All particulars may be obtained from the Resident Medical Superintendent
Dr MARY R BARKAS M D D P M

STRETTON HOUSE,

Church Stretton Shropshire

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness including the allied disorders of Alcoholism and the Drug Habit All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act 1930 Bracing Hill country See *Medical Directory* p 2138 —Apply to Medical Superintendent Phone 10 P O Church Stretton

CHEADLE ROYAL,

CHEADLE CHESHIRE

This Registered Hospital for MENTAL DISEASES with the seaside branch Glan y Don Colwyn Bay is for the treatment and care of PRIVATE PATIENTS of the UPPER and MIDDLE CLASSES Voluntary Temporary and Certified Patients received
For terms etc apply to the Medical Superintendent J V C ROY M B who may also be seen in Manchester by appointment
Telephone 2231 CATLEY

THE GRANGE,

near ROTHERHAM

A HOUSE Licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorders Both certified and voluntary patients received Approved for Temporary Patient This is a large country house with beautiful grounds and park five miles from Sheffield Station Grange Lane L & N E Railway Sheffield Telephone No 40030 Ecclesfield Resident Physician GILBERT E MOULD L R C P M R C S

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Fees 3 guineas weekly
Particulars from the MEDICAL SUPT

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Voluntary Boarders received in the Villas. Large Mansion on out skirts of Bath with 20 acres of grounds (see *Medical Directory* page 2134)
For terms apply S J GILPILLAT O B E M B C M Edin Resident Physician
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REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle formerly from 17 guineas a week have been reduced to from 15 guineas a week

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The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

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A NURSING HOME for the treatment of EARLY MENTAL CONDITIONS in BOTH SEXES, twelve miles from Marble Arch Resident Medical Officer, visiting Pathologist, Occupational and Psychotherapeutic treatment Fees 5 to 12 guineas

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PENMAENMAWR

Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine clad hills with sea and mountain views Modern treatment including SANOCRYSIN ARTIFICIAL PNEUMOTHORAX etc X ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L M S Main Line to Holyhead 4¼ hours from London Resident Physicians Dennison Pickering, M D (Cantab) J A Hennesey, M B Ch B Matron Miss S A Eddy, S R N Late Sister in Charge, Royal Hospital Annexe Sheffield

For particulars apply to the Secretary, Pendyffryn Hall Penmaenmawr N Wales (Phone 20)

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Full day and night Nursing Staff

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MEDICAL SUPT FELIX SAVY M D For particulars apply to the Secretary

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This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES It is situated in the midst of a large area of parkland at a height of 400 feet above sea level on the south west slopes of mountains rising to over 1500 feet which protect it from north and east winds and provide many miles of graduated walks with magnificent views Average rainfall 29 57 per annum Full day and night nursing staffs X ray plant Every facility for Artificial Pneumothorax and for operations on the chest Electric lighting Central heating Home farm Clean milk from T T Herd For particulars apply to Medical Superintendent H Morriston Davies M D M Ch Cantab F R C S Llanbedr Hall Ruthin N Wales

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Among the Pine-clad Border Hills.
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BOTH MEDICAL and SURGICAL CASES.

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Resident Physician, J. W. JOHNSTON SMYTH, M.D.
Physicians, L. T. POPE HUTCHINSON, M.D.

Tel. Telegrams Haynes Brentwood 45

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Qualified medical practitioners and registered students may join at any time For particulars apply to the Dresser Secretary at the Hospital

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MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complication Monthly or Fortnightly Courses

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Final 174

M R C P (Lond), 1914 31 **199**

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The appointments will become vacant on May 1st Gentlemen (unmarried) are invited to send in their applications with copies of three testimonials to the undersigned not later than first post on Friday April 15th Salary of each at the rate of £150 per annum with board and residence Candidates who have held a responsible Resident Hospital appointment are preferred The appointments are for a period of six months

JAMES A HAMLIN Secretary

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Applications invited for undermentioned positions

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 4a) County Hall Westminster Bridge S E 1 returnable by April 1st Canvassing disqualifies Further inquiries should be addressed to Medical Superintendents at the Hospitals

For appointments (1) and (2) the duties which are of a general nature are assigned by the Medical Superintendent and include necessary assistance at other establishment under the control of the Council Board lodging and washing are provided Candidates must be qualified Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for six months

The salaries and value of emoluments are subject to temporary reduction

(1) RESIDENT [illegible] CAL OFFICER (
CITY OF Bow Road E 3
HACKNEY HOSPITAL High Street Homerton E 9
MILE END HOSPITAL Bancroft Road Mile End E 1
PADDINGTON HOSPITAL Harrow Road W 9
QUEEN MARY'S HOSPITAL [illegible]leup kent
ST [illegible] HOSPITAL Rain
ST [illegible] Marloes Road Kensington W 8
ST NICHOLAS HOSPITAL Plumstead S E 18

One form of application only required for the vacancies and successful candidates will be allocated in accordance with the requirement of the service Consideration will however be given to any preference which candidates may express Appointments are for one year only

(2) RESIDENT ASSISTANT MEDICAL OFFICER (men only) at HAMMERSMITH HOSPITAL Ducane Road W 12 Salary £350 rising annually by £25 to £425 a year Experience in obstetrics and children's diseases is desirable

(3) VISITING MEDICAL OFFICER at Edmonton Colony for Sane Male Epileptic Silver Street Edmonton N Salary £200 a year for an average of one hour's visit daily and emergency visits

MEDICAL CORRESPONDENCE COLLEGE

19 WELBECK ST LONDON W 1 Tel Welbeck 8301

PROVIDES HIGHLY SUCCESSFUL ORAL AND POSTAL COACHING FOR ALL MEDICAL EXAMINATIONS

Special Preparations for all Surgical Qualifications

F R C S ENGLAND (Primary & Final) **M C CANTAB M S LONDON**

F R C S EDINBURGH

And all other Surgical Degrees and Diplomas

¶ The remarkable success of Students of the Medical Correspondence College at the higher Surgical Examinations is specially noteworthy

¶ Both at the Primary and Final F R C S England the majority of our Students are successful at the first attempt and Candidates who have failed at these Examinations on several previous occasions get through without difficulty after going through our courses

¶ The Surgical Tutors of the College all hold either the M S Lond or F R C S England or both and are highly experienced teachers

¶ The Postal Courses are thoroughly clear concise and up to date and the test questions are carefully selected from those set at previous Examinations so as to embrace all parts of the subject By working systematically through the Course the Student is brought up to the examination standard in the minimum time and much unnecessary reading is saved

VALUABLE BOOK

How to Pass the F R C S — *free on application to the Secretary*

STANNINGTON CHILDREN'S SANATORIUM CLIFTON MORPETH NORTHUMBERLAND (308 Beds—Pulmonary and Non Pulmonary Tuberculosis)

RESIDENT ASSISTANT MEDICAL OFFICER (Lady)

Applications are invited from fully qualified women for the post of Assistant Medical Officer at the above Sanatorium for Children Previous Resident appointments in General and Children's Hospitals essential Candidates should have had some Orthopaedic training knowledge of X ray work and experience in Pneumothorax Treatment would be a recommendation Salary £300 per annum with board residence and laundry The successful candidate will be required to commence duties on May [illegible] st particulars [illegible]ed by copies [illegible] r than April 140

Sidney

EVELINA HOSPITAL FOR CHILDREN Southwark S E 1

Applications are invited for the post of HOUSE SURGEON (male) for six months from April 12th (first two months in the Casualty and Out patient Department) Salary at the rate of £120 per annum with board and residence

Applications stating age experience and qualifications accompanied by copies of four testimonials to be sent at once to the undersigned from whom rules and other particulars can be obtained

By Order of the Committee of Management

W H SIDNELL Secretary Supt

March 7th 1932

HOUNSLOW HOSPITAL Staines Road HOUNSLOW MIDDLESEX (70 Bed)

Wanted May 1st SENIOR and JUNIOR HOUSE SURGEONS (male) Salary £150 and £100 per annum respectively with board residence, etc The appointment will be for six months but the Junior will be eligible for appointment as Senior after six months

Applications stating age experience qualifications etc and enclosing copies of testimonials should be sent by April 5th (marked House Surgeon top left hand of envelope) to W F LOSS Secretary Hounslow Hospital Hounslow

ROYAL NAVAL MEDICAL SERVICE.

VACANCIES EXIST FOR MEDICAL OFFICERS IN THE ROYAL NAVY.

Candidates will be entered as Short Service Medical Officers and will be considered for transfer to the Permanent Service after 6 months' service They must be registered under the Medical Acts, and be under 30 years of age on date of entry

Medical Officers, R N, are liable to serve in Naval Hospitals or Ships in any part of the world

Excellent opportunities exist for Clinical professional work, both Medical and Surgical, as well as for study and practice of Hygiene, Pathology, Ophthalmology, and other specialist branches

Adequate provision is made for Post-Graduate Study

OUTFIT ALLOWANCE of £50 is paid on joining

PAY —Pay from approximately £430 to £2,070 a year, according to length of service

ALLOWANCES —When in charge of Hospitals and Sick Quarters, 10s and 5s a day
60 Specialists' Allowances of 5s a day
Flag Allowances, 5s and 2s 6d a day
Provisional Allowance, Lodging Allowance, etc.

PROMOTION —To Surgeon Lieutenant Commander after 6 years' service, to Surgeon Commander after a total of 12 years' service Promotion to Surgeon Captain, Surgeon Rear-Admiral, and Surgeon Vice-Admiral is by selection

Ante date of seniority on account of civil hospital appointments and accelerated promotion can be gained

RETIREMENT —Gratuities are paid as follows —

Short Service Officers, after 3 years' service -	£300
Permanent Officers, after 4 years' service - -	£500
" " " 8 years' service - -	£1,000
" " " 12 years' service - -	£1,500
" " " 16 years' service - -	£2,250

Rates of Pension range from approximately £535 a year, normally earned after about 25 years' service, to £1,064 a year, the maximum earned by a Surgeon Vice-Admiral

Copies of the Regulations and Particulars as to Conditions of Service and Emoluments may be obtained on written or personal application to the Medical Director-General of the Navy, Admiralty, Whitehall, London, S W 1.

JOHANNESBURG HOSPITAL SOUTH AFRICA

APPOINTMENT OF WHOLE TIME RADIOLOGIST

Applications are invited from qualified Medical Practitioners registrable in the Union of South Africa for the post of Whole time Radiologist to the Johannesburg Hospital

Salary £1 500 per annum rising by annual increments of £60 to £1 620 per annum

Duties to commence August 1st

The successful applicant will be required to sign a contract of service for a period of three years

Full particulars of the duties of the post and conditions of service may be obtained from the Medical Secretary of the British Medical Association British Medical Association House Tavistock Square London W C 1

Applicants should state their age qualifications and experience and forward copies of three recent testimonials

Applicants are requested to send a duplicate copy of their application to the High Commissioner for South Africa London

Applications marked on the outside Whole time Radiologist to reach the undersigned not later than May 25th

Johannesburg, South Africa
February 19th 1932

A H LOUW
Superintendent

CITY OF MANCHESTER

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Public Health Committee invites applications for the position of Assistant Tuberculosis Officer at a commencing basic salary of £650 per annum rising by annual increments of £25 to £750 per annum The salary is subject to a temporary deduction (£29 10s on £650)

Candidates must be fully qualified Medical Practitioners having special knowledge of Medical and Surgical Tuberculosis Candidates should state whether they possess the Diploma of Public Health

Applications stating age qualifications and experience with copies of not more than three recent testimonials and endorsed on the envelope Assistant Tuberculosis Officer must be addressed to the Town Clerk only and not to members of the Committee or Council and must be received by him not later than April 8th

The gentlemen appointed will be under the administrative control of the Medical Officer of Health and the immediate control of the Senior Tuberculosis Officer He will be required to devote the whole of his time to the duties of his position to execute the Deed of Service and to contribute to the Corporation Superannuation Fund

Canvassing in any form direct or indirect oral or written is prohibited

By Order
Town Hall, Manchester
March 1932

T E WALBRECK HOWELL
Town Clerk

COUNTY BOROUGH OF BRIGHTON

SANATORIUM AND INFECTIOUS DISEASE HOSPITAL

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER Salary £150 per annum with board and lodging The appointment is for a period of six months

Particulars and forms of application can be had from the undersigned

Latest date for application April 4th

Brighton, March 14th 1932

JAS H ROTHWELL
Town Clerk

CARDIFF ROYAL INFIRMARY

(Associated with Welsh National School of Medicine)
No of Available Beds—490

Applications are invited for the post of RESIDENT REGISTRAR

The post is tenable for a year with a possible extension to two years Salary at the rate of £100 per annum with board and lodging

Form of application can be obtained from the undersigned and should be returned with copies of three recent testimonial on or before April 4th

March 21st 1932

R ARMSTRONG
Medical Supt

ROYAL LANCASTER INFIRMARY LANCASTER

Want 1 end of April Two RESIDENT HOUSE SURGEONS (Senior £175—Junior £130 p a with board and laundry) Male British

Application stating age and previous experience together with copies of testimonials to be sent not later than April 16th to Secretary Medical Committee

SOUTHEND ON SEA NEW GENERAL (VOLUNTARY) HOSPITAL (221 Beds) TO BE OPENED IN JUNE 1932

Applications are invited for the post of PATHOLOGIST The successful candidate will be required to devote the whole of his time to the Hospital but will be allowed to undertake private work in the Hospital Laboratory on terms as set out in the regulations Salary £500 per annum

Applications are invited for the post of RADIOLOGIST The successful candidate will be required to devote the whole of his time to the Hospital but will be allowed to undertake private work with the Hospital apparatus on terms as set out in the regulations Salary £500 per annum

Applications are invited for the post of RESIDENT MEDICAL OFFICER Salary £400 The successful candidate must be under 40 year of age and unmarried and devote his whole time to the Hospital Preference will be given to an applicant holding the higher qualifications Previous residential hospital experience and experience in administrative Hospital work essential

Applications are invited for the post of PHARMACIST The successful candidate will be required to devote the whole of his time to the Hospital

Salary £350 to £375 per annum according to experience rising to £400 per annum

Application forms with regulations governing the appointment may be obtained on application and must be returned to the Secretary on or before April 10th

SOUTHEND ON SEA NEW GENERAL (VOLUNTARY) HOSPITAL (221 Bed) TO BE OPENED IN JUNE 1932

Application are invited for the following honorary posts

ONE SURGEON Candidates must be F R C S (Eng)
ONE OR MORE PHYSICIANS Candidate must be F R C P (Lond) or M R C P (Lond)
ONE OR MORE GYNAECOLOGICAL AND OBSTETRIC SURGEONS Candidates must be F R C S (Eng) M R C P (Lond) or M D (Lond) (Ol
ONE X RAY
ONE X RAY
ONE OR MORE ANAESTHETISTS
ONE DERMATOLOGIST Candidates must be F R C P (Lond) or M P C P (Lond)

Application forms with regulations governing the appointments may be obtained on application stating the appointment desired and must be returned to the Secretary on or before April 10th

MILLER GENERAL HOSPITAL Greenwich Road S E 10

ASSISTANT SURGEON TO THE GENITO URINARY DEPARTMENT

Applications are invited for the post of Honorary Assistant Surgeon to the Genito Urinary Department Candidates must be Fellows of the Royal College of Surgeons of England They must not be engaged in general practice The duties will be to see both in and out patients

Candidates will be expected to call upon the members of the Honorary Medical and Surgical Staff a list of whom can be obtained from the Secretary

An honorarium of 20 guineas per annum is allowed towards travelling expenses

Applications which must be printed or type written together with copies of not more than three recent testimonials should be sent to the Chairman of the Hospital as soon as possible

March 21st 1932

EAST SUFFOLK AND IPSWICH HOSPITAL IPSWICH (265 Beds—7 Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN Salary at the rate of £120 per annum Board residence and laundry

Applications from British (male) candidates stating age qualifications and experience and accompanied by three recent testimonials to be sent to the undersigned

The Hospital, Ipswich
ARTHUR GRIFFITHS
Secretary

BOOTLE GENERAL HOSPITAL Derby Road BOOTLE near LIVERPOOL

APPOINTMENT OF HONORARY LARYNGOLOGIST AND AURIST

Applications are invited for the above vacancy Candidates are requested to send particulars of their qualifications and experience accompanied by testimonials addressed to the Chairman not later than April 9th

J A BEARDSALL
Secretary Superintendent

WESTERN OPHTHALMIC HOSPITAL Marylebone Road London N W 1

Applications are invited for the post of SENIOR RESIDENT and JUNIOR NON RESIDENT HOUSE SURGEON

The salaries are at the rate of £150 and £100 per annum respectively and the appointments are for six months Some previous Ophthalmic experience is required The selected candidates will be required to take up duty on May 1st

Application accompanied by copies of three testimonials should reach me by April 6th and candidate should be prepared to attend before the Medical Committee on April 8th at 5 p m

Candidates should state in their application whether they are prepared to accept either post

H W BURLEIGH
Honorary Secretary

LIVERPOOL HAHNEMANN HOSPITAL HOPE STREET (52 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Hospital which falls vacant on April 17th next Only one R M O kept

Duties include occasional anaesthetic and assisting at operations general ophthalmic gynaecological and aural

Appointment is for six months renewable Salary at the rate of £100 per annum

Knowledge of Homoeopathy desirable but not essential

Apply stating age sex nationality and previous experience and enclosing copies of testimonial to the Registrar before April 11th

ROYAL FREE HOSPITAL Gray's Inn Road W C 1

Applications are invited from duly qualified Medical Women for the post of RESIDENT CASUALTY OFFICER Previous experience as Hospital Resident essential Salary £150 per annum Intending candidates should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before April 9th

The appointment is tenable for six months from May 1st

RECINALD R GARRATT
Secretary

HOSPITAL OF ST JOHN AND ST ELIZABETH 60 Grove End Road N W 8

Applications are invited for the post of RESIDENT HOUSE SURGEON (male) The appointment will be for six months from May 1st Salary at the rate of £75 per annum with full board Applications together with copies of three testimonials should reach the undersigned on or before March 31st

F DUDLEY HOBBS B A
Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of SURGICAL REGISTRAR which will become vacant on May 1st Candidates must be Graduates in Surgery of a University of the United Kingdom or Fellows of the Royal College of Surgeons Honorarium 40 guineas

Applications accompanied by not more than three testimonials to be addressed to the Secretary by April 7th

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN

The Directors of this Hospital will meet on Wednesday April 13th to elect an ASSISTANT PHYSICIAN to the Institution Letters of application accompanied by not more than four testimonials should be lodged with Messrs HENRY & SCOTT W S 56 Frederick Street Edinburgh on or before March 21st

By Order of the Directors
HENRY & SCOTT W S Hon Secs

ALTRINCHAM GENERAL HOSPITAL (100 Beds)

Application are invited for the post of JUNIOR HOUSE SURGEON (male) Salary at the rate of £120 per annum with board residence and laundry The appointment is for six months in the first instance

Applications stating age and experience together with copies of recent testimonial to be sent by April 5th to Secretary General Hospital Altrincham

BURTON ON TRENT GENERAL INFIRMARY

Applications are invited for the post of JUNIOR HOUSE SURGEON (male) Salary at the rate of £120 per annum with board residence and laundry

Applications giving age and qualifications together with copies of testimonials to be sent to—

E W THORNLEY Secretary

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House, Tavistock Square W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District
GENERAL POST OFFICE. *(Assistant Medical Officer—Woman)*	**CONTRACT PRACTICE** *(contd)*	**PUBLIC HEALTH**
CONTRACT PRACTICE	HARDY GLAMORGAN *(Workmen's Medical Scheme)*	DEVON COUNTY COUNCIL *(School Medical Inspector—Male)*
EBBW VALE MON *(Workmen's Medical Society)*	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE. *(Medical Practitioner)*	FLINTSHIRE COUNTY COUNCIL *(Assistant Medical Officer of Health and Tuberculosis Officer)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE *(Workmen's Medical Scheme)*	NORTH OXFORDSHIRE UNITED DISTRICTS JOINT COMMITTEE *(Medical Officer of Health)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	NEATH AND DISTRICT *(Medical Aid Association)*	STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS *(Tuberculosis Officer)*
LLWYNYPIA CLYDACH VALE TENNCLAIG GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE MON *(Medical Officer for Medical Aid Association*	
	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House, Tavistock Square, W C 1

Town or District	Hon Sec of Division or Branch	Town or District.	Hon Sec of Division or Branch	Town or District.	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr J G HUNTER *(Medical Secretary New South Wales Branch)* 135 Macquarie St Sydney N S W	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr G F V ANSON *(Hon Sec New Zealand Branch)* British Medical Association P O Box 156 Wellington New Zealand
VICTORIA. *(All Institute or Medical Dispensaries)*	Dr J P MAJOR *(Hon Sec Victorian Branch)* British Medical Association Medical Society Hall East Melbourne Victoria.			WESTERN AUSTRALIA *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St Georges Terr Perth Western Australia.

March 23rd 1932 By Order of the Council WILFRID COX Medical Secretary

THE LONDON LOCK HOSPITAL 91 Dean Street London W 1

The Board of Management invite applications for the post of HOUSE SURGEON at the Male Lock Hospital

Candidate must be doubly qualified and duly registered The appointment is at the rate of £175 per annum with furnished rooms full board and laundry The appointment is for six months Duties to commence April 9th

Application enclosing copies (only) of three recent testimonials to be sent to the undersigned on or before 10 a m March 29th

By Order of the Board
H V J EASON
March 7th 1932 Secretary

PRINCE OF WALES HOSPITAL FOR LIMBLESS AND CRIPPLED CARDIFF (CARDIFF AND CROSSWAYS—135 Beds)

A LOCUM TENENS for the Resident Surgeon will be required for twelve weeks from April 20th It is desirable that applicants shall have had experience as a Resident in an Orthopaedic Hospital The remuneration will be Four Guineas a week

Application stating age qualifications and experience accompanied by copies of two recent testimonials should be sent to the Secretary Mr GILBERT D SHEPHERD F C A by March 31st

ROCHDALE INFIRMARY AND DISPENSARY (110 Bed)

The Board of Management invite applications for the appointment of JUNIOR HOUSE SURGEON The salary attached to the appointment is £200 p a including board residence and laundry

Application stating age nationality etc together with copies of three recent testimonial to be sent to the Secretary endorsed House Surgeon Particulars of duties and conditions of appointment may be had on application to the Secretary

Infirmary Office W WYNNE
Rochdale Lancs Secretary

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL MAIDSTONE (110 Bed)

Applications are invited for the post of HOUSE SURGEON (male) to the Ear Nose and Throat Department which post will become vacant on April 14th Candidates must be duly qualified and registered Medical Practitioners single and of British birth and nationality and should have had some experience in the treatment of diseases of the Ear Nose and Throat The Hospital is recognized by the Examining Board for the D L O The appointment will be for six months but may be renewed for a second six months Salary at the rate of £200 per annum with board residence and washing

Applications stating age together with copies of not more than three testimonial should be sent to the under signed

JOHN W STRICKLAND Secretary

ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER (158 Beds)

HOUSE PHYSICIAN

Applications are invited from fully qualified men for the above post to take up duties at an early date Six months appointment Salary £125 per annum with board residence and laundry Candidates who must be of British nationality to make application at once to the undersigned enclosing copies of three testimonial

HERBERT MASLEN Secretary

ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER (158 Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post to take up duties at an early date Six months appointment Salary £125 per annum with board residence and laundry Candidates who must be of British nationality to make application at once to the undersigned enclosing copies of three testimonials

HERBERT MASLEN Secretary

WEST LONDON HOSPITAL, Hammersmith Road W 6 (234 Bed)

Applications are invited for the post of HONORARY MEDICAL RADIOLOGIST (Diagnosis) Candidates must be duly qualified Medical Practitioner and have had experience of Radiological work especially X ray Diagnosis The successful candidate will have full control of and be fully responsible for his Department in all matters relating to X ray Diagnosis

Applications accompanied by copies of testimonial should reach me not later than Wednesday April 6th Candidates must attend a Meeting of the Medical Council on Friday April 8th at 4 30 p m and prior to that date call upon and send copies of application and testimonials to each Member thereof They must not canvass Members of the Board of Management but nevertheless must send copies of application and testimonials to each Member thereof and be in attendance at a Meeting of the Board at 6 p m on Tuesday April 12th when the election will be made

H A MADGE Secretary

FREEMASONS HOSPITAL AND NURSING HOME 237 Fulham Road Chelsea S W 3

A vacancy exists for the position of a SURGEON DENTIST to the Freemasons Hospital and Nursing Home an Institution primarily for nursing patients of limited means Applicants should be Licentiates in Dental Surgery of the Royal College of Surgeons England and a Medical qualification is advisable Further information will be given on application to the Joint Honorary Secretaries of the Hospital

LOWESTOFT AND NORTH SUFFOLK HOSPITAL

TWO HOUSE SURGEONS (men or women) required Commencing salary £120 per annum with board residence and laundry

Application together with copies of three recent testimonials to be sent to the Honorary Medical Superintendent

(Appointments continued on p 42)

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
Telegrams ARTICULATE WESTCENT LONDON
Telephone MUSEUM 9861 (4 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) 9s
Each Additional Line, 1s 6d

(a line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

WANTED—AN INDOOR LADY ASSISTANT for a *general partnership Practice in* pleasant town near London (dispenser kept) Newly qualified might suit Interview usual bond State height age and other essential particulars—Address No 1714 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP (OUTDOOR) London or suburbs by gentleman M R C S L R C P single 28 H S H P expert G P 3 yrs now Good refs Own car—Address No 1738 B M A House Tavistock Square W C 1

WANTED—ASSISTANT SINGLE OUTDOOR for Liverpool Good salary and comfort able accommodation for suitable and energetic man Dispenser kept — Apply A c/o MESSRS R SUMNER & CO LTD Manufacturing Chemists 40 Hanover Street Liverpool

WANTED—ASSISTANTSHIP BY WOMAN M B B Ch (B H 1928) experienced hospital and general practice Used ob stetric drive car Aged 27 Free end of April —Address No 1734 B M A House Tavistock Square W C 1

WANTED — INDOOR MALE ASSISTANT British or Irish small country town salary £300 to £350 according to experience own car preferable but not essential age photo etc—Address No 1711 B M A House Tavistock Square W C 1

WANTED—OUTDOOR ASSISTANT FOR quiet Country Practice North of England Work is very light consequently only small salary offered Applicant should be able to drive car and have good recent testimonials—No 1726 B M A House Tavistock Sq W C 1

WANTED—ASSISTANT EXPERIENCED IN panel and private Practice N E Coast industrial area References required Salary £300 indoor £400 outdoor — Address No 1731 B M A House Tavistock Square W C 1

WANTED A YOUNG INDOOR ASSISTANT in an Industrial Practice near Newcastle on Tyne State age nationality and any other particular Salary £300 p a — Address No 1708 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WANTED SECOND WEEK APPOINTMENT male ASSISTANT indoor Monmouthshire Motorist preferred Salary £300 per annum Dual bond—Address No 1733 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP BY AN Indian Doctor Moderate terms Free now Well received and experienced—Address No 1717 B M A House Tavistock Sq W C 1

INDOOR ASSISTANT WANTED WITHIN reach of West End to do Evening Surgeries £100 p a all found—Address No 1729 B M A House Tavistock Square W C 1

SHEFFIELD—WANTED MAY 1st MALE unmarried ASSISTANT Rooms board and attendance at branch surgery Car driver Usual bond Interview or photograph (return able) — Address No 1729 B M A House Tavistock Square W C 1

YORKS W R—WANTED MALE ASSISTANT English or Scotch with view to Partnership in private and panel Practice State full particulars age experience references etc—Address No 1728 B M A House Tavistock Square W C 1

LOCUMS

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4 ADAM ST Strand London W C 2
Teleg Epsomian Lond Phone Temple Bar 9011
After Office Hours Epsom 9142

M D ENGLISH SCOTCH WITH FIVE YEARS exper in general practice and 2 years in sanatoria will be free for *LOCUMS* shortly Assistantship with scope considered Own car—Address No 1722 B M A House Tavistock Square W C 1

PARTNERSHIPS

FOR DISPOSAL—OUTLYING SUBURB PARTNERSHIP Owner of a rapidly growing Practice established about 5 years and already returning at rate of £2 000 a year wants an active Partner to help him Panel over 600 Unlimited scope Choice of houses Personally known and recommended — Apply No 8995 PERCIVAL TURNER LTD 4 Adam St Adelphi Strand London W C 2

LANCS TOWN—PARTNERSHIP FOR DISposal in old established industrial Practice Half share Receipts over £3 500 Panel 3 400 Scope Chartered Accountants figures Modern house Partnership and book debts for disposal For further particulars Address No 1721 B M A House Tavistock Square W C 1

MIDLANDS — PARTNERSHIP IN LARGE first rate old established Practice in prosperous city Share worth £1 750 per annum for disposal Good house available Applicants must be experienced well qualified and over 30 Premium 2 years purchase—Address No 1707 B M A House Tavistock Square W C 1

PARTNERSHIP — INCREASING PRACTICE London suburb Receipts £2 500 average Panel 1 400 Excellent scope £1 000 share 2 years purchase increase to half later House for sale — Address No 1725 B M A House Tavistock Square W C 1

MEDICAL POSTS DISPENSERS etc

DISPENSERS SUPPLIED TO
DOCTORS and HOSPITALS
AT SHORT NOTICE WITHOUT FEE
Qualified and experienced in private and panel practice Permanent and part time Book keeper Dispensers Secretary Dispensers Nurse Dispensers Chauffeuse Dispensers and Receptionist
Write wire or phone Central 3679
The Reliance Bureau for Dispensers
12 Holborn Viaduct E C 1

WANTED—ASSISTANT MEDICAL OFFICER to commence duties on May 1st Salary £350 per annum Appointment limited to twelve months Application forms to be obtained from the Medical Superintendent Cheshire Joint Sanatorium Market Drayton Salop

AS RECEPTIONIST — YOUNG GENTLEwoman seek POST with Doctor or Dentist London (West End preferred) Knowledge of typing Nominal salary for experience—Address No 1719 B M A House Tavistock Sq W C 1

A LADY DISPENSER BOOKKEEPER supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Parl 0969) Secretary 7 Westbourne Park Road W 2

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W C 2

LADY DISPENSER AND BOOKKEEPER desires RE-ENGAGEMENT as LOCUM or permanent Fifteen years experience Good testimonial Disengaged now—Address MISS DANIEL 72 Gower Road Haywards Heath Sussex

LADY REQUIRES POST WITH DOCTOR as RECEPTIONIST SECRETARY Has had 14 years experience as chauffeuse clean licence and two years nursing Good reference —MISS E T PARTRIDGE 12 Burnham Court Queen's Road London W 2

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION 85 Eccleston Square S W 1 (Telephone Victoria 2722) supplies qualified Dispenser Bookkeepers Laboratory Assistants Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dental Clerk Orderlies Porters Caretakers etc without charge to prospective employers

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PRACTICES

WANTED A PRACTICE IN SCARBOROUGH by a doctor who has practised in West Riding of Yorkshire for 12 years and now aged 40 desires a complete change Health resorts not entertained and no partnership desired What is desired is a good middle class Panel Practice doing anything from £1 250 to £2 000 Capital available but present practice would have to be sold before new deal is completed—Address No 1715 B M A House Tavistock Square W C 1

WANTED — UNOPPOSED COUNTRY PRACTICE South Midlands preferred S or S W Counties considered Income £1 500 upwards Panel 950 to 1 500 and appointment Good house and large garden essential—Address No 1704 B M A House Tavistock Sq W C 1

WANTED — PRACTICE about £1 500 better London suburb or within 50 miles Convenient non basement house minimum 6 bedrooms garden and garage Good schools essential Simple Capital—Address No 1735 B M A House Tavistock Square W C 1

WANTED—A SMALL NUCLEUS PANEL Practice in London £200—£300 with living accommodation for a single person on instalment payment—Address No 1716 B M A House Tavistock Square W C 1

WANTED THIS SUMMER GENERAL AND Panel PRACTICE 1 500—2 000 Outlying suburb town near or seaside Good house with garden — Address No 1736 B M A House Tavistock Square W C 1

WANTED — PRACTICE IN NORTHERN Ireland Income about £700 town or city Panel essential R C—Address No 172 B M A House Tavistock Square W C 1

WANTED IN SCOTLAND MEDICAL PRACTICE Panel and private Capital immediately available—Address No 1730 B M A House Tavistock Square W C 1

WANTED — PANEL 500—1 000 SOUTH Coast Town Brighton Hove Preferred—Address No 1702 B M A House Tavistock Square W C 1

EAST COAST — OLD ESTAB COUNTRY PRACTICE Receipts over £1 700 includ ing panel 900 and remainder appointments £140 Educational and sporting facilities Ex cellent house built for doctor Large garden with orchard tennis lawn £3 000 1½ yrs purchase —No 1737 B M A House Tavistock Sq W C 1

FOR SALE—YORKSHIRE WEST RIDING IN dustrial district middle and working class PRACTICE In present hands 25 years Panel 1 500 Income £1 500 Good house available — Address No 1724 B M A House Tavistock Square W C 1

FOR SALE — AN OLD ESTABLISHED (Midlands) rural PRACTICE Good house 5 bedroom 2 attic 2 garages and garden Rent £50 Full particulars available Price £1 600 — Address No 1710 B M A House Tavistock Square W C 1

HOLIDAY EXCHANGE—LONDON (PECKHAM Park) Client would exchange Practice in July (last three weeks) with Doctor at Seaside Mixed Practice Visiting optional—Address No 1622 B M A House Tavistock Square W C 1

LONDON — FIRST CLASS GENERAL PRACTICE for Sale in best suburb non panel present hand 22 years fee 10/6 to 21/ average £2 200 p a Excellent house (Doctor's house for 50 years) freehold Premium 2 years purchase — Address No 1604 B M A House Tavistock Square W C 1

M B LONDON RETIRED COLONIAL MEDical Service desires General PRACTICE with panel leads £800—£900 country town House 3—4 bed garden garage rent or purchase Full particulars in confidence—Address No 1705 B M A House Tavistock Sq W C 1

NO PREMIUM—NUCLEUS ILFORD ESTAB lished 1 year Panel 50 Small appointment Receipts about £90 Excellent residence Original cost £2 000 accept £1 250 Freehold—Address No 1709 B M A House Tavistock Square W C 1

NEAR BOURNEMOUTH — NUCLEUS FOR sale in good residential and growing district about £300 including small panel scope 1 years purchase Good house and garden with tennis court Garage Can be bought or small house available—Address No 1732 B M A House Tavistock Square W C 1

SHEFFIELD — WANTED—PRACTICE WITH panel or Partner hip might be entertained Would act as Locum with view to purchase Cash available Full particulars in confidence —Address No 1720 B M A House Tavistock Square W C 1

SHROPSHIRE—PRIVATE AND PANEL (320) £370 p a Med Officer and Public Vaccinator (transferable) Could be doubled by energetic man Ven lor too old to do more House 2 reception 4 bed professional rooms bath hot and cold Good garden Garage Rent £54 — Address No 1618 B M A House Tavistock Square W C 1

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FREEHOLD HOUSE OF MEDICAL MAN FOR SALE very small Nucleus but no chance for this Good class suburban area rapidly developing splendid position and good prospects for man who could wait Would suit Medical Man going into semi retirement Workmen's and good fire House is modern and up to date in everything garage attached large garden Price for house £2 300 can this obtain big mortgage if required Vendor wishes to get away about August—Address No 1705 B M A House Tavistock Square W C 1

GOOD OPENINGS IN MARKET TOWN Hunts Suitable HOUSE for G P rent £80 Also residence in own grounds for Nursing Home Price £2 850—Address No 1713 B M A House Tavistock Square W C 1

HARLEY STREET (CLOSE) — LARGE BED ROOM well furnished 2 gns p w Also CONSULTING ROOM to Let large part time attendance waiting room £50 p a—Address No 100 B M A House Tavistock Sq W C 1

HARROGATE—DOCTOR'S HOUSE FOR SALE No 62 Leeds Road Modern (2 floor only) detached and pleasantly situated Just fully decorated Price £1 850 Generous mortgage guaranteed Keys next door—Apply C H LORD 19 Market St Bradford Phone 1672

REDUCED RENTAL FROM MARCH 25th —An excellent opportunity occurs of acquiring a large light and lately fitted CONSULTING ROOM in the best part of the medical area Low rent of £180 p a includes attendance doorplate and all services Suit any Specialist or Dental Surgeon Also part time ROOM with all facilities from £30 p a—Address No 1402 B M A House Tavistock Sq W C 1

SOUTHGATE N 14—IDEAL FOR NURSING HOME detached RESIDENCE near Tube Station 1½ acres of land 8 bedroom 3 reception dom stic and chauffeur's quarters Freehold £2 800—HUDSON & HORSLEY Chancery Side

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APPOINTMENTS—Contd

PRISON MEDICAL SERVICE

Applications are invited for the post of MEDICAL OFFICER CLASS II in the above service Salary £350 rising by £20 per annum to £600 with quarters or an allowance in lieu The pay is subject to a bonus which at present on a salary of £350 is £96 14 These posts are pensionable and there are prospects of promotion to higher rank

Candidates must be fully qualified and registered Preference will be given to those who have held House appointment have had experience in Lunacy and Psychological methods and are under the age of 30 Forms of application can be obtained from the Secretary Staff Branch Prison Commission Home Office London S W 1

ESSEX COUNTY HOSPITAL COLCHESTER
(160 Beds)

Wanted in May a HOUSE SURGEON (male) Salary £175 per annum with board washing and residence in the hospital Medical and Surgical qualifications required Applications with three recent testimonials to be sent by June 4th April 5th to—

ALFRED C BUCK Secretary

SAMARITAN FREE HOSPITAL FOR WOMEN
Marylebone Road N W 1

Applications are invited for the post of ANAESTHETIST to attend on Monday afternoons and Friday morning

Applications accompanied by copies only of three testimonials must reach the Secretary at the Hospital on or before Thursday March 31st

G H HAWKINS Secretary

THE ROYAL INFIRMARY SUNDERLAND (290 Beds)
Six Residents

Wanted immediately HOUSE SURGEON (male) Salary £140 per annum with board residence and laundry Applications stating age qualifications and accompanied by copies of testimonials to be sent to the undersigned

S C FRYERS
House Governor Secretary

THE ROYAL EYE AND EAR HOSPITAL BRADFORD

Wanted JUNIOR HOUSE SURGEON (male) Salary £150 with board residence and laundry Application stating qualifications age etc with copies of recent testimonials to be forwarded to the undersigned

I BRIGGS Secretary Superintendent

KING GEORGE HOSPITAL ILFORD
(8 miles from London)

Applications are invited for the appointment of CASUALTY HOUSE SURGEON (male) as from April 1st Salary £100 per annum with board residence etc Term six months with eligibility for a further period Applications should be sent at once to the Secretary

ROYAL VICTORIA HOSPITAL DOVER

Wanted RESIDENT MEDICAL OFFICER (resident unmarried) doubly qualified and registered Previous surgical experience essential Salary £180 a year and board lodging and laundry (=0 1 1)

Application to be received on or before Saturday April 2nd by the Hon Secretary Royal Victoria Hospital Dover on a form to be obtained from him

THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London W C 1

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on April 14th

Gentlemen are invited to send in their applications addressed to the Secretary before 12 o'clock on Monday April 4th with copies of not more than three testimonials given specially for the purpose and also evidence of their having held a responsible Hospital appointment

The appointments are made for six months Salaries at the rate of £100 per annum laundry allowance £5 board and residence in the Hospital

Candidates must be unmarried and possess a legal qualification to practice

All candidates must be in attendance to appear before the Joint Committee if required at their meeting on Wednesday April 6th at 5 p m precisely

Forms of application and copies of the Rules may be obtained from the Secretary

By Order of the Board of Management
JAMES McKAY
March 1932 Secretary

METROPOLITAN HOSPITAL
Kingsland Road E 8

There are vacancies for the following
(a) SENIOR HOUSE PHYSICIAN (male)
(b) SENIOR HOUSE SURGEON (male)
(c) JUNIOR HOUSE PHYSICIAN (male)
(d) JUNIOR HOUSE SURGEON (male)
(e) TWO CASUALTY OFFICERS (male)
salary £100 per annum

Appointments in the first place will be for a period of six months dating from May 1st

Candidates must possess registered Medical and Surgical qualification of the United Kingdom

Applications with copies of three recent testimonials and a certificate of ability to administer anaesthetics should be sent to the undersigned not later than first post on Thursday April 7th

None Member of the Resident Staff are candidates for the two Senior appointments

HERBERT F RUTHERFORD
Secretary & House Governor

CARDIFF ROYAL INFIRMARY
(Associated with Welsh National School of Medicine)
Number of available Beds—490

Applications are invited for the undermentioned posts

HOUSE PHYSICIAN
HOUSE SURGEON to Surgical Unit
HOUSE SURGEON to the Department of Obstetrics and Gynaecology

Salary is at the rate of £50 per annum with board and lodging Appointments are for six months commencing April 26th

Forms of application can be obtained from the undersigned and should be returned with copies of three recent testimonials on or before April 4th

R ARMSTRONG
March 18th 1932 Medical Supt

THE ROYAL DEVON & EXETER HOSPITAL EXETER (225 Beds)

APPOINTMENT OF HOUSE SURGEON TO SPECIAL DEPTS

Applications are invited from male qualified and registered candidates for this appointment vacant on April 1st next

Engagement for six months candidates being eligible for subsequent appointments

Salary at the rate of £150 per annum with board residence and laundry

Applications with copy testimonials should be sent to the undersigned as soon as possible

S S COLE
Secretary & Manager

ROYAL INFIRMARY BLACKBURN
(240 Bed—Five Residents)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum rising to £250 with board residence laundry etc To commence duties early in April

Applications with copies of testimonial stating age nationality experience etc to be sent at once to the undersigned

Royal Infirmary NATHAN A SMITH
Blackburn Gen Supt & Secretary

This Institution is recognised for the Surgical Practice required for the F R C S Final Examination

SOUTHEND ON SEA VICTORIA HOSPITAL
(95 Beds)

JUNIOR HOUSE SURGEON male required immediately Six months appointment Salary £150 per annum board residence and laundry

Apply stating age qualifications previous experience copies of three recent testimonials to the Secretary on or before March 31st

WORCESTER COUNTY AND CITY MENTAL HOSPITAL Powick near WORCESTER

SENIOR ASSISTANT MEDICAL OFFICER AND DEPUTY MEDICAL SUPERINTENDENT

The Committee of Visitors invite applications for the above appointment from duly qualified and registered Medical Practitioners Candidates must have had several years experience in Mental Hospital practice and be in possession of a Diploma in Psychological Medicine and should have held a resident appointment in a General Hospital

Commencing salary £600 per annum rising by four annual increments of £25 to £700 per annum together with partly furnished house and garden valued at £80 per annum for superannuation purposes The salary which includes the D P M will be subject to a temporary deduction of £28 15s per annum

The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909 and is determinable by three months notice on either side

Applications stating age experience and full particulars together with copies of three recent testimonials to be forwarded to the Medical Supt not later than April 6th

COUNTY BOROUGH OF BLACKPOOL

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and registered Medical Practitioners for the above appointment

The duties will consist mainly of work under the Tuberculosis and Venereal Diseases Schemes of the Blackpool Corporation and the applicants should have special experience in the diagnosis and treatment of these diseases

The salary offered is at the rate of £700 per annum rising by two annual increments of £50 to £800 per annum

Details of the conditions of appointment list of duties and a form of application may be obtained from the undersigned

Applications must be received by the undersigned not later than the first post on Monday April 11th

Canvassing of any description will be deemed a disqualification

D L HARBOTTLE LLB
Town Hall Town Clerk
Blackpool March 23rd 1932

GLOUCESTERSHIRE JOINT COMMITTEE FOR TUBERCULOSIS
STANDISH HOUSE SANATORIUM STONEHOUSE GLOS

Applications are invited from registered Medical Men for the post of JUNIOR ASSISTANT MEDICAL OFFICER at the above Institution No previous professional experience is necessary

There are at present 250 beds including men women and children There is an orthopaedic block

The salary is £250 per annum with board furnished apartments and laundry in addition subject to an economy deduction of combined salary and value of emoluments as follows

On the first £65 per annum nil
On the next £205 per annum 2½ per cent and 3½ per cent on the remainder

The appointment is for six months (with the possibility of extension for a further period of six months) and will be terminable within that period by two months notice on either side

Applications stating qualifications and age and accompanied by copies of three recent testimonials should be received not later than April 11th

Shire Hall F T CARDOM
Gloucester Clerk of the Joint
March 22nd 1932 Committee

DERBY CITY HOSPITAL

THIRD RESIDENT MEDICAL OFFICER

Applications are invited for the post of Third Resident Medical Officer (male) at the above Hospital of 300 beds for the treatment of General cases

Candidates must be registered in Medicine and in Surgery

The appointment is for a period of twelve months two months notice of resignation to be given

Salary at the rate of £200 per annum for the first six months then rising to £250 with board and residence subject to temporary economy deduction in force

Applications stating age experience and accompanied by three recent testimonials should be sent not later than Wednesday April 6th to the undermentioned

COLDON LIHCO
Medical Officer of Health
Public Health Department
Ford Street Derby

ROYAL MINERAL WATER HOSPITAL BATH

Notice is hereby given that a vacancy in the office of REGISTRAR AND SECRETARY to this Hospital (non-medical and *non-resident*) will be filled at a General Court of the President and Governor to be held at the Hospital

Candidates are requested to send in their applications in their own handwriting (stating age qualification and previous hospital experience if any) with their testimonials not later than Thursday March 31st for the consideration of the Committee

Salary £250 per annum

Rules and regulations relating to the office may be obtained at the Hospital

Application to be addressed to the President Royal Mineral Water Hospital Bath

March 10th 1932

ROYAL VICTORIA AND WEST HANTS HOSPITAL BOURNEMOUTH

HOUSE SURGEON (male British nationality) required to commence duty the first week in April Salary £150 per annum with board lodging and washing The appointment is tenable for six months and candidates must be registered according to the provisions of the Medical Act Application stating place of birth with copies of three testimonials to be sent immediately to the undersigned

Women and married men are ineligible

GORDON M SALT

March 10th 1932 Secretary

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS

Victoria Park E.2

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A vacancy for a HOUSE PHYSICIAN (male) will occur on May 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Applications with copies of three testimonials should be sent to the undersigned on or before Friday April 15th

GEORGE WATTS Secretary

Telephone WELBECK 2728
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The small advertisements section provides a *forum* for the 'domestic business of the profession and those wishing to arrange the Sale or Purchase of Practices requiring Assistants or Assistancies and Partners or Partnerships may in these pages reach thousands of their fellow medical men at very economical cost Such transactions may, in addition be protected by the secrecy which the free Box Number service provides

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2 SOMERSET —Old established Country PRACTICE Receipts average £750 to £800 a year (last year £800) panel 450 Charming Bungalow residence 3 bedroom etc and separate Surgery attached Garage and large garden Rent £35 a year long lease Splendid opening Premium £1 050

3 LONDON W —*Well-established* PRACTICE Receipts nearly £1 700 a year with panel 655 Flat and Surgery premises available Reasonable offer considered

4 LONDON N (10 mins Finsbury Park)—Well-established Cash and Panel PRACTICE Rec £1 000 a yr panel 650 Nice house on Prem for quick sale £1 000

5 LONDON N (near St Pancras) — Well established Cash and Panel PRACTICE Receipts last year £406 panel 350 Rent of Surgery £1 weekly inclusive Premium £550 including drugs and furniture

6 Nice Seaside Town 60 miles from London —Old-established PRACTICE Receipts average nearly £1 000 p a including panel Nice house to be sold with Practice Combined price £2 900

7 LONDON S W (7 mins Kennington)—Old-established Practice Receipts average £800 a year including panel 650 Nice large house on long lease rent £3 per week Prem £1 400 Practice steadily increasing

8 HEREFORDSHIRE — Old established Country PRACTICE Receipts average £1 04- p a *panel nearly* 600 Nice house in ground rent £65 p a Prem 1½ yrs purch

9 LONDON N (10 mins Holloway)—Well established mixed class PRACTICE. Receipts average £650 p a panel over 300 Nice corner house rent £120 long lease For quick sale £750 premium will be accepted

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LONDON N F —Borders of Essex —PARTNERSHIP in middle class G P Suitable house to rent Receipts average £3 500 p a Panel 4 500 Premium for 3 8 share with view to 1 2 £2 850 cash

LONDON E —Mixed suburban G P —Medium sized corner house Receipts nearly £800 Panel approx 1 000 Increasing scope Premium £1 340 for Practice leasehold house £900 or near offer

LONDON S E — PRACTICE in growing locality with excellent scope Small house to rent at £50 p a Receipts approx £600 Panel 730 Prem £900

LONDON W —Within 20 minutes of West End PARTNERSHIP in suburban middle class G P situated in rapidly developing locality Excellent scope for young and energetic man Panel approx 2 000 Receipts £2 500—£2 600 Premium for one third share 2 years pur

LON[illegible] middle and ceipts over ope for in Premium for 2 5ths share 2 years purchase with view to larger share

LONDON S E —Lady Doctors PRACTICE situated in busy working class locality Flat available at low rental Receipts approx £350 Panel 160 Fees 2s 6d up Premium £350 or near offer

DURHAM —Middle class and industrial PRACTICE Average receipts approx £500 Panel 370 Medium sized house Branch surgery Fees 2/6 up No appointments Prem £725 or offer Excel scope

WEST END Harley Street locality —NUCLEUS good class non dispensing Practice Excellent leasehold house Receipts £500 p a approx Prospects of good transfer appointment (in addition) Premium for house and Practice £5 000 or near offer Good mortgage obtainable

MIDDLESEX W —PARTNERSHIP in Suburban Practice situated in rapidly growing residential locality Receipts (approx) £2 000 Panel (increasing) 650 Medium sized house available Premium for 1/3 or 2/3 share 2 years purchase

LONDON S E —Near West End —Cash and panel PRACTICE (Lock up) Shop fronted surgery held on lease at £70 p a part sublet Receipts average approx £400 Panel 517 Excellent scope for one giving whole time and undertaking midwifery Premium 1½ years purchase or near offer

BERKS —PARTNERSHIP —Country Rural Practice in sporting district Receipts average nearly £1 150 Panel nearly 600 Fees 2/6 up Short preliminary Assistantship 1/3 to 1/2 share for disposal at 1½ years purchase Suitable to experienced man British aged 27 upwards

YORKSHIRE —Well established mixed rural PRACTICE Suitable house available (4 beds) Receipts approx £1 000 Panel 620 Fees 3/6 up One appointment Premium 1½ years purchase

LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 900 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment *Premium* 2 *years* purchase or near offer

MIDLANDS —PARTNERSHIP in old established country Practice with scope for considerable increase Fine Elizabethan house with grounds to be rented at low rental Average receipts approximately £5 200 Panel 2 700 Nine fourteenths share on 2 years purchase Sport of all kinds Suitable for a man desirous of country life

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1 MIDLANDS —COUNTY BOROUGH —PARTNERSHIP (One Third Share) in old established panel and industrial Practice Receipts £4 200 Panel 4 700 Good house to rent

2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good-class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Garage etc

3 SOUTH OF ENGLAND—Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

4 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

5 SOUTH WALES —Contract and middle class PRACTICE Receipts average £1 100 Panel about 1 000 Good house to rent Lawn garage etc

6 LANCS —Old established and Industrial PRACTICE Receipts £— 242 and increasing Panel 1 430 Appointments worth about £90 Good house to rent

7 BERKS —(Country Town) —PARTNERSHIP (2 5th share) with first-class Assistantship (Panel mate aged 70) Receipts over £1 200 Panel 550 and good scope Appointments about £250 Offices and house

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1 [illegible] idly ces ase Good house for sale £1 000 or rent £72 p a

2 DEVON —Unopposed PRACTICE in lovely district Receipts £675 p a Appts £90 Panel 250 Old established semi retiring Doctor Good scope Prem 1½ yrs Sm rent

3 MIDLAND CITY — Old established general and venereal PRACTICE Receipts last year £2 740 Panel 500 recently established increasing Ex house to rent Prem £3 250

4 DEVON —Seaport town — In growing district £520 in last 15 months Panel 300 Good house to rent Prem £400 Great scope Selling owing to ill health

5 COUNTRY TOWN —PRACTICE £900 p a in Carmarthen Prem £750 Good house to rent £40

6 DEVON —PARTNERSHIP for well qualified Physician 2/5 share returning at present £800 p a Good class non panel Practice Excellent house to rent Prem 2 yrs pur

7 MONMOUTH — Old established PRACTICE Receipts £300 p a In same hands 40 yrs Good house Selling owing to ill health Populous dist £1 000 for house & Practice

8 WESTERN CITY —Middle and working class PRACTICE Last year £490 Panel 850 Price £675 Old house Might rent Clients of cope

9 OXFORDSHIRE —Old established unopposed Country PRACTICE Aver £1 200 p a Panel over 600 Good house Prem 1½ yrs pur

10 COUNTRY TOWN — Choice of two —Third Share with incr to half share later Last yr £1 800 Choice of hse Prem 2 yrs pur

11 COUNTRY PRACTICE —Old established in pleasant country Last year £1 750 accts figs Panel 946 Appts £120 In present hands 23 years Good house garage large yard House & Practice £5 000 Borders of Monmouthshire No Collieries Old scope

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LANCS TOWN —Old-established mixed PRACTICE Average cash receipts £995 p.a. Panel 710. Excellent house to rent in pleasant district. 2 reception 4 bedrooms. Garage and garden. Vendor retiring. Premium £1 000 for quick sale.—No 298

MANCHESTER.—Good Suburb.—Sound mixed PRACTICE. Cash receipts last year £1 292. Panel 1 170. Scope. Excellent house 2 reception 5 bedroom. Premium 1½ year purchase.—No 339

LINCOLNSHIRE.—SEASIDE TOWN.—Old-established mixed-class PRACTICE. Average cash receipts £1 701 p.a. Panel 686. Excellent living and professional accommodation. 2 reception 6 bedroom. Garage and small garden. Rent £100 p.a. on long lease. Premium 1½ years purchase.—No 332

MANCHESTER.—Residential Suburb.—Middle-class PRACTICE. Suitable for two in Partnership (one a good Surgeon). Cash receipts 1931 £4 578. Panel 1 400. Two excellent house to rent with ample accommodation. Premium 1½ years Purchase.—No 277

DEATH VACANCY. LANCS TOWN.—Sole good Surgeon.—Mixed class PRACTICE. Average cash receipts £1 634 p.a. Panel 829. Premium £4 000 part by arrangement (to include Surgery and Nursing Home (freehold) equipped Operating Theatre fitting. Ward furniture drugs and book debt about £1 300).—No 335

VENEREAL DISEASES PRACTICE.—NORTHERN CITY.—Cash receipts approx. £1 800 p.a. House to rent. Vendor going abroad. Will accept any reasonable offer for immediate sale.—No 340

WELSH BORDER.—UNOPPOSED COUNTRY PRACTICE in beautiful district. Average cash receipts £1 100 p.a. including transferable appointments £300 p.a. Panel 756. Cottage Hospital. Excellent house 4 reception 4 bedroom. Garage and large garden. Rent £70 p.a. or would sell for £1 250. Premium 1½ years purchase. Will not be retained.—No 337

MANCHESTER.—MIXED PRACTICE suitable for two in Partnership. Cash receipts last year £2 840. Panel 2 156. Good scope. Two excellent houses with ample accommodation. Premium—Practice—1½ years purchase.—No 321

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Old established. Cash receipts 1931 £645. Panel 459. Good scope. Excellent house 3 reception 6 bedroom. Garage. Rent £80 p.a. on lease. Premium 1½ years purchase.—No 330

LANCS.—PLEASANT COUNTRY TOWN.—Sound mixed PRACTICE. Average cash receipts £1 369 p.a. Appointment mostly transferable approximately £265 p.a. Panel 1 037. Excellent house 3 reception 6 bedroom garage and large garden. Premium—Practice—1½ years purchase.—No 326

MANCHESTER.—Old established PRACTICE in present hand over 30 years. Cash receipts last year £1 409. Panel 885. Scope for increase. Rent of surgery premises £50 p.a. Premium 1½ years purchase.—No 328

LIVERPOOL.—Mixed General PRACTICE. Cash receipts last year £1 080. Panel 950. Scope for increase. Good house 3 reception 5 bedroom. Rent £75 p.a. or would sell for £1 250. Premium 1 years purchase.—No 324

LIVERPOOL.—PRACTICE in good Industrial area. Cash receipts 1931 £685. Panel nearly 800. Scope for increase. Good house 2 reception 4 bedrooms. Rent £52 p.a. Premium £1 000 or near offer.—No 331

MANCHESTER.—INDUSTRIAL PRACTICE. Cash receipts last year £889. Panel 721. Suit R.C. Limits of scope. Good house 2 reception 5 bedrooms. Rent £50 p.a. Premium—best offer.—No 190

LIVERPOOL.—Old-established middle-class PRACTICE. Cash receipts over £2 000 p.a. Panel 900. Excellent house 2 reception 7 bedrooms garage and garden to rent.—No 276

NEAR MANCHESTER.—Semi Residential Town.—Old established (non-dispensing) middle-class PRACTICE. Average cash receipts £2,400 p.a. Small panel of 450. Well situated freehold detached house 2 reception 5 bedrooms. Garage. Premium—Practice—1½ years purchase.—No 329

CHESHIRE COAST TOWN near LIVERPOOL.—Middle class PRACTICE. Average cash receipts £1 184 p.a. Appointment £80 p.a. Small select panel. Excellent corner house 3 reception 5 bedroom. Premium—Practice—1½ years purchase.—No 317

MANCHESTER.—PARTNERSHIP with succession in Practice of about £1 600 p.a. Panel 1 550. House available to rent. Premium—half share—1½ years purchase.—No 303

NORTH WEST COAST.—SEASIDE RESORT.—Old established PRACTICE. Cash receipts 1930 £874. Panel 250. Excellent freehold house 2 reception 5 bedroom. Garage and garden.—No 266

MANCHESTER.—Middle-class PRACTICE in pleasant suburb. Cash receipts 1931 £1 327. Panel 459. Charming house 3 reception 6 bedroom billiard room. Large garden and garage. Premium—Practice—1½ years purchase.—No 322

CHESHIRE TOWN near MANCHESTER.—PARTNERSHIP in old established Practice. Average cash receipts £5 151 p.a. Panel 3 600. Excellent house 2 reception 3 bedroom garage and garden. Premium—one fifth share—£1 700.—No 333

NEAR PRESTON.—PRACTICE offering scope. Cash receipts 1930 £700. Panel 300. Good house 2 reception 4 bedrooms. Rent £70 p.a. Premium 1½ years purchase.—No 254

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(FOUNDED 1880)

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending its members to consult Mr A V STOREY, the General Manager in all transactions requiring the services of a Medical Agent

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Practices and Partnerships for Disposal — **Full particulars sent free**

1 S OF ENGLAND — Partnership (with succession) in good class Practice about £2 500 p a in beautifully situated watering place No panel Very good society Educational facilities and sport Share of about £1 000 p a at first at 2 years purchase Short preliminary Assistantship

2 HOME COUNTIES — Country Practice averaging £1 200 p a in pleasant district about 3 miles from first rate town Panel 900 Detached bungalow residence (5 bedrooms) garage and nearly acre of ground to rent on lease Excellent scop Premium 1½ years purchase

3 LONDON, S W — Cash Practice about £1 100 p a close to the West End Panel about 1 250 which could be considerably increased Valuable corner residence for sale Premium for Practice £1 000 only

4 ESSEX —Compact Cash and Panel Practice over £1 300 p a in outlying suburb Panel over 1 800 House in very good condition, with 4 bedrooms etc to rent on lease Premium £2 750

5 LONDON, E —Cash and Panel Practice of £840 p a in populous district Panel 570 Small house to rent on lease Premium 1½ years purchase

6 KENT — Partnership in Practice about £3 800 p a in an industrial town Panel 2 630 House with 4 bedrooms etc for sale or rent Share of £800 p a guaranteed at 2 years purchase, with option to increase later Preliminary Assistantship

7 DEATH VACANCY —E MIDLANDS — PRACTICE averaging £1 550 p a in small industrial district easy distance of two good towns Panel 1 235 Large house with surgery etc garage and good garden for sale Beautiful surrounding country and sport of most kinds

8 DEVON — Country Practice in delightful and attractive part Receipts 1931 over £1 300 including appointments worth £170 p a and a panel of 687 Well situated modern house (7 bedrooms) garage and about three acres of ground including orchard for sale Good educational facilities and sport Premium £1 900

9 ESSEX —Partnership in Practice of £5,400 p a in developing country district easy distance of coast Panel 3 600 Detached house (6 bedrooms) garage and good garden for sale Scope for increase One fourth share 2 years purchase

10 S COAST —Lock-up Practice between £450 —£500 p a in rural district on outskirts of popular holiday resort Panel 400 Rent of Surgery premises 10/ weekly Premium £550

11 LONDON, N W —Non-dispensing Practice averaging over £1 450 p a No panel Large house (7 bed and dressing rooms) with garage and small garden for sale or rent Premium £2 000

12 EASTERN COUNTIES — Partnership in Practice averaging £4 400 p a in market town Suitable house available Share of £750 p a at first at 2 years purchase Cottage Hospital Applicant must have surgical experience and if holding the D P H, could obtain M O H Appointment in addition

13 W OF ENGLAND —Partnership in Practice nearly £2 600 p a in country town Panel about 1 000 Good house (5 bedrooms) garage, and garden of about half acre to rent Good educational facilities Cottage Hospital Premium one third share £1 750

14 MIDLANDS —Practice over £1,700 p a in growing town with nice surroundings Panel 1 100 House available later Good hospital and scope for surgery Premium 1½ yrs purchase

15 HOME COUNTIES —Non-dispensing Practice averaging £1 150 p a in growing residential watering place No panel Detached house (3 bedrooms) with every modern convenience and attractive garden to rent Premium 1½ years purchase

16 MIDLANDS —Practice averaging £727 p a in clean flourishing manufacturing town Panel 570 House (3 bedrooms) garage to rent Premium 1½ years purchase

17 SHROPSHIRE — Practice £800 p a in Market Town Panel 170 Suitable house to purchase Premium 1½ years purchase

18 STAFFS — Partnership in Practice over £4 000 p a in manufacturing town Panel 4 700 Suitable house to rent Premium one third share at 1½ years purchase

19 S WALES — Mixed Practice in growing district of seaport town Receipts last year over £800 Panel 760 House (3 bedrooms) garage and garden to rent Good prospects for scope Premium £1 200

20 MIDLANDS — Partnership in Practice, averaging over £3 000 p a in a most progressive manufacturing town Panel about 4 000 Expenses light House (4 bedrooms and 3 attics) for sale Premium one half share £3 000

21 MIDDLESEX —Practice in growing residential district Receipts 1931 £1 250 Panel 400 Modern house (3 bedrooms) garage and large garden for sale Great scope Premium 1½ years purchase

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)

(Founded 1880)

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Practices and Partnerships for Disposal (continued)

22 LANCASHIRE —Practice averaging £2,100 p a in industrial district on outskirts of manufacturing town Panel 1 460 House (5 bedrooms) with garage to rent on lease Premium 1 year's purchase

23 EAST ANGLIA — Partnership in unopposed Practice of £5 580 p a in small market town in beautiful part Panel 1 900 Good house (6 bedrooms) in excellent order with three-quarters of acre of garden for sale Cottage Hospital and ample scope for surgery Premium one third share 2 years purchase

24 W OF ENGLAND —Partnership in Practice averaging £2 360 p a on outskirt of first rate town Panel 2 400 House with 5 bed and dressing rooms for sale One third share at 12 years purchase Preliminary Assistant ship

25 N WALES —Practice in small Wateringplace Receipts 1931 £575 Panel 238 Modern house very easily run with ample accommodation at nominal rent Very bracing climate Excellent shooting fishing Scope for increase Premium £450 Welsh not essential

26 MIDLANDS —Partnership in sound non-dispensing Practice of over £5 700 p a in beautifully situated county town Panel 2 000 Good well-qualified Physician required aged 30 35 One-fifth share at 2 years purchase with early increases Good Hospital with prospect of appointment on Staff at an early date

27 BIRMINGHAM — Practice averaging £584 p a in good class suburb Small panel but ample scope Very little midwifery Low expenses House with garage to rent Premium 1½ years purchase or near offer for quick sale

28 WILTSHIRE — Country Practice over £1 300 p a in a most picturesque village Panel about 700 Good detached house (6 bed and dressing room) garage and large garden to rent Premium £2 200

29 ITALY —Old-established Practice in an attractive City Receipts last 2 years averaged £1 400 p a No midwifery or night work Suit gentleman of experience married and with good social attainments Ideal opening premium

30 W OF ENGLAND —Partnership in Practice in pleasant country town Cash receipts average about £5 200 p a (including panel and appointments over £1 500 p a) Charming old house (5 bedrooms and attics etc) garage and beautiful garden Plenty of sport Scope for increase Premium for one fifth share 2 years purchase.

31 S E COAST — Popular Resort —Partnership in mixed class Practice about £3 600 p a Panel about 2 000 Excellently situated house (5 bedroom etc) with garden and garage for sale. Five twelfths share for disposal at 2 years purchase

32 MIDLANDS — Partnership in Country Town Practice averaging about £3 500 p a Panel over 1 500 Scope for increase Premium for one fourth share 2 years purchase Preliminary Assistantship if desired

33 LONDON, N W — Practice in suburban district Receipts 1931 £700 Panel 300 Corner house (5 bedrooms) garage and garden to rent on lease Premium £750

34 SUSSEX — Country Practice between £1 200 and £1 300 p a in delightful part No panel Large residence (9 bedrooms etc) garage and garden of four acres to rent on lease Premium £1 800

35 SURREY — Partnership in increasing middle class Town Practice of £2 300 Panel over 1 200 Modern detached corner house (5 bedrooms) garage and garden for sale. Partner should be 26 30 and have held Hospital appointments. Share of £1 000 p a. at 2 years purchase

36 N OF ENGLAND — Partner required in increasing Practice in beautiful city Receipts last year £5 000 Panel 4 000 Applicants should be proficient in minor surgery anaesthetics and obstetrics Share of three-fifteenths at 2 years purchase.

37 LONDON, N W —Non-dispensing Practice over £950 p a in good residential district No panel. Ten roomed house with garage and large garden Rent £200 p a. Premium £1 200

38 N MIDLANDS —Partnership in Practice, about £3 000 p a in country district near two important towns. Panel over 1 600 Small house (3 bedrooms etc) available to rent Great scope as district is growing rapidly Premium one third share 2 years purchase

39 EAST ANGLIA — Partnership in sound non dispensing Practice of about £3 000 p a in favourite Seaside Resort Partner should be a Varsity man about 30 years of age experienced in Medicine and Anaesthetics Good up to date Hospital Premium for one third share 2 years purchase

40 W OF ENGLAND —Practice about £800 p a. in first rate City Panel 1 324 Well built house (4 bed and dressing rooms) to let. Excellent scope Premium £1 450

41 S WALES —Increasing Practice of £900 p a in pleasant Market Town Panel 150 Well situated house (non basement) with 3 bedrooms for sale Cottage Hospital Premium

42 DURHAM —Practice of over £500 p a in residential and colliery district near large towns Panel 370 Substantially built 9 roomed house for sale Scope for increase

43 NEW ZEALAND —NORTH ISLAND — Non dispensing PRACTICE about £1 800 p a in first rate Town Modern detached house (4 bedrooms etc) garage and garden for sale Liquable climate Good educational facilities Premium only £1 250

44 NORTH OF ENGLAND — Small Season PRACTICE in Inland Health Resort capable of increase by one practising all the year round Receipts about £150 No panel or midwifery House in own grounds with 6 bedrooms etc Price—house and Practice—£1 250

45 EAST ANGLIA —Partnership in Practice over £4 500 p a in beautiful country district easy access of important town Panel 3 000 Nice detached house (7 bedrooms) garage etc garden and grounds of 10 acres for sale Sport of most kinds Considerable scope Premium two thirds or four ninths share 2 years purchase

46 KENT —Country Practice of over £800 p a in beautiful part Panel nearly 400 Very attractive residence (5 bedrooms) central heating grounds of 2½ acres orchard etc for sale Sport. Premium 1½ years purchase

47 S OF ENGLAND —Partnership in Ophthalmic Practice about £1 300 p a in small but delightful resort Considerable scope to one able to operate Premium one half share 12 years purchase

48 HOME COUNTIES —Partnership in exceptionally good and rapidly increasing Practice about £6 000 p a. in delightfully situated Country Town easy distance of coast Attractive house (4 bedrooms) to rent Partner must hold the F R C S and be aged about 30 Appointment on Hospital Staff Premium for one sixth to one fourth share 2 years purchase Preliminary Assistantship

49 KENT — Country Practice of about £850 p a. Panel 550 Good house and garden for sale Prem £1 100

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1 MANCHESTER —Middle and better class PRACTICE in residential district Average gross cash receipts for past three years £1 270 including panel of 1 170 Convenient house can be purchased for £1 000 £600 on mortgage Premium 1½ years purchase

2 WITHIN 150 MILES NORTH OF LONDON —COUNTY TOWN —Very well established chiefly better class non panel PRACTICE In favourite town Average gross cash receipts for last three years £3 201 last year £3 309 No appointments Fees 5/ to 21/ Only about 20 cases of midwifery from 5 to 25 gns Very nice house with 2 reception 6 bedrooms dressing room etc and professional rooms Price for freehold £2 000 half on mortgage Premium £5 000 Hospital of over 200 beds and good surgical scope if desired Ill health sole reason for sale

3 PARTNERSHIP —LINCS —Attractive Market Town within easy reach of Coast —A share representing about £750 p a (with increase up to one half in 3 or 4 years) is offered in an exceptionally good mixed class Practice established many years Average gross cash receipts for last three years over £3 600 This year at the rate of over £4 000 Panel of 1 600 Fees from 3/6 to 2 gns Midwifery 1½ to 10 gns Choice of houses or Purchaser could reside in rooms to begin with Premium for share £1 500 Ingoing Partner should be experienced able to undertake surgery and preferably hold the D P H in which latter case appts could be obtained which would increase the income of the share up to about £1 000 p a

4 KENT —PARTNERSHIP —A guaranteed share of £800 p a is offered (after preliminary assistantship of £400 p a outdoor) in an exceptionally sound middle and working class Practice producing about £4 000 p a Panel of 2 700 Suitable house available on rental Premium for share 2 years purchase Ingoing partner should be English or Scotch

5 SURREY — Delightful residential district within 25 mile — Well established PRACTICE averaging about £550 p a with good scope Panel of 250 Detached house in 1½ acres of ground (3 reception 4 bedrooms etc) rent on lease £120 p a Premium £850

6 LINCS —LARGE TOWN — PARTNERSHIP — A one third share is offered in an old established mixed class Practice averaging approximately £2 000 p a Panel of 2 550 Fees from 2/6 Suitable house with 2 reception 3 bedrooms etc Surgery and waiting room Rent on long lease £50 p a Premium £1 000 to include book debts etc

7 WESTERN CITY —Well established middle and working class PRACTICE averaging for last 3 years over £500 including panel of 850 Fees from 2/6 Suitable house with dining room waiting and consulting rooms 4 bedrooms and bathroom etc Price £1 000 or can be rented Premium £600

8 LONDON SOUTH EAST —Old established good mixed class PRACTICE producing for last twelve months nearly £1 700 Panel of over 1 700 Fees chiefly 2 6 to 10 6 Very convenient ten roomed house with nice garden and garage Can be obtained on long lease at exceptionally low rental Efficient introduction given

9 ABERDEENSHIRE COAST —Old established mixed class PRACTICE in attractive district averaging £759 p a including panel of over 500 and appt worth about £220 Fees from 3/6 Suitable house with 2 reception 5 bedrooms and professional rooms Good garden Garage Rent £35 p a or could be purchased Premium £850

10 MANCHESTER —Old established PRACTICE averaging £640 p a Panel of 154 Offers good scope Fees 3/6 to 10/6 Midwifery 3 to 7 gns House contains 4 reception 5 bedrooms bathroom etc Rent on lease £70 p a Premium for immediate sale £450

11 DEATH VACANCY —Town and Country PRACTICE on the outskirts of Lincoln offering very good scope Cash receipts for the last twelve month approximately £1 400 including panel of over 1 000 Fees from 3/6 Very nice house standing in its own grounds with ample accommodation Premium £1 500

12 SOMERSET —SUBURB OF FAVOURITE TOWN —PARTNERSHIP — A one third share (after a preliminary Assistantship of about six months at £300 p a indoor) is offered in an old established mixed class Practice averaging for the last three years £2 371 p a Panel of over 2 400 Fees from 3/ Suitable house with 2 reception 4 bedrooms drawing room separate entrance to professional rooms electric light Large sized garden Garage Price for freehold £1 000 part on mortgage Room for share one and a half years purchase

13 PARTNERSHIP —LONDON SUBURB (SOUTH EAST) —Owing to the retirement of one of three partners the third share of an old established middle and working class Practice situated in a well populated district is for immediate disposal Cash receipts for past three years average £4 852 p a including appts over £500 p a and panel of about 5 500 Very little midwifery Expenses small Suitable house available Rent £40 p a Premium 2 years purchase

14 SOUTH WEST OF ENGLAND —FAVOURITE TOWN —PARTNERSHIP —A share producing about £800 p a, with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Midwifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be experienced and hold M D London

15 FAVOURITE SOUTH WESTERN COUNTY —PARTNERSHIP —A two-thirds or three fifths share is offered in a well established Practice situated within easy reach of good residential town Gross cash receipts for last 12 months £2 522 Panel of 1 500 Visits 3/6 to 10/6 Very up to date attractive house with 2 reception 6 bedrooms Price for freehold £2 500 payable £1 000 down and £1 500 on mortgage Premium for share two years' purchase Good sporting social and educational facilities Surgical scope if desired

16 SOUTH OF ENGLAND —FAVOURITE COAST TOWN —Old established chiefly better class PRACTICE producing about £1 800 p a Small selected panel Fees 3/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

17 WEST OF ENGLAND —LARGE — PRACTICE producing nearly £900 p a 1 300 Suitable house in excellent position be rented at £60 p a Premium £1 450 Good scope for increase

18 NORTH MIDLAN — Two Partners are required to take ov — (with increase later) in a very sound — Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

19 LONDON NORTH WEST —Well established middle class non dispensing PRACTICE averaging for the past three years £840 including appts worth about £300 p a and panel of 1 20 Fees 3/6 to 21/ Purchaser can choose his own residence Premium £1 250

20 LONDON S W —Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room and dispensary 3 bedrooms sitting room etc Price for leasehold (94 years to run) £1 200 part on mortgage Premium £1 050

21 MIDLANDS —PARTNERSHIP —A one third share is offered in a very sound middle and working class Practice held by the senior partner for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Prem 2 years pur

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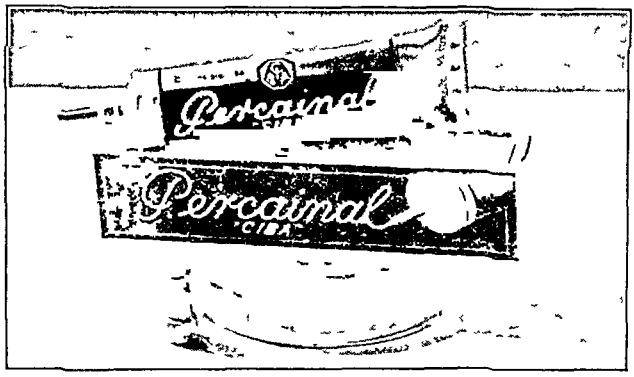
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British Medical Journal

APRIL 2 1932

CONTENTS

ORIGINAL ARTICLES

The Psychological Interest in General Practice. By F G Crookshank M D F R C P 599

Chronic Non Tuberculous Infection of the Lungs in Children. By F H Young M D 601

The Significance and Origin of Lactic Acid in the Gastric Contents By Ian Murray M D F R I S and Andrew B Robertson M D 607

Jejunostomy and Witzel's Operation in Vicious Circle Vomiting By H Donovan M B F R C S 609

Idiopathic Congenital Dilatation of the Common Bile Duct By Ernest R Fitzhugh M Ch F R C S Ed 610

MEMORANDA

Focal Sepsis a Predisposing Factor in Miners Nystagmus By F O'Sullivan M B 611

Hydronephrotic Pelvic Kidney By Howel B Pierce M B and D J Happies M D F R C S 612

REPORTS OF SOCIETIES

Medical Society of London 612

Diagnosis of Hip-Joint Diseases

North of England Obstetrical and Gynaecological Society 612

Treatment of Eclampsia

REVIEWS

History of Scottish Medicine 613

Female Sex Hormones

Chronic Urethritis

Stammering

Tropical Fevers

Notes on Books

OBITUARY

C B Hallman L M S S A

J M Prentice L R C P & S I

C H Moorhouse M B

England Kerr M B

THE SERVICES

Honorary Surgeon to the King

Deaths in the Services

LEADING ARTICLES

Cancer of the Larynx 620

International Maternal and Child Welfare

THE WEEK

Peripheral Vision 621

The Health Committee of the League of Nations 622

Experimental Katatonia Produced by Bulbocapnine 622

Plague Prevention in Manchuria

Citation Silver 623

623

624

GENERAL ARTICLES AND NEWS

The Obstetrics of a General Practice in the Last Decade. By A F Martin M D 625

Tuberculosis of Bovine Origin in Great Britain 627

Nova et Vetera. Causes of Death of the Brontë By C Mabel Edgerley L R C P & S 618

Preparations and Appliances (Illustrated) 619

Medical Notes in Parliament

Public Lotteries 617

Silicol

Medical News

LOCAL NEWS

England and Wales—

Dr Alfred Cox Testimonial 628

Chadwick Public Lectures 628

Diet for the Healthy Individual 628

County Hospitals Nursing Staff 628

Instruction at L C C Hospitals 629

University College London 629

Scotland—

Reform of Medical Education 629

Edinburgh Hospitals for Women 630

Deacons Hospital 630

Glasgow Eye Infirmary 630

Proposed New Glasgow Hospital 630

LETTERS AND ANSWERS

Income Tax 641

Vacancie and Courte ies 641

Visit to Soviet Pu sin 642

Doctor and District Nur es 642

Paw Milk and Dental Caries 642

Coronary Di ease 642

A Coincidence 642

Di ch mner and Warning 642

CORRESPONDENCE

The Student in Irons By Sir Maurice Cra s M D F R C P Fred rick Dillon M D and G Francis Smith M R C S 630

Aetiology of Di seminated Sclerosis By B H Stewart M D 630

Visceral Herpes Zoster By W Pus ell Brun M D F P C P and Robert Platt M D 631

The Aftercoming Head By R C Buist M D 632

Failed Forceps Gar is M D By Mar s C De 632

Flat foot By W H Broad M D 633

Aetiology of Cancer By Richard Kerry M D 633

A Primer of Fracture Practice By Paul Nicholas Leech M D 634

Ambulatory Treatment of Fracture By A Watson Jones F P C S 634

Extrarenal Oedema By D W Carmalt Jones D M F R C P 634

The Tuberculosis Problem By J Middleton Martin M D 634

Indian Medical Service Pensions By W G Kains M B 635

Pathological Service of the L C C By Gordon W Goodhart M D 635

UNIVERSITIES AND COLLEGES

636

University of Leed 640

University of Liverpool 640

University of Dublin 640

National University of Ireland 640

Vacancies 640

(See also page 119 of Supplement) 642

The Supplement contains Insurance Acts Committee Report of the March Meeting

The Capitation Fee Correspondence with Chancellor of Exchequer and Minister of Health

Correspondence

The B M A and the Insurance Bill

The Capitation Fee

The Future of Panel Practice

Current Notes

Association Notices Vacancies and Appointments Diary

An epitome of current medical literature will be found at the end of the Journal

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Churchill J & A
Cameron A T —Biochemistry 3
Cameron & White—Biochemistry 3
Connor T P—Surg in the Tropics 3
Duke Elder W S—Refraction 3
3
3
3
3
Massie G—Surgical Anatomy 3
Newman C—Med Emergencies 3
Piney A—Diseases of the Blood 3
Piney & Wyard—Clinical Atlas 3
Rogers & Megaw—Tropical Med 3
Romanis & Mitchiner—
Surgical Emergencies 3
Tottenham R E—Midwifery 3
Whitby L E H—Bacteriology 3

Lewis H K & Co Ltd
Elliot R H—
Couching for Cataract 3
Glaucoma 3
Scott G L—The Morphine Habit 34

Oxford Medical Publications
Elliot, R H—
Care of Eye Cases 3
Treatise on Glaucoma 3
Tropical Ophthalmology 3

ASSURANCE COMPANIES—
Century Insurance Co Ltd 49
Medical Insurance Agency 4

BANKS—
Barclays Bank 32
Westminster Bank 33

BOOTMAKERS &c—
Holland & Son—Foot Support 33

BRASS NAME PLATES &c—
30
33
30
3
30

DEBT COLLECTION—
British Medical Protection Society 37

FOOD PREPARATIONS—
Bemax Laboratories—Bemax 18
Cow & Gate Ltd—Milk Food Cover iii
Valentine's Meat-Juice 13

SURGICAL APPLIANCES—
Allen & Hanburys Ltd—
Surgical Belts etc 16
Curtis & Son—Supports 9
Davis & Geck—
Kangaroo Tendon Cover ii
De St Dalmas & Co Ltd—
Dressings 9
Fleming & Co—Surgical Equipment 9
Hilliard's New Absorbent Bags 30
8
8
3
31
6
33
31

HOSPITAL &c FURNITURE—
Bailey W H & Son—
Consulting Room Furniture 31

PRINTING & STATIONERY—
Emerson & Son—Account Forms 42
Harlock Co—Harlet Typewriters 4
Lewis H K & Co Ltd—
Stationery Books etc 3
Taylor Typewriters 3

CHEMISTS &c—
Allen & Hanburys Ltd—
Iodolysin Cover i
Vapo Cresolene 31
American Apothecaries Co—
[illegible] 33
Carnrick & Co—
[illegible] Cover iv
[illegible] 16
[illegible] 17
Uralysol 18
Cranbux Ltd—Odol 28
Crookes Laboratories—
Collosol Products 25
Ephazone Co—Ephazone Tablets 11
Evans Sons Lescher & Webb Ltd—
Hepatex 23
Fry & Co—Pancresal 10
[illegible] 11
[illegible] 12
Merrell Laboratories 12
Sternles 20 22
May & Baker Ltd—
Neptal 15
Mond Stafford-shire Refining Co—
Monsol 17
Newbery & Sons Ltd—
Cal Bis Nate 26
Haemorrhoidal Suppositorie 14
Peat Products Ltd—Sphagnol 11
Petrolagar Laboratories Ltd—
Petrolagar 24
Roberts & Co—Dimenol 12
Saccharin Corporation Ltd—
Novocain 20
Stenzes Ltd—Mistol 14
Wander A Ltd—Ovaltine 13
Wyleys Ltd—Naphthin 12

MINERAL WATERS—
Rubinat Llorach 30

MOTOR CARS TYRES &c—
Lodge Sparking Plugs 30
Second hand Motors for Sale 48

TAILORING & UNDERCLOTHING—
Hall H—Medical Service Dress 48

TOBACCO & CIGARETTES—
Player's No 3 32

TRANSLATIONS TYPEWRITING—
Radford B—Typewriting etc 46

VACCINES & CULTURE MEDIA—
Burrough Wellcome & Co—
Coryza Vaccine 27
Cenato an Ltd—Vaccine 21
Heinemann W—Vaccine Lymph 10
Laboratories of Pathology & Public Health 10

WINES & SPIRITS—
de Kuyper's Hollands 29

X RAY & ELECTRO MEDICAL APPARATUS—
Hamblin Ltd—
Intrave nal Ioniser 30
Kodak Ltd—
Metal X Ray Cassette 7
Medical Supply Association Ltd—
Diathermy Apparatus 8

SANATORIA—
[illegible] 37
[illegible]
[illegible]
[illegible] 37
Lenhy [illegible] 37
Terra Dene Sanatorium 37
Victoria Sanatorium Davos-Platz 3

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 40

HOSPITAL &c VACANCIES—
[illegible] 44
[illegible]
[illegible]
Blackpool County Borough 42
[illegible] 41
[illegible] 45
[illegible] 44
[illegible] 40
[illegible] 43
[illegible] 43
[illegible] 44
[illegible] 43
[illegible] 42
[illegible] 43
[illegible] 49
[illegible] 44
[illegible] 44
[illegible] 48
[illegible] 49
[illegible] 43
[illegible] 47
[illegible] 48
[illegible] 44
[illegible] 40
[illegible]
[illegible] 47
[illegible] 44
[illegible] 45
[illegible] 45

BATHS SPAS &c—
Bad Nauheim 38
Bridge of Allan Spa 3
Llandrindod Wells 39

HOTELS & HEALTH RESORTS—
Clifton Hotel 38
Eastbourne 5
Margate 38
Matlock Hotel 38

HYDROS & PRIVATE HOSPITALS—
Bournemouth Hydro 38
Harrogate Investigation Clinic 3
Leeds Hydro 37
Llandrindod North Wales 6
Matlock Hydro 8

HOMES & ASYLUMS—
Barnwood House Gloucester 5

INEBRIETY—
Bay Mount, Paignton 34

MEDICAL SCHOOLS &c—
[illegible] 43

SCHOOLS &c—
Colthurst House School Warfield 43
Eaton—Schools for Boys & Girls 42
Taunton School

TUTORS & LECTURERS—
Exams—Med Correspondence 3
F R C S Edin Class—H C Orr 43
Manchester Tutorial College 43
Stammering—Miss L Belinke 3
University Exam Postal Instruction 3

TRANSFER AGENTS—
Bovril Medical Agency Ltd 43
British Medical Bureau 35
Lee & Martin, Ltd 3
Manchester Medical & School Agency 43
Peacock & Hadley Ltd 2
The Medical Agency 4 43
Turner J Ltd 43
Western Medical Agency Britol 30

ASSISTANTS PRACTICES &c—
Assistancies Wanted and Vacant 46
Dispensers Medical Posts &c 46
Locum Wanted and Vacant 47
Partnerships Wanted and Vacant 47
Practices Wanted & d Vacant 47

NURSING INSTITUTES—
Carey th Nurses 30
New Medical Nurses Co Ltd 3
Nurses Association 30

MISCELLANEOUS—
Consulting Room &c to Let 47
Income Tax Consultant—Harry 43
Medical Defence Union 3
Miscellaneous 47

It must be understood that the acceptance by the British Medical Association of an Advertisement does not imply a recommendation and that no responsibility is accepted with regard to the accuracy of the statements therein contained

The Issue of the BRITISH MEDICAL JOURNAL is this week 37,750 copies.

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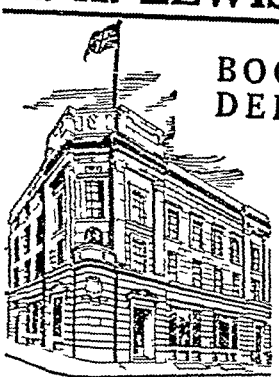
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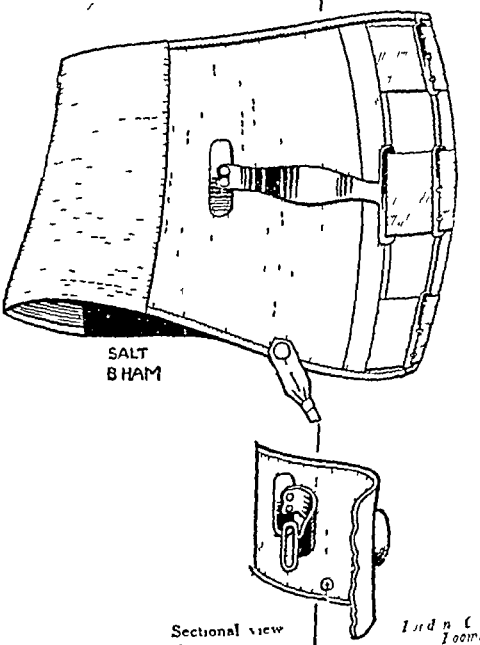
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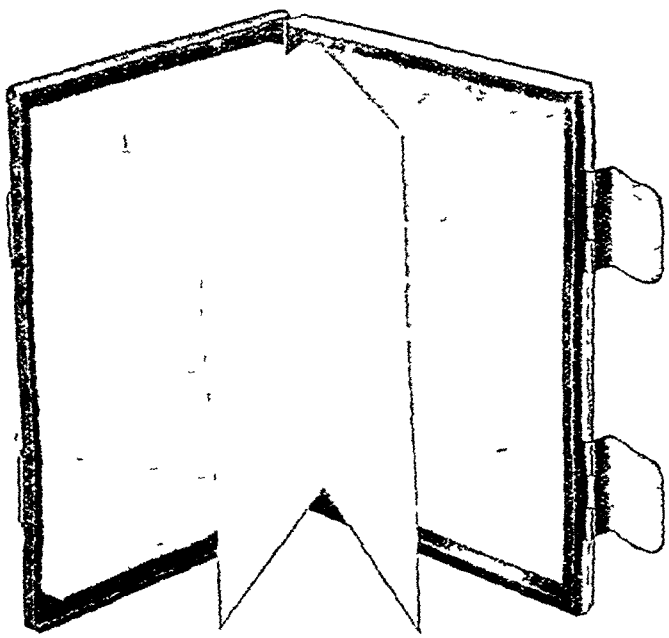
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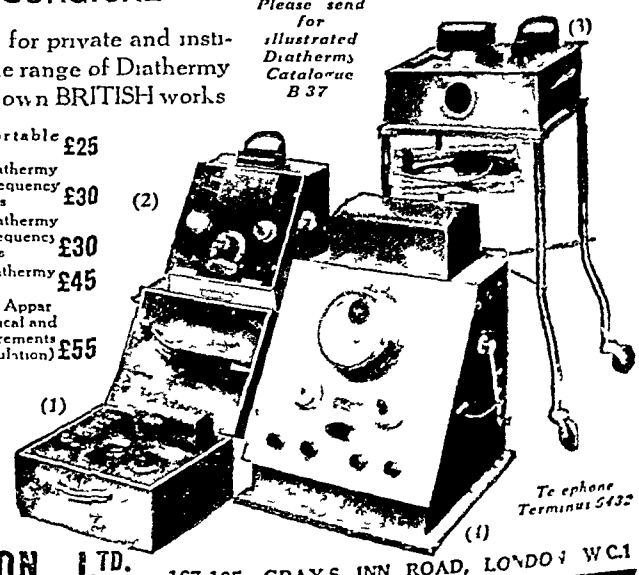
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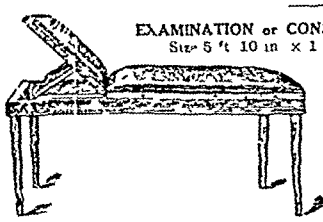
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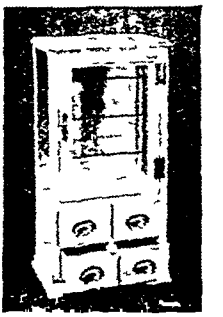
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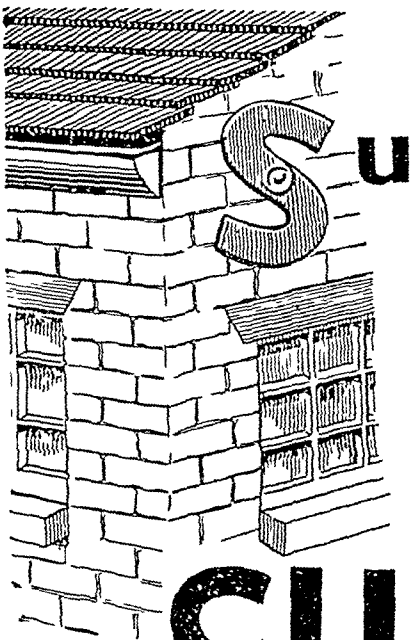
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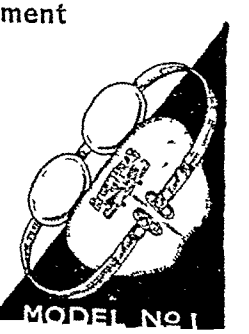
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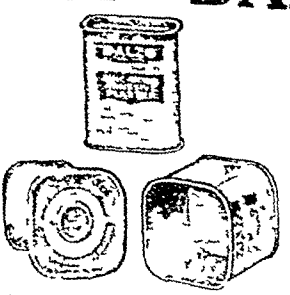
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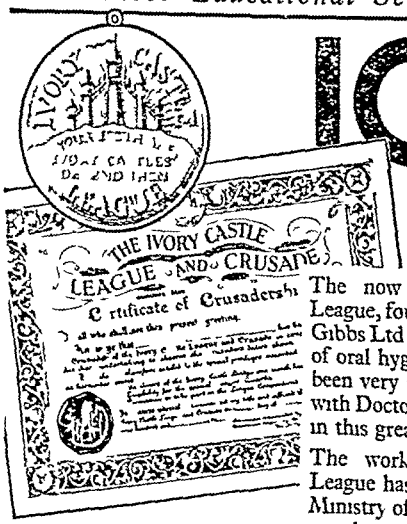
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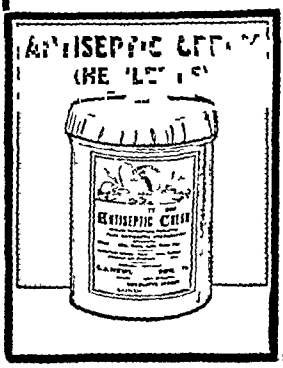
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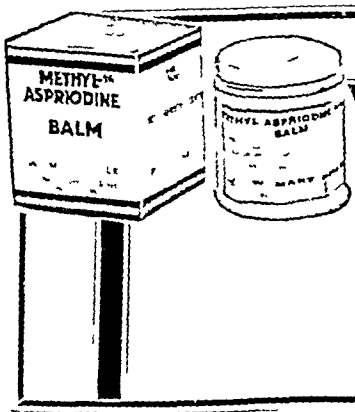
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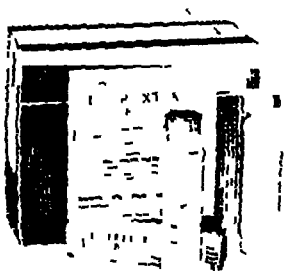
—(See B M J and Lancet, March 10th, 1928)

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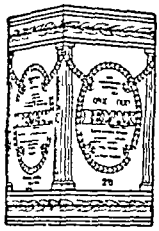
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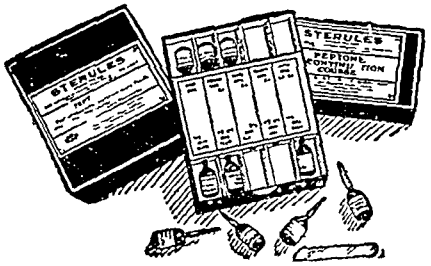
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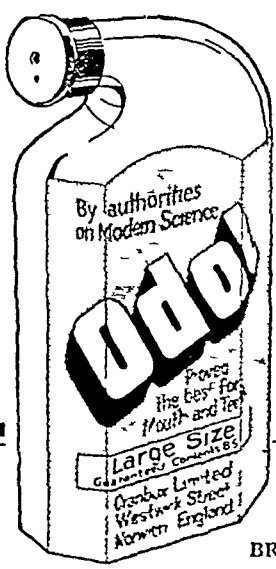
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ON

THE PSYCHOLOGICAL INTEREST IN GENERAL PRACTICE*

BY

T. G. CROOKSHANK, M.D., F.R.C.P.

DIRECTOR OF PHYSICIAN, THE INSTITUTE OF MEDICAL PSYCHOLOGY, LONDON

No one I hope will dispute that when there is physical disorder there is always some psychical and that when there is psychical disorder there is always some physical. This is the true sense of the aphorism *Mens sana in corpore sano* which in this country is usually taken to mean that mental health is to be procured by middle-aged men playing ball games. Certainly in some cases what is called the physical predominates or rather it is the physical that arrests our attention. We then speak of organic disease. In other cases the psychical no less obviously predominates or attracts: we then say that the patient is *mental* or *psychotic*.

But there is a vast group of cases concerning which many doctors find themselves in difficulties: in these psychical and physical disorder are apparently so nicely balanced that it seems impossible to force them into either of the beloved categories. In this group we find the migrainous and the vertiginous, the sufferers with mucous colitis, the asthmatics, the hysterical dyspareunics, the aerophagics, and the subjects of extrasystoles and palpitation. In these physical shortcomings and distress are generally combined with psychical disorder as well as with physiological unrighteousness: the migrainous man has astigmatism and practises coitus interruptus; the vertiginous man has some middle-ear catarrh and smokes too much as well as being in fear of falling physically and morally; the dyspareunic woman has a misplaced uterus and a husband whom she hates; the aerophagic doctor bolts his meals is in debt and has a flabby abdomen; while the subject of extrasystoles and palpitation drinks too much tea has a congenitally poor heart and masturbates.

Too often such persons as these are dismissed from our serious attention, being consigned to the limbo of the so-called functional—if no surgeon can be found who will operate upon them for something or other! But to call a man or woman a functional case does not help anyone very much unless it be the doctor who is enabled thereby to conceal his lack of clarity in thought and his bankruptcy in therapeutics at the same time that he justifies the continued prescription of bromides and luminal.

If these so-called functional cases are the despair of the thoughtful practitioner they are the joy of the charlatan and often enough are cured by New Thought, Christian Science, osteopathy, and the like. It is principally to them that I would crave your attention to-night for it is in them that the psychological interest in general practice chiefly abides.

Now it is a study of these functional cases that gives us the key to what I will call the rational human study of disease, for it teaches us that we must not divide our patients into two or even three hard and fast classes—the organic, the functional, and the mental—but that we must always investigate the *individual* from every aspect without reference to obsolete and misleading academic distinctions.

These so-called functional cases teach us however something more. Their teaching is that if the patient be confirmed in his psychological or physiological sins such organic disease may ultimately develop as only the surgeon—if even he—may remove. This on which I am anxious to insist is fundamental. I maintain if we really wish to understand the beginnings of disease. I do not wish for one moment to underrate the influence of extrinsic factors in bringing about organic disease but we should never assume in respect of any case that there was never a time in which organic change might have been averted if only right functional adjustment had been secured. Cowper put the situation admirably when he wrote:

> Faults in the life breed errors in the brain
> And these reciprocally those again.

The poet's lines have really a far wider field of application than he contemplated when he wrote them. For if we inquire how organic changes can possibly be brought about in consequence of conscious or unconscious psychical states we find a link in the sympathetic and parasympathetic systems their cerebral and spinal connexions and their control of those vasomotor secretory and muscular mechanisms that do undoubtedly lie behind disease processes whatever be the parts played by micro-organisms or exogenous toxins.

But the play and interplay between what some call mind and body and others psyche and soma are so inextricably combined that it becomes wise and more convenient the further we pursue our studies to abandon the theological or metaphysical distinction and to content ourselves with studying the *individual* in a fashion that I am anxious to discuss with you to-night.

It is indeed only when the practitioner leaves resolutely on one side all outworn academical distinctions and observes what happens that he begins to be truly a physician and comes to appreciate the wealth of interest that there is for him in the complete investigation of every patient.

* * * * *

I now come to a point that is not too willingly conceded by some of our most eminent teachers in the elementary medical schools. It may perhaps be otherwise at our new post-graduate school. We shall see!

The practice of our art is very largely guided by the views we hold concerning the nature of disease and these are derived from our attitude towards certain *metaphysical* and *philosophical problems*. Time was when doctors of physic studied philosophy and then systems of medicine were logically justifiable. Nowadays we do not systematically study the foundations of knowledge and belief and we ignore logic; nevertheless medical doctrine is always based on belief and many of our so-called advances are not so much actual discoveries as expressions of a change of attitude towards the fundamental problems of life. Considerations of this sort may not seem very relevant to such questions as for example whether a leg should be amputated by a circular or a flap method and so forth but become of extreme importance when we have to decide whether or no a patient with colitis should be treated by appendicostomy or psychotherapy. One man will call for thyroidectomy at the very onset of what he diagnoses as Graves's disease; his colleague will inquire about what the patient is frightened and in particular will examine the sexual complexes. And so on. Put otherwise the man who does not believe in the supremacy of mind over matter will go for material remedies *but he who believes in that supremacy will have something to say in favour of psychotherapy.*

In further illustration of my point let me remind you that in the East disease is generally regarded as the result of the abstraction of something spiritual from the body

* Given before the Section of Psychological Medicine on February 9th, 1932.

Western races on the whole consider disease to be the expression of something added In bygone centuries this was very frequently a demon To day this something added is often a toxin that no chemist can identify a filter passer that no microscopist can see But when a patient is constipated a dose of castor oil is efficacious whether we give it to expel a demon or to eliminate a poison!

Now although we no longer believe in demons official views concerning disease are still of a peculiar order A disease is (officially) something real—an objective entity different diseases are spoken of as different kinds of natural objects that can be studied in the same way as lions and tigers postage stamps and coins Conservatives and Socialists This sort of talk once current in science when laws were supposed to govern the universe and forces like gravity to keep the heavenly bodies in place is now obsolete save only in medicine and in theology for those who are interested in modern psychology it has little value This is why in the schools where science is still firmly embedded in mediaeval metaphysics there is no clear teaching in respect of the psychological interest One cannot accept the results of modern psychotherapeutics so long as one believes that the only disease worth bothering about is something that attacks the patient that makes a noise like a murmur and that can be seen on a plate after death! Those who think thus consider psychotherapy a special method that has nothing to do with really respectable medicine but which may be employed like ultra violet rays or a change of air for those wretched cases which have nothing organic the matter with them

Now roughly speaking there are three sets of metaphysical views which may be said to obtain in medicine And each corresponds to definite views in respect of health and disease moulding in respect of treatment the attitude of those holding it

We have in the first place those who may be called materialists Materialists—I am only speaking in the simplest terms—seek to explain the world as composed of one kind of stuff only that which they call *matter* and which *moves* The phenomena of *mind* are for these people produced by physical and chemical changes in the nervous system consciousness is a product or function of protoplasm and nothing more Doctors who think thus come to believe that in disease what is really important is disturbance in fine or gross structure of the tissues or organs and so when they meet with functional cases pass by them on the other side as did the Levite and the priest pass by the man who fell among thieves That is if they do not take a hand in the spoliation themselves! For oddly enough those who affect to despise the purely functional case have a firm belief that derangement of function is really the outcome of organic disease if the patient be wealthy! And so countless operations are performed, and countless treatments are carried through without avail on patients who *could* be successfully treated by psychotherapy Sometimes the result of surgical treatment appears successful it is true but the method is that of burning down the house to cook the pork chops of removing the tongue to cure bad grammar or of disconnecting the telephone to stop it ringing For visceral or vasomotor disturbance may be and often is as much an expression of emotion as is crying or sweating

Our second class of medical metaphysicians believe that all we call material in this world is but an aspect or consequence of mental perspective and that mind or spirit is the ultimate or only reality Those who apply such views to the subject of healing or who derive their practice from such views comprise not only the spiritualists (true and false) and the Christian Scientists but many psychotherapeutical practitioners They declare that if all is well with the mind soul or spirit all will be well with the body It is idle to deny that many who think thus and rule their lives accordingly do adjust well to their environments and do escape many of those troublesome functional ' disorders that vex those who seek to allay an uneasy conscience by blue lights or pink pills It is idle to deny that spiritual experiences of one kind or another do rid life long invalids hypochondriacs and neurotics of troubles for which they have suffered much at the hands of many physicians I am not even inclined to deny that sometimes what a pathologist would call a case of organic disease may be cured by what we call psychological change It is not good enough—to use a vulgarism—to say that *because* a case is cured after a visit to Lourdes it was never a case of organic disease To speak thus is to beg the whole question Let me put it in this way When an unexpectedly good result is obtained after the administration of a simple drug in a confirmed and seemingly hopeless case many surgeons will say Oh yes! But was it not the effect of suggestion? Perhaps but the case recovered To *say* suggestion *explains* nothing We might with greater justification *say* suggestion when a laparotomy is performed successfully on a hysterical patient When employing physical means we can never exclude a psychical effect and conversely we can never exclude a physical effect when employing psychical means

If we give an enema we are working on a low physical level but we admit a psychical effect as possible If I say Abracadabra three times over most people would say that I am only employing psychical means and can therefore only hope for a psychical effect Yet I am physically stimulating the auditory tract and its connexions just as definitely as does my friend who gives an enema stimulate the rectum and its sympathetic connexions As between materialists and spiritualists it seems to be almost six of one and half a dozen of the other This is perhaps why the metaphysical doctrine most popular among doctors is that of psychophysical parallelism derived from the two clock notion of Leibnitz This means that each physiological nervous process has a concomitant psychological process as counterpart and vice versa The parallelism may be restricted as many restrict it to the higher parts of the brain or may be applied to the whole of the nervous system in which case we postulate unconscious psychical processes accompanying the physical nervous states of the spinal cord or nerves

Now this third doctrine which supposes ' mind and brain to work in ' harmony has a rather subtle practical value Postulating that neither the one nor the other process has the upper hand and that we cannot explain the connexion between the two it allows us to say that it is sometimes more convenient to tackle what we call the physical series—to rub in mercury in order that a gumma absorb—and sometimes better to tackle what we call the psychical—to employ suggestion or psychoanalysis This kind of facing both ways leads one kind of case to be treated by drugs or surgery while another is sent to the asylum or the psychoanalyst But the functional cases again tend to fall between two stools This is the grave fault in the neurology of Hughlings Jackson and his pupils (It was an eminent neurologist of this school who recently said that though he did not understand functional cases he earned his living from them!)

A quite different point of view is now a growing importance Those who adopt this regard mind and matter

s different names given to different aspects of the *individual* and prefer to make no such real distinction between them as is made by others

It is this view which I commend to you and on which I advise you to base your practice and your theory

* * * * *

If we now turn to what are called practical details we find that the method derived from this special view is not only found very useful in respect of asthmatic migrainous vertiginous neuralgic and functional cardiac and dyspeptic patients as well as of mucous colitis cases sexual sufferers prostatic cases and anxiety compulsive and hysterical neurotics—in fact of the whole gamut of the nervous patients—but is also strikingly valuable in dealing with many of what we usually consider organic cases

This is the method We must in the first place institute a complete physical examination appraising not only type not only morphological change but any disorder of function present While the ordinary clinical investigation is comprehended in this something more is required The physician must pay attention not merely to the so called signs of disease but to the presence of what we call organ inferiority He will find for example that migrainous and neuralgic persons have usually some ocular or facial asymmetry or other defect, that asthmatics have imperfectly developed nares epiglottides and larynges and if we dissect them not only poor chests but lungs that are imperfectly developed *qua* lobes Tinnitus and vertigo patients have often poor external ears our dyspeptics dilated or ptotic stomachs cardiac neurotics small and pendent or large and pushed up hearts hypochondriacs and colitis cases may have long mesenteries mobile colons mobile kidneys and the like Sexual neurotics may have small or misplaced uteri varicoceles phimoses pendant scrotums and so on Spinal and other neurasthenics have rudimentary spina bifida and sometimes a tendency to pes cavus and hammer toe—because the terminal spine is imperfectly developed Nay even our rheumatoid and arthritic patients are found to have digits and limbs with which there is something wrong from the point of view of the sculptor just as do many insane patients exhibit the most extraordinary skin peculiarities—strong presumptive evidence that the epiblast from which the neural tissues are formed is not what it should be Now these organ inferiorities (as Adler has called them) which we notice in the neurotic and the psychoneurotic are of significance either in connexion with the organs that work badly—as are the small penis and long prepuce of the boy who wets his bed—or as inferential evidence of other organ defects—as when the external ear is malformed in a tinnitus patient—or suggest a widespread deficiency as do the segmentally distributed skin defects found in association with neurasthenia In the same way many women with a neurotic abdomen have a fissured tongue so that we can postulate a Meckel's diverticulum or something of that sort while a neurasthenic miner with lumbago has probably a sacralized fifth lumbar vertebra that has been parred

Now we have come to learn of late years that constitutional or local organ or tissue inferiority often enough affords a peg to which may be transferred an affect or *feeling* that rightly pertains to something quite else The actress with astigmatism who desires not to appear on a certain occasion (because she fears her professional name will be out of joint) develops a headache (due to eyestrain she says her doctor says) that gives her an excuse while satisfying her unacknowledged and unacknowledgable desire to vindicate her own importance We may give her glasses but her headaches will continue on suitable occasions Our war experiences help us to understand this The shell shocked man with cold feet who durst not acknowledge his cowardice became deaf if he had a perforated drum blind if he had astigmatism or squint paralysed in his legs if he had spinal inferiority with hammer toes and wetted the bed if he had a varicocele and a long foreskin So it is the woman who dislikes her husband who with a retroflexed uterus or a prolapsed ovary suffers dyspareunia She has no dyspareunia with her lover Where there is a will not to do there is always a way of escape from doing what should be done and what we know ought to be done *The twin doctrines of organ jargon and organ inferiority help us to understand the meaning and purpose of neurotic illness*

But this is going too fast Having completed the so-called physical examination we still have much to learn about the individual We need to know his aim in life his life plan his feelings emotions habits—his answer in a word to the demands of life How are we to acquire this knowledge and what system are we to use as a guide to the examination of what is called the mind? The old unhelpful psychology based on introspection by intelligent normal and cultivated persons was governed by the assumption that the mind like the brain and spinal cord responds to stimulus in a predetermined sort of way This was of little use in dealing with psychoneurotics! *Mais nous avons change tout cela* The new psychology *based largely upon study of the neurotic requires and implies a different outlook* Now there are several schools of those who profess the new psychology but by far the most helpful to the general practitioner is that of Adler that of Individual Psychology and it is in terms of this that I have already spoken

Our first business is to examine the response—that is to say the behaviour—of the patient and then to work back seeking not for the sort of stimulus that would or should make what we think a normal person so act but for the tendency the purpose that *our* patient is seeking to gratify by his to us odd behaviour Thus a busy man complains of strange cardiac sensations and tells us his wife is irritable We simple souls would once have told him that he was overworked and advised him to take his wife for a week end to Brighton Nowadays we find that he is afraid of not carrying through successfully some business enterprise and so seeks an excuse in the state of his heart for abandoning it Moreover he has just spent a surreptitious week end at Boulogne and is trying to justify his marital infidelity by finding such fault with his wife as will reconcile his conscience to the acts of which he is ashamed Probably too he left his fountain pen behind him at the hotel and thinks his memory is failing! But we do not stop at such explanations as these

Three psychological categories have to be taken into account if we would understand fully the neurotic's or functional patient There is in the first place the acknowledged or unacknowledged conflict or perplexity that is apparently unsettling the patient's mind—the present problem that is I say apparently because we believe that even the hesitation the doubt is useful to the patient and expresses his purpose Secondly there is a guiding tendency or life style or goal for which satisfaction is somehow sought in every situation that arises Thirdly there is the early life history explaining for us why the life line is as it is and helping us to understand the circumstances under which it was first adopted When we have learned all this *we form to ourselves a picture of the way in which the patient is facing the three demands of life those of subsistence society and sex And why? Then only do* we know the individual

Now Adler finds the desire to assert superiority to gain one's own ends to attain compensation for real or fancied inferiority the great motive which receives gratification in neurosis Goal attainment is the explanation of life conduct and for the neurotic, one frequent goal is the avoidance of social duty and obligation at the expense of others and to his own advantage

There are other theories and techniques as you know There is that of Freud and there is that of Jung And there is at present a great deal of washy and spineless eclecticism that degenerates into clinical opportunism if not humbug But for the general practitioner whether in relation to the class of case we are chiefly discussing or any other it is the technique and the theory of Adler—the theory and practice of Individual Psychology—that gives the best results

I cannot to night attempt even an outline of Individual Psychology but it is clear that it demands on the part of the physician something more than acquaintance with medicine as taught in the schools Unless there is a pretty wide knowledge of human types of life situations of trends of thought and of human nature in all its aspects, psychological appreciation is impossible The wider our own experiences the greater our knowledge of the human heart and mind as dissected in art and literature and the fuller our acquaintance with the views held in respect of religious and philosophical as well as of ethical problems the more successful our efforts Perhaps that is the meaning of the maxim that at 50 one is either a fool or a physician!

The point I stress is that for each neurotic there is not only some immediate problem which is not being decided, and in respect of which there is an apparent conflict an attempted compromise or some abortive repression into the limbo of the unconscious some putting away of what is unpleasant or unwelcome but there is a special attitude towards life in general which is adopted in face of almost every problem whether in connexion with the family the school the opposite sex society one's profession and religious or irreligious inclinations This attitude however coloured is generally one of indecision of irresolution of procrastination and evasion so that practical adjustment is never made and *compensations for what is denied satisfactions which are* not openly claimed excuses for what shames insurances for what is feared—in fact a whole cloud of mechanisms and arrangements are set up The child complains of stomach ache when for some reason of which he guards the secret he does not want to go to school

Now while the first object of our inquisition is to lay bare all such mechanisms and arrangements that lie behind the manifest symptoms of which the patient complains the second is that after the picture has been made clear to the doctor the patient himself may come to understand the reason for his or her behaviour in this or that fashion on this or that occasion Then the patient assumes conscious control of the disturbing factors and if the demand is rightly met well being returns all being done that rightly can be done by medicines by physical agents or what not to assist the control by the individual of those disordered visceral functions which have led to advice being sought

I would like now to exemplify in some measure what I have suggested in respect of the emotional or affective and purposive aspect of certain neurotic disorders The man or woman who complains of migraine or of trigeminal neuralgia is I think without exception placed in some situation that gives rise to an unexpressed or unrecognized emotion of rage and humiliation The vertiginous neurotic is one who has constantly with him the fear of falling—morally socially or financially Patients with tinnitus are generally those who refuse to listen to some imperative call and the kind of noise of which they complain often gives a key to the difficulty Neurotic asthmatics are often obsessed by an urge towards economy (not always in respect of money) and regret expenditure The miser in a novel always wheezes! Whilst patients with true or false angina are angry and resentful at heart the ordinary case of cardiac neurosis suffers from fear from anxiety and, very often, from unacknowledged or unsatisfied sexual desire

It is odd how common phraseology helps us here We speak of a maddening headache say we feel sick about something have sorrow in our heart or are in a pudding funk Such verbal combinations indicate psychical correlatives of physical states which were perfectly well known to the Hebrew prophets and psalmists Nay there is far more truth than we acknowledge in the Graeco-Roman correlations between the bile black bile lymph and blood and the emotions symbolized when we speak of being liverish splenetic phlegmatic and sanguine

The flatulent dyspeptic has usually reason to resent or even loathe that which he is compelled or thinks himself compelled to swallow constipation is associated with sexual repression and avarice diarrhoea sometimes with a desire to be rid of this or that, and so called colitis not so much with a repression of sexuality as with an unsatisfied desire for sexual gratification (The physiological explanation of this last is that the colon though not the small intestine is associated, via the sacral autonomic system with the sexual viscera) Sexual neuroses are commonly associated *I think, with remorse* or dissatisfaction in connexion with the sexual life The man who is impotent with a prostitute may so protect himself against sin and infection the syphilophobic has always I think remorse for some past or present wrong doing in his mind and is trying indirectly to satisfy his conscience or protect himself in respect of what he has not the moral courage to renounce Paralysis of the functional type often carries the same kind of explanation and the psychical element in sciatica that is sciatica is often clear It is generally the expression of a desire to shirk a duty or avoid a danger and is associated with a sacro lumbar organ inferiority that can be demonstrated by *x* rays

But now, the individual diagnosis having been made if not in detail at any rate in such broad outline as is possible at an early stage we turn specifically to the psychotherapeutic management of the case Let the patient understand the nature of his unwellness as we see it then outline the physical treatment necessary or advisable This should never be neglected whatever the psychotherapeutic indications It may be of course and often is necessary to enlist the aid of a specialist friend But here a word of warning A colleague or acquaintance unless he is sympathetically inclined towards psychological investigation is only too likely to put the finger of inexperience into the wheels of complexity Even if he be sympathetically inclined, by exceeding the limits of his own province he may do more harm than good I advise you then to be careful to ask for just what you want—namely an opinion on the somatic condition without any discussion of its nervous importance

But is such psychological treatment as is required to be given by the general practitioner or by a physician who has paid special attention to the subject I am all in favour of the general practitioner retaining the treatment in his own hands if he feels himself competent and confident and has had experience and cares to at the time A physician consulted as second opinion may advise helpfully *once* but cannot as a rule do much more unless the psychical treatment is confided to him

as wholeheartedly as is the conduct of an operation to a surgeon. It may be and often is advisable that this course be followed. If so let it be followed without reserve. It is as impossible for a physician to make a complete diagnosis and to convey to an uninstructed practitioner within the limits of a single consultation full psychotherapeutic directions as it would be for a surgeon to explain by letter how to do a laparotomy to one who has never done one.

Again it is impossible for intimate conversations to be held with a physician and a practitioner alternately. It is generally unwise for confidences to be repeated and there is the danger of wearying and frustrating intervention by relatives who too often are predisposing and exciting morbific agents. If the patient's confidence is to be gained it must be deserved and kept.

The aim of the physician must be to help the patient *to know himself* and to understand the mechanisms and arrangements that he has unconsciously constructed and why. He must be led to see where is the difficulty that compromise and indecision are no solution. He must be rather led to see *that adjustment* to the demands of subsistence of society and of sex *must* be made. But *the solution* must not be dictated. The patient must *herein minister* to himself: he must work out his own salvation. Never is the method of Adler (which involves early diagnosis on the part of the physician and early statement to the patient) more successful than when the *patient cries with the Philippian gaoler*: What must I do to be saved? If that is he is really desirous of freeing himself from what as yet he has only partly confessed to himself.

While *prolonged attempts* at psychotherapy are seldom very useful when the patient is over 50 or 55 something can be achieved sometimes if tried in the right way. But *perhaps* psychotherapy has its fullest scope between the ages of 20 and 40 and surprisingly good results often *attend the* quite summary *treatment* of young people *eager to be helped*.

With Adler's *method the relation of the physical symptoms* to a psychical state *can be confidently* pointed out *at once*. Again, under Adler's technique *the feeling* that *the* patient comes to entertain towards the *physician* should be free *from embarrassment* to either. It may be desirable that the physician should be one who *if not* an actual stranger is at any rate not a *participant in the* social life enjoyed by the patient. At the *same time his* attitude should be not that of a pedagogue *or* a priest or of one that speaks with authority but in Adler's own phrase *one of* comradely benevolence.

One word *in* conclusion of general interest. Bishop Butler reduced the authorities *in* the polity of the soul to two conscience and self-love. The term self-love covers the superiority aim of Adler. By conscience we may understand the countervailing social impulses that tend in certain circumstances to inhibit self gratification at the expense of others. *This is* what Adler has in mind when he speaks of the *defectiveness* of the social or community feeling in the neurotic and in the psychotic. *For the* neurotic seeks to have dependants and the psychotic has *no friends*. In great part then we are only learning anew *and in a new language what in the* pride of modern scientific research we have too carelessly forgotten.

Two further points: the psychological interest in general practice is so immense that nothing could be more deplorable than *diffusion of the idea* that the investigation of the neuroses means *the discussion of sexual topics* with young girls and psychotherapy the *recommendation* of fornication. No: what sexual complexes are present *the patient suffers because for* one reason or another a wrong attitude has been taken up in respect of the great problems involved in human life.

And this leads towards my second point. Nowadays we are apt to explain all aberrations of emotion and conduct as determined by the balances of our internal gland secretions. It is true that in clinical medicine by administering thyroid gland we can sometimes effect wonderful changes in mental and physical functioning but it is no less true that, by persistence in certain forms of conduct we modify first the functional activities and secondly the actual organization of those glands which by so many are supposed to dictate our emotional responses and our conscious endeavours. Frankenstein's monster in the end slew his master. But it was Frankenstein himself who created the monster *and on* whom the ultimate responsibility for his own destruction rested. In everyday life it is the monsters of our own creation who slay not only ourselves but our children—unto the third and fourth generation. For the effective gland balance in the child is often enough an expression of the consciously exercised and developed positive or negative psychological and ethical trends of the parents.

The fathers have eaten a *sour grape and the children's teeth are set on edge*.

So I end as I began—by asking you to believe with me that although some of us refuse to make the distinction (unnecessary as we *see it*) *between* mind and body yet if this distinction *is made it is better to allot* the responsibility for bodily ills to the wrong *use of the mind* than it is to put the blame entirely on the body. If we follow the latter course we foul the springs of human conduct at *the* very source: if with Adler we adopt the former we shall be surprised *at the extent to which* conscious effort overcomes weakness in the face of difficulty.

We shall be surprised too to find how often the functional maladies that have *defied* drugs operations scoldings expostulations threats and vaccines or ultra-violet rays disappear when the doctor really understands *the individual* and the individual understands himself.

* * * * *

And now a few words by way *of epilogue*.

My subject has been the psychological interest in *general* practice. In discussing this I have dealt, as *I promised* with the nature and treatment of those cases which excluded *from the categories of the* organic and *the mental* alike are too often *relegated to the* dustbin *of the functional*. In actual practice *such are too* often either dismissed with a bottle of bromide or bandied from pillar to post—that is to say from surgeon to *specialist*. They are not sent as they should be to the *physician* who is also as he should be a psychologist. For it is these cases—known sometimes as cases of hysteria of sexual *neurosis* of neurasthenia of anxiety-neurosis of psychoneurosis and the like—that are above all others those which seem in time are so *responsive* to psychotherapy. *These* are the cases with which the *general* practitioner could so *well deal* would he only learn the *technique*. These are *the cases* that give the psychological interest in general practice.

I have purposely said *nothing* of the schizophrenes the *manic-depressives the cases of* climacteric or senile involution and *the other* psychotics or of the subjects of obsessions and *compulsions*—so near to true psychosis. Yet oddly enough *it is these cases more refractory* to psychotherapy that are so persistently sent by practitioners to *psychotherapeutists* with a *diagnosis of nothing organic* and in assurance that psychotherapy *will put them right in no time*. These cases have their interest of course and modern psychology *helps us to*

understand them at least and at any rate to do what can be done for them But psychotherapy to be successful requires co operative response by the patient The psychotics cannot and the obsessed often will not co operate with the physician Even magic requires for its successful application the belief that in itself implies co operation

I repeat the scope for psychotherapy, in the hands of the general practitioner is first and foremost in dealing with the numerous patients who not the subject of gross somatic physical change are yet, with the best intentions and the worst consequences so often submitted to operations and to useless forms of physical treatment before the true origin and nature of the malady is recognized Alas! that it should be so And again alas! that the true nature of the case is so seldom recognized before the flush of functional ' vasomotor disturbance has given place to small celled infiltration and fibrosis or other structural consequences of nutritional change

Your business and your interest are with the little foxes that spoil the vines The little foxes are the emotional disturbances which finding surreptitious expression in functional disorders of viscera are the true begetters of the dreaded organic disease

CHRONIC NON TUBERCULOUS INFECTION OF THE LUNGS IN CHILDREN *

BY

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PHYSICIAN CHARING CROSS HOSPITAL ASSISTANT PHYSICIAN BROMPTON HOSPITAL FOR DISEASES OF THE CHEST

I have chosen this subject for my lecture for two reasons Firstly the subject is not dealt with clearly or comprehensively in any of the ordinary textbooks and secondly experience at the Brompton Hospital shows that many practitioners have no very definite ideas about it The cases grouped under this heading receive a large variety of labels—chronic bronchitis recurrent bronchitis unresolved pneumonia recurrent or interstitial pneumonia and fibrosis of the lung with or without bronchiectasis are the diagnoses which are made It may be considered that to include all these under one heading is unjustified but if they are seen in large numbers it will be realized that they have a very strong family likeness I admit that the physical signs in the chest vary considerably but observation of individual cases over a period of years shows that those who start with slight physical signs in the lungs may steadily deteriorate and finally show signs associated with advanced destruction of the lung substance Hence I believe that the cases in which these diagnoses are made are really different stages or minor variations of one condition rather than several diseases A great deal of the lack of knowledge about them is due to the fact that they occur mostly in children of the poorer classes with the result that the same practitioner does not have the chance of following many of them through all their varying stages as they only attend a doctor during acute exacerbations The child is considered chesty by its parents but as the degree of illness is not sufficient ordinarily to keep it in bed and the treatment involved is expensive and tedious there is a tendency for the parents to pay little attention to the symptoms and the child is seen by the doctor only on the occasion of the next exacerbation Again necropsies are not often obtained as the children seldom die in hospital when they are admitted during an acute flare up careful nursing usually brings them to convalescence Even when necropsies are obtained the disease is in the advanced stages and the destruction has gone so far that any clear understanding of the aetiological process is quite impossible The experience of those who work in the out patient departments of children's and chest hospitals is, however very different These children come up in large numbers and attend for many years

The cases present a very definite clinical syndrome but the history usually takes a good deal of elucidation because the facts in the earlier history of the case have been half forgotten and are only volunteered after close cross examination

A TYPICAL CASE HISTORY

The following represents a typical history The child was perfectly well until the age of about 2 years when it suffered from an attack of whooping cough this was associated with respiratory complications—bronchitis and probably an attack of broncho pneumonia From this date the child has never been the same At first it had a cough in the winter which cleared up in the spring and during the summer months no ill effects were noticed Every now and then the child caught a fresh cold which immediately went to his chest and an attack of bronchitis ensued The child more than once became rather acutely ill and the doctor who was called in found on examination of the lungs what he thought was going to be a patch of broncho pneumonia at the base of the left lung When he came on the following day the child was better and to the doctor's surprise the signs had become markedly less Recovery took place but the cough was not lost until the return of the warmer weather These colds on the chest tended to become more frequent and on each occasion the doctor found signs in the same place After two or three years the colds which had been absent in the summer began to appear at this time also finally the child was never free from a cough Apart from the cough the child was comparatively well between the colds It was fairly well nourished there was however disinclination to take any violent exercise and the patient got short of breath The slightest exposure or diminution of resistance was inevitably followed by the dreaded cold on the chest At length the chronicity of the disease began to arouse suspicions of tuberculosis in the doctor's mind and the child was sent to hospital for an opinion

When considered on a large scale the points of resemblance in the histories are so marked that the identity of the condition is impressed upon one very forcibly The differences are matters of degree and of the stage of the disease at which the child is seen The difference in physical signs depends upon this and upon whether a partial collapse of the lung has occurred I feel that until the pathology and bacteriology are clearly proved these cases should for clinical purposes be grouped together

AETIOLOGY

1 The commonest causes are *whooping cough* and *measles* If care is not taken that the chest completely clears the syndrome is apt to occur presumably in the bronchitis which accompanies whooping cough or measles damage is done to the walls of the smaller bronchioles and a chronic infective process is set up The children of the well to do who have had these illnesses severely are usually carefully treated afterwards by extra rest fresh air and sun in the country or at the seaside till the lungs have completely recovered and normal health has been restored If this is done ill effects do not usually follow but in the children of the poor careful after

* Report of a lecture delivered at the Charing Cross Hospital Sunday Post Graduate Course

treatment is not available—this is the main reason why the syndrome is common among the poor and relatively uncommon among the children of the wealthier classes

2 Attacks of *acute bronchitis* of which the origin is not clear are another relatively common cause this is especially so when the condition affects the smaller bronchioles and if patches of broncho pneumonia appear The expression that a child has cut its teeth with bronchitis is one at which we are inclined to smile but there is no doubt that attacks of bronchitis do frequently occur during teething and this is sometimes the origin of the whole process Whether one should consider the presence of adenoids obstructing the upper air passages as predisposing to acute bronchitis and therefore to be dealt with in the preceding paragraph I am not quite certain but upper air passage obstruction and the catarrhal condition which this causes are certainly predisposing factors

3 The *place of rickets* in the aetiology is rather doubtful Among the more usual symptoms of the disease bronchitis has a prominent place and it seems reasonable to think that the influence of rickets in this condition can be included A history of rickets occurs fairly commonly in these cases but the accuracy of the history of its absence must depend upon whether or not the child was seen at the time by one who was interested in this complaint and on the look out for its minor manifestations

4 *Influenza* is not so frequent a cause as is commonly thought Although the attack of so called influenza often appears to be the origin of the process it is frequently really nothing except a feverish attack with respiratory symptoms and if careful questions are asked as to whether there was an epidemic of influenza at the time and if cases occurring only *during this* are allowed the influence of influenza is much reduced

5 *Lobar pneumonia* and empyemata which have been drained are usually given as common causes I believe that this is a mistake Lobar pneumonia is a rare disease in children at the age at which this syndrome starts It is a condition characterized by a profound exudate into the alveoli of the lung which usually clears up within a very short time leaving the lung in a state in which it is impossible to find any deviation from the normal

The *broncho pneumonia* of children is a different process The epithelium of the smaller bronchi becomes inflamed and in many cases probably ulcerated this allows organisms access to the deeper layers and is therefore much more likely to leave a residual infection The symptoms caused by a partially collapsed lung following an empyema which has been drained are not very marked in fact the heart may be pulled well over to one side with definite evidence of thickening of the pleura without any symptoms except dyspnoea Similarly patients who have had an artificial pneumothorax for pulmonary tuberculosis may at the end of their treatment show extensive signs with no symptoms Damage to the smaller bronchi appears to be the deciding factor

6 *Foreign bodies* in the lung if of an inorganic nature may give rise to symptoms resembling the syndrome we are discussing but those of an organic nature give rise to more acute symptoms

Other Aetiological Factors

The family history is extremely interesting Lees who has made a study of this condition states that 23 per cent of patients questioned gave a history of either the father or the mother having had a chronic cough or chronic bronchitis and in 26 per cent there were other children in the family suffering from a similar condition He suggests chronic pulmonary catarrh as a name

The amount of work which has been done on the question of the infecting agent is comparatively small Lees considered that Pfeiffer's bacillus is probably the organism responsible, this observation is supported by Opie who found *Pfeiffer's bacillus* in 86 per cent of cases of broncho pneumonia following measles

The condition can commence at any age from birth upwards but most commonly commences between 2 and 6 years of age On the whole boys seem to be more frequently affected

Signs and Symptoms

The symptoms are fairly constant Cough is always a prominent feature it often assumes a paroxysmal character especially first thing in the morning In the early stages the cough is lost during the summer months but later it is present all the year round Sputum is usually present except in the mildest cases It will be remembered that ordinarily small children swallow their sputum and in consequence the number of cases in which sputum occurs will be very much greater than those in which it actually appears This is one of the conditions in which sputum does occur in small children It is frequently purulent but does not get offensive until the later stages Haemoptysis in the form of streaks is a common complication occasionally it occurs in larger quantities Dyspnoea is a fairly *constant feature* The general health between the exacerbations is good but is interrupted by the recurrent attacks of bronchitis and colds on the chest *Weight is variable* as a rule the children seem very well nourished in other cases they may be thin Pain in the chest of an aching character is often complained of usually referred to the side on which the signs are found The outstanding feature of the symptoms is however, their recurrent nature the child has periods of comparatively good health but the tendency is for these to be shorter and less complete The temperature is frequently irregular During the acute stage it may rise to 103° with an accompanying *frequency of pulse* and respiration during the periods of remission it may be slightly irregular in the evenings The child's colour is usually good The tongue is commonly rather furred probably the result of the material which is swallowed Early clubbing of the fingers is often found and before actual clubbing glazing and slight cyanosis around the nail beds are noticed The physical abnormalities in the chest during the period of remission may be surprisingly few Commonly there is a slight impairment of note a diminution of breath sounds and one or two rales in the area near the angle of the scapula on the left side They occur about twice as frequently on the left as on the right If the case is seen during a flare up there will be signs suggesting a deep seated consolidation in the same area and bronchitis throughout both lungs In the later stages the heart is found to be displaced towards the affected side and marked evidence of pleural thickening and fibrosis is found When this stage is reached the rest of the lungs usually show scattered rhonchi

Radiographic Changes

The *x ray* appearances do not help much in the earlier stages They usually found are (1) Increase of striation running down from the lower part of the hilum towards the base which may on the left side be partially hidden by the heart shadow The hilum shadows are usually increased (2) The diaphragm may show some diminution of movement and evidence of peaking (3) The heart if the film is accurately centred is often slightly displaced

towards the affected side If the condition is advanced the heart is considerably displaced towards the affected side and the lung markings are completely masked by a dense shadow suggesting thickening of the pleura Occasionally cavities with fluid levels may be seen in the course of the bronchi *X ray photographs after injection of lipiodol* show bronchial dilatation in moderate and advanced cases

DIFFERENTIAL DIAGNOSIS

This is usually easy Pulmonary tuberculosis is the condition which one is usually asked to exclude There has been a great deal of work and discussion of recent years in America on pulmonary tuberculosis in children and an impression has got about that it is relatively common Recent work at the Brompton Hospital does not confirm this In children under 7 years the Mantoux intracutaneous tuberculin reaction is not positive in more than 30 per cent unless there is a strong contact history and this refers to cases coming up to the hospital with some chest complaint The investigation of the x-ray shadows in conjunction with the Mantoux reaction does not lend any support to the idea that tuberculosis of the lungs is frequent in young children in England Out of five hundred cases only three were definitely proved to have active tuberculosis *and in these the lesions were in the upper parts of the lungs* The age during which chronic non tuberculous disease of the lungs is common appears to be the age at which chronic pulmonary tuberculosis is uncommon The history of the child being chesty over a number of years is very strongly against a diagnosis of pulmonary tuberculosis

The other common differential diagnosis is between this syndrome and chronic heart disease Children with mitral disease often have symptoms strongly resembling the condition under discussion but careful examination of the heart and consideration of the history will prevent error in this respect

Foreign bodies in the lung will occasionally give rise to difficulty but if the possibility of their occurrence is *remembered the main difficulty will disappear*

COMPLICATIONS AND PROGNOSIS

These are not very frequent apart from the ordinary progress of the disease itself Severe haemorrhage is rare but does occur Secondary infection with tubercle bacilli is by no means unknown I have a patient under my care at Brompton who originally started this complaint at the age of 3½ years and has subsequently attended the Brompton Hospital for fifty two years About three years ago having had in all over thirty negative sputums she suddenly had a positive and I am pretty certain that this represents a superadded infection There is no x ray change in the better lung and it is impossible owing to the density of the shadows in the worse lung to see what is happening She does not seem any the worse for this development

The prognosis is illustrated by the previous case Frequently the patient lives to late middle age but suffers from a chronic cough and sputum with acute exacerbations throughout life In other cases death occurs during childhood in one of the periodical flare ups but if adolescence is reached the prognosis as regards early death is not very bad

TREATMENT PROPHYLACTIC AND CURATIVE

The prophylactic treatment will be realized from consideration of the aetiology Following measles and whooping cough the child must be carefully looked after until complete health is restored This will usually occur if proper convalescence is insisted upon Sea air with plenty of sunshine will be sufficient but the period of convalescence must be carried on until all symptoms have disappeared A similar convalescence should be arranged after attacks of broncho pneumonia or bronchitis

The treatment when the condition has developed is not so satisfactory In cases where the parents have enough money and are prepared to take sufficient trouble, a great deal can be done The child should be sent to the seaside (especially during the winter months) at first convalescent and then for school A short period is not of great value The child will improve but will relapse on the return to old surroundings Should the seaside be impossible country air may be tried but a dry subsoil is essential The child should be removed if possible from other members of the family with chronic coughs it is probable that reinfection does take place when once the ground has been prepared In cases where this is impossible an open air school will probably produce marked benefit Extra rest should be insisted upon the child should have long nights and should lie down for a couple of hours in the afternoon preferably in the open air Any definite sepsis or obstruction in the upper air passages must be dealt with Breathing exercises are of great value they expand the bases of the lung and tend to permit efficient drainage In the absence of real sunlight artificial sunlight is usually the main method of attack for increasing the general resistance The diet should be liberal and contain considerable quantities of vitamins Cod liver oil and malt should always be given and plenty of fresh fruit and vegetables I have found the use of glucose to be very valuable I have been trying these children on vaccines for some time and in certain cases there has been a benefit on the whole however the results have been disappointing When the disease has reached a more advanced stage and sputum is a prominent feature postural drainage is beneficial Drainage by means of a bronchoscope is only palliative and it is impracticable to get this done often enough to be of any great use Collapsing the lung by means of an artificial pneumothorax would be valuable if practicable but in nearly every case adhesions prevent an adequate collapse Evulsion of the phrenic nerve seems to be the most reasonable form of treatment in more advanced cases Lobectomy of the affected lobe is such a severe operation that it is hardly within practical politics at present Thoracoplasty in children is not satisfactory the deformity of the chest is very severe and the results do not seem to justify the risk Expectorants and inhalants are very disappointing they may be of some symptomatic value in relieving the cough and making the sputum if it has become offensive less so The use of the creosote chamber is probably the most efficient method as by this means any stagnant secretions are generally brought up The severity of the cough however in a chamber of this kind frightens the child so badly that it is hardly practicable

RESULTS OF TREATMENT

The results of treatment in the fully developed cases are not very good but in the earlier stages if the means of the patient permit a great deal can be done I have under my care three children, all of whom are relatives of doctors and in whom treatment has been successful but one must confess that the results in hospital cases are very poor unless by some rule a case can be arranged home by the seaside or in the country can be arranged It is clear that our efforts should be concentrated on prophylaxis recognizing the condition in the early stages and realizing what is likely to happen if definitive steps are not taken If this is done a large amount of chronic illness will be avoided

THE SIGNIFICANCE AND ORIGIN OF LACTIC ACID IN THE GASTRIC CONTENTS

BY

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AND

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It is generally accepted that hydrochloric acid and lactic acid may be found together in gastric contents, but there has been much uncertainty as to the significance of the presence of the latter. Ewald and Boas stated that it was never present except in association with gastric disturbance. Herter agreed with this view, and considered that lactic acid fermentation was very liable to occur when there was delay in emptying, especially if cancer were present. Pavlov was of the opinion that Nature could have devoted organs for lactic acid in the stomach as well as hydrochloric acid, but that she had not done so. The former would appear to be the case, as lactic acid is found in the gastric contents in a large number of conditions, and in many of these it is present in considerable amount. Lactic acid is also found in the stomach contents in cases of cancer of the stomach, and in many of these it is present in considerable amount. Lactic acid is also found in the stomach contents in cases of cancer of the stomach, and in many of these it is present in considerable amount.

As long ago as 1824 [illegible] Beaumont [illegible] and this was [illegible] Others [illegible] Lenoir [illegible] Boas [illegible] 1888 [illegible] with [illegible] Dupré [illegible] that [illegible] does [illegible] cancer [illegible] As regards [illegible] Hayem [illegible] that lactic acid [illegible] Leichtenstern [illegible] held that it was produced [illegible] the [illegible] decomposed acid [illegible] hydrate [illegible] lactic acid [illegible] hydrochloric [illegible] Another [illegible] from carbohydrate *fermentation*. Contact of [illegible] acid [illegible] in the stomach recalls the Boas-Oppler bacillus, for long considered pathognomonic of cancer, which was presumed to be capable of producing lactic acid. Many other organisms have, however, been found capable of producing lactic acid from carbohydrate *fermentation*. Contact of [illegible] acid in the stomach recalls the Boas-Oppler bacillus

Cases Investigated.—All these test meals were carried out on patients in the medical wards of the Glasgow Western Infirmary. Over 50 per cent. were receiving treatment for some gastric condition while the remainder showed clinically no evidence of any such trouble. The patients were of both sexes but the large majority were males. From the type of curve obtained when the gastric acidity was charted the cases were divided into four groups (*a*) showing no free hydrochloric acid (*b*) showing a very low concentration of hydrochloric acid (*c*) showing isosecretory or normal curves (*d*) showing hypersecretory or climbing curves.

The average ages were: Group A 43 years; Group B 33; Group C 29; and Group D 37.

The results were as follows:

TABLE I

Group	Number of Cases in Group	Number with Gastric Symptoms (*a*)	Number without any Gastric Symptoms (*b*)	Cases showing Lactic Acid throughout Meal (*a*)	(*b*)
A	10	6	4	6	4
B	9	3	6	3	6
C	15	7	8	6	4
D	16	12	4	4	4

From this table it will be seen that lactic acid was found throughout the various fractions of the test meal in thirty seven out of the fifty cases and that its presence in the stomach was not necessarily associated with gastric symptoms. In Groups A and B every case was found to show lactic acid while the gastric and non-gastric cases were practically equal in number. A similar distribution of cases according to symptoms is seen in Group C but of the ten cases in which lactic acid was found only in six was a gastric condition diagnosed. In the last group the cases from which lactic acid was obtained were equally divided between the two categories.

A summary of the details of the test meals carried out is given in the following table:

TABLE II

Group	Number of Cases in Group	Fasting Juice		Lactic Acid Present throughout Test Meal per cent	
		Average Quantity c.cm.	Mucus Present per cent.	++	+
A	10	24·7	80	100	—
B	9	23·4	77	23	77
C	15	19·5	73	20	46·6
D	16	28·0	75	6·25	43·75

The average quantity of fasting juice varied a little being least in the isosecretory and greatest in the hypersecretory group. Lactic acid was present in the fasting juice in all cases in which it was detected throughout the course of gastric digestion. Mucus was present in a large proportion of the cases the proportion in all four groups being almost identical.

It is apparent from Table II that increasing acidity of gastric contents is associated with a diminution in the frequency of occurrence of lactic acid. In the hypo secretory groups lactic acid was present in 100 per cent. of the cases in the isosecretory in 60 per cent. while in the hypersecretory group the percentage fell to 50. Not only does frequency of occurrence of lactic acid vary inversely with gastric acidity but there is in addition a decline in the actual amount of lactic acid when that acid is present. It must be understood of course that the estimation of quantity was simply relative. When the concentration was high the reaction appeared much more quickly often before the test had been completed—that is as soon as the thiophene solution was added and before the usual heating in the water bath. Such a relatively high concentration determined in this way is indicated in the table as ++. In Group A all the cases fell into this category; in Group B although in all cases lactic acid was found only in two (23 per cent.) was a strongly positive reaction obtained. With the higher gastric acidity in Groups C and D both the incidence and the amount of lactic acid fell considerably but perhaps the remarkable feature is that it was found to be present in so many cases. The hypersecretory group showed only 6·25 per cent. of cases giving the rapid reaction of relatively high concentration but even in this group lactic acid was found throughout the course of gastric digestion in half the cases. Cases of the isosecretory type Group C were intermediate both as regards incidence and quantity between those of low and of high gastric acidity.

While lactic acid was not of such frequent occurrence where the gastric acidity was normal or high our results were nevertheless in distinct contrast to the opinion commonly found in textbooks that the discovery of lactic acid in achlorhydria is pathognomonic of carcinoma. Herter found that the organisms which he considered responsible for the production of lactic acid in the stomach were more active in a neutral or slightly acid medium although they grew quite well in the presence of hydrochloric acid in a concentration of 0·7 per cent. The results of the present investigation are capable of explanation by these facts.

PRODUCTION OF LACTIC ACID

From these results it is apparent that lactic acid frequently occurs in the stomach when there is no reason whatsoever to suspect carcinoma. The theory that its production is due to the specific action of cancer cells therefore appears untenable.

As the long accepted view that lactic acid resulted from bacterial fermentation seemed very probable it appeared to us to be of interest to investigate the source of the causative organisms—that is whether these existed normally in the stomach or were introduced with the food. There is of course the further possibility that lactic acid might be produced wholly or in part as the result of enzyme action. In order to discover whether the organisms were present in the gruel test meal several such meals were investigated under varying conditions. Freshly prepared gruel was kept at room temperature and specimens examined at intervals of a few hours but even after twenty four hours no lactic acid was detected. Evidently then the lactic acid found in the presence of cases must have been produced in the stomach. Next samples of gruel test meals were incubated at body temperature for twenty four hours. Neither gruel alone nor gruel to which peptic extract and hydrochloric acid had been added showed any trace of lactic acid even at the end of that period. We concluded therefore that the organisms were not commonly introduced with the meal.

The possibility that they might exist in the stomach was next investigated. Fasting gastric juice which had been found to contain no lactic acid when obtained in each case from perfectly healthy individuals exhibiting no evidence of gastric disorder was added to a gruel test meal and incubated at 37° C. another gruel to which some boiled fasting juice had been added was

placed under the same conditions and samples of each were examined at hourly intervals. In those cases in which acid was found after incubation the gastric contents were then tested for the presence of lactic acid. In the control experiments, in which the gastric juice was kept for four hours without the addition of food, no lactic acid was found. The procedure was repeated on three occasions and the results were always the same. The gastric juice was capable of digesting coagulated egg albumin and hydrochloric acid was present in adequate amounts.

[illegible]

[illegible]

[illegible]

CASE II

A fitter's assistant aged 29. Eleven years' history of indigestion; radiograph confirmed diagnosis of duodenal ulcer. *Operation 1* (August 4th 1931).—Duodenal ulcer; posterior no-loop gastro-jejunostomy with vertical stoma; appendicectomy. Course at first satisfactory; till onset of copious vomiting on August 13th. Treatment by change of position, gastric lavage, and repeated aspiration of stomach contents through Rehfuss tube of no avail. *Operation 2* (August 16th).—Exploratory laparotomy under general anæsthesia; duodenum very dilated; sharp spur present at stoma. It was not easy to understand the failure of the stomach to empty via the efferent loop; a finger could be quite easily invaginated through the gastric wall down this loop, albeit somewhat obliquely. There was no marked gastric dilatation. Owing to the shortness of the proximal loop the only procedure that seemed feasible was an enteroplasty; this had to be done without clamps. After this operation the patient was no better, and was indeed very emaciated. His urinary output and chlorides were constantly watched all this time, and saline was administered to maintain their level. *Operation 3*.—Under local anæsthesia a large rubber self-retaining suprapubic tube (Malecot type) conveniently stretched on an introducer was inserted into a small opening in the stomach and guided through the stoma down the efferent bowel for 6 to 8 inches. The operation was then completed as a Senn gastrostomy. An immediate feed was given, and in twenty-four hours ordinary feeding was also started. The patient's condition at once began to improve. Seven days after this operation the tube was found to be loose and accidentally came out. There was no material leaking from the stoma, and the patient went home on September 10th with his wound healed and free from indigestion.

CASE III

A man aged 54. Two and a half months' history of loss of weight and appetite, with some epigastric pain and vomiting; radiograph confirmed diagnosis of carcinoma of stomach. *Operation 1*.—Inoperable carcinoma of stomach; anterior gastro-jejunostomy. Approximately seven days later vomiting of high obstructive type began, and was not relieved by lavage and change of posture. Care was taken to keep up the quantity of urine secreted and its chloride content. *Operation 2* (September 19th 1931).—Under local anæsthesia the abdomen was reopened and a lateral anastomosis done between the afferent and efferent loops. The site of the previous anastomosis was high up under the costal margin and could not be examined. The stomach was not grossly dilated. Convalescence was satisfactory; the man was discharged on October 10th.

DISCUSSION

The life of the second patient appeared to be saved by Witzel's procedure of introducing a tube through the stomach down the efferent jejunum, a procedure drawn to my notice by Mr. Bernard J. Ward. A patient suffering from vicious circle vomiting is a poor surgical risk, and is none the better for forty-eight hours of gastric lavage. He is ill fitted for general anæsthesia, and such procedures as undoing the anastomosis or plastic operations on the jejunum at the stoma. It is suggested that the intubation operation of Witzel is a suitable treatment for this dangerous complication.

On the question of the ætiology of circulus vitiosus, summarized recently by Armitage, two facts emerge from a study of Case II. First, that the efferent jejunum seemed not to be obstructed; secondly, that the introduction of a tube down this path enabled the stomach to empty itself. It is fair to presume that there was obstruction of outflow from the stomach by this route which was not apparent on palpation. It seems right also to be critical of any other explanation of the condition than that there is a mechanical interference with the emptying of the stomach down the efferent bowel.

The first patient, whose life was not saved by jejunostomy, was in desperate condition when this procedure was carried out. Conclusions cannot safely be drawn from this case, especially because of the extraneous factors of a probable enteritis and a certain suppurative broncho-pneumonia. Nevertheless, although he lived for nine days after the jejunostomy was made, there was a steady deterioration in his condition.

Reference to the literature on the prolongation of life of dogs by jejunostomy feeding below an obstruction shows that almost invariably the animals seem to die (thirty-three days; White and Fender, twenty-nine days; Matsukura). Armour and others[4] emphasize a loss of weight which treatment could not prevent.

It seems fair to ask the question: Will jejunostomy ever improve the condition of a patient suffering from a high intestinal obstruction? If jejunostomy is the only procedure that a patient in such a condition can stand, will he ever improve sufficiently for further intervention?

The third patient exemplifies the wisdom of always doing an entero-enterostomy when a gastro-jejunostomy is done for carcinomatous pyloric obstruction.[6]

Finally, as pointed out by Armour and others, while non-operative treatment is being carried out measures must be instituted to ensure an output of 30 to 40 oz. of urine and to ensure that this contains chlorides. This can be done effectively, if uncomfortably, by the subcutaneous administration of saline.

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IDIOPATHIC CONGENITAL DILATATION OF THE COMMON BILE DUCT

BY

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Mr. James H. Saint's instructive article in the *Journal* of February 6th on a case of that rare and very interesting condition, cystic dilatation of the common bile duct, has rewakened in me a desire to place on record some details of a similar case with which I was confronted a few years ago. Although a reader of the usual textbooks and the more recent current literature in surgery and surgical pathology I could not at the time recall any reference to this condition. In consequence the task of doing what was best for the patient and more particularly of dealing with the biliary fistula produced by the first operation was beset with a considerable degree of anxiety.

CASE HISTORY AND TREATMENT

The patient, a married woman aged 29, came for treatment as a possible case of gall-stones. Her history was a long one, dating from childhood. She had been told that her trouble started after an attack of jaundice which she could not remember. All her life she had had recurrent attacks of upper abdominal pain accompanied by vomiting and flatulence, but there had never been any further attack of jaundice; the attacks lasted a few days, and in the intervals she felt comparatively well apart from [illegible]. She was a fairly healthy-looking woman, although rather thin; she was not in any pain but there was a feeling of pressure in the epigastrium and right hypochondrium. A fullness was palpable but it was indefinite. The right rectus was retracted to muscular resistance, but not sufficiently definite to just [illegible]. Various surgeons for possible gall-bladder trouble and no confirmatory investigations were proceeded with.

Three methods of dealing with the condition have been advocated — namely marsupialization cholecysto duodenostomy and choledocho duodenostomy I tried each one in succession the intervals being four and six weeks respectively

The cyst was a large one and was found to extend almost from the right margin of the liver to within an inch or two of the cardiac orifice of the stomach It filled the kidney pouch on the right side and displaced the duodenum in a downward direction The gall bladder was normal in size and apparently healthy An aspirating needle was inserted through the gastro hepatic omentum and bile stained fluid withdrawn The cyst was thought at this time to be pancreatic in origin a large rubber tube was introduced at the site of the needle puncture and the cyst marsupialized by suturing the edges to the abdominal incision A biliary fistula was the result and clay coloured stools developed After the first fortnight the fistula made several attempts to close but on each occasion the patient complained of pain her temperature rose to 100° to 101° and the sinus opened again with the discharge of a large quantity of bile Up to this time the true nature of the condition was not suspected although of course it was obvious that there was a connexion with the biliary tract

It was thought that if the gall bladder were short circuited by an anastomosis with the intestinal tract then the fistula might possibly cease to exist on the next occasion when it tried to close Accordingly the abdomen was reopened the cyst was more fully investigated and the condition was now seen to be a dilatation of the common bile duct itself It commenced abruptly at the origin of the duct above but did not involve the intramural portion below The opening in the cyst was enlarged and the orifices of the cystic and common hepatic ducts were seen A probe was easily passed into each but it could not be made to enter the duodenum A cholecysto duodenostomy was carried out and the cyst again drained

At the end of another six weeks the wound was still draining copious quantities of bile and the fistula had shown no sign of closing The abdomen was opened for the third time and the anastomosis performed at the previous operation was found to be perfect There now remained nothing to be done except to try to establish a communication between the dilated common duct and the duodenum An incision was made in the anterior wall of the first part of the duodenum proximal to the site of the anastomosis with the gall bladder and an opening was made through the postero superior aspect of the bowel directly into the cyst and without opening up retroperitoneal tissue A soft rubber tube 3 8 inch in diameter and 1½ inches long was inserted through this newly formed track and sutured in position with catgut The incision in the duodenum was closed in layers and the cyst drained as before The wound healed the fistula was closed in about three weeks and the patient was discharged feeling quite well

Aetiology

The aetiology of the condition is obscure Intermittent obstruction due to a calculus is discussed by Mr Saint and rejected for the following reasons (1) The dilatation affects the common duct only (as it did in this case) Taylor[1] states that where a cyst exists the gall bladder as a rule dilated but the gall bladder was normal in this case In the case of a stone in the common duct the gall bladder is contracted but this is due to a pre existing cholecystitis and fibrosis and although the obstruction may be intermittent the two conditions are not comparable (2) With intermittent obstruction attacks of jaundice would be a marked feature in the history This patient could not remember ever having had jaundice Although it was impossible at the second operation to pass a probe downwards into the duodenum this could have been due to an inflammatory reaction blocking the duct since at both the second and third operations the cyst was grossly infected and the contents foul smelling The lower end of the duct must have been patent at the first operation but unfortunately no attempt was made to demonstrate this

A theory that the condition may be due to achalasia of Oddi's sphincter is not tenable because (a) jaundice would again be prominent in the history (b) the pancreatic duct would also be affected (c) the whole biliary system would be involved in the dilatation and (d) Fowler's case (quoted by Mr Saint) rules out the possibility of such a theory I agree with Mr Saint that the congenital theory would appear to be the only one that will withstand the fitting together of all the facts both in the history and in the clinical findings

Treatment

In discussing treatment Mr Saint says 'The anastomosis most commonly advocated is a choledocho duodenostomy but a cholecysto gastrostomy appears to be equally efficacious Taylor says It is possibly better to short circuit the bile from its first distended reservoir as it may be that a recurrent residual cholecystitis will arise later where the second distended reservoir the cystic common duct has been drained into the alimentary canal and the gall bladder left alone

I submit that the only treatment that can be depended upon is an anastomosis with the dilated common bile duct itself and not with the gall bladder My justification for this statement lies in my experience of the operation of cholecysto duodenostomy which completely failed to effect a cure in this case

Reference

[1] Taylor *Brit Journ of Surg* xvi 327

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

FOCAL SEPSIS A PREDISPOSING FACTOR IN MINERS NYSTAGMUS

In a paper on miners nystagmus (*British Medical Journal* April 11th 1931 p 616) Dr W E Cooke writes that when investigating the blood picture there is a definite increase in the percentage of monocytes the average being 8 9 per cent On a further examination of his figures and comparing them with the normal the author observes there is also an increase in the percentage of lymphocytes and basophils He states that there was evidence of toxaemia in each case to account for the abnormal polynuclear picture

Focal sepsis undoubtedly plays an important part as a predisposing factor in the aetiology of the condition known as miners nystagmus and in the series of cases which came under my observation I have paid particular attention to the history of infection whether present or past The following case is of exceptional interest in so far as it tends to substantiate what I have already stated and may well account for the change in the blood picture discussed above It is not my intention to deal with the further aetiological factors concerned of which much has been written by other authors upon the subject On the other hand the white corpuscular count investigated by Cooke in patients suffering from miners nystagmus opens up a new aspect of the subject of clinical importance

The history of this case is unusual because prior to an attack of osteo periostitis following a deep-seated furunculus of the right leg about four inches below the buttock the patient had never displayed any symptoms or physical signs of nystagmus

The patient a collier aged 39 years states that he has worked underground for over 20 years without symptoms of eye trouble Seven months ago he consulted me complaining of what he described as a blind boil on the leg The condition resembled a localized abscess surrounded by a hard area of induration situated about four inches below the right buttock

No evidence of Pott's caries could be discovered but a radiograph demonstrated a well defined shadow about the region of the upper third of the femur His Wassermann

reaction was negative He was advised to rest hot fomentations being applied three times daily accompanied by constitutional treatment The temperature remained normal throughout the pulse rate being only slightly increased Nothing abnormal was observed in the other systems The abscess discharged slightly but cleared up after about five weeks leaving a little hard swelling which was not tender on pressure

Six months after returning to work the patient again consulted me this time complaining of eye trouble—namely giddiness photophobia and dancing of lights On examination he displayed well marked physical signs of miners nystagmus —namely rotatory oscillations of eyes conjunctival hyperæmia—his light minimum was increased and on perimeter test there was marked diminution of the field for blue green and red

On inquiry regarding his leg he stated that the old scar broke down and started to discharge slightly about two months after resuming work but was not painful He was strongly advised on this occasion to cease work and submit himself for operation and is at present awaiting admittance

We may in consequence conclude that the prolonged suppuration resulting from the diseased bone must have considerably weakened the patient's system predisposing in due course to the nystagmic symptoms of which he later complained It will be interesting to note after the sinus has been explored and a radical cure obtained whether the eye symptoms will quickly improve also whether the nystagmus will recur on resuming work underground

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HYDRONEPHROTIC PELVIC KIDNEY

Cases of this condition are sufficiently rare to warrant publication

CASE HISTORY

A collier aged 32 years was admitted into the Mountain Ash Hospital on February 20th 1930 with the following history In November 1929 he had a severe attack of what appeared to be typical renal colic the pain radiating from the left loin into the left thigh and testis This incapacitated him for about a week Several minor attacks followed the last occurring just before admission The attacks were accompanied by the usual gastric symptoms but there were no changes in the urine The man was subject to constipation

On examination the left kidney could not be felt in its usual position but an indefinite tumour could be palpated in the left pelvic area Per rectum a hard tumour could be felt pushing the rectum to the right Before opening the abdomen the diagnosis was not certain the provisional diagnosis being either an ectopic kidney or a carcinoma of the pelvic colon involving the ureter An x ray plate of the upper abdomen showed no evidence of stone but unfortunately a plate of the pelvic area was not taken

On February 22nd 1930 the abdomen was opened by a left infraumbilical paramedian incision The right kidney was normal in size and position the left being absent from the loin The pelvic colon ran down over the front and right side of the pelvic tumour and was apparently not connected with it The peritoneum over the tumour having been incised the latter was seen to be an ectopic hydronephrotic kidney 4 by 3 by 3 inches in dimensions and occupying about two thirds of the pelvic cavity The hilum looked upwards and to the left The renal vessels joined the left common iliacs The pelvis of the ureter was in front of the vessels while the ureter ran down over the anterior surface of the kidney and was tightly stretched over it The kidney was removed without difficulty and the patient made a good recovery and has enjoyed excellent health since

COMMENTARY

This case illustrates some important points

1 Renal colic due to a diseased pelvic kidney closely resembles colic due to a normally placed one In fact this pain was caused by irritation of left renal calculus

2 An ectopic kidney may cause no trouble for many years in this case thirty-six

3 The gastro-intestinal symptoms with the presence of a definite pelvic tumour can easily lead to an error in diagnosis in the absence of typical renal colic or a routine pyelogram

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Reports of Societies

THE DIAGNOSIS OF DISEASES OF THE HIP JOINT

At the meeting of the Medical Society of London on March 21st with Mr HERBERT TILLEY the president in the chair a paper was read by Dr J F BRAILSFORD on the diagnosis of diseases of the hip joint The paper was illustrated by a very large number of lantern slides illustrating conditions seen on x ray examination

Dr Brailsford said that his paper was based on a study during the past five years of patients sent for x ray examination of the hip joint to various hospitals and infant welfare centres in Birmingham and Warwickshire and of patients in his own private practice Save in the case of acute disease the diagnosis of disease of the hip joint was almost entirely dependent upon the x ray picture and even in acute diseases radiography might supply very useful additional evidence A standard technique should be adopted for all radiographs of the hip joint otherwise faulty interpretation was almost bound to occur The patient should lie on his back with the lower limbs stretched out and the feet symmetrically inverted The tube should be centred vertically over a point midway between the anterior superior spine and the symphysis pubis Both hip joints should be included on the one film so that a comparison of density and uniformity of structure could be made Radiographs permitted of the early recognition of congenital dislocation (which was much more common in the female in whom the left hip joint was most frequently affected) and showed that early treatment secured the best anatomical results Severe trauma during reduction often resulted in a stunted development of the femoral epiphysis and neck Changes similar to those seen in Perthes's disease of the femoral epiphysis were not uncommon after the trauma attending reduction or attempted reduction It was not uncommon among children to find a fracture of the neck of the femur and although this was relatively rare in early adult life its incidence again increased with age The fracture might not be detected in children until a coxa vara deformity had developed unless, of course the child was radiographed at the time of the injury About 50 per cent of the fractures of the neck of the femur in adults and elderly people failed to unite Dr Brailsford was doubtful whether trauma was the cause of slipped epiphysis most of the patients with this condition gave no history of trauma and the radiographic appearances did not support that theory The epiphysis might be completely reduced and the best result was a premature effusion of the epiphysis with a resulting quarter inch shortening of the limb often however the epiphysis underwent degenerative changes Perthes's disease frequently showed more extensive bone changes in the radiograph than the clinical signs would suggest It had an active phase during which the bone was plastic and gave way to pressure and permanent deformity might result In early tuberculosis of the hip-joint although the clinical signs might be prominent the x ray picture might not show any bone changes On the other hand a radiograph might show definite evidence of tuberculosis when clinical signs had not suggested the trouble These apparent contradictions were due to variation in the site and spread of the

infection All patients with clinical signs of hip joint disease and normal radiographic appearances should be radiographed again after an interval Radiographs would give a good indication of the cessation of activity of the disease Syphilitic coxitis was frequently bilateral its radiographic appearances—sometimes mistaken for tuberculosis or Perthes's disease—were distinctive particularly if a series of radiographs of the hip joints were taken throughout the course of the illness Acute arthritis of gonococcal origin was often followed by a marked reduction of the joint space and irregularity of the articular surfaces with later lipping of the articular margins When arthritis of the hip joint occurred in the course of rheumatoid arthritis it frequently resulted in the condition of protrusio acetabuli due to pressure of the head of the femur on the softened bone of the acetabulum The first radiographs of the osteo arthritic hip joint usually showed extensive disease diminution of the superior joint space sclerosis of the approximated articular surfaces (indicating destruction of the articular cartilage) and eburnation and erosion of the articular surfaces Joints showing cyst like cavities in the bone indicative of early osteo arthritis but no diminution of joint space did not cause the patient pain It was not uncommon to see localized myositis ossificans following injury in the neighbourhood of the hip joint After the reduction of a hip joint dislocation the radiograph might show what appeared to be a normal joint but marked new bone formation might be shown on subsequent radiographs—an important point in medico legal cases Paget's disease and secondary metastases of carcinoma might be shown on a radiograph taken owing to a fracture or to a complaint of sciatica because the clinical evidence had suggested these conditions Pain referred to the area of the knee joint in children and adults might be explained by the evidence on a radiograph of the pelvis and hip joints

Mr D McCRAE AITKEN after complimenting Dr Brailsford upon his excellent radiographs said that a point to be remembered was that clinical diagnosis ought to come before x ray diagnosis because pain and symptoms would frequently be found before there had been time for alterations in the bone texture which would show in the x ray picture These symptoms also would disappear long before the bone was cured He showed a normal arch in the erect position in a small boy of 7 and indicated the essential points for the orthopaedist to remember particularly the arch known as Shenton's arch or Shenton's line He mentioned one boy who was brought up to him after having pain in the hip for seven months with a possible diagnosis of tuberculosis It was however a case of Perthes's disease he rather disagreed with Dr Brailsford that this was not due to injury He thought it attributable to such a condition as a punch injury from jumping off a wall In this case he treated the patient by recumbency and gradually the symptoms disappeared with recovery of the head though some weakness remained on the pressure line In another case of a child with a fragmented femur head he prevented the head from bearing weight by treating in a double Thomas frame until he saw what he thought was full repair He showed by means of lantern slides the stages of progress in this and other cases over a period of years illustrating the slowness with which regeneration took place though the result was quite satisfactory in the end He did not agree with Dr Brailsford's suggestion that slipped epiphysis was not the result of injury he believed it to be due to a twist injury in which the head remained in the acetabulum the cartilage giving way and the injured area becoming hyperaemic along the region of repair One of his cases was that of a girl who had strained her hip at hockey and she had the same kind of pain as was found in the early stage of slipped epiphysis He believed that there had been an attempt at slipped epiphysis but that the girl was a little too old to have the complete condition Mr Aitken described the operation recently introduced by Lavalle of Buenos Aires which consisted of tapping the hyperaemic areas and putting in a thin spine of bone thereby relieving congestion and promoting bone repair He had found that this operation did definitely hasten the repair of bone and saved joints from being subjected to an ankylosis It was important that the operation should take place into the hyperaemic not into the caseous area He thought it a useful procedure for saving the joint

Mr WHITCHURCH HOWELL said that the more he saw of arthritis the more he thought one ought to be prepared to alter one's surgical treatment In the child with the tuberculous hip joint opinion was coming round to the need for some form of deliberate operation provided open-air treatment over a period of months or years had failed to effect a cure If he himself had tuberculosis of the hip joint he would wish to have ankylosis done but he spoke in deference to others as a junior in orthopaedic surgery If he had arthritis of the hip he would wish to have some form of surgery done other than ankylosis—some form of arthroplasty and if that failed arthrodesis or fixation of the hip joint

Mr NOEL ST J BUXTON remarked that in some of the cases most difficult in diagnosis the x ray picture was normal He gave an account of a schoolboy 15 years old who was injured while playing football He was laid up for a day or two there were no abnormal physical signs and he went back to his school work Some days afterwards he went again into the football field but he could not carry on through failure of the hip After rest in bed for a fortnight or three weeks normal function was restored but the skiagram gave no indication of any abnormal appearance He believed that in most of these cases there was an effusion in the joint which in the case of the knee was visible because the fluid was entirely superficial but was not seen when it affected the hip

Dr BRAILSFORD in reply said that it was true that in acute cases very often little help could be afforded by means of x ray films though there were times when information was forthcoming by that means which it would not be possible to obtain in any other way With regard to the disorganization seen in Perthes's disease and the possible effect of trauma the same appearance of fragmentation as was found in the typical case of Perthes's disease was to be seen in congenital dislocation of the hip-joint which had been manipulated

TREATMENT OF ECLAMPSIA

At the meeting of the North of England Obstetrical and Gynaecological Society in Sheffield on February 26th a paper on the conservative treatment of eclampsia with a report of 100 cases was read by Drs E A GERRARD and R L NEWTON (Manchester) These cases had been collected during a period of three and a half years at St Mary's Hospitals Manchester and one or other of the authors had been partly responsible for every case

In a review of the results of treatment during the twenty years 1908–28 a comparison was made with those obtained in the cases described Before 1920 there was no routine method of treatment which however usually consisted of purgation and diaphoresis while Caesarean section and accouchement force were frequently employed The mortality rate for this period was 35 6 per cent In 1920 the Dublin method was adopted and as a result the mortality rate fell to 19 8 per cent for the following eight years A criticism of this treatment was the adverse effect that repeated colonic lavage appeared to exert upon

the patient's heart In 1928 Stroganoff's method was combined with certain eliminative measures A quarter of a grain of morphine and 1 c cm of coramine (a camphor preparation) were given Half an hour later gastric lavage was performed and 2 oz of castor oil and 2 minims of croton oil were introduced into the stomach After a colonic lavage 2 oz of magnesium sulphate were left in the colon At one and a half hours 30 grains of chloral hydrate were administered by rectum or mouth morphine was repeated at three hours Coramine was repeated at the fourth eighth twelfth sixteenth, and twentieth hours 30 grains of chloral hydrate were given at seven hours 20 grains at twelve hours and then eight hourly if necessary At the beginning of treatment—according to the method of Schwarz and Dieckmann—10 c cm of 25 per cent solution of magnesium sulphate were given intramuscularly (with 5 c cm after each convulsion) and at the same time 1 000 c cm of 20 per cent solution of dextrose intravenously the injection being repeated if necessary There was no operative intervention during labour but in a certain number of cases induction of abortion or of labour was carried out on account of persistent albuminuria following recovery from eclampsia The mode of delivery was by natural forces in fifty-four cases by forceps in seventeen and by induction succeeded by natural delivery in seven There was spontaneous abortion in eight cases and induced abortion in three Version followed by extraction breech extraction Caesarean section and craniotomy were each performed on one occasion and five patients died undelivered There were seven deaths in the hundred cases and the mortality fell from 10 per cent in forty cases to 5 per cent in sixty cases as a result of the introduction of dextrose and magnesium sulphate into the treatment The foetal mortality rate after excluding eighteen cases of post partum eclampsia and eleven abortions was 57 7 per cent This also included neo natal deaths A detailed review of the cases was given after dividing them into two groups—the severe and the mild The severe group included patients in coma with more than six convulsions or with a temperature of over 103° F Only seven of the patients had attended the hospital clinic of these three had not attended for some time and all developed post partum eclampsia In two cases post partum eclampsia occurred after the beginning of eliminative treatment for albuminuria In another case ante partum eclampsia resulted within a few hours of eliminative treatment being started and in the last case eclampsia followed labour induced for persistent albuminuria Albumin was absent from the urine on admission in five cases and none of these patients died The urine was clear in seventy eight of the cases on discharge from hospital

In reply to questions raised during the discussion Dr NEWTON stated that the blood pressure changes had afforded no help in the investigation He only used chloroform during the preliminary washing out of stomach and colon in the presence of restlessness The administration of glucose should be followed by polyuria 200 grams being the maximum amount it was safe to give more resulting in glycosuria

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At the meeting of the Optical Society on March 10th a paper on The absorption of light was read by Dr H A HOUSTOUN and a note on refractive indices by Mrs I CLIFFORD A demonstration of the manufacture of a microscope was given by Mr W J WATSON BAKER of Messrs W Watson and Sons Ltd who exhibited a cinematograph film showing all the important mechanical [illegible] in the construction of the slides etc [illegible] and polishing of the lenses

Reviews

HISTORY OF SCOTTISH MEDICINE

Dr J D COMRIE who is lecturer on the practice of medicine at the School of Medicine of the Royal Colleges at Edinburgh and on the history of medicine in the University wrote a *History of Scottish Medicine to 1860* for the meeting of the British Medical Association at Edinburgh in July 1927 He has now enlarged and practically rewritten it and a book which ran to 301 pages now fills two volumes comprising 856 pages[1] Both editions appear under the auspices of the Wellcome Historical Museum, and Sir Henry S Wellcome contributes a foreword showing how great has been his interest in the preparation of the history which is a fitting addendum to the museum Sir Henry says in this introduction that his Historical Museum is designed to expound by objective demonstration the practical value of the teaching of the history of medicine where visual object lessons do much more than merely supplement the oral instruction of the lecture room for they help very materially to infuse a live and realistic interest into the dry bones of history Both volumes of the history are abundantly illustrated, and Dr Comrie has evidently been at very considerable pains to discover the originals from which the blocks are made It may be said at once that the illustrations are admirable but their very number and excellence makes the volumes so heavy that they are difficult to handle

This book shows that Scottish medicine has developed on very different lines from those of English medicine though the two professions are naturally allied In a poor and difficult country with the population widely scattered it was necessary that everyone should have some knowledge of the means of helping the sick and hurt—knowledge which might be traditional or might be acquired England had only two universities—Oxford and Cambridge Scotland had four—Edinburgh Glasgow Aberdeen and St Andrews The general standard of education was higher in Scotland than in England and until comparatively recent times there was no middle class in Scotland It thus happened that the ranks of the medical profession were recruited from landed proprietors and from the sons of peasants to a much greater extent than was usual in England Lack of means and the scarcity of openings at home drove many men abroad where they did good service in the Navy and Army as well as in London itself, whilst in earlier times they served in the armies of France Spain and even Russia Their stories are told in many scattered publications—some difficult to obtain—but Dr Comrie with incredible diligence has gathered them together and has woven them into a single well considered whole a tale which is told well and so pleasantly that it is of the greatest interest It is said that the Scotsman occasionally invents a story against himself but Dr Comrie shows that some time honoured jests have a basis of truth It is reported that Aberdeen boats may be recognized by the fact that gulls do not attend them Bishop Leslie records in 1578 that in Aberdeenshire no Rattoun is bred or brought in from any other place may live Dr Comrie thinks that this absence of rats accounts for the fact that Aberdeen was comparatively immune from the great outbreaks of plague

Dr Comrie gives an account of the history of the universities showing how they were governed and the hold

[1] *History of Scottish Medicine* By John D Comrie [illegible] Royal College of Physicians of Edinburgh Second edition Two vol London Baillière Tindall and Cox 1932 (Pp 852 404 figures The two volumes not sold separately)

which was kept upon some of them by the town authorities. He provides very valuable lists of the professors with the dates of their appointment and adds to these lists the names and dates of the extra-academical teachers which have often been difficult to obtain. The posts have always been held by men of established reputation, many of the names being known throughout the world. The teaching has usually been of a very high character and Dr. Comrie draws attention to the fact that clinical medicine was a subject at the University of Edinburgh as early as 1749 when John Rutherford introduced himself to his class with the words: "I shall examine every patient capable of appearing before you in the following manner: first give you a history of the disease; secondly inquire into the cause; thirdly give you my opinion how it will terminate; fourthly lay down indications of cure; and if any new symptoms arise acquaint you with them that you may see how I vary my prescriptions; and fifthly point out the different methods of cure." The surgeons in the Scottish universities until comparatively recent times have been under the dead hand of anatomy; for the teacher was professor of anatomy and surgery and his love of anatomy was often greater than his affection for surgery. The surgeons as in England were for a time allied with the barbers but their union was dissolved in 1703 at the request of the barbers while in London it continued until 1745 when the separation took place at the request of the surgeons. In Edinburgh the Apothecaries were more closely connected with the surgeons while in London they were more associated with the physicians.

In conclusion Dr. Comrie adds short biographies of Scottish medical men who have done honour at home and abroad to their native country and includes in many cases a portrait. The last name on the list is that of Sir Andrew Balfour who died in 1931. The whole book is painstaking accurate fully documented and provided with a most satisfactory index. Dr. Comrie is to be congratulated on having brought it to so successful an issue in such a short space of time. It may be noted that he speaks more than once of Fifeshire instead of the Kingdom of Fife and that he writes of Sir Henry Ackland which is wrong.

FEMALE SEX HORMONES

The numerous investigations that are being carried out in the field of sex hormones make it difficult for those who are not actually engaged in the work to keep abreast with all new findings and to appreciate the broad directions of progress in the bewildering maze of details. Professor W. P. CLAVES in his book *Female Sex Hormonology*[1] has endeavoured to present recent contributions to the subject from the point of view of an intensely interested clinical spectator. There is no attempt to produce a detailed account of experimental work or even to deal with every line of investigation but merely to give such material as in the author's opinion seems to have led or promises to lead to new advances.

In the opening chapters the main factors of the sexual cycle in the uterus and ovary in various experimental animals are briefly recapitulated and there follows a description of the cyclical changes in the primate endometrium. The author however makes no reference to the recent work in the cyclical physiological changes in reactivity in the musculature of the human uterus. In succession leading up to the discovery of the ovarian hormones are described in some detail and the synergism existing between oestrin and the corpus luteum hormone is emphasized. Two chapters are devoted to the work on the gonadotropic functions of the pituitary the excretion of gonadotropic hormones and pregnancy diagnosis. The later work of Zondek on the excretion of prolan A under physiological and pathological conditions is not included nor is the recent work which establishes the significance of vaginal mucification in the mouse (a test which at one time appeared to be of value in differentiating between the gonadotropic hormones). The various theories regarding the significance of menstruation are discussed and prominence is given to the views advanced by Hartman. A chapter is devoted to the work on the factors responsible for the end of pregnancy and parturition. This includes a rather lengthy description of the experiments on the synergism between oestrin and pituitrin while the function of the corpus luteum is only cursorily mentioned. The significance of the finding (described elsewhere in the book) that ovariectomy does not interfere with pregnancy in the human subject is not here considered. Knowledge of mammary activity and lactation is reviewed in the light of the contribution recently made by Corner but we miss some reference to the work of the Dutch school on the action of oestrin.

On the whole the book presents a fair account of a number of lines of investigation on the subject of female sex hormones. The author has whole heartedly and enthusiastically advocated various theories but has not shown much critical judgement and discrimination in his evaluation of the experimental data. The glossary will prove of value to the beginner if the explanations given are not taken too literally.

[1] *Female Sex Hormones*. By Willard Claves, M.D. Pp. 244. Philadelphia and London: W. B. Saunders Company. 1931. (21s. net.)

CHRONIC URETHRITIS

To write on chronic urethritis demands considerable courage for it is a problem that often puzzles the clinician and taxes to the full his patience and skill. Drs. R. Dossot and M. Palazzoli have undertaken this task in *Les Uretrites Chroniques*.[2] As chief and assistant respectively of the urological clinic of the Necker Hospital Paris they have had an abundance of clinical material on which to draw. Unfortunately an abundance of material does not in itself ensure good scientific work but the authors of this book have utilized their opportunities to the full. Realizing that chronic urethritis is often treated empirically and in the absence of an accurate diagnosis they have condensed in their book the knowledge necessary for recognition of the different types of urethritis as well as that required for the treatment appropriate to each. In order that nothing should be omitted they have divided their work systematically into the anatomy and physiology of the genital tract its bacteriological and pathological anatomy the clinical examination of the patient the study of the various forms of treatment available and a description of that form which is most appropriate to a given type. The book is essentially practical and no treatment which does not meet with the approval of the authors has been described.

The aim which every doctor who deals with this form of trouble must ever keep before him is the restitution of the genital tract to a normal condition. After a fracture there exists a callus and after an acute infection a scar. In the case of urethritis some insignificant lesion may persist which indicates that the genital tract has not returned to the normal and no case of chronic urethritis can safely be left unless the final examination reveals that the urethra is healthy and intact. It is a common expe-

[2] *Les Uretrites Chroniques*. Par R. Dossot et M. Palazzoli. Préface du Professeur Legueu. Paris: Masson et Cie. 1932. (Pp. 344 illustrated. 50 fr.)

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CANCER OF THE LARYNX

For many years the disease we call "rickets" has been known in Germany as "Die englische Krankheit" In the same way syphilis in the Renaissance Period was often called the 'French disease" Thus Pistol, in *Henry V*, says

> News have I that my Nell is dead i' the spital
> Of malady of France

It brings some comfort to our *amour propre* to read that laryngo-fissure has recently been referred to in French literature as "l'operation anglaise" This is doubtless, in recognition of the pioneer work of Butlin and Semon at the end of last century Their courage and perseverance has received filial recognition from a pupil who is chiefly responsible for establishing the early diagnosis, the indications and the technique of an operation which claims to be without risk, while securing a lasting cure and a useful voice [1] As the importance of an early diagnosis of a persistent hoarseness becomes generally known, the operation by the laryngo-fissure route will become the operation of choice in nearly all cases of intrinsic cancer and the need of a complete laryngectomy will become increasingly rare This more extensive and relatively mutilating operation has been brought to its present state of perfection chiefly through the work of Gluck and Sorensen (Berlin), Tapia (Madrid), and McKenty (New York) But both these operations are chiefly of value in growths originating within the larynx—the intrinsic group It has been established in recent years that extrinsic cancer can only seldom be dealt with by the removal of the entire larynx McKenty went so far as to say that extrinsic cancer—that is, cancer originating around the upper orifice of the larynx or its posterior or lateral walls—was not, and never would be, amenable to surgery Some exception to this can now be made thanks to the work of Wilfred Trotter in establishing lateral pharyngotomy for approaching growths originating around the upper orifice of the larynx and its posterior walls The present status of these three methods—by a laryngo fissure by a lateral pharyngotomy and by complete laryngectomy—is well brought out in a recent article by Lionel Colledge and Roydon Peacock [2] The results of ten years work are so admirably displayed in tabular and statistical forms that they must afford a mass of interesting records to the laryngologist But the authors tables and forms are so full of information and cross references that those who are not specially engaged in laryngology may fail to see the trees from the thickness of the wood We would therefore direct particular attention to such of their findings and conclusions as appear to have the widest general interest

With laryngo-fissure cases Mr Colledge records a lasting cure in 80 per cent With a proper selection of cases in the future, he feels it will not be unreasonable to expect a success of 90 per cent There was one operative death in eleven cases Of forty two total laryngectomies there were nine operative deaths, or 21 4 per cent Of the thirty-three patients who survived the operation twenty-one or 63 6 per cent, remain alive and well In both these groups there is a striking contrast between results in hospital and in private practice The one operative death in laryngo fissure was in a hospital case Of the forty two total laryngectomies the operative mortality in (twenty) hospital patients was 40 per cent, and in (twenty two) private patients it was 4 5 per cent The factors responsible for this difference are thought to be (1) the less robust physical condition of hospital patients and (2) the fact that the management and care of hospital patients after operation is largely and unavoidably entrusted to a frequently changing staff, whereas private patients are entirely under the control of the surgeon and permanent staff of nurses

In regard to laryngo-fissure an important point is brought out in this report Among the laryngectomies were eleven cases in which cancer had recurred after a laryngo-fissure In ten cases this procedure had been performed elsewhere Now the statement is sometimes made that laryngectomy after a laryngo fissure is an almost hopeless undertaking yet it is worthy of note that seven of these eleven patients remain free from disease Indeed, in one case laryngo fissure had been performed twice previously, and the patient whose larynx was removed three years ago is now symptom-free In early cases of intrinsic cancer the disease can be lastingly removed by the laryngo fissure route while advanced cases require a complete laryngectomy Between these two groups a certain number of border-line cases are observed Up to the present the tendency—particularly in the hands of the protagonists of laryngectomy—has been, in such cases to advise complete removal of the larynx These results of Mr Colledge will strengthen the position of those who have, in recent years been demonstrating how extensive an excision of diseased tissue with a good healthy margin, can be carried out by first splitting the larynx which enables the laryngologist to carry out (in the expressive words of Sebileau) "une laryngectomie economique a la demande des lesions"

Of extrinsic cancers a certain number were operated on by a pharyngotomy or by a pharyngo laryngectomy The cases must be studied in detail but two important points emerge from these copious records First it is again evident that operative mortality is much heavier in hospital patients than in private practice Secondly the mortality diminishes markedly as the experience and skill of the operator increases The deaths in the early lateral pharyngotomies were attributed to the

[1] *Cancer of the Larynx* By S Clair Thomson and Lionel Colledge London 1930

[2] An Analysis of 120 Cases of Malignant Disease of the Upper Air Passages treated during a Period of Ten Years *Journal of Laryngology* 1932 xlvii No 3 161

sepsis following closure of the pharynx and were avoided in later ones when the wound was stitched open by uniting the skin edge to the mucous membrane In these 126 cases there were eight cases of malignant disease in the nasopharynx and eight cases in the maxillary antrum Of the former seven died within a year and all within two years Of the antrum cases surgery alone or surgery plus radium has in the majority proved ineffective These cures of cancer in the jaw and nasopharynx are few but according to Mr Colledge, they seem to suggest that the future lies with radiation In the larynx and lower pharynx radiation has failed to establish itself and the first choice must be given to surgery in the hands of experts In the intrinsic form it has given better results than can be claimed with cancer in any other internal region in the body Some types of the extrinsic manifestation can also be lastingly cured With these now well established results practitioners should strive after early diagnosis and will feel justified in advising surgery For as McKenty puts it death from this cause is the most distressing and revolting known to man

INTERNATIONAL MATERNAL AND CHILD WELFARE

While great difficulty would attend the task of laying down a system of rules for maternal and child care which would be equally valid in all countries there are certain general principles which hold good everywhere and which can form the basis of a health service without regard to climate or customs of the country It is on such broad principles that the health organization of the League of Nations has founded its report on maternal welfare and the hygiene of infants and children of pre school age [1] The material which forms the report is based on an analysis of the experience obtained in different countries and on studies made by various members of the committee appointed to carry out this task

The report is divided into three sections under the headings of maternal welfare infant welfare and the health of the pre school child, and in each section the special dangers encountered by those persons in the group are discussed before the suggestions for preventive measures are set out The section on the health of the pre school child seems to us to be particularly interesting since in this country little provision is made for the care of the child between 2 and 5 years of age with the result that children admitted to the infants departments of elementary schools have been described as damaged goods The same lack is apparent in other countries and indeed in one direction they are even less fortunate than ourselves since elsewhere school attendance commonly becomes compulsory at the age of 6 instead of 5 Statistics for the pre school period are generally incomplete The morbidity is only known from the few infectious diseases which are notifiable and mortality statistics are often misleading owing to individual variations in certification—deaths following complications of measles for example may be certified as due to broncho-pneumonia only

The pre school period is a particularly critical one for the child since it is at this time that he is most likely to encounter and contract the acute infectious fevers The committee notes in its report that mortality in the pre-school age is still after mortality in the first year the highest recorded up to the age of 45 or even 50 and this appears to hold for all the countries investigated Great emphasis is laid on the importance of preventive measures the most effective of which depend on systematic and regular supervision of the health of the child until he comes under the care of the school doctor Propaganda and education are necessary to make parents realize the importance of such supervision once the anxious early months of life are successfully accomplished but the increasing attendance at ante-natal clinics and infant welfare centres is an indication of the results which may be achieved by education of this kind The writers of the report consider that supervision of the pre-school child should be exercised from centres under the same organization as infant welfare centres No scheme is set out proposing the inclusion of the family doctor as the supervisor of the pre school child this seems to us to be an omission worthy of fresh consideration A reference is made in the final paragraph of the report to the allotment of work and the relations of the social services to the medical profession but only to the extent of suggesting special inquiries into these relations with a view to utilizing as wisely as possible the human and material resources available The role of the general practitioner in the care of the pre-school child is one which might well be developed at less expense than would be incurred by a wide extension of public health machinery

The value of day nurseries, nursery schools, and nursery classes is well recognized by the committee but it feels that the dangers of epidemic infection in such gatherings of children must not be regarded lightly Where the accommodation is unequal to the demands made upon it—and that is everywhere at the present time—those responsible are warned to resist the temptation to admit a greater number of children than the institution is designed to hold The committee thinks it desirable that all children should be submitted to anti diphtheritic vaccination between the ages of 1 and 2 and suggests that free vaccination might usefully be given once a year by all local authorities The appearance of measles in a day nursery residential institution or hospital ward should be followed immediately by inoculation of all the children present with convalescent serum

The report throughout is informative and the proposals made are practical and suggestive The committee lays great stress on the importance of co ordination between the various public voluntary and professional interests concerned to secure economy of effort and to prevent overlapping

[1] Maternal Welfare (League of Nations Publication Department 10 Metcalfe Street London W C 1 (2s)

PERIPHERAL VISION

The great mass of physiological investigations which have been carried out on visual problems have concerned themselves with central vision—that is the perception of objects whose images fall directly upon the macula It may be true that if we wish to see an object clearly we turn the eyes and the head towards it to view it directly but it is equally true that the perception of objects situated in the peripheral field makes up a very great deal of our mental life In a valuable contribution to our knowledge of this little-known but important subject incorporated in one of the Special Report Series issued by the Committee on Vision of the Medical Research Council G C Grindley deals more particularly with the psychological factors in peripheral vision [1] It is well known that there are definite differences between peripheral and central vision for example the perception of any given object is progressively less accurate as the distance from the direct line of vision increases, the perception of light is more acute at the periphery than in the central area and conversely the acuity of the colour sense diminishes in the former region while colour values themselves change Grindley's researches have dealt entirely with form vision as it is brought out by the rapid or momentary exposure of objects in various parts of the visual field, and he has shown quantitatively how this becomes less accurate as the eccentric angle at which an object is exposed to view is increased As the eccentric angle is increased the object become less distinct less bright and smaller When a figure is not clearly seen in these conditions he has shown how frequently an observer asserts that he sees an object having very little similarity with that actually shown or one comprising a part of the real object or containing some of its parts but in a new and incorrect arrangement The accuracy of observation, as one would expect increases as the time of exposure is increased while the simultaneous exposure of several objects in the same field greatly increases the tendency to mistakes If the attention is directed towards the position at which an object is to appear in the peripheral field before the actual exposure occurs the accuracy of the observations is intensified It is interesting that there is a tendency to under-estimate the eccentric angle at which an object is exposed—an illusion which persists even if the figure is exposed near a fixed and continuously illuminated reference mark—and not uncommonly, to imagine an apparent movement in a figure which is actually stationary Two hypotheses may be advanced to account for these differences either they are determined in the eye itself by the difference between the central and peripheral receptors or they may be due to differences in the cerebral factors which interpret and co ordinate the patterns derived from the end organ The evidence of the present series of experiments supports the former view for it provides no indications that the perceptual factors involved in peripheral vision are radically different from those operating in central vision At first sight these observations however interesting from the academic point of view may appear somewhat divorced from the problems that present themselves in everyday experience That they have a wide interest however can be seen when the last two are examined Thus the illusion of position by which there is a tendency to under-estimate the eccentric angle at which an object is seen in the peripheral field is a problem of everyday life it explains to some extent the relative infrequency of one type of accident in the crowded traffic of our city streets If the wings of a motor car are at fixed positions in the driver's field of vision as he looks straight ahead, stationary or moving objects which the car approaches will act in the same way as the figures exposed for a short interval in these experiments and since these objects are judged to be closer to the path of the car than they really are it will be unlikely that the driver will try to pass between two of them situated too close together If the illusion were in the reverse sense or if it were widely known and acted upon as an illusion, the consequences might be disastrous Again the illusion of movement in the peripheral field has much biological interest for the periphery of the retinal field is the older part phylogenetically and the more primitive functionally and in comparison with the accurate perception of form the perception of movement is the more primitive and biologically more important in the spotting of an enemy or a victim a considerable distance away The more that is known of these problems the greater the interest that emerges from them and the greater their practical importance becomes The Committee on Vision of the Medical Research Council is to be congratulated on its furtherance of work requiring much time and attention to detail but possessing high utilitarian value

[1] Medical Research Council Special Report Series No 163 Reports of the Committee upon the Physiology of Vision IX Peripheral Vision By G C Grindley London H M Stationery Office 1931 (1s net)

THE HEALTH COMMITTEE OF THE LEAGUE OF NATIONS

The minutes of the eighteenth session of the League of Nations Health Committee which met in Paris last October have now been published [1] The session was shortened by the demand for economy from Geneva but the representatives of twelve countries who were present reviewed the work of the various commissions and conferences of experts which have proceeded during the last year Discussion arose on a technical statement by a reporting committee set up to consider maternal welfare and the health of infants and children of pre school age Dame Janet Campbell presented the report, which she said was of a preliminary character as a number of questions had been postponed until a more favourable opportunity The main recommendations were the organization of ante natal services the provision of maternity homes and qualified midwives social relief for expectant mothers regular supervision by health visitors and the establishment of nursery schools The Rumanian Spanish and Belgian representatives regretted the absence of any reference to the incontestable results of the use of anti tuberculous vaccine and the Belgian representative Professor Bordier who pointed out that the recent occurrences at Lubeck were due to extraneous causes and ought not to embarrass research complained that the British attitude towards B C G vaccine was indifferent a view which was immediately contradicted by Sir George Buchanan Dame Janet Campbell undertook to incor-

[1] London Allen and Unwin (1 [illegible])

porate the expressions of opinion in the final publication of the report which was adopted by the committee as embodying fundamental principles whereby health administrations might usefully be guided The other principal discussion was on a report of the Opium Committee requesting a decision by the Health Committee on specified points submitted by Governments Switzerland asked for the exemption of certain preparations having a basis of opium alkaloids and alkaloids of specialized from the provisions of the 1925 International Opium Convention but the committee postponed a decision until the experimental work on the emetic properties of emetine (which in the form of hydrobromide is a constituent of the preparations) is further advanced It agreed that 'anti opium tablets (eucodal) submitted by the Siamese Government should be exempted, but expressed the hope that they would not be put out under that name which suggested a property they did not possess Sterilized solutions of morphine and atropine and of eucodal and atropine in 1 1 c cm ampoules as proposed by Germany were also exempted and on a question by the Indian Government it was decided that percaine is not a habit-forming narcotic drug but a local analgesic wholly unrelated to cocaine so that there is no reason to bring it under the Convention France had asked that when a preparation had been given the benefit of Article 5 of the Convention on the ground that it contained a denaturant all preparations containing the same narcotic and the same denaturant in the same proportions should be exempted no matter what other non narcotic substances entered into their composition The committee was unable to agree with this view for the reason that other substances might be introduced which would counter the denaturant and destroy its effect The Health Committee considered certain administrative questions The diminution of the Health budget is causing some concern though it is recognized that the economy affects all the technical organizations of the League and not the Health Organization especially The Rockefeller benefactions continue, there are sufficient funds for the Singapore bureau and measures have been taken to ensure that 1932 notwithstanding a diminished income will be a year of at least normal activity

EXPERIMENTAL KATATONIA PRODUCED BY BULBOCAPNINE

Drs H de Jong and H Baruk have succeeded in showing that graded doses of the alkaloid bulbocapnine can produce in animals such as monkeys a series of effects ranging from sleep through catalepsy to convulsions which parallel exactly the phenomena observed in cataleptic patients This is a remarkable experimental success which should be of particular value in the field of psychopathology As Professor Claude says in his preface to a monograph by these investigators[1]

A great effort has been made to study by the biochemical method an important group of neuro-psychiatric syndromes One cannot insist too much on the importance of such work for this branch of medicine which is so unduly fettered by words Another interesting point is that this work represents the results of international collaboration between Dr de Jong of Amsterdam who approached the subject chiefly from the laboratory side and Dr Baruk of Paris whose standpoint is that of a clinical investigator Dr de Jong in 1921 began experiments with a view to producing an artificial catalepsy and the late Professor Magnus suggested trying bulbocapnine A series of researches extending over five years, established the chief facts about the action of bulbocapnine on animals ranging from fishes to cats and dogs Dr Baruk working under Professor Claude made clinical studies of catalepsy and showed that the condition was distinct from Parkinsonism The two authors came into collaboration in 1928 and with help from the Rockefeller Foundation worked together first in Paris and later in Amsterdam Their work was a successful combination of animal experiments with clinical observations Its outcome proves that bulbocapnine can produce catalepsy in a series of animals and the effects in cats and monkeys are particularly clear Clinical catalepsy has always attracted psychologists and the striking attitudes and curious gestures of these patients have proved a fertile field for the exercise of psychoanalytical ingenuity It is therefore of interest to learn that monkeys under the influence of bulbocapnine may assume attitudes of crucifixion as well as commoner and less dramatic postures such as that of Rodin's 'Penseur The authors conclude 'We see therefore that motor disorders of the voluntary type, which bear an outward resemblance to psychic manifestations may have an organic origin no less than such involuntary motor disorders as the contractures and abnormal movements of athetosis chorea and tremors although an organic origin is usually limited to the latter The voluntary appearance of the motor syndrome in katatonia the capriciousness of its psychic manifestations, and the explanations that the patients themselves furnish do not therefore refute the organic nature of katatonia'

[1] [illegible] de Jong et H Baruk Preface du Docteur H Claude Par H Baruk (9fr)

PLAGUE PREVENTION IN MANCHURIA

The Manchurian Plague Prevention Service was founded twenty years ago mainly to deal with pneumonic plague epidemics arising among the marmot fur-trappers on the Transbaikalian frontier The problems attending the periodic exacerbations of epizootic disease among Siberian marmots and the conditions of overcrowding in underground huts among the trappers were such that few of the delegates to the International Plague Conference in 1910 at Mukden had any idea that the service they recommended would be able to keep future epidemics in check Except for a limited outbreak in 1920–21 the dispositions made and precautions taken have resulted in freedom from other than sporadic cases in Manchuria Wholesale hunting of these valuable fur-bearing rodents (tarabagans) has resulted in destruction of large numbers so that neither among the animals nor among trappers does overcrowding and the consequent intensive spread of infection prevail to the same extent as in the past But while formerly plague attacked China from the north-west it has now veered to a focus in the south west—the Tung Liao district of Manchuria—and instead of being among wild rodents in sparsely

populated regions the service has now to deal with rats in crowded settlements, and the pneumonic has given place to the original bubonic type There is an account of the active measures taken to combat the Tung Liao epidemic and from it one can note the enlightened co-operation given by lay Chinese officials in carrying out quarantine and other preventive methods as advised by the service medical officers dispatched to the scene of outbreak for management and investigation among the plague-infected villages In the first chapter of the 1929–30 report of the Manchurian Plague Prevention Service Dr Wu deals with the rodents of Manchuria and Mongolia and their significance in disease [1] He shows how from the Volga and Caspian Sea reaching northwards to the Siberian Taiga and southwards to the Himalayan Mountains, there extends an enormous area of steppes—that is, land devoid of forests and trees These steppes are inhabited by immense numbers of rodents which tunnel the ground in numerous burrows, and are so fertile that neither natural enemies (snakes, wolves fitchets etc) nor trappers can seriously reduce them Consequently great catastrophes and widespread epizootics are required from time to time to step in and restore the balance of nature Up to the present time however little is known about natural epizootics among rodents The rest of the report is chiefly devoted to research papers on general subjects by members of the staff It is regrettable to think of the interruption to the work of this plague prevention service by hostilities in Manchuria—the hospital with all its scientific equipment was looted by Soviet troops Political events now raging in China will no doubt interrupt medical progress in the services which are the outcome of much praiseworthy and persistent effort on the part of Chinese medical pioneers But the work of recent years has already placed the Manchurian and national quarantine services on too sound a footing for us to regard present events as causing more than a temporary setback

CATADYN SILVER

It is known that certain metallic salts possess antibacterial properties, an outstanding example being mercuric chloride as employed in surgery Some metallic elements also when immersed in water may react with it in such a manner as to inhibit or kill any bacteria present Silver is reputed to be one of the most potent of the metals so endowed and an effort to turn its energies to account has been made by Dr Krause in his catadyn method of water purification The precise manner of preparing the effective agent has not been revealed by its inventor but it is understood that silver is sprayed upon sand so that the sand becomes coated with the metal and this silver-coated sand termed 'catadyn sand when employed as a filtering medium activates the water passing through its interstices by communicating to it a germicidal quality which may last for a number of months The bactericidal action is held to be due to the electrical charges of silver ions in the water In his bacteriological assay of the efficiency of his method the inventor used solid culture media only plating up to 1 c cm of the water to be tested Dr L V Suckling who has rendered the useful service of testing the method with liquid media found that when distilled waters containing 2 000 and 10,000 *B coli* per c cm were rapidly filtered through catadyn sand and inoculated into MacConkey's liquid medium both were sterile in 1 c cm in two hours When tap water was used instead of distilled water it took four hours to attain the same result These tests reveal a definite bactericidal action, but *B coli* absent from 1 c cm would not be regarded as high grade purification in the case of a public water supply Dr Suckling found further that London water to which *B typhosus* had been added in such amount as to be present in 0 1 c cm, showed after filtration through catadyn sand the organism absent from 100 c cm four hours later The same result was obtained with *B paratyphosus* B originally present in 0 01 c cm Dr Suckling noted that clear bright water was essential to successful working, as the dissolved silver combined with organic matter present and so tended to spare the bacteria while organic particles in suspension covered the silver coating on the sand grains and prevented delivery of the metal to the water In losing efficiency through the presence of organic matter catadyn sand resembles chlorine but whereas turbid water may be prepared for chlorination by pre-filtration with filter alum in a mechanical filter it cannot in a similar manner be prepared for treatment by catadyn sand since the floc of aluminium hydrate inhibits the action of the silver The amount of silver taken up by water in the catadyn process is of the order of 0 015 to 0 06 part per million, the higher value of which is only about one-third of a low chlorine dosage Against this however may be set the dietetic consideration that silver is a substance foreign to the tissues while chlorine is not Further, while chlorine can be accurately measured and the quantity introduced into a supply adjusted to changing qualities in the water it does not appear that a similar adjustment can be readily made with catadyn silver Lastly the germicidal action of chlorine is rapid while that of catadyn silver on Dr Suckling's showing is comparatively slow It is proper that these comparisons should be made owing to the vogue of chlorine which is firmly established in North America alike in routine and emergency conditions and for supplies both great and small, and is steadily growing in favour in this country Further testing and further experience may reveal in the new method great merits not hitherto disclosed but on the information at present available catadyn silver does not appear likely to become a serious rival to chlorine for the purification of public water supplies

[1] *Annual Report 1929–1930 Manchurian Plague Prevention Service* Edited by W Lien Teh M D Vol VII of the series published in Shanghai

We have to announce with much regret the death on March 28th of Professor George M Robertson M D following almost immediately upon his decision to resign the post of physician superintendent of the Royal Edinburgh Hospital for Mental Disorders and the chair of psychiatry in the University of Edinburgh

We regret to announce also the death of Mr Rutson Parker consulting surgeon to the Liverpool Royal Infirmary and for many years professor of surgery in the University of Liverpool

THE OBSTETRICS OF A GENERAL PRACTICE IN THE LAST DECADE *

BY

A. F. MARTIN, M.D.

In all the recent talk in the medical and in the public press about unreduced maternal mortality and morbidity there smoulders very near the surface a fire which could easily be fanned to a flame of spurious indignation against our profession. It is being laid to our door that this blot upon the nation's life has not been effaced in our time. I am convinced that wherever the blame is to rest it does not cloak the shoulders of any general practitioner who is worth his salt. If any man brings an enlightened enthusiasm into his work his results will stand investigation and comparison with those obtained in any institution or by any system in which the general practitioner is not used; and it may be well therefore to examine the practice of the obstetric art as it obtains for most of us in a practitioner's life in the year 1931.

Of 330 consecutive maternity cases (190 primiparae and 140 multiparae) 201 were normal—103 primiparae and 98 multiparae—a two-thirds normality. By *normality* I mean (1) that these women delivered themselves with no more help than that obtained from anaesthetics or uterine muscle stimulants; (2) that they developed no sustained rise of temperature; and (3) that they displayed no complications before, during or after confinement. There have been two deaths—one due to embolism and the other to perforated gastric ulcer. It might be thought that one outlet of escape for fatal cases was by way of hospital admission. Two patients in this series were admitted to hospital—one for Caesarean section and one for uncontrolled diarrhoea in the third week. It has always to be borne in mind also when looking at his statistics that the practitioner is the casualty clearing station for the midwives of his district.

USE OF FORCEPS

The forceps rate was 19 per cent., forceps being used sixty-three times. I have taken as the main indication for their use a failure to make progress during half an hour of strong or medium second stage pains. The analysis of these forceps cases is as follows: there were twenty-one cases of occipito-posterior presentation, two unreduced and nineteen after manual rotation to the anterior position had been obtained; fifteen cases where delay occurred with the head in the vagina past the brim due to a relatively small pelvis. Pelvic measurements have not revealed disproportion. One is conscious of pulling the head past an obstruction on to the perineum when the forceps have been taken off and the labour completed naturally. In one instance the coccyx was hooked forwards and I fractured it during the forceps operation. There were twelve high forceps deliveries through generally contracted pelves; five cases of delay in primiparae and six cases of rigidity of the parts in elderly primiparae. There was one case of failed forceps in contracted pelvis where delivery of a dead child was obtained by internal version. As regards the twelve cases of pelvic contraction a malign fate overhangs these women in travail since the infants are often extraordinarily large. These cases all tell the same story—head high, forceps slipping and delivery after a tremendous struggle. Seven out of eight babies at full term were lost, whereas five cases induced at the eighth month were satisfactory.

It is natural to meditate over this series, small though it is. I am much impressed by the results of induction at the eighth month. Where the woman is healthy and of average intelligence and the child is vigorous and of moderate size we can look forward to a labour free from anxiety and to a puerperium with a thriving child. It is merely ironing the risk to postpone the induction the size of the passage may be guaranteed but not that of the passenger. In two cases on examination with a view to induction at the eighth month I was tempted to let the case go on for another fourteen days because I thought I could press the head into the brim. Here I was mistaken: both babies were large and both were lost at eight and a half months. My feeling is strongly that for a safe induction there should be no delay beyond the end of the eighth month. In all the five cases induced at the eighth month the children have lived but those left later have given trouble.

As to the value of external pelvimetry, I have been disappointed. Where the intra-spinous and intra-cristal diameters approximate the information is very useful because one is forewarned. This was so in two of these cases but in two others I was definitely led into a state of false security by finding no disproportion. Dr. Blair-Bell, lecturing once under the auspices of the British Medical Association, gave a very informing account of minor pelvic deformities. Most difficult forceps cases he maintained were due to relatively small pelvic disproportion. I have since carried out external mensuration in every primipara. I cannot detect these cases of minor degrees of small pelvis by pelvimetry; they have been diagnosed by the feeling during extraction that the head had to be dragged past an obstruction when below the brim.

Even in these enlightened days one meets alas! every now and then a case of full-time confinement with obstruction at the brim necessitating a high forceps operation. I know no more anxious situation, calling for all the judgement, grit, determination, willingness to take risks and the use of all available physical strength. One cannot launch one's barque on the seas of operative surgery without taking risks but one cannot launch out on to the sea of high forceps midwifery without getting on to the rocks! The feeling of anxiety is to me more acute during a high forceps operation than when I am doing a major surgical operation. The contrast in the fee recognized as adequate in both cases is nothing short of ludicrous! I have lost only one mother from embolism as related; this favourable result I attribute to careful chloroform dosage. These obstructed cases require much deeper anaesthesia than the unobstructed cases but the dosage can be regulated so beautifully by using a Junker inhaler that the collapse consequent upon long deep chloroform anaesthesia is not so severe. During the later years my practice has changed. Whereas in my earlier cases I set my teeth and tried to make the best of a bad job later I have inclined towards induction at the eighth month. I have set myself resolutely against the practice which formerly held of trying to bring off at term doubtful cases with a reduced conjugate diameter. But even where forceps have failed when a surgeon knows the character of his general practitioner and can vouch for forceps having been applied with due antiseptic and aseptic precautions he should not shut the door of escape from this terrible impasse by means of surgery. Antiseptic practice has improved out of all knowledge and the surgeon should remember that in refusing to operate in a failed forceps case he is condemning an unborn child to death and calling the mother to submit to risks far greater than those of Caesarean section as we know them nowadays.

OCCIPITO-POSTERIOR PRESENTATIONS

This event is so common and the results of bad treatment and wrong diagnosis are so disastrous that all our obstetric acumen should be in use when we are dealing with an occipito-posterior case.

In the first place we know little about the cause. Why should one baby lie one way round and the next the other? I feel that some slight degree of pelvic disproportion is present much more frequently in occipito-posterior than in occipito-anterior presentations. I have notes of forty-eight occipito-posterior cases of these seven showed some greater or lesser degree of pelvic deformity and I suspect that there were others in my earlier cases.

* Paper read at a meeting of the Bradford Medico-Chirurgical Society, October 1931.

As regards the diagnosis I have found as a rule the easy palpation of the large rhomboidal anterior fontanelle an authoritative guide When the case has been left too long help from sutures is not present When the sutures fail abdominal palpation is usually negative because the uterus has by then attained a state of tonic spasm which obscures the feel of the knees and elbows To make the diagnosis certain at this stage one must give an anaesthetic introduce the hand into the vagina feel the nearest ear and thus get the lie of the occiput Then of course treatment is begun immediately Full surgical anaesthesia is required and the impacted head is pushed up until it is freely movable Then being well held by the fingers it is definitely rotated until the occiput lies anteriorly the body of the child being rolled round by the shoulders with the other hand The occiput will not maintain its anterior position unless the rotation of the body has been very efficiently managed I am never quite certain of this and so I hold the head in its new position for as long a time as it takes for a full cubic centimetre of pituitary extract to exert a good contracting influence on the uterus When the pains begin and the head is forced down it will stay anteriorly Thus quite a good proportion of occipito posterior presentations are treated without loss of time and without the application of forceps I have notes of twelve such deliveries one of them being particularly interesting in that the brow was presenting with the occiput posterior The whole presentation was changed by hand flexion being obtained and delivery secured without forceps

In fourteen cases the head rotated naturally when there is free movement of the head the obstetric anaesthesia used is that form described later, and it is interesting to watch the natural rotation taking place with the patient asleep I think the absence of nervous apprehension and of consequent spasm has a good deal to do with this happy result Forceps were used immediately after rotation in fifteen cases In two of these early in the series rotation had not been maintained and they were delivered unreduced in six others forceps were applied after the head had been held with the inserted hand without pains coming on effectually

To sum up in 330 cases there were forty eight occipito posterior presentations fourteen rotated naturally , twelve were rotated manually and were delivered without forceps and nineteen cases had a forceps delivery after rotation (two unreduced) In seven there was definite pelvic contraction In one of these I could not hold the rotated head either by hand or forceps and a dead baby was born by internal version this is the only case for many years where I failed to secure delivery after rotation and the presence of a deformed pelvis here does not negative my conclusions

LESS FREQUENT ABNORMALITIES

There were nine breech presentations in this series with seven live babies and two dead ones In three cases there was marginal placenta praevia with one smart haemorrhage Even then it is always safest to put the patient deeply under an anaesthetic to insert the hand into the vagina and to feel for the placental edge In treatment I am partial to the use of a de Ribes bag There is no need for great alarm at a single violent bleeding In the case of a member of my own family who lived in a small country town the doctor diagnosed partial placenta praevia plugged the vagina and sent twelve miles for a surgeon who performed Caesarean section in the patient's bedroom I think she was too heroically treated for her morale was shaken and she never indulged in another pregnancy It is easy for surgeons and practitioners to overlook this aspect of the situation Very early in practice before I began to take systematic notes I saw two cases of central placenta praevia both patients died, one too quickly for any help to be given her Perhaps Caesarean section would be helpful here but in a marginal placenta praevia it is poor practice Either the quiet application of forceps or the bringing down of a leg should meet the case after sufficient dilatation

MATERNAL MORTALITY

The question of maternal mortality and morbidity is in all our minds In this series of cases the death of the mother has occurred twice and in neither case could I blame myself One death was in a case of contracted pelvis due to embolism, due in its turn to wounding the placenta with a bougie Another was in the case of a deformed pelvis where the midwife had called me in late in the third day of labour The woman was in severe abdominal pain I put it down to uterine clonus and immediately gave her chloroform The presentation was of the impacted occipito posterior kind The difficulties were eventually overcome by rotating the child and applying forceps again The next day the woman was vomiting and had a distended abdomen She died on the fourth day and I thought there might have been a ruptured uterus I obtained leave to open the abdomen and found general peritonitis due to a perforated gastric ulcer The uterus had a black bruised appearance but was not more septic than the remaining abdominal contents One patient ran a temperature of 104° for four days and no signs of infection developed There is no doubt that some women are capable of infecting themselves

MORBIDITY

In 330 confinements there have been those two deaths (one unavoidable) and six cases of puerperal fever four of these occurred in nursing homes and I do not hold myself responsible for them Three cases of pyrexia were definitely due to auto intoxication from faecal accumulation four other various unimportant cases occurred In many cases on the tenth to the fourteenth day a vaginal examination has been made to ensure that the uterus is left in a condition suitable for as perfect involution as possible In my last 130 cases which have been carefully examined I have found seven instances of retroversion and in six replacement was successful in the seventh the provision of support in position by a watch spring pessary was required to remedy the defect My explanation of this rather common event in first labours is that it is an early symptom of want of tone in the uterine muscle showing that subinvolution is liable to be present and is an indication for a course of ergot An estimation of the relative closure of the os should be made at this examination

OBSTETRIC ANAESTHESIA

There have been 156 cases in this series where I have employed an obstetric anaesthesia This has helped to obtain a low interference rate, and a high proportion of normality In 148 cases the result obtained has been good a more or less complete forgetfulness of the pains ensuing In eight cases only did a partial amnesia follow The technique I employ is that detailed by me at the Glasgow meeting of the British Medical Association in 1922

For some reason which is not explained yet the pregnant woman is peculiarly tolerant of and responsive to chloroform and he must be a clumsy artist indeed who succeeds in administering an overdose Particularly is this the case if a Junker inhaler is always used in obstetric practice Most women are kept sufficiently under with a surprisingly small dose of chloroform given in this way the average amount is 1 drachm each half hour The mask is tied with an elastic band round the face and the chloroform is pumped with the left hand leaving the right hand free for examination and other work The chloroform administration is stopped between the pains but begins again as soon as the uterus is felt beginning to harden In this way if the pains are kept going with fractional doses of post pituitary extract (never more than 0 5 c cm being advisable at a time) the patient has passed in about twenty minutes into a state where she is subsequently forgetful of the pain but is still able to bear down partially to her pains and to keep reasonably quiet on the bed She should never lose her reflex nor breathe stertorously but she often does lose some control of her own efforts This is more than made up for by the increased involuntary effort of the paralyzed uterine muscle and the relief from spasm which is

such an obstruction in the early stages of many confinements. No mothers have died in this series; three babies died, and in every case there has been sufficient cause to explain their death without blaming the anæsthesia. The period of anæsthesia has ranged from half an hour to six hours, but this is of course exceptional; it has often lasted three to four hours. Anæsthesia is induced late in the first stage; the chloroform will often relax the spasm of the os, and makes digital dilatation of the cervix a possible and frequent procedure. The chloroform also prevents by its inhibitory action on the uterine muscle the bad splitting of the cervix which might be expected from the use of the pituitary preparation earlier in labour than is usually given.

In this series of 156 anæsthetized cases forceps were applied twelve times: once for restlessness, twice for delay on the perineum in elderly primiparæ, three times for delay in the vagina probably due to small pelvic outlet, and six times for occipito-posterior presentations. The anæsthetic has been used in all cases indiscriminately, and without any regrets. Very rarely the baby has been apnœic for a little while after birth. This method has given me far better results than the scopolamine-morphine method, which I used before, and for a little while after the war. The disadvantages of the latter in private practice are many; the most serious is that unless begun at the right time it is not effective, whereas the chloroform and pituitary method can be started at any time after some dilatation has occurred. I have notes of twenty of my latest scopolamine cases; thirteen were successful, and seven were not successful in obtaining good amnesia. The time entailed in attending a primipara under scopolamine precludes its systematic use outside an institution.

As regards the pituitary dosage, the first dose is given (0·3 to 0·5 c.cm.) as soon as the chloroform has begun to exert its effect, and is repeated every half an hour or so when the pains are judged to be slackening again in intensity. It is safe to give as much as 3 c.cm. of pituitary extract in consecutive doses to one patient. Dr. Muir Bell kindly wrote to me advising me of this fact. When a longer anæsthesia is necessary I use forceps after the 3 c.cm. total has been reached. It is slower in action but lasts longer, and I have found no increase in the blood pressure after its use.

POST-PARTUM HÆMORRHAGE

I have seen very little of such hæmorrhage: *one patient* lost three quarts of blood in a twin confinement with double forceps operation, there being delay due to a hooked coccyx. The real absence of hæmorrhage is all the more remarkable in that most of the opponents to obstetric anæsthesia use the argument that tendency to it is engendered sufficiently to cause increased danger. I can only say that in 156 cases, some of extreme difficulty and duration, I have not experienced it.

STILLBIRTHS AND NEO-NATAL MORTALITY

I have lost seven babies in eight high forceps cases: in the case of one born dead at term the loss could be attributed to fright of the mother. As the result of albuminuria I had three dead babies among ten gross albuminuric cases. Two infants perished owing to abnormalities of the cord: in both they were white and pulseless. Both were anæsthesia cases, and so had had rather more deliberate delivery than others. One child had so short a cord that the nurse had to hold it close to the vulva while I was applying the ligature in order to ensure that there was no traction on the placenta. We calculated that the cord was only 8 inches long. In the other case the cord was wound three times round the child's neck. In both these cases the uterine contractions were very inadequate, and but for pituitary medication the labour would have been exceedingly long. I am of opinion that unsatisfactory pains—so-called uterine inertia—often indicate the presence of some obstetric abnormality: the uterus reflexly on its guard, and I have seen the same phenomenon in occipito-posterior cases. I would say always look out in cases of unsatisfactory contraction. A third case of short cord very much misled me. I induced labour at the end of the eighth month because I could feel the head on the left side of the abdomen, and could not get it to enter the pelvis. The child was born unexpectedly early the next day, much to my surprise although I had known the measurements were normal. The cord was again in this case wound three times round the child's neck, and this had prevented the head from entering the pelvis.

I have had a total of fifteen neo-natal deaths or stillbirths in 330 unselected maternity cases. The causes of death within the first few weeks have included convulsions (one case) at the third day, and prematurity with a 50 per cent. death rate. Cases of prematurity have been due to a nervy uterus, breech presentation, a case where myomectomy had been done, pneumonia, mastitis, in the dwarf. In nine cases of twin confinements two babies were born dead, and seven others died within a week. Three women have borne deformed children, two on more than one occasion; both these have had endometritis. Abnormalities in the development of the fœtus must often depend on the unhealthy state of the uterus in which they lie. Athleticism and motoring are of no advantage to our present-day mothers.

THE DISEASES OF PREGNANCY

I have had ten cases of gross albuminuria in which treatment seemed to be ineffectual. Degeneration of the placenta was found in most of these cases, and on two occasions a degenerate amnion was seen. Three times heredity figured in the history of the mother. Eclampsia I have not encountered in the last twenty years, and have not heard of it in my neighbourhood for a long time. I had one case of severe chorea in a twin pregnancy, both babies lived. In one case of jaundice lasting seven months treatment was useless; the patient had an obstetric anæsthesia, and was asleep for six hours, taking 14 drachms only of chloroform and requiring 4 c.cm. of pituitary extract. She passed coloured stools for the first time for seven months on the fourth day, and has had a normal pregnancy since. I can also recall one case of mania after returning home; this woman committed suicide. Six patients were subject to mitral disease; three showed no sign of upset, and three did, but all did well. As regards surgery during pregnancy, one patient had two laparotomies performed, the first for an impacted retroverted uterus which I could not release, and the second for a small intestinal obstruction owing to adhesions of the bowel to the abdominal scar. She proceeded to term and did well. In another patient I had performed a ventrifixation for a retroflexion three years before; she had a normal confinement.

A case of previous myomectomy has been mentioned as has also a case of perforated gastric ulcer which I did not diagnose.

The report of the St. John Ophthalmic Hospital, Jerusalem, for 1931 shows that the number of in-patients was 1,169 and of new out-patients 18,984. The total attendances were 75,423 and the number of operations 2,911. The incidence of trachoma among out-patients was 59 per cent. and the number of patients who were blind in one or both eyes was 2,363 or 12·4 per cent. Nearly 70 per cent. of this blindness can be traced directly or indirectly to acute conjunctivitis, and the new annexe which was built for the care and treatment of this disease has more than justified its cost. During the ophthalmia season (July to December) there were 20,000 consultations. At times over 200 patients, many of them with their families, slept there, and the nightly average of inmates for the season was over one hundred. The subway which now connects the annexe with the hospital will permit of the accommodation of the hundreds of trichiasis cases which flock to the hospital from March to June. After operation in the hospital they can be sent safely into the cloisters of the annexe by way of the underground passage. The six clinics under the supervision of the hospital surgeons—at Acre, Beersheba, Gaza, Nablus, Ramleh, and Tul Karem—show substantial increase in their work over 1930.

England and Wales

Dr Alfred Cox Testimonial

At the invitation of Sir Arthur S Cope K C V O R A a few members of the Executive Committee of the Testimonial Fund and others who could be quickly got together (the notice being very short) attended at his house in Kensington to see the portrait painted of Dr Alfred Cox Medical Secretary of the British Medical Association before its transfer to the Royal Academy on April 4th Those present included Sir Ewen Maclean (Chairman of the Executive Committee) Mr N Bishop Harman (Honorary Treasurer of the Fund) Dr E Rowland Fothergill (Honorary Secretary of the General Committee) Sir StClair Thomson, Dr W Paterson Dr G C Anderson (Deputy Medical Secretary) Dr R Forbes (Assistant Medical Secretary) Mr W McAdam Eccles and Dr H B Brackenbury The opinion was unanimous that Sir Arthur Cope had caught in a most pleasing manner, the personality of Dr Cox and this was expressed to him on behalf of those present by Sir Ewen Maclean and supported by others Apologies were received from several who were unable to attend the function at such brief notice

Chadwick Public Lectures

Dr J D Rolleston s lecture on the life and work of Sir Benjamin Ward Richardson of which a report appeared in the *Journal* of February 27th marked the beginning of the twentieth annual series of public lectures provided under the bequest of Sir Edwin Chadwick for the advancement of sanitation the promotion of hygiene and the prevention of disease The main theme of health will be regarded from a variety of aspects by lecturers with medical architectural and scientific qualifications Early in April Sir Humphry Rolleston will deliver in Paris (in the grand amphitheatre of the Faculty of Medicine) a lecture on The pioneers and progress of preventive medicine On April 28th Dr James Sequeira who is arriving in England from Kenya Colony this month will speak on The educational aspect of public health work in the Tropics in the Council Room of the British Medical Association The Malcolm Morris Memorial Lecture on Dermatology as an outpost of medicine will be given by Sir Ernest Graham Little at the Royal Society of Arts on May 23rd and on June 9th Dame Helen Gwynne Vaughan will give a discourse at the Chelsea Physic Garden on The contribution of plants to the study of heredity All Chadwick lectures are free without ticket Particulars may be had from the secretary Mrs Aubrey Richardson at the office of the Trust 204 Abbey House Westminster S W

Diet for the Healthy Individual

Useful suggestions for the guidance of medical officers of health and others concerned with advising on the nutritional value of diets for normal people are contained in a memorandum [1] by the Advisory Committee on Nutrition to the Ministry of Health In assessing the value of a given diet there are five criteria to be considered—calorie value quantity of first class protein supply of mineral matter vitamin content and proper distribution of calories between protein fat and carbohydrates The tables most commonly used for estimation of the calories are those of Plimmer and Atwater and Bryant The report gives a simple table by Cathcart and Murray from which the daily needs of persons of various ages and different sexes can be calculated Of first class protein defined as animal protein such as cheese, eggs fish, meat and milk the absolute amount necessary per diem is 37 grams for an adult male This represents 5 per cent of the total calorie ration

Protective foods—that is those which supply mineral matter and vitamins—include milk vegetables fruit liver fish and eggs Conveniently these two constituents are often found in the same food—for example liver and egg yolk which are good sources of iron supply also vitamin A and egg yolk in addition, vitamin D Examples are given of foods containing calcium phosphorus iodine, and iron while the distribution of vitamins in various foodstuffs is also indicated As regards the quantitative need for vitamins it is suggested that if the diet contains per person one pint of milk per day if cheese is partaken of freely if one orange or one tomato or a helping of raw salad is taken daily if one ounce per day of butter (or vitaminized margarine) is given and if some sort of fat fish such as herring appears in the winter menu once a week (or if in default of such fish half a teaspoonful of cod liver oil is taken once a day) the mineral matter and the vitamin content of the diet are satisfactory It is hinted that the diet of the individual is often short of first class proteins and protective foods and where attempts are made to remedy this defect with at the same time an eye to economy the use of cheese herring, fish roe and sprats is advisable while it is generally agreed that one pint of milk per head per day is to be recommended A useful appendix to the report gives a rough and ready guide for the estimation of the calorie value of the various first class proteins

Institutional Diet for Children

A further communication from the Advisory Committee on Nutrition comprises a report on diets in Poor Law children s homes [1] Particulars of the dietary in various homes in different parts of England were placed before members of the committee who in addition visited eight homes to make inquiries about and observations on the preparation and cooking of food In general they found the latter satisfactory, while the facilities appliances and utensils for cooking were adequate The quantity was sufficient both in respect of calories and first class protein and fat The main faults discovered were the result of a desire to keep cooking down to a minimum a lack of knowledge of food values and a tendency to monotony Among the suggestions made towards the material improvement of the average diet now supplied for children in Poor Law homes were the allowance of a pint of milk per head per day ample supply of vegetables margarine if used to be vitamin containing, greater use of cheese and more variable menus The following foods when cheap and readily available are recommended for inclusion in the diets ox liver fish roes (in winter) herrings (for older children) carrots tomatoes watercress and oranges Menus recipes and diet tables are contained in an appendix to the report

London County Hospitals Nursing Staff

On the motion of Dr Stella Churchill the Central Public Health Committee of the London County Council has had under consideration the possibility of devising a scheme whereby part of the nursing staff of county hospitals should be non resident At the present time the number of non resident nursing staff is 774 of whom 317 are male nurses Members of the Council s nursing staff are only allowed to become non resident when there is no accommodation available in the hospitals A non resident staff is much more costly and it is estimated that every non resident member of the staff causes an increased cost to the Council of about £20 a year Dr Churchill suggested the employment as an experiment of non

[1] The Composition of Diets London H M Stationery Office 1932 (6d)

[1] Diet in Poor Law Children Homes London H M Stationery Office 1932 (3d net)

resident probationers on an eight hourly shift but the committee is against this plan on account of the difficulty of arranging suitable hours for lectures without encroaching on the off duty time of non resident probationers the impossibility of providing satisfactory training in clinical observation of acutely ill patients if probationer nurses are absent from the wards for consecutive periods of sixteen hours the improbability of obtaining suitable lodging within reasonable access of the hospital and the unwisdom from the point of view of health of allowing young persons to live in lodgings entirely without supervision to ensure that they obtain sufficient rest and food to carry out their daily duties and secure the utmost benefit from their training It is pointed out also that the supply of nurses to the Council's hospitals is more than adequate, 15 307 applications were received during the last Council year and 4 333 appointments were made The committee is satisfied that the Council is unlikely to have any serious difficulty in obtaining an adequate number of staff from the lowest to the highest grades of its nursing service The committee is of the opinion that where it is possible to increase the nursing staff accommodation in the Council's hospitals it would be more economical to do so than to have a large proportion of the nursing staff non resident and with regard to probationer nurses that it would be undesirable to engage them as non resident officers until such time as it is possible to eliminate much of the theoretical study and requisite junior examinations from the period of practical training and in this respect to place first year probationers on the same footing as first year medical students

Instruction at L.C.C. Hospitals

The London County Council has a regulation that its medical officers who give courses of instruction shall receive 2½ guineas of each 3 guinea fee or 3½ guineas of each 4 guinea fee paid in respect of courses at fever hospitals in connexion with the D P H The General Medical Council having revised the rules relating to the examination for the diploma and reduced the number of daily attendances in connexion with the course in clinical practice at an infectious diseases hospital from thirty to twenty four a corresponding reduction in the fee chargeable to candidates from 4 guineas to 3½ guineas has been approved by the L C C and it is suggested that of the latter sum half a guinea should be returned by the Council the balance being paid to the medical officer giving the instruction The London County Council is accepting pupil radiographers on the recommendation of the Society of Radiographers for training at selected hospitals and institutions They are to be provided with a practical training for a period of six months and will be furnished with a certificate on leaving but will have no claim on the Council for employment in either a permanent or a temporary capacity

University College London

The annual report of the Committee of University College London for the year ending February 1932 has just been issued The number of students on the books of the College last session was 3 225 and 14 000 persons attended free public lectures The income of the establishment account amounted to £224 275 £76 851 being provided by fees £38 012 by income from endowments and £98 205 by the recurrent grant from the Court of the University An addition to the buildings has been made by the completion of the new Ramsay Memorial Laboratory of Chemical Engineering A further extension of the site has been effected by the acquisition of a portion of the property immediately south of the College known as Upper Gower Mew It includes buildings with a floor space of more than 100 000 square feet admirably fitted for adaptation to the use of scientific departments The Department of Zoology and Comparative Anatomy will with the aid of a special grant of £30,000 made for the purpose by the Court of the University be rehoused and re equipped as speedily as possible in one section of these buildings In close association with this a munificent appropriation has been made by the Rockefeller Foundation of New York amounting to £88 000 for the development of research in the Department of Zoology and Comparative Anatomy The late Sir Gregory Foster Head of the College from 1904 to 1929 to whom a tribute is paid in the report included in his bequests a valuable portion of his library for the English Section of the College Library and a freehold cottage at Chiddingly Sussex given in memory of his first wife for the use of women students and women members of the staff Among the new teaching appointments inaugurated last session are readerships in physics physical chemistry eugenics and zoology a professorship of clinical anatomy held by Dr H A Harris jointly at the College and University College Hospital Medical School and a professorship of the history of medicine held by Dr Charles Singer

Scotland

Reform of Medical Education

A discussion on the need for reform of the medical curriculum arranged by the students of Edinburgh University in the University Union on March 14th was opened by Dr Chalmers Watson Dr Watson said that in his opinion present day teaching was too largely permeated by the atmosphere of curative medicine and too little by the modern outlook on preventive medicine Not enough time was available for the student's personal study of practical medicine so that he had little or no time to educate himself The overweighted curriculum of the present day which was due to the specialism of the last few decades and the additional practical and theoretical classes arrested the development of his reasoning faculties The experience of general practitioners showed that approximately 90 per cent of their daily work was concerned with general medicine while only 10 per cent was taken up with surgery and other specialist subjects and it seemed advisable that the medical curriculum should be planned accordingly It was increasingly recognized that a large proportion of the common diseases both medical and surgical were really the end results of a long continued neglect of some of the elementary laws of health and that the only effective means of cure lay in prevention To this end more attention should be devoted to fundamental subjects such as applied biology principles of feeding ante natal nutrition and child welfare In recent years an unfortunate tendency had arisen in medical schools for the teachers of subordinate sciences in medicine to assume the role of masters rather than of allies The clinical teachers were however best able to decide to what extent the foundations necessary for study should be laid in anatomy physiology chemistry pathology bacteriology etc Dr Hope Fowler expressed the opinion that at the present day there was too much laboratory and special work and he recommended the relegation of special subjects until the year after the student had qualified Several students took part in the general discussion and one complained of the lecture system suggesting that the time might be more profitably occupied by discussions Several of the speakers advocated smaller classes and most of them affirmed that students saw far too much of illness in its last stages and too little in its early stages

Edinburgh Hospitals for Women

At the annual meeting of the Edinburgh Hospital and Dispensary for Women and Children and of the Elsie Inglis Memorial Maternity Hospital with Mrs Chalmers Watson M D in the chair it was reported that the income for the year of the two institutions had amounted to £13 163 and the expenditure to £15 716 although the latter figure included an adverse balance of £2 553 it was less than the corresponding figure for the previous year One third of the expenditure of the present year had been met by payments from patients A small supply of radium had been available for the Edinburgh Hospital for Women since January 1931 and used in the treatment of 75 cases the Medical Research Council had also loaned the hospital 125 milligrams of radium which was received on October 4th last At the Elsie Inglis Maternity Hospital 965 mothers had been treated in the hospital and 355 in the district and an ante natal clinic had been opened in September by arrangement with the public health authority Dr Joan K Rose submitted the report of the Medical Committee and stated that at the ante natal clinic there had been 15 719 attendances Of the 1 320 confinements there had been only two maternal deaths while the morbidity had been 3 8 per cent It was believed that this low morbidity rate was attributable to a special technique, which had resulted from research carried on at this hospital for the last two years

Deaconess Hospital

Presiding at the thirty seventh annual meeting of contributors to the Church of Scotland Deaconess Hospital Edinburgh Dr Alex Fiddes said that this was the only hospital in Great Britain run by a Protestant Church and it had never been in debt Contributions last year showed an increase and amounted to £4 482 the total ordinary income having been £6 752 and the total ordinary expenditure £6 717 The capital revenue or contingency fund now stood at £5 411, while the income reserve fund amounted to £1 750 The total number of patients receiving treatment in the hospital during 1931 had been 832 and the number of surgical operations 550 The attendances at the out patient department had totalled 19 965 the number of persons receiving treatment being 5 284 The average stay of each patient in hospital had been 19 1 days and the mortality 4 17 per cent Referring to an extension of the hospital Dr Fiddes said that a site to the rear of the present building would it was expected be available in the course of the present year Mr J W Struthers said that the voluntary hospital was very much in the public eye at the present time and there was no doubt that the system on which voluntary hospitals were managed would have to be changed before long The term waiting list would have to disappear from the reports of voluntary hospitals before the hospital system of this country was satisfactory

Glasgow Eye Infirmary

At the annual meeting of contributors to the Glasgow Eye Infirmary the Lord Provost who presided said that this Infirmary for the past 108 years had been one of the most indispensable philanthropic institutions in the city Increasing care was now exercised in the treatment of diseases of the eye and precautions were taken especially in the case of children to arrest early indications of faulty eyesight Patients treated during the past year had numbered 1 780 in the wards and 29 703 out patients The directors still required £30 000 to enable them to proceed with the new building which they contemplated Despite bad times the ordinary subscriptions had shown a decrease of only £47 and the employees subscriptions were less by only £680 than in the previous year Sir Matthew Mackenzie president of the institution said that the directors had decided to proceed with the enlargement of the out patient department and for this the funds already received would be sufficient It would form a harmonious part of the entire scheme when they were in a position to complete the extension

Proposed New Glasgow Hospital

The Subcommittee on Institutions of the Glasgow Corporation has unanimously recommended that a new hospital for infectious diseases be constructed on the south side of the city The hospital is estimated to cost £250 000 and is intended to supersede the old Shieldhall Hospital which contains 130 beds and is considered out of date in construction and equipment The new hospital will contain 350 beds with provision for extension to 500

Correspondence

'THE STUDENT IN IRONS'

SIR,—Seldom has one the pleasure of reading so thoughtful a letter as that written by Dr J A Ryle Every sentence in it calls for consideration for it is written by one who appreciates what is required to make a man a real physician and what education is necessary to produce such a person

Two important factors there must be the power to observe and an ever widening experience, both of which can best be acquired by the close association with men who have attained them Instead we find the early years of the medical curriculum being spent in memorizing scientific data which quickly lose their value owing to their being separated from those matters which render them valuable for the special purpose that they are ultimately intended to enhance Further the great sciences in which the student is called upon to acquire knowledge in his early years are becoming increasingly expressed in mathematical terms and formulæ Their values call for a specialized type of mind and certainly *without this they are not entirely helpful in the training* of those who ultimately have to treat human beings who better appreciate power of expression and language Yet this tendency to use formulæ even in the later professional subjects such as psychology is on the increase It may be argued that the use of formulæ leads to greater accuracy, *and this may* be true to the trained mathematical mind but to the mind not so endowed it may lead to unnecessary difficulties We find Faraday possessed as he was with great mental powers writing to the physicist and mathematician Clerk Maxwell There is one thing I would be glad to ask you When a *mathematician engaged* in investigating physical actions and results has arrived at his own conclusions may they not be expressed in common language as fully clearly and definitely as in mathematical formulæ?

The whole trend of modern medicine is towards specialization Valuable as this may be in some respects I feel that the more one observes and the longer is one's experience the more clearly stand out the values of a wide knowledge of general medicine Certainly this has been my experience for it is over five and twenty years since I decided to try and help the specialty in which I worked back into a closer relationship with general medicine and I have never regretted my decision nor doubted that it was correct Dr Ryle is right let clinical training no matter how elemental be begun at the earliest possible moment in a student's career Pure science will have a greater meaning and it will be linked with matters touching upon the alleviation of disease which is the ultimate aim of every medical student—I am etc

MAURICE CRAIG

East Preston Sussex March 28th

SIR,—Is not Professor Greenwood taking an unduly gloomy view of the difficulties of the medical curriculum described in Dr. C. M. Wilson's article? The difficulties obviously exist but they are largely those that arise from the inevitable advance in knowledge common to the sciences. Little time is left it is true for the acquirement of culture and it may be as Professor Greenwood asserts that the general educational standard of the profession literary and rational is falling. But we must bear in mind that circumstances are now such that a deficiency of culture in the doctor is more noticeable. Medical problems are discussed to a much greater extent than formerly in the lay journals. Differences among doctors are more marked. People are less inclined to accept the merely pontifical utterances of a medical man at their face value. The dogmatism which used to pass muster as scientific truth is less acceptable to a better educated and more experienced public.

To speak of a "remedy" for this state of affairs would be misleading; there is none. The advance in knowledge is not likely to be halted, but would not the position be helped materially by the addition of yet one further subject to the curriculum—the subject of methodology? The danger is, of course, that it would become a subject to be taken along with others and that it would be taught as such with little or no emphasis on its practical and everyday application. This would largely depend however upon the teacher and the fact that to the best of my knowledge the student has at present no opportunity to become method conscious is a serious deficiency at least partly responsible for the difficulties Professor Greenwood laments.

The student should be given the opportunity of becoming acquainted with and developing for himself the rational attitude of mind. He should be encouraged in the attitude of intelligent scepticism, as distinct from that of constant acquiescence in dogmatic teaching. He should be made aware of the necessity of distinguishing between assertion and proof, between a reason and a rationalization, and should be helped towards acquiring some knowledge of the personal bias. This would mean that teachers would be under the painful necessity of having to be ready to justify their teaching—but that would not be a bad thing.

The subject need not be a lengthy one, it need not be difficult, and it need not be tedious. It could be made very valuable.—I am, etc.,

London, W.1, March 21st. FREDERICK DILLON.

SIR,—Dr. C. M. Wilson's article. The student ironsis timely and of extraordinary interest. I believe it is generally recognized that the curriculum is too long contains too many subjects, demands an unnecessarily high standard, and puts too great a financial strain upon parents and guardians.

The medical profession for the purposes of this subject consists of general practitioners and specialists—the former largely predominating. The best practitioner is the one who has fair technical knowledge, a good general knowledge, human sympathy, and savoir faire. Examiners may all be regarded as specialists, and as such subconsciously impart and require too special a knowledge of the student. The important matters of handling patients and the psychology of practice as taught by the old apprentice system are omitted. Students imbibe all their medical knowledge with a view to passing examinations, and it is no wonder if they have the first upon the public as a class that they begin to see the real meaning of "failure" only after they have failed to realize the hundred and one things in practice not touched upon in their curriculum.

My suggestions for coping with these difficulties are as follows:

1. The formation of a committee of practitioners (say of the B.M.A.) and examiners, to discuss the whole question.
2. The shortening of period and number of subjects.
3. The division of examination results into pass and honours lists, the former for general practice, the latter for consultants and specialists.
4. The formation of post-graduate hospitals where whole-time well-paid first-class men form the staff, whose duties will be to instruct the students, all of whom must have passed their qualifying examinations. The latter should also have lectures on general practice.
5. After six months have been thus spent the passed students should then and only then be registered as general practitioners. Honours men would of course not be precluded from taking this course; it would probably be to their interest to do so.—I am, etc.,

G. FRANCIS SMITH, M.R.C.S., L.R.C.P.

Folkestone, March 24th.

AETIOLOGY OF DISSEMINATED SCLEROSIS

SIR,—In your issue of March 14th, 1931, you published a letter from me in defence of Miss Chevassut, which was in answer to a criticism that appeared in the previous number. During the nine months which followed the publication of my letter I was in close touch with Miss Chevassut's work and methods. In the interests of the medical profession and sufferers from disseminated sclerosis I ask you to insert in your valuable journal this compressed account of the results of her work.

Early in 1931 the Halley Stewart Trust decided to provide a further opportunity for the trial of the method of treating disseminated sclerosis based on the use of a vaccine prepared from cultures of a virus or organism which Miss K. Chevassut claimed to have cultivated from the cerebro-spinal fluid of such cases and described in an article in the *Lancet* of March 15th, 1930. Premises were taken at 30, Chesterford Gardens, Hampstead, and equipped as a nursing home with laboratories containing all the apparatus required by Miss Chevassut to enable her to prepare the vaccine for the clinical trials and to continue her investigations on the organism which she had described. Miss Chevassut, who was a grantee of the Trust, was given the services of Mr. Lavington, who had acted as her laboratory assistant during her investigations at the Westminster Hospital. The institute provided a nursing staff and accommodation for twelve patients. I was appointed medical superintendent.

The institute was opened on March 29th, 1931, and by the end of the year 116 cases had been treated. Of this number 69 were readmitted on one or more occasions, thus providing opportunities for testing the results of the treatment. An analysis drawn up by the medical assistant at the institute of the results of these 69 cases is as follows:

1. Cases showing considerable improvement	4 = 5·80%
2. Cases showing slight improvement	13 = 18·85%
3. Cases showing no change of condition	25 = 36·23%
4. Cases definitely worse	27 = 39·13%
Total	69

These figures were submitted to Dr. F. M. R. Walshe, who has kindly given the Trustees his views concerning them. Dr. Walshe says, *inter alia*:

"Your result *amounts roughly to this*, that 25 per cent. of cases showed some measure of improvement (trivial in 20 per cent.) and 75 per cent. showed no improvement or definitely regressed. I may say with confidence these results are markedly worse than hospital records would show for the

treatment on other lines of disseminated sclerosis and also are not so good as a similar number of wholly untreated cases would probably show I can only conclude from your figures that the treatment you have been investigating must aggravate the malady and that the patients so treated are worse off than if they had been left alone

Miss Chevassut made her first report to the Trustees on her work in September 1931 It was of a highly technical nature and dealt with investigations in a number of different directions It was submitted by the Trustees to a committee of three eminent experts on pathology and particularly on bacteria and viruses who kindly examined the report and gave the Trustees the benefit of their opinion This opinion was entirely unfavourable the committee expressing the view that the report had no scientific value It described a successful cultivation of the specific organism which she claimed could now be readily and regularly maintained in subcultures on solid media and her records state that the organism was present in a very high proportion of the cases admitted to the institute during the six months from April to September 1931 The committee therefore naturally desired to have the opportunity of examining the organism and of verifying Miss Chevassut's detailed description of its microscopical and cultural characters Miss Chevassut however was unable to furnish for examination by the committee a culture which she was willing to identify as that of the specific organism but she readily promised to secure such a culture at the first opportunity The Trustees therefore at a special meeting on December 14th decided to afford her a final chance of establishing her claim and gave her the sole control of the laboratory and the right to admit at least twelve cases for the period of a full month in which to provide positive cultures for verification by eminent scientists She accepted these conditions but only admitted six patients and having failed to produce from them a solitary culture she withdrew from the institute on January 7th a week before the expiration of the allotted month and indicated her intention not to return In view of the committee's adverse report and her failure to produce a culture with the properties and appearances described in her report as characteristic of her disseminated sclerosis organism which could be verified by independent investigators the Trustees had no alternative but to close the institute to her and abandon the trial of her method —I am etc

B H STEWART M D
London N W 3 March 23rd Hon Sec Halley Stewart Trust

P S —The above letter was drafted some weeks ago The delay in submitting it for publication arose from a desire to have it approved by all concerned Being written before the *Lancet* issue of March 19th it is in no sense a rejoinder to the article by Sir James Purves Stewart and Dr Hoeling which appeared in that number

VISCERAL HERPES ZOSTER

SIR —Dr Chesterman's communication on herpes zoster involving the urinary bladder draws attention to the occurrence of herpes zoster involving a viscus simultaneously with the skin and first sensory neurone This is probably not uncommon and it is desirable that attention should be paid to the association of visceral symptoms with herpes zoster I recently saw an example of herpes zoster of the pleura in an elderly man a patient of Dr C R McClure He had herpes zoster involving the fifth and sixth dorsal segmental areas on the left side He complained that his pain was intensified by taking a deep breath and auscultation revealed a harsh pleural rub audible both at the back and in front of the chest and exactly underlying the site of the cutaneous eruption Thinking that the pleurisy might be tuberculous in origin and that the zoster might be a complication of tuberculosis we had the patient's chest x rayed Radiographically the lungs were normal and pyrexia and other general symptoms of tuberculosis were absent The post-herpetic neuralgia yielded to x ray irradiation and the pleural rub disappeared in three or four weeks

There is evidence that the virus of zoster first attacks the first sensory neurone and spreads both centrally towards the spinal cord and peripherally towards the skin It is reasonable to explain visceral zoster on the supposition that it also spreads peripherally along the visceral nerves and so may reach a viscus innervated by the spinal segments affected Similarly zoster arthropathy appears to be due to infection of the periarticular tissues by the zoster virus —I am etc

London W 1 March 24th W RUSSELL BRAIN

SIR —With reference to the interesting case of herpes zoster affecting the urinary bladder recorded by Dr Chesterman in to day's *Journal* (p 563) it is of interest to note that a case of herpes simplex has also been recorded[1] This was in a woman aged 31 who had a right sided pyelitis and developed a typical herpes labialis which was associated with about twenty similar vesicles in the bladder By a series of cystoscopies these were shown to follow the same course as the vesicles on the lips —I am etc,

Sheffield March 26th ROBERT PLATT M D M R C P

THE AFTERCOMING HEAD

SIR —The obstetric finger longs to enter an available orifice and there must be few obstetrical practitioners who have not felt the temptation (and yielded to it) from the time when Celsus used pelvic delivery for the dead child and Soranus for the living The parturient has a vagina and the aftercoming head has a mouth and what is the obstetric finger to do if it is not to enter them?

Less than two weeks ago I heard a practitioner defy even an expert to recognize an occipito posterior position by other than vaginal examination and it is possible that the majority of practitioners trained twenty years ago still make per vaginam diagnoses which could be derived from abdominal palpation In seventy years the essential practical lesson of Semmelweis has not fully reached the obstetric consciousness The obstetric finger should enter the vagina only when it must

The tradition of inserting the finger or fingers into the mouth of the aftercoming head is hoary but in full vigour Dr Bourne recommended it at Eastbourne Dr Potter whose experience of aftercoming heads is large exhibits a photograph with his two fingers in the mouth and the Kodal film of the management of a normal breech delivery shows the same manœuvre Dr Bourne reserved the manœuvre for the case with extended head but the others used it in ordinary cases Dr Bourne uses the term jaw traction but Dr Potter says The jaw is not pulled upon as a fracture might result The period during which the child will survive the interruption of the placental circulation sets a time limit to the delivery of the aftercoming head though the limit is not so narrow as an excited accoucheur is apt to think The driving force when necessary is supplied by suprapubic pressure and the ostensible warrant for any vaginal manœuvre is its capability of facilitating advance by affecting the flexion of the head The accoucheur who puts his finger in the mouth sees the chin approach the sternum but

[1] Gremme A *Zentralbl f Gynäk* May 1 1931 p 1538

has not at all influenced the attitude of the cranium on the atlas unless he has used jaw traction Dr Potter furnishes no excuse for his manœuvre

The following passages from Smellie's *Midwifery* (N S S i 306) are of interest

When the child is delivered as far as the shoulders let him introduce the fore or middle finger (or both if necessary) into the mouth of the fœtus by which means the chin will be pulled to the breast and the forehead into the hollow of the sacrum And this expedient will also raise upward the handhold which rests at the os pubis

The application of the fingers in the child's mouth will contribute to bring the head out in this manner prevent the os externum from hitching on the chin help along the head and guard the neck from being over strained a misfortune which would infallibly happen if the forehead should be detained at the upper part of the sacrum Nor is there any great force required to obviate this inconvenience or the least danger of hurting the mouth if the head is not large for if the head cannot be brought along with moderate force and the operator is afraid of injuring or over straining the lower jaw let him push his fingers further up and press on each side of the nose or on the inferior edges of the sockets of the eyes

There is no mystery in the matter the finger is entitled to enter the vagina in the management of the aftercoming head when it can influence favourably the position of the cranium The position which it is necessary to modify is the attitude of the cranium on the atlas and it can be influenced by jaw traction or by pressure on the upper surface of the maxilla Both Smellie and Dr Potter recognize the possibility of danger and I have seen a mouth enlarged at both its angles by the operations of an anxious accoucheur Smellie gives an alternative to the dangerous method and this with a little modification is not only an alternative but so much a better solution of the problem that no justification is left for the routine use of the finger in the mouth The problem is to flex the cranium on the atlas In an actual cranium with an occipito frontal circumference of 31·5 cm the distances from the centre of the occipital condyle as projected on the median plane are mandibular fossa 2·1 cm incisor fossa on upper jaw 5·8 cm Thus the mechanical advantage of a force applied at the incisor fossa is between two and three times as great as at the mandibular fossa At the mandibular fossa force is applied by a pull on soft tissues on the maxilla the force is applied by pressure on an integral part of the cranium In view of these facts there seems no doubt that the operator who aims at flexing an aftercoming head should pass his finger up and press on the maxilla He may miss the easy joy of seeing the chin approach the sternum when the finger enters the mouth but he will know that whatever force he uses is applied to the greatest mechanical advantage and does not endanger the vulnerable structures of the child — I am etc

Dr Melbourne R C BUIST M D

FAILED FORCEPS

SIR —A study of Dr Spencer's paper on failed forceps (December 12th 1931) and of the 1928 papers shows that too much attention is being paid to the mechanics and not enough to the physiology of these cases That uterine inertia and the failure of spontaneous and even of arrested delivery in the cases reported is evidenced by the frequency of incomplete dilatation of the cervix and of artificial rupture of the membranes before completion of the first stage as well as by the absence in most cases of pelvic or fœtal obstruction of sufficient degree seriously to hinder labour in term pregnancies These patients are clearly suffering from inertia of the first stage usually in combination with some other unfortunate circumstance such as mild pelvic contraction or an occipito posterior position The authors have not told us the duration of the first stages in these cases but very likely it ran into many hours or even many days so that the medical attendants felt that something must be done if mother or baby was to survive labour Dr Spencer thinks that premature rupture of the membranes in itself leads to lingering labour but this is not so many labours end speedily or within the average limits in spite of rupture of the membranes even prior to labour Certainly premature rupture is most unfortunate in lingering labours as it exposes both mother and baby to risks of infection of pressure etc but it seems more probably a result of uterine inefficiency than a cause of it

What is the practitioner to do when he meets with a dilatory first stage (probably running into days) perhaps with the membranes already ruptured? Surely patience and anodynes are not enough they have already been applied in vain! Should he not dilate the cervix manually or by bags and then see what the second stage can do? Not uncommonly a good second stage follows a tedious first if the second stage also proves inert then forceps should be applied

If the mother's condition is good it would be better to assist uterine action but nobody knows an effective treatment for actually existing uterine inertia because neither clinicians nor physiologists have been interested in discovering the physiological factors on which uterine efficiency depends May not the uterine muscle be depreciated by deficits either in minerals vitamins or in protein and so forth? In my own cases I act on this assumption and supply such extras during a labour which threatens to be tedious In ante natal management attention to adequate diet and to renal activities reduces the incidence of delayed labour in practice

If the physiology of the labouring uterus were studied in the clinic and in the laboratory then would our teachers be able to instruct us how to prevent uterine inertia and how to cure it also instead of merely begging us to wait for full dilatation of the cervix before interfering quite regardless of the fact that the death rate of both mothers and babies is well known to rise with the duration of labour while it is obvious to anyone in practice that the duration of labour depends almost entirely on the length of the first stage It is rare indeed to have serious trouble in a patient who has had a good first stage (say under five hours) —I am etc

Geelong Feb 8th MARY C DE GARIS M D B S Melb

FLAT FOOT

SIR —I read with much interest Dr Forrester Brown's article on the above in the *Journal* of March 12th

I would like particularly to refer to the question of supporting the arch during treatment I agree with the statement that crooking the heel of the shoe acts like magic in children but in older patients I have found that this method in many cases is ineffective Further owing to the complaint that the heel of the shoe is rendered unsightly objection on aesthetic grounds is offered

If one realizes that the integrity of the foot arch is maintained by the static postural contraction of the tibialis posticus and anticus (and included in the arch are the subastragaloid joints) then any give or drop of the arch must be restored to and *held in* proper position by a splint or support pending the return of the normal tonal muscular contraction *For this purpose I have found* a light *rigid* full length duralumin arch support of great

service It should as far as possible be made to fit the individual foot Additional to this special toe exercises—with the *toes turned well in*—are practised Usually a month or six weeks of this treatment enables a patient to discard the support as it is essential to impress the fact that this is only temporary and that the exercises are the all important part of the treatment —I am etc

Liverpool March 17th W H BROAD M D B S

AETIOLOGY OF CANCER

SIR —One gathers from the resume of Dr Gye's lecture on the aetiology of cancer in your issue of February 27th that extracellular neutralization of virus has been accomplished and presents no great difficulty The problem is to induce penetration of the cell As practically all active principles are crystalloid it is possible that the antivirus has been rendered indiffusible by adsorption on the colloids of the serum That the adsorption is not irreversible is evident because the serum is active *in vitro* It might be worth while to experiment with an emulsion of the serum homogenized if possible as if the anti virus should be fat miscible it would penetrate the cell with the fat and probably neutralize the virus —I am etc

Montreal March 11th RICHARD KERRY

A PRIMER OF FRACTURE PRACTICE

SIR —I would like to express appreciation for the excellent review which appeared in the *British Medical Journal* of January 23rd entitled A primer of fracture practice In this article appears the statement of the reviewer But why does the storage tin bear the misleading legend Bread ? The reason is that one may purchase these bread containers at any department stores they are admirable for storage purposes and are economical and easily obtained Without such explanations the reviewer's wonderment at the label is easily understood It was put there purposely but unfortunately without an explanatory note —I am etc

Chicago March 9th PAUL NICHOLAS LEECH

AMBULATORY TREATMENT OF FRACTURES

SIR —Mr McFarland has misunderstood me when he assumes that I advise that all patients with fractures of both leg bones should walk in two days It has been my practice to allow weight bearing in fractures of the foot and ankle in twenty four hours in fully reduced horizontal fractures of both leg bones in four weeks and in fully reduced spiral fractures of both leg bones in six weeks Mr McFarland more or less agrees with these dates and also agrees in condemning excessive recumbency and excessive hospitalization

But curiously enough although he agrees with the principle he has gone out of his way to dispute the facts on which the principle is based He points out that the adhesions of disuse are only dense if there is an added factor such as trauma Surely it is trauma of which we are speaking The haemorrhage serous exudate and oedema of a fracture of the lower leg or ankle provide an ideal medium for adhesion formation and one is continually seeing such cases many months after the conclusion of recumbent treatment still complaining of weakness or giving way of the ankle The symptoms are frequently attributed to arthritis but they are entirely relieved by manipulation

Mr McFarland thinks that decalcification never occurs with rest for a reasonable time I would refer him to the recent pathological work of Greig who has shown that decalcification commences at once if the blood supply to the limb is greater than the demand on the blood supply He asks why decalcification is not seen in cases other than fractures where recumbency is essential It is seen in every such case Recumbency is at once followed by an increased excretion of calcium in the urine and herein lies the explanation of the renal calculi which frequently appear as a late complication of fractures of the femur and which are seen still more frequently in open air hospitals where to the general decalcification of disuse is added the focal decalcification of tuberculous disease —I am etc

Liverpool March 21st R WATSON JONES

"EXTRARENAL OEDEMA"

SIR —It is the opinion of the advanced students of kidney function and kidney disease that the oedema of hydraemic nephritis or of nephrosis is extrarenal in origin—meaning I suppose that a state of the tissues or of the blood chemistry exists in which an abnormal distribution of the tissue fluids is induced and the blood passing through the kidney is so altered that normal excretion cannot be carried out Bennett[1] in his Goulstonian Lectures maintains this extrarenal character of the oedema of nephritis The following case seems to point in this direction

A man aged 40 years the subject of chronic bronchitis was admitted to my ward with generalized oedema and in a state of pronounced cyanosis and dyspnoea Thinking the case to be one of right heart failure my house physician at once bled him removing 20 ounces of blood with immediate relief of his respiratory symptoms I saw the patient for the first time on the following day His appearance immediately suggested hydraemic nephritis his eyelids were swollen there was a pronounced lumbar cushion his legs were oedematous there was considerable ascites and also wheezing in the chest The clinical clerk read his account of the case which was sufficiently accurate and stated that the urine was high coloured of high specific gravity but contained no albumin This finding was so improbable that I asked for an immediate demonstration when a mere trace of albumin was found and none at all was present on any other occasion nor were any casts discovered The case was therefore one of oedema of typical renal distribution in which the urine was found to be early but it contained neither albumin nor casts The patient was curiously little ill and was rather surprised at the concern displayed in his case

I prescribed continuous radiant heat which produced profuse sweating but had little effect on the oedema Meantime the routine report on blood sugar and non protein nitrogen was received and the T N P N was given at the unusually low figure of 12 mg per 100 c cm It appeared therefore that fluid was being retained in the body from lack of the normal amount of urea the physiological diuretic in the blood and half a drachm of urea was prescribed three times daily by mouth the result is shown in the table

Date	Quantity of urine	Date	Quantity of urine
Aug 2	28 oz	Aug 6 (urea started)	21 oz
3	26 oz	7	78 oz
4	34 oz	8	80 oz
5	20 oz	9	91 oz

Urea administration was then stopped the oedema having completely disappeared the average daily quantity of urine for the next week was 33 ounces The total non protein nitrogen on August 10th was 30 mg per 100 c cm The patient had apparently completely recovered and was discharged

It is perhaps unfortunate that no examination was made of the blood cholesterol or of the albumin globulin ratio of the plasma but in a case of such short duration it is improbable that much deviation from the normal

[1] Bennett, T Izod *Lancet* 1922 i 67

would have been observed the amount of cholesterol found in normal cases is too variable for a single estimate to be of much value and the investigation was not required in the patient's interest

In a recent paper on the plasma cholesterol in nephritis Fleming gives the blood urea nitrogen found in thirteen cases of parenchymatous nephritis low figures are given in four instances—about 13 mg. per 100 c.cm. Blood urea nitrogen is about half the T.N.P.N. so these cases all had subnormal amounts but not nearly so little as in my case. I do not find subnormal T.N.P.N. in cases of hydræmia nephritis with œdema described in the text books nor is it in the experience of my colleagues of the pathological department.—I am, etc.

D. W. CARMALT JONES, D.M., F.R.C.P.

Dunedin, New Zealand.

THE TUBERCULOSIS PROBLEM

SIR,—I am aware of Dr. A. Stanley Griffith's recent reports, though I have not seen the article in the *Lancet* to which Dr. Cumming refers in his letter in your issue of March 19th. I should like to take this opportunity of expressing my regret for the accidental addition of the letter *s* to Dr. Griffith's name in my article.

As regards the type of organism it would appear to be opportune to remind your readers of the conclusions of the Royal Commission of 1901, and I enclose a copy of three paragraphs on page 86 of Part I. of the Commissioner's final report, in case you can find space for them. But this is a matter which cannot be settled by a consideration of one side of the question only, but a subject which must be weighed from every point of view, and must cover at least the ground of my original article. It is disappointing that this has not been done in the recent report of the Ministry of Health on tuberculosis, which appears to be mainly a restatement of accepted views with a monograph on refined forms of treatment.—I am, etc.

J. MIDDLETON MARTIN,
County Medical Officer of Health.

Chester, March 18.

The extract from the final report of the Royal Commission on Human and Animal Tuberculosis published in 1911 are as follows:

> We are inclined to regard transmutation of bacillary type as exceedingly difficult if not impracticable of accomplishment by laboratory procedure, though in view of certain instances in which we obtained from one and the same body both types of bacilli, we are not prepared to deny that the transmutation of one type into another may occur in nature. With regard to the question of the stability of the pathogenic properties which distinguish the two types, we must again refer to the exceptional character as possessed by certain of the bacilli which we isolated from cases of lupus and equine tuberculosis. In one of the cases the bacilli had the ordinary cultural characters of the bovine type, associated with a high degree of virulence for the calf and rabbit, no greater than is usually exhibited by the human type. We have already given reasons for declining to accept these exceptional bacilli . . . as true types, and if that view of them is correct, . . . we are inclined to doubt [illegible] human or modified bovine bacilli, on the other assumption they had . . . [illegible] . . . by the latter, supposing they had the . . . [illegible] . . . certain animals which is . . . [illegible] . . . accepted . . . [illegible] . . . We prefer to . . . [illegible] . . . bacilli . . . [illegible] . . . and . . . [illegible] . . . [illegible] . . . [illegible]

He possessed a good all round knowledge of his profession and was especially skilful and successful in maternity work His frank genial and kindly nature endeared him to his patients not only as their trusted medical adviser but as their personal friend His work under the National Health Insurance Acts and the Highlands and Islands Medical Service brought him into the homes of the sick poor to whom he gave of his best in relieving their suffering and helping them in every possible way There are many who will always cherish a kind memory of him Dr Kerr never took a holiday and it may truly be said of him He scorned delights and lived laborious days His personality and his well known figure will be greatly missed in the capital of the Highlands The funeral was attended by a large concourse of people who wished to show their esteem and regard for him

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The following well known foreign medical men have recently died Dr HANS RHESE extraordinary professor of oto rhino laryngology at Konigsberg Dr A Le DANTEC professor of colonial medicine and tropical diseases at Bordeaux Dr FRANÇOIS ARNAUD honorary professor at the Marseilles Faculty of Medicine Dr UGO SOLI a Palermo pathologist aged 51 Professor JULIUS HELLER a Berlin dermatologist Professor CHARMEIL formerly dean of the medical faculty of Lille Dr HENRI GIRARD formerly inspector general of the health service of the French Navy and Dr EDWARD TYSON REICHERT emeritus professor of physiology in the University of Pennsylvania

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Before Parliament adjourned for the Easter Recess the Royal Assent was given to the Veterinary Surgeons (Irish Free State Agreement) Act the Destructive Imported Animals Act and the Dangerous Drugs Act In the House of Commons the Edinburgh Corporation Bill was read a third time and a Sunday Performances Regulation Bill was introduced by the Government on March 24th

Public Lotteries

In the House of Commons on March 22nd Sir W DAVISON asked leave to introduce a Bill to authorize the raising of money by means of lotteries for charitable scientific and artistic purposes or for any public improvement or other public object under conditions approved by the Home Secretary He said that when he introduced a Bill last year he confined its scope to the provision of funds for hospitals on the same lines as the sweepstakes in the Irish Free State In view of representations made to him he had drawn the present Bill on somewhat wider and simpler lines although British hospitals would still be within its scope and could take advantage of it should they so desire Clause 1 of the Bill provided that notwithstanding anything to the contrary in any Act of Parliament or rule of law it should be lawful for the governing body or trustees of any charity and any trustees or body of persons appointed solely and mainly for the purpose of raising money for any scientific or artistic purposes or for carrying out public improvements to hold with the approval of the Secretary of State a lottery to raise money for such charity purposes or object Clause 2 provided that no lottery should be held except in pursuance of a scheme sanctioned by the Secretary of State and for the charity or object named in the scheme Clause 3 set out certain conditions and regulations but did not preclude the Secretary of State from making others if he thought fit The Bill would not apply to Northern Ireland *If it was thought* that the scheme of the Bill was too wide or that it should be confined to hospitals or that the number of lotteries in any one year should be fixed that could easily be done in committee From the Irish sweepstakes just concluded the hospitals received £581 000 Previously they had received over £2 000 000 and in all they had had practically £3 000 000 How much sickness and suffering in this country might have been saved if this money had been kept here? A recent visitor to Dublin who saw the hospital drum there stated that when he arrived at Euston on his return he saw in the street a medical student beating a drum with a procession behind him asking for alms for a London hospital Which of the two methods was the more dignified? Another hospital appeal issued recently said that 1 000 patients were waiting for beds owing to lack of funds Those funds could be provided by a lottery Of the £3 000 000 received in Ireland over £2 000 000 came from this country No one imagined that if lotteries for hospitals were established in this country they would maintain the hospitals the hospitals wanted millions a year The lotteries would however provide funds for urgently needed equipment and for beds

Mr HOPKIN MORRIS asked the House to reject the motion for the introduction of the Bill He agreed that the betting law was *in an anomalous position* and said that a far reaching inquiry into the whole question was required Every member would agree that the hospitals were worthy objects but were they going to support them by questionable means? In London and the provinces last year the sum raised for voluntary hospitals by bequests subscriptions savings associations and paying patients was between £13 000 000 and £14 000 000 That was in a year of acute depression Of that sum 50 or 60 per cent came from voluntary contributions What was the amount of sweepstakes which would be required to assure an income equivalent to that amount? He would take the figures of a very competent hospital accountant who said that it would require three sweepstakes a year each yielding £10 000 000 or in all £30 000 000 a year If they assumed—it was a great assumption—that there would be treble the number of subscribers to English sweepstakes there were now to the Irish the yield would be £15 000 000 leaving a deficiency of £15 000 000 The testimony of the chairman of the Royal City of Dublin Hospital was to the effect that annual subscribers were withdrawing their gifts on the ground that they are no longer needed that paying patients generally working class men and women were objecting to paying anything for their treatment and keep that business firms whose employees used to pay a penny or twopence a week to the hospital now refuse to pay anything and that the loss on this source was 50 per cent and that people were not now leaving bequests That reduction had already taken place and there was no comparison between the position of the hospitals in this country and those in Ireland *The* Irish sweepstakes was a success from the Irish point of view because Ireland was a small country and they were drawing English money but if the hospitals of this country relied on the same position the amount of Irish money which they would draw would be negligible That was why the governor of Charing Cross Hospital last May stated *Speaking for* myself and this hospital we will have neither part nor lot in any such schemes and our reasons are not simply moral ones though they weigh very considerably Looking at it from a business standpoint we believe that the gains would be outweighed by *the losses* This was the testimony of hospitals the very institutions which the lottery was intended to support This was clearly a case where there should be an inquiry first

Leave to bring in the Bill was given by 176 votes to 123 and the Bill was read a first time

Silicosis

On March 21st Sir H SAMUEL told Dr Neil MacLean that much had been and was being done to get plant installed by employers to prevent silicosis Regulations to prevent silicosis had been made under the Factory and Workshop Act 1901 *for a number of industries* including the manufacture of silica bricks cutlery and edge tools and the grinding of metals and cleaning of castings A supplementary code of regulations for the pottery industry had recently been agreed with the *industry* and would be *brought* into force very shortly All these regulations included requirement involving the installation of plant to prevent inhalation of dust Further it was the general practice of the inspectors under Section 74 of the Act to require the provision of exhaust ventilation in any case where the workers were exposed to that risk *The*

prevention of accidents in mines and quarries was a matter for the Mines Department Mr Lennox-Boyd asked if the right hon gentleman was aware that the precautions taken in South Africa had practically eliminated accidents in the mines in that country

Sir H Samuel states that the total amount collected in 1931 in connection with the Sandstone Industries (Silicosis) Scheme 1929 up to December 31st last was £124 721 and the sum paid towards the cost of the medical board was £14 161

Law Concerning Abortion—On March 21st Lieut Colonel Moore Bridges asked the Minister of Health whether he would consider the present state of the law with regard to the *practice of abortion under the Act of 1861* with a view to amending that Act Sir T Inskip who replied said that he was at all times happy to consider the state of the law with regard to any subject but he was not at present satisfied that the law concerning this matter required amendment

Medical Staff of Ministry of Health—Sir Hilton Young on March 21st said that some of the whole time members of the medical staff of the Ministry of Health performed duties or held appointments other than those connected officially with the Department and for which they received emoluments *not provided by the State* He ought however to make it clear that the performance of any such duties or the holding of any such appointments (which consisted *of the delivery* of occasional lectures *or acting temporarily as examiners*) was only allowable where they did not interfere with the regular duties and the position of an officer as a public servant or with the public interest

Traffic in Streets Occupied by Medical Profession—Sir J Rawlinson on March 21st asked the Minister of Transport if he was aware of the annoyance caused by the use for heavy traffic of streets devoted *primarily* to the medical profession and if he would consider taking steps to ensure that these streets should be kept free of such traffic for the benefit of patients where alternative routes were conveniently available Mr Pybus replied that it would be impossible to impose restrictions such as were suggested in the question

Director of Public Health in the Central Provinces—On March 21st Dr Lethbridge and Dr Morris Jones asked the Secretary of State for India if any decision had been arrived at regarding the proposal to abolish the post of Director of Public Health in the United Provinces and to amalgamate the Public Health Department with the Medical Department under the Inspector General of Civil Hospitals Sir S Hoare replied that he had *not heard of* any such proposals as extended the United Provinces Perhaps the were *referring* to the United Provinces where a proposal to combine temporarily the posts of Director of Public Health and the Inspector General of Civil Hospitals was under consideration as a measure of economy

Nystagmus—On March 22nd Mr Isaac Foot replying to Mr Pybus on behalf of the Home Department stated that the number of cases of nystagmus in [illegible] Act in 1928 was 319 in 1929 302 and in 1930 [illegible] The information was not available for 1927 and the number for 1931 was not yet compiled

Bill Specially Reported by Committee of House of Commons—Replying to Mr [illegible] on March 23rd Sir John Gilmour said that all [illegible] Committee of the House of [illegible] was [illegible] Government must of the first [illegible] It was [illegible] the ordinary [illegible] [illegible] [illegible]

Hall I M D and was educated at Edinburgh where he graduated M B and C M in 1886 Entering the I M S as surgeon on September 30th 1886 he reached the rank of lieutenant colonel after twenty years service and retired on May 20th 1920 Almost all his service was spent in civil employ in Bengal and Assam where he held for many years the important civil surgeoncy of Dakka which was the capital of the short lived province of Eastern Bengal

Lieut Colonel George Maurice Hoblyn Colman R A M C (ret) died suddenly at Victoria British Columbia on January 30th aged 76 He was born at Nassau in the Bahamas on January 5th 1856 and was educated at Cambridge where he graduated B A in 1877 and M A and M B in 1882 and at St Thomas's taking the M R C S and L S A in 1881 Entering the Army as surgeon on February 3rd 1883 he became surgeon major after twelve years service and retired with a gratuity on August 21st 1895 During the South African war he was re employed at Chester for which he was promoted to lieutenant colonel on October 18th 1902.

Universities and Colleges

UNIVERSITY OF LEEDS

The following candidates have been approved at the examinations indicated

M D—Mildred I Ealing

C H M—V B Prun

FINAL M B CH B—*Part I* F Badrock G W Blomfield Kathleen S Bruce I J Cane V Carasik C D Clark O E Fisher J Gibson I Goldwater S I Leshinsky Vida L Liddell E Lodge K O Milner J I Rhodes R T Rushton W Sharp D Thackray W H Tod V Wood W Zemsky *Part II* H Agar Doris B Brown I Gledhill Gwendolen Harrison H Hart I R W Hemsley Ruth Hooton V C James E A James F C Leach I Macpherson J Q Mountain I Rosenberg L W Russell M Shankhla *Part III* I Gledhill (first class honours) Doris B Brown (second-class honours) H Agar Gwendolen Harrison H Hart Ruth Hooton V C James I Macpherson J Q Mountain I Rosenberg I W Russell C K Shun M Shankhla

D P H—J I Culpine

D P M—I E Kingston

The following scholarships and prizes have been awarded Infirmary Scholarship and Littlewood Prize J C Coates Scattergood and Edward Ward Memorial Prizes E Gledhill Hardwick and McGill Prizes Doris B Brown

UNIVERSITY OF LIVERPOOL

The following candidates have been approved at the examinations indicated

DIPLOMA IN PUBLIC HEALTH (*Part I*) F J H Crawford Ruth Henry I D Irvine G W Paton M Solomon Honora J Twomey

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY—J P Grieve W Griffiths R B Guyer P I K Navar I L Rubin J S Tomb Sylvia Wigoder

DIPLOMA IN TROPICAL MEDICINE—B V Bhandari P Dass J A Doherty R L Portway

DIPLOMA IN TROPICAL HYGIENE—C P F Bowers V Cathcart I K Kurvath I C Middleton H J H Spreadbury

UNIVERSITY OF DUBLIN

The following degrees and licences were conferred on March 16th

M D—R S F Hennessey H S Roseman V H Thompson (*stip cond*) V C Thompson (*stip cond*)

M B B CH B A O—D B Bradshaw Kathleen R Byrne H S Mason L Morrison V J O'Connor T J O'Sullivan P H Pocock I S Samuel M A Shapiro

LICENCE IN MEDICINE SURGERY AND OBSTETRICS—H J Garland

NATIONAL UNIVERSITY OF IRELAND

UNIVERSITY COLLEGE DUBLIN

The following candidates have been approved at the examinations indicated

THIRD M B—*Part I* (exempted from further examination in Part I—Pathology and Materia Medica) V B Higgins A D McDwyer W J C Murphy *Part II* †C Brallin P V Byrne D Cox C Cox J I Hanly †D J Lawlor Mary C J McCann F McMahon C C McNamee J J O'Byrne I J O'Donnell Teresa V O'Donnell I J O'Flynn J C Smyth J I Sullivan

D P H—*Part I* I J Aird M F Daly (old regulation) I I Drumm I V Hoock J I Hearn *J J Kane F Lennon D I Macdonald (old regulation) C F O'Brien I C Rice

* First class honours † Second-class honours

Medical News

The annual dinner of the Cambridge Graduates' Medical Club will be held at the Hotel Splendide Piccadilly W on Thursday April 14th at 7 30 p m with the president Sir Humphry Rolleston Bt in the chair The honorary secretaries are Dr F G Chandler and Mr W D Doherty

The School of [illegible] of Rome directed by Professor G [illegible] the usual two courses this year the first on the technico economic aspects from March 30th to May 12th and the second on the medical aspects of malaria from July 14th to September 30th The fee is 100 lire Further information can be obtained from the secretary Policlinico Umberto I Rome

The International Office of Documentation in Military Medicine has organized a series of lectures to be delivered in French at Liege from June 23rd to 25th by French Belgian Dutch Jugoslav Spanish and Mexican authorities

The forty-seventh Congress of the Balneological Society of Berlin will be held at Bad Salzuflen (Lippe) from April 6th to 10th under the presidency of Ministerialdirektor Professor Dietrich The chief subject for discussion will be the importance of carbonic acid in the spa treatment of heart disease The general secretary is Dr Max Hirsch Steglitzerstr 66 Berlin W 35

The tenth Congress of the German Society for Urology which was to have been held this month has been postponed until next year

The annual congress known as the Journées Médicales de Bruxelles will be held in Brussels from June 25th to 28th under the presidency of Professor Fernand Heger member of the Belgian Royal Academy of Medicine The opening address will be given by Dr Etienne Burnet the French delegate on the Health Committee of the League of Nations The other speakers will include Dr Michaud professor of clinical medicine at Lausanne Dr Marion the Paris urologist Professor Marañon of Madrid Dr Rohmer professor of paediatrics at Strasbourg Dr I Carozzi Italian delegate of the International Labour Office at Geneva and Dr Waterman of the Dutch Institute for the Study of Cancer

An international congress on asthma will be held at Mont Dore on June 4th and 5th under the presidency of Professor Fernand Bezançon The subjects to be discussed include the anaphylactic nervous nasal and endocrine aetiological and determining factors in this disease the different forms of treatment and the causes symptoms and therapy of infantile asthma Further information may be obtained from the congress secretary at 19 Rue Auber Paris IX

The second International Congress of Tropical Medicine which was to have been held in Amsterdam next September has been postponed until financial conditions are more favourable

During the past year the number of patients attending the London Light and Electrical Clinic in Randolph Road Pimlico was 120 000 of whom nearly 8 000 were treated free of cost and the total treatments given were 67 000 in excess of the previous year Sir Leonard Hill was appointed general supervisor in addition to his duties as honorary research director Besides a medical officer for each department three visiting physicians were appointed for purposes of diagnosis and advice as to treatment A bacteriological laboratory has been installed where cases are investigated for infection of the nose tonsil lung large bowel etc and autogenous vaccines made and injections of these given This new department which essential for diagnosis and treatment adds to the running cost of the clinic some two or three hundred pounds a year over and above the fees it earns from patients The private clinic was closed for two months but has now been re equipped and give treatment to patients on the recommendation of their own doctors

At a meeting of the Osler Club held in London on March 24th Sir Robert Philip gave an address on Koch's discovery of the tubercle bacillus some of its implications and results Dr W G Willoughby President of the British Medical Association proposed and Dr William Stobie Mayor of Oxford seconded a vote of thanks to the lecturer An interesting discussion followed in which there took part Dr A S MacNalty Dr R A Young Sir Henry Gauvain Professor Leonard Findlay Dr George Hurrell and Dr A P Cawadias

The February issue of *A chiv fur Kinderhe lkunde* is dedicated as a Festschrift to Professor Rudolf Fischl of Prague on the occasion of his seventieth birthday

The first two fascicuh of vol xn of *Acta Psychiatrica et Neurologica* form a Festschrift for Professor August Wimmer of Copenhagen on the occasion of his sixtieth birthday

A brass tablet was unveiled and a new sterilizing room opened at the Louth District Hospital on March 10th to the memory of Dr W R Higgins who died in August 1930 after twenty four years service as medical officer to the institution The need of a sterilizing room had long been felt its provision has realized a frequently expressed wish of Dr Higgins who took a warm personal interest in improving the surgical facilities at the hospital

The National Institute for the Deaf is prepared provided sufficient numbers are forthcoming to arrange short courses of training in the teaching of lip reading The proposed courses will not qualify for teaching deaf and dumb or for service under the Board of Education Persons desirous of training as teachers of this subject for professional or voluntary service should communicate with the secretary of the Institute 2 Bloomsbury Street W C 1

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

An Acid Water Supply

LATEX writes The water supply of my house in the country is from surface springs issuing from disintegrated and fissured granite rocks It is collected in masonry tanks and thence pumped to the house On analysis it is a strongly acid water and attacks lead copper or galvanized iron pipes Can anyone advise me how best to deal with such a water or tell me where I can get the required information? I am told that glass or enamel lined pipes are available but expensive and one of the best local plumbers informs me also that the lining is apt to get damaged either at the joints during fixing or from accidental knocks afterwards and that this leads to further exfoliation of the lining subsequently

Income Tax

Car used for Private Purposes

A M L uses his car both for professional and for private purposes He states that some years ago it was mentioned in the *Journal* that doctors would be permitted to use their cars for other than professional purposes and asks if there is any change

*** So far as we are aware there has been no change in the law or practice on this matter The Income Tax Act 1918 provides that no disbursements not wholly and exclusively laid out for the purposes of the profession shall be deducted It might be argued that the maintenance of a car partly used privately is not exclusively for professional purposes and therefore that partial private use negatives the right to claim that cost of such maintenance can be the subject of a claim That contention is not put forward by the authorities and therefore private use of the professional car is permissible and *the answer referred to by* A M L (*which we have been* unable to identify) may have related to that question But when the car is used for both purposes the total cost must be allocated *pro rata* between them and only the portion relating to professional use is a proper deduction for income tax purposes

Change in Proprietorship

R T explains that A and B were in partnership up to December 31st 1931 as from which date B took over the whole practice How should B be assessed for 1932?

*** (*a*) As regards the period from January 1st to April 5th 1932 B will be responsible for the tax on the whole (and not on his share only) of the appropriate proportion of the existing assessment for 1931–32 (This involves a recalculation of the tax payable by each partner on that assessment and no doubt the inspector of taxes will supply the figures if requested) For the year 1932–33—that is ending April 5th 1933—B will be liable on an assessment the measure of which will be the amount of profits of the practice for 1931 (*b*) If however A and B both request the inspector of taxes in writing the practice can be treated as having ceased and recommenced In that case A and B will be assessable for the period April 5th 1930 to December 31st 1931 on the basis of their earnings for that actual period and B will be assessable to April 5th 1933 on the earnings for that period That election would however probably involve discarding the cash basis for computing the amount of the profits It will be seen that the car renewal allowance to be made in calculating the 1931 profits would under (*a*) affect the liability for the year 1932–33 and under (*b*) the year 1931–32

LETTERS NOTES, ETC

Vacancies and Courtesies

MEDICAL SUPERINTENDENT writes in reply to 'M B B S (March 19th p 550) The suggested lack of courtesy was in effect merely routine In many instances the selection committee is a subcommittee of a committee of a large body and whilst the action of the subcommittee is often endorsed legally it is not effective until such endorsement has been made by the council or other governing body Hence legally the notice of appointment and the replies to would be candidates are often very much delayed so much so that the successful candidate may actually have commenced duty before his appointment is in legal form M B B S's complaint is reasonable but appreciate from the town clerk's point of view not remediable It could be alleviated undoubtedly if it were not for those young conscienceless practitioners who having accepted an appointment in ten days or a fortnight change their minds and write declining to enter upon the duties In such cases it frequently happens that from the original list of applications another selection and a fresh appointment is made Obviously therefore notes of regret cannot be issued until the appointment is definite M B B S expects courtesy from an official body but does such official body always receive courtesy from professional gentlemen? How about the recently qualified man who being a selected candidate for an appointment does not appear at the meeting and does not even take the trouble to send a postcard stating that he will not be able to be present? This is a particularly common experience with regard to candidates from one of the large universities

north of the Tweed True the candidate saves two bawbees but what does the appointing body think of the courtesy of a medical gentleman?

Visits to Soviet Russia

Professor JULIAN HUXLEY Sir PETER CHALMERS MITCHELL and Mrs MANSELL MOULLIN write In 1931 the Society for Cultural Relations arranged two tours in U S S R to enable scientists and doctors to see the present activities in science and medicine Sixty two scientists and doctors including several eminent specialists joined these tours The society proposes to organize similar tours in 1932 but with a wider scope of scientific interests and subjects It hopes to arrange parties for (1) physical scientists (2) biological scientists (3) agricultural scientists (4) engineers (5) chemists (6) medical doctors (7) anthropologists The parties will be limited to groups of about twenty persons if the applications should exceed this number two or more groups will be arranged The travelling arrangements will be made by Intourist Ltd Bush House Aldwych W C 2 The parties will be assisted by competent guides and interpreters provided by VOKS the Soviet organization for cultural relations with foreign countries The period of the tours will be between July 15th and September 15th and the inclusive cost of travel accommodation guiding etc will be about £35 the tours lasting about one month from departure to return to London

Doctors and District Nurses

ANOTHER DEVONSHIRE G P writes I do not think that the letter of G P in your issue of March 26th should be allowed to pass without comment He states that the district nurse now takes most of his midwifery this may be true but what medical man is not (or at any rate should not) be grateful for the hours of waiting which he is spared through the services of a district midwife? It is permissible for a nurse to practise midwifery within certain limits and I think we as a profession should be thankful to be relieved of a task which in many cases needs no more than patient watching Nature is an excellent obstetrician and the knowledge that we have a capable midwife looking after confinements leaves us free to attend to cases of a medical and surgical nature where responsibility cannot rightly be delegated to a nurse Does G P really enjoy sitting up for several hours at night with a primipara and does he consider he is amply rewarded for his vigil and care with the small fees for which so frequently we are expected to conduct our midwifery cases? I have yet to come across the district nurse who does minor surgery and sends patients to hospital for advice and treatment perhaps I have been fortunate in avoiding the nurse who takes stitches out of perineums without sanction or who diagnoses and treats a pneumonia case Far from being one of the general practitioner's most dangerous opponents I consider the district nurse is one of his staunchest allies and I can find nothing but praise for the devotion care and attention which district nurses in my experience have given not only to their patients but also to the medical men concerned

Dr M GRAHAM DILL (Alloway Ayr) writes The contribution of G P from Devonshire would appear to suggest the type of psychology evinced by the old lady on being approached by the rag and bone merchant— Any beer bottles lady? Lady Do I look as if I drank beer? Merchant Well vinegar bottles lady

Raw Milk and Dental Caries

Dr HALDANE C GILMORE (Ilford) writes Concerning the effects of raw milk on teeth my son now aged 8 years 7 months commenced raw milk daily at about 3½ years of age though he had a good deal of caries in his milk teeth he has none in his six year old molars or any of his permanent teeth There has been no abstention from cereal foods in his dietary This seems to me to be in accordance with Mr Sprawson's deduction

Coronary Disease

Dr MAURICE NEWMAN (Liverpool) writes I have read with great interest Dr Cotton's address on some clinical aspects of coronary disease published in the *Journal* of February 27th As you mention in your leading article on the subject the present day physician and particularly the cardiologist finds there is a very great increase in the incidence of coronary disease This is probably due to the greater stress and strain of modern life resulting in high blood pressure and general vaso-constricting influences that result in the ischæmia of the heart muscle which appears to be the actual cause of the acute agonizing substernal pain With regard to the prognosis I agree with Dr Cotton that in angina pectoris if there are signs of gross structural changes as enlargement of the heart valvular disease etc the prognosis is more serious than if these signs are absent but I do not agree that this is so in coronary thrombosis for in my cases the fatal ones have often occurred in those who showed no signs of any structural changes in the heart Age has often an important bearing on the prognosis in coronary occlusion for an attack in a comparatively young man (35–40) is often more fatal than an attack in older men This is probably due to there being more extensive anastomoses in the coronary circulation in older people so that the damaged area is more likely to receive blood from a collateral circulation

A Coincidence

Dr W WILDMAN (resident medical officer French Hospital London) writes The following cases admitted to the hospital under the care of Dr Hugh S Stannus on successive days form an interesting contrast

CASE I	CASE II
Man aged 66 years admitted February 13th 1932	Man aged 69 years admitted February 14th 1932
History	
Had had diabetes mellitus for past five years Treated with insulin in this hospital for two months in 1929 was then discharged and advised to continue with insulin at home	He had always been in good health and there was no previous history of diabetes mellitus
He remained in good health until fourteen days *before admission* when he developed influenza	Patient contracted influenza ten days before admission to hospital
State on Admission	
Patient emaciated and deeply comatose Breath had strong odour of acetone	Patient was very emaciated and comatose
Urine showed both acetone and sugar in large quantities	Urine showed definite presence of small amounts of sugar and acetone
Both lungs consolidated at bases	Both lungs healthy
In spite of immediate treatment patient died in coma three hours after admission	Insulin and intravenous serum glucosé given in large amounts but patient died in coma after fifteen hours
Post Mortem Examination	
Carcinoma of pyloric end of stomach causing local constriction with proximal distension A secondary deposit was present on the greater curvature	A large carcinomatous mass was found on the lesser curvature of the stomach which infiltrated the head of the pancreas
Pancreas and liver not involved	Liver showed three large metastatic growths
Cause of Death	
Broncho-pneumonia secondary to diabetes mellitus and carcinoma of stomach	Hyperglycæmia secondary to neoplastic invasion of cells of Langerhans

Disclaimer and Warning

Dr M J FENTON (Stockwell Road S W) wishes to disclaim any knowledge of a begging letter writer who uses the name of Aldridge and mentions him as a reference and he advises medical practitioners to ignore such communications

*** Aldridge is one of the many names used by a young woman Jean Atherton whose activities are only too well known to the Charity Organization Society and to the police

Disclaimer

Dr P POTT (Southend) writes repudiating the assertion made by a man named Jurkup or Faulkner who was on March 22nd charged at Long Ashton Police Court to the effect that he (Faulkner) had been in partnership with Dr Pott

Vacancies

Notification of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 40 41 42 43 44 45 48 and 49 of our advertisement columns and advertisements relating to partnerships assistantships and locumtenes etc appear on pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 119

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

297 Cyanosis in Fatal Influenzal Broncho-pneumonia

F. E. FLETCHER (*Bristol Medico-Chirurgical Journ.* Winter 1931, p. 277) supports the view of Sadler in opposition to that of Haldane by recording post-mortem evidence that the blood of patients dying from influenzal broncho-pneumonia does not contain methaemoglobin. In the author's opinion oxygen want is the result of a mechanism allowing the return of much venous blood to the left side of the heart to pollute the general circulation. Two factors are suggested. Areas of the lung lobules have been rendered functionless by the closure of bronchioles without marked damage to the alveoli: the circulation here continues to some extent. The partial pressure of oxygen in the cut-off alveoli will be rapidly reduced, while the CO_2 content will not be increased appreciably beyond equilibrium with the venous blood: there will then be a return of venous blood to the left side of the heart to mix with the arterial circulation. Rapid and shallow breathing increases the relative dead space and also leads to uneven ventilation of the pulmonary alveoli.

298 Glandular Fever with Nervous Symptoms

S. H. EPSTEIN and W. DAMESHEK (*New England Journ. of Med.* December 24th 1931, p. 1238) record the case of a youth aged 19, of Russian-Jewish parentage, who was taken suddenly ill with severe headache, blurring of vision and photophobia, followed by stupor. The spleen could be felt a finger-breadth below the costal margin, and there was general enlargement of the lymphatic glands, especially in the cervical region. Examination of the blood showed the typical picture of infective mononucleosis. Lumbar puncture gave issue to a clear, colourless fluid under normal pressure, containing 34 leucocytes per c.mm., of which 30 were lymphocytes and 4 neutrophils. Gradual improvement ensued, and finally the patient recovered completely. The authors conclude that the central nervous symptomatology was part of the general systemic disease.

299 Prognosis in Angina Pectoris and Coronary Thrombosis

P. D. WHITE and E. F. BLAND (*Amer. Heart Journ.*, October 1931, p. 1) have followed up 500 consecutive patients suffering from angina pectoris and 200 with coronary thrombosis in order to determine the factors influencing prognosis. Of the patients afflicted with angina, 213 are now dead. The average duration of life from the onset of the disease being 4·4 years. In an attempt to assess the influence of such factors as hypertension, syphilis, failure, etc., the authors contrasted their incidence in a group of 100 patients surviving only three years with their incidence in a similar group surviving over seven years. It was found that the absence of signs of heart disease, a normal blood-pressure and no electrocardiographic abnormalities combined to suggest an unusually favourable prognosis. Of unfavourable import were the presence of syphilis, angina decubitus, poor heart sounds, cardiac enlargement, congestive failure, and marked arterio-sclerosis. The group of 200 patients suffering from coronary thrombosis included 125 who had angina pectoris in addition. The average duration of life following the acute attack among the 101 patients now dead was 1·5 years. For the purpose of assessment of prognostic indications a group of thirty-three patients who had survived the attack from one to twelve months was contrasted with an equal number of patients who survived four years or more. Death was in almost every case due to heart failure. It was found that the younger patients lived a little longer than the older ones. The previous occurrence of angina did not seem to matter, but the presence of cardiac enlargement, congestive failure or poor heart sounds added considerably to the gravity of the prognosis. The authors stress the importance of a careful life and suitable treatment in improving the expectation of life in patients suffering from angina pectoris or coronary thrombosis.

300 Anterior Poliomyelitis

H. J. HARTMAN (*Med. Journ. and Record*, January 6th 1932, p. 26) considers that the preparalytic stage of poliomyelitis is a distinct clinical entity, and that it is possible for an early diagnosis to be made before any actual paralysis occurs. The paramount necessity of making an early diagnosis turns on the fact that when the disease is diagnosed in the preparalytic stage a large percentage of actual cases can be warded off, but that when the disease is once fully developed treatment is of little avail. Anterior poliomyelitis is usually sudden in onset, but there is generally a premonitory stage of invasion with symptoms of coryza, tonsillitis, or gastro-intestinal disturbance lasting from two to four days and followed by a pause of a day or two before an increase of the fever occurs accompanied by headache, backache, and fretfulness. An important diagnostic sign is that the spine is resistant to passive flexion, a symptom of mild meningitis. It is in this preparalytic stage that the injection of human convalescent serum intraspinally or intramuscularly, is of value in preventing the onset of the acute or paralytic stage, the aim being to correct the condition before death of tissue occurs. Should convalescent serum not be available, Rosenow's serum should be used, and in the presence of an epidemic the intramuscular administration of either serum is justified. The standard dose of convalescent serum during the Manitoba epidemic of 1918 was 25 c.cm. intramuscularly, subsequent doses being given if the disease progressed, but recently it has been rarely less than 60 c.cm.

301 Sporadic Typhus Fever

H. B. CUSHING and R. J. CALDWELL (*Canadian Med. Assoc. Journ.* December 1931, p. 649) record a fatal case of sporadic typhus fever in a barber aged 32, living in a poor district of Montreal. Death occurred on the fourteenth day of the disease, and the necropsy showed the characteristic typhus nodules and Rickettsia bodies. The patient may have acquired the infection by contact with infected pediculi or as Dyer, Rumreich and Badger have recently suggested the disease may have been transmitted by infected fleas.

302 The Aetiology of Tetany

R. SCHMIDT (*Münch. med. Woch.* December 11th 1931, p. 2115) discusses the relations between the parathyroid glands and the gastro-intestinal tract. The best-known associations of this kind are those between tetany and pyloric stenosis, but the author cannot accept the current view that the tetany is due to an alkalosis which results from the loss of hydrochloric acid in the process of vomiting. He points out that the proportion of patients with pyloric stenosis who develop tetany is small (about 7 per cent.), many having a severe stenosis for several years without this complication ensuing. Occasionally hydrochloric acid is completely absent from the gastric juice, and in such cases tetany cannot be attributed to the loss of this acid. The number of attacks is often small in spite of the long duration of the stenosis: in one case quoted there were seven attacks in two years. Sometimes tetany occurs in association with a gastric ulcer but without any evidence of stagnation. In the author's view it is impossible to consider pyloric stenosis as the essential factor in producing tetany in those cases where the two conditions are associated. Changes in the circulatory system are not conspicuous in tetany. With an acute fatal course there may be a very marked fall in blood-pressure, and vaso-constrictor phenomena are sometimes observed in the attacks. Secretory disturbances such as

heavy sweats excess or absence of the lachrymal secretion trophic changes affecting the hair and nails and abnormalities of respiration are among the other accompaniments of tetany

303 Cylindroid Syphiloma of Urethra

M JUNGANO (*Urol and Cut Rev* January 1932 p 8), who records an illustrative case states that tertiary syphilis of the urethra is a very rare affection of which Fournier had seen only nineteen examples among 151 cases of tertiary lesions of the penis its site is almost always the penile urethra Cylindroid syphiloma which is the rarest tertiary localization of syphilis of the urethra results from cylindrical infiltration of a section of the urethra The onset is insidious there is little or no local reaction unless the syphiloma is accompanied by stricture The canal is transformed into a hard cord accompanied by numerous gummatous nuclei which are not tender on palpation A turbid urethral discharge is often present Pain on micturition may be slight or pronounced There may be curvature of the penis during erection and consequent difficulty in coitus Treatment consists in antisyphilitic medication combined with dilatation of the stricture and finally internal urethrotomy Jungano's patient was a man aged 74 admitted to hospital for complete retention due to stricture The urethra showed an induration extending from the balano preputial sulcus to the perineum Death took place within two months of admission and the diagnosis of cylindroid syphiloma made during life was confirmed by histological examination

Surgery

304 Metastases from Pancreatic Cancer

Carnot Bouchut and others have described forms of cancer of the pancreas which they term abnormal E BENHAMOU (*Ann de Med* December 1931 p 421) considers that this term should be restricted to neoplasms propagated from the pancreatic growth to adjoining organs and evincing a symptomatology peculiar to the organ involved Metastases from a primary pancreatic cancer may however be found in distant organs many authorities are cited who have obtained evidence of such an occurrence These metastases may appear in the hepatic pulmonary renal and vesical osseous cutaneous and muscular and cerebral regions Short notes on each of these forms are given and cases illustrative of each are mentioned Benhamou believes that the pancreatic origin of these metastases should be suspected more often than it is and especially when the latent cancers usually incriminated can be eliminated Certain clinical signs point to their pancreatic origin these are a brownish pigmentation of the face and skin ascites rapid emaciation and early cachexia Radiological and histological examinations with biochemical tests are of diagnostic value Therapeutic measures are very limited Deep radiotherapy may give some relief in the vertebral and mediastino pulmonary forms In a case here recorded which showed symptoms of diabetes insipidus marked relief was obtained by injections of posterior pituitary extract

305 Torsion of the Omentum

J H MORRIS (*Arch of Surg* January 1932 p 40) defines torsion of a structure as a turning or twisting about its long axis This torsion may be unipolar in which case the structure is fixed at one extremity while its distal end swings free or it may be bipolar when the structure is fixed at two points with the intervening part left free to twist axially In torsion of the great omentum both these types of rotation may occur Torsion may be said to be complete in cases in which acute progressive symptoms and marked pathological changes are dependent on complete permanent circulatory distinction at the site of the twist Torsion is incomplete in cases with vague chronic recurring symptoms and mild pathological changes due to incomplete partial or temporary obstruction Acute torsion may be associated with hernia and may be intrasaccular in which the torsion was limited to the hernial sac or of the combined type where the torsion extended upwards to produce secondary masses and pedicles in the abdominal portion of the omentum In other cases of this type the contorted omental mass may be found entirely within the abdomen with an accompanying hernial sac In cases of torsion associated with hernia the latter has usually been of long standing of the well developed scrotal type easily reducible and giving rise to no pain until following some extreme muscular strain torsion occurs and the pain becomes severe with a rise in temperature nausea and vomiting The hernia usually becomes irreducible tender firm and frequently increased in size Pre operative diagnosis is usually rests between acute appendicitis with abscess and a strangulated hernia It was found in a large series of cases that torsion was associated with hernia in 30 3 per cent of cases while in 47 8 per cent of cases the torsion was purely abdominal in location Cases of acute torsion without hernia may be primary in which there is no evidence of an antecedent change in the omentum as a causative factor or secondary where there is definite evidence of pre existing pathological factors In the majority of cases the patients were obese and gave a history of vague intermittent digestive disturbances Other symptoms are similar to those of torsion with hernia but are mainly confined to the abdomen Diagnosis is difficult and is rarely made before the operation since the rapid development of a large abdominal mass and free fluid are the only really characteristic features

306 Tennis Elbow

W KNOLL (*Deut med Woch* January 15th 1932 p 84) on the occasion of the international lawn tennis tournaments held in Hamburg in 1931 examined the elbow joints of forty one leading players of whom twenty nine were men and twelve women In spite of the numerous occasions on which damage might have been sustained the number of lesions in the joint demonstrable by x ray examination was remarkably small With the exception of one lady aged 40 none of the women players showed any bone changes probably owing to the fact that with few exceptions women players expend a much less degree of force than the men Knoll is of the opinion that tennis elbow is mainly due to distortion of the radio humeral joint, and damage to the extensor muscles including the supinator longus The only bone change found were one case each of periostitis of the external epicondyle of the humerus a slight elongation of the head of the radius and a similar condition of the coronoid process of the ulna

307 Tuberculosis of the Knee

G R GIRDLESTONE (*Brit Journ Surg* January 1932 p 488) discussing the pathology and treatment of tuberculosis of the knee joint describes this condition as dual the manifest lesion arising from another deep unseen and more dangerous lesion He recognizes three groups distinguishable by stereoscopic radiograms The first comprises cases with purely extra articular foci in the second group bone foci communicate with the joint and in the third group no foci can be seen in radiograms In the first group the choice between conservative and operative treatment must depend upon the confidence with which one can distinguish the focus walled off by healthy bone from the case when the wall is already softened by tuberculous infiltration When doubt remains it must be remembered that an operation is only safe in patients more than 10 years old for then in the event of the focus being found to open into the joint excision can be undertaken and the risk of a tuberculous sinus into the joint be obviated In the focal articular group Girdlestone thinks that the joint should be fused and that arthrodesis should be performed at a time chosen in view of the age and the local and general conditions In the third group and in young children there is good hope of recovery with full movement after long continued immobilization The author also distinguishes three groups In children up to the age of 10 prolonged mobilization is indicated but no diagnostic arthrotomy or fusion In adolescents and adults between the ages

of 15 and 50 immobilization is only preparatory to confirmation of the diagnosis by arthrotomy followed by fusion In more elderly patients amputation is often a more satisfactory procedure than fusion Girdlestone adds that there are only two safe end results in tuberculosis of the knee—namely free movement and bony ankylosis A tuberculous sinus is a dangerous complication because of the risk of pyogenic infection Arthroplasty has no place in the treatment of tuberculosis of the knee or of its results because it is almost always unsafe or impracticable

308 Paratyphoid Fever Complicated by Appendicitis

S A ROSE (*Arch of Pediat* December 1931 p 785) records a case of a girl aged 12 years who in the first week of an attack of paratyphoid B fever developed acute appendicitis Laparotomy was performed and the inflamed appendix removed The temperature remained raised for about a fortnight after the operation but the subsequent recovery was uneventful Rose maintains that the association of appendicitis and enteric is perhaps more common than is supposed

Therapeutics

309 The Reticulocyte Response to Iron

Since the reticulocyte response to effective material has been of distinct value in affording information in pernicious anæmia G R MINOT and C W HEATH (*Amer Journ Med Sci* January 1932 p 110) have studied the positive reticulocyte response to the daily oral administration of iron in maximal amounts to patients with anæmia especially that due to chronic blood loss dietary defects gastro-intestinal disorders and pregnancy and in cases of chronic microcytic anæmia of obscure origin This study is based on data from eighty six such cases The height of the reticulocyte rise is in general inversely proportional to the level of the erythrocytes and haemoglobin before treatment but the relationships are less exact than for pernicious anæmia in response to potent material Infections and other complications hinder the action of iron as they do that of liver substance in pernicious anæmia Both the haemoglobin and erythrocyte levels influence the reticulocyte response to iron and both must be considered in evaluating the latter For a given erythrocyte level the lower the haemoglobin the greater the reticulocyte increase and at a given haemoglobin level the lower the erythrocyte count the greater the reticulocyte increase The type of case also influences the degree of response Patients suffering from achlorhydria usually show a smaller response and produce blood more slowly than is the case with patients who have free hydrochloric acid in their gastric contents

310 The Gerson Diet and the Blood Pressure

L MØINICHEN and H FRÖSHAUG (*Tidsskrift f d Norske Lægefor* January 15th 1932 p 65) report their experiences of the Gerson diet which was introduced in October 1930 at the Midtstuen hydropathic establishment near Oslo Among the forty five patients given this diet between October 1st 1930 and June 1st 1931 there were twenty three suffering from hypertension Fifteen of these twenty three showed the most characteristic signs and symptoms of essential hypertension such as giddiness palpitation of the heart mental instability and wide ranges of the blood pressure With its low sodium chloride protein and carbohydrate content and its high proportion of fat this diet which is rich in vitamins and includes uncooked vegetables and fruit has a high calorie value and tends to increase the patient's weight unless rationing is enforced The patients experienced no great discomfort from this diet apart from its tastelessness due to the lack of sodium chloride and a meteorism which in some cases was so troublesome that the vegetables and other uncooked food had to be discontinued But as a rule the patients tolerated the diet well Its effect on the blood pressure was more rapid and prolonged than that of the usual method of reducing it such as venesection the exhibition of certain drugs rest in bed and a limited and carefully regulated menu Yet in spite of a rapid and considerable fall of the blood pressure the patients continued to feel exceptionally well In some cases in which no further progress was being made with drugs dieting other than Gerson's and various forms of physical treatment the Gerson diet induced a further fall of blood pressure associated with a still greater sense of well being The authors conclude that after twenty five years experience of physical and dietetic treatment they have come to regard Gerson's diet as a considerable advance on earlier therapeutic methods for the same class of patient They add that they have found it necessary to measure the blood pressure in both arms considerable differences having been observed on the two sides in several cases

311 Therapeutic Alternatives in Aortic Syphilis

CAREY F COOMBS (*Quarterly Journ Med* January 1932 p 179) in a critical review of the diagnosis and treatment of syphilis of the aorta and heart states that the aortic inflammation which is the chief feature of cases of late involvement of the heart and great vessels is apparently provoked by infective material passing to the lymphatic vessels of the aorta from the mediastinal lymphatic glands By the time that clinical signs of this have developed the damage done is largely irreparable He therefore maintains that in every case of general syphilis the treatment should be continued at intervals during the patient's life as a prophylactic in this respect even though there are no manifest symptoms or signs and the serum reactions are negative Should there be any evidence of cardio-vascular involvement this should be attacked at once by the administration of potassium iodide associated with arsenic mercury or bismuth Arsenic should not be given if there are signs of advanced aortitis If the aortic valves are already leaking only small doses should be employed and if coronary stenosis appears to be present arsenic should be withheld In its place either mercury or bismuth may be tried according to the preference of the medical practitioner From this time onwards treatment by potassium iodide associated with one or other of the spirillicides must be maintained except for the intervals that are needed to detoxicate the patient and give him a rest from time to time The author discusses the relative values in this condition of bismuth and arsenic and is satisfied that admin stration of the latter is attended by definite risks The use of iodides is more commendable the accumulation of inflammatory cells in the aortic wall seems to be diminished and the pain is relieved

312 The Nature of Opium Addiction

R N CHOPRA and J P BOSE (*Indian Med Gaz* December 1931 p 663) cite evidence indicating the existence of a predominant psychic element in opium addiction and in the so-called abstinence symptoms Even in severe cases of addiction many of the mental symptoms such as anxiety ideas of persecution psycho-sensory disorders mania and hysterical or epileptiform attacks present all the features of an acute psychosis To confirm this opium was administered systematically to a series of patients in such a way that they remained absolutely ignorant of what was being given the taste and smell of the drug being concealed by adding oil of citronella The initial dose was 1 to 2 grains a day and this was gradually increased until 15 or 16 grains were being administered daily without producing any untoward effects After varying periods the administration was suddenly stopped but no withdrawal symptoms occurred The authors quote similar evidence obtained in the case of sudden withdrawal of opium from convicts in gaol and from men under war conditions without marked discomfort or withdrawal symptoms During the treatment of addicts the authors remark opium can be largely or totally replaced by substances such as gentian or nux vomica preparations in pill form They conclude that if the patient is not aware that he is taking opium the drug can be effectively given for weeks or months for its therapeutic effect and can be stopped at any moment without producing withdrawal symptoms They are now regularly using opiates in the treatment of asthma

amoebiasis and other conditions and in detecting malingering In the last instance patients complaining of pain with intent to deceive always state that they were not relieved by the drug whereas those with genuine symptoms admitted the beneficial effects after one or two doses

313 Transfusion in Typhoid Fever

Z LEWKOWICZ (*These de Paris* 1931, No 535) who records nineteen illustrative cases of which three are original in patients aged from 14 to 50 states that there are several indications for transfusion in typhoid fever In addition to severe haemorrhage in which transfusion should be repeated as long as there is any hope of saving the patient the method is valuable in cases of constitutional or transient anaemia Further since typhoid fever is a disease which confers immunity and the existence of antimicrobic and antitoxic substances has been demonstrated in the blood of cured or inoculated persons transfusion is indicated for the object of producing or of activating an immunity which is slow in developing The method is indicated therefore in severe and prolonged forms of the disease The transfusion however acts not merely by conferring immunity but also through bringing into operation various non specific factors such as shock and activation of the leucocytes Among the clinical types of typhoid fever in which the prognosis was particularly grave and in which transfusion was remarkably successful is the cerebral form and of this form Lewkowicz records three cases

314 Treatment of Atrophic Rhinitis

J S STOVIN (*Arch of Oto Laryngol* November 1931 p 618) describes a local treatment for cases of atrophic rhinitis which is of course supplementary to general treatment and the clearing up of accessory sinusitis if present The nose is thoroughly cleansed with injections of normal saline solution and suction The nasal cavities are then carefully packed with absorbent cotton which has been soaked in normal saline solution care being taken to cover the whole mucosa The cotton strips extend out of the nose for a distance of half an inch The cotton is attached to either the positive or negative pole of a simple galvanic apparatus and the indifferent electrode is applied to the arm or held in the hand The current is gradually increased until the patient complains of a salty taste in the mouth which occurs at between 5 and 10 milliamperes The current is allowed to flow for fifteen minutes longer and is then slowly turned off The packs are removed and the mucosa is painted with a solution of balsam of Peru in castor oil Three such therapeutic sessions are arranged each week and improvement is usually noticed after a few days

Disease in Childhood

315 The Mortality from Broncho pneumonia

A FRIEDLAENDER (*Ugeskrift for Laeger* November 26th 1931 p 1174) has investigated the factors which may have influenced the mortality among the children suffering from broncho pneumonia in a children's hospital in Copenhagen Between October 1919 and October 1929 there were 684 cases of broncho pneumonia of which 29 were excluded because the broncho pneumonia was merely a terminal phase of some other fatal disease Another series of 65 cases was ignored because the children were already moribund on admission and died within twenty four hours thereafter Of the remaining 590 children 130 died As many as 370 children were under the age of 1 year and when these 370 children were classified according as they had or had not been born at term it was found that there were only 50 deaths among the 328 children born at term (mortality 24 4 per cent) whereas among the prematurely born children the mortality was 42 3 per cent When however the 370 children under the age of 1 year were classified according as they had been breast fed or artificially fed it was found that the mortality among the breast fed was only about 5 per cent less than that among the artificially fed All the children under the age of 2 years were classified according as they showed or did not show signs of rickets Among the 185 rickety children the mortality was 24 8 per cent and among the non rickety it was 24 2 per cent This observation that rickets does not apparently affect the prognosis in broncho pneumonia came as a great surprise to the author Among the 399 children there were 137 who had already suffered from some disease of the respiratory system such as bronchitis and broncho pneumonia The mortality was 22 6 per cent (31 deaths) for these children whereas it was 21 per cent for the remainder It would thus seem that a previous illness affecting the respiratory system of children does not greatly influence the prognosis one way or the other of an attack of broncho pneumonia

316 The Rate of Growth in Childhood

A SUNDAL (*Nord Med Tidsskr* November 28th 1931 p 754) publishes statistics and charts which show that children are growing faster now than they did some ten years ago In 1919 measurements were made of over 500 children between the ages of 2 and 6 attending day nurseries in Oslo In May 1929 similar measurements were made among children of the same class between the ages of 3 and 7 It was found that the growth in height was fairly uniform both for boys and girls between the ages and that the boys were taller than the girls throughout this period In every age group both the boys and the girls in 1929 were about 5 cm taller than the children in 1919 The author refers to numerous investigations in other countries in which a similar increase in the stature of children has been observed In Helsingfors for example measurements in 1923 of children in day nurseries yielded figures about half way between those of 1919 and those of 1929 in Oslo Measurements of the weight of school children in Oslo between the ages of 8 and 14 in 1920 1925 and 1930 show a similar tendency and it would seem that the change which has come over the rate of growth of children during the past decade is not one merely of height or weight alone but of an all round character Sundal thinks that of the factors responsible for it improvement in the conditions under which children are now brought up is probably not the least important

317 Carotid Artery Haemorrhage in Children

Although profuse haemorrhage from the pharynx or ear resulting from an erosion of a large blood vessel is generally considered as a rare complication of retropharyngeal abscess A B IF MESURIER (*Canadian Med Assoc Journ* November 1931, p 551) believes that it is sufficiently frequent to be borne in mind He records eight cases of this condition which have occurred during the past six years in 100 cases of acute retropharyngeal abscess at the Toronto Sick Children's Hospital The bleeding is practically always from the internal carotid artery which becomes eroded near the base of the skull The haemorrhages are profuse and if untreated recur until they prove fatal This complication almost invariably affects children in late infancy the ages of the recorded patients were between 1 and 9 years The chief symptom is a sudden profuse haemorrhage which begins and ceases spontaneously and which is never or seldom fatal After a period ranging from a few hours to two days secondary haemorrhages occur The earliest date of death was after the second haemorrhage twelve hours after the onset In five cases the bleeding was from the mouth alone in one from the ear alone and in two from the mouth first and later from the ear The pathology and diagnosis in which the chief difficulty is encountered in determining the bleeding site are discussed There is no alternative to the treatment recommended—namely tying the carotid artery and preferably the internal one Even with this measure the mortality is extremely high In only two of the five cases operated on was life preserved Blood transfusion is of great value but should be used with discretion

Obstetrics and Gynaecology

318 Diagnosis of Chorion epithelioma

K. LITSKO STROCHNOWA (*Arch. f. Gynal.* September 12th 1931 p. 483) alludes to the difficulties of the microscopical diagnosis of chorion epithelioma from curetted material. He recalls that in physiological conditions elements of Langhans's layer penetrate during the first two months of pregnancy into the myometrium producing giant celled multinucleate clumps. These may remain active until well after the fourth month. As characteristic of malignant chorionic invasion of the myometrium the author describes and illustrates massive penetration very large masses of syncytium and extensive necroses and haemorrhages. Mitoses scarcely ever noted in physiological conditions are very numerous. In suspicious cases the pathologist and clinician must co-operate. In certain cases hysterectomy is justified by a history of repeated bleedings after expulsion of a hydatidiform mole even when the biopsy findings are negative.

319 I. LEWIT (*Ibid.* June 1931 p. 738) describes three cases which illustrate the difficulty of diagnosis of chorion epithelioma. All the patients were aged about 25 and had expelled a hydatidiform mole after which they had irregular bleeding from time to time. The first patient was admitted to hospital on seven occasions but four curettings gave negative reports. After a microscopical diagnosis of chorion epithelioma had been finally established radical operation was followed by an initial gain in weight of over 2 st. but death eventually occurred from renal and other metastases. In the two other patients curetting failed to reveal chorion epithelioma and was followed by considerable improvement one died never the less within four months from chorion epithelioma but the other in whom radical operation was thought to be advisable escaped observation for eight months and was then found to be well and seven months pregnant. Lewit remarks that whenever suspicion of chorion epithelioma exists the Aschheim-Zondek reaction is of great diagnostic importance.

320 Renal Tuberculosis and Pregnancy

J. RAVINA (*Bull. Soc. d'Obstet. et de Gynecol. de Paris* November 1931 p. 704) describes three cases of tuberculosis of the left kidney detected during or immediately after pregnancy. Two patients recovered after nephrectomy but the other succumbed after drainage of a pyonephrosis during the puerperium. He points out that such cases in the presence of frequency of micturition pyuria and pyrexia are apt to be confused with the common *B. coli* pyelitis or pyelonephritis of pregnancy and the puerperium. The tubercle bacillus may be difficult to detect even after several examinations of the urine; moreover the presence of its presence may not be remembered. In none of Ravina's cases was the classical sign of haematuria present. In all of them gestation appeared to exert an unfavourable effect on the course of the tuberculous condition.

321 Lymph Gland Metastases in Carcinoma of the Corpus Uteri

V. [illegible] to J. P. TOURNEUX (*La Gynecol.* December 1931 p. 703) it is important during operation for cancer of the body of the uterus to search for metastases in the pelvic and lymph glands. Such metastases may be present in early stage of the malady. He describes two cases of carcinoma of the corpus uteri in which hysterectomy was performed in apparently favourable conditions with a mobile non-adherent uterus the tumour only superficially invading the myometrium and no glandular affection perceptible to macroscopic observation. Nevertheless both patients showed within eight months large inguinal and lumbar lymph gland metastases. A similar appeal is also made to Cullen's case in which health was preserved for at least thirty months after bilateral extirpation during a hysterectomy operation of enlarged carcinomatous iliac glands and to Pinson's case in which a woman aged 51 who believed she was suffering from an inguinal hernia had enlarged glands containing columnar celled carcinomatous elements removed from the groin. Subsequently total hysterectomy and extirpation of the round ligament were performed. Tourneux believes that in treating these glandular metastases the knife should be renounced in favour of radiotherapy.

322 Prophylaxis of Stillbirths

H. VAN DER HOEVEN (*Nederl. Tijdschr. v. Geneesk.* January 9th 1932 p. 143) had previously shown that the number of cases of toxic albuminuria could be considerably diminished by the administration of thyroid extract during pregnancy. He now records his observations at the Leyden Clinic where he almost entirely prevented the occurrence of toxic symptoms during pregnancy by prescribing thyroid tablets for women whose blood contained more than 150 mg. per litre and whose blood pressure did not exceed 100 mm. Hg. He succeeded by this method in reducing the incidence of stillborn children from 3.3 to 1.08 per cent.

323 Parathyroid Function in the Puerperium

R. MALMEJAC (*Gynecol. et Obstet.* December 1931 p. 689) finds that the percentage of guanidine in the blood is associated with certain states of obstetrical physiopathology. It varies with the state of functioning of the parathyroid system any lesion of which causes an increase. There is a slight guanidine concentration towards the end of pregnancy when there is also a hypocalcaemia. In a pathological puerperium with a tendency to eclampsia there is hyperguanidinaemia with hypocalcaemia. In eclampsia itself there is invariably an increase of guanidine with deficiency of calcium. During a normal pregnancy there is some risk of a hepato-parathyroid dysfunction but since the glandular equilibrium is generally maintained this tendency is not manifested clinically. In pathological pregnancies and particularly in eclampsia there is an evident dissociation of glandular function which is manifested by definite pathological phenomena such as the accumulation in the blood of toxic bodies of which guanidine can be taken as an index associated with a deficiency of calcium. The glandular insufficiency can be counteracted by the administration of suitable glandular products with an intensive calcium medication. Certain observations made with ultra-violet rays seemed to indicate that the action of the calcium could be reinforced thus.

Pathology

324 Demonstration of Tubercle Bacilli in the Gastric Contents

V. CLAUSEN (*Hospitalstidende* November 5th 1931 p. 1084) has examined for tubercle bacilli the gastric contents of 136 adults and 152 children under the age of 15. The stomach was washed out in the empty state in the morning and the microscopical examination for tubercle bacilli was supplemented by inoculation on Petroff's medium and by inoculation of guinea-pigs. Among the 136 adults were 46 who had been admitted to hospital for observation on account of a suspicion of tuberculosis without this suspicion being confirmed by the clinical evidence during the observation period. In only one of these 46 could tubercle bacilli be found in the contents of the stomach. In a second group of 7 patients with x-ray signs of old tuberculosis of the lungs the examination of the contents of the stomach was invariably negative. In a third group of 49 patients showing clinical signs of pulmonary tuberculosis there were 38 in whose sputum tubercle bacilli could not be detected. Among these 38 were 20 in the contents of whose stomachs tubercle bacilli were found. Thus in an appreciable proportion of sputum-negative cases the diagnosis of tuberculosis was clinched by the examination of the contents of the stomach but there were positive x-ray signs in all the cases in this third group. In a fourth group were 30 patients suffering from pleurisy-

and among them were 4 in whose stomachs tubercle bacilli were found In a fifth group there were 4 patients not suffering from tuberculosis and in all these cases the examination of the contents of the stomach was negative Among the 152 children were 58 cases admitted to hospital for observation in whom pulmonary tuberculosis was suspected but not diagnosed In none of these could tubercle bacilli be detected in the stomach but in another group of 93 sputum negative children suffering from pulmonary tuberculosis there were as many as 29 in whose stomachs tubercle bacilli were found In one other child among the 152 they were also thus discovered

325 The Metabolism in Addison's Disease

C H GREENE and others (*Amer Journ Med Sci* January 1932 p 1) define three stages in Addison's disease—namely the period of initial destruction of the suprarenal glands the stage of the recognizable clinical syndrome and the terminal stage or crisis They report the results of chemical and metabolic investigations made during the last two of these periods At the onset of the second stage there may be loss of weight asthenia and definite malnutrition The basal metabolic rate is slightly reduced and there is some reduction in the blood sugar these changes are diminished by appropriate treatment and become more marked in periods of crisis The quantities of the various urinary constituents corresponded with the lowest levels of the usually accepted normal standards Creatinuria was frequently present and retention of almost all the urinary constituents was noted in one case in the course of a period of diminished output The nitrogen balance of those patients who were losing weight was negative Most patients gained weight as a result of treatment with the cortical suprarenal hormone in such cases the nitrogen balance became markedly positive The period of crisis was accompanied by gastro intestinal disturbances nausea and vomiting pain circulatory collapse, low blood pressure dehydration and renal insufficiency the effect of the last two dominated the clinical picture at the time The authors remark that their results indicate the many points of similarity between the chemical and metabolic changes observed in cases of Addison's disease and those reported in animals from which the suprarenals have been removed they also reveal that in the study of these changes the clinical condition of the patient must be carefully considered in order to exclude the influence of those secondary effects not solely attributable to suprarenal insufficiency The paucity in Addison's disease of chemical and metabolic changes which can be ascribed solely to suprarenal insufficiency is significant and further research is required with a view to standardizing more satisfactorily the activity of commercial preparations of the cortical extract for therapeutical administration

326 Aetiology of Lymphogranulomatosis Inguinale

C LEVADITI P RAVAUT P LEPINE and Mlle R SCHOEN (*Ann de l Inst Pasteur* January 1932 p 27) record the results of a number of experiments on the aetiology of lymphogranulomatosis inguinale Altogether they have studied eight cases of the disease and have succeeded by intracerebral inoculation of monkeys with material from the swollen glands in demonstrating the presence of the virus in seven of them Examination of nine cases of soft chancre failed to reveal the presence of the lymphogranulomatosis virus in the inguinal glands monkeys injected intracerebrally remaining well The virus can apparently pass through a Berkefeld V candle and a Chamberland L3 candle but the results obtained were inconstant It is destroyed by heat at 60° C within thirty minutes It is very susceptible to pure glycerin to desiccation and to 0 1 per cent formol At a temperature of 2° to 3° C below zero it remains virulent for ten days but later it tends to lose its pathogenicity Several species of monkey were found susceptible—namely *Macacus cynomolgus Macacus rhesus Cercocebus fuliginosus Cercopithecus callithrix* and *Cynocephalus babuin* Inoculated intracerebrally with a virulent strain—all strains from man were not of equal virulence—the virus causes death in a high proportion of animals usually in five to thirty seven days death being preceded by paralytic symptoms A disease closely simulating the natural disease in man was produced in monkeys by inoculation of the virus from a monkey's brain into either the inguinal lymphatic glands or into the prepuce After preputial inoculation a small nodule appears in about a fortnight and tends to ulcerate The inguinal glands commence to swell and within four weeks may be of considerable size Monkeys that survive an attack of lymphogranulomatosis are partially but not completely immune to intracerebral inoculation The final proof of the transmissibility of the disease was obtained by inoculating virus from a general paralytic into the skin of the prepuce with brain material from a monkey typical lymphogranulomatosis resulted The authors conclude that the causative organism of the disease is a filterable virus

327 Quantitative Estimation of Red Cell Resistance

E GREPPI and R S DOUGLAS (*Il Policlinico* Sez Med November 1st 1931 p 533) have made determinations of the red cell resistance to varying hypotonic saline solutions using Simmel's microscopical method of counting the number of the cells They combined the results with estimation of the total volume of the blood in the same persons by the Congo red method From this was obtained a quantitative view of the red cell volume arranged according to the varying resistances *in vitro* of the individual cells—namely minimum resistant medium resistant and maximum resistant and corresponding in normal subjects respectively to 6 4 per cent 8 3 4 per cent and 10 2 per cent of the cellular volume Independent or simultaneous variation in the globular resistance and the blood volume gave marked changes in the ratios of these three groups of cells Generally increase of the minimum resistant and maximum resistant cells signifies respectively an increase of the haemo destructive and haemo regenerative phenomena

328 Development of the Tubercle and the Fate of Living Tubercle Bacilli

M B LURIE (*Journ Exper Med* January 1932 p 31) has attempted to correlate the histo pathological changes in the various organs with the number of living bacilli contained in them in experimental tuberculosis of rabbits Bacilli of varying degrees of virulence were injected intravenously into rabbits and the animals were killed at various intervals of time cultures were made from the tissues by a method allowing some idea to be gained of the numbers of tubercle bacilli present and the tissues themselves were studied histologically As the result of these experiments the author draws a number of conclusions about the development of the tubercle and the destruction of the bacilli The initial accumulation of polymorphs which occurs particularly with virulent strains is followed by a rapid increase in the number of large mononuclear cells The greater the multiplication of the bacilli the more intense is the regeneration of the mononuclears by mitosis moreover mitosis is greatest in the most susceptible organs—namely, the lungs and kidneys These cells gradually become converted into epithelioid cells and with the maturation of the epithelioid cells and the formation of tubercles it is found that the bacilli are already greatly reduced in numbers From this fact and from the rate of maturation in different organs it is concluded that the transformation of the mononuclear into the mature epithelioid cell follows its destruction of the tubercle bacilli The cells in the alveoli of the lung are much less active in destroying the bacilli than are those in the interstitial tissues it is suggested that this may be dependent on the greater partial pressure of oxygen in the alveoli The appearance of giant cells is associated with the cessation or diminution of mononuclear regeneration by mitosis and is coincident with a marked reduction in the number of living bacilli These cells seem to be formed from epithelioid cells when the multiplication of the bacillus has ceased and there is no longer any stimulus for the formation of new cells Caseation is not necessary for giant cell formation Evidence is submitted in support of the view that caseation is a necrotic reaction occurring in the sensitized animal

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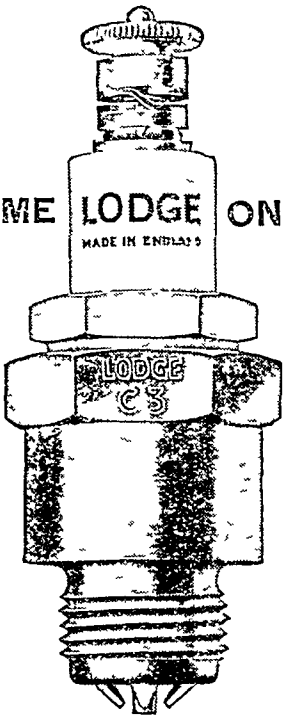
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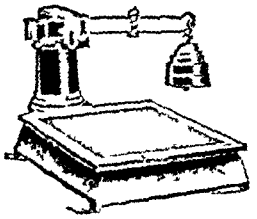
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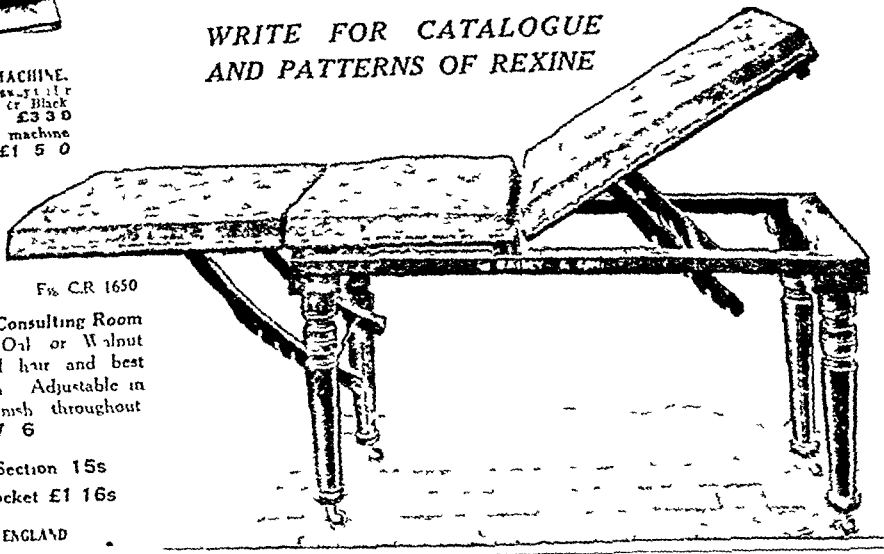


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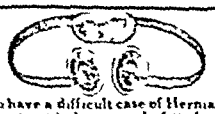
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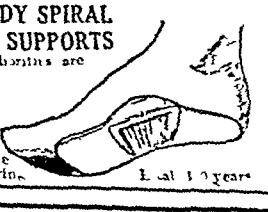
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M.R.C.S., L.R.C.P.	First 1910-31 (Completed Exam.)	501
M.D.	Various. By Thesis.	Numerous successes

Preparation for the above and also for Medical Preliminary and for all examinations leading up to M.R.C.S., L.R.C.P. or M.B. of various Universities also to D.P.M., D.O.M.S., D.T.M. & H., D.L.O., D.C.O., D.M.R.E., M.M.S.A., L.M.S.S.A., etc. Numerous successes.

ORAL CLASSES

M.R.C.P., M.D., Primary and Final F.R.C.S., F.F.C.S. (Edin.), Final M.B., B.S., and M.R.C.S., L.R.C.P. Museum and Microscope Work. Also Intensive Tuition.

MEDICAL PROSPECTUS (48pp.)

CONTENTS.—The Special Advantages of this Institution. *Particulars of all Medical Examinations.* Postal Courses and Oral Classes. Numerous Testimonials. Advice for the higher Medical Examinations. Suggested Courses for the Earlier Surgical Examinations. Short Courses. Special Courses for the Special Diploma Examinations. Specimen Lessons. Private Courses Open to Women. How to Enrol. Terms. Medical Preparatory Courses.

Prospectus gratis, along with *List of Successes*, etc., on application to the Principal, Mr. E. S. WEYLOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

UNIVERSITY of CAMBRIDGE

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY

The next Course of Study for the Diploma which is open only to duly qualified Medical Men and Women begin on October 3rd 1932 and occupy nine months

During the first three months instruction in Physics is given in the Cavendish Laboratory and in Elementary Radiology and Electrology in the Department of Radiology at Cambridge Arrangements are made by the British Institute of Radiology for a similar Course to be given in London at the same time These Courses are alternative

The second three months must be spent in London where lectures are given at the British Institute of Radiology and are combined with clinical instruction in the large teaching Hospitals

The third three months may be spent in recognized Hospitals in London or elsewhere the student acting as clinical assistant or in similar capacity

The examinations consist of three parts viz

1 Physics with examinations in January and April
2 Radiology and Electrology with examinations in April and July
3 The presentation of a Thesis which is entirely the candidate's own work and is intended to show that he has had practical experience of the subjects

Further information as to the Courses together with application forms for admission may be obtained from

G STEAD M A Secretary for the Diploma Cavendish Laboratory Cambridge or
The General Secretary British Institute of Radiology 32 Welbeck Street London W 1

Completed form of application for admission must reach the Secretaries not later than September 10th

LONDON HOSPITAL MEDICAL COLLEGE.

THE HUTCHINSON TRIENNIAL PRIZE 1935

The following subject has been selected for above prize

Septic Infections of the Hand with special reference to the final result

The Dissertations for the Prize must be delivered at the Hospital not later than 4 p m on March 31st 1935

The conditions of the prize may be obtained on application to the Dean Professor WILLIAM WRIGHT M B D Sc F R C S Mile End E 1

ROYAL COLLEGE of PHYSICIANS of EDINBURGH ROYAL COLLEGE of SURGEONS of EDINBURGH ROYAL FACULTY of PHYSICIANS and SURGEONS of GLASGOW

COPIES OF REGULATIONS for the TRIPLE QUALIFICATION (L R C P E L R C S E and L R F P & S G) and the DIPLOMA IN PUBLIC HEALTH containing Dates of Professional Examinations for the year 1932 33 Curriculum etc may be had on application to Mr DAVID THOMSON 49 George Square Edinburgh or to Mr WALTER HURST 242 St Vincent Street Glasgow Inspectors and Treasurers at Edinburgh and Glasgow respectively

EPILEPSY.

Attendance at school is a necessary part of the satisfactory treatment of Epilepsy in Children

COLTHURST HOUSE SCHOOL meets all the requirements of children of middle class parentage Extensions made necessary by the success of the school have created several vacancies

Only bright and intelligent boys and girls are eligible for admission

Apply to the Medical Supt, Colthurst House School Warford Alderley Edge

BRISTOL EYE DISPENSARY

Vacancy for HONORARY OPHTHALMIC SURGEON Duties light and could be combined with general work if desired Would suit retiring Medical Man or Woman with good knowledge of Eye work willing light work in Eye and ear department Apply stating age and experience to Secretary (Medical) 17 Queen Street Bristol

LONDON SCHOOL OF DERMATOLOGY

St John's Hospital for Diseases of the Skin,
Leicester Square W C 2

Conducted by the Honorary Staff of the Hospital together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospitals Lectures and Demonstration every Tuesday and Thursday at 5 p m from October to March and four times weekly during May Clinics daily at 2 p m and 6 p m Saturdays 2 p m only Pathological Laboratory for Instruction or Research work

For further particulars fees etc apply to J E M WIGLEY M B Dean

TAUNTON SCHOOL, TAUNTON

A PUBLIC SCHOOL FOR BOYS

Boys are regularly prepared for the First M B Examinations University Scholarships in *Chemistry Biology* etc

Special facilities are offered for the teaching of Chemistry Physics Botany and Zoology

New Science Buildings containing seven laboratories two lecture rooms science library store rooms etc opened in September 1925 Prospectus from Head Master

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D T H must possess the D T M of this University)

For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pembroke Place Liverpool

SCHOOLS for BOYS and GIRLS

TUTORS FOR ALL EXAMS

Messrs J & J PATON having an up to date Knowledge of the BEST SCHOOLS and TUTORS in this Country and on the Continent will be pleased to AID PARENTS in their choice by sending (free of charge) prospectuses and TRUSTWORTHY INFORMATION and ADVICE

The age of the pupil district preferred and rough idea of fees should be given

J & J PATON Educational Agents 143 Cannon St London E C 4 Tel Mansion House 5053

ABERDEEN MEDICAL SCHOOL

A COURSE OF POST GRADUATE STUDY in Public Health will be held from April 19th to June 23rd on Tuesdays and Thursdays at 3 15 p m In addition special clinics will be held on these days at 11 45 a m

A syllabus of the Lectures and Demonstrations may be had on application to the Secretary The University Aberdeen

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March June September and December For Regulations apply to the Secretary College of Preceptors Bloomsbury Square London W C 1

Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric and Prelims
Chemistry Physics and Biology Labs
MANCHESTER TUTORIAL COLLEGE
327 Oxford Road Manchester

F R C S (Edin)

Full PREP COURSE with Anatomical (Cadaver and Living Model) and Surg Path Demonstration for next Exam will commence shortly POSTAL TUITION at any time—H C ORRIN F R C S Surgeons Hall Edinburgh

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS
Victoria Park E 2
(Bus Tram and Rail Cambridge Heath L N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on May 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Application with copies of three testimonials should be sent to the undersigned on or before Friday April 15th

GEORGE WATTS Secretary

MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON RESEARCH TRAVELLING SCHOLARSHIP IN MEDICINE value £300 tenable for one year Candidates must be University Graduates who have taken out the full course of Clinical Instruction in the Manchester Royal Infirmary

A copy of the regulations governing the Scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday April 16th

FRANK C HAZELL
Secretary to the Trustees

MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON RESEARCH SURGERY SCHOLARSHIP value £75 tenable for one year Candidates must be University Graduates who have taken out the full Clinical Instruction in the Manchester Royal Infirmary

A copy of the regulations governing the Scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday April 16th

FRANK C HAZELL
Secretary to the Trustees

MANCHESTER ROYAL INFIRMARY

Applications are invited for the (part time) DICKINSON RESEARCH SCHOLARSHIP IN MEDICINE value £75 tenable for one year Candidates must be University Graduates who have taken out the full course of Clinical Instruction in the Manchester Royal Infirmary

A copy of the regulations governing the Scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday April 16th

FRANK C HAZELL
Secretary to the Trustees

ROYAL SEA BATHING HOSPITAL MARGATE

A MALE HOUSE SURGEON required The salary is at the rate of £200 per annum with board residence attendance and laundry

Candidates for the post must be legally qualified and registered The appointment is for six months but may be extended for a further period of six months

There are 308 beds for adults and children which affords special opportunities for the study of surgical tuberculosis

Application stating age previous appointment with copies of three recent testimonials should be sent to the Secretary I S B H Office 15 Yorl Buildings Adelphi London W C 2

DERBYSHIRE ROYAL INFIRMARY DERBY
(General Hospital—247 B I)

Applications are invited for the post of HOUSE SURGEON for General Surgery and Ear Throat and Nose

Candidates must be qualified and registered under the Medical Acts

The appointment is for 12 months

Salary will be £150 per annum with apartments board etc

Application with copies of testimonials to be sent to the undersigned not later than April 15th

WALTER BANKS
Supt & Secretary

April 1st 1932

ANCOATS HOSPITAL MANCHESTER

MEDICAL REGISTRAR required to assist the Hon Staff in the Out patient Medical Clinic on Monday Wednesday and Thursday mornings 9 30 a m to 12 30 p m

A small honorarium is paid

Applications are invited from Medical Practitioners (ladies or gentlemen) and should be forwarded to the undersigned not later than April 13th stating age qualifications and experience together with copies of three recent testimonials

By Order of the Board
HERBERT F DARFORD
Clerk & Secretary

ROYAL MANCHESTER CHILDREN'S HOSPITAL PENDLEBURY near MANCHESTER (200 B I)

Wanted a RESIDENT MEDICAL OFFICER salary £120 per annum with [illegible] for six months Duties [illegible] appointment Candidates must have [illegible] Registration [illegible] Hospital experience [illegible] Medical Men [illegible] to [illegible] Applications [illegible] Canvassing directly or indirectly [illegible]

By Order
W J HILDRETH Secretary

ROYAL NAVAL MEDICAL SERVICE.

VACANCIES EXIST FOR MEDICAL OFFICERS IN THE ROYAL NAVY.

Candidates will be entered as Short Service Medical Officers and will be considered for transfer to the Permanent Service after 6 months service They must be registered under the Medical Acts, and be under 30 years of age on date of entry

Medical Officers, R N, are liable to serve in Naval Hospitals or Ships in any part of the world

Excellent opportunities exist for Clinical professional work, both Medical and Surgical, as well as for study and practice of Hygiene. Pathology, Ophthalmology, and other specialist branches

Adequate provision is made for Post-Graduate Study

OUTFIT ALLOWANCE of £50 is paid on joining.

PAY —Pay from approximately £430 to £2,070 a year, according to length of service

ALLOWANCES —When in charge of Hospitals and Sick Quarters, 10s and 5s a day

60 Specialists' Allowances of 5s a day

Flag Allowances, 5s and 2s 6d a day

Provisional Allowance, Lodging Allowance, etc

PROMOTION —To Surgeon Lieutenant Commander after 6 years service, to Surgeon Commander after a total of 12 years service. Promotion to Surgeon Captain, Surgeon Rear-Admiral, and Surgeon Vice-Admiral is by selection

Ante date of seniority on account of civil hospital appointments and accelerated promotion can be gained

RETIREMENT —Gratuities are paid as follows —

Short Service Officers after 3 years' service -	£300
Permanent Officers, after 4 years' service - -	£500
" " 8 years service - -	£1,000
12 years service - -	£1 500
" 16 years service - -	£2,250

Rates of Pension range from approximately £535 a year, normally earned after about 25 years' service to £1,064 a year, the maximum earned by a Surgeon Vice-Admiral

Copies of the Regulations and Particulars as to Conditions of Service and Emoluments may be obtained on written or personal application to the Medical Director-General of the Navy, Admiralty, Whitehall, London, S W 1

ROYAL ARMY MEDICAL CORPS.

TWENTY FIVE permanent COMMISSIONS in the ROYAL ARMY MEDICAL CORPS will be offered on April 15th, 1932 Applications should reach the War Office not later than April 12th, 1932

Candidates will be selected for Commissions without competitive examination and will be required to present themselves in London for interview and medical examination on April 15th, 1932 They must be under 28 years of age on May 1st 1932, and registered under the Medical Acts

Officers of the RAMC are liable to serve in any part of the world where British troops are quartered

Ample opportunities exist in the Army for clinical professional work, both Medical and Surgical, as well as for the study and practice of Hygiene Pathology, and all the special branches

The cost of Post Graduate study which is compulsory, is met from Army Funds

Emoluments Pay—From £356 to £1,542 a year according to rank **Allowances**—Free quarters, fuel and light servant and rations or a cash allowance in lieu totalling from 6/5d to 23/3d a day according to rank (£117 to £424 a year)

Candidates who have held a full time house appointment in a recognised civil hospital before appointment to a permanent Commission in the RAMC may, subject to certain conditions, be allowed to count the period of service in such an appointment, up to a maximum of 12 months, as Army service for promotion and increase of pay

Gratuities on Retirement—After 7 years service £1 000
„ 15 „ „ £2 800
„ 18 „ „ £3,500

Current rates of retired pay range from £352 10s per annum, normally earned by a Major after 20 years' service, to £890 per annum the maximum for which a Major General is eligible The rates of pay and retired pay are subject to periodical variation consequent on fluctuations in the cost of living

Outfit Grant—An officer on joining receives £50 as outfit allowance

Marriage Allowances—Officers of 30 years of age and over who are married are entitled to draw special rates of allowances

A Voluntary Widows' and Orphans' Fund exists for officers of the Corps

All particulars may be obtained by application in writing or personally to the Under-Secretary of State The War Office (A M D 1) Whitehall London S W 1

GLOUCESTERSHIRE JOINT COMMITTEE FOR TUBERCULOSIS
STANDISH HOUSE SANATORIUM
STONEHOUSE GLOS

Applications are invited from registered Medical Men for the post of JUNIOR ASSISTANT MEDICAL OFFICER at the above Institution No previous professional experience is necessary

There are at present 250 beds including men women and children There is an orthopaedic block

The salary is £250 per annum with board furnished apartments and laundry in addition subject to an economy deduction of combined salary and value of emoluments as follows

On the first £65 per annum nil
On the next £205 per annum 2½ per cent and 3½ per cent on the remainder

The appointment is for six months (with the possibility of extension for a further period of six months) and will be terminable within that period by two months notice on either side

Applications stating qualifications and age and accompanied by copies of three recent testimonials should be received not later than April 11th

Shire Hall F T GARDOM
Gloucester Clerk of the Joint
March 22nd 1932 Committee

COUNTY BOROUGH OF BLACKPOOL
APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and registered Medical Practitioners for the above appointment

The duties will consist mainly of work under the Tuberculosis and Venereal Diseases Schemes of the Blackpool Corporation and the applicant should have special experience in the diagnosis and treatment of these diseases

The salary offered is at the rate of £700 per annum rising by two annual increments of £50 to £800 per annum

Forms of the conditions of appointment list of duties and a form of application may be obtained from the undersigned

Applications must be received by the undersigned not later than the first post on Monday April 11

Canvassing in any form will be deemed a disqualification

THOMAS H HAPPOTTLE M.D.
Town Hall Medical Officer of Health
March 23rd 1932

JOHANNESBURG HOSPITAL SOUTH AFRICA
APPOINTMENT OF WHOLE TIME RADIOLOGIST

Applications are invited from qualified Medical Practitioners registrable in the Union of South Africa for the post of Whole time Radiologist to the Johannesburg Hospital

Salary £1 500 per annum rising by annual increments of £60 to £1 620 per annum

Duties to commence August 1st

The successful applicant will be required to sign a contract of service for a period of three years

[illegible] s of the post obtained from [illegible]ritish Medical [illegible]ciation House

age qualifications and experience and forward copies of three recent testimonials

Applicants are requested to send a duplicate copy of their application to the High Commissioner for South Africa London

Applications marked on the outside Whole time Radiologist to reach the undersigned not later than May 25th

Johannesburg A H LOUW
South Africa Superintendent
February 19th 1932

EAST SUFFOLK AND IPSWICH HOSPITAL
IPSWICH
(205 Beds—7 Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN Salary at the rate of £120 per annum Board residence and laundry

Applications from British (male) candidates stating age qualifications and experience and accompanied by three recent testimonials to be sent to the undersigned

The Hospital ARTHUR GRIFFITHS
Ipswich Secretary

LIVERPOOL AND DISTRICT HOSPITAL FOR DISEASES OF THE HEART

HOUSE PHYSICIAN (male or female) required for period of six months from April 15th Salary at rate of £100 per annum with board residence and laundry Applications no later than April 12th to Miss Lewis Secretary 14 Cook Street Liverpool

CITY OF MANCHESTER
APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Public Health Committee invites applications for the position of Assistant Tuberculosis Officer at a commencing basic salary of £650 per annum rising by annual increments of £25 to £750 per annum The salary is subject to a temporary deduction (£29 10s on £650)

Candidates must be fully qualified Medical Practitioners having special knowledge of Medical and Surgical Tuberculosis Candidates should state whether they possess the Diploma of Public Health

Applications stating age qualifications and experience with copies of not more than three recent testimonials and endorsed on the envelope must be addressed to the Town Clerk only and not to members of the Committee or Council and must be received by him not later than April 8th

The gentlemen appointed will be under the administrative control of the Medical Officer of Health and the immediate control of the Senior Tuberculosis Officer He will be required to devote the whole of his time to the duties of his position to execute the Deed of Service and to contribute to the Corporation Superannuation Fund

Canvassing in any form direct or indirect oral or written is prohibited

By Order
Town Hall F E WARBRECK HOWELL
Manchester Town Clerk
March 1932

SUTTON AND CHEAM HOSPITAL SUTTON SURREY (68 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER which will be vacant on May 9th The appointment is for six months and the salary is £100 per annum with full board suite of apartments and laundry

Applications giving full particulars as to age and qualifications together with copies of recent testimonials should be sent to the Secretary

WANTED MEDICAL OFFICER (Male) for [illegible] DAILY VISIT [illegible] £ [illegible] per annum [illegible] beds Medical [illegible] by letter [illegible] to the Secretary STEPNEY AND POPLAR HOSPITAL 9 Devas Street Commercial Road London E 14

LANCASHIRE COUNTY COUNCIL

CHOOR MEDICAL AND CHILD WELFARE DEPARTMENT

APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER

The Education Committee invite applications for the appointment of an Assistant County Medical Officer in the Choor Medical and Child Welfare Department. Applicants must be registered medical practitioners under 40 years of age and must possess the Diploma in Public Health. The appointment will be subject to the Medical Practitioners and Child Welfare Acts, General Regulations, Rules and Orders, and such other duties as may be assigned by the Committee.

The appointment will be pensionable.

The salary will be £800 a year, rising by annual increments of £50 to £1,000 a year, with a bonus of £100 a year. The appointment will be subject to the Provisions of the Local Government Superannuation Acts.

Applications must be made upon a form which may be obtained from the County Medical Officer of Health and Chief Welfare Medical Officer, County Offices, Preston, to whom they should be returned not later than Saturday, April 16th. Canvassing will disqualify.

Any form issued not strictly filled in will disqualify.

CHARLES ETHERTON
Clerk of the County Council.

County Offices,
Preston.
March 31st.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST
Brompton, S.W.3

The Governors of Many Count invite applications for the post of HOUSE PHYSICIAN (for men only) for three months. The duties include work in the Out-patient Department as well as in the Wards, and the full-time Assistant will also be appointed Assistant to the Director of Clinical Research. The Physician to the Hospital will appoint the Assistant from candidates nominated by a Medical Committee.

The salary will be £150.

Applications are also invited for duties with the HOUSE PHYSICIAN at the Sanatorium at Frimley. The latter will be in residence and will receive a salary at the rate of £50 per annum. Applicants must be registered medical practitioners under 30 years of age. The appointment will be for three months, but may be renewed for a further period of three months.

Applications, which should be sent not later than April 16th, should be addressed to the Secretary.

FREDERICK WOOD
Secretary.

LANCASHIRE COUNTY COUNCIL

JUNIOR ASSISTANT MEDICAL OFFICER FOR THE WEST DERBY HOSPITAL, FAZAKERLEY

Applications are invited for the post of Junior Assistant Medical Officer in the West Derby Hospital, Fazakerley. The Hospital consists of [illegible] Fever Hospital, Observation Block, Isolation Block, Tuberculosis Block, Children's Block, Maternity Block, Mental Observation Block, Administration Block, Nurses' Home, Staff Quarters, Mortuary, Laundry, Boiler House, Engineer's Workshop, Stores, Recreation Hall, Chapel, Lodge, Gate House, Cottage Hospital, Isolation Hospital, Sanatorium, Tuberculosis Hospital, Children's Hospital, Maternity Hospital, Mental Observation Hospital, Administration Hospital

MILLER GENERAL HOSPITAL
Greenwich Road SE10

ASSISTANT SURGEON TO THE GENITO URINARY DEPARTMENT

Applications are invited for the post of Honorary Assistant Surgeon to the Genito Urinary Department Candidates must be Fellows of the Royal College of Surgeons of England They must not be engaged in general practice The duties will be to see both in and out patients

Candidates will be expected to call upon the members of the Honorary Medical and Surgical Staff a list of whom can be obtained from the Secretary

An honorarium of 20 guineas per annum is allowed towards travelling expenses

Applications which must be printed or type written together with copies of not more than three recent testimonials should be sent to the Chairman of the Hospital by April 30th

March 21st 1932

PADDINGTON GREEN CHILDREN'S HOSPITAL (INCORPORATED) London W 2

HOUSE PHYSICIAN HOUSE SURGEON

These appointments will become vacant on May 1st Gentlemen (unmarried) are invited to send in their applications with copies of three testimonials to the undersigned not later than first post on Friday April 15th Salary of each at the rate of £150 per annum with board and residence Candidates who have held a resident Hospital appointment are preferred The appointments are for a period of six months

JAMES A HAMLIN Secretary

ROCHDALE INFIRMARY AND DISPENSARY
(110 Beds)

The Board of Management invite applications for the appointment of JUNIOR HOUSE SURGEON The salary attached to the appointment is £200 p a including board residence and laundry

Applications stating age nationality etc together with copies of three recent testimonials to be sent to the Secretary endorsed House Surgeon Particulars of duties and conditions of appointment may be had on application to the Secretary

Infirmary Office W WYNNE
Rochdale Lancs Secretary

ROYAL BUCKINGHAMSHIRE HOSPITAL AYLESBURY

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) for six months To commence duty as soon as possible Salary £200 per annum with board residence and laundry Candidates must be fully qualified and registered

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned at once

M W BROWN Secretary

ROYAL EYE HOSPITAL
St George's Circus Southwark SE1

Applications are invited for the appointments of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON for a period of six months for the above Hospital Salaries at the rate of £150 and £100 per annum respectively

Candidates must be registered Practitioners

Applications with copies of three recent testimonials should be sent to the Secretary at the Hospital not later than Wednesday April 13th

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WARNEFORD GENERAL HOSPITAL
LEAMINGTON SPA

RESIDENT HOUSE SURGEON required on April 23rd Salary £165 per annum with board and laundry

Applications from qualified and registered Medical Practitioners with copies of at least three testimonials should be sent to the undersigned by April 14th

W RUSSELL PUDALL
Hon Governor & Secretary

THE ROYAL EYE AND EAR HOSPITAL
LEADFORD

Wanted JUNIOR HOUSE SURGEON (male) Salary £150 with board residence and laundry Applications stating qualifications age etc with copies of recent testimonials to be forwarded to the undersigned

J WIGGS Secretary Superintendent

VICTORIA HOSPITAL FOR SICK CHILDREN
HULL (Incorporated)

RESIDENT HOUSE PHYSICIAN (Unit) required Salary £100 per annum with board residence and laundry Applications (with copies of three recent testimonials) stating age qualifications and experience should be sent to the Secretary not later than April 6th

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BELGRAVE HOSPITAL FOR CHILDREN
(Incorporated)
1 Clapham Road S W 9

The Committee of Management invite applications for the posts of TWO HOUSE PHYSICIANS and ONE HOUSE SURGEON which will become vacant on April 30th next

Applicants men must be fully qualified and registered The appointments are for six months with board residence and washing provided Salary at the rate of £100 per annum

Applications with copies of testimonials stating age should be forwarded on or before Thursday April 7th to the Secretary

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BOLINGBROKE HOSPITAL
Wandsworth Common S W 11
(121 Beds)

HOUSE SURGEON (male) required The appointment is for six months commencing on May 1st Salary £120 per annum with board residence and laundry

Candidates must be fully qualified and registered

Applications stating age qualifications and experience with copies of not more than three recent testimonials should be sent to the undersigned on or before April 13th

W S RANDOLPH BISS
Secretary Superintendent

ST MARY'S HOSPITALS MANCHESTER

TWO HOUSE SURGEONS for the WHITWORTH ST WEST HOSPITAL (Maternity) and one for the WHITWORTH PARK HOSPITAL (Gynaecological Dept) each for a period of six months from May 1st next Salaries at the rate of £50 per annum with board and residence

Applications with copies of three testimonials to be sent to the undersigned on or before April 18th

R RATCLIFFE Secretary

CONNAUGHT HOSPITAL
Walthamstow E 17
(100 Beds with Three Resident Medical Officers)

SENIOR RESIDENT HOUSE SURGEON (male) required Salary £150 per annum with residence board and laundry Appointment for six months from May 1st Applications stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials should be received by Monday April 18th

KENELM S ELLISON Secretary

BOPSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL

RESIDENT MEDICAL OFFICER required (male) Salary £175 per annum with residence board and laundry Applications stating age qualifications nationality etc with copies of three recent testimonials to be sent to me To commence duties on April 23rd

Public Office F C POWELL F C I S
Price St Secretary
Burslem

ROYAL FREE HOSPITAL
Gray's Inn Road W C 1

Applications are invited from duly qualified Medical Women for the post of RESIDENT CASUALTY OFFICER Previous experience as Hospital Resident essential Salary £150 per annum Intending candidates should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before April 9th

The appointment is tenable for six months from May 1st

REGINALD R GARRATT
Secretary

ROYAL FREE HOSPITAL
Gray's Inn Road W C 1

Applications are invited from duly qualified Medical candidates (male) for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st and tenable for one year Salary £150 per annum with board and residence

Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before April 30th

REGINALD R GARRATT
Secretary

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL

Applications are invited for the appointment of HOUSE SURGEON at this Hospital for three months ending June 30th Salary £150 per annum with board lodging and laundry

Applications accompanied by not more than three testimonials should be sent to the undersigned as soon as possible

HY RUSSON Secretary

ROYAL INFIRMARY BLACKBURN
(240 Bed—Five Resident)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum rising to £200 with board residence laundry etc To commence duties early in April

Applications with copies of testimonials stating age nationality experience etc to be sent at once to the undersigned

Royal Infirmary NATHAN A SMITH
Blackburn Gen Supt & Secretary

This Institution is recognised for the Surgical Practice required for the F R C S Final Examination

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THE HOSPITAL FOR WOMEN
Soho Square W 1

Applications from fully qualified men and women are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months from May 1st next

The salary is at the rate of £100 per annum with board residence and laundry Applications and testimonials must reach the undersigned from whom further information can be obtained by Friday April 15th

J I HEMING Secretary

THE SHEFFIELD ROYAL HOSPITAL
(340 Beds)

HOUSE SURGEON required at once and there will be a vacancy for a RESIDENT ANAESTHETIST at the end of April Salary at the rate of £80 per annum rising to £100 per annum in six months with board residence and laundry There are seven Resident Medical Officers

Application should be forwarded immediately to—

W H BOOTH
March 21st 1932 Supt & Secretary

DERBYSHIRE HOSPITAL FOR SICK CHILDREN
(80 Beds)

Wanted at once a RESIDENT HOUSE SURGEON (lady) Salary £130 per annum The appointment is for six months but may be extended by mutual arrangement Applicants must be fully qualified Applications with three testimonials one relating to anaesthetics to be sent to the undersigned

ARTHUR N WHISTON
25 St Mary's Gate Secretary
Derby

BOOTLE GENERAL HOSPITAL
Derby Road BOOTLE near LIVERPOOL

APPOINTMENT OF HONORARY LARYNGOLOGIST AND AURIST

Applications are invited for the above vacancy Candidates are requested to send 12 copies of their application and testimonials addressed to the Chairman not later than April 9th

J A BEALDSMITH
Secretary Superintendent

THE SALVATION ARMY
THE MOTHERS HOSPITAL
Lower Clapton Road Clapton E 5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER vacant May 1st Salary £60 per annum with board residence and laundry The appointment is for six months Applications with testimonials must be sent to this office on or before April 19th

EDGAR DIBDIN Secretary

MANCHESTER BABIES HOSPITAL
Burnage Lane HEATONSHILL

The Board of Management invite applications for the post of MEDICAL ASSISTANT at a salary of £50 per annum

Further information may be obtained from the Secretary to whom applications should be addressed with copies of testimonials on or before April 7th

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MERCERS HOSPITAL DUBLIN

The Governors invite applications from duly qualified Practitioners for the vacant post of HONORARY ASSISTANT VISITING SURGEON also for the post of HONORARY ASSISTANT ANAESTHETIST Applications will be received up to and including April 12th

By Order of the Board
HENRY D HUEY Registrar

OLDHAM ROYAL INFIRMARY

HOUSE SURGEON required immediately Salary £150 per annum with board and laundry

Applications together with copies of three testimonials to be sent to the undersigned

T H FLETCHER
Secretary

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association BMA House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary, , Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd)*	**CONTRACT PRACTICE** *(cont)*
TREW VALE MON *(Workmen's Medical Society)*	MALKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE *(Medical Practitioner)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*
CEFNCOCH GLAMORGAN *(Workmen's Medical Scheme)*	MELTHYL VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE *(Workmen's Medical Scheme)*	**PUBLIC HEALTH**
LOWESTOFT MEDICAL INSTITUTE *(Medical Officer)*	NEATH AND DISTRICT *(Medical Aid Association)*	NORTH OXFORDSHIRE UNITED DISTRICTS JOINT COMMITTEE *(Medical Officer of Health)*
LLWYNYPIA CEYDACH VALE TYNYCAE GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE MON *(Medical Officer for Medical Aid Association*	STAFFORDSHIRE AND DUDLEY *(Tuberculosis Officer)*
MAERDY GLAMORGAN *(Workmen's Medical Scheme)*		

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association BMA House Tavistock Square W C 1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES *(All Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St. Sydney N S W	QUEENSLAND *(First line Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon. Sec. Queensland Branch British Medical Association BMA Building Adelaide St. Brisbane.	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr G F V ANSON (Hon Sec. New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
VICTORIA *(All Institute or Medical Appointments)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria.			WESTERN AUSTRALIA *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St. Georges Terr Perth Western Australia.

March 30th 1932 By Order of the Council ALFRED COX Medical Secretary

WESTERN OPHTHALMIC HOSPITAL Marylebone Road N W 1

[illegible] SENIOR RESIDENT and JUNIOR ASSISTANT HOUSE SURGEON [illegible] at the rate of £150 and £100 [illegible] Applications [illegible]

ROYAL EAST SUSSEX HOSPITAL HASTINGS [illegible]

[illegible]

WOLVERSTEL COUNTY AND CITY MENTAL HOSPITAL Fenwick near WOLVERSTEL

SENIOR ASSISTANT MEDICAL OFFICER AND DEPUTY MEDICAL SUPERINTENDENT

The Committee of Visitors invite applications from duly qualified [illegible] Medical Practitioners. Candidates must have had several years experience in Mental Hospital practice and must possess a Diploma in Psychological Medicine or shall have held a resident appointment in a General Hospital.

Commencing salary £600 per annum rising by four annual increments of £25 to £700 per annum together with partly furnished [illegible] valued at £60 per annum for [illegible] The salary which includes [illegible] will be subject to [illegible] Applications [illegible] £98 15s per annum.

The appointment is subject to the provisions of the Mental Officers Superannuation Act 1920 and will [illegible] three months' notice.

Applications stating age experience and [illegible] should be sent to the undersigned not later than April 6th [illegible]

[illegible]

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL ASHFORD (110 beds)

[illegible] are invited for the post of [illegible] SURGEON [illegible] will be [illegible] Salary £300 per annum [illegible] Applications [illegible] £500 [illegible] Applications [illegible] be received not later than [illegible]

DAVID STIRLAND Secretary

DERBY CITY HOSPITAL

THIRD RESIDENT MEDICAL OFFICER

Applications are invited for the post of Third Resident Medical Officer (male) at the above Hospital of 300 beds for the treatment of General cases.

Candidates must be registered in Medicine and in Surgery.

The appointment is for a period of twelve months two months notice or termination to be given.

Salary at the rate of £200 per annum for the first six months then rising to £250 with board residence and laundry.

Applications stating age experience and qualifications should be sent not later than Wednesday April 6th to the undersigned.

COLLIN LILICO
Medical Officer of Health
Public Health Department
Town Hall Derby

THE ROYAL INFIRMARY SUNDERLAND (2 beds)

Six [illegible]

Wanted immediately HOUSE SURGEON (male) Salary £150 per annum with [illegible] Duties [illegible] to commence on [illegible]

[illegible]
Secretary and Treasurer

DEVON COUNTY HOSPITAL EXETER (160 beds)

[illegible] Salary £200 per annum [illegible] Applications [illegible] with two recent testimonials to be sent to the undersigned not later than [illegible]

ALFRED C TUCK Secretary

(Appointments continued on p 48)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
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WANTED — ASSISTANT BOARD AND accommodation provided £300 to £360 p a according to experience and whether married or single T T State age height and capital (if with view) Photo —Address No 1825 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP (OUTDOOR) Scotland or England by Aberdeen Grad aet 29 married ex H S H P fevers tuber culosis anaesthetics 3½ years exper G P Own car — Address No 1935 B M A House Tavistock Square W C 1

WANTED — INDOOR MALE ASSISTANT British or Irish country Practice Salary £300 to £350 according to experience Own car preferable but not essential age photo referen e —Address No 1815 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP NORTH OF England Age 27 years M B B Ch (N U I 1928) unmarried 1½ years H S 2 years G P midwifery and anaesthetics Ener getic Car driver Free end of April —Address No 1812 B M A House Tavistock Sq W C 1

WANTED —BEGINNING JULY MALE OUT door ASSISTANT in growing residential South Coast Practice Excellent pro pects for energetic man —Address with photograph and particulars No 1802 B M A House Tavistock Square W C 1

WANTED —INDOOR ASSISTANT (LADY) IN an industrial Practice in Lancs Work light Car when necessary State essential par ticulars — Address No 1817 B M A House Tavistock Square W C 1

WANTED A YOUNG INDOOR ASSISTANT in an Industrial Practice near Newcastle on Tyne State age nationality and any other particulars Salary £300 p a — Addre s No 1708 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WANTED — MALE ASSISTANT INDOOR for London Irish ab tainer Usual Lond Salary £300 — Address No 1930 B M A Hous Tavistock Square W C 1

WANTED — MALE ASSISTANT IRISH indoor working-class Practice in London Experience not ess ntial Salary £2o0 —Add No 1931 B M A House Tavistock Sq W C 1

ASSISTANTSHIP WITH VIEW IN WOMAN S Practice Northern University Town Well qualifi d woman wanted Hospital exp rience e ntial and if possible Obstetrics Vacancy early summer — Addre s No 1655 B M A Hou e Tav tock Square W C 1

ASSISTANT WANTED WITH OR WITHOUT view to SHARE (if well qualified with Hos appts) of mixed Practice (good panel and appt) with s op Up to £300 p a and quart rs et All social amenities etc Apply now — Addre No 1803 B M A Hou e Tav tock Square W C 1

ASSISTANT OUTDOOR MALE WANTED after Partnership Pra tice in small manufac turing town and surrounding country Mot or car Salary £2 0—£400 —Addre No 1824 B M A House Tavistock Square W C 1

ASSISTANTSHIP REQUIRED M B (LOND) 1925 St Bart s single 30 now disengaged Experienced ho pital and general practice Good references —Address No 1821 B M A House Tavistock Square W C 1

ASSISTANT —PANEL AND PRIVATE PRAC tice Salary £300 per annum with board and lodging Percentage on taking —Address No 1932 B M A House Tavistock Sq W C 1

ASSISTANTSHIP WANTED AT ONCE BY F R C S Eng in town or country —Box A R 486 55 Bryanston St W 1

MALE ASSISTANT WANTED INDOORS £300 p a motor provided Pleasant Mid land City Up to date loyal principal Must be temperate and reliable State age nation ality and religion —Addres No 1816 B M A House Tavistock Square W C 1

M D TWO YEARS EXPERIENCE GENERAL Hospitals one year general practice wants ASSISTANTSHIP or LONG LOCUM Free May 2nd London or South Coast pr f ried State salary —Address No 1830 B M A House Tavistock Square W C 1

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WANTED BY ABERDEEN GRADUATE PARTNERSHIP or General PRACTICE with panel Good re idential suburb London Would consid r prelim Assist ship Well up in anaes minor surg Inc over £800 Cap avail —No 1938 B M A House Tavistock Sq W C 1

WANTED —PARTNERSHIP OR ASSISTANT SHIP with early view M D excellent hospital and general practice experience If po sible scope for midwifery Own car Capital available — Address No 1818 B M A House Tavistock Square W C 1

WANTED —PARTNER FOR PRACTICE IN Northern City Gross receipts about £3 000 Panel over 2 000 rapidly increasing Excellent modern house One half share 2 yrs purchase Cash offers only entertained —Add No 1933 B M A House Tavistock Sq W C 1

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MANCHESTER — PARTNERSHIP IN OLD e tablished Practice Receipts £1 600 yearly Good house garden garage £40 per annum Excellent scope Panel 1 500 Price £1 200 half share part deferred —MANCHESTER MEDICAL & SCHOLASTIC ASSOC 6 Brown St

MIDLANDS — PARTNERSHIP IN LARGE first rate old established Practice in pros perous city Share worth £1,750 per annum for disposal Good house available Applicants must be experienced well qualified and over 30 Premium 2 years purchase —Addre s No 1939 B M A Hou e Tavistock Square W C 1

PARTNERSHIP FOR DISPOSAL IN TOWN IN Wiltshire Receipts over £5 000 per annum panel 3 000 Share for disposal one fifth Pur chaser should be experienced as regards run ning a good class Practice Maternity Home and Cottage Hospital locally —For further particu lars apply Messrs R SUMNER & Co LTD Manufacturing Chemists 40 Hanover Street Liverpool

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Applications should be sent not later than April 28th to the General Supervisor Profe or Sir LEONARD HILL at the above Clinic *Panelagh Road S W 1*

A FULLY TRAINED NURSE S R N C M B also DISPENSER (Apothecaries Hall) desires outside po t with Doctor or In titution —Apply ELLA LENTON 61 Shalimar Gardens Acton W 3

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DOCTOR S WIDOW (*STUDENT RADIOLOGY*) desires LOST part time or otherwise with Radiologist preferred Nursing exp rience et Pharmacy qualification Nominal salary only expected —Address No 1828 B M A Hous Tavistock Square W C 1

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LONDON CLINIC AND NURSING HOME LTD 20 Devonshire Place W 1

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[illegible]

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NOSE AND THROAT PRACTICE REQUIRED for general giving scope for this line South of England preferred Income about £2 000—£3 000 per annum—Communicate in first instance with WOODCOCK & SON Transfer Agents Ipswich Strict privacy observed

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APPOINTMENTS—Contd

BOROUGH OF DOVER

ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation of Dover invite applications for the above appointment from Medical Practitioners between 30 and 40 years of age who hold a Diploma in Sanitary Science Salary £650 rising by two annual increments of £50 each to £750

The applicant appointed will be required to devote his attention principally to work under the Ateens Order 1920 Colloquial French and German will be a recommendation

Further details of the duties and terms and conditions of the appointment and forms of application may be obtained of the undersigned to whom application accompanied by copies of testimonials must be delivered by the 15th proximo

Town Clerk's Office R E KNOCKER
Broad House Town Clerk
Dover
March 29th 1932

COUNTY BOROUGH OF MIDDLESBROUGH

HOLGATE MUNICIPAL HOSPITAL
(273 Beds)

ted for the post of ASSISTANT to commence at the rate of £170 six months and £180 per annum thereafter with board residence and laundry

The appointment affords good opportunities for gaining experience as the Hospital is equipped for modern X-ray Electrical Medical and Operative Treatment

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the undersigned not later than Monday April 11th

Municipal Building ELLISTON KITCHEN
Middlesbrough Town Clerk
March 18th 1932

BURTON-ON-TRENT GENERAL INFIRMARY

Applications are invited for the post of JUNIOR HOUSE SURGEON (male) Salary at the rate of £150 per annum with board residence and laundry

Applications giving age and qualifications together with copies of testimonials to be sent to—

J W THORNLEY Secretary

ROYAL LANCASTER INFIRMARY
LANCASTER

Wanted end of April Two RESIDENT HOUSE SURGEONS (Senior £175—Junior £120 p.a. with board and laundry) Male British

Applications stating age and previous experience together with copies of testimonials to be sent not later than April 16th to Secretary Medical Committee

KING GEORGE HOSPITAL ILFORD
(8 Miles from London)

Applications are invited for the appointment HOUSE SURGEON (male) Salary £100 per annum with board residence etc Term six months with possibility for a further period

Applications should be sent immediately to the Secretary

CITY OF LIVERPOOL

CITY INFECTIOUS DISEASES HOSPITALS

ASSISTANT RESIDENT MEDICAL OFFICE

The Port Sanitary and Hospitals Committee of the Council of the City of Liverpool invite applications for the above office Salary £300 per annum together with board residence (subject to a temporary deduction as may be by the Council)

The appointment is for a term of not exceeding one year and is not renewable

Every candidate will be required to possess a registered Medical and Surgical qualification and should have a knowledge of Bacteriological methods

The person appointed will be allowed to engage in private practice and will be required to devote whole time service to the duties of the office

Applications to be made upon forms obtainable from the Medical Officer of Health Municipal Annexe Dale Street Liverpool to be endorsed Resident Assistant Medical Officer and returned to the undersigned to be received not later than 10 a.m. Friday April 8th WALTER MOON Town Clerk

Municipal Buildings Liverpool
March 29th 1932

CITY OF SALFORD

HOPE HOSPITAL

Applications are invited for the post of RESIDENT MEDICAL OFFICER at Hope Hospital Salford (to commence duties as soon as possible after April 12th) Commencing salary £400 per annum rising by £12 per annum to £520 per annum plus board lodging and laundry A deduction of 5 per cent will be made from salary and a certificate of emoluments for superannuation purposes

The Hospital contains 1 000 beds and is equipped with pathological Liboratory x-ray and electro-cardiograph and affords full facilities for clinical investigation There is a Medical Physician on the Staff

The R M O is one of the three senior residents and will be responsible for work in medical division Candidates must have had practical hospital experience and preference will be given to those preparing for M R C P or M R C I

Further particulars may be obtained from the Medical Superintendent Hope Hospital Salford

Application forms may be obtained by letter to the Medical Officer of Health 143 Town Hall Salford to whom they must be returned duly filled in by copies of not more than three recent testimonials, not later than April 9th

H H JOHNSON Town Clerk

BOROUGH OF CAMBRIDGE

Applications are invited from fully qualified Medical Practitioners under 40 years of age for the post of Whole-time ASSISTANT SCHOOL MEDICAL OFFICER and ASSISTANT MEDICAL OFFICER OF HEALTH Salary £600 per annum rising subject to satisfactory reports by annual increments of £50 to a maximum of £800 per annum subject to a temporary addition under the scheme approved by the Council previous experience in a similar capacity will be taken into account in assessing the commencing salary

Applicants must have had at least three years practice since qualification and must have had experience in the carrying out of certificates for additional qualification

The successful applicant will be required to undergo a medical examination before appointment to contribute to the Local Government and Other Officers Superannuation Scheme

A list of duties and application forms may be obtained (on receipt of a stamped addressed foolscap envelope) from the Secretary Education Committee The Guildhall Cambridge with whom applications with copies of not more than three recent testimonials must be received not later than Saturday April 16th

C H KEMP Town Clerk

ST BARTHOLOMEW'S HOSPITAL
ROCHESTER (12 miles)
Rochester Chatham Gillingham and District

The Hon Medical Committee of the Hospital invite applications for the post of HOUSE SURGEON who will act as Casualty Officer and will have charge of the Out-patient Department

Vacant on June 1st

Candidates must be unmarried and not over 30 years of age

Salary at the rate of £150 per annum for the first six months and £175 per annum for the second six months with board residence and laundry

Applications, together with copies of not more than three recent testimonials, should be sent to the Secretary of the Hospital, St Bartholomew's Hospital Rochester Kent

STANNINGTON CHILDREN'S SANATORIUM CLIFTON MORPETH NORTHUMBERLAND (308 Beds—Pulmonary and Non Pulmonary Tuberculosis)

RESIDENT ASSISTANT MEDICAL OFFICER (Lady)

Applications are invited from fully qualified women for the post of Assistant Medical Officer at the above Sanatorium for Children Previous Resident appointment in General and Children's Hospitals essential Candidates should have had some Orthopaedic training knowledge of X-ray work and experience in Pneumothorax Treatment would be a recommendation Salary £300 per annum with board residence and laundry The successful candidate will be required to commence duties on May 1st Application giving fullest particulars of experience etc accompanied by copies of testimonial to be sent not later than April 14th to Mr JOHN H WATSON 140 Sidney Grove Newcastle-on-Tyne

THE CANCER HOSPITAL (FREE) (Incorporated under Royal Charter) Fulham Road London S W 3

The Committee are prepared to receive applications for the post of HOUSE SURGEON to commence duties on May 1st Salary at the rate of £100 per annum

The appointment is for six months and subject to rule

Candidates must be qualified upon each Member of the Medical Committee not later than Tuesday April 19th

A copy of the rules and the names and addresses of the Medical Committee may be obtained from the Secretary

Previous experience as a House Surgeon is indispensable

Application with three (copies only) testimonial to be sent to the undersigned not later than the first post on Wednesday April 13th

J COURTNEY BUCHANAN
Secretary

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL Woodchurch Road BIRKENHEAD

HOUSE SURGEON

The Board invite application for the post of House Surgeon (male or female) for a period of six months Honorarium at the rate of £100 per annum with board residence and laundry

SECOND HOUSE SURGEON

The Board invite applications for the post of Second House Surgeon (male or female) for a period of six months Honorarium at the rate of £75 per annum with board residence and laundry

Applications for above posts together with copies of testimonial to be addressed to the Secretary at the Hospital not later than April 11th

THE HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale W 9

A RESIDENT MEDICAL OFFICER required May 1st

HOUSE PHYSICIAN required May 1st

Applications are invited for these posts The salaries are at the rate of £150 and £100 per annum respectively and the appointments are for six months Candidates for the post of Resident Medical Officer should state if they are willing to take that of House Physician and applications accompanied by copies of three recent testimonial should reach me by April 10th The accommodation at the Hospital does not permit of Women Graduates holding these appointment

H W BURLEIGH
Secretary & Gen Supt

THE HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale W 9

MEDICAL REGISTRAR REQUIRED

Applications are invited for the post of Medical Registrar falling vacant May 1st

The appointment is for one year renewable for a further year Honorarium £100

Applications which should be accompanied by copies of not more than three recent testimonial should reach me by April 15th

H W BURLEIGH
Secretary & Gen Supt

SOUTHAMPTON CHILDREN'S HOSPITAL & DISPENSARY FOR WOMEN (40 Beds)

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER (duly) Six months appointment vacant April 9th Salary at the rate of £100 per annum with board residence and laundry

Applications stating age and accompanied by copies of testimonials to be sent to the undersigned not later than April 15th

ELLA K MATTHEWS
Secretary

LIVERPOOL HAHNEMANN HOSPITAL HOPE STREET (52 Bed)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Hospital which falls vacant on April 17th next Only one R M O kept

Duties include occasional anaesthetics and assisting at operation general ophthalmic gynaecological and aural

Appointment is for six months renewable Salary at the rate of £100 per annum

Knowledge of Homoeopathy desirable but not essential

Apply stating age sex nationality and previous experience and enclosing copies of testimonial to the Registrar before April 11th

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LONDON NORTH — £1 000 P A MIDDLE and working class panel 650 Visits 3/6—5/6 up Premium one year purchase Good house main road Leasehold £1 750 48 yrs to run —No 9005

EASTERN COUNTY ON HIGH GROUND— Small Town PRACTICE Average over £2 300 p a Panel worth £750 p a upp £112 or more Visits 3/6 to 10/6 Commodious det house 7 bed 3 recep 2 consult waiting room etc and good garden Rent £50 on long lease Premium 1½ year purchase Personally recommended —No 9003

NORTHERN TOWN — VERY OLD ESTAB— One fifth share of over £5 000 p a Panel of 4 000 Fees 5/ upward Choice of house Scope for Midwifery Anaesthetics Eye and ENT work —No 9002

LONDON EAST — ABOUT £2 500 P A Panel 2 600 Not much midwifery Visits 5/6 to 5/ Surg 2 to 2 0 Shop front in excellent position on main road Two consult and disp Very comfortable Living over 2 sitting 3 bed bath etc —No 9001

PROSPEROUS MIDLAND CITY — ONE HALF share of over £3 000 p a Panel 4 000 Visiting fees 3/6 to 5/ Good house 4 bed 3 attics (h and c in bedrooms) Every modern convenience Hou £2 200 Share £3 000 —No 8999

ATTRACTIVE LITTLE SEASIDE RESORT within 50 miles of Town Averag over £1 300 incg panel 1 100 worth nearly £600 About 20 mids p a 2 to 8 gns Visits 5/ to 21/ Specially built house main road prominent position 2 recep 3 profess room 5 beds etc garden and garage £2 000 f hld.— No 9000

MIDDLESEX — OUTLYING SUBURB on Tube £1 250 and ample scope Panel 400 increasing Mids fees 4 to 5 gns about 10 p a Visits 5/ to 10/6 Modern house 2 recep 3 bed sep surg and con room Small gard Freehold £1 700 —No 8998

LANCS TOWN — OLD ESTAB — £2 100 p a Panel 1 460 Very little mids fees £3 3s Visit 2/6 medicine 2/6 Surg 2/6 Specially built house with splendid surgery large waiting room and 2 con rooms and disp 2 recep 5 bed etc Rent £100 Premium one years purchase —No 8997

OUTLYING SUBURB W — PARTNERSHIP about £2 000 p a rapidly increasing Panel over 650 Fees 4/ to 7/6 One third to two fifths share at 2 years purchase Choice of house —No 8995

MARKET TOWN NEAR S COAST—AVER receipts over £1 000 a year Panel 815 Old estab appt worth over £100 Fees 5/ to 7/6 Charming detached house in own grounds half an acre 6 bedrooms 2 attic 2 recep surg etc Recently overhauled Price for house and practice £3 500 —No 8979

MIDLANDS —£3 000 A YEAR OLD ESTAB Same hand over 30 year Partner 5 years One third share for sale now more later at 2 years purchase House available to rent Station close Fees 7/ to 21/ Extensive district very little opposition Panel 1 600 Long known and recommended —No 8902

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YORKS —PARTNERSHIP in busy rapidly increasing Town Practice Receipts £2 300 Panel 1 500 Suitable house available 1/3 share with view to succession 2 years purchase

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known Country Town Receipts approx £6 000 Select easily run panel Medium sized house to rent Premium for 1/4 share 2 years purchase This Practice has been known to the Agency for many years and is highly recommended It is essential that the incoming Partner shall hold the F R C S and be aged about 30 Appointment to Hospital Staff

LONDON W —PARTNERSHIP in West End Practice Receipts over £3 600 Panel over 3 900 Premium for 1/3 share £3 000 Suitable opening for man with good address and experience preferably aged about 30

EAST MIDLANDS — PARTNERSHIP in better class Practice Suitable house available Receipts nearly £2 000 Up to date Hospital Scope for surgery Premium for 1/3 share (with view to larger share) £1 300

LONDON W —Within 20 minutes of West End PARTNERSHIP in suburban middle class G I situated in rapidly developing locality Excellent scope for young and energetic man Panel approx 2 000 Receipts £2 500—£2 600 Premium for one third share 2 years pur

WEST END (adjacent to) —Mixed better class PRACTICE situated on main thoroughfare Suitable house available on lease at exceptionally low rental Receipts approx £1 000 p a Panel 730 increasing Fees 3/6 to 1 gn Premium to include Practice lease drugs and all contents furniture etc £3 500 or near offer

DURHAM —Middle class and industrial PRACTICE Average receipts approx £500 Panel 370 Medium sized house Branch surgery Fees 2/6 up No appointments Prem £725 or offer Excel scope

MIDLANDS —PARTNERSHIP in old established country Practice with scope for considerable increase Fine Elizabethan house with grounds to be rented at low rental Average receipts approximately £3 200 Panel 2 700 Nine fourteenths share on 2 years purchase Sport of all kinds Suitable for a man desirous of country life

MIDDLESEX W —PARTNERSHIP in Suburban Practice situated in rapidly growing residential locality Receipts (approx) £ 000 Panel (increasing) 650 Medium sized house available Premium for 1/3 or 2/5 share 2 years purchase

LONDON S E —Near West End —Cash and panel PRACTICE (Lock up) Shop fronted surgery held on lease at £70 p a part sub let Receipts average approx £400 Panel 517 Excellent scope for one giving whole time and undertaking midwifery Premium 1½ years purchase or near offer

YORKSHIRE —Well established mixed rural PRACTICE Suitable house available (4 beds) Receipts approx £1 000 Panel 620 Fees 3/6 up One appointment Premium 1½ years purchase

LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 000 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment Premium 2 years purchase or near offer

LONDON N E.—Borders of Essex—PARTNERSHIP in middle class G P Suitable house to rent Receipts average £3 500 p a Panel 4 500 Prem for 3/8 share with view to 1/2 £2 850 cash

LONDON N E — Mixed suburban G I —Medium sized corner house Receipts nearly £800 Panel approx 1 000 Increasing scope Premium £1 340 for Practice lease house £900 or near offer

If the investment you are seeking is not advertised here, let us know your wants, and we will gladly forward details of others suitable to your requirements

WEST END Harley Street locality —NUCLEUS good class non dispensing Practice Excellent leasehold house Receipts £500 p a approx Prospects of good transfer appointment (in addition) Premium for house and Practice £5 000 or near offer Good mortgage obtainable

YORKS —PARTNERSHIP in middle and working class Town Practice Receipts approx £3 000 Panel over 2 000 House to rent Premium for 1/4 share 2 years purchase

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1 MIDLANDS —COUNTY BOROUGH —PARTNERSHIP (One Third Share) in old established panel and industrial Practice Receipts £4 200 Panel 4 700 Good house to rent

2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Gar etc

3 NORTH OF ENGLAND—Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

4 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

5 SOUTH WALES —Contract and middle class PRACTICE Receipts average £1 100 Panel about 1 000 Good house to rent Lawn garage etc

6 LANCS —Old established Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £40 Good house to rent

7 BERKS —(Country Town) —PARTNERSHIP (= 5th Part) with short term Assistantship and ultimate succession Receipts over £1 200 Panel 1 550 and good scope Appts worth about £200 Good fees and house

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1 CORNWALL —PRACTICE in small country town near sea Averages £1 300 p a Panel about 637 Plenty of scope Premium £2 000 Good house for sale

2 OXFORDSHIRE —Old established unopposed Country PRACTICE Over £1 200 p a Panel over 600 Good hse Prem 1½ yrs pur

3 COUNTRY PRACTICE —Old established in pleasant country Last year £1 750 accts figs Panel 946 Appts £120 In present hands 23 years Good house garage laigard House & Practice £5 000 Borders of Monmouthshire

4 STAFFORDSHIRE. — PRACTICE in rapidly growing district returning £569 p a accts Panel 414 Prem 1½ years purchase Good house for sale £1 000 or rent £72 p a

5 DEVON —PARTNERSHIP for well qualified Physician 2/5 share returning at present £800 p a Good class non panel Practice Excellent house to rent Prem 2 yrs pur

6 COUNTRY TOWN — Gloucestershire —Third Share with incr to half share later Last yr £1 800 Choice of hse Prem 2 yrs pur

7 DEVON — Unopposed PRACTICE in lovely district Receipts £675 p a Appts £90 Panel 250 Mild suit lady semi ret or young Doctor Gd scope Prem 1½ yrs Sm rent

8 MIDLAND CITY — Old established general and venereal PRACTICE. Receipts last year £2 740 Panel 500 recently established increasing Fine hse to rent Prem £3 250

9 MONMOUTHSHIRE — Old-established PRACTICE Receipts £300 p a. In same hands 40 yrs Good house Selling owing to ill health Copulous dist £1 000 for house & Practice

10 BEDFORDSHIRE — Country PRACTICE about £500 p a Good house to buy or rent Premium £300

11 DEVON —Seaside Town —Doctor's house 23 years with small PRACTICE attached Under retiring Details on application

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DEATH VACANCY LANCS TOWN —Suit good Surgeon —Mixed class PRACTICE Average cash receipts £1 634 p a Panel 829 Premium £4 000 part by arrangement (to include Surgery and Nursing Home (freehold) equipped (operating Theatre fitting Ward furniture drugs and book debt about £1 300) —No 335

DERBYSHIRE —COUNTRY TOWN Nr MANCHESTER —Mixed PRACTICE Cash receipts 1931 £7 30 Panel 494 Good house 2 reception 3 bedroom Garage Rent £52 p a Premium 1½ years purchase —No 341

NEAR MANCHESTER —PARTNERSHIP in sound Practice Average cash receipts £4 154 p a Panel 3 621 Good house 2 reception 5 bedrooms Net rent £35 p a Premium—5 25ths share—1½ years purchase Prospect of further share later —No 336

LINCOLNSHIRE —SEASIDE TOWN —Old established mixed class PRACTICE Average cash receipts £1 701 p a Panel 686 Excellent living and professional accommodation 2 reception 6 bedrooms Garage and small garden Rent £100 p a on long lease Premium 1½ years purchase —No 332

LIVERPOOL —PRACTICE in good industrial area Cash receipts 1931 £685 Panel nearly 800 Scope for increase Good house 2 reception 4 bedroom Rent £52 p a Premium £1 000 or near offer —No 331

MANCHESTER — Good Suburb — Sound mixed PRACTICE Cash receipts last year £1 292 Panel 1 1 0 Scope Excellent house 2 reception 5 bedrooms Premium 1½ years purchase —No 339

LANCS — PLEASANT COUNTRY TOWN —Sound mixed PRACTICE Average cash receipt £1 369 m [illegible] house 3 mium—Pr

Appointments mo thly Panel 1 037 Excellent and large garden Pre 326

MANCHESTER Old established PRACTICE Cash receipts last year £1 513 Panel 1 69 Scope for increase Good house 2 reception 4 bedroom Premium—Practice—1½ years purch —No 325

LANCS TOWN —Old-established mixed PRACTICE Average cash receipts £995 p a Panel 710 Excellent house to rent in pleasant district 2 reception 4 bedrooms Garage and garden Vendor retiring Premium £1 000 for quick sale —No 298

MEDICAL WOMAN'S PRACTICE — MANCHESTER — Old established Cash receipts 1931 £645 Panel 450 Good scope Excellent house 3 reception 6 bedroom Garage Rent £80 p a on lease Premium 1½ years purchase —No 330

NEAR MANCHESTER —Semi Residential Town —Old-established (non-dispensing) middle class PRACTICE Average cash receipts £2 400 p a Small panel of 450 Well situated freehold detached house 2 reception 5 bedrooms Garage Premium—Practice—1½ years purchase —No 329

VENEREAL DISEASES PRACTICE—NORTHERN CITY —Cash receipts approx £1 800 p a House to rent Vendor going abroad Will accept any reasonable offer for immediate sale —No 340

CHESHIRE COAST TOWN near LIVERPOOL —Middle-class PRACTICE Average cash receipts £1 184 p a Appointment £80 p a Small select panel Excellent corner house 3 reception 5 bedrooms Premium—Practice—1½ years purcha —No 317

MANCHESTER — Residential Suburb — Middle-class PRACTICE Suitable for two in Partnership (one a good Surgeon) Cash receipts 1931 £4 5 8 Panel 1 400 Two excellent houses to rent with ample accommodation Premium 1½ years purchase —No 2 7

LIVERPOOL —Old-established middle class PRACTICE Cash receipt over £2 000 p a Panel 900 Excellent house 2 reception 7 bedrooms garage and garden to rent —No 2 6

MANCHESTER — INDUSTRIAL PRACTICE Cash receipts last year £889 Panel 721 Suit R C Plenty of scope Good house 2 reception 5 bedrooms Rent £30 p a Premium—best offer —No 190

CHESHIRE TOWN near MANCHESTER —PARTNERSHIP in old established Practice Average cash receipts £5151 p a Panel 3 600 Excellent house 2 reception 3 bedrooms garage and garden Premium—one fifth share—£1 700 —No 333

MANCHESTER — PARTNERSHIP with succession in Practice of about £1 600 p a Panel 1 550 House available to rent Premium—half share—1½ years purchase —No 303

WELSH BORDER — UNOPPOSED COUNTRY PRACTICE in beautiful district Average cash receipts £1 100 p a including transferable appointments £300 p a Panel 756 Cottage Hospital Excellent house 4 reception 4 bedrooms Garage and large garden Rent £70 p a or would sell for £1 250 Premium 1½ years purchase —Welsh not essential —No 337

NEAR PRESTON — Cash receipts 1930 £700 Panel 30 4 bedroom Rent £70 p a Premium 254

MANCHESTER —MIXED PRACTICE suitable for two in Partnership Cash receipts last year £2 840 Panel 2 156 Good scope Two excellent houses with ample accommodation Premium—Practice—1½ years purchase —No 321

MANCHESTER —Middle-class PRACTICE in pleasant suburb Cash receipts 1931 £1 327 Panel 459 Charming house 3 reception 6 bedrooms billiard room Large garden and garage Premium—Practice—1½ years purchase —No 322

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7 LONDON E —Cash and Panel Practice of £840 p a in populous district Panel 570 Small house to rent on lease Premium 1½ years purchase

8 KENT — Partnership in Practice about £3 800 p a in an industrial town Panel 2 630 House with 4 bedrooms to be sold or rent Share of £800 p a guaranteed at 2 years purchase with option to increase later Preliminary Training

9 DEATH VACANCY —E MIDLANDS — PRACTICE averaging £1 550 p a in small industrial district easy distance of large town Panel 1 235 Large house with stabling etc garage and good garden for sale Beautiful surroundings country and sport of most kind

10 ESSEX —Partnership in Practice of £1,400 p a in developing country district easy distance of coast Panel 3 600 Detached house (6 bedrooms) garage and good garden for sale Scope for increase One fourth share 2 years purchase

11 S COAST — Lock-up Practice averaging £480 p a in rural district on outskirt of popular holiday resort Panel 400 Rent of Surgery premises 10/ weekly Term £600

12 EASTERN COUNTIES — Partnership in Practice averaging £4 400 p a in market town Central position available Share of £750 p a at first at 2 years for half Cottage Hospital Applicant must have surgical experience and if holding the D P H could obtain M O H Appointment in addition

13 W OF ENGLAND —Partnership in Practice nearly £2 600 p a in country town Panel about 1 000 Good house (5 bedrooms) garage and garden of about half acre to rent Good educational facilities Cottage Hospital Premium one third share £1 750

14 MIDLANDS —Practice over £1,700 p a in growing town with nice surroundings Panel 1 100 House available later Good hospital and scope for surgery Premium 1½ years purchase

15 HOME COUNTIES —Non-dispensing Practice averaging £1 150 p a in growing residential watering place No panel Detached house (3 bedrooms) with every modern convenience and attractive garden to rent Premium 1½ years purchase

16 MIDLANDS —Practice averaging £750 p a in clean flourishing manufacturing town Panel 570 House (3 bedrooms) garage to rent Premium 1½ years purchase

17 SHROPSHIRE — Practice £800 p a in Market Town Panel 170 Suitable house to purchase Terms 1 years purchase

18 STAFFS — Partnership in Practice over £4 000 p a in manufacturing town Panel 1 470 Small house to rent Premium one third share at 14 years purchase

19 S WALES — Mixed Practice in growing district of superior town Panel £900 House (3 bedrooms) garage and garden to rent Goodwill for sale Premium £1 200

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Practices and Partnerships for Disposal (continued)

20 MIDLANDS — Partnership in Practice, averaging over £3 000 — manufacturing town. Panel about 4 000. 4 bedrooms and 3 attics) for sale. P

21 MIDDLESEX —Practice in growing residential district. Receipts 1931 £1 250. Panel 400. Modern house (3 bedrooms) garage and large garden for sale. Great scope. Premium 1½ years purchase.

22 LANCASHIRE —Practice averaging £2,100 p.a. in industrial district on outskirts of manufacturing town. Panel 1 460. House (9 bedrooms) with garage to rent on lease. Premium 1 year's purchase.

23 W. OF ENGLAND —Partnership in Practice averaging £2 360 p.a. on outskirt of first rate town. Panel 2 400. House with 5 bed and dressing room for sale. One third share at 1½ years purchase. Preliminary Assistantship.

24 N. WALES —Practice in small Watering-place. Receipts 1931 £575. Panel 238. Modern house very easily run with ample accommodation at nominal rent. Very bracing climate. Excellent shooting, fishing. Scope for increase. Premium £450. Welsh not essential.

25 MIDLANDS —Partnership in sound non-dispensing Practice of over £5 700 p.a. in beautifully situated country town. Panel 2 000. Good well qualified Physician required aged 30-35. One-fifth share at 2 years purchase with early increases. Good Hospital with prospect of appointment on Staff at an early date.

26 BIRMINGHAM — Practice averaging £584 p.a. in good class suburb. Small panel but ample scope. Very little midwifery. Low expenses. House with garage to rent. Premium 1½ years purchase or near offer for quick sale.

27 ITALY —Old-established Practice in an attractive City. Receipts last 2 years averaged £1 400 p.a. No midwifery or night work. Suit gentleman of experience married and with good social attainment. Reasonable premium.

28 W. OF ENGLAND —Partnership in Practice in pleasant country town. Cash receipts average about £5 200 p.a. (including panel and appointments over £1 500 p.a.). Charming old house (9 bedrooms and attics etc.) garage and beautiful garden. Plenty of sport. Scope for increase. Premium for one fifth share 2 years purchase.

29 S.E. COAST — Popular Resort —Partnership in mixed-class Practice about £3 600 p.a. Panel about 2 000. Excellently situated house (9 bedrooms etc.) with garden and garage for sale. Five twelfth share for disposal at 2 years purchase.

30 MIDLANDS — Partnership in Country Town Practice averaging about £3 500 p.a. Panel over 1 500. Scope for increase. Premium for one fourth share 2 years purchase. Preliminary Assistantship if desired.

31 LONDON, N.W. — Practice in suburban district. Receipts 1931 £700. Panel 300. Corner house (5 bedrooms) garage and garden to rent or lease. Premium £750.

32 SUSSEX — Country Practice between £1 200 and £1 500 p.a. in delightful part. No panel. Large residence (9 bedrooms etc.) garage and garden of four acres to rent or lease. Premium £1 800.

33 SURREY — Partnership in increasing middle class Town Practice of £2 300. Panel over 1 200. Modern detached corner house (5 bedrooms) garage and garden for sale. Partner should be 26-30 and have held Hospital appointments. Share of £1 000 p.a. at 2 years purchase.

34 N. OF ENGLAND — Partner required in increasing Practice in beautiful city. Receipts last year £5 000. Panel 4 000. Applicants should be proficient in minor surgery, anaesthetics and obstetrics. Share of three fifteenths at 2 years purchase.

35 LONDON, N.W. —Non-dispensing Practice over £950 p.a. in good residential district. No panel. Ten roomed house with garage and large garden. Rent £200 p.a. Premium £1 200.

36 N. MIDLANDS —Partnership in Practice, about £3 000 p.a. in country district near two important towns. Panel over 1 600. Small house (3 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one third share 2 years purchase.

37 EAST ANGLIA — Partnership in sound non-dispensing Practice of about £3 000 p.a. in favourite Seaside Resort. Partner should be a Varsity man about 30 years of age experienced in Medicine and Anaesthetics. Good up to date Hospital. Premium for one third share 2 years purchase.

38 S. WALES —Increasing Practice of £900 p.a. in pleasant Market Town. Panel 150. Well situated house (non-basement) with 3 bedrooms for sale. Cottage Hospital. Premium.

39 DURHAM —Practice of over £500 p.a. in residential and colliery district near large towns. Panel 370. Substantially built 9 roomed house for sale. Scope for increase.

40 NEW ZEALAND —NORTH ISLAND — Non-dispensing PRACTICE about £1 800 p.a. in first rate Town. Modern detached house (4 bedrooms etc.) garage and garden for sale. Equable climate. Good educational facilities. Premium only £1 250.

41 NORTH OF ENGLAND — Small Season PRACTICE in Inland Health Resort capable of increase by one practising all the year round. Receipts about £150. No panel or midwifery. House in own grounds with 6 bedrooms etc. Price—house and Practice—£1 250.

42 EAST ANGLIA —Partnership in Practice over £4 500 p.a. in beautiful country district, easy access of important town. Panel 3 000. Nice detached house (7 bedrooms) garage etc. garden and grounds of 10 acres for sale. Sport of most kinds. Considerable scope. Premium two-thirds or four-fifths share 2 years purchase.

43 KENT —Country Practice of over £800 p.a. in beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms) central heating, grounds of 2½ acres orchard etc. for sale. Sport. Premium 1½ years purchase.

44 S. OF ENGLAND —Partnership in Ophthalmic Practice about £1 300 p.a. in small but delightful resort. Considerable scope to one able to operate. Premium one-half share 1½ years purchase.

45 HOME COUNTIES —Partnership in exceptionally good and rapidly increasing Practice about £6 000 p.a. in delightfully situated Country Town, easy distance of coast. Attractive house (4 bedrooms) to rent. Partner must hold the F.R.C.S. and be aged about 30. Appointment on Hospital Staff. Premium for one sixth to one fourth share 2 years purchase. Preliminary Assistantship.

46 KENT — Country Practice of about £850 p.a. Panel 550. Good house and garden for sale. Prem. £1 100.

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See Supplement

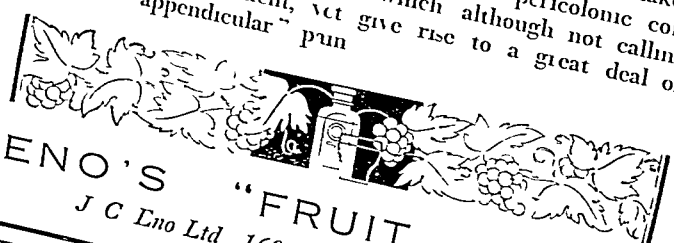


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British Medical Journal

CONTENTS

APRIL 9, 1932

ORIGINAL ARTICLES

Surgical Treatment of Diseases of the Gall bladder and Bile Ducts By R P Rowlands MS, F R C S 643

Duodenal Ulcer By H Seaward Morley M D M R C P (With Plate) 647

Excretion Urography By Reginald I Payne M B F R C S (With Plate) 649

Acute Necrosis of Liver with Epidemic Catarrhal Jaundice By G M Findlay M D and J I Dunlop M B (With Plate) 652

Silico Anthracosis Presenting Curious Bodies Similar to those in Asbestosis By W F Cook M D M R C P (With Plate) 656

Paroxysmal Tachycardia Associated with Pregnancy By David Fyfe Anderson M B 657

MEMORANDA

Haemostasis and the Radical Operation for Hydrocel By C Max Page M S F R C S 658

Unusual Bone Injury in a Child By W Hunter M B B S (With Plate) 658

Exophthalmic Goitre in a Child By T H Crozier M D (With Plate) 659

Pulmonary Embolus By Ian Fraser M Ch F R C S 659

REPORTS OF SOCIETIES

Royal Society of Medicine
After-effect of Toxaemias of Pregnancy 660

London Association of the Medical Women's Federation
Anal Canal in Normal Labour 660

Tuberculosis Association
Bronchoscopy and Drainage 661

Royal Academy of Medicine in Ireland Tuberculous Pericarditis 662

REVIEWS

The Art of Prognosis 662
Lay Diseases of Childhood 663
Orthopaedic Surgery 663
Lithuria in General Practice 664
Medical Mirrors 664
An Outline of Psychiatry 664
Child Hygiene 665
Notes on Books 665

MEDICO LEGAL

Industrial Medical Benefit 665

LEADING ARTICLES

1832 1932 666

Drugs in General and in Particular 666

Treatment of Hyperpiesia 667

THE WEEK

Intracardiac Adrenaline 668
The Literature on Cancer 669
Health of the Navy 669
Goethe's Medical History 670
Mosquito and Aeroplanes 670
[illegible] 670
Diphtheria 671
Congress 671

GENERAL ARTICLES AND NEWS

The First Hundred Years Notes on the Association's History 672

A Survey of Tuberculosis Dr Mac Naught's Report 675

Treatment of Infantile Paralysis Experiences in Melbourn 676

Preparations and Appliances 665

Medical News 691

LOCAL NEWS

Ireland—
Public Health Congress in Belfast 677
Mental Diseases in Ireland 677
Clean Milk Legislation 678

Scotland—
Glasgow Health Services 678
Glasgow Cancer Hospital 679
Edinburgh Post-Graduate Courses 678
Falkirk Royal Infirmary 679

England and Wales—
Leeds General Infirmary 679
Royal Free Hospital New Physical Medicine Department 680

THE SERVICES

Auxiliary R A M C Funds 687
Deaths in the Services 687
(For List of Military and Air Force Appointments see Supplement)

OBITUARY

G M Robertson M D F R C P Ed (With Portrait) 688
William Gardner M R C S 689
Purkiss Parker F R C S (With Portrait) 690
Howard Distin M B 690

UNIVERSITIES AND COLLEGES

[illegible] 691
[illegible] 691
[illegible] and 691
[illegible] of Ireland 691

CORRESPONDENCE

The Student in Irons By H Crichton Miller, M D 680

Road Traffic Signals By N Bishop Harman F R C S 682

Lactic Acid in the Gastric Contents By E C Dodds M D and J D Robertson M D 682

The Chronic Pelvic Woman By James Young M D 683

Mobility By E J [illegible] 684

Fracture Jones, F R C S 684

Colporrhaphy and Prolapse By E Hesketh Roberts F R C S Ed 684

Aetiology of Cancer By W E Gye M D 685

Diet and Dental Disease By D M Paine and J M Campbell L D S 685

Aluminium and Health By Lachlan Grant M D and Coram James M R C S 686

Indian Medical Service Pension By Sir T H Symons Major General I M S (ret) 686

Pathological Service of the L C C By Sir E [illegible] 686

Preparation Arthur and C A Allin M B 687

LETTERS AND ANSWERS

Varicose Veins Oedema after Treatment 692
Income Tax 692
Chloroform and the Edinburgh School 692
Four of German Mental Hospitals 692
Aircraft Wreckage Air Ministry's Appeal 692

Vacancies 692

(See also page 131 of Supplement)

The SUPPLEMENT contains
Centenary Meeting London Provisional Programme and Time Table

Status and Remuneration of Anaesthetists

Current Notes
[illegible]
Sp
[illegible]

National Health Insurance
London Panel Committee

Association Notices Vacancies and Appointments Diary

An Open Letter to Non-Members
Form of Application for Membership

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible classes will for the most part be found on the pages indicated

Advertisements of the following

PUBLISHERS

Appleton D & Co
Th Practitioners Library 11

Bailliere Tindall & Cox
10
11
10
10
and Their Enzymes 10
I well & Kanntze—Tropical Fever 10
Komilow A F—Birth Control 10

Bale Sons & Danielsson Ltd
19
Birdwood C T—Inte Natal Ad vice to the Expectant Mother 19
19
19
19
Clinical Surgical Diagnosis 19
Dingwall E J—Artificial Cranial Deformation 19
Dugdale J N—
Health in Hot Climates 19
19
19
19
19
19
19
Hunter R H—Anatomy 19
Neath & Stonham—A Manual of Homoeo Therapeutics 19
Parry I A—Criminal Abortion 19
19
19
19
19
Sorsby M—Cancer and Race 19
Spencer H R—
Cle ance Section 19
History of British Midwifery 19
Storer R A—Sex and Disease 19
Von Ren A R—Di of Newborn 19
Ward E—
General Practice 19
Medical Adventure 19

Cassell & Co Ltd
4
4
4
4
4
4
of
ry 5
Hawk & Barnim—Physiol Chem 5
Illingworth & Dick—Surg Pathol 5
Medical Directory 1932 5
Newman C—Med Emergencies 5
Lin & Wyard—Clinical Atlas 5
Recent Advance Series 5
Yellowlees H—Psychol Medicine 5

Heinemann W Ltd
McDowall R J S—The Science of
Mar 15
15
15

Kimpton H
Bertwistle A P—
Atlas of Radiography 7
Dub E Lee W S—Ophthalmology 7
Gow H Clinical Dietetics 7
Gifford S R Ophthalmic Therapeutics 7
Sinclair I—Diseases of the Skin 7
Traquair H M—Clinical Psychiatry

Saunders W B Co Ltd
Veterinary Secretary of Animal 3
Trinity & Canterbury—
Bacteriology 3
Wesbrook & Conklin Anatomy 3

Lewis H K & Co Ltd
Blacklock & Southwell's Guide to
D 8
8
8
8
8
Minor Surgery 8
Tilley A C T—
Chronic Arthritis 8
Internal Derangements of the Knee Joint 8
8
8
8
Pillsbury H C—United States Army X Ray Manual 8
Reis Affections of the Eye 8
Spencer & Cade—Diseases of the Tongue 8
Stitt E R
Practice 8
Diseases 8
8
8
8
Sykes Manual of Medical Practice 8
White R P—Affections of the Skin 8

Lippincott J B Co
Davis G C—Applied Anatomy 12
Hertzler A—Surgical Pathology 12
Kirschner M—Operative Surgery 12
Spaltholz Hand Atlas of Human Anatomy 12
Thorek M—Surgical Errors 12
Wilson & Cochrane—Fractures etc 12

Livingstone E & S
Anderson J—How to Stain the Nervous System 9
Bourne G—Intro to Med History 9
Camp
Clem
Cochr
Consul
Core
Cu
Curr
Delafi
Fine
in Man 9
Gardiner P—Skin Diseases 9
Glaister J—Medical Jurisprudence 9
Guy & Linklater—
Hygiene for Nurses 9
Haultain & Fahmy—
An 9
9
9
9
X Ray Atlas 9
Maclean & McCartney—
P 9
9
9
9
9
9
9
9
St wart & Dunlop—Clin Chemistry 9
Syme W S—Diseases of the Nose etc 9
The Cataract in Senility 9
Underwood L A—A Manual of Tuberculosis for Nurses 9
Watson & Mellanby—Histology 9
9
9
9
9

Murray John
Hallibur ton & McDowall—
Physiology 16
Simson P—Old Doctors 16

Oxford University Press
Darrach W—Encephalitis 6
Dunlap I I—Manual of Roentgenology 6
Henderson & Gillespie—Psychiatry 6
Muir & Ritchie—
Manual of Bacteriology 6

Wright & Sons Ltd
Medical Annual 1932 14

The Physical Science Ar lication 16
The Practitioner 13

ASSURANCE COMPANIES—
London Medical Protection Society 1
Medical Insurance Agency 84
Medical Sickness Annuity etc 48

BRASS NAME PLATES &c—
Cook Name Plates 16
F 16
L 64
C 67

CHEMISTS &c—
Allen & Hanburys Ltd—
Dextrin Maltose 43
Inulin A B 43
Isogel Granules 66
Andrews Liver Salt 53
Anglo French Drug Co Ltd—
Brith Drug Houses Ltd—
Acriflavine B D 33
Inulin A B 43
Radiostol 31
Burroughs Wellcome & Co—
Liver Extract 45
Coate & Cooper—Dimalphamin 23
Continental Lab Ltd—
Botol 5
Tasol 40
Crumbie Ltd—Odol 47
Denver Chemical Mfg Co—
Antiphlogistine 51
P 56
61
66
1
44
55
67
42
52
29
Kaylene Ltd—Kaylene oil 23
Laboratory Nativelle Ltd—
Digitaline 62
Martindale W—
Sterule 41
Matthew Lab Ltd—Sterilla 16
May & Baker Ltd—
Soneryl 31
Mond Stafford hire Refining Co—
Monol 33
Newbery & Sons Ltd—
Arsenol Cover iii
Alka Zime 58
Parke Davis & Co—
Ventriculin Cover iv
Pharmaceutical Corporation Ltd—
Novatox 30
Stechalin Corporation Ltd—
Novocain & Glucose 52
Sharp & Dohme Ltd—
61

DEBT COLLECTION—
British Medical Protection Society 65

FOOD PREPARATIONS—
30
4
57
46
35
50
Harden Bro & Lindsay Ltd—
Doctor's China Tea 1
Horlick's Malted Milk 51
Keen Robinson & Co Ltd—
Patent Barley 22
Mellin's Food 54
Nestlé & Anglo Swiss Condensed Milk Co
Lactogen 52
Sumner Hygienic Tea 57
Valentine's Meat Juice 59

HOSPITAL &c FURNITURE—
Furniture, &c Depository Ltd—
Second hand Furniture 64

PRINTING & STATIONERY—
Barnicott Barnett Typewriters 67
Bridge & Co—Printers 6
Hamilton—Medical Stationery 67
Strong Morgan Bottle Funnel &c 16
Taylor Typewriters 67

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
ALL APPOINTMENTS 9

HOSPITAL &c VACANCIES—
All Saints Infirmary 87
British Hospital for Mental Disorders &
Manchester Royal Children's Hospital 77
Manchester Royal Infirmary 83
Manchester St Mary's Hospital 83
Middlesbrough County Hospital 77
Miller General Hospital S E 1 83
Mirfield General Hospital 83
Nettleship Hospital for Sick Children 77
Newport, Royal Gwent Hospital 79
Oldham Royal Infirmary 77
Portsmouth Royal Hospital 83
Reading Royal Berkshire Hospital 83
Rochdale Infirmary & Dispensary 83
Royal Eye Hospital W C 1 83
Royal Free Hospital W C 1 83
Royal Northern Hospital N 7 77
Royal Hospital of St Cross 77
Ruyton Hospital for County Asylum 83
Ryde Royal I O W County Hospital 83
St John Hospital S E 13 83
Salford City 83
Salvation Army Mothers' Hospital 77
Sheffield Jessop Hospital for Women 77
Sheffield Royal Hospital 83
Southport General Infirmary 83
Sunderland Royal Infirmary 83
Sutton & Cheam Hospital 83
Warneford General Hospital 63
York Bootham Park Medical Hospital

BATHS SPAS &c—
Baden Baden 1
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Llandrindod Wells Pavilion 4
Matlock
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For completion of Index to Advertisements see page 14

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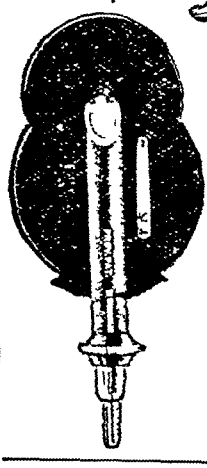
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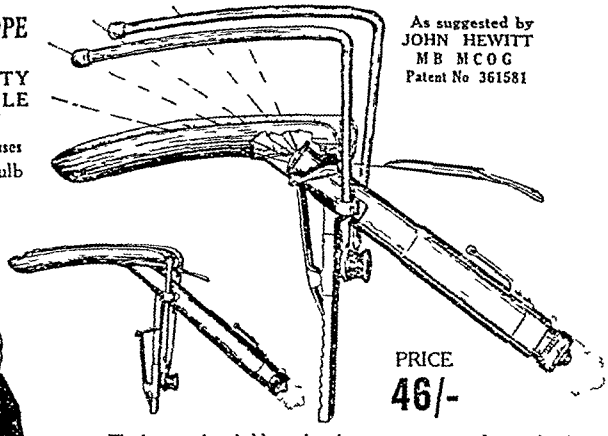
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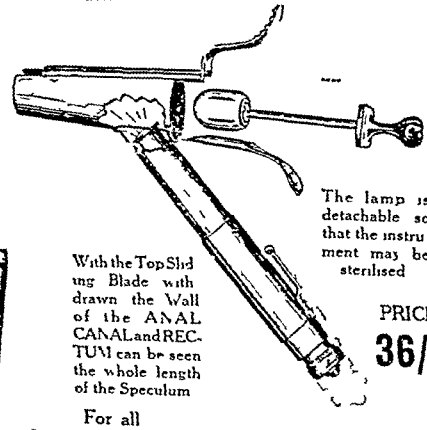
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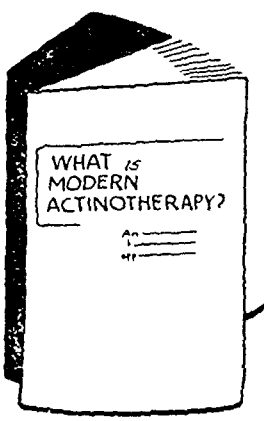
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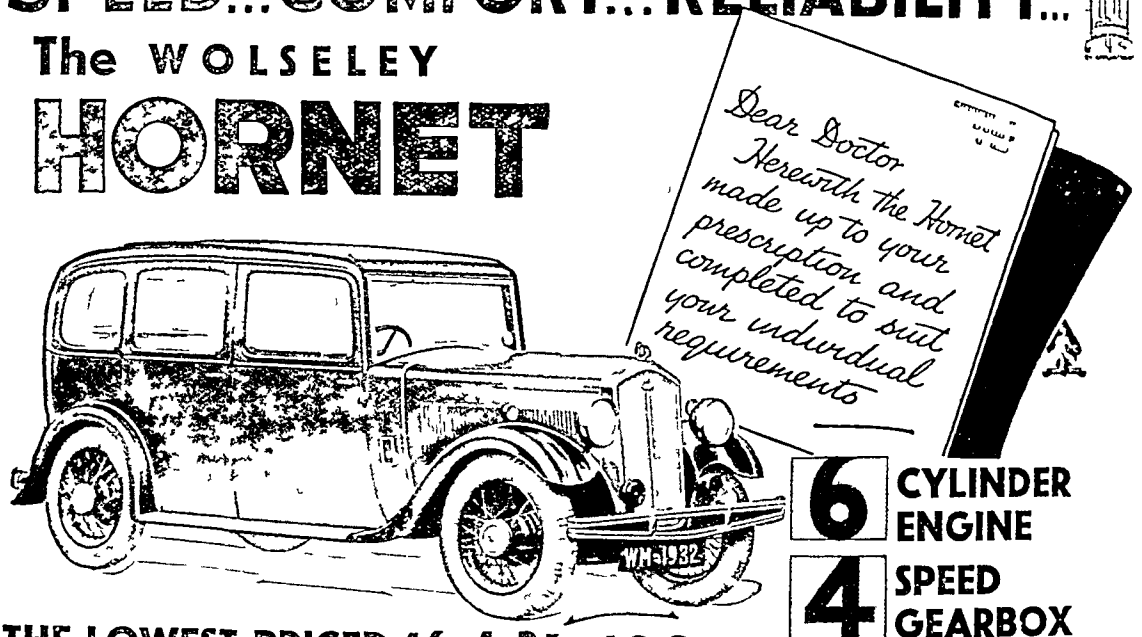
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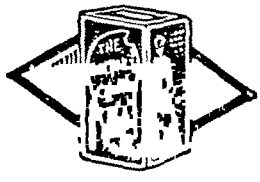
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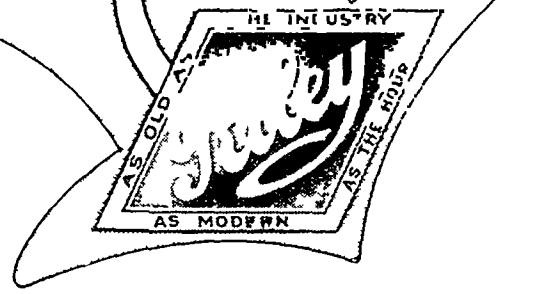
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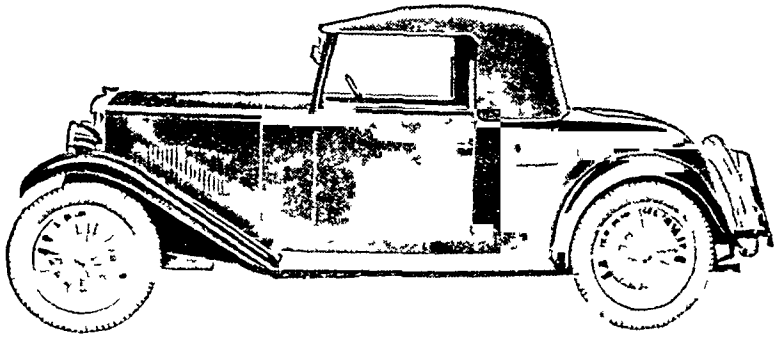


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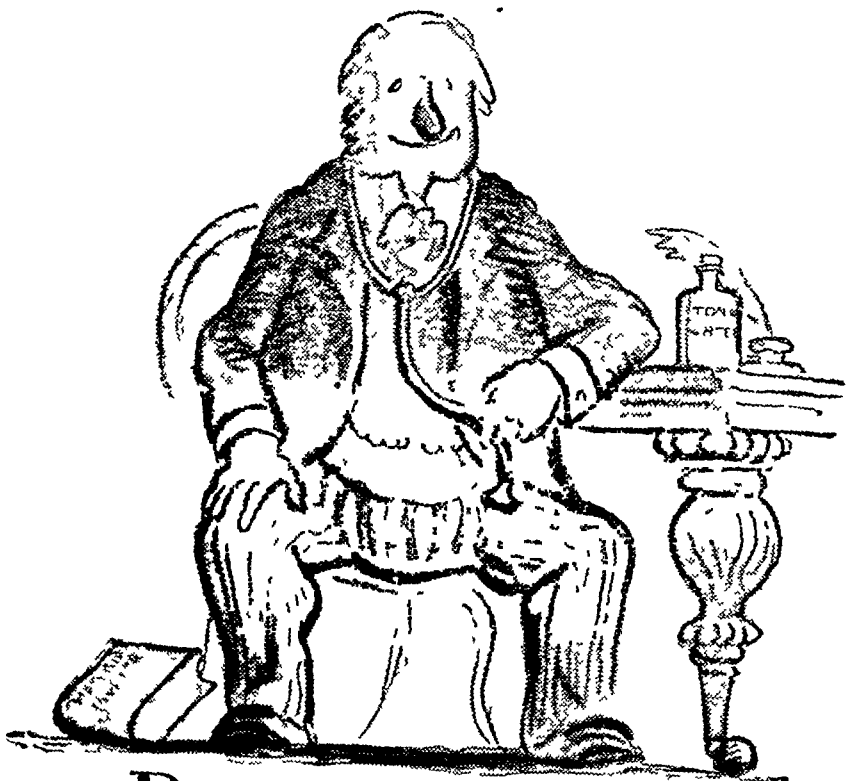
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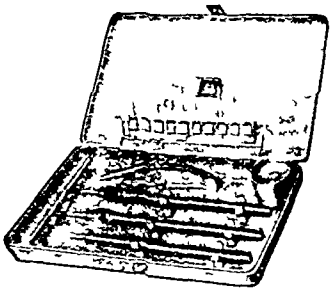
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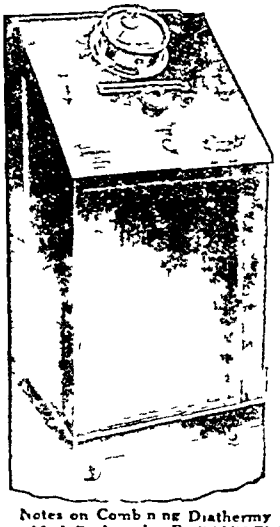
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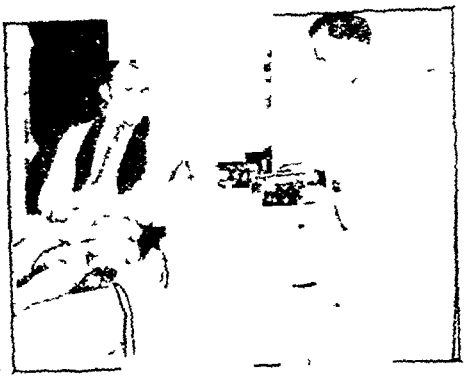
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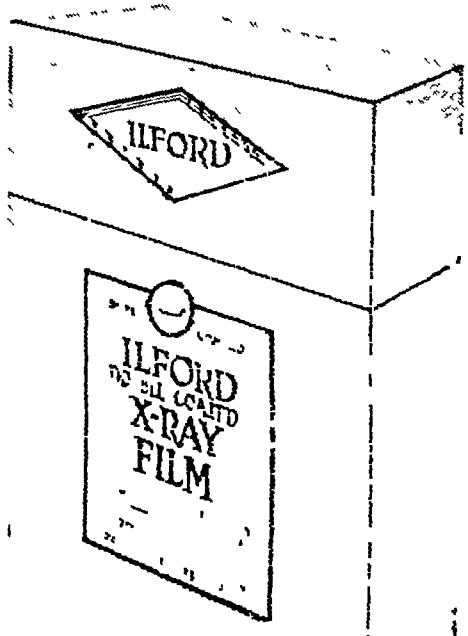
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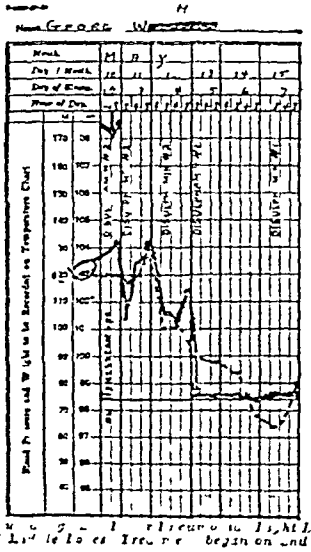
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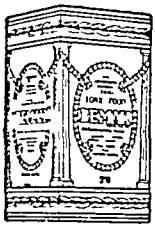
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Partial deficiency of Vitamin B is more common than was realised until conclusive researches demonstrated its wide incidence It may be suspected wherever there is a derangement of the Gastro-intestinal function, Nervous Debility, Neurasthenia, Rheumatism, and, especially in children, impairment of growth, Anorexia, and lowered resistance to infection

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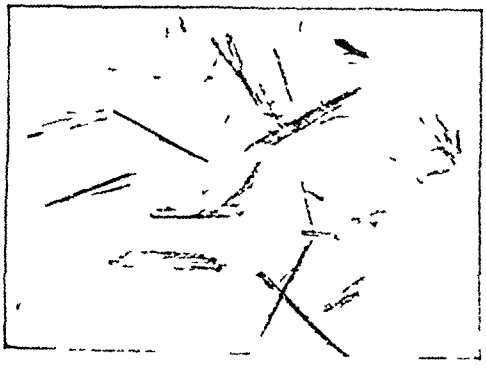
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Recent reports demonstrate the importance of precision in dosage in Vitamin D therapy by the employment of Radiostol preparations this precision in dosage is always assured

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THE BRITISH DRUG HOUSES LTD. LONDON N-1 Rs/141

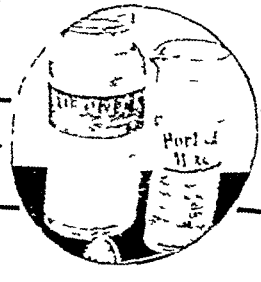
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It is a common observation that many infants who unfortunately must be artificially fed do not tolerate or thrive on ordinary modifications of cows milk In some cases this is due to impaired digestion, and in others to errors in metabolism For all such cases Horlicks Malted milk—made from pure full-cream cows milk and the nutritive extracts of malted barley and wheat—may be confidently recommended

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Carbohydrate content as in Breast Milk

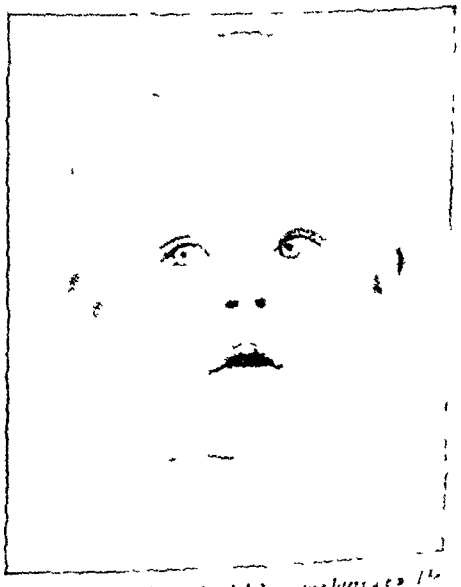
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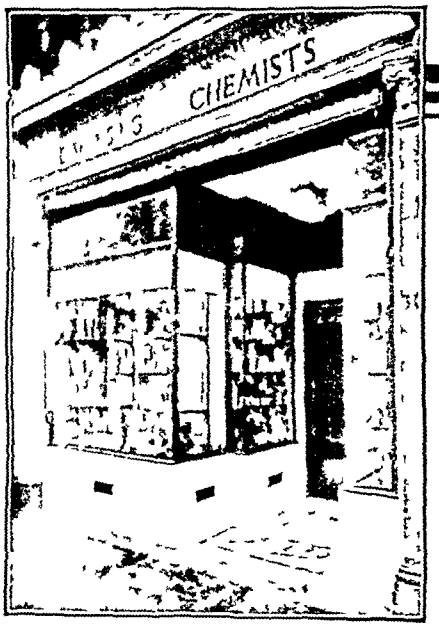
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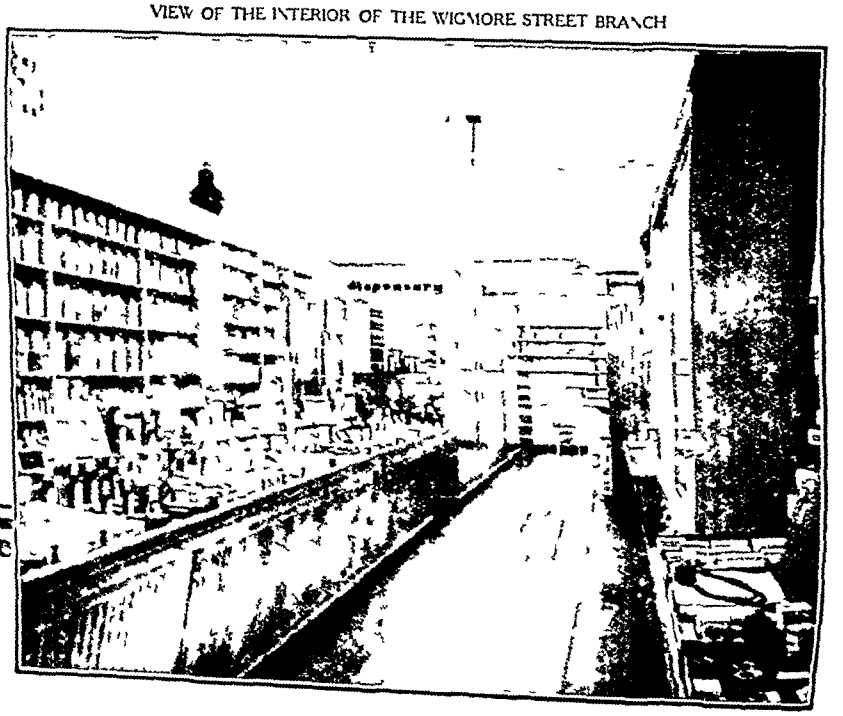
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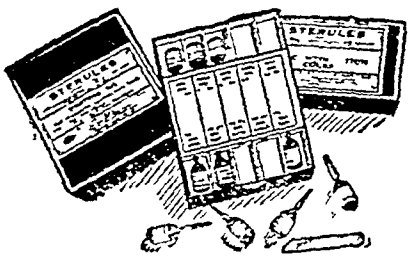
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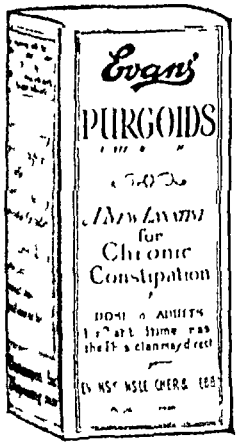
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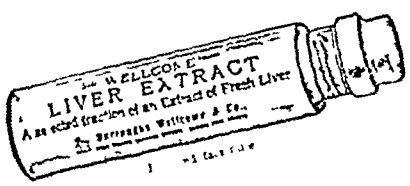
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Date A D 966—1025. First independent monarchy of Poland.

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Supplied in bottles of 50 tablets

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Some Points in THE SURGICAL TREATMENT OF DISEASES OF THE GALL-BLADDER AND BILE DUCTS*

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I believe that nearly all the diseases of the biliary tract are directly or indirectly due to blood borne infections causing cholecystitis with the consequent deposition of gall stones in the gall bladder, where the bile becomes so greatly concentrated. It is acknowledged that the gall bladder is the only considerable factory for the formation of gall stones which rarely form elsewhere. We have reason to believe that mankind has suffered from cholelithiasis from time immemorial, as is well illustrated by the recent discovery of gall stones in Egyptian mummies which can be seen at the Royal College of Surgeons. It is sad to think of the terrible pain and suffering which gall stones have caused men and women throughout the ages. Medicine had little to offer beyond imperfect relief of pain by sedatives. As late as 1890 a distinguished physician seriously advocated massage as a means of expelling stones through the bile ducts into the duodenum. Nature occasionally succeeded in getting rid of stones but with a high mortality and long suffering, for Nature is a poor substitute for modern surgery.

Early Operations on Gall Bladder

Although Petit suggested cholecystotomy in 1733 the operation was not actually performed until 1867. In that memorable year Lister published his epoch making discoveries which gave birth to modern surgery, and made him the greatest benefactor of the human race. Before his time surgery could not safely interfere beyond opening abscesses or slitting sinuses for the extraction of stray stones. A little more than fifty years ago a few surgeons adopted Lister's methods and ventured to embark upon pioneer work in the upper abdomen, but for a long time few dared to trespass beyond the gall bladder, from which they were content to remove stones with or without drainage—cholecystostomy or cholecystotomy. In 1882 Lane, who first successfully removed the gall bladder, but by 1890 only forty-seven cholecystectomies had been recorded.

Surgery of the bile ducts was naturally of slower development, although choledochotomy was first successfully performed in 1889 by Knowsley Thornton. Since then, and especially during the present century, aseptic and technical improvements have made surgery so comparatively safe that operations upon the biliary tract have multiplied with great rapidity. In fact there is now reason to fear that too many operations may be performed and too many gall bladders drained or removed [illegible] by the trained operator. Let us not rush at the [illegible] of the gall bladder, the surgery of the gall [illegible] into the [illegible] which has only attached itself [illegible] operation, [illegible] and cholecystectomy. We [illegible] that the [illegible] great success of [illegible] and bile ducts carried [illegible] by those who [illegible] to try the [illegible] in the difficult [illegible] which [illegible] scrupulous [illegible] Many [illegible] learn [illegible] careful [illegible] and patient [illegible] of the bile apparatus and especially the important and confusing changes in the surrounding tissues produced by inflammation. But the perfect skill and judgement which can save a surgeon from the pitfalls that beset his path can only be attained by watching, assisting and operating under the supervision and encouragement of a master in this special branch of surgery. Thus with perfect training and greater care we ought to see and hear less of those injuries to the bile ducts which demand difficult reconstructive operations. Here prevention is far better than cure.

Diagnostic Methods

Many advances have been made in recent years in the diagnosis of cholecystitis and gall stones. If it be true that about 10 per cent. of the population have gall stones and many more have cholecystitis there are plenty of opportunities of testing both old and new methods. As usual there is some danger of forgetting the old and relying too much on the new. A careful and repeated study of the history, symptoms and clinical signs is still valuable and indispensable. These are so characteristic that they generally lead us to correct conclusions which may however need confirmation by cholecystography. Simple radiography shows the shadows of some opaque gall stones and of thick walled or calcified gall bladders. With the aid of the opaque meal it may indicate that a distended or retracted gall bladder is pressing or dragging upon the duodenum, stomach or colon.

Cholecystography is a great advance and often reveals cholecystitis or small non-opaque gall stones. It is particularly useful in showing obstruction of the cystic duct. It is invaluable in the differential diagnosis of diseases of the gall bladder from those of the alimentary and urinary tracts. Above all it often gives the patient that confidence in the diagnosis which he desires before consenting to operation. The discovery of pathological changes in the bile obtained through the duodenal tube sometimes helps materially in the diagnosis of difficult cases.

Differential Diagnosis

In passing I may mention here some of the difficulties that may be met with in the differential diagnosis.

Severe acute inflammation of the gall bladder, perhaps with perforation, may be *mistaken for perforated duodenal or gastric ulcer* or acute pancreatitis. The gall bladder is not always palpable and recognizable as such in these cases; it may be high up or far back in the right loin. Sometimes it is so low as to be *mistaken for appendicitis* with abscess. When there is grave doubt it is safer to explore without delay. Large renal swellings, especially hydro- or pyonephrosis, may be dull in front and thus mistaken for a distended gall bladder. Hydatid cyst projecting from the under surface of the liver from the kidney or from the pancreas may also be mistaken for a distended gall bladder. In one case I mistook an enlarged gummatous pedunculated accessory lobe of the liver for the gall bladder. An enlarged adherent gall bladder has been mistaken for inoperable cancer or ulcer of the stomach and vice versâ.

In most of these cases the symptoms and particularly the radiographic findings are invaluable. Cholecystitis with or without small gall stones is constantly confused with duodenal ulcer and even now, with all the help we can get from clinical, radiographic and chemical examinations, we sometimes have to explore the abdomen before we can complete the diagnosis and cure the patient.

I have a middle-aged man now at Guy's who had been confidently treated for duodenal ulcer for many years. There was a definite history of severe haematemesis and melaena, and the radiographic and chemical examinations confirmed the diagnosis. At the operation there was no

sign of any ulcer anywhere but an enlarged, slightly thickened kinked gall bladder was found and removed Very small black stones were then found in the gall-bladder and cystic duct Another difficult case may be mentioned in which cholecystitis with gall stones was mistaken for duodenal ulcer

Illustrative Case

A man aged 50 years first seen by me in May 1926 gave a history of a severe attack of enteric in 1903 For the last twelve years he had had attacks of indigestion of the duodenal type and was seen by several distinguished physicians who all suspected a duodenal ulcer He had been x rayed several times but neither the radiogram nor the screen examinations ever showed an ulcer Two years ago he saw another physician who found marked hyperchlorhydria An *x* ray examination then showed some defective filling of the duodenal cap Cholecystography was not tried The patient was sent to bed on a duodenal ulcer diet and he did well putting on half a stone in weight

At 9 p m on May 20th 1926 he was seized with very severe pain in the right hypochondrium In spite of morphine this became much worse about 5 o clock the next morning Perforation of the duodenum with local extravasation was feared I saw him at 8 30 a m the same day and could then just feel the fundus of an enlarged gall bladder The diagnosis of acute cholecystitis was then clear whether a duodenal ulcer was present or not After the attack had subsided the gall bladder was removed There was no evidence of a duodenal ulcer The gall bladder was thick walled inflamed and full of stones one of them impacted in the cystic duct There was no evidence of any stone in or obstruction of the common bile duct The appendix which was adherent to the left side of the brim of the pelvis from old inflammation was removed Complete recovery followed

Comment —This case is interesting because the patient a very observant doctor thought for many years that he had a duodenal ulcer and the many physicians who saw him agreed and yet the history was to my mind more suggestive of intermittent attacks of obstruction of the cystic duct with the dyspepsia that so often accompanies cholecystitis The pain was severe came on suddenly and capriciously at any time (especially during exercise) and ceased just as suddenly Sometimes it interrupted a game of golf but after a short rest the patient was able to finish the round Vomiting frequently brought relief Neither haematemesis nor melaena had ever been observed occult blood in the stools had never been found On one occasion only was there defective filling of the duodenal cap and that was probably due to reflex spasm

An operation which was the only means of curing this patient was deferred for many years owing to an impression that he was suffering from a duodenal ulcer and because the patient preferred medical to surgical treatment

CHOLELITHIASIS AND JAUNDICE

Patients and even medical men still have a difficulty in accepting the diagnosis of gall stones unless there is history of jaundice But we know that jaundice is a late and rare sign of gall stones not to be expected when the disease is limited to the gall bladder and cystic duct and often absent even when stones lie in the common bile duct for years They may not obstruct the bile for a sufficient length of time to cause jaundice

Biliary colic without jaundice is often mistaken for right renal colic but the site and distribution of pain and tenderness are very different in the two cases Biliary colic with jaundice is not always due to stone in the common duct it may be caused by other things such as blood clot daughter cysts or papillary growth inside the duct A roundworm may ascend the bile ducts and cause jaundice and even acute necrosis of the pancreas

The exact cause of chronic jaundice without history of colic is often difficult to ascertain The essential thing to decide is whether an operation can or cannot be expected to cure or relieve it Hence it is important to find out if the gall-bladder is enlarged and can be drained into the stomach so that jaundice itching anorexia and wasting may be corrected and life prolonged and made more tolerable When there is neither history of colic nor palpable enlargement of the gall bladder an operation is not hopeful The jaundice may be due to cirrhosis or carcinoma of the liver obstructing the smaller ducts or it may be caused by cancer obstructing the common hepatic duct

It is well known that the gall bladder is enlarged in all cases of obstruction of the common bile duct except stone—Courvoisier's law Usually this law is reliable but occasionally the gall bladder is enlarged when a stone in the common bile duct is the cause of jaundice for there may be coincident obstruction of the cystic duct

INDICATIONS FOR OPERATION

Obstruction of the Cystic Duct —This is indicated by attacks of biliary colic with tenderness and rigidity in the right hypochondrium and often a palpable gall bladder during or after the attack Failure to fill the gall bladder with dye is very strong evidence of obstruction of the cystic duct

Recurrent or Persistent Irritation and Infection of Gall bladder —This is indicated by chronic flatulent dyspepsia pain and tenderness over the gall bladder referred to the lower angle of the right scapula Cholecystographic evidence of defective filling concentration and emptying or of stones in the gall bladder is of great and increasing assistance

Obstruction of Common Bile Duct —This is evidenced by (1) recurrent attacks of biliary colic with moderate jaundice (these nearly always indicate calculous obstruction and it is unfortunate that the x ray films very rarely show stones in the common duct) and (2) increasing and persistent chronic jaundice with enlargement of the gall bladder This latter is generally due to chronic pancreatitis or carcinoma of the head of the pancreas or common bile duct but is sometimes caused by stone in the duct Here great care must be taken to exclude other causes of jaundice such as cirrhosis or malignant disease of the liver acute yellow atrophy and other forms of toxic jaundice for which an operation is strongly contraindicated

Stones without Symptoms —It ought to be evident that the mere demonstration of gall stones in the gall bladder is not a sufficient indication for operation They are very common and in many they cause no appreciable discomfort or only such as can be readily relieved by medical treatment but when symptoms of cholecystitis or of gall stones recur or persist in spite of medical treatment it is wise to recommend early operation in order to prevent a high mortality and other serious consequences of delay It is well to remember that in spite of the extravagant claims of quacks we have no medical means of dissolving or of evacuating gall stones although some of them may sometimes pass spontaneously along the ducts or escape through fistulae into the bowel

TREATMENT OF THE ACUTE ATTACK

As a good general rule it is wise not to operate during an acute attack of colic jaundice or fever It is better and safer to wait for a quiet interval during which to investigate and to prepare the patient very carefully Later a more radical operation can be performed

Fortunately the acute symptoms usually subside under complete rest and careful medical treatment for unlike the appendix the gall bladder and bile ducts rarely set up jaundice peritonitis. It is true that occasionally the acute symptoms do not abate but get worse and demand emergency operation. Usually these should be limited to drainage of the gall bladder or common bile duct. Radical operations can if necessary be carried out later when the patient is better the liver functions are restored and pus has subsided.

It is a great mistake to let many recurrences take place to allow time for dangerous complications to develop, or the general health to become seriously depreciated. Too long watching and waiting, and relying upon drugs and dieting for the relief of symptoms inevitably leads to much suffering and a greatly increased mortality from delayed operation.

Consequences of Delay

Some of these are (1) gangrene suppuration and perforation of the gall bladder with local or even diffuse peritonitis pylephlebitis, septicaemia and multiple arthritis (2) extension of the disease to the common bile duct with jaundice infective or suppurative cholangitis with risks of haemorrhage and cholaemia (3) extension to the pancreas causing either acute haemorrhage or chronic pancreatitis with or without jaundice (4) intestinal obstruction by gall stones ulcerating through into the duodenum or colon (5) adenoma papilloma and cancer from chronic irritation of the gall bladder and bile ducts (6) cardiac degeneration from chronic septic absorption (the damaged heart is often restored by removal of a septic gall bladder) (7) cerebral toxaemia from the same cause may induce mental confusion depression and even insanity which are sometimes overcome by removing the septic source of poisoning.

Preliminary Treatment

Much has been done in recent years to make operations safer by improving the preparation of patients and this applies particularly to the surgery of the bile ducts which is beset with special dangers.

The patient is kept at rest preferably in bed for several days and dieted the bowels are regulated and the colon is washed out at least eight hours before the operation. Plenty of sugar and sodium bicarbonate are given by the mouth 5 per cent glucose in normal saline is given by the rectum or even intravenously in all bad cases where failure of the liver functions is feared. Hexamine is given as a urinary antiseptic. All septic sores in the mouth nose and throat are treated in time to lessen the risk of pulmonary complications. When the patient is jaundiced and clotting of the blood is delayed 1 c.c. of a 10 per cent solution of calcium chloride is injected intravenously for two or three days before the operation. Sometimes it is more convenient to give the calcium chloride intramuscularly—1 grain is diluted in 10 minims of water and kept in a sterile ampoule ready for injection every day. If this fails to [illegible] the normal or if there is marked [illegible] one or more transfusions of blood [illegible] with great advantage.

The Anaesthetic

[illegible] the patient's [illegible] owing to its [illegible] and liver. A large dose of 1/4 grain [illegible] 1/100 grain of [illegible] given [illegible] [illegible] and extension [illegible] [illegible] but this [illegible] anaesthesia.

The Operation

I find that Kocher's incision which divides the whole width of the rectus muscle and its sheath one inch below the right costal margin gives by far the best access for cholecystectomy especially in fat and muscular patients. It makes a difficult operation much easier and safer because it gives a splendid view for what may prove a difficult and dangerous dissection among the important blood vessels and bile ducts near the portal fissure. It is easy to close and is rarely followed by ventral hernia although it allows free drainage at its outer angle. It does not rob the rectus of an adequate nerve supply. For exposing the common duct in late cases of jaundice I choose a right paramedian epigastric incision which gives the best access to the lower part of the common bile duct with very little haemorrhage from the parietes.

The abdomen having been opened the surgeon rapidly but carefully explores so that he may discover and remove any source of sepsis. It is generally wise to remove the appendix which is often affected at the same time. The gall bladder and bile ducts are examined with special care so that no stone or disease is overlooked. Stones may rest in the common bile duct for years without causing jaundice. When the common bile duct is dilated it must be carefully palpated from end to end and sometimes it is necessary to open it and to pass a large probe through into the duodenum in order to be quite certain that no obstruction is missed.

It is fairly easy to recognize gross disease of the gall-bladder but slight yet important abnormalities can be easily passed over. It is well to look for the following indications of disease adhesions between the gall bladder and the parietes duodenum colon or omentum abnormalities of size and shape (intermittent obstruction often causes enlargement while chronic inflammation generally induces contraction) thickening with change of colour to pink or grey small stones often difficult to feel even after the bile has been squeezed out of the gall bladder (it is especially difficult to feel very small stones in the convoluted cystic duct which is only one tenth of an inch in diameter) white spots indicating cholesterosis or strawberry gall bladder an excess of fat in the wall of the gall bladder enlargement of the sentinel lymphatic gland near the cystic duct (especially important) and often of the glands upon the common bile duct and finally evidence of hepatitis and of perihepatitis—especially of subcapsular fibrosis near the gall bladder.

I am particularly interested in kinks bands adhesions and deformities at the neck of the gall bladder, which may be concealed by their peritoneal coverings. The junction of the gall bladder and cystic duct often gets kinked making a valve similar to the one so often causing hydronephrosis. The pavilion then dilates and becomes a backwater for stasis. A long pedunculated gall bladder is apt to twist and to obstruct its neck resulting in colic inflammation or even gangrene. All these cause stasis of bile in the gall bladder and may lead to over concentration cholecystitis and the deposition of gall stones.

Adenoma of the gall bladder is a fairly common result or cause of chronic inflammation. It is generally seen at the fundus but I have seen it at other parts—in one case at the neck resembling a miniature obstructive enlarged prostate. In another a polypoid adenoma caused intermittent obstruction of the orifice of the cystic duct. Cancer of the gall bladder is estimated to complicate over 5 per cent of all cases of gall stones. The danger of this is greater than that of an operation for gall stones.

In conclusion I think that if the clinical evidence is fairly convincing it is wise to remove the gall bladder while it is exposed for we can easily overlook evidence of small stones cholesterosis or intermittent obstruction of the cystic duct.

CHOICE OF OPERATION AFTER EXPOSURE OF PARTS

Disease Limited to Gall bladder and Cystic Duct—In this case the choice lies between cholecystectomy and cholecystostomy. It is the ideal of the surgeon to operate while the disease is limited to the gall bladder and cystic duct so that he can eradicate it. Fortunately the gall-bladder is not indispensable although it has been shown to have several interesting functions. Certain animals such as the horse the deer and the rat have no gall bladder and thousands of human beings who have had it removed get on well without it. Skilful excision in suitable cases carries little risk therefore we need not hesitate to remove it when this is necessary and the common bile duct is not obstructed. Removal is far better than drainage for the following reasons: (1) Drainage rarely cures cholecystitis because the infection lurks deeply in the walls of the gall bladder. (2) A diseased gall bladder being the chief factory of gall stones is better removed to prevent recurrence. (3) It is extremely difficult to make sure of getting rid of all the stones from the cystic duct and the gall bladder. It is often easier cleaner and therefore safer to take away the gall bladder and cystic duct without opening them. (4) Excision of the gall-bladder may get rid of an unsuspected early cancer or precancerous condition the results of such operations are extremely favourable. I have several patients living and well many years afterwards but it is usually too late to cure a cancer of the gall bladder which has been recognized before the abdomen has been opened.

The chief indications for cholecystectomy are irreparable wounds and injuries or diseases limited to the gall bladder and its duct. The most important of these diseases are acute chronic and recurrent cholecystitis especially when associated with gall stones typhoid infection making a patient a typhoid carrier gangrene perforation empyema and hydrops or mucous fistula of the gall bladder due to obstruction of the cystic duct by stone torsion kink band or stricture fibroma adenoma papilloma and carcinoma and biliary fistula and chronic jaundice due to kinking of the common bile duct following cholecystostomy.

If every gall bladder is carefully examined after removal I believe that more new growths will be discovered. Many of the adenomata which I have excised contained small black septic stones. I think these adenomata have a very important bearing upon stone and cancer formation.

It is not wise to undertake cholecystectomy when the patient is very ill old and feeble or when the mechanical difficulties and danger of the operation are too great. Cholecystostomy is safer in such circumstances care being taken to remove all the stones if possible. If the symptoms recur secondary cholecystectomy can be performed in more favourable circumstances.

With Spread of Disease to Common Bile Duct—The extent of operation in these bad cases depends on the general condition and age of the patient the duration of jaundice the amount of infection of the bile ducts the degree of deterioration of the liver functions and the state of the pancreas. In grave cases all that is urgently required is choledochotomy with drainage of the common bile duct. This will probably rescue the patient from the perils of cholaemia and sepsis and allow a more radical operation to be done if necessary when the patient is better. In less grave cases the stones may also be taken out of the gall bladder by cholecystostomy. In favourable cases the gall bladder may be excised but this should not be attempted when there is chronic jaundice (with consequent risk of uncontrollable haemorrhage) unless the normal coagulation time has been restored by treatment or when there is infective or suppurative cholangitis or hepatic insufficiency. Cholecystectomy should never be performed unless it is certain that the common bile duct is patent.

OPERATIVE RESULTS

The results of operations upon the gall bladder and bile ducts performed by good and specially trained surgeons are very satisfactory and compare favourably with those obtained in any other branch of surgery.

Mortality

The death rate is surprisingly low considering the complicated nature and difficulties of these operations. My results during the last twenty years are as follows: The mortality in 434 cholecystectomies was 1·6 per cent. in 116 cholecystostomies 18 per cent. and in 116 choledochotomies 12 per cent.

The death rate of cholecystostomy is much higher than that of cholecystectomy because this operation is generally reserved for bad and late cases. Similarly the mortality of choledochotomy is naturally high, because the patients requiring it are often bad subjects who have suffered for many years, who have developed complications such as secondary heart disease cholangitis hepatitis or pancreatitis and who are peculiarly liable to haemorrhage, above all they are apt to suffer from hepatic insufficiency nephritis and pneumonia. Many of the cases are too late for the best results to be obtained. If they come reasonably early the mortality ought not to be above 5 per cent. but it may be as high as 35 per cent. when infective or suppurative cholangitis has supervened.

The mortality is higher in private than in hospital patients chiefly because the former wait too long and try a variety of medical conservative cures before they come to operation. Hospital patients cannot afford to wait. For similar reasons the mortality in men is higher than in women.

Ultimate Results

Cholecystostomy affords complete and permanent relief of symptoms in only about 45 per cent. of cases. The persistence or recurrence of symptoms is often due to stones left behind to the persistence of inflammation in the walls of the gall bladder or to the formation of new stones. Secondary cholecystectomy or choledocho tomy is often required.

Cholecystectomy affords complete and permanent relief in about 86 per cent. of cases. Muller found the result completely satisfactory in 84 per cent. of stone cases and in 70 per cent. of cases of cholecystitis without stones. Whipple gives similar figures. At least 80 per cent. of my results were good. The more accurate the diagnosis and the more complete the operation the better the result. Hurst has pointed out that some temporary recurrence of symptoms may follow cholecystectomy owing perhaps to spasm of the sphincter of Oddi with dilatation of and inflammatory changes in the bile ducts secondary to those of the gall bladder. Under these conditions spasmodic pains may develop and be attributed to stones left behind in the common bile duct. In my experience these symptoms are almost limited to late cases in which disease before removal of the gall bladder has already allowed infection to spread to the common bile duct. Cholangitis may then persist or recur perhaps with exacerbations even after drainage of the common bile duct as well as after the removal of the gall bladder. Medical treatment will generally cure these symptoms and should be well tried before submitting the patient to another operation which may not discover any stone or obstruction in the bile ducts. Recurrence of symptoms after operation may be due to residual infection in liver or pancreas to stones overlooked in the ducts to errors in diagnosis — e.g. overlooking osteo arthritis of the spine—or to spastic mucous colitis.

Form of the Curve —Roughly speaking the form of the test meal curve may be divided into the rising type the plateau type and the type in which a rise is followed by a fall Dividing them thus the following results were obtained

	Rising	Plateau	Rise and fall
All cases	21 0%	46 0%	33 0%
Hypersthenic	23 0%	57 0%	20 0%
Sthenic	20 5%	36 0%	43 5%
Hyperstheric	12 5%	37 5%	50 0%

The average test meal curve compounded from the figures of all cases shows after the initial fall a steady rise up to one hour followed by a plateau and a slight fall after two hours

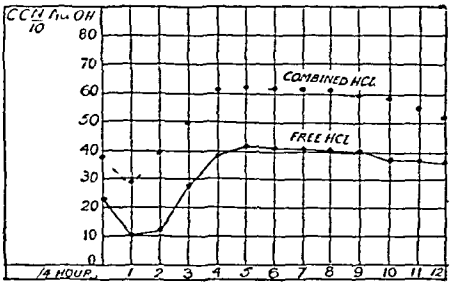


CHART 1 —All cases

A similar curve is obtained in the cases confirmed after wards at operation

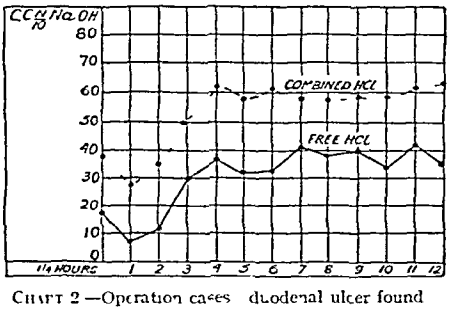


CHART 2 —Operation cases duodenal ulcer found

The curve roughly agrees with that given by Donald Hunter [7] but is lower than that given by Ryle [8]

The curve of free HCl is definitely above the average of the normal limits of free HCl as found by Bennett and Ryle[10] in 80 per cent of 100 normal males

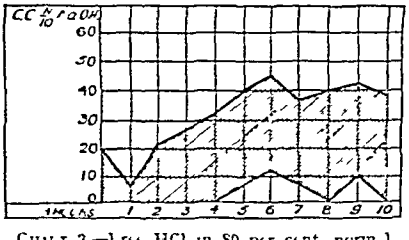


CHART 3 —Free HCl in 80 per cent normal males (Pennett and Ryle)

As regards the correlation between the type of stomach and the average test meal curve found in each variety it was observed that the curve of gastric acidity was lowest in the asthenic type and gradually rose until the hypersthenic type showed the greatest acidity (see Charts 4 5 6 7)

The results tend to show that there is some correlation between the type of the stomach and the curve of gastric secretion the hypersthenic stomach having the highest curve In all cases there tends to be an increased acidity above the normal which agree with the views of most authorities that this factor is usually present in duodenal ulceration

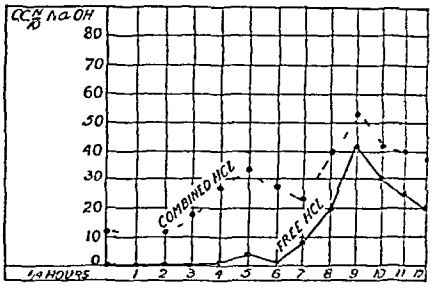


CHART 4 —Asthenic type

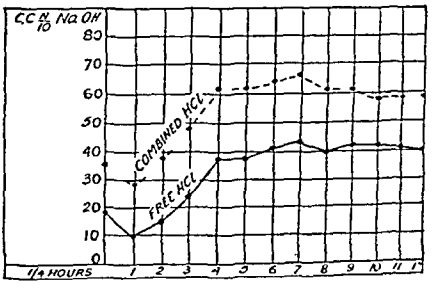


CHART 5 —Hypesthenic type

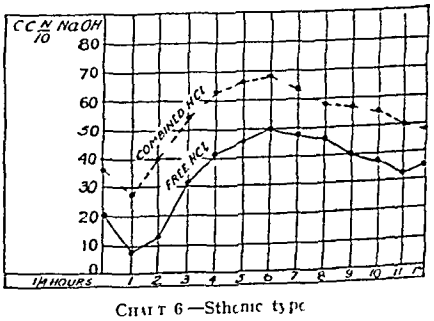


CHART 6 —Sthenic type

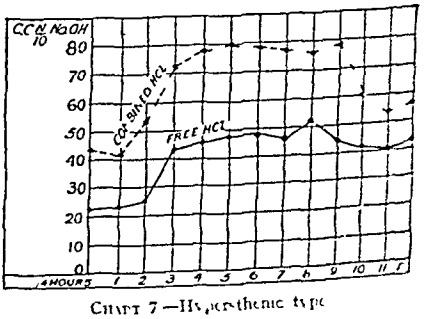


CHART 7 —Hyperstheric type

SUMMARY

The records of 250 cases of probable duodenal ulcer have been investigated and the following deductions drawn

1 The sex incidence shows a preponderance of 3 2 male to 1 female

2 One third of all cases first notice symptoms between the ages of 20 and 29 more than one half between 20 and 39 years of age

upon the ultimate concentration of the drug in the urinary tract and this in turn is mainly dependent upon the functional capacity of the kidneys Furthermore the rate of their elimination can be used as a functional renal test This may be done in one of several ways First the amount of the drug retained in the blood at varying time intervals after injection may be estimated and compared with the normal Secondly the actual amount of the drugs excreted in the urine over varying time periods may be estimated Or finally the specific gravity of the urine may serve as an approximate guide to the amount of the drug excreted

MODE OF ACTION

Instrumental urography gives information as to the size shape and outline of the cavities of the urinary tract but it gives no clue to the functional activity of the kidneys or to the motility or dynamics of the rest of the tract Whilst the older method is essentially anatomical the new one of excretion urography is strictly physiological In excretion urography the first essential is that the kidneys shall be able to excrete the drug in sufficient concentration to give a radio opaque picture The time of the appearance of the dye will be a measure of the functional activity of the organ Secondly the outline of the calyces the pelvis and the ureter will be those of the normal working state and not under any conditions of artificial distension The work of Cumming has shown the effect of alteration of tonus in the different parts of the calyces and pelvis From time to time separate contractions of individual calyces or of the pelvis occur but without apparently any orderly sequence Consequently the outline of an excretion pyelogram depends upon the exact functional state at the moment of the exposure For this reason when a series of plates is examined the calycal and pelvic outlines may vary considerably reflecting the varying phases of filling and emptying of the component parts In diastole of the calyces and pelvis a picture is obtained which in many respects is very similar to an instrumental pyelogram On the other hand a picture taken in systole may show what appear to be filling defects in one or more of the calyces and the pelvis itself may appear much smaller In the ureter too the resulting picture will be entirely different Only too often have instrumental ureterograms suggested a comparatively passive tube whereas in point of fact it is rarely that some point or other of the ureter is not in movement in transporting urine to the bladder There would appear to be considerable variation in the type and frequency of the ureteric movements but they are mainly of the nature of a segmental peristalsis and there is little evidence to show that waves ever pass from end to end of the ureter The excretion urogram visualizes the dynamics of these processes

It is only on the basis of a comprehension of the method of action of excretion urography that there can be any adequate interpretation of the resulting pictures If these are interpreted on the lines of the older instrumental methods then not only will the urograms often be regarded as technically disappointing but the deductions made from them will in many cases be erroneous

TECHNIQUE OF ADMINISTRATION

Certain technical details are of importance if good urograms are to be obtained The first of these concerns the preparation of the patient The method adopted in the majority of the cases in the present series was as follows Thirty six hours before the injection an ounce of castor oil is given and the following day the patient is kept on a light diet Four hours before the injection a breakfast of lean ham rusks and a cup of tea with a minimum of milk and sugar is taken followed by ten ounces of boyril one hour before the injection On the day preceding the investigation the total fluid intake should not exceed forty ounces otherwise marked diuresis may affect the quality of the pictures Finally it has to be remembered that in excretion urography flatus is one of the greatest enemies of success and it is unfortunately still true to say that many pictures are spoilt by the shadows produced by gas in the large bowel This evil can be minimized by reducing the amount of carbohydrate in the diet on the day beforehand and when practicable by keeping the patient up and about In fact much the best pictures are often obtained in out patients

The injection of the drug must be carried out with the same scrupulous care as for the dyes used in cholecystography For this purpose the antecubital veins are by far the most accessible, though in the case of children I have had on occasion to use the external jugular Cases have been reported in the literature of extensive sloughing after the escape of uroselectan into the tissues Personally I have only seen one case in which a localized inflammation lasting three days followed the escape of a small amount into the tissues As regards abrodil and uroselectan B I have seen no complications of this type and with the former dye they seem hardly likely as the drug has been recommended for subcutaneous administration in the case of children Sichel and Boeckel have followed Kohler in the administration of uroselectan and abrodil by the rectal route, but the pictures are not nearly as good as those obtained by the intravenous method

POSSIBLE REACTIONS

Certain mild toxic effects may follow the administration of these drugs In this respect uroselectan is the greatest offender and uroselectan B the most innocuous In practically every case where uroselectan is used there develops during the injection a sensation of great heat all over the body together with a marked flushing of the face symptoms which usually disappear within ten minutes A few of the patients develop acute thirst after the injection and a small number nausea and vomiting The pulse rate is invariably increased by about 40 per minute for about ten minutes With abrodil these symptoms are very rare and with uroselectan B they have not been observed at all In the literature of the subject a few cases of generalized rash of urticarial type coming on at once after the injection of uroselectan have been reported and considered as due to the liberation of iodine In the present series nothing of this sort has been seen and no serious complications either local or general have followed the administration of any of the drugs

TAKING OF UROGRAMS

Skiagrams of the whole urinary tract are taken at intervals after the injection With uroselectan these have been at intervals of a quarter three quarters and one and a half hours with abrodil a quarter half and three quarters of an hour and with uroselectan B ten twenty and forty minutes The exact times obviously are not of extreme importance What is important is to get urograms in the individual patient during the excretion of the drug In pathological cases the time will have to be determined after the earlier pictures have been taken in those cases where there is any delay in the excretion of the drug the time would obviously have to be extended The urograms are taken with the patient supine and during full expiration In the present series of cases no artificial means of compression of the abdomen bladder or ureter has been carried out Many observers in order to accentuate the pictures obtained by excretion urography have compressed the lower abdomen by means of inflated bags or have inserted balloons into the rectum or vagina to compress the ureters I am sure such method should be

general be condemned If they are resorted to in order to intensify excretion pyelograms it must be remembered that the resulting pictures will be comparable to those obtained by instrumental methods They must not be taken as showing the physiological or pathological condition of function in the urinary tract Only as such will it be possible to interpret them and it is questionable whether such methods if adequately performed are free from risks

ANALYSIS OF CASES

During the course of the past two years 144 excretion urograms have been carried out on 138 patients at St Bartholomew's Hospital and these cases form the basis of the material of this lecture Of this number 124 of the investigations were made on patients with diseases of the urinary tract and the remaining 20 investigations were on patients with diseases of other abdominal viscera or in cases where disease of extra urinary origin was thought to have produced secondary changes in the urinary system As regards the type of injection uroselectan was used in 58 abrodil in 69 and uroselectan B in 17 The series is admittedly a small one but I think that from experience with the method some idea of its value can be gained by a study of the cases

Hydronephrosis —As a means of investigation in cases of hydronephrosis excretion urography is invaluable for it not only gives the answer to the question as to the degree of function left in the affected kidney but in early cases it also demonstrates the site of the obstruction and the secondary changes which have occurred in the organ It is to be expected therefore that a study of urography in these cases will in the course of time lead to the formulation of more exact knowledge as to the pathology of hydronephrosis and consequently lead more often to earlier and more conservative treatment At the same time we possess in the method a ready means by which the results of plastic surgery may be checked A case of bilateral congenital hydronephrosis is shown in Fig 2 (on Plate) a renal type of hydronephrosis in Fig 4 and a pelvi renal type associated with a calculus at the uretero pelvic junction in Fig 5

Horseshoe Kidney —There were two cases of horseshoe kidney in the series In one case the excretion pyelogram gave no indication of the condition owing to associated severe hydronephrosis and consequently marked impairment of renal function In the second case shown in Fig 3 the urograms furnished the diagnosis

Calculi —In the presence of functional renal tissue excretion pyelograms will localize renal and ureteric calculi as accurately as did the older instrumental method The excretion pyelogram has in addition the advantage that owing to the relatively less radio opaque nature of the contrast medium as compared with the sodium bromide and sodium iodide usually employed instrumentally the outlines of calculi in the calyces or pelvis are less likely to be completely obscured by the dye Furthermore at the same time information is obtained as to the anatomical and functional changes which have occurred in the diseased kidney as the result of calculi and also as to the condition of the opposite kidney (Figs 5 and 6)

Renal Mobility —In cases of abnormal renal mobility it is possible to demonstrate the position of the organ and at the same time to determine whether or not its descent has had any effect on the capacity of the calyces and pelvis to empty themselves and also as to whether any dilatation of the latter has occurred In the seventeen cases of this condition in the series it was found that in none of them was there any abnormality to be made out in the excretion urogram as regards renal function or the size or shape of the calyces and pelvis on the affected side

Tubercle —As a rule the diagnosis of tuberculous disease does not present great difficulty but in the investigation of such cases excretion urography can often be invaluable First in the cases of renal tubercle where a link in the diagnostic chain is missing it provides a means of getting in early cases an excretion pyelogram of the affected organ and also a urterogram and cystogram while in advanced cases a functionless kidney may be demonstrated secondly the excretion urogram provides information as to the functional capacity of the opposite kidney Of the six cases of proved renal tubercle in the present series four showed no secretion on the side of the lesion owing either to the extent of renal destruction or on account of ureteric obstruction In the earliest case hitherto encountered the excretion pyelogram (Fig 9) shows elongation and deformity of the upper calyx together with a persistent dilatation of the ureter Fig 8 shows the appearance of a kidney the site of moderately advanced cavernous tubercle in which a fair amount of functional renal tissue was present the dye was delayed in appearance and gradually outlined the cavernous spaces of the organ

Renal and Bladder Tumours —In the early diagnosis of renal tumour the one essential is extremely accurate anatomical information and in view of this and in the light of the knowledge of the mode of action of excretion urography it is very doubtful if the latter can ever become an entirely reliable substitute for the instrumental method On the other hand in the absence of haematuria the excretion method may prove a useful preliminary in indicating the side of impaired renal function At times also the aid of excretion urography may be invoked in the investigation of bladder tumours by visualizing the effects which the latter have produced in the upper urinary tract This is particularly the case where either the extent of the growth or haematuria prevents cystoscopy

The Ureter —Perhaps the most important contribution which excretion urography brings in connexion with the ureter relates to the vexed question of stricture On this subject there has often been great difficulty in the interpretation of instrumental ureterograms With the excretion method if in a series of pictures pathological changes suggesting angulation fixation or absence of motility are detected then stricture and periureteritis may be diagnosed In Fig 7 are shown the changes in a double ureter following an operation some time previously for the removal of stone from the pelvic course Fig 10 shows a condition of hydronephrosis and hydroureter in a patient with multiple urinary fistulae to the rectum perineum and suprapubic region In a case in the series (not illustrated) the tremendous lateral displacement of the ureter associated with a huge retroperitoneal ganglion neuroma was well shown Similarly the relationship of both the kidney and the ureter to external shadows such as tuberculous glands was frequently illustrated

VALUE IN TESTING RENAL EFFICIENCY

A discussion as to how far excretion urography can be regarded as a test of renal efficiency involves a consideration of all the factors which determine the density of the resulting shadows Now as regards the pyelogram these factors may be summarized as follows (1) the degree of function of the kidney (2) the effect of diuresis (3) the contour of the calyces and pelvis (4) the degree of obstruction in the urinary tract (5) the presence of infection and in the interpretation of the urograms the questions as to the time of the appearance of the dye in the renal pelvis and the bladder and the density of the pictures are the relevant ones

Hughes and Peterfi have shown that drugs of the uroselectan group are eliminated principally through the glomeruli Thus in any form of nephritis with glomerular lesions there will be delayed excretion Now in surgical diseases of the urinary tract especially those where any obstructive lesion is present it is principally the tubules which are affected Consequently in such cases glomerular activity may let a considerable amount of dye through and the effects of the obstructive lesion will be to heighten the resulting shadow Unless one realizes this there will be in such cases a marked over estimation of the real renal capacity In any excretion urograms where there is a suggestion of any obstructive lesion it is essential to avoid such a pitfall

As an example of the above may be quoted the case of a woman who had a uretero vaginal fistula following pan hysterectomy some months before The right kidney never

secreted at all but on the left side a moderately good renal shadow with a slightly dilated ureter showing dye in its whole length was made out At the time the patient had a blood urea of 50 mg per cent the urea concentration test never reached more than 0 9 per cent in the urine and after indigo carmine the dye appeared very faintly at twenty five minutes on the left side and not at all on the right In this case the effects of a moderate degree of ureteric obstruction enhanced the shadow from an extremely defective kidney The patient died in uraemia about a month later

As a test of functional capacity the method is important in those cases where for some reason or another it is inadvisable or impossible to obtain the information by instrumental methods Acute infections of the urinary tract lead to a delayed excretion of the dye and the improvement in function of the kidneys can be demonstrated with the clearing up of the infection Similarly in the case of stone in the ureter it is possible to tell whether or no there is complete obstruction (Fig 12) and after the removal of the obstruction to watch the return of renal function

COMPARISON WITH INSTRUMENTAL METHODS

In their inherent nature instrumental urograms must be regarded as artefacts produced by the cystoscopist for diagnostic purposes yet capable of giving invaluable information In this connexion I shall confine my remarks to a comparison of instrumental and excretion pyelograms In carrying out an instrumental pyelogram the essential condition is that it shall be possible to introduce the opaque media directly into the renal pelvis and this implies an absence of obstruction to cystoscopy and to the passage of a ureteric catheter On the other hand in the case of an excretion pyelogram the first consideration is that there shall be a sufficient amount of renal tissue to excrete the dye in a concentration necessary to produce a radio opaque shadow in the renal pelvis An instrumental pyelogram records the anatomical outline of the calyces and pelvis The excretion pyelogram records first the functional capacity of the kidney secondly the anatomical outline of the calyces and pelvis and thirdly the dynamic function of these parts So that in comparing the two methods we can only compare the instrumental pyelogram with the anatomical results of the excretion pyelogram

Amongst the present series were thirty four cases where the excretion pyelogram was checked by an instrumental one but space does not permit a detailed consideration of these

INDICATIONS FOR USE

The indications for the employment of excretion urography in diagnosis fall in the main into two groups In the first group are those cases where for some reason or other instrumental methods are impossible or inadvisable These are as follows (1) in children especially males and in intolerant adults (2) in urethral obstructions such as strictures or enlarged prostate or in the presence of urethritis (3) in acute infections or tuberculosis of the bladder or in the presence of haemorrhage growth or fistula in that organ (4) in ureteric lesions of the nature of stricture or fistula or where malformations are suspected (5) in suspected calculus anuria In the second group the indications are relative ones and under this heading come all those pathological conditions of the urinary tract where it is desired to gain information as to the function of the kidneys on the two sides or to determine the outline and motility of the ureters

As regards contraindications to the employment of the method I find it very difficult to formulate any The available evidence does not suggest that excretion urography is contraindicated in the presence of even severe renal disease though with severe associated hepatic disease it has been regarded as inadvisable Personally the only condition in the urinary tract in which I have deliberately refrained from this investigation has been in the presence of very acute infection associated with a high degree of fever

CONCLUSION

It has been possible in the course of this lecture to touch upon only a few aspects of excretion urography but I trust I have given you some idea of the scope and possibilities of the method For the extravagant claims that have already been made by some that the method is one which will replace the older methods of visualization of the urinary tract and even in many cases do away with the need for cystoscopic examination I hold no brief But experience has shown that excretion urography is safe that it is in addition applicable to a wider range of cases than is the instrumental method and that it answers questions in terms of anatomy and function On the other hand it must be admitted that the interpretation of the urograms is not always easy and that for the uninitiated the method may provide a large number of pitfalls

With time improvements in technique are bound to occur and it may not be too great a hope that in the near future oral administration of the drugs may become a possibility Meanwhile the extended use of the method will lead to a fuller knowledge of the physiology and pathology of the urinary tract especially in regard to the effect of disease of one part upon the function and dynamics of another In this way the method justly deserves to be incorporated with the older and more tried ones with which its results must be checked and its advantages and limitations defined If this is done then many difficulties of urological diagnosis will be simplified surgery will gain in outlook and technique from a renewed contact with physiology and most important of all the slender barque of our patient's life is further safeguarded from shipwreck on those dangerous twin rocks of inaccurate diagnosis and ill advised surgery

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A FATAL CASE OF ACUTE NECROSIS OF THE LIVER ASSOCIATED WITH EPIDEMIC CATARRHAL JAUNDICE

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(With Special Plate)

During the past few years considerable interest has been aroused both in this country and abroad by the occurrence of extensive outbreaks of epidemic catarrhal jaundice In association with certain of these outbreaks notably in Sweden there have been reported a considerable number of deaths from either acute or subacute necrosis of the liver In this country the disease has been comparatively mild and relatively few deaths have been recorded Nevertheless Morgan and Brown (1927) and O'Neill (1931) have described fatal cases during epidemics in Northamptonshire and Surrey The present case however is the first in this country in which it has been possible to carry out full pathological and bacteriological examination

The patient a girl aged 3 years and 2 months resident in a town in Hampshire immediately adjoining the Surrey boundary During the past two years

recorded by Findlay Dunlop and Brown (1931) there have been numerous small outbreaks of catarrhal jaundice in the south western part of Surrey affecting especially children attending the elementary schools Owing to the fact that epidemic catarrhal jaundice is notifiable in the schools under the control of the Surrey County Council it has been possible to follow up these outbreaks in some detail In Hampshire unfortunately no such notification is in force so that there is greater difficulty in determining the exact source of infection in the present case There is however no reason to suppose that epidemic catarrhal jaundice is a respecter of county boundaries nor are there lacking records that a number of cases of epidemic catarrhal jaundice have occurred during the past eighteen months on the Surrey side of the border in close proximity to the patient's house In addition one at least of the children of a fellow worker with the patient's father is known to have suffered recently from epidemic catarrhal jaundice

CLINICAL HISTORY

The patient was a well developed child the daughter of healthy parents and had no previous history of any serious illness On August 22nd 1931 she seemed rather out of sorts and in the night she vomited Vomiting recurred on the afternoon of the following day and on the 24th the mother noted that the stools were a little lighter and the urine a little darker in colour than usual During the next few days apart from the development of a slightly jaundiced complexion there was no indication that the disease was in any way serious and in fact the patient appeared to be well on the way to complete recovery after having suffered from the usual mild form of epidemic catarrhal jaundice On September 2nd eleven days from the beginning of her illness she became somewhat drowsy The drowsiness continued for three days at the end of which period she complained of severe headache and for the first time showed symptoms of irritability and restlessness These symptoms gradually increased ultimately developing into fits of violence in which the child would throw herself about in bed or dash herself against the wall Alternating with these attacks were periods of quiescence when she lay in an apathetic semi comatose condition

From September 4th till her removal on September 9th to the Royal Surrey County Hospital Guildford there was obstinate constipation despite the administration of a variety of laxative medicines

After admission to hospital the restlessness continued and during the violent phases the child would bite or scratch anyone who attempted to restrain her At times there was spasmodic contracture of the limbs During this period she failed to recognize her parents had no appreciation of her surroundings and for the most part talked incoherently Constipation still continued on one occasion a black tarry looking stool was passed For the first few days of her stay in hospital she refused both food and drink but later she became thirsty and also rather hungry although attempts to feed her with any thing but the lightest food invariably caused vomiting Under the influence of bromide and chloral given at four hourly intervals the general condition improved and from September 16th to 19th the movements were sufficiently co-ordinated to enable a feeding cup to be held On the latter date however she again became very restless and though the jaundice was now fading petechiae began to appear on the legs and buttocks while attacks of epistaxis occurred at frequent intervals Vomiting became intractable and even nutrient and saline enemata were not retained Coma gradually became the predominant symptom and by September 23rd the restlessness had entirely ceased the patient lapsing into a state of total unconsciousness which ended in death in the early hours of September 24th thirty three days from onset of the illness

Clinical examination on admission to hospital revealed the fact that the liver dullness was diminished though the spleen was not enlarged On palpation of the abdomen there was some generalized abdominal tenderness Examination of the urine showed the presence of a few pus and squamous epithelial cells though neither red blood cells nor casts were seen A trace of albumin was found together with bile Sugar was not present

Incontinence of urine though not invariable was a frequent symptom The temperature throughout the patient's stay in hospital was subnormal The pulse was regular varying only from 100 to 120 per minute till September 19th on which date it rose to 150 per minute later falling to 80 per minute until shortly before death when it became irregular and rapid At the same time the respiration rate rose from 25 to 40 per minute

An examination of the blood two days before death showed red blood corpuscles 2 690 000 per c mm with some variation in size but none in shape leucocytes 12 100 per c mm differential count polymorphonuclears 54 per cent small lymphocytes 37 per cent large mononuclears 6 per cent transitionals 2 per cent eosinophils 1 per cent

POST MORTEM APPEARANCES

The necropsy was carried out six hours after death The body was that of a well developed female child The skin and mucous membranes were of an icteric tint while on the back of the legs and buttocks there were numerous small petechial haemorrhages *Thorax* Jaundice of the subcutaneous tissues and costal cartilages was well marked there was only a trace of fluid in the pleural cavities No evidence of pleurisy both lungs were congested while the lower lobe of the left lung was deep purplish red in colour and consolidated Small haemorrhagic spots were present in the upper lobe of the left lung and throughout the right lung The lymph glands at the root of the lungs were not enlarged nor haemorrhagic and the thymus appeared normal The pericardium was deeply bile stained the pericardial sac contained about 1 oz of clear straw coloured fluid The heart muscle was pale in colour There were no subpericardial or subendocardial haemorrhages the valves were normal the aorta jaundiced with no arterio sclerosis *Abdomen* The lining of the peritoneal cavity did not show any petechiae or evidence of peritonitis There was no increase in the amount of fluid The *liver* was slightly decreased in size and of a deep reddish brown colour the right lobe was a little roughened on its anterior surface On section the liver with the exception of a portion at the upper posterior part was of an orange tint with fine reddish mottlings (see Plate) The wall of the *gall bladder* was pale and studded with small petechial haemorrhages Scattered throughout the mesentery and omentum there were numerous small haemorrhagic foci The *mesenteric glands* were slightly swollen and in some there were minute haemorrhages involving the cortex The spleen was not definitely enlarged although deep red in colour and rather soft in consistence The mucous membrane of the *stomach* was injected and at the pyloric end were a few small petechiae There was no evidence of any catarrhal change in the mucosa In the *duodenum* also the mucous membrane appeared free from catarrhal change the opening of the common bile duct was patent and the duct was unoccluded throughout its length About one inch distal to the ampulla of Vater however the whole circumference of the duodenum was involved in a large haemorrhage which extended about one inch along the duodenum and backwards on to the posterior abdominal wall On the surface of the transverse colon immediately above the duodenum there was a dark-reddish swollen area about one inch in length which at the time was regarded as also probably due to a haemorrhage involving the peritoneal coat Small haemorrhagic areas were also present here and there throughout the course of the large intestine being most numerous in the descending colon The *kidneys* were normal in size and the capsule stripped readily on section the cut surface was pale yellow in colour with some engorgement of the vessels in the boundary zone and medulla The mucous membrane of the *bladder* though red in colour was not thickened and no actual haemorrhages could be dis-

tinguished There were no haemorrhages in the adrenals while the pancreas though deep yellow in colour was otherwise normal in appearance The uterus and ovaries appeared normal On reflecting the scalp there was seen a haemorrhagic area about the size of half a crown occupying an area on the left parietal bone just to the left of the sagittal suture The meningeal vessels were congested but there was no evidence of meningitis The substance of the cerebral lobes was somewhat oedematous but the brain itself did not exhibit any haemorrhages

HISTOLOGICAL APPEARANCES

Liver—The histological appearances were those of an acute necrosis of the liver most advanced in sections taken from the anterior portion of the organ Both the central and the intermediate zones of the lobules were necrosed only a few cells adjacent to the portal spaces retaining their normal appearance In the area round the central vein the cells of the liver parenchyma consisted of the cell membrane within which was a small amount of acidophilic granular debris In the majority of the cells it was no longer possible to see any nuclear remains though in a few the dim outline of a nucleus could still be distinguished In the intermediate zone of the lobule the cytoplasm of the liver cells was either highly vacuolated or diffusely granular The nuclei however were comparatively well preserved In the periportal region the liver cells were normal except for the occasional occurrence of vacuoles In the intermediate zone many of the liver cells contained small masses of inspissated bile and here also in sections stained by Scharlach R there was seen a certain amount of fatty degeneration of the liver cells In the periportal region there was a small amount of fatty infiltration Hyaline degeneration of the cytoplasm as seen in yellow fever and Rift Valley fever was not encountered Except in the region around the central vein where nuclei had undergone lysis the nuclear structure was well preserved In some nuclei however the chromatin was reduced to a thin ring applied to the nuclear membrane Careful search failed to reveal the presence of any acidophilic material within the nuclei which could be interpreted as intranuclear inclusions such as are characteristic of yellow fever hypertrophy of the nucleoli was not seen The Kupffer cells were relatively unaffected even in the most necrosed areas in some cases however the nuclei were hyperchromatic and the cells contained phagocytosed debris In the sinusoids were seen occasional polymorphonuclear cells and large mononuclears In the areas around the central vein these cells had penetrated between the necrosed liver cells the normal arrangement of which into columns had largely disappeared Excessive congestion of the intralobular capillaries was not a feature of the sections nor were there any actual areas of haemorrhage There was very little attempt at regeneration in the cells of the periportal region In the portal tracts themselves the amount of cellular infiltration varied greatly At some points there were but a few polymorphonuclear leucocytes present in others considerable masses of small lymphocyte like cells polymorphonuclear leucocytes and large mononuclears There was no new formation of connective tissue in relation to the portal tracts The epithelium of the small bile ducts appeared normal though in the lumina of many of the bile ducts there were small masses of inspissated bile There was no evidence of an ascending cholangitis In sections stained by Levaditi's method neither spirochaetes nor leptospira were discovered while in sections stained both by Gram's technique and by the thionin blue van Gieson method careful search failed to disclose the presence of any bacteria

In sections from the upper and posterior portion of the liver the degenerative changes though still most noticeable in the region of the central veins were definitely less advanced Many of the liver cells however showed a slight degree of fatty infiltration while here and there polymorphonuclear leucocytes were seen in the sinusoids

Spleen—The most noticeable change was the congestion of the sinuses which were filled with large numbers of red cells A few polymorphonuclear leucocytes could be seen both in the sinuses and within the germ centres These latter did *not* exhibit any of the central necrosis recently described by Hudson (1931) as occurring in fatal cases of jaundice of unexplained origin from West Africa Phagocytosis of red cells by the endothelial cells of the sinuses was occasionally seen

Kidneys—In these organs there was present a very intense toxic change affecting more especially the cells lining the convoluted tubules and the ascending and descending limbs of the loop of Henle All the various stages of degeneration could be distinguished beginning with cloudy swelling and hyperchromatization of the nuclei and going on to complete disappearance of the nuclei with breaking up of the cytoplasm The lumina of many of the convoluted tubules were filled with granular debris The glomeruli were relatively unaffected though the cells of Bowman's membrane were in some instances swollen and eosinophilic with prominent nuclei The glomerular capillaries were not unduly congested and did not show any excess of polymorphonuclear leucocytes The glomerular spaces were generally empty The blood vessels in the cortical region were not congested nor were infiltrating polymorphonuclear leucocytes seen In the medulla degenerative changes affecting the cells of the straight tubules were comparatively slight while bile-staining of the cells was not conspicuous Here and there however groups of intensely congested capillaries had pressed upon and almost completely obliterated the intervening straight tubules Spirochaetes could not be detected in sections prepared by Levaditi's method nor were bacteria seen in sections suitably stained In frozen sections stained by Scharlach R there were seen fine fatty granules in the cells lining the convoluted tubules and loops of Henle

Abdominal Lymph Glands—Sections of mesenteric lymph glands showed congestion of the blood vessels in the cortex of the gland and the presence of a small number of polymorphonuclear leucocytes in the lymph sinuses

Alimentary Tract—The only noticeable histological change in the *stomach* was the presence in sections from the pyloric end of small haemorrhages in the submucous layer In the first part of the *duodenum* there were no obvious pathological changes In order to determine whether there was any mechanical obstruction to the outflow of bile serial sections were cut of the ampulla of Vater and the common bile duct No evidence was obtained that the duct was plugged with inspissated mucus nor was there any inflammatory change in the wall of the duct In the third part of the duodenum which on naked eye examination was the site of an extensive haemorrhage there were found microscopically numerous small haemorrhages involving the submucous layer associated with intense congestion of the blood vessels and some degree of compression of the glandular secreting cells There was no evidence of any infiltration of the tissues with polymorphonuclear leucocytes nor any pathological change in the mucous lining of the gut On examining sections of the *transverse colon* there was found a localized swelling of the peritoneal coat In this area there was considerable congestion of the capillaries with oedema of the surrounding tissues which contained many polymorphonuclear leucocytes a few large mononuclear cells and small collections of red cells In sections stained by Gram's method Gram positive organisms could be seen either lying free in the tissues or phagocytosed by the polymorphonuclear leucocytes and mononuclears of the exudate No fibrin had been deposited in the oedematous area These organisms were present either as diplococci or in short chains of streptococcal form In the other layers of the transverse colon there was congestion of the blood vessels but no haemorrhage Occasional polymorphonuclear leucocytes were seen both in the muscular layers and in the submucosa The lining epithelium was normal in appearance and there was no evidence of epithelial desquamation

Lungs—Sections of the right lung and upper part of the left showed no change beyond congestion of the interalveolar capillaries and occasional small haemorrhages into adjacent alveoli In the lower lobe of the left lung however all the alveoli were completely filled with a fibrinous and haemorrhagic exudate in which were a few large mononuclear cells There was no polymorphonuclear infiltration of the alveoli nor did the congested interalveolar capillaries contain an excess of polymorphonuclear leucocytes

Heart—The only pathological changes were those seen in frozen sections stained with Scharlach R Occasional muscle cells were found to be the site of a fine fatty degeneration No cellular infiltration was seen in the heart nor any haemorrhage The heart valves were quite normal

Adrenals—Slight congestion of the vessels in the medulla was noted but no actual haemorrhages were seen Occasional pyknotic nuclei were present in the cells of the cortex *Pancreas*—No pathological changes observed *Brain*—Beyond congestion of the vessels both in the meninges and in the brain substance there was no obvious pathological lesion

BACTERIOLOGICAL EXAMINATION

During life the only bacteriological examination made was an investigation of the stools No organisms of the typhoid dysentery or Salmonella group were isolated At the necropsy blood was removed aseptically from the heart and bile from the gall bladder Cultures in glucose broth incubated aerobically and anaerobically remained sterile

In order to determine the presence or absence of leptospira portions of minced liver and kidney were examined by dark field illumination No leptospira were seen Animal experiments were also carried out in an attempt to isolate leptospira Minced liver was rubbed on the scarified skin of two guinea pigs a similar experiment being carried out with minced kidney The four guinea pigs failed to show any temperature reaction and remained in good health Two other guinea pigs had heart blood applied to the scarified skin these animals also remained in good health Finally the blood serum was examined for the presence of antibodies to leptospira by the adhesion test of Brown and Davis (1927) For carrying out this test our thanks are due to Major H C Brown The result of the adhesion test was negative Thus the only micro organisms to which a pathological significance might be attached are the streptococci which were found in a localized area of the peritoneal coat of the transverse colon

DISCUSSION

Histological examination of the tissues shows that death was due to an acute toxaemia affecting the liver kidneys and heart muscle So far as the changes in the liver are concerned the case falls into the class which Mallory (1926) has described as a toxic cirrhosis in which the lesions are most advanced in the central and intermediate zones of the lobules Of the many poisons which are known to produce this form of acute necrosis it is possible in this case to exclude quite definitely the action of organic arsenicals trinitrotoluene phosphorus and cinchophen

Leptospiral jaundice which has occurred in this country both in epidemic and in sporadic forms may be excluded on the following grounds Clinically the present case was almost afebrile and death was delayed till the thirty third day of illness Buchanan (1927) in the epidemic which he recorded in Midlothian found that death took place from the tenth to the fifteenth day of illness Pathologically the changes in leptospirosis are very variable ranging as they do from negligible histological alterations to severe damage of the liver cells Haemorrhage into the adrenals is however very common This lesion was not present in this case Bacteriologically there was (*a*) failure to determine the presence of leptospira in minced liver or kidney by dark field examination (*b*) failure to demonstrate leptospira in stained sections of the liver and kidney (*c*) failure to infect guinea pigs with blood liver or kidney (*d*) failure to detect the presence in the serum of leptospiral antibodies although in leptospiral jaundice antibodies should be well developed thirty-three days after the onset of illness Though a negative result in any one of the above tests may be of questionable value the fact that all were negative is strong presumptive evidence that the disease in the present instance was not due to infection with *Leptospira icterohaemorrhagiae*

Congenital syphilis can be definitely excluded in this case while infection due to typhoid or paratyphoid organisms may also be ruled out by the absence of any characteristic pathological changes and by the failure to isolate any non lactose fermenting bacilli from either the stools or bile

There remains for discussion the relation of the case to epidemic catarrhal jaundice and the role of the streptococcus in its causation The following facts are in favour of the view that the primary cause of the present illness was an attack of epidemic catarrhal jaundice

1 The patient resided in an area where during the past few months there have occurred numerous small outbreaks of epidemic catarrhal jaundice affecting more especially young children At least one child with whom the patient may have been in contact is known to have recently suffered from a typical attack of epidemic catarrhal jaundice

2 Many outbreaks of epidemic jaundice have been associated with fatal cases of acute necrosis of the liver In this country Morgan and Brown (1927) reported one fatal case in connexion with the epidemic which they investigated in Northamptonshire In this case that of a girl of 11 years the clinical symptoms were at first those of a benign catarrhal jaundice Later symptoms of liver insufficiency developed and at the post mortem examination the chief pathological finding was a parenchymatous degeneration of the liver Leptospira were not found in sections of the liver nor were they isolated from any case examined during this epidemic Okell (1931) in the epidemic described by Booth and Okell (1928) also reported one fatal case in the outbreak which they described in Surrey Unfortunately no post-mortem examination was permitted Incidentally it may be mentioned that among the patients in the recent epidemic in Surrey was another girl, aged 6 years who after an attack of what appeared to be epidemic catarrhal jaundice developed symptoms of liver insufficiency This patient eventually recovered though even now ten months after her illness there is present a very definite reduction in the size of the liver Abroad the association between epidemic catarrhal jaundice and acute necrosis of the liver has been extremely striking In the United States of America in association with the wave of catarrhal jaundice which occurred in the years 1920–22 Williams (1923) Roman (1927) and others have recorded a considerable increase in the incidence of cases of acute necrosis of the liver A similar close connexion between epidemic catarrhal jaundice and acute necrosis of the liver has been noted in Germany The most striking example of the interrelation of the two diseases comes however from Sweden where it has been ably described by Wallgren (1930) and Bergstrand (1930) In the years 1914 to 1925 when catarrhal jaundice was not epidemic there were in Stockholm only twenty seven cases of acute necrosis of the liver an average of just over two a year In 1926 and 1927 epidemic jaundice was rife in Sweden In the latter year forty two cases of acute and subacute necrosis of the liver were seen in Stockholm alone while throughout the country there were many more especially in

Gothenburg where epidemic catarrhal jaundice was extremely prevalent

3 The clinical history of the case here described is similar to that of many recorded from Sweden—an onset resembling in every way that of a benign case of epidemic catarrhal jaundice improvement then quite suddenly the appearance of symptoms pointing to an acute liver insufficiency

4 The pathological changes of epidemic catarrhal jaundice found in sections of the liver taken from living patients by Nordmann (1925) and Eppinger (1922) and confirmed by sections obtained from patients who had died from other conditions are those of a hepatitis grading into acute atrophy Eppinger states that severe cases of acute catarrhal jaundice are forms of acute atrophy of the liver in miniature The pathological changes in many of the cases reported by Bergstrand (1930) are also very similar to those found in the present case

5 Bergstrand (1930) and Findlay Dunlop and Brown (1931) have expressed the view that epidemic catarrhal jaundice is probably due to a virus which though pathogenic for man cannot be transmitted to monkeys or to the smaller laboratory animals while acute necrosis of the liver is due to some superadded toxaemia in a patient whose liver has not fully recovered from the primary attack of the virus In support of the view that a toxin and an infection together produce a more widespread necrosis of the liver than either alone may be cited the classic work of Opie (1910) who found that acute hepatic necrosis resulted from the combined action of chloroform and *Bacillus coli* Hurst and Hurst (1928) also found that the toxic action on the liver of manganese chloride is reinforced by injections of *Bacillus coli* while Findlay Dunlop and Brown (1931) showed that arsphenamine injections combined with injections of *Bacillus coli* produce far more hepatic necrosis than either the coliform infection or the arsphenamine alone

6 The presence of secondary bacterial infections in association with acute necrosis of the liver has been recorded by McDonald (1918) while it is of considerable interest that in a number of Swedish cases Bergstrand (1930) has isolated a *Streptococcus viridans* in pure culture from the duodenum This is a further point of similarity to the present case in which a streptococcal focus was located in the wall of the transverse colon

Our sincere thanks are due to Dr R C Matson pathologist to the Royal Surrey County Hospital Guildford for his kindness in placing the pathological material at our disposal to Dr E T Ruston assistant pathologist to the hospital for his assistance in performing the post mortem examination and to Dr J C Lindsay medical officer of health for Aldershot

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SILICO-ANTHRACOSIS PRESENTING CURIOUS BODIES SIMILAR TO THOSE IN ASBESTOSIS

BY

W E COOKE M D M R C P

PATHOLOGICAL DEPARTMENT WIGAN INFIRMARY

(With Special Plate)

The arguments against anthracosis ever being a primary condition are so strong that the time would seem opportune to give to the disease a designation which is more correctly descriptive Cummins[1] Cummins and Sladden and Jousset[2] have shown that the primary factor in the production of coal miners lung is silicosis and that coal dust is retained in large amounts only when there is a high silica content And the converse is true without a high silica content there is no important retention of coal dust in the lungs Cummins and Sladden conclude that coal dust is retained only when the lymph drainage in the lungs has been impaired by the action of silica and that anthracosis is a special variety of silicosis depending upon the accumulation of coal dust in the silica damaged lung The following case supports their contention

Case History

A man aged 64 was admitted to the Wigan Infirmary on September 17th 1931 with the history that at the age of 10 he had commenced work as a half timer in a cotton mill at 16 he was employed at the Park Lane Collieries near Wigan and worked there continuously as a drawer and coller until the collieries closed in 1926 He had had no other employment nor had he lived outside the Wigan district The seams in these mines are all soft coal no anthracite being present On admission the patient was found to be suffering from multiple myelomatosis with collapse of the bodies of the fourth and fifth thoracic vertebræ and paraplegia He gave a history of dyspnœa and chronic cough with mucoid white sputum The urine contained a large amount of Bence Jones proteose No tubercle bacilli were found The radiologist's report on the chest stated that there was extensive fibrosis of both lungs but no mottling or evidence of silicosis and that right base showed pleural thickening The patient died on September 27th 1931

Post Mortem Findings

There was invasion of the sternum ribs and vertebræ by neoplasm The bodies of the fourth and fifth thoracic vertebræ were collapsed and surrounded by a tumour mass

Lungs—There were dense pleural adhesions on both sides more marked on the right The thoracic glands were black and enlarged but not hard The lungs were black all uniformly fibrosed with the exception that four or five small hard nodules could be felt in each lung substance There was no gross anthracotic consolidation

The diaphragm the capsule on the upper surface of the liver and the pre aortic glands showed deposits of carbon coal matter

Histological Appearances

The bone tumours present the histological characters of myeloma multiplex

Lungs—There is marked excess of dust throughout the sections and the interalveolar septa are thickened and infiltrated with dust cells The peri vascular and peribronchial areas show extensive fibrosis with large accumulations of dust—the result of blockage of the lymphatics an occasional fibrous whorl is present There is a considerable degree of emphysema The pleura is thickened and there are adhesions carbonaceous deposits but no subpleural lymphoid hyperplasia is seen in the sections By polarized light doubly refracting particles are seen in large numbers In addition there are sections show masses of golden yellow pigment (altered blood) and large black angular particles measuring from 5 to 50 μ in length Some of the shapes are seen in the tissue sections the bases of the curious bodies

The Curious Bodies—In sections and after digestion of lung with trypsin some of the large angular particles

seen to have a golden brown material deposited around them Many especially the bodies that have slender spicules as central cores present the double and single bulbous ends and the annular arrangement of the deposit so frequently seen in the bodies in asbestosis In asbestosis these bodies are present in myriads and are of all sizes and shapes from minute forms resembling streptococci to bodies 130 μ or more in length as in Fig 1 on Plate Their size depends upon the length of the fibre and the size of the particles of asbestos dust which act as nuclei In chrysotile dust there are black angular particles of biotite and magnetite and in asbestosis some of these particles have the same appearance as those found in this case and shown in Figs 7 8 9 and 10 The particles in powdered iron pyrites closely resemble the large spicules The curious bodies are not nearly so numerous or so varied in form as in asbestosis

Tylecote and Dunn[4] have recently published the finding of similar bodies in a case of a coal miner who had worked in Alabama as well as in English coal mines According to the Geological Survey of Alabama the iron ores are associated with the coal measures in an area of over 2 000 square miles and these haematites contain silica in amounts up to 43 per cent In the present case no iron ore except pyrites (FeS_2) or any strata containing large amounts of silica were encountered during the course of the man's working life

CHEMICAL ANALYSIS OF THE LUNGS

The analysis was as follows

	Per cent
Mineral matter	11 5 of dried lung
Insoluble silica	15 6 of ash
Soluble silica	2 4 6
Total silica	40 2
Ferric oxide	7 2
Phosphoric acid	0 66
Alumina	28 7
Calcium oxide	0 2
Magnesium oxide	0 3
Total sulphur (probably organic)	0 45
Alkalis	22 25

The silica figure is as high as the average analysis of the lungs of six quartz miners in South Africa given by McCrae[5]—namely 39 7 per cent—and approximates the highest figure in Cummins and Sladden's series of coal miners lungs—42 1 per cent The iron content is also high but further analyses showed that the sulphur present was organic and therefore neither the iron nor the sulphur was due to the presence of unaltered iron pyrites In this connexion it must be remembered that the total amount of the large black spicules seen in certain sections and in the digested deposit was infinitesimal compared with the bulk of the ash

DISCUSSION

Curious Bodies—The presence of silica and altered haemoglobin may be important in the ultimate solution of the problem of the curious bodies The mode of formation of these bodies in asbestosis was discussed at the Annual Meeting of the British Medical Association in 1929[6] The bodies consist of slender cores of asbestos fibre upon which colloidal aggregates of blood proteins plus a soluble fraction of asbestos are adsorbed Syneuresis occurs and with the loss of water the adsorption is rendered irreversible and the fibre becomes permanently ensheathed It was then suggested that the bodies were not peculiar to asbestosis but that any speck of insoluble material might have colloid deposited around it and become moulded into a curious body The point is illustrated by Figs 4 5 and 6 which are of bodies having cores of biotite spicules The constancy of the bodies in asbestosis has led them to be called asbestosis or asbestos bodies but in view of the case described by Tylecote and Dunn and the present one any title which implies pathognomonicity would appear inaccurate Schuster has reported a case of asbestosis in a wire haired terrier that lived in an asbestos factory nearly all its life of 10 years Although asbestos fibres were present in large numbers in the lung sections not a single curious body was found

Coal miners Lung—The work of Cummins and Sladden, and of Jousset, has given us a new conception of anthracosis The cases described by Cummins and Sladden were in anthracite workers but the present case shows that the same conditions obtain in soft-coal miners The present view of the pathology of anthracosis would appear to necessitate a readjustment, not only of the accepted radiological interpretation of silicosis and the pneumonoconioses in general but also of the clinical and industrial aspects of the disease As an aid to the new conception the title 'silico anthracosis' has been suggested independently by Cummins and myself

I should like to express my gratitude to Mr T H Byrom for undertaking the analyses in this case

The photomicrographs reproduced on the plate are by C F Hill and W E Cooke Magnification 400 diameters

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PAROXYSMAL TACHYCARDIA ASSOCIATED WITH PREGNANCY

BY

DAVID FYFE ANDERSON M B

ASSISTANT TO THE REGIUS PROFESSOR OF MIDWIFERY UNIVERSITY OF GLASGOW ASSISTANT OBSTETRIC SURGEON ROYAL MATERNITY AND WOMEN'S HOSPITAL GLASGOW

In a recent issue of the *British Medical Journal* James[1] records a case of asthma in which the attacks were in abeyance during pregnancy only to recur shortly after delivery The following notes of a case of a different nature may prove of interest as here also there is illustrated the beneficial effect exercised by the pregnant state—possibly by the stimulation of the endocrine system which is thereby induced

A woman aged 22 pregnant for the first time was admitted in labour to the Glasgow Royal Maternity and Women's Hospital on the evening of October 30th 1931 On general examination the only points of note were that the skin was very pale although the mucous membranes were of fairly good colour and that there was a supernumerary breast on the left side The heart sounds were pure and of good quality there was no oedema The patient had been a regular attender at the ante natal dispensary and during these months the progress was uneventful She would not admit any ill health and the only item of interest gleaned from the family history was that her father was classed C3 during the war on account of a weak heart

At 1 40 a m on October 31st a healthy female mature child was delivered spontaneously The puerperium was uneventful until 5 a m on November 6th when the heart suddenly began to beat rapidly It was impossible to count the pulse at the wrist The apical rate was ascertained to be 220 per minute The heart continued beating at this rate until about 5 45 p m on November 11th when the patient saw everything suddenly becoming black she had a feeling as if the heart stopped for a couple of seconds and as if something in the praecordial region snapped whereupon the heart commenced to beat at about half its previous rate The pulse and apical rate were then found to be 104 per minute Breast feeding was discontinued at the onset of the paroxysm when the patient was seen by the consulting physician to the hospital Dr Wm MacLennan

Throughout this attack lasting just over five and a half days the cardiac rhythm was perfectly regular this was confirmed as was also the rate by polygraphic tracings.

The blood pressure did not exceed 106/78 mm Hg and the patient did not suffer from breathlessness She ate her food normally In fact her sole complaint was of the rapid beating of her heart and of drowsiness The medicinal measures adopted during the attack consisted in the administration of different preparations of digitalis but mainly the tincture the importance of the part played by the drug is difficult to assess *Venous thrombosis* (*without* pyrexia) developed in the right leg necessitating a prolongation of the period of her confinement to bed but this cleared up satisfactorily During the interval November 11th to December 11th there was no further tachycardia the pulse being regular in rhythm and varying in rate between 80 and 90 per minute The thyroid appeared to be slightly enlarged On dismissal exactly six weeks after delivery the pulse rate was running at about 60 per minute the cardiac dullness was within normal limits and the heart sounds were pure and of good quality The pallor of the patient's skin still remained a noticeable feature although the mucous membranes were fairly well coloured

The following history was elicited from the patient The first bout of palpitation occurred when she was six years of age a few months after an attack of measles Every two or three months thereafter there was a recurrence of these bouts during which she was sick and vomited while the attack lasted she would neither eat nor drink and was very drowsy Menstruation commenced when she was 10½ years old, the periods have never been regular occurring as a rule every two to six weeks and the flow lasting seven to ten days Quite frequently but not invariably a bout of palpitation was associated with the period—often on the third or fourth day of the period

There has never been any warning of an impending attack at no time has she suffered from breathlessness or oedema and she has never fainted She has had an occasional frontal headache

On December 24th 1931 the fourth day of the first period which occurred after delivery the patient had a paroxysm which lasted about ten hours Again she felt drowsy and after vomiting the heart suddenly began beating at its normal rate When seen on January 10th 1932 the thyroid was definitely enlarged the pallor of the skin was striking but otherwise physical examination proved negative

Meyer Lückner and Schochet report two cases of paroxysmal tachycardia in pregnancy In one the paroxysm commenced two days after a normal delivery and lasted for six days with a remission of eight hours These authors in a critical review of the literature discovered only four or five case reports of true paroxysmal tachycardia associated with pregnancy

COMMENTARY

The outstanding feature of this case of paroxysmal tachycardia is that throughout the entire period of gestation not a single attack occurred Apart from some sickness after meals especially at night she was perfectly well during pregnancy The last menstrual period and the first after delivery were each associated with a paroxysm The attack described lasting over five and a half days and the worst from which the patient has suffered far surpassed in duration her previous record which was thirty six hours One cannot fail to be impressed with the absence of tachycardia during the period of pregnancy when many organs are overtaxed One naturally wonders to what extent endocrine activity (known to be so pronounced in pregnancy) was concerned This however is but a simple record of a case and no generalizations are offered

I am indebted to Professor Munro Kerr to whose unit the patient was admitted for permission to publish the notes of this case

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

HAEMOSTASIS AND THE RADICAL OPERATION FOR HYDROCELE

In the radical operation for hydrocele of the tunica vaginalis difficulty in obtaining complete haemostasis is I think, a common experience This may be true of the operation whether complete dissection of the sac is carried out or if the testis is merely exteriorated In hospital practice I have been struck by the number of troublesome scrotal haematomas which result from either type of operation in old standing cases This experience is due partly no doubt to the difficulty of applying proper compression to the operation area but is also associated with the structure of the sac wall In old standing hydroceles this consists of firm fibrous tissue, which holds open and opposes the retraction and clotting of the small arteries after section The tendency to bleed is particularly in evidence in old standing cases in which both the vascularity of a part and fibrosis of the tunica are increased

For the past few years I have overcome this difficulty by employing some form of cautery to the cut margin of the tunica vaginalis No doubt similar procedures are adopted by other surgeons but the practice is by no means general In my experience the most satisfactory haemostatic agent to use is the diathermy current The testicle is exposed by the inguinal route and the sac stripped of its outer coverings The hydrocele is opened and evacuated the sac is split in the long axis of the testicle and then cut away with a diathermy needle to within about 1/8 inch of the testis The current employed should be of the type usually classified as cutting If this does not produce complete haemostasis on the line of section more coagulation is produced by altering the character of the current An absolutely dry wound can be produced in this way

If the diathermy cautery is not available a Paquelin or electric cautery can be employed in a similar way for the same purpose though they are not so easily controlled After the operation there is a little reactionary swelling of the testicle, but not greater than is common in the operation by the older method I have in no case seen any serious haematoma or observed any other complication For those cases in which the radical operation is considered advisable I think this slight modification in technique ensures a certain and uncomplicated convalescence

London W 1 C MAX PAGE

UNUSUAL BONE INJURY IN A CHILD

(With Special Plate)

It may be of interest to record a rather curious case which came under my care a short time ago

A child aged 2 years and 9 months spending a holiday on the coast at Sunderland was swinging his left arm with a spade in his hand He suddenly began to cry and was noticed to be holding his left arm away from his side The mother picked up the child by the elbows and was rather alarmed when the arm gave a click after which the child was able to approximate the elbow to the chest wall

When I saw him some hours later the arm was held rigidly to the side in full pronation and showed a slight puffiness from the root of the neck to the wrist but no discoloration At first the child resented any movement at the affected shoulder joint but allowed free movement of the elbow and arm With coaxing the full range of passive movement at the shoulder joint with the exception of abduction beyond about 60 degrees was obtained At the shoulder joint but the child would not attempt active abduction Full flexion could be obtained at

the elbow with little resistance on the part of the patient and he voluntarily flexed the forearm nearly to a right angle Attempts to supinate the forearm passively were strongly resisted and appeared to be causing considerable pain On supinating and also on returning the arm to the prone position a soft crepitus was felt both by the hand at the wrist and also more obviously through the head of the radius The latter rotated with its shaft and there was no gross deformity at the elbow joint

The impression I obtained from my examination was that the child had probably sustained a subglenoid dislocation or subluxation of the shoulder joint and a partial separation of the upper radial epiphysis without displacement

The impression I obtained from my examination was that the child had probably sustained a subglenoid dislocation or subluxation of the shoulder joint and a partial separation of the upper radial epiphysis without displacement

The arm was put up by Chiene's method in full flexion and it was later examined under the fluorescent screen radiograms being taken by Dr J B Waters No bony injury was detected in the region of the shoulder joint and there was no evidence of separation of the radial epiphysis The upper third of the shaft of the ulna however was found to be bowed with the convexity directed laterally This was considered to be in the nature of a greenstick bending of the bone (The opposite ulna was normal) On pronation the convex lateral border of the ulna apparently passed over the radial tubercle giving rise to the crepitus which I had felt and also being the cause of the pain On considering the age of the patient and the difficulties which could be expected on attempting to straighten the bone owing to its nearness to the radial epiphysis and the elbow joint it was decided not to attempt the correction of this deformity which would almost certainly disappear spontaneously within a comparatively short time During the first five days the arm was supported by a Chiene's bandage and after that period once daily under supervision and after that period free active movement was allowed the bandage being dispensed with The child presented no gross evidences of rickets but a course of calcium iron and cod liver oil was deemed advisable and was commenced immediately On the fifth day the boy actively carried out all movements of the shoulder and elbow joints with the exception of abduction of the arm beyond about 75 degrees and supination of the forearm On passively supinating the forearm there appeared to be little pain but some resistance was experienced at a point almost midway between the prone and supine positions No actual crepitus was felt at this period Dr W Bell of Humshaugh writes just over three weeks after the accident The boy is quite well again has no pain and perfect function

In my opinion the most interesting features in this case were the unusual bony deformity giving rise to a rather confusing series of symptoms and signs and the fact that there was no direct violence the injury being sustained during the simple act of circumduction of the arm

I am indebted to Dr J B Waters for permission to reproduce one of the radiograms

SUNDERLAND W M HUNTER M B B S

EXOPHTHALMIC GOITRE IN A CHILD

(With Special Plate)

The following case merits record on account of the rarity of this condition in childhood

A girl of 6 years was brought to the Belfast Hospital for Sick Children in November 1930 with a history of a progressive swelling in the front of the neck first noticed about seven months previously She was bitten on the cheek by a dog a few weeks after the thyroid swelling appeared and immediately afterwards she became nervous and emotional was subject to night terrors and ceased to thrive Her health had formerly been excellent The home conditions were good and she was the only child of devoted and intelligent parents The family history was entirely negative A recent acute thyroid enlargement was noted On examination she presented a general thinness and widening of the palpebral fissures Joffroy's sign was present and that of Moebius absent She had a fine tremor of both hands and a flushed moist skin There was slight enlargement of the heart with an apical systolic bruit The resting pulse rate was 108 but mild exertion or excitement produced an increment of twenty to thirty beats per minute Electrocardiographic examination revealed no abnormality

She was admitted under the care of Dr Bryce Smith and ran a slight irregular pyrexia during her stay of ten weeks in hospital Her basal metabolic rate was + 25 Treatment with Lugol's iodine produced little improvement beyond allaying her apprehensiveness and lessening tremor Her mildly septic tonsils were removed but the basal metabolic rate pyrexia She received a course of deep x radiations at the Royal Victoria Hospital which produced appreciable diminution in the size of the thyroid but the exophthalmos persisted She has remained unaltered and the exophthalmos persisted She has since been treated with tonics vitamins and ultra violet light Her thyroid is still definitely enlarged and the ocular signs remain but the cardiovascular and nervous phenomena are less obvious and she is able to pursue a modified school curriculum Growth has continued at a normal rate but she has not shown a proportionate gain in weight

The photograph (see Plate) taken on discharge from hospital shows the classical bulging eyes and startled expression also the scar of the dog bite on the right cheek

The association of fright and sepsis as possible aetiological factors in this case is interesting There is a consensus of opinion that the ultimate outlook in such cases is good most of them apparently recovering spontaneously On this account and because of the important role assigned to the thyroid during pubescence one hesitates to consider operative measures Nevertheless the methods of treatment adopted in this instance have yielded rather disappointing results Polar ligation might possibly provide a satisfactory compromise between medical treatment and subtotal thyroidectomy although Pemberton (*Arch Surg* 1929 xviii 735) states that if treatment with iodine fails to influence the course of the disease ligation will be equally ineffective

BELFAST T H CROZIER M D M R C P

THYROID EXTRACT AND PULMONARY EMBOLUS

Fatal pulmonary embolus following operation is not unfortunately infrequent enough in occurrence to warrant mentioning a case in the *Journal* but when two cases occur on consecutive days and when all precautionary measures have been employed one feels that perhaps a note on the cases may draw forth help or suggestions

CASE I

Miss C aged 65 Scirrhus right breast without axillary involvement Radical operation with removal of both pectoral muscles and complete clearance of the axilla was performed There were no post operative complications and patient was allowed out of bed on the tenth day She had been allowed out to the commode from the fifth day and she died on the seventeenth day whilst preparing to go home She was kept moving taken out on the fourteenth day Her stitches were removed from the beginning Milk was not permitted and 2 grains of thyroid extract were given thrice daily from admission

CASE II

A patient in the same nursing home operated on by Mr Fullerton to whom I am indebted for the following details Mr M aged 60 Painless renal haematuria The left kidney was explored through an anterior incision Pelvis of kidney opened and later kidney split to find cause of bleeding Organ resutured Immediate recovery was uneventful and patient on the fourteenth day suddenly died with cyanosis pain in chest etc showing the usual syndrome In this case thyroid had been administered from the beginning also

The above cases merely show that thyroid has not proved itself to be an infallible preventive nor has it supported the claims made in its favour

BELFAST IAN FRASER M Ch F R C S.

Reports of Societies

AFTER EFFECTS OF TOXAEMIAS OF PREGNANCY

At a meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine held on March 18th, Dr JAMES YOUNG read a paper entitled "An evaluation of the incidence of and the maternal disability following eclampsia and albuminuria" written in conjunction with Dr JESSIE C B SYM and Dr ELSIE V CROWE.

Dr Young said that there were no data by which to compute accurately either the incidence of or the damage inflicted by the late toxaemias of pregnancy. The Registrar General's figures only gave the deaths from such causes. An analysis of 239 successive cases of eclampsia and albuminuria showed that 20 per cent. suffered from subsequent grave impairment of health due to pre existing albuminuria or hypertension heart disease severe anaemia or chronic invalidism whilst in 42·7 per cent. there was a greater or less permanent disability. In 2·1 per cent. *death had occurred subsequently*. Many of these cases were referred to hospital with advanced toxaemia. To exclude such factors of selection ninety one cases under the complete care of the institution from the ante natal period were investigated and in 41·7 per cent. a greater or less impairment of health was discovered. When this figure was applied to the community at large it showed that in 25 000 surviving cases of toxaemia in England and Wales during 1930 there were over 10 000 who suffered more or less permanent damage. Investigation showed that on the average the degree of disability depended upon the period over which the patients had been exposed to toxaemia during pregnancy. Thus of 122 patients there were 52 in whom the subsequent health was good and in these the toxaemic symptoms in one or more pregnancies had lasted for a period of three weeks whilst in 70 with impaired health the average duration was six weeks. The authors suggested that to grapple with the problem of toxaemia (*a*) each pregnant woman must be provided with a mid wife or doctor thoroughly conversant with the significance of ante natal supervision and of the first signs of the disease and (*b*) women must be educated to place themselves under the care of their attendant at the latest by the sixth month of pregnancy; further (*c*) that as probably at least 10 000 such cases occurred each year in England and Wales the question of the urgent need of an extension of our hospital services to deal with this problem had to be considered.

Professor F J BROWNE agreed that there was an enormous amount of damage caused by toxaemias which showed itself in after life. In his opinion a great many of these toxaemias were never discovered during ante natal examination because speaking generally ante natal work in this country was carried out very badly. He put in a special plea for the frequent taking of blood pressures. In discussing treatment he emphasized the value of rest and was somewhat doubtful whether dieting etc. had any real value.

Mr L CARNAC RIVETT said that in his experience patients who had had eclampsia in a previous pregnancy did not have trouble in a subsequent pregnancy. With albuminuria it was rather different as in many cases there had been pre existing nephritis and here there would be certainly increasing trouble with every pregnancy; one prominent feature being the appearance of albumin in the urine very early in pregnancy. Many of these patients had a kidney lesion which caused no disability or albuminuria in ordinary life but when the additional strain was put upon them they failed. The speaker thought that a very large number of women who had an apparently normal pregnancy and labour suffered from a good deal of impaired health for many years afterwards; in fact he would say that comparatively few of them felt quite the women they were after they had had a baby.

Dr J S FAIRBAIRN said that he had recognized early in his obstetric experience that late disability from renal disease after a toxaemic pregnancy was frequent and liable to escape attention owing to the remoter period at which its effects became manifest. His impression was that the cases in which these effects were most commonly met with were rather those with an onset of albuminuria more gradual and earlier in the pregnancy than in those that actually had eclampsia. There was a tendency to think of all cases of albuminuria of pregnancy as prospective eclamptics and for that reason he disliked the term pre eclampsia as begging the question. During recovery from eclamptic convulsions the most striking feature was often the rapid diminution of albumin from urine that before had boiled nearly solid whereas in cases of albuminuria of more gradual onset but resistant to treatment recovery after the termination of the pregnancy was usually both more gradual and less likely to be complete. Subsequent pregnancies in *the latter type invariably* showed return and aggravation of symptoms and these were the cases that seemed to him to be most commonly left with renal deficiency and the lowered expectation of life that went with it.

Dr W H F OAKLEY suggested that the Edinburgh clinic for following up toxaemias of pregnancy would show an even higher rate of disability in a few years since the breakdown in the general condition of the patient did not occur for several years after the toxaemia had been present. Lady BARRETT said that in her experience there was a great deal of difference between those patients who had a toxaemic type of albuminuria and others suffering from chronic nephritis and she urged the need of thorough investigation of the kidneys by biochemical tests. Dame LOUISE MCILROY did not agree that toxaemias were liable to recur. In her opinion the *Bacillus coli* had something to do with these pregnancy toxaemias. She further suggested that there was evidence that the state of the teeth was a causal factor. Mr J M WYATT held that the bad after effects of these albuminurias arose from the fact that pregnancy was not terminated early enough. The apparently mild cases were taken in or watched in the out-patient department for many weeks in order to get a living child with the result that the mother's general health broke down years later.

The president (Mr BONNEY) pointed out the difficulties of comparing statistics from various centres. He quoted the case of a patient who had come into the Middlesex Hospital where every possible care and supervision had been exercised yet the patient suddenly got very much worse and he was obliged to terminate the pregnancy by Caesarean section.

ANALGESIA AND ANAESTHESIA IN NORMAL LABOUR

At a meeting of the London Association of the Medical Women's Federation held at B.M.A. House on March 17th with Dr LETITIA FAIRFIELD the president in the chair Dr RHODA ADAMSON opened a discussion on analgesia and anaesthesia in normal labour. She said that from the surgical point of view labour in the first and second stages could best be compared to a colic. Want of rest and sleep in the first stage predisposed to shock and sedatives or narcotics were needed if the labour was prolonged. In the second stage some form of anaesthesia helped to prevent laceration of the perineal body. Anaesthesia pushed to the complete surgical degree at the time of the crowning and delivery of the head was the best

aid to preventing tears She had found no evidence that the risk of post partum haemorrhage was increased by the use of a general anaesthetic In the Leeds Maternity Hospital it had been the practice since 1926 to administer a general anaesthetic to the obstetrical degree to all patients The number of cases of haemorrhage and of perineal laceration had lessened since 1926 and no anaesthetic deaths had occurred

Dr ENID BROWNE said that analgesia rather than anaesthesia was required Three pains stood together as the most acute in character and exhausting in effect biliary colic renal colic and the pain of a woman in labour Two main classes of drugs were available—those that could be taken by the mouth or injected and inhalation anaesthetics Injection could be intramuscular intravenous or spinal only a few cases were suitable for rectal injection Of the intramuscular injections morphine and its derivatives especially opoidine and scopolamine were discussed pernocton sodium amytal and nembutal being also mentioned When enough of these latter was given to produce hypnosis or analgesia the drop in blood pressure might be alarming Nembutal was being tried at the London Hospital and at Queen Charlotte's and though the pains were unaffected the patients had no memory of them Spinal injections were of value for the second stage in bad cardiac cases but were limited in their time of action Of inhalation anaesthetics ethylene and ether were both inflammable and were unpleasant to take though C_2 was a useful combination For the practitioner working single handed chloroform was invaluable and was the anaesthetic of choice if required for the second stage or the actual delivery of the head only Gas and oxygen could be used from the beginning of the first stage to the end of the third without harm to mother or child It depressed the pain centres without loss of consciousness did not interfere with the normal mechanism shortened the second stage and caused no shock or haemorrhage At the Royal Free Hospital the general plan was to give sedatives either by the mouth or intramuscularly during the first stage and gas and oxygen during the second with chloroform or ether for the crowning of the head Morphine did not appear to damp off the uterine pains if given at the right time in the form of opoidine it had no harmful effect on any child Dr Browne drew attention to a recent article by Professor Stillheim of Leipzig appealing for the sanction of the profession for the administration of analgesics by midwives in the absence of the doctor

Dr C PHILPS gave an account of the difficulties which beset a doctor attending a working class woman in her home Asepsis was more difficult to maintain when anaesthetics had to be given while prolonged chloroform anaesthesia caused some lack of tonicity in the uterus and sometimes haemorrhage when the placenta was separating Dr Philps preferred when she was sent for in good time to give such a sedative as potassium bromide and chloral hydrate with tinct opii or an opium pill as soon as the pains began to cause discomfort Dangerous effects of opium on mother and child seemed to have been exaggerated except when given in large and repeated doses

Miss IVA PYE speaking from the midwife's point of view said that 60 per cent of the births in this country were attended by midwives The scantiness of their training in the use of drugs the discouraging attitude of local authorities and the patient's belief that nothing could be done to relieve pain had led midwives to an attitude of acquiescence There was nothing in their rules to prevent midwives using chloral bromide or even opium provided they had been properly taught how to do this From her own experience she did not consider that general anaesthesia was necessary or advisable in the second stage but there was much to be said for giving the patient something to inhale during the later pains She had conceived the possibility of using crushable capsules of chloroform and tests with them at Queen Charlotte's and the Middlesex Hospitals had been completely successful

Mrs IVENS KNOWLES said that midwives should first be taught and then authorized to give sedatives She also suggested that it would be better for medical students who were now taught the administration of gas and oxygen to learn simpler methods which could be used in practice Lady BARRETT hinted at the possibility of training midwives to use gas and oxygen

BRONCHOSCOPY AND DRAINAGE IN LUNG SUPPURATION

At the annual provincial meeting of the Tuberculosis Association held at Oxford on March 17th and 18th two papers were read on chronic pulmonary suppuration and its treatment by bronchoscopy and drainage

Diagnosis

Dr A S SCOTT PINCHIN described the aetiology and diagnosis of suppurative conditions affecting the respiratory tract and discussed the various types of lung abscess met with In the latter connexion he stressed the importance of symptomatology radiography and bronchoscopy in diagnosis By means of the bronchoscope pus might be seen coming from a bronchus where no abscess had been suspected or there might be an unhealthy appearance of one of the branches due to intermittent discharge of pus or some pus might be seen on coughing If there was no such evidence the bronchi were explored by a drainage tube with flexible gum elastic and the whole connected to a suction apparatus If the cavity was near a bronchus it might be opened in this way Only a small quantity of lipiodol was injected down the bronchus of drainage to prevent massing in the alveoli Where the abscess was secondary to neoplasm the growth could be seen occluding the bronchus The bronchoscope used by the speaker and his colleague Dr Morlock was one specially constructed A lamp with a lens on the end gave a forward illumination while a telescope gave a clear natural and magnified vision and allowed the entrance of lateral branches to be seen A retrograde instrument enabled the operator to see right up the bronchus of the upper lobe

Treatment

Dr H V MORLOCK's paper dealt more especially with the treatment of lung abscess and bronchiectasis and was based upon a number of cases under the care of Dr Scott Pinchin and himself at Victoria Park Hospital With regard to lung abscess the speaker began by emphasizing the fact that there was no single form of treatment universally applicable to all lung abscesses The distinction between an acute or chronic abscess was not one of aetiology or of pathology but merely one of duration—an important point in evaluating reported results of treatment since an acute abscess was much more likely to heal under conservative methods than were the chronic ones Conservative treatment in this connexion included rest in bed postural drainage expectorant mixtures (avoiding any sedative to the cough reflex) supporting treatment for the cardio vascular system and where indicated emetine or intravenous arsenical preparations In lung abscess as in any other abscess the one essential

was free drainage since without this the acute abscess would fail to heal and would become chronic The only way of ascertaining this point with certainty was by visual examination with the bronchoscope an investigation moreover which should be carried out in all lung abscesses irrespective of the particular line of treatment which might subsequently be adopted If the bronchus was free the abscess might with a fair hope of success be treated on medical lines only but if a partial obstruction was found at the initial bronchoscopic examination there was definite risk in trusting to general medical measures alone and bronchoscopic drainage should be resorted to in addition In any case the earlier the bronchoscopic examination and treatment were instituted the fewer would be the bronchoscopical examinations required to produce healing On the question as to whether a diagnostic and therapeutic bronchoscopy should be done before a lung abscess had made communication with a bronchus the speaker was definitely of the opinion that this procedure should be undertaken partly in order to exclude any removable obstruction and partly in order that a drainage tube might be passed along a suspicious bronchus in the hope of making communication with the abscess

Chronic Lung Abscess

In the case of a chronic lung abscess the indication for bronchoscopic drainage was even more definite since it was the only procedure short of surgical measures which could help the abscess to heal If however immediate improvement was not obtained with bronchoscopic drainage surgery should not be delayed In many of these chronic cases the initial bronchoscopic examination showed a definite bronchial stenosis due to granulation tissue and on clearing this obstruction a quantity of foul pus was sucked up with marked improvement in the general condition of the patient The number of drainages required to promote healing was very much greater in a chronic abscess than in an acute abscess and further the larger the abscess cavity the greater the number of drainages required owing to the liability of the cavity to become reinfected Cases which did not respond to medical or bronchoscopic treatment would require some form of surgical treatment—for example artificial pneumothorax which might be used where a centrally situated and well localized abscess was draining by a bronchus

Bronchiectasis and Bronchiectatic Abscess

The treatment of these conditions was essentially different from that of a single lung abscess efficient drainage being seldom obtainable either by *via naturalis* or by external operation Artificial pneumothorax, phrenic evulsion thoracoplasty and pneumolysis had all been tried in cases of bronchiectasis on the strength of the success of these measures in the treatment of pulmonary tuberculosis Dr Morlock showed however that it was unreasonable to expect success from collapse therapy in bronchiectasis where the conditions were totally different Phrenic evulsion indeed he thought was definitely harmful in these cases since the resulting paralysis of one side of the diaphragm reduced the power of the patient to empty the cavity by forcible coughing For the cure of bronchiectasis he had come to the conclusion that they must rely on the surgical removal of the lobe containing the bronchiectasis Unfortunately the operative risk here was about 30 per cent and since if the operation was to be given a fair chance it ought to be done reasonably early while the patient's general condition was good it meant having to ask a patient who was not seriously ill to take a 30 per cent risk Bronchoscopic lavage and drainage could only be a palliative measure in bronchiectasis but in the cases in which it had been undertaken at Victoria Park Hospital it had definitely improved the general condition of the patient and had made the sputum less in amount and much less offensive The treatment which included drainage lavage with an antiseptic saline solution and the instillation where indicated of gomenol or arsenical preparations was carried out at weekly intervals at first, the intervals gradually being lengthened as the patient improved One very definite indication for bronchoscopy in the treatment of bronchiectasis was when surgical intervention was contemplated in order to render the bronchiectatic cavities as empty and as clean as possible before the operation

TUBERCULOUS PERICARDITIS

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland held on March 18th with the president Dr J T WIGHAM in the chair Dr J O CONNOR gave an account of a case of tuberculous pericarditis

The patient a man aged 20 years was admitted to hospital in September *1931* as a case *of cardiac failure He had* been ill for three months before admission and complained of swollen abdomen and shortness of breath There was double hydrothorax ascites and consolidation of the right apex The thorax was tapped on both sides to give him relief Salyrgan was given at first with good results but after a time it lost all effect The man was in hospital eleven weeks The diagnosis of tuberculous pericarditis was not made before death

Dr A R HALPENNY demonstrated the specimen The PRESIDENT said there was no doubt from looking at the pathological specimens that this was a tuberculous condition He thought there must have been a large amount of fluid in the pericardium Dr A R PARSONS mentioned the possibility of this case having been one of polyorrhomenitis

Aetiology of Cancer

Dr W M CROFTON read a paper on cancer and showed lantern slides He said that in the *Lancet* of March 1916 the late Professor Leyton and Dr Helen Leyton published an account of their work on rat sarcoma It was briefly as follows They grew from the filtered juice a streptothrix and induced sarcoma in other rats by inoculation with this organism They recovered the microbes from the tumours they had induced Koch's postulates were therefore completely satisfied Dr Crofton said that he had been able to isolate from every human sarcoma and sarcomatous condition he had so far investigated pleomorphic organisms which usually grew as Gram positive bacilli on the media he employed Such bacilli had been isolated from a large inoperable sarcoma of the neck sarcoma of the kidney antrum knee sarcomatous change in a fibroid thymoma xanthoma Hodgkin's disease lymphatic leukaemia and recently in pure culture from the blood of a case of myelogenous leukaemia Dr Murray had supplied him with a rat with a Jensen tumour and he had been able to confirm the Leytons' work By the inoculation of a rat with the microbe isolated he had been able to induce cellular changes which he could not distinguish from the cells of the original tumour This applied both to the tissues around the site of the initial inoculation and to the secondary tumours in the lung

The PRESIDENT in the course of discussion said that the section from the rat cells which Dr Crofton had shown did not appear to him to be malignant at all It seemed to be mostly composed of an abscess and the patch looked like the patch seen in cases of pneumonia He doubted whether in his experiments with rat D Crofton had used sufficient controls He thought that the leukaemias should be regarded as malignant tumours

Reviews

THE ART OF PROGNOSIS

An Index to Prognosis[1] by various writers edited by Mr RENDLE SHORT has now reached its fourth edition The conditions dealt with (which include all branches of medicine and surgery) are classified alphabetically and the volume is therefore essentially of the reference book type to which the reviewer turns with a feeling that his task will be heavy and uninteresting Here however he is pleasantly surprised at the mass of interesting material to be found within its pages for prognosis naturally depends upon treatment and a balanced account of the end results of various methods of treatment is very good reading and all too rare in the literature

The wise and experienced reader will object that no reference book can teach the art of prognosis which comes only with long practice and case memory Let him then say whether without such a book he can tell us the chances of a gall stone patient developing acute complications or cancer or the chances of piles becoming cured without operation and the percentage of patients with fracture of the skull who develop sequelae Let him state the likelihood of a case of pernicious anaemia being resistant to liver treatment and the mortality of operations on the pituitary gland For these are the questions which directly or indirectly patients and their relatives are prone to ask and this admirable work though it cannot assess each case—medicine being such an individual subject—will supply many an answer The articles are largely statistical being based on published results to which references are given and as a collection of useful data the book achieves its purpose But it is more than this in that the effect of isolated symptoms in increasing the gravity or otherwise of the prognosis is dealt with by authors who have specialized in the subjects they review

On the whole there is very little to criticize for it is difficult to disagree with opinions based on the most recent published results of follow up inquiries and it is encouraging to see that so many researches of that type are being carried out Articles of special interest to which we might refer are those on gastric and duodenal ulcer (partly based on the British Medical Association's collective inquiry) on anaesthetics on syphilis and on the acute cardiac lesions of rheumatism but these are only a few picked out from many others which are of equal merit Prognosis especially in regard to the merits of different forms of treatment is seldom dealt with adequately in textbooks and this volume therefore fulfils a real need

EAR DISEASE IN CHILDHOOD

An excellent volume on Affections of the Ear in Childhood by Dr MAX MEYER of Würzburg in a series of monographs on paediatrics needs no apology from the author in justification of the task which was bequeathed to him by Professor Manasse and has been faithfully fulfilled In the book by Alexander the aural diseases of childhood are described from quite a different standpoint The author has endeavoured to present to the practitioner and the physician a practical treatise from the clinical aspect with a sufficient basis of pathology There is very little relating to surgical technique except a few paragraphs on the management of the wounds after mastoid operations One important chapter deals with affections of the ear in the acute infectious diseases which are often most destructive In mumps the non suppurative labyrinthitis or neuritis which causes severe deafness has long been treated with pilocarpine although this stock remedy seems rarely if ever to do good The suggestion is made and attributed to Voss that the primary cause is a serous meningitis with raised pressure and lymphocytosis of the cerebro spinal fluid and that lumbar puncture might be a useful form of treatment There is also a good practical account of chronic otitis and cholesteatoma Though he discusses the factors which cause a discharge from the ear to become chronic the author is vague and probably shares the feeling of many aural surgeons that the origin of many cases of chronic otorrhoea is still shrouded in some mystery At the end of the book there are six plates showing histological preparations of the ear to illustrate pathological points arising in the text The translation from the original German into French has been made by Dr Paulette Gauthier-Villars In a school clinic or hospital for children and in general practice too this book should be of great help because the outlook is different from that of the ordinary textbook on aural surgery

ORTHOPAEDIC SURGERY

Mr BLUNDELL BANKART's contribution to the series of Modern Surgical Monographs edited by Mr G Gordon Taylor is an important one The opinions expressed in this book entitled *Manipulative Surgery*[3] may here and there be found opposed to some that have been widely held and perhaps not too closely inquired into by former writers Mr Bankart's opinions are strongly held and plainly set out but have evidently been formed on a basis of long and wide experience They must therefore be received with respect The value of clear cut expression can hardly be exaggerated in a work which is intended as a guide to students and practitioners Those who turn to it for guidance will not be disappointed The introduction includes a definition of what is meant by manipulative surgery and an account of the anatomy and physiology of joints which are so much concerned with manipulative treatment Those who know Mr Bankart's teaching will be prepared for clear and emphatic definitions of the part played by muscles and ligaments in the prevention of injury and particularly for descriptions of the effects of postural contraction Due importance is given to discussion of the ways of unqualified practitioners and the reasons why they sometimes succeed when qualified surgeons fail If Mr Bankart's advice is carefully studied and followed such events will become rare

Without attempting to give an epitome of this book we may glance shortly at a few of the points on which it is likely to startle those who have been inclined to accept without inquiry the views of older writers As to the foot the author gives good reasons for brushing aside much that has been written about it and here his views on the allowable forms of boots and shoes appeal to us as of great practical importance It is of no use to advocate shoes which no self respecting woman would ever wear High heels (2 in) and a medial pointed shoe must be conceded We commend Mr Bankart's teaching as to the so-called arches of the foot and the overwhelming importance of muscles as contrasted with ligaments The

[1] *An Index of Prognosis and Final Results of Treatment* By various writers Edited by W Rendle Short M D B S F R C S Fourth edition fully revised Bristol J Wright and Son Ltd London Simpkin Marshall Ltd 1932 (Pp xii + 569 42s net)

[2] *Les Affections de l'Oreille chez l'Enfant* Par D Max Meyer Traduit de l'allemand par le Dr P Gauthier-Villars Monographies de Pediatrie et de Puericulture Paris Gauthier-Villars et Cie 1931 (Pp viii + 201 25 figures 6 plates 40 fr)

[3] *Manipulative Surgery* By W S Blundell Bankart M Ch F R C S Modern Surgical Monographs London Constable and Co Ltd 1932 (Pp xii + 190 21 figures 7s 6d net)

section on displaced semilunar cartilages should be carefully studied by the practitioner who is likely (and who is not?) to have players of strenuous games among his patients. Although these injuries are included in this book on manipulative surgery, the author quite clearly lays it down that the only possible cure for them is by cutting operation. Differential diagnosis between dislocation and strain of the joint is necessary, but difficult. The reader will find good advice on how to achieve it. In describing Colles's fracture Mr. Bankart lays full emphasis on the necessity for reduction and on the great force which may generally be required to bring it about. On the difficult and confusing subject of tennis elbow he is not able to offer a conclusive pathology or recommend an infallible treatment but he gives a good description. He seems to have made out his case that that strange disease myositis ossificans is not necessarily connected with injury of bone.

We strongly recommend this book to all concerned with the treatment of injuries whether by manipulation or by the knife.

PULMONARY TUBERCULOSIS IN GENERAL PRACTICE

In choosing as its main title *Chest Disease in General Practice*[1] Dr. PHILIP ELLMAN has detracted from an otherwise excellent book. Pneumonia, acute and chronic bronchitis and asthma are surely by far the commonest chest diseases encountered in general practice and of course the question of the case being one of pulmonary tuberculosis is ever present. As Dr. Ellman points out the general practitioner brought face to face with a case exhibiting symptoms of chronic pulmonary disease will naturally ask himself whether it is a case of tuberculosis. If so is it active and does it require active treatment? It is to help him to answer these questions that the volume has been written. It deals almost entirely with the diagnosis and treatment of pulmonary tuberculosis. There is a chapter on industrial diseases of the lungs, but pneumococcal pneumonia and acute bronchitis do not appear to be mentioned while chronic bronchitis and asthma are only considered in relation to the differential diagnosis of pulmonary tuberculosis. The main title rather alters the meaning of certain statements. For instance we cannot agree that in chest diseases *as a whole* the radiological examination of the chest should be granted at least a similar position to that of auscultation. While this is very true in cases of possible tuberculosis it is hardly necessary or even advisable in acute forms of pneumonia or bronchitis.

But if this volume is regarded as dealing with pulmonary tuberculosis in general practice it is very good indeed. The description of the differential diagnosis of the disease is clear and practical and there is an excellent section on its treatment by various methods at home and in sanatorium. It is well written and contains many useful points of information of the type not generally included in works of this kind. It is of interest to note that a careful search of the literature and post mortem statistics suggests that the combination of exophthalmic goitre and pulmonary tuberculosis rarely if ever occurs. In fact Dr. Ellman goes so far as to suggest that they are antagonistic. His plea for radiology to be considered as a routine method of examination of the chest in chronic pulmonary disease is very sound. It has been estimated that 5 to 10 per cent. of suspicious cases of pulmonary tuberculosis occur without any manifest physical signs in the chest but with definite x ray evidence of infiltration of the lung parenchyma. The book is illustrated with clear line drawings and numerous radiograms which have reproduced astonishingly well. Many of these have a small explanatory diagram attached. This adds greatly to the interest and value of the volume which has been produced at a very reasonable price. Though intended primarily for general practitioners, who will find a great deal of good sound practical information in its pages it appears to have an even wider scope. It is an ideal book for students and contains much that will be of interest to physicians and those engaged in tuberculosis work.

[1] *Chest Disease in General Practice with Special Reference to Pulmonary Tuberculosis.* By Philip Ellman, M.D., M.R.C.P. With a foreword by Professor Sir Lyle Cummin, C.B., C.M.G., M.D. The General Practice Series. London: H. K. Lewis and Co. Ltd. 1931. (Pp. xv + 270; 15s. net.)

MORBID HISTOLOGY

In the new issue of Professor ROBERT DONALDSON'S excellent handbook of *Practical Morbid Histology*[1] the original work has been revised almost out of recognition. The pages have been doubled in size and a hundred new ones added, the old fashioned and, as some will think, more agreeable paper has been replaced by the modern type of paper required for photogravures and a large number of illustrations have been introduced. The make up of the book may therefore be said to have been modernized. In the first edition the author purposely omitted illustrations on the ground that the best and only ones of real value to the student were those contained in the slide box. He has apparently given way on this point, while retaining his opinion unchanged. There is an undoubted tendency for students to learn their histology from pictures and as these generally represent merely a minute fragment of a lesion differing in detail in every part it would certainly be an advantage to the student if this practice were discouraged. Several valuable new chapters have been included—namely, those on diseases of the bone marrow the thyroid and suprarenal glands and the prostate and on dystrophies of bone. The author has a sound method of exposition proceeding from the macroscopical to the microscopical examination and the descriptions give an admirable idea of the correct manner of examining sections. For the student beginning his study of morbid histology the book *must* be considered as one of the best on the market. The author anticipates with good reason that it should also prove useful to the practitioner. Many of the recent advances in pathology cannot be understood *without a reference* to their histology and the volume contains much information that will serve to keep the practitioner abreast of the time.

[1] *Practical Morbid Histology.* By Robert Donaldson, M.D., Ch.B.Ed., F.R.C.S.Ed., D.P.H. Foreword by [illegible]. Edinburgh: Bt. G.C.V.O., K.C.I., M.D., Sc.D., [illegible]. London: H. K. Lewis and W. Heinemann (Medical Books) Ltd. 1931. (Pp. [illegible]; figures 425; net.)

AN OUTLINE OF PSYCH[illegible]

[illegible]ed. Such brain [illegible] there is rather a tendency for [illegible] sarcoma of the [illegible] generate into definite cram[illegible] sarcomatous [illegible] said of Dr. G. W. HENRY'S *Essentials of Psych[illegible]* Lodgkin's dis[illegible] The book is written from the point of [illegible] types an attitude which does not find general approval in this country nor indeed on the Continent but which has a strong following in America and among those who have studied in America. As is usual with the supporters of 'reaction psychoses' the importance of toxic and organic factors is minimized. The chapter concerned with toxic psychoses is unsatisfactory—the endogenous toxic psychoses are discussed very briefly. It is disconcerting to find the epilepsies dismissed in little more than one page

[1] *Essentials of Psychiatry.* By Adolf Meyer, [illegible]. With a chapter on Psychiatric Nursing by Adele Easton, [illegible]. Baltimore: The Williams and Wilkins Company. London: Baillière Tindall and Cox. 1931. (Pp. xiv + 334; [illegible] net.)

In this short account the author apparently finds space to accept the theory that there is such a thing as an epileptic personality prior to the onset of fits in the individual This theory has had considerable doubt thrown on it for some time The chapter dealing with treatment is disappointing A large proportion is devoted to psycho analytic procedure and too little to the general medical aspects of the case The author does not emphasize sufficiently that the treatment of all cases of psychosis consists in a mass attack from every aspect of the case—organic mental or occupational A section concerned with psychiatric nursing is very welcome and is well done but is it necessary to waste space on telling the reader that capillary haemorrhage is manifested by oozing? The most useful feature of this book is the provision of many illustrative cases which should give the student a clear insight into the problems of psychiatry

COLLOIDAL CHEMISTRY AND FOOD PRESERVATION

Colloid Aspects of Food Chemistry and Technology [7] by Dr W CLAYTON is a textbook that covers a new and rapidly expanding field of knowledge The author has collected his information from a very scattered literature for he quotes from journals of physiology biochemistry colloid and physical chemistry as well as from various technological journals Some of the subjects discussed are the staling of bread whipped cream and homogenized milk the purification of sugar the setting of jellies the foaming of beer the freezing and chilling of meat and the purification of water this gives some indication of the ground covered in the book under review The ever-increasing concentration of populations into urban districts causes a proportional increase in the use of preserved foods and hence the physical chemistry of food preservation is a matter of great moment Such problems as the best method for freezing meat are indeed of national importance The volume is intended primarily for the food chemist who has not specialized in colloidal chemistry but it will also prove of value to the research worker particularly on account of the bibliography of *2 000 references* collected from the most varied sources

NOTES ON BOOKS

In his *Introduction to Hygiene* [8] Dr WILLIAM ROBERTSON lately medical officer of health for Edinburgh provides a simple manual of preventive medicine in which the various topics are dealt with concisely The opening chapters give an outline of sanitary administration generally and of the Factory and Workshops Acts The author then deals with practical aspects of infectious diseases disinfection house construction and ventilation water supplies sewage purification and foods More than thirty illustrations are supplied in order to make clear certain technical points The book can be commended as a readable introduction to preventive medicine which will pave the way to larger works on this subject

Taking it for granted that members of the medical profession in proportion to their numbers visit galleries and museums at least as often as any other section of the educated public we feel justified in commending to their notice *I Grammar of the Arts* [9] by Sir CHARLES HOLMES sometime director of the National Gallery Those who have had a drilling in science should value a well written guide to first principles in art more especially nowadays when the admirable custom has grown up of displaying at Burlington House artistic treasures from different parts of the world The author's object is to help readers whose knowledge is limited to understand some of the aspects of beauty in art and we think he has fulfilled it

The appearance of a second edition of the *Clinical Atlas of Blood Diseases* [10] is in itself a recommendation for its usefulness For clinical pathologists who are accustomed to the use of Giemsa staining it would undoubtedly afford much assistance in the interpretation of their blood films the clinical and therapeutic notes should be of immediate value to the medical practitioner We are glad that Dr PINEY and Dr WYARD have included in this revised version of their atlas some of the suggestions made by reviewers of the previous edition They have added two new plates which in our opinion do not contribute greatly to the value of the book The staining of Plate 30 is not specified it is of course not Jenner Giemsa

Miss M C ERXLEBEN of Philadelphia Children's Hospital has put together some *Notes on Children's Nursing* [11] which contains a large amount of information suitable for nurses and mothers The illustrations mostly of collections of nursing requisites are the least satisfactory feature of an otherwise useful little book The style is clear and easy to follow and nursing procedures are described in a staccato manner which most people find easy to remember as in cookery books While essentially designed for an American public this book might certainly prove useful to nurses and others here The pattern for a steam tent is one which might be adopted as a standard

[7] *Colloid Aspects of Food Chemistry and Technology* By William Clayton D Sc F I C London J and A Churchill 1931 (Pp xiii + 371 64 figures 30s)

[8] *An Introduction to Hygiene* By W Robertson M D D P H F R C P I Edinburgh E and S Livingstone 1931 (Pp viii + 307 7 figures 6s net)

[9] *A Grammar of the Arts* by Sir Charles Holmes London G Bell and Sons 1931 (Pp xxvii + 236 9 plates 10s 6d net)

[10] *Clinical Atlas of Blood Diseases* By A Piney M D M R C P and Stanley Wyard M D M R C P Second edition Churchill's Empire Series London J and A Churchill 1932 (Pp xvi + 103 38 plates 12s 6d net)

[11] *Notes on Children's Nursing* By Marguerite C Erxleben R N B S Philadelphia F A Davis Company 1931 (Pp 242 43 figures 2 dollars)

PREPARATIONS AND APPLIANCES

VITAMIN CONCENTRATE

Adexolin liquid is a tasteless and inodorous concentrate of vitamins A and D prepared by the Glaxo laboratories (56 Osnaburgh Street N W 1) The makers state that it has been assayed and standardized to contain the vitamins A and D equivalent to twenty times its own volume of *high grade cod-liver oil* The difficulties that may attend administration of cod liver oil to children are well known and hence tasteless substitutes are very welcome The importance of such substitutes containing both of the fat soluble vitamins is being recognized more and more

RESYL

Resyl Ciba is stated by the makers (the Clayton Aniline Company Limited) to contain glycero guaiacol ether They quote evidence that the compound is decomposed in the body more readily than is potassium guaiacol sulphonate The compound is eliminated as an oxidation product combined partly with sulphates and partly with glycuronic acid The preparation is recommended for treatment of inflammatory diseases of the respiratory tract

APPARATUS FOR ADMINISTRATION OF CO_2

At a recent meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine (*reported in the Journal of January 23rd (p 142)*) Dr J S Haldane gave some account of the effects of adding *oxygen or carbon dioxide* to the inspired air and demonstrated apparatus lent by Messrs Siebe Gorman and Company Limited (187 Westminster Bridge Road S E) The new carbetha apparatus of this firm has lately been announced in our advertisement pages It provides mixtures of CO and air in variable proportions the CO_2 percentage being indicated on a calibrated dial and a considerable quantity of the air + CO mixture is delivered to the open mask when the cylinder valve is opened The apparatus which was designed at Dr Haldane's suggestion is in two standard models one with a 1/2 lb cylinder of CO_2 and the other with a 2 lb cylinder

British Medical Journal

SATURDAY, APRIL 9th, 1932

1832–1932

The British Medical Association, which in July next celebrates throughout the British Empire its hundredth birthday, was born at Worcester on July 19th, 1832. The foundation membership was fifty. Placing before itself from the outset as its objects the collection and study of information in relation to the science and art of medicine, the maintenance of the honour and interests of the profession, and the fostering of friendly feeling among its members, the new body was soon actively at work. Thus at its first Annual Meeting, held at Bristol in July 1833, by which time the total membership had increased to 316, it dealt, among other things, with the current state of knowledge of anatomy, and the chemistry of animal fluids as illustrative of pathology, and it discussed vaccination, prizes for essays on medical subjects, and the need for registration of the causes of death. At its second Annual Meeting, held at Birmingham in July 1834, when 250 members were present out of a total of 450, important clinical questions came up for debate, and committees were appointed to consider the formation of a library and the establishment of a medical benevolent fund. The third Annual Meeting, held at Oxford in July 1835, was attended by more than 300 members out of a total of 500. Among the questions dealt with was the important one of medical relief for the sick poor.

When the Association met for the fourth time, at Manchester in July, 1836, the membership had increased to 600, and at that meeting the first Branch was founded—namely, the East Anglian Branch, representing the Eastern Provincial Medical and Surgical Association," which body had sent a deputation to raise the question of fusion. A benevolent fund was also formed by the Association that year, later to become a separate body—the Royal Medical Benevolent Fund. In 1858 the Association visited Scotland for the first time, meeting at Edinburgh, and four years later it held its first Annual Meeting in London. In 1867 it first met in Ireland—namely, at Dublin—and on that occasion the scientific business was for the first time transacted in Sections, of which there were four—medicine, physiology, surgery, and midwifery. In 1877 the first overseas Branch was formed in Jamaica. In 1900 the question arose of the desirability of organizing the Association not only in Branches but also in areas small enough to give the local members an opportunity to meet in friendly and social intercourse, and for the transaction of their common affairs. As a result, in 1902 far-reaching changes were made. Local medical bodies or 'Divisions' of the Association were set up, of a size which placed it in the power of each member to attend the meetings of his or her Division. A new central body, the "Representative Body," elected territorially by the Divisions, was called into being to act as the supreme deliberative body of the Association.

In 1932 the British Medical Association, organized in 100 Branches and 250 Divisions, extends throughout the British Empire, its membership is over 34 000, distributed in all parts of the world, the circulation of its *Journal* is over 37 500 copies weekly, and the scientific and clinical work of its Centenary Meeting in London is being arranged in twenty-four Sections, embracing almost every branch of curative and preventive medicine. The provisional programme, drawn up by the officers of the Sections, is published in our *Supplement* this week, together with the general time-table and other information, and at page 672 we print the fifth of a series of advance extracts from the History of the Association, which Mr. Muirhead Little has written, at the Council's request, for members attending the commemorative proceedings in Worcester and London at the close of July.

The year 1932 marks also the seventy-fifth anniversary of the publication of this Journal under the title *British Medical Journal*. In 1840 the Association, which had hitherto published only annual volumes of transactions, embarked upon a weekly periodical, the *Provincial Medical and Surgical Journal*. In 1853 this became the *Association Medical Journal*, and in 1857 the name was changed again to that which it now bears.

DRUGS IN GENERAL AND IN PARTICULAR

The practitioner's mail seldom fails to include some advertisement for new drugs, or old drugs in new form, with offers of samples for clinical trial. Where the choice is so wide it is interesting to speculate on the possible factors which influence him in making a selection. It may be granted that the use of the drug is to be relevant to the patient's complaint, and that it is neither of the nature of a placebo—and the post-war stomach may be a little intolerant of cochineal water—nor a refuge for diagnostic impotence or therapeutic nihilism in the administration of "nux vomica and hope." For although a healthy scepticism may lead to intelligent experimental trial and some critical controversy, the use of drugs postulates at least a belief that results of some value will follow. Indeed the literature that comes through the letter-box usually tells of varied pharmacological effects demonstrated by laboratory tests on animals, and more or less detailed clinical results with patients. Having determined then that certain remedies are appropriate, the practitioner will naturally tend to use those forms which occur readily to his mind. It is this factor of relevance which is fostered by the assiduity of manufacturers and distributors in bringing their wares constantly to our notice. One preparation may be preferred because its name comes easily to mind, and so much is this so that there

is a tendency for one product to become fashionable A consultant visiting several parts of a district may disseminate the fashion In the old days of personal dispensing it was not unnatural that a drug should be used because it was cheap and that the same reason is in the minds of the authorities at the present day is shown by the instructions in regard to excessive prescribing and the correspondence this topic has brought forth in the pages of our *Supplement* In these days, too, of economic stress it may be of importance for the practitioner to consider whether other things being equal a certain preparation will benefit the patient as much as another and deplete his purse less

Though the era is passing when the public believed that for each complaint Nature or providence had instituted a suitable remedy if only it could be found, a number of diseases are to be dealt with by definite drugs The most cogent reason for the use of a drug therefore, is that it is necessary In these days of new synthetic drugs produced by subsidized German chemical laboratories at the rate of a dozen a month, most of them discarded after more or less careful trial, and few of them destined to win a place for long in the practitioner's favoured medicament list it is refreshing to read the pronouncement of the doyen of French medicine on the use of bismuth in gastro intestinal complaints Professor Georges Hayem emerged from retirement on his ninetieth birthday to read before the Medical Society of the Hospitals of Paris a paper[1] reiterating his experiences with subnitrate of bismuth and kaolin which led him to believe that these two drugs were of prime importance in clinical medicine He pointed out that it was in 1894—thirty seven years ago—that following the work of Kussmaul and of Fleiner he had started to use subnitrate of bismuth in cases of ulceration of the stomach a condition which had previously always been treated with bicarbonate of soda Toxic effects of bismuth had been described when it was used in the treatment of varicose ulcers, but Hayem found that taken by the mouth it had no toxicity and even in large doses he had never observed toxic effects in gastritis of a simple or ulcerative type Though cases of cystitis were also reported as following bismuth treatment Hayem persisted in using and advocating it as the sovereign remedy for gastric discomfort and hyperchlorhydria

The useful therapeutic properties of subnitrate of bismuth are described by Professor Hayem as (1) sedative—both to the gastric pain and discomfort and to the secretory and motor reflexes diminishing salivation and the consequent air-swallowing which accompanies it and in soothing the spasm of the pylorus (2) anti fermentative—probably by modifying the bacterial flora in the stomach and intestine reducing flatulence and diminishing the acidity of the bowel contents and (3) haemostatic He continued to use subnitrate of bismuth for all cases of gastric discomfort with or without ulceration until in the war supplies ran short He then thought of replacing the bismuth by kaolin Further experience has convinced him that a mixture of kaolin and bismuth subnitrate in the proportion of three to one is a suitable medicament for all affections of the gastro intestinal tract Six drachms of this powder, to which a few drops of essence of aniseed have been added are given fasting in the morning for affections of the intestine associated with constipation 3 drachms twice a day before the two principal meals, for all forms of gastro-enteritis that are painful or accompanied by increased reflex secretion of saliva or pyloric spasm and 2 drachms three times a day before meals in intestinal conditions associated with diarrhoea The daily dose is always 6 drachms (20 grams) Long an opponent of polypharmacy Hayem concludes after prolonged observation that the treatment of all gastro-intestinal affections may be covered by the use of subnitrate of bismuth, kaolin saline solutions, and soured milk

[1] [illegible] de la Soc. méd. des Hôp. de Paris December 7th 1931 p. 1919

TREATMENT OF HYPERTRICHOSIS

The treatment of hypertrichosis on the female face is a problem that, as yet has not been satisfactorily solved Although not a matter of life and death its importance must be recognized for there is no cosmetic defect about which women especially young women are more sensitive than the growth of hair to an abnormal degree upon the face This is an instinctive reaction to an ill balanced development which is to a large extent justified for the presence of facial hair (other than negligible down) signifies incomplete femininity That this is so is illustrated by the fact that many of the worst cases occur in sterile individuals Hypertrichosis is also prone to manifest itself towards the period of the climacteric at the close of active sexual life Occurring at such a time—although never welcome—it has less psychological importance and rightly is to be regarded as marking that inexorable flight of time to which all must reconcile themselves In young women however, it may often cause loss of self-confidence hypersensitiveness shyness and reluctance to take part in ordinary social life, even in extreme cases melancholia It should be noted however that these deplorable mental effects are often by no means proportional to the severity of the affliction and many of those who are most sensitive on the subject are only affected to a comparatively trivial degree The mental poise of the individual is a highly important factor

Since hypertrichosis is associated with deficiency in the sex hormone the ideal treatment would be to supply that deficiency either by oral or intramuscular administration, but that cannot as yet be done with precision, although as long ago as 1923 the late Dr McKenna recorded improvement after the administration of ovarian extract and advised its employment in all cases In practice we are driven to employment of local measures all of which remain more or less palliative On the whole the most satisfactory is the destruction of the hair follicles by electricity Each follicle must be

treated separately, and the essence of the process is the passage of a fine needle down the whole length of the follicle to carry the current necessary for the destruction of the papilla at the bottom The current employed may be derived either from the negative pole of a galvanic battery or other apparatus yielding a weak constant current or from a diathermy apparatus The latter has the advantage of accelerating what is always a tedious and laborious method of treatment, for when using it many follicles may be treated simultaneously, while in ordinary electrolysis with a constant current only one follicle can be destroyed at a time Good results may often be obtained by the patient application of these electrical methods which effect permanent destruction of the roots of the hair treated with corresponding relief to the patient's mental distress They do not however have any influence on the constitutional tendency to grow hair in abnormal quantity where it is not wanted and disappointment is sometimes caused by the appearance of new growth to take the place of that which has been destroyed But those patients who have the means and the perseverance to submit themselves to electrical treatment from time to time as appearances seem to them to require, can keep themselves respectable almost indefinitely In skilled hands no scarring results and the pain attendant upon the treatment is not severe Those to whom for one reason or another electrical treatment is not available must resort to less satisfactory palliative methods Something may be done to mitigate the condition in brunettes by the use of a bleaching fluid, such as a solution of corrosive sublimate in hydrogen peroxide Persistent attrition with fine pumice-stone is also sometimes successfully employed Such methods, however must be used with care, because they are apt to inflame or coarsen the skin The same caution applies also to the use of frank depilatories These almost all consist mainly of barium sulphide mixed with a varying percentage of some inert powder and their effect is purely superficial and soon passes off Their regular employment on the limbs where the skin is tougher and less likely to become inflamed than on the face is perfectly legitimate

We must not conclude without a word of warning against two forms of treatment attractive at first sight but in reality highly objectionable The first of these is exposure of the area affected to x rays Permanent epilation can undoubtedly be obtained by their agency but not without also causing permanent and serious damage to the other elements of the skin These ill effects may not become apparent for some months—even years—but sooner or later the exposed area will become shiny atrophic marked by ugly telangiectases and often streaked with pigment For these reasons not to speak of the tendency of x-ray scars to develop carcinomata dermatologists and radiologists have abandoned the employment of x rays in the treatment of hypertrichosis We regret to say that a considerable trade is still being done on these lines by quacks who employ them without scruple being well aware that they will have secured their profit long before the victims can realize what they have let themselves in for The second treatment against which the medical profession and the public should be warned is the use of pastes containing thallium acetate for local application That this compound can cause epilation when ingested into the system is well known, that it can so act locally is less certain, but there is no doubt of its high toxicity, and its employment has led to cases of serious and almost fatal poisoning one of which was commented upon in these columns about a year ago

INTRACARDIAC INJECTIONS OF ADRENALINE

The power of adrenaline to resuscitate the moribund and apparently dead is universally recognized by clinicians Numerous records have been published to prove that intravenous or intracardiac injections may revive cardiac contractions when these have become arrested—for example during anaesthesia many, in fact, have been so dramatic as to make a general appeal and gain newspaper publicity Hitherto adrenaline has been to some extent used empirically but researches have recently been made by Sir Edward Sharpey Schafer and Mr W A Bain[1] to determine the effects of adrenaline when used to assist recovery from asphyxia They found that if a cat had been asphyxiated by temporary occlusion of the trachea an intracardiac injection of adrenaline would provoke contractions in the heart, even if these had previously ceased At the same time a swift elevation of blood pressure occurred, and respirations started again It was further found that a more rapid result was produced by injection into the myocardium than by injection into the heart cavities the drug in the latter case having to find its way through the lungs or the aortic and coronary systems before taking effect Sharpey Schafer and Bain have examined also the role of artificial respiration and cardiac massage in resuscitation from asphyxia These methods were shown to accelerate recovery if intra-auricular or intra-ventricular injections of adrenaline had been made, and moreover they were capable of restoring the action of the heart and the respiratory movements without the aid of adrenaline This process may be explained on the following basis during asphyxiation the centre for secretion of adrenaline becomes stimulated, in common with the other bulbar centres so that adrenaline which cannot find its way into the arrested circulation accumulates in the suprarenal veins Artificial respiratory action and massage of the heart produce sufficient movement of the blood to bring this stagnant supply of adrenaline into the heart Rarely even the "agony respirations" are sufficient to achieve this result without the help of artificial respiration Concerning the clinical uses of intracardiac adrenaline injections Bodon quoted This investigator recommends the method in the circulatory failure of surgical shock anaesthesia collapse obstetrical haemorrhage and shock asphyxia and asphyxia neonatorum The technique adopted by Bodon is as follows a fine needle about 3 inches long

[1] *Proc Roy Soc Edin* January 1932 lii 2 [illegible]
[2] *Lancet* 1923 i 5.6

H SEAWARD MORLEY DUODENAL ULCER TYPES OF STOMACH



Fig 1.—Asthenic type



Fig 2.—Hyposthenic type

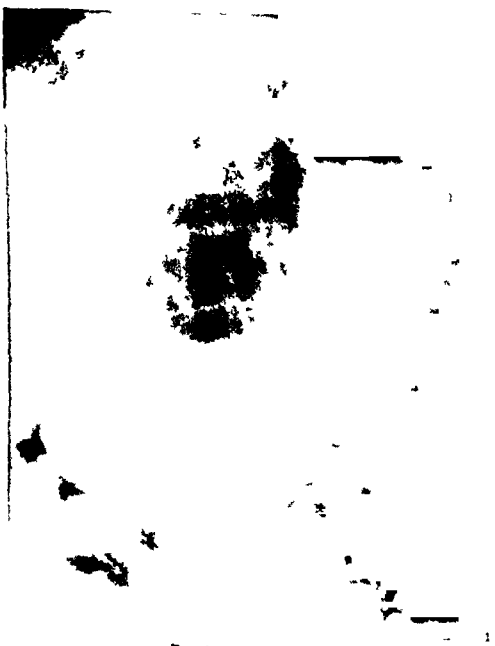


Fig 3.—Sthenic type



Fig 4.—Hypersthenic type.

R. T. PAYNE: EXCRETION UROGRAPHY



FIG. 1.—*Normal. On the right side there is a bifid pelvis and on both sides there is well marked cupping of the calyces.*



FIG. 2.—*Bilateral congenital hydronephrosis. From a youth of 22 whose only symptom was headache.*



FIG. 3.—*Horseshoe kidney with bilateral hydronephrosis and calculi in the lower calyx on left side.*



FIG. 4.—*Hydronephrosis on the right side and on the left a pervi tent kink at the pelvi ureteral junction with early hydronephrosis.*



FIG. 5.—*Calculus at the uretero pelvic junction on the right side showing pelvi renal type of hydronephrosis.*



FIG. 6.—*Calculus in the lower calyx of right kidney.*

R. T. PAYNE: EXCRETION UROGRAPHY



FIG. 7.—Double ureters on right side showing marked dilatation as the result of periureteritis following removal of a calculus from the course of the pelvic ureter.

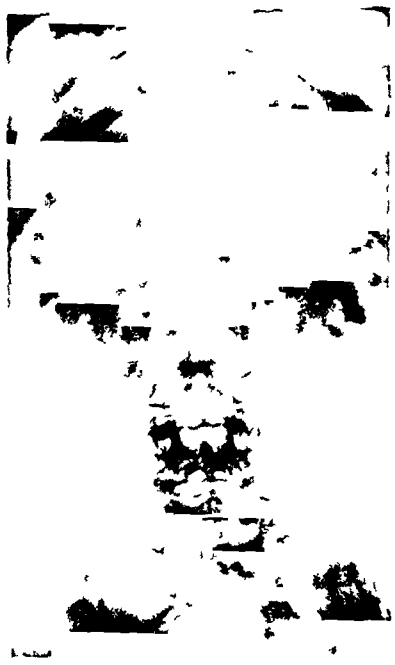


FIG. 8.—Right renal tubercle. The secretion on the affected side was delayed in appearance and it shows *a cavernous type of lesion*.



FIG. 9.—Very early right renal tubercle. Showing elongation and deformity of the upper calyx and persistent dilatation of the ureter.



FIG. 10.—Ulcerative renal tuberculosis. From a patient with urinary fistula in the rectum, perineum and suprapubic region. Many years before left nephrectomy for tubercle also lithotrity etc.



FIG. 11.—From same patient as Fig. 10. Both pictures show the extreme degree of dilatation and kinking of the ureter. This also shows a diverticulum of the bladder.

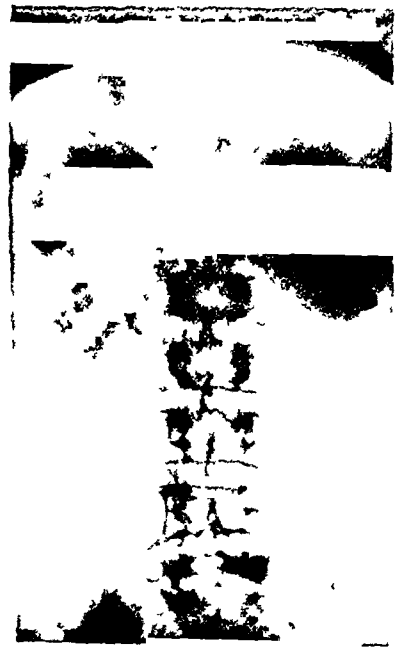


FIG. 12.—Showing calculus in middle calyx of right kidney and one in the course of ureter. At no stage was secretion on this side history suggested that ureteric calculus had been in position about nine weeks.

G M FINDLAY & J L DUNLOP NECROSIS OF LIVER WITH EPIDEMIC CATARRHAL JAUNDICE



FIG 1.—Acute necrosis of the liver associated with epidemic catarrhal jaundice in a child

W E COOKE SILICO ANTHRACOSIS WITH 'CURIOUS BODIES'

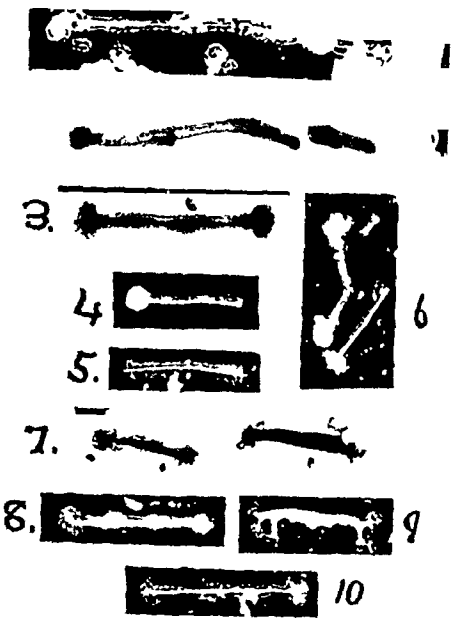


FIG 1.—Curious body from a case of asbestosis 137 μ in length. FIG 2.—Curious body in asbestosis colloidal coating fractured to show fine asbestos filament forming the core FIG 3.—A common form in asbestosis elongated dumb bell with annular or discoid appearance of deposit FIGS 4 5 and lower figure in FIG 6.—Curious bodies from a case [illegible] 9 and 10.—Curious b[illegible] In Figs. 8 and 10 [illegible]

WILLIAM HUNTER UNUSUAL BONE INJURY IN A CHILD



FIG 1.—Greenstick bowing of ulna

T H CROZIER EXOPHTHALMIC GOITRE IN A CHILD

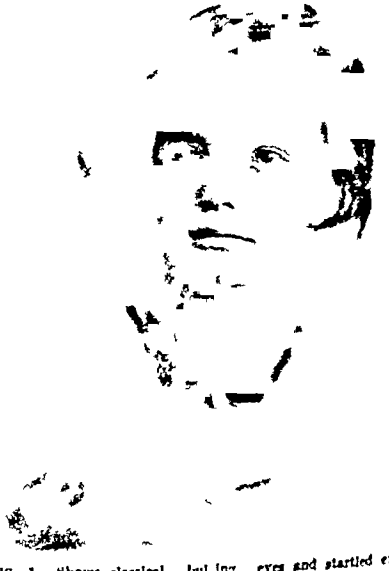


FIG 1.—Shows classical bulging eyes and startled expression also scar of dog bite on right cheek

is inserted in the fourth intercostal space just above the fifth rib and about a finger-breadth from the edge of the sternum. In this way the internal mammary vessels are avoided and the penetration of the myocardium may be shown by the oscillation of the needle if the heart is still acting. The recorded results of intracardiac adrenaline injection are so good that it should when indications and technique are more generally appreciated find a wider application than it does to-day.

THE LITERATURE ON CANCER

To render easily accessible the entire current literature of cancer might seem a task outside the region of practical endeavour. It is however being successfully accomplished at the present time by the *American Journal of Cancer*. Part of this periodical is devoted to original articles and part to abstracts not of selected articles but of the entire cancer literature of the world. It is obvious that such an immense undertaking—involving as it does the composition and publication every year of abstracts of some six thousand articles written in various languages—must entail an expenditure likely to place the work beyond the means of those most in need of it. Realizing this the Chemical Foundation has come forward with financial support which enables the journal to be issued at a price representing a mere fraction of the cost of printing and thus brings it practically within the means of all. The abstracts now published seem to answer the purpose admirably—namely to make reference to original articles unnecessary and place the reader in a position to obtain a complete survey of the field in his own language. Further as the motive of an article is not always immediately obvious an endeavour is made to clarify it where necessary and for the better ensuring of this authors are invited to submit their own views for publication in order that their position may be adequately represented. It might be thought that there is no call for every article to be abstracted and that as there must be many of little importance an unnumbered selection would be more to the point. Selection however is not always judicious and one only needs to be reminded of the fate of Waterston's epoch-making article on the vibratory theory of heat to realize the truth of this. Moreover there are certain features in modern cancer research which render selection undesirable. It is no longer a question merely of discovering the cause of cancer: a considerable number of causes are already known and are likely to be added to from time to time—a new cause of sarcoma is described by Kennaway in the current number of the journal. Cancer research in so far as it concerns spontaneous cancer appears to be gradually relinquishing its attempt to find an extraneous cause such as a micro-organism and to be occupied more in the physico-chemical sphere—with the essential nature of the cancer process and its relation to normal physiological processes. In this field there is an enormous amount of spade-work doing with questions which on a superficial view might seem to have little direct relation to cancer production though they enhance our knowledge of the cancer process. In the absence at the present time of a satisfactory theory to guide research one cannot be sure of any new fact that it is unimportant.

HEALTH OF THE NAVY IN 1930

The statistical report on the health of the Navy for the year 1930 has now been published.[1] The medical staff at the Admiralty have not only produced this volume in standard time but they have reorganized the presentation of their material and brought it into line with the health reports of both civil and fighting Services. They have made the report more interesting to the general reader and have enhanced its value both to research worker and to statistician by dividing it into a series of sections. The first gives a general summary of statistical information about the total force. The second contains remarks on certain diseases as they affect the total force and the various stations. The third is devoted to the special departments of hygiene, pathology, surgery, medicine and dentistry, and the report concludes with a series of tables and statistical details. The year 1930 was comparatively free from influenza and was a very healthy year both among civilians and the personnel of the Army and Royal Air Force. The Navy was no exception, its sick admission ratio being 428·08 per 1,000—a decrease of 50·47 compared with 1929. The total number of cases of disease and injury was 38,031 with a daily average of 1,721·8 or a ratio of 19·38 per 1,000 showing a decrease of 1·04. The total number of days sickness was 628,460 which represents an average loss of service of 7·07 days—a decrease of 0·38. The daily sick admission ratio per 1,000 on the various stations was as follows: Irregular List 68·91, Africa Station 25·1, Home Station 21·3, China Station 20·35, Royal Marines at Headquarters 19·62, East Indies Station 17·38, Mediterranean Station 17·14, America and West Indies Station 16·63, and Atlantic Fleet 14·45. A study of the principal causes of inefficiency in a selected body of men is of great value not only to the medical officers of the Service concerned but to the profession generally for by analysing them and comparing conditions and results with those in civil life further investigations are made into the origin of diseases common to all and into the methods adopted by the public health services of the country to eradicate or correct them. In the Navy local and general injuries accounted for a ratio per 1,000 of 88·92 during the year under review; diseases of the digestive system including diseases of the teeth and gums 76·93, venereal diseases 70·35, respiratory diseases 56·27, diseases of the areolar tissue and skin 55·37. The individual diseases causing the highest ratio were bronchitis 49·27, tonsilitis 27·34, and boils 15·74. The total number of deaths was 220 giving a ratio of 2·47 per 1,000. Of this number 112 were due to disease and 108 to injury. The chief causes of death were injuries 50, drowning 39, pneumococcal infection of lungs 16, suicides 14, pulmonary tuberculosis 13, organic disease of the heart 13, and diseases of the intestine 12. The total number of personnel finally invalided from the Service was 1,115 a ratio of 12·55 per 1,000. This is a decrease of 1·83 compared with the figures for 1929. The outstanding causes of invaliding were pulmonary tuberculosis 202 (2·27 per 1,000), diseases of the eye 199, nervous and mental diseases 176, diseases of the ear 91, injuries and wounds 78, and diseases of the heart 55. Twenty-

[1] London: H.M. Stationery Office. 1932. (2s. 6d. net.)

two persons were invalided on account of having refused surgical operations Considerable attention has been paid in Section II to pulmonary tuberculosis, the chief cause of invaliding The most interesting feature of the report and probably the most important from the point of view of service and disability pension, is the table showing the ratio per 1 000 invalided for this disease according to length of service The figures show under one year s service 1 92 , one to five years 1 34 five to ten years' 2 79 , over ten years 2 5 The departmental sections give a succinct outline of the work carried out by the professional branches, and should encourage naval medical officers on shore and afloat to look forward annually to a publication which clothes statistical figures with interesting professional facts

GOETHE'S MEDICAL HISTORY

At a meeting of the Osler Club on March 24th in commemoration of the centenary of Goethe s death Dr J D Rolleston showed a number of the poet's portraits and works, the scientific value of which has of late received attention in the German medical weeklies and in the special number of *Forschungen und Fortschritte* noted in our issue of March 26th (p 597) Goethe s medical history, as Dr Rolleston pointed out, contains several features of interest According to his autobiography through the unskilfulness of a midwife Goethe came into the world as dead and it was only after prolonged efforts that his life was saved This accident which has been regarded as strangulation by the umbilical cord, was so far beneficial to his birthplace Frankfort in that Goethe s maternal grandfather the chief magistrate of the town, seized the occasion to appoint an accoucheur and to introduce or revive education for midwives During his childhood Goethe had a severe attack of small-pox which was treated in accordance with contemporary practice by keeping the patient as warm as possible and thereby adding greatly to his sufferings He remarks that though inoculation had been introduced into the country some time previously German physicians had been unwilling for the most part to perform what they regarded as an unnatural operation In spite of the severity of the attack no disfigurement resulted Goethe as is well known being one of the handsomest men of his age Although it is generally stated that varicella was not differentiated from variola before Heberden's paper published in the *Transactions* of the Royal College of Physicians in 1767 Goethe states that in addition to small pox and measles he also had an attack of chicken-pox (Windblattern) which probably occurred in the sixth decade of the eighteenth century, so that in some parts of Germany at least the distinction between the two eruptions must have been recognized before Heberden s time An illness which occurred when he was in his twentieth year was interpreted by Freund as syphilis, to which like the philosopher Schopenhauer against whom a similar unfounded charge had been brought Goethe was doubtless often exposed during his student life at Leipzig The error of this diagnosis was conclusively proved by Fraenkel who in the *Zeitschrift fur Tuberkulose* of 1910 showed that this juvenile illness was tuberculosis the principal symptoms being haemoptysis followed by enlargement of the cervical glands Like many other distinguished men, Goethe was the victim of gout, and on several occasions he made a cure at Pyrmont, Marienbad and other spas to beguile the tedium of which as he confided to Eckermann, he always engaged in some new love affair Goethe retained his sexual appetite and potency until the end of his life and showed no signs of prostatic hypertrophy Probably as the result of his sedentary life he became the subject of chronic constipation and for the treatment of this he consumed according to Dr Vogel his medical attendant, 400 bottles of Marienbad water a year Although, like Heine and Hugo he detested tobacco, Goethe in common with most of his contemporaries, indulged freely in alcohol during his earlier years, becoming more moderate in later life His wife however, whose father had died of drink inherited bibulous propensities and the only surviving child of a family of five died of chronic alcoholism at the age of 40 Of the three grandchildren, none of whom inherited Goethe s genius, one died in childhood and the others in the 'eighties of last century Goethe's death seems to have been due to angina pectoris precipitated by influenza, of which he had had several previous attacks Although morphine had been introduced sixteen years earlier, it was not employed to alleviate the sufferings of this, his last illness

MOSQUITOS AND AEROPLANES

Modern transport is undoubtedly a subject of much interest to the public health services, as its rapidity offers a means for the almost immediate dispersal of contagious diseases and for the introduction of infective foci into new countries *Griffitts and Griffitts* [1] in an interesting article in the United States Public Health Reports, have pointed to a possible concrete example of this There is now a regular air service between many of the West Indian Islands tropical America and the United States, and they have shown by various ingenious experiments that *Aedes aegypti*, the most important vector of yellow fever, may be easily transported, not only from island to island but from the island to the mainland in these aeroplanes Routine spraying of machines with an insecticide is now a regular procedure in some lines, but not in all and in 102 undisinfected aeroplanes arriving at Miami nearly 20 per cent carried mosquitos In one case a mosquito was actually observed biting the radio operator at a height of 3 000 feet—surely an overlooked "record" in these days of bizarre records

"ADIPOSALGIA"

To those who find the constant advent of new *diseases* in our midst disturbing it may be comforting to remember that diseases go as well as come The cause of this happy issue out of some of our affliction is numerous Among them is the belated discovery that the malady in question has never really existed at all but been a figment of the imagination conceived in a creative spirit unhampered by agnostic wavering In rise and proposed fall of one such is discussed by D Hans Jansen in *Ugeskrift for Laeger for* March 31 A disease was discovered or invented somewhere or

[1] U S Public Health Reports xlvi No 47

1880 by the Swedish massage school which named it *cellulitis or panniculitis on the assumption* that there was an inflammatory element about it Doubts as to the existence of this inflammatory element led to the adoption of the non-committal term, "subcutaneous infiltrations" The favourite sites of the condition are the legs below the knees the inner sides of the knees the hips abdomen, deltoid region, and back of the neck The tissues are firmer than usual and cannot be lifted up with a fold of the skin The overlying skin *looks normal but may at times be tense and shiny* rubbed or scratched a lively vasomotor reaction follows The skin bruises very readily, there are stout ladies whose arms promptly register the slightest violence In 1907 the term 'adipo algia" was coined, it emphasized the two most prominent features of the condition Several years later the idea that it might be more or less related to myxoedema raised it to the *rank of those mysterious disorders of metabolism* now so fashionable Dr Jansen's opinion of this imposing structure calls to mind Hans Anderson's story of "The Emperor's new clothes' Fat is normally distributed in granules and lobules held in the meshes of connective tissue The granular or lobular character of this distribution is more pronounced in some places than others Subcutaneous tissues much infiltrated by fat bruise readily because the vessels in the skin are kept stretched and cannot, therefore, *so easily yield under pressure* As for the painful element of the condition some parts of the body are normally much more tender than others and one only needs to have a neurasthenic constitution in order to exalt this tenderness to acute pain Adiposalgia is practically confined to women mostly middle aged and Dr Jansen has never found it in persons who failed to show signs of nervous instability There are many drawbacks to these subcutaneous infiltrations which Dr Jansen brackets with the *colitis* Dr Munthe so effectively holds up to ridicule in his *San Michele* Masseurs are too much addicted to adipo algia hunting, and the discovery and massage of innumerable infiltrations to the neglect of muscles and joints that may be *sadly in need of their attention* The public submits complacently to the ministrations of the masseur preferring these to the more Spartan methods of dieting and active exercises It is also unfortunate that these subcutaneous infiltrations should be *regarded popularly* as manifestations of gout rheumatism uric acid deposits etc "Adiposalgia patients—that is neurasthenics with prominent symptoms referable to the subcutis—constitute the bulk of the patients suffering from so called muscular rheumatism or simple rheumatism

COMMUNAL IMMUNIZATION AGAINST DIPHTHERIA

An adequate example of the benefit of communal immunization in a large city is afforded by the recently published records of the anti diphtheria campaign conducted by the public health service in New Haven Connecticut with a population of nearly 163 000 Although as in other large communities diphtheria mortality had shown a considerable fall from the rate of previous years—a decline from 184 deaths per 100 000 population in 1877 to 130 in 1890 and twenty years later (thanks largely to serum treatment), to 12 7 per 100 000 in 1910—yet during the ten years before 1923 when New Haven's campaign first started there was still a yearly average of 313 cases and twenty deaths and for the five years 1920–24 a mortality rate of 7 1 per 100 000 As a result of the active preventive measures begun in 1923, about 35 500 children, including nearly 12 000 of pre-school age, had been immunized up to the middle of 1931 and, in addition over 13,700 were recorded as Schick-negative on preliminary tests thus *yielding a total of over* 49 200 children presumably protected against diphtheria Following the steady progress of the campaign New Haven's diphtheria record for recent years has shown very striking reduction from the earlier ten years' average above quoted—to forty six cases and four deaths in 1928 forty-three cases and two deaths in 1929 fourteen cases and one death in 1930, and in 1931 only four cases were reported, with for the first time on record, no deaths So dramatic a decline in incidence and mortality may reasonably be claimed as largely attributable to the growing influence of preventive inoculation on a comprehensive enough scale to cover the bulk of the child population of New Haven an achievement greatly to the credit of the public health organization and co operation, which in the past nine years has been so persistently applied to the eradication of diphtheria

OXFORD OPHTHALMOLOGICAL CONGRESS

The twenty-second Oxford Ophthalmological Congress will be held under the mastership of Mr Cyril H Walker on July 7th, 8th and 9th 1932 Members will assemble at Keble College on the evening of Wednesday, July 6th and on the following morning there will be a discussion on 'The treatment of non-paralytic strabismus *excluding operative details* to be introduced by Dr Luther Peter of Philadelphia The Doyne Memorial Lecture will be delivered on Friday July 8th, by Professor van der Hoeve of Leyden, entitled 'The ocular signs in the phakomatoses of Bourneville, von *Hippel Lindau*, and of Recklinghausen' A cinematograph demonstration of *living cells* and of the influence of radium on malignant cells will be given by Dr Canti Papers have also been promised on trachoma (Professor Patcheff Sofia) and refraction (Mr Burdon Cooper) It is hoped there will be a demonstration of the Thomas photoelectrographe an apparatus enabling the blind to read print or handwriting *reproduced* in relief by means of a system of photo-electric cells Members are invited to bring novelties of ophthalmological interest to the scientific and *commercial* museums where demonstrations are planned The annual dinner of the congress will take place at Keble College on July 7th guests may be introduced Communications should be addressed to Mr C G Russ Wood Hill House Abberbury Road Iffley Oxford who is again acting as honorary secretary

The annual meeting of the Canadian *Medical Association will be held* in Toronto from June 20th to 24th under the presidency of Professor Alexander Primrose C B F R C S who has latch retired from his academic offices in the University of Toronto after many years of most distinguished service

culosis schemes should be managed and the definite recommendation that where possible a chief clinical tuberculosis officer should be appointed is a most important one Where several doctors of equal standing are employed in the tuberculosis scheme for any area, team work is essential for success and team work is impossible without a leader and a leader backed by authority The medical officer of health rightly the administrative head of the local service cannot ordinarily fill this position, his duties are too diverse, and his training unsuitable, it would only be possible in exceptional cases If this recommendation was universally adopted and if the posts were entrusted to the right men, the improvement in the general standard of tuberculosis work would be enormous High salaries could be given without increasing the total outlay, for, with good team work and good control, much of the routine duties could be performed by more junior men who would be willing to enter the service at lower salaries to learn the work, as long as there was a prospect of advancement in their own or other areas And, indeed the transference of junior men in one area to senior posts in another would be of great advantage by standardizing the work throughout the country and by grafting the good points practised in one area on to the good points of the other It should not be a very difficult matter to make the qualifications for the different posts, and the salaries standard throughout and to make pension entitlements interchangeable Local schemes would then stand or fall by the chief clinical tuberculosis officer, and the causes of inequality of efficiency throughout the country would be easier to detect and to remedy

A great deal more has yet to be said on the question of contact examination, and this report gives a comprehensive and suggestive survey of this field which should stimulate endeavour to get at the true principles of contact work There is no doubt that our present clinical and administrative methods are in need of revision modernization and standardization Although much has been achieved we must still be far from satisfied when we realize that tuberculosis still accounts for 31 per cent of all the deaths occurring between 15 and 45 years of age a much larger proportion than should be allowed to any one disease, but a survey such as is given by Dr MacNalty is an encouragement and a stimulation

TREATMENT OF INFANTILE PARALYSIS

EXPERIENCES IN MELBOURNE

At an informal meeting held at the Liverpool Medical Institution on March 21st Dr JEAN MACNAMARA, who was introduced by Sir Robert Jones gave an address on acute poliomyelitis

The history of the treatment of infantile paralysis by human immune serum was reviewed and the experimental basis for the therapy outlined The succession of epidemics which had occurred in Melbourne during the years 1927 to 1931 had given an opportunity for recognition of cases before paralysis and therefore for the treatment of cases at the stage at which serum was effective During the first year in which serum was available of 135 cases only one was diagnosed before paralysis had developed, in 1931 of 270 cases 86 were diagnosed and treated in the prepiralytic stage The dromedary type of onset, in which the two phases of the disease were separated by an interval of apparent recovery had been frequently observed but more often three or four days of definite illness had preceded paralysis The symptoms were described as general and special The general symptoms of fever vomiting constipation and headache did not differentiate from other diseases but in the cases which progressed to the stage of paralysis other symptoms served as warning signals, such as tremor of the hands photophobia and retention of urine The most important sign had been the 'spine sign"—a disinclination for forward flexion of the spine owing to the pain involved In older children this sign was elicited by placing a coin on the knee and bribing the child to attempt to bend forwards towards it In infants the sign was elicited by passive flexion The necessity for a careful general examination and for constant watchfulness—particularly in times of epidemics of patients suffering from an indefinite illness—was stressed in order that confirmation of the clinical diagnosis should be sought at the first appearance of warning signs and symptoms by examination of the cerebro spinal fluid The changes in the fluid were an increase of polymorphonuclear cells then of lymphocytes and later of the globulin content The estimation of the chloride content was useful in discriminating between poliomyelitis and tuberculous meningitis Clinical experience in 1928 had confirmed the warning of experimental work, of the danger of delay between the removal of cerebro spinal fluid and the administration of serum The procedure adopted in Victoria of examining the cerebro spinal fluid at the bedside while the lumbar puncture needle, with obturator replaced remained *in situ* was described and illustrated by cinematograph films It was important to re-examine the patient twelve to eighteen hours later, for if the first intravenous and intrathecal injection of serum was adequate to establish a passive immunity there should be marked improvement in the general condition and a rapid fall of temperature

Dr Macnamara next gave details of the method of preparation adopted by the Commonwealth Serum Laboratories in Melbourne The product fulfilled the requirements of a serum free from haemolysis, aseptic without added antiseptic and as free of fibrinogen as possible The experience in Melbourne had been parallel with that of other countries where serum had been used The use of human immune serum in the prepiralytic stage of poliomyelitis had been proved beneficial by the low mortality rate the low average total paralysis and the strikingly low proportion of paralysis of the severer grades The results of treatment of 133 cases in the prepiralytic stage had been as follows in 66 no paralysis could be detected, in 60 paresis for some weeks could be demonstrated by careful examination but cleared up completely with no residual paralysis, in 7 treatment failed one case proving fatal and six developing paralysis The seven failures had taught two lessons (1) Delay between the withdrawal of fluid and the administration of serum must be avoided (this was the probable explanation of the fatal case and of the three with paralysis) (2) An adequate initial intrathecal and intravenous dose was essential and if the response in eighteen to twenty four hours was unsatisfactory a second injection of serum should be given

Dr Macnamara then referred to the other aspect of the treatment of acute poliomyelitis where advice was not sought until paralysis had fully developed In 1929 when an attempt was made to secure adequate after treatment for every paralysed patient the principles which had been enunciated by Sir Robert Jones and Robert Lovett were used as the basis for the work The patient was placed on a frame of a modified double Thomas pattern, with in addition, foot pieces head piece and if necessary arm pieces A cloth corset had been used for abdominal paralysis When there was involvement of the small muscles of the hand a papier maché splint was applied So long as hyperaesthesia persisted the treatment involved complete rest on the frame with daily immersion in hypertonic saline baths at first for ten to twenty minutes and later for longer periods Even during immersion care was taken to prevent stretching of paralysed muscles Re-education was commenced when the hyperaesthesia

subsided and as far as possible this was carried out by experts Experience in Melbourne confirmed Lovett's conclusion that the degree of recovery which could be achieved by an expert was three times as great as that achieved by well meaning amateurs An accurate knowledge of the anatomy and actions of muscles was essential to prevent the development of trick movements Furthermore considerable experience was necessary to assess the fatigue point of the neuro muscular system which was to be kept raised back to normal function Splintage required constant supervision and frequent modification of the position of the limb was necessary in order to give the advantage of relaxation to groups of muscles relatively weaker than their antagonists The principle taught by Jones and Lovett that the greatest factor in converting a slight paresis of muscle which is capable of recovery into severe and permanent paralysis is fatigue had been borne out by experience in the physiotherapy department of the Children's Hospital in Melbourne For this reason when the lower limb abdominal or spinal muscles had been paralysed an endeavour was made to continue rest by splinting in recumbency with muscle re education as long as any recovery was evident The treatment was not changed until nine months had elapsed with no evidence of further recovery Records were kept of the degree of recovery measured periodically according to the standards of the Harvard Infantile Paralysis Commission In many cases more recovery was seen during the third year of recumbency than during the second year The degree of muscle recovery was less during the winter than the summer months If the factor of fatigue of recovering muscles was fully appreciated and prevented it was therefore worth while continuing recumbent treatment for longer than the two years which had usually been allowed

SIR ROBERT JONES Mr MCMURRAY and Mr WATSON JONES thanked Dr Macnamara for her lecture, and for the opportunity of seeing the films which had been presented

Ireland

Public Health Congress in Belfast

The Royal Institute of Public Health will hold a congress in Belfast from May 10th to 15th The inaugural meeting will take place in the Great Hall of Queen's University on May 10th there will be a civic reception the same evening and a banquet on May 12th The annual meeting of the Fellows and Members of the Institute will be held in the Grand Central Hotel on Saturday morning, and special services in the Cathedral and St Peter's Church have been arranged for the following day The Sections will meet in the Municipal College of Technology where there will be two presidents one from Ireland and one from this side of the Channel In the State Medicine and Municipal Hygiene Section The vital factor in nutrition will be the subject of a lantern demonstration by Dr Chalmers Watson Sir Lynden Macassey will give an address on modern legislative tendencies in public health and there will be a discussion on the organized treatment of cripples will be opened by Miss M J Forrester Brown of the surgeon to the Bath and Wessex Orthopaedic Hospital and County Clinic Dr David Lees will speak on venereal disease as a public health problem The Industrial Hygiene Section will consider recreation in its various and special aspects The part played by nurses in the treatment of chronic sickness will be dealt with by Dr Fergus Fergus and papers will be read on the diseases associated with the [illegible] In the Section concerned with [illegible] and hygiene of childhood there will be discussions on the treatment of venereal disease in children Dame Louise McIlroy will open a discussion on the prevention of maternal and infant mortality and other topics to be dealt with include child guidance clinics physical education and the provision for maternity in the transferred Poor Law hospitals In the fourth Section a number of papers will be contributed on tuberculosis with special reference to the industrial problems concerned and Dr Jane Walker will give an address on the economic aspects of this disease The fifth Section will comprise pathology bacteriology and biochemistry and its proceedings will open with an address by Mr A B Mitchell on the contributions of bacteriology to problems of public health Another address in this Section will be given by Professor A M Drennan on pathology in relation to public health Further information may be obtained from the honorary secretary of the Institute, Dr T N Kelynack 37 Russell Square London W C 1

Mental Diseases in Ireland

At a meeting of the Joint Committee of the Grange gorman Mental Hospital a report was read from Dr J O C Donelan resident medical superintendent in which he dealt with the increase of insanity and stated it could not be too strongly emphasized that while the number of registered insane in the mental hospitals and workhouses in Ireland had increased mental hospital treatment was utilized to a much greater extent than heretofore—more especially for persons of advanced years suffering from senile decay who formerly would never have been included among the registered insane The extent of the actual increase in Ireland (if any) was therefore a matter on which there was a considerable divergence of opinion even among competent medical authorities In 1894 and again in 1906 the Inspectors of Lunatics submitted special reports to the Lord Lieutenant dealing with the alleged increase of insanity in Ireland Extracts from those reports were submitted by Dr Donelan from which it appeared that the reasons given in 1894 for the apparent increase in the number of insane and the main factors contributing to the development of insanity could be classed under the headings of (*a*) heredity (*b*) consanguineous marriage (*c*) innutritious dietary (*d*) immoderate use of certain nerve stimulants and (*e*) mental strain and harassing anxieties following the acute agricultural depression experienced at that time The results of the 1906 inquiry showed that while for a number of decades there had been a decrease in the population the number of the registered insane had increased This had given rise to the widespread belief that an actual increase of insanity had taken place in Ireland Whether that was so or not it was impossible to state since the available statistics did not afford the precise information upon which a definite conclusion could be based The increase in the actual numbers in asylums was attributed among other causes to accumulation the gradual absorption into asylums and workhouses of the unregistered insane the change in medical opinion concerning the degree of insanity which justified certification and transfer to institutional care the greater confidence of the poorer classes in the method of treatment in asylums the increase in the number of asylums and their greater accessibility in consequence of the extension of railways and other means of communication greater longevity generally owing to increased sanitation and the influx of returned emigrant who having broken down mentally while abroad returned or were sent back to their country to swell the numbers of the insane The statistics of insanity in other countries even more than in Ireland indicated that the Celtic race notwithstanding its undoubted intellectual gifts was peculiarly prone to mental disease Dr Donelan pointed out that it was a remarkable fact that during the period from 1894 to 1903 the

average death rate in the mental hospitals in Ireland was 25 per cent lower than in the mental hospitals of England and Wales in Ireland, therefore accumulation was largely if not altogether responsible for the fact that the proportion of registered insane to total population was greater than in England Wales and other countries Accumulation was responsible also for the fact that Belfast had a smaller number of registered insane than Dublin While it was distressing to see the large number of insane persons under care in mental hospitals one form of mental disease was decidedly on the decrease—namely general paralysis, which in many instances, now yielded to treatment and was prevented by the improved treatment of venereal disease The proportion of alcoholic cases decreased steadily up to last October, but since then for some unaccountable reason there had been an unusually large number Dr Donelan concluded that heredity was the main cause of insanity and that the only means of improving the mental health of the country was to limit the reproduction of the unfit The chairman remarked that the returns circulated by the resident medical superintendent appeared at the first glance most alarming The proportion of insane to population was calculated on the actual resident population in Ireland in each census year no account being taken of the immense oversea population which had emigrated The feeble minded and insane were not among those who emigrated and it followed that Ireland had now to support an insane population out of all proportion to its actual resident population

Clean Milk Legislation

At a recent meeting of the subscribers to the Stillorgan Convalescent Home Dr Leonard Abrahamson stated concerning the question of the amalgamation of hospitals that he was in favour of one large well equipped hospital In England and on the Continent big, well equipped hospitals were the rule and he found that the atmosphere of friendly co operation between the staffs was as good as it was in any of the smaller institutions Last year he advocated legislation for the provision of clean milk to the hospitals and to the public generally Nothing had been done by the Government in this matter and he hoped that the new Government would consider the question Dr M J Russell did not agree that the Dublin hospitals were inferior to hospitals in England or elsewhere but there was certainly room for work in the provision of clean and wholesome milk the importance of which could not be exaggerated There were however at least twelve suppliers of clean milk to three or four of the Dublin hospitals

Scotland

Co ordination of Glasgow Health Services

In an address to the Royal Philosophical Society of Glasgow on March 23rd Dr A S Macgregor M O H for Glasgow spoke upon the subject of co ordination of health services under the Local Government Act In Glasgow the transference to the local authority of the provision of hospital and other treatment for the sick poor and of services in connexion with lunacy and mental deficiency had led to the creation of a comprehensive administrative unit responsible for a hospital system of about 8 500 beds The unification of the scheme for medical inspection and treatment of school children with that for maternity and child welfare had resulted in one administrative unit dealing with children from infancy to the end of school life The changes had emphasized the preventive aspect of public health The investigation of the causes of sickness and mortality was so important that the Government might be urged when times were better to foster medical research by applying that section of the Act which enabled an additional service to obtain a grant Dr Macgregor envisaged a closer liaison between the hospitals of the local authority and the medical schools these hospitals had already developed as training schools for nurses

Glasgow Cancer Hospital

At the annual meeting of the Glasgow Royal Cancer Hospital the Lord Provost Sir Thomas Kelly who presided, said that although the cure for cancer had yet to be discovered, medical science had in recent years made great advances in the knowledge of this disease, and also in the successful treatment of the malady in its early stages This hospital provided treatment for patients not only from Glasgow, but from all parts of Scotland The report showed that 547 cases had been treated in the hospital during the past year with a daily average number of 57 The ordinary income had been £8 249 and the ordinary expenditure £10 619 Professor Shaw Dunn said that the problems of cancer, such as its prevalence increase, and world wide incidence were now receiving thoughtful attention, because there was a much greater willingness to face the facts of this disease and to find a way to combat it Besides accommodating the largest possible number of cases to which only palliation and comfort could be offered this hospital had made provision for the diagnosis and treatment of early cases where complete cure might be expected, in these surgical skill and nursing were supported by the resources of the x ray department the Radium Institute, and the pathological laboratory In recent years the number of such cases had increased due to early diagnosis and to the use of radium in treatment The hospital was also actively engaged in promoting and subsidizing research on the essential nature and cause of cancer

Edinburgh Post Graduate Courses

The syllabus of the courses at Edinburgh arranged by a committee of the School of Medicine of the Royal Colleges and of the University for July August and September of the present year is now available A course on obstetrics gynaecology and diseases of children will be held from Monday July 11th to Saturday August 6th—fee £10 10s, with a minimum number of twelve It will include clinical midwifery and clinical gynæcology obstetrical and gynæcological anatomy physiology and pathology diseases of children child welfare and ante natal clinics This will be followed by a course for general practitioners from Monday August 15th to Saturday September 10th which will include daily clinics upon clinical medicine and surgery at the Royal Infirmary and on stated days clinics upon infectious diseases gynæcological cases diseases of children of the eye ear nose and throat on dermatology midwifery, and venereal diseases as well as demonstrations on applied anatomy morbid anatomy radiology and ultra violet light therapy The fee for this course will be £10 10s for four weeks or £6 6s for two weeks and arrangements may also be made for instruction in simple laboratory method and in personal examination of cases Concurrently with this course there will be a general surgical one including surgical clinics and operations gynæcological operations and clinics upon surgical conditions of children demonstrations upon applied anatomy general surgery clinical diagnosis and treatment of renal diseases clinical surgery orthopædics surgical pathology surgical physiology radiology and venereal diseases The full course will be £10 10s for four weeks or £6 6s for the first or second fortnight Special courses for small numbers on the pathology of the nervous system and therapy modern diagnostic methods diseases of the blood

x ray physics ultra violet radiations genetics tuberculosis diseases of the ear and throat ophthalmoscopy venereal diseases and surgical pathology can be arranged Applications for enrolment, or for copies of the syllabus should be made to the secretary Post Graduate Courses in Medicine University New Buildings Edinburgh

Falkirk Royal Infirmary

At the annual meeting of Falkirk and District Royal Infirmary Dr John Young moved the adoption of the report which stated that the new buildings of the institution were giving general satisfaction and the number of patients admitted to the wards during the year had been 1 378 as against 1 088 in 1930 while the number of out-patients had been 5 460 as compared with 3 445 The chairman referred to the fact that hospitals everywhere were now realizing that it was not fair to subscribers that some persons who used the hospitals should refuse to contribute on the grounds that the hospitals were maintained by voluntary subscriptions This matter had been brought into special prominence by cases arising out of the working of the Road Traffic Act Patients from a different district were admitted to a hospital as the result of an accident and none of the parties involved would admit liability and the insurance companies would make no payment When liability was denied and no action to obtain a decision was brought before the court the hospital received nothing from the insurance companies It had been suggested that in such circumstances the claim of the hospital might be pursued in court but it was hoped that the hospital section of the Road Traffic Act which was rather obscure in its present form would be altered so as to ensure that hospitals would be fully recompensed for motor accident cases and that liability would be fixed upon some specific person or insurance company It was however increasingly recognized that hospitals would have to adopt a firmer attitude in regard to such cases

England and Wales

Leeds General Infirmary

At the annual meeting of the General Infirmary at Leeds held on March 31st Mr Henry Middleton chairman of the Board of Management said that the report and balance sheet showed a brave optimism in spite of the financial position of the institution which for some time had been a source of anxiety The fact that the overdraft at the bank amounted to £80 000 was indeed serious but for some years there had been no great increase in the amount The labours of the Workpeople's Hospital Fund were cordially recognized for in addition to the contributions to other institutions some £31 000 had come to the Infirmary from that source In making an appeal for an increase in the annual subscriptions Mr Middleton stated that a generous friend of the Infirmary had offered to add 25 per cent to the amount of any increase in the total of the regular annual subscriptions and it was hoped that this offer would be widely known Reference was made to the great expense to the Infirmary of motor accidents during the year treatment had been given to 1 126 patients and of these 523 were admitted to the wards The cost to the Infirmary had been £4 084 but in spite of the provisions of the Road Traffic Act only £566 was received and of this sum £430 came as voluntary contributions from the patients themselves The chairman expressed the view that the Act had given very little relief one reason being that the insurance companies would not pay anything to the hospitals unless and until their clients were proved to be in the wrong The Dental Hospital of which an account was given in these columns some years ago and which as an educative centre is a part of the University and as an institution for the treatment of patients is under the management of the Board of the Infirmary had since the amalgamation been represented on the Board by three of its dental surgeons Recently the University had instituted a full time appointment of professor of dentistry the holder of which would act as warden and would perform the same functions in relation to the dental students as the dean of the Medical School did for the medical students An alteration had been made in rules whereby the dental department of the Infirmary—that is the Dental Hospital—would be represented on the Board by the warden and two dental surgeons

Mr Charles Lupton

The date of the annual meeting this year marked the completion of fifty years of service to the Infirmary by Mr Charles Lupton who was elected a member of the Board in succession to his uncle Mr Arthur Lupton on March 31st 1882 A member of a family whose services to Leeds have been rendered by at least three generations Mr Charles Lupton has devoted himself with unvarying zeal and enthusiasm to the work of the Infirmary in all its aspects He was chairman or treasurer as the post used to be called for upwards of twenty years and it was not only during his chairmanship but very largely owing to his efforts that the great extension of the buildings which forms the King Edward Memorial Wing came into existence When Mr Lupton saw and more clearly than anyone else the imminent need for this great extension he ventured on his own responsibility to buy up the land round the Infirmary which he deemed would be required It is certain that by so doing he saved the Infirmary a large sum of money and effected at the same time an improvement in its surroundings for which he deserved the gratitude of the citizens In the details of hospital management Mr Lupton has for many years been a recognized expert and no question has ever arisen at the Board on which he was unable to give wise advice Both Mr Lupton and his immediate predecessor Mr Benson Jowitt have been warm friends of the cause of medical education In consequence there have always been most cordial relations between the Infirmary and the old Medical School which then became the medical department of the Yorkshire College and had now for some twenty five years been a part of the University of Leeds These two far seeing chairmen recognized that one of the great functions of our larger hospitals was the teaching of students and the provision of facilities for research On behalf of some 400 members of the staff of the Infirmary a number which included the Board the honorary staff the nurses and the servants Mr Lupton was presented with a porcelain and silver gilt replica of the Celedon porcelain bowl which was presented to New College Oxford by Archbishop Warham some time between 1505 and 1532 The presentation was made by Mr F K Kitson and he was supported by speeches from Dr Barrs who has just retired from practice after fifty years and from Dr Telling the chairman of the Faculty A special gift of a silver tea and coffee service was at the same time made on behalf of the nurses by Miss Innes the lady superintendent who referred to the great interest Mr Lupton had always taken in their work It was well known that many of their privileges and many of the improved conditions under which they now carried out their duties were due to his initiative and influence In replying Mr Lupton mentioned that when the Infirmary was opened in 1868 there were some twenty nurses now with perhaps two and a half times the number of

beds there were upwards of 200 Referring to some remarks which had lately been made in public in Leeds as to the advisability of amalgamation or co operation between the medical charities Mr Lupton explained the steps already taken to secure this and convinced his hearers that matters were progressing in the right direction He paid a generous tribute to the work of the medical and surgical staff He spoke of the early recognition by the surgeons of Leeds of the great work of Lister and how at a time when his work was not accepted nay was even opposed in London was barely recognized in Edinburgh and had taken root only in Glasgow, the surgeons of Leeds sent him a 'round robin' expressing their agreement with his conclusions and saying that they attributed any failures they might have had not to any flaw in principle but to some error in technique It is a source of great satisfaction to all connected with the Infirmary that Mr Lupton has consented to remain a member of the Board and it is hoped that his advice and help may be available for many years to come

Royal Free Hospital New Physical Medicine and Orthopaedic Departments

The new departments of physical medicine and orthopaedics at the Royal Free Hospital, London received a house warming the other day when the meeting of the Physical Medicine Section of the Royal Society of Medicine took place within its walls These new departments adjoin the Eastman Dental Clinic and although on a much less ambitious scale they embody the same modernity in design and construction They have been planned to enable the hospital to qualify for recognition as an approved centre for the treatment of rheumatic diseases to obviate the crowding which has hitherto militated against efficient work and to develop if required in out patient fracture clinic The block one side of which is occupied by the departments is planned eventually to extend to seven floors but at present, for financial reasons it is cut short at the first floor The ground floor is devoted to electrotherapy and the lower ground floor to other physical treatment and orthopaedics At the beginning of the corridor is a waiting room where a dial and light indicator board summon the next patient either to the consulting room next door, or direct to the dressing and treatment rooms In each of the electrical treatment rooms—one for men and the other for women—there are three separate treatment units The advantages of this plan are that the waiting time of patients is reduced that the assistants are enabled to follow the same case right through treatment and that the efficiency of the treatment and the care and maintenance of the apparatus can be made the special responsibility of individuals In each unit alternating current is available for diathermy the surging sinusoidal current for switch boards a low voltage direct current (80 to 100 volts) for ionization and the main voltage (220) direct An adjacent room is devoted to the paraffin bath This is a bath heated electrically to 115° F the melting point of the paraffin wax it contains It is used to remove residual stiffness and thickening around an injured joint In the orthopaedic and plaster room on the floor below provision is made for the carrying out of manipulative surgery and minor open orthopaedic operations while next door is a gymnasium where exercises are given under the direction of the orthopaedic surgeon Next to this is a room for treatment by the sudd chair a German modification of the Plombieres method and this leads to the large room for light treatment where there is a full equipment of lamps including the kromayer mercury vapour the Finsen carbon arc flame carbon arcs and tungsten arcs A small shower room with rest and dressing cubicles for patients who have had carbon arc treatment is provided, and further along the corridor is installed a vapour bath and a variable type of spray, somewhat like a Scotch douche The faradic treatment room contains the well known Bergonié chair used in this instance not for obesity (for which in the experience of the department it has only a temporary value) but for reconditioning weak musculatures It is expected that a good deal of the work of the department will consist in the treatment of septic hands sinuses burns, varicose ulcers and so forth and a room is therefore provided for this purpose There is also a brine bath given in a teak container deep enough to allow of the special type of spray being used again a German douche and finally a form bath—a sweating with a minimum of fatigue Many interesting ideas are followed out in the design of the department such for example as distinctive colours for switches and non interchangeable plugs the keeping of all accessory apparatus for each unit in separate specially designed cupboards warm cupboards for keeping plaster and splint in good condition a zinc covered table for manipulations in the orthopaedic room a suspension apparatus fixed for the application of plaster spinal jackets, the clock mechanism for driving the Bristow coil so that treatments may be given with the minimum of supervision and the ingenious apparatus for exercises in the gymnasium The visitors were conducted round the department by Dr C B Heald physician in charge of the electrotherapeutic department of the hospital and Mr P Jenner Verrall orthopaedic surgeon

Correspondence

"THE STUDENT IN IRONS"

SIR,—Dr C M Wilson's article, and the subsequent letters of Professor Greenwood and Dr Ryle must surely have commanded the sympathetic interest of every reflective reader The situation is, admittedly deplorable but I suggest that it is not necessarily insoluble The solution depends on two things first knowing what we want to achieve and secondly facing facts, in which I include both the constants and the variants of the situation

First then, what do the authorities really wish to produce? Is it a general practitioner who can treat a sick person or is it a polymorph specialist who can handle an electrocardiograph unskilfully who can produce a series of indifferent abdominal x rays and who could venture on a laminectomy (probably when it was not required) If it is this 'Jack of all trades that is wanted I fear by all means go on as we are doing adding another year to the curriculum every now and again I submit however that a time will come when the public will realize that it is not being supplied with the sort of general practitioner it wants and when it will demand a type of doctor who is prepared to leave laboratory and electrical machinery to specialists who knows what to give to their findings in his particular patient and who holds a status both in the profession and out of it that the specialist cannot assail To produce such a type of general practitioner he must be educated *ab hoc ad hanc* not submitted to the same teaching and examination as the future specialist Furthermore he should be protected by holding the only diploma that entitled him to carry on general practice It may be a very foolish ambition to give every specialist a full general training first, but it is not practical politics Personally I have the advantage of an arts course before studying medicine and of ten years in general practice before I specialized and for these benefits I have always been grateful I am

recognize that the amount of special training now called for in any specialty makes such a programme quite impossible

Let us consider dental surgery as an example Owing to the way dentistry developed in our country we are accustomed to the idea that very few dental surgeons have a medical education When I graduated in Italy a dental diploma was only obtainable by graduating in medicine (six years) and then devoting *one* year to dental studies I am aware that this has since been altered It gives however an illustration by *reductio ad absurdum* I am prepared to admit that every dental surgeon might be the better for a preliminary medical degree but I am inclined to doubt whether an ophthalmologist requires a full medical course any more than a dentist Certainly if I suspected that I had cataract I would not be greatly impressed by the claim of an ophthalmic surgeon that he had won a gold medal in obstetrics And if I were choosing a medical attendant for my family I should be glad to know that he could use an ophthalmoscope but supremely indifferent to his skill in operating for cataract or even in fitting spectacles

The fact of the matter is that in every department of the curriculum teachers are aware that they are instructing future specialists in that particular branch to whom every technical detail that can be crammed into the course must be of ultimate importance This is the real trouble It prevents that careful discrimination of relevant and irrelevant material whereby alone the general practitioner can be trained to be a thinking doctor fit to take charge of the sick person Let the specialists all take a full medical course if they like just as all dentists are free to do *now* but let it also be possible for the student by early specialization to become a specialist and receive an appropriate diploma in the same length of time as it takes to make a general practitioner I realize that this phrase early specialization will instantly evoke a torrent of protest I deplore early specialization as much as anyone but I am positive that it is the only cure for the far greater ills so vigorously denounced by Dr Wilson, Professor Greenwood and Dr Ryle We continue to cling to fate—that is post graduate—specialization because we do not face facts The first fact is that the utmost length of a medical education has been reached That is a fixed point to every open minded observer The second is that the body of medical knowledge is a variant which varies only in one direction—increase It is only by refusing to face these facts that we cling to the idea that somehow or another we can train together for five or six years gynaecologists and biochemists radiologists and bacteriologists dermatologists and ophthalmologists etc

Let us take a lesson from the engineers No one would think of demanding from the same candidate proof that he could design a tunnel and also construct a microphone At a very early stage civil mechanical and electrical engineers specialize The engineers are rational and they treat the problem of expanding knowledge in the only logical way

Despite Dr Wilson's pessimism about committees I surmise that if the principle were once accepted there would be found leaders in every department capable of laying down a curriculum of six years possibly even five that would be calculated to train specialists for their own branch The ophthalmologists would probably cut out practical midwifery the biochemists might discard orthopaedics the dermatologists might prune intracranial surgery but whatever they did I am perfectly certain that they would all find it feasible to outline a specialist course that was reasonable and relevant in content and above all that did not encroach on a modest liberal education As things stand at present a boy begins his medical career when he is 16 or at most 17 and before he leaves school That is early specialization of the most virulent description Let the medical schools get candidates who have *at least* as much general education as a solicitor even if they must have less than teachers and clergymen The profession will suffer much less from specialized knowledge and specialized ignorance within medicine than from general ignorance of life, from the lack of a liberal education and from cultural deficiency which is becoming increasingly evident on all sides

This change would I believe allow us to attack freely the fundamental problem—the making of the general practitioner We could start him to memorize chemical formulae after he has left school without demanding that he gave up a year's classics or a modern language or even a modicum of English We could aim at Sir Charters Symonds's grand objective of introducing clinical opportunities from the very first We could maintain some thread of humanizing education throughout his professional training and finally give him a status not of the humble general practitioner but of the best man in the profession in relation to whom all specialists would be as they should be humble satellites We might even produce such a highly evolved type that he would think in terms of prevention first and treatment second Then and only then would the public cease this stupid and mischievous quest of the specialist's independent opinion which results from a general devaluation of the practitioner to the detriment of all concerned

But I have not the slightest hope that any change such as I suggest will take place And the reason for my pessimism is the large number of vested interests that would be threatened So long as we have a multiplicity of examining and qualifying bodies so long will drastic and rational reform be impossible I recall Victor Horsley's campaign in the nineties for a one portal system He was as a voice crying in the wilderness Our profession continues to have as many means of entry as a cup tie final The British mind being well nigh incapable of criticizing the traditional sees no disadvantage in this situation It only becomes derisive when its attention is drawn to a somewhat similar situation in America But if we were a trifle less complacent in our insularity we might be more sensitive to the impression we make on foreigners

About thirty years ago I was discussing with Golgi an anomaly (which I believe still exists) in the reciprocity between Italy and this country in medical practice Golgi said But we have to defend ourselves You have no State qualification—only a great many letters We cannot possibly know which of these have any value It is not surprising in Turkey but you English and Americans are the only others that expect foreigners to respect your private diplomas If you had a State qualification it would be quite different I was unable to differ from him I reflected that I held an Edinburgh M B of which I was not ashamed but I knew that an Edinburgh qualification to wit the Licence of the Royal Colleges was at that time (I am not speaking of the present) incomparably and incontrovertibly easier to obtain despite the efforts of the General Medical Council to standardize medical examinations I suggest therefore in conclusion that those who like Dr C M Wilson entertain aspirations to emancipate the student from irons should begin by concentrating their attention on a unified system of qualification after which the reform of the curriculum may become more feasible than at present it seems to be —I am etc

Institute of Medical Psychology
51 Tavistock Square W C 1
March 26th

H CRICHTON MILLER

ROAD TRAFFIC SIGNALS

Sir,—Many of the statements made by Dr Ed J Primrose in his letter published on March 26th are true but the deductions he makes therefrom in my opinion are not equally sound There is no doubt he is right in his supposition that the road authorities have copied modern electric railway signals for their road signs On the railways the older semaphore cum lantern is being superseded by signal lights alone This may be good practice since with electric lighting the signals can be more brilliant and penetrating than the older oil or gas lamps and a brilliant light can be seen much further than a semaphore arm Again on the railways the risks of colour blindness are eliminated by regular examinations of employees The adoption of this system for road signals is a mistake since it takes no account of defective colour sense amongst motor drivers If it can be shown that colour-blindness (of any serious degree) constitutes a risk then either colour signals are wrong or those who are colour blind should not drive cars No one proposes to penalize the colour blind who are otherwise fit drivers It is the colour signal that is wrong Dr Primrose agrees with this conclusion

My proposition is this The light signals should have a distinctive shape so that they would be recognizable apart from colour Thus the Stop signal should be a horizontal bar of light the Caution signal a round light and the Go signal a vertical column of light These may be coloured or not as the authorities please Dr Primrose suggests that this proposition does not really represent correctly informed opinion on the part of those of the Association who are qualified in this matter There he is misinformed My proposal was examined by the Committee on Tests for Motor Drivers a special and most representative committee appointed by the Association This committee approved the proposal The proposal was debated by the Ophthalmic Section of the Eastbourne Meeting of the Association and again approved The Council of the Association forwarded the resolution of the Ophthalmic Section to the Ministry of Transport On this representation I was summoned to attend a meeting of a committee of the Ministry I spent a lively hour and a half under cross examination by the members of that committee most of whom are directly concerned with the control of road traffic The chief points that arose in this cross examination were these (1) the magnitude of the difficulty of defective colour vision (2) proof that the defect was a cause of accidents (3) the visibility of the existing form of the signal boxes On these points my evidence was as follows

1 For the most part defective colour vision occurs in males Percentages of 3 4 and 5 have been given as its incidence in unselected groups Complete colour blindness probably does not exceed 1 per cent One of the members of the committee stated that the examination of candidates for driving licences for public service vehicles in his district showed 1 per cent of failures I submitted that these were to some extent selected men for those who knew they were colour blind were not likely to become candidates Those with partial colour defect are also dangerous when visibility is poor—for example in fog My submission was that even if there were only 2 5 per cent whose colour defect rendered them potentially dangerous then the authorities must either prohibit their driving or change the character of the road signals I pointed out that the authorities did in fact recognize the truth of my contention that a colour signal alone was insufficient since the present signals did try though ineffectually to give form as well as colour The red bulbs ever signal had STOP fused in the glass and the green GO but the brighter the signal light the less visible is this lettering

2 There was little evidence that accidents had occurred on the roads owing to failure to recognize colour signals That accidents did arise at sea and on railways from this failure was known Colour signals on the roads in this country were new and experience was to come But I have since read (and forwarded to the Ministry) a quotation in the New York *Sight Saving Review* (March 1932) It reads

> The monthly bulletin *Street Accidents* published by the Police Department of the City of New York records During the month of November collisions of cars injured 1 379 persons and killed 18 misjudgement of signals caused the injury of 256 people and the misjudgement of distance closely connected with binocular vision caused the death of 2 and the injury of 346 people

The nature of the misjudgement of signals is not stated

3 There was a strong belief on the part of the committee of the Ministry that the position in the signal boxes of the lamps—top middle or bottom—would be indicative of the signal even when colour could not be seen It was alleged that the street lighting would illuminate the signal box in town and the car headlights in the country I maintained that this was not so Since then I have submitted a memorandum of observations made in company with other observers in London at Cambridge and on arterial roads In the most brilliantly lighted part of Oxford Street the signal boxes were not visible at night unless they had a light background The dead black of the boxes reflected no light Even against a light background they were invisible when the brilliant amber light was showing In dull lighted streets and in the country the car headlights did not illuminate the boxes if the headlamps were properly adjusted to give a level beam

Both Dr Primrose and myself agree that the present signals are not right The issue between us is what the new signals should be He advocates the manipulation of a bright white light of large surface steady flashing or with a movement of bands of light and dark I advocate a characteristic shape His main objection to shape is that this may be mistaken by drivers with bad visual acuity But this objection falls since the State has decreed a minimum visual acuity—the ability to read the letters of a motor car registration plate at twenty five yards If a man can read this (nearly 6/12 Snellen) he could surely recognize a band of light the size and shape of a number plate at a hundred yards Dr Primrose's advocacy of intermittent signals is based upon the fact that such signals are well appreciated in the peripheral fields of vision This would be a good argument for signals at sea where lights must be picked up over a wide horizon but road signals are fixed in relatively narrow streets where the area is amply covered by the visual field for form Finally my proposal was put forward after several variations of signals (including that advocated by Dr Primrose) were tried out The form signals proved most easily recognizable and also simplest to provide

Cheap electricity and powerful lights of all colours have brought about a great increase of illuminated street advertisements They blaze and blink into our eyes from every shop and street corner Some of them are dangerously deceptive For this reason apart from the difficulties of the colour blind the character of road signals is important if they are to serve their purpose It may even become necessary for the Ministry to require the removal or modification of shop signs that conflict with or render invisible the road signals—I am, etc

London March 31st N Bishop Harman

LACTIC ACID IN THE GASTRIC CONTENTS

Sir,—The paper by Professor Ian Murray and Dr Andrew B Robertson (April 2nd p 607) adds yet another argument against the specificity of the presence of lactic acid in the gastric contents as a means for the diagnosis of carcinoma There are however one or two points in their paper which require mention In the first place it should be pointed out that a very great deal of careful work has been done on the origin and significance

of lactic acid in normal and pathological gastric contents and their main thesis—namely that the lactic acid content varies roughly inversely with the HCl content—has been known for a great many years In 1886 Ewald (*Berl klin Woch* 1886 xxiii 825) demonstrated that if a healthy man took a roll of bread on an empty stomach then lactic acid appeared in the gastric contents in the first half hour after the meal On dissolving bread in water and digesting at body temperature he found no lactic acid to be present and he writes

> This does not appear surprising however for I find quite a number of lactic acid producing organisms and know that the mucous membrane of the stomach is always coated with mucus containing cell residue detritus and micro organisms The fact is one can always detect lactic acid within thirty minutes after eating bread As soon as HCl develops the lactic acid disappears at a rate proportional to the increase in HCl formation until finally only HCl can be detected With normal persons this is the case after the first hour

Miller (*Deut med Woch* 1885 ii 843) had in fact shown in 1885 that a number of micro organisms of the normal stomach could be demonstrated which gave rise to lactic acid formation Ewald further wrote that it would be of great help to know at what strength of free HCl lactic acid formation ceased and this was demonstrated by Hirschfeld (*Archiv fur Physiologie von Pflüger 1890* xlvii 510) some four years later He showed that concentrations of 0 01 to 0 02 per cent of free HCl retard the activity of the lactic acid forming bacilli intermediate concentrations of 0 03 to 0 04 per cent still further depress the formation of lactic acid and complete annulment is attained at an HCl concentration of 0 07 to 0 08 *per cent* He further showed that pure cultures of *B acidi lactici* behaved in a similar manner towards the above concentrations of free HCl In the following year Maly (*Handbuch der Physiologie* 1881 Band V 3) studied the process of lactic acid formation microscopically and he found that as soon as lactic acid appeared in large amounts legions of the lactic acid forming bacilli appeared in the field of vision These observations have already been recorded in a monograph by one of us (J D R) entitled *Gastric Acidity* (John Murray 1931 pp 30–31)

It was in fact the detection of the prolongation of the lactic acid phase in abnormal conditions of the stomach where the secretion of free HCl was either lower than normal or completely absent which led people to put forward the theory that the presence of lactic acid in large amounts was specific for carcinoma of the stomach

Again the authors are incorrect when they state

> The most recent work on the subject which we have found is that by Moore and Roberts who state that the presence of lactic acid is not only at all times abnormal but is pathognomonic of gastric carcinoma

This problem was very carefully considered in two papers by ourselves (The origin and occurrence of lactic acid in human gastric contents with special reference to malignant and non malignant conditions *Quart Journ Med* 1930 xxiii 175 and Lactic acid and carcinoma of the stomach *Lancet* 1930 i 1711) The problem was studied by very careful quantitative means and it was proved that the lactic acid was definitely of fermentative origin and therefore not specific for carcinoma Again in the paper in the *Quarterly Journal of Medicine* we state

> A study of the results proves at once that the second point of view—namely the absolute specificity of the presence of lactic acid in the gastric contents in cases of carcinoma—cannot be upheld Excluding the repeats it will be seen that 56 per cent of the non malignant cases showed the presence of lactic acid in the resting juice and 36 per cent showed it in the later specimens Whilst the quantity present in cases of carcinoma is greater in a few instances than that obtaining in many of the non malignant cases yet there is not sufficient difference in the quantities in many of the cases to render even the quantitative reaction of diagnostic value

The theory advanced by Craven Moore and Roberts—that the lactic acid was produced by the specific action of cancer cells—cannot be supported in view of our results

It is a pity that the authors were not more specific in the diagnosis of their cases since they refer to them merely as cases with some gastric condition and cases which showed clinically no evidence of any such trouble One would like to have the assurance of the authors that every possible step had been taken to exclude the diagnosis of carcinoma of the stomach particularly in Group A where achlorhydria was present in all cases and the average age was 43 years The fact however that Professor Murray and Dr Andrew Robertson have succeeded in confirming the results of earlier workers will re emphasize that tests for lactic acid are of no value as a specific means for diagnosis of carcinoma ventriculi —We are etc

E C DODDS
J D ROBERTSON

Courtauld Institute of Biochemistry Middlesex Hospital April 4th

THE CHRONIC PELVIC WOMAN

SIR,—In his paper in the *Journal* of March 26th Dr Aleck Bourne gives a vivid description of a very common clinical condition with such symptoms as abdomino pelvic and back pain, frequency and excess of menstruation leucorrhoea fatigue and nausea and vomiting among its characteristic features For such *women who constitute the bulk of the gynaecologist's practice* Dr Bourne would largely narrow down our treatment to a choice between psychical measures for that group which he classes among the neuroses and drastic surgical procedures for that group with organic lesions—surely a sorry dilemma for modern gynaecology with its ideals of conservatism!

Few will *quarrel with* Dr Bourne's emphasis of the psychical background so often present in gynaecological cases and with his plea that chronic pelvic and abdominal illness may have its *origins* in such a neurosis But no one will question the frequency of pelvic lesions in such cases and it would be unfortunate if the statement that it is *seldom possible to cure* these patients except by operation and in most cases the operation must be radical —for example hysterectomy—should go unchallenged We know that it is contrary to the experience of many gynaecologists We have ourselves reported a large series of chronic pelvic women in whom the symptoms have been relieved by nothing more radical than an opening up and draining of a deeply *infected* cervix In such cases the abdomino pelvic and back pain which can be elicited promptly by vaginal manipulation of the cervix and fornices may actually disappear within twenty four hours of the operation and the leucorrhoea menstrual arrhythmia and malaise within a short period thereafter In respect of the importance of cervical infection as a cause of persisting abdomino pelvic symptoms our experience coincides with that of Masson Parsons Robinson and others Next to cervical infection we would place vaginal prolapse as a cause of chronic abdomino pelvic disorders

The proved advantages of minor treatment in a large *proportion of* such cases is more and more restricting the field of the drastic surgery favoured by Dr Bourne to the relatively uncommon class with fibroids and chronic adnexal disease Dr Bourne rightly deprecates the frequency with which such women carry *on their abdomen* the scars of futile operations but he does little to help us to remove *this slur* on our art with the statement that the only hope lies with *radical surgery*

Finally the recognition of the orthopaedic nature of much of the *low back pain* experienced by the gynaecological cases that Dr Bourne describes a recognition

which we owe to Dr Goldthwaite and his pupils marks a further step in the management of such suffering women Dr Bourne in a reference to backache states that this is one of the chief complaints but instead of conforming to what we should expect it may to our surprise be worse on lying or sitting down On the basis of this capricious behaviour Dr Bourne would class this type of pain amongst the neuroses In our experience these features are frequent in a readily recognizable and easily treated type of orthopaedic strain —I am etc ,

Edinburgh March 28th JAMES YOUNG

MOBILITY OF THE PELVIC JOINTS IN PREGNANCY

SIR —May I be permitted to draw the attention of obstetricians to the report in the *Journal* of March 19th (p 526) of Mr R Brooke s interesting remarks on backache in women?

Mr Brooke speaking from the orthopaedic point of view refers to the variability in parturient women of the amount of stretch and later of subinvolution of the sacro-iliac ligaments Obstetricians recognize that a large foetus may be successfully delivered from a small mother and they realize that the foetal head in such cases is much moulded but often they do not appreciate the part played by relaxation of the pelvic ligaments in achieving this result If they did they would be more ready to seek to differentiate before the commencement of labour, between those women whose ligaments are soft and those who have an unyielding pelvis and in whom a Caesarean section may be the only means of saving the life of the child The presence or absence of mobility in the pelvic joints can readily be demonstrated during the later months of pregnancy by palpating the lower border of the pubic joint whilst the patient (in the upright position) rests her weight alternately on each foot That attention to this mobility might appreciably reduce infant mortality and morbidity was proved in a fairly recent investigation of a series of mothers (*Journ Obstet and Gynaecol British Empire* 1930 xxxvii No 1) —I am etc ,

E JOYCE PARTRIDGE F R C S

London S W 1 March 24th

FRACTURES OF THE SPINE

SIR —Colonel Ellis s letter on the first aid treatment of fractures of the spine (March 19th p 542) is of great interest and importance The view which I very strongly hold is that no patient who has sustained a fracture or fracture dislocation of the spine should ever be lifted from one situation to another unless he is first turned into the prone position and lifted face downwards

Every surgeon who has used the method I have described will have been impressed by the ease with which simple hyperextension movement will reduce the most severe crushing injuries and dislocations Similarly the most simple forward flexion movement cannot do other than increase the displacement We know that in many fractures of the spine the cord has been actually compressed but not crushed or severed and that in such cases the paraplegia is capable of complete recovery We now have records of many such cases Since we know that displacement is so very easily influenced by movement that the necessary range of movement is small and that the position of the vertebrae can be very considerably altered without the patient complaining seriously of pain and without him being able to prevent it by muscle spasm it is clear that the risk of converting a recoverable paraplegia due to compression into an irrecoverable paraplegia due to crushing of the cord is a very real one

Although there can be no doubt that a very serious risk is taken in lifting the patient in any position other than face down, there is comparatively no danger when the patient is recumbent on the stretcher If by chance respiratory or cardiac embarrassment should then arise it would be quite safe to turn or roll him on to one side Personally I have never seen such embarrassment and in view of the frequency with which prolonged spinal operations are performed on anaesthetized patients in the prone position without respiratory or cardiac complications arising I doubt very much whether there is any serious likelihood of such a complication even in a shocked patient Moreover the prone position is quite safe in cases where in addition to a fracture of the spine there is injury to the ribs or pelvis Dislocations of the *symphysis pubis (and sacro iliac joint)* are most widely displaced when the patient lies on his back, the displacement being less when he lies on his face and entirely reduced if he lies on his side There would therefore be no increased risk of injury to the pelvic viscera

The first aid rules which in my opinion are sound and which we have taught at the Liverpool Royal Infirmary and elsewhere are as follows

1 Place the stretcher alongside of the patient and while the patient holds himself rigidly roll him on to the stretcher taking care to roll him uniformly (in one piece)

2 If this is impracticable and the patient is lying in any position other than on his face roll him on to his face and then lift him face downwards on to the stretcher

3 If respiratory distress should arise raise one shoulder by means of a folded coat If still not relieved the patient may be rolled on to one side In most cases he will be comfortable on his face

These rules should undoubtedly be applied in all cases where a back injury is associated with paralysis of the legs and in my opinion they should be applied whenever there is a reasonable probability that the spine is fractured The difficulties are greatly increased in mine accidents where the only means of transportation is the confined space of a cage Possibly H M Medical Inspector of Mines who discussed these questions with me a year ago could quote his experience of recent cases —I am etc

Liverpool March 26th R WATSON JONES

COLPORRHAPHY AND PROLAPSE

SIR —Professor W Fletcher Shaw has asked in the *Journal* of March 19th for a detailed description of my modification of double colporrhaphy called ' combined abdomino perineal cystopexy this will be found in the appendix of the 1932 impression of *Recent Work on Prolapse* referred to in my letter in the *Journal* of January 30th There also will be found fuller details of the drawbacks of the older operation (as well as a new perineal technique for minimizing them) These drawbacks lessen the value of the statistics of the orthodox double colporrhaphy operation and justify the submission of an abdominal modification which is free from them While I am convinced of the superiority of the latter over the former I did not intend to urge the adoption of the abdominal modification in all cases but to limit its application to those types of cases (referred to in my letter in the *Journal* of March 5th) in which abdominal section is indicated When the value of this operation has been confirmed by other gynaecologists it is not improbable that its application will be extended to other types of prolapse —I am etc

E HESKETH ROBERTS F R C S Ed

London W 1 March 22nd

AETIOLOGY OF CANCER

SIR,—Dr Mottram in his letter (March 26th, p 590) raises a point which Dr Purdy and I have perhaps not sufficiently discussed The point is as follows Does an immune serum prepared by injecting an animal with filtrates of a tumour owe its neutralizing power partly (or even wholly) to an action on the cells of test animals by which the cells are injured and rendered incapable of acquiring malignant properties? This question has been answered in the manner suggested in Dr Mottram's letter Immune serums prepared in horses or goats by injection of filtrates of Fujinami's tumour grown in fowls neutralize filtrates of the same tumour grown in ducklings whether the test animals be chickens or ducklings

Perhaps the simplest experiment which resolves Dr Mottram's difficulty is the following An adult duck is injected with a filtrate made from a Fujinami tumour grown in a duckling a tumour forms as a consequence of the injection In my experience the tumour thus obtained always recedes leaving the duck resistant to subsequent injections The duck is now hyperimmunized by a series of injections of filtrates of Fujinami's tumour taken always from ducklings The immune duck has received no fowl proteins whatsoever but the immune serum neutralizes filtrates of Fujinami tumours grown in chickens the test of neutralization being the inoculation of chickens with mixtures of serum and chicken tumour filtrate

Thus the antiserum contains no antibodies to the tissues of the test bird and no antibodies to the fowl proteins contained in the tumour filtrate It therefore cannot cause specific injury to the tissues of the test bird nor can it neutralize by action upon specific fowl proteins of the filtrate The obvious conclusion the only conclusion which follows from these established facts is that some thing which is neither duck nor fowl in nature is neutralized What can this thing be except a virus? —I am etc,

Mill Hill March 30th W E GYE

DIET AND DENTAL DISEASE

SIR,—Your presentation of the report of Mrs May Mellanby and Dr C Lee Pattison on the effect of cereals on the teeth in conjunction with the report of Surgeon Commander Sampson on the dental perfections of the inhabitants of Tristan da Cunha is singularly well conceived and a strong prima facie case has in consequence been made for the elimination of cereals from the diet of those who seek to preserve their teeth

The facts might have been stated in even stronger terms for the island's adoption of the potato in place of flour as its staple article of food does not find its commencement as you rather suggest in the wreck of the *Henry & Paul* in 1882 when rats for the first time came ashore Though the subsequent increase of them until they became a plague made the growing of corn impossible it did not account for the people's preference for the potato for that had prevailed throughout their occupation

The Rev W F Taylor for instance in the published account of his six years mission there—from 1851 to 1857—states that the island crops consisted almost entirely of potatoes and that nothing but potatoes had ever succeeded there or was likely to succeed and that though a little wheat was grown it was not much and the yield was not very plentiful And to go still further back the young artist Augustus Earle who was marooned on the island in 1824 in his published account of the year he spent there says that the islanders standing dish was potatoes and that bread was scarcely known It may be taken therefore that the people's staple food throughout their residence has been potatoes and while this diet has persisted their exceptional health, whether or not attributable to it has remained The one and only instance of any serious disease among them is the case of cancer from which William Glass the founder of the settlement died in 1853 If this ascendancy of the potato in the island diet has been subject to any qualification it has come about through the current movement for helping the people for that has given rise to the consignment of flour to the island and the consignment of it in considerable quantities What is the result? In earlier times the people's dependence on cereals had been limited to what visiting ships—most of them whalers—could spare from their own ship's stores—usually a few bags at the most Now the supply of flour is more or less organized For instance 3½ tons were sent by H M S *Dublin* in 1923 and since 1925 in the yearly visits of ships taking stores flour has on each occasion been regarded as the chief item in the consignment and when it has arrived it has been equally divided among the families

Though the islanders dependence on the potato still seems undiminished yet their consumption of cereals as it now obtains constitutes a new factor in the island dietary and it cannot be disregarded in any conclusions concerning their admirable dental conditions Mrs Mellanby and Dr Pattison experimented on children of 6 years of age and under and they found that the initiation and spread of dental caries in each were almost eliminated with the exclusion of cereals from their diet Does the addition of cereals now made to the Tristan diet affect the island children in an opposite way and produce caries or the symptoms of it? Apparently not for Surgeon Commander Sampson is conclusive in the tables of his report that no islander under 21 years of age has any carious teeth and yet the younger among them have been born and reared since the supply of flour became regular and more plentiful

It may of course be said that the supplies of flour even as now sent are still inadequate to taint the system But this is only tantamount to saying that cereals in moderation are not injurious and this is the point which the lesson of Tristan da Cunha seems to establish with regard to our teeth The principle of fasting was introduced on hygienic grounds and through recognition of the importance of it it became a religious observance It operated either as a total abstinence or as one confined to specific articles of food and the benefits of it are now more or less disregarded In the spirit of it cannot the experiment in diet which you so rightly say has been made in Tristan da Cunha with success of giving a qualified preference to the potato now be tried here and results noted for our edification?—I am etc

Tristan da Cunha Fund 3 Raymond Buildings Gray's Inn W C 1 March 28th DOUGLAS M GANE

SIR,—I was much interested to read in the *Journal* of March 19th the comprehensive reports of Surgeon Lieut Commander (D) W E A Sampson and Mr J R A Moore L D S on the dental conditions of the Tristan islanders The impression first created in the minds of your readers is that here exists a dental paradox but further consideration soon supplies the clue

The staple diet is stated to be fish potatoes milk and eggs these are undoubtedly rich in vitamins and mineral salts both of which are essential for the building and maintenance of healthy teeth Further these foods have an alkaline base ash whereas meat and cereals (seldom eaten in Tristan da Cunha) have an acid base ash If these latter foods predominate in the diet then the system is definitely acidified and Nature in an effort to maintain a proper equilibrium is forced to withdraw calcium from the teeth the result is dental caries On the other hand

it would appear as I have shown in my book *Those Teeth of Yours* that years of continued dietetic errors tend to produce towards middle age a state of intestinal toxaemia and that this bowel unhealth manifests itself in the mouth as gingivitis This inflammation aided by a state of general body acidity quickly develops into pyorrhoea alveolaris

The report further says that in Tristan da Cunha a toothbrush is never used but surely this adjuvant to mouth cleanliness is unnecessary when teeth are properly built and properly nourished —I am etc

J MENZIES CAMPBELL,
Glasgow March 29th DDS LDS FRSE

ALUMINIUM AND HEALTH

SIR —Your editorial article in the *Journal* of March 26th (p 576) will be appreciated by numerous readers I am in entire agreement with the findings which you have quoted in support of the harmlessness of this smooth clean and bright non ferrous metal

During the past twenty four years I have had thousands of workers in aluminium in big factories in this country under my care I have never come across a case of systemic illness which I could attribute in any way to aluminium or alumina The whole of the working lives of many of these men have been spent in the factories, and they are still in excellent health

The purified bauxite clay and cryolite used in making this modern metal are of the highest purity The clay is thoroughly calcined and a great deal of the fine aluminium dust and furnace fumes must of necessity be constantly inhaled or ingested by the workers in these factories Yet I have never observed the slightest signs of ill health such as are to be found in other metal industries I feel I can claim from long and intimate experience to speak with every confidence on this matter

It seems little use to reiterate the fact that aluminium in a soluble form is contained to a greater or less extent in all animal or vegetable foods In fact the normal individual takes hundreds of times more aluminium salts into his system with his normal diet than he could possibly obtain from the aluminium pans in which food is cooked In my own household aluminium cooking and infusing utensils are greatly appreciated as a result of their lightness cleanliness and easy transmission of heat If the articles are kept clean by wire abrasion and a trace of soap the same vessels can be kept smooth and spotless for many years and being thus free from cracks there is much less chance of organic matter being left to decompose in the pans and another important matter from the housewife's point of view is that food is not so readily singed

There appear to me to be no grounds whatsoever for the campaign against aluminium which in my opinion should be in universal use —I am etc

Ballachulish March 27th LACHLAN GRANT

SIR —In reference to your annotation on aluminium and health in the *Journal* of March 26th I should like to offer a few remarks as to the possible ill effects of frequent doses of this metal with a full appreciation of the mathematical fallacy of basing serious conclusions on a small number of cases

When my attention was called to the solubility of aluminium—as very clearly shown by the analyses by Dr Lastes and reported in the pamphlet by Dr R M L Hunter Cooper—I saw at least a possible cause of chronic ill health with anomalous symptoms of gastric disorder in a considerable number of my patients They occurred mostly in women in every case they were especially proud of their complete aluminium outfits and in almost every case they were taking three or more glasses of hot milk or hot milk food boiled in a pot sometimes single but more often double—in the latter case the milk was often a considerable time boiling or nearly so in the aluminium vessel Now Dr Eastes's figures show that milk does dissolve quite a definite amount of the metal Acting on this possibly being at all events, a contributing cause of the ill health I was successful in most cases in substituting good enamel or iron pots, with a complete relief of the symptoms—especially in that of a member of my own family—no other treatment being carried out at the same time

One has sometimes had patients with a personal idiosyncrasy to special drugs—aspirin acetanilide antipyrine belladonna, and even the rarely used copaiba—but it seems like riding coincidence too hard to suppose that a sequence of a score or more relieved could all have been hypersensitive to aluminium As apparently no cook now pays any attention to the 'no soda' caution when cooking green vegetables I still think that the case against aluminium and its possible evils (I do not stress dangers) has not been cleared up —I am etc,

CORAM JAMES MRCS LRCP
London NW 2 March 28th

INDIAN MEDICAL SERVICE PENSIONS

SIR —I write to say that I quite agree with the letter which appears from Colonel King in your current issue in connexion with pensions of officers of the Indian Medical Service It is a question that affects most vitally many officers who have retired, and also in an indirect way those young medical men who contemplate choosing the Indian Medical Service as a career It is obvious we cannot leave the question as it is and in addition to the suggested line of action made by Colonel King I think the support of the British Medical Association through its Naval and Military Committee would be welcome and at the same time most helpful —I am etc

T H SYMONS
Major General I M S (ret)
Late Director General
Church Crookham April 3rd

PATHOLOGICAL SERVICE OF THE LONDON COUNTY COUNCIL

SIR —Dr Gordon Goodhart I think mistakes the position The hospitals whether county or voluntary are the servants of the public who are concerned to secure efficient medical services as economically as is compatible with efficiency The Council is spending not its own money but that of ratepayers, by whom wasteful expenditure will be resented very particularly at the present time The Voluntary Hospitals Committee fulfilling its statutory duty under Section 19 of the London Government Act 1929 recorded its opinion that obviously a cheaper and a better plan than the provision of group laboratories was the utilization of existing facilities at the voluntary hospitals Dr Goodhart ignores completely as his chiefs also have done that authoritative expression of opinion but it is not by any means certain that the nation and Parliament which is the final arbiter will approve of that attitude

I am a member of a group of public men calling themselves Friends of Economy who have set out to resist waste of public money It was with that purpose that my first letter to you (February 6th) dealt chiefly with the waste involved in the proposed establishment of group laboratories the most expensive and least defensible part of the Council's scheme That that was my

position is clear from the sentence which ran One would like to be told whether the Voluntary Hospitals Committee advised this ambitious undertaking in the circumstances of our present financial stringency and the presence of established institutions for doing the same work as that contemplated by the new group centres Dr Goodhart therefore misrepresents the facts when he says that my main criticism was directed against the smaller laboratories within the hospitals to which I did not refer

Dr Goodhart makes the serious imputation that the pathological staff of St Mary's Hospital were more or less indifferent about the *work* which they were doing for the county hospitals and did that work indifferently Since he adds the gibe that boards of management [may] regret losing the *money* he may perhaps be surprised to learn that no money of which the board of management had any knowledge was paid to St Mary's Hospital in respect of this work and he is obviously very insufficiently informed as to the facts of this particular instance

Dr Goodhart contrasts his qualification to be a champion of the voluntary system with mine He declares that he is a child by birth of the system whereas I am a child by adoption I can only infer this cryptic observation to mean that because his father was a member of the staff of a voluntary hospital and mine was not Dr Goodhart claims to have a superior right to speak for that system This argument is so infantile as to disarm criticism but perhaps I may in turn point out that I am just completing thirty years of service as the head of a *department* at a voluntary hospital whereas Dr Goodhart *filled* I understand for twelve years a relatively subordinate post in the pathological department of a voluntary hospital and recently abandoned this for a better-paid office at a municipal hospital —I am etc

House of Commons April 5th E GRAHAM LITTLE

PREPARATION FOR MARRIAGE

SIR —A recent letter in your columns signed by the honorary *medical* secretaries of the British Social Hygiene Council draws attention to the establishment of a Personal Problems Bureau the consultant being Mrs Neville Rolfe the secretary general to that council In answer to a *letter of inquiry* from me as to whether the advice to be given to those about to marry would include at Mrs Rolfe's discretion advice as to artificial measures of birth control I am informed by Mrs Rolfe that

> I am hoping to give assistance on the lines of the hand book on *Preparation for Marriage* to girls intending marriage It does not appear to me that the question of birth control is likely to enter to any considerable extent In the event of an individual requesting advice on methods they would be referred to the medical profession

My desire in this letter is carefully to avoid the very disputable point as to whether such advice should ever be given in preparation for marriage and the still more debatable point as to whether that advice should be given under the arrangements now proposed

But there arises for supporters of the British Social Hygiene Council a *more general* and extremely important *problem* I was actively concerned in recommending that this society (then called the National Council for Combating Venereal Diseases) should be formed as a *conquest* official body to undertake educational work conducive to the prevention of the evil *excesses* and the protection of the sanctity of family life by the promotion of chastity and continence This body has hitherto refrained from action which would imply approval of artificial birth control The establishment however of a consultation centre at which advice in preparation for marriage may include advice on birth control—even if not to any considerable extent —we are told by the honorary medical secretaries has received the full support and approval of the Social Hygiene Council Furthermore it is intended that part of the profits coming from these consultations shall be added to the funds of the British Social Hygiene Council

This obviously is a new departure in policy of great significance and cannot leave the position of the council unchanged Clearly it is now for every subscriber to its funds including each contributing borough council and county council to decide whether they are in sympathy with this departure of the British Social Hygiene Council from the position of neutrality hitherto ostensibly maintained on this most controversial subject of birth control —I am etc

ARTHUR NEWSHOLME

The Athenæum London W March 28th

SIR —I have read the letter on preparation for marriage by Kenneth Walker and A H Harkness in the *British Medical Journal* of March 26th (p 592) and I would beg leave to comment on it I do not know whether the proposed Personal Problems Bureau has the sanction of the British Medical Association but I am sure that the bulk of general practitioners will quite definitely disapprove of the suggested line of conduct both from the point of view of their own pockets and from the point of view of the undesirability of undermining a patient's confidence in the ability of the family doctor who best of all knows the constitution of his own patient

I would suggest that general practitioners should be supplied with a notice for display *in their waiting rooms* setting forth the objects of this bureau in full in plain *comprehensible* language readily grasped by the patient *Most important of all* should be the injunction to consult your own doctor in the first instance It would then be left to the discretion of the family doctor to refer the patient to the bureau as it quite *definitely ought to* be Any patient attending the bureau without his *doctor's* knowledge should be immediately referred *to his doctor* no matter what the nature of the *complaint* The practice of handing a list of so called *authorities* to the patient cannot be too strongly condemned as many ailments can be treated at home by the family doctor and if they cannot be so treated he will not hesitate to make the best possible arrangements for his patient —I am etc,

Sedbergh March 27th C A ALLAN

The Services

AUXILIARY R A M C FUNDS

The annual meeting of the members of the Auxiliary R A M C Funds will be held at 11 Chandos Street Cavendish Square W 1 on Friday April 22nd at 5 p m when the annual report and financial statement for the year ended December 31st 1931 will be presented and the officers and committee for the current year elected

DEATHS IN THE SERVICES

Lieut Colonel William George Marsden R A M C (ret) died at Edinburgh on February 2nd He was born on March 28th 1877 and was educated at Aberdeen where he graduated as M B and Ch B in 1901 Entering the R A M C as *lieutenant* on January 31st 1905 he became lieutenant colonel on March 7th 1919 and retired less than a year ago on April 15th 1931 He served in the war of 1914–18 and was mentioned in despatches in the *London Gazette* of June 15th 1916

Obituary

GEORGE M ROBERTSON M D LL D F R C P Ed

Physician Superintendent of the Royal Edinburgh Hospital for Mental and Nervous Disorders and Professor of Psychiatry in the University of Edinburgh

We had to announce last week with much regret the death at Tipperlinn House Edinburgh on March 28th, of Professor George M Robertson in his sixty ninth year He had been in poor health for some time and had intimated the resignation of his appointments to take effect next September He took an active interest in his specialty almost up to the end and within the past month had drawn up his annual report as physician superintendent of Morningside in which was included an acute and critical survey of legal changes at present desirable in connexion with the treatment of insane persons in Scotland



A son of the late Colonel John Robertson C I E of the Indian Army George Matthew Robertson was born in India he received his early education at Madras College St Andrews and studied medicine at Edinburgh where he graduated M B Ch B in 1889 and then acted as resident physician in the Royal Infirmary Immediately afterwards he took up the study of mental diseases as assistant physician under Dr T S Clouston at Morningside Asylum There he remained till 1892 when he was appointed physician superintendent of Murthly Asylum becoming seven years later physician superintendent of Larbert Asylum He joined the Royal College of Physicians Edinburgh as a Member in 1891 and two years later proceeded to the Fellowship while the Royal College of Surgeons of Edinburgh conferred upon him its honorary Fellowship in 1927 He did not elect to take the M D degree until 1913 when however he received a gold medal for his thesis entitled Observations on the early diagnosis aetiology prophylaxis treatment and signs of general paralysis of the insane a subject which at that time was attracting great interest On the retirement of Sir Thomas Clouston in 1910 Dr Robertson became physician superintendent of the Royal Morningside Asylum for the Insane or as it came to be called later the Royal Edinburgh Hospital for Mental and Nervous Disorders At the same time Robertson became lecturer in the University of Edinburgh on mental diseases a post which had also been held by Clouston The increasing social importance of mental disorder and the great development in its treatment led the managers of the Royal Edinburgh Asylum to present to the University of Edinburgh a sum of £10 000 with the object of endowing a chair of psychiatry on condition that the professor of psychiatry in the University and the physician superintendent of the Royal Asylum should be the same person Robertson became the first incumbent of this post in 1919

In addition to being a lecturer highly popular with his students a painstaking administrator of the institution in which as superintendent he was responsible for the care of nearly a thousand patients and a brilliant and daring innovator in regard to new methods of treatment Professor Robertson found time to make numerous contributions to the literature of his special subject His annual medical reports to the managers of the Royal Edinburgh Hospital were awaited with eager anticipation by the medical profession because each dealt with some aspect of mental disorder which at the time was attracting attention Among his other publications were articles on the Use of hypnotism among the insane published in the *Journal of Mental Science* in 1893, Formation of the subdural membranes," "Employment of female nurses in the care of insane men in asylums (1902) "General paralysis of the insane published in 1913 'Hospitalization of the Scottish asylum system in 1922, 'Prevention of insanity,' in 1926 and History of the teaching of psychiatry' which appeared in the *Edinburgh Medical Journal* in 1928

His eminence in his special subject and the great services he had rendered to the profession and the public were recognized by numerous honours received from time to time Thus he was medallist in 1892 and later president of the Royal Medico-Psychological Association He took an interest in the work of the British Medical Association and became president of its Edinburgh Branch in 1926, and twice acted as president of the Section for Mental Diseases at the Annual Meetings in 1922 and in 1927 He had been Morison lecturer on mental diseases to the Royal College of Physicians of Edinburgh in 1911 and in 1913 and for a third time acted in this capacity in 1927 He was Maudsley lecturer in 1926

From an early stage of his career he was attracted by the historic humanitarian work that had been done by Pinel for the mentally afflicted and he maintained a close connexion with the asylums of Paris acting as a corresponding member of the Société Clinique de Médecine Mentale de Paris and being appointed vice-president of the Centenaire de Bayle at Paris in 1922 He was president of the Royal College of Physicians of Edinburgh from 1925 to 1927 and in 1931 the University of St Andrews conferred upon him its honorary LL D

Sir Thomas Clouston had been a pioneer before 1892 in the matter of transforming asylums which were then largely places of detention into hospitals where mental disorder was to be treated on much the same lines as in hospitals for physical diseases This alteration which was a matter of gradual progress received the special attention of Professor Robertson and several of the most important steps that have been taken in this direction were due to his advocacy or actual introduction The increasing employment of trained female nurses in the care of mental patients of both sexes received a great impetus from him and was an important corollary to

Clouston's earlier work A movement which particularly originated with Robertson and which was carried through against a considerable amount of criticism was the institution of nursing homes for the treatment of doubtful or early mental cases which could not be treated satisfactorily at home but which at the same time hardly required actual certification Eight of these nursing homes situated in the southern suburbs of Edinburgh and in the country were at his instigation opened by the managers of the Mental Hospital During the last five years he wrote 720 patients have been treated in these homes a convincing proof of their usefulness They have come from all over the English speaking world and many have come from England and Ireland to escape certification While these homes provided for mild mental cases among the more affluent of the community the still greater need of some such provision for cases among the poorer classes which were constantly drifting into asylums led him to persuade the managers of the Mental Hospital to found Jordanburn Nerve Hospital for gratuitous advice and treatment or treatment at a small charge This hospital which does not admit certified cases of insanity proved a great boon for mild and incipient mental patients and was the first of its kind in Britain it is now in process of imitation in several other places Jordanburn Nerve Hospital together with the West House Hospital provide clinical cases for the University class in mental diseases and an elaborate course of instruction extending over two terms was arranged there by Professor Robertson Partly as the result of these innovations which he had introduced and partly because of his genial kindly and confidence producing personality Professor Robertson's reputation was world wide and his opinion was often sought on questions both of administration and of policy He was greatly interested in the Royal Commission on Lunacy of 1924 before which he gave evidence and in the drafting of the Mental Treatment Bill for England which followed upon that Commission's report

The funeral took place at the Edinburgh Crematorium Warriston on March 31st after a service held in St Cuthbert's Parish Church and was attended by a large number of representatives from the Royal Edinburgh Hospital for Mental Disorders the Edinburgh Corporation the Royal College of Physicians of Edinburgh the Royal College of Surgeons of Edinburgh and the Royal Infirmary as well as by many other colleagues and friends

Dr W McALISTER medical superintendent Bangour Mental Hospital writes

The passing of Professor George Robertson removes from our midst one who for years dominated the whole field of Scottish psychiatry His devotion to the specialty was wholehearted and as time passed his influence and position became the pivot round which every movement in the direction of progress revolved He was in all essentials a great leader—endowed with courage foresight tenacity and a spirit that never admitted defeat It used to be said of Robertson Everything he touches turn to gold There was often a tincture of envy in the remark and he had earned his rewards too easily Nothing could be further from the truth If genius is the capacity for taking pains then Robert on had it in ample measure No one except those who were privileged to work in intimate association with him can have any idea how tremendously he laboured at the foundations of his many schemes One of his favourite dicta was It is not the quality of thought but the amount of thought that matters in devising some new departure And so he lived to gather round him not only his supporters but also his critics in order that when the time was ripe for launching his proposals he might be certain that no relevant consideration had been ignored Robertson however was anything but pedestrian in his methods He had an amazing power of grasping as it were in a flash the essentials of a situation whether it was a difficult clinical case a tangled domestic situation or an administrative problem But he never allowed his uncanny intuition to run away with him for he went to infinite pains to check his first impressions The same quickness was manifest in every direction A cursory glance through a new book usually sufficed to give him an accurate idea of what it was about and a retentive memory enabled him to store away what was of interest to him

If one were asked what was the mainspring of his ceaseless activity one would not be far wrong in attributing it to his sympathy with the insane Busy man though he was he was never too engrossed to find time for an old patient in distress He did not suffer fools gladly—so long as they were sane fools But to the afflicted he was patient and considerate to a degree Nothing pleased him better than to take up the cudgels on their behalf a thing he was always ready to do If there was one thing he could not tolerate that was to dismiss a patient's plea however ill founded it might appear on the ground that it was just a delusion That same characteristic lay behind his ceaseless agitation for the amendment of the Lunacy Laws It also explained why in season and out of season he advocated the cause of the insane It was for this that he welcomed any honour which came his way It was this that spurred him on to fight for the recognition of psychiatry as one of the most important branches of medicine worthy of a place beside the others To work with and for him was a liberal education His Why? put a check at once on slipshod work or ill thought out notions He was a relentless critic without ever importing any element of personal rancour or bitterness He strove to be just and usually ended by being generous in his dealings with his subordinates Any measure of success that came to them he welcomed with almost boyish satisfaction

It seems hard that he should have been cut off when within sight of that leisure which he had so well earned But his record of achievement is a full one such as is given to few men Idleness to him would have meant only weariness And so we console ourselves with the memory of one whom age never wearied and whose personality was an example and an inspiration to all

[The photograph reproduced is by E R Yerburgh and Son]

Dr WILLIAM GARDNER who died recently in his 75th year was a son of the late Thomas Gardner of Woodcote Manor Bromsgrove His mother was one of the last of the Gowers of Worcestershire a family dating back to the Norman Conquest and numbering among its members Gower the father of English poetry After leaving school he engaged in business for some time but he always inclined towards medicine and eventually entered as a student at St Mary's Hospital in due course obtaining the M R C S and L R C P diplomas After holding appointments at the London Lock Hospital and the Warwick County Mental Hospital he obtained a Poor Law appointment in Somerset and practised at Nunney Being devoted to country life this gave him the surroundings he would have chosen He made himself very acceptable to his patients and neighbours To his many friends he was always Bill and to his patients generally Doctor Bill He was an excellent shot Although not a great horseman he was quite at home on horseback and never happier than when riding his rounds For some years his health had been failing and he moved in retirement latterly near Warminster He leaves a widow and two sons his brother is Dr F G Gardiner of Oxford

RUSHTON PARKER M B, B S, F R C S

Professor of Surgery University of Liverpool Consulting Surgeon Liverpool Royal Infirmary

As briefly announced in our last issue, Professor Rushton Parker F R C S died at his residence in Rodney Street Liverpool on Good Friday morning at the age of 84

He was born in Liverpool the son of Dr Edward Parker a well known practitioner and police surgeon His first school was that of John Brunner the father of Sir John Brunner though later he went to the Royal Institution School in Liverpool His medical education took place at University College Hospital London where he had a most brilliant career gaining the medals in anatomy physiology and surgery After graduating M B, B S Lond with honours he served as house surgeon at University College Hospital He then spent a year abroad in Paris and Vienna and returning to London, acted as demonstrator of anatomy at University College for a short time In 1872 he became a Fellow of the Royal College of Surgeons of England and returned to Liverpool to the old Royal Infirmary School of Medicine—the precursor of the Liverpool University — and there started his long academic career, as demonstrator of physiology and histology He soon showed his aptitude for surgical work and within a year he was made assistant surgeon to the Stanley Hospital In 1878 he was appointed to the staff of the Royal Infirmary serving that institution until 1907, when he retired as senior surgeon He became professor of surgery in 1882 and retained the title until his death a period of fifty years He was secretary and president respectively of the Section of Surgery at the Annual Meetings of the British Medical Association held in Liverpool in 1883 and 1912 and was president of the Liverpool Medical Institution in 1902-4



Rushton Parker was one of the very few men whose student days were passed before the publication of Lister's original papers but he often said that the three men who had impressed him most were Erichsen Lister and H O Thomas His unbounded faith in Lister early led him to embrace the then new creed and his persistent efforts to convince others made him one of Lister's most ardent disciples He was a pioneer in the operation for the radical cure of hernia and in the extirpation of tuberculous glands in the neck He was one of the few men to appreciate the genius of Hugh Owen Thomas, for it was Parker who first induced Thomas to publish an account of his splints The story of their association is told by Sir Arthur Keith in *Menders of the Maimed* So proud was Parker of this friendship that when he large presented with his portrait on his retirement he induced the artist lightly to sketch in a Thomas splint in the background

He was a man of wide culture a great linguist and bibliophile He had a sense of humour peculiarly his own and many generations of students will no doubt recall instances of his mordant wit which can only be described as Parkerian But at heart he was a most unselfish and generous man beloved by all his patients and friends

[The portrait reproduced is by Elliott and Fry Ltd]

DR HOWARD DISTIN died at Paignton on March 18th in his 66th year He had retired in 1927 after more than thirty years of active practice at Enfield in which from the first he was associated with the work of the local hospital He assisted in its growth from a cottage hospital with twelve beds to that of fifty two beds with 'War Memorial" as its new name, under the reorganization he was appointed medical manager and remained as such until his retirement, and in recognition of his services one of the wards was named the "Howard Distin" He was educated at King's College School and Hospital, qualifying M R C S L R C P in 1890 and taking the degree of M B Lond in 1892 He had been house surgeon at 'King's to Lord Lister at the time when Lister's views and practice were not only not generally favoured but were held in ridicule by some London surgeons, his powers as a conversationalist made the period of his career of great interest to those who came after Lister's work was accepted A good speaker he was a keen and regular attendant at meetings of the North West Middlesex Division of the British Medical Association in which he had held office as chairman He was extremely popular with his brother practitioners and on more than one occasion was president of the Enfield Medico Ethical Society of which he was in part a founder A staunch Churchman he was vicar's warden for many years before leaving Enfield and on his retirement took office in the church at Paignton which his forebears had for centuries served

Medico-Legal

FALSE USE OF MEDICAL TITLE

At Long Ashton (Bristol) police court a man who was described on the charge sheet as William Faulkner alias Norman Nelson Kirkup formerly of Fishponds Mental Hospital Bristol was fined £20 on each of two charges—namely of posing as a Bachelor of Medicine and of falsely using the title Dr Kirkup or M D implying that he was a registered medical practitioner The chairman of the magistrates stated that the bench thought the fine the maximum penalty quite inadequate to the seriousness of the offence considering the consequences that might have followed The defendant was also committed for trial on charges of bigamy and false pretences to which he pleaded Not guilty

The prosecuting solicitor stated that the defendant applied for and obtained a post as assistant medical officer at Fishponds Mental Hospital in the name of Norman Nelson Kirkup which name appeared in the Colonial List of the *Medical Register* with an address in Ontario He stated that he had just returned from China where he had been engaged by the Canadian Baptist Missionary Society and he enclosed testimonials references from Canada where he said he was M C P and S Ont For six months he carried out his duties with the complaint Dr Edward White medical superintendent of the hospital said that Kirkup's duties included prescribing and examining patients he sometimes gave anæsthetics for the dental surgeon A London woman gave evidence that she knew defendant as William Faulkner who had married her daughter Last October he told her that he had obtained the name of Kirkup and had obtained a post as ship's It was while going to take up a post in North Borneo that the accused was arrested by a police inspector who had arrived at Singapore only a few hours before the boat in which Faulkner (or Kirkup) was travelling A statement alleged to have been made by the accused was that he was a medical student at Queen's University Toronto in 1914 during the war served in France with the Canadian and later with the R A M C He added that in 1919 and partnership with a London practitioner and later in practice doctor opened a sunlight clinic in London another medical officer to a firm in the City he became bankrupt to open a clinic and nursing home in Nottingham he was sued he began to practise in medicine in the name Last year to his mother's name Kirkup which charges of false pretences on which One of them earned a sum of £68 which it was committed com from the *British* North Borneo Company he had obtained secured a position as medical with whom he had

Universities and Colleges

UNIVERSITY OF BIRMINGHAM

A course of five lectures under the William Withering Memorial Lecture ship on some aspects of human biology will be delivered by Mr C J Bond C M G honorary consulting surgeon Leicester Royal Infirmary on April 20th 27th May 4th 11th and 25th Members of the medical profession are invited to attend

UNIVERSITY OF ABERDEEN

At the spring graduation ceremony on March 30th presided over by Sir George Adam Smith Principal and Vice Chancellor the honorary degree of LL D was conferred on Sir George Buckston Browne F R C S and on Mr Walter A Reid founder of the Reid Library in the Rowett Research Institute Aberdeen

NATIONAL UNIVERSITY OF IRELAND

UNIVERSITY COLLEGE GALWAY

The following candidates have been approved at the examination indicated

THIRD MEDICAL EXAMINATION—*M Dermody *M G A Little †H Walsh

*First class honours †Second class honours ‡Exempt from further examination in pathology

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly business meeting of the College held on April 1st James Michael O Donovan was unanimously elected a Fellow and Mohd Aslam a Member of the College The College nominated the President Dr T Gillman Moorhead as its representative to the Centenary Meeting of the British Medical Association to be held in July next

Medical News

The Sections of Physical Medicine and Radiology of the Royal Society of Medicine will hold a combined dinner with Old English Fare at Claridge's Hotel Brook Street W on Friday April 15th at 8 15 p m Sir Robert Jones will be the guest of honour

The sixth annual medical reunion of the North of England and Midlands Alumni Association of University College (late Queen's College) Galway will be held in the Queen's Hotel Piccadilly Manchester on Saturday May 7th at 7 30 p m Dinner at 8 p m Representatives of University College Galway will be present Graduates wishing to attend should communicate as early as possible with one of the secretaries Dr Patrick J Webb 127 Rochdale Road Harpurhey Manchester and Dr Bernard Shea 15 Manchester Road Shaw Lancs

The Huxley Memorial Lecture 1932 entitled Huxley as a literary man will be delivered by Mr Aldous Huxley at the Imperial College of Science and Technology South Kensington on May 4th at 5 30 p m

Dr Barrie Lambert chairman of the Central Public Health Committee of the London County Council will preside over a discussion on Hospital libraries and librarianship at the County Hall Westminster Bridge S E on Friday April 29th at 5 30 p m The speakers will include Lord Gorell Dr Herbert A Powell Dr W J T Kimber and Dr C Hagberg Wright Application for admission may be sent to the organizing secretary British Red Cross and Order of St John Hospital Library 48 Queen's Gardens Lancaster Gate W 2

At the meeting of the Paddington Medical Society on Tuesday April 12th at 9 p m at the Great Western Royal Hotel Paddington a debate on A State medical service will be opened by Mr Somerville Hastings and Sir Leonard Rowson Lyle M P followed by Dr G C Anderson D C L Batten and Dr A Welply Non members are invited to attend

A general meeting of the Royal Sanitary Institute on Tuesday April 12th at 8 p m at 90 Buckingham Palace Road S W 1 D T S Korth will open a discussion on the bacteriology of milk and methods of examination

At the meeting of the Society of Medical Officers of Health on Friday April 15th at 5 p m at 1 Upper Montague Street W C Dr R Fortescue Fox and Dr G R Bruce will discuss the provision of medical baths by local authorities

The Cantor Lectures on Recent researches on the nature and function of vitamins will be given by Professor J C Drummond on Mondays April 18th 25th and May 2nd at 8 p m in the house of the Royal Society of Arts John Street Adelphi W C

The Fellowship of Medicine and Post Graduate Medical Association announces that on April 16th at 10 30 a m Dr B Schlesinger will give a demonstration on rheumatic infections and heart disease in children at the Children's Heart Hospital West Wickham Kent Application must be made to the Fellowship by April 12th Forthcoming courses include oto rhino laryngology at the Central London Throat Nose and Ear Hospital April 18th to May 14th consisting of a clinical class operative surgery peroral endoscopy and pathology classes The clinical class may be taken separately or with one or more of the others (which are strictly limited) A course in paediatrics will be held at the Hospital for Sick Children Great Ormond Street in the mornings and at the Infants Hospital in the afternoons from April 25th to May 7th An afternoon course in psychological medicine will be given at the Maudsley Hospital from April 25th to May 21st All the above courses are restricted to members of the Fellowship Application should be made to the secretary Fellowship of Medicine 1 Wimpole Street W 1

The Seamen's Hospital Society has made arrangements for a new post graduate course for ship surgeons divided into three parts held at dates convenient to the normal slack times of certain trade routes of shipping and designed to give instruction in general medicine tropical and ship's hygiene duties The section of the course at the Dreadnought Hospital will enable students to take advantage of the Devonport Pathological Laboratory immediately opposite Part 2 comprising tropical medicine and hygiene will be held from April 11th to May 6th at the Hospital for Tropical Diseases Gordon Street and at the London School of Hygiene and Tropical Medicine Keppel Street W C Part 3 will take place in July and Part 1 in the autumn

A special two weeks post graduate course in cardiology will be held at the Liverpool and District Hospital for Diseases of the Heart from Wednesday April 27th to Tuesday May 10th inclusive The fee for the course which is limited to twenty is one guinea

A course of three post graduate lectures arranged by the Derbyshire Royal Infirmary by Dr J A Ryle physician to Guy's Hospital on Tuesdays at 8 p m commencing on April 12th The fee for the course will be one guinea

The annual meeting of the German Dermatological Society which was to have been held in Vienna at Whitsuntide has been postponed in view of the present economic conditions

The German Tuberculosis Congress will be held at Bad Harzburg from April 18th to 20th

At the meeting to be held at Evian les Bains in September 1933 which will be devoted to the study of renal insufficiency the Société Anonyme des Eaux Minérales d'Evian les Bains will award a prize of 10 000 fr for the best original essay written in French on the clinical value of experiments in provoked diuresis Full information concerning both the meeting and the competition may be obtained from the offices of the society 21 Rue de Londres Paris IXe

The first issue of a quarterly journal devoted to the study of vitamins and entitled *Zeitschrift für Vitamin forschung* was published at Bern in January

An international society for nutrition and vitamin research has been founded at Bern Further information can be obtained from A Juhasz Schaffer Universitäts-Augenklinik Bern Switzerland

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House, Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

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QUERIES AND ANSWERS

Plantar Corns

CLAVUS (South Africa) writes I would be grateful for advice in the treatment of plantar corns and incidentally of interdigital epidermophyton injection (as I understand it to be) Presumably the latter has been with me without causing discomfort for ten or fifteen years but during the past two and a half years I have had hard corns on the soles of my feet which I have been assured are of similar origin Almost eighteen months ago these were given one exposure of x rays in London and I was assured they would disappear If anything they are worse and are certainly painful at times now Recently I have tried repeated applications of phenol and even of nitric acid without effect Salicylic acid makes no impression at all Carbon dioxide snow I have not tried for I understand it necessitates some days in bed and as even acids make car driving painful I can quite believe it I would like to know of a less drastic but effective measure for what is a surprisingly troublesome complaint

Varicose Veins Oedema after Treatment

Mr A DICKSON WRIGHT writes in reply to J A L G's query (March 12th p 506) regarding the oedema which persists after the treatment of varicose veins by the injection method and after the application of elastoplast bandaging to ulcers In the case of treatment by injections a residue of chemical inflammation is left in the legs and the blockage of numerous veins necessitates some readjustment of the venous circulation before circulatory equilibrium is restored The existence of ulceration points to long standing stagnation and the healing of the ulcer brought about by expulsion of the oedema by elastoplast bandaging is not the signal for the suspension of all form of support because it takes some time for the leg to lose its firmly established oedematous habits For the maintenance of this support I recommend the spiral elastic stocking made for me by Bourjeaurd or Down Bros It is of the utmost importance that these should be made to measurements carefully taken when the leg has been rendered *absolutely free* from oedema by firm strapping The stockings should be worn until such time as the legs cease to swell thus indicating that equilibrium between arterial and venous circulations has been regained In certain cases of extensive deep thrombosis when the venous return is very embarrassed the lifelong use of efficient elastic stockings may be necessary to secure the patient's comfort and to keep him safe from gravitational complications

Income Tax

Maidservant Professional Expense

D R pays a maidservant £1 per week and is allowed to regard one third of that expense as professional because of the amount of work done in connexion with the practice What is the position with regard to the cost of her food?

* We assume that one third of the wages was allowed because she spends one third of her time in connexion with the professional side of the work and not that one-third of £52 = £17 represents a fair inclusive amount for that work If so D R can certainly claim to deduct also one third of the cost of the maid's food There is no standard rate of allowance—so much must depend on the actual facts—but no doubt a reasonably close estimate can be made

LETTERS, NOTES, ETC

Chloroform and the Edinburgh School

Dr HARLEY WILLIAMS (Tavistock Square W C 1) writes At an inquest at Stepney the other day a member of the profession answering a question from the coroner Is not the use of chloroform under a cloud? is reported to have said Yes unless one comes from Edinburgh It is a common misapprehension that the Edinburgh school teaches the use of chloroform to the disfavour of other anæsthetics No doubt the fact that this drug was introduced by Sir James Y Simpson and first used in Edinburgh in 1847 has given it a traditional association with the school But the exclusive use of chloroform was not the teaching given in my student days nor is I think at the present time I was a member of the University professors' clinic of surgery during 1921 and 1922 There was in the operating theatre a conspicuous notice that no chloroform must be used save by special permission of the surgeon We were accustomed to give ether with some chloroform ether mixture for induction and I think this practice was general in the other surgical clinics

Tour of German Mental Hospitals

Under the auspices of the Royal Medico Psychological Association a study tour of German mental hospitals and clinics has been arranged to take place from April 25th to May 4th The party will leave Liverpool Street Station on the Monday morning and travel by Flushing to Cleve whence the journey will be continued by motor coach to Bedburg Hau Gutersloh Bielefeld Giessen Frankfort Wiesloh Bruchsal Karlsruhe Illenau and Renchen The week end will be spent at Baden Baden allowing an opportunity for a visit to the Black Forest and the return journey will be made from Strasbourg by train The hotel and travelling charges from London are RM 445 (about £30 14s at the present rate of exchange) payable by ordinary cheque about ten days before the commencement of the tour to the Reisebüro der Hamburg Amerika Linie Sofienstrasse 1B Am Kurgarten Baden Baden Members intending to make this tour are asked to notify as early as possible the honorary secretary Dr A E Evans 11 Weymouth Avenue Mill Hill N W 7 intimating also the names of relatives or friends by whom they may be accompanied

Aircraft Wreckage Air Ministry's Appeal

As medical men are often among the first to arrive on the scene of an aeroplane accident we publish the following note received from the Air Ministry calling attention to the great difficulties sometimes caused by private persons thoughtlessly removing parts of damaged aircraft It is of the greatest importance that the causes of accidents to aircraft should be ascertained Whenever a serious accident is reported the Air Ministry inspector of accidents proceeds with the least possible delay to the scene of the accident to examine the crashed machine and it is essential for his purposes that the wreckage should not have been disturbed more than is necessary to set the occupants free and to prevent any immediate risk of damage to persons or property During the interval therefore before the arrival of the inspector members of the public are earnestly requested to abstain from any interference with a wrecked aircraft except for these emergency purposes The police already have instructions on the whole matter and interference with wreckage is definitely prohibited by law A further point of great importance is that broken pieces of the aircraft (for example a part of a propeller) may be found some distance away It will be of the utmost assistance if the finding of such pieces is immediately reported to the police or to the inspector of accidents

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 76 77 78 79 82 and 83 of our advertisement columns and advertisements as to partnerships assistantships and locumtenancies at pages 80 and 81

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 131

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

329 The Striate Syndrome in Dysentery

L. RATCZAC (*Deut. med. Woch.* February 12th 1932 p. 249) has recently observed that a large number of dysentery patients (Shiga Kruse and Y cases exclusively in men) in the St. Ladislaus Hospital for infectious diseases at Budapest presented a muscular rigidity resembling post-encephalitic Parkinsonism an attitude similar to Latah and an indifferent expression with rare exhibitions of pain or emotion in spite of the suffering which they were undergoing. In many instances also there was a more or less marked tension of the abdominal muscles which in many cases especially where there were no symptoms of local peritonitis were regarded not as a visceromotor reaction but as evidence of a general extrapyramidal increase of tonus. The view that these symptoms were due to disease of the strio-rubral hypothalamic and spinothalamic centres and tracts was confirmed by histological examination of the brain which revealed liquefaction of the ganglion cells cortex and corpus striatum increase of neuroglia and haemorrhages of different sizes. Ratczac regards the lesions of the centres and tracts as due to the dysentery toxin.

330 Subacute Meningococcal Endocarditis

N. B. GWYN (*Arch. Int. Med.* December 1931 p. 1110) records the case of a woman aged 37 who for eight months showed symptoms and physical signs characteristic of subacute bacterial endocarditis due to infection of the heart valves with *Streptococcus viridans*. Blood cultures however in the last two weeks of her illness revealed the presence of meningococci and death was due to cerebro-spinal meningitis. The necropsy findings agreed with those described in association with subacute bacterial endocarditis and meningococci were recovered from the meninges only.

331 Uraemia following the Excessive Elimination of Chlorides

L. LACAPE and R. BARGUES (*Journ. de Méd. de Bordeaux* February 10th 1932 p. 105) discuss the modern theories concerning the aetiology and treatment of nephritis. A systemic retention of chlorides does not invariably produce oedema there is a dry chloride retention. Chlorine metabolism in nephritis may be normal or chlorides may be retained in the tissues and fluids. A salt-free diet once considered harmless may induce uraemia this may also follow the excessive elimination of chlorides from loss of *fluid* in severe persistent vomiting or diarrhoea. This chloropenia may be relieved by large doses of sodium chloride (intravenously if necessary). Uraemia is now invariably of renal origin nor due to an excess of the blood urea. The toxic effects of deprivation of chlorides are related closely to the complex question of chlorine metabolism and particularly to the problem of hypochloraemia of which there are two forms: (1) a general reduction of extreme chlorides with uraemia and a normal or elevated alkaline reserve the chloropenic syndrome and (2) a diminution of the chlorine content of plasma and leucocytes with uraemia and low alkaline reserve but *without* reduction of the percentage of chlorides in the tissues and thus without true chloropenia. The administration of chlorides fails in this last group and on occasions is toxic. Exceptions though it is followed by rapid improvement in cases belonging to the first group. Yet all chloropenic uraemia is not acute it may occur in patients with healthy kidneys or in nephritis. Acute uraemia of retention gives rise to an increase of blood urea with a corresponding fall in chlorides. This may explain the persistence of uraemia some days after an operation for the relief of retention. A case is cited to illustrate the danger of prescribing a salt-free dietary without a determination of the blood chloride and blood urea contents and the alkaline reserve. A man aged 49 had uraemic convulsions and coma. He had been dyspeptic for six years and the pain had been relieved by the vomiting of large quantities of watery mucus. For this a milk and vegetable diet of low salt content was prescribed but the patient became weak and emaciated. A biochemical examination revealed a diminution of chlorides in the urine, blood and cerebro-spinal fluid with an increased blood urea content suggesting excessive loss of chlorides due to the vomiting. Addition of salt to the diet relieved all the symptoms.

332 The Infectiousness of Psittacosis

O. MOLTKE (*Ugeskrift for Laeger* January 21st 1932 p. 78) shows how highly infectious psittacosis is by recording four cases in medical practitioners connected with the State Serum Institute in Copenhagen. The outbreak began in 1930 with the arrival in Denmark of a vessel carrying parrots from Brazil five human cases of psittacosis from this ship were admitted to hospital. Early in February, 1930 a doctor aged 41 performed a post-mortem examination on one of these parrots and took throat swabs from three of the patients one of whom coughed in his face. Nine days later he developed the characteristic symptoms of psittacosis. The second medical practitioner to become infected was present at the *post-mortem* examination of the parrot and was associated with the first investigation in his work till the latter became ill. The third doctor was also present at the post-mortem examination of the parrot and worked in association with his colleagues at the Serum Institute till he developed symptoms of the disease. The fourth also was present at the same post-mortem examination and was with the first patient when he first fell ill. In all four cases the incubation period was about nine days. The author suggests that some cases masquerading as influenza would on closer examination prove to be cases of psittacosis.

Surgery

333 Sympathetic Ganglionectomy in Arthritis

M. S. HENDERSON and A. W. ADSON (*Journ. of Bone and Joint Surg.* January 1932 p. 47) record the results of sympathetic ganglionectomy and trunk resection in a group of cases of periarticular arthritis. It had been found that this method of treatment resulted in improvement of the circulation and it was therefore assumed that in patients suffering from cold clammy pale or cyanotic extremities an operation affecting the vascular system would improve the blood supply and alter the metabolism and course of the disease. Arthritis is classified into five main types the infectious traumatic senescent gouty and the type which represents secondary arthropathy. Sympathetic ganglionectomy and trunk resection have been confined to the non-specific infectious type of arthritis which includes atrophic proliferative rheumatoid and periarticular arthritis. It has not been used in osteo-arthritis hypertrophic or degenerative arthritis. Conservative treatment should be employed in the majority of cases before an operation is undertaken. Immediately after the operation the skin over the extremities becomes warm pink and dry showing that the vasomotor fibres have been interrupted as well as those leading to the sweat glands. After five or six days the skin becomes normal in colour and the pain and swelling become gradually less. Graduated light exercise and physiotherapy are advisable during convalescence. In most cases pain and soreness return for three or four months following increased movement but after that period there is a

gradual and permanent recovery from pain tenderness, and swelling of the extremities In a series of forty one patients operated on there was no death, marked improvement occurred in many cases with slight improvement in several more It was found that sympathectomy was of no value for advanced cases with ankylosed joints The operation is particularly indicated for young persons who have vasomotor phenomena but whose arteries are patent elastic and not occluded Sympathetic ganglion ectomy and trunk resection afford the greatest amount of relief in the smaller joints of the extremities such as the fingers hands wrists toes feet and ankles but are of little benefit when there is involvement of the larger joints such as the knees hips shoulders and spinal column

334 Hydatid Cyst of the Kidney

G JEANNENEY (*Bordeaux Chirurgical* January 1932 p 36) comments on the rarity of hydatid cyst of the kidney and attributes this to the blood passing through the liver and lungs where the embryo may be arrested before it reaches the kidney, while in addition, the circulation is at a relatively slow rate in these organs It is unusual to find more than one cyst in the same kidney, but care must be taken at the operation as in the case reported to make certain that no small cysts are in process of formation in addition to the main cyst The cyst is most frequently situated in the upper pole of the kidney and lies in the cortex, from whence it grows outwards towards the surface of the kidney When the cyst has a deep central origin it grows outwards breaking down the renal tissue which surrounds it, it may in time destroy the entire kidney When the cyst originates on the surface it may be pedunculated and can easily be removed without injury to the kidney The patient usually gives a history of renal disorder such as pyuria, haematuria or colic The last may be due to the passage of hydatids in the urine, and is of course pathognomonic of the condition Complications which may follow are infection which may lead to perinephritic abscess, or rupture of the cyst into the urinary passages Owing to the slow development and relatively benign nature of the lesion the prognosis is not grave although in many cases the kidney is destroyed The diagnosis can be made or confirmed by pyelography (which shows a sharp deviation of the ureter) radiography and analysis of the urine Treatment which must be surgical depends on the type and position of the cyst This treatment may be conservative which consists in enucleation of the cyst or marsupialization of the cyst wall after removal of the lining membrane more radical procedures such as nephrectomy may also be necessary If the cyst is large and has partially destroyed the kidney nephrectomy is advisable but if it is of medium size partial subcapsular nephrectomy should be performed A case is reported in which one large and two small cysts were found After nephrectomy the patient made a good recovery

335 The Appendix in Measles

M HERZBERG (*Journ Amer Med Assoc* January 9th 1932 p 139) states that the recent discovery by Warthin of giant cells in the tonsils and pharyngeal mucosa in the prodromal stage of measles has led him to record a similar finding in the appendix His patient was a boy aged 6 years who was admitted to hospital with symptoms of appendicitis Laparotomy was performed and an inflamed appendix with a pinkish distal end was found the omentum was slightly adherent to the caecum and appendix On histological examination the appendix showed marked follicular hypertrophy with numerous giant cells in the lymph follicles The temperature rose to 100° F the following day and four days after the operation the rash of measles appeared with Koplik's spots conjunctivitis and cough This case confirms Warthin's suggestion of a distinct pathological change in the lymphatic structures in the prodromal stage of measles and explains the frequent occurrence of abdominal symptoms related to the appendix in the acute exanthemata

Therapeutics

336 Pepsin Injections in Gastric and Duodenal Ulcer

K GLAESSNER (*Presse Med*, January 13th 1932 p 61) emphasizes the importance of the gastric juice in the production of ulcers these can only be formed when the free hydrochloric acid is in excess and they heal when it is diminished A lasting loss of acidity can be produced by excising part of the pylorus and antrum Local causes such as haemorrhages emboli and infections also aid in the production of ulcer Experimenting on rats and guinea pigs Glaessner found that ulcers could be produced by injections of hydrochloric acid and pepsin and that these could be rapidly cured by injecting neutral pepsin He was therefore led to try this method in the treatment of gastric and duodenal ulcers and has employed it with marked success for about five years Both objective and subjective improvement results The acidity is decreased, the patient's weight increases radiographs show an improved local condition occult blood disappears from the faeces, while the pain and other gastric symptoms are cured or markedly ameliorated The treatment is harmless painless, and rarely inefficacious It consists of a series of thirty subcutaneous injections A commencing dose of 0 2 c cm is given daily or every two days this is increased by 0 1 c cm after every three injections till 0 5 c cm is reached and this is given for twelve injections The dose is then progressively decreased in a similar way, and the series ends with the original dose of 0 2 c cm The pepsin must be sterile and absolutely neutral its preparation is described Adjuvant medical and dietetic measures are also advised This treatment has benefited other ulcerations too such as those of the mouth, pharynx, intestine, and skin

337 Polyvalent Serotherapy in Pulmonary Gangrene

H VINCENT and G STODEL (*Bull de l Acad de Med* January 12th 1932, p 42) review the bacteriology of pulmonary gangrene, which demonstrates the polymicrobic nature of that affection and claim that rational treatment must be based on this knowledge Anti gangrenous serotherapy is the basic treatment and they advise injections of a polyvalent serum the dosage being reduced as the symptoms regress Numerous cases are cited to show the beneficial effects of the serum employed by the present authors Other measures should be employed concurrently, such as arsenical preparations and anti streptococcal or anti pneumococcal serum, where the results of bacteriological examinations indicate their use Prophylactic measures (disinfection of the mouth, teeth, and nose) are briefly commended

338 Digitalis as a Cause of Anginal Pain

G K FENN and N C GILBERT (*Journ Amer Med Assoc* January 9th 1932 p 99) believe that digitalis may be responsible for the appearance of angina in many cases in which this drug is being administered to restore cardiac compensation but are unable to estimate the relative frequency of such an occurrence In view of their observations they now rarely use digitalis in angina and never early in coronary thrombosis they consider that there has been a consequent fall in the incidence of angina symptoms They cite seven of the cases which led them to this view and discuss the possible aetiology Animal experiments showed that digitalis reduced the coronary flow to an extent which could not be explained by changes in the pulse rate Constriction of the coronary arteries was manifest in some but not in all cases The authors do not suggest that digitalis is definitely contraindicated in angina they used tinctures and not the whole leaf preparations and agree that it is difficult to assay satisfactorily and comparatively the relative values of the various forms of this alkaloid They maintain however that in some cases of cardiac disease the exhibition of digitalis is only of doubtful value and that in such cases the existence of a tendency to excite or intensify anginal pains should be remembered

Radiology

339 Treatment of Antral Carcinoma

C. S. SHARP (*Radiology*, November 1931, p. 984) describes a treatment of antral carcinoma based on Quick's dicta that the tumour can be eradicated if radium and x rays in sufficient dosage are applied accurately throughout the growth, surgery being essential to provide exposure and drainage for radium application. The condition is not recognizable in its early stages; signs referable to the nose, orbit or teeth appear long before a neoplasm is suspected; the primary symptom frequently indicates the origin of the growth. Direct histological diagnosis by aspiration and smear examination is recommended as being of greater value than biopsy and permitting immediate treatment. Radium and x rays must be delivered in lethal doses to the tumour; the minimum lethal dose is standardized on a basis of erythema dosage and eight to ten skin erythema doses are necessary. Preliminary external irradiation is desirable. The surgical exposure of the antral contents must be sufficiently wide to permit the accurate uniform implantation of radon throughout the tumour bearing area. Involvement of the orbital floor requires exenteration of the orbital contents in addition to an intraoral antrotomy for adequate approach to the growth. Cautery removal of the bulk of the tumour shortens convalescence by producing free drainage and in many patients has ensured recovery otherwise doubtful. Closure of the aperture in the antral floor by mechanical means is effective and comfortable for the patient; later plastic closure is probably inadvisable. Six cases representing special features in the treatment are recorded.

340 Rationalization of X Ray Exposures

G. SIMON (*Brit. Journ. Radiol.*, January 1932, p. 65) has endeavoured to find a means of measuring radiographic exposures as used in practical diagnostic work, or fulfilling this to devise an arbitrary standard permitting exposures to be repeated exactly by various workers and so to be comparable for clinical and educational purposes. He remarks that the present method of recording exposures in terms of KVP, milliamperes, time, distance and screening is unsatisfactory owing to (1) measurement difficulties (especially for very short exposures of high intensity), insufficiency of data since the wave form affects the significance of the kilovolt (peak) measurement while the tube factor must be included, and (3) the lack of a photographic standard of speed. Simon suggests that some of the existing difficulties might be solved in the following ways. For the measurement of KVP might be substituted a unit of radiographically effective kilovolts obtained by measuring, on each apparatus, the number of milliampere seconds required to match a certain standard—this standard being based on the kilovolts of a constant potential set (so as to be agreed to by all workers) on a four or six valve set according to preference. It would be best in the case of very rapid exposures to measure milliampere seconds and time rather than to measure milliamperes directly. A photographic standard of speed might be set up both for films and for use with screens. It might be possible and convenient to calibrate this in r units at a certain radiographically effective kilovoltage in order to [illegible] accordance of blackening.

341 Radium Treatment of Carcinoma of the Breast

C. [illegible] (*Amer. Journ. Surg.*, January 1932, p. 415) [illegible] the two main methods of treatment [illegible] the best external irradiation with a considerable [illegible] of radium and interstitial radium with a small quantity. The technique [illegible] of two areas, the breast and the [illegible] of the breast, the lymphatic areas. [illegible] required for the lymphatic areas [illegible] required for the [illegible] to the size of the patient's breast. The needles should be inserted as far as possible in a plane deep to the growth, under the deep surface of the mammary gland itself and in the plane of the pectoral fascia. When the tumour or the breast is large additional needles may be inserted more superficially in the neighbourhood of the growth. The needles should be disposed as evenly as possible, no gap of untreated breast being left between the tumour and the anterior fold of the axilla. A much larger area than that occupied by palpable nodules must be treated. The treatment of the subpectoral lymphatics and of the axilla is important and is best effected by the long needles inserted beneath the pectoral muscle and into the axilla. The third lymphatic area for needles is the infraclavicular, and they should be inserted below and more or less parallel with the middle third of the clavicle. The fourth area is the supraclavicular, and here two or three shorter needles are inserted through skin punctures from within outwards parallel with the middle third of the clavicle. The fifth lymphatic area includes the four intercostal spaces and in this area a short needle is pushed very obliquely between the ribs just behind the edge of the sternum. The needles are usually left in position for seven days or for rather longer in the case of stout patients. After removal of the needles the punctures heal rapidly and after about a fortnight the tumour usually decreases in size and may disappear completely in a few weeks. From experience of 171 cases of primary carcinoma of the breast treated by interstitial radium it is concluded that this form of treatment compares favourably with pure surgery or any other method of treatment. For advanced or inoperable tumours it is the treatment of choice and in cases of average intermediate operable tumour it may be used in conjunction with surgery, while for the earliest and smallest tumours excellent results have been obtained by radium alone. Radium is unsuitable for very adipose patients. Full details are given of the 171 cases treated by radium.

Obstetrics and Gynaecology

342 Operations for the Relief of Sterility

J. SIEDORFF (*Hospitalstidende*, December 17th 1931, p. 38) summarizes the results of operations for sterility undertaken at the St. Luke's Hospital in Denmark in 160 cases between August 1917 and December 1929. There were 13 other cases but the subsequent fate of the patients could not be ascertained. A year or more had elapsed in every case before the effects of the operation were studied. The sterility was primary in 140 instances and secondary in 33. Pozzi's operation was performed on 96 occasions, the results being ascertained in 90. 38 of these patients subsequently became pregnant—a positive result in 42·2 per cent. The remaining 44 cases of primary sterility were treated by dilatation as a rule up to a No. 18 Hegar dilator. The result was ascertained in 39 of these 44 cases; in 16 of them pregnancy supervened—a positive result in 41 per cent. For secondary sterility Pozzi's operation was performed only in three cases (in none of which conception followed) and simple dilatation in 30. The result was ascertained in 28 of these 30 cases and in 12 of these pregnancy followed. Of late years the tendency at the St. Luke's Hospital has been to abandon Pozzi's operation in favour of simple dilatation. Though the former was not followed by serious complaints troublesome haemorrhage occurred in some cases eight to ten days after the operation.

343 F. [illegible] (*ibid.*, p. 45) has in the course of twenty-two years performed 269 operations for primary sterility. He has always employed Pozzi's operation and has never relied on dilatation alone. No patient was operated on who had not been married for at least a year. A preliminary examination for spermatozoa was always made and the operation was not performed in cases of anosperma. Other contraindications for the operation were evidence of a previous attack of salpingitis, impotence

and vaginismus or other difficulties during coitus Among the 269 women were 188 who subsequently reported that they had become pregnant Fenger-Just suggests that he achieved his object in as great a proportion as 79 per cent largely because of his adhering to the contraindications already enumerated

344 The Aetiology of Stillbirth

J V DE PORTE (*Amer Journ of Obstet and Gynecol* January 1932 p 31) reviews the known causes of still birth and reports an inquiry he has conducted in an endeavour to discover a further possible determining factor An analysis in 1929 of the live births and stillbirths in the State of New York exclusive of New York City, suggested the possibility that the hour of birth had some causal relationship to the viability of the child The maximum number of live births (13 289) was recorded between the hours of 3 a m and 6 a m the minimum number between midday and 3 p m The distribution of stillbirths was in general, opposite to that of live births the maximum (474) falling between the hours of 3 p m and 6 p m , and the minimum between 6 a m and 9 a m All the stillbirth rates between noon and midnight were greater than the rates between midnight and noon The author considers that this variation in the stillbirth rate is certainly significant since the mathematical probability that the difference in the distribution of the stillbirths and live births is merely one of chance is less than one in a million When the live births and stillbirths were grouped according to seasons of the year the excess of the maximum rate over the minimum rate was practically the same for each quarter A further analysis showed that both full term and less than full term still births occurred at the maximum rate between 3 p m and 6 p m the minimum rates being between 6 a m and 9 a m Thus although the variation of the total stillbirth rate was practically the same during all seasons of the year yet the rate of stillbirths both full term and less than full term definitely varied according to the hour of delivery The suggestion that operative intervention by implication frequently unnecessary is probably responsible for the high stillbirth rates in the afternoon and evening introduces a factor which is certainly within the range of direct control

345 The Uterine Tonus

R MAHON (*Gynecol et Obstet* January 1932 p 1) reviews the various definitions in the literature of the tonus or permanent contraction of the uterine muscle In his opinion it ought to be regarded as a simple reaction to distension and therefore he places it in the category of stretch reflexes, and compares it with the vesical tone The physiological variations correspond with the alterations in the uterine volume They can only be demonstrated after the expulsion of the foetus and occasionally after the rupture of the membranes Hypotheses of frequent variations in the tonus which do not take into consideration its fundamental state of permanent contraction are nullified by the evidence of the hysterograph Theoretically it is necessary to distinguish between tonus permanent contraction of the uterine muscle retractility and manifestations of the inherent elasticity of the uterine fibre and the vasomotor system but in practice these distinctions are nearly always impossible The usual pharmacodynamic agents have no effect on the uterine tone with the exception of morphine which appears to relax it occasionally Conditions described as pathological variations of the tonus are an inexact explanation of uterine contractility Increases in it are generally confounded with tetanization by fusion of the subintrant contraction and the permanent retraction due to loss of elasticity consequent on histological lesions of the muscle caused by overstrain After spinal anaesthesia the intermittent contractions of the uterus are suppressed or much diminished and the retraction is exaggerated this being probably a purely physical manifestation of elasticity Uterine tonus apparently depends on the abdominal pelvic sympathetic innervation and the inhibitory centres are situated in the central nervous system

Pathology

346 Adrenaline and the Normal Body Tonus

N K BASU (*Indian Journ Med Research* January 1932 p 877) discusses the part played by adrenaline in maintaining the normal body tonus It is shown that nearly the whole of the adrenaline is present in the blood corpuscles in combination with their protein portions The secretion is continuous and serves to maintain the normal tone of different systems Apparently its presence is absolutely necessary for the normal functioning of the haemoglobin Adrenaline operates both directly and indirectly , in the latter way by neutralizing the effects of choline which is also normally present in the tissues Basu suggests that this circulating adrenaline acts not only by stimulating the sympathetic nerve endings but also as a general excitant and stimulant to individual cells The maintenance of cell life when the suprarenals are not functioning is briefly discussed

347 Placental Permeability to Inorganic Iodides

Opinions differ whether inorganic iodides pass through the placenta and are absorbed by the foetal thyroid gland As the result of animal experiments G E HUDSON (*Journ Amer Med Assoc* November 21st 1931, p 1813) concludes that they do The thyroid glands of mothers on a low iodine diet contain an average of 11/ of iodine per 100 mg of tissue , 1 mg is the equivalent of 1 000/ Those of mothers receiving in addition 100 mg of potassium iodide daily contain 127/ per 100 mg of tissue The thyroid glands of foetuses of mothers of the first group yield approximately 13/ of iodine per 100 mg of tissue while those of mothers of the second group yield 26/ for the same amount of tissue The amount of iodine obtained from the maternal thyroid glands of animals receiving potassium iodide varied with the amount given that of foetal thyroid glands varied little with the amount of the salt administered to the mothers No significant increase in the weight of thyroid tissue occurred with increase in its iodine content If a child with congenital goitre is born of a mother who has received inorganic iodides throughout her pregnancy, it is not because of iodine deficiency in the foetal thyroid gland

348 Simplification of the Intradermal Melitin Reaction

C DUBOIS and N SOLLIER (*C R Soc de Biologie* February 12th 1932 p 359) in a series of more than 300 intradermal melitin tests for the diagnosis of undulant fever have experienced considerable trouble as the result of non specific reactions due to the proteins in the broth For this reason they have prepared a specimen of melitin by growing *Br melitensis* in broth made from human placenta, containing in addition 0 5 per cent glucose The intracutaneous injection of the sterile broth into thirty nine persons gave rise to no reaction whatever The injection of the melitin made from placental broth apparently produced satisfactory results in a small series of cases of undulant fever The authors conclude that it would thus appear that the use of human placental broth in the preparation of melitin is likely to do away with the trouble of the pseudo positive reaction

349 Heterophile Antibodies in Infectious Mononucleosis

J R PAUL and W W BUNNELL (*Amer Journ Med Sci* January 1932 p 90) found heterophile antibodies in the form of sheep cell agglutinins in rather high concentrations (1 in 128 to 1 in 1 024) in the active stages of four cases of infectious mononucleosis Apart from cases of serum disease and in an obscure fatal case the authors failed to note this finding in 275 controls including cases of Vincent's angina, lymphatic leukaemia and other blood dyscrasias The two following possible explanations may be given for the presence of heterophile antibodies (1) the unknown agent of infectious mononucleosis contains the heterophile antigen , (2) the condition is an example of isoagglutinin production by abnormal cells which are present either in the blood or elsewhere during active stages of the disease

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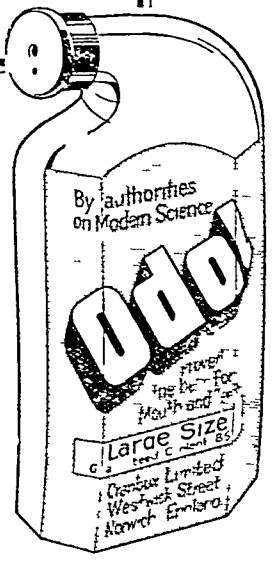
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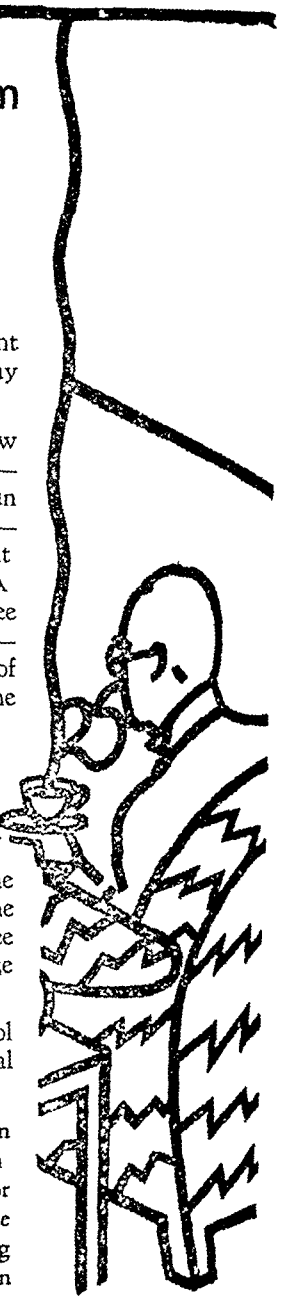


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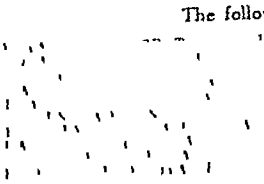
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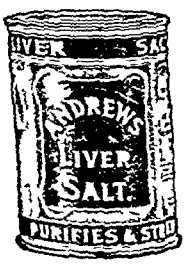
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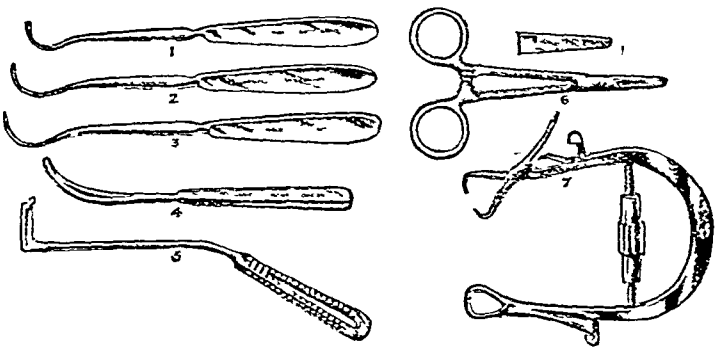
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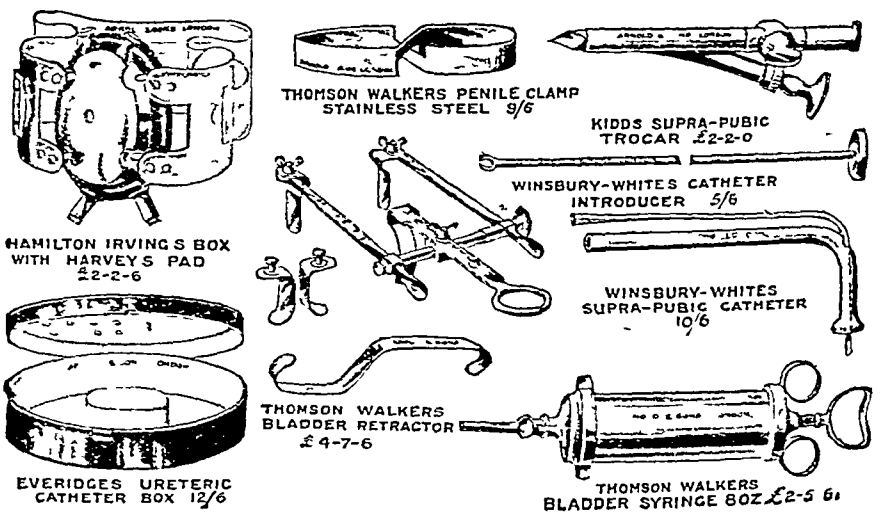
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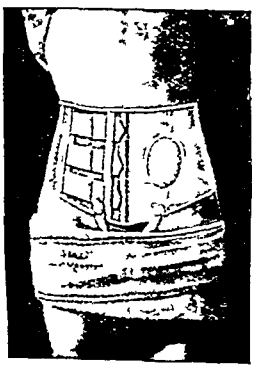
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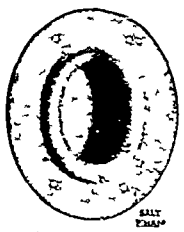
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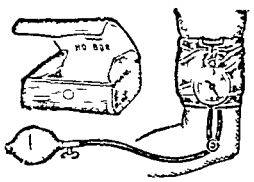
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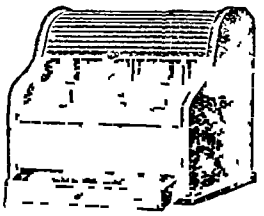
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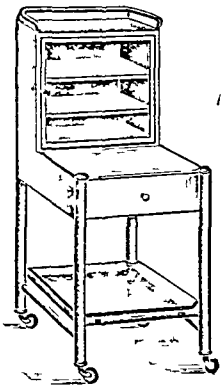
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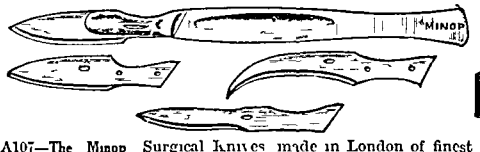
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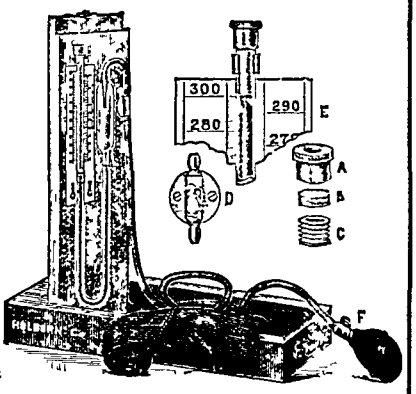
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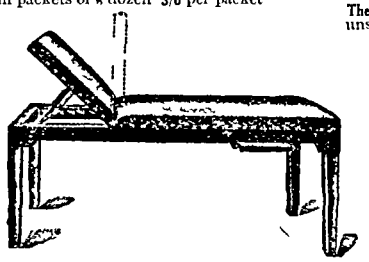
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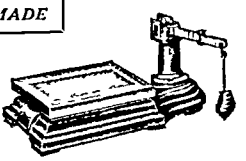


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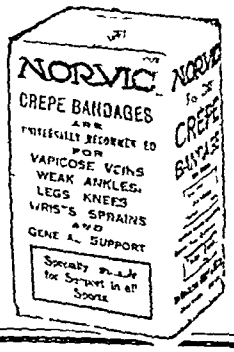
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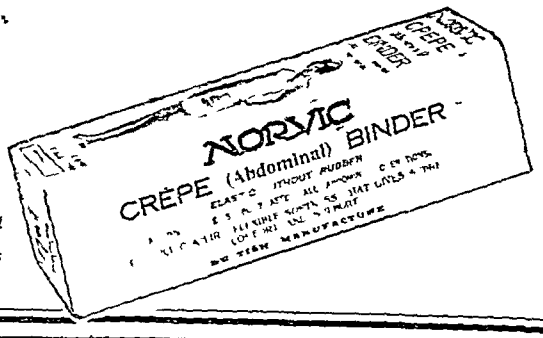
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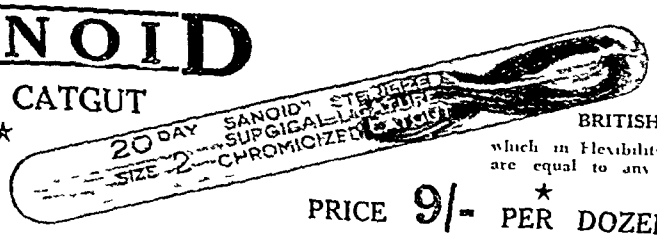


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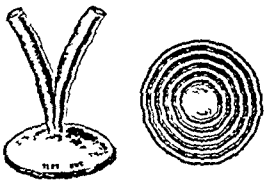


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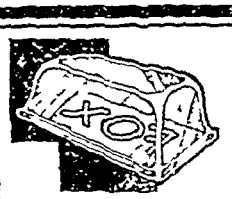
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Reg Tel Address Bethlem Beckenham *Telephone* Springpark 1180—1181

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CONVALESCENT HOME at BOURNEMOUTH, standing in 12 acres of ornamental grounds with tennis courts etc., which Voluntary Temporary or Certified Patients may visit, by arrangement for long or short periods

Illustrated Brochure on application to the Medical Superintendent, The Old Manor Salisbury Telephone

The MUNDESLEY SANATORIUM

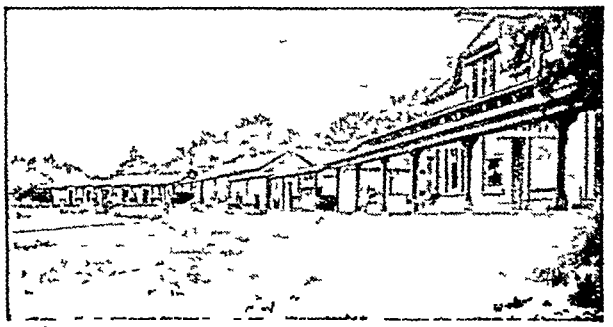
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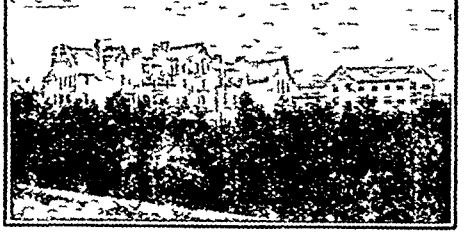
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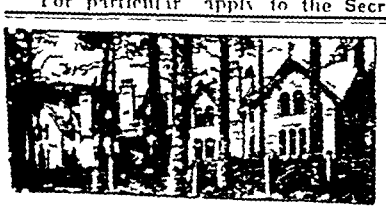
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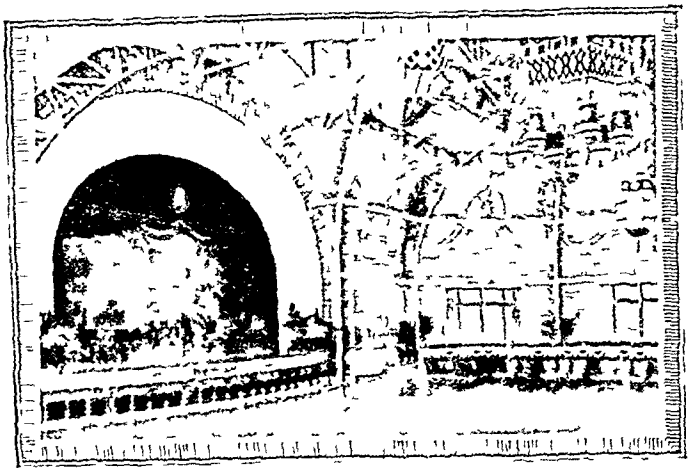
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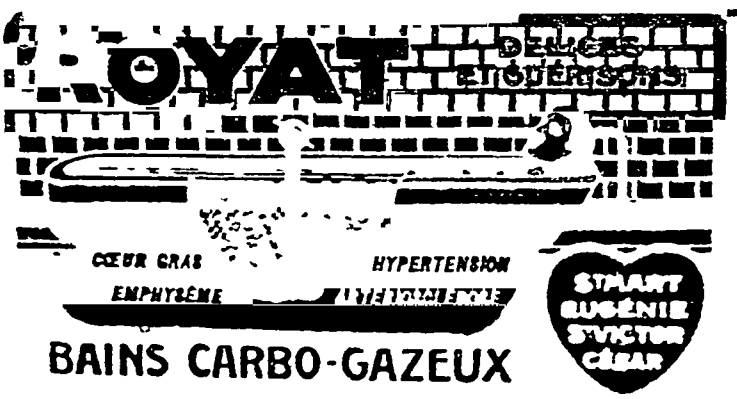
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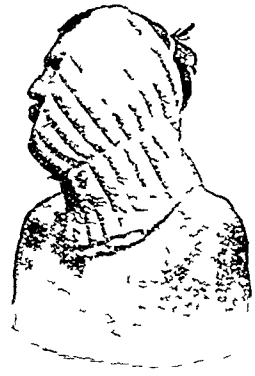
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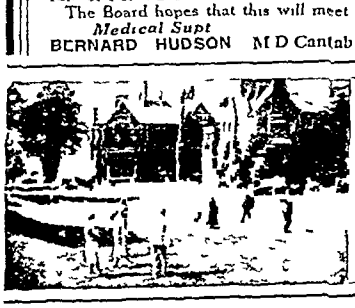
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Major MITCHELL SINCLAIR C M G R A M C (ret) (Surgical Specialist Ministry of Pensions)	Fractures of the Lower Extremity" (With Lantern Slide Demonstration)
MAY 17th	
Prof LEONARD ERSKINE ARIAN M D F R S (Emeritus Professor of Physiology University of Edinburgh)	The Nervous Mechanism of Respiration"
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The M B and M D Degrees of all British Universities
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Examination in which interested

BOROUGH OF CAMBRIDGE

Applications are invited from fully qualified Medical Practitioners under 40 years of age for the post of Whole time ASSISTANT SCHOOL MEDICAL OFFICER and ASSISTANT MEDICAL OFFICER OF HEALTH Salary £600 per annum rising subject to satisfactory service by annual increments of £50 to a maximum of £800 per annum subject to a temporary deduction under the scheme approved by the Council previous experience in a similar capacity will be taken into account in assessing the commencing salary

Applicants must have had at least three years practice since qualification and must have had experience in the correction of errors of refraction A Diploma in Public Health will be an additional qualification

The successful applicant will be required to undergo a medical examination and to contribute to the Local Government and Other Officers Superannuation Scheme

A list of duties and application forms may be obtained (on receipt of a stamped addressed foolscap envelope) from the Secretary for Education The Guildhall Cambridge to whom applications with copies of not more than three recent testimonials must be sent not later than Saturday April 16th

C H KEMP Town Clerk

Royal College of Surgeons of ENGLAND

ELECTION OF EXAMINERS UNDER THE CONJOINT EXAMINING BOARD IN ENGLAND

Notice is hereby given that the Council in June next will proceed to the election of four Examiners in Elementary Biology for the Pre Medical Examination three Examiners in Anatomy two Examiners in Physiology four Examiners in Midwifery and four Examiners in Pathology for the Diplomas of L R C P M R C S two Examiners for the Diploma in Public Health two Examiners for the Diploma in Tropical Medicine and Hygiene three Examiners for the Diploma in Ophthalmic Medicine and Surgery one Examiner for the Diploma in Psychological Medicine three Examiners for the Diploma in Laryngology and Otology and one Examiner for the Diploma in Gynecology and Obstetrics

The present Examiners are eligible for re election except one Examiner in Elementary Biology one Examiner in Midwifery one Examiner for the Diploma in Public Health Part II) and one Examiner for the Diploma in Laryngology and Otology (Part I)

Candidates for the Examinerships in Midwifery for the Diplomas of L R C P M R C S must be Fellows or Members of the Royal College of Surgeons

Candidates must make written application to the Secretary on or before Monday May 2nd

S TORRESTT COWELL
April 9th 1932 Secretary

Royal College of Surgeons of ENGLAND

ELECTION OF EXAMINERS IN ANATOMY AND PHYSIOLOGY FOR THE FELLOWSHIP

Notice is hereby given that the Council in June will proceed to the election of four Examiners in Anatomy and four Examiners in Physiology

The present Examiners are eligible for re-election except two Examiners in Physiology

Candidates for the Examinership in Anatomy must be Fellows of the College

Candidates must make written application to the Secretary on or before Monday May 2nd

S TORRESTT COWELL
April 9th 1932 Secretary

STAMMERING, SPEECH DEFECTS

BEHNKE METHOD Estab 1882 Cases non resident treated at 39 Earls Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns

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MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON RESEARCH TRAVELLING SCHOLARSHIP IN MEDICINE value £300, tenable for one year Candidates must be University Graduates who have taken out the full course of Clinical Instruction in the Manchester Royal Infirmary

A copy of the regulations governing the Scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday April 16th

FRANK G HAZELL
Secretary to the Trustees

MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON RESEARCH SURGERY SCHOLARSHIP value £75 tenable for one year Candidates must be University Graduates who have taken out the full Clinical Instruction in the Manchester Royal Infirmary

A copy of the regulations governing the Scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday April 16th

FRANK G HAZELL
Secretary to the Trustees

MANCHESTER ROYAL INFIRMARY

Applications are invited for the (part time) DICKINSON RESEARCH SCHOLARSHIP IN MEDICINE value £75 tenable for one year Candidates must be University Graduates who have taken out the full course of Clinical Instruction in the Manchester Royal Infirmary

A copy of the regulations governing the Scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday April 16th

FRANK G HAZELL
Secretary to the Trustees.

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M B, B S (Lond),	*Final* 1906 31 (Completed Exam)	280
F R C S (Eng),	*Primary* 1906 31	173
	Final	174
M R C P (Lond),	1914 31	199
D P H	(Various) 1906 31 (Completed Exam)	308
F R C S (Edin),	1918 31	50
M R C S, L R C P	Final 1910 31 (Completed Exam)	501
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Mr F S WEYMOUTH at 17 Red Lion Sq London W C 1 (Telephone *Hornsey 6313*)

CITY OF SALFORD

HOPE HOSPITAL

Applications are invited for the post of RESIDENT MEDICAL OFFICER at Hope Hospital Salford (to commence duties as soon as ... Salary £400 per annum ... to £520 per annum ... advance and laundry ... it will be made ... use of emolument ...

The ... 1 000 beds and is equipped with pathological laboratory ... and electro cardiograph and affords full facilities for clinical investigation There is a Visiting Physician on the staff

The R M O is one of the three senior resident ... and will be responsible for work in the ... division Candidates must have had previous Hospital experience and preference will be given to those possessing the M D or M R C P

Further particulars may be obtained from the Medical Superintendent Hope Hospital Salford

Application forms may be obtained by ... warding stamped addressed foolscap envelope to the Secretary to the Committee of Medical Officer of Health 243 Regent Road Salford 3 to whom they must be returned ... panied by copies of not more than three testimonials not later than April 16th

H H TOMSON Town Clerk

WAITHAM GENERAL HOSPITAL (100 Beds)

Applications are invited for the ... of HOUSE SURGEON (male) Salary ... the rate of £120 per annum with board ... and laundry The appointment ... six months in the first instance

Application stating age and ... together with copies of recent testimonials to the Secretary General Hospital ...

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST
Brompton S.W.3

The Committee of Management invite applications for the post of HOUSE PHYSICIAN (for which there are three vacancies). The duties include work in the Out-patient Department and within the Wards and one of the Assistant Physicians will be appointed Assistant to the Tuberculosis Officer for the Local Tuberculosis Dispensaries at the Hospital. The appointments are for six months commencing on May 1st with an honorarium of £50.

Applications are also invited from duly qualified Medical Practitioners for the post of JUNIOR HOUSE PHYSICIAN at the Sanatorium at Frimley. The appointment is for six months commencing on May 1st, with an honorarium of £50. At the expiration of his term of office or in the event of a vacancy the Junior House Physician will be expected to apply for and if suitable to fill the post of Senior House Physician for a further term of six months.

Applications with copies of testimonials must reach the undersigned not later than Wednesday April 20th.

FREDERICK WOOD
Secretary

Brompton
April 1932.

ELTHAM HOSPITAL FOR SICK CHILDREN
Southwark S.E.

Applications are invited for the post of PHYSICIAN TO OUT-PATIENTS (Honorary). Candidates must be Graduates in Medicine in the University of London or Members of the Royal College of Physicians London or possess qualifications that confer the right to practise in the United Kingdom.

Applications with copies of testimonials must be sent to the Secretary not later than April 23rd.

Canvassing will disqualify.

The Committee will call upon members of the Honorary Medical Staff who may be asked to do so to interview candidates.

The successful candidate will be required to attend the Out-patient Department on Monday and Thursday afternoons at 2 p.m.

By Order of the Committee of Management
W. H. SIDNELL
Secretary's Office
April 1st 1932. Secretary pro tem.

ELTHAM HOSPITAL FOR SICK CHILDREN
Southwark S.E.

Applications are invited for the post of CASUALTY and OUT-PATIENT OFFICER (male) for a period of six months from the date of appointment at the rate of £150 per annum with board and residence. Hours of duty from 9.30 a.m. to 5.30 p.m. daily Monday to Friday inclusive Saturdays until 2 p.m. No Sunday duty.

Applications stating age experience and qualifications accompanied by copies of four testimonials to be sent to the undersigned not later than April 23rd from whom full and other particulars can be obtained.

By Order of the Committee of Management
W. H. SIDNELL
March 30th 1932. Secretary pro tem.

ROYAL SOUTHERN HOSPITAL
Liverpool

WANTED

ONE HOUSE SURGEON Salary £60 per annum

ONE MEDICAL OFFICER to Special Duties and ASSISTANT ANÆSTHETIST Salary £100 per annum

ONE CASUALTY OFFICER Salary £100 per annum

The above are for a period ending September 30th next.

Applications to be sent immediately to the undersigned.

ALLEN NAUDERT
Secretary

DEVONSHIRE HOSPITAL FOR SICK CHILDREN (CORK)

WANTED a RESIDENT HOUSE SURGEON Salary £120 per annum. The appointment will be for a period of six months from May 1st next. Applications with copies of testimonials to be sent to the undersigned not later than April 15th.

ARTHUR WHITSON
Secretary

BUCKINGHAMSHIRE AND ISLE OF ELY WAR MEMORIAL HOSPITAL

[illegible] MEDICAL OFFICER [illegible] Salary £[illegible] per annum [illegible] will be required to take up duty on May 2nd.

[illegible]
Secretary

MILLER GENERAL HOSPITAL
Greenwich Road S.E.10

ASSISTANT SURGEON TO THE GENITO-URINARY DEPARTMENT

Applications are invited for the post of Honorary Assistant Surgeon to the Genito-Urinary Department. Candidates must be Members of the Royal College of Surgeons of England. *They must not be concerned in General practice.* The duties will be to attend in and out patients.

Candidates will be expected to call upon the members of the Honorary Medical and Surgical Staff a list of whom can be obtained from the Secretary.

An honorarium of 20 guineas per annum is allowed towards travelling expenses.

Application which must be printed or type written together with copies of not more than three recent testimonials should be sent to the Chairman of the Hospital by April 30th.

March 21st 1932.

HOSPITAL OF ST. CROSS, RUGBY
(114 Beds)

Applications are invited for the post of THIRD MALE RESIDENT MEDICAL OFFICER. *Qualified.*

Salary at the rate of £100 per annum with full board etc.

Six months appointment and eligibility on completion of service for extension or other resident post.

Candidates must be prepared to commence duties on May 1st.

The practice of the Hospital offers excellent opportunity for wide experience.

Certificates and other forms dated by L.M.O.H.

Application stating age, nationality and full details with copies of three recent testimonials to be sent to the undersigned.

(Sgd.) W. COCKERTON
Superintendent Secretary.

THE ROYAL PORTSMOUTH HOSPITAL
PORTSMOUTH

CASUALTY OFFICER (male) required to commence May 1st fully qualified.

Salary at the rate of £100 per annum in addition to appointment and eligible on completion of term for extension or other appointment.

There are five Resident Medical Officers Senior Resident Surgical Officer Two House Surgeons and Casualty Officer.

Application stating age nationality and full details with copies of three testimonials to be sent to the undersigned on or before April 12th from whom all particulars can be obtained.

B. WAGSTAFF Secretary.

THE HOSPITAL FOR SICK CHILDREN
NEWCASTLE-ON-TYNE
(94 Beds)

Applications are invited for the following appointment

HOUSE PHYSICIAN
SENIOR HOUSE SURGEON
JUNIOR HOUSE SURGEON

(male or female) to commence duties forthwith until September 30th. Salary at the rate of £100 per annum each with board residence and laundry. Application stating age and qualifications with copies of testimonials to be sent to the Secretary Mr. NEIL BRODIE 18 Old Eldon Square.

THE JESSOP HOSPITAL FOR WOMEN
SHEFFIELD

The Board of Management invite applications for the post of SECRETARY. Commencing salary at the rate of £450 per annum. Federated Superannuation Scheme applied.

Candidates must have had experience in Hospital administration and will in their application *state whether they are* [illegible] and must be prepared to undertake the duties of Secretary to the Hospital.

Applications with copies of three testimonials to be sent to the Secretary Jessop Hospital for Women Sheffield not later than April 15th.

H. B. SHELLSWELL Secretary.

GLENOCK ROYAL INFIRMARY

Wanted a HOUSE SURGEON (lady) to enter at the middle of May. Salary £100 per annum with board residence and laundry. Chief Assistant (ladies) wanted July 1st. Experience essential. Apply at once with testimonials to the Secretary 2 Hamilton Street Greenock.

JAS. A. LOVE
Secretary

HALIFAX INFIRMARY

Wanted a THIRD HOUSE SURGEON (male unmarried). Candidates must be duly qualified and registered.

The appointment will be for six months from May 1st. Half a year in each of the Senior Resident Medical Staff and a Fellowship at Surgical Out-patients. Salary £200. First House Surgeon £200. Second House Surgeon £175. Third House Surgeon £150 per annum with residence board and laundry. The Hospital contains 250 beds has a large Extension and a Thyroid Department. Many Ward and Pathological Laboratory Post-graduate duties may be obtained from the undersigned to whom applications should be sent.

A. MIDGLEY
Secretary.

April 4th 1932

ROYAL INFIRMARY BLACKBURN
(240 Beds—Five Resident)

RESIDENT HOUSE PHYSICIAN (male) required at a salary of £175 per annum and FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum with board residence laundry etc. To commence duties early in April.

Application with copies of testimonials stating nationality experience etc. to be sent forthwith and signed

Royal Infirmary NATHAN A. SMITH
Blackburn Chief Superintendent Secretary.

The Institution is recognised for the Surgical Practice required for the F.R.C.S. Final Examination.

ROYAL ISLE OF WIGHT COUNTY HOSPITAL RYDE

The Election Committee give notice that a VACANCY having occurred in the office of HONORARY OPHTHALMIC SURGEON they will proceed to fill the appointment. Candidates must be engaged in general practice. *Fourth and last* will obtain from the Secretary to whom applications must be addressed by copies of not more than three recent testimonials. Applications must be received not later than April 16th. *Canvassing in any of the Election Committee will be an disqualification.*

A. S. COPPOCK Secretary.

ROYAL CHILDREN'S
[illegible]
[illegible]

Wanted a RESIDENT MEDICAL OFFICER. Salary £125 per annum which will be allotted for six months. Duties to commence on April 12th.

Candidates must be unmarried and duly registered. Previous hospital experience essential.

Application stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned immediately.

By Order
W. M. HUMPHRY Secretary.

ROYAL NORTHERN HOSPITAL
Holloway N.7

Applications are invited for the post of *HOUSE SURGEON. The appointment is for* a period ending October 15th followed by three months as Casualty Officer. Salary at the rate of £70 per annum with board residence and laundry.

Application with copies of testimonials should be sent immediately to the undersigned from whom forms of application and rules can be obtained.

GILBERT C. PANTER
Secretary.

BETHLEM HOSPITAL MONKS ORCHARD
Penge Junction Beckenham KENT

Wanted an UNRESIDENT HOUSE PHYSICIAN (unmarried man preferred) duly qualified in Medicine and Surgery.

The term of office is for six months from May 1st. Apartments, complete board and laundry will be provided and remuneration at the rate of £140 per annum will be paid for the first three months of service and £160 per annum for the remaining three months.

Written applications stating age and experience should be addressed to the Medical Superintendent Bethlem Hospital Monks Orchard Penge Junction Beckenham Kent.

EAST SUFFOLK AND IPSWICH HOSPITAL
IPSWICH
(235 Patients Resident)

Applications are invited for the post of HOUSE SURGEON. Salary at the rate of £120 per annum. Board residence and laundry. Previous experience essential.

Applications from Britons (male) of good standing are qualification and experience and must be accompanied by three recent testimonials to be sent to the undersigned.

The Hospital ALFRED GRIFFITHS
Ipswich. Secretary.

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ASSISTANCIES

WANTED AT ONCE RELIABLE OUTDOOR ASSISTANT of good appearance well up in Midwifery for Country Practice in Midlands £250—£300 Hospital Re ident preferred—Address No 2033 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP (OUTDOOR) by Woman M B Ch B (Scot) Experienced panel and private practice and midwifery Dispenser drive car used to sole charge Free end of April —Address No 2080 B M A House Tavistock Square W C 1

WANTED —INDOOR MALE ASSISTANT FOR mixed Practice in West of England Salary £300 p a Car provided Resident Dispenser kept—Address stating age experience etc with photograph No 2017 B M A House Tavistock Square W C 1

WANTED — INDOOR ASSISTANT (LADY) one having held House appointment preferred Ex prospects for suit app Comf work No mines Com salary £240 with commission—Indu town in Midlands No slums Address No 2082 B M A House Tavistock Sq W C 1

WANTED — PERMANENT ASSISTANT prospect of Partnership if suitable Salary £300 indoors and half midwifery fees increase at £25 at end of 12 months Must have knowledge of panel work—Address No 2001 B M A House Tavistock Square W C 1

WANTED — ASSISTANT — ENGLISH OR Scotch married with some experience Pro pects for a trustworthy energetic man Working class Practice near London—Address No 2027 B M A House Tavistock Sq W C 1

WANTED—ASSISTANT MALE ENGLISH married Charge of Branch Surgery West Country Experience of general practice essential—Address No 2077 B M A House Tavistock Square W C 1

WANTED—ASSISTANT SINGLE BRITISH nationality Salary £350 per annum with rooms coal light and attendance 10/ extra midwifery ex e Usual bond—Apply A H JAMES M D The Park Blaenavon

WANTED A YOUNG INDOOR ASSISTANT in an Industrial Practice near Newcastle on Tyne State age nationality and any other particulars Salary £300 p a —Addre s No 2081 B M A Hou e Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars—BRITISH MEDICAL BUREAU 33 Cro s Street Manchester

WANTED — ASSISTANTSHIP OUTDOOR Country To n or Rural Practice by woman M B A B (Edin 1926) experienced Hospital and G P —Addre No 2032 B M A House Tavistock Square W C 1

WANTED—ASSISTANTSHIP OR LOCUMS by Medical Woman 5 years experience Private and panel practice Accu tomed sole charge Dispensing Can drive car—Address No 2031 B M A Hou e Tavistock Sq W C 1

ASSISTANT WANTED WITH OR WITHOUT view to SHARE (if well qualified with Hou appt) of mixed Practice (good panel and appt) with scope Up to £300 p a and quarters etc All social amenities etc Reply now —Address No 1803 B M A House Tavistock Square W C 1

WANTED — LADY ASSISTANT IN SOUTH Midlands near London Recently qualified State age height and essential particulars Usual bond—Addre s No 2021 B M A House Tavistock Square W C 1

ASSISTANT REQUIRED IN BETTER CLASS Practice Must be a gentleman and foreign nationality no bar Furn house pro Must be good Anaes State age h ight all essential particulars and send photo — Addres No 2036 B M A House Tavistock Square W C 1

ASSISTANTSHIP WITH VIEW TO PARTNER ship in large mixed Practice in Kent Scots (male) Graduate pr ferred Inclose photo and testimonials —Address No 2012 B M A House Tavistock Square W C 1

ASSISTANT INDOOR £300 PER ANNUM £50 allowed if own car Scot preferred—Address first instance No 2010 B M A House Tavistock Square W C 1

DOCTOR—WOMAN M B 35 HAVING HAD experience all types general practice hospital L C C School work etc desires part time ASSISTANTSHIP in or near London regular weekly surgs or any non res appt with nom salary wh re mornings 11 to 1 are free—No 2078 B M A House Tavistock Sq W C 1

PART TIME ASSISTANT WANTED IN London Would suit lady or gentleman doing post graduate work Live in or out—Address No 2083 B M A House, Tavistock Square W C 1

PATHOLOGICAL AND BACTERIOLOGICAL LABORATORY ASSISTANTS ASSOCIATION—Pathologists and Bacteriologists requiring SKILLED CERTIFICATED LABORATORY ASSISTANTS are invited to communicate with H GOODING Hon Sec Moelfre 10 Holbeck Grove Victoria Park Manche ter No fees

PARTNERSHIPS

WANTED — YOUNG MARRIED PARTNER later one third share worth £1 000 p a more House garden country Practice, 2 years purchase ticulars except and paddock to let No par No 2003 B M A at interview London—Address House Tavistock Sq W C 1

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LANCS TOWN—PARTNERSHIP IN GOOD and old e tablished Practice with receipts of over £1 700 yearly and increasing Panel 2 550 Price for one third to commence £1 000 —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

MIDLANDS — PARTNERSHIP IN SOUND Practice average c sh receipts £3 450 Panel 4 900 Good house garage £52 per annum One third share available September at 14 years purchase—Addres No 2014 B M A House Tavistock Square W C 1

REQUIRED PARTNER FOR WELL KNOWN Medical Coaching establishment Share worth £500 p a available Applicants must have good profes ional qualifications and some experience of Medical Coaching — Address No 2005 B M A House Tavistock Square W C 1

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LOCUM TENENCIES WANTED DURING THE Summer by London M B experienced all forms general practice Could bring own car Free April 21st—Addre s No 1929 B M A Hou e Tavistock Square W C 1

NO SALARY — EXPERIENCED PRACTITIONER gentleman (Brits) with own good class Practice in London is willing to INDEFINITE LOCUM in return for Hospitality at South Coast Resort preferably Hove or Worthing during June —Address No 2086 B M A House Tavistock Square W C 1

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Write wire or phone Central 3616
The Reliance Bureau for Dispensers
12 Holborn Viaduct L C 1

A LADY DISPENSER BOOKKEEPER supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in bacteriological laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

DAUGHTER OF PROFESSIONAL MAN desires engagement as RECEPTIONIST SECRETARY to Doctor or Dentist Experienced bookkeeper shorthand typist chauffeuse Good testimonial —Address Miss Brewis c/o Dr Hogg 18 Graham Valley Road South Croydon

DISPENSER BOOKKEEPER MALE 4 tall good appearance and quick worker desires POST any district Highest references Moderate salary — Address No 2022 B M A House Tavistock Square W C 1

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 9858 THE DISPENSERS BUREAU 15 Lindsay House 141 Shaftesbury Avenue London W C 2

DOCTOR SEEKS POSITION WHOLE OF part time preferably London and period experienced Life ab tainer Small salary accepted, in or outdoor Particulars interview testimonials No midwifery —Addre s No 2009 B M A House Tavistock Square W C 1

LADY DISPENSER AND BOOKKEEPER desires RE ENGAGEMENT Fifteen years experience competent bookkeeper accounts Earlish returns etc Good te timonials Moderate salary Di engaged now —Addre Mrs DANIEL 72 Lower Road Haywards Heath

LADY DISPENSER (HALF) DESIRES Position Town or country Available now — Address No 2018 B M A House Tavistock Square W C 1

MEDICAL OFFICER AT PRESENT IN charge of large group of Tea Estates seeks Good British qualifications age 41 with great Tropical and General experience di trict in India with climate and r motene s of district in India DESIRES SIMILAR WORK anywhere Fully up Mines Mills Rubber etc Offers entertained Good testimonials Could l free July 1933 — No 2013 B M A House Tavistock Sq W C 1

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PRACTICES

WANTED — PRACTICE OR PART SHARE in London or suburbs Minimum £2 000 to £4 000 p a Minimum £2 000 Ample capital available —Addr BMA House Tavistock Square W C 1

WANTED IN SCOTLAND MEDICAL PRACTICE (panel and private) Capital available Address Tavistock Square W C 1

WANTED PRACTICE OR PARTNERSHIP by Scottish graduate England Experienced in general practice Qualifications M.B. F.R.C.S. Excellent testimonials Would purchase practice with an income of £800 per annum Capital available £1,000 Write—Box 1811 BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WANTED BY EXPERIENCED PRACTITIONER Locum Tenens PRACTICE with a view to Partnership South or South East Coast Town Income £1,000 per annum upwards Capital available Small practice not objected to—Address No 1811 BMA House Tavistock Square W.C.1

WANTED — PRACTICE WITH SMALL panel Going £1,000—£1,500 per annum North Midlands preferred A death or other vacancy with a view to partnership Modern residence and garage essential—Address No 1827 BMA House Tavistock Square W.C.1

WANTED—PRACTICE OR PARTNERSHIP In or near Ilford £1,000 Good London suburb or town in Surrey Kent or Sussex Qualifications and home essential Capital available —Address No 2019 BMA House Tavistock Square W.C.1

WANTED — SOUND MIDDLE CLASS PRACTICE In or near Ilford £1,000 Near London preferred Convenient house with garage Professional references and garage Advertiser free to take up September Capital £1,000 Strictly confidential—No 1934 BMA House Tavistock Square W.C.1

WANTED — PRACTICE OR PARTNERSHIP Successor in London In or near about £2,000 or more Can join in large good panel Acquisition capital available —Address No 2013 BMA House Tavistock Square W.C.1

WANTED THIS SUMMER CENTRAL AND Panel PRACTICE 1,500—2,000 Outlying suburb Town near coast preferable Good house with garden —Address No 1750 BMA House Tavistock Square W.C.1

WANTED — A PRACTICE OR PARTNERSHIP with panel in Bexhill or neighbourhood Value £1,000 p.a. Replies in strict confidence to Dr. N. 2010 BMA House Tavistock Square W.C.1

WANTED — PRACTICE OR PARTNERSHIP (Qualified) preferably in Sheffield or district Full particulars in strict confidence to Address N. 2030 BMA House Tavistock Square W.C.1

WANTED TO PURCHASE PANEL AND Private PRACTICE In or near about £1,000—£1,500 per annum Within 40 miles London Capital available—Address N. 1603 BMA House Tavistock Sq. W.C.1

COAST TOWN NEAR NEWCASTLE.—PANEL 950 Club and Private Receipts £1,400 Valuation £1,000 House with surgery and garage Apartment or Furnished —Address N. 2050 BMA House Tavistock Square W.C.1

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FOR SALE—PRACTICE IN RESIDENTIAL district of large Provincial City Receipts £4,000 p.a. Valuation £1,000 Satisfactory reasons for disposal Apply Box £00 c/o Address N. BMA House Tavistock Square W.C.1

MARRIED COUPLE WISHES PRACTICE OF PARTNERSHIP with £1,000 Any area Address N. 1810 BMA House Tavistock Square W.C.1

[illegible] PANEL SALE [illegible] PRACTICE [illegible] Panel £1,700 [illegible] Receipts £4,000 p.a. Valuation £1,000 [illegible] Apply Dr. [illegible] BMA House Tavistock Square W.C.1

[illegible] SALE [illegible] PRACTICE [illegible] Panel 1,600 [illegible] Receipts £4,000 [illegible] Valuation £1,000 [illegible] Apply Dr. [illegible] BMA House Tavistock Square W.C.1

[illegible] SALE [illegible] PRACTICE [illegible] Panel 1,600 [illegible] Receipts £4,000 [illegible] Valuation £1,000 [illegible] Apply Dr. [illegible] BMA House Tavistock Square W.C.1

FOR SALE—YORKSHIRE WEST RIDING INDUSTRIAL district mile and working class PRACTICE In part hand 25 years Panel 1,500 Income £1,500 Good house available —Address No 2029 BMA House Tavistock Square W.C.1

FOR SALE—SMALL NUCLEUS FREEHOLD House garden Labour saving beautifully situated five mile from sea Suit Doctor wanting some work Private means essential—Address B 11 Adelaide Crescent Brighton

LINCOLNSHIRE COAST TOWN — OLD established PRACTICE Average cash receipts £1,701 Panel 686 Excellent living and professional accommodation 2 reception 6 bedroom garage and garden Rent £100 p.a. on long lease Premium 1½ year purchase—BRITISH MEDICAL BUREAU 33 Cross Street Manchester

LONDON E.—£550 P.A.—CASH AND PANEL PRACTICE Panel 320 increasing Good commencement to rent or purchase Premium £750 or near offer—Address No 2029 BMA House Tavistock Square W.C.1

MEDICAL PRACTICE IN CENTRAL SCOTLAND Cash receipts approximately £800 House with consulting room and waiting room also garage Premium for Practice £1,000 or offer Purchase price of house £800—Apply MACKAY & FORBES S.S.C. 40 Melville St Edinburgh

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PANEL AND PRIVATE PRACTICE IN Midland County yielding about £1,200 increasing Good house Senior partner (of two) retiring through ill health His half share for sale Irrefutable Church of England Active 1,130—40—Address No 2020 BMA House Tavistock Square W.C.1

SALE OLD ESTABLISHED GENERAL PRACTICE in West London Panel about 800 Income over £800 Commodious house on 3 Cars offers—Address No 2007 BMA House Tavistock Square W.C.1

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URGENT SALE—LONDON N.W.—NURSES' Lock up Surgery High Street Excellent position thickly populated Business premises Entrance Rent £78 Newly decorated Fittings furniture £50 Scope—Address No 2084 BMA House Tavistock Square W.C.1

WOMAN DOCTOR'S PRACTICE — MANCHESTER Cash receipts £6-5 Panel 400 Great scope Good House 3 receptions 6 bedroom garage Rent £80 p.a. Premium 1½ years purchase—BRITISH MEDICAL BUREAU 33 Cross Street Manchester

YORKSHIRE DOCTOR REQUIRES TO HELP CHASE Country PRACTICE taking £1,500—£3,000 per annum with minimum of expenses Communicate in confidence in first instance with WOODCOCK & SON Transfer Agents Ipswich

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CONSULTING ROOMS TO LET — HARLEY Street Wimpole Street and district Whole and part time Lists sent on application Rooms wanted in Harley Street district—ELCOCK & Co. 10 Henrietta St Cavendish Sq W.1 Langham 2601

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CRICKLEWOOD—NEAREST PRIVATE HOUSE to Broadway No 1 ASHGROVE Vacant redecorated a fine opportunity for Doctor or Dentist occupier £150 per annum—OWNER 1 Walm Lane Cricklewood

DOCTOR WISHES DISPOSE LEASE CHARMING HOUSE out Kirtle London established four years as Home for Nervous cases Good profit Small premium Domestic reasons for sale—Address No 2023 BMA House Tavistock Square W.C.1

FULWOOD PRESTON LANCASHIRE — CORNER PREMISES South and West frontage small garden Suitable for Doctor or Dentist 2 reception 4 bedrooms and room for garage Vacant possession—SALMON Nook Lane Preston

HARLEY STREET (CLOSE) — LARGE BED ROOM well furnished 2 guineas per week Also CONSULTING ROOM to Let large part time attendance waiting room £50 p.a.—Address No 100 BMA House Tavistock Sq. W.C.1

HARLEY ST. AREA—DELIGHTFUL SUITE OF ROOMS in handsome residence Very suitable for Doctor requiring Consulting Room and residential accommodation Splendid service Constant hot water to bath and basin Moderate rent — P. W. TALBOT & Co. 16 Maddox St. W.1 Mayfair 6565

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LARGE CONSULTING ROOM TO LET CLOSE Portland Place Medical area Attractive and general waiting room fully equipped Rental £175 inclusive — MEDICAL c/o 5 Stanley Road Wimbledon Phone 0354 Wimbledon

NORTH WALES (COLWYN BAY)—HEALTHY modern detached HOUSE Position exceptionally suitable for Doctor Ground floor 3 fine reception rooms Large garage Good opportunity Low Price—T. BRACKSTONE & Co. Estate Agents Colwyn Bay

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APPOINTMENTS—Contd

DEVON COUNTY COUNCIL

SCHOOL MEDICAL INSPECTOR

The Education Committee invite applications from registered Medical Practitioners for the appointment of a School Medical Inspector

The salary which is in accordance with the Askwith Scale will be £500 rising by annual increments of £25 to £700 (subject to a temporary deduction of £8 for a period of one year)

The successful candidate must provide a motor car for his work Travelling and subsistence allowances will be paid in accordance with the Devon County Council Scale

Candidates must possess a Diploma in Public Health or its equivalent and have had previous experience in the work of School Medical Inspector Preference will be given to candidates who have also had experience in the duties of a District Medical Officer of Health The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and of the successful candidate passing the necessary examination

Forms of application may be obtained from the undersigned to whom they should be returned completed together with copies of not more than three recent testimonials on or before Saturday April 16th

L MEREDITH DAVIES
County Medical Officer

4 Barnfield Crescent Exeter

LONDON COUNTY COUNCIL

Applications are invited from duly qualified medical men only) for appointment to the HOUSE PHYSICIAN at the Lower Road Infirmary for a year together with board lodging and laundry Cash remuneration is subject to temporary reductions in respect of salary and value of emoluments Appointment is for six months only in the first instance but may be extended for further periods of six months up to a maximum of two years provided that not more than 12 months are spent at one hospital Marriage terminates contract of service Duties are assigned by the Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 and must be returned by April 22nd Canvassing disqualifies Inquiries for further details as to nature and scope of duties should be addressed to the Medical Superintendent

CITY OF LIVERPOOL

RESIDENT ASSISTANT MEDICAL OFFICERS (Male)

Applications are invited for the above appointments at the SMITHDOWN ROAD HOSPITAL (1 200 beds) Liverpool for a period of one year at a salary of £200 per annum (subject to a temporary deduction as authorised by the Council) together with the usual residential allowances Canvassing will be deemed a disqualification

Applications to be made upon forms obtainable from the Medical Officer of Health Municipal Annexe to be endorsed Resident Assistant Medical Officer and returned to the undersigned so as to be received not later than Monday April 18th

Municipal Buildings WALTER MOON
Liverpool Town Clerk
April 4th 1932

ALNWICK INFIRMARY

Wanted HOUSE SURGEON (male) immediately Salary £150 and board Modern surgical hospital (25 beds) Ample time for study —Apply Dr SCOTT ELLIS Alnwick Northumberland

HARTLEPOOLS HOSPITAL Friar Street HARTLEPOOL

A HOUSE SURGEON is required for the above Hospital Applications should be sent in addressed to the Secretary

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PARTNERSHIP in non panel Practice one third share West Riding Town and residential district Total average receipts £3,500 *Scope for surgery Would sell* FRCS (Eng) Two years premium Consulting house lease hold price £1 200—Ref 2646

GOOD COUNTRY PRACTICE in hunting district within easy reach of West Riding towns Held by Vendor 38 years Residential and agricultural Unopposed Average cash receipts £1 000 Panel 760 Premium £1 500 Modernized house £2 250—Apply 2647

WEST RIDING TOWN — Middle-class and Artisan Panel approximately 500 Average cash receipts £656 Convenient detached freehold house £850 Premium *Practice 14 years*—Apply 2691

SMALL PRACTICE in residential district of West Riding City Panel 448 Receipts average £90 per quarter Scope for increase—Apply 2644

We have several vacancies for male Assistants single recently qualified indoor for which applications are invited

COUNTY BOROUGH OF MIDDLESBROUGH

HOLGATE MUNICIPAL HOSPITAL (273 Beds)

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN to commence duties forthwith Salary at the rate of £150 per annum for the first six months and £180 per annum thereafter with board residence and laundry

The appointment affords good opportunity for gaining experience as the Hospital is well equipped for modern X ray Electrical Medical and Operative Treatment

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the undersigned not later than Monday April 11th

Municipal Buildings J J FESTON JUCHEN
Middlesbrough Town Clerk
March 18th 1932

BOROUGH OF DOVER

ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation of Dover invite applications for the above appointment from Medical Practitioners between 30 and 40 years of age who hold a Diploma in Sanitary Science salary £650 rising by two annual increments of £25 each to £750

The applicant appointed will be required to devote his attention principally to work under the Mental Deficiency Acts 1913 and 1927 *Lunacy and Mental Disorder Act 1930* and the Mental Treatment Act 1930 Ability to speak French and German will be a recommendation

Further details of the duties and terms and conditions of the appointment and forms of application may be obtained of the undersigned to whom applications accompanied by copies of testimonials must be delivered by the 23rd proximo

Town Clerk's Office R E A OCKER
Brook House Town Clerk
Dover
March 29th 1932

ESSEX COUNTY COUNCIL

PUBLIC ASSISTANCE DEPARTMENT

JUNIOR RESIDENT MEDICAL OFFICER

The Public Assistance Committee invite applications for the appointment of a Junior Resident Medical Officer at the CHELMSFORD HOSPITAL ROMFORD The appointment is for one year Salary £200 per annum with the usual emolument subject to a temporary reduction not exceeding £5 per annum An abatement of £1 10 0 per week will be required to be made in respect of each day of absence from duty The successful applicant will be required to pass a medical examination Applications for the appointment to be made on forms obtainable from the Public Assistance Officer Principal Block Chelmsford must be returned to him by the 15th *April 15th*

By Order
Shire Hall JOHN H PRIOLEAU
Chelmsford Clerk of the Peace
April 5th 1932

BRISTOL EYE HOSPITAL

Vacancy for HONORARY ASSISTANT SURGEON Duties [illegible] combined with general work [illegible] retiring Medical Man or [illegible] Knowledge Eye work [illegible] pleasant educational centre [illegible] and every [illegible] to Secretary Orchard Street Bristol

EAST LANCASHIRE TUBERCULOSIS COLONY Barrowmore Hall Ct Barrow CHESTER
(Under the Direction of the British Red Cross Society and Order of St John of Jerusalem)

HOUSE PHYSICIAN (male) required The appointment is for six months and is renewable Salary £100 per annum with board residence and laundry The appointment is terminable by one month notice

The Institution deals with all stages of Pulmonary Tuberculosis and comprises Hospital accommodation Sanatorium accommodation extensive workshops for graduated work and a settlement

Application with copies of three recent testimonials should be sent to the Medical Superintendent at the above address

ROCHDALE INFIRMARY AND DISPENSARY (110 Beds)

The Board of Management invite applications for the appointment of JUNIOR HOUSE SURGEON The salary attached to the appointment is £200 per annum including board residence and laundry

Application stating age nationality etc together with copies of three recent testimonials to be sent to the Secretary endorsed House Surgeon Particulars of duties and conditions of appointment may be had on application to the Secretary

Infirmary Office W WINNE
Rochdale Lancs Secretary

ADDENBROOKES HOSPITAL CAMBRIDGE

Applications are invited for the post of HOUSE PHYSICIAN The appointment will be for six month from April 23rd but is terminable at an earlier date on month written notice on either side Salary at the rate of £130 per annum with board residence and laundry Candidates (male) who must be unmarried and duly registered are requested to forward their application stating age qualifications etc together with copies of not more than four testimonials to the undersigned on or before Saturday April 16th

W H HEAD
Secretary Superintendent

THE ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

A vacancy for an ASSISTANT HOUSE SURGEON exists Applicants must be fully registered and unmarried and the appointment will be for six months Salary £100 per annum board apartments and laundry free

Application accompanied by copies of not more than three testimonials should reach the undersigned not later than Saturday April 16th

By Order of the Committee
FRANK LOWE
April 1st 1932 Secretary

THE ROYAL GWENT HOSPITAL NEWPORT MON (160 Beds)

Wanted a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out patients and a House Physician

Salary £150 with board lodging and laundry Resident Medical Staff—to be eligible for promotion

Large Out patient Department

Applications stating age and qualifications with copies of three recent testimonials to be sent to the undersigned

Applications from ladies not entertained

J K MILLWARD
April 1st 1932 Secretary Supt

EASTBOURNE PRINCESS ALICE MEMORIAL HOSPITAL (116 Beds)

Owing to one of the two Resident House Surgeons (male) having returned another appointment applications are invited for the VACANT POST Salary at the rate of £150 per annum with board lodging and laundry

The appointment will be for six months commencing about the 1st or after the 22nd inst Candidates must be unmarried fully qualified and registered

Applications stating age qualifications etc accompanied by copies of not more than three testimonials (one of which should be from Medical Superintendent) should be sent to the Secretary to reach him not later than Monday 18th inst

BOOTHAM PARK MENTAL HOSPITAL YORK

Wanted ASSISTANT MEDICAL OFFICER male single fully qualified and registered Previous Mental Hospital experience not essential Salary at the rate of £300 per annum with board accommodation attendance and laundry

Apply with copies of testimonials to the Medical Superintendent Bootham Park York

MINEHEAD & WEST SOMERSET HOSPITAL MINEHEAD SOMERSET (56 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male or female) to this Hospital

Duty to commence on June 1st Appointment for a period of six months Salary £150 per annum with board residence and laundry

Application stating age nationality experience and qualification accompanied by copies of three recent testimonials to be sent to the undersigned not later than May 9th

W H T LODDY Secretary

KENT AND CANTERBURY HOSPITAL CANTERBURY
(Recognised by the University of London for the purposes of MD Examination)

HOUSE PHYSICIAN (male) required Six months appointment Salary payable at the rate of £125 per annum plus board residence and laundry

Application stating age and particulars of qualification and enclosing copies of testimonials should be forwarded to the undersigned

W T SOUTHWOOD
Supt & Secretary

ROYAL FREE HOSPITAL Gray's Inn Road WC1

Applications are invited from duly qualified Medical candidates (male) for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st and tenable for one year Salary £150 per annum with board and residence

Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before April 30th

REGINALD F GARRATT
Secretary

ROYAL BUCKINGHAMSHIRE HOSPITAL AYLESBURY

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) for six months To commence duty as soon as possible Salary £200 per annum with board residence and laundry Candidates must be fully qualified and registered

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned at once

W W BROWN Secretary

THE SHEFFIELD ROYAL HOSPITAL (340 Beds)

HOUSE SURGEON required at once and there will be a vacancy for a RESIDENT ANAESTHETIST at the end of April Salary at the rate of £80 per annum rising to £100 per annum in six months with board residence and laundry There are seven Resident Medical Officers

Applications should be forwarded immediately to—

W H BOOTH
March 21st 1932 Supt & Secretary

WARNEFORD GENERAL HOSPITAL LEAMINGTON SPA

RESIDENT HOUSE SURGEON required on April 23rd Salary £165 per annum with board and laundry

Applications from qualified and registered Medical Practitioners with copies of at least three testimonials should be sent to the undersigned by April 14th

W RUSSELL READE
Hon Governor & Secretary

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN BRIGHTON (100 Beds)

HOUSE PHYSICIAN (male) required Salary at the rate of £100 per annum with board lodging and laundry No emoluments allowed To commence duties on June 1st

Applications in writing accompanied by testimonials should be sent to HUGH F SPOONER Secretary on or before Saturday April 30th
March 29th 1932

KING GEORGE HOSPITAL ILFORD (8 miles from London)

Applications are invited for the appointment of HOUSE SURGEON (male) Salary £100 per annum with board residence etc Term six months with eligibility for a further period Applications should be sent immediately to the Secretary

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (120 Beds)

HOUSE SURGEON required Salary £150 per annum with residence board and laundry Application with not more than three testimonials to be sent to the Assistant Secretary Miss SUSAN SMITH South Cliff Kidderminster

SOUTHPORT GENERAL INFIRMARY, (150 Beds)

Special Departments for Eye Ear Nose and Throat X ray Massage Pathology Skin and V D

Wanted May 1st a JUNIOR HOUSE SURGEON fully qualified and registered unmarried Salary £150 per annum with residence board and laundry Excellent opportunity for gaining experience Applications stating age nationality and experience with copies of testimonials to be sent in by April 14th to Secretary Infirmary Offices Southport

ROYAL EYE HOSPITAL St George's Circus Southwark SE1

Applications are invited for the appointments of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON for a period of six months for the above Hospital Salaries at the rate of £150 and £160 per annum respectively

Candidates must be registered Practitioners

Applications with copies of three recent testimonials should be sent to the Secretary at the Hospital not later than Wednesday April 13th

ST MARY'S HOSPITALS MANCHESTER

TWO HOUSE SURGEONS for the WHITWORTH ST WEST HOSPITAL (Maternity) and one for the WHITWORTH PARK HOSPITAL (Gynaecological Dept) each for a period of six months from May 1st next Salaries at the rate of £50 per annum with board and residence

Applications with copies of three testimonials to be sent to the undersigned on or before April 18th

I HATCHETT Secretary

ST JOHN'S HOSPITAL Lewisham SE13

CASUALTY OFFICER (male) is required for appointment on May 1st The appointment is resident and total for the period of six months Salary £100 per annum Application with copies of testimonials from fully registered practitioners should reach the undersigned not later than the morning of April 16th

F C GILBERT Secretary Superintendent

SUTTON AND CHEAM HOSPITAL SUTTON SURREY (68 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER which will become vacant on May 4th The appointment is for six months and the salary is £150 per annum with full board out of apartments and laundry

Applications giving full particulars of age and qualifications together with copies of three recent testimonials should be sent to the Secretary

LONDON CLINIC AND NURSING HOME 113 20 Devonshire Place W1

RESIDENT HOUSE SURGEON required by the Medical Staff who should have had experience in a Hospital The appointment is for six months on account of the salary is at the rate of £200 per annum with quarters and board Applications should be made in writing to the House Governor Sir ERNEST MORRIS at the above address not later than April 21st

THE SALVATION ARMY THE MOTHERS HOSPITAL Lower Clapton Road Clapton E5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER vacant May 1st Salary £60 per annum with board residence and laundry The appointment is for six months Application with certificates must be sent to the Secretary on or before April 19th

EDGAR DIBDIN Secretary

DURHAM COUNTY HOSPITAL (100 Beds)

TWO HOUSE SURGEONS are required to commence duties immediately Salary £150 per annum with board and lodging Application with copies of testimonials to be sent to W R WILSON Secretary 79 Saddler Street Durham

APPLICATIONS ARE INVITED FOR THE post of HON PHYSICIAN to the BRITISH HOSPITAL FOR FUNCTIONAL MENTAL AND NERVOUS DISORDERS (Forbes Winslow Memorial) 72 Camden Road NW [illegible]

[illegible] LEEDS

Resident [illegible]
of the [illegible]

H
Hon

[illegible] Secretary

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2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non-dispensing Panel and private PRACTICE Receipts £874 Good house for sale Car etc
3 NORTH OF ENGLAND—Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man
4 MIDLANDS —Panel and Private PRACTICE Receipts considerably over £700 Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc
5 SOUTH WALES —Contract and middle class PRACTICE Receipts average £1 100 Panel about 1 000 Good house to rent Lawn garage etc
6 LANCS —Old estab and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent
7 BERKS —(Country Town) —PARTNERSHIP (2/5ths share) with short prelim Assistantship and ultimate succession Receipts over £1 200 Panel 550 and good scope Appts worth about £250 Good fees and house
8 LANCS (LARGE TOWN) — Non dispensing non panel largely Surgical Practice Receipts aver £1 179 p a and unlimited scope Good house etc

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1 SCOTLAND — DEATH VACANCY — Well established PRACTICE Receipts average nearly £800 p a panel 666 Nice house and garage rent £26 10 p a Prem £1 000
2 SOMERSET —Old established Country PRACTICE Receipts average £750 to £800 a year (last year £800) panel 450 Charming Bungalow residence 3 bedrooms etc separate Surgery attached Garage and large garden Rent £35 a year long lease Splendid scope Premium £1 050
3 LONDON W (10 min Fulham) — Well established cash and panel PRACTICE to be sold immediately Receipts nearly £1 700 a year panel 650 First reasonable offer accepted
4 LONDON S E (nr Deptford) —Well established busy cash and panel PRACTICE Receipts average nearly £1 350 p a panel 640 Small house available Premium £1 500 payable only £400 down
5 Near MARBLE ARCH W —Small but promising PRACTICE Well established Receipts £140 p a panel 160 Good scope Premium £220 cash
6 LONDON N (10 mins Finsbury Park) — Well-established Cash and Panel PRACTICE Rec £1 000 p yr panel 650 Nice house on Isc Prem for quick sale £1 000
7 SCOTLAND — Well established PRACTICE Receipts last twelve months £950 panel 900 Large modern house to be sold Premium for Practice 1½ years purchase Nearest opposition 2½ miles
8 Near HOLLOWAY N — Old established PRACTICE for immediate sale Receipts average £650 p a panel over 300 House at low rent Premium only £600 Good scope for increase
9 LONDON N (near St Pancras) — Well established Cash and Panel PRACTICE. Receipts last year £406 panel 350 Rent of Surgery £1 weekly inclusive Premium £350 including drugs and furniture

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BRIXTON S W —£700 P A MIXED CLASS PRACTICE *with panel of 900 Expenses* very slight Midwifery declined Good scope Premium £1 000 Pleasantly situated detached residence with good garden Freehold £1 400 Well recommended —No 9008

MIDLANDS —£3 000 A YEAR OLD ESTAB Same hands over 30 years Partner 5 years One third share for sale now more later at 2 years purchase House available to rent Station close Fees 7/ to 21/ Extensive district very little opposition Panel 1 600 Personally known and recommended —No 9006

LONDON NORTH — £1 000 P A MIDDLE and working class panel 650 Visits 3/6—5/6 up Premium one years purchase Good house main road Leasehold £1 750 48 yrs to run —No 9005

NORTHERN TOWN — VERY OLD ESTAB — One fifth share of over £5 000 p a Panel of 4 000 Fees 5/ upwards Choice of houses Scope for Midwifery Anaesthetics Eye and ENT work —No 9002

LONDON EAST — ABOUT £2 500 P A Panel 2 600 Not much midwifery Visits 3/6 to 5/ Surg 2/ to 2/6 Shop front in excellent position on main road Two consn wait and disp Very comfortable Living over 2 sitting 3 bed bath etc —No. 9001

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2 STAFFORDSHIRE — PRACTICE in rapidly growing district returning £569 p a. Actual figs Panel 414 Prem 1½ years purchase Good house for sale £1 000 or rent £ ? p a.
3 MIDLAND CITY — Old established general and venereal PRACTICE Receipts last year £2 740 Panel 500 recently established, increasing Excellent house to rent Prem £3 ?0
4 CORNWALL —PRACTICE in mail coach town near sea Averages £1 300 p a. Panel about 637 Plenty of scope Premium £2 000 Good house for sale
5 DEVON —PARTNERSHIP for well-qualified Physician 2/5 share returning at present £800 p a Good class non panel Practice Excellent house to rent Prem 2 yrs. purchase
6 OXFORDSHIRE —Old established unopposed Country PRACTICE over £1 000 p a. Panel over 600 Good house Prem 1½ years purchase
7 COUNTRY PRACTICE — Old-established practice pleasant country Last year £1 750 actual figs Panel 946 Appts £120 In present hands 23 years Good house garage, large garden House & Practice £5 000 Borders of Monmouthshire
8 COUNTRY TOWN — Gloucestershire —Third Share with incr to half share later Last yr £1 800 Choice of house Prem 2 yrs purchase
9 DEVON — Unopposed PRACTICE in lovely district Receipts £675 p a Appts £60 Panel 250 Wild suit lady *semi ret* or yr Doctor Good scope Prem 1½ yrs Sen partner
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BERKS —PARTNERSHIP —Country Rural Practice in sporting district Receipts average nearly £1 150 Panel nearly 600 Fees 2/6 up Short preliminary Assistantship 1/3 to 1/2 share for disposal at 1½ years purchase Suitable to experienced man British aged 27 upward

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ESSEX —NUCLEUS non panel G P with excellent house for sale or to rent Receipts approx £230 p a Scope for panel if desired Good opening for Lady Doctor

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EAST MIDLANDS — PARTNERSHIP in better class Practice Suitable house available Receipts nearly £2 000 Up to date Hospital Scope for surgery Premium for 1/3 share (with view to larger share) £1 300

LONDON W —Within 20 minutes of West End PARTNERSHIP in suburban middle class G P situated in rapidly developing locality Excellent scope for young and energetic man Panel approx 2 000 Receipts £2 500—£2 600 Premium for one third share 2 years pur

YORKS —PARTNERSHIP in busy rapidly increasing Town Practice Receipts £2 300 Panel 1 500 Suitable house available 1/3 share with view to succession 2 years purchase

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known Country Town Receipts approx £6 000 Select easily run panel Medium sized house to rent Premium for 1/4 share 2 years purchase This Practice has been known to the Agency for many years and is highly recommended It is essential that the incoming Partner hall hold the F R C S and be aged about 30 Appointment to Hospital Staff

WEST END (adjacent to) —Mixed better class PRACTICE situated on main thoroughfare Suitable house available on lease at exceptionally low rental Receipts approx £1 000 p a Panel 730 increasing Fees 3/6 to 1 gn Premium to include Practice lease, drugs and all contents furniture etc £3 500 or near offer

MIDLANDS —PARTNERSHIP in old established country Practice with scope for considerable increase Fine Elizabethan house with grounds to be rented at low rental Average receipts approximately £3 200 Panel 2 700 Nine fourteenths share on 2 years purchase Sport of all kinds Suitable for a man desirous of country life

LONDON N W —Well established mixed PRACTICE mainly letter-class with excellent house situated on main thoroughfare Receipts approx £900 Panel over 420 Fees 3/6 up No midwifery On appointment Part of house sublet if desired Vendor has developed better class of Practice at good fee Premium £1 300 each

BEDFORDSHIRE —NUCLEUS Country Practice with conveniently situated house (7 bed) Receipts nearly £500 House to be rented on lease at £65 p a or would sell for £800 Premium for Practice £300 for quick sale

LONDON W —PARTNERSHIP in West End Practice Receipt over £3 600 Panel nearly 3 900 Premium for 1/3 share £3 000 Suitable opening for man with good address and experience preferably aged about 30

LONDON S W —NUCLEUS PRACTICE cash and panel House to rent on lease Receipts over £300 p a Panel 350 No midwifery or night work Excellent scope for young and energetic man Premium £450 or near offer

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LONDON N F — Mixed suburban G P— Medium sized corner house Receipts nearly £800 Panel approx 1 000 increasing scope *Premium* £1 340 For Practice leasehold house £900 or near offer

[illegible] PRACTICE Average receipts house Branch surgery or offer Excellent scope

DURHAM —Middle-class approx £500 P Fees 2/6 up No

MIDDLESEX W —PARTNERSHIP in Suburban Practice situated in £2 000 rapidly growing residential locality Receipts (approx) Panel (increasing) 650 Medium sized house available Premium for 1/3 or 2/5 share 2 years purchase

LONDON S E —Near West End —Cash and panel PRACTICE (Lock up) Shop fronted surgery held on lease at £70 p a part sublet Receipts average approx £400 Panel 617 Excellent scope for one giving whole time and undertaking midwifery Premium 1½ years purchase or near offer

WEST END Harley Street locality —NUCLEUS good class non dispensing Practice Excellent leasehold house Receipts £,000 p a approx Prospects of good transfer appointment (in addition) Premium for house and Practice £5 000 or near offer Good mortgage obtainable

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MANCHESTER —Good *Suburl* —Sound mixed PRACTICE Cash receipt last year £1 292 Panel 1 1"0 Scope Excellent house 2 reception 5 bedroom Premium 1½ years purchase —No 339

LINCOLNSHIRE —SEASIDE TOWN —Old-established mixed class PRACTICE Average cash receipt £1 "01 p a Panel 686 Excellent living and professional *accommodation* 2 reception 6 bedroom Garage and small garden Rent £100 p a on long lease Premium 1½ years purchase —No 332

MANCHESTER —MIXED PRACTICE —Cash receipts about £1 600 Panel 1 500 Good house *(on lease)* Garden and garage Urgent *sale* Any reasonable offer considered —No 303

DEATH VACANCY LANCS TOWN —Suit good Surgeon —Mixed class PRACTICE Average cash receipts £1 634 p a Panel 829 Premium £4 000 part by arrangement (to include Surgery and Nursing *Home (freehold)* equipped Operating Theatre fittings Ward furniture drugs and book debts about £1 300) —No 335

CHESHIRE TOWN near MANCHESTER - PARTNERSHIP in old-established Practice Average cash receipts £5151 p a Panel 3 600 Excellent house 2 reception 3 bedroom Garage and garden Premium—one fifth *share*—£1 700 —No 333

LANCS — PLEASANT COUNTRY TOWN —Sound mixed PRACTICE Average cash receipts £1 369 p a Appointment mostly transferable approximately £265 p a Panel 1 037 Excellent house 3 reception 6 bedroom Garage and large garden Premium—Practice—1½ years Purchase —No 326

MANCHESTER —PRACTICE averaging £661 p a Panel 154 Good scope House contains 2 reception 5 bedroom Garage and garden Rent £70 p a Premium for quick sale £450 —No 226

DERBYSHIRE —COUNTRY TOWN Nr MANCHESTER —Mixed PRACTICE Cash receipts 1931 £730 Panel 494 Good house 2 reception 3 bedrooms Garage Rent £52 p a Premium 1½ years Purchase —No 34.

MEDICAL WOMAN'S PRACTICE — MANCHESTER — Old established Cash receipts 1931 £645 Panel 430 Good scope Excellent house 3 reception 6 bedrooms Garage Rent £80 p a on lease Premium 1½ years purchase —No 330

CHESHIRE COAST TOWN ne
TICE Average cash receipts PRAC
Small elect panel Excellent 80 p a
rooms Premium—Practice—1 5 bed
e —No 317

NEAR MANCHESTER —PARTNERSHIP in sound Practice Average cash receipts £4 154 p a Panel 3 621 Good house 2 reception 5 bedrooms Net rent £35 p a Premium—5/25ths share—1½ years purchase Prospect of further share later —No 336

YORKSHIRE Pleasant City —TWO PARTNERS to take over a three fifteenths share each (with increase later) Cash receipts over £5 000 p a Panel 4 000 Prem 2 years purch —No 325

MANCHESTER — Residential Suburb — Middle class PRACTICE Suitable for two in Partnership (one a good Surgeon) Cash receipts 1931 £4 5"8 Panel 1 400 Two excellent houses to rent with ample accommodation Premium 1½ years purchase —No 277

LIVERPOOL —PRACTICE in good industrial area Cash receipts 1931 £685 Panel nearly 800 Suit for married Good house 2 reception 4 bedroom Rent £52 p a Premium £1 000 or near offer —No 331

NR LIVERPOOL —PARTNERSHIP in good-class Practice Cash receipts approx £3 000 Good house available Premium—one third share—2 years purchase —No 309

MANCHESTER Old established PRACTICE Cash receipts last year £1 513 Panel 1 69" Scope for increase Good house 2 reception 4 bedroom Premium—Practice—1½ years Purchase —No 323

NEAR ILESTON —PRACTICE offering scope Cash receipts 1930 £709 Panel 300 Good house 2 reception 4 bedroom Rent £"0 p a Premium 1 year Purchase —No 294

MANCHESTER — INDUSTRIAL PRACTICE Cash receipts last year £889 Panel—all Suit R.C. Clients of scope Good house 2 reception 5 bedrooms Rent £50 Premium—by tender —No 150

NEAR MANCHESTER — Pleasant Town —Old-established PRACTICE Average cash receipts £ 9" Panel 302 Excellent detached house (freehold) 3 reception 5 bedroom Garage and garden Premium—Practice —1½ years Purchase —No 264

VENEREAL DISEASES PRACTICE—NORTHERN CITY —Cash receipts approx £1 800 p a House to rent Vendor going abroad Will accept any reasonable offer for immediate sale —No 340

NORTH WEST COAST — SEASIDE RESORT — Old-established PRACTICE Cash receipts £874 Panel 250 Excellent house 2 reception 5 bedroom Garage and garden —No 266

[illegible] PRACTICE Cash receipts 900 Excellent house 2 reception garden to rent —No 276

NEAR MANCHESTER —Semi Residential Town —Old established (non dispensing) middle class PRACTICE Average cash receipts £" 400 p a Small panel of 450 Well situated freehold detached house 2 reception 5 bedrooms Garage Premium—Practice—1½ years purchase —No 329

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2 FLOURISHING COUNTY TOWN within 70 miles of London—Lucrative PRACTICE averaging £2 260 p a Panel 1 830 Excellent house (6 bedrooms) in best part for sale or rent Premium 1½ years purchase

3 FASHIONABLE INLAND WATERING-PLACE about 120 miles from London—PARTNERSHIP in Practice of about £3 500 p a including appointments and substantial panel Old-fashioned corner residence with nice garden to rent Premium one half share 2 years purchase

4 S MIDLANDS—Partnership in Practice of £2 676 p a in Historical Market Town within 75 miles of London Panel 2 000 Excellent detached house (6 bed and dressing rooms and attics) garage etc for sale Premium one half share 2 years purchase Very considerable scope for increase

5 NORFOLK — Working-class Practice, averaging £2 550 p a in important town and agricultural centre Panel 2 500 Excellent house (6 bed and dressing rooms) in central position Good garage etc for sale Premium for Practice 1½ years purchase

6 W OF ENGLAND—Partnership in old-established Practice of about £1 545 p a in first rate City Panel 1 348 Choice of houses. Share worth about £700 p a at 2 years purchase

7 MIDLANDS — Steadily increasing PRACTICE of between £1 100—£1 200 p a in thriving town one and a half hours by rail from London Excellent house (7 bed and dressing rooms) garage and garden for sale Cottage Hospital Premium 1½ years purchase

8 S WALES—Partnership in Colliery and Panel Practice of £2 000 p a in pleasant district easy distance of Cardiff Panel 2 150 Premium one-third share 1½ years purchase

9 LONDON S W — Cash Practice about £1 100 p a close to the West End Panel about 1 250 which could be greatly increased Valuable corner residence for sale Premium for Practice £1 000 only

10 LONDON E—Cash and Panel Practice of £[illegible] p a Panel about 1 570 Small house to rent or sale Premium 18 years purchase

11 DEATH VACANCY—E MIDLANDS—PRACTICE averaging £1 550 p a in small industrial district easy distance of two good towns Panel 1 235 Large house with surgery etc garage and good garden for sale Beautiful surrounding country and port of most kinds

12 ESSEX—Partnership in Practice of £1,400 p a in developing country district easy distance of coast Panel 3 600 Detached house (6 bedrooms) garage and good garden For sale Scope for increase One fourth share 2 years purchase

13 S COAST — Lock-up Practice, averaging £480 p a in rural district on outskirts of popular holiday resort Panel 400 Rent of Surgery premises 10/ weekly From £600

14 EASTERN COUNTIES — Partnership in Practice averaging £4 400 p a in market town Suitable house available Share of £750 p a at first at 2 years purchase Cottage Hospital Applicant must have surgical experience and if holding the D P H could obtain M O H Appointment in addition

15 W OF ENGLAND—Partnership in Practice nearly £2 600 p a in country town Panel about 1 000 Good house (5 bedrooms) garage and garden of about half acre to rent Good educational facilities Cottage Hospital Premium one third share £1 550

16 MIDLANDS — Practice averaging £1,710 p a in growing town with nice surroundings Panel 1 100 House available later Good hospital and scope for surgery Premium 1½ years purchase

17 HOME COUNTIES—Non dispensing Practice averaging £1 150 p a In growing residential watering place No panel Detached house (3 bedrooms) with every modern convenience and attractive garden to rent Premium 1 years purchase

18 MIDLANDS—Practice averaging £727 p a in old an flourishing manufacturing town Panel 570 House (3 bedrooms) garage to rent Premium 1 years purchase

19 SHROPSHIRE — Practice £800 p a in Market Town Panel 1 0 Suitable house to purchase 1½ years purchase

20 SLATTS — Partnership in Practice of £4 000 p a in manufacturing [illegible] house to rent Premium on third share 1½ years

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Practices and Partnerships for Disposal (continued)

21 S WALES — Mixed Practice in growing district of seaport town Receipts last year £600 Panel 760 House (3 bedrooms) garage and garden to rent Good prospects for scope Premium £1 200

22 MIDLANDS — Partnership in Practice, averaging over £3 000 p a in a most progressive manufacturing town Panel about 4 000 Expenses light House (4 bedrooms and 3 attics) for sale Premium one half share £3 000

23 MIDDLESEX —Practice in growing residential district Receipts 1931 £1 250 Panel 400 Modern house (3 bedrooms) garage and large garden for sale Great scope Premium 1 year purchase

24 LANCASHIRE —Practice averaging £2,100 p a in industrial district on outskirts of manufacturing town Panel 1 460 House (5 bedrooms) with garage to rent on lease Premium 1 year's purchase

25 W OF ENGLAND —Partnership in Practice averaging £2 300 p a on outskirts of first rate town Panel 2 400 House with 5 bedrooms and dressing room for sale One third share at 1½ years purchase Preliminary Assistantship

26 N WALES —Practice in small Watering-place Receipts 1931 £575 Panel 208 Modern house very easily run with ample accommodation at nominal rent Very bracing climate Excellent shooting fishing Scope for increase Premium £450 Well worth enquiry

27 MIDLANDS —Partnership in sound non-dispensing Practice of over £5 700 p a in beautifully situated county town Panel 2 000 Good well qualified Physician required aged 30 35 One fifth share at 2 years purchase with early increases Good Hospital with prospect of appointment on Staff in near future

28 BIRMINGHAM — Practice averaging £584 p a in good class suburb Small panel but ample scope Very little midwifery Low expenses House with garage to rent Premium 1½ years purchase or near offer for quick sale

29 ITALY —Old established Practice in an attractive City Receipts last 2 years averaged £1 400 p a No midwifery or night work Suit graduate of experience married and with good social attainment Reasonable premium

30 W OF ENGLAND —Partnership in Practice in pleasant country town Cash receipts average about £5 200 p a (including panel and appointments over £1 800 p a) Charming old house (5 bedrooms and attics etc) garage and beautiful garden Plenty of sport Scope for increase Premium for one fifth share 2 years purchase

31 S E COAST — Popular Resort —Partnership in mixed class Practice about £3 600 p a Panel about 2 000 Excellently situated house (5 bedrooms etc) with garden and garage for sale Five twelfths share for disposal at 2 years purchase

32 MIDLANDS — Partnership in Country Town Practice averaging about £3 600 p a Panel over 1 500 Scope for increase Premium for one fourth share 2 years purchase Preliminary Assistantship if desired

33 LONDON, N W — Practice in suburban district Receipts 1931 £700 Panel 300 Corner house (6 bedrooms) garage and garden to rent on lease Premium £750

34 SUSSEX — Country Practice between £1 200 and £1 300 p a in delightful part No panel Large residence (9 bedrooms etc) garage and garden of four acres to rent on lease Premium £1 800

35 SURREY — Partnership in increasing middle-class Town Practice of £2 500 Panel over 1 200 Modern detached corner house (6 drooms) garage and garden for sale Partner should be 25 30 and have held Hospital appointments Share of £1 100 p a at 2 years purchase

36 N OF ENGLAND — Partner required in increasing Practice in beautiful city Receipts last year £5 000 Panel 4 000 Applicants should be proficient in minor surgery anaesthetics and obstetrics Share of three fifteenths at 2 years purchase

37 LONDON, N W —Non-dispensing Practice over £950 p a in good residential district No panel Ten roomed house with garage and large garden Rent £..00 p a. Premium £1 200

38 N MIDLANDS —Partnership in Practice, about £3 000 p a. in country district near two important towns. Panel over 1 600 Small house (5 bedrooms etc) available to rent Great scope as district is growing rapidly Premium one third share 2 years purchase

39 EAST ANGLIA — Partnership in sound non dispensing Practice of about £5 000 p a in favourite Seaside Resort Partner should be a Varsity man about 30 years of age experienced in Medicine and Anaesthetics Good up to date Hospital Premium for one third share 2 years purchase

40 S WALES —Increasing Practice of £900 p a in pleasant Market Town Panel 150 Well situated house (non basement) with 3 bedrooms for sale Cottage Hospital Premium

41 DURHAM —Practice of over £500 p a in residential and colliery district near large towns Panel 370 Substantially built 9 roomed house for sale Scope for increase

42 NEW ZEALAND —NORTH ISLAND — Non-dispensing PRACTICE about £1 800 p a in first rate Town Modern detached house (4 bedrooms etc) garage and garden for sale Equable climate Good educational facilities. Premium only £1 250

43 EAST ANGLIA —Partnership in Practice over £4 500 p a. in beautiful country district easy access of important town Panel 3 000 Nice detached house (7 bedrooms) garage etc garden and grounds of 10 acres for sale Sport of most kinds Considerable scope Premium two thirds or four ninths share 2 years purchase

44 KENT —Country Practice of over £800 p a in beautiful part Panel nearly 400 Very attractive residence (5 bedrooms) central heating grounds of 2½ acres orchard etc for sale Sport Premium 1½ years purchase

45 S OF ENGLAND —Partnership in Ophthalmic Practice about £1 300 p a in small but delightful resort. Considerable scope to one able to operate Premium one half share 1½ years purchase

46 HOME COUNTIES —Partnership in exceptionally good and rapidly increasing Practice about £6 000 p a. in delightfully situated Country Town easy distance of coast Attractive house (4 bedrooms) to rent Partner must hold the FRCS and be aged about 30 Appointment on Hospital Staff. Premium for one sixth to one fourth share 2 years purchase Preliminary Assistantship

47 KENT — Country Practice of about £850 p a Panel 550 Good house and garden for sale Prem £1 100

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1 LONDON SOUTH WEST—Very old established good middle class PRACTICE in open residential suburb Average gross cash receipts over £1 500 Small selected panel Fees 5/6 to 10/6 Not much midwifery at from 4 to 8 gns Very well situated house in good repair and containing 2 reception 5 bedrooms etc Three professional rooms Garden Very moderate rental on lease

2 LONDON EASTERN SUBURB—Old established good middle class PRACTICE producing for the last twelve months over £1 500 Panel of 1 000 Fees from 2/6 Very nice house in excellent condition with 2 reception, 3 bedrooms bathroom etc and professional accommodation Price for leasehold £1 000 Premium 1½ years purchase

3 MIDLANDS—COUNTY TOWN—PARTNERSHIP—A one third or two fifths share is offered in a well established middle and working class Practice Gross cash receipts average over £2 000 p.a. including panel of nearly 2 000 Fees 2/6 to 7/6 Not much midwifery Suitable flat available above Surgery or house can be rented Premium for share 2 years purchase

4 LONDON NORTH WEST—Old established mainly better class non panel and non dispensing PRACTICE averaging nearly £1 000 p.a. Fees 7/6 to 21/ Only few cases of midwifery at 10 gns Corner house with 3 reception, 6 bedrooms etc Electric light Garden Garage Rent on lease £150 p.a.

5 LONDON NORTH—Middle class PRACTICE producing about £1 000 p.a. including panel of 660 Fees from 2/ upwards Very little midwifery Seven roomed house with professional accommodation Price £1 500 or could be rented Premium £1 500

6 MANCHESTER—Middle and better class PRACTICE in residential district Average gross cash receipts for past three years £1 270 including panel of 1 170 Convenient house can be purchased for £1 000 £600 on mortgage Premium 1½ years purchase

7 WITHIN 150 MILES NORTH OF LONDON—COUNTY TOWN—Very well established chiefly better class non panel PRACTICE in favourite town Average gross cash receipts for last three years £3 201 last year £3 309 No appointments Fees 5/ to 21/ Only about 20 cases of midwifery from 5 to 25 gns Very nice house with 2 reception 6 bedrooms dressing room etc and professional rooms Price for freehold £2 000 half on mortgage Premium £5 000 Hospital of over 200 beds and good surgical scope if desired Ill health sole reason for sale

8 PARTNERSHIP—LINCS—Attractive Market Town within easy reach of Coast—A share representing about £750 p.a. (with increase up to one half in 3 or 4 years) is offered in an exceptionally good mixed class Practice established many years Average gross cash receipts for last three years over £3 600 This year at the rate of over £4 000 Panel of 1 600 Fees from 3/6 to 2 gns Midwifery 1½ to 10 gns Choice of houses or Purchaser could reside in rooms to begin with Premium for share £1 500 Ingoing Partner should be experienced able to undertake surgery and preferably hold the D.P.H. in which latter case appointment could be obtained which would increase the income of the share up to about £1 000 p.a.

9 KENT—PARTNERSHIP—A guaranteed share of £800 p.a. is offered (after preliminary assistantship of £400 p.a. outdoor) in an exceptionally sound middle and working class Practice producing about £4 000 p.a. Panel of 2 700 Suitable house available on rental Premium for share 2 years purchase Ingoing partner should be English or Scotch

10 SURREY—Delightful residential district within 25 miles—Well established PRACTICE averaging about £550 p.a. with good scope Panel of 250 Detached house in 1¼ acres of ground (3 reception 4 bedrooms etc) rent on lease £120 p.a. Premium £850

11 LINCS—LARGE TOWN PARTNERSHIP—A one third share is offered in an old established mixed class Practice averaging approximately £2 000 p.a. Panel of 2 550 Fees from 2/6 Suitable house with 2 reception 5 bedrooms etc Surgery and waiting room Rent on long lease £50 p.a. Premium £1 000 to include book debts etc

12 ABERDEENSHIRE COAST—Old established mixed-class PRACTICE in attractive district averaging £759 p.a. including panel of over 500 and appts worth about £220 Fees from 3/6 Suitable house with 2 reception 5 bedrooms and professional room Good garden Garage Rent £55 p.a. or could be purchased Premium £850

13 MANCHESTER—Old established PRACTICE averaging £640 p.a. Panel of 154 Offer good cope Fees 5/6 to 10/6 Midwifery 3 to 7 gns House contains 4 reception 5 bedrooms bathroom etc Rent on lease £70 p.a. Premium for immediate sale £450

14 SOMERSET—SUBURB OF FAVOURITE TOWN—PARTNERSHIP—A one third share (after a preliminary Assistantship of about six months at £300 p.a. indoor) is offered in an old established mixed class Practice averaging for the last three years £2 371 p.a. Panel of over 2 400 Fees from 3/ Suitable house with 2 reception 4 bedrooms etc room separate entrance to professional rooms Electric light Fair sized garden Garage Price for freehold £1 000 Part on mortgage Premium for share one and a half years purchase

15 SOUTH WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP—A share producing about £1 000 p.a. with further increase is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 5/6 to 21/ Midwifery 5 to 10 gns Suitable house can be rented at £90 p.a. Premium for share 2 years purchase Good Hospital with over beds Ingoing Partner should be experienced and hold M.D. or

16 FAVOURITE SOUTH WESTERN COUNTY—PARTNERSHIP—A two thirds or three fifths share is offered in a well established Practice situated within easy reach of good residential town Gross cash receipts for last 12 months £2 522 Panel of 1 500 Visits 3/6 to 10/6 Very up to date attractive house with 2 reception 6 bedrooms Price for freehold £2 500 payable £1 000 down and £1 500 on mortgage Premium for share two years purchase Good sporting social and educational facilities Surgical scope if desired

17 SOUTH OF ENGLAND—FAVOURITE COAST TOWN—Old established chiefly better class PRACTICE producing about £1 800 p.a. Small selected panel Fees 5/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

18 NORTH MIDLAND CITY—PARTNERSHIP—Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £6 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium for two years purchase Excellent sport and schools

19 PARTNERSHIP—WEST OF ENGLAND—A share producing about £700 p.a. is offered in a well established Practice averaging over £1 500 p.a. Ultimate succession Inter Panel of nearly 1 400 Choice of houses Premium £1 400

20 WITHIN 30 MILES OF LONDON—Delightful residential district Small PRACTICE producing about £400 p.a. with Panel of 300 and capable of considerable development Very good house 2 acres of ground) suitable for resident patient £4,000 (mortgage arranged) Premium £400

21 LONDON NORTH WEST—Well established middle class and PRACTICE averaging for the past three years £840 including worth about £300 p.a. and panel of 1 Fees 5/6 to 1/ Purchaser can choose his own residence Premium £1 250

22 LONDON S.W.—Good middle class PRACTICE offering considerable scope and producing for the past 12 months over £670 panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about cases yearly) Suitable house with dining room consulting and dispensary 3 bedrooms sitting room etc Price for lease (94 years to run) £1 200 part on mortgage Premium £100

23 MIDLANDS—PARTNERSHIP—A one third share is offered in a sound middle and working class Practice held by the same for 55 years Average gross cash receipts for the last three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 1/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage all kinds and very good schools within reach Premium 2 years purchase

24 MID WALES—Agricultural District—Mixed class PRACTICE producing about £880 p.a. including small panel of 150 Fees 5/6 to 21/ Small house with 2 reception 3 bedrooms etc Premium 1 years purchase Fishing shooting and other sport

25 WOMAN DOCTOR'S PRACTICE—[illegible] established eight years easily worked and producing nearly £ Panel of 500 Fees 5/ to 7/6 Midwifery 3 to 5 gns house with 2 sitting 3 bedrooms 4 attics etc Rent on lease £42 10s p.a. Premium 1½ years purchase or

26 SOUTH OF ENGLAND—Pleasant Town near Coast established middle and upper class PRACTICE Cash receipts nearly £1 750 p.a. including panel of 800 Visits 3/6 to little midwifery House including consulting room and dispensary in well situated part of town Fees £1

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2 SOUTH WEST OF ENGLAND—PRACTICE or PARTNERSHIP preferred) in rising about £1 500 p.a. Small or would purchase

3 SOUTH [illegible] near or at PRACTICE [illegible] TOWN—A good

4 SOUTH [illegible] about £1 500 suitable investment

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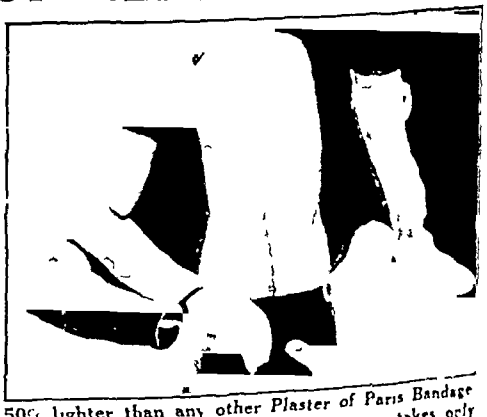
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British Medical Journal

CONTENTS

APRIL 16, 1932

ORIGINAL ARTICLES

Control of Silicosis in Industry in South Africa. By L G Irvine M D (With Chart) 693

Comments on the Recent Outbreak of Pneumonia. By F John Lovinton M D F R C P 6 8

Acute Mastoiditis. By J Lewin M B F R C S 699

A Comparative Study of Chest Radiograms and the Mantoux Test in Children By Dorothy J Dow M B and W Ernest Lloyd M D 701

The True Place of Serum in Prophylaxis of Measles By J I Collier B Sc Ph D M R C S 703

Two Unusual Examples of Osteogenesis Imperfecta. By James Crooks F R C S (With Chart) 705

MEMORANDA

Open Safety pin in Oesophagus of Baby Removal by Endoscopy By Harold Downer M B 705

Actinomycosis Involving a Long Bone By A B Davies F R C S Ed 705

Colour Index Nomogram By George H Bell M B (With Chart) 706

Perforation of the Orbit with an Anæsthetic Needle By J Cole Marshall M D F F C S 706

CLINICAL PROCEEDINGS

Fife Branch Common Form of Dermatitis 707

REPORTS OF SOCIETIES

Royal Society of Medicine Megalocytic Anæmias 708

West London Medico Chirurgical Society Foetal Pathology 709

Devon and Exeter Medico Chirurgical Society Backache 710

REVIEWS

Diseases of the Thyroid 711

[illegible] 712

[illegible] 713

Hodgkin's Disease 713

British Students at Leyden 713

Notes on Books 714

OBITUARY

A D [illegible] 730

Alex[illegible] 731

Henry [illegible] M.D. 731

J Curtis Franklin L R C P & S 732

LEADING ARTICLES

Tuberculin Tests in Man 715

Loose Milk 716

THE WEEK

Teaching of Paediatrics in the U S A 717

The [illegible] 718

The [illegible] 718

Lect[illegible] 719

& Co 719

British Empire Cancer Campaign 719

GENERAL ARTICLES AND NEWS

King's College, London. Hambleden Department of Anatomy (With Plan) 720

London School of Hygiene and Tropical Medicine. Sir Austen Chamberlain's Review 722

Nova et Vetera. A Swallowed Coin 721

Preparations and Appliances (Illustrated) 714

Medical Notes in Parliament

The Health Services 733

Indian Medical Qualifications 734

Medical News 736

CORRESPONDENCE

The Student in Iron[illegible] By Gustave Monod M D F P C P 725

Idiopathic Dilatation of Common Bile Duct By James H Saint F R C S 725

Visceral Herpes Zoster By J A Pyle M D F R C P 726

Treatment

Hip By F [illegible] 726

Arsenic and [illegible]

Turner W[illegible] M B 726

By Alexander [illegible] 727

[illegible] M B By James Cook 727

727

727

[illegible] Collier M B [illegible] 728

[illegible] Laurence M B 729

Research on Hepatic Calcium By G W Theobald M D 730

Ambulatory Treatment of Fractures By Bryan McFarland M.D M Ch 730

THE SERVICES

I M S Dinner

Deaths in the Services 735

(For Naval Military and Air Force Appointments see Supplement)

LOCAL NEWS

Scotland— [illegible] 722

[illegible] 722

[illegible] 723

Silicosis in Scotland 723

Hospital Services in Fife 723

England and Wales—

King Edward VII Sanatorium 723

Post-Graduate Tuberculosis Course in Wales 723

Venereal Diseases Clinics in London 724

Ireland—

Treatment of Mental Cases 724

Memorial to Dr James McIlroy 724

India—

Forecasting Epidemics 724

Prevention of Cholera in Army 725

King Edward VII Hospital Bombay 725

UNIVERSITIES AND COLLEGES

University of Oxford 732

University of Cambridge 732

University of London 732

University of Glasgow 732

National University of Ireland 732

Royal College of Surgeons of England 732

LETTERS AND ANSWERS

Plantar Corns 737

Income Tax 737

Is Determinism Dead? 738

Doctors and District Nurses 738

A Medical Epitaph 738

First Aid Equipment on the Roads 738

I M S Pensions 738

Vacancies 738

(See also page 143 of Supplement)

The SUPPLEMENT contains

The Development of National Health Services Address by Dr H B Brackenbury

Consultant and Specialist Services for Members of Contributory Schemes

National Eye Service Additions to List of Local Representatives

National Health Insurance Insulin for Insured Person in Scotland

Current Notes

Lists of Consultants for Voluntary Organizations

Ophthalmic Treatment

Council Elections

Books Added to the Library

Association Notices Correspondence Vacancies and Appointment Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible classes will for the most part be found on the pages indicated

Advertisements of the follow

PUBLISHERS

Churchill J & A
Ball & Eran —Dis of the Kidney 3
Haslam s Preventive Medicine 3
Hewlett R T —
Manual of Bacteriology 3
Pathology 3
Hewlett & Nankivell s Principles of Preventive Medicine 3
Illingworth & Dick—Surg Pathol 3
Imm's Entomology 3
Ivens Knowles Caesarean Section 3
Jameson & Parkin on s Synop is of Hygiene 3
Johnston s Regional Anatomy 3
Johnston & Simp on s Bacteriology 3
Kerley s Radiology 3
Pear on & Wyllie Di of Children 3
Piney s Haematology 3

Constable & Co Ltd
Bankart, A S B —
Manipulative Surgery 4

Lewis H K & Co Ltd
Clinical Journal 4
Scott G L —Morphine Habit 33

ASSURANCE COMPANIES—
Century Insurance Co Ltd 45

BOOTMAKERS &c—
Dowie & Marshall—Bootmakers 28

BRASS NAME PLATES &c—
Cooke s Name Plate 29
Ford s Name Plate 29
Herd S J & A —Name Plates 29
Lewis & Co Ltd —Name Plates 29
Osborne F & Co —Name Plates 29

DEBT COLLECTION—
British Medical Protection Society 4

DISPENSING BOTTLES &c—
United Glass Bottle Manufrs Ltd —
Dispensing Bottles 11

PRINTING & STATIONERY—
Anderson & Son—Account Forms 44
Barlock Co —Barlet Typewriters 44
Taylor s Typewriters 28

SURGICAL APPLIANCES—
Co Ltd —No e Spray 9
10
22
27
Curtis & Son—Support 8
Fleming & Co —Surgical Equipment 28
Hilliard s New Absorbent Bag 29
d 10
23
23
7
Flexotta etc Cover ii
Taylor E Ltd —Flexotta 28

CHEMISTS &c—
4
21
21
Vapo Cresolene 4
American Apothecaries Co —
14
Boc
Bri
Pituitary Extract B D H 18
British Oxygen Co Ltd —Oxygen 12
Burroughs Wellcome & Co —
Welcome Insulin 25
Carnrick C W Co —
Liver Extract Cover i
27
16
Craubax Ltd —Odol 16
Fairchild Bro & Foster—
Panopepton 17
26
18
15
Menley & James Ltd —Pyridium 17
23
14
13
Sandoz Chemical Works—
Feltumine Cover ii
Sharp & Dohme Ltd —
Caprokol 14
Wyley Ltd —Naphthin 13

FOOD PREPARATIONS—
Bemax Laboratories—Bemax 19
Cow & Gate Ltd —Milk Food Cover iii
Nestlé & Anglo Swiss Con Milk Co
Lactogen 24
Valentine s Meat-Juice Cover iv
Wander A Ltd —Ovaltine 29

MOTOR CARS TYRES &c—
Lodge Sparking Plug 29
Mann Egerton & Co Ltd —
Motor 5
Second hand Motor for Sale 44

TAILORING & UNDERCLOTHING—
Hall H —Medical Service Dress 44

TOBACCO & CIGARETTES—
Player s No 3 12

TRANSLATIONS TYPEWRITING—
Radford B —Typewriting etc 43

VACCINES & CULTURE MEDIA—
Evans Sons Lescher & Webb Ltd —
Vaccines 23
Laboratories of Pathology & Public Health 29

WINES & SPIRITS—
Bollinger s Champagne 4

X RAY & ELECTRO MEDICAL APPARATUS—
Dean & Co —X Ray Apparatus 9
Hamblin T Ltd —
Intra Nasal Ionizer 29
Kodak Ltd —
X Ray Reduction Camera 6
Medical Supply Association Ltd —
Diathermy Apparatus 8

BATHS SPAS &c—
Baden Baden 35
Bridge of Allan Spa 36
Harrogate 35

SCHOOLS &c—
Cheltenham College 36
Eaton —Schools for Boys & Girls 38

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 41

HOSPITAL &c VACANCIES—
Alnwick Infirmary 40
45
44
41
43
43
43
39
39
40
45
40
44
43
39
41
41
43
41
42
44
39
40
40
41

HOTELS & HEALTH RESORTS—
Clifton Hotel 36
Italian Health Resort 36
Margate 36
Plymouth 36

HYDROS & PRIVATE HOSPITALS—
Smedley s Hydro Matlock 36

INEBRIETY—
Bay Mount Paignton 33
Caldecote Hall near Nuneaton 33
Dalrymple House, Rickmansworth 33
Old Hill House Cuckfield 33
Rendlesham Hall Woodbridge 33

SANATORIA—
4
Pendyffryn Hall Sarn Mellteyrn
Tor na Dee Sanatorium 34
Victoria Sanatorium Davos Platz 36

HOMES & ASYLUMS—
Barnwood House Gloucester
Emilie Galloway Home of Re
Fenstanton Streathum Hill
Grange near Rotherham.
Grove House Church Stretton
Haydock Lodge Lancashire
Highfield Hall, St Albans
Lawn Lincoln
Ilkeston Abbey Chapel
Wonford House Exeter
Woodside Nerve Hospital N W
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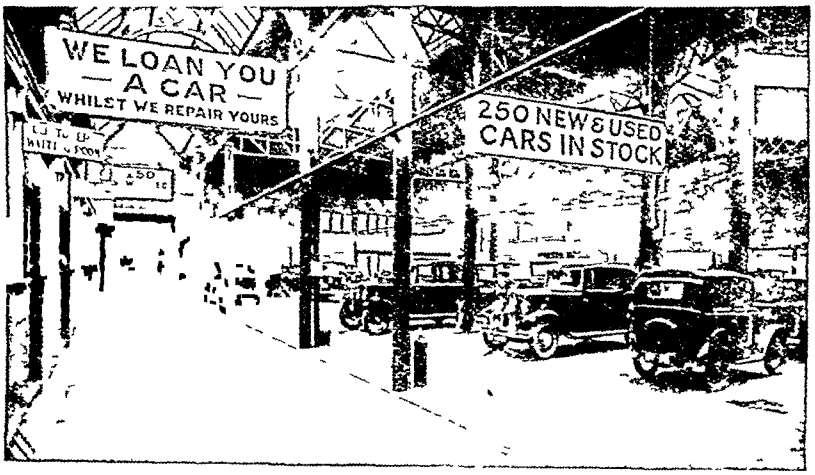
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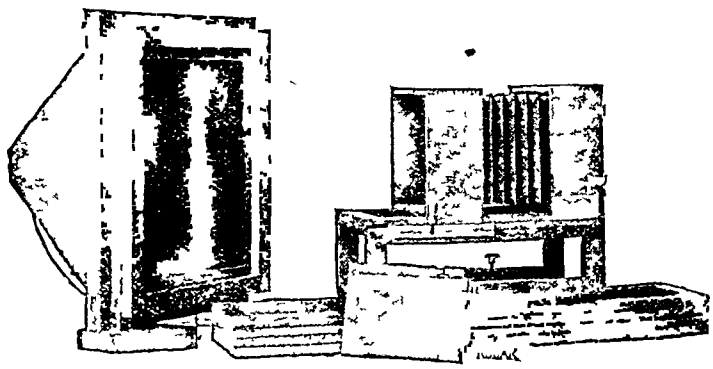
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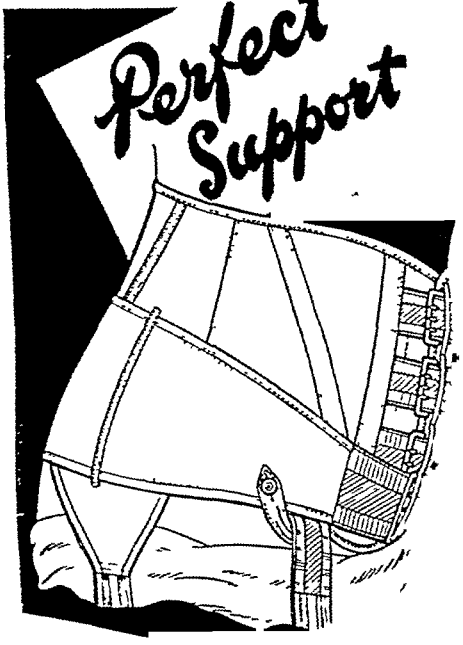
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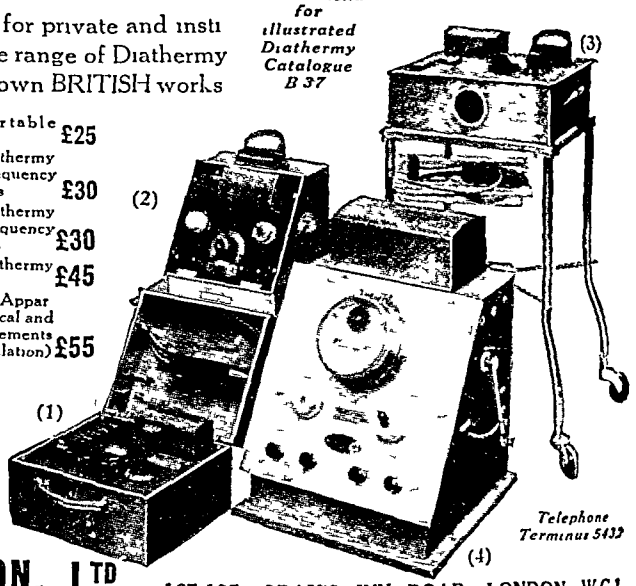
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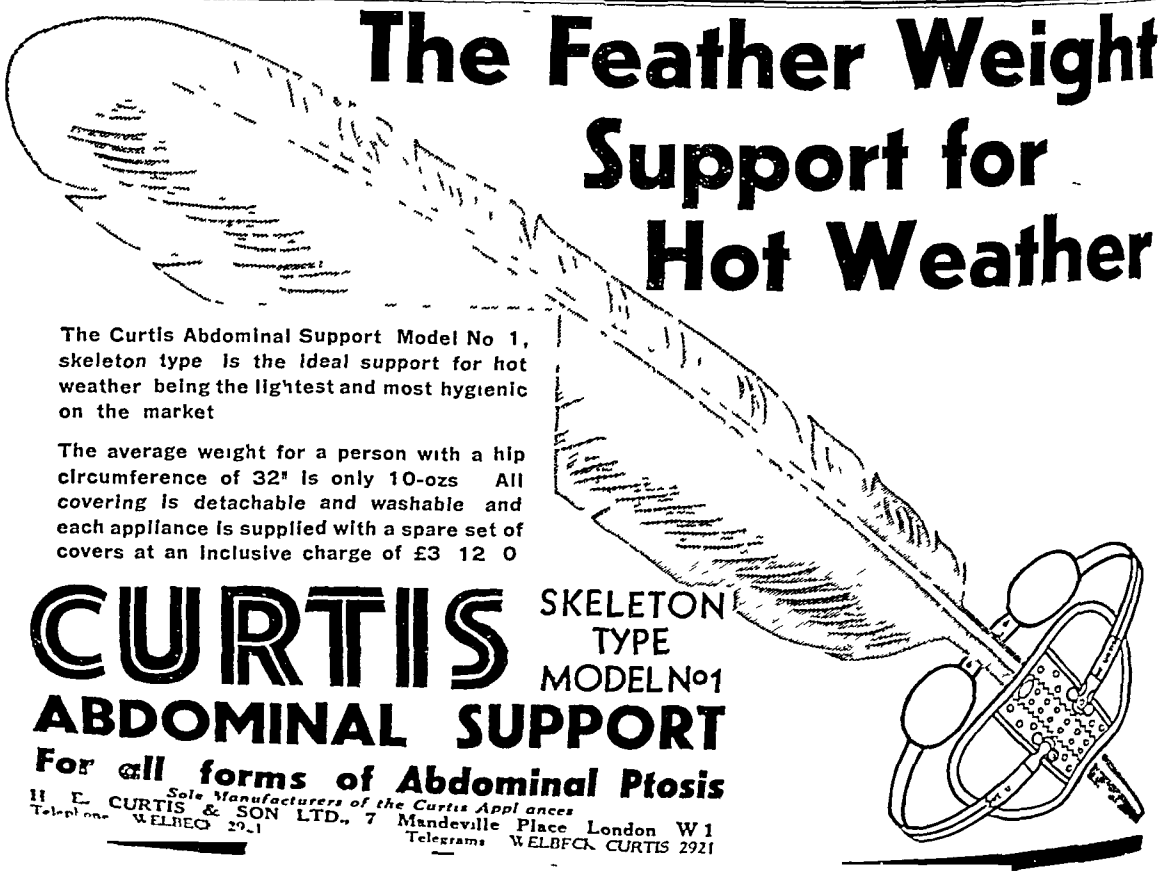
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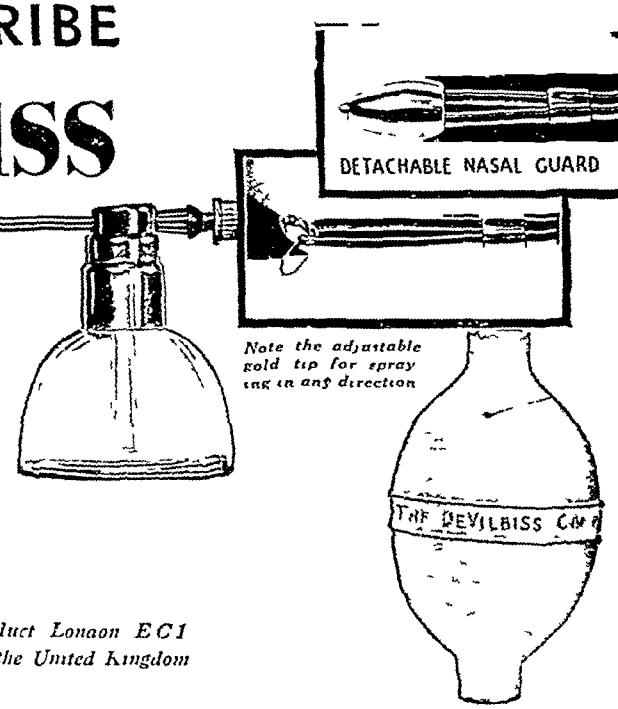
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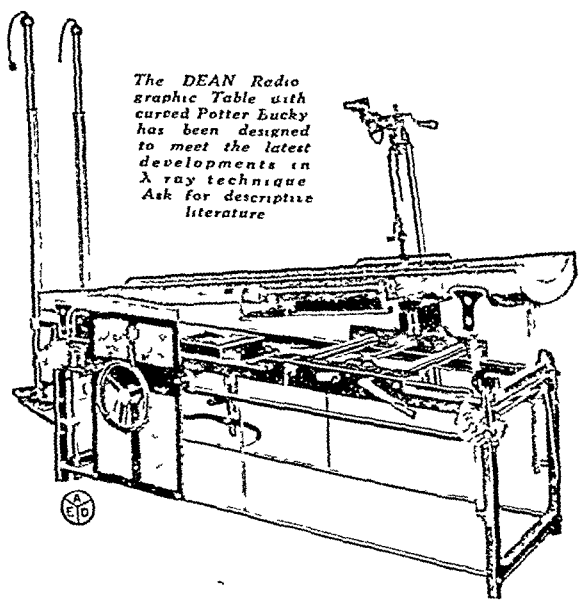
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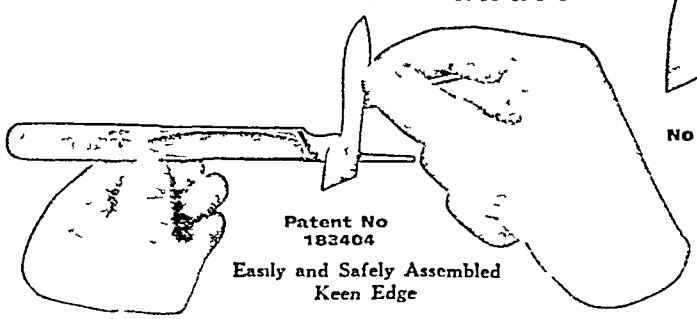
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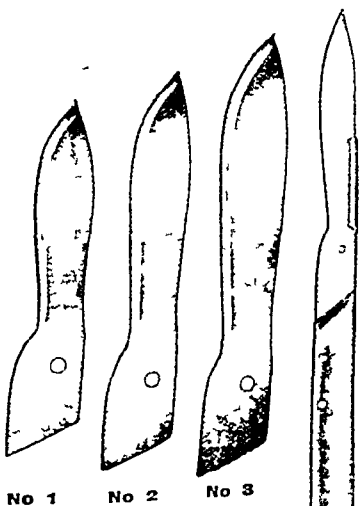
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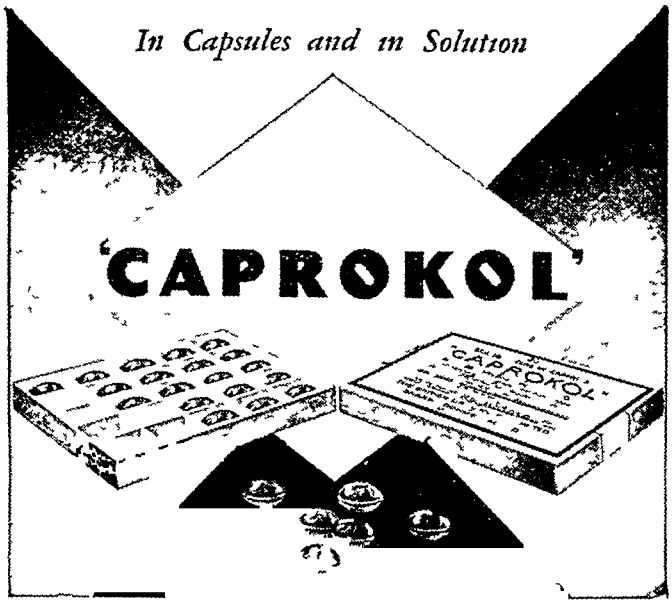
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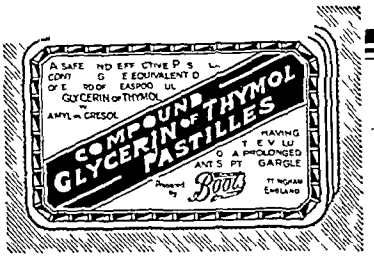
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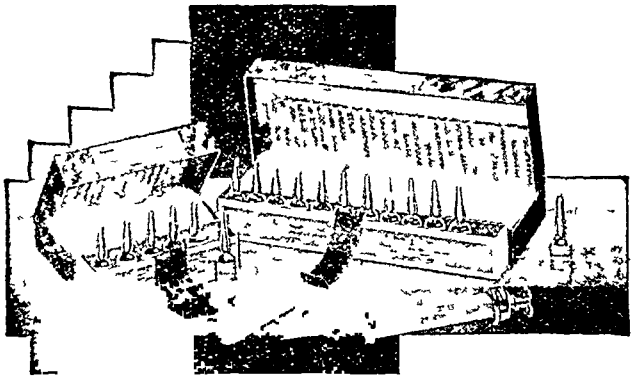
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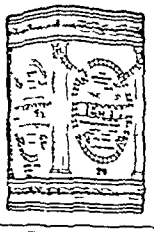
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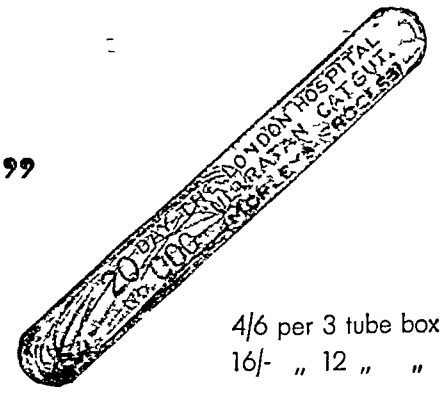
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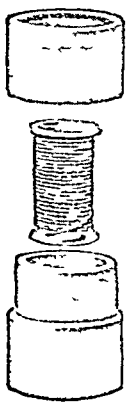
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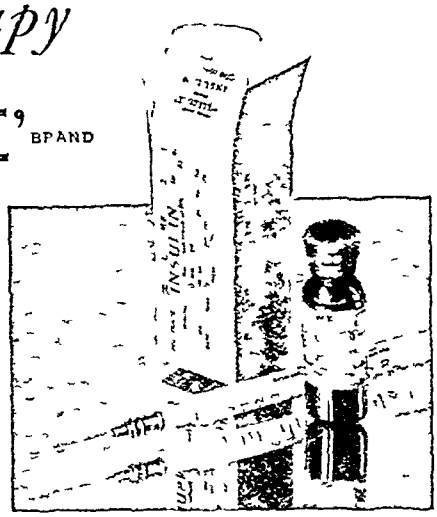
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Observations
ON
CONTROL OF SILICOSIS IN INDUSTRY IN SOUTH AFRICA*
BY
L G IRVINE M A M D B Sc
CHIEF MINES PHTHISIS MEDICAL BUREAU JOHANNESBURG

The recent rapid development of schemes for compensation in cases of silicosis demonstrates that in Great Britain the disease has its ramifications in a large number of different industries In South Africa on the other hand the recognized risk of silicosis has so far been confined to the mining industry and practically speaking although not quite entirely to the great gold mining industry of the Witwatersrand Nevertheless just because of this limitation of the problem in South Africa a brief account of the incidence of the disease in the Witwatersrand gold field of the measures taken for its control and of their results may be of interest, inasmuch as the history of the gold mining industry on the Rand is known in detail since its inception and because the local concentration of the industry in one continuous gold bearing area and its rapid and spectacular development practically within a single generation provide a unique illustration of the menace to health and life which a single industrial disease may occasion

The gold bearing reef of the Witwatersrand stretches for about thirty miles on either side of its central point at Johannesburg the outcrop running roughly east and west with the reef dipping to the south The reef is a quartz conglomerate in a country rock of quartzite The components of the rock mined are silica silicates and pyrites the proportion of free silica in the original ore being 75 to 80 per cent The tonnage milled per annum is over 36 000 000 the average stoping depth is 2 700 feet and the maximum depth reached is about 8 000 feet For the past twenty years the industry has employed underground some 10 000 to 11 000 European miners together with from 120 000 to over 145 000 native mine labourers These are the most important basal facts of the situation

The first discovery of gold on the Rand took place in 1886 Since that date the development of the industry has been rapid but it was not until after the South African war when the exploitation of the deep level mines began that it attained a position approaching its present magnitude The earlier period prior to that time had been one of practical ignorance of the menace of silicosis It was not until 1901 and 1902 when work was resumed after the cessation of the war that the danger from the disease was first realized and then only imperfectly The years which followed—up to 1910—may be fairly described as a period of tentative preventive measures a considerable improvement in occupational conditions was effected but it was not sufficiently thorough to produce very substantial results The years 1911-12 marked a further stage—by the introduction of a legal system of compensation in cases of silicosis and silicosis with tuberculosis and by the institution of the active investigation and trial of more systematic and extensive preventive measures Finally from 1916 onwards may be dated the beginning of the present employment of systematic measures for the detection and prevention of the disease That year was marked by the institution of the Miners Phthisis Medical Bureau which conducts or controls the medical measures taken for the detection and prevention of silicosis and tuberculosis and by the publication of the report of the Miners Phthisis Prevention Committee

*Read to the Section of Public Health at the Annual Meeting of the British Medical Association Bournemouth 1931

This was a strong technical committee representative of the Government the mining industry and the miners which had been engaged for four years in the thorough investigation of preventive measures from the engineering aspect Its report incorporated and considerably extended many important measures which had previously been adopted and these again since that date have from time to time been supplemented and improved in various directions

PROVISIONS FOR THE CONTROL OF SILICOSIS

The present day policy for the control of silicosis in the gold mines of the Rand includes as I have indicated two distinct sets of provisions (1) the medical measures for the detection and prevention of silicosis and tuberculosis and (2) what may be termed the engineering measures which are aimed directly against the production of dangerous dust and its dissemination in mine air

Engineering Measures

These are best considered in two groups those which do not depend upon the use of water as a dust preventive and those which do

The former group consisting of the *dry* methods of prevention is of cardinal importance First and foremost of these methods is the requirement of an adequate standard of mine ventilation both general and local Next in importance is the provision that blasting should take place only once in twenty four hours at the end of the day shift No rock is drilled or broken on the night shift on which only a limited complement is employed to do the cleaning up Other measures provide in detail for the regulation of methods of blasting and for the arrangement of shifts and work and of hoisting men and material to avoid unnecessary exposure to dust or fumes

Wet methods of prevention depend upon the employment of water to lay dust at its source or—what is more difficult—to remove it from the air when formed Every mining process—drilling blasting shovelling or transport of broken rock—is covered by meticulous regulations having this object Hand drilling formerly extensively employed on the Rand has been generally superseded by machine drills and since 1926 only machine drills having an axial water feed have been permitted Dust determination both gravimetric and by direct count is systematically carried out by the mines and by the inspectors of the Mines Department

The combined operation of these two groups of preventive measures has effected an immense reduction in the quantity of dust by weight in mine air Visible dust underground is now as rare as it once was common exposure to fumes from blasting if occurring at all is accidental and sustained efforts are being made to provide increased ventilation Nevertheless although the incidence of silicosis has markedly decreased cases of the disease still arise

I think one may draw two important conclusions from the history of silicosis on the Rand

1 In the prevention of silicosis in metal mines the provision of ample ventilation is a matter of the first importance It is probably *the* matter of first importance In metal mines which create a phthisis producing dust ample ventilation is as essential as in coal mines with their more obvious immediate dangers since in an atmosphere laden with impalpable silica dust there is for practical purposes a dangerous gas which should be dealt with as such Had this been realized in the mining practice of thirty or forty years ago the Rand would have been spared a large part of its troubles The earlier mines however were planned without regard to the provision of artificial ventilation and although mechanical ventilation has for many years been universal on the

Rand many of the existing mines which have incorporated the workings of the earlier properties are still gravely handicapped in this direction by the original layout and mode of development of the older workings

2 The use of water in dust prevention not only has its limitations, but has certain positive disadvantages When in 1916 the Miners Phthisis Prevention Committee found that the adequate use of water suitably applied would reduce the amount of dust generated in drilling or blasting by 97 or 98 per cent by weight it appeared that the problem had been solved It has only been solved *so far* Water is very efficacious in laying the coarser particles of dust but it is less efficacious in allaying the very fine particles which are the actual cause of silicosis There still remains in mine air after the best of watering a dangerous amount of very fine dust and a humid atmosphere forms a better vehicle than does a dry one for the conveyance into the lungs of dust residue in the air and of the tubercle bacillus Excessive humidity also creates further hygienic difficulties when associated with the high temperature of very deep workings Water has a place in dust prevention but we should not do with water what we can do equally well by other means

The control of silicosis in mining operations is a very complex and baffling problem in regard to which the Rand can as I hope to show claim a very considerable measure of success, but in which complete success has not yet been attained

Medical Aspects

As I have said the medical measures for the prevention and detection of the disease are centred in the activities of the Miners Phthisis Medical Bureau This is purely a Government institution The cost of its administration is borne solely by the Union Government and all appointments to it are made by the Minister of Mines and Industries The Medical Bureau consists of nine whole time medical officers—namely a chairman and eight medical examiners—together with a part time radiologist and pathologist with the necessary clerical and technical staff Its examinations are both clinical and radiographic and laboratory aids to diagnosis are also freely used In all of its decisions the Bureau acts as a whole each case being submitted after examination by one or more members to the judgement of the whole body Since 1925 the decisions of the Bureau in all instances which are the possible subjects of awards of compensation are on application subject to revision by a Medical Board of Appeal consisting of three medical men appointed by the Government two of these being former members of the Medical Bureau This measure has provided an additional elasticity to the system of examination for compensation

In respect of European miners the functions of the Bureau have been as follows

1 To conduct an *initial examination* of all new recruits for the industry with a view to excluding from underground work all persons who are suffering from tuberculosis and those whose respiratory or general physique renders them unsuitable for underground work This system of strict examination has led to the introduction into the body of working miners of an increasing proportion of men of specially selected physique Those of this group who have not previously been employed in underground work elsewhere are called new Rand miners distinguish them from the old Rand miners who began [illegible]ground work on the Rand prior to 1916 and there [illegible] not originally pass through the initial examin- new Rand miners now constitute about 57 per whole body of working miners whom the ex

a *periodical examination* of all working [illegible] to the detection of all new cases of silicosis or tuberculosis which may arise among th[illegible] Miners who are in actual employment are examined as a routine measure once in six months A miner may however leave mining and still remain eligible to appear at a periodical examination provided that he presents himself for such examination at least once in two and a half years Cases of tuberculosis or tuberculosis with silicosis detected at the periodical examination are immediately and permanently excluded from underground work and are eligible for an award In cases of simple tuberculosis however the award is granted in lieu of compulsory loss of occupation and do[illegible] imply th[illegible] complicated tuberculosis in a miner is recognized [illegible] national disease All cases of plain sil[illegible]ted also become ineligible for com[illegible] not prohibited from continuing [illegible] but if they remain at work [illegible] months after the date of th[illegible]rst eligibility for compensation disease further than th[illegible] were first detected A small number remain at work at

[illegible] *benefits examination* of all miners [illegible] no claim compensation in respect of the presence or suspected presence of silicosis or tuberculosis To decide upon *claims by dependants* of deceased miners as are suspected of having had silicosis or tuberculosis at the time of their death

During 1929–30 over 47 000 examinations and investigations were carried out by or for the Bureau in respect of nearly 32 000 persons the daily average being roughly 150 Post mortem examinations of deceased European miners or native mine labourers alone numbered nearly 700

In the case of the large force of native mine labourers the initial and periodical examinations are conducted by medical officers appointed by the mines These examinations however are subject to the general control and direction of the Medical Bureau Every native employed is weighed once in six weeks and all who show more than a prescribed loss of weight are set aside for special medical examination all natives with more than five years service on any mine undergo a further special medical examination every three months and all natives upon leaving employment are required to have a final medical examination These are the prescribed examinations In addition the mine medical officers examine the chests of all natives admitted to hospital for any cause Finally the Chamber of Mines some years ago instituted an annual radiographic examination of long service natives Suspected cases of silicosis or tuberculosis are sent by the mine medical officers to the Bureau for final examination and disposal

The result of the examination of mine natives discloses that simple tuberculosis and tuberculosis with silicosis taken together are decidedly more prevalent among the native than among the European miners The reverse is true of simple silicosis owing to the fact that the service of the great majority of natives is in general much shorter than less continuous than that of the European miners [illegible] so when judged by European and American experience the attack rate for tuberculosis among mine natives is alarming although the actual number of cases detected is considerable and constitutes the chief danger of communication of tuberculous infection underground

RESULTS OF METHODS EMPLOYED

In dealing with the results of our methods I propose of the European miners regarding whom we have detailed information A system of compensation for silicosis amongst the miners of the Rand was

introduced in 1912 and the Act of that year specifically excluded from eligibility for compensation all miners who had ceased work prior to August 1908 I have already stated that since 1910 the average number of European miners employed underground reckoned as in continuous employment has been generally maintained at from 10 000 to 11 000 The number of original awards granted in respect of cases of silicosis and of tuberculosis with silicosis from August 1912 to July 1930 has been approximately 14 000 This figure gives some idea of the magnitude of the vital and economic wastage which the disease has occasioned to the mining community It is therefore of great importance to attempt to determine how far the measures outlined have been effectual in reducing the incidence of the disease

Prior to 1916 the most important information regarding the incidence of silicosis on the Rand is that derived from the number of awards of compensation to miners in respect of silicosis or silicosis with tuberculosis granted annually during the four years 1912–16 The nature of the evidence so obtained permits of the formation of approximate conclusions only but a careful consideration of the data suggests that the number of new cases of these conditions arising annually during these four years averaged over 800 During the past three years 1927–30 the average annual number of original cases of silicosis and tuberculosis with silicosis detected by the Bureau at periodical and benefits examinations among miners who had actually worked underground subsequent to August 1st 1916 was under 300 The average number of European miners employed underground was not markedly different during the two periods so that conditions in that respect were approximately comparable The evidence therefore indicates that there has been since the earlier period a marked decline in the incidence of these conditions which is of the approximate order of 60 per cent

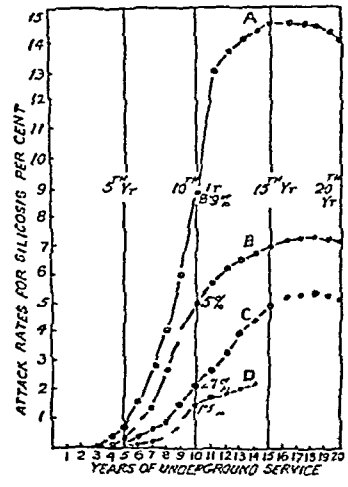
From the date of the establishment of the Medical Bureau in 1916 much more precise information is available If for purposes of comparison we take the returns of the periodical examinations of working miners we are faced with the fact that while during the three years 1920–23 the average number of new cases of silicosis detected was 251 for the three years 1927–30 it has been 270 and during the intervening years it had shown a very considerable rise above both of these figures Can we then in face of this evidence claim that there has been any improvement in the situation during the past ten years? I think that we certainly can and the evidence on which this statement is based provides an interesting illustration of the complexity of the factors which may determine the number of cases which may actually arise from year to year

Analysis of the data shows that two important and conflicting influences have been mainly responsible for this apparently unsatisfactory phenomenon

1 I consider that the most reliable comparative evidence of the actual incidence of the disease is provided by the attack rates for silicosis on the miners working in each respective year of underground service Now the returns indicate that these attack rates have undergone a progressive although not an uninterrupted decline during the past ten years This fact is clearly demonstrated by the accompanying graph which shows the attack rates per cent for silicosis among the miners working at each respective year of underground service during the three periods 1918–20 (Curve A) 1920–23 (Curve B) and 1929–30 (Curve C) If we take as an indicator the attack rates at the tenth year of service we find the comparative values to be for 1918–20 8·9 per cent for 1920–23 5 per cent and for 1929–30 2·1 per cent In other words there has been during the past ten years a marked decline in the liability to contract silicosis at each year of underground service The whole curve of incidence has been shifted to the right and has become progressively flatter

Why then has the number of cases which arise annually not decreased in proportion?

2 The main explanation of this phenomenon lies in the fact that in part no doubt owing to the steadying effect of the existence of a system of compensation the mining community has become during recent years a much more settled community composed of steadier workers As a result there has been a marked progressive increase in the number of miners working in the later periods of service who have in direct consequence a greater liability to contract silicosis The number of miners examined who had worked for over ten years underground (the years in



which the attack rates are highest) was in the period 1920–23 1 493 In 1929–30 it had risen to 5 150 more than three times as many

We have therefore during the past eight or ten years had this anomalous situation There has been a progressive decline in the liability to contract silicosis at each year of underground work and this influence has tended to produce a decrease in the number of cases But there has been at the same time a marked heaping up of the miners working in the later years of service and this influence has tended to an increase in the number of cases We have now reached a point where the influence of the former factor has practically cancelled the potential influence of the latter and the fact that the number of cases which have arisen annually has gradually fallen during the past three years appears to indicate that the former influence has now become the more significant of the two One may suggest the analogy that you cannot keep the number of deaths in a town down if you flood its population with an excess of elderly people But that position is quite compatible with a genuine improvement in the essentials of its health conditions

The decrease in the attack rates for silicosis at each year of service is particularly obvious among the specially selected men who constitute the new Rand miners as already defined The curve of incidence among this group of miners is shown in the graph as Curve D The low values of this curve appear to demonstrate the preventive value of a careful selection of recruits That the relatively low attack rates hitherto shown by the new Rand miners are not however due to this cause alone is indicated by the fact that the attack rates of the old Rand miners who were not originally specially selected men also show a substantial decline a phenomenon which may reasonably be attributed in large measure to the progressive betterment of occupational conditions since 1916–17

The ultimate outlook is therefore, in my opinion, much more encouraging than it has been at any previous time Nevertheless in view of the fact that the old Rand miners among whom the great majority of cases of silicosis arise still form a very considerable (though a decreasing) body I do not anticipate that any dramatic decline below the present figure of about 250 cases per annum will take place for a number of years

EARLY DETECTION OF SILICOSIS

Your president has asked me to refer especially to the measures taken in South Africa to detect silicosis at its earliest stages I may perhaps be permitted first to refer briefly to the nomenclature of the disease which we have adopted

South African law provides for the compensation of three conditions—silicosis tuberculosis with silicosis, and simple tuberculosis The latter phrase is specifically defined in the Act to mean any person who " is expectorating the tubercle bacillus, or who has closed tuberculosis to such a degree as to seriously impair his working capacity By tuberculosis is meant therefore a clinically detectable active and physically deteriorating condition of tuberculosis The conjunction of this condition with a detectable silicosis is termed tuberculosis with silicosis ' The presence in a case of silicosis of latent or arrested infective lesions which have produced or are producing no significant physical deterioration even although these may be suspected of being of tuberculous origin does not in the absence of the specific criteria of tuberculosis which I have mentioned constitute a condition of tuberculosis with silicosis Such cases are common Legally considered, they are cases of silicosis only but clinically and pathologically we distinguish them as cases of silicosis of infective type ' This distinction is useful because one meets in practice with three distinguishable types of case (1) cases of silicosis of simple or uncomplicated type, (2) cases of silicosis of infective type, but without evidence of active tuberculosis and (3) cases of tuberculosis with silicosis in which a silicotic condition is conjoined with one of active tuberculosis I wish to make this clear since some confusion might otherwise be caused by the terminology we employ

Silicosis of Simple Type

Silicosis and tuberculosis are in origin two distinct pathological processes The essential feature of cases of uncomplicated silicosis is the development of a miliary nodulation or nodular fibrosis of the lungs and visceral pleurae due to the presence of aggregations of silica dust at many separate points in these organs There is always a corresponding fibrosis of the root glands which indeed are the first structures to show fibrotic change and there is some bronchitis and bronchiolitis with in well marked cases a varying degree of emphysema The pathological condition present apart from the accompanying bronchitis is practically that of a simple dust fibrosis which has undergone little or no significant modification by infection With regard to the pathological diagnosis of this condition I may add that the mere presence of an excess of pigmentation in a lung is not in itself evidence of the presence of silicosis Extensive pathological observation has shown that in the absence of macroscopic evidence of visible and palpable fibrosis histological examination does not reveal the presence of significant fibrotic change Cases of silicosis of this simple or uncomplicated type may and in most instances do progress often to a very considerable degree even in the absence of tuberculous or other infection and even after the withdrawal of the affected man from underground work The clinical condition is one of good or fairly good general health with however a degree of respiratory disability which corresponds although by no means exactly, to the degree of fibrosis present Slight cases may have no disability in well marked cases the general clinical type of chest disability is one of chronic emphysema

The Medical Bureau has been fortunate in having been able to trace *ab initio* the clinical and radiographic progress of this condition in an immense number of individual cases, and in having had at its disposal a very large amount of pathological material derived from the post mortem examination of deceased European miners and native mine labourers The Bureau has therefore been able to reach standards of diagnosis which are based on the careful correlation of the results of clinical radiographic and pathological observation of a large series of individual cases As a result of this investigation we have come to regard a technically good radiograph taken instantaneously as the most reliable *single* criterion in the diagnosis of silicosis

When interpreted in the light of the results of a careful correlation such as I have described the radiograph can be trusted within narrow limits of error to indicate the presence of any degree of silicotic fibrosis which matter and to afford reliable indications of its degree and distribution in all stages of the disease But the radiograph is never the sole criterion in reaching a decision which must always incorporate the additional and essential evidence regarding the clinical condition of the individual derived from a thorough and I may add an expert clinical examination The latter indeed is frequently the deciding factor particularly in borderline cases It is assumed as a matter of course that the previous industrial and medical history of the case has been thoroughly investigated

The only *specific* radiographic sign of the presence of silicosis is the occurrence in the film of the characteristic discrete mottling produced by the small rounded shadows thrown up on the film by individual nodules This appearance tends to develop first in the upper half of one or both lung fields but in time it becomes generalized and is then more or less symmetrically distributed throughout both A film which shows merely a generalized arborization suggesting the appearance of a leafless tree in both lung fields without evidence of specific mottling in parts at least of these, is not definitely indicative of silicosis but of an increased density of the bronchial or in some cases possibly of the vascular tree, which may be due to other causes and which even in individuals exposed to the inhalation of silica dust is not necessarily accompanied by any significant fibrosis Such a condition may remain practically unchanged for many years Nevertheless when found in a miner radiographs of this type of generalized arborization are on the borderline and pathological observation shows that in a minority of cases of miners whose radiographs have exhibited this appearance during life a slight degree of nodular silicotic fibrosis has been found to be present post mortem The Bureau therefore deals with such cases individually according to their clinical condition and industrial history

Those cases, on the other hand which show evidence of specific mottling are in our experience practically pathognomonic of silicosis with a reservation of course in favour of cases of miliary tuberculosis radiographs of which may closely simulate those of silicosis The simple silicotic cases of this type form a characteristic and consistent series The earliest case in this series is that in which the film we describe as a ' generalized arborization with partial small mottling occurs It is characterized by the appearance usually in the upper portions of one or both lung fields of a limited number of small discrete shadows showing up against the background of generalized arborization This is the characteristic radiograph of slight degree of silicosis and is the general standard of

the radiographic diagnosis of that condition That standard is however subject to the qualification indicated above regarding cases showing radiographs of the type of simple generalized arborization a qualification of which due account is taken by the Bureau in arriving at a final decision in borderline cases

In the early stages of uncomplicated silicosis there is no impairment of the general health There is little respiratory disability and there may be none, but under South African law all cases which show the earliest detectable specific physical signs of silicosis are eligible for compensation whether disability is present or not Some shortness of breath on exertion is usually complained of There may be recurrent colds with cough and moderate expectoration The original conformation of the chest is not altered but its expansile quality may be slightly impaired and typically the air entry is throughout slightly reduced and the inspiratory murmur pronounced or somewhat harshened Adventitious sounds are usually absent These signs however are variable and often indefinite and may be due to other conditions When found in conjunction with specific radiographic evidence of silicosis they suffice to clinch the diagnosis In the absence of such a conjunction clinical evidence does not by itself provide a sufficiently reliable general standard of diagnosis Cases of a moderate or well marked or advanced silicosis of simple type show very characteristic radiographs which may be described as having the appearance of a generalized mottling in which the individual elements are small or medium or large according to the degree of silicosis present In such cases the diagnosis presents little difficulty

Silicosis of Infective Type

The grave feature of silicosis is the high potential predisposition shown in most cases of that condition to the ultimate development of active tuberculosis This characteristic forms the still unresolved pathological crux of the disease As a consequence the two processes are frequently conjoined in individual cases The tuberculous infection may originate either before or simultaneously with or subsequent to the development of the silicotic lesions and of these modes of origin the two former are probably of the greater importance

There is however a further feature of the relation of silicosis to tuberculosis upon which emphasis must be laid —namely that either process is apt to produce a characteristic modification in the normal course of development of the other Although it is common to find in silicotic lungs evidence of the presence of the commoner pulmonary infections—pneumonic or broncho pneumonic or tuberculous in a practically unmodified form—it is a very characteristic feature of the disease that more chronic or less massive acute infections tend to produce and to undergo a distinctive modification in the silicotic lung resulting in the production of lesions characterized by an excessive fibroid reaction This is particularly the case with a low grade tuberculous infection although the tendency is not confined to such infections alone The result is frequently the production of extensive often very extensive areas of a massive fibroid consolidation which may show no microscopic or conclusive histological evidence of tuberculosis and whose infective origin as has been shown in particular by Strachan and Simson may be demonstrable only by animal inoculation Such infective lesions are typically of low virulence with a slow spread of infection in the lung and to other organs and they may frequently especially in European cases undergo long periods of virtual arrest These pathological features have their clinical counterpart in the fact that although in such cases evidence may be found of the presence of localized areas of consolidation more commonly at or towards the apices or of pleural thickening or other indications of arrested or latent infection the customary physical signs of active infection are not apparent and toxic symptoms and deterioration in the general health are either absent or are relatively unimportant The radiographs of this type of case are also characteristic In place of the more or less uniform discrete mottling of the simple type of case the shadows indicative of nodular fibrosis are found to be much more irregular in size and distribution sharply defined patches of opacity indicative of areas of fibroid consolidation are common the hilar shadows are prominent and the heart shadow tends to be of the elongated or vertical type Admittedly it is not always possible from the radiographic appearances alone particularly when seen for the first time to distinguish between active and latent infective lesions but when a succession of radiographs is taken at periodic intervals in the same case very trustworthy indications are given of the nature and progress of the condition present

It is to this group of cases characterized by evidence of the presence of arrested or latent lesions of infective or partly infective origin but without evidence of active infection that we apply the term silicosis of infective type Many cases show these general characteristics from the outset the radiographic picture sometimes closely copying that of a chronic fibroid tuberculosis with little or no indication of generalized silicotic nodulation This is more common in individuals of an originally spare flat chested phthinoid physique men of initially robust deep chested build run more commonly to the simple type of silicosis In other cases a condition of infective silicosis represents a transitional stage often of long duration between an originally simple type of the disease and one of frank tuberculosis with silicosis

The point of general practical diagnostic interest in connexion with the infective type of case is that indications of persistent consolidation in the radiograph of a case of silicosis do not necessarily signify tuberculosis and even when the underlying infection is tuberculous are not necessarily indicative of active disease The radiograph must always be interpreted in the light of the actual clinical findings

Tuberculosis with Silicosis

By this term is meant silicosis complicated by an active overt tuberculosis—a meaning which is in conformity alike with legal requirements and with ordinary usage This condition is by far the commonest cause of death in cases of silicosis Active tuberculosis may supervene at any stage in the course of silicosis It may be present indeed from the first appearance of detectable signs of that disease but among European miners manifest tuberculosis is more usually a terminal complication of well-marked cases of silicosis Clinically with the onset of active tuberculosis there is generally a rapid breakdown in the general health with loss of weight and the customary local and general signs of that condition and death results from progressive asthenia or from haemoptysis Some cases however even with obvious active infection run a chronic course

The radiographic diagnosis of tuberculosis with silicosis rests upon the presence in the same radiograph of the characteristic signs of *both* diseases The radiograph is particularly helpful in such mixed conditions It is an easy and common course when a case of active tuberculosis is met with in a miner to *assume* the presence of silicosis but such a diagnosis when made on clinical grounds alone is in very many cases merely presumptive As a rule the radiograph is decisive but not in all cases An extensive bilateral tuberculosis for example may sometimes wholly obscure the indications of an underlying silicosis and one is then compelled to fall back upon the probabilities of the case and upon the presumptive

evidence afforded by the duration and character of the underground service of the individual, and his previous medical history

APPLICATION OF RESULTS TO OTHER INDUSTRIES

The brief description which I have given of the three distinctive clinical pathological and radiographic types of silicosis met with may suffice to enable you to understand the basis upon which our standards of diagnosis and classification rest How far our results can be applied to the parallel or allied conditions encountered in other dusty occupations is another matter Pneumonoconioses are not all of one type Asbestosis for example differs distinctively from silicosis in the character of the lesions produced which are dependent on differences in the chemical and physical properties and to some extent probably on the mere size of the particles inhaled The dust particles which produce silicosis are of very minute size of the general order of 1 to 3 microns easily conveyed by phagocytic cells from the alveoli and in fundibula to the small intrapulmonary aggregations of lymphoid tissue, which appear to provide the anatomical basis of nodule formation Asbestos fibre is in this respect much less tractable a single point which has I think been emphasized by Kettle The cases of silico anthracosis which have been described as occurring in some coal miners, particularly among men who have worked for considerable periods in hard headings are complicated by the conjunction of coal dust and silica containing dust in the atmosphere breathed and in the lesions produced and the latter are strikingly different from the lesions of a true silicosis in the low predisposition shown among coal miners to the ultimate development of tuberculosis It is clear that each industry must work out the problem of diagnosis for itself This can be done only by the method which we have employed—namely by the careful correlation of the results of pathological clinical and radiographic examination in a large series of individual cases both among those which are affected by respiratory disability and those which are not Radiographic examination taken by itself may be a misleading guide until it has been discovered how the radiograph is to be interpreted in the light of the results of such a correlation carried out in detail in each dusty trade

COMMENTS ON THE RECENT OUTBREAK OF PNEUMONIA

BY

F JOHN POYNTON M D F R C P LOND

PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL SENIOR PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN GREAT ORMOND STREET

A somewhat striking personal experience in the last six weeks* of fifteen cases of severe pneumonia leads me to make a few clinical comments upon them I call them —unscientifically I admit—pneumonia and influenza because they occurred in patients during a period which is popularly called an outbreak of influenza I make no pretence to in addition to what is already known about such cases and perchance it is only a form of egotism that has led me to write this short article an egotism based upon a memory of being struck down in St John's Wood Road when walking to the Zoo in the eighties during the first—shall I say?—recent visitation of this scourge to England The astounding weakness left after this attack impressed upon a young and strong student the reality of a disease which many were inclined then to deride and left a memory never to be forgotten

Naturally one asks oneself to-day Why has there been so much pneumonia this year? The winter has not been in reality severe and not to be compared with that year in which to walk across the Serpentine became a matter of course It has in fact, been unusually mild at intervals though this mildness has been suddenly interrupted by bouts of horrid winds It is noteworthy that no one in the street has been seen with a smiling face and the ruthless severity of the Inland Revenue authorities and the insanity of the world at large may be accountable for the general level of melancholy and anxiety which spell widespread loss of nerve tone Whatever may be the explanation this fact remains that the cases were of the greatest severity and some were examples of recovery that almost passed belief

Men, women and children have all been among the victims The onsets have differed some have developed a slight cold followed by quick recovery and then some days later a sudden relapse with the development of the pneumonia , others have had a sudden dramatic rigor with vomiting while others again have been obviously ill but have developed the pneumonia insidiously Almost all arrived in hospital with that peculiarly alarming low pressure pulse that is known to all physicians and some with that livid pallor which is the dread of all who carry the responsibility for their treatment In one case a very strong woman in the prime of life with a calm and courageous outlook apparently only the front of one lung appeared to be unaffected, yet she recovered after more than eleven days of high fever, pleurisy and spreading pneumonia

Another case also a woman 57 years of age, gave me a new experience in that I was called to her with acute heart failure, oedema of the less affected lung and with what is popularly called the 'death rattle' in her throat In fact, she appeared moribund Moreover having vinous tendencies she had previously and in spite of every care indulged in that furtive slipping out of bed when in mild delirium which none of us welcomes in advanced pneumonia She recovered reacting to a daring dose of morphine and atropine and the intramuscular injection of strophanthin Again a distracted nurse overworked before her illness, was so weak that for some days she made no effort to live a complication which every practical doctor hates When eventually she recovered she retained not the slightest memory of her illness but nevertheless eventually left for a convalescent home bright and full of courage Yet another nurse who had reached the stage of partial despair had a typical expected crisis in which the temperature dropped to 95° falling below the limits of the temperature chart This case particularly interested me for it was the only one which offered an opportunity for the employment of an antiserum but the typing was antagonistic Had I used the serum I am certain that I should have exclaimed

What a magnificent success!' An old lady 72 years of age with high fever, basal pneumonia, and general bronchitis proceeded in a most dignified way to recovery steadily with a temperature falling by lysis A small boy who had severe upper lobe pneumonia with pleurisy showed a colour closely resembling the 'heliotrope' cases of 1918 This boy refused all food and vomited what he did have but conquered his extensive lesions and made an excellent recovery

In several cases the pneumonia affected both upper lobes and it was interesting to note the clinical signs spreading in the lungs when the temperature was gradually falling In some too there was a drowsiness which amounted almost to coma and this utter exhaustion lasted for days after the acute illness was over Several in instances were drenching in their severity

In the spring of 1931 a number of cases of pneumonia occurred which affected the lower lobes and were associated with severe diaphragmatic pleurisy One of

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was the difficult complication of empyema between the diaphragm and the base of the lung In the present series of 1932 although there was extensive pleurisy which in some instances was audible at the diaphragmatic level on both sides of the chest in front and behind there was fortunately only one instance in which possibly such an empyema resulted

The case however of a woman 63 years of age was one of great difficulty, for a double pneumonia with pleurisy affecting both lower lobes supervened upon an extremely severe herpes round the costal margin which had left much recent scarring Post herpetic pain which at times was almost unbearable had followed This symptom combined with the dullness caused by the pneumonia and pain by the pleurisy presented a clinical problem of great perplexity Added to all these complications were a diagnosis by radiography of a pulmonary new growth the removal of 10 oz of blood stained fluid from the left pleura and fever which lasted for thirty two days after admission to hospital In spite of the patient s age the extreme prostration the continuous pain the prolonged fever and extensive pleuro pneumonia she eventually made a good recovery

An Army officer aged 62 came into hospital a livid grey colour with a pneumonia which implicated both upper lobes and the right lower his respirations were for eleven days between 40 and 50 a minute and for long intervals he lay in a stuporous sleep His recovery was as remarkable as it was heartening for he was a splendid patient

There were two fatal cases in the series and both were tragedies One was a little boy aged 3 years who was admitted to the Children s Hospital Great Ormond Street with bilateral broncho pneumonia For thirteen days he ran a high temperature which then subsided and he improved so greatly that convalescence appeared to be at hand Suddenly he became much more distressed and died The post mortem examination disclosed confluent disseminated broncho-pneumonia with small abscesses and haemorrhagic hepatitis

The fatal case in the adult was a young man of 23 with acute pneumonia Unfortunately there was no post mortem examination but a loculated empyema was probed and there was every reason to suspect that there

This in addition a considerable pulmonary abscess if silicated this abscess was not the primary focus of pus formation The pus grew staphylococci and a Gram negative bacillus

In this series there occurred that clinical feature so misleading and so difficult to teach at the bedside —namely the commencement of a pneumonia by what may be described as a smothering of the air entry with no alteration in the percussion note and often no other physical signs or at most some extremely fine and scattered rales This sign would later develop as a frank pneumonia or in a shower of sharp rales suggestive of the milky way on a fine September night

A rise in the number of polymorphonuclear leucocytes coupled with the development of areas of bright consonating rales made it probable that small pulmonary abscesses had developed in some of these cases which healed as convalescence proceeded

The treatment in all cases was essentially on the same lines and doubtless open to criticism in many respects That only two cases were fatal I attribute first to fine and courageous nursing and the skilled observation and assistance of my house physician Dr C Cray secondly perhaps I put that stolid obstinacy of a West Country man which admits that an apparently dying patient is rather ill and thus insensibly gives hope to the patient nurses and all concerned when tired by their efforts they must naturally feel inclined to lose heart I mention this on account of the great trouble in which I found myself when after a few cheerful words I turned to a valued sister and said I suppose you realize how ill this patient is? Her rage at my having told the truth so long after she had known it confirmed my belief in the value of an ox like heredity Thirdly I would put the great value of digitalis morphine and atropine strophanthin alcohol and liquid peptonoids I am aware that in writing thus I am an outcast possibly from scientific medicine and also an object of opprobrium to hospitals in this economic crisis and to the enemies of alcohol to whom I would venture to praise the value of a good liqueur brandy The preparation of digitalis I used was digiglusol and I was well satisfied Fourthly I put an atmosphere of calmness with non disturbance of the patient and was devoutly thankful for the intense drowsiness and semi coma that some of them showed reducing them as it did to mere breathing machines Fifthly and I suppose those who read this note would put it first I would mention good luck

A successful serum administered early would naturally make this treatment obviously inadequate, but these patients came under care too late for such a serum in the present state of its evolution and I hope that this short review of severe cases may be some encouragement to others when struggling with similar ones

ACUTE MASTOIDITIS *

BY

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This disease is so diverse in its manifestations that it still offers many problems to specialist and practitioner alike, problems inadequately dealt with even in the best text-books which are concerned to describe only what one might term the normal case I would go so far as to say that in acute mastoiditis there is no such thing as a normal case

ANATOMICAL AND DEVELOPMENTAL CONSIDERATIONS

In regard to the development of the ear the Eustachian tube deserves mention if only to emphasize that by its origin from a recess in the primitive pharynx it early establishes a connexion between that cavity and the middle ear which arises in its own expanded outer end It is almost superfluous to stress the fact that the overwhelming majority of middle ear infections pass up through the Eustachian tube the micro organisms being derived from foci in the tonsils adenoids or nasal fossae That mastoid infections are the result of a direct spread as opposed to a blood stream infection has a considerable bearing on the course of the disease

The development and anatomy of the mastoid is in spite of the uniformity of its external contour in marked contrast to that of the other important elements of the auditory apparatus which are almost completely rigid and unvarying The mastoid itself is derived from the petrous and squamous portions of the temporal bone which early in the history of the embryo fold themselves round the primitive otocyst containing the germ of the internal ear The structure of this enfolding mass is so to speak a more fluid one with the result that a large number of variations of internal structure are possible in

* A summary of an address given to the West Norfolk Division of the British Medical Association on December 15th 1931

the fully formed bone These variations apply particularly to the air cells which form the bulk of the mastoid It is often supposed that these air cells develop as buds from the centrally placed antrum much as the alveoli of the lung grow out from a central core This is not the case The antrum itself certainly grows backwards from the tympanic cavity, and varies enormously in size and outline but the remaining cells arise independently and those that open into the antrum do so secondarily The majority remain discrete, and in number and size they present a diversity of patterns from one individual to another They may be large and numerous or entirely absent but although no two bones are alike it is possible and helpful to divide the mastoid into two broad groups the sclerotic and the diploetic The sclerotic mastoid is as the name suggests very dense and resistant to infection and associated clinically with the chronic type of otitis media whereas the diploetic with its loose texture offers a ready path to an inflammatory process and is usually encountered in the type we are to consider—the acute mastoid

PATHOLOGY

Pathologically, acute mastoiditis is an infective osteomyelitis differing from the same disease in other bones only in the features imposed by its anatomical structure The acute infection is associated with bone necrosis and suppuration in the air cells, and in the behaviour of the purulent products lies the clue to the many clinical manifestations of the disease Pus in whatever part of the body it is formed has one characteristic it always tends to track along the path of least resistance We can now see how the varying signs and symptoms of mastoiditis are produced how in one case the pus comes rapidly to the surface in another remains pent up under tension or again tracks deeply to infect the dura brain and other important structures It is obviously impossible to make a logical classification of all the possible variations but I shall illustrate the most important of them in a continuous and consecutive series of cases which came under my care in the West Norfolk Hospital and in consultations outside They include all cases of mastoiditis under observation during a given period and it will be seen that each although obviously a mastoiditis presented a different syndrome

Before going on to the individual types as shown in these cases it is worth considering a question which must have occurred to each of us How soon and how late in relation to an acute otitis can mastoiditis develop? I have operated on two cases in which advanced necrosis of the mastoid was present before perforation of the drum During a bad influenza epidemic I operated on a nurse who had the most widespread disease I have ever seen in less than twenty four hours from the onset of earache There is no doubt that given a virulent infection or a very cellular bone or both together mastoiditis may be developed and what is more may become recognizable in a few hours from the onset of the otitis from which it spreads In contrast to the fulminating case is the type which presents a process resembling more closely a quiet necrosis of bone The illness may be apyrexial yet it undoubtedly dates from an acute otitis media The first sign may be a cold abscess forming behind the ear or one pointing to cerebral mischief The whole mastoid may be excavated by disease without giving rise to pain or as I have suggested to pyrexia The contents of the cavity differ from the cholesteatoma seen in chronic cases and there is no doubt that this type is rightly classed as an acute mastoiditis There is yet one more case which may come on at any time during a patient's life and that is the acute grafted on the long standing chronic There is no limit whatever to the time in which it may appear

ILLUSTRATIVE CASES

A complete list of the symptoms and signs which can be met with in acute mastoiditis would only be confusing and meaningless but in the cases described below an attempt will be made to point out the significance of some of them as they arise

CASE I

The first case was that of an old lady of nearly 80 whom I saw in consultation Following influenza she had an acute left otitis media which lasted several days and was apparently resolving when it was found that she had become noticeably drowsy and soon afterwards commenced to vomit There was only a moderate pyrexia and practically no localized tenderness over the mastoid I felt sure her symptoms were due to an extradural collection of pus under tension and in spite of her age advised an operation The diagnosis was confirmed and the abscess found deep to a rather dense cortex but her resistance was poor and the infection passed into the meningeal spaces and she died two days later of meningitis The important lesson of this case is that absence of mastoid tenderness does not by itself negative a diagnosis of acute mastoiditis There may be anything up to three quarters of an inch of unaffected bone between the examining finger and the inflammatory process

CASE II

The next case was that of a middle aged woman whose condition at first sight hardly suggested any mastoid trouble at all She was admitted to hospital with an external rectus paralysis in the left eye associated with headaches Head retraction and Kernig's sign were slight but definitely present This combination of both rectus paralysis and meningism associated with suppuration in the auditory apparatus is known as Gradenigo's syndrome and on looking into the case it was found that an otitis media on the affected side had been present for a few weeks There was again no mastoid tenderness At operation the bulk of the mastoid was found to be unaffected but a number of cells related to the dura of the middle cranial fossa were broken down and a collection of pus was present The headache and meningism cleared up very rapidly and the external rectus paralysis was practically well before she went home a fortnight later Again the classical signs of inflammation were lacking but there was nevertheless a very grave condition present

CASE III

The next case was that of a child aged 13 who had had otorrhoea for a year For a few weeks prior to admission she had an accession of pain associated with a progressive facial paralysis on the affected side Although there was no pyrexia or tenderness I class this case as an acute exacerbation on top of a chronic infection as the pain suggested that something new was going on and the operative findings showed that actual mastoid involvement was recent in spite of a years otorrhoea I opened the mastoid and found healthy bone almost throughout but there was a fistula leading to the facial canal with a septic granulation growing at its orifice I drained the mastoid and antrum and the facial paralysis gradually cleared up This child had a fairly dense bone and it was her misfortune that the progress of suppuration was facilitated in the direction of the facial nerve rather than towards the exterior Again no pyrexia and no tenderness yet a little delay might have meant a permanent facial paralysis

CASE IV

Another patient a boy of 9 was sent to me with a history of about one week's otorrhoea which was apparently subsiding when his temperature rose and his neck became stiff and painful on the side of the affected ear There was a purulent discharge from the drum which was obviously adequately drained but there were no localized signs of mastoiditis This child's condition calls attention to a very vital point in the diagnosis of mastoiditis—namely that a persistent temperature in spite of adequate drainage of the middle ear points very strongly to mastoid involvement and is by itself an indication for operation I have operated many times on the strength of this alone and never failed to find pus as I expected in this child the disease was deep seated and about the only tracking beneath the mastoid process and about the origin of the muscles arising in that region This accounted for the pain and stiffness in the neck Had he been allowed to go

gress to the point of abscess formation he would have had the condition known as Bezold's abscess which appears actually in the upper part of the neck

Another variety which is not infrequently encountered is the zygomatic mastoid The mastoid air cells are prolonged to a greater or less degree into the zygoma and may extend actually in front of the ear In such cases the suppuration is superficial and the condition easily diagnosed but in those cases where the zygoma alone is affected a pre auricular abscess may be confusing if the possibility of a mastoiditis is not borne in mind The treatment differs only in that the incision must be prolonged above and in front of the ear and care must be taken not to enter the temporo mandibular joint

CASE V

I was asked to see a boy at Wisbech who after several months otorrhœa developed a painless fluctuating swelling behind the ear I opened his mastoid and found the whole bone was excavated by the disease to such an extent that all I had to do was to round off a few corners and establish a drainage down to all the important structures This case illustrates very well the quiet necrosis which sometimes takes the place of the most commonly occurring acute osteomyelitis

CASE VI

The last case is one that is most commonly met with and approximates most nearly to the so called normal The patient was a child—and this group occurs chiefly in children—*who had* earache following a sore throat. *The day before* admission to hospital she had a myringotomy but in spite of adequate drainage the temperature remained up and there was oedema and tenderness behind the ear Pus was found immediately beneath the surface and the operation completed on the usual lines

DIAGNOSTIC FEATURES

As already stated it is not possible to make a logical grouping of the various symptoms which may occur in mastoiditis but it may be helpful to tabulate a few of the points which come out in the above cases and which may be of assistance in establishing a diagnosis

(*a*) It is never too early in the course of an acute otitis media to suspect mastoiditis

(*b*) Persistent pyrexia in spite of adequate drainage of the middle ear suggests mastoid involvement and is itself an indication for operation

(*c*) Absence of tenderness and signs of inflammation over the *mastoid do not* negative a diagnosis of mastoiditis

(*d*) Involvement of important structures such as the dura mater and the facial nerve are often the first indications of mastoiditis and must be constantly watched for

(*e*) To await oedema behind the ear and pushing forward of the auricle is to allow the disease to progress unduly These signs only indicate that the suppuration has come right through to the periosteum

(*f*) Early diagnosis and operation spell less danger and less possibility of continued suppuration later on

There are many cases sent to hospital wrongly diagnosed as mastoiditis on the strength of oedema and displacement of the auricle and there are two conditions which commonly give rise to them The first is inflammation and suppuration in the post auricular gland which is usually secondary to scalp infections or pediculi The absence of otorrhœa or any form of otitis media should give the clue to the correct diagnosis The second is meatal boil Boils occur only in the outer hair bearing area of the meatus and the lining here is so closely adherent to the underlying cartilage that the pus is always in the early stages under considerable tension and causes excruciating pain The *infection* may pass backwards and give rise to oedema and tenderness over the *mastoid* The presence of a discharge from the ear further suggests the possibility of mastoiditis There is no real excuse however for an error of diagnosis as a meatal boil can always be seen on inspection Even if its core cannot be distinguished the swelling and obstruction to the meatus are beyond anything seen in an acute otitis The intensity of the pain is also characteristic

I shall not go into any detail about the operation for acute mastoiditis beyond stressing the importance of a prompt and complete clearance of all infected bone I also make a point of exposing the lateral sinus and the dura of the middle fossa almost as a routine There is no doubt that many subsequent radical operations could be avoided as well as permanent damage to hearing by a more thorough technique in the operation for the acute condition One last point It is frequently necessary to do a second operation at a later stage for the removal of tonsils and adenoids Even with the mastoid healed otorrhœa may and often does persist and it is essential to remove all the causative infective foci It would be only a slight exaggeration to say that this measure should be carried out in every case

SUMMARY

1 Mastoiditis is extremely varied and uncertain in its *manifestations*

2 It may appear very early or very late in relation to an otitis media

3 To await mastoid oedema and displacement of the auricle is unnecessary and harmful to the patient

4 Complete clearance of all infected bone is essential for permanent cure

5 Removal of tonsils and adenoids is often necessary at a later stage

A COMPARATIVE STUDY OF CHEST RADIOGRAMS AND THE MANTOUX TEST IN CHILDREN

BY

DOROTHY J DOW M A M B CH B

AND

W ERNEST LLOYD M D M R C P

This paper is the third of a series reporting our investigations on the subject of tuberculosis in children Our first paper[1] dealt with the mortality in the average child population as contrasted with that in contact children our second paper compared the incidence of tuberculous infection in these two classes the present paper is an attempt to estimate the value of radiological examination of the chest in the diagnosis of tuberculosis in childhood *

Five hundred children up to the age of 15 were included in our present series They were attending the Brompton Hospital as out patients either as contacts and apparently in good health or as patients with symptoms referable to the respiratory system thus they are not representative of the general population of that age No selection of cases was made all children being included in the order they attended the out patient department Each patient was tested with tuberculin by the intracutaneous method of Mantoux the technique described in our previous paper being used We consider that a positive reaction to tuberculin signifies that the child is infected by the tubercle bacillus It may be argued that even when a child has been infected the reaction is not necessarily positive—as for example in a child suffering from miliary tuberculosis or recovering from one of the infectious diseases As all the children were well enough to attend the out patient department of the hospital and the previous history was carefully investigated this does not affect the conclusion drawn from our series Each child

* The investigation was carried out by means of a grant from the Hall Steward Trust to the research department of Brompton Hospital The radiographs on which it is based were very kindly taken for us in the radiological department of the hospital by the assistant radiologists for the interpretation rests entirely on a study of the radiograms by Dr C J Bond at Mr Pearson Dyson Mr Arkell R C Winkfield and ourselves It must be said in fairness to Dr Bond and myself that we have carried out the work of radiology but we have endeavoured to keep an open mind as to the exact meaning which we attach to such appearances as infiltration fibrosis and so forth

was at the same time examined radiologically The radiograms were interpreted according to a scheme in which certain definite criteria were laid down This scheme is given later in the paper, it will be seen that we have taken certain pathological conditions and opposite each we have described the appearance which such a condition should show on the radiogram The radiogram was in each case read quite independently of the tuberculin reaction—in fact the result of the latter was not then known We have classified our results according to the relation between the radiogram and the tuberculin reaction and in this way have tried to ascertain the value and significance in diagnosis of an abnormal radiogram considered in conjunction with the tuberculin reaction

X RAY CRITERIA IN THIS SERIES OF CASES

Pathological Conditions	*X Ray Appearances*
A *Abnormal Tracheo bronchial Glands*	
1 Enlarged 2 Caseous	No abnormal shadows seen unless the glands sufficiently large to project beyond normal mediastinal shadow
3 Calcified	Shadows must be (*a*) sharp in outline (*b*) of great density and usually (*c*) irregular in shape
B *In the Lung Parenchyma*	
1 *Infiltration* —An invasion of lung parenchyma by any abnormal tissue which alters its structure the term is not therefore limited to infiltration due to tuberculosis	Normal lung appearance is altered by presence of localized areas of diminished translucency outlines of which are generally ill defined
1A *Fibrosis* — Infiltration with fibrous tissue	Evidence of infiltration is accompanied by definite homolateral visceral displacement
2 —*Healed Primary Focus* of tuberculous infection as described by Ghon[3] and Canti[4]	Small calcified focus in lung parenchyma with or without calcification of corresponding tracheo bronchial gland (for calcification see above)
C *Pleura*	
1 *Pleural Effusion*	Homogeneous shadow usually with contralateral cardiac displacement possibly showing definite margin
2 *Thickened Pleura*	This may appear as (*a*) homogeneous shadow resembling that seen in pleural effusion but without contralateral cardiac displacement (*b*) obliteration of the costo-phrenic angle or (*c*) peaking of diaphragm

It will be observed from the above table of definitions that we have not attempted to diagnose any infiltration of the lung as being tuberculous since the term infiltration has a wider significance

RESULTS OF INVESTIGATION

We have referred in the text to any radiogram fulfilling one or more of the above criteria as an abnormal or positive radiogram Of the 500 children 285 or 57 per cent were considered to have a normal radiogram and 215 or 43 per cent an abnormal radiogram The 500 cases were further subdivided into the following four groups which show the relation of the radiograms to the tuberculin reaction (T R in table)

	No of Cases	Percentage of Total Cases	Percentage of Total Negative Radiograms	Percentage of Total Positive Radiograms
Negative radiogram with negative T R	165	33	57 8	—
Negative radiogram with positive T R	120	24	42 1	—
Positive radiogram with negative T R	90	18	—	41 8
Positive radiogram with positive T R	125	25	—	58 1

Age Incidence

Fifty seven of the children were under 5 years of age 269 were between 5 and 10 years and 174 between 10 and 15 years In these three age groups the number of positive radiograms was respectively 19 or 33 3 per cent 114 or 42 3 per cent, and 82 or 47 7 per cent We thus see that abnormal radiograms of the chest in children increase in frequency with the age of the child

Relation to the Tuberculin Reaction

Two hundred and fifty five children reacted negatively to tuberculin and 245 gave a positive reaction Of the non-reactors 90 or 35 3 per cent had an abnormal chest radiogram Of the reactors 125 or 51 per cent had an abnormal radiogram From these figures it appears that children who react positively to tuberculin show a higher percentage of intrathoracic lesions as seen by the x ray photograph than do those giving a negative reaction The lesions seen in the 90 or 35 3 per cent of the non reactors are presumably non tuberculous while if we assume that the focus of tuberculous infection in children is extrapulmonary in many cases—for example in glands cervical or mesenteric or in bones—it is probable that a large number of the intrathoracic lesions seen radiologically in the 125 children who gave a positive reaction are non tuberculous also

Type of Lesion

The lesions found in the 215 positive radiograms are given in the following table

Type of Lesion	No of Cases	Percentage of Total Cases	Percentage with Tuberculin Reactions
Infiltration	100	20 0	46 5
Calcified tracheo bronchial glands	51	10 2	23 7
Primary focus of tuberculosis	20	4 0	9 3
Fibrosis	30	6 0	13 9
Pleural effusion	11	2 2	5 1
Pleural thickening	3	0 6	1 3

These lesions will now be considered more in detail

Infiltration —In 100 of the 215 positive radiograms the lesion present in the chest was an infiltration according to our previous description The tuberculin reaction was negative in 43 and positive in 57 of these cases It follows therefore that a very large percentage of the infiltrations seen in chest radiograms of children is non tuberculous The distribution of the lesions appears to be much the same in children infected with tuberculosis and in children not so infected In the 43 non reactors in this group the lesion was present in the upper zone of the lung in 10 or 23 2 per cent in the middle zone in 9 or 20 9 per cent and in the lower zone in 24 or 55 8 per cent In the 57 reactors the corresponding figures were 15 or 26 3 per cent 13 or 22 8 per cent and 29 or 50 8 per cent It should be noted that the majority of these infiltrations are in the lower zone Tubercle bacilli were found in the sputum of 9 of these children and they reacted positively to tuberculin In all of the cases the upper zone of one or both lungs was affected We may therefore assume that in children who react to tuberculin the lesion is more likely to be tuberculous when it is situated in the upper zone than when it is confined to the lower

Calcification —Of the 215 children who had positive radiograms 51 were considered to have calcified tracheo bronchial glands Of these 22 or 43 per cent gave no reaction to tuberculin while 29 or 57 per cent gave a positive reaction In view of the former figure it would appear that our radiological criteria of calcification were not sufficiently strict McPhedran[5] in dealing with calci

fied tracheo bronchial glands in children says that if the tuberculin reaction is negative to 1 in 100 tuberculin the lesion is probably obsolete In our opinion cases with definite calcification of the tracheo bronchial glands do give a positive tuberculin reaction The explanation of this is that in almost all such instances tuberculous lesions are still present somewhere in the body That calcification of those glands is more rare than is generally supposed is borne out by some figures kindly supplied to us by Dr Atkin pathologist to the Brompton Hospital In a series of 200 post mortem examinations in adults he found obviously calcified tracheo bronchial glands in only 14 or 7 per cent calcified mesenteric glands in 42 or 21 per cent and no calcification in 144 or 72 per cent One hundred and twenty four of the 200 were cases of pulmonary tuberculosis and the corresponding figures were 11 or 8 9 per cent 32 or 25 8 per cent and 81 or 65 3 per cent In the remaining 76 patients who had suffered from diseases other than pulmonary tuberculosis the figures were 3 or 3 9 per cent 10 or 13 1 per cent and 63 or 82 9 per cent

Primary Tuberculous Foci—Twenty of the 215 positive radiograms showed primary foci to be present Of these 7 or 35 per cent did not react to tuberculin while 13 or 65 per cent did react We think that as in the case of calcified glands our criteria were not sufficiently strict although McPhedran[5] states that even in the event of large calcified foci the tuberculin reaction is often negative to 1 in 100 tuberculin

Fibrosis—Fibrosis was present in 30 of the 215 positive radiograms Fourteen or 47 per cent of the cases did not react to tuberculin while 16 or 53 per cent gave a positive reaction The remainder of the 215 positive radiograms consisted of 11 cases of pleural effusion and 3 cases of pleural thickening Taking these cases together we found that 10 out of the 14 cases gave a positive tuberculin reaction

Conclusions

1 Abnormal radiograms of the chest in children become more frequent as the age of the child increases

2 Children who react positively to tuberculin show a higher percentage of intrathoracic lesions as seen radiologically than do those who give a negative reaction

3 Since 35 per cent of the non reactors to tuberculin had positive radiograms the lesions found in these cases are presumably non tuberculous

4 In view of conclusion No 3 it follows that of the 51 per cent of the reactors who show a positive radiogram a considerable number must be discounted in estimating the radiological incidence of intrathoracic tuberculous lesions In other words in children infected by the tubercle bacillus intrathoracic tuberculous lesions radiologically demonstrable are very few

5 A very large number of infiltrations seen in children are non tuberculous The distribution of the infiltration appears to be much the same in all children whether they are infected with the tubercle bacillus or free of infection a little over 50 per cent being in the lower zone and the remaining 50 per cent being equally distributed in the upper and middle zones of the lung We suggest that upper zone infiltrations are more likely to be tuberculous than lower zone infiltrations

6 In view of the fact that 22 of the 51 children who were considered to have radiological evidence of calcified tracheo bronchial glands did not react to tuberculin it would appear that our radiological criteria in this respect were sufficiently strict In every case where there was doubt about the presence of calcified glands an oblique radiogram should be taken so as to exclude the possibility of mistaking a blood vessel or other structure viewed end on as being a calcified gland

7 The same conclusion applies to those cases of primary calcified foci in which the tuberculin reaction was negative

8 Fibrosis appears to be as common in non reactors as in reactors

9 Intrathoracic tuberculosis is comparatively uncommon in children under 15

It would appear that in attempting to localize the lesion in children who are shown to be tuberculous by a positive Mantoux reaction the chest radiogram is not so helpful as might have been supposed The lesions if glandular are invisible unless calcified and Dr Atkin's figures suggest that the majority of such lesions may be extrathoracic Further our experience in this series of cases shows that non tuberculous infiltration and fibrosis are more common than tuberculous from which they cannot be differentiated with certainty Therefore while the chest radiogram in children is of great clinical value it has in this respect these definite limitations and its interpretation in the Mantoux positive child needs the greatest care

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THE TRUE PLACE OF SERUM IN PROPHYLAXIS OF MEASLES

BY

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Measles although endemic in this country tends to assume epidemic proportions every two or three years The anticipation according to statistics of an epidemic of measles in the autumn and winter of 1931–32 has again brought into prominence the serious complications of this illness and the importance of prophylactic treatment The gravity of this disease is shown in the report of the medical officer of health and school medical officer on the measles epidemic of 1929–30 (London County Council 1931) During the past four years in London measles has caused eight times as many deaths as scarlet fever and one and a half times as many as diphtheria The average death rate from measles is 6 to 10 per cent depending on the severity of the epidemic

It is intended here to deal with the possibilities of immunity in the prophylaxis of measles Opinion has definitely turned to immunity as the method of control of the epidemic of measles and the consequent reduction in the death rate Stocks[1] among others expressed this view and stated that the only hope of preventing these epidemics altogether was through the immunity factor and that we must hope for either a simple method of inoculation which will produce a more or less permanent immunity or else some method of rendering an attack abortive and harmless

Scope of Serum Prophylaxis

Both animal serum and that of convalescent measles cases have been used The animal serum is obtained by injecting goats with a green producing diplococcus isolated from measles patients and claimed to be the causal organism of the disease The consistently good results of human serum have overshadowed those of the animal serum Of the animal serums Tunnicliff's has been shown to give the best results with a protection of 43 per cent of cases treated whereas with human convalescent serum

Gunn[3] obtained a protection in 95·7 per cent., and Nabarro and Signy[4] in 98·1 per cent. of cases treated.

The claims put forward for the use of the serum from convalescent measles patients are that given in the correct dosage one can by this means ensure:

1. Complete protection against measles if the injection is given before the sixth day of incubation. This passive immunity lasts only two to four weeks.

2. Partial protection if the serum is injected between the sixth and ninth days of incubation. The patient suffers a mild attack of measles which induces a permanent active immunity.

The injection of serum after the ninth day of incubation has no effect whatever on the course of the disease.

General Considerations

Instances of natural immunity to measles are too uncommon for practical purposes and with the exception of the transient immunity which exists in the first three months of life[5] one has to work on the assumption that every child at some time in its existence will experience an attack. Therefore one must endeavour to control the attack so that it occurs under the best conditions from the prognostic point of view.

TABLE I.—*Cases of Measles Admitted into the Fever Hospitals*

Ages	1912			1930		
	Total Admissions	Deaths	Case Mortality per cent.	Total Admissions	Deaths	Case Mortality per cent.
Under 1	404	82	20·3	488	78	15·9
1 to 2	1,042	196	18·8	1,453	201	13·8
2 to 3	779	62	8·0	1,110	70	6·3
3 to 4	697	43	6·2	1,041	34	3·2
4 to 5	566	22	3·9	886	19	2·1
5 to 10	714	8	1·1	1,245	17	1·3
Over 10	112	1	0·8	229	3	1·3
Totals	4,314	414	9·6	6,452	422	6·5

Of the total death rate of measles 93 per cent. occurs at the age period of 1 to 5 years; the mortality is highest among the very young children and decreases rapidly up to 5 years. Table I. giving the figures for the last epidemic and for the one in 1912 (taken at random) shows this very well.

Theoretically therefore the attack should be postponed until the fifth year. To achieve this would necessitate injections of serum on every occasion of exposure to infection. The hopelessness of attempting such a measure during an epidemic when contact is of daily occurrence with a serum which protects only from two to four weeks is apparent even without taking into account the other great difficulties associated with the supply of the serum. The question would assume an entirely different aspect should a serum be produced which would protect for a period of years. Stocks[6] from a purely theoretical consideration of the possibilities of immunity in the control of measles epidemics concluded that the isolation and immunization of all home contacts with convalescent or parent's serum was the most practical method of attacking the problem but the total volume of an epidemic could not be reduced by more than about 13 per cent. by this means and only about one third of the injections would have any useful effect.

Where a modification of the attack is the object of the injections however the position is very different. Here at least should the contact develop the disease the risk of complications is reduced to a minimum and what is of the greatest importance the child has thereby acquired a permanent immunity to further attack. It would therefore be a general principle that the place of serum in the prophylaxis of measles is to ensure a modified form of the disease. The only exception is the case of a patient already so ill that even a mild attack of measles may have serious consequences; this child must be protected at all costs. This general rule applies also to ward infections. The latter which present an important problem from the administrative point of view of the individual hospital are of small significance in the general problem of measles.

Practical Aspects

In practice the medical man is usually first called in to see the case on the appearance of the rash. Should the case be seen in the prodromal stage a diagnosis of measles would only be made on the appearance of Koplik's spots. Seeing that serum has no effect when injected after the ninth day of incubation all cases of measles seen in general practice are therefore too late for serum treatment. From this point of view the serum treatment of hospital cases of measles is more hopeless still. The usual hospital case is one that has been treated privately for several days and then sent into hospital because the disease is not taking its usual course and complications are setting in. Of all cases of measles which are treated in fever hospitals roughly one-quarter are already complicating as will be seen from the following figures which are taken from the London County Council report of measles cases admitted to fever hospitals during the last two epidemics.

TABLE II

	1929	1930
Total measles cases admitted	8,779	6,452
Admitted with complications	1,523	1,[illegible]
Admitted with broncho-pneumonia as the complication	1,343	1,[illegible]
Developed broncho-pneumonia first day after admission	167	1[illegible]

A further illustration of the late type of case dealt with by the fever hospitals is seen from the following series of 150 consecutive cases which were kept under observation during an investigation[7]. The cases were admitted at the stages given.

TABLE III

Stage	No. of Cases
Prodromal	3
First day rash	46
Second day rash	63
Third day rash	20
Fourth day and later	18

It will be seen therefore that leaving out the problem of the contacts who are never brought for treatment and whose serum prophylaxis has already been discussed measles cases are first seen and diagnosed when it is too late to apply serum treatment.

Conclusions

1. *The place of convalescent serum in the prophylaxis of measles is to ensure a modified attack and in exceptional cases to produce complete protection.*

2. *The use of serum to-day is of little practical value in the control of measles epidemics and in influencing the resulting mortality.*

I am indebted to Dr. G. W. Ronaldson medical superintendent of the South Eastern Hospital for his [illegible] help in this paper.

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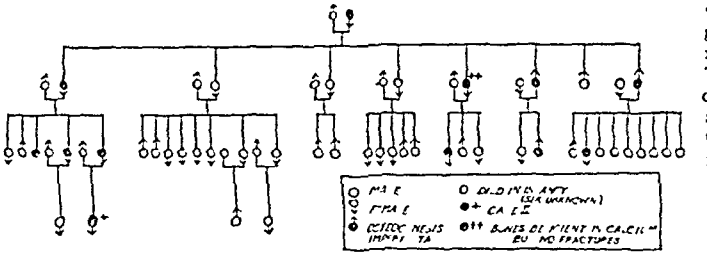
TWO UNUSUAL EXAMPLES OF OSTEOGENESIS IMPERFECTA

BY

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Osteogenesis imperfecta osteitis deformans and generalized osteitis fibrosa may be grouped together as diseases sharing to some degree the same pathology related to calcium and phosphorus metabolism and possibly to the activity of the parathyroid glands. In all three of these disorders there is defective calcification of bone and liability to fractures; the plasma phosphatase, that enzyme which Robinson has shown to be responsible for the deposition of calcium from the phosphoric esters of the blood is high. In two of them osteogenesis imperfecta and osteitis deformans otosclerosis may develop.



Of the two following cases the first is of interest because the mother suffers from osteitis deformans while her only child has osteogenesis imperfecta and the second affords an illustration of the hereditary tendency in osteogenesis imperfecta.

CASE I.

A girl aged 7 weeks was admitted to the Hospital for Sick Children in July 1930 with congenital hypertrophic pyloric stenosis and osteogenesis imperfecta. Rammstedt's operation was performed for the stenosis and the baby made an excellent recovery. The thighs were bent and x-ray examination revealed an old fracture with much callus through the middle of the right femur and a more recent one at the middle of the left femur. The bones were of the short thick type described by Mr. H. A. Fairbank as most common in the newly born baby with osteogenesis imperfecta (Fairbank Type I). Calcification was very poor.

The baby was again admitted to the Hospital in November 1931 with fractures of the left radius and lower end of the left femur which had been sustained as she twisted round in her cot. The previous fractures of the femora were well united. There was x-ray evidence of an old fracture of the upper end of the left humerus. The bones were now long and thin (Fairbank Type II); the bi-temporal bulge and abnormally blue sclerotics typical of this disease were present.

This girl was the only child of a woman who had been married for twelve years. There was no family history of osteogenesis imperfecta but the mother stated that her left leg had been enlarging and bending for twelve years. On examination she was found to have osteitis deformans and x-rays of the tibia and skull confirmed the diagnosis. Her Wassermann reaction was negative. The plasma phosphatase of the baby was 0·3 unit and that of the mother 0·45 unit. (The normal in childhood is 0·15 to 0·25 unit and in adult life 0·1 to 0·2 unit.)

CASE II.

A girl 8 days old was admitted to the hospital with a fractured femur. She had been delivered by Caesarean section as her mother was a cripple from osteogenesis imperfecta and had a deformed pelvis. The fracture of the left femur had been noticed when she was 4 days old. No other bone was broken but x-rays showed very deficient calcification in all. The long bones were of the Fairbank Type I. The sclerotics were abnormally blue and there was a well marked bitemporal bulge. The plasma phosphatase of the child was 0·3 unit and that of the mother also 0·3 unit.

I have allotted the accompanying extensive family tree; the members suffering from osteogenesis imperfecta are marked black.

I have to thank Mr. O. I. Addison and Mr. Denis Browne for permission to publish this note.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

OPEN SAFETY PIN IN OESOPHAGUS OF BABY. SUCCESSFUL REMOVAL BY ENDOSCOPY.

The removal of a foreign body from the oesophagus of a very young child is under any circumstances an interesting undertaking but should the intruder happen to be an open safety pin the procedure becomes like Holmes's famous attempt at self-decapitation a difficult not to say dangerous operation. In describing the details I follow the nomenclature adopted by Chevalier Jackson (*Bronchoscopy and Oesophagoscopy*, 1927, p. 240).

Margaret S., aged 8 months, was admitted to the Worthing Hospital, the mother stating that the child had swallowed a safety pin one hour previously. A radiogram was taken and the pin located in the oesophagus at the pre-cricoid level, owing to movements made by the child the picture was not sufficiently clear to demonstrate the exact site of the pin. Under general anæsthesia a small Jackson's laryngoscope, the pin was displayed and the head should be raised. The pin's point (directed) was lying horizontally, the plane of its length vertical in the posterior wall. The plane of exposure was in the interposterior plane of the [illegible] body and the tube held in a range of 10 degrees at the spring.

The pin was of the usual kind, size 1, when measured later the [illegible] was found to be 1 cm. in length.

The relations having been determined, the point of the pin was withdrawn from the wall of the oesophagus by gentle anterior traction, whilst at the same time the distal end of the endoscope was maintained in close proximity to the foreign body, thus saving the oesophageal mucosa from further damage. This risk was now avoided by keeping the point of the pin within the lumen of the endoscope, the whole being gently and steadily withdrawn.

The whole procedure took less than one minute, and the patient was detained in hospital for a further forty-eight hours during which no departure from normal convalescence was noted.

Hove. HAROLD DOWNER, M.B., Ch.B., D.L.O.

ACTINOMYCOSIS INVOLVING A LONG BONE.

Points of interest in the case described below are the age of the patient, the situation of the lesion, and speculations as to the mode of entry of organism—whether metastatic or direct and local.

A boy, aged 12 years, was admitted to the War Memorial Hospital, Swallownest, over the left scapular aspect of upper part of left thigh. There was a history of injury resulting in a bruise of the part in October 1930. In November 1930 he sustained a scratch wound of the skin in the same region. In July 1931 he developed a swelling over the lateral condyle of the left tibia, which rapidly increased in size, from tenderness and [illegible] sign of inflammation in the skin. Various injections and lotions were applied locally, the boy not being under medical supervision, and he was able

to pursue a normal course of activity Finally he consulted his doctor owing to pain at night and by this time a small area of inflammation had appeared in the overlying skin

On admission pulse temperature and respiration were normal A diffuse swelling was seen over the lateral condyle of the left tibia It was painless and free from tenderness except for a small area where the skin was involved fluctuation was obtained at this point The joint was not involved and movement was unrestricted The general condition was good and patient moderately well nourished X ray examination revealed an erosion of the surface of the underlying tibia

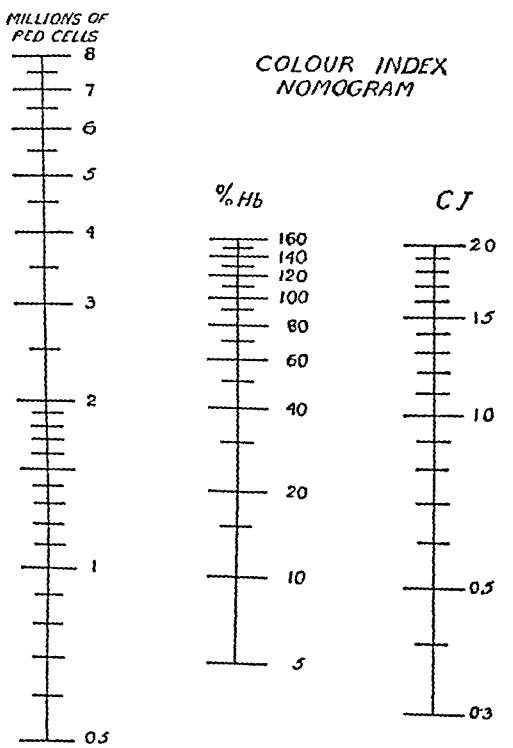
At operation a small amount of pus was evacuated together with a larger amount of loose necrotic semi purulent material scrapings gave a liberal supply of this material The microscopical section showed oedematous granulation tissue containing foci of actinomycosis Other clinical investigations proved negative

I have to thank Dr H O Williams Milford for an interesting case

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COLOUR INDEX NOMOGRAM

The chart method for the rapid estimation of colour index put forward by Dr Frewen Moor (*British Medical Journal* November 21st 1931 p 949) has certain drawbacks which may be obviated by the use of a chart of



another type The nomogram illustrated above gives the value more easily and more accurately

To use the chart join the number of red cells on the left hand scale to the percentage of haemoglobin on the middle scale and produce the line to the right hand scale The point of intersection gives the colour index In order not to spoil the chart it is better to join the values by holding a piece of thread tightly between the fingers or by laying a piece of straight wire across the chart in the required position

This chart has the following advantages It covers a very large range clinical cases outside its capabilities if they do exist must be very rare The percentage accuracy is the same all over the scale thus it compares favourably with Dr Moor's chart where inaccuracies inseparable from the nature of the chart creep in at the values of red cells due to the crowding of the ninth lines near the origin In addition, it is easier to get intermediate values of the colour index in the nomogram than it is in Dr Moor's chart It is of a convenient size and need not be enlarged

Glasgow GEORGE H BELL M B B Sc

PERFORATION OF THE ORBIT WITH AN ANILINE PENCIL

The following case I consider of interest, first because of its extreme rarity and secondly because of the importance of an exploratory examination as soon as possible after the accident

A boy aged 2½ was seen at the Western Ophthalmic Hospital on November 17th 1931 his history being that three weeks previously he had fallen while going up some steps and the indelible pencil in his hand had stuck into his left eyelid He was taken to a doctor soon after the accident and the wound was probed but nothing was felt Fomentations were applied but the eye did not improve and a thin bluish fluid exuded continually from the small puncture On examination a small wound was seen about one inch from the upper and inner angle of the orbit There was ptosis of the left lid and the eye was proptosed and pushed downwards and outwards The pupillary reaction was normal there was no sign of iritis and the media were clear

The child was admitted to the hospital and under a general anaesthetic an incision was made through the skin external to the small punctured wound On exploration of the sinus this was found to lead down to a dark blue deeply stained cavity extending almost to the back of the orbit This was surrounded by masses of necrosed tissues and there were small pieces of dark stained material some of which appeared to be fragments of the original piece of pencil which was said to be about 1/4 inch long when it broke off All these pieces were carefully removed and as much of the necrosed tissue as possible was curetted away The wound was irrigated with a weak solution of hydrogen peroxide and a small tube was inserted In spite of the irrigation with hydrogen peroxide no progress was made various fluids were tried and fomentations were applied four hourly A second operation was performed at which on the suggestion of Mr Sage the analytical chemist who kindly attended the second operation the wound was thoroughly irrigated with Dakin's solution of 1 in 100 later increased to 1 in 40 The discharge gradually became less and on January 11th 1932 the lids began to open wider and looked more healthy the movements of the eye were quite free and the proptosis decidedly less

The child left the hospital on January 15th the eye was then only a very slight discharge of a watery nature from the wound He was seen a fortnight later the wound was completely healed the eye movements were free and the pupil less and in every way the condition seemed quiescent

A similar case was published by R Wissmann (Lebertintenstiftverletzung der Orbita *Zeit f Augenh* 1906 xvi 187) The summary of this paper showed how the injury led to severe chronic inflammation of the orbital tissues The pathological picture is that of progressive necrosis, a finding which is mainly due to the chemical composition of the dye Histologically the fat cells were normal but the nuclei were destroyed and even the neighbouring blood vessels were obliterated and the connective muscular tissue coagulated The author emphasizes the importance of early intervention in these cases and the same treatment was carried out as in the case described the only difference being that a 10 per cent solution of tannin was used instead of Dakin's solution

London W J COLL MARSHALL M D F R C S

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

FIFE BRANCH

COMMON FORMS OF DERMATITIS

At the third clinical meeting of the Fife Branch an address on the aetiology and treatment of the more common forms of dermatitis was delivered by Dr G H PERCIVAL (Edinburgh).

Aetiology

Dr Percival said that dermatitis was produced by substances of external or internal origin acting on a susceptible skin. Dermatitis due to substances developed within the body—normal or abnormal products of metabolism—or to ingested substances had been satisfactorily proved in only a few cases. There was an internal factor in all cases of dermatitis but that factor was a property of the skin itself a property of reacting with an eczema reaction to specific stimuli. Dermatitis of internal origin comprised isolated cases of drug eruptions some types of infantile eczema the asthma eczema syndrome or Besnier's prurigo and some diffuse papulo-vesicular eruptions affecting trunk or limbs. It was doubtful if the eczematous drug eruptions reported were not in reality scaly erythemata. Infantile eczema of internal origin might be due to sensitization of the skin to a particular constituent of the diet or to the products of imperfect digestion. In such cases the actual skin lesions were almost entirely due to scratching the primary cause having produced a sensation of intense paroxysmal itch in the skin. The asthma-eczema syndrome also called Besnier's prurigo consisted of a skin eruption alternating with attacks of asthma. The cause was unknown. From the course of the eruption and the failure to discover any external cause it was regarded as being of internal origin. Substances acting on the skin from within whether drugs or abnormal metabolites produced erythematous urticarial lesions and not the eczema type of reaction.

Dermatitis of Infective Origin

The infective group included infection due to bacteria yeasts and filamentous fungi of the species Trichophyton and Epidermophyton. Eczema marginatum or dhobie itch a fungus dermatitis of the groin had long been known. Fungus infection as a cause of dermatitis of the feet was becoming increasingly common. There were two common clinical types one consisting of maceration of the skin between the toes especially the fourth interspace the other a vesicular eruption on the instep. Dermatitis of the palms and fingers due to a similar cause was also becoming more common and it was sometimes secondary to a foot infection. Into this category fell a proportion of those eruptions known as cheiropompholyx. When associated with epidermophytosis of the feet the hand infection was either direct in which case the fungus was seen microscopically or the hand eruption was the result of spread along the blood stream of fungus elements or toxins from the feet in which case no fungus elements were to be found. These secondary eruptions were of the tuberculide nature as tuberculides and some types of syphilitic eruptions and immunological factors played a part in their production. Thus in such cases it was possible to obtain specific cutaneous reaction with an extract of the fungus or the tuberculin reaction. Fungus dermatitis like bacterial dermatitis showed a predilection for the body folds. The following figures from the New York Skin and Cancer Hospital illustrated the increased incidence of fungus dermatitis: 1925 3 per cent. 1926 4 per cent. 1927 10 per cent.—the second column in these figures being the first positive examination to be recorded so that the increase in frequency of the positive cases was half the actual increase. Epidermophytosis was rarely seen in the schools and colleges of the United States. In Europe it was rarely seen in the hospitals of Edinburgh and was of functional importance only. The immunological reaction were: Intradermal tuberculin and clinical infection. Scrapings from the lesions required from immature objects. The majority of cases seen here occurred in public school boys and the infection was now so prevalent as to suggest the imminent necessity for serious steps being taken to eliminate it.

The most common type of bacterial dermatitis was the clinical entity known as seborrhoeic dermatitis. By this was meant (1) the circinate patches met with on the scalp and on the sternal and interscapular regions—in the latter situation known as seborrhoea corporis or flannel rash—and (2) the moist dermatitis affecting the scalp retro-auricular regions and body folds occasionally becoming confluent and involving large areas of skin. The organisms responsible for these lesions were a yeast the pityrosporon of Malassez or a streptococcus or a staphylococcus or an association of these organisms. The nummular dermatitis of the hands and arms and some types of cheiropompholyx were also bacterial in origin. Sycosis when fully developed whether on the beard region or other hairy areas was really a staphylococcal dermatitis. Certain types of pruritus ani and vulvae were due to bacterial infection of the skin. In the intertrigos and seborrhoeic dermatitis of the scalp and sycosis of the legs in hairy individuals the prognosis was bad. The condition usually lasted for months or years if left to itself and treatment was difficult. Infective dermatitis of the pompholyx type and nummular dermatitis were also difficult to clear up. The chronicity was due to an idiosyncrasy of the skin towards the infecting organism limited to certain areas. All practitioners would be familiar with the unilateral retro-auricular intertrigo or the patch of sycosis limited to an area of one cheek for months although the opportunity for infection of the adjacent unaffected skin was always present. Treatment consisted in the application of antiseptics. These were usually best employed in aqueous or spirituous solution this was allowed to dry on and the area might then be covered with a protective zinc paste. The direct application of grease in such cases was not well tolerated—a fact not generally appreciated. The best tolerated antiseptics were those of the aniline dye group especially crystal violet and brilliant green in spirit solution. If prolonged application caused dryness the preparation should be replaced for a day or two with zinc ichthyol paste. Silver nitrate in water or 10 per cent. tar acetone was also useful. Frequently cases did well up to a point with one of these applications but only continued to improve if a change of drug was made. X rays were of great value in a number of cases. If the skin was very inflamed starch poultices might be used and a small amount of grease in the form of a cream was usually well tolerated. It was essential in intertriginous cases to clear the conditions up completely before the treatment was discontinued otherwise recurrence might take place. After an intertrigo had been cured steps should be taken to ensure cleanliness of the parts and avoidance of excessive moisture. The latter condition favoured bacterial growth and by itself was capable of producing a certain amount of inflammation of the skin if this was allowed to become sodden in the body folds.

Dermatitis of Chemical Origin

This type of dermatitis was known as dermatitis venenata and the action of chemicals on a susceptible skin was its commonest cause. The sources and natures of the chemicals were very many. Broadly speaking the common classes were those used in industry those present in toilet preparations in wearing apparel and from time to time those in flowers and plants. The action of chemicals on the skin depended on the capacity of the skin to react with them and in this respect the skin appeared to vary remarkably in some. If a number of individuals were exposed to a simple substance such as HgCl in varying dilutions it was found that there was a concentration which no one reacted and also a minimum concentration which everyone reacted. Between these two concentrations a varying number of individuals reacted according to the strength of the concentration. This proved that all were susceptible but in different degrees varying directly with the concentration of the chemical. The reaction in the few to the low dilution was the same as their reaction at high dilutions which indicated that the mechanism of the reaction in both cases was the same. This was an

important observation, because many dermatologists now held that if the skin reacted it did so because it became substantially altered or sensitized They asserted that it developed antibodies towards the chemical which produced eczema on it Such observations cast doubt on this conception since they showed that the skin of the sensitive person was only different from the normal in that it responded to lower concentrations and that given the concentration, the normal skin would react as strongly as the eczematous person s skin With concentration and action curves for other chemicals acting on other tissues it was apparent that this individual variability of reaction occurred with tissues and drugs where no immunological processes such as antibody formation could be rationally put forward to explain it Individual susceptibility to chemicals did not depend on the anatomical structure of the skin or on alterations of penetrability of the skin since a person at the sensitive end of the scale for mercury might be able to withstand a concentration of chrysarobin one hundred times stronger than that required to cause a chrysarobin eczema in chrysarobin sensitive persons

Diagnosis and Prognosis

In the diagnosis of dermatitis it was wise to suspect a chemical origin from the start and to exclude fungus infection if there was the least suggestion of this The bacterial and yeast intertrigos were usually obvious at a glance The detection of the chemical which was producing the dermatitis might be easy or difficult , in the case of occupational dermatitis it might be impossible even after a most exhaustive investigation In attempting to arrive at an absolute diagnosis a careful history was the first essential the likely chemical should then be tested directly on the skin in a suitable concentration Much had been learned from such tests For instance only localized areas of skin might be hypersensitive to the chemical so that tests carried out with it at a distance from the parts affected might be negative , this was a rare occurrence however Again the concentration of chemical necessary to produce a reaction might vary from day to day this variation indicating a waxing and waning in the reactivity of the skin was slight

The problem of returning to work in occupational cases was a difficult one Woodworkers seemed to be those for whom a return to the original occupation after an attack of dermatitis was most likely to prove unfortunate while the risk to dyers bleachers bakers cooks, rubber workers and chemical and sugar workers in this order was considerable If the skin was completely healed and it was his first attack it was worth while sending the patient back to his old occupation if he had been previously employed at it over a long period Recurrences had been estimated to take place in from 16 to 23 per cent of cases If repeated attacks had occurred a change of work was the only solution If the patient developed dermatitis on first starting work as in the case of young adults it was preferable to advise change of work immediately Rubber gloves did not help at all If the patient returned to work he should be advised to keep his hands as clean and dry as possible and to avoid all chemical cleansing agents The exposed parts might be protected to some extent by keeping them covered with a thin coating of vaseline or other grease

Idiosyncrasy

The most interesting fact about chemical dermatitis was the development of the specific reactivity of the skin—the development of idiosyncrasy The change which had taken place in the skin was a quantitative one not a qualitative one The increased reactivity of the skin sometimes followed an acute febrile disturbance or other systemic upset but as a rule it could not be associated with any derangement in health They knew a great many more facts about idiosyncrasy but they were still ignorant of its ultimate cause

The percentage of idiosyncratic individuals varied with different substances Thus about 60 per cent of individuals were sensitive to poison ivy while very few were irritated by vaseline The same variability appeared also in occupational dermatitis and must be borne in mind when dealing with outbreaks of disease If a large number of workers were affected by a certain process the process should be modified or else the employees should first be tested by means of the patch test before being allowed to commence work It amounted to this that if a chemical irritated a sufficient number of individuals it should be eliminated , if it only irritated a small minority these should be excluded The question of compensation was an extremely difficult one where cases were prolonged Here the possibility of superadded infection or even malingering must be seriously considered If the former could be proved, the liability of the insurance company was surely lessened Nevertheless in such cases the view taken was that since the dermatitis was first acquired at a certain type of work the work was responsible for the entire subsequent course of the disease including the occurrence of secondary infection

Reports of Societies

MEGALOCYTIC ANAEMIAS

At a joint meeting of the Sections of Tropical Diseases and Parasitology and Medicine of the Royal Society of Medicine held on April 7th with Dr John Thomson in the chair Dr L J Witts opened a discussion on megalocytic anaemias of tropical and non tropical countries

He defined megalocytic anaemia as an anaemia in which there were more than the normal number of megalocytes, a megalocyte being a cell larger than the normal red cell An excess of megalocytes in the blood meant a megaloblastic marrow, and this might be due to two things (*a*) a megaloblastic degeneration of the marrow, or (*b*) megaloblastic proliferation to compensate for increased blood destruction Megaloblastic degeneration was in his view always nutritional in origin For the proper maturation of the megaloblast into the normoblast certain substances contained in the normal human diet were essential abnormalities in diet resulted in the main in hypochromic anaemia whilst the megalocytic anaemias were for the most part associated with gastric or intestinal abnormalities The importance of normal gastric digestion in the elaboration of such a substance was now well known (for example in pernicious anaemia) but we were less well informed as to the part played by defective intestinal absorption Dr Witts discussed briefly the essential points which have so far come to light in the haematological investigation of case of coeliac disease chylous diarrhoea, pancreatic disease and gastro colic fistula Megalocytic anaemias in the second group which were due to an effort by the marrow to compensate for excessive haemolysis were uncommon and our knowledge of them was meagre He described cases of aleukaemic leukaemia which appeared to come into this category, as also did a group of cases of Hodgkin s disease reported by Professor Stanley Davidson

Dr Hamilton Fairley said that the tropical megalocytic anaemias were characterized by marked anisocytosis and an excess of megalocytes leading to an increase in the average diameter of the corpuscle All were associated with a variable degree of megaloblastic degeneration of the red marrow and might respond specifically to liver extract with reticulocytosis and rapid blood regeneration Tropical sprue dibothriocephalus anaemia and the tropical macrocytic anaemia especially common in pregnancy were of dietetic or alimentary origin, but the Banti group appeared to be true haemolytic anaemias and were possibly explicable in terms of Bunting s work on chronic benzol poisoning in laboratory assistants where definite megaloblastic hypoplasia was induced Other true haemolytic anaemias such as those of malignant tertian malaria and blackwater fever invariably produced a normocytic or microcytic anaemia The anaemia of tropical sprue closely resembled that of pernicious anaemia and there was still some confusion in the literature regarding the duality of these two diseases

in sprue there was much greater loss of weight pale fatty gas ous stools and in absence of neurological features while at necropsy the lack of yellow subcutaneous fat the small heart and the atrophic diaphanous small intestine were characteristic The sprue patient generally sought advice on account of diarrhoea and rarely for anaemia which was much less marked at the onset of the disease than in pernicious anaemia The blood picture was one of a mild grade megalocytic anaemia the Price Jones curve showed the displacement to the right the marked broadening of the base (anisocytosis) and the increase in the mean corpuscular diameter which characterized pernicious anaemia The response to liver extract with rest in bed and high protein dietary was comparable to that obtained in pernicious anaemia Intravenous injections of hepatex P A I which had proved disappointing when given alone were of real value in reinforcing the effect of liver extract by mouth Brief reference was made to the changes in gastric secretion induced by sprue the tendency being towards achlorhydria and ultimately achylia whereas with recovery a normal secretion was often re established Hyperbilirubinaemia was much less frequent than in pernicious anaemia In conclusion Dr Turley expressed the opinion that tropical sprue was a gastro intestinal disease characterized by defective gastric secretion and malabsorption of fat glucose and calcium Dysfunction of the small intestine was the essential lesion and this was where sprue differed fundamentally from pernicious anaemia

Dr G W GOODHART described a series of cases of megalocytic anaemia occurring in association with clinical conditions not pernicious anaemia these included aplastic anaemia atrophic cirrhosis of the liver with ascites Hodgkin's disease severe jejunal inflammation pulmonary tuberculosis lymphosarcoma and thrombocyto penic purpura All showed a severe anaemia of the megalocytic type and all failed to respond to liver treatment by mouth intravenous extracts had not been available In all there was a leucopenia but in most cases there was a shift of the Arneth count to the left In his opinion these cases could be distinguished from pernicious anaemia by the symmetrical form of the Price Jones curve by the lack of response to liver treatment and by the absence of hypersegmentation of the nuclei of the polymorphonuclear cells

Dr LUCY WILLS gave an account of tropical *macro* cytic anaemia as seen in India It was more common in South India but occurred among all communities and in all grades of society it was seasonal in incidence most cases being seen in winter As patients rarely presented themselves for treatment until the late stages it was difficult to estimate the duration of the disease but breakdown might be extremely rapid The usual course was for the patient to be admitted in the seventh or eighth month and to have a premature labour followed by rapid improvement or frequently by collapse and death Occasionally the disease developed after delivery The symptoms other than those referable to the anaemia were variable Diarrhoea and vomiting had been recorded by Balfour but in her experience they occurred only when equally prevalent among the rest of the community Sore tongue was constantly present menstrual changes were not seen the spleen was frequently enlarged and sometimes tender The grosser stigmata of acid were absent The anaemia was very severe megaloblastic type with reticulocytosis and normoblastosis Price Jones curves showed a shift to the right and increased increase variability The cause was unknown Nutritional deficiency was considered to be very unlikely as the disease responded to liver extract which had been shown to be ineffective in that condition Liver extract was used large doses equivalent to 600 grains of liver were essential With marmite one teaspoonful three or four times a day caused rapid improvement with maximal reticulocyte response The suggestion that this improvement was due to a tonic effect on the intestine with the better diet in hospital was negatived by a consideration of local conditions It appeared to be a definite nutritional anaemia and Dr Wills reviewed the evidence and showed that everything pointed to the responsible factor being some part of the vitamin B complex Her own experiments seemed to prove that it was not vitamin B, and though there was some evidence that it might be vitamin B it was not yet conclusive

Dr R C LIGHTWOOD spoke of the extreme rarity of pernicious anaemia in childhood and discussed briefly the possible reason for this he mentioned the fact that in a few cases of coeliac disease the blood showed a pernicious anaemia picture but that as a rule the colour index was low with a high red cell count

Dr C PRICE JONES spoke of the nature of the curves associated with his name He pointed out that they gave a mathematical expression of the degree of anisocytosis and that the coefficient of variation might be of more importance than the mean diameter of the cells An excessive variability was an even more constant feature in pernicious anaemia than a high mean diameter He thought the stress laid by Dr Goodhart on the symmetry of the curves in his cases might be deceptive

Professor M J STEWART recalled some cases of T N T poisoning which had a pernicious anaemia blood picture and suggested that one of Dr Goodhart's cases might have been a case of liver necrosis

Dr JANET VAUGHAN said that of the thirteen cases of coeliac disease chiefly in adults which she had investigated three showed a megalocytic hyperchromic anaemia and in two of these treatment with marmite gave a maximal reticulocyte response and cure of the anaemia The marmite had no effect on the severe diarrhoea which was subsequently relieved by other measures

FOETAL PATHOLOGY

At a *meeting of the* West London Medico Chirurgical Society on April 1st with Dr H H MILLS president in the chair the subject under discussion was The romance of foetal pathology

Mr W MCADAM ECCLES who showed a number of lantern slides illustrating various abnormal conditions said that the actual forces which caused the various cells of the embryo to develop along prescribed lines were still largely unknown What was more difficult of explanation in embryology for instance than the closure of the lateral halves of the body in the middle line? In operations the surgeon brought the two edges together with a fine absorbable catgut stitch underneath the epidermis so that the scar became almost though never quite invisible but Nature joined the two margins of epithelium in the embryo in such a way that one was at a loss to say where the junction was actually made Canti had photographed the division of cells but he had yet to show the union of cells as Nature produced it If it could not be said what was the cause of union there were still more in the dark as to the cause of occasional non union Why did hare lip occur? For a number of years he had a strong belief that it was due to want of innervation but that theory had been upset by recent work The interesting condition known as pterygium which was liable to produce diplopia and possibly to become malignant was undoubtedly a question of failure of innervation he stated in one case he had to excise a portion of the conjunctiva in the part affected Mr Eccles referring to branchial clefts said that in a large number of cases gill lips remained in part or in whole in the

human subject Congenital umbilical hernia, he continued was a developmental malformation not true hernia in the sense of something acquired Mr Eccles also discussed the question of spina bifida occulta and of dermoid cysts

Professor TOM HARE who showed specimens in illustration of his remarks—chiefly from the veterinary standpoint—dealt with structural chemical, and mental defects which had an inheritable character Many examples of defective foetal development were evident at birth, of which some were inconsistent with continuance of life, others made life a burden and others again might be an advantage or a disadvantage according to individual taste Other defects which arose during intrauterine life were not manifest at birth but became so in the course of later development It was not for example, until some two or three months after birth that the disease known as ichthyosis showed itself Inheritable defects in muscle such as ptosis were not evident until some later period in post natal life the same was true of night blindness and other eye defects and of delayed or precocious sexual development the individual at birth appearing normal Again there were structures which in the normal course of development should disappear but did not and the persistence became pathological and apt to produce injury to the patient In speaking of haemophilia, he mentioned that an inheritable disease of bleeding occurred in racehorses, due probably to some inadequacy of the capillaries

Dr F J MCCANN referring to intrauterine amputations said that he had found such amputations in cases in which there was a plentiful supply of amniotic fluid One of the most important and obscure questions was failure of reproductive power which was one of the great causes of abortion In certain pregnancies there might not be power to continue reproduction if that was the case in a general way it could readily be appreciated that there might be a defect of reproduction relating to a particular limb or organ

Dr BERNARD MYERS mentioned a case in which he had seen total absence of joints in arms and legs and Dr SAMBY WILLIS one in which the lower lobe of the lung had been absent Professor F T G HOBDAY described a number of cases which arose in veterinary practice and Dr H H SANGUINETTI discussed the extent to which the study of this subject should enter into the training of the general practitioner

Mr MCADAM ECCLES in his reply referred to Dr Bernard Myers's case of absence of joints, and said that the muscles were laid down by the side of the primitive rods of cartilage in the limbs before the cleavage where the joint was going to be took place It was certainly difficult to explain why the actual muscle preceded the joint which it was going to actuate Failure in the cleavage of the rod of cartilage was the reason why these children were born without joints Congenital absence of a lobe of the lung was not an uncommon condition but seldom produced symptoms

BACKACHE AND THE ORTHOPAEDIC SURGEON

At a meeting of the Devon and Exeter Medico Chirurgical Society held on March 24th with the president Mr NORMAN LOCK in the chair Mr NORMAN CAPENER of Exeter gave an address on orthopaedic aspects of backache

Mr Capener said that the terms lumbago' in England and low backache in America were used almost as though they were diseases Because of this backache achieved a distinction that other symptoms such as stomach ache or headache did not possess The reason was that we were still surprisingly ignorant about the pathological processes involved In one large group of cases of backache—difficult of explanation—it was probable that the outstanding disturbance was physiological rather than anatomical The causes of backache could be placed under three main headings (1) visceral (2) spinal and (3) neurological It was obvious that in individual cases factors lying within more than one of these provinces might be concerned Nowhere was this more true than in the disturbances of the menopause The orthopaedic surgeon was primarily concerned with the second and third groups Starting with the neurological causes Mr Capener subdivided them into (*a*) sensory and (*b*) sensori-motor The majority of cases in this group belonged to the latter type the essential feature of which was a disturbance, varying in its intensity, of the complex series of lower motor neurone reflexes concerned in the control of the spinal musculature Such a disturbance was alone responsible for the pain of many gross spinal lesions such as tuberculosis Chronic backache more frequent in women, was distinctly a fatigue phenomenon, in which the factors of metabolic changes static disorders psychological disturbances and pelvic lesions played a large part In acute lumbago on the analogy of periarticular lesions elsewhere it was obvious that many of these sensori-motor disturbances could result from torn muscles or ligaments (sprains, in other words), or even of displacements of joints and that a chronic disturbance might be due to intra or peri articular adhesions To prove or disprove was equally difficult Mr Capener however contended that the further possibility of a disturbance of a purely physiological nature had not been adequately considered The nearest approach to this could be found in the type of condition described as cramp a form of neuralgia in which no gross anatomical lesion could be discovered Under the complex conditions found in the musculature of the spine it was not difficult to demonstrate two muscles or two portions of one muscle that normally acted together but which might be thrown into contrary phases by some unaccustomed effort A prolonged spasm or cramp might result Two muscles normally in opposition might go into spasm while temporarily acting together Acute lumbago of this sort as in the more chronic backache was essentially a fatigue phenomenon but of a special kind Not infrequent in athletic men it occurred particularly in the spring when they are out of training or when fatigued Muscles for the moment off their guard or in some way functioning imperfectly developed this disturbance which was almost of explosive violence What the trigger might be it was difficult to say It was very probable that in some patients it was set off from within the muscular system itself

The aim of treatment should be the production of a uniform phase in one large physiological group a process that would result in the development of a uniform opposite phase in the antagonistic muscles this probably accounted for the slow spontaneous resolution of many cases of acute lumbago or sciatica—a result that could frequently be hastened by manipulation with or without an anaesthetic In the sensory neurological group backache said Mr Capener included many cases associated with sciatica in which the distinction from sciatic neuritis must be made The occurrence of the latter in connexion with spinal cord tumours must be borne in mind In the aetiology of sciatica a possible cause might be found in the movements of the meningeal sheaths within the spinal canal and intervertebral foramina which in certain movements of the spine must be very considerable The possibility of epidural inflammation and adhesions was the basis of the treatment of intractable sciatica by epidural injections of novocain saline

As a preliminary to a discussion of the spinal lesions causing backache Mr Capener briefly touched upon the facts of the mechanics of the spine with particular reference to the differences in the disposition of the trunk in relation to the centre of gravity This in the standing position was situated in front of the second piece of sacrum which

was also the site of the rotation of the trunk upwards in the evolution of the erect posture. Of the trunk itself—as for example in the sitting position—the centre of gravity was anterior to the thoracico-lumbar junction. The latter was a factor of importance in the frequency of traumatic and tuberculous lesions at this point. The mechanics of the sacro-iliac joint were discussed with special reference to the sling-like suspension of the sacrum from the innominate bones through the sacro-iliac ligaments—a mechanical feature probably brought into play in the severer types of lordosis. X-ray films and photographs were shown illustrating various spinal lesions.

In the discussion which followed, the PRESIDENT inquired as to the number of spines it was necessary to fuse in paralytic scoliosis. Mr CAESER gave his personal experiences of the relief attained in an acute lumbago by the sling treatment carried out on him by the reader of the address. The immediate muscular relaxation experienced had been very striking, and Mr. Candler was of opinion that pain could be absorbed in many of these cases where otherwise it became the question of days or even weeks of suffering and disablement. Dr. DOUGLAS MURRAY mentioned a case of interest from the medico-legal aspect in which subluxation of the sacro-iliac joint had been upheld in court as the result of trauma. Mr. R. WAYLAND SMITH had noted immediate relief at the onset of an acute lumbago through intramuscular injection of 2 c.cm. of A.V.A. The man so affected was doubled up with pain but in a few minutes was able to play a game of billiards without discomfort. Dr. B. COMBS discussed the position of osteopaths and asked how success was achieved by their efforts in certain cases.

Mr. CAESER in his reply said that in the fusion of spines he was guided by the collapse shown in any given region and that he fused where there was most collapse. He considered that the immediate effects of A.V.A. could be attributed to the production of a *uniform phase*. He agreed with Mr. Candler that for success to follow the sling treatment of acute lumbago this treatment must be immediate. As regards displacement of the sacro-iliac joint he was of opinion that at any rate such an occurrence must be extremely rare. Mr. Caesar considered that the osteopath gained ascendancy partly through suggestion and in part through manipulations which have been established as long as medicine itself and which might be described as empirical. Unfortunately it was not rare to see the reverse side of the picture at orthopaedic clinics where cases of tuberculosis of the spine and of other joints were admitted after receiving preliminary treatment at the hands of the osteopath.

At the meeting of the Society of Public Analysts on April 6th a paper on the estimation of hormones was presented by Mr. R. CUTHBERT and Dr. S. W. F. UNDERHILL. The physiological tests for the active principle of the internal secretions were discussed and a description given of the methods used for the estimation of sodium pituitary posterior lobe extract and adrenalin. In each case the effects of variations in the sensitiveness of the different animals were reduced to a minimum by using fairly large groups of a uniform stock and the results were compared with those obtained under controlled conditions with the international standard preparations issued by the Health Organisation of the League of Nations. Mr. C. MINNITT also read a paper on the chemical assay of thyroid gland. The sources of error in the determination of the iodine content of thyroid preparations and the method which the author was united with which earlier workers had failed to [illegible] A number of tests on the method of [illegible] for the assay of the soluble iodine. Mr. H. E. LOCKWOOD described an apparatus for the [illegible] the determination of [illegible] Lecithin [illegible] Lecithin [illegible]

Reviews

DISEASES OF THE THYROID GLAND

In 1901 a volume on *Diseases of the Thyroid Gland and their Surgical Treatment* was published by Mr. (now Sir) James Berry, surgeon to the Royal Free Hospital. It was the best book in English on the subject written up to that time, and established the pre-eminence of both the surgeon and the hospital in that particular field of surgery. During the succeeding thirty-one years the Royal Free Hospital has remained one of the homes of thyroid surgery, and Sir James Berry's mantle has fallen on to the broad shoulders of Mr. CECIL JOLL. How worthily he has worn it (and still wears it) is demonstrated in his new book, *Diseases of the Thyroid Gland with Special Reference to Thyrotoxicosis*.[1] During the three decades that have elapsed between the publication of these two books the change that has taken place in the treatment of thyroid diseases particularly on the surgical side is as great as that in any other branch of medicine or surgery. Mr. Joll now comes forward as the able surveyor of the whole field of diseases of the thyroid apparatus, basing his survey on a very large personal experience and on a thorough knowledge of the enormous literature of the subject, his index of authors quoted containing over one thousand names. It was bold of a surgeon to assume the responsibility for the exposition of the whole of so complex a subject, and it can hardly be expected that every aspect would be dealt with equally well. The cardiological side, for instance, is of great importance, but we doubt whether physicians experienced in treating thyrotoxicosis will be entirely satisfied with the chapter on this subject, though the author disarms criticism on this score by explaining in the preface his reasons for assuming the whole responsibility himself rather than making an edited volume.

The pathology of thyroid disease, and therefore its nomenclature, has been until recently in the greatest confusion, and we therefore turn with much interest to see how Mr. Joll has threaded his way through this particular maze. According to the more modern views a relatively easy classification of thyroid diseases is possible, and of this Mr. Joll has availed himself to the full. The use of the term "simple goitre" is perhaps a little misleading, for unfortunately the pathology of no goitre was ever really simple, but it at least encourages the student to think he can understand it. Under the heading "chronic thyroiditis" the author includes two diseases—Riedel's disease and lymphadenoid goitre—though it may be doubted whether the distinction between them is quite as clear-cut as he seems to indicate. With this possible exception we believe that Mr. Joll's classification will commend itself as eminently useful. Through the difficult subject of the aetiology of goitre Mr. Joll steers a judicial course, and he gives an excellent summary of the current theories. His historical surveys are always of much interest, as for instance his history of iodine (on p. 153), though he acknowledges here that much of the work had already been done for him in a report of the Medical Research Council. His use of the salts of iodine in the treatment of simple goitre coupled with that of the other extract seems to be a good preparation before operation, but the important problem for the pathologist and physician, Mr. Joll has elsewhere stated, is to find some simple ward treatment advocated by Mr. T. P. Dunhill [illegible] the [illegible] [illegible]

[illegible] [illegible] [illegible] [

adenoma papilliferous carcinoma and carcinoma simplex It was perhaps a pity to introduce in addition, such terms as carcinoma sarcomatodes and 'sarcoma-carcinomatodes in describing the anaplastic changes that may occur in a malignant thyroid

Nearly half the book is devoted to the consideration of thyrotoxicosis, and this proportion is justified by the amount of attention that this subject is receiving at the present time In the historical introduction to this part of the book Mr Joll brings forward the claims of Caleb Hillier Parry as the discoverer of exophthalmic goitre,' since in 1825 he described five cases, the first of which he attended in 1786 Parry's observations were unpublished so that Graves's account of 1835 remains the first that was made public but the fact of Parry's priority serves to demonstrate once again the undesirability of associating men's names with diseases Mr Joll does not now try to graft the name of Parry on to the thyroid gland but adopts the more satisfactory nomenclature of primary and 'secondary toxic goitre Here again he perhaps tends to make the problem appear easier than it really is since he almost identifies 'exophthalmic goitre with primary toxic goitre, a simplification which is scarcely justified by the facts He admits on page 446, that this is unsatisfactory but states that he adopts this view for practical purposes though why it is more practical than a closer approximation to the truth is not clear His very full examination of the aetiology and pathology of thyrotoxicosis is of great interest and is well illustrated by photomicrographs though the statement on page 381 that the aggregations of lymphoid cells so commonly found in toxic goitre have no germinal centres and are therefore not lymph follicles is not quite accurate The interesting and important question of iodine medication is discussed in detail and attention is drawn to the fact that a paper published by H E Waller in 1914 anticipated Plummer's work of nearly ten years later in almost every detail Mr Joll is in accord with general opinion in his high valuation of the effect of iodine before surgical treatment, and his warnings as to its dangers if carried to excess Few surgeons however will agree with his statement (page 519) that iodine medication after operation should rarely continue for more than seven to ten days Other forms of treatment especially irradiation are carefully examined and the conclusion is reached that x rays are of very doubtful value and with this most other observers will agree

The last 140 pages of the book describe the surgical treatment of thyrotoxicosis In his first sentence on this subject the author states that Markham (1858) was the first to note the coexistence of enlargement of the thymus and thyroid in exophthalmic goitre and he seems therefore to have overlooked Sir Astley Cooper's clear description of a patient showing this association in his *Anatomy of the Thymus Gland* (1832) But this is a minor point in relation to the general excellence of the surgical survey which affords a remarkable instance of the way in which surgery has in recent years been broadening its outlook There can be few operations where pure technique is of more importance than in operations on the thyroid gland The patient's life in fact depends on it and yet a surgeon like Mr Joll who is able to command all the necessary refinement of technique thinks it is also incumbent on him to inquire into the last details of every corner of his subject He has indeed travelled far from the carpentry stage of surgery In spite of this Mr Joll is perhaps inclined to make too tremendous a business of the operation In addition to two principal assistants he demands four additional assistants which most operators would find a hindrance rather than a help The operative technique which he describes cannot be regarded as standardized, since every expert thyroid surgeon will vary it in detail but it forms an admirable basis for study by those who are evolving their own methods Mr Joll has some interesting observations on the enthusiasm with which thyrotoxicosis is now being diagnosed He finds indeed that in recent years between 10 and 20 per cent of patients referred to him with this diagnosis have not got thyrotoxicosis at all, but merely have some minor disorder of the heart or nervous system Results are difficult to assess in a disease where as Mr Joll says the term 'cure' is so difficult to define He claims however, an operative mortality of 2 5 per cent and cures amounting to 90 per cent These figures are a fitting climax to a work which is almost encyclopaedic in its content and is in every way a most remarkable achievement The book is excellently illustrated throughout and is fully indexed

SPONTANEOUS PNEUMOTHORAX

The publication of *Spontaneous Pneumothorax in the Apparently Healthy* by Dr HANS KJAERGAARD (translated from the Danish by Hans Andersen) comes at a time when considerable attention is being focused on the subject in this country The main object of the book is to show that spontaneous pneumothorax occurring in otherwise healthy individuals is not a manifestation of pulmonary tuberculosis and that its prognosis is always good Dr Kjaergaard re-examined forty-nine of these patients three or more years after the pneumothorax and in forty-eight he could find no clinical or radiological evidence of tuberculosis In the remaining case the patient aged 25 years, and with a marked family history of tuberculosis was quite well for three years after a right spontaneous pneumothorax She then developed acute tuberculosis of the left lung which was treated by artificial pneumothorax Seven months later a spontaneous pneumothorax developed on the right side and the patient died Post-mortem examination showed the presence of bilateral pulmonary tuberculosis

In support of his claim that spontaneous pneumothorax in the apparently healthy is not a tuberculous manifestation Dr Kjaergaard emphasizes the fact that these cases are never complicated by a pleural effusion and that apart from a slight fever which may be present during the first few days the condition is afebrile throughout its course Statistics show that spontaneous pneumothorax is more than twice as common in men as in women and that the right lung is far more frequently affected than the left lung Full clinical notes of fifty-one cases are included, and among these are examples of recurrent alternating and chronic pneumothorax In one of the cases of the last type the condition remained for fourteen years during which time the patient enjoyed excellent health A recurrence of the spontaneous pneumothorax in the same or other lung is thought to occur in at least 20 per cent of the cases a higher figure than has been obtained in this country

With regard to aetiology Dr Kjaergaard thinks that the condition is due to the rupture of a valve vesicle of which he describes two types—namely scar tissue vesicle and emphysematous valve vesicle It is admitted that the scar-tissue vesicle may have originated from a small healed tuberculous focus It is difficult to establish conclusively any theory as to causation owing to the paucity of post mortem evidence Dr Kjaergaard's views therefore though attractive require further confirmation A very full bibliography of the subject is included and the work is illustrated by numerous x ray photographs which are excellently reproduced

Spontaneous Pneumothorax in the Apparently Healthy. By Hans Kjaergaard Copenhagen Levin and Munksgaard (Pp 93 29 figures)

A RADIOGRAPHICAL ATLAS

A Descriptive Atlas of Radiographs[1] by Mr A P BERTWISTLE is presented in an enlarged and revised form and with a title somewhat different from that of the first edition It is intended to assist those who having no special knowledge of radiology wish to acquire general information which will be of use to them in the practice of medicine At the same time it provides for the student a pleasant and easy method of revising the whole subject before examinations Two short notes on radio diagnosis and the clinical application of radiology are followed by the interesting chapter entitled Milestones in radio diagnosis This having been compiled from the *British Journal of Radiology* refers almost entirely to British work The author's method of reproducing negatives so that the outline of the flesh is clearly indicated is described in detail and the advantages of the silhouette radiograph as an aid to diagnosis are briefly set forth

The atlas consists of a series of radiographs of good quality contributed by many radiologists to whom suitable acknowledgement is made Normal bones and epiphyses congenital abnormalities fractures diseases of bones and joints the common pathological conditions of the alimentary urinary respiratory and other systems are well illustrated the wise course of proceeding from the normal to the abnormal being adopted The use of clinical notes and of tracings enhances the value of the atlas The best and the largest section is that which deals with bones With a very few exceptions the radiographs have been well chosen and the clinical notes carefully abstracted The alimentary and respiratory systems do not lend themselves quite so well to the atlas method of instruction for here it is that the necessity of the screen examination becomes obvious and series of radiographs however good can never replace it In this section however the student will find typical examples of all the common pathological lesions which he is likely to meet with Considerable space is allotted to the nervous system and a full description of the author's method of localization is given An index is provided

The publisher has done his work well The print is clear and the reproductions of the radiographs are uniformly good The atlas is a handsome volume which we hope will induce those for whom it has been prepared to realize that radiology is a science worthy of further study

[1] *Descriptive Atlas of Radiographs* By A P Bertwistle MB ChB FRCS Second edition revised and enlarged London H Kimpton 1932 (Pp xxvii + 200 figures 42s net)

[2] *Science and Practice of Dental Surgery* Edited by Sir Norman Bennett MB BCh LDS Two vol Second edition Oxford Medical Publications London Milford Oxford University Press 1931 (Pp 1868 1230 figures £4 4s net)

SCIENCE AND PRACTICE OF DENTAL SURGERY

The first edition of Sir NORMAN BENNETT'S *Science and Practice of Dental Surgery*[2] was published in 1914 Its reception would have encouraged many authors to an early second edition Sir Norman Bennett hurried slowly and the present second edition fully justifies his caution The work is by many authors and occupies two large volumes Great care has been exercised to avoid overlapping to apportion space according to the importance of the subject and to include every subject that might reasonably be expected to find a place in a comprehensive textbook Much of the present edition is new and in particular we may note the chapter on development by Mr Frank Coleman and that on saliva and calculus by Mr A I Spencer Payne as evidences of the value of careful re editing The author's individual contribution is a chapter almost a book in itself on abnormalities of position of the teeth and abnormal development of the associated parts The point we find of most interest here is the general agreement with the evolutionary views so ably put forward by Professor Brash in his series of Dental Board lectures but to the dentist every page of this scholarly essay will be of interest

Fully to criticize a book like this in a medical journal would be out of place beyond asking for too much space We must be content to say that Sir Norman Bennett has been well served by his collaborators while the whole tone of the book portrays dentistry not as a separate art but as an auxiliary of medicine and surgery—especially of medicine We regret to note the death of many of the contributors to this work—Sir Harry Baldwin Mr W C Gowan of Ontario Professor A Hopewell Smith Mr J H Mummery Mr C H Preston and Mr W G T Story

HODGKIN'S DISEASE

The hundred years since Hodgkin first described the disease which bears his name have seen many publications dealing with the subject and a recent addition to these in the shape of a monograph by Professor PAUL CHEVALLIER and Dr JEAN BERNARD[3] presents a very good review of what is known at the present day about this malady After a historical introduction (where an attempt is made to claim the disease for Trousseau on the strength of an excellent lecture this famous clinician gave on the subject) and a brief clinical summary the authors plunge into the pathological anatomy bravely dealing first with the blood Stressing the initial importance of negative blood changes (that is the exclusion of leukaemia) they recount many points from their original observations which go to show that *in the blood there* are changes almost characteristic of Hodgkin's disease The morbid anatomy of the disease receives full attention likewise the clinical aspects and there are good short sections on the bacteriology of the disease and its pathogenesis Diagnosis prognosis and treatment are described in some detail while a moderately good bibliography and (for a French work) a good index complete the book For its stimulating discussion on the theories of origin of Hodgkin's disease this well written monograph can be thoroughly recommended

BRITISH STUDENTS AT LEYDEN

As a graduate of the Edinburgh Medical School which was closely bound to that of Boerhaave Dr INNES SMITH has appropriately devoted much time labour and travelling to the compilation of a list of the *English Speaking Students of Medicine at the University of Leyden*[4] The frontispiece reproduces the portrait of Archibald Pitcairne who was professor of medicine at Leyden taught the great Hermann Boerhaave and was then active in founding the Royal College of Physicians of Edinburgh In the introduction the history of the University of Leyden and its relation to other Continental universities is sketched in an interesting fashion Founded in 1574 the University of Leyden was unique in admitting students of all religions and it thus attracted a large number of alumni many of them however graduated elsewhere In 1578 it received its first medical student in the person of John James already a medical graduate of Cambridge

[3] *La Maladie de Hodgkin* Par Paul Chevallier et Jean Bernard Paris Masson et Cie 1932 (Pp 284 69 figures 75 fr)

[4] *English Speaking Students of Medicine at the University of Leyden* By R W Innes Smith MD Ed With foreword by John D Comrie MD FRCP Ed Edinburgh and Leyden Oliver and Boyd 1932 (Pp xxii + 258 illustrated 16s)

who was 'promoted' to the Leyden doctorate in 1581 being the second to obtain this degree. The amount of investigation undertaken by Dr Innes Smith has been phenomenal and the results will be most useful to the growing number of those interested in medical history. Thus he has disentangled William Russell (1687–1759) F.R.S., the real founder of Brighton as a health resort from another man of the same name with whom he was telescoped in the *Dictionary of National Biography*. Working on the album of students at Leyden from 1575 to 1875 which gives the bare details of the students at the time of entry he has elaborated their subsequent history. Among the famous names is that of Sir Thomas Browne and among the moderns is that of William Munk (1816–1898) compiler of the *Roll of the Royal College of Physicians of London* to which frequent reference is naturally made in the accounts of other English-speaking Leyden students. Among the American students is Benjamin Waterhouse, who dedicated his inaugural thesis to John Fothergill, the inspirer of my studies and was largely responsible for the introduction of Jennerian vaccination into North America. John Coakley Lettsom described as Ex Insula Tortola India occidentalis also dedicated his thesis to John Fothergill but included in this grateful act Sam Fothergill brother of John.

NOTES ON BOOKS

Nearly half the first instalment of this year's volume of the *Annals of Medical History*[1] is occupied by the first part of Dr J. H. Dempster's account of John Locke physician and philosopher whose portrait appears as the frontispiece. This article gives a number of sidelights on life in the seventeenth century and among other quotations reproduces from Sir William Osler's *Alabama Student* the case record of Lord Shaftesbury's hydatid cyst. In Professor Major's article on William Clowes and his Profitable and Necessarie Booke of Observations for all those that are burned with the flame of gun powder there are some interesting sketches of life in the Elizabethan period. Dr G. C. Peachey supplements his *Memoir of William and John Hunter* by information which he has since obtained about William Andre who was John Hunter's museum assistant for some years. There are two articles dealing with the twelfth century. Dr H. A. Savitz of the Boston Medical History Club writes on Maimonides's Hygiene of the Soul and Drs Dana C. Munro and C. D. Haagensen in a note on the treatment of cardiac disease in this far-off period reproduce the account of Emperor Alexius's death from congestive cardiac failure. The medical literature of Guatemala which dates from 1782 is described by Mr Nathan van Patten of Stanford University, California, and Dr J. M. Mison traces the early history of medical education in the Southern States of Northern America. Among the book reviews is a justly appreciative notice of the second edition of Dr F. R. Packard's *History of Medicine in the United States* which Lieut.-Colonel F. H. Garrison says has held the field as the authority for thirty years.

In *Scientific Riddles*[2] Sir J. ARTHUR THOMSON pleasantly and not too deeply discourses on some of the mysteries of this mortal life such as Why do we cry? Why must we die? Why do we dream? and Whence came man? These articles like those he has written in the *New Statesman* are well adapted for the ordinary reader and though the answer is sometimes left somewhat open they cannot fail to stimulate thought and the study of Nature. In a discussion of evolution the author deals with that of the earth as well as that of man and the animal kingdom. The epilogue The Wonder of the World is a charming confession of faith of a philosophical naturalist.

Dr ERNEST HEDGES's treatise on *Colloids*[9] presents the subject in a simple and acceptable form. The sequence in which the sections are dealt with renders the book convenient for every kind of student and the treatment is complete enough for all ordinary requirements. Colloidal systems are abundant in many forms and the outward manifestation of their effects is familiar to most. It is therefore possible to illustrate the discussion of principles by reference to well-known phenomena. The author has made the most of this opportunity and has shown the development of colloidal properties from the simple physical behaviour of the detached particle of matter. The several aspects of interest are given a share of notice proportionate to their importance in nature in industry and in biology. Mathematics are not introduced except where simple mathematical expressions are an aid to clarity. The book provides a sound and complete manual of instruction.

The fourth number of *Tabulae Biologicae Periodicae*[10] which has recently appeared completes the first volume of this journal constituting the seventh volume of tabulated biological data that has been published. The present number contains an article of forty pages devoted to a systematic description of the amphibia and the remainder is occupied with data concerning the physiology of work and muscular movements.

Mrs HALDIN's *Bottle Feeding of Infants*[11] is a popular exposition of Dr Eric Pritchard's well-known method of infant feeding. The instructions for making what is called "Breast standard cow's milk with whey"—the first method described—are however so complicated that mothers reading them may well be frightened back into the simpler paths of breast feeding. Perhaps this is the idea of the book. If it is really intended to help mothers it requires expert revision.

[1] *Annals of Medical History*. Edited by F. R. Packard, M.D. New Series, vol. iv, No. 1, January 1932. New York: P. B. Hoeber, Inc. London: Baillière, Tindall and Cox. (Pp. 108. Illustrated. Subscription in Great Britain £3 5s. 6d. for six numbers.)

[2] *Scientific Riddles*. By Sir J. Arthur Thomson. W. & D. Leslie Wilson and Norman Lee, 1932. (Pp. 284. 10s. 6d. net.)

[9] *Colloids*. By Ernest E. Hedges, M.Sc., Ph.D., D.Sc., A.I.C. London: E. Arnold and Co. 1931. (Pp. viii + 272. 2s. figures. 12s. 6d. net.)

[10] *Tabulae Biologicae Periodicae*. Herausgegeben von C. Oppenheimer und L. Pincussen. Band 1, Nr. 4 (= *Tabulae Biologicae*, Band vii, Nr. 4). Berlin: W. Junk. 1931. (Pp. vi + 391–608. Four parts £2 10s.; subscription price £2.)

[11] *Bottle Feeding of Infants*. By Mrs. Henry Haldin. With a foreword by Eric Pritchard, M.D., F.R.C.P. Third edition. London: Simpkin Marshall Ltd. 1932. (Pp. viii + 78. 1s. net.)

PREPARATIONS AND APPLIANCES

AN ANAESTHETIC MASK

Dr F. O'SULLIVAN (Cwm, Monmouthshire) writes: The accompanying figure illustrates a type of mask which I have devised and which I think facilitates the administration of oxygen or CO with chloroform and ether. The two tubes A and B are perforated inside and may be connected to



cylinders by means of rubber tubing. This ensures a supply of gas which is generalized inside the mask if necessary and does not hamper the operations of the anæsthetist giving the anæsthetic. I am not aware that a similar type of mask is at present being used for the purpose. The usual method for administering oxygen with an anæsthetic in smaller cottage hospitals is by placing the tube under the mask; this is awkward and it is often difficult to maintain it in position. The mask was made for the Ebbw Vale Cottage Hospital by Messrs. Place and Co., Minchester.

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THE VALUE OF TUBERCULIN TESTS IN MAN

It is a natural development of all sciences that the basic qualitative observations of the early workers constituting the so called discoveries have later to be submitted to the searching process of quantitative analysis It is by this means alone that their limitations can be defined and their real value assessed The introduction by von Pirquet in 1907 of the cutaneous tuberculin test was an advance of the first order, providing as it did a simple method for ascertaining in the absence of clinical symptoms the occurrence of infection with one of the most widely distributed micro organisms that are pathogenic to man There is no need to review the services that have been rendered by this test both in clinical diagnosis and in epidemiological surveys suffice it to say that, in conjunction with careful post-mortem examinations such as those carried out by Naegeli at Zurich and Burkhardt at Dresden, it has led to a complete reorientation of our attitude towards the frequency of infection in tuberculosis The enthusiasm that followed the introduction of the test has, however, largely died down, and for clinical purposes it has fallen into abeyance The reasons for this are probably twofold First it has become evident that the test is not infrequently negative, even in definite cases of clinical tuberculosis, and secondly owing to the prevalent opinion based on surveys of the poorer classes in some of the large towns of Europe and America that tuberculous infection is almost universal a positive reaction has come to be regarded as practically meaningless so far as the immediate diagnosis of the patient's condition is concerned This attitude though not altogether unjustifiable is to be regretted and Sir Robert Philip's advocacy in his Malcolm Morris Memorial Lecture (published in our issue of January 10th 1931) of the more extended use of the tuberculin test, particularly in endeavouring to ascertain the earliest traces of tuberculous infection may be regarded as a sign that the full value of the test has not been generally recognized

In a recent publication Dr P D'Arcy Hart[1] reviews the whole subject of the tuberculin test and endeavours to trace the causes of the comparative failure in clinical diagnostic work of the von Pirquet test The burden of his analysis is that the latter is insufficiently delicate that in certain types of active tuberculosis it is attended by a relatively large error and that a negative reaction can never be relied on for the exclusion of tuberculous infection On the other hand most of these disadvantages can be removed by the substitution of the carefully graded or quantitative intradermal Mantoux test made with a standardized tuberculin Carrying out this test on a series of 1 030 clinically tuberculous patients of all ages starting with the injection of 0 1 c cm of a 1 in 10 000 dilution of old tuberculin and proceeding in negative reactors up to the undiluted product he obtained evidence that the error of diagnosis was not more than 2 or 3 per cent At the same time he tested 751 clinically non-tuberculous members of the London hospital class Allowing for the fact that it was not possible to retest all negative reactors with lower dilutions and basing his calculations on the assumption that the same proportion would have reacted as did actually react among those who were retested he obtained the following figures under 3 years of age 6 5 per cent reacted between 3 and 6 years of age, 18 per cent between 6 and 11 years 38 per cent between 11 and 21 years 70 per cent and over 21 years 95 per cent These figures it may be remarked, are slightly lower than those recently published by Dow and Lloyd[2] but doubtless the difference in the type of persons examined may account for this discrepancy If Dr Hart's control cases may be considered as representative of a random sample of the clinically non-tuberculous section of the poorer classes of London his results are very striking for it will be observed that not until the age of 21 is reached is a positive reaction universal On the basis of these results a plea is made for the reinstatement of the tuberculin test in routine clinical diagnosis Dr Hart's argument may be summarized thus With the quantitative intradermal test the error is so slight that a negative reaction to 1 in 10 tuberculin can be regarded as excluding the presence of tuberculous infection with almost equal accuracy at all ages on the other hand in infants and young children a positive reaction may afford valuable information, because only a fraction of the population at these ages is infected with tuberculosis The frequency of tuberculous infection appears to be lower in the country than in the towns, and in the wealthier than in the poorer classes In the country, therefore and in private practice the routine use of the test for the purpose of excluding clinical tuberculosis may be extended even to adults

The interpretation of the test clearly varies at different ages According to Dr Hart the positive reaction has its chief clinical value in infancy when from direct observation tuberculous infection is more likely than at other ages to be associated with or progress towards active disease terminating fatally An infant under 2 years of age showing a positive reaction, but without symptoms should be kept under observation for some years on account of the possible development of clinical tuberculosis meantime the prognosis should be optimistic though guarded If however obscure and persistent symptoms are present, a positive reaction should be regarded as important evidence but not proof that these are tuberculous in origin and a serious view should be taken until time has shown this to be unwarranted A positive reaction in a child aged 2 to 5 years with persistent symptoms should suggest that these

[1] Medical Research Council Special Report Series No 164 The Value of Tuberculin Test in Man with special reference to Quantitative Tests By P D'Arcy Hart, H M Stationery Office [illegible]

[2] Dow Deneh J and Lloyd W E *British Medical Journal* 1931 ii 187 See also current issue p 701

are tuberculous in origin In a patient over 5 years a positive reaction should not be regarded as denoting clinical tuberculosis, even in a suspicious case

In a later section of the report the author describes his investigations into the frequency of positive reactions in contact children About a hundred children (the figures in the text are unfortunately at variance with those in the table) belonging to the hospital class in London who came from tuberculous households were submitted to the intradermal tuberculin test, together with 513 clinically non-tuberculous children of the same class and district in whose houses it was stated there were no persons suffering from clinical tuberculosis The results showed that home contacts of open cases of tuberculosis usually developed a positive reaction within the first few years of life while in children exposed to cases of pulmonary tuberculosis with a negative sputum, or to non-pulmonary cases, the proportion becoming sensitive to tuberculin at different ages was approximately the same as in the non-contact controls The routine testing with tuberculin of all infants and children attending a contact clinic is strongly recommended, negative reactors being tested at six-monthly intervals In this way the physician will learn when infection has passed from the tuberculous mother to her children and will be able to follow the subsequent history of these children more intelligently In older contacts a negative reaction may be of help in excluding early pulmonary and tracheo bronchial tuberculosis, as well as tuberculous cervical adenitis all of which conditions are notoriously difficult to diagnose with certainty in school children Opie, it may be remembered, goes still further and advises that all school children giving strongly positive reactions to 1 in 10 000 tuberculin should be subjected to an x-ray examination of the chest on the chance of discovering grave lesions of the lungs or adjacent glands The stronger the reaction is to high dilutions of tuberculin the more likely Opie considers are grave lesions to be demonstrated radiographically, even when no symptoms are present

It will be agreed by all who take the trouble to read Dr Hart's monograph with the care it deserves that he has made out a strong case for the more frequent and extended use of the tuberculin reaction in clinical diagnostic work The limitations of the intradermal test the errors to which it is subject the interpretation of positive tests in the anergic skin diseases such as lupus pernio lupus miliaris and the sarcoids and the conclusions that may be drawn from the intensity of the reaction to varying dilutions of tuberculin are discussed with due critical care and with a wealth of bibliographical reference The greater use of the test together with the observation of positive reactors over a number of years will it is hoped assist materially both in foretelling the ultimate fate of children infected at different ages and in advising suitable precautionary or therapeutic measures before it is too late The whole tendency of modern work is to concentrate on early diagnosis in this aim the intradermal tuberculin test has undoubtedly a great part to play

"LOOSE MILK"

An enterprising newspaper in New York recently investigated the dangers lurking in "loose milk"—that is milk retailed otherwise than in bottles—and succeeded in creating the impression that there might be some connexion between the infantile paralysis epidemic of 1931 and milk sold in this way This among other factors led Dr Shirley W Wynne, the Commissioner of Health for the City of New York, to set up a body of experts to look into the whole problem, and its report is now available[1] The first question put to the Milk Commission was whether loose milk represented a danger to health, and the answer was definitely in the affirmative Among the reasons put forward in support of this were the following The opportunities for the removal of cream and the addition of water are greater in the case of loose milk than in the case of bottled milk Distribution by dipping from cans results in many customers receiving milk which is below the normal standard in fat and in total solid content even though there has been no deliberate adulteration Nearly 20 per cent of loose milk bought at retail shops in the course of the investigation failed to meet the minimum requirements for total solids as defined by the sanitary code Further, the methods used by retailers in distributing milk otherwise than in bottles leads to serious danger of contamination It is strikingly shown in the report that while the handle and cover of a milk pump—the parts seen by the public—may be well cared for the rest of the apparatus is often unclean and badly corroded

The second problem dealt with by the Commission was to discover what further precautions could be taken to remove the dangers to health presented by loose milk, short of prohibiting its sale Many schemes were put before the Commission—such as setting up more exacting standards, issuing special annual permits, increasing the inspection and supervision staff of the Department of Health, compulsory homogenization of the loose milk to break up all fat globules and the compulsory use of some sanitary mechanical distributing apparatus Despite all these suggestions which were fully discussed and considered, the Commission came to the conclusion that nothing short of prohibition of the sale of loose milk would meet the case In view of the present economic situation, however it was recommended that such prohibition should not be made effective before January 1st 1933 The recommendations of the Commission can be summarized more fully as follows Loose or dipped milk not consumed on the premises is to be prohibited while milk for consumption on the premises is to be dispensed from bottles filled and sealed at the milk plant The continued sale of loose milk to hospitals and other institutions is to be permitted under regulations prescribed by the Board of Health and this method of selling milk is also to be permitted for cooking and manufacturing purposes in restaurants bakeries, and manufacturing establishments

[1] *Is Loose Milk a Health Hazard?* Health Department of New York City The Academy Press 1931

which are operated under regulations laid down by the Board of Health

The Commission also made several important proposals concerning milk distribution in general For example it is urged that only full forty quart or twenty-quart cans ought to be employed, which should be filled and sealed at the pasteurizing plant Bottling was stated before the Commission to be an expensive process and the banning of loose milk might be expected to raise the cost of milk to the poorer classes It is suggested that this might be met by establishing a standard bottle without the dealer's name on it and the charging of a deposit on all bottles issued Further the carriage of milk from country to city needs investigating to ascertain whether 'tank cars' are able to effect economies and whether road transport which is becoming more and more used by milk firms is justifiably replacing rail transport Lastly the Commission wisely urges the Board of Health to see if in its own regulations there are any obsolete and unnecessary provisions which increase the cost of producing processing and distributing milk Thus many of the problems discussed in this report especially on the economic side have their parallel in our own country The report will therefore repay close study the two appendices containing a wealth of information on the whole subject

TEACHING OF PAEDIATRICS IN THE U.S.A

The White House Conference on Child Health and Protection has been considering many aspects of this subject In recognition of the fact that fundamentally the health and welfare of the child depends upon medical science as practised by individual physicians in charge of children it became essential to discover if physicians were adequately trained or whether measures were necessary to secure this end With such an object in view the Committee on Medical Care for Children has issued a valuable report entitled *Pediatrics Education and Practice*[1] which contains much valuable information and some important suggestions To secure information on the results of the recent methods of training doctors in paediatrics a questionary was sent out to three groups physicians who specialized in paediatrics physicians who while not limiting their practice to were especially interested in paediatrics and medical men who had been in general practice for ten or fifteen years in communities of less than 50 000 population The criticisms of the present methods of instruction which were obtained in the replies were illuminating Lack of clinical experience came first on the list of complaints followed by neglect of consideration of the normal child and too little time given to paediatrics A second stage in the investigation dealt with present day undergraduate instruction As a whole most of the medical schools appear to have adequate teaching facilities in the form of available beds in the paediatric department though in a few of the schools such facilities are obviously inadequate The average number of hours devoted to paediatrics for twenty-one medical schools is 195 and the average ratio of the time given to paediatrics as compared with that to internal medicine is 1 to 4 1 But since electives, or optional courses exist in many of the schools it by no means follows that the time allotted is fully taken up by every student although there is a decided tendency on the part of the undergraduate student to choose paediatrics where the course is optional A very wide divergence in the method of teaching is found in the various schools and it is suggested that little thought has been given to the teaching of paediatrics from a pedagogical standpoint Post-graduate instruction appears to exist in two forms intensive courses of various lengths of time at various medical schools and clinics or instruction taken by the teacher to groups assembled in their own communities or districts An analysis of various post-graduate courses shows that courses of four weeks duration occupying the entire time, seem the most popular and the chief interest has been taken in the clinical side of paediatrics and not in laboratory or research work Certain important points are laid down as essential for post-graduate teaching in this subject

> The hospital and clinical facilities must be ample the faculty must be large so that the teaching burden does not fall too heavily on any one or two men clinical teaching must be emphasized the students who are giving up their practice and income must be kept busy and the teaching staff must be keenly interested in the post graduate instruction

In dealing with the future the committee has laid down an outline of a course in paediatrics which seems to contain great detail but is stated merely to cover the minimum essentials for the practitioners Approximately 200 hours are thought to be necessary to cover the requirements set out in this outline a figure almost identical with the average time at present allotted to the subject in the medical schools suggesting that the quality rather than the quantity of the present-day teaching is at fault It is urged in the general conclusions of the report that the great advance in paediatrics from the scientific point of view in recent years has quite outstripped the distribution of this advance to the public, too much interest in business terms having been centred round the production end of the concern For undergraduates there must be adequate clinical material and fifty beds are regarded as the minimum for any medical school estimating the average undergraduate class at 100 to 135 students It is also urged that a well baby clinic is an essential feature of paediatric training and that the teaching on contagious diseases should be in the hands of the paediatric departments The committee insists that paediatrics must not be treated as a sub branch of medicine or as a medical specialty but as a fundamental clinical subject with its own department properly equipped staffed and financed nor must research be allowed to dominate such a department for its first duty is instruction in paediatrics over a broad programme to include the normal child his growth and development and other modern aspects of the subject in relation to public health The present report will be read with great interest by those concerned with the teaching of paediatrics in this country It contains much that is provocative and stimulating and within

[1] *Pediatrics Education and Practice* White House Conference on Child Health and Protection London D Appleton and Co (7s 6d)

its covers may probably be found an answer to the question of *how* the subject should be taught, though the committee does not offer any direct solution of this fundamental problem.

TEACHING SURGERY WITH THE CINEMATOGRAPH

A short debate took place at the last meeting of the Section of Surgery of the Royal Society of Medicine on the use of the cinematograph in teaching It was preceded by the projection of several films by Professor R E Kelly of Liverpool, and of one film by Mr W H Ogilvie of London The subjects of Professor Kelly's films included the removal of an angioma , the removal of a pre-frontal tuberculoma, showing Souttar's craniotome in action , sections of the removed tumour, and the patient, six months afterwards, with a slight hemiparesis , the removal of carcinoma of the breast by the diathermy knife , and the removal of hour-glass spinal tumour Mr Ogilvie's film illustrated pulmonary embolectomy in a post-mortem subject Mr Ogilvie mentioned that last year, while on a visit to Sweden, he and other surgeons were shown three of the four successful Swedish cases (two by Crafoord and two by Nystrom) and afterwards the operation was repeated on a dead subject and cinematograph records made On returning to London with his own record he discovered that some of the most essential parts of the picture had been spoiled either by bad focus or by the intervention of the arms of the operator he replaced these, and amplified the whole film in the post-mortem room at Guy's The result was a rather lengthy instructional record Professor Kelly made it plain that he did not advocate the cinematograph as an easy or desirable way of learning surgery It could never replace clinical instruction, but he thought it had its value particularly in showing unusual cases or procedures which the student in the ordinary course might miss It was useful also in such subjects as the eye signs in exophthalmic goitre, spasmodic facial tics and abnormal gaits During his own teaching career he had made a plan of collecting all kinds of photographs book illustrations and water-colour drawings with the idea of using them in his talks to students only in this way could he avoid the textbook lecture Such a series of pictures took years to amass and had to be constantly re-edited The cinematograph had proved a very useful auxiliary especially when as in his own case the actual records were made by a colleague Dr Cohen (who naturally knew exactly what it was desired to show) in a way that could not be expected of the professional photographer The chief disadvantage to the operator was the necessity of working amid the glare and heat of powerful lamps The result had its obvious limitations only selected portions of a long operation could ordinarily be taken and of course pending a satisfactory colour film process, the picture was in black and white Mr Girling Ball the president of the Section said that the pictures which had been shown chiefly represented the value of the method in recording rare operations but he had felt that they were useful only for senior people who understood what was happening and that the junior student would find it very difficult to follow what was shown on the film Certainly on the post-mortem subject the operation could be more conveniently carried out with greater regard to the requirements of photography, and with an absence of confusing reflections of light Sir Holbert Waring confessed himself interested in the possibilities although doubtful as to how far the cinematograph could be introduced into undergraduate teaching The question of the institution of a laboratory for the production of films for the teaching of surgery had been under consideration in connexion with the new post-graduate school in London, but he had been rather impressed, after visiting studios at Elstree, with the expensiveness of the whole affair Mr Webb Johnson suggested the usefulness of a library of films of classic operations on the dead subject by a master in surgery and Mr Jocelyn Swan emphasized the historical value of such records to future generations Mr McAdam Eccles mentioned the high degree of development to which obstetrical films, if not surgical, had been brought in America He was one of those who had witnessed an American film, with a talking attachment of a Caesarean section The operation was performed under a local anaesthetic, and the talking mechanism recorded the doctor's reassurances to the mother and also the cry of the child as soon as born In replying to the discussion Professor Kelly mentioned that his own interest in cinematography dated from 1909 On August 3rd of that year he published in the *British Medical Journal* a preliminary note on the application of the cinematographic principle to the study of serial sections It was rather a quaint and ingenious device of use to him in the teaching of anatomy, which was his occupation at that time but no one appeared to have taken any notice of his publication

THE WASSERMANN TEST

Dr E J Wyler is such an experienced and reliable serologist that his pamphlet *A Method of Increasing the Sensitiveness of the Wassermann Test*,[1] should carry conviction to all As pointed out by Sir George Newman in the preface, greater reliance is placed on the test in this country than on flocculation reactions, so that an increase in sensitiveness is a notable advance Briefly Dr Wyler has succeeded in making the No 1 method Wassermann reaction more sensitive by using increasing amounts of inactivated patient's serum, while keeping the other constituents of the test unaltered The only other variant was the period after which results should be read in general, with more serum it is necessary to wait longer before reading The new method appears to yield an increase of 20 per cent in sensitiveness as compared with the old, without loss of specificity it also gives only 2 6 per cent of doubtful reactions as compared with the former 9 3 per cent A comparison of the new test with the sigma flocculation test proves it to be superior Too much significance must not be attached to this observation for, though Dr Wyler claims that the latter is probably the equal in sensitiveness and specificity of "any other flocculation test for syphilis" few with much experience of these tests will agree with him Dr Wyler also tried to obtain increased sensitiveness by varying (*a*) the complement and (*b*) the antigen—without success It might have

[1] Reports on Public Health and Medical Subjects [illegible] A Method of Increasing the Sensitiveness of the Wassermann Reaction By E J Wyler M C M D H.M Stationery Office 1 (4d net)

been expected that diminution of the amount of antigen would have had much the same effect as increasing the serum since in weakly positive cases in the Kahn test precipitation is greater when the antigen serum ratio is 1 to 12 than when it is 2 to 12 The explanation probably lies in the fact that where more serum is used a greater amount of precipitate is formed by which complement may be fixed Dr Wyler suggests that increasing amounts of serum might with advantage be employed in other complement fixation reactions, curiously enough this was not found to give any increase in sensitiveness in the reaction for gonorrhoea It is not stated whether any serums (among those tested) *gave a stronger reaction in syphilis* by the old method than by the new This might have been expected to occur from time to time seeing that many specimens of human serums contain relatively large amounts of natural anti sheep cell haemolytic amboceptor The obvious way out of the difficulty would be to remove this substance before testing but unfortunately the process appears to render serums anticomplementary—at any rate when used in the routine 1 in 5 dilution It is to be hoped that other pathologists will try out Dr Wyler's method so that it may be substantiated and generally employed

LECTURES ON THERAPEUTIC RADIOLOGY

The International Centre and Post Graduate School of Radiotherapy of which Sir Cuthbert Wallace is dean has arranged a series of clinical lectures on therapeutic radiology in the hope of stimulating interest in this subject amongst the younger medical practitioners in London These lectures, with demonstrations of cases will be given on Wednesdays at 4 30 p m from May 4th to July 20th inclusive at the Mount Vernon Hospital and Radium Institute Riding House Street W 1, particulars may be obtained from the secretary at that address The lecturers are Mr Stanford Cade Mr Malcolm Donaldson Mr R Ogier Ward Dr N S Lwyn Mr Douglas Harmer Dr Roy Ward Mr Duncan Fitzwilliams Mr Geoffrey Keynes and Mr Durden Smith The course is open to registered medical practitioners free of charge Dates and subjects will be announced in the Diary of Post Graduate Courses and Lectures appearing each week in our *Supplement*

A CONFERENCE OF CONTRACEPTION

The National Birth Control Association (with which is incorporated the Birth Control Investigation Committee) has arranged a conference on contraception to be held at Caxton Hall Westminster during the week end May 20th 22nd On the afternoon of Friday May 20th there will be a discussion on spermotoxins and hormones at which the president Sir Thomas Horder will take the chair The morning of May 21st will be devoted to a consideration of spermicidal preparations and their effects under the chairmanship of Dr C P Blacker and in the afternoon with Dr C Killick Millard in the chair some particulars will be given of the experiences of doctors at voluntary clinics and at clinics under public health authorities On the morning of May 22nd the Grafenberg ring and other methods will be discussed under the chairmanship of Sir Humphry Rolleston Membership of the conference is we understand restricted to medical officers of health and members of their staffs research workers doctors in hospitals and in private practice and doctors and a few lay workers from voluntary clinics The fee will be 2s 6d for the conference tickets can be obtained from the secretary 26 Eccleston Street S W 1

BRITISH EMPIRE CANCER CAMPAIGN

At the quarterly meeting of the Grand Council of the British Empire Cancer Campaign, held on April 11th, with Sir *John Bland-Sutton* in the chair the following grants were made in furtherance of cancer research £500 to St Mark's Hospital £2 500 to St Bartholomew's Hospital £1 500 to the Cancer Hospital, and £5 500 to the Middlesex Hospital The nomination of Mr W Sampson Handley as representative of the Queensland Cancer Trust on the Council and the election of Dr G Fildes as an additional member of the Radiology Committee which acts jointly for the Medical Research Council and the Campaign were confirmed The judges reported that in their opinion none of the essays submitted for the 1931 Garton prize on The early diagnosis of cancer was worthy of the prize and the Council accordingly resolved not to award it Dissertations for the next Garton prize for research work on 'The biological effects and mode of action of radiations upon malignant and other cells are due to be received not later than December 31st 1933 and it was reported that a large number of applications for copies of the rules and regulations had been received Approval was given to a scheme for co operation with the nursing services in a large scale circulation of the Campaign's official publication *The Truth about Cancer* Arrangements have been made in collaboration with the committees of the Queen's Institute of District Nursing and the public health section of the College of Nursing whereby copies of the book will be made available for active members of those organizations It is anticipated that individual members of the associations will make returns in a year's time in order that the Campaign may ascertain how far this propaganda scheme for early notification of unusual symptoms has proved effectual Intimation was received that H R H the Duke of York President of the Campaign will preside at the annual general meeting to be held on July 11th

We have to announce with deep regret the death at Bordighera of our old friend and former colleague Lieut Colonel Guy Stephen who was a member of the editorial staff of the *British Medical Journal* for fourteen years and did invaluable service to British military medicine as our special correspondent in France from 1914 to 1919 and as informal liaison officer between G H Q and the medical units in the Western theatre of war

The Ingleby Lectures 1932 will be delivered in the medical lecture theatre of the University Birmingham on Thursdays May 5th and 12th at 4 o'clock by Professor Seymour Barling M S F R C S on the operative treatment of toxic goitre

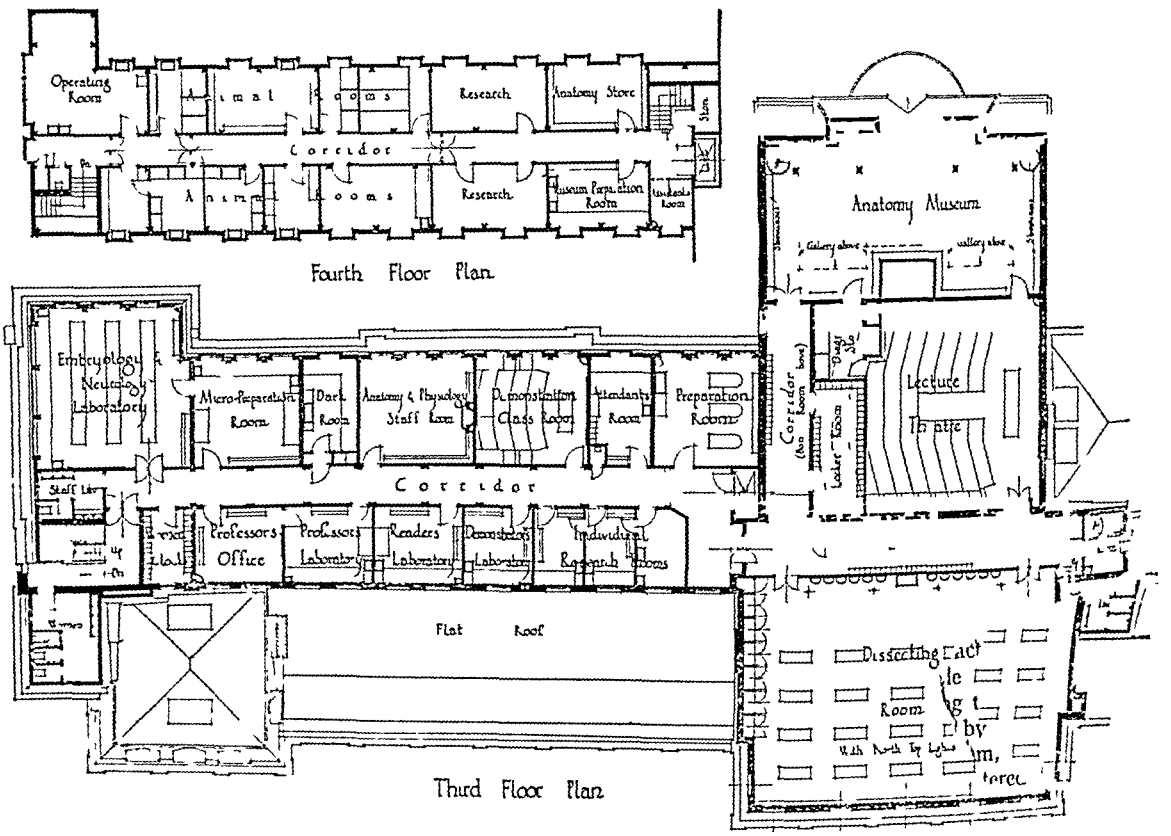
KING'S COLLEGE, LONDON

HAMBLEDEN DEPARTMENT OF ANATOMY

The extension of the medical department of King's College London the chief portion of which is to form the Hambleden Department of Anatomy is to be opened on April 27th the first day of the college term by the Earl of Athlone Chancellor of the University Greatly increased laboratory research and museum accommodation will be available and the department of anatomy will now be brought into close topographical and other relation with the department of physiology, which itself was recently modernized, and the other biological departments of the college The old quarters of the anatomy department are to be converted into an extension of the department of chemistry which is undergoing reconstruction The new extension represents the first step in the execution of the building programme which was set out in the centenary appeal of King's College three years ago It is much more than an affair of college interest it has been undertaken largely out of university funds and marks a definite policy in medical education in London The plans have been devised particularly to meet the needs of the large and growing pre clinical school at King's which is associated on the clinical side with four teaching hospitals—namely Charing Cross Westminster St George's and King's College Hospital at Denmark Hill—whose students with others attend the courses at the institution in the Strand The total number of students in the department of anatomy according to the last annual report of the college was 400

The narrow portals of King's College give no idea of the great extent of the building which slopes down to the Embankment Deprived of the means of much lateral expansion by reason of its situation, the college has burrowed to the depths below and ascended to the sky above and to accommodate the new extension two additional stories have been built on the roof to the north and east This has been done without spoiling the character of the building, and the old familiar balustrade has simply been carried higher though for loftiness the part of the college building now rivals Bush House just opposite and affords from its large flat roof a remarkable view of the City and Westminster

The extension comprises some thirty rooms large and small The largest of all is the dissecting room probably the most spacious to be found in any medical department in the country with a suite of tiled cupboards with air tight doors a tiled floor sloped with drains and a series of twelve wash basins with hot water and towel rails above Adjoining this is a large lecture theatre seating 170 or 200 in emergency and embodying the most modern ideas in the arrangement of its seating and equipment A device is installed for dimming without extinguishing the lights when the epidiascope is in operation so that the student may still see to make his notes Beyond is the new anatomy museum and reading room with a gallery and excellently lighted One feature here is the x ray viewing cabinets which are made a permanent fixture The room will house the valuable Hunterian and former collections From these large rooms a corridor leads off with smaller rooms on either side and at the end the office of the professor (Professor Blair) and his laboratory the reader's laboratory another laboratory for demonstrators and two or three individual research rooms all fitted up with benches On the other



corridor are rooms given up to microscopical and other preparation work and to photography and modelling a demonstration class room, and a joint staff room for the departments of anatomy and physiology. A library for the use of both departments is included and at the end there is a large embryological and neurological laboratory again well equipped with benches sinks and cupboards. The lecture theatre museum and dissecting room have their upper portions on a level with the higher floor of the extension and over the other rooms there has been built a story to be devoted chiefly to animal research. These rooms about twelve in number will be for the general use of all the biological departments of the college. Ample accommodation with sterilizable cages and runs is provided for the keeping of animals large and small. An operating room and a room allocated to experiments in metabolism are included.

The department incorporates the newest ideas in laboratory furnishing and equipment with intercommunicating telephones good natural and artificial light ample provision of lockers for men and for women students and general conveniences. The cost of the extension has been about £65 000 apart from certain special equipment yet to be installed. The joint architects are Mr. F. W. Troup and Mr. Stephen J. B. Stanton under whose supervision the work has gone forward quickly reaching completion within a year. The staff of the department of anatomy and anthropology consists in addition to its head (Professor Duncan M. Blair) of a reader four lecturers and two demonstrators and the department of physiology biochemistry and histology under Professor R. J. S. McDowall of five lecturers and two demonstrators. Lister who for fifteen years filled the chair of clinical surgery at King's would have derived satisfaction from the circumstance that the two professors have come to King's as he did from Scotland—Professor McDowall from Edinburgh and Professor Blair from Glasgow.

One cannot leave the new department of anatomy without imagining with what pleasure it would be viewed by those who in the past have made King's famous for its anatomical teaching—William Bowman who was called the father of general anatomy in England Lionel Beale the master of the microscope in histology John Wood who for twenty years it was said almost lived in the dissecting rooms off the Strand William Ferguson by whom the term conservative surgery was first applied and Richard Partridge the first demonstrator in anatomy.

Nova et Vetera

THE SWALLOWED COIN—1750

A man swallowed two copper coins which stuck in the oesophagus for five weeks and produced a violent pain a spitting of blood and a difficulty of swallowing solid aliments. These symptoms ceased entirely when the pieces of copper fell into the stomach where they remained for six months and were at last ejected by vomit. This is an old story as old as coinage quoted from a paper On Extraneous Bodies Retained in the Oesophagus read by M. Hevin to the Royal Academy of Surgery at Paris. A translation was published by F. Cave at St. John's Gate in 1750.

There was at the case of the young man afflicted with the toothache who put into his mouth a dicat of Portugese gold in order to alleviate the pain but fallin asleep he swallowed the dicat and upon his awakening could hardly believe he had done so. However some months after his voice became hoarse and he was so extenuated that he was obliged to have recourse to physicians and surgeons who could neither feel the piece of gold with a sound nor with the finger. At the end of two years it was discharged by the mouth and one of its faces was as white as if it had been rubbed with quicksilver.

The case of M. Vaillant a physician and a celebrated antiquary is full of the redness and juice of life in a stirring age. After being taken by a pirate and kept a prisoner in Algiers for four and a half months this physician was returning to France when he was again chased by pirates this time from Tunis. On seeing this new misfortune that he might not lose all as he had done in the other vessel he swallowed fifteen golden medals which he had about him. M. Vaillant however having escaped the pursuit of the pirate made it his business to find out the method of freeing his stomach from the burden that he had committed to it. As Nature did not seem disposed to afford him any relief he began to think himself in danger and consulted the faculty of medicine on his case. Every physician proposed a different remedy and the patient not knowing which of them to take left himself entirely to the disposal of Nature who acted her part so well that she discharged half of them when he arrived at Lyons where he sold them to a virtuoso promising to let him have the rest as soon as he could and to his great satisfaction he was able to fulfil his promise that very night.

Not the least interesting part of M. Hevin's paper is his painstaking review of the different means which industry has in all ages suggested to free the oesophagus from extraneous bodies. Thus we are told some make the patient swallow a large piece of some aliment such as the stem of lettuce a piece of biscuit or a tender crust of bread without chewing them. Others recommend a dried fig turned inside out or a plum without its stone or skin. Very much favoured apparently was the use of a piece of new sponge dipped in oil and securely fixed to the end of a strong thread. Another way of using the sponge was to swallow it dry in the hope that it might pass the impacted body then allow time for it to swell before withdrawing it. Hevin thought little of the sponge but was of the opinion that the leech which is easily found everywhere and at all seasons is a very commodious and usual method of depressing extraneous bodies which are but little advanced in the oesophagus. However some authorities think it not altogether sure because it may be bruised in bending to accommodate itself to the figure of the pharynx. The violent motions of the oesophagus may also contribute to this inconvenience. Evidently there were patients who like Ancient Pistol were qualmish at the smell of leek.

Another favourite instrument used to cleanse the stuffed bosom of that which weighed upon it was of course the wax candle dipped in oil which Fabricius ab Aquapendente preferred to all other means. Those more mechanically minded had recourse to many kinds of probangs some of them made of silver or flexible steel of the size of a quill almost a foot and a half long and whose ends terminate in a bud on some what conoidal and as large as a small nut.

It is of interest to note that the coin-catcher had been evolved by 1750. Hevin makes clear his own partiality for an instrument invented by M. Petit—"a flexible rod or stillet of silver or two silver wires twisted together in a spiral form the extremity is crooked and forms a small ring to lay hold of the extraneous body." He also mentions with approval a rod with a small round or oval button at its extremity used by Mr. Stedman a surgeon of Kinross.

But proceeds M. Hevin the deceased M. Marechal supplied the defect of these instruments by one of which was a hand and which though much resembling that the others yet succeeded very well. A man having bowed a very large bone of a pig when stuck in his throat M. Marechal who was ready to mount his horse and who had no other instrument than a whip in his hand made a loop on the cord at the end of the whip which he dipped in oil and introduced into the oesophagus beyond the extraneous body which he had laid hold of in the loop and extracted it forthwith.

E. ROLAND WILLIS

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

SIR AUSTEN CHAMBERLAIN'S REVIEW OF ACHIEVEMENT

At a meeting of the court of governors of the London School of Hygiene and Tropical Medicine on April 7th Sir Austen Chamberlain was elected chairman of the court and afterwards presided at a luncheon held in the library of the School at which many distinguished public men and members of the medical profession were guests

Sir E. HILTON YOUNG, Minister of Health in proposing the toast of Sir Austen Chamberlain's health remarked on the association of the Chamberlain family with the School Mr Joseph Chamberlain, when Secretary for the Colonies gave it a great initial stimulus and Mr Neville Chamberlain six years ago laid the foundation stone of its new home in Gower Street The Minister added that his own travels and work had brought home to him the importance of a central school for tropical medicine, to promote one of the two great blessings—namely peace and health—which the great organization of the British Empire could bring to the peoples under its flag

Sir AUSTEN CHAMBERLAIN said that it was an almost incredible fact that forty years ago in the centre of an empire with responsibilities in every part of the tropical world there was no school of tropical medicine When his father attended the inaugural meeting of what had now become so great an institution he said that the greatest enemy of the Empire was not hostile chiefs nor the influence of barbarous customs, nor even the physical difficulties of countries in which primeval nature still held sway but rather the insidious attacks of disease which, if it did not kill at least shortened the lives and spoiled the careers of many of the ablest and most energetic representatives of the Empire He quoted a gruesome extract from a Lagos newspaper of 1898—the year the School was started—pleading that something should be done to relieve the gravediggers from the strain of the work to which they are subjected ! In 1896 the average death rate in the tropical Dependencies and Colonies of the Crown was 100 per 1 000 per annum last year it was between 8 and 9 per 1 000 But enough diseases still scourged those countries to provide a limitless field for further work In the case of each of the tropical diseases there was urgent work to be done with the prospect of humanitarian and utilitarian reward—utilitarian because in proportion as they were conquered there came the possibility of development of trade and industry It was a happy circumstance that the study of such problems was now thoroughly organized in London and that a group of institutions had arisen since the days of which he had spoken to train thousands of men for service in tropical climates Turning to problems of health at home Sir Austen Chamberlain said that the exact nature of those problems and their ramifications was only now beginning to be perceived Social services had become an increasingly dominant issue in politics and a growing preoccupation of governments Wherever one looked the field of inquiry and research grew wider with every fresh discovery The London School had a claim on anyone who was able to help it With so vast a field open it was impossible to rest content on what it had achieved so far At an appropriate moment it would be necessary to make a fresh appeal to the public for support The recognition of the work of the institution by the Rockefeller Foundation had given it an international character It was more than national or imperial—it was a school serving the interests of the whole world—and he was glad that representatives of other countries and races should make their contribution to what was for the general service of mankind

In conclusion, Sir Austen Chamberlain proposed the health of Sir Holburt Waring for more than eight years chairman of the court of governors and still the treasurer and Sir HOLBURT WARING in response referred to recent developments in the expansion of the field of study in particular the start made in industrial psychology to be followed eventually, he hoped by the appointment of a professor

Among those present at the luncheon were Lord Macmillan Lord Moynihan Lord Riddell Sir Harry Goschen, the Right Hon Walter Elliot M.P. Sir Cooper Perry Dr F. E. Fremantle M.P., Sir George Newman Sir Arthur Robinson Sir John Robertson Sir Leonard Rogers Sir David Munro Sir Milsom Rees Sir George Buchanan Sir E. Graham Little, M.P. Dr A. T. Stanton Sir Malcolm Delevingne, Colonel W. P. MacArthur Mr G. S. Elliston, M.P., the Editors of the *British Medical Journal* and the *Lancet*, and the members of the professorial staff of the School

Scotland

Finlayson Memorial Lecture

Sir D'Arcy Power K.B.E. F.R.C.S.Eng. consulting surgeon to St Bartholomew's Hospital will deliver the Finlayson Memorial Lecture in the Hall of the Royal Faculty of Physicians and Surgeons 242 St Vincent Street Glasgow, on Thursday April 21st at 4 o'clock The subject of the lecture will be 'The progress of surgery in a London hospital 1880-1930' and all medical practitioners are invited to attend

Royal Maternity Hospital Edinburgh

The report of the Royal Maternity and Simpson Memorial Hospital Edinburgh which was submitted at the annual meeting on March 28th stated that a formal agreement had been reached between the Royal Maternity Hospital and the Royal Infirmary of Edinburgh concerning the transfer of the work of the former together with its property funds and equipment to the Royal Infirmary so soon as this institution was in a position to open its new maternity pavilion The chairman mentioned that the present buildings of the Maternity Hospital which had accommodation for 91 beds dated from 1879 and that they were inadequate both in size and in equipment for the work that was being carried on During the past year the hospital had dealt with a total of 3 467 cases of which 2 463 had been in the wards 536 in the patients' homes and 468 at the Leith branch The attendance at the ante-natal and other clinics in the Ballantyne Annexe had this year numbered 14 759 the highest figure since these clinics were inaugurated and an increase of 810 over last year's record The number of maternity cases treated by the hospital during the year was equivalent to 44·3 per cent of the total births in Edinburgh 12 795 visits had been paid by doctors and nurses to those cases treated at their own homes an average of 12·7 visits per case With regard to finance the subscription income for 1931 had been £3,217 an increase of £107 but the ordinary expenditure had been unavoidably high so that there was a deficit on the working of the hospital of £2 614 It had therefore been necessary to draw upon the reserve and the directors were considering making a very urgent appeal to their subscribers and the public generally for a steady subscription income of at least £4 500 to carry the hospital over the period of two years or so which would elapse before the new maternity pavilion at the Royal Infirmary was ready A Provisional Order dealing with the transfer of the Royal Maternity Hospital to the Royal Infirmary of Edinburgh

has now been issued The Royal Infirmary has agreed to take over the whole work and services of the hospital and to provide accommodation for not less than 120 beds in a pavilion to be designated the Simpson Memorial Maternity Pavilion The date of transfer has been provisionally fixed for May 15th 1934

Larbert Colony for Mental Defectives

The report of the Royal Scottish National Institution Larbert submitted to the annual meeting of subscribers on March 24th by the superintendent Dr R D Clarkson showed that 560 mental defectives could now be accommodated in the institution The chief feature of the report however was the statement that before the end of the present year the colony for adult mental defectives would be ready for the admission of 250 patients It was recognized that mental defectives were most happy in colonies of defectives of a similar grade to themselves In Scotland at the present time large numbers of these adult defectives had to be certified under the Lunacy Acts and sent to mental hospitals for their own protection the present scheme had the cordial approval of the General Board of Control which was responsible for the supervision of all mental defectives in Scotland The institution provided a permanent home for those who could not be boarded out in families of the community The finances of the institution continued to be satisfactory but about half the cost of building the colony had still to be met Lord Fleming in commending the institution and its colony for adults as worthy of the support of the people of Scotland said that it was sometimes questioned whether many of the social schemes introduced during the last hundred years had really contributed to human progress He believed however that great progress had been made in the treatment of the feeble minded It was now recognized that feeble mindedness was a misfortune which could be partially relieved by treatment While he believed that the amount of crime attributed to mental deficiency was exaggerated there was no doubt that it was responsible for some of the crimes committed and it was quite good business to give mental defectives treatment and education which would benefit them

Silicosis in Scotland

At an inquiry held before Sir Harold S Morris on April 5th in Glasgow a scheme was put forward by a committee of the mason and bricklayer trades for lessening the incidence of silicosis in the building trades The scheme provides for the setting up of a joint committee of employers and workmen engaged in the industry with an independent chairman to decide questions regarding the right to compensation and the amount to be paid It also proposes a general compensation fund to be maintained by a levy on employers It was stated that every area in Scotland with the exception of Glasgow was in favour of the proposals

Grouping of Hospital Services in Fife

At a meeting of the Fife County Public Health Committee held at Cupar on April 8th a report was submitted by the Hospital Subcommittee dealing with the question of hospital services in the county and of co-operation with the town councils of Kirkcaldy and Dunfermline The report stated that a meeting had been held of representatives of the County Public Health Committee the Dunfermline Town Council and the Department of Health for Scotland with the object of determining hospital policy The provision of a central hospital for the whole of the county was not feasible proposals were made and it was suggested that arrangements might be made for the additional accommodation of certain patients in the Dunfermline area At the West Fife Infectious Diseases Hospital arrangements could be made for fever cases medical and maternity cases tuberculosis would not in future be treated at the hospital The hospital would be available for patients from areas of the county in addition to the patients from Dunfermline at present admitted It was reported further that the Kirkcaldy Town Council had agreed to co-operate with the county council regarding hospital services and the provision of necessary additional accommodation in the neighbourhood of the burgh of Kirkcaldy

England and Wales

King Edward VII Sanatorium

During the seven years ending June 30th 1931 artificial pneumothorax has been attempted in 125 cases at the King Edward VII Sanatorium Midhurst and successfully induced in ninety four failure in the remaining thirty one was due to the absence of any pleural space the smallness of the initial pocket or the impossibility of refilling as a result of adhesions These cases have been grouped and a general appreciation of the value of the treatment is published in the twenty fifth annual report of this institution In twenty five cases with an after history now ranging from three to seven years sputum has been either absent or tubercle negative Three patients in whom re-expansion was performed are now free from tubercle One underwent thoracoplasty with an excellent result and another had a course of sanocrysin following re-expansion since tubercle bacilli were again found in the sputum—this last patient has now been free from bacilli for two years Of thirty five cases which were still having refills on June 30th 1931 twenty eight either have no sputum or this is free from bacilli Five of these patients were also suffering from laryngeal tuberculosis all are now healed Phrenic evulsion was tried in twenty seven cases for various conditions The results have been good and in only four instances has there been no benefit Thoracoplasty was performed in four cases with satisfactory results three patients being now well and back at work while the fourth who is still in the sanatorium is in better condition than he has been for the past three years The after histories of forty cases treated with sanocrysin during the past four years have been traced of these twenty two are now free from evidence of active tuberculosis while seventeen are still positive one patient died Such a result is considered most encouraging for most of the patients had chronic disease with recent exacerbation and still had tubercle bacilli in the sputum when the injections began The work of the pathological and x-ray departments of the sanatorium has increased The sedimentation test is now carried out as routine on every case at least once a month It is undertaken each week for the first four weeks in the case of patients with artificial pneumothorax and thereafter at fortnightly intervals The work of the statistical department proceeds on the same lines as in previous years

Post Graduate Course in Tuberculosis

The tuberculosis department of the Welsh National School of Medicine and the Welsh National Memorial Association have jointly arranged a post graduate course commencing Monday June 20th and concluding on Saturday June 25th On the first day Dr D A Powell will lecture on The tuberculosis scheme in Wales at Harlech in the tuberculosis department of the Welsh National School of Medicine Cardiff at noon Professor S I Cummins will speak in the Tuberculosis Museum on Changes in the blood in tuberculosis and at 2 15 p m

reservoir will result in drainage of the first but the converse does not hold good Thus I feel I would certainly perform a choledocho duodenostomy should it ever be my lot to encounter another case

I would like to take this opportunity of laying stress on the inclusion of this condition of the common bile duct in the group of idiopathic dilatations mentioned at some length by Professor Rutherford Morison in his *Introduction to Surgery* He points out that other hollow muscular viscera such as the oesophagus stomach, small intestine colon and rectum and the bladder and ureters have all been found enormously dilated and the most careful search has failed to reveal any sufficient obstructive cause With regard to idiopathic dilatation as found in the common bile duct he tells me that he once had the opportunity of seeing a case during life and of examining the condition after death The patient, a young girl, was operated upon for an abdominal cyst the size of a child s head it was in the upper part of the abdomen and on opening it bile escaped At the post mortem examination the cyst was found to be due to enormous dilatation of the common bile duct The duodenal opening of this was normal and no mechanical obstruction could be found — I am etc

Newcastle upon Tyne April 7th JAMES H SAINT

VISCERAL HERPES ZOSTER

SIR —To the accounts of visceral herpes by Dr C C Chesterman and others the following might I think be justly added

A medical man aged 61 developed a severe attack of shingles on June 19th, 1930 which involved the right scapular region and extended around the chest above the nipple and also down the inner side of the right arm The onset was febrile and he felt extremely ill apart altogether from the effects of the pain On June 22nd the vesicles coalesced forming blebs of the size of a three penny piece On July 2nd there was marked anorexia On July 8th he went away for a change still with much pain from the herpes Constipation nausea and salivation next appeared and steadily increased and by July 22nd he became aware of epigastric pain arriving two or three hours after food During the first week of August the symptoms continuing he developed urticaria and the feelings of general weakness were still pronounced Excepting for showing the scars of the herpes and an old standing detachment of the right retina the physical overhaul was negative Abdominal examination discovered no tenderness tumour or guarding A fractional test meal gave a definite hyperchlorhydric curve with slight delay in emptying such as obtains commonly in duodenal ulcer The barium meal revealed no deformity of the duodenal cap but a rapidly emptying stomach A second series of pictures taken later showed a change in the shape and position of the stomach which was now of the cup and spill type There was no occult blood in the stools

I concluded that he had developed duodenal herpes or at any rate a neuro muscular irritability of his stomach with a duodenal syndrome in consequence of an involvement of sympathetic fibres in the inflammatory process Th duodenum is I believe supposed to receive its supply from T 4 and T 5 Treatment as for a duodenal ulcer was advised but improvement was very slow In January 1931 there was no longer any pain but a decided nausea persisted with sudden salivation developing two hours after food and sometimes in the middle of the night By February 1931 the symptoms had for the most part departed Before this illness the patient had never experienced any dyspeptic symptoms — I am etc

[illegible] J A RYLE

TREATMENT OF OSTEO ARTHRITIS OF THE HIP

SIR —In your report in the *Journal* of April 2nd of a recent discussion at the Medical Society of London you quote Mr Whitchurch Howell as saying that if he had arthritis of the hip he would wish to have some form of arthroplasty, and if that failed, arthrodesis or fixation of the hip joint

That surgical intervention may at times be required as a last resource none will deny but I venture to say that in future no case which is diagnosed at a reasonably early stage should require surgical aid Within the past few years it has proved possible to arrest the progress of the disease and to obtain great improvement even in cases which, judged by radiographic appearances may be called advanced This has been accomplished by means of deep x ray therapy Middle aged persons suffering from osteo-arthritis of the hips knees or lumbar spine form the most suitable subjects Patients who have been virtually confined to the house may be enabled to walk a mile or two in comfort, and not a few are so much benefited that they can resume occupations from which they had been debarred by their disability others whose nights have been disturbed by pain have become able to look forward to regular sleep

The above results have been accomplished in three to six months and by means of some twelve to eighteen exposures to deep x rays The necessary dosage is not large enough to upset the patient constitutionally Undue credit has been cast on the treatment in some quarters by overdosage and also by applying it to cases of rheumatoid arthritis, in which it rarely gives relief

My favourable experience with deep x rays in osteo-arthritis is shared by other workers At the February meeting of the Section of Physical Medicine Royal Society of Medicine a paper on the subject was read by a Continental worker of repute Dr Kahlmeter of Stockholm, and on the same day in the Section of Radiology Dr Gilbert Scott gave an account of his results in connexion with patients from the British Red Cross Clinic

Nearly all the cases so far treated have been of long standing with much bony deformity It would appear from the results obtained that early treatment might prevent the appearance of osseous changes Once the value of deep x rays becomes known it should be possible to get hold of cases as soon as any symptoms develop, with a good prospect of arresting the disease —I am etc,

London W 1 April 4th F HERNAMAN JOHNSON

ARSENIC AND WALLPAPER

SIR —The recent mysterious and fatal illness at a cottage in the Forest of Dean was at first thought to be due to wallpaper but afterwards at the inquest it was proved beyond doubt that the cement on the wall, and not the wallpaper, was to blame This case has once more focused attention on the possibility of arsenical poisoning from wallpapers As medical officer to one of the largest wallpaper manufacturers in this country I thought it was opportune to place before you and my fellow members some facts in the hope that they will be useful in preventing unconsidered statements on this subject which may have a damaging effect on a very necessary and hygienic industry

In the above case the wallpaper was found to contain 4 4 parts of arsenious oxide per million In this instance this would be equivalent to 0 00276 grain of arsenic per square yard of wallpaper The State of Massachusetts U S A permits 1/10 grain of arsenic per square yard of wallpaper whilst Dutch law allows 5 mg per square metre which is equivalent to 0 0645 grain per square yard In view of this it is natural to assume that a wallpaper conforming to these restrictions would be considered

harmless As the arsenic in the wallpaper under reference in the Forest of Dean case was only approximately one thirty sixth of the amount allowed by Massachusetts and approximately one twenty third of that allowed by Dutch law its smallness is evident

It is well known that arsenic is so widely distributed in element that in consequence there are very few substances which would not contain traces of it as an impurity In bygone days arsenical pigments were employed in wallpaper manufacture but their use has long since been discontinued and the principal English makers of wallpaper have for many years bought all their raw materials on the understanding that they are commercially free from arsenic Analyses of raw materials are moreover continually being performed by their chemists to ensure that any arsenical impurities are kept as low as possible Some time ago a case came to light of a lady found to be suffering from arsenical poisoning attributable to wallpaper The analysis proved that this poor lady might have eaten 343 yards of the paper 21 inches wide with impunity so far as its arsenical content was concerned and it was found that she had taken far more arsenic into her system than was contained in all the wallpaper in the house

These facts suggest that members of our Association need to be very sure of their ground in cases of arsenical poisoning before expressing the opinion that the wallpaper is responsible as I know for a fact that every such case which occurs is being very carefully followed up by the manufacturers—I am etc

W F M TURNER WILSON
Wembley April 4th M B Ch B

ALUMINIUM AND HEALTH

SIR—Your article on aluminium and health in the issue of March 26th is very interesting and shows how strong is the evidence that aluminium is harmless to the majority of people At the same time there is no doubt that in a certain number of cases it acts as an irritant poison and when a subject is anaphylactic to aluminium it is surprising how infinitesimal a quantity is sufficient to cause trouble

To take my own case For many years I suffered from severe abdominal pain which at times completely incapacitated me It baffled all attempts at diagnosis and it was only the length of time during which the pain had persisted that ruled out the general belief in its malignant origin After reading Dr Le Hunte Coopers pamphlet I stopped the use of aluminium vessels and in a short time the pain disappeared Some time later the pain returned and was particularly severe on two days in each week The most careful inquiry failed to trace any connexion with aluminium until I noticed on these particular days I was in the habit of having a certain article of prepared food On writing to the makers of the food I was informed that it was prepared in aluminium vessels but I was asked that my stated tests showed that it contained no trace of aluminium On leaving off this food the pain at once disappeared Since then on several occasions I have had a return of pain but each time I found that I had had some cooked in aluminium I have now no hesitation in saying that I could and do tell by simple observation which article of food I had to avoid [illegible]

I have never seen which appears to [illegible] vessel produced this [illegible] I have [illegible] which [illegible] Sometimes [illegible] On [illegible] expected A characteristic feature of aluminium pain is that it is not relieved by the ordinary carminatives and sedatives

It is not wise to be too dogmatic on any subject—I am etc

London W 1 April 5th ALEXANDER FRANCIS

OBSTETRICAL HEARSAYS

SIR—Dr R C Buist in his delightfully wise letter published on April 2nd mentions a practitioner who said that occipito posterior positions were not always discoverable antenatally by suprapubic examination I am inclined to agree with this opinion for the following reasons (1) It is generally held among general practitioners (2) A great proportion of women are more mattress like than syphilitic and it is often difficult to be sure they are pregnant let alone whether the presentation is occipito posterior (3) Anæsthesia antenatally in these cases is not feasible (4) Cases which have been in the hands of experts at clinics etc are found to be occipito posterior when the doctor is asked to deliver them (5) Cases which have been thought occipito posterior antenatally and have been corrected by experts are found to be occipito posterior on delivery by the general practitioner

There is really no doubt that the child's position frequently alters throughout gestation and especially in the last two months It is not unusual for a breech to become a head presentation and vice versa though the latter is I think rarer The absolute need therefore for x ray control of our manipulations here is too obvious to need stressing I am no advocate of needless vaginal examinations but given a sterile perineum and a sterile gloved finger I think no great harm can be done That such an examination is required is undoubted Why are nurses allowed to make a vaginal examination and that without gloves? Why are nurses allowed to attend cases without gloves? Why is the paper wrapped packet of Gamgee tissue still so universal in midwifery cases as the only dressing? The after care of the average maternity case is slipshod in the extreme All these things need to be ruthlessly tightened up before we shall get a fall in morbidity It is not the big aspects such as hospital *versus* home that are important it is the minutiæ that turn the scale

All must agree with Dr Buist about the wrongness of inserting the finger in the mouth of the after coming head I was astonished when I read Dr Bourne's paper and saw that this method was still extant Smellie's grip and the upward push on the occiput are ideal and seldom fail

Finally I must testify to the excellence of chloroform as an anæsthetic in labour It is so safe—outside hospitals—that I have never known of a death through its use in almost a quarter of a century Properly employed it does not stop uterine contractions *pace* Dr Bourne and his turibours and it is my usual custom in order to save the perineum to allow the mother to push her child home while under light chloroform anæsthesia I agree that deep chloroform must [illegible] will stop uterine contractions but so would a fracture over the jugular vein and both are unnecessary I suggest that Dr Bethel Solomons should cease to misuse the parents Act and concentrate on proper chloroform anæsthesia in the Rotunda He would then get as good results as the general practitioner—I am etc

[illegible] JAMES COOK M D

PREPARATION FOR MARRIAGE

SIR—The letters from Sir [illegible] and Dr C A [illegible] printed in your issue of April 9th draw attention to an [illegible] undertaken by the British Social Hygiene Council which may well concern all who are interested in the maintenance of high ethical standards of the medical profession The honorary medical secre-

taries of the Council (*British Medical Journal* March 26th p 592) tell us that a non medical representative having the full support and approval of the Council is about to open a private consulting room where anyone desiring advice on questions relating to marriage may learn on payment of a fee of £2 2s whether lay advice is equal to the occasion or whether on the contrary medical direction should be secured In the latter event the applicant will be directed to the right medical authority by means of a list of authorities in the special field this list being intended for presentation to the patient's medical adviser who may or possibly may not be grateful for the information Such in brief is the announced programme of the new Personal Problems Bureau

There is no need to question either the motives of this enterprise or the legal right of non medical persons to advertise their capacity to give advice on any subject they may choose to select and equally the public is free to accept any such offer and to pay for the opportunity Indeed in principle the Personal Problems Bureau is already in undisturbed operation for various agencies offer by correspondence as does the British Social Hygiene Council's bureau advice on marriage and related topics to all to whom the classical counsel of *Punch* has been spoken in vain In these respects therefore neither law nor precedent can be quoted against the project approved by the B S H Council

What however is startling is that such a scheme should be announced over medical signatures and promoted by a council which includes members of the medical profession For leaving all other questions aside can the profession approve the preparation by an unauthorized council or individual of a list of right medical authorities for distribution to the clients who may be attracted to the private consulting room of the Personal Problems Bureau ? And again what will be the position and responsibilities of a medical practitioner who is named in the list as right and recommended as such by the bureau? Evidently the bureau is going to appeal for clients it will in given circumstances advise some of its clients to consult one or other of a group of selected medical practitioners will not any practitioner who allows his name to be used in this fashion run the risk of appearing to be art and part in a scheme of personal advertisement? For himself of course he says nothing but is it not also his duty in accordance with the demands of the General Medical Council to decline acquiescence in the publication by others of notices commenting on or drawing attention to his professional skill knowledge services or qualifications and indeed to avoid association with those who procure such publication ? In quite recent times we have seen judgement fall on practitioners who have not been careful to resist the well intentioned co operative activities of certain popular journalists Does not the same principle apply to nominations or introductions promoted by a Personal Problems Bureau ? If not the development of other private consulting rooms and further lists of right medical practitioners would appear to be sanctioned in advance —I am etc

London W April 11th C O HAWTHORNE

Sir —In a letter appearing in your issue of April 9th Sir Arthur Newsholme comments adversely on the establishment of a Personal Problems Bureau the consultant being Mrs Neville Rolfe secretary general of the British Social Hygiene Council The decision of the Council forming the establishment of the bureau was arrived after full and careful consideration and after consultation with representatives of the members of the British Medical Association The plan for such a bureau arose out of a series of lectures on preparation for marriage organized in co operation with the Churches

Sir Arthur Newsholme draws the conclusion that advice on artificial birth control is to be given by Mrs Neville Rolfe This is incorrect In a letter addressed to him from which he quotes Mrs Neville Rolfe expressly informed him that in the event of an individual requesting advice on methods they would be referred to the medical profession The main objects of the bureau are to assist parents wishing assistance in handling difficulties in sex training of children and to advise girls intending marriage

Sir Arthur Newsholme further states that as the bureau has been established with the sanction of the British Social Hygiene Council this indicates a change of policy on their part in regard to the subject of birth control This again is incorrect The policy of the Council has not been changed advice on artificial birth control will not become part of its work in the future any more than it has been in the past unless and until some future decision of the Council should reverse the present policy I regret that Sir Arthur in support of his personal views should have allowed himself to suggest that in the circumstances subscribers to the funds of the British Social Hygiene Council are called upon to reconsider the attitude to the Council —I am etc

KENNETH M WALKER
Honorary Medical Secretary British Social Hygiene Council

London S W April 11th

PHILOSOPHY AND MEDICINE

Sir —In one of his fables R L Stevenson describes the arrival of a reformer at a native village He preached in the morning to the assembled villagers but was buried at dusk I am reminded of this fable by the letter of Dr F C Eve in your issue of March 26th Dr Eve comments upon the appeal in the *Journal* of February 20th by a number of distinguished signatories on behalf of the British Institute of Philosophy All who are in clinical practice know that much of his letter is entirely true in its statements of facts Medicine cannot be an exact science because of the ever present and variable factor in our problems of the human or temperamental element *No amount of chemical* x ray or other investigations can compensate for the absence of a clinical insight which is at first innate in varying degree and late developed by careful observations clear thinking and the use of experience But Dr Eve questions the value of learning systematic philosophical methods of thought and in another place he mistrusts the use of logic in the solution of our clinical problems Unfortunately the word philosophy has been associated in the minds of most practical men concerned with the details of daily life with the idea of thought for thought's sake and endless discussion of abstractions and unrealities however much it may profess to aim at the definition of true reality For this reason the letter from the British Institute of Philosophy is likely to pass unnoticed

Despite the suspicion aroused in many minds by the mention of philosophy it is very true that a life which is guided by its principles can be not only fuller and happier but can also be of greater practical value in the material world of every day It is difficult to say exactly how this is so illustrated by a brief and [illegible] example but experience is evidence that the habit of mind produced by philosophical methods of thought permeate every ramification of life's activities It is of course quite obvious that the practice of a rigid mathematical logic can lead us nowhere in clinical medicine or indeed in any department of thought concerned with human feeling and behaviour and if Dr Eve's [illegible]

a training in logic is a result of a study of philosophy he quite naturally distrusts its power to assist us in our daily work But surely philosophy takes us further than this Are not some of the aims of philosophy to teach a controlled flexibility of thought for the attainment of a truth which would be denied to one whose reasoning is unintelligently precise? As I understand it philosophy deals with thought in relation to all human affairs and therefore it can train the mind to meet any problem even *when not concerned solely with material factors*

Surely the need of to-day in medicine is not for more loose thinking but for more controlled thought Dr C M Wilson has brought forward this very contention in a recent issue of the *Journal* in his admirable article The student in irons In our present system of education the child and later the student are taught little or nothing of the valuation of evidence and clear logical deductive thought with the final result that credulity is the most widespread mental infirmity of to-day — I am etc

London W 1 April 8th ALICK BOURNE F R C S

SIR —As no other member of the Institute of Philosophy has answered Dr Eve's letter I should like to be allowed to make one or two remarks upon it

To suggest that an acquaintance with philosophy is a hindrance to the efficient practice of the art of healing is I believe incorrect I believe also that Dr Eve would agree with me if he understood by the word philosophy what is usually understood by it In fact he would appear to have convicted himself by his own words He says learning profits little without sagacity and humanity To cultivate sagacity and humanity —or we may call it wisdom —is *the great aim of philosophical study* Wisdom is not learning and bears only a remote connexion with it Learning or knowledge is the clay out of which the individual by the exercise of philosophical insight tries to make a pot of wisdom Philosophy helps us to cultivate a critical judgement and to give ourselves stability so that we are not blown about by every wind of therapeutic and diagnostic doctrine None will deny that we need this stability Philosophy teaches us to cultivate an open mind so that we do not become hidebound Those who have read Dr I G Crookshank's paper in the *British Medical Journal* of April 2nd will realize how great is the danger of this intellectual stagnation Our philosophical beliefs *do* greatly affect our practice If we do not even know what our beliefs are if we are content to have unconscious prejudices and regard them as a satisfactory basis for medical practice so much the worse for our practice

No there is no doubt that all medical men should have some knowledge of philosophy No better advice could be given to a young doctor than that he should join the Institute of Philosophy and begin to think for himself He need not throw away his old boots until he is sure that his new ones do not pinch his present feet — I am etc

[illegible] HOWARD F COTTLE

The [illegible] Philosophy and Medicine is now [illegible] *Ed L*

PATHOLOGICAL SERVICES OF THE L C C

SIR We have read with regret the letter [illegible] Dr [illegible] to the statements [illegible] London County Council We [illegible] the Lewisham Hospital [illegible] new [illegible] test

[illegible] [illegible] [illegible] [

equal *devotion* to the voluntary system If Sir Ernest thinks it was *infantile* for me to emphasize that devotion by the observation that it was founded on the firm rock of an inherited tradition he may be allowed his opinion but it was a pity he did *not* allow it to disarm criticism instead of letting it betray him into a remark that on consideration, I feel sure he has already regretted I wish I could pass his last sentence over in silence but to do so seems hardly fair to the generous treatment accorded to me in the hospital where I *spent* so many happy years I am not an actuary but so far as I can make out the emoluments I am receiving at the moment are not quite equal to those I was getting when I left my previous post

I regret that a correspondence my part of which was begun in an effort to show that there was no antagonism between the voluntary and municipal pathological services should end so sorrily but I have an unconquerable belief in the ultimate triumph of good will and now that the initial irritation has passed away Sir Ernest Graham Little's flagellations leave me unmoved—I am etc

London S W April 9th GORDON W GOODHART

CRIMINAL PROSECUTIONS

SIR —In his appreciation of Dr Bronte which appeared in the *Journal* of April 2nd Dr Edwin Smith states that the truth was that he [Dr Brontë] disliked the spectacle of the unequal contest sometimes presented by say the prisoner in a capital charge standing in the dock with the scales already weighted by the forces of the Crown arrayed against him Anyone who has practised at the criminal bar will know that the assumption that the scales (presumably of Justice) are weighted by the Crown against a prisoner on any charge is entirely false but few of your readers can be in that position The duty of the Crown is simply to bring evidence fairly before the jury and not to strive for a conviction in my experience of some years that principle has always been apparent and obvious and it seems lamentable that a statement such as that made by Dr Smith should gain currency I cannot believe that his experience really leads him to think it is capable of serious support—I am etc

Wimbledon April 8th W B PURCHASE

RESEARCH ON HEPATIC CALCIUM

SIR —Miss Wright and I are interested in the calcium content of the liver Might I be allowed to request any of your readers who may be in a position to do so to send us portions of liver from women dying from eclampsia or hyperemesis gravidarum? We should like roughly 1/2 lb of liver from each lobe if possible and the material without any preparation may be wrapped in waterproof material and posted to either of us at the Pharmacology Department University College Gower Street W C It is because the method is prolonged the apparatus specially made and eclamptic livers are difficult to obtain that I have ventured to make this request—I am etc

London W April 5th G W THEOBALD

AMBULATORY TREATMENT OF FRACTURES

SIR —I am sorry to take up more space over this matter but may I disclaim a statement attributed to me by Mr Watson Jones in your current issue that adhesions of disuse are only dense if there is an added factor such as trauma ? I thought I made it perfectly clear that I do not believe there is any such condition as adhesions of disuse Of course the suggestions of Greig and of Leriche and Policard are most interesting—I am etc

Liverpool April 4th BRYAN MCFARLAND

Obituary

A D BLACKADER M A M D LL D

Emeritus Professor of *Pharmacology* and Therapeutics and of Diseases of Children McGill University Montreal

The ink was scarcely dry on our leading article of March 12th on the Blackader lectureship in diseases of children instituted by the Canadian Medical Association in honour of the great Montreal paediatrician when the news reached us that Dr Blackader had passed away in his 85th year

Alexander Dougall Blackader was born in Montreal in 1847 and educated at McGill University where he graduated in arts with first class honours in 1870 and in medicine in the following year His graduation preceded by a year that of Osler at the same university Afterwards he undertook post-graduate study at St Thomas's Hospital *London and* at *Vienna and Prague* His first professional service apart from acting as assistant surgeon in the Montreal Garrison Artillery during the exciting times of the Fenian raids at the beginning of the seventies was as a ship surgeon on the Royal Mail Line to South American and Chinese ports He then took up a number of resident and other appointments *in London—at Pimlico Dispensary Brompton Hospital* South London Ophthalmic Hospital and the Great Ormond Street Hospital for Sick Children Probably it was at the last named that he received the influences which turned his career to the study of children's diseases Having obtained the diploma of M R C S Eng he returned to Montreal in 1877 and commenced practice as a family doctor which in the fullest sense of the word he remained until the end of his life One of the great objects to which he addressed himself was to combat the high child mortality then existing in his native city *In* 1883 he renewed his association with McGill this time as teacher when he was appointed lecturer on diseases of children and thus began a period of active service for the university which extended over *nearly four* decades In 1891 he was also made professor of pharmacology and therapeutics and held that chair for thirty years For twenty-seven years from 1885 until 1912 he was *physician* at the General Hospital Montreal and he also served as consultant at the Montreal Foundling and Babies Hospital and indeed he was connected in one way or another with almost all the hospitals of the city

His reputation as a paediatrician furthered by his speech and writings quickly spread across the Canadian border and he was *honoured* by various national and international bodies devoted to the welfare of the child among others by the American Paediatric Society of which he became president He filled the chair also at various times of the Canadian Medical Association the American Therapeutic Society the American Climatological Association and the Medico Chirurgical Society of Montreal

At the Toronto Meeting of the British Medical Association in 1906 Dr Blackader was a vice-president of the Section of Therapeutics, and opened a discussion in that Section on Alcohol as a therapeutic agent in which he advocated its cautious use At the same meeting he opened a discussion in the Section of Paediatrics on Rheumatic infection in children a subject which had aroused his interest while at the Great Ormond Street Hospital and which he had zealously pursued since his return to Canada

Dr Blackader contributed to a number of textbooks and periodicals chiefly on the subject of infant feeding and diseases of children From 1891 until 1918 he was editor of *International Clinics* a Philadelphia publication His

signal achievement in editorship however was begun when he was well past seventy In the difficult years just following the war he was made editor-in-chief of the *Canadian Medical Association Journal* to which he had for many years been a contributor and in the course of ten years he carried it to a very high degree of excellence making it one of the outstanding medical journals on the other side of the Atlantic and so regarded by the medical profession not only in Canada but in the United States It was in appreciation of the services he had rendered as its editor that the Council of the Canadian Medical Association in 1929 on his resignation of the office established the Blackader Lecture in diseases of children to be delivered once every three years by a distinguished paediatrician Dr Blackader was then made editor emeritus but neither in the editorial office nor in the classroom—he had become professor emeritus in 1921—did he accept the emerited position as calling a halt to his activities and he interested himself in the same unassuming conscientious way in all that had to do with the *Journal* and with the university right up to the last week of his life His activity as an octogenarian was almost a proverb in Montreal in the streets of which he went about his business as briskly as men who numbered only half his years

Dr Blackader married a Montreal lady who survives him with one daughter His only son serving in the war with the Royal Highlanders of Canada was wounded near Ypres and died shortly afterwards in London

Almost 100 medical men and women gathered to pay a final tribute on the occasion of Dr Blackader's funeral at St George's Church Montreal on March 16th The Canadian Medical Association was represented by its officers and members and many representatives of the city and university attended The gathering was an eloquent testimony to the high degree of personal regard which he enjoyed in addition to his reputation for professional attainments Dean Martin of the Medical Faculty in a public tribute said that Dr Blackader stood among his professional colleagues as a type which expressed the very highest ideals of his profession and exemplified both in word and deed the truest character of the perfect gentleman

This veteran of Canadian medicine added yet more lustre to the fair name of McGill which conferred on him ten years ago its honorary degree of LL D and in the halls of which his portrait presented to him by his professional brethren now hangs But he did more for he will be remembered as one of those who have helped to build up across the seas a profession with the same outlook and ideals as those of the profession in the Mother land

ALEXANDER JAMES M D F R C P Ed

Consulting Physician Edinburgh Royal Infirmary

The death took place suddenly on April 7th of Dr Alexander James at his residence in Haddington Dr James who was in his 82nd year had been a well known Edinburgh physician retiring from practice some three years ago Born in Edinburgh in 1851 he was educated at the Edinburgh Institution and afterwards studied medicine at the University of Edinburgh where he graduated M B C M in 1872 After a period as resident physician to the professors of clinical medicine in the old Royal Infirmary and as house surgeon to the Liverpool Infirmary for Children he spent a period of post-graduate study at Leipzig and afterwards settled in Edinburgh There he obtained his M D in 1876 and became a Fellow of the Royal College of Physicians in the following year He had a long connexion with the Royal Infirmary as assistant physician and as physician in charge of wards during which time he was a popular teacher of clinical medicine and on his retirement was elected a consulting physician to the institution For many years he held the posts of consulting physician to the City Hospital Edinburgh and of medical officer to the Edinburgh Merchant Company In 1878 he began to lecture on physiology in the extra-academical school and later in 1889 he began an annual course of lectures on the practice of medicine He contributed several small books to medical literature among which were *Pulmonary Phthisis its Etiology Pathology and Treatment* (1888) *Clinical and Physiological Studies* (1888) *Royal Infirmary Clinics* (1896) and more recently a book of general essays entitled *Digressions of a Doctor* He was also a frequent contributor to medical periodicals Dr James was a successful teacher in the Edinburgh Medical School and enjoyed a considerable consulting practice He was in much demand at medical gatherings for his songs and other contributions to social entertainment His recreations were shooting and fishing He is survived by a widow, and by two daughters and a son

HENRY HARVEY M B Ed

Liverpool

Dr CHARLES MACALISTER writes

Liverpool has lost an old and esteemed practitioner by the death of Dr Henry Harvey in his eighty-fifth year By a coincidence a letter informing me of Dr Harvey's death and one from Dr Dan McKenzie enclosing a reprint from the *Transactions* of the Royal Society of Medicine (February 3rd 1932 p 638) of his paper on Alfred Higginson and His Syringe arrived by the same post This paper contains a letter from Dr Harvey written in 1930 in which he gives a vivid description of Higginson's personality and some personal recollections concerning him I mention this because it takes us back to the time when Dr Harvey met Higginson who was on the staff of the Liverpool Southern and Toxteth Hospital Dr Harvey was senior resident medical officer to the hospital in 1871 and at the time of his death was the only human link between that old institution and the Royal Southern Hospital to which he was transferred when it replaced the old building in 1872 He was acquainted with many of the well-known hospital physicians and surgeons who practised in Liverpool at that period and the pity is that he did not write biographical sketches of them to place in the archives of the Liverpool Medical Institution for he was a man of literary culture whose style was one of interesting narrative In the course of conversations with him one learnt much about the conditions more especially of surgical practice in the days when antiseptic surgery was in its infancy and when faulty technique accounted for much scepticism concerning Lister's teaching In discussing the work of the nurses of those days he had much to say concerning the real efficiency of what he styled the born nurses who carried out their work in a missionary spirit compared with others of the charwoman type whose sobriety was not always beyond reproach It was always interesting to meet Dr Harvey because his knowledge embodied the best of the old methods of therapeusis so many of which have unfortunately been forgotten or remain untaught together with the modern methods of treatment in which he was well versed He was a thoroughly sound practitioner trusted and respected by all with whom he came in contact His kindly thoughtful face and gentleness of manner together with his keen personal interest in his patients were in themselves assets which promoted their well being He belonged to the old type of family practitioner whose advice was sought on many matters besides those appertaining to his

profession Of him it might truly be said He is gentil that doth gentil dedis

Dr Harvey was vice president of the Section of Medical Sociology when the British Medical Association held its Annual Meeting at Liverpool in 1912 and on two occasions he was a member of the Representative Body

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Dr J CURTIS FRANKLIN died at Durban South Africa on March 24th He received his medical education at Queen's College Cork and took the diplomas L R C P and S Edin and L R F P S Glas in 1899 He had served in the West African Medical Service and as ship surgeon to the Union Castle Line He had been a member of the British Medical Association for some years

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The following well known foreign medical men have recently died Dr WILLI VORKASTNER professor of forensic medicine at Halle aged 53, Dr MINAKOFF professor of forensic medicine at Moscow General CARLO ANGELO ANNATONE physician to the Royal Family of Abyssinia and formerly sanitary director of the Italian division in Macedonia during the war aged 70 Dr RUDOLF LSCHWEILER extraordinary professor of otology and rhinology at Bonn University, aged 61 Dr KOLOMAN TELEKY SNICZKY formerly professor of anatomy at Budapest Dr LDOUARD MARTIN DU PAN a Geneva paediatrist aged 87 Dr ALOIS CZELJA a prominent Vienna roentgenologist aged 45 Geheimmedizinalrat Professor Dr HEINRICH WALB formerly director of the University ear nose and throat clinic at Bonn Professor WLADIMIR W IWANOW of Moscow one of the most eminent Russian dermatologists aged 58 and Dr CANAC MARQUIS formerly surgeon to the French Hospital of San Francisco

Universities and Colleges

UNIVERSITY OF OXFORD

The electors have awarded the George Herbert Hunt Travelling Scholarship for 1932 to John Charles Needham Green B M B Ch Balliol College

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UNIVERSITY OF CAMBRIDGE

The third examination for medical and surgical degrees will commence on Tuesday June 14th The names of candidates should be sent to the Registrary by Tuesday April 26th Candidates who are members of the Senate may send their names to the Registrary direct but all other names must be sent through the prelectors of the college The fee for each part of the Third M B is £5 5s on readmission £4 4s

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UNIVERSITY OF LONDON

The celebration of presentation for degrees will take place at the Royal Albert Hall on Thursday May 12th at 2 30 p m The annual service for members of the University will be held at Westminster Abbey at 5 30 p m when the Rev F R Barry D S O will preach The graduation dinner will take place in the evening at the Grocers' Hall when the Chancellor will preside

Applications for the University Chair of Physiology tenable at the London Hospital Medical College must be received by the Academic Registrar University of London not later than the first post on May 14th

Three lectures on human and comparative placentation including the early stages of human development will be given in English by Dr Otto Grosser professor of anatomy in the German University Prague at University College on May 2nd 5th and 6th at 5 15 p m Dr J P Hill professor of embryology in the University will preside at the first lecture

A course of two lectures on the autonomic nervous system with lantern and cinematograph illustrations will be given in English by Dr W R Hess professor of physiology in the University of Zürich at the University College on May 12th and 13th At the first lecture Dr C A Lovatt Evans F R S Jodrell professor of physiology in the University will take the chair

The Hobhouse memorial lecture will be delivered at University College by Dr C S Myers F R S principal of the National Institute of Industrial Psychology on Thursday May 19th at 5 30 p m The subject will be The autonomy of any mind body relation

Sir Ernest Graham Little M P has been appointed the representative of the University at the celebration of the fifth centenary of Alfred Fournier to be held at the Sorbonne Paris on May 12th

The Geoffrey E Duveen travelling studentship in oto rhino laryngology of the value of £450 will be awarded annually The tenure shall in the first instance be for one year part of which will be spent in study abroad in accordance with a scheme approved by the Geoffrey Duveen Studentship Board but it may be extended for one or two years and during the extended period the student may be allowed to undertake research at the Royal Ear Hospital or some other laboratory approved for the purpose Grants for promotion of research in oto rhino laryngology or in any part thereof may also be made by the Trust Fund Full particulars can be obtained from the Academic Registrar South Kensington S W 7 and prescribed forms of application must reach him not later than June 11th together with a statement of the nature of the research proposed and a scheme of study for the approval of the Board

Applications for grants from the Thomas Smythe Hughes and Beaverbrook Medical Research Funds for assisting original medical research must be sent in by May 15th accompanied by the names and addresses of two persons to whom reference can be made

The annual dinner of the University of London Medical Graduates' Association will be held on Wednesday May 11th

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UNIVERSITY OF GLASGOW

The following candidates have been approved at the examination indicated

FINAL M B CH B—J J Barton I L Bernstein J Bolton W Boyd W Brownlie R P Butler I Cameron S A Carloo W C Cowan Edith D Dempster W M Dennison M C Dickson M C G Dod Mary M Downes J S Cemmill J D Gilhes Margaret R Gilmour Margaret M Goudie D Houston A Kelly A C Lendrum C A Macdonald T C Macdonald Barbara A A M Geachy J M Govern I R Macintyre I Mackinnon J M Naman D T Macky A M Maiden H D Miller D Murray J H Neill A F Rodger I D W Scott W B Shaw D M Waller R J Watherspoon

* With distinction in Surgery

NATIONAL UNIVERSITY OF IRELAND

The Senate met on April 7th with Mr Eamon de Valera B A B Sc LL D Ph D President Executive Council of Saorstat Eireann Chancellor of the University in the chair Reports of the examiners upon the results of the spring medical examinations were considered and passes honours etc were awarded in connexion therewith Dr William D O'Kelly Professor of Public Health and Bacteriology in University College Dublin was appointed to represent the University at the Centenary Meeting of the British Medical Association to be held in London in July

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ROYAL COLLEGE OF SURGEONS OF ENGLAND

COUNCIL ELECTION

Monday March 21st was the last day for the receipt of nominations of candidates for the Council Of the three retiring members—Mr W McAdam Eccles Mr Wilfred Trotter and Sir Charles Gordon Watson K B E C M G—Mr Trotter and Sir Charles Gordon Watson seek re election and the following candidates also have been nominated Mr A E Webb Johnson C B E D S O Mr C Cordon Taylor O B E Mr W Girling Ball Mr H S Souttar C B E and Mr Cecil P G Wakeley

The composition of the Council since July 1931 has been as follows

President—Lord Moynihan K C M G C B *Council* (1) 1912 (*substitute*) (2) 1919 President 1926

Vice Presidents—Mr R P Rowlands O B E C (1) 1922 (2) 1930 and Mr W Samp on Handley C (1) 1923 (*substitute*) (2) 1929

Other Members of the Council—Sir Holburt Waring C (1) 1913 (2) 1921 (3) 1929 Sir John Lynn Thomas C (1) 1918 (*substitute*) (2) 1925 Mr Ernest W Hey Groves C (1) 1918 (2) 1926 Sir Cuthbert Wallace C (1) 1919 (2) 1927 Mr F J Steward C (1) 1920 (2) 1928 Mr C H Frost C (1) 1921 (2) 1929 Sir Percy

Sugnt C (1) 1923 (substitute) (2) 1930 Mr G F Cash C (1) 1923 (2) 1931 Mr W McAdam Eccles C (1) 1914 (2) 1924 Mr Wilfrid Trotter C 1924 Sir Charles Gordon Watson C 1924 Mr A H Burge C 1925 Mr V Warren Low C (1) 1916 (substitute) (2) 1917 (1) 1926 (substitute) Mr Victor Bonney C (1) 1926 (substitute) (2) 1930 Mr C Grey Turner C 1926 Mr Hugh Lett C 1927 Mr Leonard Gamgee C 1928 (substitute) Mr R G Howarth C 1928 Mr R J Kelly C 1928 Mr Graham Simpson C (1) 1929 (substitute) (2) 1931 Mr V James Walton C 1931

The medical schools are represented as follows

St Bartholomew's	4	Birmingham	1
Guy's	3	Bristol	1
London	2	Cardiff	1
Middlesex	2	Leeds	1
St Mary's	1	Liverpool	1
St Thomas's	2	Manchester	1
University College	1	Newcastle	1
	—	Nottingham	1
Total London	15	Sheffield	1
			—
		Total Provinces	9

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons reassembled on April 5th and approved a proposal to continue transitional benefit under the Unemployment Insurance Act 1930 till the Act ceases to have effect

The House of Commons this week discussed the co ordination of health services the progress of housing and the administration of home affairs The Army and Air Force Annual Bill was read a third time and the Transitional Payments (Unemployed Persons) Bill was reported A Bill to authorize Sunday cinema performances and concerts at the option of local authorities was discussed

A Bill to confirm a scheme for the Royal Medical Benevolent College Epsom was introduced by Dr Burgin a Charity Commissioner on April 13th

Mr Neville Chamberlain will introduce the Budget on April 19th Substantial reductions in direct taxation are not expected

The Health Services

On April 12th Dr MORRIS JONES called attention to local government administration and moved That this House appreciates the progress made by local authorities since the passing of the Local Government Act of 1929 in co ordinating and improving their public health services and while recognizing the need of economy in local expenditure is of opinion that the development of these services should steadily continue as and when circumstances permit He said that since 1891 the expenditure on local administration in this country had gone up from £36 000 000 until to day it was close on £300 000 000 By no means the whole of the expenditure was on public health administration He asked the Minister of Health to tell the House how the amalgamation of areas was proceeding and how many county councils and county boroughs had submitted the schemes which were due by April 1st of this year

These were schemes to be submitted for the future use of Poor Law institutions Some of them were to be absorbed other were to be altered and made more adaptable to modern conditions under the public health and local authorities and some were to be declared redundant That work was long overdue in the interests of public health He understood that in the London area very much progress had been made in dealing with Poor Law institutions The last report of the Ministry of Health showed that thirty seven Poor Law institutions had been appropriated for use as hospital and nine for use as children's hospital or convalescent homes The progress in the country was less satisfactory Only nineteen out of the seventy nine county boroughs had submitted schemes for the reclassification of their Poor Law institutions and not one county council outside London had so far been able to appropriate a single Poor Law institution for the purposes of a general hospital under the control of the local authority The Local Government Act empowered local authorities to make a declaration that such and such health services should be provided otherwise than by way of Poor Law relief Were the local authorities making any of these declarations and if so how many Some local authorities took the view that those declarations were to be made before their taking over from the Poor Law but that was not the case He asked if any county council or county borough had yet transferred the health functions of the Public Assistance Committee to the Public Health Committee or to the Maternal and Child Welfare Committee The whole intention of the Act was that this should be done within a certain time There was freedom under the Act for medical officers to consult with specialists at the large voluntary hospitals He was afraid that so far not much consultation had taken place

The tendency of the Ministry of Health was to get whole time medical officers under its control as far as it could The general medical practitioner had served the country and would continue to serve it he hoped that the Minister would discourage any tendency to relegate the treatment of disease into the hands of the officers of the Ministry If they put a medical officer in charge of maternity and ante natal clinics a large number of expectant mothers would prefer to go to private medical practitioners Some county councils and county boroughs suggested doing away with the old Poor Law medical officer He would be very sorry if that came about One or two authorities had suggested that visits to patients homes should be made by their own institutional medical officer and one authority had proposed the setting up of a panel something like that under the National Insurance Act whereby a sick person in receipt of parish relief would be able to select any doctor from that panel in the neighbourhood He did not think that that would lead to efficiency or economy He would like to know what effect the crisis of last September had had on the public health services Did the Minister consider that there was a reasonable standard of efficiency and progress without excessive and unreasonable expenditure? It was the belief of the supporters of the Act that the changes introduced by it would lead to greater economy in administration by avoiding duplication of service Could the Minister tell the House what was the result of the Act in regard to those particular economies?

Dr FREMANTLE in seconding the motion said they were all agreed that they must maintain the efficiency of institutions and personnel They wanted to make better use of such facilities as they had and to get a better output from them by reorganization They had to face the fact that they could not measure the results of the Local Government Act by any immediate statistics The figures for 1931 were disappointing in regard to the mortality rate The birth rate fell from 16 5 to 15 8 which was the lowest yet The death rate went up from 11 5 to 12 3 and infant mortality rose from 60 to 66 per thousand They were not living in times when they could confidently believe that things were always going to improve Fears had been expressed as to the position of our Poor Law institutions and Parliament might have expected some decline in their efficiency as the result of the enormous task of transferring them to new authorities The London County Council alone took over on the appointed day the work of twenty five boards of guardians thirty five separate infirmaries and twenty eight mixed institutions Yet they had not heard of a single case in which anybody had suffered or in which the efficiency of an institution had suffered The nation owed a debt of gratitude not only to the London County Council but to the local authorities all over the country Those who had worked professionally with the local authorities recognized that great advantages were accruing on the professional side of the work of the institution The reduction in the number of isolation hospitals was a case in point He hoped this reorganization would be carried into effect in the next two or three years The House knew how inadequate had been the arrangements for dealing with a small pox epidemic That raised the further question of vaccination and it was clear that in the revision of machinery for maintaining the public health Parliament must review the vaccination laws and the whole of the vaccination machinery To what extent was the transfer of powers under the Local Government Act a preparation for such a revision of the vaccination laws and their

administration? He hoped that the county councils in taking over powers to deal with small-pox and vaccination would be able to prepare a sound scheme to deal with the appalling anomaly under which the country was supposed to have a system of compulsory vaccination when only one-third or *one-fourth or less of the population* growing up were vaccinated. Another point to consider in developments under the Local Government Act was the threat to voluntary institutions voluntary hospitals and voluntary agencies engaged in health work. Even the most extreme Socialist recognized that for the present the voluntary system must remain. At the present time when they had to consider both efficiency and economy it would be madness to interfere with the efficiency of voluntary hospitals and other institutions. The advantage of the voluntary system was that those who gave generally in that results were obtained from their contributions and that was why municipal hospitals had a duller and less appetizing air about them. In London everything had been done by officials to try to work with the voluntary hospitals and yet the voluntary hospitals felt that it was more and more difficult to hold their own against the municipal side of hospital work. He had been in close touch with the thirteen teaching voluntary hospitals in London. They were perturbed by the fact that whereas the Local Government Act provided for a London Voluntary Hospitals Committee to be in constant consultation with the London County Council there were in fact 150 hospitals represented on that committee and that the thirteen teaching hospitals had not had their interests adequately considered. There was an idea that the London County Council was going to set up a central teaching hospital which would compete with the voluntary teaching hospitals which have been the foundation of British medicine. That was not intended by the London County Council but it did intend to carry out a splendid scheme introduced by the Government for a post-graduate teaching centre in London. The voluntary hospitals must be given the work of teaching and of research. Neither could be properly carried out in municipal or in official institutions. On the other hand municipal hospitals ought to work with the voluntary or teaching hospitals with a view to greater efficiency. The municipal hospitals had a large field of clinical material which would be of great advantage to the rising medical profession and to the nursing profession in the ordinary voluntary hospitals. The teaching hospitals would willingly help with the work of the Poor Law infirmaries if adequate arrangements were made for them to do so. If they did so municipalities would get work done by men who gave their services for nothing. A proposal had been made that the London County Council should arrange to group laboratories for all their work. That was criticized by Sir Ernest Graham Little recently but he (Dr Fremantle) thought there must be grouped laboratories. That required detailed working out. They were all looking forward to the first revision of the grants under the Local Government Act and they were very much concerned about what the grants would be in the present financial difficulties. With regard to the penal clause which gave the Minister power to refuse grants to those authorities which were not doing their job properly he hoped that that power would be used not to penalize authorities but to keep them up to the mark.

The Minister's Reply

Sir E HILTON YOUNG Minister of Health said there was no foundation for the suggestion that there had been unwise restriction of the public health services in the interests of economy. It was the policy of this Government as it would be of any Government to consider public health as a matter of urgent national importance. He had an estimate made of all the claims of development in regard to public health which were before the Ministry at the time of the effort for economy. They amounted roughly to £1 000 000, and of that only £150 000 had been abandoned. In regard to tuberculosis great advantage had been derived from the co-ordination of services which had been possible under the new system of local government. They could now follow up cases after these left the sanatoriums. At the end of December 1930 the number of beds available for the treatment of tuberculosis was 15 972 and at the end of December 1931 the number of beds available was 17 609. The number of infant welfare centres in England and Wales was 3 043 at December 1931 compared with 2 935 at the end of 1930 and of the ante-natal clinics 1 262 compared with 1 101. The scheme for dealing with maternal mortality which had been put forward by the late Labour Government would have caused an additional burden on the country's finance of a nature which they could not bear at this time. He did not think that the Labour Government's scheme was well conceived or would have produced the best for the money. In the war against maternal mortality they wanted to make the best use of available resources. The Ministry had already drafted a circular to local authorities. There were services for promoting the welfare of the mother and child which the local authorities could render but they did not all render them. What could be done was to stimulate local authorities to come up to the standard of the best. Until the best use was made of existing powers it was a waste of time to think of new powers. The co-ordination of public health and public assistance was already yielding valuable interesting and important results both in efficiency and in the economy which was part of efficiency. Another benefit was the ability of the Ministry of Health to concentrate with a single mind on its more proper work of being the clearing-house of knowledge. Special inquiries recently carried out into tuberculosis cancer and cerebro-spinal meningitis were characteristic of the good work which could be done by a central body for the help of local authorities. Another characteristic bit of staff work was in connexion with nutrition. In classification of institutions and the transfer of hospitals from a Poor Law basis to the new status of the general public hospital progress had been satisfactory particularly in London. According to the last report 68 institutions had been turned over from Poor Law purposes to special purposes and since the last report 11 more had been classified. It was a primary object of the Ministry to promote co-ordination between voluntary and public hospitals in every way. He knew of no antagonism between them. He had been asked about the post-graduate school. That was a typical instance of how voluntary hospitals and the public hospitals could by due relations each discharge complementary functions in hospital accommodation and medical education. He was glad to say that the post-graduate school had come to birth and they believed it to be of great promise for the future of medical science and education. It had come to birth in connexion with a public general hospital—the only one of its kind. A charter had been granted and a governing body set up. At present the organization of the school was being worked out.

The motion was withdrawn and a discussion followed on housing.

Indian Medical Qualifications

On April 11th Dr FREMANTLE asked the Secretary of State for India if he had approved the Bill introduced into the Legislative Assembly for the establishment of a Medical Council in India and for the maintenance of a British Indian medical register; whether he was assured that a standard of qualification would be made and maintained which would enable such qualification to be recognized by the General Medical Council of the United Kingdom and whether medical practice both in India and in the United Kingdom and other parts of the British Empire would be freely open to medical practitioners registered by either Medical Council.

Sir S HOARE replied that the answer to the first part of the question was in the affirmative. There was he thought good reason to hope that the standard of the Indian medical qualifications recognized by the Indian Medical Council would be such as would enable them to be recognized also by the General Medical Council here. The present Bill did not deal directly with the right to practise in India. Dr FREMANTLE asked if the right hon. gentleman had any assurance from the General Medical Council here that it would approve the standard set up by this Bill in which case it would settle the question. Sir S HOARE replied that he had had no such assurance. Dr FREMANTLE: Is it possible to get some such assurance before this Bill is passed? Otherwise Indian medical men qualified in India will be debarred from practising in different parts of the Empire. Sir S HOARE: I could not give an answer to that question without further consideration. Dr FREMANTLE: The right hon. gentleman says he has

approved the Bill Did he consider it before he gave his approval or is it only a temporary provisional approval? No reply was given to this question

Hospitals and the Cost of Motor Accidents

Replying to Sir John Haslam on April 6th Mr PYBUS said he did not know the cost to the hospitals during 1931 of treating motor accident cases and what proportion of such cost had been recovered by them under the Road Traffic Act The information was very difficult to procure but he would try again Sir JOHN HASLAM subsequently put down a question for April 13th asking Mr Pybus if he knew that according to the British Medical Association 7 326 motor accidents were treated in 135 hospitals during 1931 incurring a total cost to the hospitals of £64 132 and that the claims repaid under the Road Traffic Act amounted to £6 575 or about 10 per cent and what steps he proposed to take in order that the expectations under the Act could be realized No reply was given on April 6th to a suggestion by Sir JOSEPH NALL that the police should be asked to send accident cases to municipal hospitals which were in a position to make charges

Slum Clearance.—On April 5th Mr E BROWN replying to Mr Albery said that up to March 31st 1932 the Minister of Health had received resolutions declaring 408 areas in England and Wales the clearance of which involved the displacement and rehousing of approximately 68 000 persons to be clearance areas under the Housing Act 1930 and 269 clearance or compulsory purchase orders had been submitted in connexion with such areas Upwards of 13 000 houses which were either earmarked or available for the purposes of the Act had been erected or were under construction The intention was that local authorities should continue to make the fullest possible use of their powers in this matter

Number of Mental Defectives in Great Britain.—In reply to Mr Lambert on April 7th Sir HILTON YOUNG said the number of mentally defective persons including children in Great Britain was estimated by the Wood Committee to be approximately 300 000 On January 1st 1932 the total number of mental defectives actually ascertained by local authorities was 97 310 of whom 33 356 were in institutions or under guardianship

Maternal Mortality Committee's Report.—Mr ERNEST BROWN stated on April 6th that the Departmental Committee on Maternal Mortality was considering its final report which was expected to be ready for publication towards the end of the summer

Ante natal Clinics.—Sir HILTON YOUNG told Mr Rhys Davies on April 8th that the approval of the Ministry of Health was not now required for the establishment of ante natal clinics by local authorities In 1930 the latest year for which statistics were available 854 ante natal clinics had been established in England and Wales by local authorities and 194 by voluntary associations these included 118 in London In Wales 53 had been established by local authorities but none by voluntary associations

Royal Commission on Lotteries.—Mr MACDONALD stated on April 11th that the terms of reference of the Royal Commission to be set up to inquire into the law regarding lotteries are under consideration It would be impracticable to suggest any time limit within which the Commission was to report Pending the receipt of the report it would be inappropriate for the Lotteries Bill to proceed

Shellfish.—On April 11th Mr E BROWN replying to Sir A Samuel said that sanitary authorities had general powers for the inspection and seizure of unwholesome food and these were put into operation from time to time to prevent the sale of shellfish which appeared to be polluted No special regulations had been made by the Ministry of Health with regard to imported shellfish The Irish Free State Government had made regulations prohibiting the distribution for sale for human consumption of shellfish taken from layings in and immediately in the counties of Louth and Meath unless the shellfish had been washed and relaid

The Services

I M S DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant London on Wednesday June 15th at 7 15 p m Major General J W D Megaw C I E has been invited to take the chair Tickets and all particulars may be obtained from the joint honorary secretaries Major Sir Thomas Carey Evans V C Hammersmith Hospital Ducane Road W 12

DEATHS IN THE SERVICES

Captain Lewis Julius Christopher Hearn R A M C (ret) died at San Diego California on January 18th aged 62 He was born at Ballyconnell on March 31st 1869 and was educated at Trinity College Dublin where he graduated M B Ch B and B A O in 1896 Entering the Army as surgeon lieutenant on July 28th 1897 he became captain after three years service was placed on half pay on account of ill health on June 27th 1903 and retired on June 27th 1908 He served in the Nile campaign of 1898 receiving the British and Egyptian medals and in the operations at Sierra Leone in 1898–99 receiving the West African medal with a clasp

Lieut Colonel Vivian Godfrey Drake Brockman Bengal Medical Service (ret) died at Hook Heath Woking on January 16th aged 62 He was born at Lucknow the son of William Drake Brockman Esq of the Indian Public Works Department on July 9th 1869 was educated at the Middlesex Hospital and took the M R C S and L R C P Lond in 1891 Entering the I M S as surgeon lieutenant on January 30th 1893 when he passed first into Netley he became lieutenant colonel after twenty years service and retired on February 13th 1915 but rejoined in September of the same year and served to the end of the war He served in the North West Frontier of India in the Tochi Valley campaign of 1897–98 receiving the frontier medal with a clasp Most of his service however was put in in civil employ in the North West Provinces now the United Provinces of Agra and Oudh He was a brother of Lieut Colonel H E Drake Brockman I M S (ret)

Lieut Colonel John William Unthank MacNamara Bengal Medical Service (ret) died on January 2nd aged 78 He was born on July 12th 1853 the son of the late Michael MacNamara and was educated at Queen's College Galway and in Dublin He graduated B A in 1873 and M D with honours in 1879 in the Queen's University Ireland and M A in the Royal University (the name having been changed) in 1880 also taking the L R C S I in 1878 and the L A H in 1879 He entered the I M S as surgeon on October 31st 1879 passing first into Netley became lieutenant colonel after twenty years service and retired on July 12th 1908 Most of his service was passed in civil employ in Assam where he was for many years civil surgeon of Sylhet and later of Tezpur

Lieut Colonel John Lawrence Van Geyzel Madras Medical Service (ret) died suddenly at Cannes on February 20th aged 74 He was born at Colombo on June 19th 1857 the son of John Abraham Van Geyzel of that city and was educated at the Royal Academy Colombo and at Aberdeen University where he graduated M B and C M in 1879 Entering the I M S as surgeon on October 2nd 1880 he became lieutenant colonel after twenty years service and retired on July 9th 1911 From 1887 to 1911 he held the appointment of professor of chemistry in the Madras Medical College and chemical examiner to the Government of Madras While holding that post he introduced x ray photography into Madras He was selected as photographer to the Madras Astronomers Expedition to observe the total eclipse of 1898 After his retirement from the Service in 1911 he was appointed examiner of medical stores to the India Office and held that post for about fifteen years He was given the C I E on January 1st 1921 He married Catherine Mee daughter of Mr W J Palmer of Hertford who survives him

Lieut Colonel John Henry Tull Walsh Bengal Medical Service (ret) died at Kington Hill on March 27th aged 72 He was born on July 6th 1859 the son of the Rev Thomas Harry Walsh of Alton Hayes Chester was educated at Westminster Hospital and took the M R C S in 1881 the M R C P Lond in 1883 and the I R C S in 1895 Entering the I M S as surgeon on April 1st 1884 when he passed first

into Netley he became lieutenant colonel after twenty years service and retired on July 21st 1905 Most of his service was spent in civil employ in Bengal where he was for many years civil surgeon of Murshidabad and for the last few years of his service superintendent of the Campbell Medical School and Hospital police surgeon of Calcutta and professor of medical jurisprudence in the Calcutta Medical College He served in the Burmese war in 1885-87 when he took part in the Chindwin River campaign and received the frontier medial with a clasp After his retirement he rejoined during the war of 1914-18 and served in the Indian hospital in the Pavilion at Brighton from January 20th 1915 till July 1915 when his health broke down and he was invalided He was the author of a *History of the Murshidabad District* (1902) and edited the seventh edition of *Moore's Family Medicine for India* in 1903

Medical News

A meeting of the Royal Microscopical Society will be held at B M A House Tavistock Square W C on Wednesday April 20th for special consideration of the microscopy of the filterable viruses At 4 p m there will be an exhibition and demonstration of specimens and apparatus and at 5 p m the president Mr Conrad Beck will open the discussion followed by Mr J L Barnard, F R S Professor J C G Ledingham F R S Dr S P Bedson Dr C C Hurst Professor J McIntosh Captain S R Douglas F R S Dr W J Elford Dr C M Findlay and Mr B K Johnson

The annual general meeting of the Medical Society of London will be held at 11 Chandos Street W on May 9th at 8 p m Sir *James Berry will deliver* the annual oration at 8 30 p m his subject being Fallen idols A conversazione will follow the oration

A *sessional meeting* of the Royal Sanitary Institute will be held in the Guildhall Norwich on Friday April 29th when discussions will be opened on Some questions of infectious diseases, by Dr W F Soothill and on The housing problem by Mr J S Bullough at 5 p m The chair will be taken by Dr Charles Porter On April 30th a visit will be made to the Norwich refuse dump

The third regional conference of the British Health Resorts Association (southern region western section comprising Weymouth Swanage Poole Bournemouth and Christchurch) *will be held at the Town Hall Bournemouth* under the presidency of the mayor from April 29th to May 1st The chairman at the morning session on Saturday April 30th will be Sir Thomas Oliver M D and at the afternoon session Dr Alfred Cox

Among the Friday evening discourses of the Royal Institution which will be resumed on April 22nd and continued until June 3rd are the *following* April 22nd Professor J B S Haldane hereditary transmission of acquired characters April 29th Professor H Hartridge the rival theories of hearing May 20th Professor Henry E Armstrong Faraday at the sign of the hexagon coal colour and constitution, and May 27th Sir Walter Fletcher new conceptions of medical research The discourses are given in the lecture theatre at 21 Albemarle Street W at 9 o clock

A discussion on Infection in the dormitory ' will be held at the combined meeting of the Sections of Epidemiology and State Medicine and Disease in Children of the Royal Society of Medicine on Tuesday April 19th at 8 p m Drs A J Glover and R E Smith will open on behalf of the former Section and Surgeon Commander S F Dudley and Dr W H Bradley on behalf of the latter Section

Three public lectures arranged by the National Institute of Industrial Psychology (under the Heath Clark Bequest) on psychological and social factors in business rationalization will be delivered by Dr Charles S Myers F R S principal of the National Institute of Industrial Psychology on Wednesdays May 4th 11th and 18th at 5 30 p m at the *London School of Economics and Political* Science Admission free and without ticket

A course of six weekly lectures on ' The foundations of moral values will be given by Professor J H Muirhead L L D on Wednesdays at 5 45 p m beginning April 27th at University Hall 14 Gordon Square W C 1 Syllabus can be obtained on application to the Director of Studies at University Hall

A course of lectures on pathological research in its relation to medicine will be held at the Institute of Pathology and Research St Mary's Hospital Paddington on Tuesdays at 5 p m during the summer session The first of the series will be given on April 26th by Sir Almroth Wright F R S on a new body of immunological doctrine on June 14th Professor R T Leiper F R S will conclude the course with a lecture on helminth migrations The lectures are open to all members of the medical profession and students in medical schools without fee

The Fellowship of Medicine and Post Graduate Medical Association 1 Wimpole Street W 1 announces an all day course in oto rhino laryngology at the Central London Throat Nose and Ear Hospital from April 18th to May 14th Courses taking place in the near future include paediatrics at the Hospital for Sick Children April 25th to May 7th in the mornings and during the same period at the Infants Hospital in the afternoons afternoon courses in psychological medicine at the Maudsley Hospital April 25th to May 21st in the afternoons and in dermatology at St John's Hospital May 2nd to 28th An evening M R C P course will be given on Mondays and Fridays in June five demonstrators will attend each evening with cases which the post graduates will examine and on which they will be questioned as to diagnosis and treatment two pathological evenings will also be included Three evening lectures on post encephalitis will be given by Professor Arthur J Hall during June Details will soon be ready of all the above courses which are open only to members of the Fellowship of Medicine

The preliminary programme has now been issued for the meeting of the American Association for the Study of Goiter to be held in Canada at Hamilton Ontario on June 14th 15th and 16th The corresponding secretary is Dr J R Young Rose Dispensary Building Terre Haute Ind U S A

The French committee of the International Union for the Protection of Childhood has decided that the seventh international congress shall be held in Paris from July 5th to 9th 1933 when the following questions will be discussed (1) medical supervision of games (2) the State and welfare work Further information can be obtained from the Comite National de l Enfance 26 Boulevard de Vaugirard Paris XVe

The sixth Congress of the French Societies of Oto neuro ophthalmology will be held at Montpellier, under the presidency of Professor Euziere from May 27th to 29th when the subject for discussion will be the sequelae of closed cranial trauma

The next award of the Hunterian Society gold medal will be made in 1933 for the best essay received on or before December 31st 1932 The competition is open to all general practitioners resident in Great Britain Ireland and the Channel Islands and for this purpose the council defines a general practitioner as being he who is not established in any special branch of work or in consulting work The rules governing the award may be obtained from the secretary Mr Andrew McAllister 79 Wimpole Street W 1

A preliminary meeting of the Réunion Internationale de Prophylaxie et d Hygiène Mentale was held in Paris on September 21st 1931 under the presidency of M Justin Godart formerly Minister of Health the British representatives being Sir Hubert Bond and Drs Brock and Donald Ross It was decided that the next congress should be held in Paris this year when the following subjects would be discussed open psychiatric services introduced by Dr Toulouse, eugenics and mental prophylaxis introduced by Professor Rudin and unification of psychiatric statistics introduced by Dr Bersot

In order to arouse the interest of women in the subject the National Safety First Association will devote a session during its forthcoming annual congress to the study of safety in the home when the speakers will include Dr Elizabeth Sloan Chesser Miss C Haslett director of the Electrical Association for Women and Miss Norah March secretary of the National Baby Week Council The president of the Association Lord Brentford will open the session and the Right Hon Margaret Bondfield hopes to preside Women's organizations are co operating in the arrangements for this session which will be held on the morning of Thursday May 5th in Caxton Hall Westminster S W admission free Tickets and full particulars obtainable from the National Safety First Association, 119 Victoria Street S W 1

The Association of Certificated Blind Masseurs has formed a medical advisory board to advise on the extension of training of blind masseurs and masseuses The board will consist of Dr L Danyers Bailey Dr C C Worster Drought Dr F D Howitt Dr W Kerr Russell Mr P Jenner Verrall Mr A Mace (representing St Dunstan's) and Mr P L Way (representing the council of the association and the massage school of the National Institute for the Blind)

The Battersea General (Anti Vivisection) Hospital having intimated that it now gives anti tetanic serum has been restored by the London County Council to the list of hospitals to which accident ambulance cases can be taken It was removed from the list in 1927 following upon a resolution of the Council that no hospital not equipped for the reception and treatment of serious cases of accident or illness should be retained thereon

The permanent committee of the International Congress of Military Medicine and Pharmacy announces that on the occasion of the second Congress of the International Registration Office of Military Medicine to be held at Liege from June 22nd to 25th the new central office which the city of Liege has presented to this organization will be opened with full ceremony There will be a series of lectures and discussions on the organization and functioning of the various forms of preventive and clinical work in connexion with armed forces as well as on the international law pertaining thereto Immediately following this congress there will open at Brussels the annual conference known as the Journees Medicales de Bruxelles

Lady (Olive) Watson M B Ch B has been appointed a member of the Board of Trustees for the National Galleries of Scotland for a period of five years as from April 1st 1932

We are informed that the National Institute of Child Psychology has been obliged to cut down some of its activities owing to shortage of funds but is carrying on at 20 Warwick Crescent W 2 with a smaller staff and a reduced number of cases selected for their special clinical interest

The issue of the *Deutsche medizinische Wochenschrift* for March 25th which is devoted to Koch contains an article by Professor William Bulloch entitled Robert Koch and England

Professor Wilhelm Tauffer of Budapest the doyen of Hungarian *gynaecology has recently* celebrated his eightieth birthday and the fiftieth anniversary of his professorship

Professors Roux of Lausanne and Marinesco of Bucarest have been elected foreign associate members of the Academie de Medecine

The Students' Association of the University of California at San Francisco has made a donation of 1 500 dollars to the University for carrying out investigations on the treatment of epidermomycosis otherwise known as athlete's foot

By the will of the late Miss Elizabeth Fullarton of Bladdog House Lamlash Arran a sum estimated at £50 000 is to be divided between the Royal Western Victoria and Eye Infirmaries and the Ophthalmic Institution of Glasgow

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861 9862 9863 and 9864 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are

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The address of the Irish Office of the British Medical Association is 16 South Frederick Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone *24361 Edinburgh*)

QUERIES AND ANSWERS

Mucocutaneous Ulcers

J C F (Glasgow) writes I have a patient who has had ulcers of mouth and vulva almost weekly during the past ten years No gastric complaint and no apparent cause in any other region of body and no septic focus The patient is in good health Could anyone suggest probable cause or some permanent cure?

Overdose of Ephedrine Hydrochloride

Dr H GORDON O B L (Weybridge) recording a case in which a female child of 2½ years drank a large quantity of a mixture containing ephedrine hydrochloride (estimated at 4 grains) would welcome further information about the effects of this drug on the various organs together with additional or alternative suggestions for combating overdosage He writes Strong salt and water solution was ordered as an emetic The child was very frightened pulse was over 200 per minute the heart beats were very forceful and there was incessant hiccup After the girl had been sick sweetened sodium bicarbonate solution was ordered and as the salt water had made her thirsty she drank this with avidity I was not certain what effect ephedrine would have on the liver glycogen but arguing that it might be similar to that of adrenaline I gave the sugar to replace the glucose and hence the glycogen The sodium bicarbonate was given to counteract any tendency to acidosis which might occur In order to overcome the effects of the constriction of the peripheral arterioles a hot bath was ordered and after this the child slept Next day she was perfectly normal Amyl nitrite was not resorted to in order to lower the blood pressure for the dosage is not measured I was not certain of the effects on a child 2½ years of age and I did not wish to substitute one emergency for another

Plantar Corns

Dr R J MORRIS (Harrogate) writes in reply to Clavus (April 9th p 692) Use ung acid benzoic co (*B P C*) for the interdigital condition or use mycol (*P D and Co*) which contains chlortone 3 per cent alcoholic 4 per cent and mercury salicylate 4 per cent in a suitable ointment base For the callosities or corns use a medium sandpaper every morning and pare the affected areas with collodion callosum this must be persevered with regularly To prevent recurrence wear shoes or boots with stiff soles and wide round and large enough to permit of an insole or sock lining of loofah—the loofah's rounded downwards the smooth side next the foot

Income Tax

Proportion of Home used Professional

N H is in practice in the suburbs and uses the house in which he resides for the entire work of the practice He pays rent on a repairing lease What proportion can he claim?

There is no fixed rule in the matter so much depends on the relative proportions in each case actually used

privately and professionally The latter category would cover the surgery waiting room garage and dispensary and some allowance would be due for the bedroom occupied by the maid employed for the purposes of the practice There was formerly a maximum allowance of two thirds for professional use but nowadays one half is a more common proportion One useful basis of comparison is to have regard to the balance left (one third or one half as the case may be) and consider whether that represents a reasonable payment for the private use having in mind what is paid by other private tenants in the locality Rates would follow the same proportion but repairs can usually be dealt with more precisely the actual expenditure on the professional rooms being charged as professional expenses

Employment of Boy on Car and Garden

H S employs a boy 18 years of age for cleaning the car doing running repairs and driving the car when a locum is employed he also works in the garden etc So far H S has charged half his salary as a professional expense is that enough?

The answer depends on whether the boy spends more than half his time working in connexion with the car Failing H S employs a locum to an abnormal extent thereby increasing the boy's motor car work one half would seem to be about the right proportion

LETTERS, NOTES, ETC

Is Determinism Dead?

Mr F C FINTO L R C S I (Dublin) writes In the *Journal of Lectures 27th under the heading, of The philosophy of a biologist* Dr Joseph Needham's book *The Great Amphibium* is reviewed and the reviewer goes on to say that To-day the physicists have abandoned determinism but most of the followers of biological science more royalist than the King remain faithful to their ancient creed and while the physicists are driven to advance theories of indeterminacy to account for the vagaries of the behaviour of atoms many psychologists confidently interpret human behaviour on strictly deterministic lines Further on the article states The new physics was founded because the laws of classical physics could not explain the behaviour of the smallest units of matter From which I presume that the writer of the article as well as Dr Needham agrees with certain eminent physicists that determinism is now dead as the dodo and should be decently interred Now Sir I have recently perused certain articles published by Jeans and others in which they discuss the evidence for and against (chiefly against) determinism and I must say that I do not feel convinced that determinism is dead To me as an ordinary plain man in the street we must go whole hog either for determinism or for indeterminism I can find no compromise or half way road between the two If we throw determinism overboard what have we got to take its place? Two and two can no longer when added together be held always to make four and should we combine two parts of hydrogen with one of oxygen in a vessel and pass an electric spark we are as likely to find chocolate creams or red herrings resulting as we are to find water Simply because certain of those minute particles which constitute the atom do not always behave in accordance with our preconceived ideas of how they should behave is in my opinion no reason for scrapping determinism If we scrap determinism I am afraid nothing will remain but chaos Until physicists are able to assure us that they thoroughly know and understand all the laws which govern the behaviour of what is called matter in its entirety I think they would be well advised to leave the question of whether determinism is or is not dead severely alone

Doctors and District Nurses

A Somerset C P writes It appears to me that Another Devonshire C P and possibly C P writing on March 26th are rather beside the mark It is undoubtedly the case that rural and possibly country town midwifery is now conducted by the district nurse under the guidance of C M B Certainly this is so in slum and cottage cases The midwife only sends for the doctor when she is unable to conduct the case herself by reason of abnormal presentation My experience fully endorses that of C P of March 26th and I need only quote two recent instances out of many of flagrant breaches of professional etiquette by the district nurse (1) Attendance for several weeks upon a mentally deranged woman who finally committed suicide by putting herself upside down in a tub of water at which event I was called in I *am pleased* to say that I induced the coroner to reprimand the nurse *for accepting responsibilities* which did not come within her scope (2) A private patient of mine for whom I ordered a simple enema and instructed the friends of the patient to get the nurse to administer it The nurse reported to me that she had failed to give a satisfactory enema but had given the patient a good dose of castor oil These are two of many instances in my practice where a district nurse has prescribed for my private patients and more often than not in cases when I have not sent for her but found her in attendance while I was attending A nurse's duty is to nurse to act under the instructions of the medical attendant and *not to run a competitive* medical and surgical practice It is high time that the British Medical Association took up this district nursing question with the county nursing associations which run their nursing scheme to the detriment of the medical profession and the public *The district nurse* is between the devil and the deep sea She must carry on as her local nursing committee dictates she must tout for subscribers and please the public and she must beware of the doctor upon whose field of work she generally encroaches so unprofessionally

Dr S BARTLETT (South Uist) writes *in reply to* G P's letter published on March 26th (p 598) I have an area of roughly 100 square miles with two district nurses I am president of both nursing associations and control both nurses They have always proved most willing and eager to do anything I have told them and have shown themselves capable midwives They save me many weary hours and are always at hand to give an enema when required I would not be without them for worlds God bless them

A Medical Epitaph

C S W writes *On a tablet beside the south door of* Totnes Parish Church there is the following epitaph to William Marshall surgeon who died on May 17th 1808

Steady but liberal in his Religion
Humane and friendly in his Profession
Circumspect in his Morals
Conciliating in his Manners
Revered by his Relatives
And regretted by his Patients
By a sudden call of the divine Mercy
He was taken hence to a better World

Of Mr Marshall's virtues the one that appeals to me most is the third The *Concise Oxford Dictionary* defines *Circumspect* as Cautious wary taking everything *into* account

First aid Equipment on the Roads

The Automobile Association announces that in future all A A roadside telephone boxes will be equipped with emergency first aid outfits *which* will be available to members at any hour of the day or night The contents include iodine sterilized dressings bandages safety pins etc and are intended for the use of members in the absence of the A A patrols *This new emergency outfit* is supplementary to the comprehensive first aid set contained in all the roadside telephone boxes which is used by patrols who are qualified to *render* first aid in cases of accident

Indian Medical Service Pensions

A Correction

Colonel W G KING I M S (ret) writes In my letter on the above subject which appeared in your issue of April 2nd I suggested that in discussion it was desirable to hold in mind the distinction between the Indian Medical Service and the *Indian Medical Department* with which it might be confused As to the latter term I should have used the full designation—Indian Medical *Subordinate Department*

Corrigendum

The photograph of the late Professor G M Robertson reproduced last week was by Messrs E R Yerbury (Edinburgh) and not Yerburg as printed

Vacancies

Notifications of offices vacant in universities *medical colleges* and of *vacant resident* and other appointments at hospitals will be found at pages 38 39 40 41 44 and 45 of our advertisement columns and *advertisements as to partnerships assistantships and* locumtenencies at pages 42 and 43

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 143

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

350 Influenzal Meningitis

I Rou (*These de Paris* 1931 No 525) maintains that *B influenzæ* meningitis is an independent disease and is only in exceptional cases a complication of influenza It shows a predilection for children in whom 88 per cent of the cases occur but it may also be observed in adults As a rule the infection is confined to the meninges and there are no septicæmic complications The prognosis is extremely grave in the infant the mortality rate being 96 per cent Recovery however may take place either spontaneously or as the result of treatment such as intrathecal injection of a vaccine or specific serotherapy The thesis contains the histories of nine cases in patients aged from 1 to 33 years in whom recovery ensued

351 Coronary Thrombosis

J C Meakins and W W Eakin (*Canadian Med Assoc Journ* January 1932 p 18) from a clinical and pathological study of sixty two cases of coronary thrombosis conclude that there has been no pronounced increase in the incidence of this condition during the last forty years The average age of the patients was 55 twelve were females and fifty males Dyspnœa of a paroxysmal nature occasionally without pain was the most frequent symptom with the onset of occlusion there is a characteristic fall in the blood pressure Cardiac enlargement was present in 82 per cent of the cases Apart from the vascular system gall stones and diabetes were the most frequent pathological associates in twenty one cases there was a pronounced degree of general arterio sclerosis In forty four the thrombosis only affected the left coronary artery it was found most frequently in the left descending branch Atheroma of the coronary arteries whether due to the hypertension or not was found to be the most important contributing cause of the thrombosis The treatment is the same as for thrombosis elsewhere in the body an essential feature being the allowance of time for adaptation to the injury and for anastomosis to take place Prolonged rest in bed must be continued after the acute symptoms have subsided Digitalis is chiefly useful when symptoms of circulatory failure develop

352 A Blood Transfusion Fatality

I W Papr and H Ikkischner (*Journ Amer Med Assoc* January 2nd 1932 p 47) report the case of a Syrian aged 27 admitted into hospital with an incomplete abortion complicated by severe secondary anæmia The treatment proposed was transfusion followed by curetting The patient was typed as O (Jansky I) her husband of the same blood group was secured as donor Cross typing was performed with the patient's serum and cells against the donor's cells and serum and the bloods were adjudged entirely compatible Direct transfusion was undertaken two days after admission and 400 c.cm of blood was introduced At 200 c.cm the patient complained of vertigo and nausea and her face became flushed This was thought to be of nervous origin and the transfusion was completed By this time there was a bright red flush over the entire body surface and the patient was markedly uncomfortable Congestion persisted the breathing became laboured œdema of the arms and hips appeared the conjunctivæ became blood shot the pulse weakened to imperceptibility but the heart remained normal and not very rapid Adrenaline caffeine and strychnine were administered but soon afterwards the superficial flush became cyanotic and the breathing less laboured although still rapid Oxygen was given but four and a half hours after the transfusion the cyanosis deepened the pupils dilated and the respiration became laboured The heart for the first time became irregular and feeble and death supervened from circulatory failure Re examination of the blood of the donor and of the recipient immediately after the transfusion showed that the bloods were entirely compatible both being of type O Further examination revealed the fact however that the donor's cells slowly haemolysed *in vitro* with the recipient's serum The haemolysis was not so rapid as to call attention to its occurrence in the usual cross typing preparation

353 Diagnosis of Raynaud's Disease

L V Allen and G L Brown (*Amer Journ Med Sci* February 1932 p 187) review critically the minimal requisites for a diagnosis of Raynaud's disease and point out that much greater accuracy in distinguishing the various forms of peripheral vascular disorders is necessary if treatment is to be evaluated correctly Recording a series of 150 cases of this disease the authors approve the four requirements for diagnosis postulated by Raynaud (1) gangrene or trophic changes limited in a large degree to the skin (2) symmetrical or bilateral involvement (3) the absence of evidence of occlusive lesions of the peripheral arteries and (4) intermittent attacks of changes in colour which usually precede the trophic alterations by months or years The authors found twenty five cases reported in the literature as being instances of Raynaud's disease none of which fulfilled the necessary requirements for such a diagnosis many being obvious examples of thrombo angiitis obliterans In their own series each patient was subjected to a complete neurological examination the potency of the peripheral arteries was determined and recorded further investigations of this being made after long intervals As regards the secondary criteria of Raynaud's disease they specify (1) a predilection for females nine out of ten patients being of this sex and (2) the absence of pain They maintain that the occurrence of severe pain during the attacks is so exceptional that it strongly contraindicates the diagnosis of a primary vasomotor disturbance of the spastic type It has also to be remembered that arthritis neuritis the presence of a cervical rib thrombo angiitis obliterans arterio sclerosis and other diseases may give rise to disturbances of colour of the hands or feet their existence must therefore be definitely excluded Gangrene is relatively rare in Raynaud's disease probably in 20 per cent of the cases the patients suffer definite loss of tissue frequently in the form of minute excavations without symptoms The more severe grades of gangrene take the form of digital suppuration often associated with sclerodermal alterations in the skin The authors add that to diagnose Raynaud's disease without determining the state of pulsation in the peripheral vessels is comparible with diagnosing mitral stenosis without auscultating the heart

Surgery

354 Subacute Infectious Arthritis of the Hip

C Clavelin and J Nellhaus (*Arch de Chir* December 1931 p 689) describe a series of cases of disease of the hip joint which simulate tuberculous arthritis The cases however have a more favourable prognosis in spite of the acute onset of the disease and appear to run an intermediate course between that of acute purulent arthritis and that of chronic arthritis of tuberculous origin or not The cases reported have therefore been grouped under the term of subacute infectious arthritis They are divided into two different groups those which developed during or at the end of some acute medical condition such as suppurating otitis acute tonsilitis or measles and those which occurred in patients of apparently good health and developed rapidly from slight pain in the joints to an attack of great severity accompanied by raised temperature and

some skin lesion such as boils or eczema In every instance the onset was acute with evidence of reaction in the joints limitation of movement and pain on mobilization which after a few days became so intense as to prohibit all movement The leg became fixed in a position of flexion abduction with oedema over the hip joint at this stage in a ray examination showed no modification of the joint surfaces nor any signs of decalcification After a few days and following the immobilization of the joint the symptoms decreased in intensity In one case an abscess developed in the inguinal region on puncture this was found to contain a watery fluid which gave a culture of staphylococci As the temperature falls and the general infection subsides the development of ankylosis appears to be almost inevitable it occurred in all but one of the cases reported X ray investigations although negative in the early stages later reveal the complete disappearance of the joint space and the destruction of the upper end of the head of the femur Medical treatment must be given for the infection and will vary according to the nature of the organism but emphasis is laid by the author on the importance of early local treatment such as the immobilization of the limb in a good position if possible before pain in the joint becomes acute In cases with no lesions of the skin a plaster case reaching from the foot to the chest is most satisfactory but when boils or eczema are present an extension instrument is best Owing to the danger of ankylosis resulting the joint should be kept in a position of slight abduction while care must be taken to preserve movement in the knee and ankle during treatment

355 Injection Treatment of Haemorrhoids

W A LANSER (*Minnesota Med* February 1932 p 98) discusses the injection treatment of haemorrhoids Either by an interstitial injection directly into the substance of the pile or by an injection just beneath the mucosa above and covering it an attempt is made to produce a thrombosis of the haemorrhoidal vessels the inflammatory reaction eventually obliterating the varicosities The only type suitable for injection according to the author is the internal haemorrhoid which after injection will remain above the internal sphincter muscle Sufficient inflammatory reaction to produce fibrosis is all that is required, and sloughing should be avoided Lanser commends 1 to 2 c cm of a 5 per cent quinine urea hydrochloride solution or 5 to 10 minims of a 20 per cent phenol solution in equal parts of glycerin and water as satisfactory preparations for use but for submucous injections 2 to 5 c cm of a 5 per cent phenol solution in olive oil is considered by him to be the best Two areas are sufficient for one injection unless the patient is not working when the complete ring may be injected , the interval between the injections should not be governed by time but by the condition of the haemorrhoid Induration still existing from the previous injection contraindicates further treatment of this kind until it has entirely subsided whether the interval has to be a day or a month A cure should not be promised under four to eight weeks the number of injections required entirely depends upon whether any haemorrhoids are still present when all induration has subsided

356 Appendicitis in Infants

G LOTHEISSEN (*Zentralbl f Chir* January 30th 1932 p 259) records the case histories of four children under the age of 2 who were operated on for appendicitis These cases occurred among a total of 3 629 operations for this disease which gives an incidence of 0 11 per cent in infancy *The prognosis is serious because in infants the omentum is poorly developed there is no tendency for the pus to become encapsulated and the infection is generally streptococcal In these cases only a small perforation is usual appearing as though it had been made with a fine needle* The general picture is that of a heavy infection with a general peritoneal inflammation Even with considerably older children there is often no encapsulation The author believes that the blood stream is an important route of infection The mortality in the four cases amounted to 25 per cent Early diagnosis and operation are essential to save life As regards the diagnosis loss of the abdominal reflex and dullness in the caecal region are important Tenderness at a spot two fingerbreadths below McBurney's point is a particularly valuable sign Only one finger should be used in palpation Observations on the cadaver and on the patient before and after operation have shown that this spot represents almost exactly the junction of the caecum and the appendix It is suggested that during the examination pressure is made on the lymph channels of the mesentery or nerves rendered sensitive by the inflammation Even when the appendix lies against the liver and an encapsulated abscess causes pain there pressure at the spot described always produces severe pain much more so than at the situations which McBurney and Lanz have represented as the appendix points It is stated that if in addition the pressure of the tip of the examining finger is painful on the right but not on the left side the ileo caecal region should certainly be exposed by a *laparotomy*

Therapeutics

357 Atropine Sulphate in the Gastric Crises of Tabes

Remarking that no efficacious treatment for tabetic gastric crises has been recorded up to the present T ALAJOUANINE and A HOROWITZ (*Bull et Mem Soc Med des Hop de Paris* February 15th 1932 p 178) recommend intravenous injections of neutral atropine sulphate in these attacks They have employed this procedure with almost constant success in 30 cases during the past three years only two cases of morphomania failed to respond To test the patient's susceptibility an initial dose of 0 5 or 1 mg is given this usually has a sedative effect and some hours later a dose of 1 to 2 mg according to the result of the first injection is administered This usually checks the crisis In frequently repeated crises and in refractory cases often associated with morphomania one or two injections should be given daily in doses of 1 or 2 mg depending on the intensity of the attack and the results obtained This method is said to be remarkably safe the only after effects are transitory dryness of the mouth and slight transient troubles of accommodation with pupillary dilatation The other lightning pains of tabes are also benefited by this treatment Discussing the mode of action of the salt in these conditions the authors suggest that the effects are produced by its amphotropic action on the whole autonomic system

358 Malarial Therapy of Neurosyphilis

U J WILE and K M DAVENPORT (*Journ Amer Med Assoc* November 28th 1931 p 1579) employed intravenous inoculations of from 2 to 10 c cm of blood taken from patients at the height of a malarial paroxysm of the usual tertian type in the treatment of tabes general paralysis and diffuse neurosyphilis with the following results In 53 per cent of the tabetic patients there was immediate improvement which was increased to 67 per cent on later observation Of a series of general paralytics with tabes 40 per cent showed immediate improvement which was increased to 67 per cent on later observation In 13 per cent of the cases the disease was arrested and in 13 per cent it was made worse 7 per cent of the patients died after leaving *hospital* The immediate results were most striking in the diffuse central nervous system group Ultimate gain in weight was almost constant even in patients who did not otherwise improve After treatment many colloidal gold curves became negative reversed or more or less intense without parallel clinical results Reversal of the Kahn or Wassermann reactions or diminution in their intensity occurred more often in the spinal fluid than in the blood Decline in the cell counts and organic solids was almost invariable P A O'LEARY (ibid p 1585) treated 56 patients with asymptomatic neurosyphilis 18 of whom

were women and 40 men by inoculation of *Plasmodium vivax*. During the malariotherapy anti-syphilitic medication was stopped so as not to confuse the results but it was resumed in the form of arsphenamine or bismuth or both within six months after the course of malaria because otherwise although the progress of the neuro-syphilis might have been arrested other manifestations of syphilis in the viscera might become aggravated. In 34 per cent. of the patients most of whom had undergone intensive anti-syphilitic treatment the previously positive Wassermann reaction in the spinal fluid became negative after treatment by malaria and in another 14 per cent. the spinal fluid was greatly improved.

359 J. STOSSIER (*Rev. Méd. de la Suisse Romande* February 25th 1932 p. 84) reviews the literature and records his observations on 21 cases of general paralysis treated at the Bel Air psychiatric clinic of Geneva between 1926 and 1930 by the inoculation of malaria. The results were as follows: 4 patients died 3 became worse in 7 the condition was unchanged and 7 showed some improvement. The author remarks that his results were therefore much less brilliant than those recorded by other observers but that this might well be attributed to the advanced stage of the disease in several cases.

360 Anti-poliomyelitis Serum in Lethargic Encephalitis

A. NETTER (*Journ. de Méd. de Paris* January 21st 1932 p. 91) states that in 1925 he reported eighteen cases of lethargic encephalitis treated by anti-poliomyelitis serum of which thirteen appeared to make a complete recovery. According to recent information concerning ten of these patients seven are still in a perfect state of health two have a certain degree of Parkinsonism and one has had a relapse. Netter does not regard this successful result as evidence that encephalitis is caused by the virus of poliomyelitis but considers that recovery is due to protein shock comparable with cases of recovery from pneumococcal or paratyphoid arthritis following the injection of anti-meningococcal serum.

Ophthalmology

361 Lenticular Exfoliation

M. S. BEER (*Brit. Journ. Ophthalmol.* February 1932 p. 64) reviews the literature of exfoliation of the lens capsule or glaucoma capsulo-cuticulare and records some personal observations. Exfoliation of the capsule may be seen with the slit-lamp in 17 per cent. of persons over the age of 60 of these 75 per cent. develop secondary glaucoma. Of all cases of glaucoma 8·6 per cent. are due to this condition. The exfoliation occurs peripherally being associated with the deposition on the iris and the pupillary border of bluish felt-like masses composed of debris of the zonular lamella. These masses are not seen in the absence of exfoliation although the converse does not obtain. Glaucoma results from the masses falling into and blocking the filtration angle. The condition is senile slow of development and associated with depigmentation of the iris.

362 Subnormal Accommodation

According to V. D. FRANCIS (*Arch. of Ophthalmol.* December 1931 p. 906) this rare condition rarely overlooked unless the near point of each eye is determined in every case. He gives an historical survey with comments and describes two types the static or premature presbyopia and the dynamic. The dynamic is further subdivided into two classes the permanent or ophthalmoplegic with pupillary changes and the temporary due to some physical cause capable of removal. The etiological condition is frequently a focal infection too often dental sepsis. The dynamic type is too common in asthenic persons—for example after operation. The most significant feature of abnormal accommodation is fixation at a near point without regard to the treatment in the static and the permanent dynamic types is the use of additional spheres for near work. In the temporary dynamic class removal of the underlying physical cause cures the condition.

363 Ultra-Violet Treatment in Ulcus Serpens Corneae

J. DEPEI (*British & Colonial Lists* January 1932 p. 9) records a series of 101 patients suffering from corneal ulcer which he classifies in two groups. 44 were treated in the usual way while 57 had local applications of ultra-violet light in addition to the usual treatment. The light treatment was administered by means of the Pirch-Hirschfeld lamp. The author defines three groups: (1) slight cases (2 to 3 mm. in diameter and small hypopyons) (2) larger and more infiltrated ulcers with a larger hypopyon and (3) ulcers occupying at least two-thirds of the cornea. The results were considerably superior in the irradiated cases in the first and second groups while in the third group there was no difference in the results between the irradiated and non-irradiated cases.

Obstetrics and Gynaecology

364 The Blood Platelets in Menstruation Pregnancy and the Puerperium

In estimating the number of blood platelets E. BENHAMOU and A. NOUCHY (*Gynecol. et Obstet.* February 1932 p. 97) use the technique of van Herwerden van Goudsmuiden modified by the addition of brilliant cresyl blue to the diluted liquid. In order to make their results comparable and to avoid confusion with the increase in platelets during digestion blood samples were taken at the same time in the morning and before the patient had broken her fast. The normal figure in females oscillates about a mean between 330 000 and 380 000. Menstruation is always accompanied by a fall in the platelet count the fall being sudden and immediately preceding the appearance of the periods. Injections of folliculin do not appear to provoke big variations in the platelet count and never cause an increase. The menopause hardly modifies the platelet figure. Pregnancy is generally accompanied by a progressive rise in platelets which at term number 500 000 to 600 000. During labour a diminution occurs which becomes more marked after delivery. Through the puerperium the figure slowly rises until towards the eighth or ninth day it reaches the usual figure for the normal woman.

365 Pregnancy Complicated by Tuberculosis

J. HAIG FERGUSON (*Edinburgh Med. Journ.* March 1932 p. 165) believes that a pregnant woman who is suffering from a curable form of pulmonary tuberculosis should be able with the aid of sanatorium treatment to go to full term in comparative safety. Strict treatment should be continued until as near delivery as possible and should be resumed after confinement although it is often difficult to induce such patients to undergo a long and monotonous therapeutic course. In addition to dietetic and hygienic measures artificial pneumothorax or phrenicotomy may be desirable. While interruption of the pregnancy may be necessary sometimes this is only justifiable if undertaken early since abortion after the third month brings with it dangers and accidents analogous to those occurring at a full term confinement. Induction of abortion may be justified in cases where pregnancy occurs before the tuberculous process is in a quiescent stage with the arrival of this stage the pregnancy may safely be continued. Thus after the complication of laryngeal tuberculosis is present abortion is to be induced in the early months. Tuberculous cases rarely cause abortion but post-partum haemorrhage occurs in about 13 per cent. of the cases—more than six times its usual frequency. It is estimated also that tuberculosis as a complication of pregnancy occurs in the high proportion of 14 per cent. of tuberculous cases. Primary infections associated with the presence of streptococci. Caesarean section at full term under suitable conditions is often a safer method than delivery per vias naturales. Education of the patient in the care

of herself as regards tuberculosis as well as in respect of her pregnancy is of great importance Women who allow sufficient time after pulmonary disease has been arrested (three years or more) before becoming pregnant are less likely to suffer ill effects The author adds that marriage is said to improve the health of tuberculous women and therefore marriage with postponed pregnancy might be a therapeutic factor

366 Radium Therapy in Cervical Carcinoma

W P HERMAN (*Journ Amer Med Assoc* December 5th 1931 p 1680) analyses the results of radium treatment applied to 1 571 cases of carcinoma of the cervix uteri from 1918 to 1922 the cross fire form of radiation therapy was adopted radium being applied to the cervix from the vagina by the intracervical and intrauterine route externally by the use of a radium block at 4 cm in six positions about the pelvic circumference and interstitially by the insertion of glass radon seeds At the same time the massive dose was adopted by which treatment was completed in 72 hours From 1922 to 1925 all cases were treated with radium applied within the vaginal tube against the cervix and within the cervical and uterine canals unfiltered glass radon seeds were buried in the outer margins of the cervical lesion and low voltage x rays were used a week or two subsequently In 1926 the glass radon seeds were replaced by gold seeds tubes of 0 3 mm gold filtration high voltage x rays were used instead of the low voltages From 1929 to 1931 interstitial irradiation was omitted in the first series of treatments and four exposures of the high voltage x rays preceded the radium applications This preliminary treatment caused shrinking of the lesion and eliminated the softer friable infected surface thus creating a more favourable setting for the radium Recently radon seeds have been used less than the surface application of radium Of the 1 571 cases under review 11 4 per cent required repeated treatment Only 20 to 22 per cent of all the patients treated survived five years whatever was the form of treatment employed The best results were obtained in cases in which early diagnosis was followed by prompt and efficient radiotherapy It was found that in 60 per cent of the early cases the disease might be arrested for five or more years but this therapy seemed to have a greater field of usefulness than surgical treatment relieving the symptoms more effectually, and prolonging life

Pathology

367 The Relation between the "Phenomena" of Schwartzman and Arthus

A GRATIA and R LINZ (*C R Soc de Biologie* February 26th, 1932 p 585) review the experiments they have made during the past year on Schwartzman's phenomenon and conclude that this phenomenon is closely related to anaphylaxis Their reasons may be summarized as follows (1) In certain cases in which Schwartzman's reaction has been particularly intense it has been accompanied by such features as capillary stasis fall of blood pressure thrombopenia and incoagulability of the blood by a current of CO_2—all symptoms of anaphylactic shock (2) Schwartzman's reaction may desensitize against anaphylactic shock provoked by serum the more intense the reaction is the greater is its desensitizing effect (3) The rat and the mouse are refractory to Schwartzman's phenomenon just as they are to anaphylaxis (4) Whatever the bacterial antigen employed in Schwartzman's phenomenon the reaction is always the same—namely local haemorrhage followed by a dry aseptic necrosis—and is always different from the primary effect For this reason Schwartzman's phenomenon may be regarded as a manifestation of allergy or rather since the phenomenon is not specific as heteroallergy The authors therefore propose to refer to it as haemorrhagic heteroallergy This conclusion implies that Schwartzman's phenomenon is merely a modification of Arthus's phenomenon which is always described as a congestive reaction of the skin accompanied by oedema and followed by dry aseptic necrosis To test the truth of this conclusion the authors have carried out experiments on the rabbit which indicate that the two phenomena are very closely related Rabbits sensitized by the repeated intravenous injections of horse serum reacted to the intradermal injection of horse serum eight or ten weeks later only very mildly But with further intradermal tests made at weekly intervals local reactions appeared which were not simply congestive but which in some rabbits were frankly purpuric as in a typical Schwartzman's reaction The similarity between the two reactions became very striking when it was found possible to produce two reactions simultaneously in the same rabbit it being impossible to distinguish the one due to bacterial filtrate from that due to serum

368 Myocardial Infarction

A R BARNES and R G BAIL (*Amer Journ Med Sci* February 1932 p 215) record the results obtained from 1 000 unselected consecutive post mortem examinations in which more or less localized myocardial infarction was recognized in 49 subjects (4 9 per cent) In 685 of these who were over the age of 40 infarction was observed in 47 (6 86 per cent) thus indicating that coronary thrombosis with this sequel is not an uncommon event The age incidence was also apparent the authors finding that 70 per cent of such infarctions occurred among patients between the ages of 50 and 69 Associated hypertension was common but no notable preponderance of arterio sclerosis in the left coronary artery over that found in the right was established Gross myocardial infarction resulting from coronary occlusion was practically confined to the left ventricle being situated in the posterior basal portion in twenty four instances as compared with twenty eight in which it involved the apex and anterior portion The authors urge the importance of making a more careful pathological study of the posterior basal portion of the left ventricle in order that infarctions in that region should not be overlooked They add that the designation of the anterior descending branch of the left coronary artery as the artery of coronary occlusion is no longer justifiable

369 B aerogenes as an Index of Water Purity

J D ATLAN GRAY (*Journ of Hygiene* January 1st 1932 p 132) records experiments in support of his belief that a predominance of *B aerogenes* is an index of safety in a water supply Such a preponderance over *B coli* may he states be regarded as an indication of freedom from pathogenic organisms including *B typhosus* and *B paratyphosus* B The water has not been in contact with soil contaminated by fresh faeces if any such contamination had occurred it would have been in the remote past In water which has been in recent contact with faeces the proportion of *B aerogenes* to *B coli* is relatively low but is rapidly reversed during storage This is largely due to the death of the latter organism but may in part also be brought about by multiplication of the *B aerogenes* present Both organisms are almost universally present intermingled in nature and considerable care is therefore essential in making deductions as to their source when they have been isolated from water both may be found in water supplies of high sanitary quality and even at some time or another in water which has merely drained virgin soil Repeated examination of faeces during storage revealed a primary marked increase in the total number of organisms present this was succeeded by a gradual decrease coinciding with a relative increase in the numbers of *B aerogenes* Whether there was an absolute increase as regards this organism was not determined The author discusses the efficiency of the methyl red Voges Proskauer and citrate tests in identifying coliform organisms and pleads for the establishment of more uniformity in their application to water examination He finds that the use of modifications of the citrate medium containing lithium or barium is useful in the isolation of *B aerogenes* when *B pyocyaneus* is abundant Little if any danger appears to accrue from ingesting the latter organism even in large numbers

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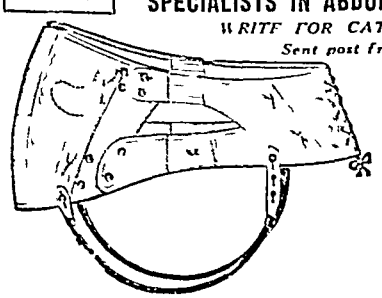
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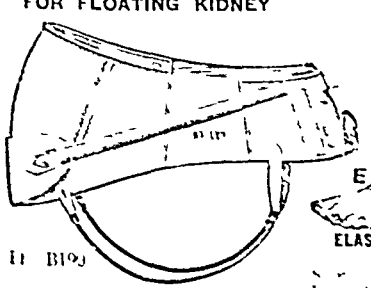
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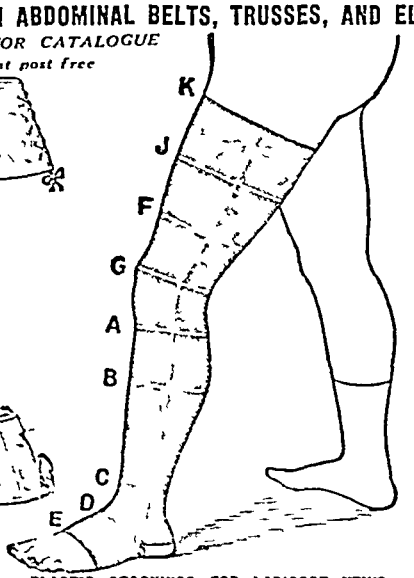
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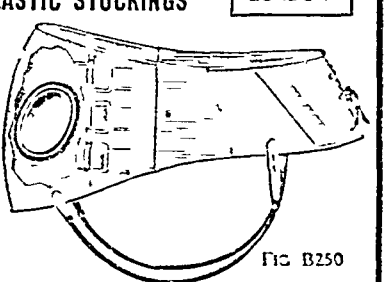
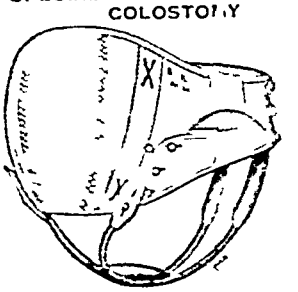


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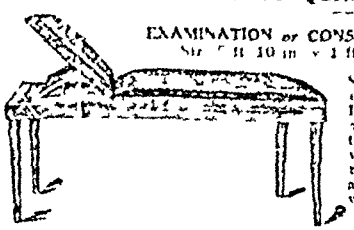
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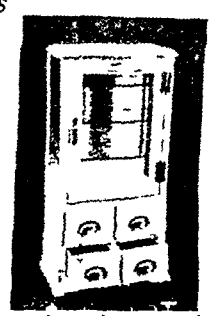
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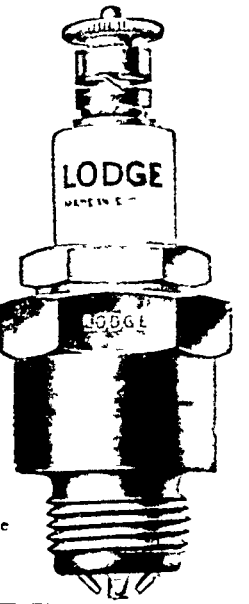
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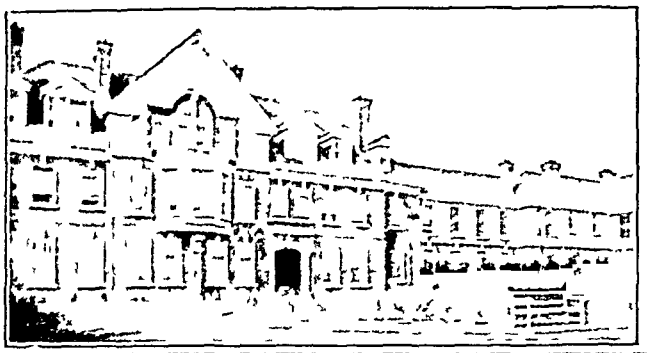
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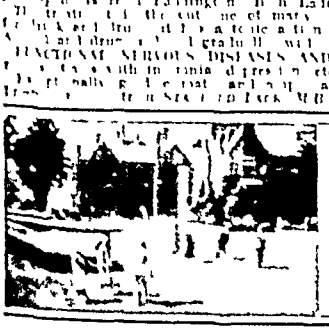
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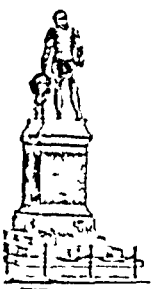
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MAY 24th	
Prof. MARTIN HAHN (Director of Hygiene, University of Berlin)	On the Present Trial and the Scientific Principles for the Use of the Calmette-Guérin Anti-tuberculosis Inoculation
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Medical Students and Qualified Practitioners are admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admissions being emergency cases). Over 2,400 patients are admitted to the Wards annually, and in the Antenatal Department there are over 18,000 attendances per annum.

Certificates as are required by the various Examining Bodies.

For rules, fees, etc., apply to ARTHUR WATTS, Secretary.

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LONDON, W.C.2

M.R.C.P. COURSE

A Course in Preparation for the July Examination for MEMBERSHIP OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON will be held commencing on Monday, May 2nd.

The Course will extend over ten weeks and will comprise daily instruction, including SPECIAL LECTURE AND DEMONSTRATION. Vacancies for the Course are definitely restricted in number and early application for admission is essential.

FEE TWENTY GUINEAS.

Further particulars may be obtained from the Dean.

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(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd, and for the Diploma in Tropical Hygiene on January 11th and April 10th. (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pem Croke Place, Liverpool.

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Remedial Tuition on modern lines for Stammer, Aphonia, Cleft Palate, Tracheotomy and Disturbed Co-ordination by LRIC MIALL, A.L.C.M., Speech Instructor at Middlesex Hospital.

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Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September and December. For *Regulations* apply to the Secretary, *College of Preceptors*, Bloomsbury Square, London, W.C.1.

CITY OF LONDON MATERNITY HOSPITAL,

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UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY CHAIR OF PHYSIOLOGY tenable at the London Hospital Medical College. Salary £1,100 a year. Applications (12 copies) must be received not later than first post on May 14th, by the Academic Registrar, University of London, S.W.7, from whom further particulars may be obtained.

CITY OF BIRMINGHAM

DUDLEY ROAD HOSPITAL

JUNIOR ASSISTANT MEDICAL OFFICERS (Male)

Applications are invited from fully qualified Medical Practitioners for appointments as Junior Assistant Resident Medical Officers (male) at the Dudley Road Hospital, Birmingham.

The Hospital, which is devoted exclusively to Children's Diseases, Infectious and Obstetrical, is completely equipped Pathological and Biochemical Laboratories, Department of Therapy, X-ray, Electrical Massage, Sunlight and Dental Department. Approximately 4,000 operations are performed annually.

The appointments will be for a period of six months in the first instance, but may be extended at the end of that time for a further period not exceeding six months.

The persons appointed will be required to assist at operations, to administer Anæsthetics, and undertake Casualty work and such other duties as may be assigned to them by the Medical Superintendent.

The salaries attached to the appointments will be at the rate of £200 per annum together with full residential emoluments (rations apart), subject to an agreed increase of £25 per annum after one year's satisfactory service.

The appointments are subject to the Rules and Regulations of the Medical Staff, and may be terminated by one month's notice on either side.

Further particulars of the appointments may be obtained from the Medical Superintendent, F. W. ELLIS, Esq., M.D., F.R.C.S., Dudley Road Hospital, Birmingham, to whom applications, stating age, experience and qualifications, accompanied by copies of recent testimonials, should be forwarded not later than Thursday, April 21st.

B

SURGICAL HOSPITAL

HOUSE SURGEON (Male)

Applications are invited for the above appointment.

Candidates must be duly qualified and registered. Salary £200 per annum with board and lodging.

Reference will be given to a candidate with previous experience especially in the administration of Anæsthetics.

The successful candidate must devote the whole of his time to the duties of his office and to assist the Medical Staff and act under the supervision of the Medical Superintendent who is also Medical Officer of Health and School Medical Officer.

The appointment will be for a period of six months to be renewed if thought fit for another period of six months but not for any subsequent period.

The successful candidate will be required to commence duties immediately.

Applications, stating age, qualifications, positions held with copies of three recent testimonials to be sent to Dr. P. W. KENT, Medical Superintendent, Public Health Office, Barry.

(Signed) T. D. HOWELLS, Clerk.

April 4th, 1932.

The East London Hospital for CHILDREN, Shadwell, E.1

There will be a DEMONSTRATION OF CLINICAL CASES on WEDNESDAY, APRIL 20th, at 3.30 p.m., to which you are cordially invited. Tea at 5 p.m.

THE CENTRAL HOSPITAL BIRMINGHAM

Applications are invited for the following Resident appointments
From May 16th
RESIDENT ANAESTHETIST Salary £120 per annum
HOUSE PHYSICIAN Salary £70 per annum
HOUSE SURGEON Salary £70 per annum
From June 1 the—
RESIDENT ANAESTHETIST Salary £120 per annum

Applications giving full details of qualifications and accompanied by testimonials (if already held) should reach the undersigned by April 20th

A R HANCE
April 11th 1932 Hon Governor

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

The Board of Management invite applications from unmarried Registered Medical Graduates for the post of CASUALTY OFFICER

Duties to commence on or about May 1st

Salary at the rate of £150 per annum with board residence and laundry

Applications stating age, nationality, qualifications, and experience, to be sent to the undersigned

JOHN GIBSON
April 11th 1932 Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN
Hackney Road E 2
To be Registered with C.O.G.

CLINICAL ASSISTANT required for Medical Outpatients, Minor Surgery, Throat, Nose and Ear Department, and Pathological Laboratory duties

Applications, with copies of testimonials, to be sent to the undersigned not later than April 20

CHARLES H ELLIS III
April 7th 1932 Secretary

THE HOSPITAL FOR WOMEN AT LEEDS
(For the Treatment of Diseases of Women)

HOUSE SURGEON required for duties May 1st Salary at the rate of £100 per annum, with board, lodging, and laundry. The appointment is for six months, but the Appointment Committee will be prepared to consider the question of renewal for a further period of six months. Applications, stating age, qualifications, and previous appointments, should be addressed to the Hon Secretary, Women's Hospital, Leeds

S C HILL Secretary

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (male). The appointment will be for a period of six months at a salary of £120 per annum and will date as from May 15th next

Candidates must submit applications stating qualifications, age, etc., with copies of not more than three recent testimonials, not later than Thursday May 5th addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

A vacancy has occurred for the post of HONORARY ASSISTANT PHYSICIAN with charge of beds. Candidates must be Doctors of Medicine of a British University or Members of the Royal College of Physicians

Applications with copies of not more than three recent testimonials must be forwarded not later than Thursday May 5th addressed to the Secretary

KING GEORGE HOSPITAL
ILFORD LONDON

Applications are invited for the appointment of TWO HOUSE SURGEONS (male). Salary £100 per annum with board residence etc from six months with eligibility for reappointment. Applications should be sent immediately to the Secretary

ESSEX COUNTY HOSPITAL COLCHESTER
(160 Beds)

Wanted in May ASSISTANT HOUSE SURGEON Salary £120 with board washing and residence. Medical and Surgical qualifications required

Applications with three recent testimonials to be sent by Wednesday April 20th to—
ALFRED C BECK Secretary

KILMARNOCK INFIRMARY AYRSHIRE
(130 Beds)

Wanted TWO HOUSE SURGEONS male or female one now and on for May 11th Salary £140 per annum with board and residence. Apply with testimonials to Secretary

WEST OF ENGLAND EYE INFIRMARY EXETER

APPOINTMENT OF SURGEON

Applications are invited for the post of Surgeon Candidates must be a Fellow of one of the Royal Colleges of Surgeons of the United Kingdom or a Member of the Royal College of Surgeons of England or must possess an equivalent Surgical qualification in one of the Universities of the United Kingdom and must be duly registered. Preference will be given to a Practitioner qualified in Ophthalmic Surgery

The present Assistant Surgeon is a candidate for this post. It is stated that the post of Assistant Surgeon will become vacant early in May and that those who wish to apply for the post of Assistant Surgeon

Applications with copies of three testimonials should be sent not later than Thursday April 28th to Mr W W BELL Secretary West of England Eye Infirmary Exeter

ROYAL SUSSEX COUNTY HOSPITAL BRIGHTON (240 Beds)

HOUSE PHYSICIAN (male) required at the end of May with charge of Private Wards £120 per annum with board residence and laundry

Candidates must be Registered Medical Practitioners with qualifications in the British Empire and duly registered in the British Medical Register. They must have been born on or after January 1st 1902 and must not have exceeded the age of 30 on appointment

Applications with copies of testimonials should reach the undersigned not later than April 20th

LIEUT-COL F W HANCOCK C.M.G.
Secretary Sussex County Hospital

WEST HAM AND EAST DISTRICT SHIRE WAR MEMORIAL HOSPITAL
(160 Beds)

RESIDENT HOUSE SURGEON (female) required for the Hospital to commence immediately. Appointment for six months, but preference will be given to candidates willing to remain for a longer period

Salary £100 per annum with board residence and laundry

Applications, stating nationality, experience and qualifications, together with copies of three testimonials to be sent to the undersigned not later than

JESSIE SPENCER
April 9th 1932 Secretary

ROYAL EAST SUSSEX HOSPITAL HASTINGS (120 Beds)

Applications are invited for the post of SENIOR HOUSE SURGEON (male) to take up duties as soon as possible. The appointment is for a period of six months

Salary at the rate of £150 per annum with board and residence

Candidates must be duly registered Medical Practitioners

Applications with copies of recent testimonials to be addressed to the Secretary

WILFRID C TEWSLEY
Secretary

ROYAL SAMARITAN HOSPITAL FOR WOMEN GLASGOW

The Governors invite applications for a RESIDENT MEDICAL APPOINTMENT (open to Graduates of either sex)

Applications with copies of testimonials to be lodged not later than 20th inst with the Secretary from whom all information can be obtained

T MASON MACQUARRIE
200 St Vincent Street Secretary and Treasurer
Glasgow
April 8th 1932

ST JOHN'S HOSPITAL LEWISHAM S E 13

CASUALTY OFFICER (male) is required for appointment on May 1st. The appointment is resident and tenable for three or six months. Salary £100 per annum. Applications with copies of testimonials from duly registered practitioners should reach the undersigned not later than the morning of April 23rd

J C GILBERT
Secretary Superintendent

BURTON-ON-TRENT GENERAL INFIRMARY

Application are invited for the post of CASUALTY OFFICER AND HOUSE PHYSICIAN (male). Salary at the rate of £150 per annum with board residence and laundry

Applications stating age and qualifications together with copies of testimonials to be sent to—

J W THORNLEY Secretary

ALNWICK INFIRMARY

Wanted HOUSE SURGEON (male) immediately. Salary £150 and board. Modern surgical hospital (25 beds). Ample time for study.—Apply Dr SCOTT REVES Alnwick Northumberland

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL
Haverstock Hill N W 3

APPOINTMENT OF A HOUSE SURGEON

Applications are invited from unmarried Medical Men for an appointment of House Surgeon vacant on May 1st next. The salary will be at the rate of £100 per annum together with board residence etc and the term will be for six months

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on April 22nd next

CHARING CROSS HOSPITAL

RESIDENT CASUALTY OFFICER

Applications are invited for the post of Resident Casualty Officer. Salary £200 per annum with full board laundry etc. Candidates (male) must be fully qualified. Copies of the rules relating to the post can be obtained from the undersigned to whom applications with copies of three recent testimonials should be submitted not later than Saturday April 30th

Charing Cross Hospital PHILIP EVANS
London W C 2 House Governor

ROYAL NORTHERN HOSPITAL
Holloway N 7

Applications are invited for the post of HOUSE PHYSICIAN vacant on May 15th

The appointment is for nine months (three months Out-patient Casualty Officer and six months House Physician). Salary at the rate of £70 per annum with board residence and laundry

Applications with copies of testimonials should be sent by the 20th inst to the undersigned from whom forms of application and rules can be obtained

CUBITT C PANTER Secretary

ROYAL INFIRMARY BLACKBURN
(240 Beds—Five Resident)

RESIDENT HOUSE PHYSICIAN (male) required at a salary of £175 per annum with board residence laundry etc. In addition to Medical Wards to be attached to Ear Nose and Throat Department

Applications with copies of testimonials, age, nationality, experience etc to be sent at once to the undersigned

Royal Infirmary NATHAN A SMITH
Blackburn Gen Supt & Secretary

SCUNTHORPE AND DISTRICT WAR MEMORIAL HOSPITAL (85 Beds)

Applications are invited for the post of RESIDENT SURGEON Salary £250 per annum with board residence and laundry (President Surgeon expected to perform emergency operations). Vacant from April Age experience and earliest time for commencement and enclosing copies to be forwarded to the undersigned not later than the first post on Monday April 25th

ARTHUR MAW Secretary

HOUNSLOW HOSPITAL
(70 Beds)

Wanted urgently SENIOR AND JUNIOR HOUSE SURGEONS Salary £150 and £100 respectively with board laundry etc. The appointment is for six months but the Junior may proceed to the Senior post

Applications at once stating age qualifications etc to W J Foss Secretary Hounslow Hospital Staines Road Hounslow

NORTH LONSDALE HOSPITAL BARROW-IN-FURNESS

HOUSE SURGEON required May 4th. Applications are invited from fully qualified male Practitioner experienced in the administration of Anaesthetics. Salary £175 per annum with board residence and laundry

Application stating age qualifications experience and nationality and accompanied by copies of three recent testimonials to be sent to the Secretary, from whom forms to reach him not later than April 20th

WHITEHAVEN AND WEST CUMBERLAND HOSPITAL WHITEHAVEN (90 Beds)

Wanted for May 2nd HOUSE SURGEONS (male) one Senior and one Junior Salary at the rate of £150 and £100 respectively with board washing and residence in the Hospital. Six months' appointment. Applications with 3 testimonials required to be sent to the Secretary envelope marked House Surgeon

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following list without having first communicated with the Medical Secretary of the British Medical Association, BMA House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Tower District	Tower District	Tower District
CONTRACT PRACTICE.	**CONTRACT PRACTICE** (cont.)	**CONTRACT PRACTICE** (cont.)
LLOW VALE, NR. [illegible] (Medical Officer.)	VALE HALL MAIN SICK AND ACCIDENT SOCIETY, ATLANTIC HOTEL, [illegible] (Medical Practitioner.)	[illegible] (Medical Officer.)
CHEADLE COTTAGE HOSPITAL (Medical Officer.)	ST. THOMAS' VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. (Medical Officer.)	**PUBLIC HEALTH**
TOWN FOOT MEDICAL INSTITUTE (Medical Officer.)	BATH AND DISTRICT (Medical Aid Association.)	[illegible] (Medical Officer.)
LLYVANELLA CLYDACH VALE MEDICAL CLASSOR CAN (Medical Officer.)	OAKDALE, NR. [illegible] (Medical Officer for Medical Aid Association.)	NORTH CHESHIRE AND [illegible] JOINT COMMITTEE (Medical Officer.)
MARDY CLYDACH (Workmen's Medical Scheme.)		STAFFORDSHIRE WEST RIDING AND DERBYSHIRE JOINT COMMITTEE (Medical Officer.)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, BMA House, Tavistock Square, W.C.1.

Territory	Honorary Secretary	Territory	Honorary Secretary	Territory	Honorary Secretary
NEW SOUTH WALES (All Departments.)	Dr. J. C. BUNTEL, Clinical Secretary, New South Wales Branch, B.M.A., 135 Macquarie Street, Sydney, N.S.W.	QUEENSLAND (Medical Officer.)	The Hon. Secretary, Queensland Branch, B.M.A., Australia Chambers, Ann Street, Brisbane.	WELLINGTON, NEW ZEALAND (Medical Officer.)	[illegible]
VICTORIA (Medical Officer.)	Dr. J. H. TAYLOR, Honorary Secretary, British Medical Association, Victoria Branch, Hall of the Victorian Institute, [illegible]			WESTERN AUSTRALIA (Medical Officer.)	[illegible]

April 13th, 1932. By Order of the Council, ALFRED COX, Medical Secretary.

THE ROYAL [illegible] HOSPITAL, [illegible]

CASUALTY OFFICER (Resident) to [illegible]

RAMSGATE AND THANET CHILDREN'S HOSPITAL, RAMSGATE AND CANNON ROAD, [illegible]

HOUSE PHYSICIAN (Resident Medical Officer).

HOSPITAL OF ST. CROSS, [illegible] (Non-Resident).

THIRD MALE RESIDENT MEDICAL OFFICER.

RAMSBURY AND [illegible] (Medical Officer.)

EVELINA [illegible] (Resident Surgical Officer.)

[illegible]

[illegible]

[illegible]

[illegible]

Appointments continued on p. 44

British Medical Journal,

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WANTED — ASSISTANT MALE LIKE tstant Mixed Practice Birmingham area State age and experience Commencing salary (in lieu) £300 — Address with testimonial No 2219 B M A Hou Tavistock Square W C 1

WANTED — ASSISTANT (OUTDOOR) IN large mixed Practice Industrial Town 10 miles from Manchester Salary £450 p a increasing to suitable man State experience etc —Address No 2204 B M A Hou e Tavistock Square W C 1

WANTED AT ONCE MALE SINGLE IN door ASSISTANT British Protestant some experience C I for motorful part of York hire —Address with photograph and personal reference No 2117 B M A Hou Tavistock Square W C 1

WANTED — INDOOR MALE ASSISTANT British or Irish Country Practice Midlands £300 to £350 according experience allowance if own car no objection recently qualified age photo reference —Address No 2113 B M A Hous Tavistock Squar W C 1

WANTED —INDOOR MALI ASSISTANT FOI mixed Practice in West of England Salary £300 p a Car provided Resident Diniser kept —Address stating age experience etc with photograph No 2121 B M A House Tavistock Square W C 1

WANTED — ASSISTANT MALE INDOOI motorist for mixed country Practice Salary £300 p a State age nationality experience — Address No 2216 B M A Hou e Tavistock Square W C 1

WANTED —ASSISTANT SINGLE BRITISH nationality Salary £350 per annum with rooms coal light and attendance 10/ extra midwifery case Usual bond —Apply A H JAMES M D The Park Blaenavon

WANTED —ASSISTANT WITH OR WITH out view in good middle class Practice near Manchester Motorist State age experience etc —Addr No 2206 B M A House Tavistock Square W C 1

WANT WITHOUT
view (1925)
married and pri
vate practice Free from May —Addre No 2212
B M A Hou e Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cro Street Manchester

WANTED A YOUNG INDOOI ASSISTANT in an Industrial Practice near Newcastle on Tyne State age nationality and any other particulars Salary £300 p a — Address No 2081 B M A Hou e Tavistock Square W C 1

WANTED BY WOMAN DOCTOI ASSISTANTSHIP with early view York hire or Morecambe Lancashire district 2 years hospital experience including obstetric —Address No 2106 B M A House Tavistock Sq W C 1

WANTED —OUTDOOR ASSISTANTSHIP BY married man experienced in general practice and panel Free May London preferred — Address No 2107 B M A Hou e Tavistock Square W C 1

WANTED — OUTDOOR MALE ASSISTANT for Country Practice in North of England State full particulars nationality etc Usual bond — Address No 2110 B M A House Tavistock Square W C 1

WANTED —ASSISTANTSHIP BY AN INDIAN gentleman M R C S L R C P L D S (Eng) — Address No 2215 B M A House Tavistock Square W C 1

WANTED — LADY ASSISTANT INDOOR view to Partnership later Industrial area

ASSISTANT WANTED WITH OR WITHOUT view to SHARE (if well qualified with House appts) of mixed Practice (good panel and appts) with scope Up to £300 p a and quarters etc All social amenities etc Reply now — Address No 1803 B M A House Tavistock Square W C 1

ASSISTANTSHIP REQUIRED (FEE PAID) outdoor) Locums M B B Ch (N U I) single 27 Free May 31 Four years experience (panel and industrial) with midwifery —Address No 2115 B M A House Tavistock Square W C 1

ASSISTANT REQUIRED TO TWO PARTNERS married preferred Sole charge Panel and private practice House available Progress Salary according to experience —Address No 2205 B M A Hou Tavistock Sq W C 1

DOCTOR SEEKS POSITION WHOLE OR part time and period experienced Life assurance Maintenance man e ntial In or outdoor Particulars interview testimonials No midwifery — Address No 2218 B M A Hou e Tavistock Square W C 1

INDIAN DOCTOI WITH HIGHER MEDICAL qualifications having experience of panel private practice seeks ASSISTANTSHIP or PART TIME WORK — Address No 2123 B M A Hou e Tavistock Square W C 1

OUTDOOR ASSISTANTSHIP WANTED BY Scot (M B 1927) 28 married experienced and C I Maintainer good appearance well recommended Anæsthetic midwifery etc Drive car Excellent testimonial Free now —Address No 2114 B M A Hou Tavistock Sq W C 1

PART TIME ASSISTANT EVENINGS ONLY required within 15 minutes of West End £100 p a all found —Address No 2135 B M A Hou e Tavistock Square W C 1

SOUTH MIDLANDS —ON JULY 1 ASSISTANT with view Old established Practice Three Partners Senior retiring Receipts £6 000 For disposal 1/6 more later Panel 3 000 Surgery e ntial Hospital —Address No 2201 B M A Hou e Tavistock Sq W C 1

PARTNERSHIPS

WANTED —IN COUNTY TOWN WITHIN 50 miles of London FOURTH PARTNER to replace a retirement Share for disposal at present would bring in approximately £1 000 per annum net Experience would be given to applicants about 30 years of age married and holding University degree but latter not essential — Address No 2118 B M A Hous Tavistock Square W C 1

WANTED —WELL QUALIFIED GENTLEMAN as PARTNER in good class non dispensing non panel Practice with good appointments S W England Share worth £1 000 to commence Hou e to rent Premium 2 years purchase each —Address No 2217 B M A Hou e Tavistock Square W C 1

WANTED BY EXPERIENCED PRACTI TIONER, with Nucleus resident in Bradford SHARE in panel and private worth £700 Own car In confidence Cash available —Address No 2111 B M A Hou Tavistock Square W C 1

WANTED — YOUNG MARRIED PARTNER one third her worth £1 000 p a more later country Practice 2 years purchase House garden and paddock to let No particulars except at interview London —Address No 2003 B M A Hou e Tavistock Sq W C 1

PARTNER WANTED BY CAMBRIDGE M D in old established general Practice of £4 000 in country town in Midlands Cottage Hospital and scope for surgery Applicants must be qualified and have held resident appointments at a London General Hospital or Edinburgh Infirmary Married man preferred One quarter to one third share offered at 2 years purchase after preliminary assistantship —Address No 2126 B M A House Tavistock Sq W C 1

PARTNERSHIP UNOPOSED FOR DISPOSAL in Country district 45 miles from London Average receipts £2 600 Panel 1 400 good appointments Cool house 4 bedroom for sale £1 800 or part mortgage Premium for half share 2 years purchase — No 2105 B M A Hou e Tavistock Sq W C 1

SOUTH COAST —PARTNERSHIP IN FIRST class non disp Practice of £3 000 p a in favourite seaside resort suit man or woman Premium £2 350 fine modern house £3 500 Applicant should be exp Grad in medicine not under 40 —No 822 B M A Hous Tavistock Sq W C 1

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LOCUM — PRACTITIONER NEEDS WORK Day Evenings week end or period Recent references Fee from 10/6 per day —Addr No 2220 B M A Hou e Tavistock Square W C 1

LOCUMS OR ASSISTANTSHIPS WANTED by M R C S L R C P aet 29 4 years exp C P panel and private Energetic well rec exp anæs both local and general also injection treatment Free now —Address No 2133 B M A Hou e Tavistock Square W C 1

LOCUM OR TEMPORARY ASSISTANTSHIP wanted in Kent Surrey or Sussex by experienced Practitioner Own car available Moderate terms References given —Addr No 2207 B M A Hou e Tavistock Sq W C 1

LOCUM TENENCIES WANTED DURING THE Summer by London M B experienced all forms general practice Could bring own car Free April 21st —Addr No 1929 B M A House Tavistock Square W C 1

LOCUM WORK WANTED AT SEASIDE FOR 2 or 3 weeks in August or early September in exchange for hospitality or part hospitality for Doctor and his family —Address No 2131 B M A Hou e Tavistock Sq W C 1

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WANTED — PRACTICE OR PARTNERSHIP in London or suburb selling from £2 000 to £4 000 p a Minimum panel 2 000 Ample capital available — Address No 1820 B M A House Tavistock Square W C 1

WANTED BY EXPERIENCED PRACTITIONER good class private PRACTICE with scope South or South East Coast Town Income £1 000 p a upwards Capital available Small panel not objected—Address No 1811 B M A House Tavistock Square W C 1

WANTED BY YOUNG DOCTOR MEDIUM sized panel PRACTICE or PARTNERSHIP in Sheffield or district Capital available— Address No 2226 B M A House Tavistock Square W C 1

WANTED IN SCOTLAND MEDICAL PRACTICE panel and private Capital immediately available—Address No 2026 B M A House Tavistock Square W C 1

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WANTED — PRACTICE £1 000—£1 200 Southern suburbs or country town Good panel essential Reply in confidence—Address No 2120 B M A House Tavistock Sq W C 1

WANTED TO PURCHASE — PRACTICE £1 000—£1,200 Southern suburbs or Southern country town Good panel essential Requisite capital available — Address No 2125 B M A House Tavistock Square W C 1

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FOR DISPOSAL—EXCELLENT PANEL PRACTICE in East London Panel about 2 200 Many advantages and appointments in addition House on lease — Address No 2228 B M A House Tavistock Square W C 1

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FOR SALE—MIXED GENERAL PRACTICE in London In present hands six years Income £4 000 panel 4000 (increasing) Excellent corner house with garage in main road lease 21 years Would suit two partners Premium 24 years Purchase Whole capital could be repaid by instalments if required Good reasons for disposal—Address No 2225 B M A House Tavistock Square W C 1

FOR SALE — MORAYSHIRE SCOTLAND PRACTICE about £700 per annum Panel 540 First class house in own grounds 3 public rooms 6 bedroom etc to be sold with Practice Scope Introduction Retiral for health reasons Beautiful country district—Address No 2002 B M A House Tavistock Square W C 1

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FOR SALE—MIDDLE AND UPPER WORKING-class PRACTICE in residential district of Leeds Receipts over £500 p a Panel about 460 Good scope for increase No property to buy Premium £300 cash—Address No 2134 B M A House Tavistock Square W C 1

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HANTS — COAST TOWN — WELL ESTABlished non panel Practice Receipt little over £800 p a Scope for panel if desired Semi detached house to be sold also Premium for Practice £1 000 or near offer — Apply TEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

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LONDON (NEAR STRATFORD BROADWAY) — Well established cash and panel PRACTICE Receipts average £950 p a Panel 575 House on lease £75 p a Premium £525 or near offer Vendor going abroad — APPLY PEACOCK & HADLEY LTD 19 Craven St Strand W C 2

LONDON N (10 MINS FINSBURY PARK) — Well established cash and panel PRACTICE Receipts £1 000 a year panel 650 Nice house on lease Premium for quick sale £1 000 — Apply TEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

LONDON N W—NUCLEUS VERY RAPIDLY increasing area Good scope House or part as desired—Address No 2214 sale or lease B M A House Tavistock Square W C 1

M D (EDIN) WISHES BETTER CLASS PRACTICE or PARTNERSHIP about £2 000 p a Town S E England Preferably advertiser is Sect 42 m rried ex H S H P well received by patients and ex H S H P of G P s husbands and Has large exp nience excellent testimonial —Address No 2104 B M A House Tavistock Square W C 1

MEDICAL PRACTICE IN CENTRAL SCOTLAND Cash receipts approximately £800 House with consulting room and waiting room also garage Premium for Practice £800 or offers Purchase price of house £1 000 or lease MACKENZIE & FORTUNE S S C 40 Melville St Edinburgh

NEWCASTLE ON TYNE — GENERAL PRACTICE wanted in pleasant district about £2 000 per annum good panel little or no middle Medium sized modern house to rent — Address No 2128 B M A House Tavistock Square W C 1

NW LONDON — DOCTOR REQUIRES NUCLEUS to work with Dr ent Practice Would combine with Doctor to share Practice Also arrangement with Dentist Minister Anaesthetic—Address No 2209 B M A House Tavistock Square W C 1

PANEL AND PRIVATE PRACTICE IN Midland City yielding about £1 200 in creasing Cool house Senior partner (of two) retiring through ill health His half share for sale Preferably Church of England Active age 30—40—Address No 2122 B M A House Tavistock Square W C 1

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SCOTLAND — DEATH VACANCY — WELL established PRACTICE Returns average nearly £600 p a and 666 Net profit £800 Price £1 000 — Apply MACKAY & HARDY LTD 13 Cockspur Street Strand W C 2

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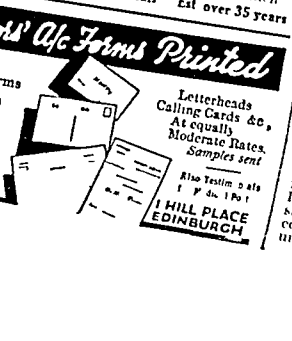
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APPOINTMENTS—Contd

ST THOMAS'S HOSPITAL

VACANCY

A Vacancy exists for the appointment of CHIEF ASSISTANT in the Ophthalmic Department (a new appointment) Applications, academic record showing appointment should be forwarded to the Secretary by Saturday April 30th

NORTH RIDING MENTAL HOSPITAL, YORK

Wanted TEMPORARY MEDICAL OFFICER male age not over 35 years Salary £ per week with board lodging etc Applications particulars of professional experience and copies of recent testimonials should be addressed to the Medical Superintendent

LEEDS MATERNITY HOSPITAL HYDE TERRACE LEEDS (110 Bed)

Applications are invited for the posts of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON Salaries payable Senior House Surgeon—£52 per annum Junior House Surgeon—£26 per annum The appointment are to be for a period of six month in the first instance from May 1st to October 31st Applications are to be sent to the Secretary The Medical Faculty Lecd Mat rnity Hospital Hyde Terrace Leeds on or before April 25th

HENRY F PITT Secretary Superintendent

April 12th 1932

SOUTH LONDON HOSPITAL FOR WOMEN Clapham Common S W 4

A General Hospital for Women and Children (120 beds) including Medical Surgical Ear Nose and Throat Ophthalmic Skin Urological and other Special Department

Applications are invited from fully qualified Medical Women for the post of HOUSE SURGEON for six months ending October 31st Salary at the rate of £100 per annum with board residence and laundry Candidates are requested to call on members of the Honorary Medical Staff before April 27th by which date applications and copies of testimonials must reach the Secretary at the Hospital

KENT AND CANTERBURY HOSPITAL (Recognised by the University of London for the purpose of MD Examination)

HOUSE PHYSICIAN (male) required Six months appointment Salary payable at the rate of £125 per annum plus board residence and laundry

Applications stating age and particulars of qualifications and enclosing copies of testimonials should be forwarded to the undersigned

W T SOUTHWOOD Secretary

ELIZABETH GARRETT ANDERSON HOSPITAL 144 Euston Road N W 1

Applications are invited for full time ASSISTANT PATHOLOGIST (woman) Salary £300 rising to £350 if reappointed for second year Duties to commence May 9th Application stating age qualifications and experience with copies of three testimonials to be sent to the undersigned by April 28th

JEAN R MURRAY Secretary

ROYAL VICTORIA INFIRMARY NEWCASTLE UPON TYNE. (672 Beds.)

WHOLE TIME JUNIOR SURGICAL REGISTRAR (Open Appointment)

Applications are invited for the post of Whole-time Junior Surgical Registrar (Open Appointment)

This appointment is designed for Graduates who desire to gain surgical experience and who have already held a post as House Surgeon to train duties in the allied departments of the College of Medicine will offer opportunities of Post-graduate study

The appointment will in no case extend beyond three years and will be for one year in the first instance renewable for two further periods

The rate of remuneration is £150 per annum

Application with copies of not more than three recent testimonials must be lodged on or before Saturday April 30th 1932 with the House Governor & Secretary Royal Victoria Infirmary from whom further

April [illegible] House Governor & Secretary

MANCHESTER ROYAL INFIRMARY

HOUSE SURGEON (male)—AURAL OPHTHALMIC AND GYNAECOLOGY DEPARTMENTS

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment vacant on May 15th

Applicant must be registered and hold a Medical and Surgical qualification

The appointment is for six months (three months as Junior and three months as Senior) subject to the provisions of the Bye laws as to notice etc Salary at the rate of £50 per annum with board residence and allowance for laundry

Application stating age to be sent to the Chairman of the Medical Board not later than April 23rd.

By Order
FRANK G HAZELL
Gen Supt & Secretary

HULL ROYAL INFIRMARY (367 Beds)

Applications are invited for the post of HOUSE PHYSICIAN (male) at the SUTTON BRANCH HOSPITAL vacant May 5th

The Branch Hospital contains 100 beds 45 of which are for acute medical cases

The appointment will be for six months in the first instance and will be determinable by one months notice on either side

Salary at the rate of £160 per annum plus board residence and laundry

Applicants giving particulars of age experience and nationality together with copies of testimonials should reach the undersigned on or before Tuesday April 26th

R J CARLESS
April 5th 1932 House Governor

WALSALL GENERAL HOSPITAL

The Committee invite applications from men for the post of RESIDENT SURGICAL OFFICER Salary £300 per annum

Candidates who must be registered under the Medical Act must have had previous experience in Surgery and administration of Anaesthetics and produce three recent testimonials

The appointment will be for six months from May 1st

The Hospital contains 100 beds and is equipped in all special department

Applications must be received by the undersigned not later than first post Tuesday April 19th

WALTER FRANCOMBE
April 9th 1932 House Governor

EAST LANCASHIRE TUBERCULOSIS COLONY Barrowmore Hall St Barrow CHESTER

(Under the Direction of the British Red Cross Society and Order of St John of Jerusalem)

HOUSE PHYSICIAN (male) required The appointment is for six months and is renewable Salary £100 per annum with board residence and laundry The appointment is terminable by one months notice

The In[illegible] tages of Pul[illegible] ises Hospital commodation [illegible] work and a[illegible]

Applications with copies of three recent testimonials should be sent to the Medical Superintendent at the above address

DURHAM COUNTY HOSPITAL (100 Beds)

TWO HOUSE SURGEONS are required to commence duties immediately Salary £150 per annum with board and lodging Application with copies of testimonial to be sent to W R WILSON Secretary 79 Saddler Street Durham

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted at once a RESIDENT HOUSE SURGEON (lady) Salary £130 per annum The appointment is for six months but may be extended by mutual arrangement Applicants must be fully qualified Applications with three testimonial one relating to anaesthetics to be sent to the undersigned

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25 St Mary's Gate Secretary
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EAST END—CASH PRACTICE INCOME £850 Panel 574 Premium £1 200 Household tenure £60 p a 10 years to run Visiting fees 5 and 10 Surg 3 6 with medicine 5 Old established Present hands 5 years —No 9004

SURREY HILLS — OLD ESTABLISHED Country PRACTICE unopposed £650 p a Fees 3 6 to 10 6 Panel 400 Premium 1½ years purchase Good house 6 bedrooms 2 reception rooms electric light good garden about 1 acre with tennis court £1 600 or rent £80 —No 8992

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NORTHERN TOWN — VERY OLD ESTAB — One fifth share of over £5 000 p a Panel of 4 000 Fee 5/ upward Choice of houses Scope for Medical Anaesthetics Eye and E N T work —No 9002

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LONDON E C —Mixed Cash and Panel PRACTICE Southern suburb Minimum 12 years Purchase all-in figure £1 000 Receipts approx £700 pa Panel 300 Low rent
LONDON S W —Well-established middle class Cash and Panel PRACTICE Southern suburb Minimum £1 000 Low rent Receipts £2 300 pa Panel 1 281 Premium 2 years purchase or rent
LONDON W 1 —Best class Cash and Panel PRACTICE Southern suburb Minimum £3 000 Low rent Receipts approx £1 200 pa Panel 700 Premium for 1 year purchase or rent
LONDON W —Within 20 minutes of West End Mixed PRACTICE in suburban district Receipts £2 000 pa Panel 1 100 Premium £1 200 cash or rent
LONDON W —Within 20 minutes of West End PARTNERSHIP in suburban district Receipts £3 000 pa Panel 1 800 Premium £2 000

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(THE SCHOLASTIC CLERICAL & MEDICAL ASSOCIATION LIMITED)

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VALUATION AND INVESTIGATION OF PRACTICES, ETC.

Practices & Partnerships Wanted **Large List of Bona-fide Purchasers with Ample Capital Available**

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LARGE CHESHIRE TOWN NR MANCHESTER—Sound mixed PRACTICE Cash receipts last year £1 850 Panel 2 390 Excellent detached house 2 reception 5 bedroom Large garden and garage Price £1 000 Premium—Practice—1½ years purchase—No 345

VENEREAL DISEASES PRACTICE—Northern City—Cash receipt last year £1 625 Convenient house to rent at £65 p a Premium £750 for immediate sale—No 340

MANCHESTER—MIXED PRACTICE—Cash receipts about £1 600 Panel 1,500 Good house (on lease) Garden and garage Urgent sale Any reasonable offer considered—No 303

LANCS—PLEASANT COUNTRY TOWN—Sound mixed PRACTICE Average cash receipts £1 369 p a Appointment monthly transferable approximately £265 p a Panel 1 037 Excellent house 3 reception 6 bedroom garage and large garden Premium—Practice—1½ years purchase—No 326

MANCHESTER — Good Suburb — Sound mixed PRACTICE Cash receipt last year £1 292 Panel 1 170 Scope Excellent house 2 reception 5 bedrooms Premium 1½ years' purchase—No 339

CHESHIRE TOWN near MANCHESTER—PARTNERSHIP in old-established Practice Average cash receipts £5151 p a Panel 3 600 Excellent house 2 reception 3 bedroom garage and garden Premium—one fifth share—£1 700—No 333

[illegible] TOWN PRAC £1 701 p a Panel 686 Excellent immolation 2 reception 6 bedrooms Garage and small garden Rent £100 p a on long lease Premium

MANCHESTER—Mixed PRACTICE suitable for two in Partnership Cash receipts last year £2 840 Panel 2 156 Good scope Two excellent houses with ample accommodation Premium—Practice—1½ years purchase—No 321

DEATH VACANCY LANCS TOWN—Suit good Surgeon—Mixed class PRACTICE Average cash receipts £1 634 p a Panel 829 Premium £4 000 part by arrangement (to include Surgery and Nursing Home (freehold) equipped Operating Theatre fittings Ward furniture drugs and book debts about £1 500)—No 335

MANCHESTER—Middle class PRACTICE in pleasant Suburb Cash receipt 1931 £1 327 Panel 459 Charming house 3 reception 6 bedroom billiard room Large garden and garage Premium—Practice—1½ years purchase—No 322

DERBYSHIRE—COUNTRY TOWN Nr MANCHESTER—Mixed PRACTICE Cash receipts 1931 £730 Panel 494 Good house 2 reception 3 bedroom Garage Rent £52 p a Premium 1½ years purchase—No 341

MANCHESTER — Residential Suburb — Middle class PRACTICE Suitable for two in Partnership (one a good Surgeon) Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses to rent with ample accommodation Premium 1½ years purchase—No 277

CHESHIRE COAST TOWN near RACTICE Average cash receipt £ p a Small select panel Excellent bed rooms Premium—Practice—1½ years purchase—No 317

MANCHESTER—PRACTICE averaging £661 p a Panel 154 Good scope House contains 2 reception 5 bedroom Garage and garden Rent £70 p a Premium for quick sale £450—No 226

YORKSHIRE—Pleasant City—Two PARTNERS to take over a three fifteenths share each (with increase later) Cash receipts over £5 000 p a Panel 4 000 Premium 2 yrs purchase—No 325

MEDICAL WOMAN'S PRACTICE—MANCHESTER — Old established Cash receipts 1931 £645 Panel 450 Good scope Excellent house 3 reception 6 bedroom Garage Rent £80 p a on lease Premium 1½ years purchase—No 330

NORTH WEST COAST — SEASIDE RESORT — Old-established PRACTICE Cash receipts £874 Panel 250 Excellent freehold house 2 reception 5 bedroom Garage and garden—No 266

NEAR MANCHESTER—Semi Residential Town—Old-established (non dispensing) middle-class PRACTICE Average cash receipts £2 400 p a Small panel of 450 Well situated freehold detached house 2 reception 5 bedroom Garage Premium—Practice—1½ years purchase—No 329

NR LIVERPOOL—PARTNERSHIP in good class Practice Cash receipts approx £3 000 Good house available Premium—one third share—2 years purchase—No 309

NEAR MANCHESTER—Pleasant Town—Old established PRACTICE Average cash receipts £995 p a Panel 902 Excellent detached house (freehold) 3 reception 5 bedroom Garage and garden Premium—Practice—1½ years purchase—No 234

MANCHESTER—Old established PRACTICE Cash receipts last year £1 513 Panel 1 697 Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1½ years purch—No 323

LIVERPOOL—Old established middle class PRACTICE Cash receipts over £2 000 p a Panel 900 Excellent house 2 reception 7 bedrooms garage and garden to rent—No 276

NEAR PRESTON—PRACTICE offering scope Cash receipts 1930 £700 Panel 300 Good house 2 reception 4 bedroom Rent £70 p a Premium 1½ years purchase—No 254

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(Tel 26771)

NORTHERN IRELAND
72 High Street Belfast
(Tel 7636/7 Grams Vouch Belfast)

All communications to be addressed to the Branch Manager BRITISH MEDICAL BUREAU 33 CROSS ST MANCHESTER

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1880)

12, Stratford Place,
Oxford Street, W. 1.

Tele. Address: Friform, Wesdo—London. Telephone: Mayfair 1782, 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending its members to consult Mr. A. V. SIORLY, the General Manager, in all transactions requiring the services of a Medical Agent.

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

The business undertaken by the British Medical Bureau is divided under the following heads:—

TRANSFER OF PRACTICES, PARTNERSHIPS, etc.

Medical Practitioners wishing to dispose of Practices or desiring to take Partners are advised to negotiate the business through the British Medical Bureau. Vendors may depe[illegible] ductions only to eligible and bona fide purchasers. All information is treated as strictly confidential, and trustworthy information regarding Practices, Partnerships, etc., for disposal to Purchasers.

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Assistants and Locum Tenens can be secured at short notice. It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out.

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[illegible] its own staff of qualified Accountants wholly engaged on medical [illegible]

Practices and Partnerships for Disposal

Full particulars sent free.

1. SOUTH OF ENGLAND — Practice, averaging £1,035 p.a. in flourishing and attractive town within 90 miles of London. Panel over 800. House (6 bed and dressing rooms) with half an acre of garden for sale. Scope. Premium 1½ years purchase.

2. HOME COUNTIES — Partnership in Country Practice averaging £2,150 p.a. in delightful part within 40 miles of London. Panel 1,120. Choice of two houses to rent. Good schools in the neighbourhood. Premium one-half share 2 years purchase.

3. S.W. OF ENGLAND — Town Practice, averaging about £1,450 p.a. No panel. Well situated house (5 bedrooms), garage and garden for sale. Plenty of sport. Good hospital and scope for surgery. Premium 1½ years purchase.

4. SCOTLAND — Non-dispensing Practice, averaging over £2,100 p.a. in University Town. Panel 1,700. Choice of two houses. Good introduction. Premium £2,600.

5. LONDON, W. — Mixed Class Practice averaging £550 p.a. in suburban district. Detached dwelling-house (6 bed and dressing rooms) with small garden for sale. Premium 1½ years purchase.

6. MIDLANDS — Partnership in Practice averaging £8,500 p.a. in famous and attractive country town. Partner should have experience in general Surgery and of Ear, Nose and Throat work and be trained in a London Hospital. A one-eighth share at 2 years purchase and further shares later. Preliminary Assistant ship.

7. FASHIONABLE INLAND WATERING-PLACE about 120 miles from London.—PARTNERSHIP in Practice of about £3,500 p.a. including appointments and substantial panel. Old-fashioned corner residence with nice garden to rent. Premium one half share 2 years purchase.

8. NORFOLK — Working-Class Practice, averaging £2,550 p.a. in important town and agricultural centre. Panel 2,500. Excellent house (6 bed and dressing rooms) in central position. Good garage etc. for sale. Premium for Practice 1½ years purchase.

9. W. OF ENGLAND.—Partnership in old-established Practice of about £1,545 p.a. in first-rate City. Panel 1,348. Choice of houses. Share worth about £700 p.a. at 2 years purchase.

10. MIDLANDS — Steadily increasing Practice of between £1,100—£1,200 p.a. in thriving town one and a half hours by rail from London. Excellent house (6 bedrooms) garage and garden for sale. Cottage Hospital. Premium 1½ yrs. purchase.

11. S. WALES.—Partnership in Colliery and Panel Practice of £2,000 p.a. in pleasant district, easy distance of Cardiff. Panel 2,150. Premium one-third share 1½ years pur[illegible].

12. LONDON, S.W. — Cash Practice about £1,100 p.a. close to the West End. Panel about 1,250 which could be considerably increased. Valuable corner residence for sale. Premium for Practice £1,000 only.

13. LONDON, E.—Cash and Panel Practice of £840 p.a. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years purchase.

14. ESSEX.—Partnership in Practice of £2,400 p.a. in developing country district, easy distance of coast. Panel 3,600. Detached house (6 bedrooms) garage and good garden for sale. Scope for increase. One-fourth share 2 years purchase.

15. S. COAST — Lock-up Practice, averaging £480 p.a. in rural district on outskirts of popular holiday resort. Panel 400. Rent of Surgery premises 10/- weekly. Prem. £e00.

16. EASTERN COUNTIES — Partnership in Practice averaging £4,400 p.a. in market town. Suitable house available. Share of £250 p.a. at first at 2 years purchase. Cottage Hospital. Applicant must have surgical experience.

17. W. OF ENGLAND.—Partnership in Practice nearly £2,600 p.a. in country town. Panel about 1,000. Good house (5 bedrooms) garage and garden of about half acre to rent. Good educational facilities. Cottage Hospital. Premium one-third share £1,550.

18. MIDLANDS — Practice averaging £1,710 p.a. in growing town with nice surroundings. Panel 1,100. House available later. Good hospital and scope for surgery. Premium 1½ years purchase.

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)
(FOUNDED 1880)

12, Stratford Place,
Oxford Street, W.1.

Tele Addre Triforn We do—London
Telephone Mayfair {1782 1783

Practices and Partnerships for Disposal (continued)

19 HOME COUNTIES.—Non-dispensing Practice averaging £1 150 p a in growing residential watering place No panel Detached house (5 bedrooms) with every modern convenience and attractive garden to rent Premium 1½ years pur

20 MIDLANDS.—Practice averaging £727 p a in cl an flouri hing manufacturing town Panel 570 House (3 bedrooms) garage to rent Premium 1 years purchase

21 SHROPSHIRE. — Practice £800 p a in Market Town Panel 170 Suitable house to purchase Premium 1½ years purchase

22 STAFFS. — Partnership in Practice over £4 000 p a in manufacturing town Panel 4 700 Suitable hou e to rent Premium one third share at 1½ years purchase

23 S WALES. — Mixed Practice in growing district of seaport town Receipts last year over £800 Panel 760 Hou (3 bedrooms) garage and garden to rent Good prospects for expe Premium £1 200

24 MIDLANDS. — Partnership in Practice, averaging over £3 000 p a in a most progressive manufacturing town Panel about 4 000 Expenses light Hou e (4 bedrooms and 3 attics) for sale Premium one half share £3 000

25 MIDDLESEX.—Practice in growing residential district Receipts 1931 £1 250 Panel 400 Modern hou e (3 bedrooms) garage and large gard n for sale Great scope Premium 1½ years purchase

26 LANCASHIRE.—Practice averaging £2,100 p a in industrial di trict on out kirts of manufacturing town Panel 1 460 House (5 bedroom) with garage to rent on lease Premium 1 year s purchase

27 W OF ENGLAND.—Partnership in Practice averaging £2 360 p a on outskirts of first rate town Panel 2 400 House with 5 bed and dre sing rooms for sale One third share at 1½ years purcha e Preliminary Assistantship

28 N WALES.—Practice in small Watering-place Receipts 1931 £570 Panel 238 Modern hou e very easily run with ample accommodation at nominal rent Very bracing climate Excellent shooting fishing Scope for increa e Premium £450

29 MIDLANDS.—Partnership in sound non-di pensing Practice of over £5 700 p a in beautifully situated counts town Panel 2 000 Good well qualified Physician required aged 30 35 One fifth share at 2 years purcha with early in cr ases. Good Ho pital with pro pect of appointment on Staff in near future

30 BIRMINGHAM. — Practice averaging £584 p a in good cla s suburb Small panel but ample scope Very little midwifery Lo expens s House with g rage to rent Premium 1½ years purchase or near offer for quick sale

31 ITALY.—Old-established Practice in an attractive City Receipts last 2 years averaged £1 400 p a No midwif ry or night work Suit gentleman of experience married and with good social attainments Reasonable premium

32 W OF ENGLAND.—Partnership in Practice in plea ant country town Ca h receipts average about £5 200 p a (including panel and appointments over £1 500 p a) Charming old house (5 bedrooms and attics etc) garage and l b autiful garden Plents of port Scope for increase Premium for one fifth share 2 years purchase

33 S E COAST. — Popular Resort.—Partnership in mixed class Practice about £3 600 p a Pan l about 2 000 Excellently situated hou e (5 bedrooms etc) with garden and garage for sale Five twelfths share for disposal at 2 years purcha e

34 MIDLANDS. — Partnership in Country Town Practice averaging about £3 500 p a Panel over 1 500 Scope for increa e Premium for one fourth share 2 years pur Preliminary A si tantship if desired

35 LONDON, N W. — Practice in suburban district Receipts 1931 £700 Panel 300 Corner house (5 bedrooms) garage and garden to rent on lease Premium £750

36 SUSSEX. — Country Practice between £1 200 and £1 300 p a in delightful part No panel Large residence (9 bedrooms etc) garage and garden of four acres to rent on lea e Premium £1 800

37 SURREY. — Partnership in increasing middle cla s Town Practice of £2 500 Panel over 1 200 Modern detached corner house (5 b drooms) garage and garden for sale. Partner should be 26 30 and have held Hospital appointments. Share of £1 100 p a at 2 years purchase

38 N OF ENGLAND. — Partner required in increasing Practice in beautiful city Re eipts la t year £5 000 Panel 4 000 Applicants should be proficient in minor surgery anaesthetics and ob tetrics Share of three fifteenths at 2 years purchase

39 LONDON, N W.—Non-dispensing Practice over £950 p a in good residential district No panel Ten roomed house with garage and large garden Rent £200 p a. Premium £1 200

40 N MIDLANDS.—Partnership in Practice, about £3 000 p a. in country district near two important towns. Panel over 1 600 Small house (3 bedrooms etc) available to rent Great scope as district is growing rapidly Premium one-third share 2 years purchase

41 S WALES.—Increasing Practice of £900 p a. in pleasant Market Town Panel 150 Well situated house (non ba ement) with 3 bedrooms for sale Cottage Hospital Premium

42 DURHAM.—Practice of over £500 p a in residential and colliery district near large towns Panel 370 Substantially built 9 roomed hou e for sale S ope for increase

43 NEW ZEALAND.—NORTH ISLAND.—Non-dispensing PRACTICE about £1 800 p a in hi t rate Town Modern detached house (4 bedrooms etc) garage and garden for sale Equable clima e Good educational facilities Premium only £1 250

44 EAST ANGLIA.—Partnership in Practice over £4 500 p a in beautiful country district easy access of important town Panel 3 000 Nice detached house (7 bedrooms) garage etc garden and grounds of 10 acres for sale Sport of most kinds Considerable scope Premium two thirds or four ninths share 2 years purchase

45 KENT.—Country Practice of over £800 p a in beautiful part Panel nearly 400 Very attractive residence (5 bedrooms) central heating grounds of 2½ acres orcha d etc for sale Sport Premium 1½ years pur ha e

46 S OF ENGLAND.—Partnership in Ophthalmic Practice about £1 300 p a. in small but delightful resort. Con iderable scope to one able to operate. Premium one half share 1) years purchase

47 HOME COUNTIES.—Partnership in exceptionally good and rapidly increasing Practice about £6 000 p a. in delightfully situated Country Town easy distance of coast Attractive hou e (4 bedrooms) to rent Partner must hold the F R C S and be aged about 30 Appointment on Hospital Staff Premium for one sixth to one fourth hare 2 years purchase Preliminary Assistantship

48 KENT. — Country Practice of about £850 p a. Panel 550 Good l ou e and gard n for sale Prem £1 100

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Under the personal directorship of Dr J FIELD HALL and J C. NEEDES

who have both had many years experience as *Medical Transfer Agents*

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1 PARTNERSHIP —FASHIONABLE SOUTH COAST WATERING PLACE —A third share is offered owing to the retirement of one of three partners in an old established non-panel and non-dispensing Practice Profit for last financial year amounted to £4,000 and there is good scope Suitable accommodation available Income must be a good start on and approximate to that on staff of Hospital immediately to offer Premium 2 years purchase

2 LONDON NORTH WEST —Very desirable old established non-panel and non-dispensing PRACTICE situated in a first-class residential suburb Cash receipts average nearly £2 400 p a Good house available To be sold for sale Premium 2 years purchase with introduction

3 SOUTHERN COUNTIES —PARTNERSHIP —Attractive country town (pop over 13 000) with beautiful surroundings The fourth share of a very desirable old established mixed-class Practice offered owing to the retirement of one of three Partners Income at present £6 600 p a including panel of 3 000 and appointments Visits 5 to 2 gns Midwifery 3 to 10 p a about 30 cases yearly Detached house with excellent accommodation To let Sport of all kinds Premium 2 years purchase Ingoing Partner must have knowledge of Eye work

4 SOUTH WEST OF ENGLAND —In an attractive Hospital Town (pop 12 000) an old-established mixed-class PRACTICE averaging nearly £1 500 p a (last year £1 520) including two small appts worth £60 Panel work has been refused but there is ample scope for this if desired There is also very good scope for Surgery which has not been undertaken of late House (professional room 3 rec tion 5 bedrooms bathroom etc) with garden and garage Price for freehold £1 250 Premium 1½ years purchase Good educational facilities and sport

5 PARTNERSHIP —EASTERN COUNTIES —A third Partner is required in a good mixed-class Practice situated in very pleasant market town within reach of the sea The share offered at first will produce about £1 000 p a with increase eventually up to one half Practice is old-established and producing about £1 500 p a Panel of 1 600 Choice of houses or ingoing Partner could reside in rooms Premium 2 years purchase

6 SOUTH WEST OF ENGLAND —PARTNERSHIP —A one third share is offered in a good middle and better class Practice situated in an attractive country town near coast There is a Hospital of 50 beds and good Surgical scope Very gross cash receipts over £3 000 p a Selected panel of 570 Fees 4/ to 21/ Choice of houses Premium 2 years purchase

7 YORKSHIRE —PROSPEROUS TOWN —PARTNERSHIP —A one third share (with increase later) is offered in a good middle-class non-panel Practice averaging £3 300 p a Fees 3/ to 2 gns Nice house with 2 reception 4 bedrooms etc Small garden Electric light Garage Price for leasehold £1 200 £800 on mortgage Good sport and excellent schools Very good Surgical practice particularly for an F R C S Eng who would obtain an appointment on the Hospital Staff Premium for share £2 000

8 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA —PARTNERSHIP —A fourth share is offered owing to the retirement of one of three partners in an old-established Practice in very pleasant country district Income £5 400 p a with good panel Detached house with ample accommodation garden etc for sale Premium 2 years purchase

9 LONDON SOUTH WEST —Very old-established good middle class PRACTICE in open residential suburb Average gross cash receipts over £1 500 Small selected panel Fees 3/6 to 10/6 Not much midwifery at from 4 to 8 gns Very well situated house in good repair and containing 2 reception 5 bedrooms, etc Three professional rooms Garden Rent on lease £55 p a Premium £2 300

10 WITHIN 3 MILES OF THE BANK —Old-established good middle class PRACTICE producing for the last twelve months over £1 500 Panel of 1 000 Fees from 2/6 Very nice house in excellent condition with 2 reception 3 bedrooms bathroom etc and pro Price for leasehold £1 000 or might be purchased

11 [illegible]OWN —PARTNERSHIP —A one third or [illegible]m a well-established middle and working-class Practice [illegible] receipts average over £[illegible] p a including panel of nearly [illegible]000 Fees 2 6 to 7/6 Not much midwifery Suitable flat available above Surgery, or house can be rented Premium for share 2 years purchase

12 LONDON, NORTH WEST [illegible] better-class non-panel and non-dispensing £1 000 p a Fees 7/6 to 21/ Only gns Corner house with 3 reception lot Garden Garage Rent on lease £ purchase

13 LONDON NORTH —Middle [illegible] Very little pa including panel of [illegible] midwifery Seven-roomed house with professional accommodation Price £1 500 or could be rented Premium £1,500

14 MANCHESTER —Middle and better-class PRACTICE in residential district Average gross cash receipts for past three years £1 270 including panel of 1 150 Convenient house can be purchased for £1 000 £600 can remain at 4½ Premium 1½ years purchase

15 EASTERN COUNTIES —COUNTY TOWN —Very well established mixed middle-class non-panel PRACTICE in favourite town Average gross cash receipts for last three years £3 201 last year £3 309 Numerous appointments Fees 5/ to 21/ Only about 20 cases of midwifery from 5 to 25 gns Very nice house with 2 reception 6 bedrooms dressing room etc and professional rooms Price for freehold £2 000 half on mortgage Premium £5 000 Hospital of over 200 beds and good surgical cope if desired Ill-health only reason for sale

16 SURREY —Delightful residential district within 25 miles —Well established PRACTICE averaging about £550 p a with good scope Panel of 250 Detached house in 1½ acres of ground (3 reception 4 bedrooms etc) Rent on lease £120 p a Premium £850

17 [illegible] PARTNERSHIP —A one third share in mixed-class Practice averaging approximately of 2 550 Fees from 2/6 Suitable house with etc Surgery and waiting room Rent minimum £1 000 to include book debts etc

18 ABERDEENSHIRE COAST —Old established mixed-class PRACTICE in attractive district averaging £759 p a including panel of over 500 and appts worth about £[illegible]0 Fees from 3/6 Suitable house with 2 reception 5 bedrooms and professional rooms Good garden Garage Rent £55 p a or could be purchased Premium £850

19 MANCHESTER —Old-established PRACTICE averaging £640 p a Panel of 154 Offers good scope Fees 3/6 to 10/6 Midwifery 3 to 7 gns House cont[illegible] bedrooms bathroom etc Rent on lease £[illegible] sale £450

20 SOMERSET —SLOU[illegible] —PARTNERSHIP —A one third share [illegible]ant hip of about six months at £300 p a (minor) is offered in an old-established mixed class Practice averaging for the last three years £2 371 p a Panel of over 2 400 Fees from 3/ Suitable house with 2 reception 4 bedroom dressing room separate entrance to professional rooms electric light Fair sized garden Garage Price for freehold £1 000 part on mortgage Term for share one and a half years purchase

21 SOUTH WEST OF ENGLAND —FAVOURITE TOWN —PARTNERSHIP —A share producing about £1 000 p a with further increase later is offered in an old-established non-panel and non-dispensing Practice having large scope for development Fees from 3/6 to £1/ Midwifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Part[illegible] nd hold M D London OWN —Old-established [illegible] £1 800 p a Small [illegible] h midwifery Good [illegible] Freehold for sale Premium £3 000

22 SOUTH OF ENGLA[illegible] chiefly better-class [illegible] s-hotel panel Fe[illegible] house with ample Premium £3 000

23 SOUTH MIDLAN[illegible] —Two Partners are required to take ov[illegible] ach (with increase later) in a very sound [illegible]ng Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

24 PARTNERSHIP —WEST OF ENGLAND —A share producing about £700 p a is offered in a well established Practice averaging over £1 500 p a Ultimate succession later Panel of nearly 1 400 Choice of houses Premium £1 400

25 WITHIN 30 MILES OF LONDON —Delightful residential district Small PRACTICE producing about £400 p a including panel of 300 and capable of considerable development Very good house (in 2 acres of ground) suitable for resident patient Price for freehold £4,000 (mortgage arranged) Premium £400 Excellent schools society and [illegible]

26 LONDON NORTH WEST —Well-established middle-class non-dispensing PRACTICE averaging for the past three years £840 including appts worth about £300 p a and Panel of 1 0[illegible] Fees 3/6 to 21/ Purchaser can choose his own residence Premium £1 250

27 LONDON S W —Good middle-class PRACTICE offering considerable scope and producing for the past 12 months over £670 including panel of nearly 400 Fees from 2/6 Midwifery 3 gns (about 30 cases yearly) Suitable house with dining room consulting room, [illegible] sitting room etc Price for leasehold [illegible] rt on mortgage Premium £1 050

28 [illegible] —A one third share is offered in a very [illegible]ss Practice held by the senior partner [illegible] for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 5 bedrooms etc Small garden Garage Sport of all kinds and very good schools within reach Premium 2 years pur

The Agency has made arrangements for special facilities on very favourable terms to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership Full details on application

Full Schedule of Terms and Conditions will be forwarded on application

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Microphotograph of undigested fæces of infant fed on starchy food



Microphotograph of normal fæces of breast fed infant

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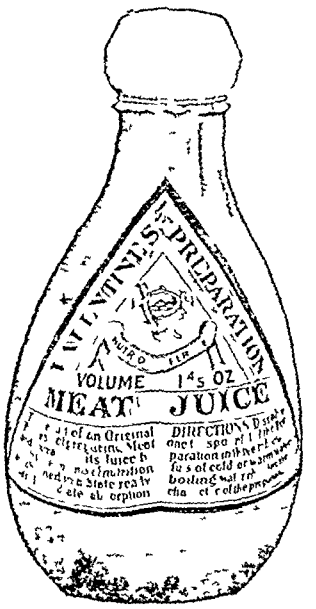
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CONTENTS

APRIL 23, 1932

ORIGINAL ARTICLES

Injuries About the Elbow in Children By Sir ROBERT JONES Bt MCh FRCS 739

Treatment of Tetanus By LES IE COLE, M D M R C I 743

Endocrine Therapy in Dysmenorrhoea. By WALTER P KENNEDY B Sc L P C P & S 746

The Age Incidence of Sero-Positive Syphilis in Females By J ERNEST NICOLL, L M S S A (With Charts) 749

A f of Po - Rubra D POBLRI I 750

Intranasal Ionization in Hay Fever, Vasomotor Rhinitis and Ozaena. By PHILIP FRANKLIN F R C S 751

MEMORANDA

Streptococcal Meningitis Recovery By T R TROUNCE M R C S and A H DOUTHWAITE M D F R C P 752

Prostatectomy in a Nonagenarian By JOHN EVELIDGE F P C S 752

REPORTS OF SOCIETIES

ROYAL SOCIETY OF MEDICINE
Manipulation in Therapeutics 753

ABERDEEN MEDICO CHIRURGICAL SOCIETY
Collapse Therapy in Phthisis 754

ROYAL ACADEMY OF MEDICINE IN IRELAND Hirschsprung's Disease 756

SOCIETY FOR THE STUDY OF INEBRIETY
The Cigarette Habit 757

REVIEWS

Chemical Embryology 757
Psychological Medicine 758
Blood Diseases 759
Diabetes 759
Genito-Urinary Surgery 759
Notes on Books 760

UNIVERSITIES AND COLLEGES

University of Cambridge 777
University of London 777
University of Glasgow 777
National University of Ireland 777
Royal College of Surgeons 777
British College of Obstetricians and Gynaecologists 777
Conjoint Board in Scotland 778

LEADING ARTICLES

PUBLIC HEALTH PROGRESS 761
INJURIES OF THE ELBOW IN CHILDREN 762

THE WEEK

Tuberculosis of Bones and Joints Before Koch 763
Narcolepsy and Ephedrine 763
Medical Education Abroad 764
Poliomyelitis in 1931 764
Hermann Paasenstechei 764
A Hope Deferred Budget 765

GENERAL ARTICLES AND NEWS

Centenary Meeting Museum 765
The 1931 Pilgrimage to Mecca 766
HOSPITAL PROVISION FOR PEOPLE OF MODERATE MEANS British Provident Association's Scheme 765
PREPARATIONS AND APPLIANCES (Illustrated) 760
MEDICAL NOTES IN PARLIAMENT
The Health Services 778
[illegible] strial 778
779
780
MEDICAL NEWS 782

LOCAL NEWS

FRANCE—
Overcrowding of the Profession 767
Treatment by Acupuncture 767
One Better than Coué 768
IRELAND—
Honorary Fellowships of the Royal College of Physicians 768
Paying Patients and Radium Supply to Northern Ireland Hospitals 768
Medical Profession of Wexford and the County M O H 769
ENGLAND AND WALES—
Prince of Wales's Visit to Guy's 769
British Legion Village 769
Central Midwives Board 769

OBITUARY

Guy Neville Stephen M I C S (With Portrait) 781
Frank Mortimer Rowland M D 781
John Henry Salter M R C S 782
Richard E Thompson L P C P & S 782

LETTERS AND ANSWERS

Plantar Corns 783
Income Tax 784
Preparation of Breast for Nursing 784
Anaesthetic Masks 784
Doctors and District Nurses 784
Ferri Perchlor in Skin Disease 784
Visits to Soviet Russia 784

CORRESPONDENCE

Rickets and Vitamin D By Chalmers Watson M D F R C P Ed 769
Deafness and Hooters By T B Layton F P C S 770
Lactic Acid in the Gastric Contents By F Craven Moore M D F R C P 771
Cystic Dilatation of the Common Bile Duct By Julian Taylor F P C S 771
Quinine and Malaria By J Norman Dugdale M B 772
Arsenic and Wallpaper By W Langdon Brown M D F P C P 772
Treatment of Osteo-Arthritis of the Hip By A H Douthwaite M D F R C P and Christopher Kempster M R C S 772
Depressed Fracture of Foetal Skull By G Spence Smyth M D F P C P I 773
Aetiology of Cancer By J A Shaw Mackenzie M D 773
The Origin of Oleothorax Treatment By Norman Tattersall M D 773
Aluminium and Health By I W Jameson M D 774
Thyroid Extract and Pulmonary Embolus By John H Hannan M D 774
Tendencies in Modern Medicine By F G M Ladell M B 774
The Student in Irons By H C Squires M D 775
The Practitioner in Irons By D M Cameron M B and C L H Turner M P C S 775
Preparation for Marriage By A Keith Gibson M B 776
L C C Pathological Service By I Kellond Ford M D 776

VACANCIES 784

(See also page 109 of SUPPLEMENT)

The SUPPLEMENT contains

BRITISH MEDICAL ASSOCIATION
Proceedings of Council
Consultant and Specialist Services as a National Health Insurance Benefit By Dr G C ANDERSON
A STATE MEDICAL SERVICE Discussion at the Paddington Medical Society
HOSPITAL AND HEALTH SERVICES IN EDINBURGH
[illegible] Dinner
Association Notices Correspondence Vacancies and Appointments Diary

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Baillière Tindall & Cox
Irwin K. Urinary Surgery 6
Stuart Low Wm. Care of the Nose 4

Churchill J. & A.
Books on the Eye 6
Book on Massage 4

Lewis H. K. & Co. Ltd.
Martindale W. H.—Pharmacopœia 3
Stuart Low Wm.—Nasal Catarrh 4

Longmans Green & Co. Ltd.
Rainsford Lt.-Col. J. V. Hygiene of Motor Vehicles 3
3
3
3
3
Lamb I. W. Human Physiology 3
Thy roidectomy
Lack A. S. Internal Secretions of the Ovary 3
Stopford J. S. B.—Sensation and the Sensory Pathways 3

Wright & Sons Ltd.
Medical Annual 1932 3

ASSURANCE COMPANIES—
London Medical Protection Society 1
Medical Defence Agency 49

BOOTMAKERS &c.—
Holland & Son—Foot Support 74

BRASS NAME PLATES &c.—
Cook's Name Plates 36
Hall S. J. & Y. Name Plates 34
Ormerod & Co.—Name Plates 34

DEBT COLLECTION—
British Medical Protection Society 32

FOOD PREPARATIONS—
Bemax Laboratories—Bemax 18
Brand's Invalid Foods 1
Cow & Gate Ltd.—Milk Food 28
Hanbury Bros. & Hanbury Ltd.—Doctor's China Tea 31
Horlick's Malted Milk 29
Keen Robinson & Co. Ltd.—Latent Grosts 10
Trufood Ltd.—Humanol Trufood 30
Valentine's Meat-Juice 14

SURGICAL APPLIANCES—
Allen & Hanburys Ltd.—Lond. Hospital Cycle Needles 8
Ferris & Co. Ltd.—Artificial Limbs 34
Hawksley & Sons Ltd.—Stethoscopes 32
Hilliard's Surgical Operation Bag 4
Medical Supply Association, Ltd.—C. Bingham Caste Bandages 30
Rose Materials Corset Belt 32
Rous & Mann Corsets Bust etc. 6
Salt's Surgical Service 67

HOSPITALS &c.—
Hospital for Epilepsy and Paralysis 34

AGENTS—
Foyton 47
47

STATIONERY—
Typewriters 48
Stationery & Printers 32

CHEMISTS &c.—
Allen & Hanbury Ltd.—
Insulin A.B. 25
Novatrax 45
Pitressin 16
Ardath French Drug Co. Ltd.—Ephedrine and Synthetic Cevadyl
Armour & Co. Ltd.—Liver Extract 2
Bell & Croydon—
Colloidal Antipneumococcal 1
Boots Products 22,23
British Drug Houses Ltd.—
Epsom Salts 20
Insulin A.B. 25
Radiol Solution 39
Clayton Aniline Co. Ltd.—Preparations Cover i
Continental Lab. Ltd.—Lactobacillus 18
15
19
Cover iii
11
Cover iii
Phosphate-Free Iron 17
Cuxson Gerrard & Co.—Bleedex Cover ii
Hough Hodgson & Co. Ltd.—Formamint & Antiseptone 33
Layne Ltd.—Layolene 31
Matthew Hay Ltd.—Sterilla 4
May & Baker Ltd.—Arthrytin 17
Newbery & Son Ltd.—Acetrol 28
Haemorrhoidal Suppositories 19
Reed & Carnrick—Neuritin 24
Roberts & Co.—Diuretol 8
Saccharin Corporation Ltd.—Sanocrysin & Glauco-san 11
Santal Midy 19
Sharp & Dohme Ltd.—Antimony 37 16
Wander A. Ltd.—Ab. Hk. Alcresl 12
Wright, Layman & Umney Ltd.—Cecil Lay Preparations 13

MOTOR CARS TYRES &c.—
Lilley Car 5
Second Hand Motors for Sale 47
Wolseley Cars 33

TAILORING & UNDERCLOTHING—
Hall H.—Medical Service Dress 48
Irish Linen Mesh Co. Ltd.—Linen Mesh Underwear 34
Regent Dress Co.—Tailors 34

TOBACCO & CIGARETTES—
Player's Navy Cut 33
Three Nuns 4

TRANSLATIONS TYPEWRITING—
Radford B.—Typewriting etc. 46

VACCINES & CULTURE MEDIA—
Burroughs Wellcome & Co.—Wellcome Sera 7
Duncan Flockhart & Co.—Vaccines 14
Laboratories of Pathology & Public Health 32

X RAY & ELECTRO MEDICAL APPARATUS—
Hamblin T. Ltd.—Intranasal Ionizer 32
Portable X Ray Ltd.—X Ray Car Service 32

INEBRIETY—
Bay Mount, Paignton 36
Caldecote Hall near Nuneaton 36
Dalrymple House Richmond 6
Old Hill House Chislehurst 36

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
PARTNERSHIPS 49

HOSPITAL &c. VACANCIES—
Aberdeen Royal Infirmary 44
45
45
3
43
45
49
41
43
44
43
Barnsley Borough 45
42
45
49
43
43
48
44
43
43
43
44
45
43
43
43
44
43
43
44
43
43
44
42
44
45
43
43
44
44
43
43
44
43
43
44
43
44
44
43
43
44
44
43
43
44
44
43

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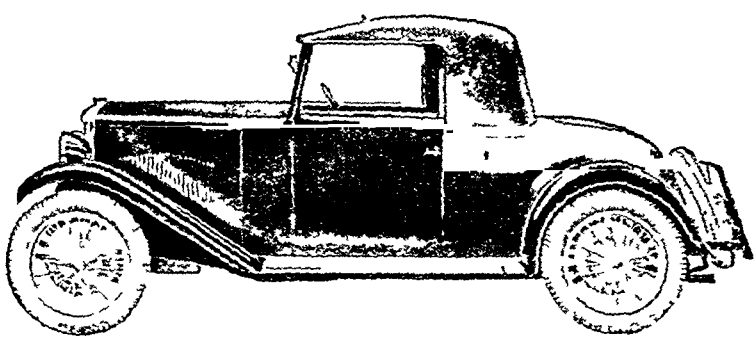
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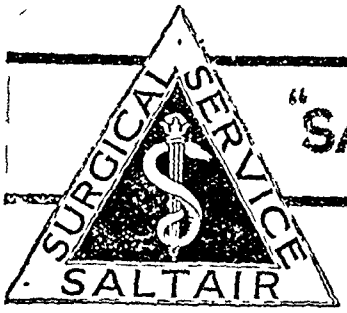
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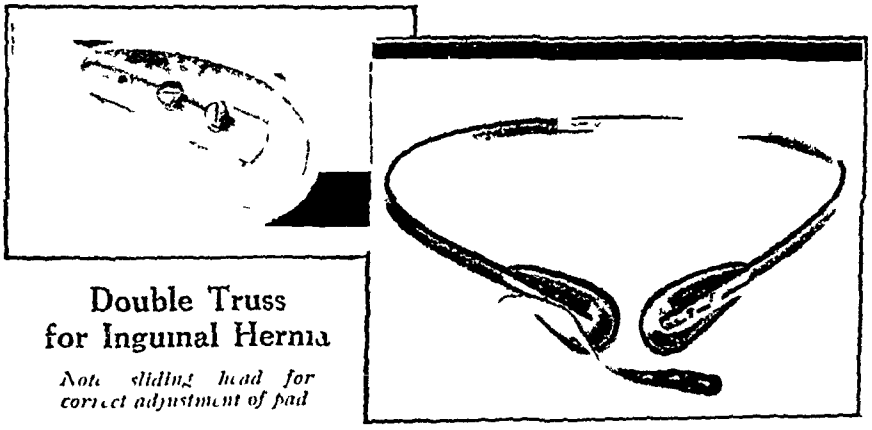
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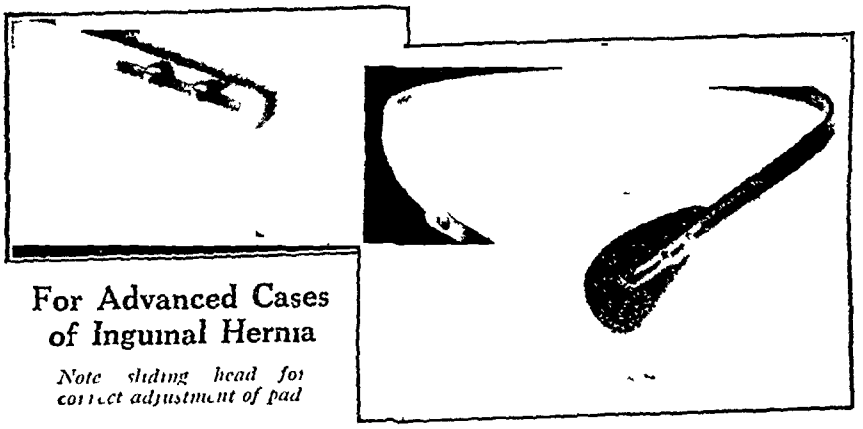
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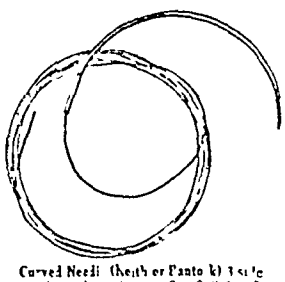
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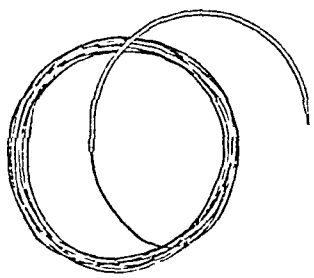
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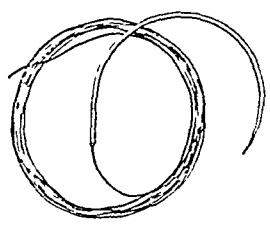
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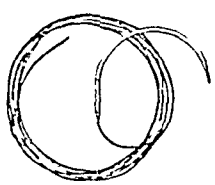
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In boxes of 3 tubes 4/6



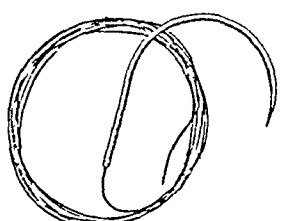
Curved Mayo Robson Stomach Needle Sizes 4/0 3/0 2/0 0 1 2 3 In boxes of 3 tubes 4/6



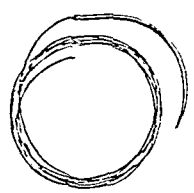
Moynihan's Model In 3 tube box 4/6



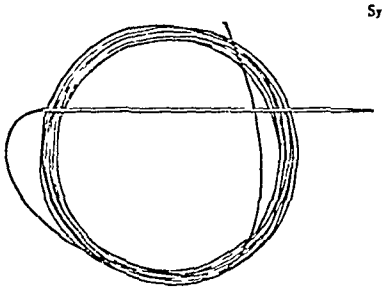
Small Curved Intestinal Needle
Size 0 In box of 3 tubes 4/6



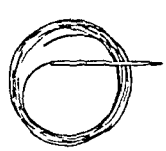
Symond's Round Bodied Medel
In boxes of 3 tubes 4/6



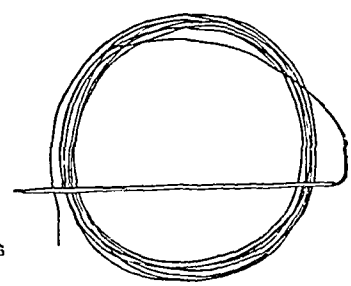
Curved Ophthalmic Needle (also for plastic work) Size 0/0
In boxes of 3 tubes 4/6



Straight Stomach Intestinal Needle Size 4/0 3/0 2/0 0 1 2 3 4
In box of 3 tubes with single needle 4/6
" 12 " " 2 needles 10/
" 3 " " 7/6
" 12 " 25/



Straight Squint Needle
(Cranmer) 3 in
Size 0/0
In boxes of 3 tubes 4/6
1 16/



Straight Needle (Heath or Bantock) 2 in 3 side cutting edge Sizes 2/0 0 1 2 3
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London Hospital Eyeless Needles are obtainable from

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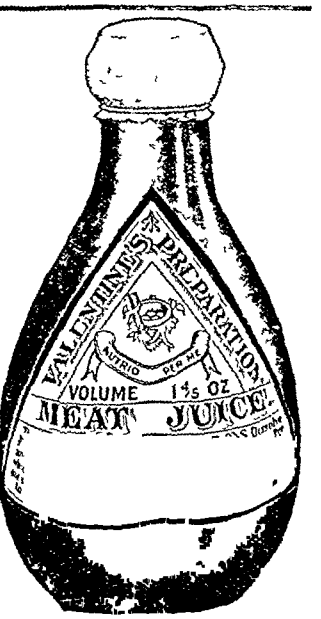
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The quickness and power with which Valentine's Meat-Juice acts, the manner in which it adapts itself to and quiets the irritable stomach, its agreeable taste, ease of administration and entire assimilation recommend it to physician and patient

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  Does not stain skin
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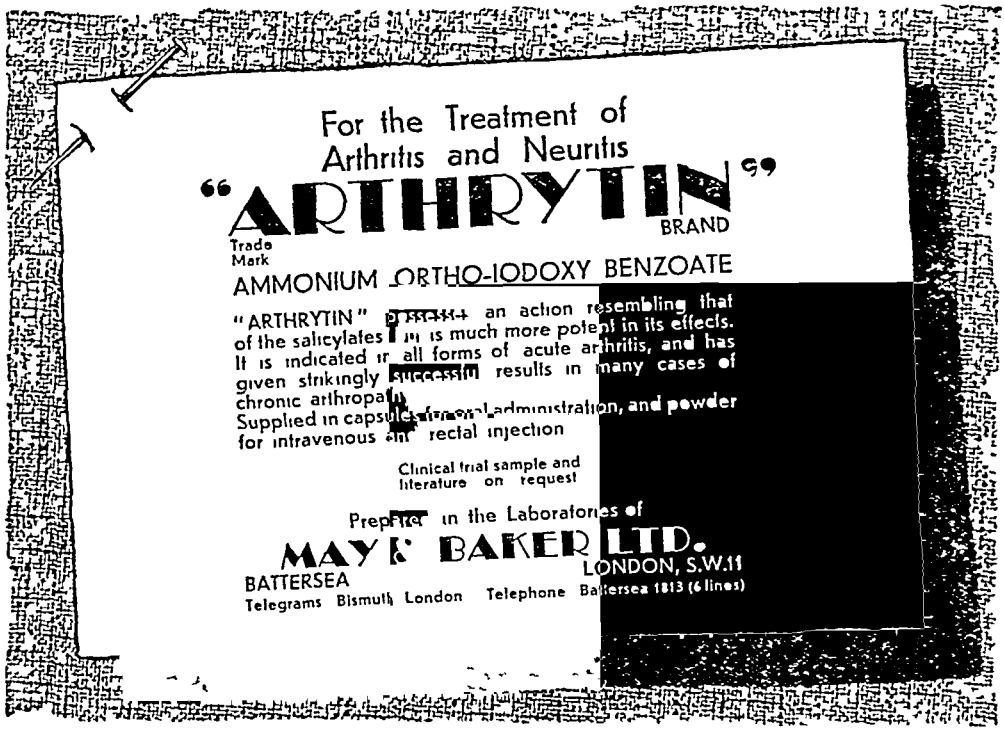
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Suggested dosage A teaspoonful in half a glassful of water three or four times daily

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CONTAINS THE ESSENTIAL MINERALS

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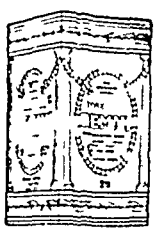
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Congestion Causes Inflammation

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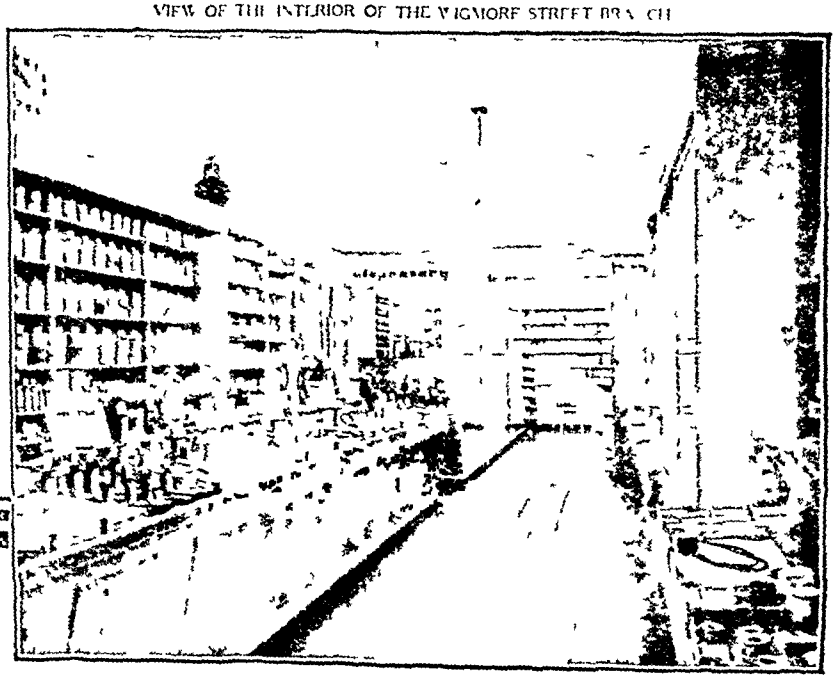
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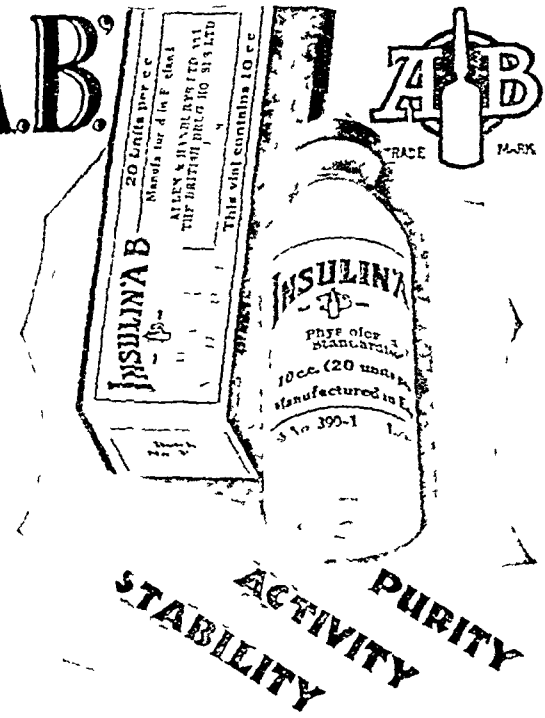
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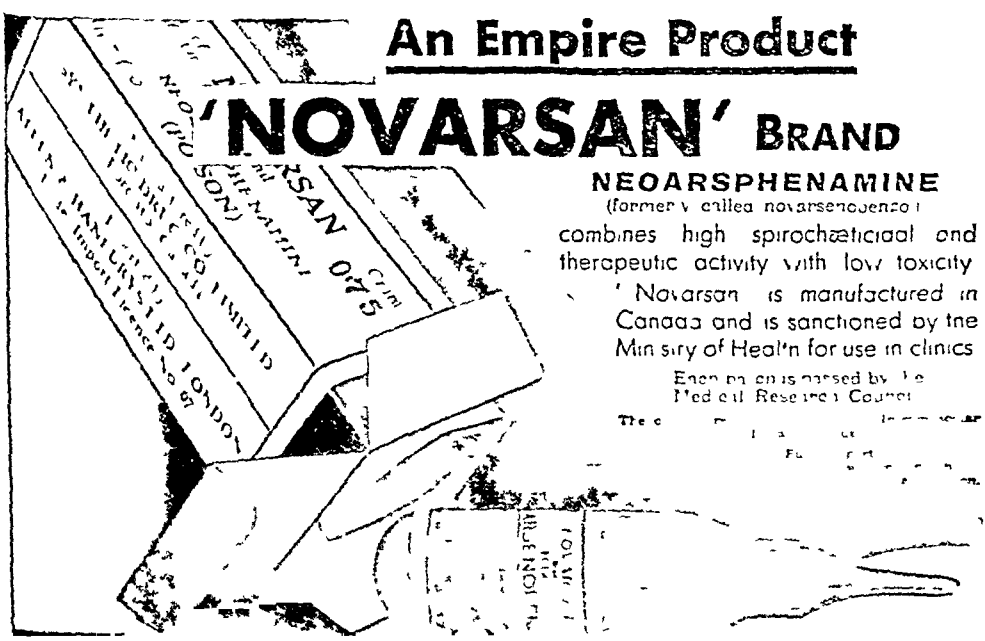
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combines high spirochæticidal and therapeutic activity with low toxicity

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Each preparation is passed by the Medical Research Council



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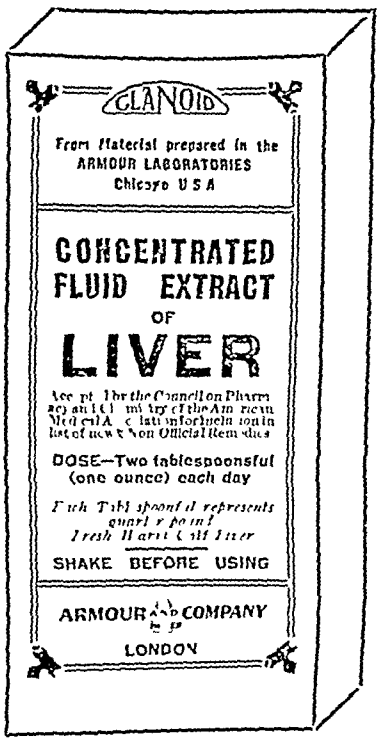
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Remarks

on

INJURIES ABOUT THE ELBOW IN CHILDREN

By

SIR ROBERT JONES BT KBE MCH FRCS

The correct treatment of injuries about the elbow leaves much to be desired We have all had our moments of anxiety in handling them Even now it is anything but rare to examine patients of all ages who have had prolonged treatment with arms fixed at awkward angles which allow only limited movements in positions quite incompatible with useful function This is not always due to negligence indeed it is often due to unnecessary and mistaken activities on the part of the surgeon Although in the vast majority of injuries of the elbow we can expect excellent results it is a wise precaution to be conservative in our predictions for failure will be experienced now and again We should from the first try to visualize possibilities and memorize happenings This is not difficult when the deformities apparent in the neglected cases are recalled there is limitation of movement in all of them some being practically anchylosed The joint is usually held at an obtuse angle and frequently an obstruction which prevents flexion is found at the head of the elbow In cases where the head of the radius is concerned pronation and supination are limited or completely obstructed while in others the forearm is displaced backwards or laterally or the elbow widened by a displaced condyle or epicondyle Variations and obliteration of the carrying angle are frequently in evidence and sometimes a deviation inwards (cubitus varus) is noted

It is needless to emphasize the importance of making an accurate diagnosis and the necessity of insisting upon skiagraphs taken in two positions In the adult the x-ray photograph is comparatively easy to understand in the child it may be very difficult and here our tactile sense is invaluable The difficulty is due to the fact that in children the articular ends of the bone are cartilaginous and transparent and apart from an occasional ossifying epiphysis there is merely a clear space of considerable extent between arm and forearm which certainly may contain fracture or displacements though they are not demonstrable in the negative

Centres of Ossification

In order to facilitate diagnosis I will refer to a few simple anatomical facts Important among these from their relation to x-ray photographs are the centres of ossification and the fusion of epiphyses The centre of the shaft of the humerus appears early in foetal life ossification of the capitellum begins in the third year in the internal epicondyle in the fifth year in the trochlea in the eleventh year and in the external epicondyle in the thirteenth The upper end of the radius begins to ossify in the fifth year and is united at the seventeenth the olecranon unites at puberty All the centres of the lower humerus fuse to form an epiphysis which joins the shaft at puberty the upper epiphysis does not join until maturity The latter means that while we cannot separate our lower epiphyses later than the sixteenth year our upper epiphysis may be detached up to the age of 21 It will be apparent from what I have said that in injuries of the elbow we must always bear in mind the possibility of epiphyseal separation and in the case of young children we must always suspect epiphyseal

Movements

Normally there is no lateral movement at the elbow but merely pronation supination flexion and extension Voluntary extension and flexion are limited by the tension of soft structures and not by contact with the respective faces of the coronoid and olecranon The bony structures check forced but not voluntary movement A point of great practical importance for diagnostic purposes is that if the arm be extended a line drawn from one condyle to another passes over the tip of the olecranon This is as useful a line to aid us at the elbow as is that of Nelaton at the hip If the elbow be flexed to a right angle the olecranon lies about an inch below and not quite half way between these points being a little nearer to the internal condyle While the line of the humero-radial joint is horizontal the humero-ulnar joint slopes obliquely downwards This fact makes the axis of the extended forearm diverge outwards at an angle of about 6 degrees giving rise to the so-called carrying angle of the elbow The angle disappears when the arm is pronated This important anatomical fact will account for the pronated hand being carried towards the face in flexion and to the outer side in supination

The internal lateral ligament is the most important and resistant It limits both flexion and extension and resists lateral yielding Were it not for the lateral ligaments fractures of the olecranon would exhibit great deformity but their attachments—more particularly that of the internal to the border of the great sigmoid cavity of the ulna—prevent a wide separation If a wide separation exists we may be sure that the ligaments have been completely ruptured Of the capsule we need only remember that its two thin aspects are at the front and at the back and that effusions present as two pouches each side of the olecranon and also beneath the brachialis anticus These anatomical points though elementary help towards an accurate diagnosis If on examination of the injured elbow there is no lateral yielding it may be concluded that there is no fracture of the condyles or rupture of the lateral ligaments excepting where there is an impacted intracondylar fracture or a partial condylar crack conditions only met occasionally In supracondylar fractures there is usually free lateral movement just above the elbow joint but the line I have described will fall normally over the condyles in its proper relation with the olecranon The elbow will yield laterally in fractures through the condyles into the joint and in posterior dislocation of the forearm

When an elbow is much swollen it is often very difficult to decide what the prominence we feel represents Our fingers will assist us by following the subcutaneous border of the ulna to the olecranon and the subcutaneous border of the radius to the external condyle The internal condyle is usually easy to palpate It is of paramount importance to discover at this the earliest stage whether there is any nerve involvement if it is discovered later the surgeon may be accused of having produced it

Dislocations

The common dislocation that of backward displacement of the forearm is usually quite easy to diagnose and if not accompanied by much lateral deviation is easy to reduce

The relative position of the condyles and the tip of the olecranon can generally be felt There is a fullness in front just below the head of the elbow and the joint is usually flexed at an angle of about 140 degrees The head of the radius is very superficial lying to the outer side of the olecranon and behind the external condyle the forearm is shortened antero-posteriorly and broadened there is deviation of the axis of the arm limited flexion and

extension and a varying amount of lateral movement. The dislocation is commonly due to a fall on the hand and the elbow is thereby hyperextended and usually abducted. During hyperextension of the arm the olecranon presses into the fossa and wrenches the ulna from the humerus; the lateral ligaments are torn and the coronoid is forced behind the trochlear surface. It will be noted that the olecranon lies behind its normal relation to the humerus; the anterior concave aspect of the olecranon can sometimes be felt. A word may be said of a frequently overlooked displacement of the head of the radius in the small child. It is true subluxation, and the history is definite. The arm can be freely flexed but there is some limit to supination; in attempting to supinate the arm the head is replaced and clicks. The injury is almost always inflicted by a pull upon the arm accompanied by abduction or adduction; the mother pulls the child's arm to hurry it along, or to lift it over an obstacle. The displacement is forwards and inwards.

Complete dislocation of the radius forwards and inwards is not uncommon. It occurs in later life and is often due to a blow from behind while the arm is pronated to a severe twist or to a fall on a pronated arm. The three bony points are in normal relation; there is limited supination; the head of the radius moves with the shaft and flexion of the elbow is sharply checked. One frequently sees old dislocations when the head of the radius lies forward and outward and generally no limitation of movement exists in any direction.

In this paper I will only deal with (1) Fractures of the external condyle of the humerus. (2) Fractures of the internal condyle and epicondyle of the humerus. (3) Supracondylar and intercondylar fractures of the humerus. (4) Fractures of the head and neck of the radius.

FRACTURE OF THE EXTERNAL CONDYLE

The line of fracture in the young usually runs along the epiphyseal line between the capitellum and the lower end of the humerus and enters the joint near the trochlear groove, often carrying with it a small portion of the diaphysis. Thurstan Holland has pointed out the rarity of uncomplicated separation of the epiphysis although the detachment of bone may be very slight. In the adult the fracture usually carries the epicondyle with it. Fracture of the external condyle is much more common than that of the internal because the ulna is the main bone of the forearm while the radius is more closely attached to the wrist—thus force is more easily conveyed to the external condyle. The fracture may however result from a fall on the flexed elbow or from forcible adduction of the forearm due to ligamentous tension upon the condyle. The gunstock deformity is due to a slipping upwards of the condyle. In children the fracture may be difficult to reduce owing to rotation and flexion of the fragment due to the action of the extensors. There is tenderness and mobility of the condyle and impairment of movement mainly in flexion. The relation of the three points is altered. The transverse diameter on the injured side is increased; the carrying angle may be increased and the forearm can readily be adducted and abducted. This injury is usually the result of a fall on the elbow.

FRACTURE OF THE INTERNAL CONDYLE

The signs of this fracture are similar to those of fracture of the external condyle. There is swelling and displacement upwards and mobility of the fragment; the arm can be adducted and abducted at the elbow. The inner of the three bony points is on a higher plane and the carrying angle diminished. The line of fracture often begins above the epitrochlea to the centre of the joint. The ulna is attached to the fragment and the condyle is usually saved from much displacement.

Displacement of the Internal Epicondyle.—The epicondyle may be fractured by a fall on the hand or from a violent stretching of the muscles which arise from it. The displacement is usually forwards. The fractured end is difficult to feel but stretching of the muscle by flexion of the fingers gives rise to sharp pain over the seat of injury. The ulnar nerve is sometimes injured either directly or as will be explained later from stretching.

SUPRACONDYLAR FRACTURE

This is a very common injury. The signs are distinctive and the only confusion likely to arise is in distinguishing the fracture from dislocation of the elbow backwards. In both cases there is lateral mobility a prominence at the bend of the elbow and a prominence of the olecranon posteriorly. In the fracture the three bony points are undisturbed. Crepitus is usually experienced in reduction while the deformity is very apt to recur unless the arm is immobilized. There is no hollow immediately above the olecranon; the condyles move with the forearm; pronation and supination are free. In both these injuries there is liable to be much effusion and an accurate diagnosis should be made by x rays. Rough manipulation is distinctly dangerous. This fracture is often accompanied by lateral displacement.

FRACTURE OF RADIUS HEAD AND NECK

This is an injury which requires very careful handling. The diagnosis is made when we find local pain on pressure with a limitation of pronation or supination or both in the absence of the other fractures already described. Fractures of the head and neck of the radius are more common in the adult than in children but the treatment is not the same. A very common sign is painful spasm when rotation is attempted. When the head is fractured it may be simply marginal and the fractured portion is displaced into the joint or a small portion of the neck may be included. Under an anæsthetic manipulation of the head should be attempted in order to replace the fragment; this is sometimes difficult. If under the anæsthetic good rotation not necessarily complete has been secured in the child the arm should be placed in full flexion. If in the adult in spite of manipulation the rotation is are not secured the broken fragment should be fixed in position or removed. Delay in doing this means a poor result because function is only partially restored if operation is postponed. The same is true in fracture through the neck. If the upper fragment can be replaced and held it is good; if not it should be dealt with. The lower fragment if the upper has been removed should be smoothed and rounded. This does not apply when dealing with the child. It is unwise to remove the loose piece in fractures of the neck because of the danger of arrest of growth; but if a part of the head is displaced into the joint it should be removed for it very rarely unites. In time the child very largely recovers from limited pronation and supination; this is not so in the adult.

TREATMENT OF FRACTURES ABOUT THE ELBOW JOINT

Neglected fractures about the elbow nearly all remain stiff well below a right angle and any attempt at flexion results in a bony block. In the days of the internal angular splint such deformities crowded out patient rooms.

Over forty years ago when x rays were unknown and motor cars were not invented practitioners in the country had to rely upon their own skill in the treatment of fractures. It was difficult to obtain outside help and fractures of the elbow in particular gave great anxiety. The joint generally stiffened at an obtuse angle. These old cases were treated in the out patient department by manipulation; an operation was looked upon as a dangerous procedure. The most successful results followed an

...ing to increase the mobility towards flexion when this was done a further proportion improved in function ... the range of movement was considerably increased. The original change of angle could not always be brought about with safety at once; it had to be ... After each effort the wrist was slung ... to the neck for a few days. Taught by the ... which came for treatment I kept injured ... but assiduous from the moment of injury ... and the functional ... favourable contrast to the deformities I ...

With the object of reducing the ... disabilities in these early days I suggested as primary treatment ... forearm in full flexion after reduction. This ... is brought about by putting traction on the ... forearm with the thumb placed just above the ... of the elbow. I explained that this should be done ... even when a diagnosis was doubtful. On examination of old cases of supracondylar fracture it was found that the prominent lower end of the humerus assisted by callus and organized exudates opposed flexion ... the elbow had been treated in the straight or ... position; this was the same in condylar ... and in backward dislocation of the forearm. I therefore trusted my house surgeons in all cases of fracture about the elbow—with the exception of the ...—to put traction on the forearm, press backwards the prominence in the elbow, supinate, and flex fully. In the early days, when x rays were not discovered, all who worked with me made this manipulation a routine.

As long ago as 1894 I urged surgeons, even when they were unable to make an accurate diagnosis, to adopt the flexed position because it was anatomically correct and the results were good. I then wrote:

> If the forearm be dislocated backwards we must extend and not attempt full flexion, for in this way only can we reduce the displacement. Should we be unable to flex the arm we may ... by such failure that the displacement still remains. If the radius is dislocated forwards and inwards, the same ... effective. The supination and extension will reduce it, but only while full flexion will maintain it in position. If the fracture be intercondyloid, the flexion has this advantage—it cures at once for the forearm a right of way before ... of callus and displaced condyles can prove obstructive. Should the injury be a separation of the internal ... while the cause no better way to keep it from downward displacement than by flexion, which relaxes the muscles ...

Our work to-day is made easier by the advent of radiography; we can make an accurate diagnosis and ... replacement of fractured ends. In spite of all ... full flexion of the elbow is found to be the most universally reliable position to *maintain the replacement* of fractures and dislocations. If the axis of the forearm ... with that of the upper arm the carrying angle will be ... restored.

flexed until the hand rests against the neck. *It should be emphasized that mere flexion of the elbow without setting the fracture is not only useless but a dangerous practice.* No external splints are required for the tendon of the triceps muscle, arranged like a strap round the back of the joint, is a perfect splint, while the coronoid process of the ulna tucked into the coronoid fossa steadies the lower fragment in front. No obstructive callus can form in front because there is no room for it. The flexed forearm keeps the fractured ends in apposition just as in fracture of the neck of the femur reduction is maintained by tension of the capsule when the joint is abducted.

Between the second and third weeks, when the fracture is fairly secure, the angle may be increased by lowering the wrist two or three inches and the patient may practise active movements daily, producing full flexion and then allowing the arm to fall down to the limit allowed by the sling. If the movement can be satisfactorily performed the sling can be lengthened every few days until a right angle is reached, and then it can be discarded altogether.

Fracture of the Condyles.—To reduce the external condyle, which is the more commonly injured, the arm should first be abducted to preserve the carrying angle, and the full flexion method adopted in order to force the condyle backwards, as contact with the head of the radius prevents displacements forwards. Once the condyle has been replaced—and this can generally be effected by manipulation—the triceps and its expansion holds it in position when the elbow is fully flexed. This may be considered as the only anatomically sound fixation.

The internal condyle is manipulated into position and then the forearm is fully flexed, which prevents the condyle from ascending; the triceps keeps it from backward displacement, and so does the weight of the ulna. In this position also the flexor group of muscles are relaxed, and so rotation deformity is prevented. In rare cases where obstructive displacement persists an operation may be needed. A successful setting may be assumed from a clinical aspect if on grasping the condyle full flexion and extension can be performed without force.

Fracture of the Internal Epicondyle.—The internal epicondyle is more often displaced than the external. In the adult it is extra-articular, but being intra-articular and epiphyseal in children it will sometimes wander into the joint and block the movements. It is sometimes associated with paresis of the ulnar nerve. When displaced into the joint it may be necessary to operate; the other displacements do not as a rule call for an operation. The arm should be kept in full flexion, and subsequent treatment should follow the same course as that laid down for supracondylar fractures.

ILLNESS OF THE ELDER

There should be no delay in reducing a fracture or dislocation. It is a bad rule to wait until swelling disappears for the replacement of fractured bones, as necessary

There has been considerable correspondence lately on the dangers of acute flexion this has arisen because of the fear of ischaemic palsy In consequence, certain surgeons have suggested rectangular flexion and some have advised that the arm should be treated in full extension I wish to make it clear that acute flexion does not mean fully forced flexion but flexion to about 5 degrees short of full normal flexion When an elbow is swollen and the joint is resistant to full flexion it should not be subjected to force This resistance is generally due to inefficient reduction and if the fragment is displaced into the bend of the elbow force is clearly contraindicated Even if there is considerable haemorrhage in the presence of a correct reduction the flexion should be brought about in stages if there is any obstruction The radial pulse is a reliable indication of this Ischaemic palsy may occur in any position which the elbow occupies and it is very unjust to hold a practitioner liable for its occurrence this will surely happen if it is agreed that acute flexion of the elbow or tight bandaging or both are the only reasons for the *occurrence of ischaemia* It is the only position which stabilises the elbow when the fracture is reduced It *prevents* rotation lateral yielding or backward displacement of the lower fragment and the action of the forearm as a deforming lever is prevented It must be remembered that in fracture of the lower humerus any abduction or adduction causes torsion of the broken fragment It is true that in full extension torsion of the fragments can be prevented but the forearm in this position acts as a powerful lever in abducting or adducting the limb at the seat of fracture If the arm is kept at right angles torsion of the lower fragment is easily produced when the flexed forearm is kept in line with the humerus the carrying angle is not interfered with The triceps when the elbow is fully flexed, forms a reliable splint both for condylar and for supracondylar fractures It covers the posterior parts of the condyles and spreads below as a broad aponeurosis Although I have used the flexed position for over forty years I have never met with an ischaemia but I have met with many old cases of this paralysis where the arm has never been acutely flexed or tightly bandaged Ashhurst in his interesting monograph of the elbow has confirmed what I say

SERIOUS COMPLICATIONS

The serious complications are ischaemic contraction nerve complications and myositis ossificans

Ischaemic Contraction

Ischaemic paralysis is a most grave complication and often starts with a dramatic onset It may follow any fracture of the elbow most frequently supracondylar or it may occur in a backward dislocation of the elbow Experiments have confirmed clinical experiences that the condition is due to acute venous obstruction it does not occur when obstruction is gradual It cannot be insisted upon too often that the calamity may be due to pressure from within such as haemorrhage into the ante cubital fossa pressure from displaced fragments or pressure from without such as tight bandaging Symptoms usually begin in the space of a few hours after injury the hand is painful the fingers are discoloured and numb and voluntary movements may disappear Irreparable mischief may take place in forty eight hours Muscular rigidity and sometimes intense pain come on early and then the contracture in a few days the fingers become stiff the muscles hard and resistant The deformity if untreated increases and the fingers become more and more flexed at the mid phalangeal and terminal phalangeal joints

The deformity in the untreated case is characteristic The fingers are slightly extended at the metacarpophalangeal range and flexed at the distal joints only when the wrist and carpo metacarpal joints are passively flexed to the fullest extent can the fingers be straightened The forearm is fixed in pronation and in a varying degree of flexion In the slighter forms of the contraction there is usually some power of active flexion of the digits In the severe type there may be a complete loss of function in the fibrotic muscle group Both the median and the ulnar nerves may be involved owing to the shrinkage of the fibrotic muscle bellies while the median is sometimes pierced by the lower end of the upper fragment in a supracondylar lesion

Treatment—This should be immediate every minute is important The arm should be released from all restraint likely to cause vascular obstruction it should also be elevated The child's future is so jeopardized that an attempt should be made to evacuate the blood clot by an incision on the antero ulnar side of the forearm and all blood expressed from the ante cubital space This prompt action may save the situation it rests on a sound pathological foundation and successful cases have been reported When the fractured upper fragment projects it should be reduced without trauma even if the arm has to be kept at an obtuse angle When contractions have already developed correction should be attempted by the method of gradual extension With the wrist and metacarpophalangeal joints in full flexion each finger is separately strapped to a little gutter splint The metacarpophalangeal range is then gently stretched and a flat metal splint applied on the palmar aspect of the hand From day to day the position of the wrist is gradually altered until dorsiflexion is obtained By this simple procedure the scar tissue is stretched in order of tension and it is the only mechanical method which will correct the deformity As the contracture yields the hand improves in function the circulation is better and the fingers often show some return of power Where the ischaemia has produced a complete obliteration of muscle fibres good function cannot be obtained but the correction of the unsightly claw deformity is always appreciated by the patient

Operative Treatment in the Old Case—I have no great hope from operative treatment such as tenoplasty and bone shortening although the separation of muscles from about the epicondyle suggested by Page appeals to me as being sound Cases which will benefit from operation are likely to yield to mechanical treatment If the muscles have been transformed to fibrous tissue no functional success is possible whatever is done If the elbow is stiff excision will give much needed space to slacken the muscular tension and give function to the joint if the muscle tissue is not altogether destroyed

Prophylaxis—Avoid circular compression and reduce dislocations and displaced bones Avoid all kinds of splints and use no force in flexing the elbow All cases of fracture about the elbow should be watched for the first few days the danger signals are great pain (usually) stiffening and swelling cyanosis and lividity of the fingers Ischaemia may result without obliteration of the radial pulse but this symptom is at least evidence of pressure Loss of voluntary movements is a serious omen The *prognosis* is always grave I have never met with perfect function in the hand where ischaemia symptoms were pronounced but improvement can generally be secured

Injuries of Nerves

Although injuries to the median and post interosseus may occur and require operation the occasions are rare It is better to perform a tendon transplantation than a nerve suturing if the post interosseus has been irreparably damaged The ulnar nerve is often injured directly or after a long interval Direct injury occurs sometimes in

cases of damage of the internal epicondyle or in the condylar groove and the nerve should be exposed only if symptoms persist It may be necessary to transpose it anteriorly

Late ulnar palsy not infrequently follows fracture and displacement of the external condyle The fracture dates nearly always from early childhood and the neuritis occurs many years later It is a traction lesion predetermined by a cubitus valgus deformity The nerve trunk being destined to take a longer course is stretched in the process It will be necessary to transpose the course of the nerve from its groove to the front of the joint, and then recovery may be expected

The median nerve is occasionally injured in supracondylar fractures by the sharp projecting angle of the lower end of the diaphysis and this may occur as an immediate complication of the fracture or may follow a rough attempt at reduction Direct injury to the musculo spiral nerve is rare but when it occurs the prognosis after operation is good

Myositis Ossificans

This alarming complication may arise after any fracture about the elbow but is most commonly associated with dislocation of the elbow backwards Its onset is gradual and when established may result in a complete or partial ankylosis of the elbow joint It is generally due to tearing of the muscular and periosteal tissue from bone accompanied by haemorrhage Fragments of periosteum and osteogenetic tissue are pulled away and probably in this way the formation of new bone takes place along the interfibrillary and intermuscular septa The symptoms are insidious An elbow which is doing well begins to get stiff in the third or fourth week and omitting to take an *x* ray film a practitioner prescribes passive movements This is a dangerous procedure The film shows a suspicious cloudiness about the attachments of some muscle—usually the brachialis anticus In two or three weeks this shadow becomes more dense and traces of bone structure are noted It is a mistake at this stage to operate because further osteogenesis often occurs The elbow should be kept quite still until evidence is obtained that bone deposit has ended—a fact which is easily ascertained by successive radiograms—and then only should active movements be allowed In rare instances the bone may be completely absorbed but in many cases partial absorption occurs If the deposit remains and is inactive but causes disability it can now be removed but if the movements of the elbow are free it should be ignored These deposits may remain for many months sometimes years and ultimately be absorbed

While therefore we have every right to expect a good result from injuries of the elbow we should be alive to possibilities and dangers We should carefully note any nerve involvement at the moment of injury we should speak of the possibilities of myositis ossificans and warn the parents of the dangers of energetic massage and movement campaigns We should also recollect that the practitioner is not necessarily to blame if an ischaemic palsy occurs it may have nothing to do with tight bandaging and it has occurred without flexion of the elbow without splints and without bandaging At the same time we should if we can prevent pressure from within by reducing displacements which cause acute venous obstruction and avoid pressure from without By no argument can the practitioner be held guilty of the origin of a myositis ossificans and neither can he be blamed for its development provided that he does not prescribe passive movements during the period of bone formation If myositis ossificans appears and any error is to be made let it be on the side of rest I have seen many tragedies occur from too early movement Finally do not fully flex an elbow without first reducing the fracture or displacement and having flexed the elbow do not obstruct the circulation of the arm by bandaging it in the flexed position

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THE TREATMENT OF TETANUS

BY

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Tetanus is now a comparatively rare disease in civil practice and this is largely due to the prophylactic use of antitoxin In agricultural districts such as East Anglia however it still occurs too frequently often after wounds which are not seen by a doctor or which seem so trivial that antitoxin is not given Ten cases have been admitted and treated at Addenbrooke's Hospital during the last three years and five of these have recovered These are recorded to emphasize the danger of tetanus that still exists and for any light that they may throw on the best methods of treating the disease

CASE I

Male aged 11 years Fourteen days before admission a sharp splinter of wood entered the skin below the left knee and penetrated 1/2 inch to the bone This was removed by a doctor and the wound healed normally Three days before admission he complained that the left leg was rather stiff The stiffness spread in a few hours to the right leg and he found that he could not open his mouth

State on Admission.—Risus sardonicus rigidity of the neck and spine board like abdomen The teeth could only be separated a distance of 1/4 inch but he could speak and could swallow fluids Severe spasms occurred with opisthotonos about every half hour The only sign of a wound was a small healed scar and this was not touched

Treatment and Progress.—On the day of admission 70 000 units of antitoxin were given intrathecally 60 000 intramuscularly and 30 000 intravenously (International units are used throughout) This was done under chloroform anaesthesia Bromide and chloral were also given The next day he was definitely better and from this time steadily improved the spasms gradually becoming less frequent and less severe In the following six days 74 000 units in all were given the dosage being gradually reduced 44 000 were given intrathecally and 30 000 intramuscularly At the end of one week he was well but for slight stiffness of the jaw and of the abdominal muscles which had quite disappeared in fourteen days

CASE II

Male aged 23 years horsekeeper No history of injury or illness Quite well and at work until fourteen days before admission He then complained of stiffness of the back Two days later his jaw also became stiff These symptoms continued but he did not send for the doctor until he had had them eight days The stiffness gradually increased and spasms of pain in the back and chest and neck came on after eight days He used to get out of bed and walk round the room in an attempt to work off the stiffness

State on Admission.—All the muscles of the chest neck and abdomen were in a state of severe spasm which was made worse by any stimulus such as movement Board like rigidity of the abdomen was present risus sardonicus marked The teeth could not be separated more than 1/4 inch Sweating was profuse

Treatment and Progress.—On the day of admission 40 000 units were given intrathecally and the same amount intravenously under chloroform anaesthesia A

further 80 000 intrathecally 60,000 intravenously and 20 000 intramuscularly were given during the next six days The spasms had then stopped stiffness was very much less and the teeth could be separated a distance of 1/2 inches The patient was discharged well after sixteen days No sign of a wound or scar could be found

CASE III

Male aged 10 years Fourteen days before admission his father noticed that he was limping Nine days later he seemed unwell and complained of pain and stiffness in the back and neck That was followed by increasing stiffness of the jaw so that on the day of admission he was unable to open his mouth

State on Admission—An extremely dirty child Small abrasion on the right foot with cab formation Marked stiffness of all the muscles of the back chest and neck Board like rigidity of the abdomen Risus sardonicus marked Teeth could be separated a distance of 1/4 inch between spasms Occasional spasms followed movement or irritation

Treatment and Progress—The scab was removed and the wound dressed with hydrogen peroxide dressings On admission 40,000 units were given intrathecally and the same amount intravenously These amounts were *repeated intravenously and intramuscularly on the following day* During the next ten days 120 000 units were given intravenously 40 000 intrathecally and 20 000 intramuscularly Five days after admission the spasms had ceased and he was very much better At the end of three weeks he could sit up in bed and feed himself He was discharged cured in five weeks

CASE IV

Male aged 11 Twenty one days before admission a thorn entered the right leg just below the knee The leg was bathed and bone lint was applied and worn for several days until the wound appeared to have healed up satisfactorily The patient remained quite well for sixteen days, when he complained that he felt queer On the following day he could not eat and bit his tongue Two days before admission he could not open his mouth and on the day of admission spasms appeared

State on Admission—Severe stiffness of the muscles of the neck and chest Board like rigidity of abdomen Risus sardonicus present The teeth could not be separated more than 1/4 inch between spasms Spasms of the whole body were very severe and occurred with opisthotonos every five minutes or on the slightest stimulation There was a small infected wound with a scab below the right knee

Treatment and Progress—The wound was opened up and a cavity was found extending down to the bone, containing 1 c.cm of foul pus and a thorn This was thoroughly opened up and irrigated with hydrogen peroxide and a drain was inserted 80 000 units were given intravenously 40 000 intramuscularly and 40 000 in the region of the wound An injection of 25 c.cm of 1 in 400 carbolic acid in normal saline was given intrathecally under chloroform and ether anæsthesia Morphine 1/6 grain and atropine 1/100 grain were given four hourly for the relief of spasms During the next twenty four hours there was very marked improvement The spasms became less severe and occurred at half hourly intervals Improvement continued for four days and then as there was a slight relapse, another 80 000 units were given intravenously and 120 000 intramuscularly Ten days after admission there only remained some stiffness of the jaw and of the muscles of the spine and abdomen He was discharged perfectly well at the end of four weeks No renal symptoms were observed as a result of the carbolic injection Cultures from the pus grew anaerobic organisms but no actual *B. tetani*

CASE V

Female aged 19 years domestic servant Twelve days before admission she pricked her little finger with a pin on her dress Five days before admission she complained of pain and stiffness in the neck shoulders and chest The next day this was more marked and she had difficulty in opening her mouth These symptoms became worse until she was admitted The first severe spasms of pain came on the night before she was admitted

State on Admission—Risus sardonicus Teeth could be separated between spasms Extreme rigidity of the muscles of the neck spine chest and abdomen Profuse sweating A small subcuticular whitlow of the little finger of the right hand marked the site of the original prick

Severe spasms of the whole body occurred about every fifteen minutes or on slight stimulation or movement of the limbs

Treatment and Progress—On admission 140 000 units were given intravenously and 60 000 intramuscularly On the next day another 100 000 were given intravenously The whitlow was thoroughly treated surgically and hydrogen peroxide dressings were applied

The spasms became rapidly less severe and after three days all reflex spasm had gone The stiffness of the muscles of the jaw spine and abdomen gradually relaxed At the end of ten days she could raise her head from the pillow and at the end of three weeks all spasms had passed off She was discharged well at the end of five weeks

CASE VI

Male aged 73 years Ten days before admission he trod on a nail wounding his big toe which went septic *On the day of admission he complained of stiffness of the jaw so that he could not open his mouth properly* He also had pain in the back

State on Admission—Marked trismus and risus sardonicus The teeth could be separated a distance of 1/2 inch between spasms There was rigidity of the neck muscles Any manipulation of the limbs caused spasm of the muscles of the spine and limbs Occasional slight spasms occurred but these were not very severe

Moderate arterio sclerosis was present, but this was not exceptional for the age On the right big toe there was a septic blister 1/2 inch by 1 inch in size This contained about 1 c.cm of *foul smelling pus The superficial raw* surface was laid bare and hydrogen peroxide dressings were applied The culture of the pus from the wound yielded *B. tetani* and other anaerobes 40 000 units were given intrathecally and 20 000 intravenously under chloroform anæsthesia This was repeated the following day The spasms however became more severe and death took place two days after admission

Report on the Pus—Predominant organism spore bearing bacillus of anaerobic type a few characteristic of *B. tetani* Cultures (anaerobic) Gram positive spore bearing bacilli some of which have the characteristics of *B. tetani*

CASE VII

Male aged 10 years Seven days before admission he fell on to a barn floor and sustained a compound fracture of the right radius and ulna No prophylactic antitoxin was given Two days before admission he seemed unwell and complained of pain in the back Severe spasms began on the day of admission

State on Admission—Very severe spasms with extreme opisthotonos were almost continuous Clenched teeth Risus sardonicus

Treatment and Progress—In the seven hours before death 520 000 units were given—350 000 intravenously and 170 000 intramuscularly, under chloroform and ether anæsthesia There appeared to be some diminution in the severity of the spasms before death which seemed to be due to prolonged spasm of the respiratory muscles causing respiratory failure An extensive cellulitis involved the whole arm in the region of the fracture, and this could not be cleansed

CASE VIII

Male aged 12 years Seven days before admission he fell down in the road and cut his left knee The cut was three inches long and one inch deep and dirty It was stitched up but no antitoxin was given Eighteen hours before admission he complained of pain and stiffness in the left leg which spread rapidly to the muscles of the back neck and jaw

State on Admission—Very severe spasms every few minutes or on the slightest stimulation with severe opisthotonos Risus sardonicus present The teeth could only be separated 1/4 inch between the spasms

Treatment and Progress.—Under chloroform and ether anæsthesia 1 000 units were injected into the wound 20 000 intramuscularly 40 000 intrathecally and 140 000 intravenously 160 000 were given during the next eight hours intramuscularly The wound was thoroughly cleansed and hydrogen peroxide dressings were applied four hourly Death took place twelve hours after admission apparently from respiratory failure during a spasm For a few hours before death the spasms were definitely less frequent and severe

CASE IX

Male aged 2½ years Admitted with a history of four days ear discharge and fits Fourteen days before admission he sustained a superficial graze on the left elbow which healed up leaving no scar Four days before admission he complained of bilateral earache and one day later the right ear began to discharge The day before admission he was *not himself and his mother noticed* that he held his head on one side and could not open his mouth to eat He had several attacks described as a kind of fit complained of pain in the back and legs and made faces in which he seemed to laugh

State on Admission and Progress.—Teeth clenched Masseters in severe spasm risus sardonicus abdomen board like Typical tetanic spasms occurred at first every hour *rapidly becoming more frequent* and prolonged so that for the few hours before death they were *almost* continuous Sweating was profuse and the rectal temperature rose to 110° before death which took place twenty four hours after admission

Treatment.—Intrathecally 30 000 units were given and 20 000 intramuscularly Chloral and bromide by the mouth paraldehyde per rectum and chloroform by inhalation for the spasms

CASE X

Male aged 60 years gardener *Ten days before admission* he went to a doctor for a whitlow of the right thumb which he had had for a few days He was treated by hot fomentations Two days before admission he complained *of stiffness of the jaw* and the following day had a sort of fit in which his arms were drawn up

State on Admission.—Risus sardonicus Teeth could not be separated more than 1/4 inch The muscles of the *neck* chest spine and abdomen were in a state of extreme rigidity which was made worse by movement Spasms of the arms head and back occurred every few minutes after admission The patient was a bad subject with some chronic bronchitis and emphysema and marked general arterio sclerosis

Treatment and Progress.—The thumb nail was removed revealing some very foul smelling *pus from* which anaerobes were grown no *B tetani* were identified Hydrogen peroxide dressings were applied after the wound had been thoroughly cleaned Under chloroform anæsthesia 120 000 units were given intramuscularly and 30 c.cm. of 1 in 400 carbolic in normal saline was given intrathecally The following day the spasms were still very severe and avertin was given per *rectum* This relieved the spasms considerably but death took place thirty six hours after admission

Summary of Cases

No.	Age	Sex	Incubation Period Days	Date of Onset Days	Dose A.T.S.	Result
1	11	M.	11	3	231 000	Recovered
2	23	M.	?	8	240 000	
3	10	M.	9	4	340 000	
4	11	M.	16	5	360 000	
5	19	F.	7	5	300 000	
6	13	M.	10	2	10 000	Died
7	10	M.	5	2	570 000	
8	17	M.	6	1	381 000	
9	3	M.	?	2	50 000	
10	60	M.	10	2	100 000	

THE WOUND

The wounds in this series of cases were as follows whitlow two cases (both mild) acute otitis media compound fracture of radius and ulna deep incised wound of leg thorn in leg with pus formation small splinter of wood below knee septic blister of great toe small abrasion of foot with scab formation no wound found

The point worth noting in this series is the way in which superficial healing and scab formation over a trivial wound may create a cavity for anaerobes to grow in This is well shown by Case VI in which the wound although started by a prick became a superficial blister in which *B tetani* could grow Anaerobes were also grown from the pus sealed off by a scab in Case I and by the thumb nail in Case X Cases VII and VIII might have been prevented by the prophylactic use of antitoxin *both these patient died*

PROGNOSIS

These cases conform to the well known fact that a long incubation period increases the chance of recovery No case that lived in this series had an incubation period of less than seven days Slow onset of symptoms is also a favourable sign An index of the rate of onset is the length of time between the first symptoms of illness and the first severe generalised spasms This period in all the five patients who lived was three days or more whereas in the five who died it was two days or less

Other factors which certainly make for an unfavourable issue are *old age and a very severe wound which cannot* be thoroughly drained so that anaerobic organisms can continue to multiply and produce toxin after treatment has begun With proper prophylactic use of antitoxin however these cases should never occur

PRINCIPLES OF TREATMENT

The therapeutic value of antitoxin is still a disputed question Toxin reaches the central *nervous* system via the motor nerve endings and the axis cylinders of the *motor nerves* Once it has *reached the central nervous* system it becomes fixed to the nerve cells and with one exception the experimental evidence shows that *antitoxin* —even in very large doses—has a negligible neutralizing effect upon it The exception is an experiment by Sherrington[1] He injected monkeys in batches of twenty five with 8 m.l.d. of pure toxin *(no bacilli) into the outer* head of the gastrocnemius muscle From forty seven to seventy two hours later when the early symptoms of tetanus had appeared he injected 2 000 U.S.A. units of antitoxin per kilo giving the serum by different routes in each batch of monkeys His results showed that the intrathecal route was the most effective with a percentage mortality of 44 the intravenous next with 72 *per cent* the intramuscular next with 88 per cent and the subcutaneous least with 92 per cent Until lately it has not been possible to give a corresponding dose of antitoxin to man because a sufficiently high titre antitoxin has not been available This may be one of the reasons why the therapeutic use of antitoxin fell into disrepute Now however that *more concentrated* antitoxin has been prepared it has become possible to give doses to man corresponding to those used by Sherrington in monkeys This has been done by A. E. Paterson of Sydney who using doses of this magnitude records nineteen recoveries in a series of twenty six consecutive cases in children Owing to the difficulty of giving sufficient antitoxin by *the intrathecal* route this was not used the bulk being given by the intravenous route and the rest intramuscularly *In four of Paterson's cases that recovered the in*cubation period was only seven days *and in one only* six *so that this* very high recovery rate cannot be

attributed to the mildness of the infection Munson's in American forces with Paterson's views and emphasizes the importance of early administration of large doses of anti-toxin by the intravenous route

Topley and Wilson[3] suggest that the difference between Sherrington's results and the therapeutic results obtained in man may be due to the fact that he used toxin only and not health In man the effects obtained with anti-toxin would appear to depend not only on whether it can neutralize toxin which has reached the nervous system but on the neutralization of toxin in the wound before it has become attached The apparent success of very large doses of antitoxin may perhaps be explained by the neutralization of toxin in the tissues before it has reached the nervous system In this way large doses of antitoxin combined with local treatment of the wound may prevent further absorption of toxin If this can be done before a lethal dose has reached the nervous system death may be prevented

Treatment of active tetanus may therefore be directed along the following lines It may aim at preventing further production of toxin in the wound by thorough local measures at neutralizing any further toxin which is formed in the wound in spite of local treatment by giving large doses of antitoxin at neutralizing toxin which is already fixed to the nervous system by giving large doses of antitoxin (assuming that this is possible from Sherrington's experiments) at neutralizing toxin by non-specific measures such as the intrathecal injection of carbolic acid is used by Suvanas[4] at preventing spasms and pain and at maintaining strength by general measures

In a small series of clinical cases such as this it is impossible to say how far antitoxin was of use still less is it possible to compare the value of the routes used Ten cases were treated and five recovered This does not compare with Paterson's results but it should be remembered that of the five patients who died two were men of 60 and 71 while two others had deep infected wounds of great severity which prophylactic antitoxin might have saved The five patients who recovered had doses of antitoxin ranging from 231 000 to 960 000 units given chiefly by the intravenous and intrathecal routes In any case of tetanus it is extremely difficult to give a prognosis and therefore to assess the results of treatment Large doses of antitoxin however did appear to influence the course of the disease favourably in these cases by lessening the severity and frequency of the spasms The only disadvantage of such treatment is the expense The cost of 100 000 units of serum is approximately £4

Summary

Tetanus is still sufficiently common in some districts to make it worth while re-emphasizing the importance of prophylactic antitoxin even after trivial wounds

When the disease has developed the following rules should be observed

1 Diagnosis should be made and treatment begun as early is possible Pain and stiffness in the back of the neck and spine may be the earliest symptom These associated with slight stiffness of the jaw and rigidity of the abdomen should suggest tetanus

2 Local treatment of the wound should be thorough and should be done at the earliest possible moment

3 Antitoxin should be given as soon as possible in very large doses preferably by the intravenous route

4 Every effort must be made by symptomatic measures to reduce spasms and allay pain For this purpose avertin may prove of value

5 The strength must be maintained by giving plenty of nourishment For this to be achieved good nursing is essential Glucose should be given freely

I am indebted to Dr J A Wright and Dr C S Hair for permission to observe and record cases in their wards and for the bacteriological examination of

Dr C H Whittle for the bacteriological examination of

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ENDOCRINE THERAPY IN DYSMENORRHOEA

BY

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The common complaint of dysmenorrhœa has caused widespread controversy as to its aetiology and treatment Many types of the disorder have been described in terms which have sometimes tended to confuse the problem This is exemplified by the presupposition of a condition such as obstruction without proof of its existence or by emphasizing the congestive element which is normally present in the premenstrual and menstrual phases Just as a distinction has been drawn between hyperplasia and hyperplasia we prefer to speak of dysmenorrhœa as a symptom accompanying some recognized primary condition such as cervicitis or salpingitis and dysmenorrhœa as an entity in the absence of any detectable disease For the symptom dysmenorrhœa the term menorrhagia has been suggested and if it could gain wide acceptance it would have much to commend it Our special concern here is with the severe cases of dysmenorrhœa sometimes called primary idiopathic essential or intrinsic which seek hospital treatment In these the simpler remedies such as mild analgesics attention to the bowels and such exercises as those described by Dr A Sanderson Clow must be frequently amplified by more intensive treatment This falls into two groups operative procedures and endocrine therapy Examination of these is aimed desirable with a view to throwing light on the nature of that disordered physiological function which becomes prominent as pain and affording a rationale for ovarian therapy This preliminary study was therefore undertaken and forms part of a more extensive investigation on menstrual physiology and pathology

The clinical picture presented by the patients who come to hospital for relief is of the following kind They are generally unmarried and nulliparous and the onset of the complaint usually dates from two to three years after the menarche though in a few cases it coincides with the first menstruation Apart from the critical time the patient feels well but some days or hours before the onset of each period strong cramp-like or colicky pains commence in the mid-line of the lower abdomen and less frequently in the low lumbar or sacral regions The pain reaches its greatest intensity at or just after the beginning of the flow and then commonly subsides It may however occasionally continue throughout and even for one or two days after the period The pain is often so severe as to necessitate the patient going to bed and is accompanied by greater or lesser degrees of malaise anorexia vomiting headache and sometimes manifestations of reduced vasomotor control as evinced by cold hands and feet etc The periodicity may be either regular or slightly

irregular with a tendency for the intermenstruum to be short and the loss to be rather excessive Thirty one of our fifty cases exhibited this characteristic while only two showed definite oligomenorrhoea Leucorrhoea frequently occurs prior to the flow and to a lesser degree after the period

Operative Measures

Dilatation of the cervix is widely practised for the relief of intractable dysmenorrhoea and sometimes produces permanent cure but it is not always successful Johnstone collecting the figures of a group of workers finds that 49 8 per cent and Holden that 37 per cent are relieved by this means The reasons for the procedure and for its partial failure require discussion For a long time a ruling concept was the obstructive theory which held that menstrual pain resulted from an inability of the uterus to rid itself of the blood shed into the lumen owing to a pin hole os kinking of the cervical canal through acute anteflexion or stenosis of the cervix Blair Bell in reviewing all his records was struck by the frequency with which dysmenorrhoea was absent in cases of pin hole os and conical cervix and further by the fact that these anomalies were not found in the majority of dysmenorrhoea sufferers This has been confirmed by numerous other observers and Eden and Lockyer teach that the condition only contributes to the causation of pain when the uterine muscle is inadequate This raises an entirely different problem which will be referred to below Acute anteflexion has been alleged to occlude the cervical canal by the sharp kink between the body and the cervix but anteflexion is the normal resting position of the uterus and during menstruation the muscular contractions lift the body of the organ into a more perpendicular plane so straightening the axis of the lumen Here also the sharp angulation would only seem to interfere when the myometrium is defective

Stenosis of the cervical canal has often been incriminated as the chief cause of dysmenorrhoea but as Blos observes it is not a constant feature and dilatation fails to cure at least half of the cases It is difficult to see why more favourable results are not obtained if the pathology is that of simple stricture or spasm of the circular muscle which is certainly overcome by stretching with dilators measuring up to 1 5 cm in diameter at the tip as this must cause rupture of some of the fibres Occasionally deliberate splitting of the circular fibres has been recommended but apparently with no more favourable results It has been argued that the effect of dilatation is to stimulate a hypoplastic uterus to grow though how this can occur is not stated Moreover such a result could scarcely be obtained at once and as immediate relief is undoubtedly given in some instances this explanation is inadequate The fact that pregnancy is almost always followed by relief has no necessary bearing on artificial stretching of the cervix as the changes in the pregnant uterus are so profound that many other factors might be operative The explanation of cure by dilatation is not clear but in view of other considerations dealt with below it may be suggested tentatively that it is possibly due to rupturing nerve fibres in the cervix

Causation of Pain in Dysmenorrhoea

Before considering endocrine therapy it will be well to examine the pain mechanism as a whole An ovarian origin was frequently postulated by the older authorities but now this is not believed to have any significance in dysmenorrhoea True ovarian pain differs in character from ordinary menstrual pain and apart from sharing in the general pelvic congestion every month there seems no obvious reason for pain to arise in this organ at the menses The pain can be explained completely by reference to the uterus for it is comparable in all respects to that arising in other unstriped muscle contracting with irregular unrelated waves or against an excessive resistance As in such parallel conditions the area of reference is not sharply demarcated although the main site may be stated definitely enough and the description given by the patients of the quality of the pain commonly employs the same terms as for colic and the like It may now be seen that the actual pain is explicable on the basis of a defect in or interference with the neuro muscular mechanism of the uterus as for example by the presence of an abnormal resistance The neuro muscular complex can be examined at three main points the central or cerebral the ganglia and the myometrium With regard to the first of these one must remember the possibility of truly functional dysmenorrhoea due to definite psychological disturbance Such cases occur and their treatment is more a psychiatric than a gynaecological problem (though it should be remembered that suggestion may augment the results of ordinary therapeutic measures) A full consideration of this aspect would however involve too wide a digression Stolper has advanced the suggestion that normally pain less contractions by surmounting the threshold of sensation might be perceived as painful when the organs are excessively congested This may possibly occur and if so it may follow various hypersensitive states of the nervous system

Interdependence of Cervical Ganglia and Ovarian Secretion

The uterine nerves pass through portions of Frankenhauser's plexus the ganglia cervicalia uteri which lie one on each side of the cervix At first sight these are exactly comparable to other pelvic autonomic ganglia but it has been shown by Blotevogel and Poll and confirmed by Kennedy that they possess the unusual feature of being under the control of the ovarian autacoids This is shown by the fact that oöphorectomy very rapidly produces degenerative changes in the ganglion before in fact any histological change is demonstrable in the uterus For a description of the cytology the original papers should be consulted

It must suffice here to say that the changes are of the reversible degeneration type similar to those exhibited in early intoxications The Nissl granules of the ganglion cells are lysed and the cells shrink while the number of chromaffin cells always associated with the ganglion diminishes markedly Restitution of the original picture can be obtained by the injection of oestrin and maintained by repetition of its administration This phenomenon caused emphasis to be laid on the ganglion as the possible key to the position If the ganglion is pathological it is reasonable to suppose that the uterus will show the effect of this either by non rhythmical contractions or disturbed polarity or if the trophic impulses are interfered with sufficiently by becoming hypoplastic Oophorectomy does produce uterine atrophy by removing the endocrine influence of the ovary but it first produces degeneration in the ganglion It is not then unreasonable to suppose that a perversion of the ovarian autacoid would adversely affect the ganglion and hence the uterus Further evidence of the importance of the ganglion is afforded by cases of cervicitis In these a common feature is that moving the cervix elicits pain which is frequently described by the patient as identical to that suffered at the periods Further this is often more severe on one side than the other After treatment of the infected cervix by cauterization this pain is frequently relieved and so too is the dysmenorrhoea which is commonly present The manner in which this relief is brought about will be readily con

curable when it is remembered how difficult the lymphatic drainage of the cervix is. The ganglion is surrounded by a lymphatic channel and must surely suffer when the lymph is heavily laden with toxic product; when how ever cauterization permits of free drainage then the irritating substances are removed, and the ganglion can be restored to normal function.

Blos has used alcohol injection of the ganglion with very marked benefit in intractable cases of dysmenorrhoea on the analogy of the treatment of trigeminal neuralgia. In a private communication this author informs us that he has extended his series to over 100 cases with continued success. He also found that by injecting one ganglion only the pain disappeared from that side but returned in status quo on the other. This probably indicates that the afferent painful stimuli are blocked at the ganglion if the contractions remain painful in character they are not perceived as such on the operated side. This method of treatment especially if it is bilaterally applied might also regularize the contractions of the uterus and it is believed that this probably occurs for the relief obtained is not always immediate and is sometimes not complete till after the third period following the injection.

We then come to the muscle itself. It has already been seen that a tentative explanation is available for the occurrence of irregular contractions in an otherwise normal organ. Next the question of hypoplasia must be considered. It is obvious that in the underdeveloped and infantile uterus the contractile power may be insufficient to rid the organ of the menstrual discharges readily and this would account for the premenstrual pain and the relief which follows establishment of the flow. The smaller organ containing relatively more connective tissue would also tend to suffer in a greater degree from congestion. Hypoplasia forms part of the wider problem of general insufficiency and this admittedly rises from a legion of causes from dietary to debilitating disease. On general biological grounds one might expect that the ovary would be more readily affected by any adverse influences than the uterus owing to its more delicate and complex structure. Furthermore the ovary admittedly controls and regulates the uterus and it is here the error should be sought first. It is unlikely that treatment (such as diathermy) directed primarily at the uterus will achieve permanent results if the ovarian motor is not set running. The endocrine balance can often be restored by attention to various general unhealthy states but it is rational to aid and hasten this by the exhibition of active lutacoid preparations. Oestrin or theelin produces growth of the uterus experimentally in animals and we believe it is also effective in the same way in woman and that its administration for this end is reasonable.

Results of Endocrine Treatment

In the treatment of intractable dysmenorrhoea we have used oestrin for three main reasons: (1) its demonstrated effect on cells of the ganglion cervicale uteri; (2) its growth promoting power on the genital tract; and (3) its influence in counteracting excessive hæmorrhage. The last of these reasons has not been discussed in detail here as it will be the subject of a later paper. The preparations used have been chiefly tablets and ampoules of sistomensin (Schering) ovocoids and ampicoids (Reed and Carnrick) (Clayton) and in addition progynon and theelin (Parke Davis). Sistomensin for injection is made up in an oily solution which has the advantage over aqueous solutions in that it affords slower absorption and thus greater approximation to physiological conditions. On the other hand oily preparations require to be injected intramuscularly into the buttock as in the arm the masses may be painful and may even be obvious as knots. In the gluteal region the injections occasion no pain if given deep into the upper and outer quadrant and we massaged for a few days specially prepared gelatine pessaries of sistomensin for administration by the vagina were used instead of injection. Pratt and Smeltzer having shown that oestrin is absorbed from mucous surfaces a fact which we confirmed with these pessaries by animal tests. These gave results similar to those obtained by injection. To maintain as regular a supply of oestrin to the body as possible injections are supplemented by tablets by the mouth. In a few cases distance from the clinic or exigencies of supply have forced us to use tablets only and in the absence of fit has been observed but never such an extent as occurs when parenteral methods have also been employed.

The course of treatment now adopted is designed to supply an extra quantity of oestrin from about the period of ovulation onwards and consists of four injections of one ampoule of the commercial preparation employed spread over the fourteen days prior to the expected start of the next period. It is not suggested that this is the best possible spacing of doses though so far this course has given the most satisfactory results and further experiments are being tried at present. If the pain customarily continues well after the onset of the flow an injection may be given on the first or second day of the period but as a rule this is not necessary. The tablets are continued till the pain ceases. This is repeated for at least three months even if no improvement ensues. The course of treatment appears in some cases to lengthen the intermenstruum even if the cycle is of the regular twenty eight day type and it is well to warn the patient at the start that the appearance of her next period may possibly be a couple of days late.

The results are as follows: completely cured 10; improved 30 (very much improved 11, relieved 15, slightly improved 4); no improvement 10; total 50. Of those cases in the first category five showed a dramatic quality in the relief obtained from more than usually severe symptoms and all have been observed from at least six months to two years from the cessation of treatment. Certain other fortunate sequelæ have been observed in many of the cases—namely effects on general health appetite weight and euphoria. The look of the patient improves in that subtle way so familiar to the physician but so defiant of description and the patients frequently refer spontaneously to a greater feeling of well being and of freedom from tiredness.

Summary

The pain mechanism of dysmenorrhoea has been discussed and an explanation offered which emphasizes the roles of endocrine dysfunction and of uterine contraction and refers to the cervical ganglion of the uterus. It is suggested that the administration of oestrin in dysmenorrhoea is rational. Methods and results are presented.

Thanks are due to Dr James Young, D.S.O., for facilities and encouragement in this work and to the firms named in the text for supplies of the various preparations.

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THE AGE INCIDENCE OF SERO-POSITIVE SYPHILIS IN FEMALES

BY

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That syphilis in the female is to all intents and purposes a different disease from syphilis in the male is becoming a commonplace observation In the female the symptoms are of a much milder character they often manifest themselves later than in the male and treatment to be efficacious has to be much prolonged If as has been suggested * this difference in reaction to syphilis is really due to the fact that from puberty to the menopause female blood is of a different composition and richer in lipoid content—in other words if female metabolism is essentially different from male metabolism during the years of menstruation—then it may well be that the serological reactions of the female are different from those of the male and it might be asked

Does female syphilitic blood show positive reactions as easily as male blood and what difference does the menopause make to these reactions?

Two difficulties stand in the way of finding an answer to these questions First the test that has hitherto been used for *statistical* investigations has usually been the Wassermann a test that has now been shown to be lacking in sensitivity in just the kind of late and latent cases that would be found in women with few or no symptoms Secondly the ordinary centres for dealing with venereal diseases have rather concentrated on the age and sex incidence of *original infections* and have not paid so much attention to the classifying of results of tests in old cases Further the patients mostly dealt with by venereal disease clinics are *those that come for treatment* What would be of more interest to us here would be the results of serological examinations carried out *at random* in unsuspected as well as suspected cases

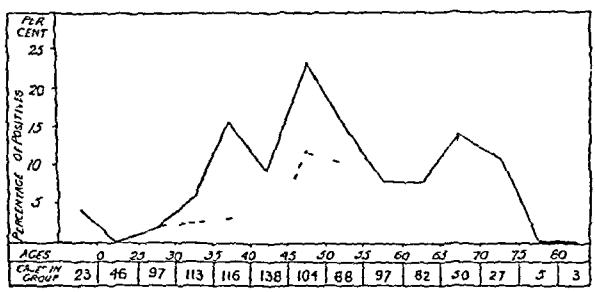


CHART I—Age incidence of sero-positive cases in 980 males
Including (——) and excluding (– – – –) general paralysis

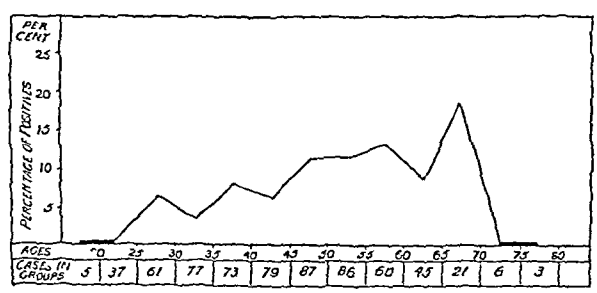


CHART II—Age incidence of sero-positive cases in 640 females
Including (——) and excluding (– – – –) general paralysis

CASES UNDER OBSERVATION

During the past year such a random testing of unsuspected cases has to some extent been carried out in this hospital by means of the M K R test This test is eminently *suited for this work* as it is more sensitive than the Wassermann and judging from our results and those of other investigators seems likely to *give correct* results in at least 98 *per cent of cases* The test has been performed on 640 females and 989 males over 280 of these cases being tested on repeated occasions From the literature on the subject one might be led to expect in the general population a maximum incidence of demonstrable syphilis (demonstrable clinically or otherwise) in individuals aged about 45 with a considerable drop in the incidence after this age but a small secondary rise in the sixties This has been quite well borne out by our results here with males (see Chart I) There is a marked maximum peak just before 50 followed by a considerable drop lasting the next fifteen years and a rise again after 65

In females however the results are very different (see Chart II) Not only is the maximum incidence delayed till after 65 but there is no peak at 45 From 50 to 60 the curve is still rising and indeed the whole graph shows a generally progressive rise without the fluctuations found in males

COMMENTARY

The situation is complicated though by the fact that the males included a large number of general paralytics and the females very few It must be borne in mind that whereas most general paralytics are treated in mental hospitals other cases of syphilis mostly find their way elsewhere and also that there is a definite age incidence for general paralysis these cases occurring at certain ages and then dying usually at an earlier age than do those suffering from other forms of syphilis But when we plot out the results obtained after *excluding* cases of general paralysis (dotted lines on charts) we still find a maximum peak in males occurring before 50 with a drop for the next fifteen years and a secondary rise at 55 to 60 And in females we still find an absence of a peak at 50 and a general rise in the curve reaching its maximum after 65

The above results tend *to support the view that* the menopause does affect the serological reactions of the females The lack of fall in the incidence of positives after 50 in females can be explained on the assumption that whatever factor tends to cause such a drop (as occurs in males) it is more than compensated for by the fact that after the age of 50 patients show positive reactions who have never shown them before notwithstanding an infection many years earlier In other words many of the females examined before 50 give negative reactions not because they are not syphilitic but merely because they have not yet reached the menopause The same fact becomes apparent on comparing the recent cases with the chronics The 270 recent males with an average age of about 35 showed a higher percentage of positives *than the chronics with a mean age of 50 whereas the 240* recent females with a mean age of about 40 showed a lower percentage of positives than the chronics with a mean age of just over 50

I am indebted to Dr F M Rodgers the medical superintendent of this hospital for permission to publish these results and to Colonel E T Burke for first arousing my interest in this matter

* See a discussion initiated by Colonel L T Purle before the Medical Society for the Study of Venereal Disease London January 15th *Brit Journ Ven Dis* 1931 vii 151

A CASE OF POLYCYTHAEMIA RUBRA DEVELOPING ANAEMIA

BY

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The case to be described is one of polycythaemia rubra apparently typical in which achlorhydria was present and the patient after giving blood on thirty-nine occasions as a donor developed a considerable degree of anaemia with a low colour index but with typical glossitis which improved rapidly on liver treatment. He was subsequently found to have a positive Wassermann reaction although he denied all possibility of syphilis. After anti-syphilitic treatment the Wassermann reaction became negative. He has now given up taking liver and is practically *in statu quo* showing typical polycythaemia and no anaemia or sore tongue. Examination of the nervous system has been negative throughout though there was some tingling of the fingers during the anaemic period. The spleen and liver have been enlarged from the commencement.

Freund[1] in 1919 described a patient who died of anaemia (? aplastic) after having had polycythaemia. Strangely enough this patient also showed a positive Wassermann reaction definitely admitted syphilis and developed an aortic aneurysm. Freund also mentions a case described by Schneider in which polycythaemia progressed into anaemia after splenectomy. The reference is not given. Minot and Buckman have recorded three cases of polycythaemia developing anaemia. In none of these is any note made of the gastric acidity or the state of the tongue.

The question arises as to whether in the case here recorded there was a real syphilitic infection or whether the strange blood condition can have affected the validity of the Wassermann reaction. The recipient of the blood on the last occasion that it was used for transfusion purposes (on the day that the positive Wassermann reaction was discovered) is alive and well and has shown no sign or symptom of syphilis. The case also illustrates the value of frequently repeated venesection in polycythaemia as this patient has worked and remained comparatively well for over four years.

CLINICAL HISTORY OF CASE

The patient a commercial traveller aged 47 married was admitted to the Royal Infirmary under Dr. Yates on January 10th 1927. He had been healthy until a severe attack of influenza in 1918 six months after which he noticed occasional aches and pains tiredness headaches and redness of the face and hands. During the last ten weeks before admission the symptoms had become worse dyspnoea and swelling of the ankles had appeared. The family history was negative. His wife had had three healthy children and had had no miscarriages.

On examination he presented a typical appearance of polycythaemia rubra. The heart was enlarged systolic blood pressure 130 spleen palpable as far down as the umbilicus. Though there may have been some slight emphysema there was no thoracic condition serious enough to have caused a secondary polycythaemia. Examination of the nervous system showed nothing abnormal.

The Wassermann reaction was negative on two occasions. The blood count on admission showed red cells 10 000 000 per c.mm. haemoglobin 140 per cent. colour index 0·7 white cells 17 000 per c.mm.—polymorphs 88 per cent. eosinophils 0 basophils 1 lymphocytes 11 hyalines 0. There was occasionally a trace of protein in the urine.

He was treated by x-ray exposure to the spleen and long bones and was discharged on February 28th 1927 slightly improved (haemoglobin 125 per cent.).

In September 1927 he offered himself as a blood donor for transfusion purposes and tests showed that he belonged to Group IV (Moss) and that the Wassermann reaction was again negative. Between September 1927 and May 1931 he gave blood on no fewer than thirty-nine occasions. He stated that he always felt well after venesection and that if he did not give blood for five or six weeks the heavy full sensations in the head and limbs returned. Apart from a small venous thrombosis in the neighbourhood of the right ankle he remained well and working until May 1931. A blood count in April 10th 1930 showed red cells 7 150 000 per c.mm. haemoglobin 110 per cent.

On May 13th 1931 (one month after a venesection) it was noticed that he was paler than before and he remarked that he had for several months been troubled with a sore tongue. The tongue showed the typical appearance of chronic superficial glossitis as seen in pernicious anaemia. The blood count was red cells 6 140 000 per c.mm. haemoglobin 50 per cent. colour index 0·41. A fractional test meal two days later showed complete achlorhydria with very low total acidity. It was suggested that he should take half a pound of liver daily but continue to serve as a blood donor if pressing symptoms returned.

On June 12th the blood count was haemometer reading 4·8 degrees (= 7·2μ) haemoglobin 60 per cent. red cells 4 320 000 per c.mm. colour index 0·72 white cells 15 000 per c.mm.—polymorphs 84 per cent. eosinophils 1 basophils 2 lymphocytes 13. No nucleated reds were seen. He still had a sensation of fullness and pressure in the head and limbs despite the anaemia and it occurred to me it was possible that the blood viscosity was still increased and might be to some extent independent of the blood count. Estimations of the viscosity were however not made until a later date.

On July 6th after two months liver treatment he again gave blood for a transfusion (the fortieth) and the Wassermann reaction was retested and found strongly positive.

On July 13th he developed an acute pain in the right side of the abdomen and vomited. He was admitted to the Infirmary under Mr. Mount as an emergency. The pain rapidly subsided without treatment (other than rest). The Wassermann reaction was again found positive. He was sent to the venereal department for treatment under Dr. Hallam and a course of intramuscular bismuth and intravenous arsenical preparations was commenced. He denied all possibility of his having acquired syphilis either before or since the first Wassermann reaction was tested.

On July 23rd blood examination showed haloemeter reading 4·8 degrees (= 7·2μ) red cells 7 400 000 per c.mm. haemoglobin 95 per cent. colour index 0·65. Viscosimeter tube experiments were performed using hirudin as an anti-coagulant with the following results:

	Patient	Control 1	Control 2
Blood	7 min. 0 sec. 7 min. 15 sec.	6 min. 27 sec. 5 min. 50 sec.	5 min. 18 sec.
Serum	2 min. 5 sec.	1 min. 55 sec.	1 min. 0 sec.

Distilled water 1 minute 3 second.

The viscosity therefore was not much in excess of normal despite the fact that a definite polycythaemia was again present. (During the period May–August 1931 the patient was regularly on liver diet and all soreness of the tongue and anaemia disappeared.)

On November 11th he came up for a venesection as the sensation of fullness in the head and limbs was returning. 500 c.cm. of blood was removed. He was now taking liver only occasionally but no soreness of the tongue had returned. About this time he was suspended from work owing to bad trade.

On January 28th 1932 the blood count was haloemeter 5·1 degrees (= 6·8μ) red cells 7 050 000 per c.mm. haemoglobin 82 per cent. colour index 0·58 white

cells 13 000 per c mm He had slight congestive symptoms and stated that the intervals between the development of these symptoms were longer than they used to be On February 8th the Wassermann reaction was retested and found negative (he was still continuing anti syphilitic treatment) On the 25th the congestive symptoms were again intense and a venesection was performed only 250 c cm of blood being removed owing to difficulties due to the high viscosity The blood count was red cells 10 300 000 per c mm haemoglobin 120 per cent white cells 21 600 per c mm The viscosity time for whole blood with the same tube was 23 minutes The Wassermann reaction was again negative

As the patient here described has been seen at one time or another by probably every physician in Sheffield I regret if I have not asked the permission of all of them to publish the case I am indebted to Dr Margaret Platt for the viscosity tests

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INTRANASAL TREATMENT BY IONIZATION IN HAY FEVER, VASOMOTOR RHINITIS, AND OZAENA

BY

PHILIP FRANKLIN F R C S

LARYNGOLOGIST TO THE ITALIAN HOSPITAL ETC

In the eighteenth century when the static machine was the only source of electrical supply Privatti and L'abbe Nollet discussed the possibility of introducing medicinal substances into the body by means of electricity The discovery of the electric cell in the early part of the nineteenth century and the subsequent rapid advance in electrophysics made possible the application of the galvanic current to the human body Throughout the nineteenth century many reports were written of the results obtained by the electrolytic introduction of substances into both human and animal tissues In 1833 Fabre Palaprat claimed remarkable success in the treatment of malaria by the electrolytic introduction of quinine through the healthy skin A wider interest in the subject of ionization in electrotherapy was created by Leduc when he published the first of his series of papers in 1900 while his address before the Radiological Section of the British Medical Association in 1907 resulted in the more general adoption of the method in this country Since then Stevenson Cumberbatch Friel and others have by their writings assisted the growth of the seed planted by Leduc

Experience has taught us that physiological and chemical changes are effected by the action of the galvanic current on the body tissues and that hyperirritable areas are rendered less sensitive In 1924 I first began to note the effect of zinc chloride and zinc sulphate solutions on the sensitive areas of the nasal mucosa These areas are particularly affected in hay fever and vasomotor rhinitis They are situated mainly on the surface of the inferior turbinate bone the lower border of the middle turbinate and the adjacent surface of the nasal septum They readily respond to the changing humidity and temperature of the inspired air Their reactions are controlled by a delicate nerve mechanism involving it is thought a nerve centre in the medulla oblongata which receives impulses through the fifth tenth and eleventh cranial nerves and the sympathetic system The normally maintained physiological balance may be upset by a variety of factors—extrinsic acting through the inspired air intrinsic acting through the blood stream and reflex from stimulation of distant parts of the vagus and sympathetic system The clinical expressions of the imbalance so produced are congestions of the nasal mucosa sneezing rhinorrhoea and itching of the inner canthus nasal vestibule roof of mouth neck and as is sometimes experienced in hay fever of more distant skin surfaces Drake (*British Journal of Dermatology* 1928) associates an asthma eczema-prurigo complex with these clinical manifestations which he ascribes to a dysfunction or dysharmony of the autonomic nervous system It is outside the scope of this article to consider the debatable causes of this nasal imbalance or its relation to the specific or allergic phenomena in general Intranasal ionization is essentially a local treatment and at least in hay fever the relief of symptoms seems to be independent of any exciting cause

The treatment by zinc ionization of the hypersensitive areas in the nose has in my experience given relief in a higher percentage of cases than have other methods The relief is obtained with relatively little discomfort and with few applications The technique simplified by use of the intranasal ionizer was described in the *British Medical Journal* of June 27th 1931 (p 1115) Zinc chloride and zinc sulphate in 1 per cent solution are equally effective provided that a small amount of glycerin is added to the latter Thin films of wool are soaked in the solution wrung out flat and applied to the sensitive areas of the nose The exact application of the thin wool films to the middle turbinate the adjacent septal surface and the inferior turbinate is of the first importance and should be carried out with the assistance of a proper illumination by direct or reflected light The subsequent packing presses the films firmly in contact with the mucosa and fills the remaining space in the nose so that all the wool is in contact with the intranasal zinc rods A range of current from 2 to 5 milliamperes is passed for fifteen to twenty minutes Both sides of the nose may be treated simultaneously unless the patient is particularly sensitive A metallic taste is at once experienced which serves as a useful indication that the current is properly applied An interval of ten days should elapse between treatments A careful inspection of the nose and sinuses should if possible be made in the quiescent period Marked obstruction or any factor liable to interfere with the efficiency of the nose should be dealt with Although an operation for obstruction or the removal of a pathological lesion may not directly affect the occurrence of hay fever it does allow better access for treatment by ionization Extreme cases of nasal obstruction cannot otherwise be adequately treated The treatment may be given either before or during the hay fever season

RESULTS OF TREATMENT

Hay Fever.—Of fourteen cases treated before the season eleven had no attack during the following season Three were not benefited The average number of treatments was six at fortnightly intervals The return of any symptom notably of itching of the eye or nose is an indication for further treatment In this quiescent period the ionization should produce a white film on the treated mucosa

Seventy seven cases were treated during attacks Fifty one were females and twenty six males the ages ranging from 10 to 62 years Fifty four had no further attacks six were not benefited and eleven failed to report Most of the cases had two or three treatments All were extreme cases which had previously undergone various types of treatment without benefit In some cases the symptoms were intensified for twenty four to thirty hours followed by relief others were relieved with dramatic suddenness The sneeze was the first symptom to disappear and the itching especially of the eye the last In many cases the eye continued to irritate although the sneeze and rhinorrhoea were relieved The swollen turgid tissues were contracted at the end of treatment but the white film deposited on the mucosa of the quiescent cases was not seen It is impossible for me to explain the action of ionization

in these cases I have bitterly observed an absence of any excoriation of the nasal vestibule on the treated side as compared with the untreated side in cases of non seasonal watery rhinitis which suggests that the chemical nature of the nasal secretion is altered some irritant constituent becoming non effective

Vasomotor Rhinitis.—Twelve cases were treated and in general the results were not so definitely satisfactory Two cases were sufficiently relieved to require no further treatment One of these is a medical man with a busy panel practice who was considerably hampered in the performance of his duties but who is now able to enjoy his work again Four cases which have been treated at fortnightly intervals for six months are better but still have occasional but fewer and milder attacks Six patients did not have the patience to continue after two or three treatments Most cases of seasonal and non seasonal rhinitis have an apparently normal nasal mucosa during the quiescent period In many cases a pallor or bluish tint is constantly present In a few cases small cysts or even a well defined polyp can be seen attached to the outer surface of the anterior part of the middle turbinate The normal reddish hue of the nasal mucosa returns after successful treatment by ionization

Ozaena.—The following is the only case of ozaena that I have seen cured V M female aged 24 was first treated by *nasal ionization with copper sulphate 1 per cent solution* in January 1931 Treatment was given for three months at fortnightly intervals and continued at three and four weekly intervals from March to October There has been no treatment since *Present condition (February 1932)* there are no scabs and no discharge and the originally crusted and atrophied middle turbinates may now be described as oedematous The odour has entirely vanished

SUMMARY

Further details of the technique of intranasal ionization are described and a report given of the results of the treatment in ninety one cases of hay fever twelve of vasomotor rhinitis and in the only case of ozaena that has yet been fully treated These results which cover a series of cases treated during the last year bear out the hopeful prognosis suggested in a previous communication

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

STREPTOCOCCAL (HAEMOLYTIC) MENINGITIS RECOVERY

We feel that the following case justifies publication not so much on account of its happy issue but because this appears to have been directly determined by treatment

HISTORY OF THE CASE

A farmer aged 45 years was seen by one of us (T R T) on November 30th 1931 complaining of extreme lassitude and malaise There were no physical signs at this time to account for the symptoms The patient had been in the habit of working on his farm from 4 30 a.m. to 7 p.m. for several years and apart from earlier evidence of generalized arteriosclerosis and recurrent bronchitis his medical history was unimportant

On December 3rd he first experienced headache and was found to have a temperature of 101° and a pulse of 100 For the next few days his condition did not alter greatly except that a hacking cough developed and constipation was obstinate Vomiting then began and was accompanied by an increased severity of headache felt chiefly in the frontal and occipital region Scattered rhonchi were detected in both lungs and moist sounds at the right base Vomiting persisted until we saw this case together on the evening of December 9th when the following abnormalities were observed The patient was then flushed and confused He groaned continually and complained bitterly of headache Temperature 101° respiration 26 pulse 100 and bounding in character Thickened and tortuous arteries in arms and retinae Signs of partial collapse at base of right lung Advanced pyorrhoea imparting sweet odour to breath Red dry glazed pharynx and dry, furred tongue Urine specific gravity 1020 trace of albumin The pupils were contracted headache was severe and aggravated by the slightest movement of the head There was moderate stiffness of the neck and any attempt at flexion was resented The tendon reflexes were diminished the plantar responses flexor Kernig's sign was absent Occasional twitchings of the limbs were observed

Lumbar puncture produced fluid which was slightly turbid but not obviously under pressure Investigation by Dr C Dukes gave the following results Blood leucocytes 10 200 *per c.mm.* Cerebro spinal fluid turbid 700 leucocytes per c.mm. stained films revealed large number of streptococci cultures gave a pure growth of haemolytic streptococci

In view of the inflamed condition of the gums and pharynx it was thought probable that this area provided the portal of entry for the organisms and that the meningitis was of blood borne origin

TREATMENT

On December 10th 10 c.cm. of scarlatinal antitoxin (B W and Co.) was given intravenously and this was repeated on the following day together with 10 c.cm. intrathecally The patient showed after the first dose some improvement in the condition of his mouth and in the relief of headache Within six hours of the intrathecal injection his appearance was quite changed all malaise having disappeared this was accompanied by a return of appetite A third intravenous injection was given on December 12th from which date he made a rapid and uneventful recovery

COMMENT

The transformation of an apparently moribund patient suffering from a disease of high mortality, to a cheerful convalescent in the course of two days was most dramatic and seems clearly referable to the efficacy of the serum employed

T R TROUNCE M.R.C.S. L.R.C.P.
London W.1 A. H. DOUTHWAITE M.D.

PROSTATECTOMY IN A NONAGENARIAN (AGED 95)

Dr William S Dickie in the *British Medical Journal* of February 20th records a case of radical cure for hernia in a male aged 90 This case raises the question of the suitability of elderly subjects for operative intervention All of us must suffer from a natural reticence and shrink from disturbing that peace and sanctity due to the aged It has been my lot to have operated upon rather more than my share of octogenarians of both sexes Urgent situations such as intestinal obstruction acute gall bladder and acute appendix have rendered operation inevitable for the saving of life or to overcome pain which rendered life intolerable These are justifications for operation at any age and the aged are no exception, especially as they withstand surgical shock in a remarkable way Moreover it generally happens that those who have lived to such great ages have the will to go on living a factor notorious for its aid during convalescence In more recent years I have performed a considerable number of successful prostatectomies in patients over 70 years of age, and in each case the subject and his relations have rejoiced in the result Nonagenarians however undergoing this operation—and successfully—are sufficient rarities to justify publication One aged 95 I operated upon in collaboration with Mr John E Payne F.R.C.S. of Eastbourne, in October 1931 As an example of the will to live this patient asked me before operation to cure his inguinal hernia at the same time as his truss interfered with his golf! The operation was performed in two stages—the first on October 2nd and the second on October 16th Urine was passed naturally on the eleventh day after prostatectomy and he was healed and getting up on the twenty first day To day he is in the best of health and has resumed his golf In aged

prostatic subjects I regard the following as being factors more likely to procure a favourable outcome (in addition to the universal precautions to be taken in every prostatic case too well known to require mention just now) (1) At least a week's pre-operative preparation—thus allowing the bowel to be emptied gradually and so avoiding the necessity for drastic purgation in the forty-eight hours preceding operation—and the establishment of a suitable diet including glucose (2) A two-stage prostatectomy (3) The careful choice of an anæsthetic For the first stage gas and oxygen suffice and for the second nerve blocking of the rectus abdominis with 1/2 per cent novocain and sufficient gas and oxygen with perhaps a small amount of ether to procure unconsciousness (4) The routine post-operative use of a repeated injection of atropine and strychnine to dry up respiratory secretion and thus to prevent pulmonary complications as well as to act as a cardiac stimulant (5) Meticulous precautions against any loss of blood In the two-stage operation a haemostatic bag appears to present advantages over the other agents This need not be inflated but is introduced as a precautionary measure and retained *in situ* for four days and can be distended or drawn upon if occasion arises

The case quoted is the oldest in my series My youngest aged 43 from whom I removed a prostate as large as a tangerine orange eventually made a good recovery but during his convalescence gave actually as much cause for anxiety as the nonagenarian if not more It is interesting to note that the mean age of these two cases is 69 a figure given as the average for prostatic subjects who seek advice

JOHN EVERIDGE
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King's College Hospital

Reports of Societies

MANIPULATION AS A THERAPEUTIC MEASURE

At the meeting of the Section of Physical Medicine of the Royal Society of Medicine on April 15th with Dr F G THOMSON in the chair Sir ROBERT JONES gave an address on manipulation as a therapeutic measure

Sir Robert Jones said that manipulation formed an important weapon in the armoury of the orthopaedic surgeon The surgeon was called upon to decide not only which of the many types of movements he would employ but whether any of them were needed he also had to point out the dangers which might be encountered if manipulation were prescribed for the wrong type of case The speaker limited his remarks to movements which had for their object the restoration of function in the joints and he applied the term manipulation to the reduction of common displacements and to the manual rectification of a few congenital and acquired deformities A stiff joint was due to adhesions the division of which into extra- and intra-articular was useful though largely artificial Extra-articular adhesions stiffened a joint by the involvement of surrounding structures The intra-articular variety might consist merely of a fixation between the folds of the synovial membrane or of any tissue within the joint cavity Adhesions relating to injury such as strain fractures or displacements required more radical treatment than those associated with definite destructive infections If adhesions were the result of inflammatory lesions such as arthritis rest was indicated until active disease or pain was modified or complete recovery had taken place Unqualified practitioners often treated arthritis as if it merely required *the breaking down of* adhesions A rule of differential diagnosis which, with few exceptions would stand the test was as follows a joint of which the movement was limited in all directions was or had been subject to arthritis while if movements were limited in certain directions only being normal in others the joint was usually not arthritic This did not apply to septic infections or to joints temporarily stiffened from long fixation The spinal column well illustrated the differential diagnosis A patient might complain of pain in the back with or without pressure If he was able freely to flex extend rotate and laterally bend his spine in each direction his freedom from both arthritis and adhesions might safely be assumed If he could not flex fully or deviate laterally or rotate but could hyperextend normally arthritic changes might be assumed to be absent Stiffness rapidly following trauma excluding fractures and dislocations was suggestive of adhesions The same was true of superficial tenderness over a limited area either on movement or pressure or both In arthritis the joint was usually warmer than the whole articulation while adhesions although they might produce a localized rise of temperature usually showed no difference from the normal Muscular wasting in an inflamed joint was in excess of that caused by mere desuetude this was not the case with mere adhesions Radiography was an essential diagnostic agent and not only should surgeons insist on procuring a film but should welcome the radiologist's help in reading it Some surgeons said Give me the film and I can read it for myself which was stupid and arrogant and never to the patient's advantage If *x* rays portrayed no changes in the joint, the absence of tuberculous septic or rheumatic invasion could be safely assumed this did not exclude synovial tumours in the young nor an enlarged post-patellar pad nor a displaced semilunar cartilage There were other signs to which appeal could be made for differentiating such conditions—for example a slightly bent knee which might have existed for weeks or months with negative radiographic appearances was suggestive of a displaced semilunar cartilage

In the treatment of joints injured or diseased the object was to obtain the best functional results and these were forthcoming by rest or movement or a combination of both In certain cases after many years of firm fibrous ankylosis a varying degree of voluntary movement took place This was specially the case in the hip and was usually associated with a disappearance of the femoral head and neck when the joint surfaces had been relieved from contact He had often been confronted with tuberculous joints where this movement had been their undoing even after many years of recovery It was for this reason he had advocated an early operative bony ankylosis especially in the child There were certain rules to be observed before movements were undertaken either by the surgeon or by the patient A precise diagnosis must be made that the pathological conditions might be appreciated Torn ligaments and the like should be prevented from strain A joint might be moved in many directions provided the injured tissues were not stretched though passive movements should be carefully supervised Massage of a gentle type could be safely practised immediately following an injury even before any effusion had taken place Such massage checked effusion relieved pain and allowed the tissues to proceed to rapid recovery The masseur should be warned against associating massage with movement When a ligament was torn it was his practice to apply a pressure bind Local effusion was lessened or even prevented by pressure In the stage of effusion he forbade any movement causing pain With regard to stiffness due to fixation of a joint he laid stress on certain principles Joints kept at rest should never be hyperextended That was a form of trauma

productive of firm adhesions It was advisable if a joint had to be fixed to keep it in a slightly flexed position Movements should be practised in all joints which had muscular attachments associated with an articulation which was temporarily fixed Before proceeding to mobilization of an arthritic joint it was necessary to know when the joint had recovered from disease Apart from the important information supplied by successive x ray plates it was necessary to be familiar with the signs of association of destructive processes It might be assumed that a joint had recovered from disease when its range of movements was not diminished by use or in a firm fibrous ankylosis when its position did not alter by use If an increase of movement followed cessation of treatment no matter how slowly it developed reliance should be placed on active rather than on passive movements and these should be practised in the absence of weight bearing otherwise cautiously conducted passive movements should be tried Whenever practicable he preferred active to passive movements because the former if voluntary were sure to be gentle and limited by pain and while the muscle itself was truly exercised the brain cells were employed which was not the case with passive movements nor movements obtained with the faradic current The masseur unless instructed did not know that it was necessary to put a joint through its movements passively more than once at a treatment He constantly met with the evil effects of the pump handle method which caused the joint to become sore and stiff instead of mobile Passive movements which were intended to prove the way for active movements should be carefully regulated The use of forcible manipulation was a branch of manipulative surgery which had been so neglected as to bring considerable discredit upon the profession This neglect had proved a rich harvest to the bone setter the unqualified It was only as it added to its own knowledge and perfected its own technique that it could hope to banish the bone setter Sir Robert Jones then described in detail the manipulations he favoured in the case of the knee He also mentioned the importance in breaking adhesions in the shoulders of elderly people of always protecting the head of the humerus by placing the fist in the axilla Another point was that correct alignment was of more value in fractures of the long bones than an end to end position and that in the case of the lower extremity firm osseous union took longer to arrive at than the textbooks stated A fracture which resisted movement when tested by the hand would often shorten when subjected to body weight In the ambulatory treatment of fractures about the ankle a correct alignment was of paramount importance and the greatest care should be taken to reduce the backward displacement of the foot

The brief discussion in which Dr J B MENNELL Dr C B HEALD Mr T P McMURRAY Mr WHITCHURCH HOWELL Dr MURPHY LEVICK Dr W P KENNEDY and Mr E F CYRIAX joined was occupied largely with tributes to Sir Robert Jones for what he had done especially during the war on behalf of physical medicine Sir ROBERT JONES in reply to a question asked by several speakers said that he had never been able to see quite how vertebrae could become displaced merely by anatomical fixation and yet the personal experiences of one or two who had spoken were so clear that it was evident such locking must occur the displacement must be extremely slight and not obvious to manual search

Annual Dinner

On the same evening Sir Robert Jones was the principal guest at the joint annual dinner of the Sections of Physical Medicine and Radiology Dr I WATTS EDEN referring humorously to the birth of the Sections said that he had never known an affair of twins proceed so smoothly and expeditiously or with less insults to the official watcher But the obstetric metaphor got him into difficulties for the two Sections were really old Sections which had arisen like the phoenix from the ashes of their progenitors Professor WOODBURN MORISON in reply dreamed of the day when practitioners of physical medicine and radiology would have full opportunity of advancing their special branches of medicine by clinical teaching in hospitals possibly even in special hospitals Dr F G THOMSON in proposing the health of the principal guest said that while listening to Sir Robert Jones's address earlier in the day it had occurred to him that physical medicine in the form of orthopaedic surgery was practised to a considerable extent in the reign of Queen Elizabeth The orthopaedic appliance kept in the Tower of London was extensively used for the straightening of limbs and the breaking down of adhesions and also had the effect of encouraging a communicative disposition among those who were considered unduly reticent Sir ROBERT JONES after expressing his pleasure at seeing the Royal Society of Medicine alive to the changing needs of the medical profession excused the shortness of his speech by a reference to the dance which was to follow and which as one who believed in the scientific manipulation of the limbs he would not delay

COLLAPSE THERAPY IN PHTHISIS

At a meeting of the Aberdeen Medico Chirurgical Society held on April 7th with the president Mr F K SMITH in the chair papers were read on collapse therapy in the treatment of pulmonary tuberculosis

Medical Aspects

Dr J M JOHNSTON described the results he had obtained by this method of treatment and discussed the results published by others Up to the end of 1930 he had attempted to induce artificial pneumothorax in 120 cases Of these 19 had thoracoplasty induced later so were not included in analysing the results In the remaining 101 cases failure to induce pneumothorax occurred in 27 cases leaving 74 in which more or less collapse of the lung was obtained The present condition of these 74 patients was as follows 55 4 per cent fit for work 14 6 per cent unfit for work and 29 7 per cent dead These figures though dealing with a small series of cases compared quite favourably with the results published by Saugman Rist the Matsons and Bonzoni The results in the 27 cases in which pneumothorax was not induced judged by the same standards were 11 per cent fit for work 26 per cent unfit for work and 63 per cent dead Thus artificial pneumothorax did save or prolong the lives of a considerable number of individuals suffering from severe pulmonary tuberculosis The value of the figures was greatly lessened by varying factors First there were the varying standards adopted by different workers in assessing the different classes of case Secondly the type and extent of unilateral disease in the cases selected for treatment influenced results Dr Johnston did not advocate pneumothorax in quite early stages of unilateral disease unless three to six months general sanatorium treatment had failed to produce real improvement though it was better to induce pneumothorax too early than too late when the pleura had become involved and extensive consolidation or large cavities had appeared Another factor influencing results was the condition of the contralateral lung The type of disease also affected the results of treatment The Matsons found 40 per cent of cases of fibro caseous disease clinically well as opposed to only 23 per cent of cases of caseous pneumonic disease due to the ready spread of

disease to the other lung in the latter form Another variable factor was the degree of pulmonary collapse obtained the results from partial collapse owing to pleural adhesions being decidedly inferior to those from complete collapse In cases of partial collapse careful supervision was essential refills had to be given at shorter intervals and the pneumothorax kept up longer than where collapse was complete The presence or absence of complications similarly influenced prognosis some extrapulmonary complications such as clinically diagnosable intestinal tuberculosis were absolute bars to the initiation of pneumothorax but in others such as diabetes it might be permissible to take a risk Complications arising during the course of pneumothorax treatment might seriously interfere with the results or might of themselves prove fatal examples of this were gas embolism rupture of the lung and the development of pleuritis with effusion of fluid into the air space When effusion occurred as it did in at least 50 per cent of all cases at some time the fluid should be removed and replaced with air if no sign of absorption was shown in two or three months otherwise obliterative pneumothorax was apt to develop due to the formation and progressive growth and contraction of adhesions between the two layers of the pleura Attempts had recently been made to treat this condition by the substitution for air of the less readily absorbed gomenol oil or paraffin Yet another variable factor influencing results was the duration of treatment the severer the disease the longer the period of collapse required to permit safe healing most authorities advised two to three years collapse in the type of case selected for this treatment Some patients preferred to go on indefinitely rather than run the risk of relapse If collapse had been kept up long enough the diseased lung would be thoroughly fibrosed and there was little danger of former cavities opening up with the re expansion of the lung Obviously the skill of the operator also influenced the results obtained this applying both to the selection of suitable cases as well as to the general management Frequent use of x rays was necessary in supervising artificial pneumothorax treatment as only thus could a proper idea be obtained of what was taking place within the chest Lastly the behaviour and social position of the patient had a bearing on the prognosis as the intelligent co operation of the patient might make all the difference between success and failure Referring to the immediate results of the induction of pneumothorax Dr Johnston said that artificial pneumothorax in spite of its dangers or disadvantages was the quickest means of curtailing sanatorium treatment with safety to the patient and to his family He considered that pneumothorax should therefore be induced earlier in working class patients than in those who could afford a probationary period of general treatment Lastly he dealt in some detail with collapse therapy by surgical operations designed either to supplement or to replace artificial pneumothorax

Surgical Technique

Mr WILLIAM ANDERSON discussed surgical technique and the immediate results of surgical procedures Commencing with phrenic evulsion he said that this was usually a simple operation which could be performed under local anaesthesia with very little discomfort He usually made a transverse incision about one inch long above the clavicle extending from the posterior border of the sterno mastoid to the anterior border of the trapezius The nerve was found lying fairly superficially on the anterior aspect of the scalenus anticus passing downwards and inwards The nerve might however be double as far as the first rib or might lie laterally to the muscle while the vagus might occupy the position normally occupied by the phrenic the nerve might also be divided into several bundles or might lie in the substance of the muscle When isolated the nerve was infiltrated with novocain and divided fairly high up the distal end was seized with a forceps and a distinct twitching of the diaphragm could be felt a steady firm pull with twisting of the forceps brought the nerve out The beat of the heart could be felt at first and diaphragm movement later Not more than three or four inches required to be removed On one occasion one of the branches of the thoracic duct was injured but no harm resulted Cessation of movement of the diaphragm seemed to be more important than the extent of the rise A marked clinical improvement without much elevation of level of the diaphragm was noted frequently and Mr Anderson agreed with Trout's suggestion that this was due to the relief of the tug of the diaphragm on the pericardium The operation probably acted in two ways first by diminishing the capacity of the chest and thus contracting the lung and secondly by giving comparative rest Extrapleural pneumolysis or apicolysis Mr Anderson had performed once only and the result was not entirely satisfactory From what he had seen elsewhere however he felt that the use of this operation must be restricted The third method was thoracoplasty Sauerbruch's paravertebral thoracoplasty being now the standard operation This consisted in removal of the posterior ends of the ribs on the affected side The twelfth rib and usually the eleventh need not be removed This was essentially a mutilating operation with much tearing of tissue bleeding which was difficult to control and therefore shock The patient should lie on the sound side with the knees flexed and the pelvis and chest supported by two well padded supports which were fixed to the table This enabled the nurse holding the arm on the affected side to help forcibly and so aid in the dislocation forward of the scapula A combination of gas and oxygen and local anaesthesia had been the anaesthesia adopted in most of the cases Novocain and adrenaline were injected before the gas and oxygen was begun thus reducing the amount of gas required and decreasing unwelcome congestion Mr Anderson favoured the two or more stage operation an interval of two to three weeks should be allowed between the stages In some cases it was best to treat the upper ribs first since from the purely surgical point of view this was easier difficulty was not experienced in getting the scapula forward on account of adhesions and the patient could be assured that the most trying part of the operation was over Each case had to be considered on its merits the general condition of the patient and the exact localization of the cavities being guides The operation was carried out by a vertical incision between the spine and the scapula the superficial muscles being divided boldly All obvious bleeding must be arrested at this stage Brauer's rib strippers were advantageous for separation of the periosteum from the rib borders Resection back to the level of the tip of the transverse processes must be aimed at about three and a half to five inches of each rib being removed except in the cases of ribs 1 2 and 11 where a smaller length was all that was possible Ribs 3 to 6 ought to be divided well forward to allow the scapula to sink in In resection of the first rib the long laminectomy forceps was found to be the most useful instrument It was better to divide the first rib well forward first After resection of the ribs the posterior stumps were cleared and as much bone as possible removed with a strong nibbling forceps The wound was closed by suture of the superficial muscles and drainage of the space beneath the scapula Shortening and increased slant of the ribs along with the pneumatic pull of the lung bringing the chest

wall inward diminished the size of the cavities in the lung A more important result of the operation appeared to be the diminution of the movement of the chest, produced by destruction of the fulcrum formed by the first rib After a few weeks the bridging of the divided bones tended to splint the chest wall Up to the end of 1931 the speaker had performed complete thoracoplasty in twenty six cases there were six deaths three of which could be classed as operative Emphasis was laid on the necessity for careful selection of cases since the results of thoracoplasty were being and would be discussed by lay tuberculous patients, and unless due care was taken a helpful operation might fall into disrepute

Anæsthesia in Thoracic Surgery

Dr J Ross Mackenzie outlined the requirements of the ideal anæsthetic agent in thoracic surgery and its method of administration as ensuring to the patient an easy induction and even maintenance of anæsthesia without excessive respiratory effort absence of anoxæmia and toxæmia production and maintenance, at will of a positive intrapulmonary pressure and cessation of the action of the anæsthetic agent with the cessation of its administration The only agents approaching this standard were nitrous oxide and ethylene gas the latter being a more powerful anæsthetic agent which would give surgical anæsthesia with a higher percentage of oxygen but unfortunately one that had explosive qualities and an obnoxious odour He had adopted the following procedure for thoracoplasty cases Morphine sulphate 1/8 to 1/6 grain with atropine sulphate 1/150 grain was given ninety minutes, and again forty five minutes before operation In some cases hyoscine was preferable to morphine The patient was instructed to attempt by position and cough to empty the pulmonary system before coming to the theatre the results of this were often disappointing As soon as the patient was comfortably settled on the table anæsthesia was induced with nitrous oxide 95 per cent with oxygen 5 per cent the expiratory valve being kept open during the first five or six respirations to get rid of the pulmonary air The patient was now turned on the sound side and the operative area infiltrated with 1/2 per cent novocain and adrenaline An artificial airway might be passed over the tongue and the face piece was fixed with Clausen's harness The artificial airway must not reach the pharyngeal mucosa as the pharyngeal and cough reflexes were not intended to be absent The head being flexed and lowered any expectoration occurring was accommodated in the dependent cheek and when convenient was aspirated by the suction apparatus Enough oxygen was supplied to prevent undue anoxæmia and capillary hæmorrhage, since this was not easy it was often necessary to add a trace of ether Rebreathing was continued for the most part throughout the operation and the bag was kept distended to the extent of 5 to 7 mm Hg this positive intrapulmonary pressure sufficed to prevent collapse of the lung if the pleural cavity was accidentally opened Intercostal nerve block with 1 per cent novocain was a valuable addition The closed method by bag and face piece retarded the passage outwards of any fluids that reached the respiratory passages from the operation field and tended to force them into the sound lung so Dr Mackenzie favoured endotracheal anæsthesia as this combined a positive intrapulmonary pressure with a constant outward current and a free exit Two catheters open at both ends and with lateral apertures at the distal end should be used the return airway catheter serving for aspiration purposes The larger catheter might be retained in the trachea for aspiration for several hours after operation if required In some American clinics intrapharyngeal insufflation of nitrous oxide oxygen and ether through the nose under pressure was favoured The essentials were that the administration of the anæsthetic should include some form of differential intrapulmonary pressure and that an adequate system of pulmonary aspiration should be in operation

HIRSCHSPRUNG'S DISEASE

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland held on April 1st with the president Mr R ATKINSON STONEY in the chair Sir WILLIAM WHEELER reported a case of Hirschsprung's disease on which he had operated in February, 1931 the patient was a male child aged 2 years

The speaker said that this condition was extremely rare and he had only seen two real cases in twenty years He did not include the megacolon of adults The great majority of cases were in male infants and the descending colon especially the sigmoid was most often involved The circumference of the dilated and hypertrophied colon might reach a size of more than three and a half feet In the present case aperients and enemata had failed to act and distension was progressive There was the usual absence of signs of obstruction and toxic symptoms were not marked Various opinions as to the cause of Hirschsprung's disease were reviewed but he thought that a neuro muscular origin must be accepted In the case under discussion there was one unusual feature The pelvic colon was not dilated for two or three inches above the pelvi rectal sphincter and the rectum was normal X ray photographs before operation showed an enormous loop of descending colon The barium meal was visible a week after ingestion notwithstanding repeated washing out of the colon The barium enema also revealed an enormous colon five or six times the normal diameter The ascending colon was not dilated and the transverse only moderately so The operation performed was that recommended by Rankin and Learmonth The posterior peritoneum was divided from the promontory of the sacrum to the origin of the inferior mesenteric artery The presacral nerve and its branches were not easily defined in the infant but communicating filaments from the second third and fourth sympathetic ganglia were divided and the area cleared of loose connective tissue The inferior mesenteric artery near its origin was similarly denuded but no very definite ganglia were found Sir William Wheeler said that in an infant he was not sure that frank exposure of the lumbar sympathetic chain on the left side and division of the trunk above the second and below the fourth ganglion was not the more satisfactory operation, ramisection being performed at the same time The constipation was completely relieved by the operation and this relief had now continued for fourteen months After operation a full sized sigmoidoscope was passed through the pelvi rectal sphincter on a few occasions the colon being emptied by means of an irrigating tube Two months after operation a barium meal and enema demonstrated the pelvic loop of colon still dilated but greatly reduced in diameter The transverse colon was also considerably reduced Seven months after operation marked dilatation was still present but there was slight further improvement The umbilical girth at the time of operation was 24¾ inches Five days later it was 21¾ inches, and the latter measurement was the same two months later Seen recently the child's general health was good the constipation was relieved but distension remained The speaker pointed out that most operations on the colon designed to relieve the condition were followed by disappointment or disaster sympathectomy had proved effectual

The PRESIDENT said that this operation seemed to be the one which promised best at present as the results of

either excision or lateral anastomosis seemed to be extremely unsatisfactory

Dr H J STILES referred to a case of Hirschsprung's disease which he had seen demonstrated in Guy's Hospital by Dr A F Hurst who had mentioned the operation of sympathectomy but not with favour The treatment which he used was simple dilatation of the anus Regarding prognosis Dr Hurst considered that if such cases were properly looked after they did exceedingly well but the dilatation and hypertrophy of the colon remained

THE CIGARETTE HABIT

At a meeting of the Society for the Study of Inebriety and Drug Addiction on April 12th with the president Lady BARRETT in the chair a paper was read on the cigarette habit by Dr J D ROLLESTON who dealt with its history economics pharmacology and clinical aspects Cigarette smoking appears first to have originated in South America where it was reported by travellers and missionaries in the eighteenth century and thence to have been introduced to Spain where it was described by Casanova during his visit to Madrid in 1767 The cigarette was subsequently introduced into France and Italy but it was not until after the Crimean war (1856) in which the French and English officers acquired it from their Turkish allies that the cigarette habit became diffused over Europe Germany where the cigar was more popular was among the last European countries to adopt the cigarette It did not however become firmly established in England until the eighties The great increase of cigarette smoking since the war especially among women in all European countries and the United States was illustrated by some remarkable statistics Dr Rolleston pointed out that the cigarette differed from other preparations of tobacco in its nicotine content being lower than that of the cigar or pipe whereas the amount of carbon monoxide in its smoke was comparatively high Furfurol which was usually absent in the smoke of the pipe and cigar and present in only very small amounts in that of the Turkish cigarette was found in comparatively large quantities in the smoke of the cheaper kinds of *Virginian* cigarettes and was liable to give rise to symptoms of intoxication Dr Rolleston dealt successively with the effects of the cigarette habit on the digestive *respiratory* cardio-vascular and nervous systems special senses reproductive and endocrine systems blood and skin He also mentioned the relation of the cigarette habit to cancer with special reference to the causal connexion between cigarette smoking and cancer of the lung which had recently received some attention in Germany and the United States The survey showed that medical opinion was still divided as to the part played by tobacco in general and the cigarette in particular in the causation of certain diseases such as angina pectoris and cancer in various situations and in the risk of laryngeal involvement in smoking by tuberculous patients General unanimity however seemed to prevail as to the injurious effects of smoking by the young or by the subjects of cardiac neurosis or peptic ulcer Dr Rolleston further urged that the possibility should be considered of the cigarette habit being responsible for other morbid conditions in which it had been incriminated and recommended that a systematic inquiry should be made in such cases as to the patient's consumption of tobacco and that temporary or permanent cessation of smoking should be ordered when there was reason to suspect tobacco as in any way responsible for the condition met with In conclusion the speaker dealt briefly with the hygiene of the cigarette habit and with the relation of the latter to crime a problem which he said had received much more attention in the United States than in this country

Reviews

CHEMICAL EMBRYOLOGY

Dr JOSEPH NEEDHAM in the prolegomena to his important work on *Chemical Embryology*[1] claims to stand as obstetrician at the birth of a new science The learned world may rejoice that so skilful an accoucheur was at hand for the long awaited infant has appeared as lusty triplets—three stout volumes running to over 600 pages apiece The slight feeling of dismay which is always the immediate reaction to such an event soon gives way to a sense of congratulation for the children have obviously been bred by philosophy out of observational science and are healthily developed and finely proportioned Indeed the scope of the work is immense and no aspect has been neglected A brilliantly written history of embryology from the days of the dynastic Egyptians to the close of the eighteenth century gives a background for the work of modern times This is considered under sections dealing with the unfertilized egg as a physico-chemical system with the development of the embryo from the physico-chemical point of view and with the physiology and biochemistry of the growing foetus Special sections are devoted to the energy requirements of the embryo and to the metabolism of carbohydrate protein fat lipins and inorganic substances Particularly valuable are the chapters dealing with the emergence of the *enzymes* hormones and vitamins Probably the interest of the medical profession will be aroused most keenly by the later chapters of the third volume for these deal with the critical periods in development at which small disturbances in environmental conditions may have serious effects on growth with the development of immunity during embryonic life with the biochemistry of the placenta and the foetal liquids and finally the hatching and birth

On account of their particular convenience as raw material much of the work on embryology has been carried out on chick embryos This is in some respects a pity and in others a reason for satisfaction—the former because avian development has had to take to a very special line and the latter on account of the fascinating picture of Nature's chemical ingenuity that is unfolded The first vertebrates that invaded the land had to face the problem of shielding the embryo from loss of water and providing it with everything it required for its development The problem was solved by enclosing the egg in a hard shell supplying it with a white that acts as a water reservoir and giving it a heavy supply of fat which is economical of space in its yolk The embryo however being in a closed box cannot rid itself of excretory products unless these are gaseous The end products of fat and carbohydrate metabolism are easily disposed of through the shell but those of nitrogen metabolism have to be dealt with differently Ammonia and urea both being undesirable since they would diffuse freely through the embryo the bird has hit upon the ingenious plan of laying down nearly all its nitrogen residues as uric acid This mechanism is characteristic of all animals with the closed box 'type of *embryo* and persists throughout adult life The mammal in becoming viviparous has solved the problem of invading the land while retaining for its young a back to the sea environment The appearance of the placenta solved many problems and in its turn *raised others* The placenta is an embryonic organ besides acting as a sieve between the maternal and foetal blood Among the

[1] *Chemical Embryology* By Joseph Needham Ph D Three vol London Cambridge University Press 1931 (Pp 2 0 2 ~32 figures 14 plates 10s the three volumes)

different classes of mammals the sieve function has attained various degrees of fineness In the cow with its cotyledonary placenta only the smallest molecules cross the placental barrier and the larger molecules involved in the chemical mechanism of immunity are secreted into the colostrum In the human where foetal and maternal frictions of the placenta are so closely mingled lysins antibodies and the like can diffuse into the foetal circulation The human infant is born with a considerable degree of immunity and can quite well dispense with the colostrum the baby calf is born without any mechanism of immunity and if deprived of the colostrum frequently falls a victim to bacterial invasion

Two features of general interest emerge from the review of chemical embryology The first is that the onset of old age is determined from the moment of conception The embryo of a few days old has an exuberance of vitality that it never attains again Almost as soon as they are formed the tissues start to wither becoming more fibrous less succulent and less sensitive to external stimuli Metabolic activity lessens and the developing embryo which at first rushed round Carnot's cycle with an efficiency that would have shocked the earliest steam engine at last learns economy of energy and works at an efficiency that would not disgrace the best modern dynamo Even this however does not check the remorseless progress towards the lean and slippered pantaloon that is its destiny from the moment of fusion of paternal and maternal chromosomes The other feature of outstanding interest is that the movement towards fewer and better embryos did not originate until a storm of controversy in the middle of the nineteenth century but has been quietly going on since the first embryo came out of the first egg The reckless profusion with which the primitive invertebrates and vertebrates cast their sperm into the ocean leaving the latter to provide the growing embryos with their requirements of salts and water has given way to the development of the yolky egg provided with all its material needs Both in aquatic and in terrestrial animals the rule holds that the higher the organism the fewer the offspring and mammals in going back to the sea did not abandon the movement for fewer and better embryos Social custom of to-day therefore is only carrying on two well established principles

Dr Needham's book finishes with a bibliography running to 240 pages and one has the conviction that no paper however trivial has been overlooked Indeed the completeness of the survey leads in many instances to loss of clearness in the story and at times produces a sense of irritation that so much attention has been spared for workers whose observations other and more reliable workers have failed to confirm But it is impossible to be both complete and selective and there is no doubt that on balance the author was right in aiming at the former in a book of this type The whole work is bound to become a scientific classic passing through numerous editions and supplemented by additional volumes As a work of reference it already is and will remain irreplaceable But Dr Needham has addressed himself to his scientific peers and the reader must bring considerable scientific experience and critical ability to the task of reading It is much to be hoped that a more compressed version in which the critical selection has been made by an editor will be prepared for the use of the student

Dr Needham's own words may be used to give a picture of the possible developments that might follow

The future of embryology lies in the closest contact between biochemistry and Entwicklungsmechanik and the biologist who will deserve the most gratitude of posterity will be he who finds the way to fuse these studies into one By doing so he will fill that gap between the morphology and biophysics of the embryo which I among many others have found so difficult to cross One thing only may be predicted he will be an individual and not a composite robot composed of a pure chemist and a pure morphologist induced by some would be benefactor to work in the same room

Dr Needham may have found the crossing difficult but he has successfully accomplished it as an individual His book is a full justification if any were needed of the outstanding feature of the science of the present century —the development of the borderline sciences

PSYCHOLOGICAL MEDICINE

It is inevitable that one should compare Dr HENRY YELLOWLEES's *Clinical Lectures on Psychological Medicine* with its famous predecessor Clouston's *Clinical Lectures on Mental Diseases* for it is of the same *genre* and in the same tradition Psychological medicine has made considerable headway since Clouston's day It has progressed from a descriptive to an explanatory science Dr Yellowlees's lectures embody and reflect that progress while still preserving the clinical mode of presentation which was so conspicuous a feature of the earlier work and which is of such vital importance in the instruction of the student and the practitioner Most of the lectures in this book have been delivered to the students of St Thomas's Hospital during their course of training in psychological medicine They represent more than the maximum number of lectures on this subject given at medical schools and yet are not fully comprehensive We would have liked for instance to see included among them one on the subject of general paralysis which is of much too great importance to be dealt with merely in occasional references throughout the text Apart from this we have nothing but praise for Dr Yellowlees's excellent manual

It is the author's contention that if the practitioner has not laid the foundations of a knowledge of psychiatry as a student the odds are against his ever doing so but while this is without doubt mainly the case we believe that Dr Yellowlees's textbook will do much to minimize the truth of his own proposition In reading such a work as this the practitioner cannot fail however late in the day to become imbued with much of the practical wisdom with which its pages abound Meanwhile the student who derives his knowledge from these lectures will lay a firm foundation which further experience may build upon but will never destroy Dr Yellowlees brings a keen eye and a sure hand to the portrayal of his patients and his description of the salient features of their ailments is graphic and memorable There is also just that amount of theoretical instruction which is necessary and no more Of course no book can take the place of clinical demonstration where the student is actually seeing the patients nor is this book intended to do so But even to those to whom such demonstrations are denied the clinical pictures here presented will afford a very serviceable substitute

The author is fully aware of the difficulties which beset the general practitioner confronted with a case of mental illness and bearing these in mind he has concentrated attention upon practical points in symptomatology and management Of especial value is his advice on the diagnosis and treatment of depressed patients He has something to say about the numerous instances of so-called neurasthenics whose suicides figure so largely in the newspapers He warns his readers against being misled into believing that all a depressed patient requires is

Clinical Lectures on Psychological Medicine. By HENRY YELLOWLEES O B E M D F R C P D P M London J. and A. Churchill 1932 (Pp. viii + 310 12s. 6d.)

a change of environment and while agreeing generally with the maxim that all depressed patients are suicidal sometimes and that some depressed patients are suicidal always he urges as the best method of ascertaining whether a patient is suicidal or not a full and frank discussion of the subject with the patient It is never a mistake to discuss the question of suicide with a depressed patient and in fact it is almost always a mistake not to do so Likewise the advice given for the treatment of neuroses in general practice is thoroughly practical and especially useful is the reminder that until the emotional preoccupation from which the majority of psychoneurotics suffer has been elicited and dispersed the treatment will not be efficacious In his joint appeal to the student and the practitioner Dr Yellowlees has been successful No one can fail to derive benefit from these pages

BLOOD DISEASES

Leçons Cliniques sur les Maladies du Sang et des Organes Hématopoiétiques[2] by CH ACHARD is a collection of clinical lectures or discussions on bedside reports of illnesses associated with morbid changes in the blood The series which includes haemophilia purpura pernicious anaemia and the many varieties of leukaemia is full of interest and the stories are told in an easy manner and make enjoyable reading The lectures on pernicious anaemia are disappointing and suggest the days before the introduction of liver treatment Though the author uses this treatment and is evidently well acquainted with the work of Minot Castle and other modern writers he does not mention the value of estimating the reticulocyte reaction in liver therapy as a diagnostic or prognostic for the disease he mentions anisocytosis but does not refer to megalocytosis macrocytosis or microcytosis or to the value of estimating the degree of anisocytosis The figures displaying the relation of the red cells to the white cells are meaningless these with the statement on page 150 un globule blanc pour moins de 20 globules rouges suggest that the author has not yet given up the old notion that the numbers of the red and white cells are interdependent To determine the degree of anaemia it is of first importance to estimate the haemoglobin percentage in the numerous blood pictures given this is often omitted It is not stated how the haemoglobin estimations have been obtained but the values for the colour indices in many cases are far too high on page 58 the number of red cells is stated to be only 440 000 per c mm but the haemoglobin percentage is given as 30 which represents a colour index of 4! Many differential white cell counts are detailed but their interest would be greater if the cell classes (many quite arbitrary and liable to personal bias) were reduced in number

The lectures on leukaemias well described as diseases of the blood affecting the formation of different kinds of white cells are of great interest and include much historical and clinical reference the account however is rather confused by frequent though probably unavoidable repetition The author endeavours to separate the varieties of leukaemias according to the blood cell picture and the clinical findings but has to admit that the classification of these different forms must at present be regarded as provisional until more is known of the aetiology of the diseases and until we have sounder rules for recognizing and understanding the nature of the many cell varieties involved a classification of leukaemias resembles as the author says a classification of plants by the shape of their leaves and the colour of their flowers It has been a pleasure to read these interesting and instructive lectures perhaps in the next edition it would be advisable to omit some of the differential white cell pictures which are liable to misinterpretation and are not useful

DIABETES

In the series of public lectures delivered at the Harvard Medical School Dr ELIOTT JOSLIN contributed a talk on *Diabetes*[4] which now appears in a compact volume As usual he writes with the humanity and sincerity which has made him the leading force in diabetic therapy in America The chief interest in this book lies in the presentation of the social not the individual treatment of diabetes Dr Joslin stresses the importance of the diabetic centre and the diabetic travelling nurse to the increasing number of diabetics in every community He sets an ideal by which all countries would benefit His practice of giving a diabetic medal to every patient who has exceeded the normal expectation of life at his age is novel and charming though perhaps too American for our diabetic octogenarians Unfortunately the price of this short essay is almost prohibitive nowadays

Drs BEARDWOOD and KELLY'S *Simplified Diabetic Management*[5] (a book mostly for patients) is certainly the simplest of the many that have come from America Their idea of food units or portions is not new in this country and they acknowledge that their scheme originates from Lawrence's line ration diet As in this the carbohydrate portion contains 5 grams but the protein and fat 6 and 10 grams respectively The authors mostly advocate diets of 30 calories per kilo Their chart for determining the correct number of food units to supply any number of calories is although forbidding at first sight, really very clever and accurate in its simplicity The rest of the book is composed of the usual sections for patients giving explanations of diabetics instructions for injections what to do when ill or approaching coma and recipes and examples of diet Percentage food tables are also given founded on the American analyses of 1896 There seems no tendency in any transatlantic publication to modify these in accordance with the modern and more accurate analyses now used in Britain

GENITO URINARY SURGERY

Surgery of the Genito Urinary Tract[6] by Mr RALPH COYTE is one of the Modern Treatment Series As the editor Dr F G Crookshank states in his introductory note the aim of this series is to provide general practitioners with the means of obtaining in convenient form and at a convenient price reliable guides to the best current practice and information in some of the many departments of medicine Mr Coyte in the volume for which he is responsible makes a general survey of the field of genito urinary surgery The only doubt that the reviewer feels is whether it would not have been better to have avoided entering into operative details and to have concentrated on those points which fall more within the province of the general practitioner For instance whereas two pages are devoted to the operation

[2] *Leçons Cliniques sur les Maladies du Sang et des Organes Hématopoiétiques* Par Ch Achard Paris Masson et Cie 1931 (Pp 270 13 figures 24 fr)

[4] *Diabetes its Control by the Individual and the State* By Elliott P Joslin M D Cambridge Massachusetts Harvard University Press London Milford Oxford University Press 1931 (Pp 70 4 figures 1 plate 6 net)

[5] *Simplified Diabetic Management* By Joseph T Beardwood jun M D F A C P and Herbert T Kelly M D M A C P Diets prepared with the collaboration of Elsie M Watt A B London J B Lippincott Company 1932 (Pp 191 7 figures 6s net)

[6] *Surgery of the Genito Urinary Tract* By Ralph Coyte M B B S F R C S The Modern Treatment Series London J Cape Ltd 1932 (Pp 127 5s net)

of prostatectomy which few general practitioners would be wise to undertake indications for surgical treatment are given in one sentence—namely that surgical treatment is not required in the early stages when symptoms are slight but only when the gland is of moderate size Surely it is generally the amount of obstruction that the prostate causes rather than its size that is of importance in arriving at a decision whether operation is necessary or not Moreover nothing is said of the general care of a prostatic case It must of course be recognized that no medical treatment can exert any real influence on the size of the prostate or on the obstruction that it occasions However all genito urinary surgeons realize that certain instructions must be given to a patient who does not require immediate operation and that attention should be paid to his diet and to his mode of life Although Mr Coyte's book lacks a good deal of information that would have been of the greatest value to the general practitioner he has made a useful survey of the field of genito urinary surgery His book is written clearly and his descriptions of operative technique are simple and direct

NOTES ON BOOKS

The issue of three editions of KARSNER'S textbook of *Human Pathology* within the space of little more than five years is a clear indication that the work has established its reputation and has supplied a want In the general arrangement of the subject matter the plan usually adopted in similar works has been adhered to but special attention is given to the discussion of current theories relating to functional processes with the intention of enabling the student to distinguish between fact and theory The present edition has been thoroughly revised and brought up to date new sections have been added on oedema shock rheumatic fever and the diseases of the teeth and the chapters on endocarditis and Bright's disease have been largely rewritten

Under the title Diabetes and its Treatment in Childhood[1] Drs R PRIESEL and R WAGNER have produced a monograph which is a model of its kind They claim that von Pirquet's clinic in Vienna was the first in Europe —and for a long time the only one—where a special department for diabetic children existed and from the unique experience gained from a study of over 130 children since the introduction of insulin they have produced this book Not only however have they first hand knowledge of their subject but their survey of the literature is wide and necessitates thirteen pages of references among which English authorities are well represented The text of the monograph is to be found in the last sentence of the introduction— a diabetic child need not die of his diabetes —and it is on this modern basis that the authors build up their methods of treatment The food requirements are given throughout in calories instead of von Pirquet's units which is an advantage for use in this country the diet lists need some though not much modification

A French review of methods of treatment described or discovered in the preceding year was first published in 1920 and maintained an annual appearance until 1924 when the editor died Dr A RAVINA has begun the series again with the sixth edition dealing with 1931 under the title The Year in Therapeutics[2] The small book is in three sections The first deals with the treatment of certain maladies and symptoms such as the muscle extract treatment of angina pectoris or the new methods of dealing with detachment of the retina and the glandular treatment of Addison's disease The second section discusses certain new technical methods such as the modern development of bronchoscopy and the carrying out of peri arterial sympathectomy by chemical means The last division mentions a number of new medicaments varying from acetylcholine to rusin juice The editor has performed his task well References to work done outside France are plentiful (if not always properly spelt) and his claims for the new measures described are studiously reserved and calm

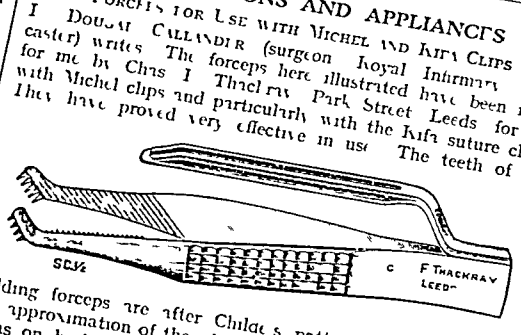
The habits of the lower primates are always of interest to the student of man and accordingly the volume on *The Social Life of Monkeys and Apes*[10] by Dr S ZUCKERMAN will be read with attention by both the serious and the amateur psychologist Dr Zuckerman is an anatomist to the Zoological Society of London and he has spent much time in a study of Monkey Hill The results of his study supplemented by a special visit to South Africa and fortified by extensive reading are embodied in this volume the greater part of which is accordingly concerned with baboons—although by no means exclusively so The facts observed and detailed are of considerable value but it is doubtful if all the author's premisses and conclusions will be accepted in their entirety by psychologists The picture of simian society is a vivid one well touched in and full of material for thought but whether it throws any light on the social level from which emerged the first human beings must remain a debatable point It does offer however an instructive comparison between the mechanisms of reproduction and their consequences It is perhaps unfortunate that the format of the volume suggests a semi popular appeal which may detract from its real scientific importance The book has an extremely valuable bibliography of over four hundred titles and copious indexes

[10] *The Social Life of Monkeys and Apes* By S Zuckerman International Library of Psychology Philosophy and Scientific Method London Kegan Paul Trench Trubner and Co Ltd 1931 (Pp xii + 357 24 plates 18s net)

PREPARATIONS AND APPLIANCES

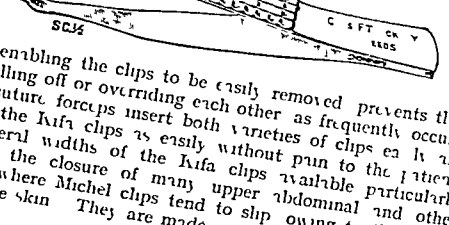
FORCEPS FOR USE WITH MICHEL AND KIFA CLIPS

J DOUGAL CALLANDER (surgeon Royal Infirmary Doncaster) writes The forceps here illustrated have been made for me by Chas J Thackray Park Street Leeds for use with Michel clips and particularly with the Kifa suture clips They have proved very effective in use The teeth of the



holding forceps are after Childe's pattern thus facilitating the approximation of the edges of the wound The roughened areas on both the clip holder and the insertion forceps help the surgeon to obtain a grip of the skin edges and to apply firmly to the skin whichever clip is used

The gallery which holds the clips is the exact width of the Michel clips is easy to load and the strength of the spring



whilst enabling the clips to be easily removed prevents them from falling off or overriding each other as frequently occurs The suture forceps insert both varieties of clips easily and remove the Kifa clips as easily without pain to the patient The several widths of the Kifa clips available particularly facilitate the closure of many upper abdominal and other wounds where Michel clips tend to slip owing to the thickness of the skin They are made in rustless steel

[1] *Human Pathology* By Howard T Karsner M D With an introduction by Simon Flexner M D Third edition revised London J B Lippincott Company 1932 (Pp xii + 1 012 461 figures 45s net)

[2] *Zuckerkrankheit und ihre Behandlung im Kindesalter* Von Dr Richard Priesel und Dr Richard Wagner Leipzig G Thieme 1932 (Pp x + 211 9 figures M 15 60)

L'Année Thérapeutique Par Dr V Ravina Sixième année Paris Masson et Cie 1931 (Pp 182 16 fr)

British Medical Journal

SATURDAY, APRIL 23rd, 1932

PUBLIC HEALTH PROGRESS

The debate in the House of Commons on the public health services which took place on April 12th and the main part of which was reported in our last issue (p 733) was the occasion of some pertinent questions and observations from some of the medical members of Parliament It afforded also an opportunity for the Minister of Health, Sir Hilton Young to review the steps which have been taken up to the present time in health matters pursuant to the Local Government Act of 1929 The subject and the debate upon it evidently interested the House and must necessarily receive the careful attention of the medical profession The Leader of the Opposition seized the occasion in accordance with what is supposed to be the proper parliamentary practice to suggest that the Minister of Health and the Government were neglecting their obvious duty and were unwisely restricting the public health services in the interests of economy Sir Hilton Young as naturally repudiated such charges with emphasis and declared that it was the policy of this Government as it would be of any Government to consider public health as a matter of urgent national importance and he went on to catalogue a series of activities which in these very difficult times was not unimpressive He mentioned the interesting fact that all the schemes of development in regard to public health which were before the Ministry at the time of the main and critical effort for economy were estimated to cost approximately £1 000 000 and that of this total expenditure only £150 000 had been abandoned

We do not think that the Ministry of Health really stands in need of any defence against the charge of lack of interest in health work and services or of neglect of effort to encourage and accomplish as much as is possible It must be remembered that the power of the Ministry to deal with laggard local authorities is especially at this stage extremely limited and conditional but though the Ministry may not be to blame it is nevertheless an unfortunate fact that the progress in health administration and in the efficiency of health services which the Local Government Act 1929 was intended to bring about is proceeding with extreme and undue slowness There is no valid reason why this should be so A great many of the reforms now possible and expected would entail no extra financial cost whatever and indeed some of them would appear to lend themselves to material economies The Ministry is now charged with and is proceeding with a survey of the health activities of all county councils and county borough councils and it is to be hoped that when that is completed the Ministry will exercise its power to withhold grants This power will then be operative in appropriate cases not primarily by way of penalty but in such a manner as to keep authorities up to the mark and to expedite action In the meanwhile it would probably serve a useful purpose if the Minister were to reiterate now the advice which was given by his predecessor Mr Neville Chamberlain in 1929 in an important memorandum that local authorities should effectively and increasingly consult the local medical profession not only with regard to the usage or provision of hospital accommodation but also with regard to the methods of carrying on other health services

Both Dr Morris-Jones and Dr Fremantle the mover and seconder of the motion on which the discussion was based put to the Minister a number of necessary questions and asked his consideration for some essential matters in their admirable and interesting speeches Each of them however made one statement to which it is desirable to draw attention as not representing the opinion of the organized medical profession Dr Fremantle is reported to have said that if the councils utilized the services of visiting physicians and surgeons in connexion with their hospitals they would get work done by men who gave their services for nothing and he seems to have held this out as an inducement for them to staff at least some council hospitals in this way There is no reason why the services of members of the medical profession should be exploited in this fashion and the British Medical Association has declared itself emphatically upon the matter There is here no question of charity All those medical men or women who perform services for the fulfilment of duties with which local authorities are charged should receive proper remuneration for those services in the same way as do other persons so employed The method of staffing which Dr Fremantle suggested should however be encouraged where possible

In his generally admirable remarks about district medical officers under the Poor Law Dr Morris-Jones did not in one respect exactly represent the opinion of the medical profession There are three methods by which the work of such officers can be arranged One of these is that which is the common practice at present —namely the appointment of a number of part-time general practitioners of the area paid either by salary or by item of attendance A second method is by establishing an open list of practitioners willing to do this work and allowing a sick person in receipt of parish relief to call in whichever of such doctors he might choose A third method is by the appointment of whole-time salaried doctors The British Medical Association emphatically deprecates this third method In this attitude it is supported by the Society of Medical Officers of Health and both these organizations have expressed their intention of opposing its adoption whenever opportunity presents itself The Association has no objection to the present method of employing selected part-time general practitioners though the conditions of service need careful consideration On the whole however it is desired to encourage local authorities to adopt the method of open list and relatively free choice

several authorities have recently adopted, or are proposing to adopt this method at least experimentally. Dr. Morris Jones is reported to have said that he did not think this would lead to efficiency or economy" There seems to be no reason why it should fail in either of these respects, and though a scheme on these lines must be well thought out the arrangement would on general grounds appear to be the most desirable in the public interest. At its meeting last week (reported in our *Supplement*) the Council of the Association appointed a special committee to consider among other matters the suitable working out of such a system.

INJURIES OF THE ELBOW IN CHILDREN

It is to be feared that the treatment of injuries about the elbow in children as at present commonly practised does not always lead to such good results as could be wished. Such is the opinion arrived at by Sir Robert Jones, than whom there is probably no surgeon better qualified to speak with authority on this matter. He has been considered as a kind of court of appeal to which difficult and doubtful cases in bone and joint surgery are submitted for diagnosis and advice, and he is in the almost unique position of being able to tell us what is the practice of the day, what results are being obtained, and in what respects the usual methods of treatment are found wanting. At the same time, as he no doubt would be the first to admit, sitting thus as a judge of appeal he sees in the nature of things more of the failures than of the successes of methods of treatment, and he has to make allowances accordingly. In the lecture demonstration of which a full report is published in the opening pages of this issue the difficulties of treatment were pointed out, and the lecturer gave much valuable advice as to diagnosis and prognosis, and the avoidance of the pitfalls which beset even the wary surgeon.

The diagnosis of fractures and dislocations of the upper extremity in childhood is in many cases less easy than in the adult because, owing to the cartilaginous nature of the joints, radiography can give but little help, and the surgeon has therefore to a great extent to rely on the information conveyed by the tactus eruditus and by comparison of the injured with the sound extremity. Even these means may fail him if great swelling has obscured the region and masked the prominences of the hard parts. This partial failure of x rays to help in diagnosis, owing to the immature state of the skeleton, may be set off in some measure by the power of adaptation to circumstances which persists in childhood and sometimes enables an anatomically imperfect correction to develop into a functionally good result, provided it is given a fair chance to do so. The surgeon must see to it that if unfortunately the joint is to become stiff or limited in range of movement it shall occupy a position in which the extremity can be of the maximum usefulness. For forty years and more Sir Robert Jones has been teaching that the well flexed position is the best suited to maintain the replacement of fractures and dislocations about the elbow joint, and his teaching has been very widely followed; but as he once again insists more flexing of the elbow without previous correction of displacement by setting a fracture or reducing a dislocation is not only useless but a dangerous practice. No external splints are necessary because the tendon of the triceps muscle adequately fulfils the role of splint after reduction has been effected and the forearm slung by the wrist from the neck.

Every surgeon who has to treat cases of injury of the elbow joint must have at the back of his mind the fear of ischæmic contraction with its disastrous result for the patient and its damaging effects on the purse and reputation of the practitioner. Some critics are opposed to the treatment of elbow injuries by flexion on account of the alleged risk of consequent interference with circulation and the production of ischæmia. But as Sir Robert Jones insists the position of flexion chosen should not be one of forced flexion but should be by some degrees less than the maximum easily attainable. We now know with a fair degree of certainty how ischæmic paralysis is brought about by acute venous obstruction and it is also established that it may result from internal pressure owing to haemorrhage without any bandage or splint having been applied and in the absence of an enforced posture of the limb so that the surgeon may be, and indeed generally is, innocent. These facts cannot be too often stated or too widely known in order that there may be no repetition of certain lamentable miscarriages of justice in the shape of verdicts and heavy damages returned against practitioners who were in no way to blame. When symptoms of ischæmia have shown themselves it is already nearly too late for treatment. Ischæmia must be fought against before it appears, and if Sir Robert Jones's advice on its prophylaxis is followed disasters will be avoided. This may be summed up into avoidance of all splints and compression or forced flexion, reduction of dislocations, and the practice of vigilant inspection.

The lecturer gives valuable advice for the detection of the early stages of myositis ossificans, points out the danger of passive movements in such a case, and prescribes rest. There is strong evidence that myositis ossificans may arise without any injury of bone or tearing of periosteum, although this immunity from damage is not likely in the case of such injuries as we are now discussing. Symptoms of injuries of nerves may appear soon after the accident or may come on gradually from stretching when the nerve trunk—most often the ulnar—is compelled to follow an abnormal course round a prominent bone. The importance of prompt diagnosis of nerve injury cannot be exaggerated. A careful examination and record of the condition of the nerves of muscle and of sensation at the earliest possible moment may secure the practitioner from subsequent charges of having caused nerve lesions by his treatment.

TUBERCULOSIS OF BONES AND JOINTS BEFORE KOCH

Long before the causal agent was known pathologists and surgeons had recognized the fact that scrofular strumous' disease was closely akin to pulmonary consumption and at an earlier period still this connexion was unsuspected by the medical world Mr D Murhead Little[1] has recently traced the history of the recognition of tuberculosis as a factor in bone and joint surgery and has shown how first the microscope alone and later the new science of micropathology brought about the development of the present day state of knowledge The ancient writers Hippocrates and Galen knew and described tuberculosis of the lungs and of the spinal column and in some way they connected the different affections but as Mr Murhead Little points out the term 'tubercle was loosely used and he puts forward the ingenious suggestion that certain large hard and persistent tubercles described by Galen were no more than cutaneous thickenings over the ends of the spinous processes in a case of angular deformity of the spine Passing from the second century to the sixteenth Mr Murhead Little deals next with Delechamps of Lyons who anticipating Pott gave a good clinical picture of a case of severe caries of the vertebrae with paralysis Richard Wiseman Sergeant Surgeon to Charles II appears to have been the first to use the term white swelling for chronic tuberculous disease of joints and especially of the knee-joint Wiseman rather spoilt an otherwise good claim to a place in the history of tuberculosis by classing so many other disorders under the general heading of the King's Evil but he undoubtedly recognized caries of bone as associated with strumous enlargement of glands in some cases In 1779 Percival Pott published his celebrated thesis While this was an excellent clinical study he said very little about pathology and as Mr Murhead Little remarks it seems quite doubtful if Pott had any clear idea of the sequence of events leading to caries deformity and palsy A few years after Pott's essay a Liverpool surgeon named Park described a new method of treating white swellings of joints by excision of the bone ends but other surgeons were emphatic in condemning surgery for this condition John Hordman was one of these and in 1802 he published at Edinburgh a dissertation on the subject which not only asserted this conservative attitude but which set out one of the first attempts to establish a differential diagnosis of diseases of the joints Benjamin Brodie some years later was also conservative in treatment, he again attempted to sort out various joint diseases without however using the term tubercle or tubercular for the deposits he observed in the joints Two years later in 1820 James Wilson F R S gave a very clear account of chronic joint tuberculosis and appeared very enlightened as regards treatment In 1835 Nicnet of Lyons published what is looked upon as the real starting point of the study of tuberculosis in bone and it was not long before a tuberculous nodule had been demonstrated in joint disease (Köster 1889) By the time of Koch's discovery in 1882 the histological features of bone and joint tuberculosis had been well worked out and despite a certain amount of caution among English surgeons in accepting Koch's tubercle bacillus the pathological story was then complete Mr Murhead Little has well shown that the disease was understood before the discovery of the bacillus and his historical survey is another demonstration of how keen was the clinical sense of many of the early observers

[1] *Proc Roy Soc Med* 1932 xxv 6-7

NARCOLEPSY AND EPHEDRINE

Most people have experienced at one time or another in their lives the feeling of helplessness caused by excessive mirth Such phrases as I was simply doubled up with laughter I laughed so much that I had to sit down to die of laughter and to burst into a fit of laughter are popular expressions of the explosive and devastating nature of this form of exaltation In more vulgar phraseology one finds the suggestion that this lack of control may extend even to the involuntary muscles Laughter indeed once set in motion gathers force until it seems to possess every muscle in the body in its upheaval Nor does there seem to be much survival value in the act of laughter It renders a man weak He is put off his guard not only physically but mentally In narcolepsy which Adie[1] defines as a disease characterized by the occurrence of attacks of irresistible sleep without apparent cause and curious attacks on emotion in which the muscles relax suddenly so that the victim sinks to the ground fully conscious but unable to move there appears to be a pathological accentuation of normal physiological mechanisms

The curious attacks on emotion called by Adie cataplexy are usually brought on by laughter sometimes by anger and annoyance The patient laughs his head falls forward his knees give way and he sinks to the ground fully conscious but unable to move a muscle or to speak Kinnier Wilson[2] had the good fortune to examine a patient in an attack and found complete flaccidity of the limbs absent knee-jerks and an extensor plantar response The sleep attacks of narcolepsy generally come on in conditions favouring sleep for example after a meal but they also occur at such embarrassing times as when a patient is crossing the road Most observers agree that this sleep does not differ much from normal sleep, Cave[3] drew attention to the restless nocturnal sleep of narcoleptics Both these states—irresistible attacks of sleep and of sudden muscular tonelessness on emotional stimuli—might be described by the psychologist as escape mechanisms but there is evidence pointing to an organic or at any rate to a physiological disturbance Obesity smallness of the sella turcica enlargement of the thyroid delayed sexual development have been severally observed in cases of narcolepsy Attacks of narcolepsy have complicated epidemic encephalitis and somnolence is a marked feature in basal cerebral tumours Adie considers that narcolepsy is a disorder of an intimately connected endocrine nervous mechanism the pituitary tween brain system as I shall call it that is formed by the pituitary body and certain vegetative centres in the base of the tween brain Following Pavlov's conception of normal sleep he considers this disorder to be of the nature of internal inhibition Kinnier Wilson is of the opinion that narcoleptic manifestations are closely allied to those of epilepsy and also of

[1] Adie W J *Brain* 1926 xlix 239
[2] Wilson S A K *Ibid* 1926 l 70
[3] Cave H A *Arch Neurol Psych* 1931 xxvi 50

catalepsy Until 1930 no form of treatment had been of any proven value Caffeine, strychnine, anti-epileptic remedies, thyroid and polyglandular extracts were without effect I E Daniels[1] in 1930 reported favourable results with ephedrine J B Doyle and L E Daniels (1932)," in a review of fifty cases treated with ephedrine, state that in two only was there failure to benefit the disease while in another two the initial improvement was not maintained The usual dose was 25 mg twice a day before meals, as much as 75 mg being given three times daily in one case It seems, therefore that in ephedrine we have a drug which can control what for the sufferers, must be an extremely inconvenient malady As a result of inquiries sent to sixty seven cases examined between 1919 and 1930, Doyle and Daniels conclude that " narcolepsy runs a chronic course without any marked tendency to self-limitation '

MEDICAL EDUCATION ABROAD

To our private and seemingly insoluble problem of ' The Student in Irons ' the work of medical schools outside this country brings additional interest *Methods and Problems of Medical Education*[2] a publication for which the wisely directed generosity of the Rockefeller Foundation is responsible has provided since 1924 valuable information on this topic Its recently issued twentieth series gives as usual, a bird s eye view of the educational and other activities of medical schools in various parts of the world Space is devoted to the group of university hospitals at Cleveland Ohio the Universities of Yale, Beirut the Western Reserve Porto Rico and Stockholm Professor G van Rijnberk dealing with the teaching of physiology at the University of Amsterdam regards as ' antiquated, impracticable, and vicious " the practice of confining reading to the home or the library and maintains that there should be an adequate departmental library always available for immediate reference On the other hand, the dean of Yale Professor M C Winternitz embraces a wider problem in his introduction to the account of the medical school work at that university As a broad minded pathologist he fears that medicine is suffering from the disintegrating effect of the acquisition of specific knowledge Attention has been so concentrated on the mastery of details that perspective has in some degree been lost and medical schools are in danger of forgetting that the function of practitioners is to deal with human beings and not exclusively with gall stones, fractures, and other lesions Changes have been made at Yale which may be worth consideration in this country—for example the signing up for attendances at lectures has been abandoned and courses of instruction have been so condensed that they occupy half the time previously taken up thus enabling the student to devote attention to aspects of medicine which may be of special interest to him Particular attention is paid to psychology and for this purpose the ' Human welfare group ' has been established Professor W G MacCallum describes another method of education which has proved highly successful—namely, the voluntary composition of essays on the history of morbid conditions This has been in progress at the Johns Hopkins University since 1929

[1] Daniels I I *Proc Staff Meetings Mayo Clinic* 1930 v 299 Doyle J B and Daniel L J *Journ Amer Med Assoc* 1932 xcviii 542

[2] *Methods and Problems of Medical Education* Twentieth Series New York The Rockefeller Foundation 1932 (Pp 250 illustrated) Distributed gratis to teachers and administrators in medical schools and hospitals or on application to other interested persons

POLIOMYELITIS IN 1931

The current (January) issue of the Monthly Epidemiological Report of the Health Section of the League of Nations contains an instructive account of recent outbreaks of poliomyelitis throughout the world During 1931 four epidemics of the classical type occurred in Austria Hungary, Switzerland and the United States and in each case were the most severe that had been experienced since records of the disease had been kept in those countries In Austria where the epidemic started in the third week of June and reached its height in the third week of August, the morbidity rose from 1 2 per 100,000 in 1930 to 9 4 during the first nine months of 1931 , while in Hungary, where the epidemic arose during the first fortnight of June and reached its height in the first fortnight of September the morbidity was 12 8 in 1931 In Switzerland the onset of the outbreak was in the third week of June, and the peak was reached in the first week of July the morbidity during the period January 4th to November 28th 1931 being 9 4 per 100 000 In the United States various outbreaks commenced between the last week of June and the first week of August and the peak was reached between the first week of August and the first week of October, the morbidity for the first ten months of 1931 being 12 3 per 100 000 In England and Wales on the other hand the morbidity rate during the last three years has been only 1 6 1 5 and 1 per 100 000 respectively In Scotland since the epidemic of 275 cases in 1928 the number of cases has been decreasing year by year, so that in the first ten months of 1931 the morbidity rate was only 0 8 per 100 000 In the Irish Free State no epidemic has occurred since 1926 and there was only 1 case in the first ten months of 1931 , and in Northern Ireland only 16 cases were reported in 1931 up to October The writer of the survey emphasizes the importance of making an early diagnosis and treating the disease by convalescent serum before paralysis develops

HERMANN PAGENSTECHER

The death is announced of Professor Hermann Pagenstecher of Wiesbaden at the ripe age of 87 years He and his better-known brother Alexander, who died fifty years ago made Wiesbaden a place of resort for many afflicted with intractable eye diseases The Pagenstechers were essentially clinicians They would never admit the possibility of " no further treatment ' and this attitude of mind attracted many to their clinic who had not found relief elsewhere Accordingly, as is within the experience of every medical practitioner, nature on some occasions developed unexpected healing powers in cases that had exposed all the marks of final loss Therein probably, lay the secret of their success and the popularity they gained with the general public The unexpected is remembered, and (by the layman) magnified the expected—well, it was only what was to be expected and what was foretold Credit must be given to the Pagenstechers for their assiduity and persistence They left no measure untried that they deemed to hold out the remotest hope of relief That

attitude was grateful to the afflicted so that when no advantage was gained there was the remembrance of unremitting attention Hermann Pagenstecher came of a family of civil servants His father was chief ranger of the forests of Nassau and his grandfather professor of jurisprudence He studied at several German universities and in England He obtained his first appointment at the University Hospital of Greiswald but in the next year 1869 migrated to the Wiesbaden Eye Hospital at his old home There he worked for the rest of a long life His publications were few and have made no permanent mark on the literature of ophthalmology Those who knew him well speak highly of his kindliness of character

A 'HOPE DEFERRED BUDGET

When revenue was flowing into the Exchequer in almost unprecedented volume in the early months of this year speculation was rife as to what relaxations of the fiscal pressure the Chancellor would be able to grant and the claims of the income tax payer to a reduction of at least sixpence in the pound were openly discussed Those hopes and others with them are deferred by the present Budget It is as obvious that taxpayers are bearing too heavy a load as it is that the removal of part of it would enable industry to go forward with renewed vigour and confidence but the time has not yet come when the restraints of prudence will allow a Chancellor to forgo the practical certainty of balancing his Budget which is provided by a maintenance of the present high rates of duty A reduction would stimulate trade and thereby increase the profits on which the reduced rate would be levied but the Chancellor cannot risk the bird in the hand for the two in the bush Modern direct taxes are graduated to fall with increasing severity on larger incomes and estates In times of prosperity they thus provide relatively high yields and conversely in bad times when incomes and estates are reduced by special circumstances to much smaller dimensions the average rate at which the tax is paid is thereby reduced and the yield of the tax is doubly depressed Something of that sort evidently occurred for 1931–32 in connexion with the Death Duties which showed a drop of £18 000 000 as compared with the estimate though probably that unfortunate result was due not only to a reduction in the average value of estates but also to difficulties of realization affecting the payment of the duties to the Exchequer So with the certainty that even the maintenance of the old income tax and surtax rates—to be levied according to the generally reduced amount of the profits of 1931—will not maintain the yield of those taxes at last year's level Mr Neville Chamberlain has found himself compelled to call on taxpayers to maintain their present strenuous efforts for another year It is undeniably rather discouraging Last autumn it was realized that the national credit both at home and abroad was in definite danger and the nation struggled successfully though certainly not without dust and heat to meet the demands necessarily made on them if the national accounts for 1931 32 were to be balanced on a thoroughly sound basis Now like a runner who has reached the tape the nation is called upon to set its teeth and complete another lap of the course if possible at the same pace and without any firm confidence that the necessary second wind will be forthcoming But if confidence is absent hope is not the Budget has deferred hope but has not by any means destroyed it Indeed in some respects the estimates for the coming year are distinctly hopeful the more so as the sober and prudent policy adopted by the Chancellor justifies the assumption that the estimates of individual items in the statement can safely be relied on for fulfilment He made it clear too that though no reduction in the direct taxes could be granted this year at least the fact had been convincingly demonstrated that we have approached the practical limit of the return from direct taxation The obvious corollary to that statement is that if a further rise in the rates of duty would produce a smaller return in the long run it may be that a reduction in the rates would at least produce no less at any rate such a policy should be given a chance at the earliest moment consistent with reasonable caution

We much regret to announce the death of Sir W Watson Cheyne Bt F R S Past President of the Royal College of Surgeons of England and consulting surgeon to King's College Hospital

CENTENARY MEETING, 1932

THE MUSEUM

It has been decided to form a Museum in connexion with the Centenary Meeting of the British Medical Association and the arrangements have been entrusted to the special Museum Committee constituted as follows Sir Arthur Keith (chairman) Dr D Evan Bedford Dr A B Bratton Dr R G Canti Dr E Tolliott Creed Dr Sydney H Daulies Dr J G Greenfield Dr H K Graham-Hodgson Dr Donald Hunter Mr P H Mitchiner Dr John O Oliver Mr Thomas G Stevens Mr C P G Wakeley The honorary secretaries are Mr Mitchiner and Dr Oliver

Owing to drastic cutting of funds it will be possible only to illustrate fully certain of the topics under discussion but it is hoped that all members desirous of exhibiting specimens will be able to do so The committee welcomes the offer of the authorities of McGill University to send from Montreal and exhibit at their expense Dr Maud Abbott's splendid collection illustrative of congenital diseases of the heart and hopes that other exhibits may be forthcoming on similar lines The committee hopes also that it will be possible to arrange for a cinematograph section to be run in connexion with the Museum

It has been decided to group the Museum into the following sections each under the arrangement of the member named to whom all communications as to exhibits in the appropriate section should be addressed

Medicine (with Diseases of Children and Orthopædics) Dr Hunter
Surgery Mr Wakeley and Mr Mitchiner
Obstetrics and Gynæcology Mr Stevens
Neurology (with Mental Disorder) Dr Greenfield
Pathology and Bacteriology Dr Bratton
Radiology Dr Graham Hodgson
Tropical Medicine Dr Daukes
Oto Laryngology

Each specimen must be forwarded only through the gentlemen named above and must be clearly labelled on a card which will be sent on application Specimens can be received at the B M A Centenary Museum Royal School of Mines Prince Consort Road S W 7 between July 14th and July 20th 1932 and must be reclaimed immediately after the close of the Meeting on July 29th

THE 1931 PILGRIMAGE TO MECCA

The chief characteristic of the last pilgrimage to Mecca was a steady diminution in the number of pilgrims—64 000 pilgrims against 120 000 the preceding year—attributable to the world economic crisis. Only 7 795 passed through Egypt and the Suez Canal whereas in 1930 there were 23 776. On its arrival at El Tor medical inspection was sufficiently favourable for the pilgrimage to be declared free, but subsequent examination having revealed some vibrio carriers the Permanent Commission of the Quarantine Council placed it under the heading suspect. The Egyptian Government takes a fatherly interest in its pilgrims to the extent of distributing circulars through the towns and provinces informing the people what the tour will cost each individual, how and where he can sleep in depots, and what obligatory vaccination he has to undergo. The whole business of this annual pilgrimage is now regulated in a most efficient way, the outcome of years of experience. Although pilgrims, most of whom are of the peasant class, are recommended to go in restricted groups or by themselves, the great majority insist on travelling *en masse*, because that has always been their custom; they also prefer to make their devotions *en masse*, as they like the communicative fervour of religious zeal. None the less present-day economic factors have considerably mitigated this zeal, and the usual problems of overcrowding were almost non-existent in 1931.

In a short review of general epidemiology in the various North African countries Dr. J. Gilmour, president of the Sanitary Council, finds the past year to have been generally satisfactory except in Algeria, where there were epidemics of bubonic and pulmonary plague. Small-pox appeared sporadically in Morocco, Iraq, the Sudan, and Persia, while in Turkey this disease maintains a hold in the provinces, though to a decreasing extent. The same remarks apply to typhus fever, which is now found only occasionally in these countries, though in Turkey, Rumania, and Jugoslavia it continues to be endemic.

In India, where there are about 20 million persons who annually attend pilgrimages and fairs, the sum of our experience indicates that the prevalence of cholera can be greatly reduced if pilgrims are inoculated in their own districts before starting on their journey. This is confirmed by the work of the Egyptian Sanitary Council in seeking to make inoculation at the port of embarkation obligatory for all pilgrims coming from the south. It is noted that Bombay is the only port which does not require compulsory vaccination to be done. Each year sees an advance in perfecting the sanitary arrangements of this pilgrimage. The different towns in the Hedjaz have been placed under sanitary control, and in Mecca there is a special municipal committee which sees to it that all houses where pilgrims lodge are kept cleaned out with phenol and that overcrowding is prevented. Immediately after the 1930 pilgrimage the Egyptian Public Works Department put in hand additional sanitary installations, electrically driven pumps for supply of pure water and ice, and improved sewage disposal. Defrecation rooms are all fly proofed, and by a new arrangement the privy pots are placed on shelves for the collection of individual specimens, after which the pots are sterilized and dried by heat before return to the rooms.

Further research work has been done on the strains of vibrios isolated at Tor. Certain pilgrims are reported as having presented a vibrionic condition without any clinical manifestations of cholera. In our review published on December 20th 1930 it was noted that "in each case where a vibrio is isolated it should be considered suspect." The difficulty remained with comparatively few cases of properly defining the whole pilgrimage as being cholera-infected or free. A happy solution of this was found in [illegible]nago to be suspect

[illegible]et Quarantenaire d'Egypte. Rapport [illegible]èlerinage de l'année 1931. Alexandria.

The question whether a vibrio is a true cholera vibrio or not is still undetermined, and this is due to the biological characteristics of *V. cholerae* which, in the words of the report, are as unstable as the colour of a chameleon. But though there are cholera vibrios that show extreme mutations there are also those which are very stable, and this report favours the work of d'Herelle who has shown that while the former are contaminated by a bacteriophage ultravirus which produced a variable vibrio (vibrio bacteriophage) the latter are ultra pure *V. cholerae*. It is because these atypical strains do not correspond entirely to the characteristics of the ultra pure vibrios that a confusion has arisen which may require revision of the present classification of bacteria. The presence of agglutinability in a vibrio is not essential for the production of the clinical syndrome known as cholera. The *V. cholerae* that one finds in an endemic region are variable, the disease itself is variable in an endemic region. The symbiosis of d'Herelle's bacteriophage with the vibrios can be regarded as a chronic disease of the vibrios, and it is this symbiosis which produces the vibrionic mutations. It has now become necessary to recognize the existence of two distinct types: (*a*) *V. cholerae epidemicus* and (*b*) *V. cholerae endemicus*. The first is the specific virus of epidemic cholera, easily transmissible in series; the second can only be transmitted with difficulty in series. The endemic type is a varying vibrio, and it constitutes the permanent reservoir of endemic and epidemic cholera. All vibrio carriers ought to be considered dangerous because they can be incubators of a case of epidemic cholera which can declare itself in several days (epidemic carrier), or they can carry a sporadic form of cholera for several months before manifestation (endemic carrier).

The report concludes with an account of the general depositions taken in the countries of origin of the pilgrims and the information received after their return to these places. There are also copies of administrative orders and official circulars which show the meticulous care that every detail of the Hedjaz pilgrimage receives from the Egyptian Public Health Department. This annual migration of devotees from the moment it enters the zone till the time it leaves bids fair to be a bright spot in the study of epidemiology. No objection can be raised to the deeply rooted almost fanatical wish of all these followers of the Prophet to worship in the Holy City of Mecca at least once in their lifetime, even if their insistence on mass movement constitutes a sanitary menace, but this desire can only be gratified on condition that they allow themselves to be shepherded and sanitarily supervised.

From the standpoint of international epidemiology it might perhaps be feasible for Dr. Gilmour to include in a future report some more detailed account of the arrangements and agreements made with the sanitary authorities of pilgrim origin countries on the subject of obligatory vaccination and the extent to which such demands are or can be accepted.

HOSPITAL PROVISION FOR PEOPLE OF MODERATE MEANS

BRITISH PROVIDENT ASSOCIATION'S SCHEME

We have received for publication the following letter dated April 13th from Lord Lloyd, chairman of the Executive Council of the British Provident Association.

We ask the valuable assistance of your columns for the purpose of making it widely known that the British Provident Association has now fully prepared its schemes for solving the hospital problem of men and women of moderate means, and is appealing widely for their co-operation. These men and women are the only people who now find real difficulty in securing for themselves what everyone wants in serious illness and what every member of the community ought to have—the best procurable treatment at charges which put no excessive strain upon the income. In order to get proper treatment in such cases they are often compelled to compete for accommodation intended for those poorer than themselves, or else to pay sums which may seriously embarrass and

possibly cripple them financially It would be superfluous to point out how pressing this need has become The columns of the press not only in London but in other large centres of population have been constantly employed to discuss the urgency of the problem but until this moment no comprehensive scheme for its solution has been put forward

H R H the Prince of Wales as President of the King Edward s Hospital Fund for Greater London set up in 1927 a committee to inquire into this question as it affected the existing hospitals This committee before which the B P A gave evidence reported that the need of the middle classes for proper facilities for institutional treatment was urgent and recommended among other things (*a*) that an effective scheme of mutual provision was needed to enable middle class patients to provide against the cost of treatment , (*b*) that full consideration should be given to the possibility of organizing a scheme of subscription to the capital cost of new pay beds The B P A has for some years been carefully investigating and subjecting to practical tests the possibilities which lie along these lines The schemes which have been evolved as a result are based upon the assumption which we regard as fully justified that no individual in this country wishes to depend upon charity or to throw the burden of solving his own problem upon the already overburdened hospitals but will always prefer if he can to stand squarely upon his own feet and work out his own salvation They are framed upon two simple principles already well understood and widely employed—the principle of co operation and the principle of spreading the cost of sickness over the years of health when it can most easily be afforded

If the total cost of pay beds with the comfort and privacy needed is spread over the wide area of those who need them the individual cost will be reasonable enough In order to secure such a bed for himself and his family with all the advantages of modern equipment each individual has only to put down one capital sum of £10 Having secured his bed he can by spreading the cost of sickness over the years of health make provision against the other expenses involved By means of a small yearly subscription he can provide against the cost of nursing and maintenance against consultant s fees and against surgeon s fees

Our association has been formed solely for the purpose of solving a pressing social problem Its executive council is constituted as follows Sir Alan G Anderson Sir J Gomer Berry E R Chadwick Healey the Hon D Fortescue W McAdam Eccles R A Moore Sir Courtauld Thomson Nigel O Walker It is debarred under its articles from making profits and any surplus it may realize must be used for the benefit of subscribers For nearly ten years the association has been evolving testing and perfecting its schemes It only remains for men and women of moderate means to co operate in making use of those schemes and so to solve their own problem and we earnestly invite them to write for details to the association s offices at 30 Lancaster Gate W 2

France

[FROM OUR OWN CORRESPONDENT]

Overcrowding of the Medical Profession

The French confederation of medical societies has just sent a circular letter to all pupils of the lycees who are about to enter for their baccalaureat indicating the extent to which the medical profession is overcrowded It appears from their figures that the Paris Faculty of Medicine which had less than five hundred students eight years ago has over a thousand this year The figures for the whole of France show an increase in the number of doctors from 16 815 in 1900 to 27 500 in 1928 while the population has only increased in the same period by two millions—that is from 38 442 000 to 40 742 000 It may be estimated that in the course of the next five years the number of doctors will have increased by still greater proportions This fact presents grave dangers moral as well as material for the profession itself The circular adds that the medical profession is not one in which to make a fortune This large increase is due partly to the ever growing proportion of women students and partly to the large number of foreign students For the last two years education at the lycees has been free as it already was in the primary schools Thus every French child can enter for his baccalaureat without costing his parents a penny and it is very unlikely that many having come so far will turn back at the portals of the university This of course means the production of a continuous series of graduates in all faculties Doctors lawyers engineers artists form an immense army of officers with no rank and file It is in this way that the intellectual proletariat —the most pitiful of all—is produced

Several remedies have been suggested to meet this state of affairs The first is to insist that all students entering the faculty of medicine shall already have passed the most difficult form of baccalaureat comprising examinations in Latin and Greek This is an obstacle which holds back very few Professional examinations are also to be made more difficult Already the oral examinations involve written tests analogous to the English system It has been finally decided that all foreign students must take the entire course at a French university and that equivalent diplomas shall hold good only up to a certain point A university diploma would be open to all but the State diploma which alone gives the right to practise in France would thus be much more difficult to obtain A foreigner even though compelled to follow the French curriculum *in toto* always has the enormous advantage of being exempted from military service The problem is serious and one which appears to have no solution The only way out of the difficulty which has been envisaged by some of the more enlightened members of the profession is to apply a democratic measure to this demagogic situation—that is to put our medical schools on the same footing as the big State schools and to make entrance possible only by means of a competitive examination

Treatment by Acupuncture

Dr Ferreyrolles whose name is well known in connexion with the revival of the ancient therapeutic methods of the East has been continuing his experiments with acupuncture During the past winter a number of Paris hospitals opened their wards to him not without a certain amount of scepticism perhaps but at all events with minds prepared to welcome anything which might prove new and helpful The sceptics were soon won over to his side He showed how in the space of a few moments muscular contractions could be made to disappear obstinate rheumatic pains to vanish and neuralgia and attacks of asthma to cease simply by means of superficial pricks with an ordinary needle It seems as though we have here a phenomenon of reflexo therapy which has never been systematically studied at any rate in France and which directs the mind towards Mackenzie s work on the projection to the surface of deeply seated organs We are familiar with the metameric zones which can be compared with the parallels of latitude But the Chinese forced to this patient and minute form of study by the fact that they did no dissecting were aware of the parallels of longitude also which do not correspond to any anatomical arrangement yet known to us These experiments have been the subject of much discussion by some of our best known medical men

There are many cases however which are entirely baffling for example the immediate amelioration in the condition of a hemiplegic patient who had been produced as a challenge to this form of therapy Dr Lerrevrolles who has in his possession some unique Chinese documents and who has given a tremendous amount of thought and study to the subject is about to publish a book which will make it possible for everyone to apply and test a system of which he is the modest yet enthusiastic advocate

One Better than Coué

A certain Dr Faivel has introduced to the public a wonderful therapeutic instrument which provides a cure for every disease and which certainly does not add to the physician's exertion It is a gramophone record whispering to the patient such good advice as made the name of Coué so popular outside the boundaries of his native country His followers have found out that suggestion depends greatly on the personal influence of the therapeutist This influence may produce quite the wrong effect if the voice is not sufficiently cajoling the smile sufficiently convincing if the physician is not wearing the right kind of collar or if he is not endowed with the right kind of humour All these inconveniences disappear with the use of this gramophone record And it cures all diseases because the record is double faced one side is directed against physical and the other side against moral ailments On the physical side a dulcet voice gives excellent advice as regards patience and confidence On the moral side the sermon is wrapped up in music— a peculiarly soothing harmony It has been said that this is a new departure in therapeutics and the hope has been expressed that eminent specialists will with the help of the gramophone give the public the indispensable notions of medicine which might have escaped their attention in the morning paper It is proposed and this is no surprise to produce a record on sexual education Let us hope that there will be only one side

G MONOD

Ireland

Honorary Fellowships of the Royal College of Physicians

On April 16th Dr T Gillman Moorhead President of the Royal College of Physicians of Ireland and of the Royal Academy of Medicine of Ireland admitted to the Honorary Fellowship of the College Sir Almroth Wright and Dr Edward Francis Stephenson chief medical officer of the Department of Local Government and Public Health Introducing Sir Almroth Wright the Registrar said he had the honour of presenting to them one who needed no introduction Years ago the great Pasteur opened wide a door through which with others who were the glory of their times Almroth Wright had entered into the fruitful garden of bacteriological research How well he had cultivated and was still cultivating that garden would need for its recital a long summer day, and even then perchance the half would not be told He had to be satisfied with one instance An army of about 400 000 men in the South African war lost from typhoid fever 8 000 In the great war in an army of over 4 000 000 there were 8 000 cases of typhoid with a death roll of under 300 They must guess for themselves how many lives were saved as the result of the preventive inoculation introduced by Wright Introducing Dr Stephenson the Registrar said he had now to present to them for their purple a worthy son of their own house who had brought honour and lustre to his Alma Mater Members of the medical fraternity had ever viewed their obligations from three aspects duty to the science of medicine, duty towards the individual patient and duty towards the community For many years there had been little scope in Ireland for the physician to practise his duty towards the community In the paths of science and of practice their forefathers had occupied high places but the study of public health had lagged sadly behind and so unfruitful was its pursuit that few were found to take part in it It was however, a great calling and one which was bound to enlist the sympathies of their best men when once the possibilities of its proper cultivation were known to them Fortunately at the time of the birth of their new State there was as chief medical officer of the Department of Local Government and Public Health one who by his knowledge and skill and by his intimate acquaintance with the needs of the people and the profession was peculiarly fitted to put forward wise schemes for the furtherance of the public health The task was difficult but the plans of the chief medical officer were pressed forward and now both the country and the profession tendered to him their grateful thanks

Paying Patients and the Radium Supply to Hospitals in Northern Ireland

Professor W W D Thomson (professor of medicine, Queen's University) referring at the annual meeting of the Royal Victoria Hospital Belfast to the provision of a pay patients block said that a hospital was no longer regarded as a place for the treatment only of the necessitous poor With the progress of medical science expensive methods of diagnosis and treatment had developed Large numbers of the professional and middle classes were unable to avail themselves fully of medical services some of which, indeed were difficult to obtain outside the walls of a hospital While the rich could buy and the poor could be supplied with the best medical skill in times of illness the middle classes of the community knew no such good fortune The medical staff was anxious that this anomaly should be removed by the provision in the near future of a pay patients block for persons of moderate means Already such blocks were being added to hospitals all over the British Isles on the Continent and in America Such an institution was one of the crying needs of Northern Ireland and the medical staff of the Royal Victoria Hospital trusted that this want would be fulfilled without undue delay After the establishment of the pay block at present under contemplation the medical staff hoped that the demand hospital treatment for all who need it irrespective of their bank account would be conceded by the extension of the principle of the pay block system to include all classes The chairman of the Finance Committee in presenting his annual report said that the Commission which had control of the radium supplies recently issued in England had unfortunately not extended the distribution of radium on loan to hospitals in Northern Ireland but had restricted it to seven centres in England four in Scotland and one in Wales—London being treated as a separate and special case The Royal Victoria Hospital fulfilled all the conditions laid down for the formation of a radium centre the report stated as it had adequate facilities for treatment by deep x ray therapy and had well equipped pathological and bio chemical laboratories Although the Radium Commission had not been able to provide any radium for Northern Ireland the Board and the medical staff were prepared to develop a radium centre for Northern Ireland on the lines prescribed by the Commission in Great Britain provided adequate funds were forthcoming The Radium Therapy Department was formed in 1930 through the generosity of Viscountess Pirrie and a few anonymous donors with a steel of radium valued at £3 314 but the

demand was so urgent in the interests of the patients suffering from cancer and the time so inopportune for a public appeal that the Board had felt justified in obtaining a special loan of £4 000 early last year

Medical Profession of County Wexford and the County M O H

In his report to the County Wexford Health Board Dr C Bastible medical officer of health said it had been brought to his notice that during the discussions which took place last year at the meetings of the Wexford County Board of Health in connexion with the proposed appointment of nose and throat surgeons for work under the school medical service scheme certain remarks of his appeared to have been misconstrued The remarks to which exception was taken were made in the course of the discussions and he had no intention of reflecting in any way on the skill or competence of the doctors of County Wexford He was satisfied that the qualifications held by the medical men of the county entitled them to perform operations on tonsils and adenoids or to follow any line of medical or surgical practice His remarks had been merely intended to draw attention to the requirements of the Department of Local Government and Public Health

England and Wales

The Prince of Wales s Visit to Guy s Hospital

The Prince of Wales who is the president of Guy s Hospital took the chair at a special meeting of the general court of the hospital on April 14th and afterwards paid a visit to the new extension of the out patient department which has been built and equipped at a cost of £50 000 provided by Lord Duveriton This new building of three stories with a basement houses completely equipped departments for ear nose and throat cases skin cases cases of disease of the nervous system and surgical cases A new almoner department for the social services of the hospital is also to be established in this building After speaking with members of the staff and with out patients awaiting treatment the Prince visited the nurses home where he inspected the new Revelstoke memorial library and class room built by his fellow governors to the memory of the late Lord Revelstoke for many years chairman of the finance committee and a great benefactor of the hospital In this department the Prince met the present Lord Revelstoke and other members of the family He was accompanied in his tour of the hospital by Mr I P Whitbread the treasurer Lord Duveriton Mr H I Eason superintendent of the hospital the matron and the architect

British Legion Village Preston Hall

Despite the prevailing financial difficulties the annual report of the British Legion Village at Preston Hall Aylesford Kent shows that most of the departments continue to be self supporting and that there has been a balance of income over expenditure This institution which is concerned with the treatment of tuberculous ex service men was taken over by the British Legion in 1925 and has been much expanded since During the year 1930 31 351 patients were admitted to the sanatorium section and 297 were discharged in 82 the disease being quiescent and in 152 the general condition having improved The medical director Dr J B McDougall points out that although the tuberculous pensioner s rapidly increasing the fact that his dependants are now housed has resulted in a rise in the number of those admitted to the sanatorium *Pneumothorax* is being increasingly used in the treatment of intractable haemoptysis and in cases where recurrent relapses are due to active disease Special investigations have been made with regard to the cellular content of the blood of tuberculous patients and the report contains an account of observations which began a year ago with a view to ascertaining the significance of the various factors in the leucocyte formula and the value of single and repeated white cell counts in the prognosis of pulmonary tuberculosis Dr McDougall emphasizes the great importance of the village settlement as a unit in the field of preventive medicine and pleads for more assistance from local authorities Adequate protection and care during the critical years that follow discharge from a sanatorium or hospital enable a great number of patients to become self supporting as well as ceasing to be a potential source of infection to others In the Preston Hall Settlement the industries carried on include the manufacture of portable buildings the production of fibre and leather goods printing wood graining live stock cultivation and the running of village stores Special efforts are made to find employment outside the settlement for tuberculous patients in whom the disease has been arrested As would be expected the results in this respect for the past year fell below expectations since unprecedented industrial conditions prevailed in the country generally some successes were however obtained and in various other ways patients have been helped to establish themselves

Central Midwives Board

At the meeting of the Central Midwives Board for England and Wales on April 7th the following elections were announced chairman Dr J S Fairburn Mr Comyns Berkeley by the Royal College of Physicians Dr J J Buchan by the Society of Medical Officers of Health Dr T Vincent Dickinson by the Society of Apothecaries of London Councillor W J Loxley by the Association of Municipal Corporations Dr Fairburn Miss E M Doubleday and Miss A A I Pollard by the Midwives Institute The report from a member of the Board on her inspection of the examination held at the Newcastle upon Tyne Centre in February last was adopted and the Board s thanks were accorded to her for making the inspection The list of lecturers and of institutions where lectures may be delivered was approved as submitted for the year ending March 31st 1933 Approval subject to certain reservations was granted to the list of institutions homes and midwives at which and under whom pupil midwives may be trained

Correspondence

RICKETS AND VITAMIN D

SIR —In a recent address to the Fife Branch of the British Medical Association I raised the question of how far the clinical results obtained by general medical practitioners from the use of medicinal preparations of vitamins in common use bore out the claims based on the results obtained in the laboratory The very guarded nature of the answers received appear to me amply to warrant the caveat I have previously expressed as to the undue haste which has been shown in recent years in applying the results of the laboratory to the everyday problems of practical medicine

Regarding rickets in relation to vitamin D I suggested that modern medical research was leading the clinician astray in the following directions (1) in its depreciation of the profound value of ultra violet rays both as a curative agent and as to the direction for its most effective study (2) in its pronouncement as to the unfavourable influence of oatmeal on rickets and rachitic disorders

in children and (4) in its claim as to the intimate and constant relationship of vitamin D to the state of the teeth

In relation to these points further clinical evidence was submitted of the remarkable results obtained by the use of irradiated milk in the treatment of rickets, the results of this treatment far exceeding in my experience those obtainable by the use of any *medicinal vitamin preparation*. In these observations ostreol was used regularly in the dietary. Reference was also made to results obtained by me thirty years ago when as a result of feeding experimental diets skeletons of young rats were found to be uniformly soft and deformed due to the absence of calcium in the dietary, the teeth on examination by investigators skilled in dental histology showing no microscopical or macroscopical deviation from the normal.

My main reason for writing, however, is to refer to a recent experience and to invite the opinion of your readers in regard to it. Recently a small girl aged 5 years a twin suffering from very pronounced florid rickets was admitted to my ward, the radiological pictures being very striking. *The teeth showed little if any deviation* from the normal, this being confirmed on radiological examination. The administration of irradiated milk was immediately followed by a degree and rapidity of improvement in the clinical and radiological picture which must almost be seen to be believed. The breakfast of the child consisted of porridge and milk. It is of interest to note that the potency of the irradiated milk in vitamin D used in this observation was, according to official laboratory tests, very *small*, being *approximately one tenth of that* present in preparations regarded as rich in vitamin D. The remarkable feature in this case, however, is the fact that a twin sister brought up under entirely the same conditions is free from rickets both clinically and radiologically. The mother is above the average in her intelligence and in the interest and care she has taken in bringing up her family. The usual amount of milk purchased daily was five pints for a household of six, the milk however being pasteurized. She reported that whereas the rachitic child had for the past three and a half years been constantly receiving skilled medical attention, including the prolonged use over the past two and a half years of at least four medicinal vitamin preparations, the twin sister grew up herself, and her health had never given the mother a trace of anxiety. So far as I am aware this is a unique record of very great interest. It would be interesting to know if any of your readers have had any similar experience.—I am, etc.

Edinburgh, April 11th. CHALMERS WATSON, M.D.

DEAFNESS AND HOOTERS: TWO AUDITORY PROBLEMS OF MOTORING

SIR,—Certain cases in the magistrates' courts during the last few years suggested that some justices of the peace considered that the deaf person should never be allowed to drive a motor vehicle. A recent correspondence in the *Times*, however, indicates a swing of opinion against the value of the hooter in a motor car. For this reason a consideration of certain auditory problems of motoring may be of value. They may be enunciated thus:

1. To sound a horn or hooter can only be of use to notify from a reasonable distance the presence of a motor vehicle to a pedestrian who is unaware of its approach.

2. The driver who is stone deaf or nearly so is *not* a danger on the road from his loss of hearing.

The proof of the first proposition is by the process of exclusion. It depends upon two points in the physiology of hearing—namely (*a*) the power to appreciate the hearing of one out of *many sounds*, (*b*) the power of judging the direction from which any given sound comes. The totality of sound at any moment comes from many *notes or noises*. The mind has the power consciously to pick one sound (or series of sounds) from many, and we call that listening to that sound (or series of sounds). There is also a subconscious selective power. Indeed our existence in a modern city depends upon the degree to which we can ignore sounds that have no meaning *for us and allow those that have to break in* upon the brain. Closely allied to this power of listening to a sound is that of listening *for* one. By this we mean that we try to ignore all existing noise and to give all our auditory attention to some other sound then *non existent* but which we expect *will* arise at the next moment or which we think *may* do so. Auditory attention is then a double process—positive attention of listening, and negative attention or the power to exclude *unwanted sounds*. This last is not absolute, for every sound has some effect upon the mind, and diminishes the amount of positive attention that can be given to the wanted sound. Negative attention has *more* power to exclude unwanted sounds when one is listening to an *existent one than when one is listening for* a non existent one. To listen for a sound that one feels confident *will* occur is a more certain form of positive attention than to listen for one that *may* arise.

In the light of these statements—*which I believe from* experience and observation to be facts—let us consider motorist No. 1 in relation to motorist No. 2 who has sounded his hooter.

In or near any town and on most main roads there is *so much traffic* that the noises from the *numerous other* vehicles take up a considerable amount of his auditory attention which has already been cut into by the noise of his own car. Many of those who drive vehicles are using the hooter and of all these noises none necessarily have any reference to his position on the road. He is therefore subconsciously listening for a sound which *may* arise and of this sound the pitch and other characters are unknown to him but are indistinguishable from many other sounds constantly *arising which have no reference* to him. Need we wonder that motorist No. 2 is so often disappointed at the response to his hooting on the part of motorist No. 1?

We are at liberty to deduce that so far as other motor vehicles are concerned the value of the hooter in traffic is negligible and that its use should be discontinued. But it may be urged there is still use for the hooter in the quiet country to warn the motorist around the corner of one's approach to a cross road. Even if the motorist round the corner heard the hoot—which often he does not—it is as likely to be a danger as a help owing to our deficient power of judging the direction from which a sound comes.

Of this part of physiology we are ignorant. We know nothing of the factors whereby we judge the direction from which a sound proceeds. If we can see something that we know is producing the sound, if we can smell something that we associate with the sound and know the direction of the origin of the smell, or if we have other reason to believe the sound proceeds from a given direction, we can usually appreciate that the sound *comes* from that direction. *With none of these* guides to help them however the great majority of persons are singularly deficient in their power to assess the direction. Such power as we have is less for a short sharp sound, even if repeated, than it is for a *continuous* sound or a series of sounds. It is I believe greatest when we are stationary and diminishes directly with the speed when one is in motion. Hooting at cross roads so far as a second motorist is concerned is therefore practically useless. There is a very good chance that the second motorist will assess

incorrectly the direction from which the noise has come Whether the sounding of a horn is the right way to warn the inattentive pedestrian may be a matter for discussion on other grounds I suggest that on otological grounds the sounding of the horn or hooter as a guide to other motorists is not only valueless but possibly a danger

The proof of the second proposition—namely that the driver who is stone deaf or nearly so is not a danger on the road—depends upon three points (*a*) that the deaf driver concentrates on his visual attention (*b*) that he develops a remarkable power of interpreting signs (*c*) that he has a sense of his own limitations

As our auditory attention is limited so is our attention as a whole As we use our visual attention our auditory attention is diminished and vice versa The very deaf person is undisturbed by noises around him and his whole mind is given to visual attention His powers of looking out are greater than they would be if he were also listening to noises of the traffic around him and listening for the sound of the hooter behind him

The power of the deaf person to interpret signs is sometimes so remarkable that it is hard for a hearing person to realize it Deaf persons may be divided into two—those who go under to their disability and those who rise above it The former become introspective morose and slow in movement and in thought The latter remain alert and active in mind and body It is these that develop the power of interpreting signs and it is not likely that the former would even try to drive a motor The deaf driver is probably very alert and has great powers of interpreting the intentions of those in front of him He can estimate what the driver in the car four ahead is about to do in addition to knowing what will happen to the car immediately in advance He is therefore likely to be a very good driver

Few of us can estimate our limitations even when we try to do so If however they are thrust upon us in relation to any purpose the fact that they are so makes us careful and makes us develop all our other faculties for that purpose This is the position in which the deaf person finds himself in relation to driving a motor car

For these reasons it would seem that deafness by itself should cease to be regarded as a reason for refusing an individual the right to drive a motor vehicle Experience would seem to bear this out —I am etc

T B LAYTON
Surgeon in Charge of the Ear Department
Guy's Hospital

April 9th

LACTIC ACID IN THE GASTRIC CONTENTS

SIR —The recent letter by Drs L C Dodds and J D Robertson in the *Journal* of April 9th concerning the occurrence of lactic acid in the stomach contents is of interest in so far as it emphasizes the extraordinary discrepancy in the results obtained by myself over many years in the examination of the stomach contents after an Ewald test breakfast of Roberts and myself employing the fractional method and the more recent observations therein referred to

I must confess at once that the discrepancy is to me inexplicable and at the same time leaves me unconvinced of the lack of any significance of the presence of lactic acid in the stomach contents as a phenomenon of cancer of the stomach

Dr J I Wilkinson director of the department of clinical research at the Manchester Royal Infirmary who has continued the investigation of the stomach contents in cancer and in gastro-intestinal diseases has kindly furnished the following figures recording the incidence of lactic acid as detected by the thiophene reaction

Out of thirty two cases of cancer of the stomach lactic acid was present in nineteen Out of 287 cases other than cancer of the stomach lactic acid was present in seven in one of these the presence of lactic acid was not again confirmed in two the positive result may have been due to some other substance—namely citric acid—and in a fourth a positive result was obtained by ferric chloride alone —I am etc

T CRAVEN MOORE

Sussex April 15th

CYSTIC DILATATION OF THE COMMON BILE DUCT

SIR —It was with great interest that I read the communications of Mr J H Saint (*British Medical Journal* February 6th) and Mr E R Frizelle (*British Medical Journal* April 2nd) Mr Saint's patient presented a group of symptoms for which the pathological explanation is not obvious but one may suspect that just as confusion may occur between acute cholecystitis and perforated ulcer on account of pain and rigidity being associated with tension in an infected gall bladder without diffusing peritonitis the intense pain and board like belly in his case may have resulted from great tension in the infected bile duct cyst My reason for troubling you is that Mr Saint in your last issue asked for the later history of the patient I described in the *British Journal of Surgery* in 1928 Briefly it is as follows

The good effect of the operation of cholecystgastrostomy lasted about a year at the end of which time she began to suffer from her old symptoms In 1931 she was readmitted to University College Hospital with recurrence of infective cholangitis and again she was desperately ill At operation I found a greatly distended gall bladder and my anastomosis completely closed I therefore joined the duodenum to the dilated common bile duct but unfortunately towards the end of the operation she had what appeared to be another convulsion A day or so later she had another of which she died Post mortem in addition to the dilated common bile duct there was seen a cyst in the centre of the liver containing bile but having no obvious direct communication with the common hepatic duct a finding that confirms the views of Mr Saint and Mr Frizelle when they attribute the malady to congenital malformation

As to the propriety of cholecystgastrostomy as opposed to anastomosis of the cyst to the duodenum I think Mr Frizelle right in preferring the latter My own use of the former was dictated by the impossibility of performing the latter owing to profuse bleeding from the acutely infected wall of the cyst and to the girl's precarious condition My surprise at the immediate resulting relief was the origin of my tentative suggestion that the gall bladder operation might prove the better This was however purely a speculation as was obvious from its wording

It is possibly better and I am indebted to Mr Frizelle for a practical demonstration of its fallacy in his case even as it eventually proved erroneous in mine

Nevertheless surgeons must be perpetually impressed by the preference exercised by the body fluids for their natural channels We need not close the opened ductus nor the ureter If faeces can possibly pass to the distal colon they will do so in spite of the presence of a colostomy opening After gastro-jejunostomy it is common for stomach contents to pass through the pylorus in the absence of stricture In the presence therefore of an intermittent obstruction to the common bile duct such as that in question it is not certain that an artificial opening made between the bile duct and the duodenum is immune from subsequent closure during those periods in which the obstruction is in abeyance since a previously efficient cholecystgastrotomy stoma has been known to disappear in similar circumstances The facts that the walls of the passages concerned are living structures perhaps capable of peristaltic contraction and that the obstruction in question is intermittent may also possibly

vitiate Mr Saint's hydrostatical deductions as I think they did mine

I trust Sir that the space that you have already devoted to this rare malady will not make it necessary for you to apply your editorial guillotine when Mr Frizelle has had an opportunity of telling us of the progress of his patient after she left his immediate care on the results of which together with his persistence in the face of difficulties he must be sincerely congratulated

I should owe an apology for failing to disclose the fatal relapse of my published case had I not soon after her death encountered in consultation with Dr McNee another example of cystic dilatation of the common bile duct in a young woman Again there were recurrent attacks of pain vomiting and jaundice since childhood but fortunately there was no infection The wall of the cyst was in good condition and there was no bleeding consequent on manipulation The cyst was therefore joined to the duodenum Jaundice disappeared and she remains well For obvious reasons I propose waiting a little longer before publishing a description of the two cases —I am etc

London W 1 April 17th JULIAN TAYLOR

QUININE AND MALARIA

SIR —I read with interest Mr W Addison's letter on the subject of malaria and quinine in the *Journal* of February 6th showing a layman's point of view The letter is all the more interesting on account of his shrewd observations not only on the treatment of malaria but also on a probable cause of blackwater fever

For the past six or seven years I have been interested in the discovery of a substitute for quinine in the treatment of malaria—one which could possess the advantages of quinine without its serious objections in pregnancy or blackwater fever I do not think that a perfect remedy has yet been found, but from my own experiences with plasmoquine in conjunction with quinine I think the producers have good reason to claim an advance on quinine treatment

The earliest preparation plasmoquine simplex was I think a little too toxic for general use when it was first produced Later it appeared to lose some of its toxicity and to some extent its effectiveness against malaria The plasmoquine compound then found its way into general use as many malariologists had been using quinine and plasmoquine combined in small quantities with good effects This compound was not as safe for general purposes as quinine nor as effective as the plasmoquine with about 5 grains of quinine The latest product quino plasmoquine is a combination of a small and almost harmless amount of plasmoquine with 4½ grains of quinine and this attains more nearly to the ideal both for treatment and for prophylaxis During pregnancy or blackwater fever plasmoquine simplex should be employed but in the treatment of malaria the newest preparation has many advantages perhaps the chief of which is that it can be taken continuously for a month or even longer

Plasmoquine simplex has to be taken carefully two days treatment and two days rest and I quite agree that the people who take quinine in a careless way by themselves open to blackwater fever Malaria has been and still is in some places a very common disease in Malaya A few years ago the spleen rate among children in many places was 100 per cent Cases of blackwater fever have been extremely rare Probably one reason for this is that few places in the Tropics provide quinine more freely and regular treatment for a short time at least is the rule There has been much talk at home about the prophylactic value of plasmoquine and it has been used here with very good effect but we are given to understand also that the same malaria which has been prevented can be successfully treated in the unprevented cases by giving 10 grains of quinine daily for a week And relapses are rare Surely these must be a weakened strain of malaria parasite for we find that 10 grains thrice daily is necessary and treatment in reduced doses has to continue for three months —I am etc

Singapore March 13th J NORMAN DUGDALE

ARSENIC AND WALLPAPER

SIR —Dr Turner Wilson's letter in your issue of April 16th recalls a case under my care some twenty years ago A young man was admitted to hospital with vomiting absence of knee jerks trophic sores on the toes and pigmentation on the elbows and knees On inquiry I found that his bedroom had recently been repapered in green A specimen of the wallpaper was analysed and found to contain a small quantity of arsenic Removal of the patient from this bedroom was followed by a great temporary improvement His blood pressure continued to be low however and after a time the pigmentation began to spread involving his buccal mucosa It became clear that he was suffering from Addison's disease and this was confirmed post mortem In spite of such suspicious features as absent knee jerks and the presence of trophic sores this case supports Dr Turner Wilson's plea for caution in attributing responsibility to wallpapers —I am etc

London W 1 April 15th W LANGDON BROWN

TREATMENT OF OSTEO ARTHRITIS OF THE HIP

SIR —In the *Journal* of April 16th (p 726) Dr Hernaman Johnson rightly calls attention to the value of deep x ray therapy in the treatment of osteo arthritis I feel however that it should be made clear that anything in the nature of lasting improvement occurs in the minority of patients though the number is appreciable I find in my notes that out of twenty four cases of osteo arthritis of the hip joint ten obtained considerable relief from pain for six months and then relapsed Further radiation had no effect Five secured remarkable diminution of pain which has not as yet recurred after an interval of one and a half to two years The remainder were no better In the most favourable cases no improvement in the x ray appearances could be observed but the relief of pain fully justifies the trial of this form of therapy It is the only kind of treatment which I have found to do good in that form of spondylitis characterized by extensive ossification of the spinous ligaments Of six such cases three showed a striking increase in range of movement one developed a leucopenia of 3 500 contracted lobar pneumonia and died in two days two were unaffected

Ten patients for whom I advised deep x ray therapy for osteo arthritis of the finger joints were no better for treatment Of a like number whose knees were irradiated only three showed great improvement Here again it was relief of pain rather than of objective signs which was evident In general I agree with Dr Hernaman Johnson that severe constitutional disturbance is unlikely to be produced but that a real danger exists where extensive irradiation is needed—for example spine—I am convinced

The vast majority of patients with osteo arthritis of the hip can be relieved of pain and of much disability by partial or complete restoration of movement by manipu

lition and the use of a walking calliper If in spite of these measures pain persists then I habitually call upon an expert to administer deep *x* rays —I am etc

London W April 18th A H DOLTHWAITE

SIR —As the result of twenty years of practical experience of the use of *x* ray therapy in cases of osteo arthritis I can fully endorse Dr Hermann Johnson's advocacy of that method of treatment In early cases the relief is generally almost instant and more important still lasting In cases which may be considered advanced the improvement is striking *in many cases in my own experience* patients who have been unable to walk without great effort and then with the aid of sticks or crutches have regained free movement and have been able to walk without assistance It is curious that surgical aid should be sought in preference to so simple a remedy —I am etc

London W I April 15th CHRISTOPHER KEMPSTER

DEPRESSED FRACTURE OF FOETAL SKULL

SIR —In the *Journal* of March 19th last Dr Peter W Philip records a case of difficult labour with particular reference to his treatment of a depressed fracture of the foetal skull It has been the teaching at the Rotunda Hospital for some time that pituitary extract is dangerous in cases of disproportion Rupture of the uterus has followed its administration and fracture of the skull is likely to occur as it did in this case Whether the culprit was the pituitary extract or the high forceps it is difficult to tell Dr Philip was lucky to get away with a live baby Much time and trouble would have been saved had he used the curved point of a bullet forceps to reduce the fracture a method which has been applied here without foetal death during the last five years —I am etc

G SPENCE SMYTH M D F R C P I

The Rotunda Hospital Dublin April 14th Assistant Master

AETIOLOGY OF CANCER

SIR —Dr Gye's letter in the *Journal* of April 9th in reply to the interesting letter by Dr Mottram (March 26th) renders the position more definite

An adult duck is injected with a filtrate made from a Fujinami tumour grown in a duckling a tumour forms as a consequence of the injection In my experience the tumour thus obtained always *recedes leaving the duck* resistant to subsequent injections The duck is now hyper immunized by a series of injections of filtrates of Fujinami's tumour taken always from ducklings The immune duck has received no fowl proteins whatsoever but the immune serum neutralizes filtrates of Fujinami tumours grown in chickens the test of neutralization being the inoculation of chickens with mixtures of serum and chicken tumour filtrate

Thus the antiserum contains no antibodies to the tissues of the test bird and no antibodies to the fowl proteins contained in the tumour filtrate It therefore cannot cause specific injury to the tissues of the test bird *nor* can it neutralize by action upon specific fowl proteins of the filtrate The obvious conclusion the only conclusion which follows from these established facts is that something which is neither duck nor fowl in nature is neutralized What can this thing be except a virus?

Nevertheless it appears to me that his final question admits of more answers than that which he holds to be the only one As it appears to me the question is What is the true nature and interpretation of the antibody reaction In the literature it is evident that it has been sought to identify the reaction with the proteolytic ferment action without a definite conclusion

As I have long held and more recently recalled in my letters in the *British Medical Journal* I have associated the antibody reaction with lipase ferment production and action induced by carcinoma extracts and filtrates acting in conjunction with the labile reactive lipase (prolipase) present in all normal tissues In such reactions it is not in my opinion injury to the tissue cells but a defensive response which action may be regarded as one of the chemical defences of the body and against the same Fujinami tumour growth whether the test animals be chickens or ducklings But the same ferment production follows injections of normal tissues especially spleen tissue and chemical substances into mice and rats rendering them non susceptible to tumour inoculation Therefore the defence whether lipolytic trypsic or other ferment action does not necessarily involve the presence of a micro organism or virus but the agent may be either a chemical substance or a living virus

In the present case the type of action as inferred in a previous issue of the *Journal* corresponds to the action of antitoxic serums on toxins The entry of diphtheria antitoxin into the blood is followed definitely as I demonstrated many years ago by an increased tissue lipolysis produced in conjunction with the substance (prolipase) which is furnished by the tissues of the patient An example of a similar response due to a chemical body in part or in whole is provided by the action of chaulmoogrates on leprosy bacilli This was noted in a paper by Sir Leonard Rogers (*British Medical Journal* July 7th 1923)

The precise manner in which the dissolution of leprosy bacilli in the tissues is brought about remained to be elucidated but in 1920 Dr J A Shaw Mackenzie recorded experiments showing that the addition of sodium gynocardate sodium morrhuate and sodium oleate to a pancreatic extract doubled the fat splitting effect of pancreatic lipase on an emulsion of olive oil *in vitro* and he suggested a direct stimulating action of tissue lipolysis in at any rate partial explanation of the therapeutic effect of sodium morrhuate and sodium gynocardate on acid fast bacilli

Subsequently a high lipase content in the serum was shown by Sir L Rogers and Dr Muir in recovered cases of leprosy and when the prognosis was good In addition to lipase comparatively recent experiments confirm the conclusions which I reached many years ago and have recalled that the proteolytic ferment trypsin in the tissues is concerned in the defence against cancer S L Baker and J Mackintosh found that the filtrate [Rous sarcoma in birds] *treated with alkaline trypsin* produced no tumours trypsin in acid medium promoted growth (1927) The same factor is seen also in reference to Gye's work He has shown that tissue ferments apparently play a large and sometimes decisive part in nullifying experimental work The ferment which appears to play an active part is proteolytic and the rapid loss of infectivity of a filtrate with incubation is due at least in part to the destruction of proteins by this ferment (Report Medical Research Council 1926-27 p 32) though apparently more recently this view is modified in favour of the oxidases

London April 13th J A SHAW MACKENZIE M D Lond

THE ORIGIN OF OLEOTHORAX TREATMENT

SIR —Dr Norman Munro's article on oleothorax in the *Journal* of March 26th commences by quoting Bernou as the originator of this treatment It is indeed correct that the recent developments of this method owe their origin largely to Bernou's work which was first published in 1922 I wish to draw attention to the fact that to the best of my belief the use of oily injections of this type was first practised by my friend and colleague Dr H de Carle Woodcock of Leeds in 1912 or 1913 At the International Congress of Medicine held in London in 1913 Dr Stuggman introduced a discussion on artificial pneumothorax In the official report of this discussion Dr Woodcock is quoted as follows

I have in two cases introduced liquid paraffin into the pleural cavity the paraffin being introduced after many

refills of nitrogen had been accomplished It is enough at present and in these remarks to say that there was no shock whatever on the introduction of the paraffin

In the *Edinburgh Medical Journal* (November, 1915) an article appeared by Dr Woodcock on the dangers of artificial pneumothorax from which I quote the following description of an actual case

Mr B large cavity in the right lung After apparent success by pneumothorax there was a relapse and severe haemoptysis Treatment was persevered in and eventually paraffin was injected together with the gas—two ounces of paraffin each time until the patient had had a pint Three years ago the patient was supposed to be dying This week a friend (?) is taking him for a motor tour

Dr Woodcock then goes on to state

I had suggested the use of paraffin to Stugman some time before I injected it in B s case he approved the idea which was new to him I am not aware of any other operator having used this form of treatment I frequently put in paraffin in chronic cases after a well marked gas filling it is not readily absorbed it creates fresh serous effusion the pleura is eventually greatly thickened and obliteration of the pleural cavity may follow The relief has always seemed proportionate to the thickening of the pleura

These remarks are quoted in full as they show that Dr Woodcock not only used paraffin but that perhaps without knowing it he had discovered a method of controlling that bugbear of pneumothorax treatment a too mobile mediastinum Pressure of work probably prevented him from publishing reports of many cases in which paraffin injections were used and it is to call attention to this pioneer work and especially to his clear deductions that this letter is written

We are proud to claim Carson of Liverpool as the first to point the way to pneumothorax treatment in 1821 an idea which has fallen for seventy years before being developed on the Continent The above facts justify the claim that in this more recent refinement an English worker was once again first in the field—I am etc,

Leeds April 12th NORMAN TATTERSALL M D

ALUMINIUM AND HEALTH

SIR—The letter of Dr Corum James in your issue of April 9th is explainable as an interesting example of faith healing Believing aluminium cooking utensils to be harmful he convinces his patients that the financial loss entailed in scrapping their aluminium ware will be beneficial to their health and it is It would be interesting could the doctor come to believe that the treatment for indigestion in his male patients is to bid them scrap their trousers and wear kilts for I feel certain that any patient with sufficient faith who carried out this treatment would also feel the benefit of course the difficulty here is the necessary faith though arguments in favour of the treatment could easily be adduced In the case of aluminium no argument is necessary for the public s respect for and ignorance of chemistry is so profound that given the necessary suggestion it derives great benefit from bread pills and patent medicines—I am etc

West Wickham Kent April 11th R W JAMESON M R C S D P H

THYROID EXTRACT AND PULMONARY EMBOLUS

SIR,—In the *Journal* of April 9th Mr Fraser records two instances of pulmonary embolism following major operations and points out that as both these cases were given thyroid extract this therapeutic agent has not proved itself to be an infallible preventive nor has it supported the claims made in its favour

In fairness to the American pioneer workers in this field I should like to point out that all they have claimed is a reduction of some 90 per cent in the incidence of pulmonary embolism in a long series of cases treated with thyroid extract as compared with a series of untreated control cases Furthermore an essential feature of the technique of administration of thyroid extract when used as a prophylactic agent against pulmonary embolism, lies in producing some degree of thyrotoxicosis as shown by the occurrence of tachycardia and sweating in the cases treated In Mr Fraser s cases only 6 grains of extract were given daily and although this might produce the desired effect in some instances a much greater dosage than this may be found necessary to produce the essential degree of increased metabolic activity—I am, etc,

London W April 13th JOHN H HANNAH

TENDENCIES IN MODERN MEDICINE

SIR—The science and art of medicine must always be progressive, but its progress during the last century has been like that of a train which is perforce confined between two rigid rails Progress has been made on strictly orthodox lines and any attempt at deviation to the right or left has rendered the would be explorer subject to the charge of quackery and he has promptly been brought back to toe the line once more

Of late years there have been signs apparent to the careful observer of a change of attitude on the part of the profession generally—a tendency to be less dogmatic and even a weakening in its materialistic outlook has been noticeable

No doubt the war was responsible in the first place for bringing about an increased permeability to new ideas Everywhere people were shocked out of their normal grooves, and the medical profession as much as any class, shared in the general mix up A condition of affairs which sent skilled surgeons to superintend latrines and consulting physicians to render first aid in the firing line was bound to result in a willingness to accept new points of view Since then there have been the revolutionary discoveries of the physicists who have shown the essential unreality of our former conceptions of inanimate and animate matter but still more iconoclastic has been the renaissance of psychology which is now providing a solid scientific background for the truths dimly discerned by the Christian scientists faith healers and innumerable isms which have so long been anathema to the orthodox

The last three issues of the *British Medical Journal* provide ample evidence of the change of values to which nobody can afford to shut his eyes Mr Alec Bourne s article on the chronic pelvic woman (March 26th) is a most welcome intimation that at long last gynaecologists are realizing that a woman s disabilities may be but the reverse side of the picture of which her emotional stresses are the obverse He is closely followed (April 2nd) by Dr Crookshank whose fascinating account of the psychological interest in general practice contains statements of facts which although familiar to some of us who have endeavoured to study our cases as individuals must have come as a great shock to the majority who are content to study disease

When side by side with these articles we find in the correspondence columns a realization that things are far from right with our training of the medical student culminating in the revolutionary suggestions of Dr Crichton Miller (April 9th) there is indeed ground for hope that a new era is dawning That the dawn is still distant is shown by the paragraph in the current issue on exophthalmic goitre in a child of 6 All kinds of treatment were applied to diminish the goitre but no investigation was made to ascertain the origin of the fear

complex which had been reinforced by the dog's attack or to evaluate the child's relationship to its devoted and intelligent parents.—I am, etc.

Birmingham, April 12th. R. G. M. LADELL.

THE STUDENT IN IRONS

SIR,—The correspondence on the curriculum continues to grow in interest though the burden of it is still sustained by the humble satellites. My reason for venturing to take a share in it is that I have had the experience of watching the progress and development of medical students to whom the description of being in irons would not apply. It is true they were not Europeans and that their outlook was perforce more Oriental than Occidental but that is beside the point. What was of interest to me was to be able to satisfy myself that with certain modifications of the usual methods it was possible to produce in three years after passing the preliminary sciences an efficient and reliable house officer.

I need not give any details of the curriculum which was carefully worked out but I would emphasize the limitation of tuition in anatomy and physiology to the first year the simultaneous carrying on of casualty and ward work during the first clinical year and the amount of personal contact between student and teacher. After passing an essentially practical examination at the end of the second clinical year at least one more complete year as a house officer was obligatory and opportunity was given during this time for as varied an experience as circumstances permitted. I would only add that in the opinion of competent external examiners more than 25 per cent. of these students, mainly of Arab extraction, attained a standard equivalent to that of the final conjoint at the end of their two years' clinical work.

The problem of the British medical student is not likely to be tackled till there is a strong public or professional demand for a change or unless a move is instituted by those responsible for the standard of medical education. But in London at any rate the situation is imperceptibly changing as more hospitals and more clinical material become available for instructional purposes and the possibility of insisting on hospital experience after qualification comes within the sphere of practical politics.

In our civilization we are becoming accustomed to the movement from the simple to the more complex and when the complexity becomes unworkable the return again to a more simplified system adapted to modern conditions. This rationalization process in an industrial sense is taking place in many spheres. But to be effectual it has to take into account the remoter effects of any change in an existing status. There will always be the two schools one concentrating on getting a move on and doing something and the other preferring to wait till circumstances or public opinion (possibly indistinguishable) compel not only consideration but action over the entire field. Personally I think that the latter process is the one that will be made use of in respect of medical education and as I have already suggested circumstances are imperceptibly changing. But when the move does come I should expect one of the most important innovations to be the attempt to evolve an efficient preliminary test before the study of anatomy and physiology is commenced. With this all with efficient teaching at hand is available for all students the percentage of failures in a qualifying examination should be negligible and inability to reach the standard within the prescribed time should be regarded as at least as important a subject for psychological investigation as the capacity of a teaching employee to exceed the average in cricket or golf.

On the subject of higher qualifications degrees and diplomas I will not venture to speculate.—I am, etc.

London, April 13th. H. C. SOLOMON.

THE PRACTITIONER IN IRONS

SIR,—Dr. C. M. Wilson's article on the student in irons and the resulting correspondence make interesting reading. Of equal if not greater concern to us who have escaped from the irons of Grant Despair is to find the pilgrim's progress further fraught with many dangers. The Scottish pilgrim has a slightly different itinerary but it behoves his English brother to learn by Scots misfortunes lest like befall him. The Scottish Apollyon straddled quite over the whole breadth of the way is armed with two formidable darts. One the English pilgrim has already felt it is called certification. The other is a dart hitherto untried in the South it is called mass clinical investigation. And of the two it is the more dangerous in that it appears to the pilgrim at first to be not a flaming dart but a crown of glory.

Scotland by reason of its size is eminently suited as an experimental ground ere launching out on a larger English field. And so you have the Scottish general practitioner transformed into a sort of statistical guinea-pig complete with number. Our Department of Health is furnished of the Ministry. Memo. 329 CI was based on R.N.O. statistics. I can assure my English fellow practitioners that much as they resented that document it is nothing to what can really be done in the statistical line. In Scotland we have a minute dissection of every practice in the land all neatly docketed. From these figures it is possible to draw any desired conclusions. Most statistics if read with suitable glasses are of that nature.

Having evolved such an admirable administrative machinery nothing is more obvious to the official mind than that such a method will produce excellent results in the clinical field. The same department whose premises on certification statistics are gravely called in question by the B.M.A. is given our blessing in its clinical investigations. A scientific advisory committee comes into being. Specialists are invoked to give their aid. Public health officials dig out their archives. And the health insurance practitioner as usual is not invoked. He is told it is all in his terms of service. The Department and the Advisory Committee having consumed but not digested Mackenzie are convinced that the general practitioner must come into the scheme. He is told grandiloquently that he "is in a position within the terms of his contract [*toujours la politesse*] to make contributions of the greatest importance to the elucidation of a wide range of medical problems."

The scheme is now in its second year. In 1931 we had a mass investigation into the hospital overcrowding problem and await with bated breath the findings. In 1932 we are investigating the early symptoms of cardiac disease. This is of course out of respect for the good Sir James who had the forethought to investigate cardiac disease before it committed itself to the matter too. What the future holds for us no one could divine. Such is the atmosphere of the Advisory Committee controlled.

The object of this letter is to draw the attention of members of the British Medical Association to the fact that they have been consulted [illegible] consideration to cooperate with the Department in mass clinical investigation. Many members—general practitioners and specialists—are persuaded that no useful or reliable conclusions can be drawn from the unreliable data which will result from investigation on the lines of M.R.I. and M.R.2. General practitioners do take strong exception to any body of men however eminent they may be in their particular specialty being given powerful

powers in the matter of *general practitioner research*. In a recent article (March 12th, p. 484) you quoted Professor Louis Sergent as saying, following a visit to Canada and America:

> "I let us prefer ten observations conducted from beginning to end by the same sage clinicians to five hundred observations heaped up in a central dossier by a computer who has no personal knowledge of any of them."

In the same number Professor Barker of the Johns Hopkins University is quoted:

> "Investigation work to be of value should be well devised, must as a rule be slowly and painstakingly conducted even by workers that are competent, and ought to be rigorously controlled by those who have a right to be authoritative persons in domains with which the researches deal."

In McNair Wilson's *Life of Sir James Mackenzie* (p. 285 et seq.) is related the story of the Department's first venture on clinical investigations. I would commend it to any interested particularly to the Advisory Committee. Mackenzie wrote of that scheme:

> "It is perfectly manifest that it is useless, but it is hopeless to get the authorities to see that no one knows how to keep such records. *It would be far better to spend a fraction of* the money which is now being spent in this vain and useless manner to obtain a method of record keeping. It must be apparent to everyone that properly kept records by panel doctors would be of inestimable value."

That still holds in 1932. *M.R.2* itself shows that a method has not yet been devised. Practitioners are not averse to keeping records; they are averse to keeping valueless records. Some of us feel that the British Medical Association is giving its blessing to a heresy—that is, that the mass compiling of statistics of no uniform standard by men untrained in the work is the ideal of general practitioner research. While the Association is arguing with the Department as to the conclusions it has drawn from certification statistics it is willing to accept its conclusions on ill-conceived clinical investigations. It is talking of committees to help the student in irons and forming committees to put the general practitioner in irons. That any protest of mine will be listened to any more than Mackenzie's was I have not the slightest hope; but if I must again go into irons I would rather not have my brothers turn the key.—I am, etc.,

Glasgow, April 15th. DUNCAN M. CAMERON.

SIR,—In connexion with Dr. C. M. Wilson's admirable article on the student in irons may I speak for the practitioner in irons? I submit that a doctor who has to attend out-patients at his surgery and "in-patients" at their houses, and who is continually available for emergencies, is unable to give of his best to humanity. The general practitioner of to-day is unable to exert his powers to the full because of the *numbing* and *crippling* effect of his liability to be called to an emergency at any time. Could there not be emergency practitioners doing nothing else and a rota for duty? Next, for the patient who is ill in bed should there not be another category of practitioner? Then would be left unencumbered the out-patient practitioner to see the relatively well type of patient who could attend surgery at stated and suitable times. A student for general practice according to this conception should decide relatively early which category he desires to take up and his curriculum could be much curtailed.—I am, etc.,

London, April 12th. C. E. H. TURNER.

PREPARATION FOR MARRIAGE

SIR,—Since the letter in your issue of March 26th announcing that a Personal Problems Bureau was to be set up with the sanction and approval of the British Social Hygiene Council leaflets and a covering letter have been received by Branch and Division secretaries in London. From this literature it is apparent that the following position of affairs may quite easily arise in the near future. A lady may call on her family doctor and inform him (1) that she has bought and read the book published for the B.S.H.C., (2) that feeling that she required further guidance she has been to the bureau recommended by the B.S.H.C. where she has paid a fee of £2 2s., and (3) that she now wishes to consult a specialist—No. 7 say on the list with which she has been provided by the B.S.H.C.—to whom she proposes to pay such further fees as are necessary. The only thing that is not clear is what part in the proceedings is to be played by the practitioner but possibly he will be permitted in showing the lady out to say "Good-bye" with a little more feeling than usual!

Everyone will probably agree with what Dr. Bracken-bury said in his address to the Kensington Division (*British Medical Journal Supplement*, April 16th) when he pointed out that the care of the health of the nation is not entirely the province of the medical profession. It is obvious also that new developments in medicine must always be taking place and that a certain length of time must elapse before the general practitioner is fully acquainted with any new technique.

It will be apparent that as in this instance, the *organization of some medical or semi-medical subject*, however desirable in itself for the good of the public generally, may be detrimental to the interests of the practitioner. These interests would be safeguarded if our representatives would ask the two following questions regarding any new development in medical science: (1) Can this advice or treatment be given by the general practitioner? (2) If not can we assist the practitioner to obtain this advice for his patients without disturbing the usual relations between patient and doctor? In the present instance (2) could have been secured by issuing a leaflet or notice somewhat as follows:

> Public attention has been directed to the fact that in certain cases advice is required on *preparation for marriage*. Like most doctors you are probably asked for advice on this or similar problems at various times. Should you feel any difficulty in advising such patients a list has been prepared of doctors who are specially qualified to give advice on these matters on a consultation basis. This list can be obtained on application to the Medical Secretary.

Only if the answer to both (1) and (2) is "No" should it be necessary to grant the courtesy of space in the *British Medical Journal* for advance announcements of any enterprise run on an economically self-supporting or any other "basis." The statement by Mr. Kenneth Walker in your issue of April 16th—that the decision to set up this bureau was taken after consultation with representatives of the members of the British Medical Association—is rather disquieting. I feel sure I am voicing the opinions of many of my colleagues in suggesting that only after the affairs of general practitioners as a whole have been placed on a thoroughly satisfactory footing should our representatives begin to express a kindly concern for sentimental schemes on the borders of medical practice.—I am, etc.,

London, W. 10, April 16th. A. KEITH GIBSON.

L.C.C. PATHOLOGICAL SERVICE

SIR,—A letter from Sir Ernest Graham-Little is usually of interest not necessarily for its own sake but because of the humour of the subsequent correspondence. Sir *Ernest* spreads the bait—and he is a wily fellow. Dr. Meredith Richards for so long at the Ministry of Health has exposed in the *Times* of April 7th one of Sir Ernest's present fallacies. Either the laboratories established for the 6,000 or so beds in the London teaching hospitals

are or are not capable of catering efficiently for the pathological needs of the 18 000 or so beds in L C C general hospitals. If they are so capable they are wasteful if not Sir Ernest has again perpetrated a hoax.

One point which has so far escaped mention in the correspondence is probably the cause of Sir Ernest's exasperation at the L C C proposals. Hospital practice is becoming more and more dependent on ready and speedy (to say nothing of reliable) laboratory work. Sir Ernest is indignant at the suggestion that municipal hospitals should be anything but completely dependent upon the voluntary ones and so astutely fastens upon this vital matter for his attack.

Is there a prize for the most prolific correspondent in the press?—I am, etc.,

Berkhamsted, April 17th. R. KELSON FORD, M.D.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The following candidates have been approved at the examination indicated:

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.—*Part I.*: C. I. Benjamin, C. C. Dixon, J. D. C. Gillie, J. Lumb, A. B. Sullivan, J. B. Watson. (*Part II.*): J. S. Brown, C. I. Carthrop, J. N. Cook, F. R. Cruz, Marjorie I. C. Greene, J. P. Greve, H. J. Ham, J. I. Hedderman, M. H. Hollman, J. N. Jacobson, J. L. Razdan, F. G. Stewart, F. R. Wilson.

UNIVERSITY OF LONDON

UNIVERSITY COLLEGE

Applications for the Bayliss Starling memorial scholarship of the annual value of about £120 (with exemption from tuition fees) should be sent to Mr. C. O. C. Douie, secretary, University College, Gower Street, W.C. (from whom copies of the regulations may be obtained) not later than Saturday, May 14th. The scholar will be required to follow a course of study approved by the Jodrell Professor of Physiology, involving a training in the principles and method of research in physiology and biochemistry.

An examination for the Bucknill Scholarship (100 guineas) and two exhibitions (50 guineas each) will be held in May. Entry forms and full particulars can be obtained from the secretary, University College.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The following candidates have been approved at the examination indicated:

DIPLOMA IN PUBLIC HEALTH.—*Part I.*: C. A. Berman, C. J. H. Earl, C. C. H. Campbell, F. J. de Verteuil, Mary C. H. Dixon, A. K. Elias, Agnes B. Erimbwa, T. O. C. Garland, J. C. F. Grey, T. C. John, F. B. Khambata, C. Macdonald, H. A. Mackenzie, Amelie Dorothy Makepeace, R. B. Mayfield, R. M. Morris, A. R. Taylor, K. C. Udall.

LONDON HOSPITAL MEDICAL COLLEGE

An open scholarship of the value of £100 offered by the London Hospital Medical College has been awarded to W. A. Law of St. John's College, Cambridge.

UNIVERSITY OF GLASGOW

A graduation ceremony was held on April 16th, when Principal Sir W. Kent conferred the following, among other degrees, and presented University and special prizes to the successful candidates:

M.D.—F. J. Mellis, D. Robertson, J. W. Crawford, J. F. Hutton, M. S. Love, B. Ford, S. C. Shaw.

M.Ch.Orth.—(The Hall memorial prize for these degrees was not awarded.) Mary Ethel Mackie.

University Ellis Lloyd Jones Gold Medal: J. W. S. Blackburn, C. H. C. M. Rice, Mowbray A. Thomson, and W. H. M. Watson.

Senior Cross Lectureship in Medicine: Mary A. M. Fyfe, Evan A. Rhodes, Alice C. Mackie, and A. M. Mackay.

NATIONAL UNIVERSITY OF IRELAND

UNIVERSITY COLLEGE, CORK

The following candidates have been approved at the examinations indicated:

M.B., B.Ch., B.A.O. (*Part I.*): Mary C. O'C. [illegible] (Passed in Anatomy).

ROYAL COLLEGE OF SURGEONS

A meeting of the Council of the Royal College of Surgeons of England was held on April 14th, when Lord Moynihan the President was in the chair. Sir Henry Gray Lewis was introduced and presented his credentials on behalf of the Royal Australasian College of Surgeons, of which he is a Fellow. The following diplomas were granted:

F.R.C.S.—H. O. Clare (Delhi), A. [illegible], M.S. (Lond.), M.R.C.S., L.R.C.P.; Sarah N. S. Barker (Lond.), M.B., B.S., M.R.C.S., L.R.C.P.; Annie L. Kenner (Manchester), M.B., Ch.B., M.R.C.S., L.R.C.P.; Sandra (Lond.), M.B., B.S., M.R.C.S., L.R.C.P.

D.P.H.—C. V. [illegible], M.C., M.B. (Cantab.), D.P.H. (Camb.); Jane G. [illegible], M.B., Ch.B. (Edin.), D.P.H. (Edin.); C. C. H. [illegible], B.S. (Lond.), M.R.C.S., L.R.C.P.; Hoff, S. R. [illegible], M.B., Ch.B. (Edin.), D.P.H. (Edin.); A. V. [illegible], M.B., B.S. (Lond.), D.P.H. (Lond.); C. W. [illegible], M.B., Ch.B. (Edin.), D.P.H. (Edin.); Ruth [illegible], M.B., B.S. (Lond.), D.P.H. (Lond.); Richard [illegible], M.B., B.S. (Lond.), D.P.H. (Lond.); B. N. Sharma, M.B., B.S. (Lucknow), D.P.H. (Lond.); Ruth H. Silver, B.Sc. (Liverpool), M.B., Ch.B., D.P.H. (Liverpool); R. H. I. Snow, C. V. Stanley, F. L. Turrell, J. J. V. [illegible] (All the candidates passed the examinations for diploma in Public Health and Preventive Medicine.)

Mr. J. H. Badcock of Hatton Street and Mr. H. B. Roderick of Cambridge, being Members of the College of over twenty years' standing, were elected to the Fellowship.

The Jacksonian Prize for 1931 was awarded to J. Lister Ross, F.R.C.S., of St. Bartholomew's Hospital for his essay on the surgery of the sympathetic nervous system. A certificate of honourable mention for an essay on the same subject was granted to Lambert Charles Rogers, M.R.C.S., of the Royal Infirmary, Cardiff.

The subject for the Jacksonian Prize for 1932 is the pathology, diagnosis and treatment of diverticula of the large and small intestine, and for the year 1933 the pathology, diagnosis and treatment of localized arresting changes in bones as illustrated by Perthes's (or Legg's) disease, Schlatter's disease, Kümmell's disease and allied diseases.

Lord Moynihan was appointed the delegate of the College at the Centenary Meeting of the British Medical Association to be held in July.

The President announced that the trustees of the late Viscount Leverhulme had made a grant of £1 000 for research scholarships and proposed to allocate a similar sum in future years, and a resolution expressing appreciation of the gift was unanimously adopted.

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

At the quarterly meeting of the Council held on April 11th it was decided that in future the president, treasurer and honorary secretary should be elected at the July meeting of the Council and take office at the autumn meeting. Professor W. Blair Bell (Liverpool) was re-elected president until the autumn meeting of the Council in 1932, when the maximum term of office allowed by the Articles of Association expires. The term of office of Professor Munro Kerr (Glasgow) having expired, Sir Ewen J. Maclean (Cardiff) was elected vice-president in his stead. Dr. J. S. Fairbairn (London) was re-elected vice-president. Mr. Lardley Holland (London) was elected treasurer and Professor W. Fletcher Shaw (Manchester) honorary secretary. Dame A. Louise McIlroy and Sir Henry J. Simson were co-opted to the Council until the next annual general meeting. The president intimated that the extended time for acceptance of invitations to the Foundation Fellowship or Membership had now expired (the Dominions and India excepted). It would be necessary for all prospective entrants to the College to obtain the ordinary membership. It was also announced that referee committees had been established in Canada and India, and that all applications for Membership from these Dominions would now be referred to these committees, and only candidates whose application were endorsed by the respective referee committees would be permitted to take the examination for membership. In response to a invitation from the Medical Association, the Honorary Secretary, Mr. W. Fletcher Shaw, was appointed delegate to the Centenary Meeting in July. Dr. J. S. Fairbairn, Dame Louise McIlroy and Sir Henry Simson were appointed delegates to the Royal Sanitary Institute to be held in July.

[illegible] Council Meeting

The annual general meeting of the Council was held on April 11th. The following were elected Fellows: Ivor Brown, D.S.O., D.S.C., M.In.; Major-General Sir Edward Wilfred Sykes, K.C.M.G., C.B., D.S.O., late of the Membership: Hugh Cecil Lovell Pullen-Burry, Capt. Hugh Percy Pollock, M.B., Ch.B., M.R.C.S., L.R.C.P., Major Philip Leslie Lord Mayo, Lieut.-Col. Charles David Pearce Williams, C.B.E., Richard [illegible], and Percy Stocken. It was announced that the following had been elected to the Council to fill the vacancies caused by the retirement of [illegible] and

the members thereof—Representatives of the Fellows: Lond J S Fairburn Provinces Sir Ewen J Maclean and Mile H Phillips Scotland J M Munro Kerr Representatives of the Members Provinces C P Prentall Scotland R A Fenton Northern Ireland and the Irish Free State R H J M Corbet The president announced that through the help of an anonymous donor the Council has decided to purchase a home for the College in London It was felt that the present satisfactory state of the College finances and the very generous help accorded by Lord Riddell justified the undertaking, though it was fully realized that it was a big financial responsibility The president pointed out that Lord Riddell's donation was for a period of seven years only and he emphasized the necessity of the College making efforts to secure sufficient capital to produce the necessary income at the end of seven years to replace the present income The president intimated that the Council had decided that the opening of the College house should take place if possible on the same day as the annual dinner in the autumn The meeting unanimously approved of the memorandum on the obstetrical and gynæcological training of medical students prepared by the Council for submission to the General Medical Council

CONJOINT BOARD IN SCOTLAND

The following have been approved at the examination indicated and have been admitted L R C P Ed L R C S Ed and L R F P and S Glas

Final Professional Examination—J D J van Rooyen L J Watson I H A Crowell H M A Walker M I Ahmed R I Chamberlain M C Cox H A Drummell A R d Duplessis Carlwell A I Mallerque J I Cummins W C R J Meyer M M Oberholz J B Warfield M I H Henriwe J Stewart M J Mcmahon

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Mr Neville Chamberlain opened the Budget in the House of Commons on April 19th He proposed no change in the rates of the income tax surtax petrol tax or motor licence duties The tea duty is remposed at 2d a pound on tea of Empire origin and at 4d a pound on tea of foreign origin Discussion of the Budget proposals continued till April 21st

The Health Services

In the course of the debate on April 12th on Dr Morris Jones's motion with regard to the progress made by local authorities in improving their public health services since the passing of the Local Government Act of 1929 Sir W JENKINS said that the Opposition disagreed with the methods adopted by the Government to economize on public health social services and education Every effort had been made to get agreement between national hospitals and voluntary hospitals but in the depressed industrial areas the voluntary system had failed and more and more came the responsibility for rate aiding those institutions Mr ELLISTON said that medical officers in all parts of the country were watching with great vigilance for early signs of the malnutrition or failure of health of the people on account of the difficulties of life at present Doubts were felt whether the money that was being spent on research was being laid out in the best way There was a general feeling that there should be less laboratory and more field research into the ordinary practical problems which were met with every day in the public health departments All those engaged in public health administration were impressed with the importance of the greater education of the people in health matters Mr LANSBURY expressed the belief that next year's reports of the medical officers of the London County Council and the medical officers of the Board of Education and the Ministry of Health would show that there was a very marked difference in the physique of school children He asked the Minister of Health if there was any possibility of the Bill which Mr Greenwood had prepared dealing with maternal mortality being introduced He wanted to see a national medical service throughout the country and while that was coming on he would like to see especially in London real co-operation and coordination in the work of the voluntary and municipal hospitals Mr ERNEST BROWN said that the report of the chief medical officer of the Ministry of Health for 1930 contained a most valuable section dealing with the problem of cancer and another dealing with rheumatic diseases So far from being lax in the matter the Ministry was thoroughly alive to the need of research as well as of action in connexion with these diseases

Cost of Health Services

A statement furnished to Mr Barclay Harvey by Sir Hilton Young on April 15th compared the expenditure of local authorities in England and Wales on health services in 1912–13 and in 1929–30 before the Government grants were consolidated in a block grant under the Local Government Act 1929 Total expenditure other than loans in 1912–13 included tuberculosis £95 500 port sanitary services £47 500 mental hospitals £4 288 000 venereal diseases maternity and child welfare welfare of the blind mental deficiency nil In 1929–30 the total expenditure other than capital expenditure included tuberculosis £3 339 000 venereal disease £411 000 maternity and child welfare £2 403 000 port sanitary £107 000 welfare of the blind £469 000 mental hospitals £9 000 000 mental deficiency £1 500 000

Home Administration Industrial Diseases and Young Offenders

Opening the discussion on the Home Office Estimates in the House of Commons on April 15th Sir HERBERT SAMUEL said fewer crimes were committed by elderly people Young men between 25 and 30 were the most difficult offenders and he attributed this to the breaking up of normal family life for a period of years during the war economic depression also contributed The Home Office advisers held that on the whole the cinema conduced more to the prevention of crime than to its commission On the industrial side the Home Office had within the year issued new codes of regulations dealing with the building trade with sugar factories and with the industry of chromium plating The Silicosis and Asbestosis Act had been put into operation In factories safety organizations were being promoted

Mr RHYS DAVIES asked for news of lead paint poisoning Had there been continued improvement since the passing of the Convention to prevent the use of lead paint inside buildings? The number of cases of nystagmus in coal mines was increasing What was being done in that matter? Discussing the treatment of young offenders he hoped that a youth suffering from mental instability was not sent to prison or to Borstal without some examination into his mental or physical deficiency

Sir VIVIAN HENDERSON said a careful examination of mental condition was made Borstal lads were classified in different institutions and that at Feltham in Middlesex where there was a doctor in residence was specially reserved for unstable cases Cases often occurred where it was obvious that a crime was committed by a lad because of his mental condition but where one could not convince two doctors that the lad was certifiable

Sir W GREAVES LORD alluding to nystagmus said attention had lately been called to the peculiar way rules were being made under the Workmen's Compensation Acts and to the way in which they were defeating the objects of the Acts He hoped the Home Secretary would try to bring the forms used in connexion with medical referees and the rules more in accord with the intention of the Acts Nystagmus had increased largely owing to the way the courts and the medical profession between them had treated it That had tended to the belief that the disease was incurable He hoped the Home Secretary would do something for criminal offenders over 21 who were not certifiable but not completely sound mentally

Mr TINKER said that in the mining industry it was difficult to establish a case of silicosis Proof had to be given of the presence of a certain percentage of silica The latest figures for nystagmus those for 1930 showed that 3 248 men were granted certificates of incapacity in that period His view was that the cramped position of the miner and the strain on the muscles of the head contributed to causing nystagmus

is much as the lighting did Miners agents found that in sanity arose among men with nystagmus Men were deprived of compensation on the ground that they had been cured but the oscillation of the eyeball meant that something was left in the man's system which rendered him unfit to work He might be unable to establish that fact in a court of law where certain symptoms had to be definitely proved to the certifying surgeon and the medical referee

Mr BRIANT complained that men suffering from dermatitis or from certain forms of poisoning had been unable to get compensation because they had been working aboard ship and could not secure certificates from a certifying surgeon Mr LYONS said concerning men who could not be called mentally defective but who had some mental defect making them abnormal and unstable that judges constantly deplored that once such men were over Borstal age no institution such as it Feltham was provided

Mr D R GRENFELL asked whether the Home Office in conjunction with the Mines Department would insist on the provision of water for use when boring and on the provision of exhaust pumps for withdrawing dust from the bore hole By adopting these South Africa had dealt effectively with phthisis Was the Home Secretary satisfied that his medical advisers were treating in a practical way the diagnosis of dust diseases? There was a belief that dust from coal in the absence of or in combination with stone dust was producing a large crop of anthracosis cases Men who worked only in coal dust should be examined separately to test how far anthracosis had disabling effects where no stone dust was present Then it could be ascertained how men who had been exposed to stone dust and whose lungs had been damaged could be saved from tuberculosis or from chronic emphysema if given attention and treatment in time He had been in communication with the Home Secretary on the question of pitch cancer The incidence of this among men engaged in certain processes in the Swansea district proved the connexion between the elements of coal gas and the condition of cancer The cancer starting in the nasal passages ultimately grew upon and destroyed the soft tissue of the upper nasal region and resulted in death He recalled that by preventive regulation the number of cases of epitheliomatous cancer in the patent fuel industry commonly called pitch cancer had been reduced almost to nil He suggested that the Home Secretary should institute a pathological survey of the men engaged in processes where cases had been reported

Dr FREMANTLE said that cancer in certain lines of industrial development must be examined in relation to the whole consideration of the prevention of cancer That research was properly in the hands of the Medical Research Council under the Privy Council Information that cancer was associated with gas products in certain industries would be valuable if sent to the right place It would be a mistake if the Home Office set up a separate department to inquire into such things There ought to be co-operation and co-ordination between the Government Departments which dealt with the health of the people There had been much energy wasted in administration and in inquiry and much overlapping To what extent was the Home Office in active touch with the Ministry of Health the Board of Education and other Departments which had to deal with corresponding problems? That applied to every medical question but particularly to the mental condition of the people No Home Office scheme for dealing with crime could be worked unless viewed in association with the responsibilities of the Board of Control the Ministry of Health and the Board of Education Was there a medical adviser at the Home Office responsible for looking into the larger issues of the prevention of crime especially among the young? Medical men had more and more stress on the mental side of health and in connexion with crime recognized that it was more important than the physical side The rush stress and noise resulting from modern inventions were largely responsible for a great deal of mental illness and therefore tended toward crime He hoped the attention now being paid to these matters under the *Mental Treatment* Act and in mental treatment generally would effect itself in a possibility of preventing crime at an early age

Mr OLIVER STANLEY replying for the Home Office said that in the Children's Bill then under consideration by a Committee of the House the Government was attempting to meet the problem of the young offenders who though not mentally deficient were mentally unstable By the alterations which were being made in reformatories and industrial schools greater opportunities were provided for classification A greater efficiency in remand homes would provide greater opportunity for mental and physical examination Prevention of nystagmus was a matter for the Mines Department He agreed that the present position of the disease was not satisfactory The chief difficulty was to find employment for those who had been certified as suffering from it The scheme for silicosis had been drawn up in agreement with employers and employed and amendments had recently been made in it particularly in regard to the percentage of silica present in the air which had to be proved The difficult question of anthracosis which might result from coal dust and nothing else was under the investigation of the Home Office The Medical Research Council had been asked to investigate it Preliminary researches had met with difficulties but everything would be done to see that these were overcome Mr Grenfell had referred to a disturbing type of cancer in the Swansea district Inquiries at certain works *had revealed an unexpected existence of cancer* The inquiries had thrown no real light on how the disease was caused nor had they established any connexion between the disease and the occupation of the sufferers The firm in question was disturbed by these discoveries and had engaged an eminent pathologist to carry out further investigations

The discussion was adjourned

Education Estimates

On April 18th Sir D MACLEAN introduced the Education Estimates He estimated the total cost in Great Britain at nearly £100 000 000 more than half the total national expenditure of the year before the war It was obvious when the necessity was imposed on the country for drastic economies that this Department should play its part but there was one item on which local authorities were proposing some increase of expenditure and that was in the health services The value of the work of the School Medical Service was nowhere disputed Children were leaving school to-day healthier and fitter than those who left twenty years ago On the other hand it must be recognized that complaints were made by employers of the physique of many young men He understood that the Army authorities were concerned at the physical condition of recruits These complaints pointed to a serious national problem—the risk of physical deterioration during adolescence after leaving school That was beyond the control of the school authorities Its gravity was not so widely appreciated as it should be though workers among the adolescent were alive to it and a warm tribute should be paid to the voluntary efforts which were being made to tackle it through boys and girls clubs boy scouts girl guides and similar activities The Royal Commission on Licensing was unanimous in emphasizing the importance of suitable instruction in the schools *in regard to alcohol Their* unanimity on such a point added to the importance of the recommendations The Commission fully endorsed the view that such instruction should form part of the general course of instruction in health In furtherance of that view he was taking steps to have the Board's syllabus on The hygiene of food and drink and also their volume of Suggestions for health education combined into a single pamphlet Recent experiments had emphasized the value of milk as an addition to children's diet About 800 000 children were now receiving a daily ration of milk compared with 350 000 two years ago In addition local education authorities provided free milk to 120 000 children whose parents could not afford to pay for it Thus in the aggregate nearly 1 000 000 children in the elementary schools received at least a glass of milk each a day

Dr O'DONOVAN said that in any review of the educational service a tribute must be paid to the great work of the school medical officers and the efficient work of the school nurses Those occupations were dreadful dead-ends of professional life and unless more openings were made through which the keener members of those services could rise to better positions doctors and nurses who desired to rise to bigger fields for their energies and abilities would cease to be attracted If there was anything which would destroy

modern civilization it was not capitalism socialism or human perversity but a general mass neurosis The medical profession feared the development of mass neurosis more than the growth of cancer or consumption If members looked at the school records and the records of school teachers they would find that nervous maladies predominated If the teachers developed neurosis the pupils were bound to contract it

Dr IPEMANTLE said that two classes of persons—the teachers and the parents—were responsible for the preventive *work in regard to the health of the children and there was* too little association between the school and the home In considering the health of school children mental health was liable to be forgotten One of the chief causes of nervous maladies was the appetite of children for an unnatural amount *of movement and activity A certain regular amount of* activity was natural but the difficulty was to know when to stop It was important to sow in the children the seeds of a love of quiet enabling them to resist the present day tendencies which all made for agitation and irritation and *neurotic troubles in after life Dr Ipemantle closed by* repeating his appeal made during the Home Office debate for closer co-ordination between the various departmental health services and said that he saw no signs of the health side of education deteriorating as a result *of the present* economies

Inspection of Food

On April 12th the London County Council (General Powers) Bill was considered by a select committee of the House of Commons Mr EVAN CHARTERIS K C (who appeared for the L C C) said that the part of the Bill which was opposed was Clause 16 *which gave powers to the Council to compel* the registration of premises in which certain kinds of food were prepared or manufactured The object of the Council was to deal with in evil the existence of which no one would deny The proposals in regard to ice cream were not opposed *but there was a petition against others by the National* Federation of Meat Traders Associations The operation of past legislation had shown that registration alone was insufficient and that the Council or local authority must have the power to refuse or revoke such registration if it was satisfied that *the premises were unsuitable* Mr *Charteris* proceeded to quote precedents including the Act dealing with massage establishments and the Act for the registration of nursing homes both of which he said gave the power to refuse or revoke registration and the Food and Drugs *Adulteration Act* which empowered an authority to remove from the register a margarine or butter factory which was deemed to be unsuitable A *number of local Acts contained* similar provisions to those asked for in the present Bill

Dr CHARLES PORTER M O H for St Marylebone giving evidence on behalf of the promoters said that the principal factor which rendered this such an important matter was that unless there was *adequate control of food there was* serious risk of contamination with consequent injury to public health As far as typhoid and dysentery were concerned contamination usually took place to day through the medium of food or drink Mr S TURNER (for the L C C) Are you satisfied that apart from large outbreaks of food poisoning individual cases of food poisoning are quite common? Dr PORTER I do not think that there is any question about that Asked whether they were always detected Dr PORTER replied Not always He said there were as many as twenty *five outbreaks of food poisoning in 1930* and he agreed that the *object in view in Clause 16 was* preventive It was not only necessary to have notifications of places where food was prepared but also to have some means by which you could make quite sure that the food was prepared under sanitary conditions There were now practically no outbreaks of enteric fever which were due to water This improvement was *entirely owing to proper* control of water supply To day infection was almost invariably conveyed through food Answering further questions Dr Porter said that the Society of Medical Officers of Health had always been in favour of registration Without registration it was quite impossible to know the situation of the places where this work was carried on and to register them and to take measures to avoid the risk of contamination There was a great increase at the present time in the use of cooked foods and foods which could be easily cooked Sausages were one of the most commonly used articles of food among poorer people This was due largely to housing difficulties Food poisoning cases were almost invariably due *to foods of this type*

On the following day the chairman announced that the committee had decided to pass Clause 16 The Bill as amended was ordered to be reported to the House

Medical Officers in East Africa and Private Practice

Replying on April 13th to Mr Culverwell Sir PHILIP CUNLIFFE LISTER said the regulations for the East African Medical Service which applied to medical officers in Uganda *provided that except in districts or stations in which the* Governor in consultation with the Director of Medical and Sanitary Services had decided that reasonable facilities existed for the treatment by private practitioners of persons not entitled to free medical attendance medical officers were allowed private practice *for which fees might be charged* provided that it did not interfere with the efficient performance of their official duties There were special regulations relating to private patients in Government hospitals Asked by Mr CULVERWELL to consider the suggestion that *fees from private patients should be paid direct to the Government and not to the medical officers and by Dr* IPEMANTLE to consider the value of retaining such supplementary advantages to medical officers to enhance the limited prospects of their service Sir PHILIP CUNLIFFE LISTER said it was difficult to pay private fees into the Public Exchequer People would say that the Government was giving the service *and they should get it for nothing or the doctor* might be unwilling to undertake private practice on such terms He had not received any complaint that medical officers neglected their duties to attend private patients Provided a man did his government duties first it would be difficult to deprive him of his private patients

Hospitals and Motor Accidents—Mr PYBUS told Sir John Haslam on April 13th that he sympathized with the difficulties *of hospitals arising out of the treatment of motor* accidents but could not introduce further legislation with a view to increasing the percentage of claims repaid under the Road Traffic Act

Slum Clearance—In reply to Mr Groves on April 14th Sir HILTON YOUNG said he had received resolutions declaring 117 areas in England and Wales the clearance of which involved the demolition of approximately *14 000 houses* to be clearance areas under the Housing Act 1930 It was anticipated that houses sufficient for the accommodation of *68 000 persons* would be provided

Incurable Disease—Replying to Mr Rhys Davies on April 14th Sir HILTON YOUNG said there were no statistics on the number of persons suffering from incurable disease in this country nor of the number for whom accommodation was provided by voluntary organizations He knew of no public institutions apart from mental institutions for incurables who were unable to look after themselves

Examination of Girls in Sexual Offences—Replying to Mr Elliston on April 14th Sir H SAMUEL said the number of cases was not great enough to warrant special appointments of women medical officers for examination of girls concerned in sexual offences If in any particular case the *parents of the child* desired that the examination should be conducted by a woman doctor and one were available her services would be *utilized*

Cerebro spinal Fever at Windsor—On April 19th Mr DUFF COOPER replying to Mr McEntee said that there were *no* strictly modern barracks at Windsor although improvements had been introduced from time to time Since January 1st there had been *nine cases of cerebro spinal fever* five of which occurred at Victoria Barracks and four at Combermere Barracks Full sanitary provisions were made in *the quarters of the guard at Windsor Castle*

Health Services in Scotland—The total expenditure on health services in Scotland in *1913* was *£430 358* and in 1930 £1 672 000 These services comprised hospitals treatment of disease (including tuberculosis and *venereal disease*) and maternity and child welfare

Obituary

GUY NEVILLE STEPHEN O B E

M R C S I R C P D P H

Sub Editor *British Medical Journal* 1903–18 Lieut.-Colonel R A M C 1914–19

The death of Dr G N Stephen at Bordighera on April 11th removes the last survivor of three men of very diverse gifts in whose hands the *British Medical Journal* came to its full stature during the first two decades of this century C Louis Taylor Assistant Editor for nearly twenty years died in December 1919 and Sir Dawson Williams Editor for thirty years died in February 1928 Guy Stephen was appointed to the indoor editorial staff in 1903 and retired at the end of 1918 after serving as our special correspondent in France throughout the period of the war

Guy Neville Stephen was born in 1858 the third son of James Stephen LL D a county court judge He came of a family that has produced men and women distinguished in law and letters —for example Sir James FitzJames Stephen and Sir Leslie Stephen and in our own time Sir Harry Stephen Sir Herbert Stephen and Virginia Woolf From Highgate School he went to St Bartholomew's Hospital qualifying with the diploma of M R C S in 1881 in later years he obtained the L R C P and the D P H Immediately after qualification he went to Paris as private assistant to the late Professor Brown Sequard in the physiological department of the University and received the French decoration of Officier de Sante in 1882 In the following year he became a medical officer under the Secretary of State for the Colonies and in 1895 was transferred to the Foreign Office Medical Service from which he retired in 1903 to become Sub Editor of this *Journal* His service abroad included the presidency of a municipal commission in Cyprus and the post of C M O H and surgeon to the general hospital at Nicosia membership of a plague commission set up by the Turkish Government in Asia Minor several years as senior colonial surgeon at Gambia and a term of duty as surgeon to the British Swedish and Norwegian Consulates at Marseilles He was seconded for service with the R A M C during the South African war and received the Queen's medal with five clasps



In his early years of study and practice Stephen published a few papers on clinical subjects in the *Lancet* and in the present columns and he wrote *A Brief Guide to the Uses of Radio Activity in General and Specialized Practice* at a time when the therapeutic possibilities of radium were receiving little attention Among a number of other interests which he pursued in the intervals of routine editorial work was hospital finance and three articles by him on this subject appeared in the Special Hospital Number of the *British Medical Journal* published on June 20th 1908 Despite the handicap of increasing deafness he regularly attended the Annual Meetings of the British Medical Association and was a familiar figure in the Sections and at all social functions His was the fluent but unconfirmed pen of a practised writer and an accurate thinker clear straightforward English seemed to come to him by nature Dull jobs irked him but he tackled them without complaint and he often managed to enliven with touches of dry humour an account of very ordinary proceedings Yet one had the feeling that Stephen with so much ability never did full justice to himself in medical journalism the work as third of three in this office was not altogether congenial to a man of his age and habit of mind so much so indeed that the outbreak of war on August 4th 1914 came to him as an opportunity for putting uncommon talents and experience to better use On the recommendation of Sir Dawson Williams he was quickly released by the Council for service abroad and the Director General A M S Sir Arthur Sloggett who already knew and trusted him found an indeterminate post for Stephen at G H Q and elsewhere in France with the rank of Lieut.-Colonel R A M C Thenceforward he travelled up and down the lines of communication visiting base hospitals casualty clearing stations field ambulances and regimental aid posts greeting everyone with a smile never perturbed always observant and resourceful The unobtrusive part he played during those four years can be known to few now living It was a great advantage to British military medicine and to this *Journal* that we had a special correspondent moving freely about the Western theatre of war whose good faith and discretion could be relied on absolutely Stephen was at one and the same time a writer of medical dispatches from the seat of war and an informal liaison officer between high administrative officers of the Regular R A M C and scattered civilian doctors holding temporary or territorial commissions Besides innumerable unsigned articles and notes appearing in these columns he wrote the section on the Royal Army Medical Corps and its work in the special supplement entitled British Medicine in the War which the British Medical Association published with Government approval in 1917 He also contributed to the *Journal of the Royal United Service Institution* The Via Dolorosa of the Soldier Boulogne as a Military Medical Base and The work of the Italian and British Forces His only son was killed in the war

With a shrewd and critical mind and a temperament not too favourably disposed towards fools or folly Guy Stephen had a kind and very loyal heart He would go far out of his way to help a friend and make nothing of a service that cost him much in time and thought and trouble H

[The photograph reproduced is by Rieburn London]

FRANK MORTIMER ROWLAND C B E M D

Lichfield

We regret to record the death on April 13th of Dr F M Rowland of Lichfield at the age of 65 He was educated at Repton and Caius College Cambridge graduating M B B Ch in 1891 and proceeding M D six years later After holding resident posts at the Royal Sussex County Hospital and the Birmingham Infirmary he commenced practice at Lichfield in 1893 as a partner of the late Mr H M Morgan Among his public appointments were those of medical officer to the Lichfield Institution to the Post Office and to the police and medical referee under the Workmen's Compensation Act and under the Ministry of Pensions He took great interest in the work of the British Medical Association was president of the Staffordshire Branch in 1915 and chairman of the Walsall and Lichfield Division in 1927–28 he was also an associate member of the Birmingham Branch Dr Rowland was for many years a contributor to our *Epitome of Current Medical Literature* In 1923 he was appointed to the Commission of the Peace for Lichfield was chairman of the Licensing Bench chairman of the Grammar School governors and

of the Lichfield Orthopædic and After Care Clinic, and president of the Lichfield City Institute. He rendered untiring services on behalf of the wounded during the war and in 1916-19 was chairman of the Mid Staffordshire Local Medical War Committee. In December, 1917, he was appointed county treasurer of the British Red Cross Society after serving as assistant county treasurer since March 1915. In view of the shortage of beds throughout the country for the reception of the wounded at the outbreak of the war he converted his drawing room into a ward and from October 1915, to February 1919 he organized a service of trullers for the conveyance of the wounded from the railway station to the local hospitals. In recognition of his war work he received the honour of C.B.E.

Dr. F. G. LAYTON, honorary secretary of the Walsall and Lichfield Division of the British Medical Association, writes:

Frank Mortimer Rowland of Lichfield is dead, and medicine in the Midlands is the poorer. For Rowland stood for something which unhappily is in danger of becoming extinct. He was an outstanding example of that sort of doctor who was content to be—just a doctor—which means in practice a very great deal more. Modern vulgarity vexed him. The fussy interferences of modern bureaucracy reduced him as nearly as they could, to something approaching profanity. He refused to tolerate fools, particularly fools in office. Often was he perplexed by the officialism which accompanies the practice of medicine to-day, and he was exceedingly candid about it. His professional life was spent in Lichfield, and as the years passed he became ever more and more a typical citizen of Lichfield. He loved the place. He loved its churches. Particularly did he love the old world room where year after year men for gather from the ends of the earth to honour the memory of Samuel Johnson, to smoke churchwarden pipes (a difficult feat with modern tobacco), one which Rowland never tried), to drink Lichfield punch (which Rowland did, but only very delicately), to enjoy—or endure—many speeches. All through his professional life he was an active, energetic, and helpful member of the British Medical Association, willing to do a great deal more than just pull his weight. He was that highly desirable, and not too common person—the Man Who Will Always Turn Up. His opinion on ethical questions was always of the utmost value, for he could see all round a problem, and believed very strongly in the sanctity of the Hippocratic Oath. He will be sorely missed.

Dr. JOHN HENRY SMITH, who died on April 17th at Tolleshunt d'Arcy, Essex, in his 91st year, was educated at King's College and obtained the diplomas of M.R.C.S. Eng. and L.S.A. in 1864. He had served as medical officer and public vaccinator for the Tollesbury District and Fourth District of Lexden and Winstree Admiralty surgeon and agent, medical referee to several well-known insurance companies, and as president of the Colchester Medical Society. He was a great sportsman and was said to be one of the best shots in the country. His home was full of trophies of his shooting expeditions abroad, mostly in Russia. He was a member of the North-East Essex Division of the British Medical Association, a Deputy Lieutenant of Essex, and chairman of the Witham bench of magistrates.

Dr. RICHARD E. THOMPSON of Tuam, co. Galway, died on April 2nd after a long illness. He was the son of the late Rev. M. N. Thompson, and was educated at Carmichael College and the Royal College of Surgeons in Ireland, taking the diplomas of L.R.C.P. and S. in 1889. He had served as house surgeon to the Tyrone County Infirmary and medical officer to the Glenties Union Hospital, and was a civil surgeon in the South African war, for which he received the Queen's and King's medals. Settling at Tuam twenty-seven years ago, he built up a large private practice, and was much beloved and respected by the poor, to whom his professional services were most willingly given. Dr. Thompson, who was a member of the South Connaught Division of the British Medical Association, was a prominent athlete in his student days, having won the gold cross for the heavy-weight championship in Ireland and many prizes for rowing as a member of the Pembroke Club. He had two brothers—the late Sir Henry Neville Thompson and Dr. Herbert C. Thompson of Stockport.

Medical News

The next reception of the Royal Society of Medicine will be held at 1, Wimpole Street, W., on Friday, April 29th. The President and Mrs. Watts-Eden will receive Fellows and their friends at 8.30 p.m., and at 9.15 p.m. Dr. G. Norman Meachan will give a lecture-recital entitled "Medical musicians."

The annual luncheon of the Irish Medical Schools' and Graduates' Association will be held at the Criterion Restaurant, London, *at 1 o'clock on Wednesday, July 27th.*

A meeting of the Medico-Legal Society will be held at 11, Chandos Street, W.1, on Thursday, April 28th, at 8.30 p.m. Dr. J. Bright Banister will read a paper on "The gynæcologist in the law courts", a discussion will follow.

At the meeting of the West London Medico-Chirurgical Society to be held at the Rembrandt Hotel, Thurloe Place, S.W., on Wednesday, May 4th, at 7.30 p.m., a discussion on "Excessive surgery" will be opened by Mr. Hamblen Thomas, Dr. Geoffrey Evans, and Mr. Zachary Cope.

The annual meeting of the Medical Mission Auxiliary of the Church Missionary Society will be held at the Central Hall, Westminster, S.W., on Wednesday, May 4th. The chair will be taken by Field-Marshal Sir Claud Jacob at 7 p.m., and the speakers will be Dr. H. T. Holland (Quetta, Baluchistan), Mrs. C. Bacon, M.B. (Kweilin, Kwangsi, Hunan), and Dr. J. Howard Cook, secretary of the medical committee. Tickets of admission may be obtained from the superintendent, Loan Department, Church Missionary Society, Salisbury Square, E.C.4. There will be a small number of reserved seats at 1s. each.

The next monthly clinical meeting for medical practitioners will be given at the Hospital for Epilepsy and Paralysis, Maida Vale, W.9, on Thursday, April 28th, at 3 o'clock, when Dr. Anthony Feiling (physician) will give a demonstration. Tea will be provided, and it will be a convenience if those intending to be present will notify the secretary.

A conference on voluntary eugenic sterilization will be held in the Caxton Hall, Westminster, on Monday, May 23rd. At the morning session, with Sir Allan Powell in the chair, medical and legal aspects of sterilization will be discussed by Sir Thomas Horder, Dr. R. Langdon Down, and Mr. Cecil Binney; and sterilization in other countries by Mrs. C. B. S. Hodson and Miss Hilda Pocock. At the afternoon session, with Professor R. Ruggles Gates, F.R.S., in the chair, social and moral aspects of sterilization will be discussed by Professor A. M. Carr-Saunders, Mr. C. J. Bond, and others; and practical proposals by Wing-Commander A. W. H. James, M.P., and Dr. C. P. Blacker. An informal discussion will take place at 8.30 p.m., open to the general public, at which questions on all aspects of this subject will be invited. Information may be had from the conference secretary, 16, Mulberry Walk, S.W.3.

Sir Basil Blackett Honorary Treasurer of the British Medical Association's Centenary Meeting is standing as a Conservative candidate for the St Marylebone Division at the forthcoming by election caused by the retirement from the House of Commons of Sir Rennell Rodd

A quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on April 13th when the president Mr Warren Low was in the chair The deaths of two members were reported and one widow in receipt of a grant had also died since the last court The latter came on the funds in 1897 and died in January 1932 having during that period received in grants £2 120 Her late husband had been a member for eight years and had paid in subscriptions £16 16s Grants were allocated to the amount of £166 of these £91 were voted to orphans who had reached the age of 16 at which age the ordinary grants cease to enable them to continue their education or start in some professional or business career One widow with her two children applied for assistance and a grant of £60 per annum was voted to the widow and one of £30 per annum to each child The annual general meeting of the society will be held on May 11th Membership is open to any registered practitioner who at the time of his election is resident within a twenty mile radius of Charing Cross Full particulars will be sent to any medical man on application to the secretary at the offices of the society 11 Chandos Street Cavendish Square A subcommittee was formed with the object of devising means to get the society better known as many medical men do not seem to have heard of its existence

The Fellowship of Medicine and Post Graduate Medical Association (1 Wimpole Street W 1) has arranged a morning course at the Hospital for Sick Children and an afternoon course at the Infants Hospital from April 25th to May 7th An afternoon course in psychological medicine will be given at the Maudsley Hospital from April 25th to May 21st and in dermatology at the St John's Hospital from May 2nd to May 28th An evening course in physical medicine will be given at the London Light and Electrical Clinic Ranelagh Road on Mondays and Wednesdays from May 2nd to 25th It will consist of lectures and demonstrations and clinical cases and their treatment can be seen during the day by graduates attending the course A week end practical course in clinical surgery for F R C S candidates and others will be held at the Royal Albert Dock Hospital on Saturday and Sunday May 7th and 8th Arrangements are now proceeding with the details of the evening M R C P clinical and pathological course and with the series of three evening lectures on Epidemic encephalitis All the above courses are open to members of the Fellowship of Medicine

A course of instruction in the diagnosis and treatment of venereal diseases which qualifies for the Ministry of Health and Victoria University of Manchester certificates opened on April 20th at 6 p m in the municipal clinic 159 Regent Road Salford Meetings will be held once weekly The course for the Ministry certificate entails attendance for three months at the clinic during which time 130 hours instruction are given For the University certificate attendance is only required at fifteen lectures There is no fee for the Ministry of Health certificate for the University certificate a fee of two guineas is payable to the bursar at the University Typed notes of the lectures will be issued to each member of the class and for the extra charge of ten shillings is made

The ninth medical tour of the spas climatic resorts and sea bathing therapeutic centres of Italy will be held from September 9th to 21st A special train composed of first class carriages will travel from Turin to Viareggio enabling visits to be paid to Courmayeur Aosta Saint Vincent Stresa Bavino Orta Acqui Nervi Rapallo and other places The fee for the whole Nord Sud tour is 1 809 lire covering all travel and hotel expenses and participants will receive special coupons entitling them to obtain railway tickets at a reduction of 50 per cent for the journey from the Italian frontier to Turin The number of tourists is limited to 150 and the application list will be closed not later than July 15th Further information may be obtained from the Italian State Tourist Department Waterloo Place Regent Street S W 1

An epidemic of influenza has recently occurred in Switzerland where the number of fatal cases since the end of February is considerably higher than in the previous months

Professor Achard perpetual secretary of the Academie de Medecine of Paris has been nominated foreign honorary member of the Academie Royale de Medecine of Belgium

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

Plantar Corns

Dr F W COLLINSON (Preston) writes in reply to Clavus (April 9th p 692) and also to Dr R J Morris (April 16th p 737) I would recommend them to use instead of caustics and sandpaper a file which can be obtained from a shoemaker's supply stores it is a Swedish patent (C O Oberg and Co Sweden Patent No 58) and has four different rasps I have tried it on several occasions and found it very satisfactory One man was practically crippled with corns and plantar callosities which he used to trim with a knife but found the file much superior to any other method or treatment his corns were cured and he can keep the cuticle thin by filing when necessary by the sound of the grating he knows when he is on the hard surface He can walk with absolute comfort A female patient is now using one of these files and has found complete relief from discomfort It can also be used for thickened toe nails being much better than scissors

Dr W R ACKLAND (Clifton) writes From the description given by Clavus of his foot troubles I think I was afflicted in a similar way I put it down to the flattening of the arches which occurred when I got about after a long illness I have found relief by wearing Scholl's listic metatarsal which support the pad of the foot in the metatarsal region

Dr WILLIAM GOSSE (Dorset) writes In reply to the query about plantar corns (probably due to the dropping of the transverse plantar arch) I have found that a disk of rubber sheeting—about the thickness of the inner tube of a cycle tyre and with a perforation the size of the corn—looped on to the toe or toes by a string loop and worn under the sock will relieve and probably cure

Unilateral Oedema

O L (Coventry) writes I should be grateful for advice as to the treatment of a case of long standing oedema of the leg resulting from a white leg following a confinement three years ago The condition has been aggravated by two or three attacks of superficial phlebitis which usually during the last seven years The patient is 55 is otherwise quite strong and healthy but recently has become much troubled by the weight of the one leg which is practically twice the size of the other An elastic stocking gives little relief

Mucocutaneous Ulcers

DR N A KINNEAR (*General Hospital Jersey*) writes in reply to the query from J C I (Glasgow) concerning recurrent ulcers of mouth and vulva (April 16th p 737) I am at present treating such a case The patient has after a provocative dose of N A B a negative Wassermann reaction—smears from ulcers however show monilia She is now almost cured the only remaining ulcer being the size of a sixpence situated on the vulva The treatment given has been as follows (i) weekly injections of monilia vaccine (ii) by mouth 20 grains of potassium iodide three times a day (iii) local application to vulva of solution of 1 2 per cent *brilliant green* 1/2 per cent crystal violet—to mouth for cosmetic reasons of 5 per cent solution of chromic acid

Income Tax

Partnership Change Expenses and Basis

I Y S asks (1) whether he can charge as a professional expense the legal fees incurred for drawing up a partnership agreement and (2) whether it is correct that the new firm should be assessed on the basis of bookings which implies the addition to the cash receipts of the increase in the unpaid accounts

(1) No The expense is not incurred in carrying out the actual professional work (2) Yes A change in personnel need not involve a change in the basis but the cash receipts basis is not legally correct and such a change frequently leads to a demand on the part of the authorities to a change of basis The increase in the amount of book debts due to the firm has to be added to the firm cash receipts but on the other hand the firm is entitled to exclude from the amount of the book debts such sums as fairly represent the probable amounts which will prove to be irrecoverable—this may reduce the difference of £160 *mentioned by* I Y S

LETTERS, NOTES, ETC

Preparation of Breast for Nursing

DR FREDERICK IVER (*Birmingham*) writes The preparation of the breasts and nipples for nursing is being carried out too ardently The sebaceous and other protective secretions are washed off and irritant antiseptics rubbed in Infection and breast abscess are the too frequent consequences Ordinary cleanliness is sufficient

Anæsthetic Masks

MR H M PAGE (London W) writes In your issue of April 16th Dr I O Sullivan published and illustrated a mask for use in anæsthesia He says that he is not aware that a similar type of mask is at present being used for the purpose Many years ago before the war I designed an identical mask and published and illustrated it in either your *Journal* or the *Lancet* at the time recommending its use and advantages in much the same way as he does I am still using it and it was in use at Guy's the West London and Belgrave Hospital during the time I was an honorary anæsthetist to those hospitals My pupils graduate and post graduate used it and I hope that some of them may be finding it useful at the present time One fixed perforated tube is sufficient at the present time for those who use the *modern up to date apparatus* which are made so that all combinations of anæsthetic gases or vapours with oxygen CO or air or any of them alone can be delivered to the mask by one delivery tube I still use my mask with two tubes and on certain occasions have found it useful to have the second tube As Dr O Sullivan mentions the name of the maker of the mask illustrated in his article I think it is only fair to say that my identical mask was made for me by Messrs Down Bros St Thomas's Street S E They made it in two sizes—for adults and children For a good many years my mask has been obtainable also from Messrs Allen and Hanburys Bell and Croyden and Charles King Ltd

Doctors and District Nurses

DR A M BARFORD (*Chichester*) writes I feel I should like to add some of my experiences in this matter—not so much however from the point of deprivation of doctors of their *just earnings* but *rather from the point of the welfare* of the public In many districts the midwife and district nurse are one and the same person As far as midwifery is concerned cases of puerperal fever and pyrexia are far too frequent especially in these days of general asepsis It is a matter to be deplored that something like 4 000 deaths occur yearly from the so called maternal mortality of which *sepsis must account for a large proportion* I have known nurses allow portions of the membranes to *remain in the uterus until sepsis has occurred before* seeking medical help If intrauterine douches had been given at once many cases of puerperal fever might have been prevented and so many lives saved In like manner I have known a district nurse diagnose an impacted Colles fracture as a sprained wrist and give lotio plumbi and not until the wrist became more swollen and painful did she advise medical help I have known a nurse treat diphtheria as a sore throat for four days and not until the child had *become* almost past medical aid did she advise help As far as I can gather this sort of thing is happening all over the country The time has arrived I venture to suggest for the British Medical Association to take this deplorable state of affairs up by holding conferences with the Central Midwives Board on the one part and the various nursing associations on the other

Ferri Perchlor in Skin Disease

DR J W CORY (*Leeds*) writes Some years ago I was surgeon in the Eastern and Australian Mail Steamship Company On one voyage we had about 300 Chinamen on board On the first morning after leaving port a man presented himself at the surgery with *dhobi itch* on his thigh which I painted with tr ferr perchlor the next day three or four were treated in the same way Every day the numbers increased until about eighteen or twenty were dealt with it proved quite a success Since then I have always treated ringworm with applications of the liq ferri perchlor fort Most are cured by one application a second is rarely necessary I use a match dipped in the fluid gently rubbing it into the part affected and the immediate surrounding skin I found however it was useful in other skin ailments Tur dermatitis is *cured by two applications with an interval of about seven* days Eczema and all kinds of itching spots are often cured by one application Psoriasis is universally treated with arsenic It is more rapidly cured with quinine and liq ferri perchlor internally Three or four grains of disulphate of quinine and one drachm of the iron water to 8 ounce bottle a tablespoonful in water after food twice or three times a day It is by far the best treatment I have found many cases of inflammatory diseases of the eye and general debility respond most favourably to this excellent tonic If the way of dealing with skin disease by the application of liq ferri perchlor fort is so successful in many dermatoses how about other inveterate afflictions? Will your readers who are able to test it report on their experience?

Visits to Soviet Russia

MISS ISOBEL CODDARD (*secretary Society for Cultural Relations 1 Montague Street W C 1*) writes It has come to our notice that the dates of the three tours to Russia for scientists—namely leaving London on July 16th August 13th and September 10th—about which a letter appeared in your issue of April 22nd will mean that members of the parties find their dates cut across those of the British Medical Association Centenary Meeting on July 21st and the Physiological Society's meeting at home on August 29th While a large number of inquiries are coming in for these tours we feel that there may be doctors and scientists who would prefer to go to Russia earlier in the year in order to attend these meetings We are prepared therefore to arrange a tour for scientists to leave London on June 18th for a tour of Leningrad Moscow Nijni Novgorod and down the Volga to Stalingrad returning to London by boat and arriving on or about July 12th The charge will be not more than £35 (inclusive of return fares hotels tips food theatres and interpreters) This party however can only be arranged if sufficient definite applications are received at this address not later than May 20th Application forms and further particulars may be obtained from this office to which a booking fee of £1 will be payable on completion of forms

British Students at Leyden

In our review of Dr R W Innes Smith's *English Speaking Students of Medicine at the University of Leyden* (April 16th p 714) we *mentioned in error* William Russell this should be Richard Russell

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 43 44 45 48 and 49 of our advertisement columns and advertisements as to partnerships assistantships and locumtenancies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 159

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

370 Displacement of the Heart in Pulmonary Tuberculosis

C CLAYSON (*Edinburgh Med Journ* March 1931 p 121) discusses the cause and treatment of displacements of the heart in pulmonary tuberculosis with special reference to those of retractive origin Any of the following five aetiological factors may be involved unilateral disease fibrosis pleurisy excavation and complementary emphysema on the opposite side to the primary disease From a review of the literature the author concludes that the main causes of such displacement are fibrosis and pleuro pericardial adhesions associated in some cases with a previous pleural effusion He remarks that persistent labile tachycardia is not necessarily an indication of active disease and may be due to such cardiac displacement which indicating sound fibrosis may be of good prognostic significance If however no special treatment is instituted the abnormality may give rise to cardiac embarrassment In these cases treatment should fulfil three conditions the heart should be replaced as far as is possible the replacement should be rendered permanent and the procedures adopted should be in no way prejudicial to the pulmonary disease Mention is made of the practice of Gunther who employs phrenicectomy to bring about a rise of the diaphragm and consequent partial collapse of the lung Clayson prefers however the much simpler method of carefully conducted breathing exercise which enable the diseased lung to expand and so to push back the heart into position He describes a case of cavity retraction following pleural effusion in which complete success was obtained in this way and publishes illustrative skiagrams of such changes in the cardiac position He argues further from this that these breathing exercises may well be used as a preventive measure they should be begun as soon as an x ray examination reveals a displaced heart and there should be no postponement until symptoms of cardiac embarrassment appear Should the treatment fail phrenic evulsion can then be tried The author adds that at Southfield Sanatorium where such breathing exercises are very carefully conducted there is only a 3 5 percentage of cardiac displacement in pulmonary cases Patients with pleurisy especially with effusion should be watched most carefully with repeated x ray examinations since the most intense clerosis is a far from rare sequel

371 Dwarfism due to Lead Poisoning

I J JARVIS NYE (*Med Journ of Australia* December 26th 1931 p 818) has noticed the frequent occurrence of dwarfism in cases of young patients in the Queensland sufferers from lead nephritis All these patients are nail biter and it was the constant association of nail biting with infantile plumbism which led Cibson to the conclusion that these children become poisoned by handling the verandah railings on which the lead paint has been rendered dry and powdery by the action of the tropical sun This powdered lead carbonate adheres to the moist fingers and is then constantly conveyed to the mouth owing to this habit Nye states that the careful following up of the life history of young adults suffering from chronic nephritis reveals the fact that these patients had had plumbism in childhood By means of a graph he compares the heights of twenty two consecutive cases of chronic nephritis following infantile plumbism with the average height curve and the association with dwarfism demonstrated The only similarity between patients with renal rickets and these stunted renal dwarfs is that they are both stunted in stature and have chronic interstitial nephritis but the latter is a condition is due to lead have in addition all the signs of generalized vascular sclerosis with raised blood pressure and cardiac hypertrophy in renal rickets the absence of hypertension is a characteristic feature The mentality and sexual characteristics are usually quite normal in the saturnine renal dwarfs Many of the females marry early in life and the first indication of any disability is the sudden onset of eclampsia in their first pregnancy There are no gross bony changes Atypical cases histories are also given in which dwarfism renal and vascular changes habits of nail biting and access to lead are all present but the patients lacked the objective signs of lead palsy The presumptive evidence is in favour of chronic lead poisoning in which neural changes have been absent or slight

372 Soft Chancre

L BOISSIN (*Thèse de Paris* 1931 No 561) who records his observations on 580 cases of soft chancre seen at the Dispensaire Bazin Paris during the years 1929 and 1930 states that soft chancre which was relatively rare before the war apart from small epidemics during the time of universal exhibitions has since the war become very frequent 529 of his patients were men and only 51 women The number of foreigners affected has been about the same since 1923 ranging from 20 to 25 per cent of the total The North Africans and Italians furnished the largest contingent In 65 per cent of the cases the infection was traced to street prostitutes and in 13 per cent to those of licensed houses A bubo was noted in 126 cases or 22 per cent and Nicolle's vaccin was found the best treatment for it In 56 cases or about 10 per cent there was an associated infection with syphilis In 50 out of 126 cases in which the Wassermann test was performed the reaction was found to be slightly or strongly positive for a few days only The diagnosis of mixed chancre or latent syphilis should not therefore be made on the strength of a single positive reaction the persistence of a positive reaction alone justifies such a diagnosis

Surgery

373 Osteomyelitis of the Vertebrae

J A LAZARUS (*Amer Journ of Surg* January 1932 p 82) describes osteomyelitis of the vertebrae as a disease with a high mortality which is difficult to diagnose and is liable to dangerous and disagreeable complications The majority of cases occur in the first three decades 75 per cent of the patients being under the age of twenty The lumbodorsal spine is most frequently involved Acute osteomyelitis of the vertebrae represents a metastatic complication in the course of a general infection starting from a focus elsewhere in the body The organism may be either a pneumococcus streptococcus or staphylococcus If the lesion is a carbuncle furuncle or infected tonsil the spread of the disease is caused by an infected thrombus which communicates with the circulation These emboli lodge in arteries and block them giving rise to secondary lesions in tissues dependent on the arteries for nutriment Growing bone is special site of predilection for such emboli because of the arrangement of their blood supply and the well marked separation between epiphysis and diaphysis In the spinal column the emboli lesions are usually small and affect the transverse processes pedicles and spinous processes more rarely the dorsal and lateral parts of the vertebral Pus formed in the bone and spread [illegible] very according to the part of the [illegible] symptoms in the acute stage are so [illegible] in any form of osteomyelitis with [illegible] fever and general bacteraemia [illegible]

milder symptoms often point to the focus in the vertebra Within 48 or 72 hours the segment of spine involved becomes fixed as a result of a protective spasm of the spinal muscles There may be oedema of the skin and soft parts over the involved vertebrae The pain may be general or localized and is aggravated by movement The suppurative process may break through the periosteum and give rise to a psoas or retropharyngeal abscess The prognosis is grave the mortality ranging from 18 per cent to 71 per cent It is more hopeful in affections of the arches than in those of the bodies of the vertebrae The mortality is highest when the disease is in the lumbar region Treatment in the milder types of infection must include the release of pus and the removal of necrotic bone Residual abscesses should be incised and drained Two cases which were successfully treated by operation are reported in both instances the patient made a good recovery

374 Wounds of the Fingers

Commenting more particularly on crushing and bruising wounds of the hands and fingers M Iselin and L B Ulrich (*Presse Méd* February 10th 1932 p 220) emphasize the dangers of merely suturing these without a thorough examination of the parts involved Such wounds are frequently accompanied by osseous lesions and the debris from these together with the contused tissues form a suitable nidus for microbic development ill results range from simple retardation of healing to death of the patient Of 110 instances fractures were found in 103 often with insignificant external lesions 13 of these are here recorded The authors therefore insist that all wounds of the hands and fingers should be systematically explored under anæsthesia even when antitetanic serum has been administered only when satisfactory conditions are found should immediate suturing be practised Local anæsthesia suffices for small injuries for extensive ones general anæsthesia should be employed Contused tissue should be excised particular attention being paid to the skin in order to prevent subsequent suppuration Recent wounds (not exceeding a maximum of six hours) which have been well prepared may be sutured when the skin edges can be opposed without traction or separation from the subcutaneous tissue Short notes are given on the treatment of the different varieties of crushing wounds —namely bursting of the skin subungual haematoma and various osseous lesions

375 Torsion of the Pedicle of the Hydatid of Morgagni

G Roudil (*Journ de Méd de Bordeaux* February 10th 1932 p 115) has found numerous records of this condition in males whose ages ranged from 11 months to 23 years a diagnosis of subacute orchitis was usually made Torsion of this organ is much rarer in females but four cases have been reported by American writers When the accident has occurred on the right side a diagnosis of appendicitis has always been made as in Roudil's case A girl aged 14 had always been healthy except for attacks of enteritis and whooping cough She had not menstruated Shortly before admission she had had cramp in the right iliac fossa There had been no nausea or vomiting until a violent attack of pain occurred There was definite muscle guarding and pain on pressure at McBurney's point By rectal examination a small elongated tender mass could be felt on the right side of the pouch of Douglas Appendicectomy was performed under general chloroform ether anæsthesia The appendix was retrocæcal about as large as a lead pencil and apparently healthy Following the routine practice of his hospital in similar cases Roudil then placed the patient in the Trendelenburg position and examined the ovaries and uterus Attached to the right tubo ovarian fimbria was a reddish mass about 3/5 in in diameter partially necrotic and with the pedicle twisted once clockwise on itself The pedicle was ligatured and the hydatid was removed The patient was discharged cured ten days later Roudil remarks that this case corresponds exactly with those previously recorded except that those patients were older—two girls aged 15 and 18 and two women aged 33 and 36 He refers to the great difficulty experienced in diagnosis although the treatment must necessarily be surgical it is always possible that this lesion may be overlooked if the internal genitalia are not examined in the Trendelenburg position

Therapeutics

376 Treatment of Sprains and Traumatic Arthrites

R Leriche and R Fontaine (*Presse Méd* February 20th 1932 p 280) advise the use of periarticular infiltrations of novocain in the treatment of sprains and traumatic arthrites By the latter term is meant those functional disabilities usually prolonged and always painful which follow articular traumatism generally without fracture and in which only a slight tardy osteoporosis of the articular extremities is present This method was adopted following previous researches by Leriche on the innervation of articulations and their ligaments and the effects of novocain anæsthesia on these structures in certain articular diseases The infiltrations must be peri and not intra articular and should be made at the point most painful on palpation if the whole articular region is painful large infiltrations are needed A single dose consists of 10 to 25 c cm of 1 per cent novocain without adrenaline this may safely be repeated daily until cure is obtained Though all cases will not respond so strikingly as the three here recorded the authors recommend that this method being simple and innocuous should always be tried In recent cases it will assure a speedy complete recovery in more chronic cases the results will not be so perfect but will however be better than those obtained by any known physiotherapeutic method In resistant cases with no apparent anatomical factor an operation should only be performed when this method fails The authors believe that such infiltrations would be equally efficacious in the sequels of articular fractures

377 The Diet in Sprue

Cuylt (*Bruxelles Médical* February 14th 1932 p 466) reports the cure of a case of sprue in a man aged 47 who had come to Belgium from Constantinople He was extremely thin and almost too feeble to stand Oedema was present in the lower limbs the tongue was red and glossy and the abdomen was ballooned with gas The stools were doughy abundant and fatty The Wassermann test was negative Radiographic examination showed intestinal pockets distended with gas The red blood corpuscle count was 2 700 000 per c mm and the leucocyte count 4 800 the haemoglobin percentage was 30 The gastric contents contained no hydrochloric acid An examination of the stools revealed abundant fat globules a condition found in sprue and pancreatic affections Treatment by emetine only aggravated the condition When the diagnosis of sprue was made treatment consisted in the complete omission from the diet of sugar and cooked starch and the free administration of vitamins especially milk raw meat and fruit including strawberries Amelioration was rapid The appetite increased the tongue improved and the intestinal gas diminished The stools became less fatty the weight increased and the oedema disappeared The blood count improved and then gastric juice became acid Calcium carbonate and phosphate were given by the mouth and subcutaneous injections of sulfarsenol as a tonic

378 Treatment of Silicosis

L Veil Chenblau (*Munch med Woch* February 12th 1932 p 269) describes a case of severe silicosis After prolonged exposure to dust in a sandstone quarry the patient was admitted to a sanatorium where he made good progress for a time after which his condition became stationary While undue optimism is not justifiable since it is impossible to remove the deposits of mineral dust

from the lungs the author believes that prognosis in silicosis is not hopeless if the appropriate treatment is pursued energetically Silicosis itself is not immediately fatal but death may follow circulatory failure or a secondary pulmonary infection The first complication occurs only in a minority of cases Secondary infections may be non-specific or tuberculosis The silicotic patient is more prone to pulmonary infection through loss of elasticity in the lung tissue and the concomitant emphysema increases liability to infection The distressing dyspnoea may be relieved by expectorants particularly by potassium iodide which assists liquefaction of the sputum Veilchenblau believes that the sputum can be rendered sterile by the intravenous injection of sodium cacodylate in 50 per cent solution in doses of 1 c.cm every third day He claims that this also relieves the dyspnoea and paroxysmal cough and is effectual also in secondary bacterial and tuberculous infections In the former type he employs autogenous vaccines administered intramuscularly He describes the case of a young man who had hyperpyrexia and severe dyspnoea with evidence of consolidation of the left lower lobe Tubercle bacilli were not found but streptococci and other Gram positive cocci were present Polyvalent vaccine treatment produced a definite focal and general reaction The dosage of the vaccine was diminished and the patient made such rapid progress that in five weeks he was able to go for a walk Four weeks later he walked more than half a mile and eventually he became fit for work

Dermatology

379 Onycholysis

H J TEMPLETON (*Journ Amer Med Assoc* December 26th 1931 p 1950) records five cases of new and apparently healthy female employees aged from 18 to 34 who developed black spots under their finger nails within forty-eight hours of their beginning to wash paste from labelled bottles Within a few days the nails loosened from their nail beds at these areas At no time was there any evidence of inflammation such as pain discharge or paronychia and the nails began to grow again in from four to six months No specific industrial irritants could be incriminated Templeton believes that the condition was caused by maceration of the tissues by prolonged immersion possibly associated with injury to the finger nails by prolonged picking at resistant pieces of paste A personal factor may also have contributed Somewhat similar cases were described by M Oppenheim of Vienna in 1910 among laundrywomen in his experience however the process was a chronic one and distinct from the fulminating type described by Templeton

380 Lupus Erythematosus

W H GOECKERMAN and H MONTGOMERY (*Arch Derm and Syph* February 1932 p 304) discuss the histological changes in lupus erythematosus as the result of investigating twenty-six cases of the discoid and eighteen of the disseminate type They agree with other authors that there is a dilatation of the superficial capillaries and lymphatics with a perivascular lymphocytic infiltrate in the upper layers of the cutis These changes are associated with a persistent relative and even absolute hyperkeratosis this is usually accompanied by thickening of the stratum granulosum keratotic plugging of the hair follicles and sweat ducts and necrotic plugging of the epidermis independently of these follicles and ducts The cure to be seen also in areas of acanthosis and epidermal atrophy with colliquative degeneration of the basal layer The authors however were unable to find any true proliferative changes in the walls of the blood vessels though occasionally moderate alterations were detected in the walls of the superficial vessels with partial or complete occlusion They suggest that the absence of such proliferative vascular changes and the common occurrence of pigments in chromatophores may be of diagnostic value in some instances but they do not think that the formation of collagen can be regarded as particularly significant I HOLLANDER *et al* (ibid p 353) call attention to the existence of a peculiar blood condition in acute or subacute lupus erythematosus in which there is a leukaemoid reaction with anaemia and thrombopenia In the presence of this haematological syndrome frequent and careful examinations of the blood are necessary since there may be present an infection or toxaemia or lack of resistance in the patient which would contraindicate such operations as tonsillectomy which have been known to bring about death They record one such case in which the blood examination gave a warning of this kind neoarsphenamine in small doses acted beneficially on the skin and also on the blood condition obviating the necessity for a dangerous operation

381 Bullous Dermatitis following Sunlight Baths

M OPPENHEIM (*Ann de Derm et de Syph* January 1932 p 1) who has already recorded cases of dermatitis occurring after bathing followed by sun baths in meadows states that this condition appears within two days after exposure as bright red streaks or clear lenticular bullae which coalesce to the size of a chestnut It is accompanied by severe itching and appears only in unprotected areas that have been in direct contact with herbage—for example the back and limbs it is not found on the palms soles and scalp When the dermatitis is severe slight fever may ensue Under simple sedative treatment all the symptoms disappear rapidly leaving a deep pigmentation that persists for months In Oppenheim's first forty patients the cause was traced to a public bath with sun bathing annexe and the eruptions suggested an icarine origin Subsequent investigations incriminated certain plants found on river banks and in marshes although some of the patients had sat on benches in the sunlight and did not lie on the grass ALICE ULLMO (ibid p 31) describes a similar case in a young woman aged 22 who had bathed in an open air bath afterwards sun bathing on the grass The author agrees with Oppenheim that certain plants such as buttercup and mustard plants may produce this dermatitis in sensitized subjects

Obstetrics and Gynaecology

382 Diagnosis and Treatment of Ureteral Fistula

According to B OTTOW (*Zentralbl f Gynäk* December 12th 1931 p 3563) the existence of a ureteral fistula may be strongly suspected when an obstetrical or gynaecological operation is followed by incontinence of urine in a patient who can void some urine from her bladder at will The diagnosis is clinched by cystoscopic and similar investigations in which the following points are stressed The discovery of a vesical fistula does not exclude the possibility of a coincident ureteral one Peristalsis is still visible although with diminished frequency at the ostium of a partially or completely divided ureter It should be remembered that bilateral fistulæ occur Extravesical sounding of a fistula is useless and may be difficult or harmful In order to make the important distinction between a total fistula with complete section of the ureter and incomplete fistulæ with preservation of ureteral continuity except at a lateral hiatus Ottow recommends (1) passage of the ureteral sound when possible through the site of the partial fistula (2) injections of coloured material through the urethra into the ostium (3) passage of ureteral catheter and pyelography after bilateral injection of urethrocholin or Uroselectan Abandonment of purposeful fistula heals spontaneously and presents favourable prognosis In the treatment of ureteral fistulæ Ottow advocates the fixation for six to ten days of a ureteral catheter removed after one to two days interval if necessary through this new dilated silver pre-

parations can be injected and at the same time hexamine preparations can be injected intravenously Prolonged surveillance is necessary after healing of the ureteral fistula, a stricture may require the repeated passage of bougies When spontaneous healing is not secured intravesical implantation or nephrectomy is required

383 Protection of the Infant's Ears at Birth

A MAUBERT (*Presse Méd* February 24th 1932, p 307) calls attention to the advisability of protecting the ears of the newborn child Although the necessity of auricular prophylaxis is not so widely recognized as is that of the eyes he considers it to be of equal importance and adduces arguments in favour of the routine treatment of the ears immediately after birth Since the ear is a deeply placed organ any untoward developments are not so readily manifest as in the case of the eye and infections arising in the nasopharynx may not become manifest for some considerable time Systematic prophylaxis would therefore prevent not only immediate septic infections but later developments in the nature of purulent catarrh with all its complications and consequences such as deafness The middle ear in foetal life is filled with embryonic connective tissue which completely enfolds the ossicles After birth and coincident with the establishment of respiratory movements this mucogelatinous cushion is absorbed Occasionally it disappears before birth the antrum and middle ear then contain a sero-sanguineous fluid The invasion of anaerobic bacteria through the nasal aditus is thus facilitated and an ideal culture medium awaits them During a research conducted at the Hôpital des Enfants Malades it was observed that the antrum and the middle ear in very young infants were frequently full of pus The prophylaxis advised is to instil *two or three drops of a 1 per* cent solution of protargol argyrol or collargol into each nostril the baby lying on the doctor's knees with the head dependent It is claimed that such a procedure maintains the integrity of the ear and prevents infections

384 Pregnancy in the Course of Leukaemia

I I KAPLAN and J J CONNERY (*Amer Journ Med Sci* February 1931 p 209) report a case of pregnancy which terminated normally with the birth of a healthy child although the mother had been suffering from chronic myelogenous leukaemia during the previous fifteen months She had had two previous pregnancies characterized by persistent nausea vomiting and headache The leukaemia began with severe and generalized weakness followed by tinnitus headache dizziness *blurring of vision* and epigastric discomfort The spleen became enlarged and haemorrhage from the gums occurred with irregular outbreaks of purpuric spots The haemoglobin percentage was 69 the red cell count was 4 920 000 the colour index 0 77 and the white cell count 122 000 Deep *x* ray therapy was started with excellent clinical and haematological results The patient however ceased treatment after three months and became pregnant a year later with the previous symptoms of severe nausea and vomiting but accompanied on *this occasion* by a persistent vaginal haemorrhage The pregnancy terminated in an uncomplicated labour its duration being less than twenty four hours The total white cell count increased during pregnancy to a level of about 70 000 per c mm at the time of delivery and the differential formula also changed there being an increase in the number of less differentiated granulocytic cells The authors remark that there is no evidence that the pregnancy aggravated the course of leukaemia in this patient and the child appeared to be perfectly normal haematologically and physically The deep radiation therapy was confined to the spleen no attempt being made to affect the ovaries At no time during the disease was there any indication that the leukaemia was passing from the chronic to the acute form and the authors record this case as having a bearing on the question whether pregnancy should necessarily be terminated when complicated by leukaemia

Pathology

385 Susceptibility of the Male Foetus to Syphilis

B DESJARDIN J LILY and J TITECA (*Bruxelles Medical* February 21st, 1932 p 485) record cases independently observed by them which confirm the observations of Gougerot to the effect that the male foetus or infant is more susceptible to infection by the *Treponema pallidum* than the female The first case quoted was one of twins the boy was seriously affected by congenital syphilis and the girl showed no stigmata The authors then record a family numbering 10, 6 male infants were stillborn at term while the 4 females survived Their third series was a family of 11 of which *4 were stillborn males* and 7 living females From observation of these and other cases it appears to the authors to be an incontestable fact that male infants and foetuses are more vulnerable to the *Treponema* than the female which appear to have a particular capacity of resistance This allergic capacity it is added is shown most clearly by intradermal reactions —for example of horse serum It is noted also that syphilis in the woman is usually more benign than in the man fatal parasyphilitic disease is more rarely seen in the female sex *The question arises whether the resistance* of the female foetus to syphilitic infection is of the same order as the favourable allergic capacity which appears to be present in the young adult woman

386 The Identification of Faecal B. coli in Drinking Water

J L MINKEWITSCH (*Zentralbl f Bakt* February 25th 1932 p 61) has tested 123 strains of lactose fermenting coliform bacilli isolated from human faeces for their ability to grow in Bulir's mannite medium at 46° C Of these strains 119 were typical *Bact coli* producing indol and not growing in Koser's medium One strain failed to produce indol and three strains which formed no indol and grew in citrate were clearly of the *Bact aerogenes* type None of *these three aerogenes* strains grew in Bulir's medium at 46° C of the remaining 120 strains all except five grew and fermented the sugar The author concludes that since 95 8 per cent of faecal *Bact coli* give a positive Bulir reaction their differentiation in water from coliform strains of *non faecal origin* may be greatly facilitated by the use of this test

387 The Hormone of the Suprarenal Cortex

G A HARROP H WIDENHORN and A WEINSTEIN (*Munch med Woch* January 29th 1932 p 171) by a number of researches on normal dogs and on dogs from which both suprarenals had been removed have been able to study the clinical picture of suprarenal insufficiency and also the action of cortical extract in this condition Using the extract in substitution therapy it was shown to be possible to maintain the animals alive for long periods one surviving for more than twelve months It was found that changes in the blood and metabolism in the dogs deprived of their suprarenals and not treated with cortical extract were comparable with those met with in the suprarenal insufficiency of Addison's disease a raised amount of residual nitrogen and urea in the blood, diminution of the total metabolism and the respiratory quotient a fall of blood pressure marked diminution in the amount of urine and of the total nitrogen and urea in the urine No changes were observed as regards the creatin and creatinin in the blood or in the urine apart from a rise shortly before death the blood sugar content tended towards hypoglycaemia but this was not a constant sign Diuresis is at first impaired during the period of severe insufficiency but later it is restored, microscopical changes in the urine contents were not present but there was slight albuminuria From these results the authors deduce that in addition to the specific action on the entire system the suprarenal cortex has a direct hormonal influence on the function of the kidneys especially on the excretion of water and urinary nitrogen

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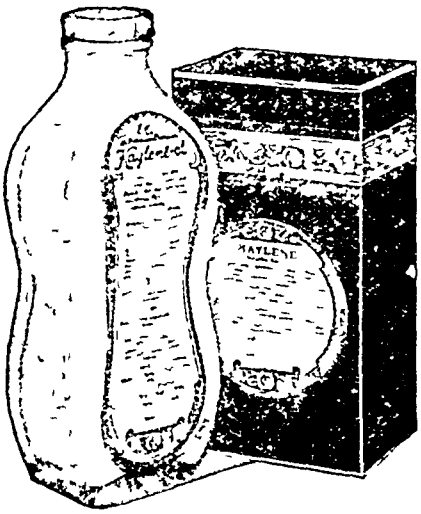
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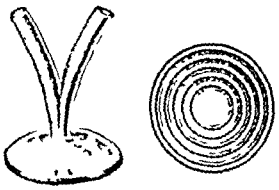
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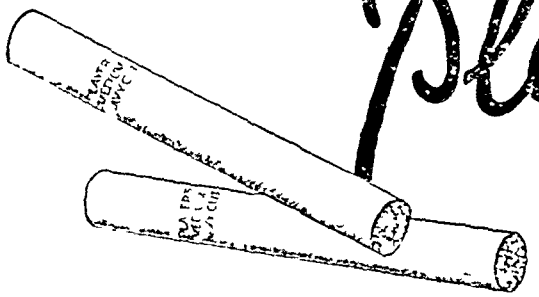
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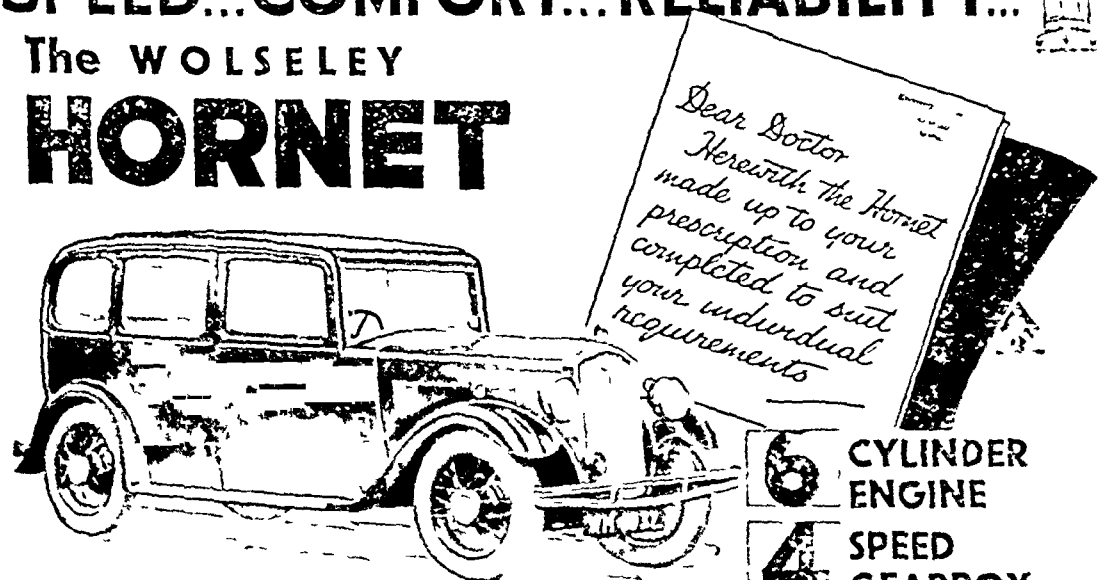
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The Home is situated on Deeside three miles from Aberdeen and the delightful surroundings of garden park and woodland attractively laid out for the occupation and recreation of those resident. It is beautifully decorated and comfortably furnished. Rest and privacy are secured and all forms of treatment are available.

The patients may be attended by their own physician or by the Physician Superintendent.

The minimum charge is £4 4s. a week.

For further particulars application should be made to the PHYSICIAN SUPERINTENDENT Royal Mental Hospital Aberdeen or to the MATRON Wellwood Nursing Home Cults Aberdeenshire. (Telephone No. 31 Cults.)

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,
Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg. Tel. Address Bethlem Beckenham. *Telephone* Shortlands 1180—1181.

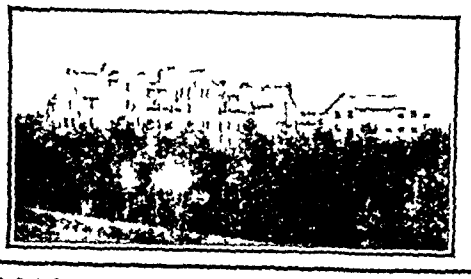
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This Licensed Hospital is now situated at Monks Orchard in [illegible] Accommodation can be provided for [illegible] patients of the educated class in [illegible] and it is hoped early that extended privileges of [illegible] patients may [illegible] Estimates can be obtained for 5 guineas weekly [illegible] The Committee will also consider applications for [illegible] at lower [illegible] there.

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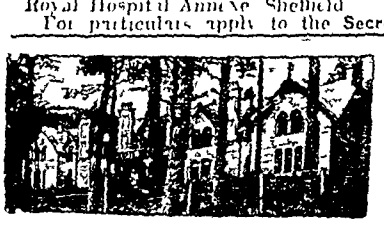
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Situated in the upper Speyside district of Inverness-shire. One of the highest inhabited districts in Britain.—The Switzerland of the British Isles. *Bracing and dry mountain climate. Well sheltered Sanatorium specially built for the Open air Treatment of Tuberculosis.* Opened in 1901. Elevation 860 ft. above sea level. Electric light throughout buildings and in rest shelters. *Central heating. Fully equipped X-ray Plant.* All forms of treatment available including Artificial Pneumothorax and Ultra Violet Rays for surgical cases of Tuberculosis. Terms £4 7s. 6d. to £6 6s. per week inclusive. No extras.

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COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D T H must possess the D T M of this University)

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Candidates must be Graduates of the University of London or any other University approved by the College Committee for the purpose or Undergraduates of the University of London or any other University approved as aforesaid of suitable standing in Science or in Medicine

The Scholar will be required to follow a course of study approved by the Jodrell Professor of Physiology involving a training in the principle and methods of research in Physiology

Each application should be addressed to the Head Master giving particulars of his career and the names and addresses of not more than three referees so as to reach the undersigned (from whom copies of the Regulations may be obtained) not later than Saturday May 14th

C O C DOLLE
University College Secretary
London (Gower St W C 1)

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A Course of Clinical Lectures on RADIOTHERAPY with Demonstrations will be held at the above address on Wednesdays in May June and July at 4 30 p m

The Course will be open to registered Medical Practitioners free of charge

For particulars apply to the Secretary The London Institute Riding House Street W 1

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The Practice of the Hospital is limited to Medical Practitioners Particulars from J BROWNING ALEXANDER M D Dean

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LONDON W 1

(University of London)

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The Medical School and Hospital occupy a central position within a few minutes walk of Oxford Circus They are fully equipped for teaching the entire Medical curriculum both for University Degrees and the Conjoint Course

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The new West Wing of the Hospital is fully occupied the rebuilding of the remainder is proceeding without the loss of a single bed the remodelled Out Patient Department continues to expand the newly built Residents Block affords greatly improved facilities the Nurses Home is the finest in London These with other new buildings including magnificent Laboratories give to the Middlesex Hospital and its Medical School the most modern facilities obtainable in Great Britain

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A Course of Lectures on PATHOLOGICAL RESEARCH IN ITS RELATION TO MEDICINE has been arranged for the SUMMER SESSION The Lectures will be given in the Lecture Room of the Bacteriological Department of the Institute on TUESDAY AFTERNOONS at 5 p.m. as under —

MAY 3rd SIR ALMROTH E WRIGHT MD FRS (Principal of the Institute)	SUBJECT On a New Body of Immunological Doctrine
MAY 10th DR HUGH CAMERON (Surgeon to the Mayo Clinic Rochester Minnesota)	The Present Position of Transurethral Prostatectomy"
MAY 10th MAJOR MELBOURNE SINCLAIR CMG RAMC (Ret) (Surgical Specialist Ministry of Pensions)	Fractures of the Lower Extremity" (With Lantern Slide Demonstration)
MAY 17th PROF EDGAR DOUGLAS ADRIAN MD FRS (Fellow Trinity College Cambridge Fullerton Research Professor Royal Society)	The Nervous Mechanism of Respiration"
MAY 24th PROF MARTIN HAHN (Professor of Hygiene University of Berlin)	On the Lübeck Trial and the Scientific Principles Involved in Calmette Anti-tuberculosis Inoculations
MAY 31st DONALD HUNTER MD FRCP (Lond) (Physician Medical Tutor London Hospital)	The Clinical Significance of Studies in Calcium Metabolism"
JUNE 7th SIR HENRY HALLETT DALE MD FRCP (Lond) Sec RS (Director National Institute for Medical Research)	Recent Progress in Hormones of the Circulation
JUNE 14th PROF F T TOPLEY MD FRS (Prof Hygiene of University of London)	Helminth Migrations"

The Lectures are open to all Members of the Medical Profession and to Medical Students in Medical Schools with Fees

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[illegible] and Qualified Practitioners are admitted to the Practice of the Hospital Patients are selected according to their Social Position and Obstetric Necessities [illegible] Over 2 500 patients are delivered annually in the Hospital and Out-Patient Department there are over 18 000 [illegible] Fee to attend Lectures on Examining Boards [illegible] Secretary ARTHUR WATTS Secretary

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Church Missionary Society

The ANNUAL MEETING of the MEDICAL MISSION AUXILIARY OF THE C.M.S. will be held in the CENTRAL HALL, WESTMINSTER, at 7 p.m. on Wednesday, May 4th, 1932

The Chair will be taken by FIELD-MARSHAL SIR CLAUD JACOB, G.C.B., G.C.S.I., K.C.M.G., and the speakers will be [illegible] Mr. Clib[illegible] Mr. T. M. C[illegible] H[illegible] J. C. S[illegible] C[illegible]

Tickets may be obtained from the Department, Church Missionary Society, Salisbury Square, E.C. 4. A limited number of reserved seats at 1s. each

WANTED FOR LADY Cardens, Brixton, references and relatives. DIPLOMA 7th of our students successful last exam. New session commences May 18th.—Write Lady Supt.

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1 value 160 guineas
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Intending candidates should apply to the undersigned for particulars and entry forms as early as possible and not later than May 9th 1932.

C. O. C. BOULTON, Secretary
University College, London (Gower St., W.C.1)

UNIVERSITY OF LONDON, KING'S COLLEGE

PRIMARY F R C S

A Special Position Course in PHYSIOLOGY and BIOCHEMISTRY for the JUNE EXAMINATION will commence on APRIL 26th 1932. The Course includes Lectures, Practical Work, Histology and Apparatus.

Fee for the Course, Ten Guineas.

Applications for admission to the Course should be addressed to the Dean of the Medical Faculty, King's College, Strand, W.C.2, from whom further particulars may be obtained.

UNIVERSITY OF LONDON

A Course of Three Lectures on *Human and Comparative Placentation, including the Early Stages of Human Development* will be given by Prof. Dr. OTTO GROSSER (Professor of Anatomy in the German University, Prague) at UNIVERSITY COLLEGE, LONDON (Gower St., W.C.1) on MAY 2nd, 5th and 6th, at 5 p.m. At the last Lecture the Chair will be taken by Sir F. G. HOBT, D.Sc., F.R.S., Provost of Fellowship in the University.

Lantern illustrations.
Admission Free, without ticket.

S. J. WOLSTENHOLME, Academic Registrar.

UNIVERSITY OF LONDON

Applications are invited from Graduates of the Universities of London in Medicine and Surgery for the CROMPTON-DUNLOP TRAVELLING STUDENTSHIP FOR RESEARCH IN OTO-RHINO-LARYNGOLOGY. The Studentship is of the value of £450 a year and is tenable in the first instance for one year.

Applications should reach the University on or before June 11th, 1932, and must be made on the prescribed form which may be obtained together with further particulars from the Academic Registrar, University of London, South Kensington, S.W.7.

UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY CHAIR OF PHYSIOLOGY (small) at the London Hospital Medical College. Salary £1,100 a year. Applications (12 copies) must be received not later than first post on May 14th by the Academic Registrar, University of London, S.W.7, from whom further particulars may be obtained.

STAFFORDSHIRE COUNTY COUNCIL

SANDON HALL ORTHOPAEDIC HOSPITAL

LADY HOUSE SURGEON

Applications are invited from duly qualified Medical Women for the post of House Surgeon at the above Hospital at a salary of £200 per annum with full board and lodging. Previous professional experience not necessary.

The appointment is for one year and is not renewable.

Applications stating age and qualifications, *accompanied by three recent testimonials*, must be forwarded to the undersigned not later than *April 29th*.

County Buildings, Stafford. EUSTACE JOY, Clerk of the County Council.
April 11th, 1932.

ROYAL HAMPSHIRE COUNTY HOSPITAL, WINCHESTER (158 Beds)

HOUSE SURGEON (Additional)

Applications are *invited from fully qualified* men for the above post to take up duties at an early date. Six months' appointment. Salary £125 *per annum with board, residence and* laundry. Candidates who must be of British nationality, to make application at once to the *undersigned*, enclosing copies of three testimonials.

HERBERT MASTEN, Secretary.

SURREY COUNTY COUNCIL

MENTAL HOSPITALS COMMITTEE

APPOINTMENT OF JUNIOR ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the post of Male Junior Assistant Medical Officer (unmarried) in the Surrey County Mental Hospital Service.

Commencing salary, which will be subject to statutory deductions under the provisions of the Asylum Officers Superannuation Act 1909, will be £350 rising by annual increments of £25 to a maximum of £450 per annum, together with apartments, board, laundry and attendance, valued for superannuation purposes at £150 per annum. The person appointed will also be paid, in addition to his salary, the sum of £50 per annum if he holds the Diploma of Psychological Medicine. Such part of the remuneration as exceeds £100 per annum is subject to a temporary economy reduction of 5 per cent.

Applicants should state which (if any) they have had experience in the work of a Pathological Laboratory.

The appointment will be subject to termination by one calendar month's notice on either side.

Applications, stating age, accompanied by copies of three recent testimonials, and enclosed in an envelope endorsed "Mental Hospitals Junior Medical Officer," must reach me not later than 12 noon on Wednesday, May 4th.

County Hall, Kingston upon Thames. DUDLEY SHARP, Clerk to the Committee.
April 19th, 1932.

NORTH OXFORDSHIRE UNITED DISTRICTS (MEDICAL OFFICER OF HEALTH) JOINT COMMITTEE

APPOINTMENT OF MEDICAL OFFICER OF HEALTH

The above Committee invite application for the position of Temporary Medical Officer of Health for the North Oxon United Districts at a salary of £800 per annum (less a temporary reduction of 7½ per cent.) plus £100 per annum in respect of travelling and office expenses.

In addition to the qualification prescribed by any statute, applicants must also be either registered in the *Medical Register* as the holder of a diploma in sanitary science, public health or state medicine.

The Districts situate within the area of the Joint Committee are:

The Urban Districts of Chipping Norton, Witney and Woodstock.

The Rural Districts of Banbury, Chipping Norton and Witney.

The gentleman appointed will be required to reside within the area of the United District. The appointment will be made in accordance with, and subject to, the Sanitary Officers Order 1926.

Canvassing, either directly or indirectly, is prohibited.

Applications, with copies of not more than three recent testimonials attached to be sent to me, endorsed "Medical Officer of Health," not later than Wednesday, May 11th.

By Order of the Committee.
16a Market Place, Chipping Norton. EDWARD KENYON, Clerk to the Committee.
April 22nd, 1932.

COUNTY BOROUGH OF HALIFAX

ST LUKE'S HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER

The Health Committee of the Halifax Corporation invite application for the post of Junior Resident Medical Officer (male, unmarried) for St Luke's Hospital (containing 448 beds for Medical, Surgical and Maternity cases). The salary will be £250 per annum, together with board, residence and laundry. The appointment will be for a term of not exceeding one year and is not renewable.

Applicants must be fully qualified registered Medical Practitioners, and preference will be given to those who have held a Resident appointment in a General Hospital.

Forms of application and conditions of appointment may be obtained from the undersigned, to whom they must be returned accompanied by copies of not more than three recent testimonials not later than April 30th.

By Order,
Town Clerk's Office, Halifax. PERCY SAUNDERS, Town Clerk.
April 21st, 1932.

LEAF HOMOEOPATHIC COTTAGE HOSPITAL, EASTBOURNE

There is a vacancy for an HONORARY GENERAL PHYSICIAN at this Hospital. Applications are invited, and candidates are requested to kindly state qualifications and experience and to send testimonials to the Chairman, Leaf Homoeopathic Cottage Hospital, Eastbourne.

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

ABERCERT SANATORIUM—202 BEDS (210 Children 92 Adult)

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Practitioners for the appointment as Junior Resident Assistant Medical Officer at the Municipal Sanatorium, Abergele, North Wales.

The Sanatorium is fully equipped with all modern requirements for the treatment of Tuberculosis in children.

Preference will be given to candidates who have had resident surgical and medical appointments in a general hospital, more particularly those of orthopædic experience.

The appointment is for a period of twelve months, and may be terminated by one month's notice on either side.

Salary £350 per annum, subject to a temporary deduction of £10 12s. 6d. per annum. The amount payable will therefore be £339 7s. 6d. per annum, together with board, residence and laundry in addition.

Every application, stating fully the training, qualifications and experience of the candidate, and having with copies of three recent testimonials, should be forwarded in the envelope. Resident Medical Officer, Abergele Sanatorium, must be addressed to the Medical Officer of Health, Civic Buildings, 1 Mount Street, Manchester, only, and not to members of the Committee or Council, and must reach him not later than Saturday, April 30th.

The successful candidate will be under the general administrative control of the Medical Officer of Health, and the immediate control of the Medical Superintendent, and will be required to devote the whole of his time to the duties of the appointment, and to undertake no private practice.

Canvassing in any form, oral or written, either directly or indirectly, is prohibited.

J. L. WARBRECK HOWELL,
Town Hall, Town Clerk.
Manchester, April 13th, 1932.

BOROUGH OF EALING

ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified Medical Men with Public Health qualification for the position of Assistant Medical Officer of Health.

Candidates will be required to carry out Medical Inspection of School Children and Child Welfare work, and perform such other duties as may be allotted as Assistant to the Medical Officer of Health and School Medical Officer.

The person appointed will be required to devote his whole time to the duties, and will not be allowed to engage in private practice.

The salary will be at the rate of £600 per annum, rising to £700 by £25 per annum, from which a temporary deduction will be made on account of the national financial emergency, amounting to £1 10s. per annum on the commencing salary.

A deduction of 5 per cent. will be made from the salary in accordance with the provisions of the Local Government and Other Officers' Superannuation Act, 1922, which has been adopted by the Council, and the appointment will be subject to passing the Council's medical examination in connection therewith.

Copies of the application form and terms of appointment can be obtained from Dr. THOMAS ORR, Medical Officer of Health, Town Hall, Ealing, W., to whom application, accompanied by copies of not more than three recent testimonials, must be delivered not later than April 25th.

Town Hall, CLO. E. BRADDON,
Ealing, W. Town Clerk.

ROYAL BERKSHIRE HOSPITAL, READING

Invited on May 4th and 19th TWO CASUALTY OFFICERS. One will have charge of the Ophthalmic Department and the other the Throat, Ear, Nose and Throat Department. Both will be required to give anæsthetics.

Each will have to be fully qualified and registered.

It is estimated that the rate of £150 per annum will be paid, and each will have a bedroom and board in the Hospital.

Applications, with copies of testimonials, should be sent to the undersigned not later than April 25th.

J. LAYTON, Secretary.

MUTHILL CHEST HOSPITAL

Applications are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months. The salary will be at the rate of £150 per annum, with board, residence, and laundry. The Medical Officer will be required to undertake the duties of Anæsthetist to the Muthill Chest Hospital. Further particulars may be obtained from the Medical Superintendent, Muthill Chest Hospital, Muthill, Perthshire.

Applications, stating age, qualifications, and experience, together with the names of three referees, should be sent to the undersigned not later than April 30th.

H. J. WOOLLCOMBE,
Town Clerk's Office, Town Clerk.
Town Hall, Muthill, April 1932.

LANCASHIRE COUNTY COUNCIL

PUBLIC ASSISTANCE COMMITTEE

PARK HOSPITAL, DAVYHULME, NEAR MANCHESTER

APPOINTMENT OF RESIDENT MEDICAL OFFICERS

Applications are invited from registered Medical Practitioners for the appointment of

(a) Second Resident Medical Officer at a salary at the rate of £225 per annum, together with the usual residential emoluments. The successful applicant will be required to commence duty on July 1st.

(b) Junior Resident Medical Officer at a salary at the rate of £200 per annum, together with the usual residential emolument. The successful applicant will be required to commence duty on June 1st.

The above salaries are subject at the present time to an emergency abatement of 5 per cent.

Candidates must be unmarried. Preference will be given to applicants having experience in Midwifery, Gynæcology, and Diseases of Children.

The appointments will in the first instance be for a period of six months, the successful applicants being eligible for re-appointment for a further period of six months at the end of that period.

The Hospital comprises 500 beds.

Application, accompanied by copies of not more than two recent testimonials, should be addressed to the County Medical Officer, Public Assistance (Hospital and Medical) Department, County Office, Preston, not later than April 30th. Envelopes should be endorsed "Second Resident Medical Officer" or "Junior Resident Medical Officer."

County Offices, GEORGE ETHERTON,
Preston. Clerk of the County Council.
April 12th, 1932.

COUNTY BOROUGH OF WEST HAM

MATERNITY AND CHILD WELFARE.

APPOINTMENT OF A DENTAL SURGEON (Woman)

The Council invite applications from Dental Surgeons (women) to carry out, under the direction of the Medical Officer of Health, the Dental Treatment of Expectant and Nursing Mothers and of children under five years of age at the Maternity and Child Welfare Clinics. The person appointed will be required to devote her whole time to the duties of the office.

The salary will be at the rate of £500 per annum, subject to the appropriate abatement under the resolution of the Council for the time being in force, at present 2½ per cent. on the first £200 and 5 per cent. on the next £100 and 5 per cent. on the remainder.

The appointment will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1922, and to a medical examination as required by the Council for the purpose of that Act and the statutory contributions to the Superannuation Fund under the Act will be deducted from the salary. The appointment will automatically terminate on marriage.

Application forms will be supplied by the Medical Officer of Health, Municipal Health Offices, 88 Romford Road, Stratford, E.15, on receipt of a stamped addressed foolscap envelope, and should be returned to the undersigned not later than Friday, April 29th.

Canvassing members of the Council is prohibited, and will disqualify.

By Order,
CHARLES E. CRANFIELD,
Town Hall, Town Clerk.
West Ham, E.15. April 13th, 1932.

COUNTY BOROUGH OF SOUTHEND-ON-SEA

SOUTHEND MUNICIPAL HOSPITAL

JUNIOR ASSISTANT MEDICAL OFFICER (Male or Female)

Applications are invited for the position of Junior Assistant Medical Officer at the Southend Municipal Hospital (Infectious).

Salary at the rate of £275 per annum, with board, lodging, and washing, the value of the latter being assessed under the National Health Insurance Acts, 1924 to 1928, at £26 per annum.

The appointment is for 12 months, and is subject to the provisions of the Superannuation Act, 1922.

The duties will be mainly those of a Resident Medical Officer.

Further particulars may be obtained from the Medical Superintendent, Southend Municipal Hospital, Prittlewell, Southend-on-Sea.

Applications, stating age, qualifications, and experience, together with the names of three referees, should be sent to the undersigned not later than April 30th.

Canvassing directly or indirectly will be a disqualification.

H. J. WOOLLCOMBE,
Town Clerk's Office, Town Clerk.
Southend-on-Sea, April 1932.

CITY OF LIVERPOOL

ROYAL INFIRMARY AND ROYAL SOUTHERN HOSPITAL

MEDICAL SUPERINTENDENT

Applications are invited for the appointment of Medical Superintendent of the Royal Infirmary and Royal Southern Hospital, Liverpool, at a salary of £500 per annum, rising by annual increments of £25 to a maximum of £600 per annum, subject to the deduction of 5 per cent. under the National Economy Act, 1931, and to a temporary deduction of £1 per annum under the Liverpool Corporation Act, 1931.

The appointment will be subject to the Superannuation Act, 1922. The duties will include the supervision of the Casualty Department, and the Medical Superintendent will be required to devote his whole time to the duties of the office, and will not be allowed to engage in private practice.

Applicants must be registered Medical Practitioners, and must have had at least three years' experience in the practice of their profession, and must have had at least 18 months' hospital experience, including clinical work, which they will be required to show they have had in the wards under the charge of the Physician and Surgeon in charge of the Medical and Surgical Out-patient Departments, and must have had training in Pathological Laboratory work.

The Medical Superintendent will be required to reside in the Hospital, and will be provided with board, residence, and laundry.

The appointment will be subject to the Standing Orders of the Committee, and the appointment will be terminable by one month's notice on either side, or by the Committee forthwith in the event of the Medical Superintendent being convicted of any felony or misdemeanour, or becoming bankrupt, or compounding with his creditors, or becoming incapacitated by reason of ill-health from performing the duties of his office.

Applications, stating age, qualifications, and experience, together with copies of three recent testimonials, should be sent to the undersigned not later than May 7th, 1932.

Canvassing, either directly or indirectly, will disqualify.

Municipal Buildings, WALTER MOON,
Liverpool. Town Clerk.
April 15th, 1932.

COUNTY COUNCIL OF MIDDLESEX

DISTRICT MEDICAL OFFICER AND PUBLIC VACCINATOR

The County Council invite applications from duly qualified Medical Practitioners for the undermentioned appointment:—

DISTRICT MEDICAL OFFICER,
PARISH OF WEALDSTONE.

Salary £100 per annum, plus travelling expenses. The officer appointed will be required to carry out his duties in accordance with the Public Assistance Order, 1930, of the Ministry of Health, to reside in the district, and to undertake to the Council some duly qualified Medical Practitioner who will, in the case of his absence or other illness, be able to act on his behalf, or otherwise act in his place.

PUBLIC VACCINATOR,
PARISH OF WEALDSTONE.

The person appointed will be required to produce to the Council a certificate of proficiency in vaccination, unless such certificate was required as a condition of obtaining any diploma, licence, or order which he holds.

He will be required also to enter into a contract with the Council in accordance with the Vaccination Order, 1930, of the Ministry of Health. The contract will provide for the payment of the minimum fees laid down in the Order.

Application, stating (1) name, (2) age, (3) qualifications, and experience, accompanied by copies of not more than three recent testimonials, must be received at the Offices of the Council not later than April 30th.

No personal application or private communication will be allowed. Envelope must be endorsed "District Medical Officer" or "Public Vaccinator," as the case may be.

Canvassing, directly or indirectly, will disqualify.

ERNEST S. W. HART,
Clerk of the Council.
Guildhall, Westminster, S.W.1.
April 8th, 1932.

THE BOARD OF CONTROL (LUNACY AND MENTAL DEFICIENCY)

[illegible] MEDICAL OFFICER [illegible] made at LAVINGTON STATE INSTITUTION FOR MENTAL DEFECTIVES, [illegible] at HEDFORD, NOTTS. [illegible] per annum [illegible] £40 [illegible] £60 [illegible] with [illegible] £100 [illegible] £60. [illegible] free furnished [illegible] Further particulars [illegible] at [illegible]

Candidates [illegible] Medical Practitioners [illegible] Certificates [illegible] Applications [illegible]

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL MAIDSTONE (110 Beds)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON (male) which becomes vacant on May 1 the next Candidate must be duly qualified registered Medical Practitioners single and of British birth and nationality and should have had experience of Ophthalmology He must be prepared to be recognized by the Examining Board for the DOMS The appointment will be for six months but may be renewed for a second six months Salary at the rate of £230 per annum with board residence and laundry

Applications stating age together with copies of not more than three testimonials should be sent to the undersigned not later than Monday May 2nd

JOHN W SHERLAND
Secretary

LIVERPOOL SANATORIUM

DELAMERE FOREST RODSHAM
(175 Beds)

ASSISTANT TO THE MEDICAL SUPERINTENDENT

The Committee of Management invite applications for the post of Assistant to the Medical Superintendent at a salary of £2 0 0 per annum with board residence and laundry

The appointment will be for twelve months commencing as soon as possible

Candidates must be fully qualified and registered

Applications forms may be obtained from the Medical Superintendent at the Sanatorium Rodsham to whom they must be returned accompanied by copies of three recent testimonials not later than Monday May 14th

WORCESTER COUNTY AND CITY MENTAL HOSPITAL LOWER WICK near WORCESTER

JUNIOR ASSISTANCE MEDICAL OFFICER (male) single required Candidates must be duly qualified in Medicine and Surgery Salary £350 per annum rising by four annual increments of £25 to £450 per annum etc with furnished apartments board laundry and attendance

The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909 Applications stating age and full particulars together with copies of three testimonials to be forwarded to the Medical Superintendent not later than Friday May 6th

THE ROYAL CWENT HOSPITAL NEWPORT MON (160 Beds)

Wanted a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out Patients and as House Physician

Salary £135 with board lodging and laundry Resident Medical Staff—five Eligible for promotion

Large Out Patient Department

Applications stating age and qualifications with copies of three recent testimonials to be sent to the undersigned

Applications from ladies not entertained

J K MILWARD
April 18th 1932 Secretary Supt

OLDHAM ROYAL INFIRMARY

Applications are invited for the following posts

TWO HOUSE SURGEONS

Salary at the rate of £170 per annum with board residence and laundry

The appointment will be for a period of six months from May 1st

Applications stating age experience and qualifications to-day with copies of three recent testimonial must be forwarded to the undersigned not later than Wednesday April 27th

H T CLOUT
General Superintendent

NUNEATON GENERAL HOSPITAL
(80 Bed)

HOUSE SURGEON (male or female) required on June 1st Salary £150 per annum with board residence and certain other emoluments

Candidates must be fully qualified and registered The appointment will be for the period ending December 31st

Applications stating age qualification and experience with copies of not more than three recent testimonial should be sent to the Secretary Medical Board at the Hospital before April 30th

ABERDEEN ROYAL INFIRMARY

The Board of Directors invites applications for the following appointment to the Honorary Staff—viz ASSISTANT PHYSICIAN

Each candidate in his application should submit a full statement of qualification and experience along with testimonial and fifteen copies of each should be lodged with the Clerk and Treasurer Alex Ian Royal Infirmary 230 Union Street Aberdeen not later than Saturday May 7th

ROYAL CHEST HOSPITAL
City Road E C 1
(Royal Northern Group of Hospitals)

Applications are invited for the following posts

RESIDENT MEDICAL OFFICER This post will be vacant on June 1st The appointment is for six months which selection is required Salary at the rate of £1 0 0 per annum with board residence and laundry

HOUSE PHYSICIAN The post will be vacant on June 1st The appointment is for six month Salary at the rate of £100 per annum with board residence and laundry

Applications with copies of testimonials should be sent on or before May 7th to the undersigned from whom forms of application rules and further particulars may be obtained

CHARLES C PANTER
Royal Northern Hospital Secretary
Holloway Road N 7

NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM
Queen Square W C 1

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer and should be sent to the undersigned accompanied by three recent testimonials not later than Monday May 9th The salary is £200 per annum with board and lodging

Applicants should state if they are willing to act as anæsthetist for Dr Thurstan (salary £150)

COLLEEN H HAMILTON
Secretary

NORTHAMPTON GENERAL HOSPITAL
(246 Beds)

There is an immediate vacancy for ONE HOUSE SURGEON to the Ear Nose and Throat Department British nationality Salary £150 per annum with board residence and laundry The successful candidate will be appointed for six months subject to satisfactory termination Applicants for September 30th and will be eligible for re-election for a further period

Candidates must be duly qualified and registered

Applications stating age sex qualifications etc with copies of testimonials should be sent to the undersigned

H ST JOHN WOOD
April 16th 1932 Secretary Supt

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL
(220 Surgical and Medical Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post The term is five months Salary at the rate of £130 per annum with board apartments and laundry

Applications stating age together with copies of three recent testimonials should be sent to the undersigned

C STANLEY
April 18th 1932 Supt & Secretary

SOUTHAMPTON CHILDREN'S HOSPITAL & DISPENSARY FOR WOMEN (45 Beds)

The Board of Management for the post of RESIDENT (lady) Six months 30th Salary at the rate of £100 per annum with board residence and laundry

Application stating age and accompanied by copies of testimonials to be sent to the undersigned not later than April 25th

FITZ MATTHEWS
Secretary

THE RIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (120 Beds)

HOUSE SURGEON REQUIRED (MALE)

Salary £150 per annum with residence board and laundry Applications with not more than three testimonials to be sent to the Assistant Secretary Miss SUSAN SMITH South Cliff Ridderminster

VICTORIA HOSPITAL FOR SICK CHILDREN HULL (Incorporated)

RESIDENT HOUSE PHYSICIAN required Salary £100 per annum with board residence and laundry Applications (with copies of recent testimonials) stating age qualifications experience and other particulars to be sent to the Secretary

WHITEHAVEN AND WEST CUMBERLAND HOSPITAL WHITEHAVEN (90 Beds)

Wanted for May 2nd HOUSE SURGEONS (male) one Senior and one Junior Salaries at the rate of £150 and £100 respectively with board washing and residence in the Hospital Six months appointment Applications with 3 testimonials required to be sent to the Secretary en clope marked House Surgeon

NOTTS COUNTY MENTAL HOSPITAL RADCLIFFE-ON-TRENT

The Committee of Visitors invite applications for the position of SECOND ASSISTANT MEDICAL OFFICER from gentlemen duly registered under the Medical Act

Salary will start at the rate of £450 per annum rising by £25 per annum to maximum of £500 per annum together with full residential allowances which for superannuation purposes at £103 4 per annum (Salary is subject to a temporary reduction of 5 per cent)

The appointment is subject to the Asylum Officers Superannuation Act 1909 and will also be subject to one months notice on either side

Application forms which must be returned not later than April 30th may be obtained from the Clerk to the Committee Mr J E CELL

THE SHEFFIELD ROYAL HOSPITAL
(340 Beds)

There will be vacancies on April 30th for three Resident

(1) An ASSISTANT CASUALTY OFFICER AND HOUSE SURGEON
(2) An ASSISTANT CASUALTY OFFICER AND HOUSE SURGEON
(3) A RESIDENT ANÆSTHETIST

Salary at the rate of £80 per annum rising to £100 per annum in six months with board residence and laundries There are chosen resident medical officers Applications should be forwarded as soon as possible to—

W H BOOTH
April 14th 1932 Supt & Secretary

ST BARTHOLOMEW'S HOSPITAL ROCHESTER (126 Beds)

Rochester Chatham Gillingham and District

The House and Finance Committee invite applications for the post of RESIDENT PHYSICIAN Candidates must be unmarried qualified and registered Medical Men Salary is at the rate of £175 per annum with board residence and laundries The officer appointed will have charge of the medical beds Some knowledge of Ophthalmic work is desirable

Application stating age qualifications experience etc accompanied by copies of three recent testimonials to be sent to the Secretary

ST BARTHOLOMEW'S HOSPITAL ROCHESTER (126 Beds)

Rochester Chatham Gillingham and District

The House and Finance Committee invite applications for the post of HOUSE SURGEON who will act as Casualty Officer and have charge of the Orthopædic cases which will become vacant on June 1st

Candidates must be unmarried qualified and registered Medical Men The appointment is for six months Salary at the rate of £175 per annum with board residence and laundry

Application stating age qualifications experience etc accompanied by copies of three recent testimonials must be received by the Secretary not later than April 28th

THE GENERAL INFIRMARY AT LEEDS

HONORARY ASSISTANT PHYSICIAN

Notice is hereby given that a Meeting of the Special Election Committee will be held in the Board Room of the Infirmary on Friday May 20th 1932 at 4 30 p m to elect an Honorary Assistant Physician

Information as to the duties and necessary qualifications for the office will be supplied on request to the General Manager

Thirty two copies of applications to be addressed to the Chairman at the Infirmary and should be sent in on or before Friday May 13th

By Order of the Board of Management
H FINNISTON FRANCE
General Manager

STOKE-ON-TRENT WARD
(86 Beds)

Applications are invited for the post of RESIDENT SURGEON Salary £200 per annum with board residence and laundry (Resident Surgeon expected to perform minor operations) The post will be vacant from June 30th Applications stating age experience and qualifications giving earliest time for one and commencing duties if appointed and enclosing copies of recent testimonials to be forwarded to the undersigned not later than the first post on Monday April 25th

ARTHUR F MAW Secretary

DARLINGTON GENERAL HOSPITAL
(120 Beds)

The Committee invite applications for the post of SENIOR HOUSE SURGEON (male) British fully qualified Salary £175 per annum board residence and laundry

Special Department

Applications stating age qualifications experience together with copies of two recent testimonials to be addressed to the undersigned

The post is vacant mid May

A PIDDIT Secretary

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association (B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE.	**CONTRACT PRACTICE** (contd.)	**CONTRACT PRACTICE** (contd.)
EBBW VALE (Workmen's Medical Society)	SAKEHAM MAIN SICK AND ACCIDENT SOCIETY, ASHTHORPE. (Medical Practitioner)	COLLIERY VALLEY CLUB, (Medical Practitioner) (Preliminary Notice)
GILFACH GOCH, GLAMORGAN (Workmen's Medical Scheme)	WELTHAT VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. (Workmen's Medical Scheme)	**PUBLIC HEALTH**
LOWESTOFT MEDICAL INSTITUTE (Medical Officer)	NEATH AND DISTRICT (Medical Aid Association)	ANGLESEY COUNTY COUNCIL (Assistant Female Physician)
TEWANTIN, CLYDACH VALE, TENYCRAIG, GLAMORGAN (Workmen's Medical Scheme)	OAKDALE, MON. (Medical Officer for Medical Aid Association.	BERKSHIRE EDUCATION COMMITTEE (Assistant Physician)
MAERDY, GLAMORGAN (Workmen's Medical Scheme)		HAMPSHIRE EDUCATION COMMITTEE (Assistant Physician)
		STAFFORDSHIRE, BURTON, AUDLEY AND DUDLEY JOINT COMMITTEE'S TUBERCULOSIS (Assistant Physician)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (Friendly Societies Appointments)	Dr. J. C. HUNTER (Medical Secretary, New South Wales Branch), 150, Macquarie St., Sydney, N.S.W.	QUEENSLAND (Friendly Societies Institute)	The Hon. Sec., Queensland Local Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND (Friendly Societies Practice)	
VICTORIA (Friendly Societies or Medical Dispensaries)	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association), Medical Society Hall, East Melbourne, Victoria.	(Townships associated with Friendly Societies Medical Institute, Toowoomba)		WESTERN AUSTRALIA (Friendly Societies Practice)	

April 20th, 1932. By Order of the Council. ALFRED COX, Medical Secretary.

HULL ROYAL INFIRMARY (35th B.L.)

Applications are invited for the post of HOUSE PHYSICIAN (male) at the SUTTON BRANCH HOSPITAL as from May 5th.

The Branch Hospital contains 100 beds, one of which is for private patients.

The appointment will be for six months in the first instance, and will be terminable by one month's notice.

Salary at the rate of £160 per annum, plus board, lodging, and laundry.

Applications, giving particulars of experience and testimonials, together with copies of not more than two recent testimonials, should be sent to Tuesday, April 26th.

F. J. CALLENS, Hon. Secretary.

April 19th, 1932.

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON (24th B.L.)

HOUSE PHYSICIAN (male) required for six months from May 1st. Salary £120 per annum, with board, residence, and laundry.

Candidates must have had experience in general medicine, and must be registered in the British Medical Register.

Applications, stating age, and accompanied by copies of three recent testimonials, should be sent to the undersigned not later than April 30th.

[illegible] LEWIS LANCASTER CAVE, Secretary.

ROYAL UNITED HOSPITAL, BATH

[illegible] HOUSE PHYSICIAN.

[illegible] LAWRENCE EVANS.

MINEHEAD & WEST SOMERSET HOSPITAL, MINEHEAD, SOMERSET (5th B.L.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER at [illegible] Hospital.

Date of appointment June 1st. Appointment for a period of six months. Salary £150 per annum, with board, residence, and laundry.

Application, stating age, qualifications, experience, and publications, if any, and the names of three persons to whom reference may be made, should be sent to the undersigned not later than May 7th.

W. H. I. EDDA, Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.

The [illegible] SECRETARY will be glad to receive applications for the post of CLINICAL ASSISTANT in the [illegible] Department. The appointment is for a period of one year, and carries a salary at the rate of £100 per annum. It is open to candidates who have had experience in the treatment of children, and who are registered medical practitioners. Applications should be addressed to the Secretary, and should reach him not later than [illegible].

THE QUEEN'S HOSPITAL FOR CHILDREN, [illegible]

CLINICAL ASSISTANT [illegible]

[illegible] HOUSE SURGEON.

NATIONAL TEMPERANCE HOSPITAL, Hampstead, N.W.

[illegible] CASUALTY OFFICER [illegible] £120 [illegible] Male [illegible]

NATIONAL TEMPERANCE HOSPITAL, Hampstead, N.W.

[illegible] HONORARY ASSISTANT PHYSICIAN [illegible]

[illegible]

[illegible]

[

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
Tel MUSEUM 9861 (4 lines)

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Up to Six Lines (32 Words) 9s Each Additional Line, 1s 6d

(a line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

WANTED MAY 1 E INDOOR MALE ASSISTANT with view to share ultimately worth approx £1 000 p a for g Essex Practice in mid Coast Town Inform give details and copies of not over 30 years of age with a few years experience of private and panel practice with midwifery Salary £300 all found if own car Share for disposal not of 1872 to be further arranged —Addr s No 2352 BMA House Tavistock Square W C 1

WANTED — ASSISTANT MALE INDOOR motorist for country Practice in Midland Salary £300 to £350 according to experience age nationality to Addr s No 2329 BMA House Tavistock Square W C 1

WANTED — ASSISTANT (OUTDOOR) IN large mixed Practice Industrial Town 10 miles from Manchester Salary £450 p a increasing to suitable man State experience etc —Addr s No 2303 BMA House Tavistock Square W C 1

WANTED — ASSISTANTSHIP WITH PROSPECT of Partnership by MB BCh Trinity College Dublin Married two children (boy 5 girl) Own car Experienced general practice and panel work South or West England preferred —No 2321 BMA House Tavistock Sq W C 1

WANTED — ASSISTANT MALE OUTDOOR for light and interesting Mixed Practice Birmingham area Half midwifery Possibility of Partnership Early view to retirement Some capital necessary — Addr s No 2331 BMA House Tavistock Square W C 2

WANTED BY SCOTS GRADUATE (AGE 34) ASSISTANTSHIP (with or without view) or Institutional Appointment married 5 years hospital experience anæsthetic surgeons cases can handle x ray and private practice — No 2314 BMA House Tavistock Sq W C 1

WANTED PART TIME ASSISTANT Ealing SW 1 9—11 and 6—8 only no visiting White male Three guineas weekly Part May 1st Six months minimum — Address No 2355 BMA House Tavistock Square W C 1

WANTED — ASSISTANT (LADY) NEWLY qualified for a large general Practice near London (Diploma if poss) Coverage held qualification etc —Address No 2313 BMA House Tavistock Square W C 1

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WANTED IN [illegible] Practitioner qualified for [illegible] Capital available Full particulars No 2304 BMA House Tavistock Sq W C 1

WANTED [illegible]

[illegible]

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Applications are invited for the post of CLINICAL ASSISTANT now vacant in the Out Patients Department on Fridays at 5 p m The appointment will be for six months a fee of three guineas being payable on appointment Applications should be addressed to the undersigned on or before May 7th

RAYMOND BLIT Secretary

COLBITT HOSPITAL STOURBRIDGE

HON ANAESTHETISTS

The Board of Management give notice that there are vacancies on the Medical Staff of the Hospital for Two Hon Anaesthetists

Applicants duly qualified are requested to send in their application with testimonials and sufficient evidence of their degrees and diplomas to the undersigned not later than Friday May 6th

W G H WESTON Secretary

HARTLEPOOLS HOSPITAL HARTLEPOOL

Applications are invited for the position of HOUSE SURGEON Salary £120 per annum Board residence and laundry Post vacant April 30th

Applications with copies of three testimonials should be sent to the undersigned

CLO SHAW Secretary

HARTLEPOOLS HOSPITAL HARTLEPOOL

Applications are invited for the following vacancies

HONORARY AURAL AND OPHTHALMIC SURGEON
HONORARY RADIOLOGIST

Applications should be sent to the undersigned not later than April 30th

CLO SHAW Secretary

DURHAM COUNTY HOSPITAL (100 Beds)

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CASUALTY OFFICER (non Resident) Salary at the rate of £150 per annum with lunch on and tea Appointment for six months The holder will be required to attend the Out patient Department from 9 a m to 5 p m

Applications with copies of three recent testimonials to be sent to the Secretary on or before Friday May 6th The successful candidates will be required to take up their duties on June 1st

ROSSENDALE MANCHESTER CHILDREN'S HOSPITAL PENDLEBURY near MANCHESTER (190 Beds)

Wanted a RESIDENT SURGICAL OFFICER Salary £125 per annum who will be appointed for six months Duties to commence June 1st Candidates must be unmarried and duly registered Previous hospital experience essential A Fellow or Member of the Royal Colleges of Surgeons would receive preference

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned not later than Thursday May 5th

Canvassing directly or indirectly may disqualify

By Order
W M HUMPHRY
April 21st 1932 Secretary

THE LONDON FEMALE LOCK HOSPITAL
283 Harrow Road W 9

Appointment of ASSISTANT NON RESIDENT SURGICAL LECTURER (Part time) The Board of Management invite applications for the above appointment

Honorarium at the rate of £50 per annum The appointment is for one year commencing May 9th Candidates who must be doubly qualified and duly registered are invited to send in their applications together with three copies of testimonials to the Secretary not later than 10 a m on Monday May 2nd Copies of the Laws and By laws relating to this appointment can be obtained on application to the Secretary

April 18th 1932

ILKESTON GENERAL HOSPITAL (60 Beds)

Wanted a fully qualified RESIDENT HOUSE SURGEON (lady) Salary £140 per annum with board residence and laundry Applications stating age and qualification with copies of recent testimonial to be sent to the Chairman General Hospital Ilkeston on or before May 12th

ESSEX COUNTY HOSPITAL COLCHESTER (250 Beds)

Wanted in May ASSISTANT HOUSE SURGEON Salary £120 with board washing and residence Medical and Surgical qualifications required

Applications with three recent testimonials to be sent by Wednesday April 27th to—

ARTHUR G BUCK Secretary

KING GEORGE HOSPITAL ILFORD (London)

Applications are invited for the appointment of TWO HOUSE SURGEONS (male) Salary £100 per annum with board residence etc Term six months with eligibility for a further period Applications should be sent immediately to the Secretary

HARROGATE INFIRMARY

Applications are invited from British subjects (male) for the post of JUNIOR HOUSE SURGEON (now vacant) for the period terminating September 30th Salary at the rate of £140 per annum with board and lodging Applications should be sent in immediately

GEO BALFANTYNE Secretary

The Infirmary

BRADFORD CHILDREN'S HOSPITAL

HOUSE SURGEON (lady) wanted *Fully qualified* Salary £100 with board residence *and laundry* Application stating age with recent testimonial not later than *May 4th* to—

J W LONGLEY Secretary Superintendent

CHELTENHAM GENERAL AND EYE HOSPITALS

The Board of Management invite applications for the post of HOUSE PHYSICIAN (male) at the General Hospital.

Candidates must be unmarried, have had experience in Medicine and Surgery, and be registered in the United Kingdom.

Salary £200 per annum, with board, lodging and laundry.

Applications, with copies of testimonials, to be sent in by Monday, May 2nd.

Canvassing will disqualify.

J. CUMMING SMITH, F.C.I.S.,
Secretary.

The General Hospital,
April 14th, 1932.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, BRIGHTON (100 BEDS).

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum, with board, lodging and laundry. Summer holidays allowed. Term of office to commence on July 1st.

Applications, in writing, accompanied by three testimonials, should be sent to the SECRETARY, Royal Alexandra Hospital, Brighton, not later than Saturday, May 28th.

APPLICATIONS ARE INVITED FOR THE POST of HONORARY MANIPULATIVE ORTHOPAEDIC SURGEON to the LONDON LIGHT AND ELECTRICAL CLINIC. Candidates should have had experience in Manipulative Orthopaedic Surgery. Particular reference to the lumbar joint disease.

Applications should be sent not later than April 28th to the Central Supervisor of Treatment, Rivington House, 32, Chiltern Street, London, W.1.

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LANCASHIRE [illegible] ESTABLISHED — £[illegible] [illegible] Valuation [illegible] Partnership [illegible] Salary [illegible] Expenses [illegible] Share [illegible] Interview [illegible]

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All communications to be addressed to the Branch Manager BRITISH MEDICAL BUREAU 33 CROSS ST. MANCHESTER.

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4 E DEVON — Practice averaging nearly £1 300 p a in beautifully situated Market Town Panel 886 House (6 bedrooms 2 attics) with garage and garden for sale Scope for increase Premium 1 years purchase

5 LONDON S W —Practice averaging £580 p a in Suburban District Panel (recently started) 40 but considerable scope House on main road rent £70 p a Prem £750

6 LONDON E—Cash and Panel Practice of nearly £550 p a in populous area Panel 320 Shop (fronted by (3 bedrooms) with garage for sale or rent Premium for quick sale £500

7 S OF ENGLAND — Practice averaging £1 035 p a in flourishing and attractive town within 90 miles of London Panel over 800 House (6 bed and drawing rooms) with half an acre of garden for sale Scope Premium 1½ years purchase

8 HOME COUNTIES — Partnership in Country Practice averaging £2 150 p a in delightful part within 40 miles of London Panel 1 120 Choice of two houses to rent Good schools in the neighbourhood Premium one half share 2 years purchase

9 S W OF ENGLAND — Town Practice, averaging about £1 450 p a No panel Well situated house (5 bedrooms) garage and garden for sale Plenty of sport Good hospital and scope for surgery Premium 1½ years purchase

10 LONDON W —Mixed-class Practice averaging £580 p a in suburban district Detached double fronted House (6 bed and dressing rooms) with small garden for sale Premium 1½ years purchase

11 MIDLANDS — Partnership in Practice averaging £8 300 p a in famous and attractive country town Partner should have experience in general Surgery and of Ear Nose and Throat work and be trained in a London Hospital A one-sixth share at 2 years purchase and further shares later Preliminary Assistantship

12 NORFOLK — Working-class Practice, averaging £2 050 p a in important town and agricultural centre Panel 2 300 Excellent house (6 bed and dressing rooms) in central position Good garage etc for sale Premium for Practice 1½ years purchase

13 W OF ENGLAND —Partnership in old-established Practice of about £1 545 p a in first rate City Panel 1 348 Choice of houses Share worth about £700 p a at 2 years purchase

14 MIDLANDS — Steadily increasing Practice of between £1 100—£1 200 p a in thriving town one and a half hour by rail from London Excellent house (6 bedrooms) garage and garden for sale Cottage Hospital Premium 1 yrs Purchase

15 S WALES —Partnership in Colliery and Panel Practice of £2 000 p a in pleasant district easy distance of Cardiff Panel 2 150 Premium one third share 1½ years pur

16 LONDON, S W — Cash Practice about £1 100 p a close to the West End Panel about 1 250 which could be considerably increased Valuable corner residence for sale Premium for Practice £1 000 only

17 LONDON E —Cash and Panel Practice of £840 p a in populous district Panel 570 Small house to rent on lease Premium 1½ years purchase

18 ESSEX —Partnership in Practice of £5,400 p a in developing country district easy distance of coast Panel 3 600 Detached house (6 bedrooms) garage and good garden for sale Scope for increase One fourth share 2 years Purchase

19 S COAST — Lock-up Practice, averaging £480 p a in rural district on outskirts of popular holiday resort Panel 400 Rent of Surgery premises 10/ weekly Prem £600

20 EASTERN COUNTIES — Partnership in Practice averaging £4 400 p a in market town Suitable house available Share of £1 000 p a at first at 2 years purchase Cottage Hospital Applicant must have surgical experience

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25. SHROPSHIRE.—Practice £800 p.a. in market town. Earning £700. Suitable house to purchase. Premium by valuation, purchase.

26. WALES.—Partnership in Practice over £1,000 p.a. in manufacturing town. Earning £1,400. Suitable house to rent. Premium for one-third share £1,250, 2½ years purchase.

27. S. WALES.—Mixed Practice in growing market town. Present assistant's salary £600. Earning £700. House (6 bedrooms) garage and garden to rent. Opportunity for Practice. Premium £1,250.

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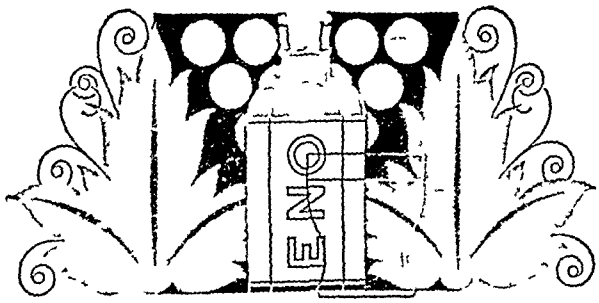
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CONTENTS

APRIL 30 1932

ORIGINAL ARTICLES

The Origin of Tumours By F I Lockhart Mummery F R C S 785

A Note on the Operative Treatment of Facial Palsy By Sir Charles Ballance I I D F R C S 787

Osteo Arthritis By Matthew B Ray M D 789

A Case Illustrating Failure of Intravenous Liver Therapy in Pernicious Anaemia. By J G McCrie M B F R C P E 792

The Nomenclature of Eclampsia. By Bethel Solomons M D F R C P I and Francis Bourke F R C P I 794

Tooth Extraction and Chronic Infective Endocarditis By Herbert H Brown M D F R C S 796

MEMORANDA

Haematoma of the Castro-Colic Omentum By W C W Nixon F R C S 797

CLINICAL PROCEEDINGS

South Eastern Counties Division
Specific Therapy of Puerperal Fever Erysipelas and Scarlet Fever 797

REPORTS OF SOCIETIES

Royal Microscopical Society
Micro copy of Filterable Viruses 798

Royal Society of Medicine
Puerperal Fever and Pyrexia 800
Infection in the Dormitory 801

Hatley Medical Society
The Origin of Tumours 803

Medical Society of Individual Psychology 804

Devon and Exeter Medico Chirurgical Society
Dr Hugh Cabot on Urology 805

REVIEWS

Cunningham's Anatomy 806
Stimulation Therapy in G P I 807
Pathogenesis of Pulmonary Tuberculosis 807
Birth Control 807
The Use of the Self 808
Notes on Books 808

LEADING ARTICLES

Cardio Vascular Syphilis 810

Medical Research and the Patent Law 810

THE WEEK

Criminal Statistics 811
Brain and Mind in East Africa 812
Dangerous Drug Traffic in Egypt 813
A New Eruptive Fever? 813
The J B Murphy Oration 814
The Planning of Laboratories 814
New Pottery Regulations 814

GENERAL ARTICLES AND NEWS

Welfare of the Blind and National Economy By J Mayhs Rickerton F R C S 815

Medical Research Council Award of Fellowships 816

Treatment of Cancer Ministry of Health's Circular 816

A Pharmaceutical Centenary 820

Preparations and Appliances (Illustrated) 809

Medical Notes in Parliament
Deaf and Mentally Defective Children Education 824
Blood Relief for China 824

Medical News 825

OBITUARY

Sir W Watson Cheyne, Bt. F R C S (With Portrait) 821

Thomas Duff L I C P & S 822

MEDICO LEGAL

Unusual Claim Under Assurance Policy Accident or Disease 822

UNIVERSITIES AND COLLEGES

University of Cambridge 823
University of London 824
University of Glasgow 824

THE SERVICES

Army Advisory Committee on Maxillo-Facial Injuries 825

(For Naval Military and Air Force Appointments see SUPPLEMENT)

CORRESPONDENCE

The Type of Stomach Predisposing to Duodenal Ulcer By Arthur F Hurst M D F R C P (With Charts) 817

Polycythaemia Rubra and Achlorhydria By F Parkes Weber M D F R C P 817

Malignant Disease of Pharynx and Larynx By Francis F Mueck F F P S 818

Bladder Healing After Suprapubic Cystotomy By Harry C Satterford Darling M S F R C S 818

Preparation for Marriage By Sir Arthur Newsholme M D F R C P and Edith Summerskill M P C S 819

Methods of Anaesthesia By P W Hornabrook M B 819

L C C Pathological Service By Sir E Graham Little M D F R C I 820

Treatment of Osteo-Arthritis of the Hip By B Whitchurch Howell F R C S 820

LETTERS AND ANSWERS

Plantar Corns 826
Income Tax 826
Anaesthetic Masks 826
Doctors and District Nurses 826
Medical Golf 826
Brain of the East African Native 826
B faecalis alcaligenes as an Index of Water Purity 826

VACANCIES 826
(*See also page 20 of* SUPPLEMENT)

The SUPPLEMENT contains

Annual Report of Council 1931-32.

National Health Insurance
Inquiry into a Practitioner's Conduct

Conference on Medical Research and Patent Law

Current Notes
Sir Charles Hastings Memorial
Ophthalmic Surgeons and Association with Bodies of Unqualified Persons
Testimonial to Dr Cox
Sir Charles Hastings Clinical Prize

Association Notices Correspondence Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Churchill J & A
Allbutt's System of Medicine 4
Hamilton's Clinical Pathology 4
Jex-Blake's Materia Medica 4

Lewis H K & Co Ltd
Coats's Diagnosis and Treatment 3
Crocket's Injuries of the Skull 3
Davis's History of Medicine 3
Elliot's Practical Ophthalmology
Cumberbatch's Refraction for Cataract 4
Glaucoma 4
Fisher's Atlas of Clinical Arthritis 3
International Documents of the Year's Work Joint 3
Treatment by Manipulation
Jerrold's Sterility in Women 3
Gould's Dictionary 3
Hayes Hall's Principles of Sanitary Law 3
Kaufmann's Pathology 3
Nettel's Pathology of Tumours 3
Riffle & White's Diseases of the Nervous System 3
Taylor's Acquaintance 3
Waters's Sanitary Law 3
Rawling's Landmark and Surface Marking of the Human Body 3
Rawling's Nursing Student's Guide to Surgery 3
Secrétan's Manipulation Habit 3
Smith's Forensic Medicine 3

Oxford Medical Publications
Elliot's Practical Ophthalmology 4
Gray's Anatomy 4
Treatise on Glaucoma 4
Practical Ophthalmology 4

ASSURANCE COMPANIES—
Century Insurance Co Ltd 4

BRASS NAME PLATES &c—
Cole Name Plates 20
Hord & Jones's Name Plate 3
Lee & Co Ltd—Name Plate 3
Osborne & Co—Name Plate 20

DEBT COLLECTION—
British Medical Protection Society 6

FOOD PREPARATIONS—
Bemax Laboratories—Bemax 20
Benger's Food 15
Cow & Gate Ltd—Milk Food Co 18
Nestlé & Anglo-Swiss Con. Milk Co
Lactogen 20
Valentine's Meat Juice 19
Wander A Ltd—Ovaltine 19

SURGICAL APPLIANCES—
Hall & Whitfield & Son—
Surgical Instruments 22
Beiersdorf Ltd—Leukoplast 8
Clarkson's Micro-cones 23
Curtis & Son—Supports 6
Down Bros & Co—Surgical Instruments 8
Hilliard's New Abdominal Belts
Manchester Machine & Instrument Makers Co Ltd—Ether Mixer 30
Manlove Alliott & Co Ltd—
Sterilizers 6
Medical Supply Association Ltd—
Sanitary Agent 7
Millikin & Lewis—
Instruments Otological etc 11
Salmon Oils—Surgical Adhesive 11
Salter's Surgical Service 8
Taylor E Ltd—Dexolac 6

MOTOR CARS TYRES &c—
Daimler Car Service 8
Lodge Sparking Plug 9
Second-hand Motors for Sale 41

PRINTING & STATIONERY—
Barlow R C—Barlet Typewriters 43
Remington Typewriters 10

CHEMISTS &c—
Allen & Hanburys Ltd—
Cocoa 17
Dextrin Maltose 19
Distillers Cream 19
Yeast Cream 7
American Pharmaceutical Co—
Salvitae 17
Bell Ewing & Co 12 14
British Drug Houses Ltd—
Contraspin 17
Eupin 11
Burroughs Wellcome & Co—
Tantigen 2
Carnrick G W & Co—
Hermoton Cover i
Crookes Ltd—Colol 7
Crookes Laboratories—
Colloid Products 4
Evans Sons Lescher & Webb Ltd—
Horlicks 1
Fox Chemical Co 8
Gibbs Dentifrice 15
Glaxo Laboratories—
Preparation Cover ii
Hewlett & Son Ltd—
Milk Diabetes Co 17
Hoffmann-La Roche Chem. Work
Digalen 3
Laboratory Naturelle Ltd—
Dialyin 4
Martindale W—
Remedies 11
Tablets 12
May & Baker Ltd—
Proprietaries Omnia 14
Milk Lyle Ltd—Medical Therapy 15
Morson & Stafford Hire Fittings Co—
Monocol 16
Newbery & Son Ltd—
Alka-Vane 1
Parke Davis & Co—
Adrenalin Cover ii
Peak Frodsham Ltd—Serum 17
Saccharin Corporation Ltd—
Novocain 2
Sharp & Dohme Ltd—Salyrgan 2
Wyleys Ltd—Saxlithin 2

TAILORING & UNDERCLOTHING—
Anderson & Son—Account Firm 43
Carnegie—Suits 21
Hall H—Medical Service Dress 21
Irish Linen Mesh Co Ltd—
Linen Mesh Underwear 28

TOBACCO & CIGARETTES—
Players's No 3 2

TRANSLATIONS TYPEWRITING—
Radford B—Typewriting etc 42

VACCINES & CULTURE MEDIA—
Allen & Hanburys Ltd—
Vaccines 20
Laboratories of Pathology & Public Health 28

WINES & SPIRITS—
Bollinger's Champagne 11

X RAY & ELECTRO MEDICAL APPARATUS—
Hamblin T Ltd—
Intensa Ionizer 8
Kodak Ltd—
Duplitized X Ray Film 9
Medical Supply Association Ltd—
Ediswan Thermex 7

BATHS SPAS &c—
Baden-Baden 5
Birkenhead Corporation 20
British Spinal Association 35
Harrogate 4
Llandrindod Wells 36
Wildbad

HOTELS & HEALTH RESORTS—
Clifton Hotel 6
Ilkley Wells Hotel 36
Margate 35
St Anne's Well Boy Hotel

CONTRACT PRACTICE & OTHER APPOINTMENTS—
INDEX TO APPOINTMENTS 41

HOSPITAL, &c VACANCIES—
Belfast Royal Infirmary 42
Birmingham General Hospital 42
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Bromley Cross Barrow & Lonsdale Hospital 43
Chester Royal Infirmary 43
Chester Royal Infirmary 43
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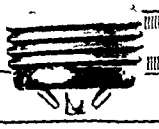
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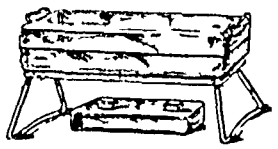


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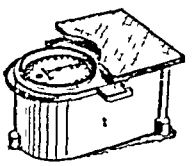
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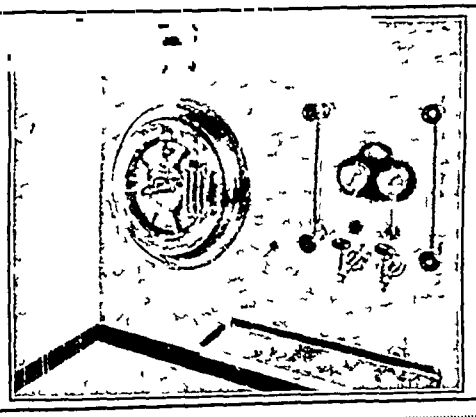
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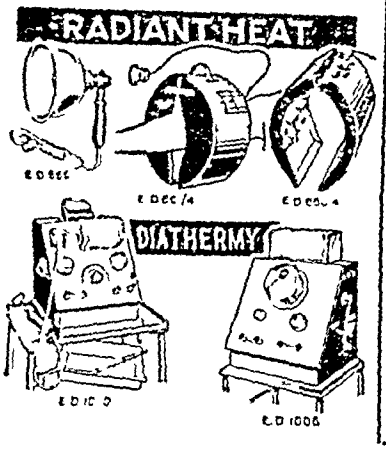
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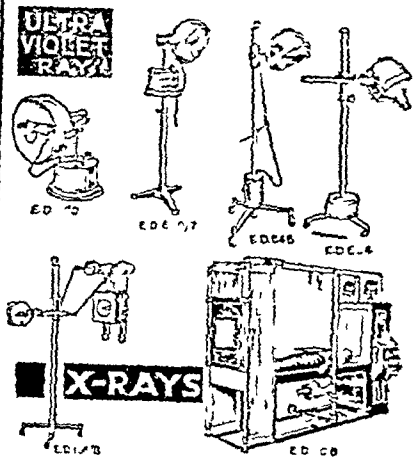
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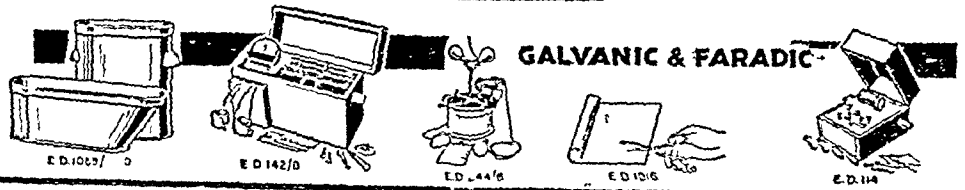
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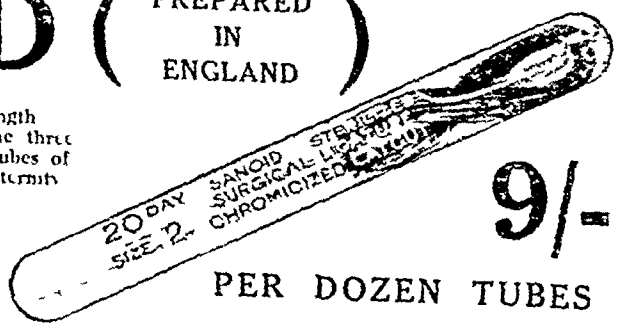
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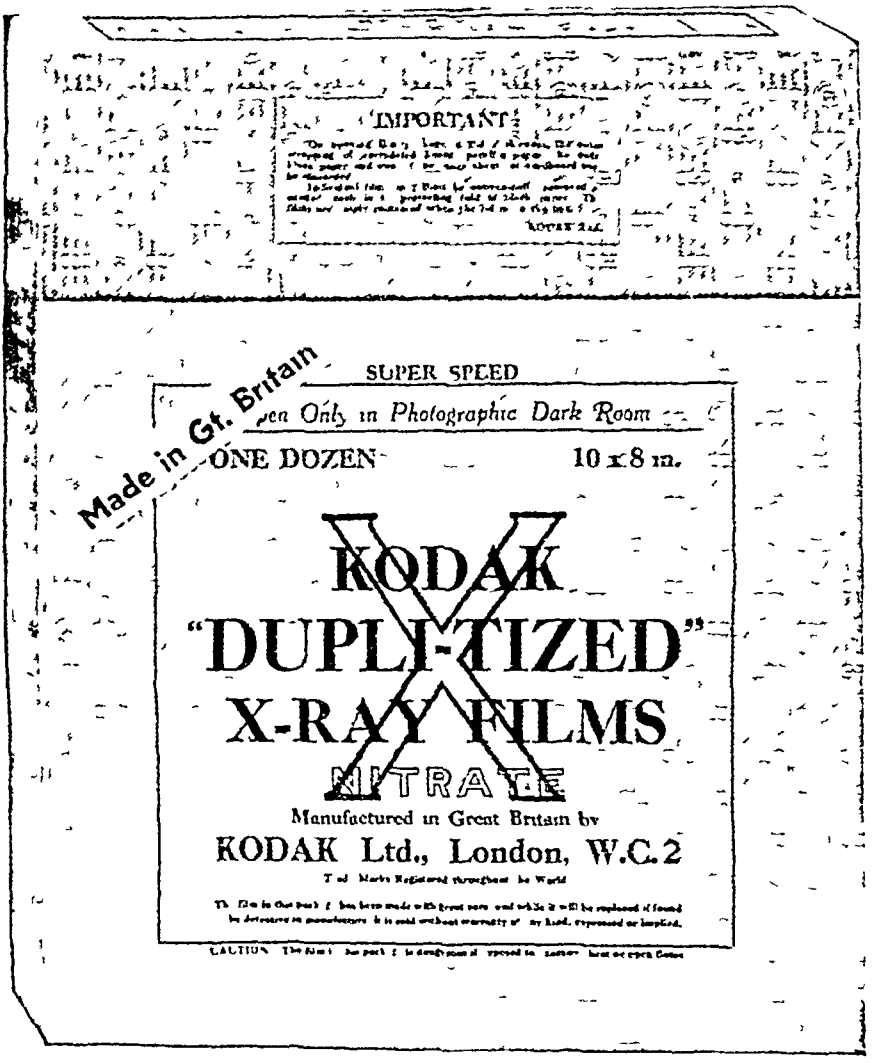
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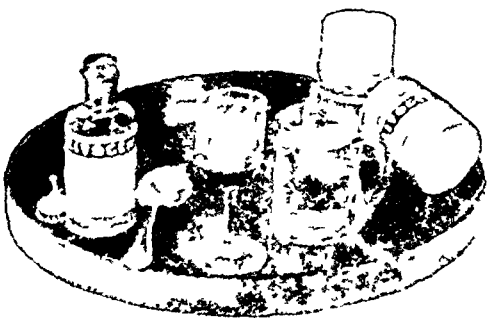
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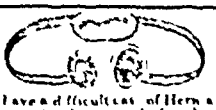
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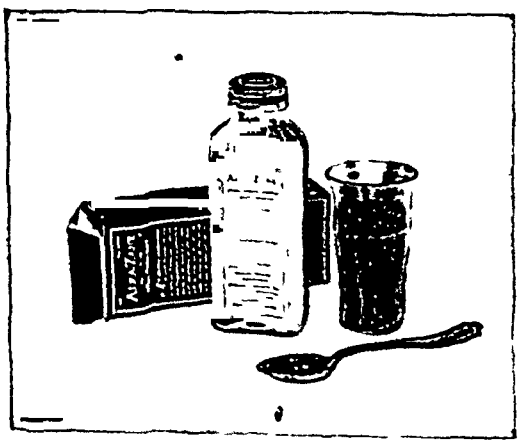
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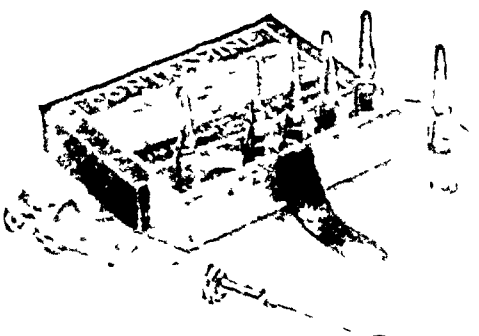
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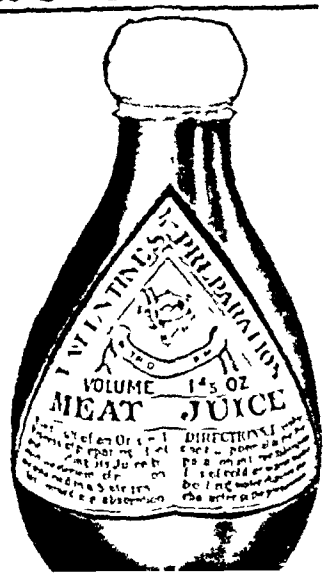


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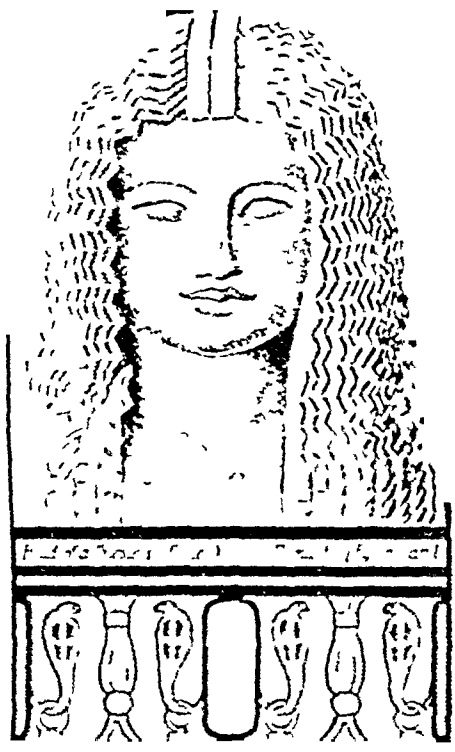
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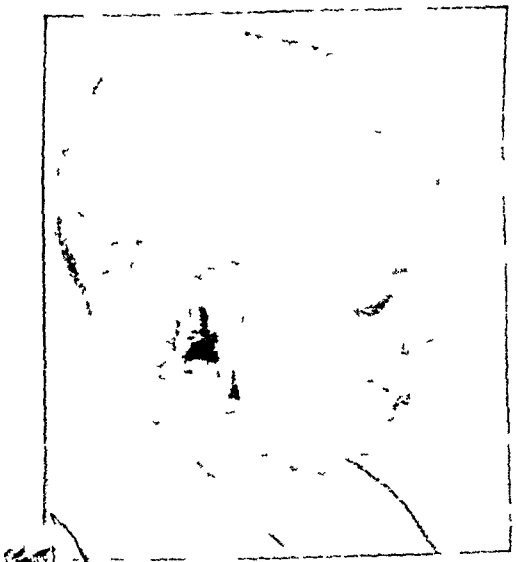
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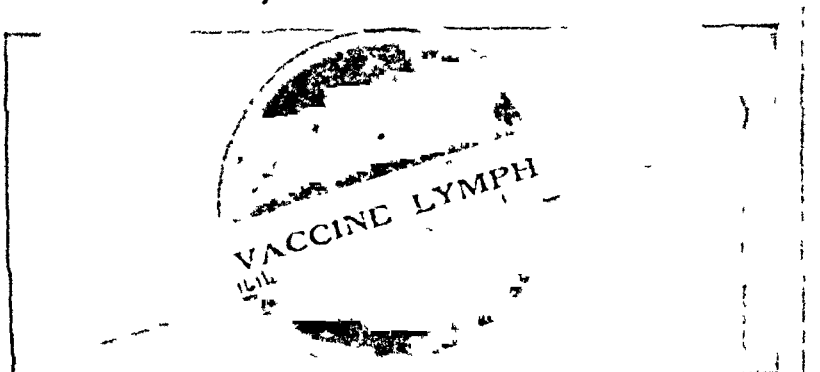
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B_1 (anti neuritic vitamin) (anti beri beri vitamin)	Restricted growth Loss of appetite Digestive complications Loss of co ordination	Ferromalt F C V D (Ferro cuprum with Vitamin D) Crookes' Emulsion with Yeast
B_2 (anti pellagra vitamin)	Loss of weight Pellagra	F C V D (Ferro cuprum with Vitamin D) Crookes' Emulsion with Yeast
C (anti scorbutic vitamin)	Scurvy	F C V D (Ferro cuprum with Vitamin D)
D (anti rachitic vitamin)	Rickets, etc Defective teeth Faulty absorption of lime and phosphates	F C V D Crookes' Emulsion " " with Calcium " " " Yeast Calcium with Vitamin D Vitamin A } Organon " A D } Concentrates
E (anti sterility vitamin)	Failure of reproduction Disturbances in gestation	Crookes' Emulsion " " with Calcium " " " Yeast

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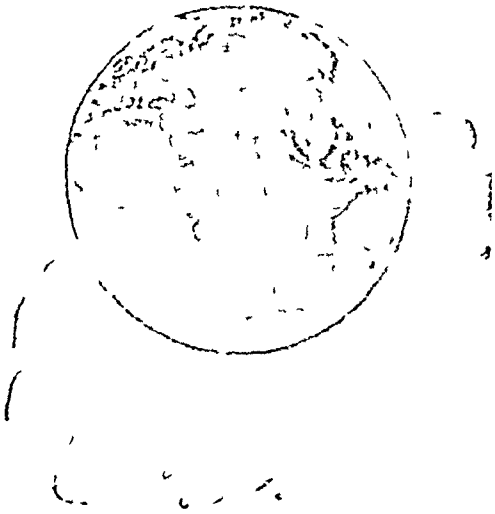
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A Paper
ON
THE ORIGIN OF TUMOURS *
BY
J P LOCKHART MUMMERY M B B CH F R C S

I am one of those who have maintained for many years that the secret of tumour formation which has for so long eluded us lies somewhere in the study *of the normal* tissue cells and that we cannot find the explanation by studying tumour tissue There have been a great many theories put forward to explain the origin of tumours but none of them have fulfilled the necessary conditions Any theory of tumour genesis must be able to explain certain well established facts Every fact must fit into the theory and if it does not then either the fact is wrong and is not admissible or the theory is false and must be abandoned *or modified*

PROPERTIES OF TUMOURS

I shall now briefly state what appear to be established facts about tumours which any theory of their aetiology will have to explain

1 Tumour cells grow by their own division and not by converting neighbouring cells into tumour cells

2 The tumour cell is specific to its original character wherever it may be Thus the cells of a tumour which started in the rectal epithelium retain the character of rectal epithelium *even if they are growing* in the liver in the brain or in a bone

3 Tumour cells are species specific Thus human tumour cells will not grow in any other animal

4 Not only are tumours species specific but there are a very great many different kinds of tumours for any single species and for each different tissue We classify tumours according to the tissue in which they originate but the tumours of the same tissue show great differences Some grow faster than others *some are more* resistant to radium some tend to degenerate etc some to regress and while some secrete others do not It is seldom that two tumours are met with which are really identical in every respect

5 Tumours can be produced by a great many different agents such as tar some aniline dyes cobalt sunlight heat lime (as in betel nut chewing) chronic sepsis (as in varicose ulcers of the leg and in septic sinuses) parasites (as in cancer of the stomach produced in rats by *Spirotera neoplastica* and in men by the ova of bilharzia) radium and x rays and the cell free filtrate which produces the Rous sarcoma There are in fact a very large number of carcinogenetic agents but there is no common factor between them

6 Where there is a known cause of tumour formation acting at a certain time there is evidence that a latent period occurs before the appearance of the tumour This latent period is a very constant factor in the genesis of tumours

FACTORS INFLUENCING CELL CHANGE

Tumour cells do not differ from normal cells in histological structure and isolated tumour cells cannot be distinguished from the normal cell of the tissue in which they arose unless their altered relationship to the neighbouring cells and more particularly to the cells of the connective tissue can be seen In fact tumour cells are normal cells which are behaving abnormally It is the behaviour of the cell and not its apparent structure that differentiates it from the normal cell from which it arose It seems probable that all the cells of the body reproduce themselves at certain times in order to replace cells which have become worn out or old There is a beautifully exact *adjustment to the requirements of the tissue concerned* and it seems certain that every cell in the body is subject to some control as regards its behaviour and that the chief controlling mechanism resides in the cell itself It is true that the behaviour of any cell may be profoundly modified by its environment and by factors outside the cell Hormones from the thyroid the pituitary the gonad the adrenal and many other glands affect the behaviour of whole groups of cells Hormones or similar substances *from other cells* also affect the cell s behaviour as is seen in the repair of injuries but the response of the cell to these various factors is fixed and its behaviour is primarily determined by its own inherent controlling mechanism which is inherited from the germ cells from which it originally arose The individual cell is much like a human being it may be greatly altered by its surroundings its nourishment and hosts of other factors but its inherent character and the way in which it will *respond* to *different* factors in the environment is determined by the genes it has inherited from its ancestors When we find that a cell or a small group of cells is behaving in a radically different manner from its neighbours in the same area we are forced to conclude that some radical change has taken place in the nucleus of the cell

ANALOGY OF GERM CELL

We can now attempt to visualize the nature of this controlling mechanism which resides within the cell but in order to do so we must refer to our knowledge of the germ cell in which the behaviour of the cells can be studied most easily We know from recent biological studies that every *human cell* contains twenty four pairs of chromosomes within its nucleus that each chromosome contains a vast number of genes and these genes control the behaviour under every possible condition of every cell wherever it may be situated

When one germ cell unites with another germ cell of the opposite sex to form the fertilized germ cell which will ultimately become the foetus this fertilized germ cell will contain in its nucleus a complete double set of twenty four *chromosomes* (in the case of man) nd a complete set of genes from both the original parent cells The genes in this cell will control after *differentiation has* commenced what the daughter cells will become in the developing foetus whether they become muscle cells nerve cells bone cells epithelial cells or connective tissue cells and how they will behave so long as they exist and will even determine their life cycle

Now if this is true of the germ cells—and no one disputes it—then it must be equally true of the somatic cell It seems impossible to argue otherwise It must not be overlooked that the somatic adult cell also reproduces itself There are two distinct forms of reproduction of cells reproduction by fertilized germ cells and partheno genesis of ordinary or somatic cells Individuals develop according to the characters they inherit from their parents and in the same way the tissue cells develop according to the characters *they* inherit from *their* parents The parent or *father* of every *cell* decides the character and behaviour of the daughter cells and this is just as true of the somatic cells as it is of the *germ* cells There are two kinds of inheritance the inheritance of the germ cell and the inheritance of the somatic cell In the recognition of this fact lies the explanation of tumours We know from studies of the germ cells that a change can occur in the nature of the genes of a germ cell from influences in the environment and therefore extrinsic to the cell itself Such a change in a gene is

* Read at the inaugural meeting of the Harley Medical Society London March 10th

called a mutation, and when a mutation occurs the gene or genes concerned will continue to breed true to the mutation or change which they have undergone. It is believed by most biologists at the present day that accidental gene mutation has been largely responsible for the evolution of new species by giving natural selection changes selectively to protect advantageous mutations.

Theory of Gene Mutation

If a gene mutation can occur in a germ cell or a cell which is going to become a germ cell then it can also occur in a somatic cell and the consequences though not the same, will be similar.

Let us attempt to visualize what may happen if an epithelial cell is exposed to some external influence which results in a mutation to one of the genes within its nucleus. Such a cell will when it next undergoes mitosis pass on to its daughter cells the mutated genes and there will be a change in the behaviour of the daughter cells as compared to the parent cell from which they originated. If we suppose that the mutation is a bad one then the daughter cells will be at a disadvantage and will probably not survive for long or will die at once and the mutation will cease to exist as happens when a bad mutation takes place in the germ cells. If on the other hand the mutation is one which is not necessarily disadvantageous or which gives one definite advantage to the daughter cells the mutation will tend to persist during the life of the organism of which the cells containing the gene mutation form units. Should the gene mutation be one for excessive reproduction—that is to say reproduction in excess of the normal rate for that particular cell—it is obvious that the daughter cell which will result when that cell next undergoes mitosis will be at a considerable advantage as compared with the other cells around them and will tend to increase abnormally at the expense of the surrounding cells. In other words the beginning of a tumour will have resulted. The cells in the mutated colony will be normal cells except that their rate of reproduction will be faster. This is exactly what a simple adenoma or papilloma of epithelial tissue is found to be.

Its Application to Somatic Cells

It will be argued that no experimental evidence of gene mutation in somatic cells is forthcoming, and that we are not justified in accepting such a theory without experimental proof. Yet there are many phenomena which cannot be investigated by experimental methods. Fortunately Nature is continually doing experiments herself and if we are sufficiently observant and can correctly interpret the results of her experiments it is sufficient to establish the truth. Gene mutation in somatic cells cannot be proved by experimental laboratory methods at present.

This theory or hypothesis of tumour genesis explains how it is that an apparently normal cell becomes parasitic upon its neighbours. It explains the essential difference between a tumour cell and a normal cell and if it is correct it must explain all the facts with regard to tumours that are known to be true. Any agent that produces a gene mutation in a somatic cell may result in the production of a tumour if the mutation affects the genes so as to increase the normal rate of mitosis. We know from the study of genetics that gene mutation can be produced in many different ways which have no apparent connexion with each other and that under natural conditions gene mutations do occur and have been occurring throughout the history of life since they are one of the chief causes of variation in species. Mutations in germ cells have been produced artificially in several different ways. Thus Morgan produced a gene mutation in the fly *Drosophila* by heavy doses of x rays and Mottram produced gene mutation by exposing the flies to the beta rays of radium and by exposing the female *Drosophila* to CO. It is certain that gene mutation can be produced by very many different agents and if tumour formation is due to mutation of somatic cells it is understandable why we find such diverse agents with carcinogenetic properties.

Such a theory of tumour genesis explains why tumours grow by division of their cells and not by converting the neighbouring cells with which they are in contact into tumour cells. It is perfectly understandable on this theory as the mutated cells which form the tumour only differ from the normal cells in that they have an excessive power of growth but there is no way in which they can convey their power to other cells except by inheritance to their own daughter cells. The intensely specific character of tumours is immediately understandable. A gene mutation must breed true and a cell containing a gene mutation will breed true to the mutation as long as its somatic life exists. An epithelial cell in the mucous membrane of the intestine having undergone mutation of its genes to excessive or abnormal rate of growth becomes in time the parent of a mass of similar epithelial cells which have the power of abnormal growth and these offspring of the mutated parent cell will become a tumour. The cells composing it will always retain their characters of intestinal epithelium wherever they may be. Their transplantation into the liver brain or bones is an accident resulting from their excessive growth but in no way alters their specific characteristics. Their growth rate and their fate may be profoundly altered by differences in blood supply in the character of their connective tissue connexions and other factors resulting from the change in their environment but they will retain the characters of the parent epithelial cell from which they arose. This theory explains the enormous variety and complexity of tumours which may arise even from the same tissue and a great variety of tumours is what we should expect depending upon the particular tissue in the cells of which the mutation occurred and the particular genes in the nucleus which have mutated.

Critical Examination of Theory

There is a marked hereditary factor in cancer incidence and breeding experiments have shown that by selective breeding this factor can be greatly increased. Thus in some strains of mice bred by Loeb the cancer rate was as high as 90 per cent of those who reached the cancer age while in other strains it was zero. These experiments all refer to mammary cancer in the females only. All the breeding experiments on hereditary factors in the aetiology of cancer have shown that the factor which is inherited is not cancer or tumour formation itself but tumour formation in certain cells of a certain tissue—in Loeb's experiments the mammary tissue of the female mouse. The obvious deduction is that the hereditary factor is an hereditary tendency for the cells of some particular organ or tissue to become tumorous. It does not seem unreasonable to suppose that by selective breeding the cell nuclei of some particular tissue may become more liable to mutation of their genes than the tissues of animals in whom there has been no such selective breeding. It seems certain if this theory is correct that mutations of somatic cells which do not concern the reproduction of the cell must also occur and many diseases besides tumours can probably be explained in this way. Many of the melanotic and keratotic changes in the skin are examples of somatic cell mutation and it is probable the leukaemias can also be thus explained.

Many people have for a long time thought that the explanation of tumour formation lay somewhere in the biology of the normal tissue cell but it was not until the

Cancer Conference in London in 1928 that the possibility of a mutation of the nucleus of the somatic cells began to be considered seriously It was suggested by Loeb Teutschlaender Strong and Mayor but no definite theory was propounded, as most investigators were more concerned with the pros and cons of the infective theory of Gye Ten years ago Theodor Boveri the zoologist put forward the theory that cancer is due to abnormal mitosis —tetrapolar mitosis—of the cell nucleus resulting in an abnormal number of chromosomes He had got the same idea as he attributed tumour formation to genetic changes in the cell nucleus but this theory was not generally accepted because the tumour cell according to his theory must have a wrong number of chromosomes There is considerable evidence that the nucleus of the ordinary tumour cell contains the correct number of chromosomes and that tetrapolar mitosis is at any rate quite uncommon in tumour cells The whole subject has been much confused by the fact that tumour cells are often found with all sorts of abnormal nuclear structure but there is every reason for believing that the ordinary tumour cell is quite normal as regards its chromosomes and that gene mutation and not multipolar mitosis is the primary factor in tumour genesis More recently in 1930 R J Ludford gave an excellent resume of the whole subject but it did not receive the attention it deserved

The strongest argument for believing that this theory of tumour genesis is the true one is that it is possible by means of it to explain all the different phenomena that have been observed in tumours and their behaviour No other theory has made it possible to interpret all the observed facts about tumours and as the facts are seen to fit in and come into line as it were the inference becomes very strong that the theory is correct How it will help in solving the problem of the cure of tumours which to us as doctors is of more importance remains to be seen At first sight it looks as if it will not help at all But experience in medicine and surgery has taught us that when the cause of a disease is known we are in a fair way to discovering how to prevent or cure it Cause and effect are a natural sequence and if we know the cause it cannot but help towards the ultimate goal of full control over this great class of diseases which we call tumours and which hitherto we have been so comparatively helpless in attacking successfully

SUMMARY

1 The essential difference between a normal cell and a tumour cell is one of behaviour not of apparent structure The tumour cell grows faster than the normal cell

2 There are two kinds of reproduction—that which produces a new individual and that which results in the replacements of injured or worn out cells in our tissues

3 All cells both germ cells and somatic cells breed true to their parent cells and this breeding is controlled by the genes in their nuclei

4 Changes or mutations of the genes in the nuclei may occur and when they do the daughter cells will always breed true to the mutation

5 Tumours are the result of a mutation of the genes controlling division of somatic cells

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A NOTE ON THE OPERATIVE TREATMENT OF FACIAL PALSY

WITH AN ACCOUNT OF SOME ANIMAL EXPERIMENTS

BY

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The experimental inquiry on which the following notes are based was carried out by Dr Arthur B Duel and myself at Laurelwood Dutchess County New York State during the years 1930 and 1931 A full account of the experiments is printed in the *Archives of Oto Laryngology* January 1932

Each anastomosis operation was combined with the removal of the facial nerve from the aqueduct of Fallopius Sometimes on gentle traction on the central end of the divided facial nerve 3 cm of the nerve came away This was followed by escape of cerebro spinal fluid from the aqueduct The object in view was to prevent the union of the divided ends of the facial nerve which would vitiate the clinical results The stimulation of the facial area of the Rolandic cortex and of the nerves in the posterior fossa of the base of the skull was undertaken as a routine in the final examination of each experimental animal

The grafting of the hypoglossal descendens noni or glosso pharyngeal nerve to the facial nerve in man is followed as recovery takes place by associated movements during eating and swallowing Whether such movements ever disappear we do not know but while they last they are disfiguring and distressing to patients during meals When in our baboons one of the above nerves was united to the facial associated movements were observed during the fourth month from the date of the experiment and they continued without remission till the animal was killed When a sensory nerve—for example auriculo-temporal—was grafted to the facial nerve no associated movements were expected and none were observed The spinal accessory nerve was not employed in the anastomosis experiments because in the many cases we had observed in man the contraction of the muscles of the face was associated with the contraction of the sterno mastoid and trapezius muscles This is a great disability Further there is deformity of the neck and maybe drooping of the shoulder The contraction of the muscles of the face dissociated from that of the shoulder muscles the movement most desired is seldom if ever attained even many years after operation

OPERATIVE TREATMENT OF FACIAL PALSY

GENERAL CONSIDERATIONS

There can be no question about the desirability attending an anastomosis operation or about the imperfections present in many cases that were hailed as good recoveries in the past. After all it is an unnatural thing to anastomose one nerve to another when the ideal surgical method of bringing the two ends of a divided nerve into contact either directly or by means of a nerve graft is both feasible and practicable. We therefore removed portions of the facial nerve from the Fallopian aqueduct and substituted for the portion of the nerve taken away in equal length of some other nerve. For example we have used the descendens nomi nerve the intercostal nerve the intercostal nerve and the external respiratory nerve of Bell from the axilla. We prefer to take the nerve graft from the nerve of Bell in the axilla there is something rather pleasing about curing Bell's palsy with Bell's nerve.

The graft operation in the Fallopian aqueduct causes recovery from facial palsy far more rapidly than any anastomosis operation and cannot of course be followed by associated movements. We collegue Dr. Dalziell write us that he has already done in his hospital alone twelve nerve graft operations for facial palsy and that the earliest are all on the way to complete recovery.

Many cases of facial palsy recover only in part after prolonged medical treatment by massage and electricity and there often the victims of a spontaneous spasm of the most acute. The spontaneous spasms have been observed in a few of the baboon both after anastomosis operations and after nerve graft operations. They are not uncommon when an experimental animal is under light anæsthesia. The nerve impulses the cause of the spontaneous spasm originate at the level of the corpus striatum and not in the cortex. They are described under the term paleokinetic in contradistinction to cortical spasm in the cortex which are called neokinetic. The spontaneous tic spasm is more prone to occur after an anastomosis experiment than after a nerve graft operation. We believe that early operation and perfection in the technique of the nerve graft operation are the pathways which lead to the avoidance of spontaneous spasm of the recovering face muscles.

The following account gives three examples of the experimental results.

ANASTOMOSIS OPERATIONS

Case I

Baboon operated on August 17th 1930. Glosso pharyngeal facial end to end anastomosis (right side) facial nerve removed from aqueduct of Fallopius.

The glosso pharyngeal nerve exposed till the petrous ganglion came in sight was divided just before its two terminal branches (motor and sensory) entered the muscle in front. The central end was turned backwards and united to the peripheral end of the facial nerve which had been severed at the stylomastoid foramen.

Examination of the animal 357 days after the operation at rest during eating and when angry showed equal movement in the occipito frontales. The right palpebral fissure was smaller than the left. Winking was synchronous and equal in range. Movements of the nose were equal on both sides. Mouth fissure was normal and lip movements equal in extent. Associated movements during swallowing were noted as follows: retraction of right ear partial closure of right eyelids and right angle of mouth pulled backwards. There was no spontaneous spasm.

With the animal anæsthetized faradic and galvanic current gave an equal response of all muscles on both sides of the face. Under light anæsthesia there was a spontaneous twitch of the muscles of the right upper and lower lips and the angle of the mouth was pulled backwards. No spontaneous spasm was observed except when the animal was lightly anæsthetized. The spontaneous spasm was synchronous with spasm of the eyelids. There was also a tonic contraction of the muscles of the posterior third of the right side of the tongue which appeared to be synchronous with the winking spasm. Stimulation of the facial area of left Rolandic cortex gave a normal response in the muscles of the right side of the face.

When the brain was removed and the nerves in the posterior fossa of the base of the skull stimulated the right facial nerve gave no response. The right glosso pharyngeal nerve gave good contraction of the muscles of the upper and lower lip and retraction of angle of mouth. With stronger current the right eyelids closed.

Stimulation of right glosso pharyngeal nerve at lower border of jugular foramen (petrous ganglion exposed) caused contraction of all muscles of the right side of the face.

The above is an excellent example of an anastomosis operation with the usual associated movements.

Case II

Baboon operated on August 23rd 1930. Auriculo temporal facial end to end anastomosis (right side) facial nerve removed from aqueduct of Fallopius.

The auriculo temporal nerve was exposed on the zygoma above and in front of the auditory meatus. It was followed underneath the attrahens auriculam muscle and divided at the upper border of this muscle. The central end was turned downwards and united to the peripheral end of the facial nerve which was exposed at the stylomastoid foramen.

Examination 145 days after the experimental operation with the animal at rest eating and when angry gave the following results.

The eyelids winked together equally. The nose was straight. The right food pouch was used. Mouth normal. When teeth were shown the pull of the left upper lip was a little stronger than the right. There was no spontaneous contraction spasm or associated movements.

With the animal anæsthetized the faradic and galvanic current gave an equal response on both sides in all muscles. Under light anæsthesia there was a spontaneous twitch of the muscles of the right upper and lower lips synchronous with the winking spasm. These spasmodic movements did not take place except under light anæsthesia. Stimulation of facial area of the left Rolandic cortex caused normal contraction of all muscles of the right side of the face.

When the brain was removed and nerves were stimulated in posterior fossa of the base of the skull the right facial nerve gave no response and the right fifth nerve caused contraction of all muscles of the right side of face.

The auriculo temporal is a small sensory nerve. Nevertheless its anastomosis with the facial nerve resulted in recovery from complete facial palsy in this experiment. No associated movements are possible.

NERVE GRAFT OPERATION IN FALLOPIAN AQUEDUCT (RIGHT SIDE)

Case III

Baboon operated on September 16th 1930. Seven millimetres of the facial nerve in Fallopian aqueduct were replaced by 7 mm. of the descendens nomi nerve. After 160 days there was no sign of deformity of face when the animal was eating an apple. Under anæsthesia faradic and galvanic current gave an equal response in muscles of the right and left sides of the face—including occipito frontales.

Examination 325 days after operation showed complete recovery of the right side of the face with no spontaneous spasm.

No spontaneous spasm when under anæsthesia equal response to faradic and galvanic stimulation on right and left sides of face. Stimulation of the facial area of left Rolandic cortex produced contraction in all muscles of the right side of the face. Stimulation of right and left facial nerves in the posterior fossa after removal of brain produced equal and full contraction of muscles of the right and left face.

This experiment is an example of the rapid and complete recovery from facial palsy when a nerve graft is substituted for a similar length of the facial nerve in the aqueduct of Fallopius. Moreover no associated movements are possible and in this case no spontaneous spasm occurred.

OSTEO-ARTHRITIS *

BY

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In seeking a working classification of the various forms of chronic arthritis perhaps the best way of clarifying our ideas on this vexed question is to regard all kinds of joint disease as falling within two main categories *specific* where the aetiology is known and *non specific* or *rheumatic* where it is still largely undetermined Under the former would be placed cases due to trauma or associated with the presence of a known infective agent such as the tubercle bacillus the gonococcus the spirochaete the pneumococcus or the typhoid bacillus The second or rheumatic group may again be divided into two kinds one primarily involving the joint surfaces and endarticular and the other affecting in the first instance the tissues round the joints and therefore periarticular The terminology of the first being anatomical is more discriminating than the second which has received such names as rheumatoid arthritis infective periarthritis and atrophic and focal arthritis The two varieties are sometimes combined under a common title of arthritis deformans a term which is rather falling into disuse The reason for this confused nomenclature is that observers are not agreed upon a common basis for classification Some view the conditions from an anatomical standpoint while others are concerned with problematical aetiological considerations It is only in the earlier stages of these diseases that hard and fast distinctions can be drawn because in the later stages of the second variety changes characteristic of osteo arthritis may be superadded

ANATOMICAL FEATURES

The changes in osteo arthritis can best be considered as they affect (*a*) the articular cartilage (*b*) the underlying bone and (*c*) the synovial membrane and capsule

The Articular Cartilage

The central portion of the articular cartilage is the furthest away from the circulus articuli vasculosus from which is derived the rich network of capillaries which supply the perichondrium of the lateral parts Those more centrally situated are supposed to draw their nourishment mainly from the synovial fluid direct Achard points out that a study of the morphology and physiology of the articulations shows them to consist of actual and potential spaces within mesoblastic elements and as Hare says these connective tissue spaces of microscopic dimensions are enlarged into articular cavities bursae and tendon sheaths All are formed from the same elements and all contain transudates from the blood plasma the percentage composition of which varies slightly according to the variations in the functions of the different spaces It is easy to see therefore that toxins however derived once in the blood stream have a ready access to the articular cartilages It is at this poorly nourished weight bearing portion of the cartilage that the changes in osteo arthritis first manifest themselves The same irritant that will cause proliferation of tissue elements in a well nourished part of the body will set up degenerative changes in a part that is poorly supplied with blood

The most characteristic appearance presented by the cartilage in the early stages is the condition known as fibrillation which according to Timbrell Fisher is preceded by parallel and vertical striae in pathological specimens these can be felt by the finger The deeper layers of the cartilage may be invaded by vascular ingrowths of osteoblasts forming new bone These ingrowths may result in rounded elevations with smooth surfaces to which Professor Shattock gives the name of epiarticular ecchondroses to distinguish them from the periarticular ecchondroses forming the well known lipping of the joint The epiarticular ecchondroses often become detached and give rise to loose bodies in the joint Following the degenerative changes in the more central portion of the cartilage the lateral portions which have a better blood supply proliferate and project outwards This lipping of the cartilage eventually becomes ossified by osteoblasts from the underlying bone and constitutes the familiar osteophytes At a later stage the cartilage gradually becomes eroded and on disappearing reveals the underlying bone which undergoes sclerotic changes and becomes eburnated As pointed out by Gilbert Scott the formation of osteophytes occurs early in the progress of the disease and the erosion of cartilage much later Thus early formation of osteophytes and the late disappearance of cartilage are important diagnostic features because in rheumatoid arthritis and chronic infective arthritis erosion of cartilage takes place at a much earlier stage

Changes in Underlying Bone

As the new formations beyond the articulating surfaces are recurved there is not usually that limitation of movement in the early stages which might be expected Impairment of movement in an osteo arthritic joint early on is generally due to the fact that the joint has not been put through its full range of movement at regular intervals The layer of bone immediately under the articular cartilage is thicker and denser than normal When the overlying cartilage finally disappears the exposed bone becomes polished and glistening The gradual wearing away of the bone causes marked shortening of the limb One may occasionally see irregular processes of bone projecting into the deep surface of the cartilage The periosteum near the articular margins may proliferate and form bony nodules (periosteal osteophytes—Heberden's nodes) Beneath the sclerosed bone the cancellous spaces have an unusually open and fatty texture Radiographic films often show cyst like cavities surrounded by a zone of bone stimulation and protective sclerosis The precise nature of these cysts has not yet been determined The formation of osteophytes is really purposive and directed towards compensation for the loss of the central articular surface

Changes in Synovial Membrane and Capsule

These usually follow lipping of the articular surfaces The membrane becomes thickened along with the proliferation of the synovial villi At a later stage hypertrophy of the villous processes becomes very marked This is more particularly seen in the knee joint and some observers have given it the name villous arthritis The synovial villi are occasionally the seat of chondromata which may be single or multiple and which may undergo mucoid degeneration with the formation of cystic cavities When these chondromata become free in the joint they constitute one variety of loose body With regard to the changes in the capsular and interarticular structures the capsule becomes thickened and adherent and the various interarticular ligaments may disappear altogether This results in deformity joint instability and even dislocation The same applies to the various tendons situated in the neighbourhood of or passing through the joints In some instances the tendons may even acquire new attachments—true ankylosis practically

* Address given to a combined meeting of the Folkestone Medical Society and the British Medical Association January 21st 1932

never occurs All limitation of movement is due to alterations in the shape of the articulation and the interlocking of the later osteophytes

Aetiology

Osteo arthritis unlike rheumatoid arthritis is much more of a local than a general disease Its subject are usually well nourished robust individuals of a somewhat plethoric type The two most important aetiological factors are age and trauma It is essentially a disease of late middle life when early degenerative changes first make their appearance According to Glover (Report on Chronic Arthritis p 18) the typical age of onset of osteo arthritis (monarticular) is at least two decades later than rheumatoid arthritis With regard to sex incidence the hip and spine are more prone to be affected in men and the knee in women

A history of trauma can be obtained in most instances under the term trauma are included not only bruises and injuries to joints but any long continued stress or strain That form of arthritis which is especially prone to affect women at or near the menopause is often due to the increase in weight at the time which subjects the knees to extra strain Certain occupations are very apt to bring about the condition in individuals who by reason of their work are liable to joint strains Van Breemen terms this variety traumatic arthritis One may quote such well known examples as the labourers spine a form of osteo arthritis affecting the lumbar vertebrae stevedores and coal miners arthritis of the hip joint the labourers knee a form of osteo arthritis of the shoulder joint People who have to spend long hours on their feet frequently develop an arthritis of the medial joint which is often preceded by traumatic flat foot It is also common in horsemen of every grade of life and in these cases is not seldom associated with a more intractable sciatica due to the implication of the lumbar origins of the sciatic nerve by an extension of the process to the lumbar vertebrae is well as to the hips In such instances there may have been a fall from a horse (possibly several years previously) resulting in a more or less transitory injury which may have been quite forgotten until the patient begins to experience difficulties in performing certain movements

The association with a focus of infection is not nearly so apparent in this form of arthritis As Glover points out 75 per cent of the population over the age of 40 have septic teeth yet nothing like this proportion suffer from arthritis This is not to say that in the treatment of this condition every care must not be exercised to determine the presence of and to remove any possible focus But it is to say that the wholesale extraction of teeth as a routine procedure is unjustified This is abundantly borne out by the multitudes of edentulous patients one sees whose arthritic joints have been in no way benefited by the loss of their teeth A certain temporary alleviation is claimed which is explicable by the fact that people with sore mouths do not overeat Climatic factors have apparently very little to do with the incidence of osteo arthritis is the disease is found all over the world

Dampness of houses or sites is more likely to bring on fibrositis than arthritis but there are no reliable statistics on which to base a definite conclusion

Clinical Features

The duration of osteo arthritis having an insidious onset and not heralded by fever or constitutional disturbance is recorded in vague terms in case histories Its incidence is practically the same in both sexes Its comparatively late commencement has already been noted

Unlike rheumatoid arthritis the joints implicated are usually few and one or more larger ones are first involved The condition may remain monarticular throughout its course The initial changes are endarticular at first and result in a gnarled irregular outline which although resembling gout in some respects is quite distinct from the fusiform swelling seen in rheumatoid and infective arthritis Apart from sudden locking movement is at first very little interfered with and bony ankylosis never occurs What is called the jam-neck syndrome is absent This is an early involvement of the temporo maxillary joint accompanied by pain stiffness and grating of the back of the neck it is considered by Herbert as pathognomonic of rheumatoid arthritis General wasting of the limbs only takes place in the terminal stages although as will be seen subsequently certain muscles atrophy early on The skin over the joints does not show that atrophy and waxy appearance so characteristic of the rheumatoid condition There is no pallor shows nothing of importance The blood picture shows nothing of importance There is no anaemia and the suspension stability is not markedly lowered The uric acid content of the blood may or may not be increased The radiographic changes will be referred to in dealing with the individual joints

Following a general clinical description some consideration must now be given to the individual joints more commonly involved

Finger Joints

As the finger joints are implicated in practically every kind of arthritis the importance of being able to distinguish the various changes cannot be too highly stressed Outgrowths from the epiphyseal ends of the phalanges are extremely common in elderly people especially women Heberden's nodes as they are termed besides being unsightly may be very tender and painful on their first appearance They can be distinguished from the tophi of gout by the fact that they are firmly attached to the bone while the gouty nodule is capable of slight movement The nodes are of very little clinical importance and may persist for years without causing any marked inconvenience except perhaps in the performance of some of the finer movements of the fingers No treatment is of any avail Real osteophytes growing out wards from the articular surfaces of the fingers are quite common and by their position cause gross deformities The distal phalanx may be tilted to one or other side at almost a right angle This is more especially seen in the terminal phalanges Besides the irregularity of the articulating surfaces the capsule of the joint undergoes fibrotic changes which further increases the pull For this reason many writers speak of a fibrous rheumatism or rheumatism sicca which is characterized by the appearance just mentioned The first and second metacarpo phalangeal joint may be affected but is usually more thickened than deformed The distinguishing features of an osteo arthritic finger joint are its irregularity in contour its asymmetrical distribution and no real ankylosis—although owing to its osteophytic outgrowths there may be locking and limitation of movement There is not as a rule that peculiar doughy feeling on palpation due to distension with synovial fluid Muscular contractures are not common and the over extension of the proximal phalangeal joints with the fixation and flexion of the distal phalangeal articulations is absent

The Wrist

An arthritis of the wrist especially when there is much synovial effusion is more likely to be infective or rheumatoid The possibility of a gonococcal infection should not be forgotten

The Elbow

Blacksmiths are liable to an osteo arthritis of the elbow joint from the wielding of a heavy hammer It is characterized by pain on movement stiffness creaking and a liability to locking in certain positions It is not a common affection

The Shoulder Joint

A ring or collar of osteophytes may in advanced cases be found surrounding the head of the bone This will of course seriously interfere with its normal movement on the scapula In such cases it will be found that in all movements at the shoulder the two bones move together Fixation of the scapula will cause a corresponding immobility in the humerus On looking at the shoulder on the affected side considerable muscular wasting will be noticed A history of some antecedent trauma can usually be elicited or the joint may have been subjected to long continued strains in occupational cases

The Spine

Buckley divides spondylitis into two main divisions—namely spondylitis ankylopoietica or ankylosing spondylitis and spondylitis osteo arthritica (the type concerning us here) The important factor in its causation appears to be heavy laborious conditions The primary change is probably in the intervertebral disks which undergo much the same changes as the cartilaginous surfaces of other joints Exostoses are thrown out to support the weakened joints These can be seen on x ray films and are in striking contrast to the bamboo-like appearance of the ankylosing variety Some degree of movement is always retained though there may be flattening of the lumbar curve and kyphosis in the dorsal region If the osteophytes happen to press on nerve roots pain may be very severe As a rule it is not marked except from strain from which it will recover with rest for a few days

The Hip Joint

Coxarthritis or malum coxae senilis is much commoner in men than in women It is essentially a disease of late middle life or old age The earliest symptoms are usually neuralgic in character Pain along the distribution of the sciatic nerve is complained of and it is extremely difficult at first to decide whether one is dealing with an incipient coxarthritis or a case of sciatica Soon however some limitation of movement is experienced—or rather certain ordinary movements give pain There is an increasing difficulty in lacing the shoes and sitting with the thighs crossed becomes impossible Pain is felt in the groin and in the neighbourhood of the trochanter and the patient cannot make long steps or ride in comfort Perhaps one of the most certain objective signs is early wasting of the buttock on the affected side This is followed by a general wasting of the thigh muscles When definite shortening has taken place and there is inability to abduct and adduct the limb and when flexion causes a flattening of the lumbar curve while rotation of the thigh is no longer practicable there is no doubt about the diagnosis

The x ray picture is very characteristic The purposive formation of osteophytes to which reference has already been made is particularly well exemplified in the hip joint One frequently sees a collar or fringe of osteophytes thinly covered with cartilage surrounding the head of the femur Bone may be deposited within the acetabulum and this can cause displacement of the head of the bone outwards Absorption of the acetabulum frequently takes place at a later stage This may cause a bulging inwards of the pelvic wall or by an extension of its cavity the head of the bone may travel upwards Before this occurs a distinct flattening of the contour of the femoral head can be made out The effect of weight bearing can best be seen in this joint

The Knee Joint

Osteo arthritic changes are commonly seen in the knee joint As its strength lies not in the anatomical peculiarities of the articular ends of the bone but in the toughness and resisting qualities of the complex structures which bind them together it is easy to see that from strains and relaxations of the muscles and ligaments faulty apposition of the bony components of the joint can readily be brought about Although both sexes are liable to the condition it is more common in women about the time of the menopause Llewellyn and Bassett Jones in their work on fibrositis refer to two stages in the life history of this type as it affects women (1) a primary or pre osteophytic stage often of prolonged duration whose clinical characteristics are those of villous hypertrophy and (2) a secondary or terminal stage in which bony and cartilaginous outgrowths make their appearance Some writers call this climacteric arthritis but its end results are osteo arthritic in character

In the early stages the knee creaks a good deal on movement This is often the first symptom the patient notices There is a fair amount of pain especially after walking Overuse may bring on a mild synovitis which clears up with rest These attacks become more frequent thickening of the synovial stratum takes place and boggy swellings can be made out on each side of the patellar ligament The muscles that control the knee joint—particularly the quadriceps—become flabby and may show distinct signs of wasting An important point to be remembered in connexion with an arthritis of the knee is that the plantar arches are frequently depressed and this may cause a faulty alignment in the weight bearing functions of the lower limb

The Foot

Perhaps the commonest form of osteo arthritis seen in the foot is found in association with the weaker flat foot where the longitudinal arch has failed and compensatory proliferation has taken place in the astragalus which shows a distinct bulging above the inner plantar margin The metatarso phalangeal joint of the great toe also commonly reveals osteo-arthritic changes What is known as the painful great toe joint is often due to hypertrophic outgrowths corresponding to Heberden's nodes in the fingers In many of these cases the anterior metatarsal arch is depressed and the toes are habitually dorsiflexed at the first phalangeal joint producing the hollow or contracted foot The weight is borne entirely on the heel and the front of the foot Callosities and corns usually form on the centre of the heel and beneath the heads of the metatarsal bones Patients often complain of neuralgic pain about the great toe the metatarsal area or in the sole of the foot This hollow or contracted foot is associated with arthritic changes in the knees to a much greater extent than is usually realized

Treatment

Although in many respects osteo arthritis may be looked upon as a local rather than a general disease the fact remains that its manifestations are associated with degenerative conditions Treatment must therefore be directed towards sparing the patient any unnecessary metabolic burden A good working rule to effect this is to estimate the calorific value of the ordinary diet the patient is in the habit of taking and to reduce it by one third This is especially applicable in the case of well nourished plethoric individuals which so many of the subjects are There is usually an increased blood pressure and the blood uric acid is apt to be high For this

reason the diet should follow very much the lines adopted for gouty patients. Besides avoiding foods rich in purins an adequate supply of vitamins should be ensured. This is of prime importance because osteo-arthritis is undoubtedly associated with the absorption of toxins from a sluggishly acting bowel. Good results frequently follow measures directed toward changing the character of the intestinal flora either by the use of Bulgarian soured milk or by such a preparation as lacto-dextrin (supplied by the Battle Creek Company).

Drugs.

So far as drug treatment is concerned the old-fashioned Chelsea pensioner—compound confection of guaiacum or its more modern prototype—tabloid guaiacum and sulphur co.—is of distinct value. It probably acts as an intestinal disinfectant. Lugol solution finds favour with many prescribers. In certain forms of glandular disturbance associated with the menopause thyroid medication is clearly indicated. For the local treatment of the synovitis accompanying arthritis of the knee nothing beats a Scott dressing. Although no specific can claim anything of the nature of a specific in the treatment of osteo-arthritis many patients undoubtedly derive benefit from it at times. This is probably accounted for by the change of application of diet and exercise and the placing of the patient in such an environment that the *vis medicatrix naturæ* can act to the best advantage.

Physical Methods.

In addition to the general measures briefly outlined above there are certain physical methods of treatment which are of the greatest value in preserving movement in affected joints and muscles and in the relief of pain.

For the first of these the deep pool bath is extensively used. It is of sufficient depth to allow a patient to stand upright and to walk a step or two and wide enough to permit exercise. Its temperature is kept at about 100° F. Combined with the pool is an underwater douche at a temperature of about 10° above that of the bath. This has a powerful effect on the skin circulation and as it often constitutes a very efficient form of massage as well as relieving pain. As all objects weigh less in water than in air a limb immersed in water can be moved with much less fatigue than in ordinary circumstances. The water supports the limbs and movements are permitted that would be otherwise impossible. In addition to the actual mobilization of a stiffened joint the fact that movement is possible at all has an excellent mental effect on the patient and he is thereby encouraged to persevere in his efforts. For the relief of pain heat in some form or another is a sovereign remedy. To be effectual it should be intensive or as hot as can be borne. It may be applied in various ways—the hot immersion bath with an underwater douche 10° higher than the bath radiant heat or the high frequency current (diathermy). In deep seated parts such as the hip diathermy is the method of choice. For local applications to more accessible parts the hot pack of peat mud or paraffin wax is of value. As owing to the immobilization of the affected joint the muscles which control it are apt to waste underwater massage and manipulation—given by either the Aix or the Vichy system—will restore their tone and at the same time remove effusions that are liable to form owing to the sluggishness of the blood and lymph circulation.

Active and Passive Movements.

Keeping in mind the dictum that no joint can possibly be healthy unless it is moved or, in other words unless it is functionally active the question naturally arises as to whether osteo-arthritic joints are to be kept moving. So far as possible movement should be maintained but it should be more passive than active. The degree of pain that attends such efforts is the best guide. It has been wisely said that in osteo-arthritis one should train up the osteophytes in the way they should go. This is not to say that in the acute stages of joint inflammation movements are to be forcibly carried out. At this period rest with soothing applications is essential. When as frequently happens walking sets up intense pain and interferes with the patient's general health the application of a calliper splint must be considered. Properly fitted such an appliance will save untold pain. It is inconvenient cumbersome and much disliked but the assurance can be given that in time it can be dispensed with. In the case of the hip with the cessation of the constant grinding of eburnated bone surfaces one upon the other the osteophytes interlock and the periarticular structures become fibrosed and add to the stability of the joint. Mobility is seriously interfered with but pain disappears and although the patient walks with a limp he is able to live in comparative comfort. The knee is somewhat different. Its strength lies in its ligaments and osteophytic outgrowths do not interfere to such an extent with the apposition of the articular ends of the bones concerned as is the case with the hip. They do of course limit movement but a patient can walk quite well with very little play between the two bones. After wearing a calliper splint for the knee for some time it is often found that on leaving it off there is still enough movement at the joint to permit walking without a perceptible limp. By cautious manipulation and the judicious employment of one or other of the methods of physical treatment briefly referred to above the range of movement may be considerably increased.

Operative Measures.

There will still remain however a certain number of cases in which neither physical methods of treatment nor fixation will relieve the intolerable pain. The question of operative intervention will then have to be considered. Such procedures have for their object either the correction of deformities by osteotomy or the removal of some intra-articular cause of arthritis—such as a misplaced semilunar cartilage or a loose body—or they may be designed with the aim of enabling the joint to be used without pain. This might entail the removal of osteophytes and an excision of the joint or an arthrodesis to secure bony ankylosis. In this connexion it must be remembered that cases of osteo-arthritis are by no means ideal subjects for extensive operative measures.

A CASE ILLUSTRATING FAILURE OF INTRAVENOUS LIVER THERAPY IN PERNICIOUS ANAEMIA

BY

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It appears justifiable in view of the prominence recently given to the value in certain cases of pernicious anaemia of liver preparations suitable for intramuscular or intravenous injection [1 2 3 4 5 6 7] to record a single case in which this mode of therapy proved ineffectual though it is admitted that the data furnished are not sufficient to enable completely definite conclusions to be drawn.

CASE RECORD.

Female, aged 62, married. Admitted to the Royal Infirmary, Edinburgh (under the care of Professor W. T. Lithgow) on February 2nd, 1932 complaining of bloodlessness and pains all over of three years' duration, breathlessness for one year and loss of appetite for about two months.

No satisfactory medical history was available but it appeared that the patient had not been in good health for three years. She had noticed oedema of the feet and ankles especially in the evening during that period. Intermittent pain and stiffness in various situations—notably the back, belly and limbs generally—had made it difficult for her to get about, but these symptoms had not been so prominent during the six weeks immediately preceding admission as severe breathlessness on exertion had rendered the patient practically bedridden. For about two months towards the end of 1931 pain across the stomach relieved by vomiting had been present; the appetite thereafter became poor but pain and vomiting ceased. Soreness of the tongue was not complained of. There was no history of haemorrhage. The patient stated that she had lost weight. She gave a history of an operation for ovarian tumour forty years previously and of gall-stones twenty years previously, but in general appeared to have been a healthy woman up to the time of onset of the symptoms already described.

Apart from the fact that the patient was one of a family of fifteen of whom eleven died young, the family history revealed nothing of note.

Physical Examination.

General nutrition poor, but no gross emaciation. Some oedema of the feet present. Patient very pale with a lemon-yellow tint. Van den Bergh reaction positive, delayed direct. Icterus index 14. Pulse rate 108 per minute; blood pressure 114/64. Heart not enlarged; blowing systolic murmur audible all over praecordia, loudest in pulmonary area. Marked muscular weakness in lower extremities, but reflexes normal and sensation (including vibration sense) unimpaired. Tongue very pale, clean and smooth; no ulceration and no subjective soreness. Abdomen: scars of former operations present; otherwise nothing abnormal detected. On account of the patient's great weakness examination of the gastric juice was not carried out. Stools: no abnormal appearances; benzidine reaction for occult blood negative. Urine: healthy. Respiratory system: no abnormal signs detected.

Blood Examination.

Red blood cells 885,000 per c.mm.; haemoglobin 18 per cent. (Haldane); colour index 1·06; white blood cells 2,000 per c.mm. A second count gave the following figures: red blood cells 813,000 per c.mm.; haemoglobin 20 per cent.; colour index 1·25; reticulocytes 3·4 per cent. Anisocytosis was marked, megalocytic forms being prominent, many having the oval shape emphasized by Davidson and Gulland[6]. A Price-Jones curve was not constructed, but careful inspection of the film left little doubt that this would have been of the typical broad-based variety, with deflection of the summit to the right. There was some poikilocytosis. A few cells showed punctate basophilia; polychromasia was not seen. No nucleated red cells were observed even after extensive search. Platelets were obviously diminished; such as were present occurring singly rather than in groups. A differential count of 100 leucocytes gave the following result: neutrophils 64 per cent., lymphocytes 35 per cent., monocytes 1 per cent. In view of the unexpectedly high proportion of neutrophil, considering the leucopenia, another count was made by an independent observer on another film, with practically identical figures were obtained. Many of the neutrophils showed hypersegmentation of the nucleus, indicating a shift to the right of the polynuclear count.

TREATMENT AND PROGRESS.

From February 3rd to 9th (*inclusive*) the patient was given daily intravenous injections of 5 c.cm. of a liver preparation which has recently been the subject of favourable comment in the literature[1-4]. The seven dose is said to contain the active principle derived from 100 grams fresh liver. No undesirable effects appeared to be associated with the injection, but there was no improvement in the patient's general condition, and no reticulocyte reaction occurred. As already noted, the reticulocyte level was 3·4 per cent. on admission. On the second day of treatment the figure was 5 per cent., but thereafter a fall occurred, the reticulocyte percentage varying from day to day between 0·5 and 1·5.

On February 10th the patient's condition being obviously one of extreme danger, a blood transfusion was decided upon. Both the patient and the daughter selected as donor belonged to Group IV (Moss), the bloods were directly tested for incompatibility, and no agglutination was found. Shortly after the commencement of the operation, however, the patient became extremely distressed, restless and dyspnoeic. The transfusion was stopped immediately and stimulants given, but the patient died one hour later.

Post mortem Examination.

This was carried out on February 11th thirty-one hours after death, and the appearances typical of pernicious anaemia were found. There was a slight generalized yellowness of the skin, and the legs showed some oedema. The serous sacs contained a small quantity of clear yellowish fluid. The heart was slightly enlarged and globular in shape, the myocardium being pale and flabby, and showing in the region of the right ventricle considerable fatty infiltration. There was a slight increase of bright yellow subepicardial fat. The lungs were oedematous particularly at the bases. The mucosa of the stomach had a very atrophic appearance. The liver was enlarged and pale in colour. The spleen was enlarged, soft and bright red. The kidneys presented a pale yellow appearance. Apart from some oedema the brain showed no abnormality. In the centre of the shaft of one femur fat had been completely replaced by bright red erythroblastic marrow of diffluent almost creamy consistency; there was considerable erosion of cancellous bone. The first ribs also showed a marked erythroblastic reaction. The liver showed a definite Prussian blue reaction, the spleen and kidneys a fainter one.

Microscopical examination of the bone marrow revealed the presence of very active haematopoiesis, this having the characters described by Davidson and Gulland[6] as typical of pernicious anaemia. The erythroblastic areas showed definitely a megaloblastic reaction, many cells of very primitive type being seen. Equally characteristic was the large amount of leucopoietic tissue present; in these areas the predominant cell was the myelocyte, polymorphs were scanty and megakaryocytes also much reduced in numbers. The liver showed extensive fatty changes, the spleen packing with red corpuscles and the kidney slight arterio-sclerotic changes together with marked degeneration of the tubular epithelium. Professor G. Lovell Gulland was kind enough to consider fully all the facts of this case including the microscopical sections above described, and as a result had no hesitation in stating the case to have been one of pernicious anaemia.

COMMENTARY.

The question arises whether in this case the diagnosis of pernicious anaemia may have been wrong, though the opinion of Professor Gulland quoted above naturally renders this unlikely.

The clinical and pathological findings are admittedly compatible with this diagnosis. It remains to be discussed whether they are compatible with any other diagnosis. The post-mortem data put any kind of secondary anaemia out of court—a secondary anaemia of high colour-index type with leucopenia in any event a most unusual phenomenon. Leukaemia and acute lymphadenoma can be similarly excluded. Aplastic anaemia was at the end the diagnosis favoured clinically on account of the lack of response to treatment, but in view of the intensely active marrow demonstrated at necropsy was proved to be incorrect. The condition which appears most to warrant discussion is that of the obscure haemolytic anaemias group referred to by Davidson[5]. One imagines that certain of these cases would be regarded

by Lord Dawson[7] as examples of acholuric jaundice since he does not consider a normal blood fragility incompatible with this diagnosis and further states that while the marrow response in acholuric jaundice is usually normoblastic it may be megaloblastic with a high colour index type of anaemia Though the fragility of the erythrocytes was not investigated in the present case any such diagnosis appears to be ruled out by the co existence of a hyperplastic marrow with a low percentage of circulating reticulocytes In haemolytic anaemia death may occur in the presence of extensive marrow hyperplasia if blood destruction runs ahead of even markedly increased blood formation but in the circumstances the circulating reticulocyte percentage is high Conversely as emphasized by Lord Dawson death may result from dimin hed marrow output even though blood destruction may not be excessive but in these cases the small number of reticulocytes in the circulation can be shown at necropsy to have resulted from marrow hyperplasia Low circulating reticulocyte percentage and of the marrow cannot coexist (as they did in this case) unless there is defective maturation and emigration of the marrow cells the characteristic feature of pernicious anaemia As already noted the highly characteristic megaloblastic proliferation in the marrow (with little emigration of new red cell into the circulation) but also the findings were present in the case not only of active of considerable leucopoietic activity (with nevertheless leucopenia in the circulating blood) The conclusion seems justified that clinically and pathologically this case satisfied all the criteria of pernicious anaemia

The question of whether the lack of response to treatment resulted from the use of an inactive liver preparation or from the case being truly a liver resistant one cannot be definitely answered It can only be said that the particular preparation used has in the hands of other workers given apparently uniformly successful results It is stated that the reticulocytes usually commence to rise within twelve to twenty four hours of the first injection and the maximum reticulocyte response should occur on the sixth or seventh day It would thus appear that in the case under discussion sufficient time was given for the signs of improvement to have appeared had they been going to do so It is regrettable that on humanitarian and on scientific grounds that no opportunity occurred of noting whether or not any other preparation might have had a beneficial effect Had such arisen it would have been strong evidence in favour of the inactivity of the substance first employed As it is it can only be said that the conclusion may or may not be justified that the preparation used was inactive It may be that variations in activity occur even in different samples of the same product as was recently emphasized by Wilkinson[13] in the case of stomach preparations but certainly no case of failure of any sample of this particular product appears to have been reported hitherto

The possibility exists that this may have been a true liver resistant case That such cases occur when orthodox therapy employed is admitted by most observers the figure is 10 per cent of all appears now to be the part of

be hereby unless it is moved or able liver preparation it is functionally active the question introduction of to whether osteo arthritic joints are to be ud Gull and[6] So far as possible movement should be mainc use of it should be more passive than active The dog present of the

body (as according to Sheard et al is strictly speaking necessary) the investigation showed that at any rate a large part of the marrow was highly active Yet the therapy employed should according to the observers already quoted have been quite sufficient to initiate a remission In the absence however of definite proof of the activity of the liver preparation employed it is impossible to decide whether this case was genuinely liver resistant or not

SUMMARY

1 A case is described which clinically and pathologically presented the features of pernicious anaemia

2 It failed to respond to intravenous injections of a liver preparation which has been found by other workers to be highly effective

3 It is suggested either (*a*) that not all samples of this preparation are equally potent or (*b*) that the case is an example of liver resistant pernicious anaemia

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THE NOMENCLATURE OF ECLAMPSIA*

BY

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The text of our paper is the following case

Mrs Mc aged 26 a 3 para had had two normal confinements She attended the prenatal department once in September 1931 but failed to return At that time there was no albumin but the feet were greatly swollen She was admitted to the hospital on October 5th with a history of having had two fits She was given morphine 1/2 grain at 11 30 a.m On examination she was found to be about thirty three weeks pregnant general condition good restless Pulse 70 tension fair blood pressure 122/70 semiconscious Gastric lavage with good results Colonic lavage excellent result Catheter was passed but there was no urine in the bladder At 10 45 p.m the patient was still semiconscious At 12 30 p.m colonic lavage with excellent result Morphine 1/4 grain given on account of restlessness Subcutaneous saline given blood pressure 118/70 Still semiconscious On October 6th general condition fair patient in labour stillborn foetus 4 lb 12 oz delivered spontaneously at ten hours There were signs of consciousness returning and it seemed better colonic lavage achieved a good result but the patient relapsed into a more comatose condition blood pressure 142/70 blood urea 30 mg per cent At 6 15 p.m she had a fit lasting three minutes morphine repeated Patient had further twenty nine fits before 11 40 p.m totalling 31 in all She died at 11 47 p.m

* Read before the Obstetrical Section of the Royal Academy of Medicine in Ireland March 1932

The post mortem report was typical for eclampsia and exemplifies not only the danger of fits in the multipara but also the difficulty of determining whether a patient has eclampsia or not

The post mortem findings were as follows

Right Kidney.—Not enlarged slight cortical congestion and pallor of medullæ pyramids slightly injected

Left Kidney.—Multiple small cortical haemorrhages not enlarged Capsule strips easily Microscopical sections show marked cloudy swelling of the epithelium of the tubules and in many places this has gone on to fatty degeneration There are scattered interstitial haemorrhages the medullary region shows slight increase in the interstitial tissue which suggests an old standing interstitial nephritis

Liver.—Not enlarged normal No haemorrhages Microscopical sections show cloudy swelling of the liver cells There is a good deal of congestion all over

POST MORTEM LESIONS IN THE TYPICAL ECLAMPTIC

Kidneys.— The kidneys are acutely inflamed and closely resemble the kidney in the nephritis of scarlatina They are large soft and congested The capsule strips easily and the glomeruli and tubules are thickly packed with blood and epithelial casts The epithelium of the tubules is in a state of cloudy swelling (Solomons in Tweedy's *Practical Obstetrics*) Symmetrical total necrosis of the cortex Immense firm cloudy yellowish areas of necrosis are infarctions involving more or less completely the whole cortex with thrombosis of intrarenal arterial venous and capillary branches in which Hertzog found hyaline fibrin thrombi (Kaufman vol ii 1910) A glomerulo thrombosis—that is degenerative changes in the vessels and epithelium of the glomeruli is occluded with similar changes of varying intensity in the epithelium of the convoluted tubules There are no signs of inflammatory or atrophic change unless the process has been engrafted upon a pre existing disease In other words the renal lesions are the result not the cause of the process (Hahr)

Liver.—According to Adami In typical cases abundant necrosis in this organ these recall the focal necrosis seen in many infectious and toxic conditions but they may be so extensive as to give the appearance of that wide destruction of the hepatic parenchyma seen in acute yellow atrophy Schmorl quoted by Williams says Irregular shaped reddish or whitish areas scattered through the entire organ and originating near the smaller portal vessels Microscopically they are areas of necrosis involving the periphery of the individual lobules and portal spaces in which blood cells may or may not be present The formation of necrotic areas is due to degenerative changes following thrombotic processes in the smaller portal vessels and these are areas justifying the diagnosis of eclampsia

DEFINITION OF ECLAMPSIA

It will thus be seen that the post mortem results in the case under review and in the typical eclamptic differ so greatly that this case cannot be classed as one of eclampsia and it seems to us that Hahr makes a point when he stresses the fact that the renal lesions are the result not the cause of the toxæmic process Whether the kidney lesion precedes the toxæmic symptoms should in most instances be demonstrated by prenatal care but the irregular attendance by the Rotunda patients makes it difficult to carry this out

We could quote many other cases to exemplify our point but for the present we shall look for a definition We define eclampsia as the occurrence of fits in a pregnant or puerperal woman which would not have occurred if he had not been pregnant Williams does not go so far and defines eclampsia as an acute toxæmia occurring in the pregnant parturient or puerperal woman which is usually accompanied by chronic and tonic convulsions He states that while the convulsions are by far the most striking clinical manifestations eclampsia and coexist the disease in many instances are occasionally met with in which they are absent

We cannot find a definition of eclampsia in the monograph by Stroganoff We consider the necessity for a definition of the highest importance from a statistical point of view and we cannot stand alone if statistics are to be of the least value We must include in our statistics of eclampsia (until it is proven otherwise) those pregnant or puerperal women who die having had fits unless the post mortem results reveal absolutely atypical lesions If the patient does not die she too must for the present be included and if he dies and a necropsy is impossible then she also is grouped as eclampsia Every year since the beginning of the present Mastership there have been cases of doubtful nomenclature and these have been included in the various tables This year however as will be seen in the report there is a separate table for toxæmias of unknown nomenclature

PREVIOUS CASES

The following are some problematical cases

CASE I

1926-27 Report 1 para admitted as eclampsia At 10.30 a.m. baby was delivered with forceps at 12.30 p.m. after the uterus had been emptied of clots rapid collapse set in and the patient became pulseless and unconscious A definite convulsion was reported to have occurred and she soon died It seems possible that this was a death fit and not an eclamptic one but this case is included in the eclamptic statistics

CASE II

1927-28 Report A primigravida aged 42 was admitted at thirty five weeks with a history of having had fits during the last four days before admission She had been semi conscious from the time of the last fit Slightly cyanosed able to protrude her tongue but made no effort to speak No ocular or other paralysis broncho pneumonia in both lungs Blood pressure 118 heart sounds normal reflexes exaggerated slight hypersensitive Consulting physician confirmed diagnosis of pneumonia and suggested that subconscious state was epileptic She remained aphasic Examination of the cerebro spinal fluid showed marked increase of lymphocytes and of globulin no tubercle bacilli found Seen by a neurologist who stated that the patient was possibly suffering from encephalitis but the diagnosis was arguable She died five days after admission All toxæmic tests were negative Blood urea 25 mg. per cent albumin never above a trace

The post mortem findings were *Liver* Pale enlarged fatty small white patches resembling tubercles no haemorrhage or necrosis Microscopically some congestion of intralobular veins The small patches resembling tubercles are small areas of a focal fatty change No evidence of necrosis or haemorrhage *Kidneys* Somewhat enlarged pale slight irregular fibrosis Microscopically congestion and parenchymatous nephritis some area of an early fibrosis and cysts some fatty changes Haemorrhage at the inferior surface of the temporal lobe No tubercles

CASE III

1928-29 Report A 9 para—an atypical eclamptic who was classed as such The kidneys showed evidence of chronic interstitial nephritis The liver was enlarged friable and greasy Sections showed marked congestion especially round the central vein Liver cells clouded and swollen with a good deal of fatty degeneration

There were two cases of [illegible] in report Pohl had fits but he history and his post mortem reports were against eclampsia

In the report for 1929-30 there was a primipara who was admitted as an eclamptic She was reputedly a nurse to have had some sort of fit As the post mortem report showed the typical eclamptic [illegible] she was classified as such if he had not had a fit she could not have been classified

In the present year the report for which has been published there will be found two cases of death (1) a 10 para who was admitted comatose—the post mortem

findings were absolutely atypical (2) the 3 patients described at the beginning of this paper

Enough has been said to draw attention to the fact that the time has come to review our ideas on eclampsia For statistical purposes fits were, in the past considered a necessary accompaniment of eclampsia It should now be decided whether fits are a necessary factor and whether the treatment suitable for the typical eclamptic is suitable also for the atypical—that is for the chronic nephritic There is no doubt that the ordinary eclamptic who has not had a severe cerebral haemorrhage will recover with careful palliative treatment but the woman with nephritis will often fail to do so

TOOTH EXTRACTION AND CHRONIC INFECTIVE ENDOCARDITIS

BY

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It is recognized that many chronic diseases especially of the rheumatic type such as arthritis fibrositis neuritis iritis etc are due to the repeated absorption of toxins from a chronic focus of infection with streptococci—generally the *Streptococcus viridans* but sometimes haemolytic streptococci One of the commonest situations for this focal infection is at the apex of a tooth where the toxins are produced under tension and readily absorbed It has become almost the general practice to recommend patients suffering from one of the chronic rheumatic manifestations to have an x-ray examination and if marked apical infection is revealed to have the offending tooth or teeth extracted

DANGER OF LOWERED RESISTANCE

Fortunately even if a large number of teeth are removed at *one sitting* the operation is not generally a very serious matter and recovery is speedy and normal But if for any reason the patient's resistance against streptococcal infection is low there may be very serious danger As Sir William Willcox[1] has pointed out

> The resistance of a person to a dental infection may be broken down by the constant doses of the blood stream with toxic products from the focus of infection A condition of constitution then results I have on several occasions seen fatal septicaemia and malignant endocarditis follow extraction of infected teeth in a patient in poor health with a low immunity

It is to this grave danger that I especially wish to draw attention It may and certainly does, happen that chronic infective endocarditis comes on without any obvious cause although in these cases the same germ generally the *Streptococcus viridans* which is present in the blood may be cultured from the apex of an infected tooth This suggests that the tooth was the primary focus of infection in a patient whose blood shows an abnormal deficiency in bactericidal powers against this organism But blood infection is more likely to occur in a patient with a very low degree of immunity if blood and lymph channels are opened up by the trauma of tooth extraction especially if the extraction is a difficult one requiring more force than usual

In recent years local anaesthesia by infiltration of the gum and tooth socket with an anaesthetic such as novocain has been very widely practised Where there is obvious septic infection of the gums a local anaesthetic is not often given but in apical infection only revealed by x-ray examination it is quite usual for extraction to be performed under *local anaesthesia* I think there can be no doubt that forcing a fluid under *considerable tension* into the *comparatively* rigid and resisting tissues of the *gum and periodontal* membranes must tend to carry any *germs which may be* present in these tissue into the lymphatics, *and so to the blood* stream with a danger *if the blood should* happen to have no bactericidal power against the infecting organism of starting a serious and fatal blood infection such as subacute infective endocarditis Two cases of this disease following tooth extraction under local anaesthesia are recorded in the *British Medical Journal* (July 1931) by Dr L Abrahamson In each case there was pre existing valvular disease and in both local anaesthesia was used

I had the opportunity of seeing not long ago another case in which chronic infective endocarditis followed immediately upon extraction of a tooth

ILLUSTRATIVE CASE

The patient a lady *of about* 50 was in a poor state of health and had been advised to have her *teeth examined* The radiologist found evidence of alveolar absorption in most of the teeth but especially in three of them He advised that owing to the state of her health little should be *done at the moment* but recommended that one of them which showed the greatest evidence of damage should be extracted This was done on October 26th 1929 but I have not been able to ascertain whether local anaesthesia was employed *On the following day* her temperature rose slightly and continued a subfebrile course *from* 99° to 100° or 101° I *during* the remainder of her illness

Haemolytic streptococci were cultured from the tooth socket but were not found in the blood The leucocyte count was 8 000 polymorphs 71 per cent and the polynuclear count showed a marked shift to the left Streptococci were also cultured in the patient's blood which had no bactericidal *effect upon them* The pathologist concluded that it was probable that there was a low grade blood infection although no growth had been obtained from the blood

Ten days later she was visited by a London consultant who reported that heart and lungs were sound and gave a good prognosis as to recovery A month later another blood examination and culture was made leucocytosis had now increased to 13 000 polymorphs 77 per cent *but still no* culture was *obtained from* the blood The consultant who *had been kept informed* of the progress of the case expressed his belief that he was suffering from a low grade type of *septicaemia* from a focal infection in *connexion* with the teeth and strongly urged the advisability of the extraction of more teeth as he believed that she would not improve until the focus had been removed Three teeth were accordingly extracted *between* December 18th and December 28th *under local anaesthesia*

The temperature rose somewhat after the first extraction and her general condition became rapidly worse I saw her for the first time on January 4th She was then in a very serious condition obviously suffering from endocarditis and myocardial infection She died on January 10th 1930

The mode of onset of the symptoms and the course of the disease clearly indicate a blood infection with subacute endocarditis originating from the first tooth extraction and very much aggravated by the three subsequent extractions under local infiltration, which introduced a larger number of streptococci into the blood stream The febrile condition was not due to repeated doses of toxin *from* an infected focus but to the elaboration of toxin in the blood from the blood infection with streptococci Removal of more teeth materially aggravated the infection adding fuel to the fire

COMMENTARY

The danger of extracting teeth with apical streptococcal infection is a real one as these cases show and I feel convinced that the danger is increased if local anaesthesia by infiltration of the gum is made use of

Unfortunately it is not at present feasible to estimate the patient's blood resistance to the infecting organism unless a culture can be made and tested against the

blood To do this a tooth must be extracted But it would be wise precaution especially in the case of an individual already suffering from valvular disease or one who may seem for other reasons to be liable to have a weak resistance to extract *one tooth* only in the first instance under a general anæsthetic such as nitrous oxide to make a culture from the tooth and to test the patient's blood for bactericidal power against it If the blood has no bactericidal power an attempt may be made to improve it by graduated doses of vaccine beginning with very small doses before any more teeth are removed In any case of this kind a general anæsthetic is indicated

REFERENCE

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

HÆMATOMA OF THE GASTRO COLIC OMENTUM

This is a case of such rarity that I am prompted to submit it for publication

A married woman aged 31 attended the out patient department Soho Hospital for Women on June 16th 1931 complaining of an abdominal swelling which she had noticed for fourteen days and which at times disappeared During the previous two days it had increased in size and had become tender In the preceding week vomiting had occurred twice and was accompanied by severe pain in the region of the swelling She noticed that on walking there was a dull aching sensation around the umbilicus Both micturition and menstruation were regular The patient had four children and her confinements had been normal

On examination there was found to the left of the mid line and just above the umbilicus a circumscribed dull tender mass about the size of a small orange It was freely movable Examination of the pelvis cardio vascular respiratory and urinary systems revealed nothing abnormal Radiograms of the kidneys demonstrated no displacement of these organs

Laparotomy was performed on July 7th A purple coloured lobulated mass was found lying in the gastro colic omentum Inferiorly it was attached to the upper and anterior aspect of the middle of the transverse colon while superiorly it was found adherent to the greater curvature of the stomach The mass was easily liberated from the colon but was firmly fixed to the wall of the stomach During the manipulations the capsule ruptured The fluid discharged was tarry and glutinous bearing a marked similarity to the contents of a chocolate cyst of the ovary The greater portion of the mass was removed but the upper pole was so firmly fixed to the stomach that it was deemed wise to leave it Into this remaining loculation a small rubber drainage tube was passed The rest of the abdominal viscera were examined and appeared to be normal The drainage tube was removed after twenty four hours Convalescence was uninterrupted and the patient left the hospital three weeks after the operation

The pathological report records the presence of a mass of blood clot with a capsule of fibrous tissue no omental tissue was to be seen

The literature on the subject is scanty Louis Timbal[1] published a monograph in which he described two cases of hæmatoma of the great omentum both patients dying There are three varieties of blood cysts (1) a true serous cyst into which bleeding occurs (2) a primary encysted hæmatoma of the mesentery or omentum due to a rupture of an arteriole (3) a hæmorrhage into the general peritoneal cavity which becomes secondarily encysted In the mesentery or omentum Trauma is a common factor in the aetiology It is interesting to note that there was no history of injury in this case Only by pathological examination can the types be differentiated In the case described there was merely a mass of blood clot surrounded by fibrous tissue The hæmorrhage had not taken place into a true and preformed space since no serous covering could be identified in the microscopical section

I should like to express my gratitude to Mr H Sidney Lonsdale for allowing me to publish this case

W C W NIXON L R C S

1 Bull et Mém de la Soc de Chir 1910 xlvi 4

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

SOUTH EASTERN COUNTIES DIVISION

Specific Therapy of Puerperal Fever Erysipelas and Scarlet Fever

At a meeting of the South Eastern Counties Division of the Edinburgh Branch held on March 16th with Dr MARSHALL in the chair an address was delivered by Dr J W BENSON medical superintendent of the City Hospital Edinburgh on the specific therapy of puerperal fever erysipelas and scarlet fever

Dr Benson considered that these diseases were all manifestations of infection by haemolytic streptococci but there were essential differences in the disease processes In scarlet fever the streptococcus remained in the majority of cases localized in the throat the systemic disturbance—as evidenced by rash pyrexia headache and vomiting—being due to the absorption of soluble exotoxins In erysipelas the infecting organisms were situated in the deeper layers of the skin where was set up the inflammatory process which showed the characteristic tendency to spread Constitutional disturbance pointed to the absorption of toxin the fact that erysipelas characterized by severe systemic disturbance not infrequently occurred in Dick negative individuals suggested that the toxaemia was due to an endotoxin In puerperal infection a new problem appeared—namely the invasive power of the haemolytic streptococcus A serum to be effective required not only to be able to neutralize toxins produced by infecting organisms but to destroy germs it must be bactericidal as well as antitoxic The facts that the exotoxins produced by different strains of *Streptococcus haemolyticus* seemed to have no qualitative difference and the majority of them were neutralized by a single antitoxin had an important bearing on the serotherapy of streptococcal infections in general The therapeutic serums could be divided broadly into two groups antitoxic and antibacterial Antitoxic serum aimed at the direct neutralization of bacterial exotoxins and proved reliable in practice The acute toxaemia shown in diphtheria tetanus and scarlet fever was of only a few days duration and the injection of an adequate amount of neutralizing serum would enable a patient to pass the acute stage On the other hand antibacterial serums had proved disappointing It was necessary for the actual destruction of invading germs and the neutralization of endotoxins Here adequate dosage was essential and since the bacteraemia which by protracted the injection might have to be continued over a comparatively long period The following were the therapeutic serums again Localized streptococcal infections were now available scarlet fever serum erysipelas antitoxic serum and puerperal fever antitoxic serum The essential difference between these polyvalent serums and the polyvalent antistreptococcal preparations

they were rapidly displacing was their high antitoxic content. Since the exotoxins produced by the various strains of haemolytic streptococci were regarded as being qualitatively identical, what fever antitoxin might be expected to neutralize the exotoxins in all three infections is a matter of fact if administration was regarded as sound practice.

In serum therapy the three important factors were early administration, adequate dosage, and the route of injection. It must commence within seventy-two hours of the onset of illness—the earlier the better. No hard and fast rules regarding dosage could be laid down, but broadly speaking serum treatment should be continued till definite improvement ensued—daily for a week or even longer. The intravenous route permitted the serum to exert an immediate effect. It was contraindicated in small children, asthmatics, and individuals who gave a history of previous serum treatment, in these the intramuscular route should always be adopted. Owing to the delay in absorption the subcutaneous injection of serum had nothing to commend it. Where untoward symptoms occurred in the course of intravenous administration it was necessary to stop, and before withdrawing the needle to inject 0·5 to 1 c.cm. of adrenaline. In cases where there was reason to suspect increased sensitivity to serum it was important to desensitize by giving initial subcutaneous injections of 0·25 c.cm. serum, followed by 0·5 c.cm. and 1 c.cm. at hourly intervals. Should no untoward symptom follow these initial injections a full therapeutic dose could be introduced intramuscularly one hour later. In serum sickness, where an urticarial rash was profuse and the discomfort correspondingly great, 5 to 10 minims of adrenaline subcutaneously or 0·5 to 1 gram of ephedrine administered occasionally by the mouth acted like a charm. In scarlet fever little could be expected from serum administration after the fourth day of illness, and in septic scarlet fever, where the characteristic feature was the invasive power of the haemolytic streptococcus, it had proved disappointing. Complications such as otitis media, rhinitis, and suppurative adenitis did arise in spite of serum treatment. In the City Hospital serum treatment was reserved for the more severe cases showing such symptoms as obvious toxic appearance, severe prostration, persistent vomiting, or diarrhœa, delirium, a very rapid and soft pulse, a temperature of 101° F. or above, and severe faucial inflammation. Serum was also given where a mild scarlatinal infection was superimposed on a previous illness to debilitated children, and to return cases as a matter of policy. In attacks of moderate severity 30 c.cm. of serum was injected intramuscularly; in most patients the injection did not require to be repeated. Where the toxæmia was severe it was advisable to inject intramuscularly 30 c.cm. followed by 30 c.cm. intravenously one hour later, the latter injection could with advantage be combined with half a pint of 10 per cent. glucose saline solution. Injections should be continued at twelve hourly intervals until the symptoms were relieved.

Puerperal infection differed essentially from scarlet fever in that the haemolytic streptococcus tended to invade the blood stream, whereas in scarlet fever a toxæmia was present; it was consequently not reasonable to expect a purely antitoxic serum to be equally efficacious. Clinical evidence regarding the value of puerperal antitoxic serum or scarlet fever antitoxic serum was conflicting. Experience in the City Hospital had left the speaker with the feeling that an effective therapeutic serum against haemolytic streptococcal septicæmia had yet to be produced, although it was only fair to add that most of his cases did not receive serum before the third or fourth day of illness. In cases of erysipelas both erysipelas antitoxin and scarlet fever antitoxin had been freely administered to some 200 cases of erysipelas in the wards of the City Hospital during the past five years. The results were not encouraging; the spread of local inflammatory process was not checked, but in some instances there had been a definite alleviation of systemic symptoms such as headache, delirium, pyrexia, and malaise. The speaker suggested, however, that where the constitutional disturbance was severe, more particularly if the patient was at the extreme of life, 40 c.cm. of erysipelas or scarlet fever antitoxin might be injected before the third day of illness, and be repeated if necessary on three successive days. In infants a daily intramuscular injection of 10 c.cm. would be adequate.

In conclusion, Dr. Benson expressed the view that apart from scarlet fever no particular advance had been made in the serotherapy of haemolytic streptococcal infections. Even in scarlet fever the serum was almost purely antitoxic, and thus too much could not be expected from it in the septic type of case. In puerperal septicæmia and erysipelas, in addition to the soluble exotoxin, the invasive power of the streptococcus and its endotoxins had to be borne in mind. For a serum to be effective against these streptococcal infections it must contain, besides antitoxin, effective antibacterial substances, and the speaker maintained that such a serum had not yet been produced.

Reports of Societies

MICROSCOPY OF FILTERABLE VIRUSES

The meeting of the Royal Microscopical Society held at the British Medical Association House on April 20th was for the special consideration of the microscopy of filterable viruses. The discussion was opened by Mr. CONRAD BECK, the president, who described the technique of dark ground illumination and the use of ultra-violet light. Photography with ultra-violet light he said was as certain and reliable as ordinary photography, and in some cases the resolution appeared to be better than theory and practice hitherto had suggested. This might be due to the well-known property of a photograph of showing in certain instances what the eye could not see. Essentially the question was one of contrast between the object or elements in its structure and the background. Where stain was not desirable or as in the case of living organisms could not be adopted, the question of visibility required careful attention. The combination of ultra-violet light with dark ground illumination had at least doubled the power of the microscope.

Mr. J. E. BARNARD said that during the last three years he had attended two discussions on the subject of filterable viruses—one held at the Royal Society in 1929 (*British Medical Journal*, March 9th and 23rd, 1929) and the other at the British Association last year (ibid., October 3rd, 1931). At the latter he noticed a marked change in the outlook of workers in this field. It seemed to have become pretty clear that a virus was probably a small organism differing chiefly in size—although it might have other physical differences—from the larger and well-known bacteria. If that was the case it was obvious that this subject came definitely within the province of a microscopical society. He laid down three propositions: (1) that the observation of small organisms could best be effected with living material (advantage could then be taken of morphological and physical differences which were obliterated in a post-mortem examination); (2) that to achieve the necessary microscopical resolution visibility must be secured, and the record of the elements of structure lying in one plane and separated one from another by distances equal to or greater than

the resolution limits was best obtained by a dark ground illumination (3) that the necessary combination of visibility with the resolving power was only to be arrived at by the use of light of short wavelength the wavelength required depending on the size of the organism which was being studied Mr Barnard then showed a few photographs of the organism of vaccinia which he had selected for the reason that its size was in one dimension at least always below the resolution limits of microscopy with visible light When the organism elongated lightly as it did before subdivision then it just came within the resolution limit Here therefore one had an organism of two dimensions—one within the limits of resolution of the microscope with visible light and the other outside those limits

Professor J C G Ledingham feared that the microscopy of filterable viruses was at present practically restricted to cell inclusions and elementary bodies So far as cell inclusions were concerned there was no doubt that their presence was almost valuable guide to the existence of particular virus infections and there was no evidence at all that the cell inclusions could be reproduced by any artificial experimental means On the other hand with two or three exceptions no precise knowledge of the composition of these cell inclusions was forthcoming With regard to elementary bodies in relation to vaccinia fowl pox and so forth there were now good grounds for knowing that they did represent the infective agent of the virus During the last five months he had been studying the filterable virus so called of bovine pleuropneumonia It was always said that this was the only virus capable of cultivation in an artificial medium But was it a virus in the ordinary accepted sense? His observations went to show that probably it should not be considered a virus at all More likely it was a bacterium or fungus possessing elements so small as to be capable of passing through the lower grade of filters He traced the history of the work on this virus and described its extraordinary polymorphism The organism appeared to be of a highly plastic nature Some workers had emphasized the difficulty of studying agar preparations of the virus owing to its capacity for burying under the agar but it was a very easy thing to take a slide press it down with finger and thumb over the growths for half a minute bring it up and stain He had had no difficulty in getting quite excellent stained preparations of the various stages Quite provisionally he was inclined to consider the organism of pleuropneumonia not as a virus but as an organism with fungal characteristics

Dr S P Bedson said that for many years now elementary bodies had been stained and studied in a number of filterable viruses and it seemed to him that one of the chief problems which confronted workers at present was to find out whether the bodies were the virus or not In attempting to solve this question with one filterable virus he had relied on purely conventional methods The methods followed by Mr Barnard were of course of the very greatest value but they were not at the disposal of everybody and possibly in the hands of those to expert might lead to error Conventional methods which had been employed in the laboratory for years now could be used in the solution of this problem The elementary bodies of psittacosis were quite definite structures By fractional centrifugation and washing he had found a certain deposit consisting of these elementary bodies and that a culture was produced by this body He had however discovered that they could be partially adsorbed out of an antityphus [illegible] and were recovered by extraction and again [illegible] from a vaccinal lymph which he had [illegible] charged He thought it could be deduced that the minute elementary bodies seen in the organism were the virus Although the method might not be applicable to all filterable viruses it could be applied to a number of them and should make it possible to determine whether the bodies seen under the microscope were the virus

Dr C C Hurst illustrated virus disease of the potato which took on he said various symptomatic and clinical forms specifically differing according to the variety of the vegetable and its tissues Four specific virus entities had been demonstrated

Professor J McIntosh asked for a definition of a filter passing virus He thought the differentiation between a visible bacterium and a filter passer was purely artificial in that it depended on the resolution limits of the microscope That was not a sufficient criterion to distinguish between two living elements It was quite possible that many of the filter passing viruses were really small bacteria in every way comparable to the visible microorganisms Working on this hypothesis there was a tendency to apply methods used in the case of the visible organisms for the differentiation and identification of the filter passers With the ordinary organism there were available microscopical examination and experimental and cultural methods Speaking purely from the practical aspect he was soon convinced that for the recognition of filter passing viruses and their separation into a definite entity these methods could not be applied with the same ease For example in the case of ultramicroscopic viruses reliance had been placed almost solely on the pathogenic effects on animals for the differentiation of the virus The microscope was used as a controlling element in close association with these animal experiments However useful in future direct microscopic demonstration of these viruses might be it was inconceivable that by this means alone the virus could be identified One did not at present make any attempt to identify and put in its proper group a bacterium solely by the use of the microscope although of course it was necessary to have the microscopical method as a control He showed some preparations of inclusion bodies which were of interest Professor Ledingham had said that only in the case of fowl pox and one or two others had it been possible to demonstrate bodies inside the inclusion but he had a section showing the Paschen body the inclusion body in vaccinia in the epithelium of the cornea of the rabbit which when stained showed the same definite granular arrangement as was found in the case of fowl pox

Captain S R Douglas discussed methods of staining The methods usually employed in staining virus bodies had he said been practically of one kind and had the disadvantage of piling up the stain on the outside of the organism Lately two new methods had been evolved In one of them Dr Laidlaw's acid stain was used which gave a good picture at times of a red-brown inclusion body The other method rather neglected in bacteriology and other studies was to float the organism in the stain and examine the wet preparation

Dr W J Elford dealt with an aspect of microscopical technique which in this particular problem assumed more than usual importance—namely the preliminary investigation in the preparation of the object The pathogenic agents the filterable viruses had so far been found unable to cultivate on inanimate artificial media [illegible] from living cells It had been necessary to examine [illegible] through series of graded collodion membranes The filtration of the virus could not take place in a single membrane but in a series of membranes each of different porosity He gave a list of those with which he had experimental dilutions in which the filtration had been completed varying from 0.125 to 0.175 μ infectious

ectromelia 0·10 to 0·15 μ herpes 0·10 to 0·15 μ foot and mouth disease 8 to 12 μμ

Dr I HINDLE said that to his mind there was evidence of a variety of structures associated together which possibly had no direct connexion He was in complete agreement with Professor McIntosh From a practical point of view he thought the use of the microscope distinctly limited In the case of larger organisms such as bacteria very few could be identified under the microscope which was merely a check on experimental and cultural methods In the case of viruses it would probably be found that simpler methods would have much greater importance than a direct examination of infected material The record of direct examinations of infected material was unfortunate A whole host of different bodies had been described as the infective agent in disease Therefore while Mr Barnard's methods were very useful he thought the future in the study of virus disease would lie in the development of cultural methods and the biological identification of the different infective agents

Mr J K JOUSSO spoke from the physical point of view The use of short wave lengths was of great value on account of the increase of resolving power obtained and also the elective adsorption of the specimens made it possible for virus qualitative tests to be made

Dr G M FINDLAY said that one of the most important things in the advance of microscopy by ultra violet light was the separation from colloidal particles with which the organisms were so closely mixed The results of differential centrifugation and filtration had been already mentioned There were two other methods One was that of adsorption of the tissue or enzyme with some substance such as kaolin the kaolin was then washed and subsequently the tissue extracted therefrom In some experiments (in which he had taken part) on the virus of vaccinia it was found comparatively easy to adsorb the virus on to kaolin but as in the case of enzymes the various kaolins differed in the ease with which they adsorbed the vaccinia virus The suspension could usefully be treated with a dilute solution of lead acetate previously afterwards the kaolin having been washed the virus could be removed by treating the kaolin—preferably with dilute ammonium phosphate In the fine granular deposit obtained it was possible by staining methods to see very minute granules which when inoculated into the rabbit were highly infective The other technique was that of micro dissection as described by Professor Chambers This was one which might be applied to many investigations of virus diseases It had now been shown that the intranuclear inclusion bodies were present in the living cell Their nature was at the moment unknown but it seemed probable that they did contain the actual virus because they could be observed to grow in the nucleoplasm and by the technique of micro dissection they might be sorted out and further studied under the microscope He believed there was no distinct line of demarcation between actual bacteria and the ultra microscopic viruses

PUERPERAL FEVER AND PYREXIA

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on April 22nd with Professor MAJOR GREENWOOD in the chair Dr A S M MACGREGOR medical officer of health for Glasgow read a paper on Puerperal fever and pyrexia

Dr Macgregor said that his paper was an attempt to assess the problem to be dealt with in a big industrial city At an earlier discussion in 1924 in which the Section with other bodies had joined the question of paramount importance was the notification of puerperal pyrexia the provision of adequate hospital facilities and the rendering of assistance to the general practitioner All these administrative ideals had now been realized but to judge from the stationary or even rising death rate the efforts of local authorities to control puerperal sepsis had not met with success The more the actual facts were disclosed the higher became the rates of incidence and mortality Special studies had been made in Glasgow of the volume of infection disclosed by the notification of puerperal fever and pyrexia The number of cases notified last year was 891 and in half the cases the notification of pyrexia meant puerperal sepsis This correction having been made the incidence of puerperal sepsis was just over 27 per 1 000 births The maternal deaths per 1 000 births in Glasgow had risen from 6·9 in 1921 to 8·57 last year Previous to the beginning of the century there had been a fair correspondence between England and Scotland in respect of maternal mortality and puerperal sepsis but since then the figures showed a wide divergence the higher figures relating to Scotland No great significance was to be attached to the comparison of the mere figures as the methods of classification in the two countries were different but as there appeared to have been no change in practice for many years the general trend might be compared and in recent years it had been upward in both countries In Glasgow the number of admissions to puerperal wards had increased from 119 in 1913 to 405 in 1931 with this increase in hospitalization had gone of course a decrease in case mortality Of puerperal fever patients 93 per cent were now either admitted to the special wards of the isolation hospitals or were treated in the maternity hospitals where the case occurred but in spite of the ample provision of hospital beds little impression appeared to have been made upon puerperal mortality The mortality rate from puerperal sepsis (3·1 in 1931) had not sensibly diminished This maintenance of the high rate was probably due to the continued occurrence of the severe septicæmic type of case and to abortion sepsis which accounted for about 22 per cent of the total fatalities due to septic infection The mortality rate from puerperal sepsis being apparently so intractable it was necessary to examine the results of administrative procedure Here Dr Macgregor showed an analysis prepared by Dr Margaret Thomas of 800 consecutive hospital admissions with 122 deaths Miscarriage and abortion accounted for 24 per cent of the admissions and 20 per cent of the deaths The cases had been classified clinically into four groups, of which the fourth representing those associated with severe blood infection provided 74 per cent of the total deaths although the cases in this group as compared with those in other groups did not appear to have been unduly delayed in admission to hospital It was evident that in all the groups there was undue delay in many cases (though an improvement had taken place in this respect compared with former years) and prognosis was adversely affected The policy of hospital treatment was now having a fair trial though it was handicapped by the presence of a virulent form of infection in which post operative sepsis took a prominent and increasing share It might be that infections with the hæmolytic streptococcus like infections with the pneumococcus tended to be more severe in the northerly parts of the kingdom There was no definite evidence to postulate a carrier The tenement system in Glasgow might be regarded as favouring the incidence and severity of puerperal sepsis by increasing the danger of carrier infections in congested areas but there was no definite evidence of such association and the incidence of puerperal sepsis occurred fairly equally throughout the city irrespective of the type of residence In a local investigation of 200 consecutive deaths from puerperal sepsis it was found very difficult to assess the attendant

circumstances when the patient was presumed to have become infected but the inquiry corroborated the view that labours in which some form of intervention had taken place were more liable to end in sepsis Of the 200 cases of death from puerperal sepsis 90 were difficult labours while forceps had been applied in 48 Too great significance however was not to be attached to the latter figures as obviously much depended upon the extent to which a practitioner was accustomed to use forceps in his ordinary practice

Dr REDINGTON HOBBS said that though the puerperal sepsis regulations by including puerperal pyrexia had brought many more cases into hospital the standard of morbidity left much to be desired and allowed a large leakage of cases to take place But until a serum or vaccine could be invented which killed the organisms at once reliance must be placed on the other signs of inflammation and if possible prophylactic measures be instituted Directly a woman came to the consulting room he thought it as well to see whether she had an erosion and any leucorrhoea Again most cases which showed *B coli* in the urine had a similar genital infection

Sir W DALRYMPLE CHAMPNEYS referred to the difficulties which faced those who framed the puerperal pyrexia regulations It was impossible to create a rule which would bring into notification all and only those cases which should be notified His feeling was that the regulations had done an enormous amount of good and but for them this fine piece of clinical and statistical research at Glasgow would probably not have been undertaken Dr JANE TURNBULL said that for Dr Macgregor to have got 60 per cent of the patients into hospital within three days of onset was an excellent result In investigating reports of maternal deaths a disturbing factor had been the lateness of admission

Dr G CLARK TROTTER said that general practitioners in good neighbourhoods and with excellent records for their maternity cases were sometimes appalled on the occurrence of puerperal pyrexia suspected to be sepsis But it was possible that just as children in better class districts did not have the acquired immunity to infectious diseases possessed by children in poor and overcrowded districts so women attended in better class practices might be more susceptible Dr D SIGF SUTHERLAND said that in Manchester considerable attention had been paid to blood infection Blood examinations were made immediately a case was admitted to hospital and quite a large number of patients showed a minor infection This could be controlled by Colebrook's method of giving arsenical drugs All the cases were centralized in the isolation hospital and the death rate last year was 8 per cent Antito in serum had been given up it was found less effective than arsenical drugs associated with glycerin and iodine irrigation Dr A S MONCKTON COPEMAN mentioned the use of oil of turpentine given externally and internally

The PRESIDENT remarked that he could not discover the relevance of most of the statements in the discussion Dr Macgregor's difficulty was that 95 per cent of the cases that occurred in his city and over 95 per cent of the deaths actually occurred under the most favourable conditions In spite of prompt and effective administrative measures the patients still died and what Dr Macgregor wanted to know was whether this apparently stationary or even increasing mortality was a true phenomenon It might be that there were subtle sociological changes which meant that the exposed to risk had a rather different connotation

Dr MACGREGOR in reply said that he was not prepared to admit that the figures for Glasgow were comparatively high until he knew that the same effort was made elsewhere to find out and classify the causes of death

INFECTION IN THE DORMITORY

The Section of Epidemiology and the Section for the Study of Disease in Children under the chairmanship of Sir HENRY GALVIN had a combined discussion at the Royal Society of Medicine on April 19th on infection in the dormitory

Dr J ALISON GLOVER in opening said that many authorities from Pringle onwards and including the Royal Commissions of 1857 and 1861 had emphasized the importance of space in preventing infection in sleeping quarters Infection in the dormitory was but one aspect of infection in the boarding school but it was very important in most schools the exceptions being a very few boys schools where dormitories were adequately spaced and most girls schools where the pupils slept in cubicles of proper size The part played by the dormitory was shown by the fact that the incidence of infections was greater in boarders than in day boys He mentioned one small public school where during an epidemic of scarlet fever the 132 senior boarders showed an attack rate of 32 per cent while of the seventy five day boys only three were affected The variation of incidence in different dormitories was often significant A small outbreak of scarlet fever due to a heterogeneous strain of haemolytic streptococcus happened in a school in which the hygienic conditions were exceptionally good There were eight cases in the whole school of 475 four of these being in one dormitory in which twenty nine boys slept Investigation showed that this dormitory was one of two which had slight overcrowding of beds Bacteriological examination eighteen days after the last case revealed a still considerable carrier rate Three of the subsequent cases occurred in the other dormitory which was slightly overcrowded Bed charts of dormitories on which the dates of onset had been noted frequently showed a grouping so suggestive that coincidence seemed unlikely When the bacteriological results of simple throat swabbings in a dormitory were charted the groupings of carriers often pointed clearly to bed to bed infection The conditions in dormitories which favoured a rapid and easy transmission of infection were proximity of beds deficient and not cross ventilation insufficient floor space dead space in ceiling and dead corners More than two rows of beds were to be deprecated The minimum suggested by the Board of Education for dormitories should be strictly observed—namely at least 3 feet between beds floor space of not less than 65 square feet per bed and cubic space of 700 cubic feet with ventilation adequate and through by arranging the windows on opposite sides of the room

Surgeon Captain S F DUDLEY after making the assumption that where people slept in congested dormitories a large proportion of the infectious morbidity was contracted in bed contrasted the former conditions on the training ship *Impregnable* with the conditions at Shotley also a naval training establishment On the *Impregnable* the lads slept in hammocks which touched one another At Shotley the sleeping conditions were less dense There was little difference in the attack rates for the most infectious types of disease the figures being 154 in the *Impregnable* and 147 at Shotley per thousand per annum The prevalence of more serious infections and complications was however higher in the establishment with the denser night environment—for example for pneumonia thirteen and six per thousand respectively for rheumatic fever nineteen and ten and for respiratory disease (a heterogeneous classification) 401 and 252 This raised the question whether an improvement in sleeping quarters too small to check total morbidity might not limit the clinical severity and the number of complications It was Captain Dudley's belief that the organisms of the commoner infections could easily traverse 3 or 4 feet during

the nine hour night. With beds arranged in pairs each pair being 9 feet from the next although each member of the pair ran a greater risk of infection running through the whole dormitory. Certain observations suggested that there was not likely to be infection running through the whole dormitory. Certain observations suggested that institutional morbidity might be decreased by using new comers relatively more space than older residents and by grouping beds in dormitories instead of having them equidistant. A speculation arose from some phenomena observed when people were closely aggregated at night—namely, as to whether parasites were able to acquire new pathological attributes in densely packed dormitories and cause outbreaks of disease outside them. I shall only theorize. Recently some authors had attributed more importance to the spread of disease by insanitary methods of washing up eating utensils and the question is worth serious attention as to whether droplets or dish water was the more common vehicle of infection.

Dr. R. I. Sutton (Rugby) said that the average per head in the dormitories at Rugby was 66 square feet of the capacity 784 cubic feet. The floor space in the studies was 114 square feet and the capacity 265 cubic feet. The studies which lacked the cross ventilation of the dormitories might be a greater source of danger than the latter. The boys also came into close contact in the dining hall and in the chapel where they sat shoulder to shoulder while in the classrooms they were separated only by about 3 feet. Influenza was one of the chief problems of the school medical officer because it was completely different from the common infections in that one attack conferred immunity only of short duration. Most of the epidemic at school occurred during the Lent term and the most useful preventive measure against influenza would be to ensure that during the Christmas holidays plenty of outdoor exercise was taken with the minimum of indulgence in parties. He was strongly opposed to routine vaccination for influenza. He also pointed out that the nurse might be a preventable carrier of infection.

Dr. W. H. Barnes (Downside School, Bath) showed a number of charts illustrating dormitory spread. He said that the dormitory was the main location of the spread of disease in semi-isolated communities. The day time contacts of the boys were not blameless but were of minor importance and in any case beyond easy control. The dormitory if it was to survive must be hygienically sick rooms irrespective of its symmetry or attractiveness. His experience of secondary infections in spread and grouped beds appeared to be more essential than perfect ventilation important though that was. His own ideal was a separate room for night use only.

Dr. Dorothea Taylor (Bedales School, Petersfield) said that Bedales was a co-education school and there were six or eight in a dormitory on each side. Her impression was that sometimes the dormitories were a source of infection with influenza and measles. With regard to sex incidence there was a strong feeling that the boys were all much more frequently than the girls and that was certainly the view of the matrons on both the girls' and the boys' sides but examination of the statistics showed that the incidence was exactly the same for boys as for girls.

Dr. I. R. Lemerle (Haileybury) said that the spread of infectious diseases in schools depended on the type of school. He described a hostel school in which the boys slept in large dormitories forty-eight per dormitory. In this school the same boys were grouped together in sleeping rooms day rooms classes and to a large extent at games. He believed that spread took place far more readily in the house rooms than in the dormitories. A low partition in the dormitory would very largely prevent the transmission of droplet infection. He gave some figures collected during the nineteen epidemics of the common exanthemata which showed that 32 per cent. had been traced to the dormitory 28 per cent. to the house or form room and 16 per cent. to the house or form while in 21 per cent. the origin was unknown.

Dr. A. L. Sutcliffe (Malvern) made a plea that as practically 100 per cent. of the community was bound to get measles the enormous amount of precaution taken at preparatory schools should be considered a mistake. He also said that in his experience serious streptococcal complications occurred chiefly in the fat and flabby type of girl of 15 or 16.

Dr. P. M. May (Royal Hospital School, Greenwich) confessed his wonder that spread in schools was not more marked. In his school of 900 boys last year there were only four isolated cases of mumps and yet the boys were all in contact with one another. At the same time the class of children with whom he had to deal was that which had got salted in early life this furnished a happy immunity from a great number of infections which would otherwise occur.

Dr. Alice Sandilands Clow (Cheltenham) said that she had made inquiries relating to thirty-three separate educational establishments in Cheltenham and although careful records of sickness were kept there were no notes of spread of infection among occupants in the same dormitory. The general opinion was that the spread of infection could not as a rule be traced to dormitories. One of the features of the construction in the Cheltenham colleges was the loftiness of the rooms which were 11 to 14 feet in height. Under such conditions cases might occur and yet if the case was removed at once there was no transmission of the infection to the other occupants of the room. To her mind colds and influenza were the most serious infections in schools at the present day in that collectively they caused the greatest waste of time and one attack conferred no immunity. Mumps and measles might almost be regarded as a part of general education. She had questioned whether elaborate arrangements to prevent dormitory spread were necessary because she had observed that especially in the chilly season the children generally slept with their heads down under the bedclothes. She believed that infection was most commonly transmitted in overheated and stuffy day rooms and living rooms.

Dr. E. W. Goodall pointed out that sex itself was a differentiating factor in connexion with the mortality and morbidity of certain infectious diseases. For example there was a higher mortality among girls from whooping cough and among boys from measles. He spoke of the large number of factors which had to be considered in addition to the structures of dormitories in assessing the spread of infection in institutions.

Dr. E. P. Poulton mentioned a preventive measure against droplet infection—namely, the massive application of a simple inert substance to the nasal mucous membranes. Spray was relatively ineffective for this purpose but an application of liquid paraffin and white vaseline perhaps with menthol had proved very efficacious in stopping respiratory infections in the early stages. The preparation which he had introduced had been placed on the market by British Drug Houses. Dr. W. R. P. Collis also spoke of the efficacy of this method.

Sir Henry Gauvain in closing the discussion said that the chief thing which every speaker had directly or indirectly emphasized was abundance of fresh air for the dilution of infection. In the light of experience gained during a quarter of a century at Alton a new hospital

was being built there in a special way so as to take the fullest possible advantage of the open air The wards were so arranged that an infinite amount of air would be available It was not a question of having 3 feet between beds but of having the whole air of Hampshire He also mentioned the importance of sterilizing the utensils used by the children and added that discomfort from cold was not at all necessary in open air treatment and that the solution of providing warmth was to be found in the panel system of heating

THE ORIGIN OF TUMOURS

The first medical meeting of the Harley Medical Society was held on the premises of the London Clinic and Nursing Home Dr H MORELAND MCCREA who occupied the chair during the first part of the proceedings said that it was with the object of keeping alive scientific ideas in their own circle that the society had been formed The DUKE OF ATHOLL on behalf of the London Clinic and Nursing Home expressed his sense of privilege in being present to hear the discussion which would ensue concerning one front in the relentless war which pathologists and others were waging against the biggest scourge mankind had to face

Sir LENTHAL CHEATLE then took the chair and Mr J P LOCKHART MUMMERY opened the discussion on the origin of tumours with a paper which will be found at page 785 of this issue

In opening the discussion the CHAIRMAN said that as Mr Lockhart Mummery had told them it was Boveri who in 1913 first announced a comprehensive theory that carcinoma was due to a chromosome imbalance Subsequently increased knowledge of chromosome constitution has led to the theory of the presence of genes in the chromosomes This theory had been developed and elaborated by Morgan Bauer Mottram and Ludford There were really only two concrete theories before the world of the origin of tumours One was the virus theory and the other the gene theory All one could say at present was that if Oye were right that carcinoma was due to the action of a virus then the gene theory might or might not have little to do with the matter and if it had it might be of secondary importance On the other hand if the gene theory alone were right the origin of carcinoma might depend entirely upon the imbalance of the gene elements or the virus theory among others might be incorporated in the gene theory as Lockhart Mummery suggested it could be Take for example the changes that occurred in Paget's disease of the nipple In the majority of instances of this disease there was a benign form of malignancy either in the epidermis of the nipple or in the upper duct openings When once an epithelial cell had become malignant it was with few exceptions difficult to state the origin of that cell The particular matter to which he wished to draw attention was the fact that in addition to this disease in the superficial regions there was frequently a carcinoma (which could not be regarded as a coincidence) arising in the epithelium of terminal ducts and acini He would not worry the meeting with his reasons but he did not believe that this deep lying carcinoma could be due to cell transplantation from the benign type of malignant disease in the region of the nipple The condition in the underlying and deep parts of the breast might be explained by a virus that had either passed down the mammary ducts or had reached the epithelium of the breast by the blood stream It could also be explained by the gene theory and the epithelial cells could be said to have inherited a tendency to the formation of carcinoma By some people (and Mr Lockhart Mummery appeared to be one of them) the gene theory was considered to be the best available theory at the present time and was capable of offering an explanation of all facts of carcinoma provided they were prepared to make certain subsidiary hypotheses What Mr Lockhart Mummery had done had been to give for the first time clinical evidence that might be explained by the gene theory and he had performed his task in a most impressive and masterly fashion

Dr R J LUDFORD showed some lantern slides illustrating the chromosome theory of heredity of which he said the gene theory was a special application He pointed out that the chromosome number was constant for every species of animal In man there were forty eight chromosomes in mice forty Whenever a cell divided the chromosomes split into two one half passing to each pole of the spindle The chromosomes retained their specific character with each cell division Although invisible the gene was a very real concept in biology occupying much the same place therein as the concept of the atom in physics In showing some interesting diagrams he said that if each chromosome was regarded as made up of genes and if these genes were arranged lineally then one arrived at the conclusion that at every division with the longitudinal splitting of the chromosomes each daughter cell got the same number of genes as the cell from which it was derived The gene theory of cancer postulated that some alteration had taken place in certain of the genes It was not known what alteration but it was known that the character of the cells was determined by the chromosomes—at least that was one of the foundations of the chromosome theory Of the forty eight chromosomes in man twenty four were of maternal and twenty four of paternal origin and since it was known that the chromosomes determined the physical characters of inheritance one was led to the conclusion that the particular type of biochemical process going on in the cell was the result of interaction between the chromosomes and the cytoplasm He showed diagrammatic representations to illustrate how certain mutations were transmitted by the germ cells—how for example such a defect as colour blindness was transmitted as a gene mutation This appeared to be the best method of explaining the factors of inheritance As opposed to this theory of cancer was Dr Gye's theory This postulated a ubiquitous virus which under certain conditions was able to enter the cell and confer upon it the character of malignancy The gene theory of cancer was one of the best capable of explaining all the facts as far as they concerned the cancer cell He would not say that it was actually at variance with the virus theory He believed that an open mind should be kept and that it should be realized that in cancer there might be some other process of which at the present time one had no knowledge—some fundamental biological process which with further research might be elucidated

Dr J C MOTTRAM said that his own association with this theory had not been very important Some few years ago he wrote a thesis upon it but the medical societies would have nothing to do with it The important fact which made one imagine this theory was the discovery that *x* rays greatly increased the number of genetic mutations and one naturally thought knowing that *x* rays could produce cancer that there might be a possibility that cancer was really a mutation When germ cells were subjected to *x* rays there was not the least doubt that they were altered and the same thing must happen with regard to the somatic cell Once a gene had undergone mutation the change continued for ever Only by a further mutation was this state of stability broken That rather fitted in with what was known about the cancer cell When it had been once altered it remained altered for ever Cancer cells had been cultivated for a great number of years and Jensen rat sarcoma which

he thought was the *oldest that had been cultivated, remained to-day exactly as it was when first discovered*. What was a somatic mutation? One of the earliest somatic mutations was discovered by Darwin who observed on a peach tree that one of the branches of the tree produced nectarines. What had happened was that some cell in this particular branch had become altered so that the peach had lost its furry skin and had become smooth. That had been propagated by budding, from one tree to another and had gone on ever since. There was no difference between somatic and genetic mutations. If a mutation occurred immediately after the first division of the egg cell following fertilization then half the animal would show this mutation and the other half would not. He spoke recalled many years ago when in Hong Kong, seeing a native child which was completely divided down the middle one half being brown and the other white. That was a case undoubtedly in which mutation had occurred after the first division. If on the other hand mutation occurred later in development patches of white skin would result: if very late one might have only a single cell affected. The conception of cancer on this hypothesis was that a single cell underwent mutation: it might be as a result of x rays or exposure to radium or exposure to tar or for no obvious reason at all just as mutations occurred in germ cells for no reason that could be discovered. That accord with what was found in cancer. Cancer did arise in situations where there had been no irritation and where no cause could be postulated but it occurred more commonly in cases which had been subject to irritation. If a gene in a somatic cell suffered this alteration then that alteration would go on for ever and if the alteration was such that it caused the cell to undergo rapid division cancer would be produced.

Dr W. J. Gye said that it was very difficult for him to criticize what had been said but so far as he understood the views put forward that evening they were based upon a hypothesis which was being largely exploited in biology but which was acknowledged to be nothing more than a working hypothesis. Some protozoologists disagreed with the general hypothesis as applied to biology. This working hypothesis was being made to explain a series of medical problems and thus hypothesis was being heaped upon hypothesis and analogy upon analogy until the whole thing was just a balloon. He had the fortune to be brought up as a chemist before he became a medical man and he worked for some years in that fascinating pursuit of making chemical compounds which had never been made before putting together chemical groups and so forth and one of the best organic chemists of the day used frequently to rebuke him and to say

Beware of analogies. They are dangerous. Cancer was really a pathological problem and he thought that Mr Lockhart Mummery had stated extraordinarily well some of the fundamental factors which they had to explain. If he himself had been reading his paper that evening he would have explained perhaps more in detail the character of autonomous growth. It seemed to him that neither Mr Lockhart Mummery nor Mr Ludford realized how entirely different the process of producing a tumour with a tumour filtrate was from the process of producing a tumour for example by turning a mouse. He did not think anybody would doubt who worked at these tumours that he was working on an infective process but it had very definite principles which were well worked out by Peyton Rous twenty one years ago. The work which he himself had done went to show that in the tumour filtrate there were two things which were necessary for the production of tumour—namely something which was extrinsic to the animal and something which was intrinsic. The theory developed that evening had really first been put forward by Boveri but Dr Murray, one of the most distinguished pathologists in this country and one of the acutest minds in cancer research although he had been closely associated with Boveri and had a filial regard for him could not accept his theory.

Mr Lockhart Mummery said that he had only to reply to Dr Gye for whom he felt the greatest respect. There were one or two things in Dr Gye's theory which it seemed to him the mutation theory explained. Dr Gye took a cell from the filtrate of Rous sarcoma No 1 and inoculated it into the muscles of a fowl in an extremely minute dose and produced Rous sarcoma No 1. He never produced Rous sarcoma No 2 but always No 1. It was hard to believe that that was due to an infective agent. One had the same result in the germ cell with the two minute bodies the male and the female germ cell. Dr Gye had never explained what the cell free filtrate did to the cell.

INDIVIDUAL PSYCHOLOGY

At a meeting of the Medical Society of Individual Psychology held on April 14th with the president Dr W. Langdon Brown in the chair Dr H. C. Squires read a paper entitled A novice's impressions of the theory and practice of individual psychology.

Dr Squires pointed out that the practical knowledge of psychological medicine was essential not only for the psychotherapist but also for the general practitioner. It was of value therefore to recognize the extent to which individual psychology fulfilled these requirements. A growing psychology it was far from being a rigid code with a fully formulated and finally enunciated set of principles. On the contrary its constitution like that of the British Commonwealth should be interpreted sympathetically rather than adhered to in meticulous detail. He briefly referred to several features which it emphasized such as the inferiority feeling the masculine protest and the motion of the life style and said that practical experience had led him to recognize the importance of these characteristics though of course their significance varied much from one case to another. Though understanding and appreciation of the main essentials of the practice of individual psychology was not difficult the efficient use of the method seemed to him to be quite another matter. The difficulty varied to some degree upon whether the method was used as an adjunct to other forms of treatment or whether it formed the chief instrument in other words whether it was employed for example by the general practitioner surgeon or gynaecologist on the one hand or by the professed psychotherapist on the other. One of the most important and striking features of the system seemed to be the emphasis laid upon the fact that the doctor and the patient were members of one social body towards which both had obligations. Dr Squires next alluded to certain difficulties he had encountered in the application of the technique. The treatment was not expected to be of long duration. He felt however that the novice should move slowly rather than quickly. At the same time increasing experience should enable the physician to elucidate the life plan of the patient more quickly though the most practised were as yet but feeling their way and here the use of hypotheses found its justification. From the theoretical standpoint the Adlerian system particularly appealed to him and practical experience had reinforced this bias. There was indeed much to support the possibility that individual psychology was the most practical and useful system of psychological medicine as yet evolved—a real step towards the attainment of a means for best dealing with psychological problems.

The PRESIDENT agreed that all medical psychologists are at present but groping their way. He felt that it was

ill to the good that the attitude of the school of individual psychology was not one of over self confidence and that the method was not isolated from general medicine The psychological aspect of every case must be considered if complete comprehension was to be obtained Dr T G CROOKSHANK said that one central point in individual psychology was that it dealt with the individual as a whole not as a number of fictitious entities It was important in treatment that the patient should realize that he was responsible for the action of his body Dr BEVAN BROWN doubted whether individual psychological treatment was applicable to all cases Valuable in certain superficial cases or where the patient was of good material and responded to stimulation in other instances it might make demands which were too great Dr C I ALLEN said that it was to be remarked that all methods of psychological medicine produced cures there was here subject for study Dr T LAWSON observed that exhortation was not used in individual psychology Dr O H WOODCOCK referred to the value of placing responsibility upon the patient Dr HILDA WEBER mentioned a patient who had been helped by the realization that she was ultimately a unity conflict gave to the whole the semblance of a number of disconnected fragments Dr M MARCUS said that in general practice every patient had some present problem Individual psychology was able to relieve symptoms in many cases and restore the patient to comparatively sound health

DR HUGH CABOT ON UROLOGY

At a meeting of the Devon and Exeter Medico Chirurgical Society held on April 14th with the president MR NORMAN LOCK in the chair Dr HUGH CABOT consulting surgeon to the Mayo Clinic gave an address on recent advances in urology

Dr Cabot began by saying that though much that he was about to bring forward was in the *experimental* stage considerable promise for the future could be drawn from new departures in the treatment of urinary obstruction related to prostatic enlargement Two kinds of men came for consultation in respect of this affection one was the man who definitely had obstruction while the other had made certain that he was going to have it As regards the latter this might not always be an idle fear statistics having shown that there was a strong case for heredity in benign lesions of the prostate In addition to the problem arising from the *obstructing* prostate itself there were the often associated infection of the urinary tract and the question whether the glandular enlargement was benign or malignant Turning to the plan of attack Dr Cabot remarked that there was a tendency towards a great simplification of methods From the obstructive side of the lesion they had to consider two classes of patients (1) those for whom operation could be undertaken after brief urethral drainage and (2) those who required long drainage by cystostomy For the first class (that is after urethral drainage) there was a choice of three operations (*a*) one stage prostatectomy (*b*) perineal prostatectomy and (*c*) transurethral prostatectomy with mortality rates of 8 per cent 4 per cent and 3 per cent respectively In his opinion the perineal route—a method which seemed to him to entail working in the dark—would soon be driven out of the field by the transurethral operation At the present time however the perineal choice still found support and notably by Dr Young and his disciples in the U S A In reviewing the second class of patients—those requiring prolonged drainage (by cystostomy) followed by (*a*) two-stage prostatectomy or (*b*) transurethral prostatectomy—Dr Cabot deprecated a very wide application of the two-stage operation but emphasized the importance of prolonged and efficient drainage when certain extreme conditions made this procedure essential He failed to find anything in favour of a two stage operation spaced by a few days In deciding for or against a two stage operation they had as yet no satisfactory test of renal function or any one test which informed them as to the physiological condition of more than the last third of the kidney He did not despair of the future but at the moment it was well to bear in mind that the foundations of these investigations had only just been laid The study of the specific gravity of the urine by the older physicians in association with the general appearance and condition of the man—the tip of the nose being particularly eloquent—perhaps gave nearly as much information as they could hope to derive from the efficiency tests of to day It was then for these cases of cardio vascular and renal degeneration that a two stage operation—be it a suprapubic cystostomy or per urethram—found legitimate excuse These cases said Dr Cabot *must* be drained and there were two choices in procedure (1) to enlarge the wound transversely (thus avoiding the peritoneum) and then to enucleate the prostate and (2) to perform transurethral prostatectomy In the majority of these cases the prostate would be found to have shrunk during the period of drainage but the reason for this could not be stated with certainty The mortality in prostatectomy by the suprapubic route varied from 8 per cent to 20 per cent in the hospitals of the United States while recent figures in Germany were as high as 25 per cent Incontinence and fistula had *occurred in 4 per cent* of the cases following perineal prostatectomy—regrettable and trying sequels to patient and surgeon alike The transurethral method had shown a small average mortality and though a new procedure there were now more than 1 000 cases from which *conclusions could be* drawn

Dr Cabot then related the history of various operations designed to reach the prostate via the perineum or urethra This was followed by a detailed description of the transurethral operation as now *carried out at the* Mayo Clinic and of the instruments so associated These included (1) the special make of cystoscope with diaphragm through which is introduced in turn (2) the diathermy apparatus with needles arranged so as to act upon and blanch but *not burn* the obstructing portion of the prostate (the current being run in from four to six seconds) (3) the knife for cutting out the mass determined upon and (4) the electrode for bleeding points In such an operation the small sclerotic type of prostate was likely to give the least trouble *in contrast* with the results of other operations There was no necessity to remove the lateral enlargements—those chiefly palpated on rectal examination they were not concerned in the obstruction Dr Cabot then showed photographs of removed portions of prostate stating that 5 grams represented the average weight of tissue removed in any one case The maximum and minimum required for the relief of obstruction and for pathological investigation were 20 grams and 1 to 2 grams respectively An important point was that diathermy as opposed to the cautery did not spoil the growth for subsequent section by the pathologist Following upon the operation rest in bed was prescribed for from four to ten days the average period being eight days A further operation had been required in about 5 per cent of the cases in which the patient had been unable to complete the emptying of the bladder Dr Cabot did not altogether agree with some authorities who held that this would be the only operation of the future He himself still performed suprapubic cystotomy Results however had been reassuring enough for the Mayo Clinic to recommend the

operation in 12 per cent of the cases as against 12 per cent on its inception

Turning his attention to urinary infections, Dr Cabot mentioned the remarkable coincidence in the findings of two investigators working independently in the same building of the clinic Hans Helmholz engaged in research on epileptic children produced an acid urine by ketogenic diet and noted that it remained sterile Cabot on the other hand had been experimenting with infected urine and observed that the coli group of bacilli lived but a short time in very acid urine It was discovered however that acidity of urine determined by diet had far reaching effects which was washing out the bladder and the giving of drugs such as urotropine by the mouth had proved futile Dr Cabot then showed chart which gave striking evidence of the rapid reduction in organisms by diet once acidity was established and vice versa the disappointing result of drug reached acidity and urinary antisepsis He added that although in infection of an abnormal kidney (such as congenital hydronephrosis) was once dirty difficult to clear up—and indeed at one time considered almost impossible of cure—Helmholz had succeeded by diet The same observer had found recent to be the most resistant of the organisms There was no hope for ultimate freedom from infection thus attained would last and it would be wise to repeat the treatment at definite intervals The ketogenic diet eventually arrived at through the researches of Chirs and Helmholz limited the carbohydrate intake to 20 grams but gave very high figure for fat—namely 240 grams A diet sheet arranged for twenty four hours on the lines was as follows cream half a pint bacon four slices toast four ounces Vegetable large in bulk but of low starch content supplied the carbohydrate and was given in divided serving Such a diet was capable of acid production down to pH 5 6 but it was not easy to obtain lower readings Sterilization of the urine by ketosis as a preliminary to operation appeared to be the method of the immediate future for with an obstructed bladder one could expect little relief from drugs In any case observed Dr Cabot finally the club wielded by the body is more powerful than that of the drug store and even where some success had been obtained in non obstructed cases it was a question whether this should not be returned to the credit of providence rather than to that of the chemist

The PRESIDENT in thanking Dr Cabot for an address so full of original and epoch making material remarked upon the comparatively few cases treated as yet by diathermy but an apparatus of the description mentioned by Dr Cabot was about to be installed at the Royal Devon and Exeter Hospital Dr H A LAKE inquired if ketone production by starvation had been found to be of service in urinary infection Dr R V SOLLY quoted cases of coli infection of the kidney where catheterization of the ureter and injection of colloidal soda had been followed by cure Dr R H FOURNESS mentioned a case where acetonuria treatment by an alkaline diet and pyelitis occurred in order of sequence Dr T M PRIDEAUX inquired about diuretic acid as a bladder wash

Dr CABOT in reply said that although experiments were being conducted on the effect of starvation in urinary infection no information was as yet available up to date He agreed that a definite group derived benefit from ureteral catheterization and injections but was inclined to attribute this to the mechanical effect in diminishing obstruction rather than to the injections In regard to acetonuria it had been within his early experience that diabetics were tolerant of catheterization and now the explanation seemed to hand At the same time he was not certain that pathological acetonuria and ketonuria produced by diet were one and the same

Reviews

CUNNINGHAM'S ANATOMY

The fact that *Cunningham's Text Book of Anatomy*[1] has passed into a sixth edition is sufficient evidence of the high position it occupies—a position not surprising considering how distinguished have been its successive editors and contributors how admirably they have been served by their artist and how generously by their publishers In the course of time many changes have occurred we note for example that only two of the present contributors are responsible for the sections with which they were associated in the first edition while only six of the present twelve contributors have been trained in the Edinburgh school Despite these changes however the book retains its original form and adheres closely to the plan laid down by its eponymous founder The issue of successive editions has enabled the editors and contributors to continue to record the advances made in our knowledge of the subject to add to the number and variety of the illustrations and to incorporate such suggestions as have been received in the way of constructive criticism The result is that the book is singularly complete clear and accurate

The chief changes which we have been able to note in the present edition are to be found in the sections dealing with the nervous system We find for instance that special attention is now paid to the parasympathetic system and to the innervation of the blood vessels of the limbs while in the section concerned with the central nervous system an account is given of the most recent work upon the thalamic region and its connexions illustrated by a series of new and helpful diagrams Among other changes are additional illustrations, to be found particularly in the sections on embryology the sense organs and the vascular system In the section dealing with surface and surgical anatomy figures of the lumbo sacral and sacro iliac regions from the back a pyelogram and a drawing of the palmar bursal spaces are now included That there have been so few changes in other sections must be attributed mainly to the careful and thorough manner in which these sections have been treated in earlier editions Despite its many excellencies there are a few features which in our opinion are not above criticism We note for example that in Fig 184 the coracoid element forming the upper part of the glenoid cavity of the scapula is regarded as an epiphysis whereas we contend it is no more an epiphysis in the ordinary sense of that term than are the various elements constituting the acetabulum In Figs 208 and 210 again the upper epiphyseal line of the ulna is shown passing through the great sigmoid cavity well below its upper limit whereas in the text on page 234 it is distinctly implied that this epiphyseal line lies usually outside the capsule In Fig 869 the palatine gland—the position and limits of which are usually clearly indicated by the smoothness of the area where it lies in contact with the hard palate—is shown extending too far forwards while no mention is made in the text of the relation of the gland to the crista palati

Much might be said on the vexed question of nomenclature but this is we think neither the time nor the place We will content ourselves by expressing the hope that the name epistropheus for the second cervical vertebra will be dropped and that the name of axis be again restored partly because it is to the first and not to the second cervical vertebra that the term epistro

[1] *Cunningham's Text Book of Anatomy* Edited by Arthur Robinson M D F R C S Sixth edition London Milford Oxford University Press New York W Wood and Co 1912 (Pp xxviii + 1 854 1 125 figures 2 plates 42 net)

phens is more applicable and partly because of the difficulty of forming compound words with such an unwieldy element—a difficulty evidently appreciated by the editor of the section on syndesmology who both in text and in figure uses such terms as atlanto axial and occipito axial While appreciating the pains which the editor of the section of osteology has taken to supply students with the derivation of so many names we should like to ask on what grounds he dismisses the sacrum rather summarily as a sacrificial bone in ancient times We had long been under the impression that a special and lofty fate had been reserved for this bone accounting for its name—a fate sufficiently notable to have led to its commemoration in English verse Reverting to more serious matters we wonder as we turn over the pages of this quarto volume—1 450 pages of compressed and elaborate illustrations—how a student can be expected to learn still less to remember more than a fraction of what is here presented We wonder further whether the time has not come for the writers of students textbooks on this subject to exercise more discrimination with a view particularly to abridgement and to practical application whether in fact works like Cunningham should not be regarded so far as students are concerned as reference books—books among which it is only right to say Cunningham would stand second to none

STIMULATION THERAPY IN G P I

In their account of stimulation therapy in progressive paralysis Professor K BONHOEFFER and Dr P JOSSMANN give the results obtained with the treatment of general paralysis by malaria infections and other fever producing procedures According to Jossmann 2 000 cases were treated in Berlin from 1922 to 1929 by the use of the Wagner Juregg malarial inoculations Of these 23 per cent were classed as cures and a total of 40 per cent were definitely improved The results recorded in Germany and other countries are tabulated and show that the successes claimed vary from 6 to 49 per cent The author mentions that the literature on the subject now amounts to some 3 000 articles The chief conclusion of importance is that Reiztherapie has attained successes in cases of general paralysis that cannot be paralleled by any previous form of treatment Dr Kellmann in his contribution acknowledges the remarkable successes of malarial therapy but points out that it cannot be stated to conform to the *nil nocere* principle since it undoubtedly kills a certain proportion of patients Alternative pyretic measures that have been investigated are inoculations with recurrent fever and injections of sulphosin The latter which is a suspension of sulphur in olive oil produced nine cures in fifty four cases It has the advantage of being easily controlled and safe and Kellmann remarks that even if it is found to be inferior to malarial infection in potency it will nevertheless find a field of usefulness in the treatment of debilitated patients for whom more drastic therapy is too dangerous The remaining articles in the volume deal with other forms of stimulation therapy and the pathology of general paralysis

PATHOGENESIS OF PULMONARY TUBERCULOSIS

Professor LEON BERNARD has inaugurated a proposed Bibliotheque de Phtisiologie with a study entitled *Les Débuts et les Arrêts de la Tuberculose Pulmonaire*[1] It is a book which will appeal only to the advanced student of tuberculosis and will not be of much interest to the ordinary medical student or to general practitioners save those who are making an intensive study of this disease Views on the pathogenesis of pulmonary tuberculosis would be a more descriptive title of the work and all who are interested in this subject should certainly read it That they will probably not agree with a great many of the author's conclusions does not matter they will get some new problems presented to them in an attractive way and many of the old ones will be seen from a different angle There is so much controversial matter in the work that a detailed criticism is out of the question The second chapter on primary infections in infants children and adults is the best and the author's five rules governing the interdependence of infection and disease are probably sound and valuable From this point onwards the work deteriorates The conclusions drawn are based apparently almost entirely on x ray appearances into which much more has been read than we should think permissible and the examples given in the reproductions are not at all convincing But still Professor Bernard has been studying tuberculosis for many years and anything that he has to write on the subject must be carefully considered Why he finishes up this purely anatomico pathological study with a chapter on tuberculosis and marriage is difficult to understand The book itself is the usual paper covered French production ill bound with pages of all sorts of sizes issued uncut and difficult to handle

BIRTH CONTROL

There is a handy little book called *A Guide to Birth Control Literature*[2] compiled by NORMA E HIRES It is a selected bibliography on the technique of contraception and on the social aspects of birth control Under these two main headings references to a number of American and English publications are given and a third part gives similar references mainly to German publications There is said to be no birth control literature worth mentioning in French Italian or Spanish Such a guide will be useful to some The largest number of items under one name occur under that of the compiler The Baedeker system of asterisks is adopted and an examination shows it to be not only up to date but prophetic for the only two items marked with a double asterisk are volumes not yet published of one of which it is said that it will be a complete source book and of the other of which it is said that it will be undoubtedly the best short treatise yet published It is of course possible that this may lead readers to wait for these instead of reading those already available Nevertheless two of the most recent of these others (with only a single asterisk) are worth notice—Dr A TOINETTE KONIKOW'S *Physician's Manual of Birth Control*[3] and *The Practice of Contraception*[4] an international symposium edited by MARGARET SANGER and HANNAH M STONE

In her introductory chapter to the former of these the author writes The physician who a few years ago looked upon birth control as something beneath his dignity now wants information and eagerly examines the books written by those with experience This is largely true and the manual —not in its literal sense a very good description—will provide the practising doctor with a clear account of alternative methods with definite reasons why one of these has been adopted by the author

[1] *Les Débuts et les Arrêts de la Tuberculose Pulmonaire.* Par Leon Bernard Bibliotheque de Phtisiologie Paris Masson et Cie 1931 (Pp 263 71 figures 40 fr)

[2] *A Guide to Birth Control Literature.* By Norma E Hires London N Douglas 1931 (Pp 80 6d)

[3] *Physician's Manual of Birth Control.* By A Antoinette Konikow MD London Baillière Tindall and Cox 1931 (Pp xiv + 245 21 figures 12 6d net)

[4] *The Practice of Contraception.* Edited by Margaret Sanger and Hannah M Stone MD Baltimore The Williams and Wilkins Company London Baillière Tindall and Cox 1931 (Pp xviii + 316 22 figures 21s net)

and with a practical exposition of the exact technique followed. One or two of the chapters would be regarded in this country as altogether too elementary for a book intended for qualified medical practitioners and too much importance need not be attached to the statistical section. The second of the two books named above is a report of the papers read and the discussions which followed at the Zurich International Birth Control Conference in 1930. Here can be found a full and critical account of all the varieties of contraceptive method including sections on sterilization and abortion with instructive and often destructive comments by persons entitled to make them. There are also clinic reports from the United States, England, Germany, Austria, Holland, Denmark, with some account of work in India, China and Japan, and a section on birth control and abortion in Soviet Russia. A useful summary by Dr. Stone completes a volume which contains a large amount of reliable information on the subject with which it deals.

We have received also two interesting reports—one from the Society for the Provision of Birth Control Clinics and one from the Birth Control Investigation Committee. The former is entitled *Birth Control and Public Health* and gives some account of the ten years' work of the society. The latter is the fourth annual issue of the International Medical Group for the Investigation of Contraception.[8] It contains some particularly valuable articles and illustrations and notes on research, and as might be expected from the auspices under which it is issued these are marked by knowledge and impartiality. There is a special study of the Grafenberg ring method. To the former of these two reports there is a preface by Professor Julian Huxley dealing generally with the birth control movement. It is difficult to understand his points: they seem exaggerated and contradictory. Perspective seems to have been lost. For the relief of suffering and misery, for the prevention of destitution and degradation, it is possible that there are matters of more moment than birth control. If ignorance, superstition, unduly and poverty are the chief factors responsible, would it not be preferable to try and remove them, perhaps by methods even more effective than birth control?

In the present state of our knowledge research is required more than excitement. At any rate from a perusal of these publications it is clear that there are great gaps in our knowledge, that dogmatism is unjustified, that the perfect contraceptive method has still to be discovered, that some methods at present employed are definitely harmful and others have yet to be proved harmless, and that all the available statistics are highly unsatisfactory and many of them entirely unreliable. It may be added that the ethical and social effects of a widespread use of contraception are by no means certain. Even an enthusiast like Dr. C. P. Blacker has to conclude his contribution thus:

> It is necessary to discover a method that is wholly dependable, harmless, fool-proof and aesthetically unobjectionable. But the popularization of such a method will not be free from grave racial dangers. It will be for the moralist and eugenist of the future to guide us past these dangers. Every practical advance in the application of negative eugenics, i.e. the limitation of the fertility of the ill-endowed, must be accompanied by a fresh emphasis on the necessity of positive eugenics, the encouraging of the reproduction of the healthy and fit. Every advance in our knowledge of genetic processes is accompanied by dangers. The dangers that will accompany the popularization of ideal [illegible] for the [illegible]alworthy

Provision of Birth Control Clinics, 1931. 8vo. Pp. 17. 1932. (Pp. 1 + 35. 1s.)

[8] *International Medical Group for the Investigation of Contraception. Fourth Issue.* London: The Honorary Secretary, Birth Control Investigation Committee, 26, Leicester Street, S.W.1. (8s.)

THE USE OF THE SELF

In our issue of May 24th 1924 (p. 913), we reviewed a book by Mr. F. MATTHIAS ALEXANDER entitled *Constructive Conscious Control of the Individual*, in which the thesis was developed that man tends unwittingly to use his psycho-physical mechanisms imperfectly in his endeavour to adjust to the complex conditions of modern life. The same author has now written a smaller monograph *The Use of the Self*[9] in which he illustrates the principles outlined in his previous book by giving instances of imperfect adjustment and at the same time describing the technique he has evolved by means of which the faulty reactions may be inhibited and new and efficient ones built up in their place. It is the essence of Mr. Alexander's teaching that too much reliance is placed upon instinctive and habitual modes of reaction which are frequently faulty and ineffective, and it is quite understandable, as he takes much pains to explain, that the teaching of a new reaction is extremely difficult as to the pupil it feels wrong though actually right. This is an eminently practical book and the author's theory and practice are clearly the outcome of many years' work. One chapter is concerned with the golfer who cannot keep his eye on the ball, another with the stutterer and a third with diagnosis and medical training. The book will be found helpful and suggestive to both the medical practitioner and the educationist.

NOTES ON BOOKS

The third edition of *The Practice of Medicine*[10] by Professor A. A. STEVENS has been entirely revised and reset and the list of sections new or altered is necessarily long. In the five years approximately which have elapsed since the last edition certain new diseases have been recognized or rarer ones have become more common so that sections have been added—for example on psittacosis, lipoid nephrosis and cystic disease of bone associated with parathyroid tumours. In other directions advanced knowledge about aetiology and therapeutics has led to modifications as in rickets, Gaucher's disease and disseminated sclerosis. Sampling of the book has given very satisfactory results although here and there a certain vagueness makes the author's meaning doubtful. For example in rickets an exposure to artificial ultra-violet radiation twice weekly for eight months is recommended but whether this prolonged course is for prophylaxis or cure is not clear and in either case it seems unnecessarily lengthy. Numerous footnotes throughout give references to monographs and more extensive information on many subjects. These enhance the value of the book. It needs no introduction in this country and the new edition will be welcomed by those who require a complete and readable textbook.

The work on *Fertility and Sterility in Marriage*[11] by Dr. TH. VAN DE VELDE formerly director of the Gynaecological Clinic at Haarlem forms the third and last volume of a series of which the first two were entitled *Ideal Marriage* and *Sex Hostility in Marriage*. The book is divided into three parts. In Part I which deals with postulates and principles the author discusses the ethical and theological aspects, family limitation in its national, international and racial aspects and the individual aspects of fertility and sterility in marriage. Part II which is entitled [illegible] The achievement of desired pregnancy, con[illegible] chapters on the physiology of reproduction, the [illegible] of sterility

[9] *The Use of the Self.* By F. Matthias Alexander. With an introduction by Professor John Dewey. London: Methuen and Co. Ltd. 1932. (Pp. xx + 143. 6s. net.)

[10] *The Practice of Medicine.* By A. A. Stevens, M.D. Third edition entirely reset. Philadelphia and London: W. B. Saunders Company. 1931. (Pp. 1,149. 96 figures, 1 plate. 30s. net.)

[11] *Fertility and Sterility in Marriage: Their Voluntary Promotion and Limitation.* By Th. Van de Velde, M.D. Translated by F. W. Stella Browne. London: W. Heinemann (Medical Books) Ltd. 1931. (Pp. xx + 448. 20 plates. 25s. net.)

in women and of impotence in men and artificial fertilization or insemination Part III which is devoted to the prevention of undesired conception contains chapters on contraceptive mechanical and chemical appliances and permanent or temporary sterilization A bibliography of 917 references to scientific theological and other literature is appended The sale of the work is limited to medical practitioners biologists psychologists sociologists and representatives of scientific education and research

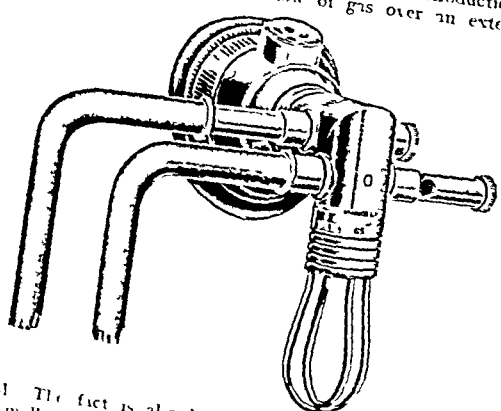
Coming from so distinguished an author as Hofrat Professor Dr HANS SPITZY a little work on Orthopaedics in General Practice[1] cannot fail to be of value restricted as its scope may be The series to which it belongs professes to provide for the practitioner a scientific basis for his work and practical application of principles As most of the conditions described are not common they are not likely to be met with often by any one general practitioner If he has this booklet by him however he will be able to find help in diagnosis and treatment for which latter he will probably in the end refer to a specialist

[1] *Orthopädie für Therapie in der Allgemeinpraxis* Von Hofrat Professor Dr Hans Spitzy Therapie in Einzeldarstellungen Leipzig Thieme 1932 (Pp 118 7 figures M 7)

PREPARATIONS AND APPLIANCES

GAS AND OXYGEN IN MIDWIFERY

Dr C R POTTER (Barnsley) writes The value of nitrous oxide and oxygen as an anæsthetic has been recognized for many years but mechanical difficulties of administration have militated against its more general use These difficulties have been much lessened in recent years by the introduction of valves which give an even flow of gas over an extended



period The fact is also becoming more and more realized that small quantities of other anæsthetics can be administered with advantage in combination with gas and oxygen One of the best known is made by Dr S Thompson Rowling in which chloroform is made by a special apparatus and either ether chloroform or both The writer having had an anæsthetic table gas and oxygen being passed through it for some time chloroform or both The writer having seen the good result obtained wondered if the idea simplified could be brought within reach of the general practitioner particularly for use in midwifery

The method tried has been to fit a gas and an oxygen cylinder with Hoke valves and connect these each by a separate rubber tube to a Clover ether apparatus the bag of which is fitted with two slot valves one for each rubber tube The two valves which are fitted to the angle piece holding the bag enable either gas or oxygen or both to be given in any quantity Ether can of course be turned on and off at will This simple and portable apparatus enables gas and oxygen to be given alone with the face piece if required for operative work or for the induction of instruments the other chamber may be used To illustrate the use of the apparatus the four following cases might be quoted

1 A multipara aged 28 years healthy third child Natural delivery 8 hours Gas and oxygen with face piece given for each pain for two hours

2 Patient aged 38 years second child Preliminary dose of sedative for first stage Gas for each pain second stage Instruments when head on perineum Gas oxygen face piece and bag only

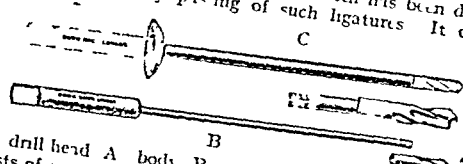
3 Obstructed labour cervical fibroid Pyrexia 38 degrees Cæsarean section Induction by gas and oxygen then ether Gas and oxygen for sewing up abdominal wall Time taken forty minutes

4 Multipara tenth child Transverse presentation hand presenting Gas oxygen and ether for a few minutes Foot brought down Natural delivery two hours afterwards

The pleasing feature has been the absence of shock and hæmorrhage in all cases In addition the use of such small quantities of ether makes for safety in bedrooms with open fires and gas jets The slot valve is made by Messrs Reynolds and Branson Ltd Leeds

BONE DRILLS

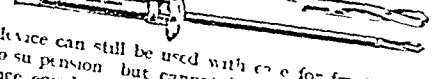
Mr A SIMPSON SMITH MCh FRCS writes The passing of wire fascia or tendon through bone is often beset with difficulty The instrument shown herewith has been designed to facilitate the easy passing of such ligatures It consists



of a drill head A body B and cannula C The body B will fit any standard bone drill whether of the Colt or Archimedean pattern as shown or of the chuck pattern the jaws of which will grip the shoulder immediately beyond the step end The shaft has a tip with a reverse screw threaded end to receive the detachable drill head A The cannula C exactly fits over the shaft between the head and shoulder and is of slightly smaller diameter than the drill head The assembled drill is passed through the objective bone so that the drill head just clears the opposite side An assistant immediately grasps the drill head A with a Lane's screw holding forceps or other suitable tool The surgeon reverses the drill action thereby releasing the drill head and then withdraws the parent drill with the shaft B attached in one movement Thus in *quick* sequence of drilling reversing and withdrawing a cannula is left in the bone through which the desired wire or ligature can be passed Withdrawal of the cannula completes the operation

This device is not only very applicable to the binding of patella fragments but in fractures of the long bones of the limbs where open reduction alone almost produces a stable reduction binding material (of fascia autogenous tendon or wire) can be readily introduced to effect this end The small drill head enables comparatively deeply situated bones to be so drilled for with a small clearance—the length of the drill head—is necessary on the contralateral side to the one easily exposed In the operation of tenosuspension for recurrent dislocation of the shoulder as practised at the Mayo Clinic should the surgeon so elect this particular operation the introduction of the tendinous sling is very easy

Five years ago Messrs Down Bros prepared a drill for me with the head and shaft made as a single unit and fitting into a shoulder for universal attachment to all bone drills



This device can still be used with ease for fractured patella and tenosuspension but cannot be used when there is not a clearance equal to the whole length of the shaft and head on the contralateral side of the bone Its usefulness therefore only very limited and chiefly applicable to the patella Mr Herbert Paterson brought to the notice of the profession a drill somewhat similar to this earlier pattern

My thanks are due to my colleague Mr E C Hughes MCh for allowing me to use this drill on cases under his care To Messrs Down Bros for their courtesy and patience in the preparation of numerous bone drills during the past five years until this final product has been selected I owe every acknowledgement

[1] Herbert Paterson *Journal of Orthopædic Surgery* November 24th 1927 *Lancet* February 4th 1928

British Medical Journal

SATURDAY, APRIL 30th, 1932

CARDIO-VASCULAR SYPHILIS

No disease is more subtle variable and unexpected in its manifestations than syphilis But while the infection may operate at times when it is least anticipated, there are circumstances which strongly suggest its presence Among circulatory disorders it is reasonable to suspect the spirochaete in aneurysm sudden death, and sometimes in angina and heart block Conversely there are certain factors which render syphilis unlikely as a causal agent Thus symptoms occurring before the age of 35 are unlikely to be caused by this infection while the coexistence of auricular fibrillation is so uncommon that in a group of 575 patients with this arrhythmia McEachern and Baker[1] found syphilis to be an aetiological factor in only eighteen Myocardial infarction is another malady to which syphilis an frequently contributes The manifold and obscure problems of cardio vascular syphilis have recently been illuminated by Dr Carey Coombs in a masterly review Dr Coombs finds no convincing evidence that the disease is becoming more frequent and he suggests that the following decade will show whether or not our modern anti syphilitic measures are of avail in reducing the liability to specific aortic lesions The high incidence of primary syphilis during the early post war years indicates that unless treatment has been successful there will be an increase in the late effects upon the aorta and the heart between 1935 and 1940

There can be little doubt that the characteristic aortic involvement is due to the spread of toxins from reservoirs in the mediastinal lymphatic glands Dr Coombs now develops this view, to which he has previously[2] subscribed He mentions the fact that it is a general lymphadenitis which brings the stage of bacteriemia to a close in syphilis and refers to the experimental work which has demonstrated the persistence of living spirochaetes in the lymphatic glands for months or years after an animal has been inoculated with the disease Further, in general paralysis—a disease that has many features in common with aortic syphilis—the lymph glands were found to be infective in three out of fourteen cases by Engmann and Eberson[4] In his consideration of the early diagnosis of aortic involvement Dr Coombs postulates that probably every person infected with syphilis sustains some aortic damage within a year or so of the infection Since in the earlier stages it is clear that physical signs must usually be lacking he turns to radiography and electrocardiography as diagnostic aids The latter has failed to provide any special clues Examination by x ray however, is believed to be of great use in the early diagnosis of aortitis, widening of the aorta—especially if unaccompanied by cardiac enlargement—increase in its opacity, or decrease in its pulsatile excursion all being regarded as important indications One which is less generally remarked upon, but which is also of undoubted value, is the elongated arc presented by the aortic knuckle when this is the seat of syphilitic inflammation Dr Coombs aptly states the case when he says that 'skiagraphy can often clinch a diagnosis of aortic syphilis when nothing else can, by proving that the aorta is enlarged in circumstances justifying a belief that the enlargement may be caused by syphilis"

Apart from symptoms signs and radiography, the therapeutic and serum tests may be of diagnostic consequence Although, theoretically a response to anti syphilitic treatment might be of help in diagnosis such a result is rarely so pronounced as to justify the inference Nor is the Wassermann reaction of as much value as has been supposed in past years The consensus of opinion is that a negative reaction may be obtained in about one third or one quarter of patients suffering from cardio vascular syphilis, that such a reaction does not exclude the diagnosis, but that a positive result is of great significance if the clinical context is appropriate There is some evidence suggesting that the flocculation tests are more reliable in this connexion than complement fixation and the Kahn test might therefore be profitably applied in doubtful cases Dr Coombs summarizes the treatment of cardio vascular syphilis by insisting that an attack should be made on the spirochaete from the moment of diagnosis and for the remainder of the patient's life whether or not symptoms or signs are present Iodide and mercury are nearly always applicable but arsenic is contraindicated in advanced aortitis and when there is evidence of coronary stenosis That Dr Coombs regards the treatment of cardio vascular syphilis in no spirit of false optimism may be judged from his concluding remark that by the time changes become appreciable to the clinical observer "the damage done is already considerable and largely irreparable'

[1] *Amer Journ Med Sci* January 1932 p 35
[2] *Quart Journ Med* January 1932 p 179
[3] *Lancet* 1930 ii 227 281 333
[4] Quoted by H Fischer *Centralbl f Bact* 1928 cxiii 247

MEDICAL RESEARCH AND THE PATENT LAW

The fundamental object of the patent system has been defined as the promotion of new industries and the improvement of old ones by the grant of temporary monopolies to persons responsible for discoveries and inventions upon which the new industries or improvements may be based In other words, it is primarily economic, and its relation to medical science is at first sight remote It has generally been assumed in this country at least alike by the profession and by the public at large that medical workers will be unwilling to derive direct profit from the limited monopoly conferred by patent rights in respect of discoveries and

inventions in the medical field The consequent refusal of medical workers to use the machinery of the patent law has tended in the past to obscure the fact that modern developments in the scope and methods of scientific research on the one hand and in the relation between science and industry and commerce on the other have given patent law and practice an important bearing upon the progress of medical science and created practical problems and difficulties whose solution requires something more than the simple affirmation or repudiation of the traditional ethical objection to monopoly and secrecy in the scientific field If the results of medical research are to be made immediately available to the public it will only be by the co-operation of commerce and industry in the production and distribution of new therapeutic agents Due account must therefore be taken both of discoveries and inventions of importance to the development of medical science which emerge as incidents of research directed primarily to other ends and of the possibility that discoveries made in the course of medical research may have economic applications beyond the therapeutic field It is clear also that any ethical principle which is to command the continued allegiance of the profession as a whole must be generally acceptable to those most closely concerned—that is to say to medical men and women engaged exclusively in research whether independently or as members of the salaried staffs of institutions and it must allow for the constant association on generally equal terms of medical and non-medical scientists on the staffs of such institutions Nor must it be forgotten that the use now being made of patent rights in this country by foreign nationals acting under existing international conventions has further complicated a position which is from the nature of the case by no means simple

The Council of the British Medical Association has been engaged since 1929 in an attempt to bring the traditional professional usage into harmony with modern conditions It will be remembered that the Representative Body—which refused in 1930 to endorse the proposition that it is ethically undesirable for a registered medical practitioner who makes an invention or discovery in the medical field to derive financial benefit from the sale of the rights of such invention or discovery or from royalties for the use of these—adopted by repudiated in 1931 a formula which while condemning undue restriction of the use and knowledge of discoveries or inventions likely to be of value in the treatment of patients for the personal advantage of the medical worker recognized the propriety (subject to the safeguarding of that principle) of the utilization of arrangements made by law for the protection of such inventions or discoveries by patent or otherwise For this it substituted a resolution which approved the traditional professional usage but left still undetermined its application to the particular question of patenting It is hoped that the conference reported at page 206 of this week's *Supplement* which met at the House of the Association last week has carried the whole problem a step nearer to solution Meanwhile the omission from the Patents and Designs Bill (which was introduced by Lord Templemore on April 21st and passed its second reading in the House of Lords last Tuesday) of any provision for easing the situation so far as medical research in this country is concerned emphasizes the need for a speedy and general agreement by the profession on the points at issue That omission is not surprising The Bill is based on the recommendations of the Departmental Committee of the Board of Trade whose report published last year dismissed the careful analysis of the position presented by the Medical Research Council with the cavalier comment

If in general the disadvantages of the monopolies granted by a patent system are more than counterbalanced by increased stimulation of industry and invention we see no reason for thinking that the same result should not equally obtain in this particular field' This verdict would seem to ignore the reasons given by the Medical Research Council for the contention that existing patent law is not well adapted to the stimulation of invention in the field of biological and medical research and that consequently the same result does not in fact obtain in that field of work

But if the Departmental Committee in its preoccupation with the economic and legal aspects of patent law failed to appreciate the possible reaction of that law upon scientific research there is the more reason for our profession to study most carefully the representations made by the body charged by His Majesty's Government with the duty of promoting medical research The Medical Research Council's memorandum now available as an appendix to its report for 1931–32[1] supplies a concise review of the facts which must be taken into consideration in formulating professional policy In view of the importance of the subject we propose to publish a detailed abstract at an early date

CRIMINAL STATISTICS

The fascination which crime has these days for all classes of the community will provide an interesting psychological study for the social historian of the third and fourth decades of the present century Coincident with this fictional concern in crime and the criminal on the part of the general public there has been a disquieting increase in actual crime which has shown itself especially among juveniles and young adults In his introduction to the Home Office report on Criminal Statistics for England and Wales in 1930 Sir Arthur Locke refers to the survey made in the report for 1928 which showed that while there had been since the war a diminution in the number of crimes of violence against the person and the grievous assaults on women the number of crimes against property—especially breakings in larcenies and frauds—had grown to such an extent as to pass the pre-war level The tide of crimes against property rises higher

[1] Cmd. 4065 H.M. Stationery Office. 2d. net.
[2] Criminal Statistics England and Wales 1930 London H.M. Stationery Office 1s. 2d. (1s. 6d. net.)

each year the figure for breakings and similar offences having in 1930 exceeded that for 1929 by 5,256. Two-thirds of all persons found guilty of crime are of ages below 30. It was pointed out in the introduction to the report for 1929 that the two main social factors responsible for this were the industrial depression in the North and the fact that the persons now under 30 years of age were below the age of 16 in 1917, a time when parental control, owing to war conditions, was at its lowest. Moreover, this section of the population has grown up during a period when crime has been forced into a romantic setting by the stage, the cinema, and the detective novel. The social anarchy prevailing in America has been treated by the popular press as good selling stuff; the financial adventures of Al Capone and the transatlantic flittings of Jack Diamond are looked upon as exploits worthy of Crœsus and Marco Polo; the rum-runner is as gallant a figure as Drake, whom the Spaniards called the English pirate. In the American film the policeman is slow of brain and outwitted by the nimble-fingered and quick-thinking thief. In the daydreams of the modern youth the gangster has usurped the throne of Sexton Blake and Sherlock Holmes. Is it, then, other than surprising, when the temptation of the preponderance of crime to the young continues year by year, in spite of the fact that the numbers of the mature and aged elements in the population are constantly swollen by the increased expectation of life, while the numbers of the young are depleted by falls in the birth-rate? This is a state of affairs for which society cannot be completely absolved from blame. The courts becoming aware that "to make the punishment fit the crime" is not so simple a matter as was once thought, have made fuller use of the Probation of Offenders Act, and have at last begun to doubt the value of corporal punishment as a deterrent to the criminal. At the same time longer sentences of imprisonment have been passed. Referring to the altered policy of the courts Mr. Locke remarks that "too much must not be hoped for from any such change." While the function of the law is mainly in the detection and punishment of crime, the responsibility for shifting the social scene in which crime is made possible lies with society itself. This is undoubtedly a tall order, but even a little could be done, for example, by reporting criminal activities briefly and in small type instead of in large type with glaring headlines. A comparison of statistics for the North and the South shows that the industrial depression has had its worst effect on children in the North and on young adults between 21 and 30 in the South. The South, being more prosperous, affords better opportunities for the more serious crimes against property with violence, the motor car being an important part of the criminal's equipment. In the South, too, it may be noted, there is a higher number of crimes of violence against the person. In the introduction to the report for 1929 Mr. Locke came to the conclusion that "the general outlook appears to be not unfavourable." The tone of the present introduction does not appear to be so optimistic. Much would seem to depend on the lifting of the industrial depression, and much also on the extent to which the Americanization of the criminal world will go. A change of attitude would hold out better prospects of recovery than changes in judicial procedure.

BRAIN AND MIND IN EAST AFRICA

In a recent communication[1] Dr. Sequeira has summarized the work which Dr. H. L. Gordon has been carrying out during the past two years on the brains of East African natives, a work which has more recently been supplemented by the researches of Dr. F. W. Vint at the Pathological Laboratory in Nairobi. The researches centre on the cranial capacity and weight of the brain of East African natives and on an examination of the layers of the frontal cortex, based on similar investigations by Professor Shrubsall-Bolton, Professor Berry, and the late Professor von Economo. The conclusions which have been reached indicate the presence of a low degree of mentality and suggest that, owing to a peculiarity of the architecture of his brain, the African differs mentally from the European, not only in degree but very definitely in kind. Indeed, Dr. Gordon is quoted as saying that "in the first series of brains examined *micro-scopically only 6 per cent.* appeared to approach in *quality* the average of the European brain, and not one was above that average." These conclusions, if they are scientifically valid, open up questions of the greatest importance. As Dr. Sequeira justly observes, if it is proved that the physical basis of "mind" in the East African differs from that of the European, it seems quite possible that efforts to educate these backward races on European lines will prove ineffective and possibly disastrous. It is not only the physical basis of mind, however, which makes such an attempt nugatory, but the profound contrast in culture and environment which rebels against the abrupt substitution of one standard for another. If there is this alleged physical difference in the structure of the brain it would only serve to make still more impossible an assimilation which is already culturally difficult because it would mean that there could never be any hope of the African thinking in the same way as we do ourselves. And yet it is suggested in the same communication that, despite the physical differences to which these researches point, "it might be possible to determine how far environment, educative influences, etc., might overcome inherited character." This implies that mind and the structure of the brain are not necessarily correlated, and that brain formations which are taken to indicate a backward or defective mentality are not a permanent handicap to mental development—a position which appears to cut at the roots of the kind of scientific research which is being conducted in East Africa. While every credit should be given to Dr. Gordon for privately undertaking investigations which should be carried out with State assistance, we feel nevertheless that the conclusions drawn are perhaps premature. The correlation between the infragranular, granular, and supragranular layers on the one hand and "the animal instincts," sensory perceptions, and the intellect on the other cannot be accepted as an established fact. It is, we suggest, overbold to state that "in the East African therefore animal instincts are provided with 6 per cent. more physical basis than in the European, but the physical basis of mind shows a preponderance in favour of the European of 9·3 per cent." A more serious objection, however, lies in the classification of

[1] *British Medical Journal*, March 26th, p. 581.

the East African who is contrasted with "negroid" though to the best of our knowledge all East African tribes are negroid. When it is affirmed that there are not only remarkable physical differences between the East African and the European, but that there are striking variations in different tribes'—a proposition to which we cordially assent—it is difficult to see how the East African can be classified as a group in contrast with caucasoids, negroids etc. Not only do the tribes show remarkable physical differences between each other but there is a wide range both of physical and of mental variation within a single tribe. In view of this it is relevant to ask for further details before any conclusions can be even tentatively accepted. What physical measurements and physiological tests have been made? From what tribes was the material drawn and did it represent any particular section of the community—hospital patients for example or prisoners? What in short are the specific data on which these observations are based?

DANGEROUS DRUG TRAFFIC IN EGYPT

The report for the year 1931 of the Central Narcotics Intelligence Bureau of the Egyptian Government affords abundant evidence of the over production of dangerous drugs and of the illicit traffic which thereby results. T. W. Russell Pasha who in 1930 staggered the League of Nations Committee by the disclosures he vouchsafed of smuggling gangs at work in Europe has continued his vigilant detection of illicit traffickers in morphine, heroin and hashish. An important source of such traffic was shown to be the three foreign owned factories in Stamboul. So long as Turkey a large producer of opium and in recent years of morphine and heroin also, is unbound by the opium Conventions of 1912 and 1925 there is little prospect of restricting the use of these narcotics to medical and scientific purposes. It is indeed alleged with some assurance that no less than ten tons of these drugs of Turkish origin passed into illicit traffic in 1930–31. Pressure has been brought to bear both by Russell Pasha and the League of Nations upon the Turkish Government and it is stated that one of the Stamboul factories has been closed that a monopoly of narcotics is to be established and that in future the export trade is to be rigorously controlled. It would however be rash to conclude that the scandals which have been exposed will entirely disappear with the control measures which have been decreed. Last May Russell Pasha represented Egypt at the Geneva Conference on the Limitation of Manufacture of Narcotics. He contributed a racy speech to the proceedings and pointed his insistence on the ghastly side of narcotic addiction by the exhibition of photographs of smugglers' contrivances and of a film showing the physical miseries of drug addicts. His annual report for 1931 is similarly illustrated and gives numerous instances of large seizures of heroin, hashish and opium effected by the effective vigilance of the preventive authorities under the Narcotics Bureau. Though narcotic addiction is said to have been much reduced in Egypt it is estimated that there are still some 250,000 out of 14 millions who are slaves to the habit. While Russell Pasha considered the last Convention which emanated from the Geneva Conference of 1931 to be an improvement on previous efforts he remarks that it is not the Convention of Direct Limitation which some of us hoped to see. It will be remembered that the Assembly of the League regarded the last Convention as but the first step towards the limitation of the production of the raw materials—that is of opium and the coca leaf. This conclusion has been reinforced by the findings of the League's Commission which visited the Far East in connexion with the use and abuse of opium for smoking. The inclusion of the raw materials within the circle of limitation and the effective concert of the chief producing countries would appear to be essential to the restriction of the dangerous drugs in question to medical and scientific purposes. This has been the objective of all the Conferences which have been held and of the Conventions drafted during the last twenty years.

A NEW ERUPTIVE FEVER?

In a communication recently made to the International Office of Public Health Professor J. Cantacuzene[1] the Rumanian delegate gave the following account of a new eruptive fever which was first observed by Dr. Stroe in a creche at Bucarest in 1923 and had occurred in that city on several occasions since the last outbreak being in October 1931. The incubation period of this disease which had been named infantile miliariform exanthem was generally ten to fifteen days. The period of invasion lasted two to five days the first symptoms being a rise of temperature ranging from 100·4° in the mild cases to 103·2° in more severe attacks. The most striking symptom of the period of invasion was generalized and profuse sweating accompanied by a slight facial enanthem and a papulo vesicular eruption on the buccal mucous membrane, oculo nasal catarrh, restlessness and insomnia. As a rule the temperature fell on the appearance of the rash which ordinarily started on the face and then became generalized. It was usually scarlatiniform but sometimes morbilliform. The rash which soon became complicated by a profuse eruption of miliary vesicles was slightly pruriginous. Its duration was two to three days in mild cases and six to seven in the more severe and the subsequent brawny desquamation lasted four to five days. In severe attacks there was a predominance of nervous symptoms such as extreme restlessness and clonic convulsions with marked hypertension of the cerebro spinal fluid. The average duration of the disease was five to six days but in some cases it might last more than three weeks when two or five relapses separated from one another by intervals of four to five days might occur. The case mortality averaged 4 per cent. The blood picture was characterized by a monocytosis with a high degree of eosinophilia. The injection of serum of convalescents from the disease in scarlet fever patients in the eruptive period produced extinction of the rash but the reverse did not take place. The cerebro spinal fluid remained clear and only 1 to 3 lymphocytes were found per cubic centimetre. Post mortem the most constant lesion is enlargement of all the lymph glands as in scarlet fever. There is hardly any enlargement of the spleen. The nerve centres show

[1] Bull. Office Int. d'Hyg. Publique.

considerable hyperæmia of the meninges On histological examination the only characteristic lesion is invasion of the dermis by mononuclear leucocytes On the first appearance of the disease the possibility of scarlet fever was considered but this was excluded by the profuse sweats during the period of invasion the absence of characteristic desquamation the occurrence of relapses and the mononucleosis in the blood and skin The disease appears to be a special form of sweating sickness differing from the classical type in that it is strictly confined to children the extreme limits of age being 2 months and 10 years Scarification of the cornea of rabbits with virus contained in the miliary vesicles gave rise to myeloloma epiphoriform attacks photophobia and profuse salivation but never keratitis The infected cornea remained virulent for four days but the virulence became rapidly attenuated on successive passages through animals The brain of children in fatal cases show no virulence

THE J B MURPHY ORATION

Sir W I de C Wheeler Dublin has accepted the invitation of the Board of Regents of the American College of Surgeons to deliver the Murphy Oration in surgery at the opening meeting of the Clinical Congress to be held in October next The first John B Murphy Oration in surgery was delivered by Lord Moynihan in 1920 and he was followed in subsequent years by Dr William J Mayo Professor Rafaele Bastianelli Dr George W Crile Drs N D Royle and John I Hunter Sir Arbuthnot Lane Professor Archibald Young Sir John Bland Sutton Professor Vittorio Putti Professor D P D Wilkie Professor G Grey Turner and Professor Arthur H Burgess

THE PLANNING OF LABORATORIES

So much time can be lost and so much annoyance caused by ill designed laboratories that no amount of care in their planning can be too great Considerable difficulties however stand in the way of those who are called upon to carry out such a task Though they may be experienced and fertile of ideas it is almost certain that they will want to see or know what other people have achieved in their field a desire entailing numerous visits to laboratories and a close study of all the available sources of information In this state of affairs Mr A L Munby's book *Laboratories their Planning and Fittings*[1] should come as a welcome and time saving aid to them His treatise is general in its scope After dealing with the inception of building schemes he passes to a consideration of the requirements in the case of chemistry physics and biology Laboratory services gas water electricity heating ventilation drains cold storage plants, are all discussed while his final chapter gives detailed and illustrated examples of laboratory design The information which has been drawn from different parts of the world concerns the needs of both school and university equipment and the contents of the book have been brought well up to date A second step in the right direction—and one which should encourage a better understanding between the promoters and designers of laboratory buildings particularly in respect of fittings finishings, and supply services—is to be found in a questionary emanating from the Royal Institute of British Architects This is to be sent to the heads of departments in the universities of the British Empire and to certain research institutions Its clear and well designed form aims at securing a consensus of opinion (of a statistical nature) on the ideal requirements of a scientific laboratory Should analysis of the returns justify it the R I B A proposes to issue a short report This would place architects and engineers in closer touch with existing laboratory needs and perhaps help promoters of buildings to crystallize their ideas

[1] *Laboratories their Planning and Fittings* By Alan E Munby F R I B A With an historical introduction by the late Sir Arthur J Shipley F R S London G Bell and Son Ltd (10s net)

NEW POTTERY REGULATIONS

The heavy incidence of silicosis among potters millers and workers in potters' shops and other branches of the china earthenware electrical ware and tile potteries shown by the report of Drs Sutherland and Bryson (to which reference was made in our issue of November 14th 1926 p 901) called for action And where silicosis schemes have been enacted as is the case with pottery manufacture the wise practice of the Home Office has been to prepare regulations to control the risk as far as possible How necessary they are is shown by the fact that in the china and earthenware industry alone in 1930 compensation amounting to over £29 000 was paid for ninety eight new cases for thirty six cases carried on from the previous year and for thirty four deaths These Draft Pottery (Silicosis) Regulations enlarge the existing wide reaching code for the manufacture and decoration of pottery but are made to include also premises in which flint is ground Their main feature is the provision of efficient exhaust ventilation for a variety of processes such as crushing, grinding and sieving of flint all processes involving exposure to powdered flint the fettling of ware and the placing of plates cups and saucers in powdered flint in the course of china manufacture A bewildering number of processes capable of giving off harmful dust are mentioned and an alternative to exhaust ventilation which is freely allowed is the carrying out of the process by a wet sponge or while the ware is still moist What sounds a particularly dusty process is the crushing or grinding of flint in a stone crusher Here the alternative to exhaust ventilation is a water or steam spray which seems to run counter to the view expressed at the international conference held at Johannesburg in 1930 that for the prevention of dust a combination of methods should be applied—exhaust draught *and* the use of water In general as for instance in the recommendation to allow vacuum cleaning to be carried out during working hours the code is on common sense lines

The annual meeting of the Canadian Medical Association will be held in Toronto from June 20th to 24th under the presidency of Professor Alexander Primrose, C B, F R C S who has lately retired from his academic offices in the University of Toronto after many years of most distinguished service

THE WELFARE OF THE BLIND AND NATIONAL ECONOMY

BY

J. MYLES BICKERTON, F.R.C.S.

OPHTHALMIC SURGEON, ST. MARY'S COLLEGE HOSPITAL

The prevention of blindness is an economy on the part of the State because many blind persons eventually become burdens on the public. Ophthalmic surgeons and others can do an enormous service to the State by recommending methods for obtaining a complete and true register of the blind population and until this is in existence we are heavily handicapped in our efforts to reduce the incidence of blindness.

To-day there are only 52,727 persons on the Blind Register (1929) in Great Britain and there has been an increase of 26,887 in ten years—that is an increase of over seven a day—but this figure is by no means a true register of our blind population. The following groups of persons are largely overlooked and may increase the above figure to 250,000 blind persons:

1. Almost all blind persons of the well-to-do classes.

2. Infants below school age.

3. Those persons who become blind after leaving school at 14 years or after until reaching blind pension age at 50 years. Many of these persons refuse to be certified and regard it as rather a disgrace.

4. Those persons who become blind after 65 years of age and are not registered. They obtain the old age pension which is the same in amount as the blind pension—10s. weekly. This is a very large group and may increase as the average age of life increases.

5. Many blind persons of suitable age to obtain the blind pension between the ages of 50 and 65 years do not apply for it because they have never heard about it.

6. It is possible that there are even one million persons who are blind in one eye in Great Britain to-day.

CERTIFICATION OF THE BLIND

The certification of the blind is performed in a very haphazard manner in this country to-day in most places. In fact the definition of blindness is not always fully understood by those signing the certificates and in spite of the fact that the examination for these certificates may take a considerable amount of time they are often obtained in the busy out-patient departments of the voluntary or other hospitals. The blind persons have to wait about in the out-patient departments they have to bring an attendant or friend and frequently have to travel long distances. This is most objectionable and is wasteful of time, energy and money. The certification can be arranged by an examination at the County Hall, London, but the voluntary blind societies often find that a long wait is necessary before even an examination takes place.

Certain provincial centres are far ahead of London in this respect. Glasgow, Liverpool, Sheffield for example—and at these places special surgeons make the examinations in private or at clinics for which a fee is paid. Detailed records are taken under a uniform system which is in most other places very few particulars are asked for or given. In Glasgow an index card register is made after the manner of the census where by means of holes punched in these cards a careful register of cessation age, direction is kept. By putting these cards through a sorting machine very valuable data may be had in a minimum of time. The writer understands that the whole census of blind may shortly be dealt with under this scheme, the funds for which are provided from three sources: (1) large Government grants; (2) local authorities and boards of guardians; (3) charitable organizations—the voluntary blind societies.

The British Medical Association has stated that it is not the duty of the surgeons of the voluntary hospitals to sign blind certificates and it considers that a fee of one guinea is a reasonable charge for this important work. When it is realized that some examinations might take from half to one hour (as fields of vision might require to be taken and important details as to causation etc. noted for the register) a guinea fee is no exorbitant. Indeed in some places a fee of two guineas is now being paid. In Glasgow the guinea fee is divided between two doctors who make separate examinations and so share the responsibility, and in addition bed-ridden persons are visited in their homes at an agreed charge. This is intricate and difficult work and requires an experienced surgeon. It is much better to employ a few surgeons who are familiar with all sides of this work, and in this way only can uniform and reliable records be obtained for registration purposes.

CONCLUSIONS

1. The present register of the blind population is totally inadequate and the true figure might be even 250,000; also valuable data are not available under the present system.

2. The recommendations of the Council of Ophthalmologists (printed below) should be carried out.

3. The voluntary blind societies should pay a fee for the certification of the blind which certification could be done by an examination (*a*) at a clinic at an eye hospital, (*b*) in private, (*c*) at a clinic at certain other hospitals, (*d*) at the home of a bed-ridden person.

4. Could not the Advisory Committee on the Welfare of the Blind recommend that steps be taken immediately by the Minister of Health to bring the whole blind population under review? In order to do this it might be necessary to make blindness a certifiable or notifiable disability, or possibly the same object could be realized by increasing the blind pension in comparison with the old age pension.

5. If such a register of the blind as is outlined above were in existence the following benefits could be obtained: (*a*) more active steps could be taken by ophthalmologists to combat the scourge of blindness; (*b*) the benefits (or the reverse) of sight-testing opticians could be viewed in their proper perspective; (*c*) the huge blind figures would enable the eye hospitals to obtain the funds which are urgently needed to carry on the work of the prevention of blindness; (*d*) the data might have eugenic value.

RECOMMENDATIONS BY THE COUNCIL OF BRITISH OPHTHALMOLOGISTS

The subcommittee of the Council of British Ophthalmologists on the certification of blind persons has expressed the following opinions in its report:

1. Except in certain localities certification of the blind is done in a haphazard manner and there is a lack of uniformity both in the method of certification and in the selection of the diseases certified as the cause of blindness. In addition to this a large number of the applicants require very careful examination by a competent [illegible] before [illegible]

2. A complete and uniform record of the blind [illegible] of the United Kingdom compiled periodically [illegible] and would be an important [illegible] in addition to regular information as to the number [illegible]

3. Reports from Liverpool, Glasgow and Leicester show that in the present complete absence of system, [illegible]

numbers of persons are certified as blind and thereby are placed in a position to draw pensions and other advantages from public and charitable funds who are not entitled to such benefits while others of the blind population never come under observation at all Any extra cases which may at present exist are therefore quite immaterial

4 A system under which the entire blind population comes under review needs to be established and steps should be taken to ensure that it be of universal application

5 The system of clinics which has now been working for two years in Glasgow has proved its efficiency and meets with the warm approval of the committee and on one such basis under clinic should be established in all large centres of population

6 The system adopted should also be available for use in isolated areas by ophthalmic surgeons recognized for the purpose of certification Such surgeons should have power to refer doubtful cases to the nearest clinic

7 The determination of the suitability of children of school age for special forms of education and of applicants for technical training under the Blind Persons Act should be a function of the organization working the system

8 Certificates of blindness except such as are granted by ophthalmic surgeons working the system should not be accepted by public authorities or by charitable agencies

9 If such a scheme as is contemplated above can be adopted the cases of blindness will be duly ascertained and recorded on a uniform basis for the whole Dominion and statistics of the most varied character will be available in a way unequalled by any other nation

MEDICAL RESEARCH COUNCIL

ROCKEFELLER MEDICAL FELLOWSHIPS

The Rockefeller Medical Fellowships for the academic year 1932 33 will shortly be awarded by the Medical Research Council and applications should be lodged with the Council not later than June 1st 1932

These Fellowships are provided from a fund with which the Medical Research Council has been entrusted by the Rockefeller Foundation Fellowships are awarded by the Council in accordance with the desire of the Foundation to graduates who have had some training in research work in the primary sciences of medicine or in clinical medicine or surgery and are likely to profit by a period of work at a university or other chosen centre in the United States before taking up positions for higher teaching or research in the British Isles In special circumstances the Fellowships may be tenable at centres of research not in America

A Fellowship held in America will have the value of not less than £350 a year for a single Fellow with extra allowance for a married Fellow payable monthly in advance Travelling expenses and some other allowances will be paid in addition Full particulars and forms of application are obtainable from the secretary Medical Research Council 38 Old Queen Street Westminster S W 1

DOROTHY TEMPLE CROSS RESEARCH FELLOWSHIPS IN TUBERCULOSIS

The Dorothy Temple Cross Research Fellowships in Tuberculosis for the academic year 1932 33 will shortly be awarded by the Medical Research Council and applications should be lodged with the Council not later than June 1st 1932

The object of these Fellowships as defined in the trust deed is to give special opportunities for study and research to persons intending to devote themselves to the advancement by teaching or research of curative or preventive treatment of tuberculosis in all or any of its forms Candidates must be British subjects and must possess suitable medical veterinary or scientific qualifications They must also be able to produce satisfactory evidence of their ability to make good use of the opportunities offered by the Fellowships

The Fellowship will preferably be awarded to candidates who wish to make their studies or inquiries outside the borders of Great Britain They will be awarded for one year as a rule but in special cases may be renewed The value of the Fellowships awarded will depend in each case upon the standing and qualifications of the candidate but will not be less than £450 per annum payable monthly in advance Travelling and some incidental expenses will be paid in addition It may also be possible to award a Senior Fellowship of considerably greater value to a specially well qualified candidate wishing to undertake an intensive study of some particular problem of tuberculosis at a chosen centre of work in another country

Further particulars and forms of application are obtainable from the secretary of the Medical Research Council

TREATMENT OF CANCER

MINISTRY OF HEALTH'S CIRCULAR

In a memorandum issued to-day (Circular 1276) the Ministry of Health invites the attention of local authorities to measures which may facilitate the treatment of cancer patients and emphasizes the wider provision for radiological treatment now available as a result of the work of the National Radium Trust and of the Radium Commission The facilities provided by the latter organizations are distributed all over Great Britain The Radium Commission decided from the outset to concentrate radium therapy at certain hospital centres nominated by the medical faculty of the local university and has secured the establishment of national centres in provincial voluntary hospitals at Birmingham Bristol Leeds Liverpool Manchester Newcastle on Tyne Sheffield and Cardiff It is now thought that as these centres are somewhat unevenly distributed there is need for a number of smaller regional centres in the East Anglian and South Western districts As part of their agreements with the Radium Commission for loans of radium the hospitals mentioned undertake to organize the radium to the maximum practicable advantage of patients to set aside as many beds for patients undergoing treatment as will keep the radium fully employed to treat suitable patients coming from any sources (including rate aided institutions) and to keep full records of cases Owing to varying factors such as distance of area from a convenient centre facilities for consultation transport of patients etc it is impossible to lay down rules for general application as to the arrangements which local authorities should make for the fullest benefit of the inhabitants of their areas It is however recommended that the local authority should fix upon the hospital where a conveniently situated radium centre is established and make arrangements for the residents in the area to obtain radium treatment in that centre whenever necessary

As regards cancer cases in general it should states the memorandum, be realized that adequate treatment requires all the resources of a hospital with modern equipment It may thus be necessary for local authorities to provide for the removal of patients from a less to a more fully equipped hospital A scheme of cancer inquiry such as that outlined in Circular 1136 is of advantage in this respect because it provides a suitable means of deciding how the needs of patients in any particular area can best be met Attention is also drawn to the provision in the normal course of health service of facilities which incidentally help in the prevention detection and early treatment of cancer Maternity and child welfare venereal disease, and tuberculosis services are valuable in the prevention of cancer by securing treatment for conditions which may favour its onset for the adequate care of women in childbirth may help to prevent later occurrence of uterine cancer the effective treatment of syphilis may be of value in the prophylaxis of cancer of the tongue while the effective treatment of lupus and of scrofuloderma may prevent the subsequent appearance of cancer

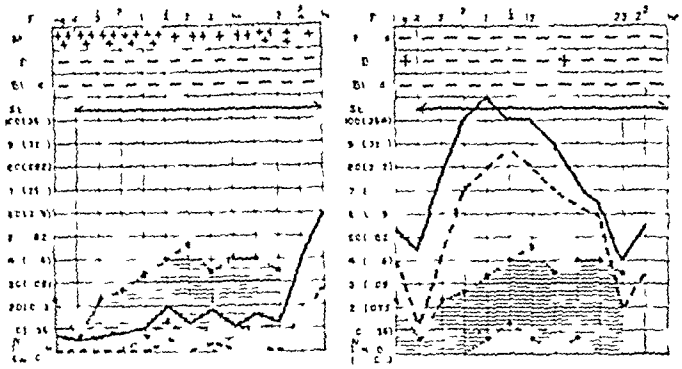
Correspondence

THE TYPE OF STOMACH PREDISPOSING TO DUODENAL ULCER

SIR,—In considering the pathogenesis of duodenal ulcer it is desirable to ascertain whether there is a special type of stomach which as I first suggested in 1922 predisposes to its development. In this connexion I have read Dr. Seward Morley's paper on duodenal ulcer in your issue of April 9th with much interest. No definite conclusion can be drawn from investigating the type of stomach which is present when its secretory and motor functions have been profoundly modified as a result of the associated gastritis and of the disturbance in the activity of the pyloric sphincter which results from the presence of an ulcer in its immediate neighbourhood. Dr. Morley does not say when his test meals were given and x-ray examinations made, but I presume that the investigations were carried out before and not after treatment.

In April 1929 Dr. J. F. Venables and I published a paper in the *Guy's Hospital Reports* entitled "The true incidence of hypochlorhydria in gastric and duodenal ulcer," in which we showed that the curve of acidity obtained with a fractional test meal was almost constantly higher after successful medical treatment of a gastric or duodenal ulcer than before, owing, presumably, to the disappearance of the gastritis with which ulcers are always associated. Thus one hypochlorhydria with a test meal similar to that in Dr. Morley's Chart IV became a high normal and one became an extreme hyperchlorhydria (Fig. 1); two low normals became high normal, one remained borderline high normal and one became hyperchlorhydria; even high normals became hyperchlorhydria and one remained unaltered; eight hyperchlorhydrias became small to moderate and four remained unaltered (Fig. 2).

Though I have no accurate statistics on the subject I believe that a similar change frequently takes place in the shape of the stomach when the delayed evacuation and dilatation and contraction round the ulcer and spasm or relaxation of the pyloric sphincter disappears as a result of treatment. This such delay is frequently present is shown by the fact that an average three hour residue of 57 c.cm. was present in Dr. Morley's 250 cases. The fact remains, however, that Dr. Morley's investigations support the view that a hyperchlorhydric type of stomach with a relatively low curve of acidity with which it was associated. Dr. Morley's series to a higher one. Our observations show that a short high rapid (empty in 3 hours) stomach with hyperchlorhydria is generally present in the duodenal ulcer which may give rise to precisely similar symptoms to those of duodenal ulcer though no deformity is seen with the x-rays and inflammation without ulceration is found if an operation is performed in most early cases of duodenal ulcer and in patients who have recovered from an ulcer as a result of medical or surgical treatment.



(a) (b)

FIG. 1.—Duodenal ulcer with chronic gastritis. (a) July 20th 1928. (b) March 6th (about August 15th) 1928. After 6 months treatment. (Patient symptomless, duodenal ulcer healed, hyperchlorhydria unaltered.)

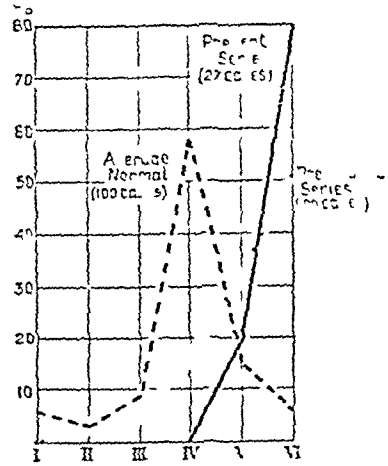


FIG. 2.—Types of test meal in 100 cases of duodenal ulcer before treatment and 27 after treatment compared with 100 normal cases. (I. Achlorhydria. II. Hypochlorhydria. III. Low normal. IV. Average normal. V. High normal. VI. Hyperchlorhydria.)

The evidence is strong that this hyperthenic stomach is an essential or almost essential predisposing cause of duodenal ulcer.—I am, etc.,

April 18th ARTHUR F. HURST

POLYCYTHAEMIA RUBRA AND ACHLORHYDRIA

SIR,—Dr. Robert Platt in the *Journal* of April 2nd records the case of a man aged 47 with typical erythraemia—polycythaemia rubra with splenomegaly—who after giving blood for blood transfusion on three occasions developed anaemia with low colour index and then by fractional examination of the gastric content he was found to have complete achlorhydria at the Clinical Section of the Royal Society of Medicine on October 9th 1931 (*Proceedings*, p. 10). I demonstrated the case of a woman aged 42 who had had typical erythraemia rubra with splenomegaly before the occurrence of two attacks of extremely severe haemorrhage in autumn more than seven months after the first case of haematemesis. Her haemoglobin was 95 per cent. though her erythrocyte count had risen to 9,000,000 per c.mm. Fractional examination of her gastric contents showed that she had complete achlorhydria even after subcutaneous injection of histamine.

The finding of complete achlorhydria in cases of erythraemia after much loss of blood is in keeping with repeated blood transfusions during the anaemic phase with the return of achlorhydria to anaemias of various types—especially simple achlorhydric anaemia and pernicious anaemia. It is interesting that [illegible] woman though still anaemic [illegible] 2 days after free hydrochloric acid [illegible]

I identify [illegible] success I have had [illegible] with erythraemia in which early [illegible] but no histamine examinations [illegible]

aged 52 under the care of the late Professor G A Gibson of Edinburgh whose case was recorded by Watson Wemyss in the *Edinburgh Medical Journal* (1911, vi 125) —I am etc

London W 1 April 21st I PARKES WEBER

MALIGNANT DISEASE OF PHARYNX AND LARYNX

SIR—My object in writing is to voice a straightout personal opinion on the very vexed question of the treatment of cancerous growths of the pharynx and larynx while freely acknowledging the very genuinely held diverse views not only in different countries but even by colleagues in the same hospitals In the course of thirty years experience the principal methods employed in the attempted eradication of this devastating growth in these areas have been the surgical knife diathermy *x* rays and radium intermixed with various stunts of very limited duration A symbiosis my own experience with the seen work of various colleagues the heard results of worthy investigators and the effects of close inquiries in various visited countries the following opinions have been arrived at and will be put bluntly before elucidation

1 In all cases of buccal tonsillar or palatal infection the diathermy knife is strongly indicated and provided that the growth does not extend below the posterior pillar of the fauces gives a very excellent chance of cure

2 In early intrinsic laryngeal carcinoma the surgical knife is best employed either by way of a window resection in one of the walls of the thyroid cartilage or by a median thyrotomy and should give an equally hopeful prognosis

3 Pharyngeal and extrinsic laryngeal involvement has generally advanced to a grave extent before it has set the patient sufficient trouble to seek medical advice and therefore together with late intrinsic never enables the surgeon to give any sort of hopeful prognosis by means of any of the present known methods

In dealing with the first group it is obvious that diathermy rather than the ordinary knife is the only possible surgical means of completely removing the deeply invading growth about the tonsils and the adjacent bony areas A second sitting being often necessary to complete the removal When cervical glands are involved and it has been decided to remove them this should be done at a preliminary operation owing to the dense fibrous scars left by the diathermy wound Should no glands be felt it is strongly advisable that the patient after operation should undergo a course of deep *x* rays Inoperable glands can be treated by the insertion of radium needles or deep *x* rays the result guiding the operator as to whether it is justifiable to attack the primary growth Radium will be dealt with under the third heading

Intrinsic carcinoma occurs much less frequently than the extrinsic and surgical methods are the only ones that need be considered in the early infection which is usually on or in the immediate neighbourhood of one of the vocal cords The window resection I prefer for the following reasons

1 It can be performed more quickly and so lessens the amount of anæsthesia the loss of the patient's resistance and the chance of pneumonia

2 The preliminary tracheotomy which though not absolutely necessary is advisable can be more quickly abandoned (one to two days as a rule)

3 If made freely enough it gives as good a view into the larynx and allows of as ready a removal of the infected area

4 It does not interfere with the movements of the larynx and so enables any phlegm to be coughed up thereby lessening the liability to pneumonia

5 The shorter convalescence (*The last two cases were* out of hospital in fourteen days)

The third group includes the so called inoperable cases and those where only a very extensive operation such as a complete laryngotomy will suffice Taking the latter first it is an openly disputed point whether these operations are ever justifiable the objectors holding that even with the best result possible it is extremely doubtful whether the individual will ever be of any value to himself his family or his State Certainly it should never be attempted by anyone not extra specially experienced in this area and should be performed on a subject who age physical fitness and past history render him or her a suitable subject beyond all doubt

The inoperable group leads us to the very vexed question as to the value of radium and *x* rays in the treatment of this dire condition At first *x* rays were found to be of little if any real value not even for alleviation but with the advance of knowledge and improvement in apparatus the modern deep *x* ray has become of very great value both by itself and in conjunction with surgical measures Radium has been left to the last because although it had such a *popular heralding* its use has become more and more disappointing in these areas Every known method has been carefully studied and tried and because of the published results by certain investigators has been most thoroughly persevered with only to end in great disappointment These remarks of course refer only to carcinomata of the throat and larynx and it is with the greatest regret and diffidence that the statement is here made that with the present known methods the use of radium in the treatment of carcinoma in the above area is of little value This finding has been arrived at by personal experience backed by that of valued colleagues and opinions expressed by investigators abroad particularly on the other side of the Atlantic It is earnestly to be hoped that radium as in the case of *x* rays will increase in its remedial value in the course of time and that while no research is spared in curative efforts the prevention of this fatal disease will be equally sought after

While on the subject of laryngeal carcinoma it is only fair to stress the difficulties which the specialist encounters in most hospitals where only a handful of beds is allotted to the whole specialty of ear nose and throat A surgeon who is also a conscientious citizen is therefore forced to think very seriously whether he is justified in occupying a bed for so long in order to place an almost certainly inefficient person back on to the hands of an overburdened State rather than help a number of younger people back to their jobs and also perhaps prevent them by the very removal of some exciting cause from being ultimately the victim of this dreaded scourge —I am etc,

FRANCIS MUECKE CBE FRCS
Surgeon Ear Nose and Throat Department London Hospital

London W April 20th

BLADDER HEALING AFTER SUPRAPUBIC CYSTOTOMY

SIR—I have read with considerable interest the article on bladder healing after suprapubic cystotomy by Mr James B Macalpine in your issue of February 6th and sincerely agree with his remarks concerning bladder sepsis

While one is in complete agreement with the thesis that it is wellnigh impossible to secure a watertight joint by *closing* a vesical wound around a tube—that is to say placing a tube in one portion and drawing together the remainder of the wound by interrupted stitches —yet a drainage tube may be inserted into the bladder between the primary wound and the apex through a separate stab wound whose margins are subsequently inverted by a purse string suture Careful apposition of the margin of the primary vesical wound can then be secured with the formation of a temporary watertight system

Although Mr Macalpin states that the only particular in which the suprapubic wound differs from any other surgical wound is contamination with urine he omitted to qualify his statement by adding that in the vast majority of cases this urine is infected For the milder degrees of sepsis careful and copious pre operative irrigation of the bladder may suffice but for the severer grades a two stage prostatectomy with continuous irrigation through a Macalpine's combined drainage and irrigation tube is advisable Cellulitis in the cavum Retzii would appear to depend mainly upon three factors first inoculation of the contained cellular tissue with septic urine during the performance of prostatectomy secondly non obliteration of dead spaces in the retropubic space and thirdly strangulation of the tissues by over tight suturing After suprapubic prostatectomy there is a tendency for stagnant urine blood etc to collect in the prostatic cavity and become infected One therefore questions the wisdom of employing an indwelling or in lying catheter which would appear to be the causal factor of the undue prevalence of post-operative epididymo orchitis recorded in the Old Country The following is the post operative technique adopted at the New South Wales Community Hospital

After the toilet of the bladder is completed the prostatic cavity is packed with a sausage roll the free end of which is brought through the lumen of a small Lane's tube (1 2 to 3 4 inch diameter) through a stab wound in the anterior abdominal wall The distal end of the Lane's tube is attached to a suitable length of rubber catheter (or other rubber tubing) of an appropriate calibre which is attached at the side of the bed The sausage roll is then withdrawn and the Lane's tube is replaced The abdominal wound is closed in layers with the exception of the stab wound for the Lane's tube and a pressure dressing applied permitting accurate apposition of the redundant vesical mucous membrane

The sausage roll is then withdrawn by the rubber tubing which is discontinued and a third layer of packing with iodoform and a fresh piece of gauze packing attached having inserted through its wall a short length of glass tubing which extends down through the centre of the packing to the bladder and which is attached by continuous irrigation of normal saline solution from a reservoir of mercury suspended above the bed The rubber tubing which connects the glass tube to the bladder with lubricant is then withdrawn and the glass tube is replaced by a Malpine tube which is connected to the continuous irrigation until the end of the second week On the removal of the Malpine tube the suprapubic wound heals by granulation and until the suprapubic wound heals the bladder is irrigated once or twice daily with normal saline solution

The above mentioned method not only enables the patient to be kept dry and comfortable but greatly reduces the arduous duties of the attendant nurses The transverse skin incision heals by first intention while the tube track through the base of the upper flap is usually sealed by the beginning of the fourth week—I am etc

HARRY C BUTHERFORD DARLING

[illegible]

EDUCATION FOR MARRIAGE

SIR—Mr Kenneth Walker's letter has done nothing to clear up the [illegible] be is raised by me in your issue of April 9th Here words as incorrect my interpretation of Mrs Neville Rolfe's intentions of the question of contraceptive advice at her proposed bureau It is only necessary to refer to Mrs Rolfe's statement that it does not appear to me that the question of birth control is to be [illegible] to [illegible] to [illegible] to

if the patient has had a preliminary injection of morphine and atropine but under every circumstance the patient must be led and not upperc t into a stage of surgical anæsthesia The chloroform mask should never be brought into close contact with the face and after the patient has been dulled under the chloroform vapour ether should always be added The correct administration of any general anæsthetic is not anæsthetic coma but anæsthetic sleep attained by the administration of chloroform and ether plus premedication —I am etc

M r rie M r h R W HOLMBROOK

LCC PATHOLOGICAL SERVICES

SIR —May I in a final letter restate my thesis which has been consistently misrepresented by my critics and which is that when Parliament by its Local Government Act of 1929 handed over the Poor Law hospitals to the county councils it enjoined upon them the duty of avoiding wasteful duplication of already existing facilities at the voluntary hospitals and elsewhere I maintained that the provision of the elaborate and expensive group laboratories which the recent report of the London County Council declared are now being built is a wasteful duplication of existing laboratories That opinion was categorically confirmed by the letter from the chairman and secretary respectively of the Voluntary Hospitals Committee the statutory authority which the Act required the London County Council to consult The opinion of that body must carry more weight than the opinions of Dr Goodhart and Dr Kelson Ford neither of whom can claim to be personally disinterested in this matter Dr Goodhart's argument born of irrelevancies is (1) that these facilities do not exist —a mere travesty of fact (2) that the voluntary hospitals which have hitherto done the pathological work for the county hospitals never did that work properly Dr Goodhart's charge that the LCC cannot be too pleased at his wholesale condemnation of services which they themselves have commanded His statement has been amply rebutted in the case of St John's Hospital Lewisham in a letter in your issue of April 16th and the charge is equally untrue regarding St Mary's Hospital Incidentally I may say that I softened Dr Goodhart's indictment with respect to St Mary's Hospital from never properly to indifferently He expresses himself as being aggrieved by this substitution and I now restore never properly for indifferently as his actual charge Dr Goodhart's predilection for municipal management is such that on his own showing he forsook a more profitable appointment at a voluntary hospital for a less profitable post at a municipal hospital although filial feeling and inherited tradition should have kept him in the voluntary fold

Dr Kelson Ford gleefully thinks that Dr Meredith Richards has floored me by his letter in the *Times* in reply to mine I did not answer Dr Meredith Richards in the *Times* because I was waiting for a more authoritative reply to my letter from responsible persons at the London County Council which has not yet been forthcoming The answer to Dr Meredith Richards and to Dr Kelson Ford is however quite easy Taking their own figures as correct the 6 000 beds in the London teaching hospitals are predominantly filled with acute or difficult cases requiring laboratory investigation the 17 000 beds in the London County Council general hospitals are as a perusal of the recent report demonstrates predominantly filled with chronic cases—for example of disablement from accident old age mental deficiency and other incurable conditions presenting no difficulty of diagnosis and not calling for laboratory investigation But the cardinal difference of course is that none of the laboratories of the voluntary hospitals are charged upon the rates, as are the laboratories at the county hospitals Moreover one of the principal functions which the laboratories of the teaching hospitals fulfil is the training of students and the prosecution of research needs which justify a certain fullness of equipment, and in several instances the pathological laboratories at the voluntary hospitals have been furnished by large subscriptions from rich men who can like Sir Anthony Gloster pay for their fancies and are not answerable to impoverished rate payers irate at seeing their money misspent

But if as seems to be the contention chiefly relied upon by Dr Goodhart and Dr Kelson Ford the existing laboratories are insufficient for the discharge of the new work it is surely more sensible to expand them as may prove necessary than to build completely new ones The debates in Parliament just concluded upon the Budget clearly demonstrate the desperate need for economy in the public services neglect of quite obvious occasions of economy by public bodies is peculiarly indefensible at the present time —I am etc

H use of Com ons April 2 E GRAHAM LITTLE

TREATMENT OF OSTEO ARTHRITIS OF THE HIP

SIR —Dr Hermaman John on is correct in assuming that at the recent discussion at the Medical Society of London I referred to those cases of arthritis of the hip which had failed to benefit by simple routine medical lines of treatment In such cases surgical intervention is absolutely essential —I am etc

London W April 26th B WHITCHURCH HOWELL

A PHARMACEUTICAL CENTENARY

The firm of C J Hewlett and Son Ltd wholesale druggist which was founded in 1832 gathered its friends and staff to a centenary dinner at the Abercorn Rooms London on April 23rd A number of people prominent in pharmacy pharmaceutical education and organizations serving the drug trade were present together with a representation of the medical and veterinary professions Dr Alfred Cox Medical Secretary of the British Medical Association in proposing the toast of the evening mentioned that he had known the firm since 1887 and that he owed not a little in the difficult days when he began practice to John Hewlett the son of the founder of the firm The House of Hewlett he said exhibited some characteristics which he liked to think of as peculiarly British the rise to considerable things from small beginnings the family element in the direction and in relations with the staff the combination of solidity and carefulness with a desire for progress and finally the care for a reputation free from blemish or aspersion The name was associated in his mind with elegant pharmacy The firm was one of the first to take a pride in the appearance of its goods so that the look of its wares appealed to the best type of family doctor In the speaker's own early experience of practice drugs were anything but elegant They justified the remark of Montaigne who begged his doctors not to give him medicine until he was better able to stand it The toast was also spoken to by Mr A R Melhuish president of the Pharmaceutical Society who mentioned that Mr Charles Hewlett the founder of the firm was one of the first members of that body in 1841 Mr Vivian C Hewlett the present head referred modestly to the traditions of his firm but forbore from giving any outline of its history which is being incorporated in a booklet Mr E J Millard another director also responded saying that the firm was celebrating its centenary in a spirit of mingled pride and gratitude

Obituary

SIR W WATSON CHEYNE BT KCMG, CB FRS FRCS

Past President Royal College of Surgeons of England Consulting Surgeon King's College Hospital

As briefly announced in last week's *Journal* Sir Watson Cheyne died on April 19th in his eightieth year This distinguished King's man was the chief link between the new hospital and the old between present day surgery and the great Lister and between the medical schools of London and Edinburgh

William Watson Cheyne was born in the little village of Fetlar in the far away Shetland Islands on December 14th 1852 He came of seafaring stock and there can be little doubt that Scandinavian blood ran freely in his veins The appearance of this was suggestive in earlier days when his honey coloured hair and fair pointed beard had a decided Viking look His descent from Norsemen is also shown in his life long love for the sea It is curious to note that he was anxious to go to sea as a boy but circumstances were against it and yet towards the end of a long public career he wore the uniform and carried the rank of a rear admiral in the Royal Navy His parents died in his childhood and he was brought up by a devoted grandfather the minister at Fetlar and so Cheyne was one of the many thousands of sons of the manse who have made good in the British Empire This clergyman passing rich on £200 a year must have denied himself many things to have given the good education he supplied to young kinsmen But then respect for education and a love of learning are imbred in the Scottish character



From Shetland Cheyne was sent across the sea to the Grammar School in Aberdeen After two years there he entered King's College Aberdeen where he studied from the age of 14 to 17 During these years he still longed for the sea but this had to be given up as his family could not afford it In fact he drifted into medicine with the vague idea that he might be able to take up a seafaring career as a ship surgeon At the age of 17 he went to Edinburgh to begin the study of medicine but delicate health prevented him from doing more than work at chemistry for the first winter This delicacy was a threatening of tubercle and he was never strong enough to indulge in the violent sports and games of youth Possibly this deprivation of social opportunities accounted for the extreme shyness which always was his greatest handicap in life He felt this handicap keenly realizing that his diffidence and shyness had often been mistaken for exclusiveness or bearishness Those who knew Cheyne chiefly as a practical surgeon may not realize that he was so devoted to chemistry that not only did he get the first prize amongst the many students at the University of Edinburgh but that he worked for a second year at chemical science and again won the prize Indeed he looked forward to winning the Hope Scholarship but unfortunately it was abolished as he just came due for it In this second year he took the three medals for anatomy physiology and chemistry During his residence at Edinburgh he gained in all twelve medals In his second full year he took up surgery physiology and practical anatomy These classes left him free from 12 to 1 and although not a dresser he more or less accidentally drifted into Lister's classroom to pass the time He was from the first fascinated by Lister's teaching and by the Master's interest in the chemistry of antiseptics Cheyne took full notes of these lectures during the winter of 1872–73 and these notes are now deposited in the library of the Royal College of Surgeons Such an industrious student was Cheyne that he used to sit up all night before an examination going over his work The examination for the physiology and Lister classes took place on the same day He was particularly anxious to beat the physiology man who had already won twice Cheyne tied with his opponent getting 99 per cent of the marks in the afternoon he sat for the examination for Lister's prize and although opposed by men in the fourth and fifth year he obtained 96 per cent of full mark Lister was so struck with this performance of a junior that he asked Cheyne why he had never applied for a dresserships Needless to say Cheyne applied at once and was selected out of a class of between 200 and 300

Cheyne graduated M B C M with first class honours in 1875 and Lister promptly invited him to become house-surgeon Unfortunately there was no house surgeonship vacant for a year nor was there any other resident post in which he could pass the time About that date there were rumours of the birth of a new science of bacteriology in Germany and Cheyne turned his attention to the Continent But how was he to get there without means? He had recently inherited a small legacy which realized £150 and with this modest sum he spent a year in study on the other side of the Rhine On his return to Edinburgh he started some bacteriological experiments and was successful in winning the Syme Bacteriological Scholarship which brought him in £100 a year for two years

How did it happen that Cheyne came to London? One spring morning in 1877 he was asleep in his lodging and woke to find Mr Lister beside his bed with the news that he (Lister) had been invited to come as surgeon to King's College Hospital that he had agreed to go on condition that he might bring his own resident and dressers and that he wanted Cheyne to be his first house surgeon in London At the old King's College Hospital Cheyne started as house surgeon during the winter of 1877–78 taking with him three other Edinburgh graduates As clinical clerk there was Dr John Stewart a devoted disciple of the Master of whom he has written several touching pen pictures Dr Stewart succeeded Cheyne as house surgeon during the great war he served with the Canadian Army in France and after-

wards returned to his practice in Halifax Nova Scotia The two dressers who came with the Edinburgh contingent were James Altham and W H Dobie The former has died the latter is still in leading practice at Chester Dr Stewart has told the writer of this memoir that the only awkwardness he felt in coming to King was that he and Cheyne were both bearded while his English colleagues were spruce shaven The colleagues—of whom Colonel Richard P Bond R A M C is possibly the only survivor—welcomed the Scottish *invasion quite cordially and* the only opposition Lister and his suite had to put up with came from the Sisters of St John to whom the nursing was in those days farmed out The ladies looked upon surgery as the handmaid of nursing and the high church ritual to which they were devoted and they opposed all sorts of difficulties to the careful measures and personal details which the then novel method of antiseptic dressing demanded

When his period of office as house surgeon was over, Cheyne had to begin the struggle for a practice and his daily bread So hopeless was this that at one time while working at his bacteriological researches he meditated trying to enter the Indian Medical Service which *in those days offered promising careers of rapid* success However Lister gave him a retaining fee of £200 a year to administer chloroform and set with Sir Rickman Godlee as his assistant in private practice Needless to remind readers that Godlee was Listers nephew and wrote the delightful life of his uncle which should form part of the library of every medical man The two young surgeons Cheyne and Godlee struggled along from the small beginning of £200 a year until each of them became in his turn President of the Royal College of Surgeons of England

From these early struggles to the present day Cheynes career is known to the world His researches the books he wrote the practice he conducted the students he taught the *honours he attained are known to all* His long career in the public eye culminated as I have already said in his work with the Grand Fleet during the war and in his wearing as admiral that uniform which he had thirsted after in his early days in Shetland Had his health permitted he would doubtless have continued to serve his profession and his country *in the House of* Commons The last active years of his life were largely devoted to sailing on his beloved ocean round his native island The wheel had come full circle STC T

This personal memoir signed with familiar initials brings Sir Watson Cheyne *before our readers eyes* To make the record more complete we add some further biographical details

In 1879 while acting as surgical registrar at Kings College Hospital with charge of patients in Listers wards Cheyne took the I R C S diploma thus beginning his long connexion with the Royal College of Surgeons of England which culminated in the Presidency from 1914 to 1916 In 1880 he won the Jacksonian prize for his dissertation on the history principles practice and results of antiseptic surgery He was Hunterian professor in 1888 [illegible] in the three following years Bradshaw lecturer 1898 and Hunterian Orator in 1915 From his own figures he was a member of the Council and from teaching hospital *a member of the Court of Examiners* The difficult case [illegible]d him by the College was in 1924 when he 17 000 beds [illegible] the Lister medal in recognition of distin pitals are as [illegible]utions to surgical science and delivered predominantly Memorial Lecture entitled Lister the disablement fro[illegible] surgeon and other incu[illegible]e Hospital he became assistant surgeon of diagnosis and [illegible] his retirement from the posts of full But the cardinal surgeon and professor of clinical surgery he was appointed consulting surgeon and professor emeritus He was elected F R S in 1894 During the South African war he served as civil consulting surgeon to the Forces and received the C B He was created a baronet in 1908 on appointment as Surgeon in Ordinary to King Edward VII For his services with the Navy during the great war he was created K C M G in 1916 On retirement from practice in the following year he was elected M P for the Universities of Edinburgh and St Andrews and from *1918 to 1922* represented the combined Scottish Universities From 1919 to 1930 he was Lord Lieutenant of Orkney and Shetland Sir Watson Cheynes academic honours included the H D of Edinburgh the D Sc of Oxford and honorary Fellowship of the Royal College of Physicians and the Royal College of Surgeons of Edinburgh His principal publications were *Antiseptic Surgery* (embodying the Jacksonian essay) a *Manual of Surgical Treatment in seven volumes (jointly with Mr F F* Burghard) *Tuberculous Diseases of Bones and Joints* and a number of smaller books on the antiseptic treatment *of wounds and suppurative conditions*

A largely attended memorial service was held in the chapel of Kings College Hospital on the afternoon of April 25th Mr Wilfred Trotter F R S Serjeant Surgeon to the King represented His Majesty

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Dr THOMAS DUFF of Roslin died on March 18th *He* was the son of Sir Benjamin Duff Bt and was educated at Blair Lodge School Polmont and the University of Edinburgh After obtaining the triple qualification of the Conjoint Board in Scotland in 1900 he practised for some years *in Cheshire* but then decided to take up mental work and was for some time an assistant medical officer at the Norfolk County Asylum under the late Sir David Thomson He later devoted his life to private mental cases *but nine* years ago returned to Scotland to the Midlothian and Peebles Mental Hospital where he was deputy medical superintendent

Medico-Legal

UNUSUAL CLAIM UNDER ASSURANCE POLICY ACCIDENT OR DISEASE

In the King's Bench Division before Mr Justice Roche on April 14th 15th and 19th an action was brought by Mrs Weyerhaeuser widow of Mr C A W Weyerhaeuser of St Paul Minnesota and his administrators against Mr Montague Evans an underwriter at Lloyds for $754 under a policy of assurance It was stated that the policy concerned claims amounting in all to about £83 000 in respect of which some premiums had been accepted by the defendant and other underwriters The policy provided that the legal representatives of Mr Weyerhaeuser should receive payment under it if within a year from January 15th 1930 he sustained bodily injury by accident which proved fatal within three months The policy did not cover death directly or indirectly caused or contributed to by disease or m[illegible] did it cover death directly or indirec[illegible] medical or surgical treatment It appe[illegible] the policy was taken out Mr Weyerhae[illegible] and a friend Miss Lee started on a [illegible] German steamship round the world [illegible] Mr Weyerhaeuser was troubled with a [illegible] in his nostril He had previously been [illegible] College [illegible] these had been dressed by Mrs Lee Miss [illegible] Edinburgh this pimple and it was alleged pressed squeezed and jabbed [illegible] Stewart it with an improvised *probe thus* accidentally causing a break *in the tissues* The plaintiff's case was that throu[illegible] succeeded break bacteria which would otherwise have remained on [illegible] war he skin or have been confined to the superficial tissue entered [illegible] and after- the blood stream Mr Weyerhaeuser was very ill on the day following this intervention by Miss Lee and although

He was treated by two doctors on the vessel he died six days later

Mr S L Porter K C who with Mr David Davies appeared for the plaintiffs contended that death followed an accident—that is to say the injury caused by Miss Lee when she tried to force out the pus by breaking down the walls of the pimple The word disease like the word accident was open to varying interpretations but counsel suggested that disease was something independent of accident which caused death If there was an injury from which fatal disease resulted the disease being part of the chain of causation that was death by injury and not death by disease The defendant who was represented by Mr Stuart Bevan K C and Mr Lennox McNair denied that Mr Weyerhaeuser sustained an accident within the meaning of the policy and claimed that his death resulted from natural cause or from disease within the exceptions to the policy—that is to say from an acute streptococcal or staphylococcal infection or both or from septicaemia or from pneumonia

In evidence for the plaintiffs Mrs Weyerhaeuser stated that her husband at the time was 63 years old and perfectly well indeed he was very robust Miss Lee described in the witness box how she treated the pimple she used a probe sterilized with alcohol The next morning the nose was much swollen but it did not occur to her that this was due to her interference Dr Hajo Jelden ship surgeon on the liner whose evidence was taken on commission stated that on being called to Mr Weyerhaeuser the day after this occurrence he found him suffering from inflammation of the upper lip His attention was not drawn to the condition in the nostril until the following day when it was pointed out to him by his fellow ship surgeon Dr Mudd In his opinion the cause of death was streptococcal infection in the blood Dr P V Panton (pathologist) expressed the view that the infection was staphylococcal He disagreed with the suggestion that the infection might get into the body by means of hair follicles or in other ways without abrasion

For the defence Sir Bernard Spilsbury gave evidence The common pimple he said resulted from an infection of the skin by staphylococci on full development it became a boil It was not necessary to have an abrasion for the micro organisms to gain entrance to the tissues many boils developed naturally without abrasion of the skin From the description he believed that Mr Weyerhaeuser was subject to acne and in his view an acne lesion was the most probable explanation of the development of the pimple in question Asked whether a pimple without such interference as was made by Miss Lee might cause death the witness replied that occasionally a pimple developed of itself and ended in death though this was very exceptional It was in a dangerous situation inside the nostril owing to the veins leading to the base of the brain The history of the case seemed to indicate that this was not an ordinary boil that the infection was not localized and that the resistance of the patient was inadequate He did not believe that the probing by Miss Lee would in itself have broken down the wall and sent infection into the tissues The probe had probably not affected the patient's condition one way or the other He agreed that medical practice was not uniform in dealing with such conditions and in any case any treatment was generally performed by the patient or his friends without medical assistance

Mr Warren Low also gave evidence for the defence

In closing the case for the plaintiffs counsel said that whether or not abrasion was required to cause the infection was purely a question of expert evidence There were two views one held by his witnesses and the other by Sir Bernard Spilsbury The court was not dealing with a scientific problem in the sense that it must eliminate every possibility but he maintained that there must be some abrasion to get a staphylococcal infection into the tissues If an abrasion was necessary then his submission was that the abrasion however small was an accident within the meaning of the policy

Judgement for the Defendant

Mr Justice Roche gave judgement for the defendant with costs He said that it was common ground that Mr Weyerhaeuser died from septicaemia due to the presence in his system of virulent staphylococci It was also common ground that the origin of the infection was the pimple in the nostril The plaintiffs case failed because there was no evidence that any accidental injury gave rise to the pimple Mr Weyerhaeuser was subject to pimples or carbuncles and there was nothing to show that this particular manifestation was due to the bite of any insect Its cause was in the realm of conjecture most probably it was acne He was not satisfied that Miss Lee had done any mischief by treating the pimple in the way she had done The *more probable* view was that expressed by Sir Bernard Spilsbury that what Miss Lee had done could not have caused the injury alleged—namely the driving of the infection which up to then had been superficial into the deeper tissues It appeared that the infection was already there and was getting worse when Miss Lee first saw the condition and that it forced its way through the resistance

In the judge's view Miss Lee had had nothing to do with the cause of death and therefore the plaintiffs had failed to make out their case

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT

The House of Commons this week discussed the Budget Resolutions altering taxation and the Estimates for Agriculture and India In the House of Lords debate arose on a Bill introduced by Lord Buckmaster to amend the law relating to motor car accidents

The Epsom College Bill was read a second time by the Commons on April 25th

Dr Fremantle presided at a meeting of the Parliamentary Medical Committee on April 26th Sir George Newman Chief Medical Officer of the Ministry of Health gave a survey of the main tendencies in the nation's health for the last fifty years and on the main lines of policy and administration followed by the Ministry of Health and by its predecessors He said he was amazed at the good health of the nation to day and gave reasons for the improvement including food leisure fresh air exercise and education A boy born in London to day had fifteen years more expectation of life than a boy born fifty years ago Leprosy cholera and plague were finished with as English diseases syphilis was checked tuberculosis was steadily declining and small pox completely held in check If the last disease became threatening the authorities had enormous reserves of doses of vaccine

Sir George Newman's address was interrupted by divisions of the House and he will confer again on a later date with the Parliamentary Medical Committee

Mr Baldwin announced on April 25th that owing to the illness of Mr Chamberlain the House of Commons would not discuss till next week the Order instituting the new import duties recently recommended by the Tariff Advisory Committee These duties are in force and include

	Additional Duties
Group X—Tartaric acid cream of tartar citric acid ammonium chloride	10 per cent
Formaldehyde whether in solution or polymerized menthol other than natural menthol	23⅓ per cent
Boric acid (refined) borax (refined) nitric acid anhydrous ammonia ammonium sulphate ammonium nitrate sodium nitrate sodium nitrite calcium chloride tin oxide zinc oxide	10 per cent
Group XVI—Toilet preparations including liquid preparations for dental purposes and mouth washes preparations for use on the hair face or body smelling salts	20 per cent

Exemptions for medical and surgical goods are specified in other sections as follows

Articles manufactured wholly or partly of the metals aluminium copper lead nickel tin zinc and alloys including any of these metals and parts of such articles (but not including scientific and medical instruments and parts thereof) additional duty 10 per cent

Cutlery Knives with one or more blades made wholly or partly of steel or iron (other than surgical knives) additional duty 10 per cent

Deaf and Mentally Defective Children Education

Replying to Mr Charles Edwards on April 21st Sir D Maclean said that on December 31st 1930 the latest date for which figures were available the number of children in England and Wales ascertained by school medical officers to be deaf was returned as 3121 of whom 1 915 were boys and 1 706 were girls The number of partially deaf children was 1 882 of whom 973 were boys and 909 were girls The period of compulsory education for deaf children was from 7 to 16 years of age Special schools for the totally deaf provided accommodation for 4 486 children and in addition there were 422 places in classes certified for the partially deaf It was estimated that the average cost of the education of deaf children was approximately £89 per child per annum in day schools and £72 in residential schools To lower the school age for these children would require legislation

Replying to Mr Edwards on April 21st Sir D Maclean said that at the same date the number of educable mentally defective children ascertained by local medical officers in England and Wales was about 12 100—18 700 boys and 11 400 girls It was known that the actual number of such children was considerably larger There was accommodation in special schools for about 16 600 mentally defective children and the average cost of the education was about £24 per child per annum in day schools and £67 in residential schools Sir D Maclean said he would inquire into the statement that mentally defective children were very often mixed up with deaf children at schools for the deaf and that if such was not the case much more accommodation would be available for those who were merely deaf He was not prepared at present to call on local authorities to provide school accommodation for the mentally defective children above the number for whom it was now available

Flood Relief for China

On April 25th Sir John Simon replying to Mr Idris Davies said that in September 1931 the Assembly of the League of Nations adopted two resolutions in regard to the floods in China and the Council of the League instructed the Secretariat to communicate copies to all the Governments In response to this appeal many contributions were made directly to China and in addition the following were notified to the League Contributions in money were made by the Belgian and United States Red Cross the Red Crescent Society of Turkey and the Swedish Red Cross Contributions of medicines etc were made by the University of Toronto the State Serum Institute of Denmark the Pasteur Institute of Saigon and the Governments of Egypt Indo China India the Netherlands the Netherlands East Indies Norway Poland Spain Sweden and Yugoslavia Contributions of medical personnel were made by the Governments of Egypt the United States Indo China the Netherlands East Indies and Spain When the laboratory resources of China were organized in view of the necessity for vaccines and serums all needed supplies were produced without difficulty so that the health authorities found it unnecessary to accept many offers of this kind Among contributions actually sent was one of anti-plague vaccine from the Government of India The medical director of the Health Section of the League arrived at Nanking in September and placed himself at the disposal of the Chinese Government and the Flood Relief Commission He remained in China till late in December Professor Cimen and Drs Borcic C I Parl A Stampar and I I Hurng all of the League Health Organization made surveys gave advice and organized anti-epidemic campaigns These activities were co-ordinated by Sir J Hope Simpson who at the request of His Majesty's Government placed his services at the disposal of the Chinese Government and was appointed to be head of the National Flood Relief Commission

Indian Medical Council—Sir S Hoare replying to Mr Morgan Jones on April 25th said that the Indian Medical Council Bill was introduced in the Indian Legislative Assembly on March 23rd He had not yet heard whether it had made further progress

Blind Statistics—Replying on April 21st to Mr Hutchison Major Elliot said the latest returns from local authorities showed that the number of registered blind persons in England and Wales was 52 727 on March 31st 1929 According to unofficial figures obtained from the Counties Associations for the Blind there were 60 598 registered blind persons in England and Wales on March 31st 1931 and the number of registered blind persons in Scotland was 8 821 The number of blind persons in receipt of pensions under the Blind Persons Act 1920 on December 31st 1931 the latest date for which figures were available was 24 387 In reply to Mr Magnay Mr Ernest Brown said the increase in the number of the registered blind was probably due to more complete registration and did not necessarily indicate any actual increase in the number of blind persons Many persons who had been blind for some time but were previously unaware of the services provided under the Blind Persons Act had been led to seek registration in order to obtain the benefits available under that Act

Slum Clearance by Wallasey Corporation—Replying to Dr Clayton on April 21st Mr Ernest Brown said that the clearance orders made by the Wallasey Corporation concerning houses in the Moreton area of Wirral had been the subject of the prescribed local inquiry and that with certain modifications the areas concerned had properly been declared to be clearance areas In the circumstances the Minister of Health had no power to mitigate any hardships incurred by occupants Mr Rhys Davies asserted that this area was one of the most insanitary in the country

Opium Manufacture—On April 25th Sir S Hoare said that information as to the quantity and value of the opium manufactured in 1931–32 at the Government of India's opium factories was not yet available

Foot and Mouth Disease in Kent—Sir J Gilmour states that no fresh cases of foot and mouth disease have been confirmed in Kent or elsewhere in Great Britain since that of April 18th at Chertton The herd of 70 cattle in which affected animals were discovered was slaughtered and the remaining stock on the farm treated with serum as a protective measure The origin of this outbreak had not yet been discovered

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The Linacre Lecture (1932) will be given by Dr J J R Macleod F R S Regius Professor of Physiology University of Aberdeen on Friday May 6th in the Anatomy lecture theatre at the new museums

UNIVERSITY OF LONDON

The following candidates have been approved at the examination indicated

DIPLOMA IN PSYCHOLOGICAL MEDICINE (*with Special Knowledge of Psychiatry*)—J J Cleg. D C Dewar

UNIVERSITY COLLEGE

The examination for the Bucknill Scholarship value 160 guineas and for two exhibitions value 55 guineas each will begin on May 23rd The subjects for the examination are chemistry physics botany and zoology The scholarship and the two exhibitions are tenable at University College London *Entry forms* should be obtained from the secretary of University College not later than May 9th

UNIVERSITY OF GLASGOW

To the list of recipients of the M D degree (with commendation) published last week at page 777 should be added the name of George Brown

The Services

ARMY ADVISORY COMMITTEE ON MAXILLO FACIAL INJURIES

The War Office announces that a Standing Advisory Committee under the Director General Army Medical Services has been formed in order to investigate and report on the treatment of maxillo facial injuries The committee will make recommendations in regard to the provision of special facilities and equipment for these cases the general methods of treatment and the training of dental officers in the principles of preliminary treatment in the field

The following are the members of the committee at present appointed Colonel J P Hellwell C B E As is tant Director General A M S for Dental Services (Chairman) Mr W Kelsey Fry *M C* M R C S L D S (appointed by the British Dental Association) Sir Harold D Gillies C B E F R C S Mr W Warwick James O B E F R C S L D S Major S H Woods O B E The Army Dental Corps (Secretary)

Medical News

The discourse to be given by Sir William Bragg at the Royal Institution conversazione on Friday evening May 6th will be related to the various developments in pure and applied science which have depended on the use of the x ra methods of analysing crystal structure In order to supplement the discourse an exhibition is being arranged which will demonstrate more fully the work that has been done Members of scientific societies or senior students of universities and technical institutions and others interested in this work will be welcome if they present themselves at the Royal Institution 21 Albemarle Street W 1 at any time between 10 a m and 6 p m on May 9 h or 10th The managers request such visitors to leave their names and addresses

A course of lectures on the contributions of psycho analysis to anthropology will be given by Dr Susan Isaacs on Friday evenings at 8 30 from May 6th to June 24th at the London Clinic of Psycho Analysis 36 Gloucester Place W 1 The lectures are intended for medical practi tioners medical students and students of anthropology fee for the course £2 2s to be paid to Dr Bryan 35 Queen Anne Street W 1

The annual meeting of the Lebanon Hospital for Mental Diseases near Beirut Syria will be held at Friends House Euston Road N W 1 on Wednesday next May 4th at 3 o clock with Dr E W G Masterman in the chair The speakers will include Dr Nathan Raw and Dr Doris Odlum

The West Kent Medico Chirurgical Society will hold a dinner and dance at Chesman s Restaurant Lewisham S E on Thursday May 12th at 7 30 p m Guests may be invited The price of the ticket is 7s 6d (exclusive of wines) Applications for tickets should reach the honorary secretary (Dr C J B Buchan 267 Baring Road Grove Park S E) by April 30th

The eighty seventh half yearly dinner of the Aberdeen University Club London will be held at the Trocadero Restaurant at 7 for 7 30 p m on Thursday May 19th under the chairmanship of Sir Arthur Keith M D F R S Rector of the University Secretary s address 9 Addison Gardens W 14

The National Safety Week Council announces that instead of one national safety week throughout Great Britain it is arranging this year a series of weeks in various localities at different dates The principal week will be held in London from May 2nd to 8th and the National Safety Congress will be held concurrently from May 4th to 7th A list of the safety weeks so far arranged and detailed information may be obtained from the National Safety First Association 119 Victoria Street S W 1

In aid of King Edward s Hospital Fund a further series of Mock Trials will be held in the theatre of the London School of Economics on Tuesdays May 3rd 10th 24th 31st and June 7th and 14th at 5 30 p m The programme of indictments and full particulars may be obtained from the secretary King Edward s Hospital Fund for London 7 Walbrook E C 4

The Fellowship of Medicine and Post Graduate Medical Association announces an afternoon course in diseases of the skin at St John s Hospital Leicester Square May 2nd to 28th a course in physical medicine at the London Light and Electrical Clinic Ranelagh Road on Mondays and Wednesdays from May 2nd to 25th at 9 p m and a week end course in clinical surgery at the Royal Albert Dock Hospital May 7th and 8th A lecture demonstra tion on rheumatic infection and heart disease in children will be given at 10 30 a m by Dr B Schlesinger at the Children s Heart Hospital West Wickham on Saturday May 7th (applications to the Fellowship not later than May 3rd) Epidiascope and laboratory demonstrations will be given by Dr Knyvett Gordon at 10 Bedford Square on Wednesdays May 18th 25th and June 1st at 5 30 p m Particulars of all courses may be had from the Fellowship of Medicine 1 Wimpole Street W 1

A post graduate course on diseases of the nervous system will be held at the National Hospital for Diseases of the Nervous System Queen Square W C from May 9th to July 1st It will consist of thirty two clinical lectures and demonstrations teaching in the out patient department and pathological lectures and demonstrations The fee for the course will be £6 6s A course of ten lectures on the anatomy and physiology of the nervous system will be arranged on Tuesdays and Thursdays at 12 noon if there are sufficient applicants fee £2 2s A course of ten clinical demonstrations chiefly on methods of examination of the nervous system will be given on Tuesdays and Thursdays at 5 p m fee £2 2s

The Metropolitan Branch of the Society of Medical Officers of Health has accepted an invitation for its members to visit the Cow and Gate Milk Powdering Factories at Wincanton and Somerton Somerset on Friday May 6th

A conference of the Southern Region (Western Section) of the British Health Resorts Association is being held this week end at Bournemouth At the morning session on Saturday with Sir Thomas Oliver in the chair Dr R Fortescue Fox will discuss Centres of convalescence the role of medical baths and papers will be read by Drs J Browning Alexander H Gordon Smith and Harold Simmons At the afternoon session with Dr Alfred Cox in the chair Colonel R H Elliot will discuss The human side of the movement and Dr W S C Copeman the medical policy of the British Health Resorts Association

According to the *Times* authorities at Havre are investigating some three hundred cases of poisoning amongst the crews of merchant vessels which have touched the port during the last three months The cause of the outbreak is attributed to arsenic in quantities from 0 46 to 0 77 of a grain per litre in a stock of Spanish wine forwarded to various shipping companies for the use of their crews At present opinion is divided as to whether some arsenious compound has been used for spraying the vines or some alkali intended to reduce the acidity of the wine has been contaminated with arsenic

Messrs H K Lewis and Co Ltd announce for early publication volume 1 of *A Short Practice of Surgery* by Mr Hamilton Bailey and Mr McNeill Love volume II will be issued a little later

Messrs George Allen and Unwin Ltd official agents for the publications of the League of Nations announce that the League has decided to publish the material issued by its Health Organization in a new periodical entitled the *Quarterly Bulletin of the Health Organization* the first number of which will be issued shortly

Dr W H France of Selston was called to the Bar by Gray s Inn on April 20 n

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House, Tavistock Square, W.C.1.** ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager.

The TELEPHONE NUMBERS of the British Medical Association and the *British Medical Journal* are *MUSEUM* 9861 9862 9863 and (after normal exchange hours) 9864.

The TELEGRAPHIC ADDRESSES are

EDITOR OF THE *BRITISH MEDICAL JOURNAL* *Articulate, Westcent, London*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc.) *Articulate, Westcent, London*

MEDICAL SECRETARY *Medisecra, Westcent, London*

The addresses of the Irish Office of the Parliamentary Medical Association are 16 Fitzwilliam Street Lower, Dublin (telegrams *Bacillus, Dublin*, telephone Grosvenor Dublin), and of the Scottish Office 7 Drumsheugh Gardens, Edinburgh (telegrams *Associate, Edinburgh*, telephone 24761 Edinburgh).

QUERIES AND ANSWERS

Plantar Corns

Dr. ERNEST J. HARRIS (Southport) writes: The best treatment for plantar corns and callosities is a piece of pumice-stone, chosen by trial, which floats well in water. This should be rubbed dry and wet with plain or soapy water several times a week. If the plantar arches are drawn up part of the load is taken off the corn and more readily by the wizard support in which the foot can be placed. The corn should be given to the foot rather than the foot to the corn, so that the boots which should be fitted so as not to cramp the foot especially in width and the upper surface of the shoe must be examined as to freedom from creases in the leather or inequalities of the surface which are liable to be produced during wear. A change of boots daily is desirable and usually frequent washing of the feet.

Income Tax

Disability Pension

I. E. M. O. has retired and has been awarded a permanent disability pension. Will he be liable to pay tax on it?

Yes, it is presumably paid to him in connexion with the pension scheme to the funds of which he has made compulsory contributions and represents income to which he has acquired a legal right.

LETTERS, NOTES, ETC.

Anaesthetic Masks

Dr. I. O. SULLIVAN (Monmouthshire) writes: I note Mr. H. M. Page's letter in your issue of April 23rd stating that before the war he devised a mask identical to the one published in the *British Medical Journal* on April 16th. As mentioned I was not aware that an identical mask was already in existence. In consequence I do not claim priority as being the originator of this mask. I have since received an illustration of Mr. Page's mask from Messrs. Allen and Hanburys and although the masks appear identical there are a few differences—namely, the mask devised by Mr. Page is shallower than mine, the perforations inside the tubes also differ in so far as mine extend almost the whole length of each tube while in his model they are confined to the dome.

Dr. A. M. DUFF (honorary anæsthetist Clayton Hospital, Wakefield) writes: In the *Journal* of April 16th under Preparations and Appliances Dr. I. O'Sullivan describes the anæsthetic mask which he has devised. I had a mask made for me two or three years ago somewhat similar in type. I brought the tubes from side to side with perforations on either side of the middle line. It was made in this way in order that the rubber tubes from the cylinders might be brought in from the more convenient side. The mask was made by Mr. C. F. Thackray, Leeds.

Dr. O. R. I. WILSON (Streatham) writes: I would like to point out that my father the late Dr. R. W. Wilson, medical superintendent of the Croydon Infirmary, used a similar appliance over twenty years ago for use with a Junker's inhaler. In this mask however there was only one perforated metal tube into the summit of which was inserted a Y piece to the ends of which were attached rubber tubes from the inhaler and from an oxygen cylinder.

Doctors and District Nurses

NURSE writes: I fear that my original letter has been misconstrued. With over twenty-five years in my present district in extensive industrial practice including Poor Law and having passed through chairs both of my Division and French Committee in this matter. The relationship between doctor and nurse was not directly at least foremost in my mind. As to the futilities of local nursing committees I sympathize with A. Devon G.P. I have had some but brought away three of their nurses to join me in the public sphere. Might I point out that the question is one come rank the patient I cannot do better than quote from one of the highest rank in our Association to whom I submitted the issue before writing to the *Journal*. I entirely agree that medical men are not doing their duty by their patients who neglect to use a trained nurse in suitable cases when they have the chance.

Dr. H. I. BRONSOM (Hurford, Gloucestershire) writes: As most of the letters have condemned district nurses I think it fair that Dr. Bartlett's views should be supported. In my practice there are five district nurses and I have ample opportunity of judging their work. Without their help in dealing with innumerable minor ailments and above all of relieving me of routine midwifery, which used to make the lives of my grandfather and father far less pleasant than mine it would really be impossible to carry on a wide country practice. They probably make many mistakes but I have never known them to make a serious one and I have always found them a skilful and devoted class of women.

Medical Golf

Dr. WILMER C. LOWRY (Blyth) writes: On Sunday April 17th the annual golf match of the Blyth Division of the British Medical Association took place. Ten members turned out. The weather was ideal and the afternoon most successful. Dr. Milne returned a score of 77 net (handicap 1), Dr. Gordon 78 net (handicap 16), Dr. J. Brown and Dr. Lowry 86 net (handicap 14). Dr. J. Brown and Dr. Macauley take this event as the occasion of their only game of the year, perhaps enjoyed the match more than anyone else. Dr. Brown scored 137, Dr. Lowry 198. Dr. Lowry however was one hole up at the end. Both clubs the victory. The thanks of the Division are due to the golf secretary Dr. C. Hartle for a very pleasant day.

Brain of the East African Native

Dr. NORMAN LEYS (formerly medical officer in Kenya and Nyasaland) writes: In your issue of March 26th Dr. J. H. Sequeira cites figures that make it appear that the average weight of the brain of the natives of East Africa is less than it is in Europeans. As the weight of the brain in all races is known to vary with the weight of the whole body and as in the figures Dr. Sequeira cites no correlation of brain with body weights has been made they would seem to be of no value.

B. Aerogenes as an Index of Water Purity

Correction

Dr. J. D. ALLAN CRAY (Bacteriological Laboratories, University of Liverpool) writes: The abstract in the *Epitome* of April 16th (p. 72, No. 369) of a paper written by me states: "He finds that the use of modifications of the citrate medium containing lithium or barium is useful in the isolation of *B. aerogenes* when *B. pyocyaneus* is abundant." Little if any danger appears to accrue from ingesting the latter organism even in large numbers. As the original paper indicates the sentence should run: "Little if any danger appears to accrue from ingesting *Bact. aerogenes* even in large numbers."

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 38, 39, 40, 41, 44, 45 and 46 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 42 and 43.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 207.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

388 Transient Ventricular Fibrillation

Transient syncopal attacks in patients with permanent auriculo-ventricular dissociation are mainly due either to complete standstill of the ventricles or to various grades of acceleration leading to ventricular fibrillation S P SCHWARTZ (*Arch Int Med* February 1932 p 282) records a case of auriculo-ventricular dissociation in which sixty-seven seizures of unconsciousness occurred during a period of seven months Each seizure was associated with periods of ventricular fibrillation the longest recorded attack with spontaneous recovery lasted six minutes and two seconds The electrocardiographic alterations preceding a seizure consisted of a gradual acceleration of both the basic auricular and ventricular rates Periods of re-excitation of from four to eleven beats were noted during the premonitory period heralding the approach of unconsciousness The onset of every recorded seizure of ventricular fibrillation in this patient was initiated by a ventricular extrasystole of constant character and location in the ventricle Spontaneous revival usually coincided with cessation of ventricular fibrillation the mode of recovery was variable but the restoration of the basic rhythm was preceded by an idio-ventricular rhythm with a slightly irregular ventricular rate following usually a post-undulatory pause Schwartz believes that this condition is much commoner than has been thought and that transient ventricular fibrillation may be suspected in such patients if preceding a period of unconsciousness the heart rate increases above that of the usual basic rate

389 Cutaneous Manifestations of Meningococcal Infection

A ATTAL (*Thèse de Paris* 1931 No 532) who records three illustrative cases in patients aged 2½ 4 and 45 years respectively states that meningococcal infection whether generalized as septicaemia or localized in the form of meningitis may be accompanied by cutaneous manifestations Some of these are frequent such as herpes purpura and papulo-nodose eruptions The others are rare —namely the maculo-vesicular *morbilliform* and scarlatiniform rashes rose spots and the varicelliform and herpetiform eruptions Although none of these eruptions is peculiar to meningococcal infection the presence of herpes purpura or a papulo-nodular eruption accompanied by attacks of intermittent fever simulating malaria or by a *slight meningeal reaction* as shown by nuchal rigidity and Kernig's sign should suggest the possibility of meningococcal infection and prompt its investigation by blood culture in the stage of septicaemia or lumbar puncture in the meningeal stage

390 The Age Incidence of Tuberculosis in Women

O HELMS (*Hosp Tid* January 6th 1932 p 45) has investigated the age incidence of pulmonary tuberculosis in 1 000 women treated at his sanatorium in Denmark The first symptoms appeared in most of these cases between half a year and one year before admission to the sanatorium and his records refer to the age at which these symptoms first appeared There were only 20 patients under the age of 15 at the first onset of symptoms At the age of 15 there were 41 and after this age there was a rapid rise which achieved its maximum at 21 the number of cases at this age being 74 Between 21 and 24 there was a slow decline from 24 onwards it became abrupt There were only 185 women whose first symptoms began after the age of 29 whereas between the ages of 15 and 29 there were as many as 795 So far as tuberculosis is concerned the dangerous age for women would seem to be within the narrow limits of 15 and 24 during which approximately three-fifths of all cases develop This dangerous age particularly between 15 and 20 corresponds broadly to the age at which most young women leave their homes to work in other homes or in offices where they are overworked and underfed in many cases Of the unmarried patients more than four-fifths had to earn their own living among the 338 married patients there were only 12 whose consorts had suffered from tuberculosis but in as many as 232 cases there was a history of deaths from tuberculosis within the family With regard to the possibilities of preventing the outbreak of tuberculosis within these narrow age limits in women the author is doubtful whether more can be done than is already done in Denmark with its ample supply of doctors insurance societies tuberculosis dispensaries sanatoriums and hospitals Early diagnosis is important but he doubts if it would be feasible to supervise at suitable intervals with stethoscope and x-rays all the women concerned Yet it would seem reasonable to examine every half-year the younger members of the female staff of hospitals The author discusses the alternatives of endogenous or exogenous infection in his cases without committing himself exclusively to either process

391 Jaundice in Lobar Pneumonia

L PRETI (*Il Policlinico* Sez Prat February 22nd 1932 p 283) who records an illustrative case states that jaundice occurring in the course of pneumonia may be due to an intense haemolytic process which takes place in the pulmonary exudate during the process of red hepatization Both clinical and experimental data indicate that the transformation of blood pigment into bile pigment may be brought about in the affected lung The jaundice so produced does not affect the prognosis but should merely be regarded as a symptom due to an intense destruction of the red cells For this no special treatment is required since it gradually disappears as the pneumonia progresses Preti's patient was a woman aged 40 who developed jaundice on the fifth day of an attack of double lobar pneumonia The issue of the case is not recorded

Surgery

392 Prostatic Calculi

A LAZARUS and A ROSENTHAL (*Urol and Cut Rev* February 1932 p 99) who record fifteen personal cases state that 370 cases of prostatic calculi have been reported though many more are encountered than are published Until the introduction of radiography into the routine urological examination prostatic calculi were supposed to be rare but modern methods of investigation have shown that they are not uncommon As regards their aetiology the present writers hold that calculi of the prostate like those found elsewhere in the body are due to a variety of causes In the majority of cases a pre-existing infection within the gland in an individual with a tendency to calcium deposit seems to be the most likely explanation for calculus formation The calculi vary in size consistency and chemical composition The nucleus is usually composed of epithelial debris blood clot bacteria corpora amylacea and necrotic tissue the surrounding layers are made up of calcium carbonate calcium phosphate calcium oxalate and ammonio-magnesium phosphate Most prostatic calculi are found in the lateral lobes and occasionally in the median ones while the anterior and posterior lobes are rarely if ever involved The calculi are usually multiple but thirty-three cases are on record in which only a single stone was seen Most of the cases are found after puberty the majority occurring in the fifth decade and two-thirds of all the cases in the fourth fifth and sixth decades In the present writers' series the youngest patient was 25 and the oldest 75 Prostatic calculi often give rise

to no symptoms and are accidentally discovered in a routine urological examination by x rays and digito rectal exploration In a fair number of cases the following symptoms occur in order of frequency diurnal and nocturnal pollakiuria dysuria and ardor urinæ perineal penile and rectal pain urgency and tenesmus hæmaturia retention impotence and hæmato permia The diagnosis is established by rectal examination and radiography Prostatic calculi must be distinguished from chronic prostatitis with hard nodules inflammatory and malignant infiltration and tuberculosis of the prostate Complete cure follow the removal of the calculi but if the condition is left untreated abscess formation cystic degeneration gangrene or carcinoma may result Suprapubic prostatectomy in two stages is the operation of choice if no symptoms are present diathermy followed by massage is sufficient

393 Pneumococcal Peritonitis

NOVI JOSSELAND (*Journ de Med de Lyon* February 20th 1932 p 99) holds that pneumococcal peritonitis is most often due to a blood infection but that the causative organism can also reach the peritoneum through the diaphragm the intestinal wall and the uterus In the first few hours there is only some swelling of the mesenteric glands with vascular congestion of the small intestines which have a characteristic shiny feel on palpation At the end of twenty four hours there is a little mucous exudate but it is only on the second day that the effusion even if purulent is appreciable The condition usually occurs in young girls suffering from some pleural or pulmonary infection rhino pharyngitis otitis or vulvo vaginitis The onset is sudden with colic diarrhœa vomiting and a temperature rising rapidly to 104° F A few hours later the pain and vomiting diminish and the temperature drops to a level of 100 5° to 101 5° F a similar apparent remission may occur in pneumonitis but not so characteristically Examination of the abdomen will reveal very slight distension no muscular defence and no tenderness in the right iliac fossa The syndrome is not always so typical The onset may be a general peritonitis with abdominal distension or it may be insidious with a temperature of 101 5° to 102° and pain in the right iliac fossa Diarrhœa is absent there may even be constipation Cure by resolution occurs fairly often but severe relapses may occur or grave and fatal complications The author advises against immediate operation if the diagnosis is definite When it is in doubt the case should be watched from hour to hour so as to permit surgical intervention at the earliest indication The operation in such cases should be under local anæsthesia and be confined to exploring the appendix and draining the pouch of Douglas At the end of 24 to 48 hours a decision is easier since the clinical signs are clearer There may be (1) a general peritonitis when an operation can do no harm and may cure (2) a resolving condition or (3) localizing peritonitis in which event operation should be postponed to the third week

394 Erysipelas Gangrenosa

S NUSSBAUM (*Arch of Ped* January 1932 p 17) who records an illustrative case states that this condition differs from the usual form of erysipelas in the diffuse margin of the rash type a streptococcus being the causative agent instead of type β the large deep ulcerations of the skin formed in the path of the rash and the low blood count He has found only two other cases on record (reported by Hoesch and Schilling respectively) both of which occurred in adults Nussbaum's patient was a girl aged 11 years in whom the portal of entry of infection was formed by the cracks of ringworm infection between the toes The onset was sudden with a high temperature and a diffuse rash which extended from the toes of the right foot to the groin Extensive ulcers developed in the right foot and two on the leg Recovery took place after nineteen days *Streptococcus viridans* was grown from the abscess Blood cultures were negative the red cell count ranged between two and three millions and the leucocyte count between 5 200 and 7 200

Therapeutics

395 Oxygen Therapy

M B ROSENBLÜTH (*Journ Amer Med Assoc* January 30th 1932 p 396) remarks that in the tents in general use for the administration of oxygen provision is usually made for the removal of excess of carbon dioxide by circulating the atmosphere of the tent through a container filled with soda lime This soda lime has to be renewed every 48 hours it introduces additional expense into the treatment and the author does not think it is necessary when large quantities of oxygen are being used With ordinary nursing care he states the oxygen content of a tent cannot be maintained at a desirable level if the flow of oxygen is less than 8 litres in each minute If special care is taken to prevent leakage the oxygen content can be raised to over 45 per cent of the tent atmosphere with a flow of 6 litres a minute but the carbon dioxide proportion will then approach 4 per cent When however the flow of oxygen is maintained at 8 to 10 litres a minute the carbon dioxide content will not rise above 1 5 per cent Rosenbluth found that patients kept in atmospheres containing between 2 and 4 per cent carbon dioxide did not experience any unpleasantness or show untoward symptoms He adds that the expense of the additional supply of oxygen necessitated is very small when compared with the saving in the cost of the soda lime there is also the additional advantage that less exacting care is imposed on the nursing A further benefit so derived is that the interruption of the treatment which is inevitable while the soda lime is being changed is obviated

396 Treatment of Severe Purpura

I GOLDSCHMID (*Derm Woch* February 6th 1932 p 198) records a case of severe anaphylactoid purpura in a male infant aged 18 months accompanied by fever pains in the joints constitutional disturbance and an urticarial eruption Rapid improvement and finally complete recovery followed intramuscular and intravenous injections of a 10 per cent solution of calcium gluconate accompanied by intramuscular injections of blood Gold schmid states that during the last three years hundreds of cases in the dermatological municipal hospital at Hanover have been treated by injections of calcium gluconate without any symptoms of irritation or infiltration developing

397 Results of the Modern Treatment of Syphilis

L LOMHOLT (*Ugeskrift for Læger* February 4th 1931, p 123) has made a statistical study of about 3 000 cases of syphilis treated at two of the principal hospitals in Copenhagen in the period 1920–27 Among these cases were 1 797 which fulfilled the following conditions they were recent they had not been treated previously and they submitted to treatment for more than half a year They were classed in three groups according as the disease was (1) primary with a negative Wassermann reaction (2) primary with a positive Wassermann reaction and (3) secondary The treatment was more or less uniform throughout the period under review but it was not quite identical in the two hospitals Irregularity of attendance of some patients further interfered with the uniformity of the treatment which in principle consisted of large weekly injections of salvarsan or neosalvarsan (about 60 cg of neosalvarsan for women and 75 cg for men the corresponding doses of salvarsan being respectively 40 and 50 cg) Six or seven injections were given in each course the first of which was supplemented by mercury or bismuth The dosage duration and spacing of the subsequent courses lacked uniformity As regards the results of this treatment subsequent clinical manifestations occurred in 4 6 per cent and serological relapses (a positive Wassermann reaction) in about 10 per cent These serological relapses were about twice as common in women as in men In 1921 a fellow countryman of the author B Pontoppidan published a study of 1 396 cases of syphilis treated in the same two hospitals in the

period 1910–14 with greatly varying doses of salvarsan combined with mercury Pontoppidan found the same percentage (about 10 per cent) of serological relapses as did the author but while he observed clinical manifestations of the disease after treatment only in 4 6 per cent Pontoppidan observed them in 22 per cent Accordingly it would seem that the specific treatment of syphilis in Copenhagen has become more effective since 1920 than it was before that year and that the reduction in the incidence of clinical manifestations of the disease must entail a reduction in the number of new infections

Disease in Childhood

398 Multiple Fractures in a Newborn Infant

A case of multiple fractures in a newborn infant is reported by C JEANNIN M SUREAU and R WEILL SITRE (*Bull Soc d Obstet et de Gynecol de Paris* January 1932 p 31) It was diagnosed as corresponding to a transition form existing between the two extreme types of congenital fragility of the bones (periosteal dysplasia) and osteo psathyrosis At birth the infant showed shortening of all the limbs which were incurved and knotty Over the shafts of the long bones were abnormal swellings at the level of which crepitation was obtained The right and left clavicle were also fractured Altogether there were about thirty fractures The cranium was almost entirely membranous only the inferior parts of the occipital frontal and parietal bones being ossified The sclerotics were definitely blue No abnormality was found in the viscera Clinical examination of the parents revealed nothing pathological there was no evidence of endocrine disorder The Wassermann reaction was negative in both So far as could be ascertained no relatives had suffered from bony defects Radiological examination confirmed the existence of the fractures and showed that the centres of ossification were normal Contrary to expectation the infant lived and two months after birth he was clearly improving Mercurial inunction was given from birth followed by ultra violet ray treatment and irradiated vitamins together with calcium phosphate and arsenic No further fractures occurred after birth The blue of the sclerotics persisted The authors consider that the condition is probably best described by the term osteogenesis imperfecta They add that during the fifth month of pregnancy the mother had exhibited a slight albuminuria associated with a marked loss of phosphates

399 Treatment of Kala azar in Children

The prognosis of kala azar in children has radically improved since the introduction of antimony salts in its treatment P GIRAUD and MLLE COULANGE (*Presse Med* February 3rd 1932 p 178) describe the use of three preparations which may be advantageously employed a mineral compound (stibyal or the emetic sodium antimony tartrate) and two organic compounds (*stibenyl* and neostibosan) Stibyal which is preferable should be administered only intravenously in a *1 to 2 per cent* solution and be injected very slowly The commencing dose of 2 to 3 cg should be progressively increased according to age to 5 to 10 cg for children aged 10 years and over The requisite number of doses varies with the individual To be efficacious this treatment must be given uninterruptedly *until cure is effected* Stibenyl can be administered both intravenously and intramuscularly this drug however is difficult to obtain since it is no longer manufactured Neostibosan can also be administered in both these ways A series of eight injections (three per week) should be given the initial dose is 5 cg and 10 cg for the remaining ones for children up to the age of 4 years The effects of treatment and such conditions as intolerance intoxication and resistance to treatment are discussed Adjuvant measures (attention to the general hygiene blood transfusion liver therapy and actinotherapy) are also recommended The evolution of the disease under this treatment and its encouraging results are fully described and short notes on three cases are appended

400 Epidemiological Factors in the Pneumonia of Children

SELMA M SHULTZ (*Amer Journ of Hyg* January 1932 p 80) records a study of pneumonia in children which shows that as in adults the principal modes of transmission of the disease are the normal carrier and the convalescent patient and that preventive measures can only be directed to the control of these The examination of eighty six persons who were associated with twenty one children with pneumococcal pneumonia revealed in eleven carriers the presence of the same type of pneumococcus as that isolated from the patient There was no significant variation in the virulence of the pneumococcus isolated from the cases and the corresponding carriers The virulence of Type I organisms from cases and carriers was higher than that of Types III or V recovered from the cases The duration of the carrier state followed in thirty five convalescent children ranged from 2 to 152 days Types I and III remained longer in the pharynx than Type II or the subdivisions of Group IV The pneumococci which were found to replace the infecting type did not differ greatly from those detected in the pharynx of the healthy contact The unclassified pneumococcus which apparently replaced the infecting type might in some instances have been a degraded form of the original strain Two children who developed symptoms of pneumonia in hospital were studied as regards the possibility of ward infection but the sources of their infection could not be traced

Obstetrics and Gynaecology

401 The Prognosis in Forceps Cases

S STEFANIK (*Bratislavske Lekarske Listy* February 1932 p 67) states that in the obstetric gynaecological clinic of Bratislava during the years 1912 to 1931 557 patients (5 6 per cent) were delivered by the application of low forceps and 125 (1 2 per cent) by means of high forceps The indications for the application of forceps were danger to the mother in 296 cases (43 4 per cent) danger to the child in 272 cases (39 9 per cent) and danger to both in 114 cases (16 7 per cent) Primiparae formed 75 per cent of all cases in which forceps were applied The mortality among the children delivered by means of forceps was 6 3 per cent in low forceps cases and 24 8 per cent when the high forceps procedure was employed Injury to the child resulted in 33 per cent in low forceps and 84 2 per cent in high forceps cases asphyxia occurred in 32 8 per cent and 56 per cent respectively The maternal mortality was 0 9 per cent for low forceps operations and 2 4 per cent in high forceps injury to the mother resulted in 72 6 per cent and general maternal illness followed in 18 2 per cent and 31 8 per cent respectively The author concludes that the application of forceps is a serious and dangerous procedure its employment should therefore be limited as much as possible

402 Hysterectomy after X Ray Sterilization

P CAFFIER (*Zentralbl f Gynak* January 9th 1932 p 89) agrees with v Peham that in recent years an increasing number of patients appear to need hysterectomy in spite of previous sterilization by x radiation of the ovaries He analyses the cases of 30 such patients treated at the Berlin Universitats Frauenklinik from 1928 to 1931 There were two cases of ovarian cystoma developing after x radiation for myoma uteri bleeding had ceased for nine or ten years There were four carcinoma cases three being corporeal and one cervical In these six cases the malady needing treatment was different from that for which radiotherapy had been used but its onset would have been prevented had hysterectomy been performed The remaining cases coming to

operation were 18 of myoma and 6 of metropathy in these with one exception irradiation could be regarded as having been unsuccessful The myoma cases in 14 of which renewed hæmorrhage was reported comprised 2 of submucous myoma with tout pedicle 5 of sessile broad based submucous myoma 7 of intramural and 1 of chiefly subserous myoma The 6 metropathic cases all characterized by persisting or renewed bleeding included 3 of adenomyoma (In the one period after 151 operations for myoma or metropathy the after operation mortality amounted only to 5 per cent At other clinics from three to eight per cent of surgical interventions after unsuccessful x ray castrations have been reported) Analysing the 17 cases of failed radiotherapeutic treatment of myoma Cahier concluded that in 3 the situation or size of the tumour should have contraindicated x ray treatment The fact that the remaining 14 seemed clinically suitable for such treatment and that in 5 no pathological explanation (softening or necrosis) of renewed or persisting symptoms could be found are taken as affording further support of systematic operative rather than systematic x ray treatment of uterine myomata

103 Glycosuria in Pregnancy

Ellis V Chase (*Canadian Med Assoc Journ* March 1932 p 279) points out that the appearance of sugar in the urine of a pregnant woman is often physiological it has been variously attributed to increased permeability of the renal epithelium to overactivity of the breasts or thyroid gland and to functional changes in the ovaries and placenta It requires no treatment and does not apparently predispose to diabetes from which condition it is differentiated by the small amount of sugar present the absence of thirst and the normality of the blood sugar curve V J Harding and D I Sharp (ibid p 283) have however found that such physiological glycosuria may be associated with thirst polyuria and pruritus vulvæ presumably due to a low renal threshold and not associated with definite diabetic symptoms In the urine of a fasting pregnant woman only very concentrated sugar is absent True acetone is never found in this form of glycosuria the Le Nobel variation of the nitroprusside test is however more reliable in these cases than the usual Rothera procedure since the latter reacts also to certain substances present in the urine of pregnancy which are not acetone though resembling it The authors see no clinical value in distinguishing such glycosuria from lactosuria in view of the uncertainty of such distinction when the tests at present in general use are employed

Pathology

401 Basal Metabolism at Puberty

A St Lotter and Hannah Meyer (*Amer Journ Dis Child* February 1932 p 327) have studied the basal metabolism in girls and boys between the ages of 10 and 16 at intervals of six months to a year over a period of from one to four years The Krogh respirometer and later the Benedict Roth apparatus were used and each child had a preliminary trial before the first recorded test so as to eliminate such factors as excitement or anxiety The authors found an increase in the basal metabolic rate in the prepubescent period which reached its maximum about the time when menstruation was established in girls and boys became sexually mature there was subsequently a decline No uniformity appeared to maintain as regards the height of the increased metabolism or its duration Some of these children had no other symptoms of an overacting thyroid gland but in certain cases there was thyroid enlargement with tremor nervousness vasomotor instability cardiac murmur and tachycardia All these symptoms disappeared as the basal metabolic rate returned to its previous normal level when puberty was well established The authors conclude that there is a physiological increase in the basal metabolism during the approach to puberty this coincides with the physiological rather than the chronological age and occurs earlier in girls than in boys coincident with their earlier pubescence Since there appears to be an individual variation in the height and duration of the increased metabolism it is difficult to define normal standards for this important age period The increase may be associated with symptoms simulating organic heart disease or more especially exophthalmic goitre and, consequently such clinical manifestations of pubescence must be borne in mind when high metabolic figures are recorded Exophthalmic goitre is rare before puberty and should not be confused with the physiological overactivity of the thyroid gland in pubescence which is only temporary and has an excellent prognosis

405 Action of the Splanchnic Nerves on the Spleen

J Barcroft Y Nishimaru and S R Puri (*Journ of Physiol* March 7th 1932 p 321) show from experiments on cats that the nerve fibres to the spleen and suprarenal bodies are carried chiefly through the greater splanchnic nerve Stimulation of this nerve produces a contraction of the spleen which is followed by rhythmical contraction This is due partly to a direct action on the spleen and partly to an indirect one through the stimulation of the suprarenals and the secretion of adrenaline Nerve fibres to the spleen and suprarenal bodies are also carried in the nervus splanchnicus minor (I) Stimulation of these nerves produces sometimes both direct and indirect effects on the spleen and at other times only an indirect effect The authors failed to find nerve fibres from the nervus splanchnicus minor (II) running to either the spleen or suprarenal bodies J Barcroft L C Khanna and Y Nishimaru (ibid p 294) contest the view that the spleen has two essentially different rhythms a specific one with a period of a minute or more and a Traube Hering rhythm with a shorter period From experiments on cats they find that the period of splenic rhythm is between 25 and 50 seconds but when the spleen is in a bad condition or the general blood pressure is low the period of the rhythm is often over 60 seconds

406 Diagnostic Value of Leucocytosis and Red Cell Sedimentation

M M Reggiani (*Il Policlinico* Sez Chir February 15th 1932 p 104) has investigated the variation in the number of leucocytes and the velocity of red cell sedimentation in cases of appendicitis cholecystitis and abdominal anastomoses He concludes that no special characteristic value can be assigned either to the number of white cells or to the sedimentation rate of red cells in differentiating these three conditions There is no constant correspondence even in acute cases between the number of leucocytes and the sedimentation rate of the red cells Repeated examinations from time to time of the blood from the same patient during the infection showed that the increase in the leucocyte count was usually of short duration and was independent of the course of the illness the sedimentation rate on the other hand reflected with certainty the progress of the disease

407 Xanthoma Tuberosum

G H W Jordans and N van der Horst (*Nederl Tijdschr v Geneesk* February 27th 1932 p 967) who record three cases in patients aged 8 13 and 34 respectively state that hypercholesterinæmia has been found in most recorded cases of xanthoma and that its absence has been exceptional Until recently cholesterin formed the most important part of the xanthoma problem The present authors point out that it is not sufficient to examine the cholesterin metabolism only attention should also be paid to the neutral fats and other lipoids especially when hypercholesterinæmia is absent In their own cases there was a well marked disturbance in the metabolism of fats and lipoids but such a disturbance however is not sufficient to explain the formation of xanthoma In two of their patients the xanthoma appeared to be familial and in some members of their families the hypercholesterinæmia was apparently hereditary

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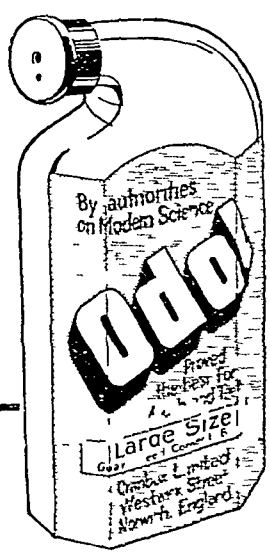
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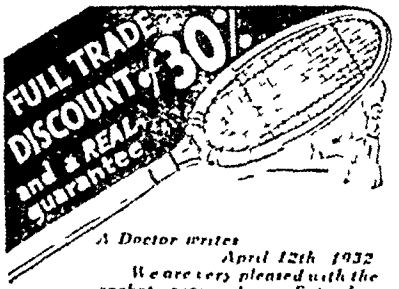
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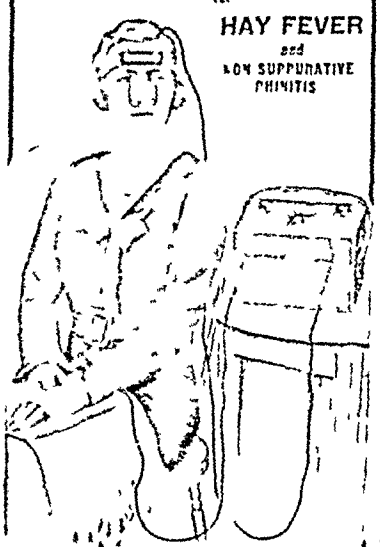
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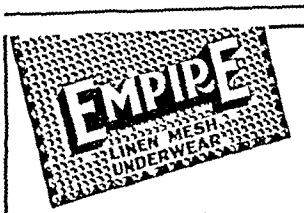
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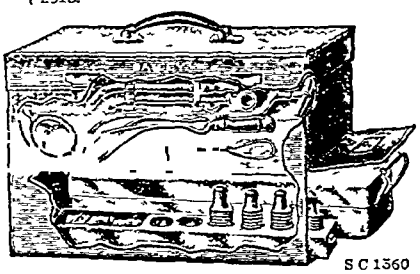
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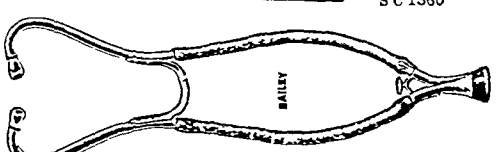
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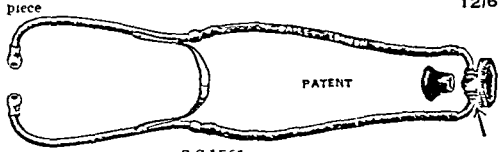
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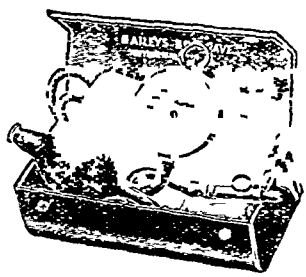
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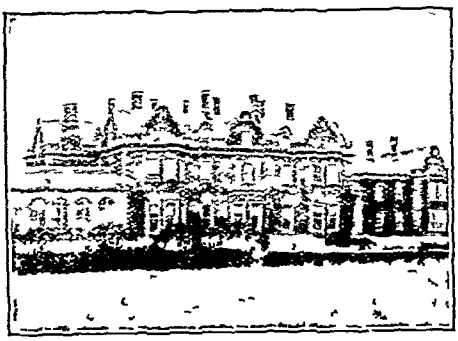
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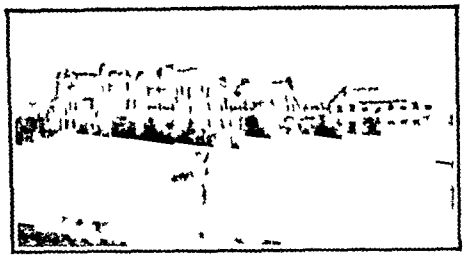
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Academic Registrar

UNIVERSITY OF LONDON

A Course of Three Lectures on *Human and Comparative Haematology including the Early Stages of Human Development* will be given by Prof Dr Otto Grosser (Professor of Anatomy in the German University Prague) at UNIVERSITY COLLEGE LONDON (Gower St W C 1) on MAY 2nd 4th and 6th at 5 15 p m At the first Lecture the Chair will be taken by Prof F G Hopkins D Sc F R S Professor of Biochemistry in the University

Lantern illustrations

Admission by visitor's ticket

S J WORSLEY
Academic Registrar

UNIVERSITY OF LONDON

THOMAS SMYTHE HUGHES MEDICAL RESEARCH FUND

Applications for grants from the Thomas Smythe Hughes Fund for assistance in Medical research *especially in the Brain* and other nervous tissues must reach the Secretary Imperial Institute of Experimental Psychiatry 58 Queen's Square W C 1 (from whom further particulars may be obtained) not later than March 16th

March 16th 1932

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE

INGLEBY LECTURES 1932

The INGLEBY LECTURES will be given on THURSDAYS MAY 5th and 12th at 4 o'clock in the Medical Lecture Theatre (Edmund Street Buildings) by Professor SEYMOUR BARLING C M G M S F R C S Senior Surgeon to the General Hospital and the Children's Hospital Birmingham

Subject *The Operative Treatment of Toxic Goitre*

Members of the Medical Profession are invited to attend

STANLEY BARNES M D D S F R C I
Dean

SCHOOLS for BOYS and GIRLS

TUTORS FOR ALL EXAMS

Messrs J & J PATON having an up-to-date knowledge of the Best Schools and Tutors in this Country and on the Continent will be pleased to ADVISE PARENTS in their choice by sending (free of charge) prospectuses and trustworthy information and ADVICE.

The age of the pupil district preferred and if possible limit of fees should be given

J & J PATON Educational Agents 143 Cannon St London E C 4 Tel Mansion House 5053

STAMMERING, SPEECH DEFECTS

BEHNKE METHOD Estab 1882 Can be non resident treated at 39 Earl's Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE's house on the Chilterns.

[illegible]

STAMMERING CLEFT PALATE SPEECH LISPING 3/9
of Miss BEHNKE 39 Earl's Court Sq S W 5

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March June September *and December* For Regulations apply to the Secretary College of Preceptors Bloomsbury Square London W C 1

Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric and Prelims

Chemistry Physic and Biology Labs
MANCHESTER TUTORIAL COLLEGE
327 Oxford Road Manchester

EPILEPSY.

Attendance at school is a necessary part of the satisfactory treatment of Epilepsy in Children

COLTHURST HOUSE SCHOOL

meets all the requirements of children of middle class parentage Extensions made necessary by the success of the school have created several vacancies

Only bright and intelligent boys and girls are eligible for admission

Apply to the Medical Supt, Colthurst House School, Warford Alderley Edge

Church Missionary Society

The ANNUAL MEETING of the MEDICAL MISSION AUXILIARY OF THE C M S will be held in the CENTRAL HALL WESTMINSTER at 7 p m on Wednesday May 4th 1932

The Chair will be taken by FIELD MARSHAL SIR CLAUD JACOB G C B G C S I K C M G and the speakers will be

H F DOLLAND Esq C I E M B Ch B F R C S Edin (Quetta Baluchistan)
Mrs C BACON M B Ch B Birm D T M & H Lond (Kweichu Kwangsi Hunan)
T HOWARD COOK Esq M S F R C S (Secretary Medical Committee)

Tickets of admission may be obtained from the Superintendent Loan Department Church Missionary Society Salisbury Square E C 4

There will be a small number of reserved seats at 1s each

ROYAL COLLEGE OF PHYSICIANS OF LONDON

Dr HARRIETTE CHICK C B E will deliver the OLIVER-SHARPEY LECTURES on Tuesday May 3rd and Thursday May 5th at 5 o'clock at the College Pall Mall East S W 1

Subject *The Relation of Light to Nutrition*

Any Member of the Medical Profession admitted on presentation of card

By Order of the President
H M BALLOW Secretary

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN

(Founded 1788) (Incorporated 1864)

The ANNUAL GENERAL MEETING of the Members of the Society will be held at 11 Chandos Street Cavendish Square W on WEDNESDAY MAY 11th at 5 o'clock p m precisely to transact the usual business of such meetings and to elect officers for 1932 1933

E J BLACKETT
Secretary

11 Chandos Street
Cavendish Square W
April 27th 1932

INTENSIVE POST-GRADUATE SUMMER COURSES

Four Courses (each of two weeks) designed to suit general Practitioners will be given at the POSTGRADUATE MEDICAL COLLEGE OF THE PRINCE OF WALES'S GENERAL HOSPITAL (Tottenham) on the following dates

May 23rd to June 4th — June 6th to 18th
June 20th to July 2nd — July 4th to 16th

Full particulars from the Dean

MASTERY OF MIDWIFERY

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday November 21st 1932 and Monday May 15th 1933

For regulations apply to the Secretary of the Society Water Lane E C 4

F R C S (Edin)

Full PRE-COURSE with Anatomical (Cadaver and Living Model) and Surgical Demonstrations, for next *Exam will commence* shortly POSTAL TUITION at any time—H C O'DS L R C S Surgeon Hull Edinburgh

M D THESIS

Advice and legitimate assistance by an expert in preparation of Thesis Also Postal Tuition for M R C P London and similar examinations —No 1001 B M A House Tavistock Sq W C 1

THE ROYAL DENTAL HOSPITAL OF LONDON SCHOOL OF DENTAL SURGERY

(University of London)
Leicester Square London WC2

SESSIONS COMMENCE MAY and OCTOBER.

Students are admitted for the curriculum for the B.D.S. Degree and the L.D.S. Diploma

DENTAL MECHANICS

Pupils may join at the commencement of either the October or May Sessions for the training in Dental Mechanics specified in the curriculum

HOSPITAL PRACTICE.

The School is thoroughly equipped. The Clinic of the Hospital is unrivalled

POST GRADUATE INSTRUCTION

Classes can be arranged for Post Graduate instruction in all branches of Dental Surgery

Write for further particulars and School Calendar to the DEAN

LEICESTERSHIRE COUNTY COUNCIL

MEDICAL SUPERINTENDENT

COMBINED COUNTY SANATORIUM AND FEVER HOSPITAL
(180 Beds—126 Tuberculous and 54 Fever)

The Leicestershire County Council invite applications for the appointment of a Medical Superintendent at their newly erected Combined Sanatorium and Fever Hospital at Markfield from registered Practitioners of not more than 45 years of age who have had extensive practical experience in the diagnosis and treatment of Pulmonary Tuberculosis and also of Infectious Diseases. It is also desirable that he should have executive and administrative ability and experience in the training of nurses for examination.

The salary attached to the appointment will be at the rate of £850 per year together with the use of an unfurnished house (rates and taxes) water light coal and laundry and will be subject to satisfactory service by biennial increments of £50 to £950. The salary is subject to a temporary reduction of approximately 5 per cent. The foregoing emoluments are valued at £150 per year.

The gentleman appointed will be required to devote the whole of his time to the duties of the office and the appointment will be subject to a present satisfactory medical certificate being provided and to the provisions of the Local Government and Other Officers Superannuation Act 1922.

The candidate appointed will be under the control and supervision of the County Medical Officer and will be required to furnish such advice and assistance appertaining to his office as may be required.

The appointment will be subject to three months' notice on either side and the successful candidate will be required to commence duties early in September.

Applications on the prescribed form obtainable from the undersigned and accompanied by copies of not more than three testimonials should be addressed to the undersigned and received not later than Monday May 23rd.

Canvassing of members of the County Council either directly or indirectly will be considered a disqualification.

10 New Street, Leicester. W. J. FREER, Clerk to the County Council.
April 23rd 1932

STAFFORDSHIRE COUNTY COUNCIL

BACTERIOLOGICAL AND PATHOLOGICAL LABORATORY

LABORATORY ASSISTANT

Wanted by the Laboratory Assistant Experience in the usual hospital routine. Practical Training will be given to those who have had satisfactory experience in general laboratory work.

Salary £220 per annum rising on satisfactory service by annual increments of £12 10s. to £250 subject to the usual deductions under the Local Government and Other Officers (Superannuation) Act 1922 and to a temporary cut which is at present £7 5s. on £220.

Applications together with copies of three recent testimonials to be sent to me not later than May 7th.

The appointment will be terminable by one month's notice on either side.

Court Buildings, Stafford. EUSTACE JOY, Staff Clerk.
April 22nd 1932.

HULME DISPENSARY, DALE STREET, Street East MANCHESTER

Wanted an HONORARY MEDICAL OFFICER. Application at once to the Hon. Medical Secretary.

LONDON COUNTY COUNCIL

Applications are invited for appointment to the position of RESIDENT ASSISTANT MEDICAL OFFICER (men only) at the undermentioned hospital.

Duties will be of a general nature as assigned by the medical superintendent and include if necessary assistance at the establishment under the control of the Council.

Remuneration in each case subject to temporary reduction. Candidates must be duly qualified Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for six months.

SHOREDITCH HOSPITAL, Hanbury Hill, S.E.10 — ASSISTANT MEDICAL OFFICER (Grade I). Salary £350 a year rising by annual increments of £25 to £425 a year together with board lodging and washing.

CONSTANCE ROAD INSTITUTION, Dulwich, S.E.22 (under the control of the Medical Superintendent of Dulwich Hospital) — ASSISTANT MEDICAL OFFICER (Grade II). Salary £250 a year together with board lodging and washing. Appointment for one year only.

Applications also invited for appointment to the position of RESIDENT ASSISTANT MEDICAL OFFICER (Grade II (men only)) at SHERRARD HOSPITAL, Lovegrove Walk (210 beds) for Non-pulmonary Tuberculosis Cases (male and female adult). Light treatment and X-ray facilities.

Remuneration (subject to temporary reduction) is £350 a year rising by annual increments of £25 to £425 together with board lodging and washing. Candidates must be duly qualified Medical Practitioners of at least one year's standing. Experience in a resident appointment in a general hospital and of the treatment of tuberculosis is desirable.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1 not later than May 6th. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendent at the Hospital.

URBAN DISTRICT COUNCIL OF STRETFORD

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the appointment of Assistant Medical Officer of Health and Assistant School Medical Officer to carry out medical inspection and treatment of school children and to attend at Maternity and Child Welfare Centres and Ante-natal Clinic and generally to assist in the work of the combined Health Service of the district under the direction and supervision of the Medical Officer of Health and School Medical Officer.

Candidates should have had at least three years experience in the practice of the profession and special experience of practical midwifery and ante-natal work. Experience in infectious diseases and in children's diseases desirable.

The salary will be at the rate of £500 per annum rising by annual increments of £25 to a maximum of £700 subject to a temporary percentage deduction in accordance with the scale approved by the Council. The appointment is subject to the provision of the Local Government and Other Officers Superannuation Act 1922 and the successful applicant will be required to pass a medical examination.

Application must be made on forms to be obtained from the Medical Officer of Health, Council Office, Old Trafford, which should be completed and forwarded together with copies of three recent testimonials not to reach the undersigned not later than May 7th.

Canvassing of any description will be deemed a disqualification.

Council Offices, Old Trafford. CECIL H. ABRAHAMS, Clerk to the Council.
April 1932

COUNTY OF LONDON

The LONDON COUNTY COUNCIL invite applications for appointment as ASSISTANT MEDICAL OFFICER (rising) under 35 years of age in Mental Hospital Service. Candidates must be registered practitioners in Medicine and Surgery in England, must be of at least five years' professional standing and must have held a residential position in a general hospital for six months or have had equivalent experience. Salary (subject to temporary reduction) £475 a year rising to £550 a year (additional allowance £50 a year to holders of D.P.M.). No emolument at present (£2 9s. a week) if required to be provided. Small uniform allowance. Superannuation Act 1909. Application form giving full particulars to be obtained from Chief Officer (I.A.B.), Mental Hospitals Department, Artillery House, Artillery Row, S.W.1. Application must be received not later than May 14th. Canvassing disqualifies.

WANTED — HOUSE SURGEON (MALE) for Hospital, County Hospital, Hereford. Salary at £125 per annum, at present all found. Apply Senior Medical Officer.

CITY OF LIVERPOOL

MEDICAL SUPERINTENDENT

ALDER HEY CHILDREN'S HOSPITAL.

Applications are invited from fully qualified Medical Practitioners, who possess administrative and experience of Hospital administration, for the appointment of Medical Superintendent at the above Hospital at a salary of £1,000 per annum together with allowances of £150 per annum in lieu of rooms, subject to temporary reduction as at present in the Council. All services rendered in connection with the appointment to be rendered exclusively to the City Council.

The gentleman appointed will be required to reside in the Hospital under the direction of the Medical Officer of Health and Hospitals for the work of the Medical Nursing and Administrative Staff in accordance with the instructions of the Council from time to time.

The Hospital which has been approved under the Public Health Acts from April 1st next has accommodation for approximately 450 patients with a Resident Staff of Assistant Medical Officers and Visiting Specialists and a Nursing Staff of 250. Provision is made for the treatment on modern lines of all classes of acute children's diseases medical, surgical and orthopædic including surgical tuberculosis and considerable experience of children's ailments is essential. The Hospital is recognised by the General Nursing Council as a Training School for Sick Children's Nurses and the Medical Superintendent will be required to organise the necessary lectures in connection with the training.

The appointment will be made subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council and will terminate at three calendar months' notice on either side. Further information concerning the terms of appointment may be obtained upon application to the Medical Officer of Health.

Application upon forms to be obtained from the Medical Officer of Health, Municipal Annexe, Liverpool, giving full particulars as to age, qualifications, experience, together with copies of testimonials, should reach the undersigned not later than Saturday, May 21st.

Canvassing of Members of the City Council either directly or indirectly will be regarded as a disqualification.

Municipal Offices, Liverpool. WALTER MOON, Town Clerk.
April 25th 1932

CITY OF LIVERPOOL

PATHOLOGIST

Applications are invited for the appointment of full-time Pathologist for certain of the Corporation Hospitals at an inclusive salary of £700 per annum subject to a temporary deduction authorised by the City Council. Any fees received in connection with the appointment to be handed over to the City Council.

Candidates, who must be fully qualified and registered, must have specialised in Pathology and Bacteriology and have had considerable experience in a recognised pathological department.

The gentleman appointed will be responsible for supervising the work of the different laboratories and will be required to co-operate generally with the medical staff so far as this particular service concerns.

Forms of application and particulars of the duties may be obtained from the Medical Officer of Health, Municipal Annexe, Liverpool.

The appointment will be made subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council and will be terminable by three calendar months' notice on either side.

Application and Testimonials to be forwarded to the undersigned not later than Saturday, May 14th.

Canvassing of members of the City Council either directly or indirectly will be regarded as a disqualification.

Municipal Offices, Liverpool. WALTER MOON, Town Clerk.
April 20th 1932

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE

NEWCASTLE GENERAL HOSPITAL

RESIDENT MEDICAL ASSISTANT (Male or Female)

Applications are invited for the above post. The salary in respect of the appointment which is for six months is at the rate of £100 per annum with board and lodging.

Applications, stating age and qualifications, together with copies of not more than three recent testimonials, to be addressed to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne.
April 26th 1932

ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER

Applications are invited for the appointment of MATRON

Candidates must hold a certificate of Training in a General Hospital and should have experience in Hospital management and staff Preference will be given to candidates holding certificates in Massage and Electrical treatment

Salary £300 per annum rising by annual increments of £10 to £350 per annum maximum with board residence laundry The Federated Superannuation Scheme in force

Applications with three testimonials must reach the Secretary not later than May 18th Forms of application can be obtained from the Secretary Canvassing strictly prohibited Candidates will be required to attend at the Hospital if they are called upon

By Order
V M HUMPHRY
Secretary

April 21st 1932

SOUTH DEVON AND EAST CORNWALL HOSPITAL PLYMOUTH (400 Beds)

RESIDENT ANAESTHETIST AND HOUSE SURGEON to the Special Department and HOUSE SURGEON (male)

Salary £125 per annum each with board residence and laundry Applications stating age and experience to be addressed to the Secretary Hospital Plymouth and marked Anaesthetist or House Surgeon as the case may be must reach the undersigned not later than May 7th

Canvassing directly or indirectly will be a disqualification

By Order of the Committee
ARTHUR H CASH
Secretary Superintendent

April 27th 1932

THE ROYAL INFIRMARY AT LEEDS

HONORARY ASSISTANT PHYSICIAN

Notice is hereby given that a Meeting of the Medical Board and Governors will be held in the Infirmary on Friday May 6th 1932 at 4 0 p m to elect an Honorary Assistant Physician

Information as to the duties and necessary qualifications may be obtained on application to the General Manager

Three copies of applications to be sent to the Chairman at the Infirmary and should be sent in not later than Friday May 13th

By Order of the Board of Management
H KINGSLEY PEARCE
General Manager

CUMBERLAND INFIRMARY CARLISLE (160 Beds)

Resident Medical Staff—Vacancy

Require at once a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON Previous experience desirable but not essential Appointment to September 30th Salary at the rate of £150 per annum board residence etc

Applications stating age nationality qualifications etc with copies of not more than four testimonials should be sent immediately to the undersigned

J C HOWITT Secretary

DUNDEE ROYAL INFIRMARY

Applications are invited for the post of RESIDENT MEDICAL OFFICER for Diseases of the Skin Particulars of duties etc may be obtained from the Medical Superintendent and applications accompanied by 4 copies of three recent testimonials should be received by the undersigned not later than May 16th

CHESTER
(211 Beds)

HOUSE PHYSICIAN required (male) to take up duties on May 23rd Salary £150 per annum with board lodging and washing

Application list closes May 14th

Application form may be obtained from the undersigned

W H CRACKNELL M R C I
Hon Superintendent of the Resident Medical Staff

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton S W 3

Applications from duly qualified Medical Men are invited for the post of JUNIOR HOUSE PHYSICIAN at the SANATORIUM at Frimley If appointment is for six months At the expiration of his term of office or in the event of vacancies the Junior House Physician will be expected to apply for and if appointed to hold the post of Senior House Physician for a further term of six months The Honorarium is at the rate of £150 per annum with full board and lodging Applications with copies of testimonials must be addressed to the undersigned

FREDERICK WOOD
Secretary

Brompton S W 3
April 19 2

EVELINA HOSPITAL FOR SICK CHILDREN Southwark S E 1

Applications are invited for the post of CASUALTY and OUT PATIENT OFFICER (male) for six months from May 9th Salary at the rate of £120 per annum with board and residence Hours of duty from 9 30 a m to 5 30 p m from Monday to Friday inclusive Saturday until 1 p m Sunday duty

Applicants must be single and have had experience and qualifications are to be sent in writing to the undersigned from whom further particulars may be obtained

By Order of the Committee of Management
W H SIDNELL
Secretary Superintendent

April 19th 1932

EALING HOSPITAL FOR SICK CHILDREN Castlebar Hill W 13

Applications are invited at once from registered Medical Practitioners for the appointment of ANAESTHETIST to attend the Hospital once a week or oftener Honorarium 25 guineas per annum Candidates will be required to call up as Members of the Honorary Medical Staff and must agree to this with the Standing Orders relating to the appointment can be obtained from the undersigned

By Order of the Committee of Management
W H SIDNELL
Secretary Superintendent

April 25th 1932

NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM Queen Square W C 1

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer and should be sent to the undersigned accompanied by three recent testimonials not later than Monday May 9th The salary is £200 per annum with board and lodging

Applicants should state if they are willing to undertake the duties of House Physician (salary £120)

CODFREY H HAMILTON
Secretary

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

The Board of Management invite applications from unmarried gentlemen double qualified and registered for the post of CASUALTY OFFICER Duties also include care of beds and Assistant Surgeons Six months appointment

Salary at the rate of £150 per annum with board residence and laundry

Application stating age qualifications experience with copies of recent testimonials to be forwarded to the undersigned

JOHN GIBSON
Superintendent Secretary

April 25th 1932

QUEEN'S HOSPITAL BIRMINGHAM

Applications are invited for the following posts

HOUSE PHYSICIAN for duty at the Birmingham and Midland Nurses Hospital (a Hospital associated with the Queen's Hospital)

Salary at the rate of £70 per annum together with board apartments and laundry

The appointment is for three months from May 1st next

Applications together with testimonials to be sent in at once

ROYAL ALBERT INFIRMARY DEVONPORT

A vacancy for an ASSISTANT HOUSE SURGEON (unmarried) exists Applicants must be duly registered and unmarried and the appointment will be for six months Board apartments and laundry free

Applications stating age accompanied by copies of not more than three testimonials should be forwarded to the undersigned without delay

By Order of the Committee
FRANK ROWE Secretary

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Gray's Inn Road W C 1

RESIDENT HOUSE SURGEON (Male)

There will be a vacancy for a Third Resident House Surgeon to enter on duty on June 1st next

The appointment will be for a period of nine months—three months as Third House Surgeon three months as Second House Surgeon and three months as First House Surgeon

Remuneration at the rate of £75 per annum

Applications accompanied by copies of not more than three testimonials should be sent to the undersigned on or before May 9th

JOHN H YOUNG
Secretary Superintendent

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Gray's Inn Road W C 1

ASSISTANTS IN THE OUT PATIENT DEPT

There is a vacancy for a First Assistant for all advice on Mondays at 2 p m also for Third Assistant for attendance on Tuesdays at 4 30 p m The duties are to assist the Surgeons in seeing the patients and the posts are honorary ones

Applications for either of these appointments may be for periods of three six or twelve months and should be sent to the undersigned on or before May 9th

JOHN H YOUNG
Secretary Superintendent

THE HOSPITAL FOR SICK CHILDREN Great Ormond Street London W C 1

The office of SECRETARY will shortly become vacant

Applications for this post with a commencing salary of £750 per annum rising by annual increments to a maximum of £1 000 must be made on the forms provided for the purpose which may be obtained by letter only from the Secretary and which must be completed and returned before May 7th No applications will be considered unless made upon the prescribed form

The successful applicant will be required to take up his duties not later than August 1st

BRADFORD ROYAL INFIRMARY

ONE HOUSE PHYSICIAN and ONE HOUSE Surgeon (Male) wanted for six months from June 1st Candidates must be single and legally qualified Salary £135 per annum with board residence and washing There are 215 beds and six resident officers

Applications stating age qualifications and previous experience with copies of recent testimonials to be received by the undersigned not later than May 3rd

J J PAPPON
Secretary Superintendent

April 30th 1932

CAERNARVONSHIRE AND ANGLESEY INFIRMARY BANGOR (General Hospital)

Wanted JUNIOR HOUSE SURGEON (male) Salary £100 per annum with residence board and laundry The Hospital contains Orthopaedic Eye Ear Nose and Throat X ray and V D Department The post offers good opportunity for practical Surgical experience

Applications stating age nationality and experience with copies of three recent testimonials stating earliest date to commence duties to reach the Secretary by not later than May 7th

LEICESTER ROYAL INFIRMARY
(472 Beds)

RESIDENT ASSISTANT ANAESTHETIST

Applications are invited Appointment for six months with possibility of renewal Salary £250 per annum with board and residence Qualified women considered Particulars of special experience in the administration of anaesthetic supported by testimonial with particular reference to anaesthetic work to the House Governor and Secretary by first post on Monday May 30th Duties to commence on or before June 6th

April 25th 1932

BEDFORD COUNTY HOSPITAL
(124 Beds)

SECOND HOUSE SURGEON (male) fully qualified unmarried required for a term of not less than six months commencing May 16th Salary £140 with board lodging and laundry

Applications stating age nationality qualifications together with three recent testimonials to be sent to the Hon Secretary Hon Medical Staff Committee as soon as possible

APPOINTMENTS—Important Notice.

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd)*	**PUBLIC HEALTH**
EBBW VALE MON *(Workmen's Medical Society)*	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE. *(Medical Practitioner)*	AYR COUNTY COUNCIL. *(Sanatorium for Chest Hospital Patients)* *(Visiting Physician.)*
CILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme)*	FOLKESTONE BOROUGH *(Assistant Medical Officer of Health)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	NEATH AND DISTRICT. *(Medical Aid Association)*	PONTEFRACT COUNTY COUNCIL *(Assistant Medical Officer of Health)*
LLWYNYPIA CLYDACH VALE TENYCRAIG GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE MON *(Medical Officer for Medical Aid Association*	STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS *(Tuberculosis Officer)*
MAERDY GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Societies Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	QUEENSLAND *(Brisbane Associated Friendly Societies Medical Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr G F V ANSON (Hon Sec N Z Branch) British Medical Association P O Box 156 Wellington New Zealand
VICTORIA *(All Institutional Appointments)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria			WESTERN AUSTRALIA. *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St. George's Terrace Perth Western Australia

April 27th 1932 — By Order of the Council — ALFRED COX, Medical Secretary

LIVERPOOL SANATORIUM
DELAMERE FOREST FRODSHAM
(175 Beds)

ASSISTANT TO THE MEDICAL SUPERINTENDENT

The Committee of Management invite applications for the post of Assistant to the Medical Superintendent at a salary of £250 per annum with board residence and laundry.

The appointment will be for twelve months commencing as early as possible.

Candidates must be fully qualified and registered.

Application forms may be obtained from the Medical Superintendent at the Sanatorium Delamere Forest Frodsham and must be returned as soon as possible and in any case not later than Wednesday May 11th.

THE ROYAL CHANT HOSPITAL, NEWPORT MON (100 Beds)

WANTED a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out Patients and Casualties. The appointment is for six months at a salary of £150 per annum with board residence and laundry. The Resident Medical Staff—five in number—dine together.

Large Out Patient Department.

Applications stating age and full particulars with copies of three recent testimonials to be sent to the undersigned not later than May 7th.

Applicants should be prepared to attend for interview.

A. WHITWARD
Secretary and Superintendent.

April 15th 1932.

ABERDEEN ROYAL INFIRMARY

Duties of Resident Medical Officer to commence on 1st June next.

ASSISTANT PHYSICIAN

Duties to commence on 1st July next.

Applications, with testimonials, to be lodged with the Clerk and Treasurer, Mr. Alexander Stuart, Aberdeen, not later than Saturday, May 7th.

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL MAIDSTONE (110 Beds)

Application are invited for the post of OPHTHALMIC HOUSE SURGEON (male) which becomes vacant on May 14th next. Candidates must be duly qualified registered Medical Practitioners single and of British birth and nationality and should have had experience of ophthalmology. The Hospital is recognised by the Examining Board for the D.O.M.S. The appointment will be for six months but may be renewed for a second six months. Salary at the rate of £200 per annum with board residence and washing.

Application stating age together with copies of not more than three testimonials should be sent to the undersigned as early as possible.

JOHN W. STICKLAND
Secretary.

THE LONDON FEMALE LOCK HOSPITAL, 283 Harrow Road W 9

Appointment of ASSISTANT NON-RESIDENT SURGICAL REGISTRAR (Part-time). The Board of Management invite applications for the above appointment.

Honorarium at the rate of £50 per annum. The appointment is for one year commencing May 9th. Candidates who must be duly qualified and fully registered are invited to send in their applications together with three copies of testimonials to the Secretary not later than 10 a.m. on May 2nd 1932 on which day and by which time all applications can be declined on application to the Secretary.

April 15th 1932.

AYLESHAM CEMENT HOSPITAL (100 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON (male) at the rate of £120 per annum with board residence and laundry. The appointment is for six months and will date from [illegible]

Applications and testimonials should be forwarded to the Secretary, Cement Hospital, Aylesham, Kent.

ROYAL CHEST HOSPITAL, City Road E C 1
(Royal Northern Group of Hospitals)

Applications are invited for the following posts:

RESIDENT MEDICAL OFFICER. This post will be vacant on June 1st. The appointment is for six months with re-election if required. Salary at the rate of £150 per annum with board residence and laundry.

HOUSE PHYSICIAN. This post will be vacant on June 1st. The appointment is for six months. Salary at the rate of £100 per annum with board residence and laundry.

Applications with copies of testimonials should be sent on or before May 9th to the undersigned from whom further particulars and forms of application may be obtained.

CHRISTOPHER PANTER
Royal Northern Hospital, Secretary
Holloway Road N 7.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (Part-time). The appointment will be paid at the rate of salary of £120 per annum and will date from May 15th next.

Candidates must be registered practitioners, must be duly qualified and must have had experience in Casualty work.

Applications, stating age, qualifications and experience, with copies of not more than three testimonials, should be sent not later than Thursday May 5th addressed to the Secretary.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

[illegible] HONORARY ASSISTANT PHYSICIAN [illegible]

[illegible]

(Appointments continued on p 44)

ASSISTANCIES

WANTED — ASSISTANTSHIP CHANCE OF Branch ... or ... preferably in or near London or elsewhere ... experienced M Heal Man MRCS LRCP (married) midwifery not objected to ... interest in panel work and all general practice — Address ... No 2403 BMA House Tavistock Square W.C.1

WANTED BY OLD ESTABLISHED FIRM in Central Town N.W. England with increasing practice highly qualified ASSISTANT with view to Partnership Must be ... resident ... good experience Full detail ... BMA House Tavistock Sq W.C.1

WANTED ASSISTANT MALE SCOTS ... preferably ... mixed panel and private ... to assist ... Salary ... and time off ... Address ... No 2419 BMA House Tavistock Square W.C.1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practice ... with and without Car ... to full particulars Britain Pharmaceutical Bureau ... Street Manchester

WANTED INDOOR MALE ASSISTANT ... for ... in Practice in North Wales ... Salary ... Address ... No 2421 BMA House Tavistock Sq W.C.1

WANTED INDOOR MALE ASSISTANT for ... and private Practice Car ... Salary & Keep — Address ... No 2418 BMA House Tavistock Square W.C.1

WANTED PART TIME ASSISTANT ... Salary ... time for ... exam ... Address No 2417 BMA House Tavistock Square W.C.1

ASSISTANT WANTED JUNE FOR 1 ... Practice (trade or ... Both ... Partnership ... Car ... Keep & Salary ... Address ... Bath 10 ... Must be ... Will send DPH ... Address No 2405 BMA House Tavistock Square W.C.1

INDOOR ASSISTANT WANTED (MALE) ... Salary £200 per annum ... with ... before ... time ... qualifications — Address ... No 2420 BMA House Tavistock Square W.C.1

PARTNERSHIPS

WANTED — A PARTNER IN OLD ESTABLISHED Practice ... £4 shares only £40 ... Car ... Large ... now available ... Apply ... Richard Wyndham ... Address No 2423 BMA House Tavistock Square W.C.1

WANTED BY MB BS (LOND) MARRIED ... PARTNERSHIP or PRACTICE ... Details in town with hospital Experienced ... Income £1,000 to £1,500 ... Address No 2418 BMA House Tavistock Square W.C.1

WANTED — PARTNERSHIP IN THE LONDON area by MB BCh eight years experience ... Income about £1,000 ... Large panel preferred — Address No 2416 BMA House Tavistock Square W.C.1

KENT COAST — FAVOURITE TOWN — TWO BERTHS SHALL ... Established Practice ... Two years receipts £3,000 ... House to be sold with share ... Combined premium about £5,000 ... Outstanding partner's drink — Apply ... (Tracod) ... Hadley Ltd 19 Craven Street Strand W.C.2

LANCS — WANTED AT ONCE MARRIED PARTNER for ... Central Country Practice over £1,500 for half ... Doctor ... DPH would probably get all appointments (£150) ... terms ... Genuine opening for prompt action — Address No 2402 BMA House Tavistock Square W.C.1

LANCS TOWN — PARTNERSHIP IN GOOD ... old established Practice with receipts of over £1,700 yearly and increasing Panel ... £500 ... for one third to commence £1,000 — MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

MEDICAL WOMAN WITH GOOD CLASS NON ... opening ... Practice in South of England will be requiring PARTNER early Autumn Guaranteed share available £800 at 2 years ... Purchase ... Experience essential and some specialty preferable — Apply Partnership ... Medical Women's Federation 9 Clifford Street Bond Street W.1

MEDICAL — MINING DISTRICT NEAR Durham — PARTNER or ASSISTANT, with early view to Partnership, wanted immediately — Apply CRAWFORD HERON & CARTON, 257 West George Street Glasgow

PARTNER REQUIRED IN OLD ESTABLISHED General Practice of £4,000 in Mid East country town with ... hospital and ... for surgery ... A QUARTER or THIRD SHARE offered at 2 years ... after ... Assistantship Hospital appointments ... Married man preferred with ... experience of general practice — Address No 2404 BMA House Tavistock Square W.C.1

PARTNER REQUIRED IN A VERY SOUND and lucrative middle class Practice on ... coast of East Lancashire ... A QUARTER or THIRD SHARE for disposal at 2 years ... Assets ... receipts £3,000 ... Married man ... with ... experience preferred — Address ... No 2304 BMA House, Tavistock Square W.C.1

RADIOLOGICAL PARTNERSHIP — FOR Sale HALF SHARE of £3,900 in old established Practice ... Northern Cities ... Exceptional ... Training ... essential ... Apply ... No 2420 BMA House Tavistock Square W.C.1

SEVEN MINS OF CRICKLEWOOD N.W. — HALF SHARE ... Well established ... and Practice ... rights to over £1,000 in ... Half of £500 ... receiving daily ... minimum £1,700 ... remain ... — Apply ... BAILEY LTD 19 Craven Street Strand W.C.2

SOUTH COAST — PARTNERSHIP IN FIRST ... Practice of £3,000 ... Assets ... Cars ... Fixtures ... £2,000 ... £3,500 ... Amount of ... Cash in the ... not under £400 — ... BMA House Tavistock Sq W.C.1

MEDICAL POSTS DISPENSERS etc

WANTED — DOCTOR ... (in surgery ... or ... work) in ... with ... and district with ... Social amenities ... Excellent knowledge of ... Private ... — Address No 2407 BMA House Tavistock Square W.C.1

A LADY DISPENSER BOOKKEEPER ... Applications immediately on request qualified and with practical experience in private practice and dispensary work also trained ... Physiological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN ... Preparation for Examinations — Write wire or ... (Park 6153) Secretary ... Westbourne Park Road W.

DOCTOR'S DAUGHTER DESIRES TEMPORARY or PERMANENT POST with Doctor or Hospital Country ... South or South West England preferred Qualified Dispenser (Hall) ... Driving ... Can drive car — ... Salary ... Eaton in Cerdano Bristol

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W.C.

GENTLEWOMAN DESIRES POST CHAUFFEUSE in or near London ... experienced driver ... make ... running repairs ... desires ... May 23rd — Address No 2434 BMA House Tavistock Square W.C.1

LADY AS SECRETARY RECEPTIONIST ... requires POST with Doctor or Dentist Shorthand typing ... bookkeeping ... moderate remuneration ... references ... town or country — Write Miss B ... c/o 16 Camborne Ave West Ealing W.13

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4, ADAM ST Strand London W.C.2

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After Office Hours Epsom 9142

WANTED — LOCUMS BY MEDICAL WOMAN ... LRCP LM DPH ... recently ... charge and ... Practice ... Junior ... for ... South or SE coast preferred ... in Surrey — Address No 2505 BMA House Tavistock Square W.C.1

GENERAL MEDICAL PRACTITIONER (RET) ... experience in London and Provinces ... locum tenancies ... Terms ... Testimonials forwarded — Apply ... Hale ... Ltd ... Bristol

GENERAL ASSISTANCE PRESENT ... Partner large general practice requires ... month LOCUM (June—July) with hospitality ... wife ... Own car Further particulars — Address No 2428 BMA House Tavistock Square W.C.1

LADY DOCTOR SEPT 31 YEARS DESIRES LOCUMS June August September Own car ... Large experience general practice ... Terms MB (Edin) 1922 DPH 1926 — Address No 2418 BMA House Tavistock Square W.C.1

LOCUM TENENS NOW AVAILABLE FOR ENGAGEMENTS for summer Experienced ... panel and private ... qualified 1907 St Partridge ... — Apply stating terms Locum ... The Elms House Lancing Sussex Phone Lancing 57

LOCUMS WANTED FOR COMING SEASON ... MRCS LRCP ... 30 reliable ... have well received British 4 years experience ... panel and private Free now — Address No 2422 BMA House Tavistock Sq W.C.1

LOCUMS WANTED BY MIDDLE AGED ... experienced reliable Practitioner Own car — Address No 2415 BMA House Tavistock Square W.C.1

PRACTICES

WANTED BY EXPERIENCED PRACTITIONER PRACTICE or PARTNERSHIP ... Successor in London ... yielding £2,000 or more ... with good Panel ... Ample capital available — Address No 2506 BMA House Tavistock Square W.C.1

WANTED — PRACTICE IN LONDON OR ... suburbs middle class ... district with house ... Ample capital ... Patients treated ... No 2364 BMA ...

WANTED — PRACTICE OR PARTNERSHIP ... or SE Coast with panel by Scot ... 34 married MB ChB Edin 1924 ex HS ... with ... Assistantship preferred — Address No 2401 BMA House Tavistock Square, W.C.1

WANTED — PRACTICE NEAR A TOWN ... Panel £1,600—£2,000 — Address full particulars No 2408 BMA House Tavistock Square W.C.1

WANTED TO PURCHASE — COUNTRY PRACTICE £800—£1,000 Good house with garden ... Ample capital — Address 2414 BMA House Tavistock Square W.C.1

WANTED — PRACTICE WITH GOOD ... panel in West ... preferably Bradford ... Ample capital available — Address No 2430 BMA House Tavistock Sq W.C.1

COTSWOLDS — GENUINE OPPORTUNITY ... for suitable person ... beautiful residential country ... Many good houses in district ... PRACTICE easily increased ... All classes of patients ... Sea bathing sports ... Choice of hospitals ... Nominal premium — Address No 2427 BMA House Tavistock Square W.C.1

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EASTERN COUNTY — EASY TERMS — AN ... PRACTICE ... £800 ... No 2413 BMA House ... Tavistock Square WC1

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FOR IMMEDIATE DISPOSAL — FINE ... PRACTICE ... £873 ... £800 ... No 2429 BMA House ... Tavistock Square WC1

FOR SALE — PRACTICE RECEIPTS £970 ... £1,200 ... £1,060 ... No 2558 BMA House ... Tavistock Square WC1

FOR SALE — EXCEPTIONALLY NICE CLASS ... PRACTICE (£278) ... No 2560 BMA House ... Tavistock Square WC1

GENERAL PRACTICE WITH SOME SURGI ... £1,000—£1,500 ... McWATTIES LTD ... WC1

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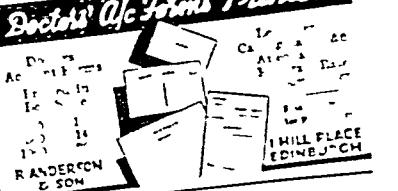
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THE PRINCESS BEATRICE HOSPITAL
Corner of Warwick Road Richmond Hill
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This Hospital which has recently been
built is in full working order with the
latest Out Patient Department has vacancies for the
HONORARY CLINICAL ASSISTANTS for the
following Clinics etc
Medical—Dr S Wearl Friday 2 p m To be
appointed
Medical—Dr B Buckley Sharp Tuesday
Medical—Dr S Wearl Friday
Ophthalmic—Mr A S Ward F R C S
Assistant Ophthalmic—Mr H S Tinker
Assistant Ophthalmic—Mr H S Tinker
Consultant—Mr H S Tinker F R C S
Consultant—Mr A F Watson
Ear Nose and Throat Dept—Mr A F Watson
Ear Nose and Throat Dept Friday 10 a m One
Charing F R C S
Further particulars
may be obtained from the Matron
Applications must be received not later than
Wednesday May 11th
THE SECRETARY
Princess Beatrice Hospital
Lindworth Hall S W 2

CONNAUGHT HOSPITAL
Walthamstow Wood and
Leyton

Applications are invited for the post of
HONORARY ANAESTHETIST Candidates
must be Registered Medical Practitioners
with Anaesthetic qualifications and Friday
afternoons Thursday mornings and Friday
afternoons
The Hospital contains 100 beds including 10
Private Patients Salary £100 per annum
Further particulars may be obtained from the
Secretary with whom applications should be lodged
KENELM S JEFFSON
Secretary

CONNAUGHT HOSPITAL
(100 beds with three Medical Officers)

RESIDENT CASUALTY OFFICER (male) required
Salary £100 per annum Appointment
for six months from June 1st with board
residence and laundry Application stating
age and qualifications accompanied by
testimonials should be received not later
than Monday May 16th by the Secretary
KENELM S JEFFSON

KENT COUNTY MENTAL HOSPITAL
Chartham near CANTERBURY

Wanted JUNIOR ASSISTANT MEDICAL
OFFICERS Salary £350 per annum rising by
annual increments of £25 to £450 per annum
subject to the usual rate of deduction
Lodging at present valued at £109 per
annum
The appointment is subject to the provisions
of the Superannuation Act 1909 and the
Committee will require the necessary candidates
to take a Diploma in Psychological Medicine
(Or which facilities will be given) and for
which an extra £50 per annum will be paid
Forms of application to be returned from the
Medical Superintendent

ROYAL NATIONAL ORTHOPAEDIC
HOSPITAL

Applications are invited for the post of
HOUSE SURGEON at this Hospital a Country
Branch at Brockley Hill Stanmore Middlesex
Salary £150 per annum with board and quarters
and laundry The appointment is for six
months renewable for a further period of six
months on the recommendation of the Medical
Board Applications with copies of testimonials
should reach the Secretary 234 Great
Portland Street not later than May 11th

WESTON SUPERMARE GENERAL
HOSPITAL (80 Beds)

HOUSE SURGEON

Applications are invited for the post of
RESIDENT HOUSE SURGEON at this Hospital
Salary at the rate of £150 per annum with
board rooms and laundry Duties to commence
on July 1st next
Applications stating age and qualifications
and enclosing copies of testimonials should be
addressed to the undersigned
JESSIE J HOLLAND Secretary

BRADFORD CHILDREN'S HOSPITAL

HOUSE SURGEON (lady) wanted Fully
qualified Salary £100 with board residence
and laundry Applications stating age with
recent testimonial not later than May 4th to—
J W LONCLEY Secretary Superintendent

ACCOATS HOSPITAL FOR CHESTER

HOUSE PHYSICIAN required to commence
duty in June for a period of six
months Salary at the rate of £100 per annum
with board and apartments and laundry
Candidates must be registered under the Medical Acts
Applications stating age and qualifications
should be forwarded to the undersigned
not later than May 12th together with
testimonials if any to be returned with
copies of three recent testimonials
By Order of the Board
HERBERT J DAFFORNE
General Supt & Secretary

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST

Wanted immediately an ASSISTANT MEDICAL
OFFICER for the CLOSELY SANATORIUM Salary £170 per annum with board apartments
and laundry Candidates must be duly
registered Medical Practitioners
Application stating age with copies of testimonials to be sent not later than April 29th
to W HUNT Secretary Hardman Street Deansgate Manchester

PAPWORTH VILLAGE SETTLEMENT
near Cambridge for the Treatment of all
forms of Tuberculosis
400 Beds (male and female)

Applications are invited for the post of
SECOND ASSISTANT MEDICAL OFFICER
Salary £400 per annum with board lodging and
laundry
Applicants must be male and single and all
applications should be sent to the Medical
Director Papworth Village Settlement Papworth
Hall Cambridge accompanied by copies of not
less than three references

WEST HOSPITAL CLOVE ROAD
Balham S W 12

JUNIOR RESIDENT MEDICAL OFFICER
(male unmarried) required for War Memorial
Maternity Home attached to above Hospital
Candidate must be fully qualified and duly
registered Salary £150 per annum with
board residence and laundry
Application with copies of testimonials to
be sent to the Secretary Superintendent from
whom further information may be obtained

VICTORIA CENTRAL HOSPITAL
WALLASEY

Applications are invited for the position of
JUNIOR HOUSE SURGEON (male) Salary at
the rate of £120 per annum with board residence
and laundry with prospects of appointment to Senior House Surgeon in six months
time at a salary of £150
Candidates should be appointed for six
months
Application with copies of testimonials to be
sent to the Secretary

NORTH LONSDALE HOSPITAL
BARROW IN FURNESS

HOUSE SURGEON required for May 18th
Application are invited from fully qualified
male Practitioners experienced in the administration of Anaesthetic Salary £175 per
annum with board residence and laundry
Applications stating age qualifications experience
and nationality and accompanied by
copies of three recent testimonials to be sent
to the Secretary so as to reach him not later
than Monday May 9th

BURTON ON TRENT GENERAL INFIRMARY

Applications are invited for the post of
CASUALTY OFFICER AND HOUSE PHYSICIAN
(male) Salary at the rate of £150 per annum
with board residence and laundry
Application stating age and qualification
together with copies of testimonials to be sent
to—
F W THORNELEY Secretary

HARTLEPOOLS HOSPITAL HARTLEPOOL

Applications are invited for the position of
HOUSE SURGEON Salary £130 per annum
Board residence and laundry Duties to commence
vacant now
Application with copies of three testimonials
should be sent to the undersigned
CEO SHAW Secretary

ILKESTON GENERAL HOSPITAL
(60 Beds)

Wanted a fully qualified RESIDENT HOUSE
SURGEON (lady) Salary £140 per annum
with board residence and laundry Application stating age and qualifications with copy
of recent testimonial to be sent to the Chairman General Hospital Ilkeston on or before
May 12th

B IDLAND LTD STREET

OUT-PATIENT OFFICERS

TWO OUT-PATIENT OFFICERS are required at the above Hospital to undertake the Appointments commencing each week. Salary at the rate of £80 per annum. Candidates must be registered Medical Practitioners. Appointment will be for a period of one year with eligibility to re-election.

Applications with testimonials stating age and qualifications should be sent to the undersigned not later than Saturday, May 21st.

Copy of Rules governing the post can be obtained on application.

C. A. MASON,
April 21st, 1932. Gen. Supt. & Sec.

WORCESTER COUNTY AND CITY MENTAL HOSPITAL, TOWICK, near WORCESTER.

JUNIOR ASSISTANT MEDICAL OFFICER (male) required. Candidates must be duly qualified in Medicine and Surgery. Salary £200 per annum, rising by four annual increments of £25 to £450 per annum, together with furnished apartments, board, laundry and attendance.

The commencing salary is subject to a temporary deduction of £15 15s. per annum.

The appointment is subject to the provisions of the Asylum Officers' Superannuation Act, 1909. Applications, stating age and full particulars to, together with copies of three recent testimonials to be forwarded to the Medical Superintendent not later than Friday, May 6th.

THE SHEFFIELD ROYAL HOSPITAL (340 Beds).

There will be vacancies on April 30th for three Resident

(1) As [illegible] CASUALTY OFFICER
AN
(2) As [illegible] OFFICER
AN
(?) As
Salary [illegible] rising to £100 per annum in six months with board, residence and laundry. There are eleven recent medical officers. Applications should be forwarded as soon as possible to—

W. H. BOOTH,
April 14th, 1932. Supt. & Secretary.

LONDON JEWISH HOSPITAL for Sick Consumptives and other Diseases of the Throat and Chest, GENERAL HOSPITAL (108 Beds).

Applications are invited for the following posts:

RESIDENT MEDICAL OFFICER. Salary at the rate of £150 per annum with board and residence. Appointment for six months.

JUNIOR RESIDENT MEDICAL OFFICER. Salary at the rate of £100 per annum with board and residence. Appointment for six months.

CASUALTY OFFICER (Non-Resident). Salary at the rate of £150 per annum. Visiting daily and by night. Appointment for six months. The latter will be required to attend the Out-patient Department from 9 a.m. to 2 p.m.

Applications, with copies of three recent testimonials, to be sent to the Secretary on or before Friday, May 6th. The successful candidate will be required to take up their duties on May 16th.

LONDON JEWISH HOSPITAL for Sick Consumptives and other Diseases of the Throat and Chest, GENERAL HOSPITAL (108 Beds).

CLINICAL ASSISTANT required in the X-ray Department.

Applications to the Secretary.

KIRKCALDY VICTORIA HOSPITAL AND SANATORIUM.

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MANCHESTER MIXED PRACTICE Cash receipts about £1 000. Price £1 000. Good house (self-contained). Capital required £[illegible]. Apply [illegible] for interview—No 303

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VENEREAL DISEASES PRACTICE Northern Centre—Cash receipts £[illegible] p.a. Price £[illegible] [illegible] Personal [illegible]—No 340

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MANCHESTER—No [illegible] PRACTICE in [illegible] Cash receipts £[illegible] Price £[illegible] Cash [illegible] Premium [illegible] purchase—No [illegible]

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MANCHESTER—PRACTICE [illegible]

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12. LONDON, W.—Mixed class Practice averaging £550 p.a. in suburban district. Detached double fronted house (6 bed and dressing rooms) with small garden for sale. Premium 1½ years' purchase.

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20 EASTERN COUNTIES.—Partnership in Practice averaging £4,400 p.a. in market town. Suitable house available. Share of £1,000 p.a. at first at 2 years' purchase. Cottage Hospital. Applicant must have surgical experience.

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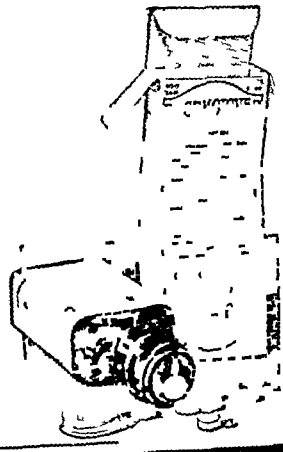
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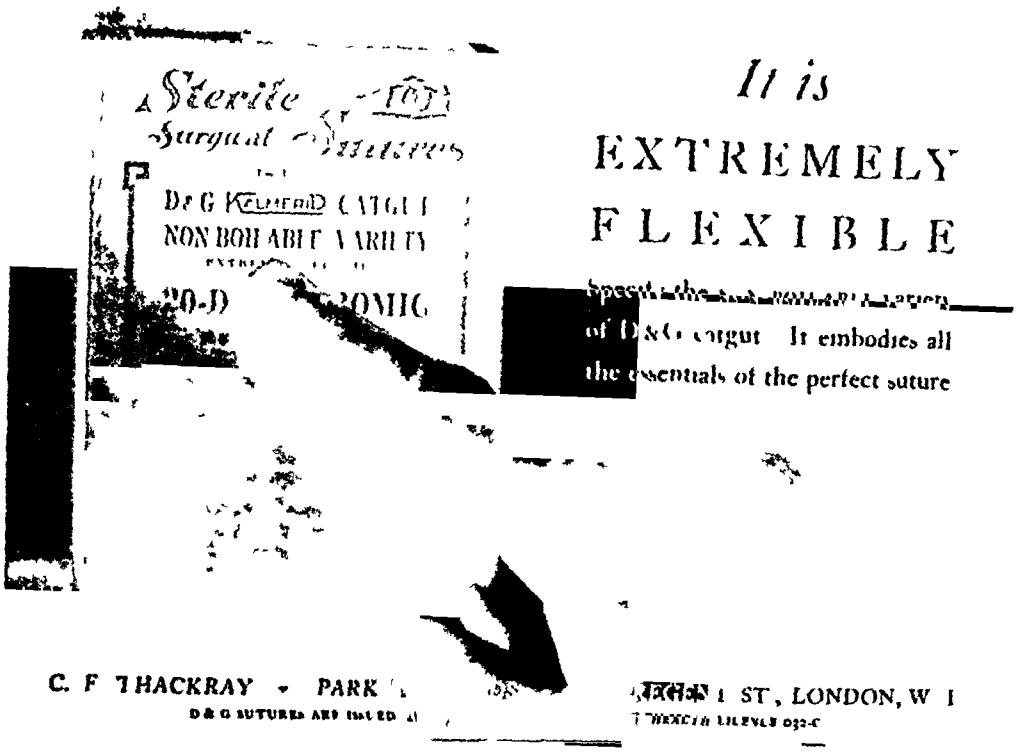
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CONTENTS

ORIGINAL ARTICLES

Surgical Treatment of Intrathoracic New Growths By [illegible] (With [illegible])

Porencephalic Imbecility By [illegible] and [illegible] (With [illegible])

Spontaneous Hypoglycaemia By [illegible] (With [illegible])

Compression Fracture with Comminution of Lumbar Vertebrae and Paraplegia By [illegible] (With [illegible])

Chronic Gastric Ulcer in a Boy By [illegible] (With [illegible])

Oedema in the Newborn By [illegible]

Local Anaesthesia for Tonsillectomy By [illegible]

MEMORANDA

[illegible]

REPORTS OF SOCIETIES

[illegible]

REVIEWS

[illegible]

UNIVERSITIES AND COLLEGES

[illegible]

LEADING ARTICLES

[illegible]

THE WEEK

[illegible]

GENERAL ARTICLES AND NEWS

Centenary Meeting Overseas Visitors

British Sea Coast Resorts

London Voluntary Hospitals Committee.

[illegible]

LOCAL NEWS

[illegible]

OBITUARY

Sir David Drummond F.D. (With [illegible])

CORRESPONDENCE

[illegible]

LETTERS AND ANSWERS

[illegible]

(See [illegible])

The SUPPLEMENT contains

British Medical Association
Annual Report of Council 1931 32
Financial Statement.

[illegible]

AN INDEX OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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[illegible]

INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Cambridge University Press
Myers & Bartlett Psychology 5

Cassell & Co Ltd
Berkeley C Midwifery 4

Churchill J & A
Hall & Lyon
Diseases of the Kidneys 3
Clark Applied Pharmacology 3
Dick Fisher W S Ophthalmology 3
[illegible] 3
[illegible] 3
[illegible] 3
Eye 3
[illegible] 3
Jewesbury [illegible] Nutrition 3
Kolb & Shattuck Microscopy 3
Neave & Williamson Nerve Ophthalmology 3
Newman Medical Jurisprudence 3
Parsons J H Diseases of the Eye 3
Pinney Wyard Clinical Atlas 3
Queen Charlotte Practice of Obstetrics 3
Ramsay & Mitchiner Surgical Emergencies 3
Yellowlees H Psychological Medicine 3

Livingstone E & S
Cuthbert J J Textbook of Med 4
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Wheeler & Jackson Handbook of Med 4

Wright & Sons Ltd
Medical Annual 1932 4

ASSURANCE COMPANIES—
London Medical Protection Society 1
Medical Insurance Agency [illegible]
Medical Sickness Annuity etc 33

BANKS—
Westminster Bank 5

BRASS NAME PLATES &c—
Cooke & Sons Ltd
Lord & Sons Ltd 40
Herd & Sons & Co—Name Plate 4
Osborne & Co—Name Plate 4

DEBT COLLECTION—
British Medical Protection Society 50

FOOD PREPARATIONS—
[illegible] 13
[illegible] 41
[illegible] 48
[illegible] 7
[illegible] 14
Mellin's Food 17
Nestlé & Anglo-Swiss Con Milk Co Factories 20
Robb's Nursery Biscuit 10
Sumner's Pyhoo Tea 32
Valentine's Meat-Juice 16

SURGICAL APPLIANCES—
Down Bros Cover II
Ferd Cook—Sutures
Ferri J & J Ltd—
Artificial Limb 40
Hilliard's New Abdominal Bag 40
Inhaling Drug & Apparatus Co—
[illegible] 40
[illegible] and 4
[illegible] 4
[illegible] 40
[illegible] 75
[illegible] 5
[illegible] 9

HOSPITAL &c FURNITURE—
[illegible] 40
[illegible] 41
[illegible] 5

PRINTING & STATIONERY—
[illegible] 57
[illegible] 4
[illegible] 4
[illegible] 40

CHEMISTS &c—
Allen & Hanburys Ltd—
Arsenal Solutions 27
Insulin A B 32
Liquid Insulin Cover I
Andrews Liver Salt 23
Anglo-French Drug Co Ltd—
Hyperol 32
Bayer Products Ltd—
Lactart Cover III
Bell & Co Ltd—
Medicinal Surgical Supplies 12
Bile Products 45
Bristol Myers Co Sal Hepatica 41
British Drug Houses Ltd—
Insulin A B 12
Insulin Solution 1
Soluble Arsenious B D H 1
Burroughs Wellcome & Co—
Lithium Citrate 31
Clayton Antilin Co Ltd—
Peripheral Ointment Cover III
Contin Ltd Ltd—
Bismuth 11
Cowbridge Ltd Ltd 33
Dimol Laboratories Ltd—
Bismol Soap 17
Dreyfus Fine Chemicals Ltd—
Preparations 15
Eno's Fruit Salt Cover II
Evans Sons Lescher & Webb Ltd—
Insulin 27
Flows Compound Syrup of Hypophosphites 14
Hotel Bleu Products Ltd—
Phosphates 13
Imperial Artificials Ltd—
Nasal Tablets 17
Martindale W—
Specialities 11
Matthews Ltd Ltd—Scrolls 4
May & Baker Ltd—Cardenal 18
Newbery & Son Ltd—
Agarol 64
Cod Liver Oil 30
Opsonic Inoculants 28
Pascal Laboratories Corporation Ltd—
Novocain 11
Warner A Ltd—Alkia 14

HOUSE AGENTS—
Bickford & Co 57
Elliott Son & Boyton 7

MOTOR CARS TYRES &c—
Invalid Car Service 40
Lilley Cars 37
Second Hand Motor for Sale 57
Wolseley Cars 39

TAILORING & UNDERCLOTHING—
[illegible] 57
[illegible] 42
[illegible] 40

TOBACCO & CIGARETTES—
Player's Navy Cut 38
Three Nuns 6

TRANSLATIONS TYPEWRITING—
Radford B—Typewriting etc 56

VACCINES & CULTURE MEDIA—
Genatosan Ltd—Vaccine 2
Heinemann W—Vaccine Lymph 41
Laboratories of Pathology & Public Health 41

WINES & SPIRITS—
Anderson Dobson & Co—
Ackermann Laurance 40
Caymer & Cider 39
Martell's Brandy Cover II

X RAY & ELECTRO MEDICAL APPARATUS—
Cox S Ltd—Diathermy Apparatus 8
Hamilton T Ltd—
[illegible] 40
[illegible] 8
[illegible] 5

HOTELS & HEALTH RESORTS—
Clifton Hotel 48
Italian Health Resort 48
Margate 46
Plymouth 43
St Anne Bay Hotel 46
Seaford 46

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
TO APPOINTMENTS 50

HOSPITAL &c VACANCIES—
Aldershot Cambridge Hospital 53
Alton Under Eye Dist Infirm 2
Barnsley Cawthorne Fire Infirmary 53
Bethnal Green Hospital 52
Birmingham City 53
Bromley-by-Bow Hospital 55
Birmingham Queen Mary's Hospital 53
Blackhill Richard Morley Hosp 53
Bolton Sanatorium 53
Bradford Royal Infirmary 2
Burton-on-Trent General Infirmary 54
Carterway Fever Co Mental Hosp 55
Cardiff City 51
Carlisle Cumberland Infirmary 53
Chester City 54
Chesterfield Royal Infirmary 54
Chelmsford Hospital 2
Derby Mickleover Royal Infirmary 2
Devonport Royal Albert Hospital 53
[illegible] 53
[illegible] 51
[illegible] 54
[illegible] 53
[illegible] 54
[illegible] 3
Leicester City 51
Leicester Royal Infirmary 54
Leicestershire County Council 3
Lincoln County Hospital 5
Lister Institute 50
[illegible] 3

BATHS SPAS &c—
Bad Nauheim 47
Baden Baden 47
Bavarian Spas 46
Harrogate 43
Llandrindod Wells 47
Wildbad 47
[illegible] 45
[illegible] 45
[illegible] 4
[illegible] 45
[illegible] 45
[illegible] 45

HOMES & ASYLUMS—
Bethnal [illegible] 47
[illegible] 43
[illegible] 44
[illegible] 47
[illegible] 47
[illegible] 62
[illegible] 44
Chelsea Royal Hospital 43
Clifton House Lyme 45
[illegible] 46
[illegible] 4
[illegible] 43
[illegible] 45
[illegible] 47
[illegible] 4
[illegible] 8
[illegible] 45
[illegible] 47
[illegible] 8
[illegible] 45
[illegible] 4
[illegible] 47
[illegible] 44
[illegible] 44
[illegible] 44
[illegible] 43
St Andrew's Hosp Northampton 45
[illegible] 45

HYDROS & PRIVATE HOSPITALS—
Bournemouth Hydro 48
Peebles Hydro 47
Pantin Castle North Wales 44
Smedley's Hydro Matlock 48

INEBRIETY—
Bay Mount Paignton 49
Caldecote Hall near Nuneaton 4
Dalrymple House Rickmansworth 49
Old Hill House Chislehurst 49

[illegible] SCHOOLS &c—
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] 4

SCHOOLS &c—
Cheltenham College 50

TUTORS & LECTURERS—
Exams—Med Corr Coll 49
[illegible] 49
[illegible]
[illegible]

TRANSFER AGENTS—
Borril Medical Agency Ltd 61
[illegible] 61
[illegible] 59
[illegible] 58
[illegible] 59
[illegible] 59
[illegible] 58
[illegible] 59

ASSISTANTS PRACTICES &c—
Assistancies Wanted and Vacant 56
[illegible] 56
[illegible] 55
[illegible] 56
[illegible] 57

NURSING INSTITUTES—
Carendish Nurses 58
Nurses Association 58
[illegible] 58
[illegible] 57
[illegible] 57

It must be understood that the acceptance by the British Medical Association of an Advertisement does not imply a recommendation, and that no responsibility is accepted with regard to the accuracy of the statements therein contained

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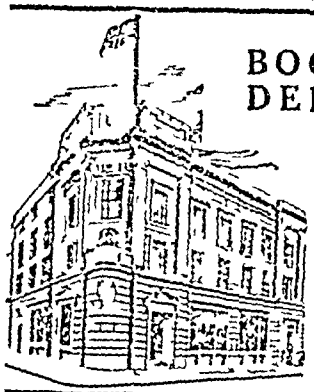
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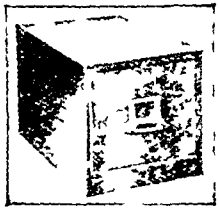
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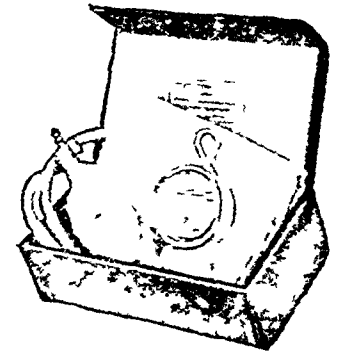
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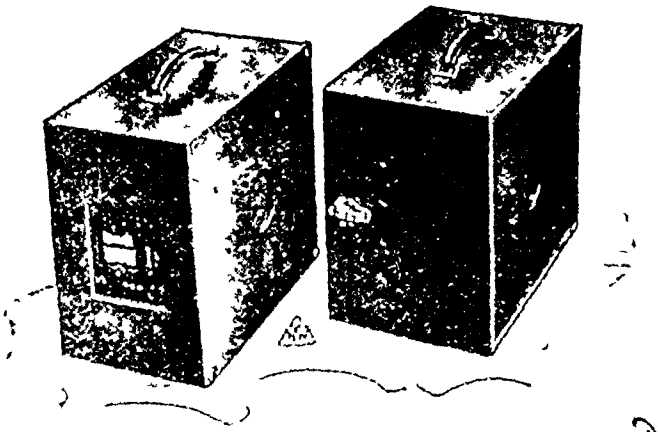
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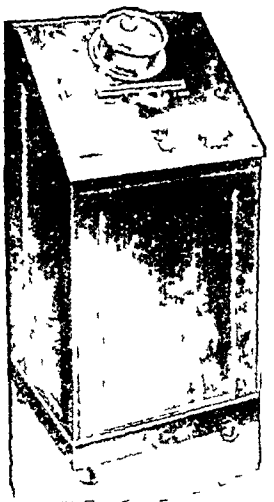
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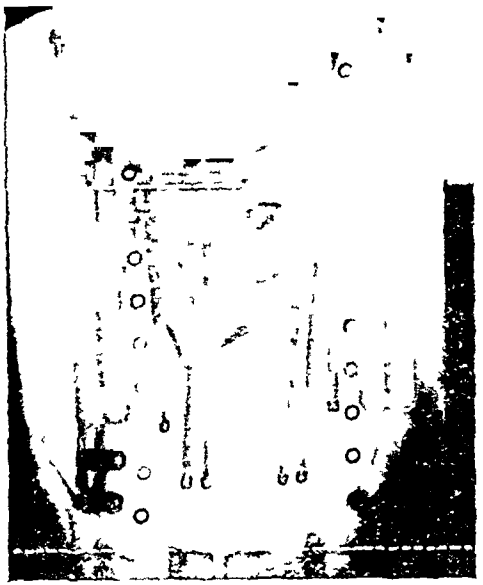
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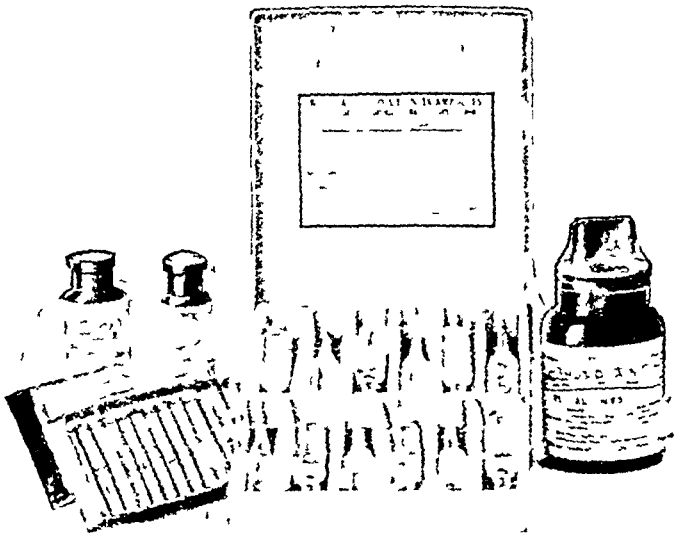
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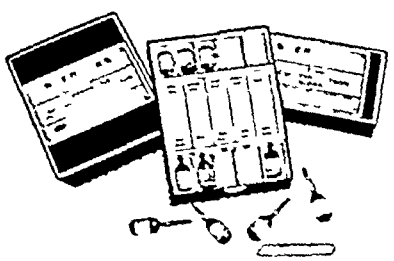
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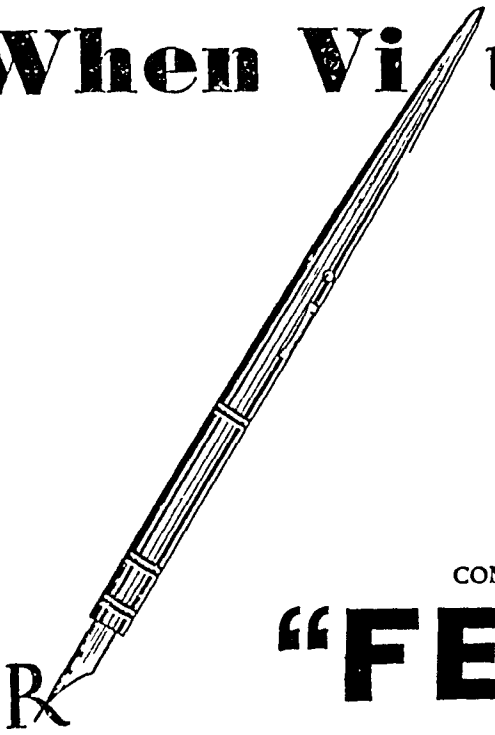
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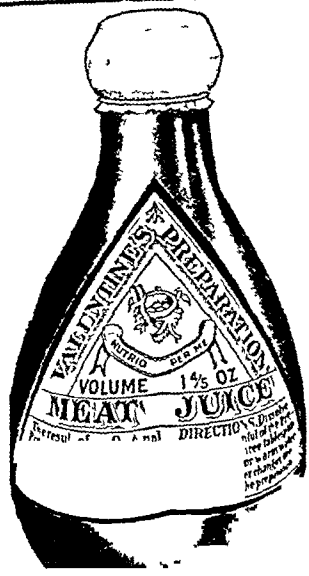
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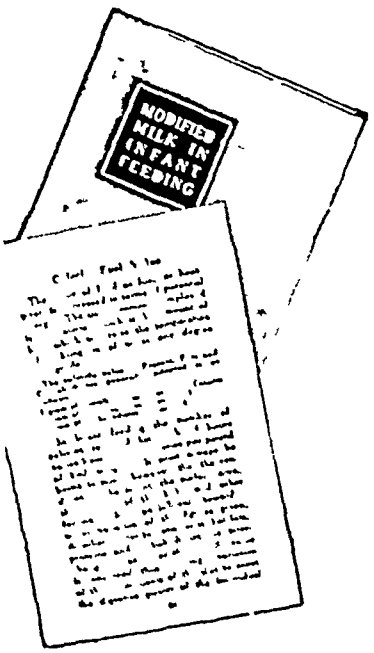
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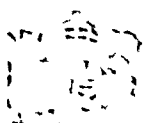


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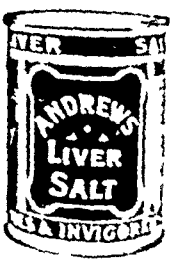
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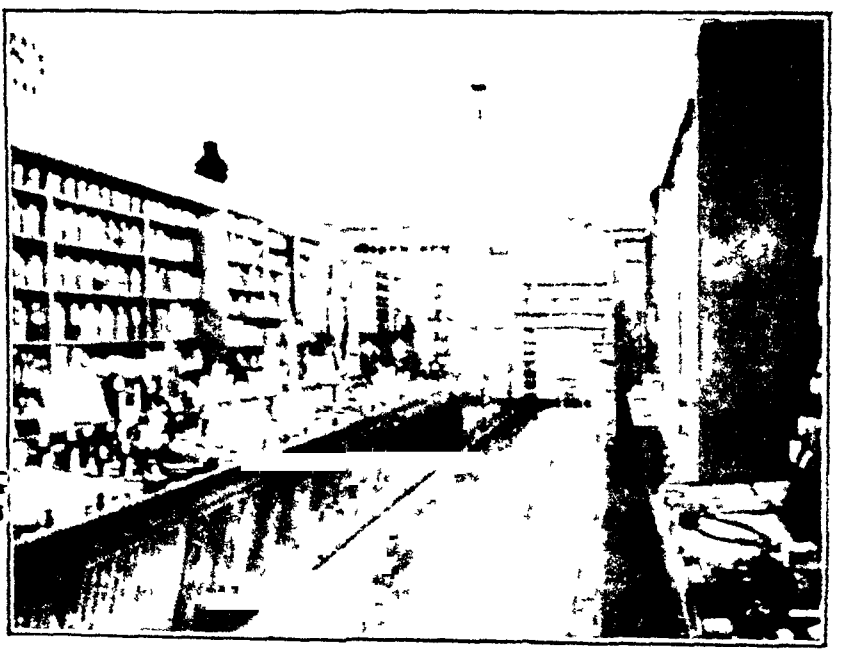
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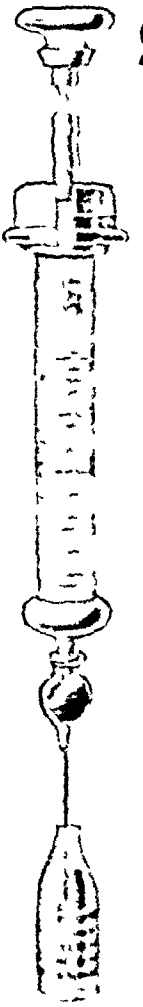
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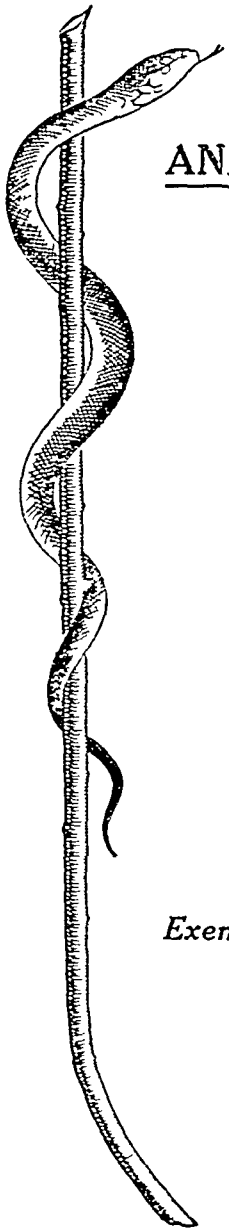
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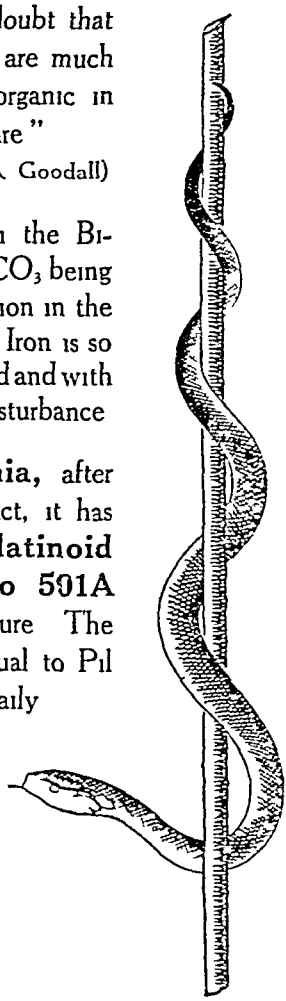
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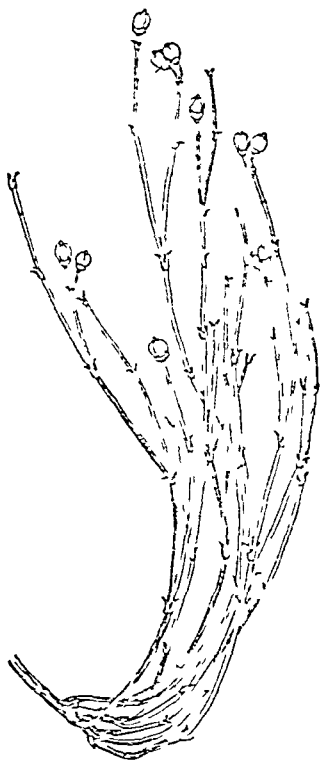
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opened the campaign against epidemic diseases. Among the precautions recommended against the Plague were the burning of incense and camomile. The costume here illustrated, is from a treatise on the Plague: it was made of leather, which because of its odour, was held to be capable of resisting the plague poison." The nose formed like a beak, is anointed with various balsams and filled with aromatics and drugs with which the air passing through a hole on either side becomes impregnated before reaching the body. The eye openings have windows of crystal: the hat boots, trousers and gloves are also of leather.

Date A D 1348-c 1600. The figure 1656 but the costume originated much earlier.

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ON

THE SURGICAL TREATMENT OF INTRATHORACIC NEW GROWTHS*

BY

A TUDOR EDWARDS M.D. M.CHIR. F.R.C.S.

SURGEON TO THE BROMPTON HOSPITAL; SURGEON TO OUT-PATIENTS WESTMINSTER HOSPITAL

(With Special Plate)

Reports from the Continent and from the United States of America now contain a considerable number of cases of both benign and malignant tumours arising within the thoracic cavity. It is probable that the apparent increase in benign neoplasms is entirely due to improved methods of diagnosis more especially the increased frequency of radiological examination but there appears to be still some doubt as to whether there has been an absolute increase in the numbers of cases of malignant disease. In the latter the relative increase is accepted by all observers. The most significant record as regards malignant neoplasms is that produced by Rosahn who has collected records of a large number of total necropsies from varying sources. In 86,824 post mortems performed during the period 1910–19 pulmonary carcinomas comprised 0·44 per cent. of all necropsies and 4·39 per cent. of all cancers whereas in 50,308 from 1920 to 1928 pulmonary carcinomas comprised 0·89 per cent. of all necropsies and 6·98 per cent. of all cancers. From these figures Rosahn infers that the (post mortem) incidence of primary carcinoma of the lung is steadily increasing and this increase is real and absolute.

The intrathoracic tumours may be divided into three main groups—the pleural, the mediastinal, and the pulmonary—and from the pathological point of view these can be subdivided into benign and malignant types.

BENIGN PLEURAL TUMOURS

The great majority of tumours described as pleural arise in tissues adjacent and as they increase in size tend to project into the pleural cavity being covered by the parietal pleura. In this manner fibroma, lipoma, chondroma, ganglion, neurofibroma, and compound tumours of these types arise in the extrapleural tissues. These tumours are often symptomless until they have reached considerable size. Perhaps the most common symptom is pain which is quite localized and persistent. Occasionally an irritating cough is present but is rarely accompanied by expectoration. The physical signs consist of an area of localized dullness on percussion with relative diminution or absence of breath and voice sounds. In some cases there may be evidence of an external tumour of the chest wall and this is most likely to occur in the chondromas and in the ganglion neurofibromas. In the latter there may also be evidence of involvement of the sympathetic chain on the same side as shown by eye signs—enophthalmos, etc.—the so-called Horner's syndrome. Effusions are rare in the benign growths.

The diagnosis is confirmed by radiological examination which will determine the extent of the tumour and will show well-defined outlines. The production of artificial pneumothorax will generally differentiate these tumours from those arising in the lung itself, as in the former case the lung will collapse and retract towards the hilum leaving the tumour in its former position. Early surgical removal is advisable if the general condition of the patient permits. Naturally the larger the tumour the more serious the operative risks, but it is well to remember that benign tumours within the thorax tend to encroach upon vital structures and thereby destroy life, and that many of these tumours are potentially malignant.

MALIGNANT PLEURAL TUMOURS

Primary endothelioma and sarcoma occasionally arise from the pleura or again from the structures immediately adjacent. Endothelioma may be localized or diffuse, but the latter type is the more common, the growth forming either a large thick plaque fusing lung and pleura or being spread over the visceral and parietal pleural surfaces which are generally separated by a pleural effusion. This is serous in the early stages but is almost invariably haemorrhagic later. In these cases the first symptoms to arise are either localized pain or marked dyspnoea. The former is more common in the localized tumour and may give rise to suspicions of abdominal disease owing to the reference of the pain along the intercostal nerves to the abdomen. In the diffuse type dyspnoea owing to the large effusions is often the first evidence of chest disease. Secondary glands in these conditions may sometimes be felt in the supraclavicular area or on the inner wall of the axilla.

Aspiration of the fluid and its replacement by oxygen or air followed by radiological examination will then enable one to see the irregular growth on the surface of the pleura. In cases where this cannot be seen introduction of a thoracoscope under local anaesthesia will enable one to visualize the growth. Sarcoma may arise as a localized mass in the chest wall involving the pleura. It can only be distinguished from the localized endothelioma by histological examination.

Surgical treatment is only to be considered in the localized types but owing to late diagnosis this is rarely possible. In one patient an endothelioma was localized sufficiently for radical operative treatment but in this case the involvement of the mediastinal and supraclavicular glands negatived operation. In the diffuse form deep x-ray therapy or the application of a large radium plaque or a combination of both methods is the only means of treatment likely to offer any form of alleviation.

BENIGN MEDIASTINAL TUMOURS

Benign tumours in the mediastinum consist of (1) the intrathoracic goitres and (2) dermoids and teratomas.

In the superior mediastinum the *intrathoracic goitre* is the most common. It may be associated with an enlarged thyroid in the neck or with an apparently normal thyroid gland in that situation; it may be solid or cystic and is occasionally calcified. In some cases there may be a history of a goitre in the neck some years before which has disappeared. These tumours of course are distinct from goitres which are sometimes situated in the neck and sometimes displaced into the mediastinum and which have been termed "plunging goitres."

The most characteristic symptom is dyspnoea which may be persistent or intermittent. In two patients submitted to operation for this condition asthma had been diagnosed and treated for several years. In the larger tumours there is often evidence of interference with the venous return to the heart resulting in cyanosis of the skin of the head and neck and considerable dilatation of the veins of the neck and of those overlying the sternum. This appearance often gives rise to suspicions of malignant disease of the mediastinum. Where the goitre is of the toxic type there will be superadded signs of hyperthyroidism. Physical signs consist in the presence of an area of dullness on percussion over the sternum corresponding in extent to that of the tumour.

Radiological examination will show a well-defined opacity in the superior mediastinum. Lateral skiagrams

* Delivered before the Bath Bristol and Somerset Branch February 1932.

are of limited value only in this position but an oblique view will help to localize the site of the mass. Almost invariably there is considerable deviation of the trachea from the normal position to one or other side but in three cases marked forward deviation of the trachea by a retrotracheal mass has been seen. Screen examination may show movement of the mass upwards on deglutition a sign which may distinguish this type of growth from other varieties of mediastinal tumour.

Mediastinal thyroids should invariably be removed by surgical operation as soon as they give rise to any symptoms. Hæmorrhage into the tumour is quite likely to cause sudden respiratory obstruction and therefore this danger should be avoided by early operation. The tumours are approached through the usual collar incision in the neck. After careful separation by blunt dissection with the finger from the surrounding tissues they can be dislocated in the neck. In very large tumours however it may not be possible to obtain sufficient room to deliver them through the superior aperture of the thorax and in such cases splitting of the sternum in the middle line down to the third space together with a transverse incision outwards will allow adequate exposure. In eleven cases of intrathoracic goitre the sternum splitting extension was necessary on three occasions.

Illustrative Case I

Man aged 42 admitted to hospital on May 11th 1927 complaining of cough and shortness of breath from which he had suffered for twenty years. A small amount of expectoration was present with occasional hæmoptysis. From January 1925 to April 1926 he was in one of the London infirmaries where a diagnosis was first made of pleurisy then of a malignant mediastinal tumour thought to be inoperable. He had gained nearly 2 st. in weight between his discharge from the infirmary and his admission to hospital. On examination he had a large mass of dilated veins overlying the upper chest with congestion and cyanosis of the veins of the neck. The left pupil was larger than the right but both were active. He had slight ptosis of the right eye which was said to have been present for ten years.

Radiological examination showed tumour in the superior mediastinum (Figs. 1 and 2 on Plate).

Operation was performed on May 18th 1927 the sternum being split in the middle line down to the third intercostal space and outwards into the intercostal space on each side. The tumour was carefully freed from the surrounding tissues and removed the only trouble being a large vein in the posterior part of the capsule which bled freely. The sternum was sutured with silk.

The subsequent history was uneventful except that one of the silk sutures became infected and had to be removed.

Dermoids and Teratomas

These are tumours which rarely cause symptoms due to their mediastinal position but tend to dissect outwards between the lobes of the lung. They may arise in the anterior or the posterior mediastinum and in the latter case tend to pass up in close relationship with the superior vena cava on the right or the arch of the aorta on the left. Two groups of symptoms may be encountered in these tumours. In the first group symptoms are absent until the mass reaches the parietal pleura whereupon they give rise to pain and dyspnœa similar to that encountered at the onset of an attack of simple pleurisy. The associated physical signs will be dullness on percussion and absence or diminution of breath sounds. In the second group the symptoms are associated with irritation of the bronchus due to the pressure upon and possibly later to rupture of the cyst into the bronchus. Irritation of the bronchus causes a non productive cough often with few physical signs. Later perforation of the bronchus may result and portions of the cyst contents (that is hair or sebaceous material) be expectorated. Secondary infection of a ruptured cyst will result in fever and expectoration of offensive purulent sputum. Continued pressure on the bronchi will lead to partial obstruction and the development of secondary bronchiectasis.

Radiological appearances will vary in accordance with the size of the tumour but in most cases except those infected, the outline of the tumour is clearly defined often rounded or oval while in a certain proportion teeth and bone may show as denser opacities. After pneumothorax skiagrams will show the tumour buried in the collapsed lung.

The treatment is the same as that in other benign tumours—that is operative removal. Apart from the results of pressure on bronchi vessels and nerves secondary malignant changes occasionally supervene. In certain instances the diagnosis can only be made by exploratory thoracotomy and in two cases in which carcinoma was diagnosed previous to operation teratomata have been successfully removed with complete recovery of the patients. These tumours should be explored by transpleural incision either anteriorly or posteriorly according to the site of the tumour. Of twelve patients operated upon for these tumours complete recovery followed removal of the tumour in eight. One case showed malignant changes at operation although it was known that the patient had had a tumour in the mediastinum for several years previous to operation. Judging from examination of the skiagrams the alteration in this tumour had occurred within the previous few months.

Illustrative Case II

Girl aged 19 admitted to hospital on May 27th 1929 with a history of cough headache substernal pain and shortness of breath which had been present for two years. There was no expectoration. Examination showed an area of dullness over the right chest posteriorly and anteriorly with weak breath sounds over the same area.

Radiological examination showed a dense homogeneous opacity at the upper part of the right apex. In the lateral plane the opacity appears to be posteriorly (Fig. 3). After pneumothorax the upper border of the opacity was well defined and the tumour was shown to be extrapulmonary (Fig. 4).

An exploration was carried out posteriorly. At this operation June 12th 1929 a posterior incision was made between the fifth and sixth ribs a very small portion of each being removed. A large thin walled cystic tumour was then seen to be lying in the upper post medial part of the pleural cavity and extending into the posterior mediastinum. The wall of the cyst was completely covered with a network of dilated veins. On account of this the cyst was marsupialized and drained.

At the second operation September 11th 1929 the chest was reopened and it was found that the cyst wall was much less vascular. The whole of the cyst wall was then separated by a careful dissection and removed as a complete sac. Apart from the aspiration of about 10 ounces of blood stained fluid from the pleural cavity three days later convalescence was steady. On November 12th 1929 an excision of the wound edges was performed and two little pockets apparently lined with smooth membrane were dissected free and a third which was in close contact with the vessels was swabbed with pure carbolic in order to destroy the lining membrane. Drainage was carried out and after several months healing took place. The patient is now free from symptoms.

Malignant Mediastinal Tumours

Lymphosarcoma and lymphadenoma are encountered in the mediastinum. The former disease is much more rapid in onset and growth and in development of symptoms. In both conditions enlarged glands are often found in the neck and axillæ. In the case of lymphadenoma enlargement of the spleen and occurrence of Pel Ebstein temperature crises may serve as diagnostic factors. Enlarged glands when present should be removed for histological examination. Operation on these cases is rarely possible

or advisable and in only one case has it been possible to remove a large mass in this situation This subsequently proved to be a primary lymphadenoma of the thymus and the patient died fourteen months later from generalized lymphadenomatosis In these cases both lymphadenoma and lymphosarcoma deep x ray therapy appears to be definitely indicated and in many cases the mass completely disappears following this treatment In many recurrence takes place and appears to be much more resistant to the action of the rays than does the original tumour

Benign Pulmonary Tumours

These are relatively very rare and it is probable those tumours described as chondroma and osteoma of the lung are really teratomata which have arisen in the mediastinum and subsequently insinuated themselves between the lobes becoming firmly adherent to the lung tissue One or two cases of fibroma arising in the bronchi have also been described Hydatid cysts are relatively common in the lung in certain countries and surgeons in Australia and the South American States have recorded considerable numbers These cysts are either single or *multiple and may* be completely silent as regards symptoms or signs Patients with hydatid disease run the risk of rupture of the cysts into the pleura when they are peripheral or into the bronchi when they are central In the former case there is a very acute local and general reaction whereas in the latter the sudden flooding of the bronchi by the cyst fluid may result in drowning of the patient If the immediate rupture is survived the cyst tends to become infected and gives rise to signs similar to pulmonary abscess

Radiological examinations show a characteristic appearance—a rounded or oval shadow with practically no reaction in the form of consolidation in the surrounding lung The diagnosis can be confirmed by the cutaneous and complement fixation reactions

The peripheral cysts should be removed and this can be done in one or two stages If done in one stage the surrounding lung should be marsupialized to the chest wall before the cyst is opened and removed Where the cysts are central unless complications supervene operations are contraindicated

Malignant Pulmonary Tumours

Primary carcinoma may originate in the large bronchi the bronchioles or the alveoli It is most commonly encountered in the larger tubes the primary bronchi and these neoplasms are mainly of two *histological* types—squamous celled and cuboidal acinar type The former probably arise as a result of metaplasia of the lining cells and the latter often show mucoid changes suggesting their origin from the mucus forming cells of the mucosa The more peripheral carcinomas are commonly squamous celled but rarely endotheliomata appear to arise in the lung possibly from cells lining the small vessels or lymphatics Lung carcinomas appear to be symptomless often for considerable periods but dyspnoea seems to be one of the earliest and most predominant symptoms In other cases a small haemoptysis may be the earliest sign to be followed by a febrile attack often diagnosed as influenza The later symptoms vary In some patients an effusion develops in others symptoms of bronchiectasis such as cough and expectoration Occasionally pain may predominate in the picture In those carcinomas arising in the larger bronchi atelectasis of a portion or a whole lobe may be the cause of such physical signs as are present The diagnosis may be confirmed by the introduction of lipiodol which will show an irregular obstruction partial or complete in the involved bronchus in the skiagram subsequently taken In obstructions of the main bronchi bronchoscopy with removal of a portion of the growth will make the diagnosis certain In the more peripheral carcinomata haemoptysis may be the only evidence of any abnormality in the lung In other cases a persistent cough may be present

Radiological examination shows an irregular opacity in the lung without evidence of any surrounding lung reaction or a fan shaped shadow apex at the hilum corresponding to the atelectatic area In the more advanced cases enlarged glands may be present in the neck or axillae These when present should be removed under local anaesthesia for histological examination

Carcinoma arising in the larger bronchi rarely allows of radical extirpation owing to its position and to the common involvement of mediastinal glands at the time when the condition is diagnosed Papilloma showing early malignant changes have been successfully removed through a bronchoscope On two occasions it has been possible following thoracotomy successfully to remove tumours arising in the larger bronchi One of these arose in the upper lobe of the left lung and proved to be a low columnar celled carcinoma the other a squamous celled carcinoma arising in the main bronchus to the middle *lobe of the right lung (In this patient the middle lobe* was removed) Both patients are completely free of symptoms one two years the other thirteen months after operation

Carcinoma arising in the alveoli and smaller bronchi offers greater opportunity for radical operation but these tumours are more rare than the previous type

The treatment of primary carcinoma by deep x ray therapy is disappointing and it is doubtful if even temporary improvements can be obtained Similarly radium as a massive application or in the form of a plaque applied to the surface has been disappointing The most encouraging results have been obtained by the use of radon seeds introduced into the growth or in its neighbourhood In those carcinomas arising in the *main bronchi* the seeds have been placed in a special container and this has been introduced into the affected bronchus through the bronchoscope It is retained *in situ* for varying periods between five and eight days By these means complete disappearance of the intrabronchial growth has resulted in several cases but the ultimate result is yet to be determined as this method has only been used for about three years

Illustrative Case IV

Woman aged 50 admitted to hospital on September 19th 1930 with a history of bronchitis in January of the same year and *with cough persisting subsequently* Some pain in the left chest and one small haemoptysis early in the present year Some dyspnoea and lost in weight Examination showed dullness and bronchial breath sounds over the upper two thirds of the left lung

Radiological examination showed the right lung to be normal and the left lung to be densely opaque in all zones (Fig 7) Lipiodol showed almost complete obstruction of *the left descending bronchus* Bronchoscopy was performed and the growth was seen immediately below the bifurcation of the trachea in the left main bronchus A portion removed for examination showed it to be a squamous celled carcinoma On December 3rd 1930 a radon container was inserted holding eight 1·8 millicurie seeds This was retained for eight days The patient was admitted on February 11th for further examination Bronchoscopy on this date showed the mucous membrane at the site of the previous growth to be smooth and of normal colour there being no obvious diminution of the lumen but a small valvular flap located 1 inch below which was easily dilated with a bougie X ray appearances of the patient afterwards are shown in the skiagram (Fig 8)

Where the growth cannot be seen by the bronchoscope open exploration of the chest is undertaken and the radon seeds are inserted into the growth under direct vision By this means also several satisfactory results have been obtained

ILLUSTRATIVE CASE III

Woman aged 65 seen on November 19th 1931 with a history of feeling run down and poorly since November 1930 In August 1931 she had an attack of bronchitis associated with pain in left side of chest and shoulder pain becoming much more severe Physical examination was negative

Radiological examination showed a tumour extending outwards from the mediastinum (Fig 5) The lateral view showed this tumour to be occupying the region of the costo vertebral groove Malignant disease was diagnosed and operation was carried out on November 26th 1931 A portion of the eighth rib was resected and the growth was found in the costo vertebral groove It was attached to the lung and had spread out from it A small portion was excised and fifteen 1·5 millicurie radon seeds were inserted as evenly as possible throughout the growth The chest was sutured The post operative reaction was slight and convalescence uninterrupted

Histological examination of the growth showed that the tumour was a squamous celled carcinoma Further x rays showed the growth to have largely disappeared (Fig 6) Pain has now completely gone and the general condition of the patient is improved while there has been a gain in weight

OTHER MALIGNANT CONDITIONS

Endothelioma appears to arise as a more peripheral growth and it has been possible on two occasions completely to extirpate the growth by removing the lower lobe One of these cases is still living and well three years after operation

Sarcoma is more rare in the lung itself Only one case has been encountered and in this the sarcoma was ossified It was removed but the patient unfortunately succumbed from pneumonia in the opposite lung nine days later

Secondary malignant disease will rarely justify operation as in the majority of cases the secondary deposits in the lung are multiple and bilateral However one patient in whom a partial pneumectomy was performed for a secondary deposit has survived for four and a half years without further symptoms

CONCLUSIONS

Modern methods of investigation enable a much earlier and more correct diagnosis of intrathoracic growths to be made and often assist one to determine the exact nature of these tumours These methods entail

1 Careful radiological examination of the chest from the antero posterior lateral and oblique aspects

2 Further radiological examination after the induction of artificial pneumothorax or gas replacement of effusions

3 The delineation where indicated of the bronchial tree by lipiodol

4 The introduction of the thoracoscope into a pneumothorax cavity where this is possible for visual examination of the superficial surface of the lung and pleura and determination of the superficial characters of the tumour —projection into the pleura

5 Bronchoscopic examination where lipiodol gives evidence of bronchial obstruction or in cases where haemoptysis is a prominent feature and in which the sputum is negative for tubercle bacilli after several examinations

In spite of these methods exact diagnosis will be impossible in certain cases and it is in these that exploratory thoracotomy should be advised with certain precautions

The operation is of no greater severity than exploratory laparotomy and in fact the convalescence is often shorter By this means tumours which were apparently malignant have been proved to be benign and have been successfully removed, while others definitely malignant have been found operable

The hope of satisfactory treatment of all types of intrathoracic new growths benign or malignant depends upon early diagnosis

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A CASE OF PORENCEPHALIC IMBECILITY

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(With Special Plate)

There recently died in Stoke Park Colony an adult female imbecile whose case presents some interesting features apart from the developmental errors revealed in the nervous system at the post mortem examination

CASE RECORD

R B born in or about the year 1905—exact date unknown—was admitted to this institution on October 26th 1920 She was certified as a microcephalic feeble minded patient of low mentality unable to settle down for any length of time to any occupation and not to be depended upon to do any work properly The certifying medical man returned her physical condition as normal and as she was a guardians case of apparently unknown parentage was unable to furnish any family or social history The then medical officers of this institution regarded her as a retrograde imbecile quiet well behaved dull apathetic without any interests The matron in charge stated that she was small for her age of pale unhealthy complexion with no signs of wasting or paralysis of any of the limbs and with no deafness or dimness of vision She was stated to be lively at times with occasional attacks of bad temper She had practically no educational attainments and was only able to do a little simple sewing under supervision

The patient's health remained generally good until January 27th 1930 when during drill in the afternoon and coincident with a menstrual period she was suddenly taken ill and had a bit of twitching and jerking of the face and arms She was put to bed whereupon she had a second attack with loss of consciousness On examination the same night she was found to have a flaccid paralysis of the right arm and leg The next day while still unconscious the patient was removed to hospital and apparently recovered consciousness the day after admission The notes state that six days after admission she was restless excited and sometimes incontinent but was now able to move her right leg though not her right arm The urine was loaded with albumin and continued so throughout the illness The patient was treated in hospital for chronic nephritis until April 1931 but as she had been walking with a special boot since January 1931 she was then returned to the care of her own house matron but remained under regular medical observation

In September 1931—that is about twenty months after her seizure—she came under the care of the present medical staff of the institution She was then found to be suffering from advanced renal disease with a systolic blood pressure of 150 and signs of renal failure She was therefore readmitted to hospital The old right hemiplegia was still apparent and there had been very little improvement in the upper limb She complained of dimness of vision in the right eye and examination of the fundi showed that the optic disks were pale and the retinal blood vessels greatly engorged The urinary output was diminished in amount and in December the patient had three uraemic convulsions The general condition became steadily worse subcutaneous and submucous haemorrhages appeared in the beginning of January and the patient died on January 21st in uraemic coma Clinically therefore the case appeared to be one of imbecility complicated by chronic nephritis Post mortem macroscopic examination seemed to confirm this as the kidneys were reduced to half their normal size and showed advanced chronic nephritis There was also fibrinous pericarditis and what appeared to be the remains of an old cerebral haemorrhage over the lower half of the central sulcus in or about the Sylvian fissure as well as a cyst like structure on the left cerebral hemisphere in the vicinity of the parieto occipital fissure Subsequent examination showed however that the

cerebral appearances were misleading, as they were due to porencephaly, the result of a partial developmental failure and not to any gross visible haemorrhage.

COMMENTARY

Anatomical Considerations

At a very early stage of embryonic life the wall of the neural tube from which the brain and spinal cord are developed consists of a single layer of columnar cells which quickly become multilayered. In this latter form the now thickened wall of the neural tube consists from without inwards of the following:

(*a*) An external limiting membrane.
(*b*) A middle syncytium
  1. Marginal layer (white matter)
  2. Mantle layer (grey matter)
  3. Ependymal layer (ventricular wall)
(*c*) An internal limiting membrane.

In certain parts of the telencephalon (cerebral hemispheres) and possibly also of the metencephalon (cerebellum) the middle syncytial layer has in this case remained permanently in its embryonic state and no brain cells have been developed therefrom. Developmentally the telencephalon consists of three regional parts—the corpus striatum, the rhinencephalon or archipallium (olfactory brain) and the neopallium or true brain. The last two together form the whole of the externally visible hemispheres and are collectively termed the pallium. Just as in any other part of the neural tube the walls of the pallium are differentiated embryologically into ependymal, mantle and marginal layers. The surface extent of the cerebral wall—that is the thin grey cortex (pallial mantle layer)—increases more rapidly than the white medullary layer (pallial marginal layer) which underlies it. As a result the originally smooth pallial wall becomes fissured and convoluted—a device of Nature to increase the area of the neurone bearing cortical strata within a confined space. That portion of the pallial wall which overlies the corpus striatum expands more slowly than the surrounding areas so that the adjacent portions of cortex termed in the adult the frontal, parietal and temporal opercula come to overhang and eventually to conceal the insula or island of Reil and by their apposition to form the lateral fissure of Sylvius. The formation of the opercula commences about the third or fourth month of intrauterine life and shortly after birth these opercula should finally have closed in over the insula. In the brain of this imbecile patient this cortical opercular formation has not taken place at all with the result that there is no insula, no true lateral fissure of Sylvius and no true opercula. Along an oblique line in the primitive pallial wall coincident with the position of the future adult lateral fissure of Sylvius the mantle layer has completely failed to form any cortical grey or white matter whatsoever. At the parieto-occipital end of this oblique line the developmental failure is even more complete, for there is no trace of either marginal or mantle layers with the result that the wall of the lateral ventricle is plainly visible upon and forms part of the cortical surface upon which it appears as a cyst-like structure filled with cerebrospinal fluid. At the frontal end of the same oblique line microscopical examination shows that the syncytial embryonic tissue between the external and internal limiting membranes has persisted and it is this tissue which has simulated the appearances of an old haemorrhage—a natural assumption in view of the history of the case. A similar developmental failure occurred in the right cerebral hemisphere though to a much lesser degree.

Defects of Neurons

On both cerebral hemispheres there are other features of neurological interest such as a diminution in size of many convolutions and cortical areas, imperfection of cerebral fissuring, retention—on the surface—of unnecessary grey, complete absence of certain parts of the cerebral hemispheres and a gross diminution in the size of the corpus callosum, centrum ovale, projection and association fibres and areas and of other macroscopic collections of white matter. The inferior surfaces of both cerebellar hemispheres also show an absence of cerebellar grey cortex in areas coincident with Bolk's leg areas and this is most marked upon the right side.

The relatively large areas of totally undeveloped grey cerebral cortex sufficiently explain the patient's imbecility and prove the association of mental deficiency with lack of cortical neurons. That this patient was devoid of such a sufficiency of neurons is shown by the cortical absence just referred to, by the striking reduction in thickness of the corpus callosum which it will be remembered is entirely composed of the medullated axons of cortical cells but in this case was no thicker than a stout piece of cardboard, by the almost complete absence especially on the left side of the centrum ovale which again is normally composed of projection and other medullated axons which have their cell bodies in the grey cortex and by the reduction of both grey and white matter to a thin sheet spread out over the wall of the lateral ventricle. The reduction in grey cortical matter is in this brain so pronounced that it can safely be asserted that von Economo's estimate of 14 000 million neurons must have been reduced by about a third and the imbecility was thus due to this neuronic reduction and to nothing else. This patient was originally returned by the certifying medical man as macrocephalic whereas she was really strikingly microcephalic. Overall head length was 176 mm., overall head breadth 140 mm. and head height 120 mm. which gives a brain capacity of 1 188 c.cm. and a percentile placement of minus 1 representing a very high degree of microcephaly. As measured after death the fronto-occipital length of the cerebral hemispheres was 155 mm. and the greatest breadth 122 mm. The microcephaly is in this case a useful clinical suggestion of a paucity of cerebral neurons.

Interpretation of Hemiplegia and other Defects

Whilst the striking developmental failure of this brain fully explains the patient's imbecility it does not explain the hemiplegia. The clinical history is suggestive of a haemorrhage and at the post-mortem examination the syncytial tissue already described was sufficiently like a blood clot as to be at first mistaken for one. That this was not however the cause of the paralysis is certain and for two reasons: first microscopical examination showed that the supposed blood clot was composed almost entirely of embryonic material and secondly the syncytium was not over the Rolandic motor area but altogether below it so that even if there had been a haemorrhage it could not have produced a hemiplegia. Microscopic cross-section of the left internal capsule too has so far failed to reveal any sign of haemorrhage so that pending more careful microscopical examination it is as yet impossible to adduce any satisfactory evidence of the site or cause of the paralysis producing lesion. The possibility of an embolus has not of course been overlooked nor the fact that the patient was menstruating at the time of the seizure but our examination has so far revealed neither haemorrhage nor embolus and there remains the further but unsolved problem of paralysis from a localized cortical uraemic poisoning intensified in the latter years of his life.

As regard the statement that prior to the seizure the patient suffered from nystagmus, deafness, diplopia of vision, examination of the corpora bigemina cortical areas hardly supports the statement. The visual areas are considerably diminished in extent especially of the left side and it is significant that after the seizure she com-

plained of dimness of vision in the right eye. The fact that the patient displayed no marked locomotor disability prior to her attack and showed no signs of wasting or paralysis of her limbs renders examination of the pre-central convolutions of some interest especially on the left side. A comparison in Figs. 1 and 2 on Plate of the areas on the immediate frontal side of the central sulcus reveals the fact that on the right side the area in question appears fairly normal whereas on the left side consequent on the failure of development of the frontal operculum the pre-central convolution appears as though it had been cut in two and the lower half removed. This clearly could not have been the case. It is therefore more probable that the pre-central convolution on the left side has been well developed but that its lower half has been bent forward. This deduction from the observed facts is also supported by the clinical evidence of the patient's ability to spell though her vocabulary was both limited and obscene.

Hints as to Aetiology

An examination of this brain shows that there has been a complete cessation of brain development in one part of the telencephalic wall and that this cessation occurred at about the sixth week of intrauterine life. The result is that the primitive wall of the telencephalic neural tube has been left upon the surface of the cerebral hemisphere along the line of the adult lateral fissure of Sylvius and this failure has been more complete on the left side than on the right. At the sixth week of normal development in about a 10 mm. embryo the five brain vesicles are present and the ependymal mantle and marginal layers of the walls of the vesicles and neural tube are well represented while the aortic arches and cardinal veins are completed. The primitive vessels extend into the head and extremities. On the left side cerebral development has in one part of the telencephalic vesicle ceased at this time. On the right side the developmental failure has been as stated less complete and has occurred much later.

Notwithstanding the extraordinary amount of research on experimental embryology and artificial teratology it does not seem yet possible to give any adequate explanation of the *causes* of these errors and failures of embryological development. In a recent number of the *Journal*[1] Keith stated that lions born and bred in the London Zoo were peculiarly liable to cleft palate but that with an altered maternal dietary during pregnancy a plentiful supply of vitamins and better surroundings this developmental error practically disappeared from the offspring. Are some at least of these developmental failures during pregnancy the result of faulty maternal feeding of an aberrant blood supply or of another allied cause? Or have we to look still further back to a deficiency of the chromatin substance of the parental chromosomes or to the genes 'which determine the course of development of the fertilized egg' for our explanation as to why some embryos manifest these and many other similar, developmental failures whilst others proceed along perfectly normal lines. If the chromosomes are responsible then the hereditary factor once more emerges as a potent cause of amentia. In this case unfortunately nothing is known of either the parentage or the hereditary history but as the patient was a board of guardians case it is probably safe to assume that her ancestry was of that inferior stock from which so many mental defectives seem to spring.

DESCRIPTION OF FIGURES

Fig. 2 shows the left cerebral hemisphere after removal of the meninges. The embryonic walls of the lateral ventricle are clearly visible upon the surface that of the occipital end being devoid of all covering of embryonic tissue whilst the larger and more frontal one is partially covered by such tissue which is the remains of the mantle and marginal layers of the telencephalic vesicular wall. The superior temporal convolutions appear well developed. A comparison of this figure with Fig. 1 which represents the corresponding surface of the right cerebral hemisphere shows the striking difference between the two hemispheres.

Fig. 3 shows the inferior surface of the cerebellum with a large non-cortical area on the right cerebellar hemisphere roughly coincident with Bolk's lobe area and an oblique depressed non-cortical area on the left cerebellar hemisphere. As the chief developmental failure affects the left cerebral hemisphere (heterolateral) and the right cerebellar hemisphere (homolateral) it is difficult to believe that prior to her seizure this patient displayed no weakness of her limbs. The cause of this patient's failure of cerebellar development has not yet been determined but it appears to have been of different origin from that affecting the cerebral.

Fig. 4 shows the internal or medial surface of the left cerebral hemisphere upon which are to be noticed the diminution in thickness of the corpus callosum especially in its occipital half the detachment of the fornix from the corpus callosum the absence of the interventricular foramen of Monro the wide opening of the left lateral ventricle here filled with cotton wool the imperfection of the visual area within and about the calcarine sulcus and the imperfect fissuring of the cortex. The whole of the cortex and white matter of this left cerebral hemisphere is as a matter of fact little more than a thin shell spread out over the wall of the lateral ventricle.

Fig. 5 is a diagrammatic cross-section of the telencephalic vesicle of a 10 mm. embryo (six weeks old) the original walls

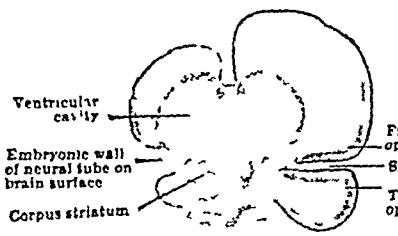


FIG. 5.—Diagram of normal and arrested brain development.

of which are bounded by dotted lines. On the right side there is indicated normal cortical development with a formation of the operculum insula and lateral fissure of Sylvius *whilst* on the left side there is diagrammatically indicated the developmental failure which has resulted in the rather remarkable and instructive brain of this imbecile woman.

CONCLUSIONS

Wigglesworth described in 1897 two cases of porencephaly - and pointed out that it is incorrect to use the term porencephaly as connoting a separate pathological entity since different cases undoubtedly have their origin in different pathological processes. His first case Wigglesworth regards as a true developmental defect. His second case is he thinks not one of developmental defect but has been caused by a definite destructive process of some sort. He inclines to the view that the definite destructive process was an encephalitis the result of injury inflicted during the process of birth not improbably by means of the forceps. He also furnishes a brief list of references to previously published cases. In 1904 Turnbull[2] described a case similar to the present one. He states: 'The cysts seen in the post-mortem examination formed the walls of the posterior portion of the right and left ventricles and represented enormously attenuated portions of cortex.' He concludes that 'the abnormalities consist in a distension of the ventricles and destruction of a large area of the cortex.'

Read in the light of modern embryological knowledge some thirty years later it seems much more probable that all three cases as well as the present one are not due to destruction of previously existing cerebral cortex but to the fact that, developmentally, it was never there. Certainly in the present case the porencephalic condition is the result of an arrest of cortical development in the telencephalic neural wall occurring at or about the sixth week of intrauterine life.

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SPONTANEOUS HYPOGLYCAEMIA

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(With Special Plate)

The occurrence of spontaneous hypoglycaemia has been noted in the literature several times and it is probable that mild degrees of the condition occur more frequently than is usually supposed. It therefore appears of interest to report the following case.

HISTORY OF THE CASE

The patient, an unmarried children's nurse, aged 44 years, was admitted to the Manchester Royal Infirmary on February 24th 1931, complaining of recurring attacks of dizziness and loss of consciousness.

For some years before 1923 she had been employed as a children's nurse in a doctor's family. In that year however there was a marked alteration in her general behaviour and temperament. She became alternately sulky and self-assertive, often attempting to treat her employers like children (these facts were confirmed by her employer, Dr. Brunwin of Lancaster).

In 1925, having moved to another district, her diet consisted largely of tinned meats with very little carbohydrate. From that time onwards she began to complain of attacks of faintness and trembling, but did not lose consciousness. These symptoms persisted till 1927, when she began to experience momentary losses of consciousness in which she would fall down. Between these attacks she suffered from continual tiredness.

In 1928 the symptoms again altered. There were no more losses of consciousness, but she was often assailed by confusion of ideas while out in the street, and on recovery would, to her surprise, find herself walking in an entirely different neighbourhood from that in which the attack began.

In 1929 the attacks of loss of consciousness returned, recurring every day and followed by severe headache. About this time it was noted that her knee jerks were absent, and that the pupils were unequal and exhibited the Argyll Robertson phenomenon.

In September 1930 she was admitted as an in-patient to the Bradford Royal Infirmary as a possible case of tabes dorsalis. The Wassermann reaction and colloidal gold curve were however found to be negative. During her stay in this hospital she began to lose consciousness almost every day in the early morning at the same time, becoming pale with profuse sweating and a very weak pulse. These symptoms suggested to Dr. Eurich, under whose care he was, the possibility of hypoglycaemia. Accordingly the blood sugar was estimated and found to be 0.046 per cent. Glucose (up to 1.2 lb. daily) was given and her symptoms improved. She was discharged from hospital with the blood sugar at 0.064 per cent. The symptoms of dizziness and twitching returned after a few weeks, and she was admitted to Manchester Royal Infirmary on February 24th 1931. On admission she seemed physically normal, but her manner suggested a neurotic temperament. Inquiry into her family history elicited no hint of importance.

CLINICAL EXAMINATION

General Condition.—Well nourished. On the face and hands a red papular eruption. Tongue, teeth, tonsils, no abnormality. Weight 7 st. 3 lb. 5 oz.

Heart.—No evidence of enlargement. Mitral pre-systolic murmur and reduplicated second sound; accentuated aortic second sound; accentuated pulmonary second sound. Blood pressure 115/75.

Lungs.—Slight dullness and increased vocal resonance medial to the inferior angle of the right scapula.

Abdomen.—Tenderness in right iliac fossa and lower third of course of transverse colon.

Central Nervous System.—Pupils miotic, irregular, and of Argyll Robertson type. Lateral nystagmus both sides. Fundi normal. Cranial nerves normal. Tendon jerks absent. Plantar response extensor on both sides. Sensation normal. Muscular power normal. Sphincters normal.

SPECIAL INVESTIGATIONS

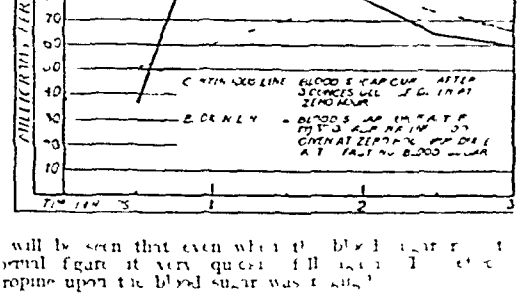
Blood Count.—Erythrocytes 5,030,000 per c.mm. Haemoglobin 84 per cent. Colour index 0.84. Leucocytes 12,200 per c.mm.—polymorphs 77 per cent. lymphocytes 17.3 per cent. large mononuclears 4 per cent. eosinophils 1.7 per cent. basophils nil. Platelets abundant. Nucleated red cells nil. Slight anisocytosis. Occasional poikilocytosis. Wassermann reaction negative. Cerebro-spinal fluid: total protein 30 mg. per 100 c.cm. globulin no increase, glucose 25 mg. per 100 c.cm. chlorides 705 mg. per 100 c.cm. The fluid was slightly opalescent, mobile under normal pressure and gave rise to no coagulum. There were two lymphocytes per c.mm. In addition there were a number of granular bodies which resembled degenerated cells.

X-ray Examination.—No intracranial abnormality; pituitary fossa normal. No abnormality or displacement of gastro-intestinal tract. Basal metabolism increased by 23 per cent. Stools: total fat 24.3 per cent., unsoaped fat 7.7 per cent., combined fatty acids 16.6 per cent. Glucose nil. Urine: lactic acid nil; diastase figure 10. Blood sugar periodic blood sugar estimations were made (see table). The highest

Date	Drugs	Diet	Blood Sugar Per cent.
March 3rd	—	Fluids only	0.031
March 4th	—	Fluid only	0.073
March 7th	G	Minced meat, potatoes, and milk pudding, etc.	0.091
March 10th	GP		0.09
March 21st	A		0.073
April 1st	GA		0.039

G = During period of administration of glucose.
P = During period of administration of protein.
A = During period of administration of adrenaline.

reading was 0.089 per cent., and most of the readings were considerably below this. A sugar tolerance test was performed and a series of estimations were made following the administration of adrenaline (see graph). From these figures



it will be seen that even when the blood sugar was at a normal figure it very quickly fell again. The effect of adrenaline upon the blood sugar was striking.

PROGRESS

On March 1st (five days after admission) the patient became comatose. She was grinding her teeth and sweating profusely. The limbs were flaccid but might be moved, there were no reflexes. She could not be roused to answer questions, and she became incontinent of urine

and faeces She remained comatose for five days when she received 5 minims of 1 in 1 000 adrenaline She then partly regained consciousness and for a short time could be roused to answer questions On the same day she received 10 c cm of 20 per cent glucose intravenously This did not have any observable effect

On March 7th she received 100 c cm of 20 per cent glucose intravenously and the coma rapidly became less profound until she was practically normal

On March 8th she *began to receive 1 lb* of glucose daily by mouth and marked improvement resulted She became *fully conscious of all* that went on but lay in bed more or less mortly with an expressionless face She spoke only in direct answer to questions, with a slow monotonous drawl She received glucose *in this way* throughout her stay in hospital At one time she also received a small dose of pituitrin twice daily and at another period adrenaline twice daily Neither of these drugs produced any effect

On April 16th she began to have *epileptiform* attacks These occurred mostly during the night and alternated with attacks of hysteria which were always controlled by the administration of glucose

On April 22nd laparotomy was performed by Mr Charles Roberts There was no evidence of pancreatic abnormality but the gall bladder contained stones and the appendix was distended by mucus to a size 6 by 1½ inches (see Plate) Cholecystectomy and appendicectomy were performed After operation her condition improved for about a week when the hysterical attacks returned

On June 10th she was transferred to the convalescent hospital at Cheadle on a daily dose of *1 lb of glucose* While there her condition remained the same

Discussion

In this rather complicated clinical picture the low blood sugar is the most striking fact How far the other symptoms can be attributed to this is not quite clear There is no doubt that the administration of glucose improved the condition and as shown by the sugar tolerance test raised the blood sugar for a time Nevertheless, although glucose prevented coma the patient continued to have attacks of apparent hysteria even while receiving 1 lb of glucose daily

A certain amount of experimental work has been done on this subject [1] [2] [3] [4] [5] [6] *and from the results we can form some idea of how far the symptoms in the present case* depended upon the low blood sugar content It has been shown[1] [3] that when hypoglycaemia is induced in normal individuals a symptom complex occurs similar to the present case Experiments upon animals give rise to the same type of symptoms, and in animals at all events *the condition* appears to be hereditary [4] Severinghaus and his co-workers[5] produced hypoglycaemia by injection of insulin into normal people and found that *the blood sugar* was lowered by various amounts down to 0 05 per cent This gave rise to slight incoordination and confusion of ideas resembling those described in the earlier stages of the present case This would suggest that the condition was progressive and gradually became more severe up to the time when the patient came under our care Sendrail and Planques[6] cite eight authorities who agree that any reading below 0 09 per cent constitutes hypoglycaemia *so that* between this and the readings in the present case there are likely to be symptoms of all degrees of severity Milder cases, in which attacks of coma have not occurred respond to a more liberal diet with frequent meals [7] More severe cases require the administration of large amounts of glucose [8] [9]

Causes of Hypoglycaemia

These have been set forth at length by some writers [10] [11] [12] and they fall into five groups (*a*) pancreatic (*b*) endocrine (*c*) hepatic (*d*) renal (*e*) nervous

Pancreatic Causes

Any factor which leads to an over production of insulin may be expected to bring about hypoglycaemia Pancreatic tumours may do this and a number of such cases have been reported [13] [14] [15] [16] The tumours have been either simple adenomas or carcinomas In one case[13] there was a primary carcinoma with secondaries in the liver and from these insulin was recovered *In contrast to this is* a case[16] in which the patient showed the symptoms of *hypoglycaemia* and at necropsy tumours were found in the liver but no insulin could be recovered from them Six cases[17] [18] were discovered at operation and the *tumours were removed, with complete relief of symptoms* Another case[19] showed no tumour but hypertrophy of the islets This again indicates an over production of insulin as the cause of the symptoms The reverse condition was found in a case reported by Pemberton [2] in which the patient had shown symptoms similar to those we have described but post mortem examination revealed a fibrotic pancreas devoid of islets It is not obvious how this could have given rise to *hypoglycaemia*—hyperglycaemia would have been more understandable Cases have been noted [1] in which hypoglycaemia occurred with a normal pancreas and the symptoms were relieved by resection of part of the normal organ From this it would appear that a normal pancreas may be overactive or else the cause of hypoglycaemia in these cases was non pancreatic

Endocrine Causes

Decreased blood sugar is known to be associated with hyperthyroidism and with pituitary dysfunction In the present case there was no obvious goitre but the basal metabolic rate was increased by 23 per cent This may indicate some hyperthyroidism but not sufficient to account for the very severe symptoms We found *nothing* to indicate pituitary dysfunction and a ray examination revealed no gross change in the region of the pituitary fossa

Hepatic and Renal Causes

We were not able to investigate the hepatic and renal functions as carefully as we should have liked Absence of sugar *in the urine* indicates that the condition was not due to a lowered renal threshold

Nervous Causes

The signs in the eyes suggested the possibility of increased vagal action as a cause for the hypoglycaemia However the administration of atropine although it was repeated on several occasions, had no effect upon the blood sugar

Conclusions

Cases of hypoglycaemia associated with widely different pathological states are recorded The majority appear to be connected with progressive lesions of the pancreas In our case, however so far as could be seen from a naked eye examination of the pancreas no demonstrable lesion was present The only pathological conditions discovered were gall stones and a greatly distended appendix and the prominent physical signs—namely *Argyll Robertson pupils extensor plantar* response, and irregular pupils—suggested a lesion of the central nervous system Therefore it has occurred *to us that the* dysfunction of the pancreas leading to hyperinsulinism may be a reflex phenomenon secondary to an infected gall bladder and *in view* of the fact that temporary insulinism produces absence of reflexes with extensor plantar responses persistent insulinism may produce this condition permanently—also dysarthria and Argyll Robertson pupils—by acting on the bulb and mid brain

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COMPRESSION FRACTURE WITH COMMINUTION OF BODY OF THIRD LUMBAR VERTEBRA AND NEURAL ARCH OF FOURTH VERTEBRA WITH PARAPLEGIA

BY

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(*With Special Plate*)

Watson Jones (*British Medical Journal* February 21st 1931) published for the first time a safe and simple method of treating crush fractures of the spine Hitherto these cases had been looked upon apathetically and the results of the usual simple recumbency method of treatment had inevitably been followed by serious deformity and crippling Davis of Erie (Pa) had devised a method where traction and forcible hyperextension were combined with suspension of the anæsthetized patient by the heels from the roof of the operating theatre and Hershkoff described a case of reduction in which four strong men had combined to exert traction on the patient's spine

Aetiology of Crush Fracture

The mechanism in crush fracture of the vertebral body is indirect injury—that is a bending or hyperflexion of the spine associated in some cases with compression in the long axis of the column Falls on the back of the head from a height or a heavy weight falling on the back while it is in a stooping position are examples of this

When the spine is forcibly flexed the first effect is a compression of the bodies of the vertebræ and of the intervertebral discs The upper vertebræ tend to be displaced forwards but are held behind by the articular processes which prevent any further movement Should the flexion continue the lower articular processes of the upper vertebra ride up and jump the upper processes of the vertebra below and a dislocation takes place Compression fracture of the vertebral body without displacement is met with in the dorsal and lumbar regions particularly the twelfth dorsal and the first lumbar vertebræ and also in the upper part of the dorsal vertebræ in the region of the fourth The latter is frequently associated with a fracture of the sternum opposite these vertebræ The cause is always an indirect injury compressing the vertebral column in a vertical direction and causing hyperflexion The soft spongy bone is compressed between the upper and lower laminæ of compact bone Owing to the presence of the pedicles behind the posterior part is strengthened the crushing being more marked in front than behind The result may be a complete comminution of the soft cancellous bone which may be broken up into innumerable fragments and displaced in all directions—usually forwards as this is the direction of the violence

Anatomical Considerations

The anterior common ligament is a strong band of fibres which extends along the anterior surfaces of the bodies of the vertebræ It is broader below than above thicker and narrower in the thoracic than in the cervical and lumbar regions being somewhat thicker and narrower opposite the bodies of the vertebræ than opposite the intervertebral fibro cartilages It consists of dense longitudinal fibres which are intimately adherent to the intervertebral fibro cartilages and the prominent margins of the vertebræ but not to the middle parts of the vertebral bodies In the latter situation the ligament is thick and fills up the concavities on the anterior surfaces and makes the front of the vertebral column more even It is composed of several layers of fibres of which the most superficial are the longest and extend between four or five vertebræ The intermediate fibres extend between two or three vertebræ and the deepest reach from one vertebra to the next At the sides of the bodies the ligament consists of a few short fibres which connect adjacent vertebræ (Gray) Reduction depends on the integrity of this anterior common ligament The process of hyperextension puts this ligament into tension which in its turn presses the fragments back into position and so moulds the vertebræ back into form Thus pressure on the cord by the laminæ of the intact vertebræ above is immediately released and unless irrevocable damage such as crushing or severance is effected recovery takes place

CASE RECORD

This is well illustrated by the following case

J D aged 50 was admitted to Queen Mary's Hospital on August 11th 1931 having been knocked down by a lorry He did not lose consciousness and remembers being crushed between the front axle of the lorry and the ground—that is his shoulder being under the front axle his trunk in a position of hyperflexion

On admission he was suffering from shock and complained of pain in the small of his back inability to move his legs and also that he could not feel them He was immediately turned over on his face and nursed in that position until two days later when reduction was effected

On examination the spines of the dorsal and upper lumbar region were normal until the mid lumbar region when a depression was felt the spine above forming a projection with a depression for two spines level below this X rays taken in lateral and antero posterior position showed marked comminution of the body of the third lumbar vertebra with forward displacement of the greater part of the body into the abdominal cavity and fracture of the neural arch of the fourth (Fig 1 on Plate)

Examination of the spinal cord revealed a complete flaccid paraplegia with complete anæsthesia or paralysis of all reflexes below the level of the lesion Left leg flaccid complete paralysis having an effort to contract the quadriceps extensor muscle sensation to touch and sense of position completely abolished The patient was unable to void urine and evacuate the bowels Catheter specimens were performed

Progress

August 12th 1931.—Patient was given morphine 1/4 grain and laid face downwards his arms resting on a high window ledge the lower part of the thighs on an operating table which was lowered to its extreme limit his body being curved and with the shoulders about 2 feet higher than the knees He had to be supported by two porters one each side holding a shoulder Plaster of Paris was applied from the shoulder to the greater trochanter An x ray taken next day showed the result—complete reduction of the fracture (Fig 2) *Immediately the plaster jacket was applied* he was very comfortable and in no pain Next day there was some return of power in the left leg and he could contract some groups of muscles and he complained of tingling in his legs The bowels were costive and an enema aided by pituitrin was necessary to secure an evacuation

During the next few days *motor power and sensation* gradually returned particularly on the right side reflexes on both sides being however still absent Urine was drawn off twice daily by catheters under strict aseptic precautions

August 26th 1931 (fifteen days after the accident).—The patient passed 12 ounces of urine normally but he had to be catheterized until September 13th since which time he has been able to void in the usual manner *Motor power* and sensation and reflexes returned gradually By August 21th there was complete recovery

October 10th.—He was allowed up and out of bed

October 16th.—Able to walk unaided up and down the ward

December 21st.—Plaster removed

February 1st 1932.—Electric reaction of muscles of lower limb showed normal responses and *complete recovery* He could now walk unaided X rays taken later confirmed the reduction The spine was in excellent position and there was no atrophy of body of third lumbar vertebra He would now have been able to resume his work but for polyarticular rheumatism an intercurrent infection

SUMMARY

This case illustrates a simple method of reducing severe comminuted fracture of the spine accompanied by severe cord injury It would have been impossible by any other method to approach replace the fragments and maintain them in *position* He has recovered completely, both as regards his fracture and the cord injury This method provides an easy way of nursing patients changing their position and avoiding the usual complications of bed sores and respiratory troubles

I wish to express my thanks to Mr Percival P Cole F.R.C.S. under whom this case was admitted and by whose kindness I had the opportunity of treating the case and publishing these notes

CHRONIC GASTRIC ULCER IN A BOY AGED 13

BY

MICHAEL OLDFIELD B.M. B.Ch.

(With Special Plate)

Chronic gastric ulcer is rare in children, although acute peptic ulceration both of the stomach and of the duodenum is not uncommon in infants under a year old Acute and chronic ulcers are more common in *adult life* and it would be interesting to know what percentage of patients who come for treatment at a later date have had preceding ulcer dyspepsia in childhood Proctor[1] describes sixteen such cases at the Mayo Clinic

Children are rarely brought up for treatment for dyspepsia of the ulcer type since this is only associated with the chronic disease They are seen more commonly following the dramatic complications of acute ulceration such as melaena haematemesis or perforation Pauss[2] Theile[3] Robinson[4] and Holm record cases of perforated chronic gastric ulcer in children which were operated upon successfully and Proctor[1] Weber[6] and Miller[7] report cases of chronic gastric ulcer in childhood not submitted to operation Among 1,596 cases of gastric ulcer observed in the Mayo Clinic only one occurred in a child Professor Stewart[8] in a series of 200 cases of chronic gastric ulcer coming to post mortem at the General Infirmary at Leeds *found none under 10 years and three* between 10 and 20 years of age Deaths from chronic ulceration are obviously extremely rare in childhood It is possible however that if a careful history were taken an account of a preceding typical dyspepsia in childhood might be obtained in many adult cases of chronic peptic ulcer This would emphasize the importance of giving rigorous and prolonged treatment to children suffering from chronic dyspepsia

CASE REPORT

H. W. a pale thin boy aged *13* was admitted to the General Infirmary at Leeds under the care of Dr Veale on December 4th 1931 for haematemesis

History.—When the patient was 11 years old he had a series of sore throats followed by indigestion This consisted of an aching pain in the epigastrium when he was hungry The pain was so severe that it wakened him during the night It was relieved by food and was occasionally accompanied by vomiting Symptoms were intermittent bouts of pain lasting two to three weeks alternating with periods of freedom The pain gradually grew worse but it was not for over a year after the onset of this symptom that the patient was taken by his mother to the doctor Frequent small milk feeds and alkalis were given and later tonsillectomy was performed The symptoms disappeared within a fortnight

Before breakfast on the morning of December 4th 1931 the boy had a sudden stabbing pain in the epigastrium and mid sternum He became thirsty and then vomited about half a pint of dark red clotted *blood* He was admitted to hospital the same day

Physical Examination.—*His face was pale* his lips and conjunctivae were blanched Pulse 120 Temperature 98.1° *Respirations 24* There was slight epigastric tenderness There was no evidence of bleeding from the nose or mouth The spleen was not palpable *The heart lungs nervous* system optic disks and urine showed nothing of note No septic foci were found in the nose ears or throat

Special Examinations.—(1) Occult blood was present in the faeces (2) A blood count showed mild secondary anaemia (3) A Rehfuss test meal showed a high normal acidity—that is 1¾ hours after the meal the total acids were equivalent to 80 c.cm. *N/10 NaOH* per 100 c.cm. of gastric contents Free hydrochloric acid reached 0.2005 per cent equivalent to 55 c.cm. *N/10 NaOH per 100 c.cm.* of gastric contents There was slight delay in emptying of the stomach complete after 2¾ hours (4) *X ray examination* showed a small ulcer crater on the posterior surface of the stomach close to the lesser curvature three inches from the pylorus

Progress.—The patient was treated medically by prolonged rest in bed starvation followed by Hurst's dieting Olive oil and belladonna were given alternately before meals alkalis after meals He remained in bed in hospital for seven weeks and was free from symptoms when discharged He stayed in bed at home for another five weeks

On March 1st 1932 he came up to hospital A radiograph was taken no ulcer crater was to be seen A Rehfuss test meal showed the gastric ulcer diathesis to be present still There was a high normal acidity—that is in the specimen taken 1¾ hours after the meal the total acids were equivalent to 95 c.cm. *N/10* NaOH per 100 c.cm. of gastric contents Free hydrochloric acid reached 0.219 per cent—that is equivalent to 60 c.cm. *N/10 NaOH per 100 c.cm.* of gastric contents There was still slight delay in emptying of the stomach complete after 2¾ hours Seven weeks have elapsed

since the boy was discharged from hospital so far there has been no return of symptom

I am indebted to Dr R A Veal for permission to publish this case and to Professor M J Stewart for his kind advice

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OEDEMA IN THE NEWBORN*

BY

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Oedematous conditions in the newborn are of fairly common occurrence but experience seems to show that it is difficult for the average man faced with a case of this kind to form a clear idea in his mind of the most likely cause of the disorder and of the appropriate treatment A study of the textbooks does not usually help very much they describe congenital oedema oedema neonatorum sclerooedema sclerema sclero oedema etc but no two authors seem to agree exactly as to the precise definitions

With the idea of simplifying this subject a little I have collected a few cases with oedema as the leading physical sign in which it will be observed that the main aetiological factors are cold and sepsis I am excluding entirely those rare cases in which the baby is born with generalized oedema ascites and hydrothorax or with massive oedema of the limbs and often dies a few hours later In general practice it is very unlikely that such a case will ever be seen in view of the fact that only one example of this condition has been observed at Queen Charlotte's among 12 000 babies born during the last six years

In my experience the commonest cause of oedema in the newborn localized or generalized is cold and in my opinion it is absolutely essential that this should be realized by every general practitioner or nurse in charge of a newborn infant The temperature as taken with the ordinary clinical thermometer (with a low limit of 96°) in the axilla or groin gives quite a false idea of the actual temperature of the infant One must use a subnormal thermometer with a low limit of 88° There is no difficulty in getting these in practice and they are not expensive The temperature must be taken rectally Neglect of these simple precautions leads to much trouble when dealing with newborn infants especially when they are premature or debilitated It is quite common to hear a nurse say that the baby's temperature is perfectly normal somewhere about 96° (the lowest reading on her thermometer) when on putting a hand on the baby's abdomen and legs they feel definitely chilly and the temperature taken rectally with a subnormal thermometer is found to be 93° or even lower The importance of warmth for the newborn infant is I think still not fully appreciated and naturally the more feeble and premature the child the more the necessity for keeping a close watch on the temperature I have seen a child three or four days after birth in a cold house in a bad slum area quite chilly and blue gasping for breath and apparently of rectal temperature—89° On putting the baby into a hot bath for twenty minutes a Lane's coil to be changed every four hours for twenty-four hours has been placed round it there has been prompt recovery

Probably many infants are certified as having died of atelectasis prematurity congenital debility and the like when in reality death is due to the effect of cold

Injurious Cold

The newborn infant then is particularly susceptible to the effects of cold The following cases all of which occurred in this hospital are I think excellent examples of cold acting as a cause of oedema

Case I

Twin boy seen on December 3rd 1931 on the ninth day of life at Queen Charlotte's Auxiliary Hospital Caledonian Road because of swelling of the penis Birth weight 5 lb 6 oz The weight had gone down to 5 lb on the third day of life but by the ninth day it was 5 lb 8 oz The mother was a primipara aged 27 perfectly healthy the delivery was normal the first twin being a L O A the second a I O P This case was the first twin

On the sixth day mild oedema of the prepuce was first noticed and when seen on the ninth day the oedema was very marked no oedema of the scrotum There was no difficulty in micturition and the urine was normal Both testicles were in the inguinal canal There was also considerable oedema of the eyelids and pitting oedema of both feet and shins and of the scalp Heart lungs abdomen and throat were normal Pulse rate 120 Since birth the infant had had a subnormal temperature varying from 93° to 96° No hot bottles had been used but the infant had been kept in a cot near a gas fire The baby's feet and head felt cold and the rectal temperature was taken with a subnormal thermometer and found to be 93°

The baby was put in a hot bath at 105° till the temperature was 99° and hot bottles were put in the cot and the rectal temperature was taken four hourly for the next four days Next day the temperature was 96 8° and there was much less oedema By December 6th 1931 the oedema was completely gone and as was expected with the disappearance of the oedema the weight dropped 4 oz in the three days One month later the baby was completely normal

Final diagnosis Oedema due to hypothermia

Case II

In view of the above case the other twin was examined although supposed to be quite normal Birth weight 5 lb 4 oz Weight on the ninth day 5 lb 4 oz Here also the temperature had always been low varying from 96° to 98° On examination there was pitting oedema of the scalp both feet shins and thighs also slight oedema of the eyelids and prepuce Urine normal Heart lungs abdomen normal The rectal temperature was 93° Similar treatment was adopted and in four days all trace of oedema had vanished the loss of weight in this case over four days was 1/2 lb One month later the baby was perfectly normal in every way

Final diagnosis Oedema due to hypothermia

Oedema may occur (1) if the infant is put into a warm bath immediately after birth without ever having had a subnormal temperature and (2) if the temperature is subnormal In the latter case the oedema is more frequent and more severe Cold therefore is a contributory factor but the main factor is poor development of the circulatory system and the vessels and blood vessels that are delicate and friable Pitting oedema of the feet is due to dependent oedema of gravity this could easily develop in the arms and legs to bring down when there is swelling of the dependent parts such as the face If the foot of the cot is raised for warmth the baby's head is kept lower than the feet the oedema of the feet drains in a few hours and

* Lecture delivered at Queen Charlotte's Hospital

completely vanished in twenty four hours at the same time oedema of the scalp appears This is not true of all cases for occasionally the oedema of the feet lessens, but does not entirely disappear with change of posture As the infant gets older the strength of the circulation improves and by the age of 3 to 4 weeks all trace of oedema has usually vanished No treatment is required for this type of oedema beyond keeping the baby's temperature normal Naturally if the baby is allowed to run a temperature persistently several degrees below normal the oedema will take longer to disappear

SCLEROEDEMA AND SCLEREMA

In infants as in adults the capillaries are extraordinarily susceptible to cold and if the temperature is allowed to remain subnormal for long serous exudation may take place into the skin and subcutaneous tissues and we have the conditions known as scleroedema and sclerema There is no sharp distinction between oedema scleroedema and sclerema and one occasionally sees a case showing characteristics of two of these conditions simultaneously in all probability it is merely a question of degree depending on the water richness of the tissues and the anatomical distribution of the subcutaneous fat The younger the infant the less the fat deposit but even in the smallest premature infant the fat deposit on the external aspect of the thigh is a few millimetres thick while elsewhere fatty tissue is extremely scarce Consequently if oedema of the feet is present the skin and subcutaneous tissues over this part of the thigh always feel rather hard and firm (scleroedematous) in contradistinction to the soft oedema of the genital region and the internal aspect of the thigh and leg If this hard firm feeling becomes well marked we have the condition known as scleroedema In this the skin and subcutaneous tissues are hard and tough and cannot be picked up properly into folds The skin has a peculiar mottled dead appearance Usually the lower limbs especially the outer aspect of the thighs (for the reasons given above) are involved but the condition may extend so widely up the trunk and limbs that all movements, even sucking are difficult The eyelids and the scrotum are never involved The temperature is subnormal usually about 90° to 93° but it may be as low as 86° and even 77° is recorded Related to this are the extreme lack of movement, the superficial breathing the feeble voice and the small slow pulse—in fact not unlike a case of myxoedema The treatment is simple—namely warmth at all costs—hot baths hot bottles, etc—massage to the limbs and of course breast feeding Since these cases so resemble myxoedema thyroid extract has been given with the idea of stimulating the basal metabolism with excellent results Dr Eric Pritchard recommends that ext thyroid sicc (B W & Co) 1/8 to 1/6 grain should be given three or four times a day and with this dosage I have seen good results when treatment is combined with warmth

A clinical picture somewhat different from this is provided by the infant suffering from sclerema a circumscribed symmetrical fat sclerosis Here the temperature is commonly raised and the infant has small plaques in the subcutaneous tissues over which the skin is reddened, these tend to be symmetrical especially on the cheeks buttocks upper arms and thighs They are very like multiple lipomata, but are harder and attached to the skin not to the subcutaneous tissues With massage they usually disappear after a few weeks Histologically necrosis of the fatty tissue with sheafs of fatty acid crystals are found also oedema cellular infiltration and numerous giant cells The cause of the condition is still unknown

OEDEMA FROM SEPSIS

The second factor we have to deal with is sepsis and one may take the following case as a typical example of this

CASE III

Baby John M born at Queen Charlotte's Hospital on June 17th 1931 with a birth weight of 6 lb 8 oz When seen on July 1st there was considerable pitting oedema of the right thigh reaching high up as far as the crest of the ilium also oedema but rather less of the right foot and shin No oedema of the left leg The temperature of both legs seemed equal and the skin was everywhere normal apart from the oedema Full range of movements of both legs normal tongue Rectal examination nothing abnormal found Nothing abnormal found in the heart lungs abdomen, or central nervous system urine normal For the previous week the baby had been mildly jaundiced Breast fed for one week then owing to failure of breast milk the child was given an ordinary modified milk mixture Two weeks before the baby was born the mother had had puffiness of the face and ankles Owing to poverty her diet had been cut down considerably during the last months of pregnancy no fresh milk had been taken but she had apparently taken plenty of oranges lettuces tomatoes etc No oedema of the ankles was present at this time and the urine was normal Hot bottles were ordered to be placed against the baby's right leg

July 2nd—*Oedema of the right leg unchanged but now* considerable pitting oedema of the left leg and oedema extending upwards over the pubis almost to the umbilicus Urine (sterile catheter specimen) acid reaction faint trace of albumin no sugar pus or blood Cultures showed a few colonies of *B coli* Orange juice 1 oz twice daily was ordered cod liver oil 1 teaspoonful daily and plenty of water

July 7th—The oedema of the legs and pubis has gradually become very marked and abdominal distension is now developing No sign of intestinal obstruction no ascites and nothing abdominal felt per rectum Abdomen tense but apparently no enlargement of the liver or spleen Baby taking feeds well no vomiting Temperature varying between 98 6° and 99 8° *Weight curve stationary* for the last eight days at 6 lb 8 oz Normal stools Examination of a sterile catheter specimen of the urine showed no pus cells but Gram negative bacilli were present which proved on culture to be *B coli*

July 8th—Massive brawny swelling developing over the left thigh with two small areas of fluctuation Much less oedema of the left leg and foot and of the right leg Abdomen softer Aspiration of the fluctuating areas 1 c cm of thick yellow stinking pus obtained which showed a pure growth of *B coli* Cod liver oil 1 teaspoonful three times a day and orange juice 2 oz daily were given

July 10th—Massive oedema and infiltration of the subcutaneous tissues of the left thigh still present pus again removed by aspiration

July 14th—No areas of fluctuation but still a lot of infiltration An incision was made down to the bone over the anterior aspect of the femur and a large amount of pus gushed out

July 17th—Thigh still very infiltrated An incision was made over the greater trochanter down to the bone and again pus was found Following this the oedema and infiltration rapidly diminished and the child was discharged well with the abscesses soundly healed on August 19th weighing 8 lb 6 oz and having gained nearly 2 lb in the six weeks of treatment Urine normal

This child was seen at frequent intervals till the age of 6 months and there was never any recurrence

Diagnosis Oedema due to deep *B coli* abscesses of the left thigh

GENERAL CONCLUSIONS

Nephritis as a cause of oedema in the newborn I have never seen and judging from the literature either it is very rare or does not exist although this diagnosis is often made The youngest cases I know of were twins aged 3 months reported by Finkelstein One baby had

intertrigo extensive oedema and the urine of a haemorrhagic nephritis typical glomerulo nephritis being found post mortem The other twin had oedema but the urine was normal there was complete recovery None of my cases quoted above ever had albuminuria and in one child (case not recorded) that died the kidneys were microscopically quite normal Many of the symptoms such as oedema which were attributed a few years ago to failure of renal function are now believed to be extrarenal in origin the oedema—for example in the typical case of lipoid nephrosis (= chronic parenchymatous nephritis)—being due to a generalized disturbance of salt and water metabolism in which the kidney shares equally with every other vascular organ

It is perfectly possible to have severe oedema without any nephritis and severe nephritis without any oedema Pyelitis in the newborn is not accompanied by oedema—at least not in the half dozen cases I have seen—so examination of the urine in oedema of the newborn practically never gives much help

To sum up then oedema is a symptom of fairly common occurrence in the newborn especially in premature and debilitated infants it is often directly due to the effects of cold in the capillaries and to circulatory weakness If the condition is recognized early and treated promptly the outlook is quite favourable whilst in cases that are febrile it is commonly an early manifestation of sepsis Nephritis is only rarely a cause of oedema in the newborn

LOCAL ANALSTHESIA FOR TONSILLECTOMY

BY

J W COSTELLO M D I R C S Ed

[illegible] [illegible] [illegible]

The difficulty recently experienced by a colleague in finding someone willing to remove his tonsils under local anaesthesia prompts this account of a small series of twenty tonsillectomies done wholly under local anaesthesia The cases were adult private and hospital patients the initial reason for local anaesthesia being the patients desire to avoid a general anaesthetic and a later reason the personal preference of the writer for this method The patients were selected only in so far as they were agreeable to the method and appeared to have ordinary powers of self control In all cases careful examination for other foci of infection was made in order to lessen the risks of troublesome haemorrhage

The general technique employed will be found fully described in my work on local anaesthesia and will be briefly dealt with here particular stress being laid on certain modifications adopted to add to the ease of the patient It is certain that the disagreeable anticipations naturally associated with the operation can be reduced in their fulfilment to something definitely less than the discomforts of many a visit to the dentist Pain should be completely absent throughout but the anxiety caused by the position of strange happenings and what must feel like a core of lethal weapons being rammed home in the victims throat—particularly if the jaw is fixed with a gag—may be so great as to place the operation outside the pale of humane therapy The relief of these feelings however depends upon the handling of the case and the extent to which it may be assisted by the patient In this group who when about to be returned to the ward asked anxiously what had gone wrong and complained that he was being sent back with only [illegible] anaesthetic injected In most cases such a state of affairs cannot be expected to obtain in all cases but it may be closely approximated in a great many cases ordinarily subjected to general anaesthetics

TECHNIQUE OF ADMINISTRATION

Preliminary morphine was given only to an unduly fearful minority and the patients co-operation gained by a short explanation of what was to be expected of him The procedure is as follows

1 The fauces are liberally sprayed with 10 per cent cocaine after cautioning the patient against swallowing any of it

2 In five minutes the injection of 0 75 per cent novocain and adrenaline may be commenced A light spinal and long needle are necessary Injections are made into the upper and lower poles and just outside the margin of the anterior and posterior pillars about the centre Enough should be injected to encircle the tonsil with a band of anaemic tissue and to saturate its bed from which it will project rather more than usual if not too adherent or fibrosed The fracial tissues should not be blown into oedematous folds with the solution

3 By the time the second injection is finished the first tonsil will be ready for dissection This is done with the finger or dissector and scissors but requires considerably more gentleness than is at times used in the dissection of tonsils under general anaesthesia In most cases the work is being done in a field which is nearly dry and one can proceed deliberately The smallest adhesions should be snipped instead of torn It is at this stage that the co operation of the patient becomes particularly valuable as by keeping his mouth well open and pharynx relaxed he will give good exposure of the parts with the occasional help of a tongue depressor used only lightly Any form of gag should be avoided as being too uncomfortable for the conscious patient At any stage the partially dissected tonsil may be held with a swab whilst the patient is allowed to relax his jaw and rest indeed these spells may be encouraged if the tonsil be looked on as a piece of raw tissue and an efficient haemostat

4 After the removal of the second tonsil is completed swabs held in the tonsillar fossae for a few minutes suffice to reduce the haemorrhage to a point which just colours the saliva and the patient is able to walk back to the ward or be driven to his home

COMMENTARY

In no case was there enough bleeding to require the use of a suction apparatus to maintain a clear view of the field of operation throughout Some of the cases were practically bloodless The only complaint made in the first hour or so after the operation was the difficulty in swallowing As the effects of the anaesthetic passed off the patient seemed to complain of rather more first-day pain than is found in the case of those receiving a general anaesthetic This however would be explained by the lack of the dulling effect of a general anaesthetic and a certain sense of disappointment following their early cheerfulness In no case was there any troublesome reactionary haemorrhage the total blood loss [illegible] only a fraction of that usually experienced There was no appreciable difference in the convalescence Perhaps the use of some other solution giving a more permanent partial anaemia of the during of the tonsillectomy with some such substance as adrenaline powder would be desirable [illegible] the after pain and leave the [illegible] only pleasant memories of his tonsillectomy

Without entering into any detailed discussion of the virtues of various methods of general and local anaesthesia [illegible] removed from the [illegible] and satisfactory [illegible] with any local anaesthetic [illegible] tonsillectomy [illegible]

was about thirty minutes Other requirements are a large measure of sympathy and confidence between patient and operator and what may not unfairly be described as a certain daintiness of touch on the part of the surgeon An anæsthetic method which demands these last two qualities seems to be no bad training for a surgeon whether junior or senior and the wider development of them might do much to improve the current standards of local anæsthetic administration which seem too often to justify the unfavourable opinions held of them

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

AN UNUSUAL CASE OF SUBPERITONEAL UTERINE FIBROID

(With Special Plate)

In view of the large size of the tumour and the very slight inconvenience which it caused the following case is I think worthy of record

The patient Miss P first consulted me on January 16th complaining of some slight abdominal pain and discomfort On examination she was found to have a large abdominal tumour of pelvic origin more marked on the left side than on the right and reaching to above the umbilicus The tumour was of firm consistence solid and smooth in outline It was freely movable from side to side and occupied the whole of the lower abdomen It was not painful or tender on palpation Vaginal examination made without anæsthesia was indefinite owing to the absence of relaxation of the patient The uterus was not softened the breasts showed no pregnancy signs menstrual history and date a regular and normal flow and duration X ray examination was negative

Operation performed on January 20th revealed an enormous subperitoneal fibroid arising from the fundus of the uterus and attached by a short pedicle The uterus itself contained several other small fibroids—mural and subperitoneal The pedicle was clamped the tumour removed and hysterectomy performed The patient made an uneventful recovery The weight of the tumour was 8 lb the circumference 30 in the length 9 in and the breadth 6½ in Fig 1 (on Plate) illustrates the size of the growth by comparison with the scale measure by its side

I wish to express my thanks to my partner Dr P Kinmont for his assistance with the case

SIDNEY B RADLEY F R C S
Honorary Surgeon Newark Hospital

FOREIGN BODY IN THE COMMON BILE DUCT

Few cases have been reported of a foreign body being found in the common bile duct Oppel[1] reported a case in which a patient had the operation of cholecystectomy and some four months later developed a fatal peritonitis A swab was found in the common bile duct this had apparently migrated from the peritoneum as the bile duct had not been opened at the previous operation Lemierre and Pollet reported a case in which a liver abscess occurred in an insane patient This was due to a swallowed spoon handle which had entered the common bile duct via the ampulla of Vater Fedoroff[3] reported a case in which following an operation for gall stones the wound was drained by a T shaped drainage tube On the seventeenth day when the tube was going to be removed the vertical portion had already been extruded from the wound while the short horizontal part had remained in the duct (which was opened at operation) For two and a half years there were no symptoms but then the patient developed attacks of colic with occasional jaundice After a further two years the patient was operated on again The tube was found in the retro duodenal portion of the common bile duct and had undergone no changes whatsoever during its five years stay Recovery was uneventful In view of the few such cases reported the following may be of interest

REPORT OF CASE

The patient a man aged 65 was admitted to the Derby City Hospital in June 1931 complaining of indigestion vomiting and pain which he located under the right costal margin He also described a lump which he said he could feel there The history extended back for an indefinite period but his symptoms had been more marked for some two or three weeks There was no history of jaundice or colic On examination the patient was well nourished and on the whole in moderately good health On palpation a rounded tender swelling below the liver suggestive of an enlarged gall bladder was clearly felt There was no general enlargement of the liver and the patient was not jaundiced The temperature was normal His symptoms improved but the swelling continued to be palpable Cholecystography showed no shadow in the area of the gall bladder after fourteen or eighteen hours

At operation the gall bladder was found to be distended and contained a mulberry stone of medium size in the cystic duct some smaller stones being present in the gall bladder Palpation of the common bile duct revealed no further stones but a piece of wire was felt to be projecting through the lateral wall of the duct just below the termination of the cystic duct Cholecystectomy was performed the piece of wire removed and the operation completed in the usual way

During his convalescence the patient was questioned about the origin of the wire but was unable to shed any light on the matter At no time could he remember the possibility of having swallowed it accidentally No previous operation had been performed on the patient and presumably the article in question must have been swallowed at some time and have migrated up the common bile duct

The wire was just under one inch in length and was bent in the shape of an I the shorter arm having perforated the wall of the duct it was steel wire approximately 0 001 inch thick and had not been corroded to any great extent

I am indebted to Dr R Strom Olsen for assistance with the translation of the references

R G COOKE
Derby Medical Superintendent City Hospital

REFERENCES

[1] Oppel *Zentralbl f Chir* 1926
[2] Lemierre and Pollet *Bull et Mem Soc Med de Paris* 1927
[3] Fedoroff *Zentralbl f Chir* 1930

GANGRENE AND PERFORATION DUE TO EMBOLISM OF THE INFERIOR MESENTERIC ARTERY

An account of this condition appearing in the *British Medical Journal* of January 30th 1932 prompts me to record a somewhat similar case that came under my notice a few years ago at a time when I was acting as resident clinical assistant in one of the city mental hospitals

Clinical History

The patient a stout man of about 64 years of age enjoyed perfect health until the onset of this fatal illness His first complaint was that his bowels had not moved for some days and Epsom salts had been taken with no result Castor oil was then given by the attendant in charge and the following day though he complained of abdominal discomfort he still passed nothing per rectum Throughout the day the attendant reported nothing further but on doing the evening round of the institution I examined his abdomen and discovered that it was distended and markedly rigid Slight tenderness was experienced on palpation more marked in the right iliac fossa Pain fairly severe and now constant was complained of all over the abdomen especially in the right iliac fossa Temperature 103° pulse rate about 100 The patient was removed to hospital where a further examination was made on the arrival of the surgeon The abdomen was now board like and severe pain was complained of on palpation There was also collapse and a rapid and feeble pulse On opening the abdomen it was evident that peritonitis had been present The intestines especially the colon were adherent to omentum

ritoneum and fat were pink, the gut being practically black. The appendix was found—pink normal and covered with a good mesh of fat—and removed after securing an appendix stump effected. The patient had died about twenty-four hours after the operation.

Post-mortem Examination.

On opening the abdomen the peritoneal cavity was half full of fluid having a strong fecal odour. We followed the intestines throughout their course. The appendix was still in situ and normal to all appearance except that it was firmly adherent retrocecally. For about six to eight inches the colour of the peritoneum and fat attached was a bluish black and gangrenous, the bowel wall itself being as thin as tissue paper for about three or four inches. At one point in it a hole into which an ordinary match head could easily enter was discovered. Obviously the blood supply to this part of the bowel was partially or completely cut off. There was no volvulus or intussusception. The heart and aorta were removed complete. Heart and proximal aorta appeared normal, and the intima of the aorta was perfectly smooth until the level of the third lumbar vertebra was reached, when for about one inch there was some hard, shelly, calcified material. This surrounded the orifice of the inferior mesenteric artery, which was itself much narrowed. A piece of the calcified material was found impacting the vessel just below the point at which the left colic branch is given off.

Commentary.

The feature of this case was the absence of a history warranting the correct diagnosis. Only a few hours prior to the operation was there any suspicion of an acute abdominal condition. Throughout the illness the patient did not vomit, and the only sign suggestive of acute obstruction was the absolute constipation. Blood or mucus was not passed. Another interesting point was the localized atheromatous change in the aorta at the level of the third lumbar vertebra. The intimal change at that site was rightly or wrongly attributed to the fact that the patient always wore a leather belt round his waist instead of braces, thereby increasing the *local tension** in the artery at that level, a factor which seems to be concerned to some extent in the aetiology of atheroma. The Wassermann reaction was negative.

H. SEY[illegible] CHARLES D. FREEMAN, M.B., Ch.B.

* Vide Mann, *Lancet*, i., 1932, p. 1.

Reports of Societies

NEPHROSTOMY IN THEORY AND PRACTICE

At the meeting of the Section of Urology of the Royal Society of Medicine on April 21st, with Mr. KEITH JOHNSON in the chair, an address was delivered by Dr. HUGH CABOT of the Mayo Clinic, Rochester, U.S.A., entitled "Nephrostomy in theory and practice."

Dr. CABOT said that nephrostomy as an emergency procedure was a very old operation, but the earliest discussion he could find did not date back beyond the eighties of the last century. At that time two important questions attracted attention—namely, the rapid return of function and the effect of drainage through the kidney substance on infection. After a glance at the historical aspect of the subject he considered the application of nephrotomy in three groups of cases: (1) calculus disease, (2) chronic hydronephrosis with or without infection, and (3) chronic infection of the kidney. In calculus disease he said that the operation was described in cases showing marked dilatation of the pelvis and the calyces. He believed that in the uncomplicated case of infection to an unimportant degree. The only cases [illegible] from the standpoint of chronic infection which had been excised. He referred to the [illegible] of a small [illegible] was [illegible] kidney due personal to one [illegible] which [illegible] had been present for a long period. He [illegible] was [illegible] to regard nephrectomy as the only safe operation. He [illegible] advised that operation if they were [illegible] on the other side even though of quite small [illegible] and doing no great damage. He [illegible] had been on account of the number of cases in which a stone bearing kidney on one side having been removed, stone promptly developed in the other kidney which had been free from trouble for many years. A stone bearing kidney on one side might be in some ways a safeguard to the other kidney. It was certain that in some instances the development of stone upon the other side had been extremely rapid. This suggested the possibility that the disturbance of the chemical mechanism whatever it might be was thrown from the kidney which had developed stones on to the kidney which had not the protective mechanism to look after itself. He was therefore becoming less willing to perform a nephrectomy and more desirous of seeing what could be done with an apparently seriously damaged kidney. In the same group came the cases of pyonephrosis without stone in which undoubtedly a hydronephrosis had become infected. It was in this type of case that the problem of determining the function of the kidneys seemed most troublesome. For many years the fact had been recognized that it was not possible to find out with any accuracy the function of a kidney containing a stone, but in a kidney which appeared to have a considerably depressed function this would return to something approximating to normal after removal of the stone. Cases of pyonephrosis, however, were frequently reported as having a completely functionless kidney; this should mean a kidney incapable of function, but that was not so. He had now the records of forty-two cases in which no function other than a moderate exhibition of water could be demonstrated by the methods available, but after drainage and removal of stone—if stone existed—a return of function to something like 50 per cent. of the original capacity was discovered. Therefore even with the very elaborate and delicate means now used one was not entitled to say that a given kidney was incapable of function. He had been continually surprised by the ability of the kidney to take up its work when obstruction had been removed. It was conceivable that the process which normally went on in the kidney whereby only a portion of the glomeruli were in action at any one time might under adverse conditions extend to the whole kidney, so that it might be possible for the kidney to be allowed for a considerable period. If the active glomeruli were reduced from say 20 per cent. to 3 per cent. the kidney might still continue to live and keep its anatomical structure. At any rate the clinical judgement that a kidney was worthless had often to undergo serious reconsideration. He knew of no method likely to be so helpful as nephrotomy in clearing the possible value of a kidney which had been adjudged to be worthless.

Dr. CABOT next discussed the advantages of nephrotomy as compared with pyelotomy. The first [illegible] much greater certainty of continued satisfactory [illegible] more important question was the effect of nephrotomy on function and on infection. His own experience [illegible] led to the conclusion that the working capacity of the kidney would return to the extent of [illegible] removed kidney to [illegible]. The effect on infection was much more difficult to judge. He did not find in the literature of the years [illegible] any great clear proof [illegible] in the process for which [illegible] had been excised. He referred to the [illegible] and [illegible] the [illegible]

chronic infection however was a much more difficult question At the Mayo Clinic there were a number of patients who had had a nephrostomy draining for several years Thus a kidney of some value was preserved—a kidney which had been severely infected at the start, was always moderately infected commonly showed urea splitting organisms but carried on as a useful organ which it was well to preserve in the presence of an injured kidney on the other side In the presence of two bad kidneys one might think it proper to maintain a kidney of that kind unless it could be shown that it was a menace to the remaining kidney but he did not think that evidence would support that view

To sum up he believed that nephrostomy had a larger field than had been customarily allowed If it was applied to a doubtful kidney infected whether stone were present or not there was a likelihood of the kidney being saved when otherwise it would have had to be sacrificed In a number of cases chiefly with cancer in one form or another permanent nephrostomy was not more socially inconvenient than permanent colostomy He remembered well the day when he regarded permanent colostomy as a condition so shocking that *had he* been the patient he would probably have preferred to die Now it was known that patients lived comfortably with a permanent colostomy for many years The same thing was true of nephrostomy If the tube was accurately placed it could be looked after by the patient himself and changed by him after some experience He was inclined to reinforce a suggestion made by Watson in 1910 that in the presence of bilateral calculus disease a permanent nephrostomy on one or both sides might preserve the kidney tissue from further destruction and he proposed with some reservations that it was just barely possible that nephrostomy in the presence of calculus disease might inhibit or entirely put an end to the further development of calculi in that kidney though he admitted that there was not very much evidence as to that At his clinic there were three patients who had lived for three six and fifteen years respectively after a nephrostomy These had had recurrent calculi and after the nephrostomy had been performed the calculi had not recurred A colleague had reported two cases in one of which he had done a nephrostomy four years previously and in the other two years previously for recurrent calculi and the calculi had not since returned Probably the case of longest duration was that originally reported by Watson in 1910 in which there was no evidence that the calculi increased in number (they had not been entirely removed) and the patient lived with good kidney function and apparently without any further development of calculi for twenty five years after the first operation which took place in 1905 a second operation on the other side being performed in 1909

Sir JOHN THOMSON WALKER raised the question of terminology He thought that in this country the terms nephrostomy and nephrotomy were more rigidly employed than in America Nephrostomy was looked upon as a permanent condition and therefore they did not usually qualify it as Dr Cabot had done by the word permanent Nephrotomy even if it meant draining the kidney for a few weeks was regarded as a temporary condition The surgery of the kidney in this country in regard to bilateral stone was conservative but he could not say it had been his experience that the removal of stone from one kidney encouraged the development of stone in the other In fact the opposite had been illustrated If a stone which was septic was left in one kidney later on one was likely to find stone developing in the other

Mr F A G JEANS expressed his thorough agreement with the remark made by Dr Cabot that if he had a bilateral condition of calculus he went for the best kidney first

Mr JOCELYN SWAN said that he was a little bit sceptical as to whether the improvement in renal function after drainage as recorded by renal tests could really be looked upon as a true improvement He thought that the depressor action of the stone had diminished the renal action in the earlier tests and that to this fact was attributable the apparent restoration of function after the stone had been removed

Dr CABOT taking up the point of terminology said that he had confined the termination otomy to mean incision Where drainage temporary or permanent was employed the s ought to be inserted He agreed that nephrostomy was not an operation to be substituted in any way either for the operation of nephrectomy if the other kidney was sound or for the operation of transplantation of the ureter

MOUTH BREATHING AND NASAL OBSTRUCTION

At a meeting of the *Section of Odontology of the Royal* Society of Medicine on April 25th Mr W WARWICK JAMES and Mr SOMERVILLE HASTINGS presented a paper illustrated by slides and models on mouth breathing and *nasal obstruction*

Mr WARWICK JAMES said that for many years Mr Hastings and he had been jointly examining patients suffering from conditions generally believed to be associated with mouth breathing In man nose breathing was normal in all races although the use of the mouth to supplement normal respiration occurred during severe muscular exertion and also in special acts such as yawning coughing sneezing and crying Again under conditions which demanded rapid filling of the lungs with air inspiration was more effective through the mouth than through the nose But the powerful urge to breathe through the nose was present in all individuals It was marked at birth and appeared to diminish in old age He and his colleagues had examined fifty three infants of 1 to 14 days while asleep in the maternity wards of the Middlesex Hospital in every case breathing took place exclusively through the nose It surprised them to discover how very few children who habitually had their mouths open really made use of them for respiration in ordinary circumstances They tested fifty four open mouthed children comprising those who came to the out patient department before operation for tonsils and adenoids and had then been admitted to the children s ward for other conditions In ten of these the mouth was used for breathing by day though at night three of the ten used the nose only the remaining forty four although they had the mouth open by day breathed through the nose Several adults who had their mouth open habitually were tested by day but in each case the nose only was used for respiration In old age especially when the teeth were lost the mouth was often open at night It had been generally concluded that because an individual had his lips apart he of necessity breathed through his mouth but this was not the case Certain abnormal pathological conditions usually described as associated with mouth breathing were therefore more correctly enumerated as accompaniments of failure of one or both oral sphincters When careful examination was made of a mouth breather the conditions were found to be far less simple than would at first appear The presence of a normal negative pressure in the oral cavity during periods of rest was a most important factor the pressure might be slight, but if it failed a sequence of events resulted with all the changes due to mouth breathing The most important changes were associated

with the position and action of the tongue and various deformities could be explained according to the relationship of the tongue to the palate and the dental arches. The anterior sphincter (the lips) was most easily observed and its failure might follow any condition of ill health which produced muscular weakness. In twenty-six out of fifty-two cases of failure of the anterior sphincter investigated there was a history of severe illness or operation in infancy and it would seem that the muscular weakness resulting from this experience initiated the habit. In old age when the musculature had become enfeebled the mouth tended to drop open during sleep. In this case however the posterior oral sphincter (soft palate and tongue) often failed also and mouth-breathing resulted. *During mental concentration the mouth some*times dropped open presumably as a result of muscular relaxation but the condition was only temporary. Failure of the anterior sphincter often occurred in several members of the same family parents and children and perhaps imitation was an important factor. In discussing the possible causes of mouth-breathing the mucous membrane of the nose had to be considered especially that covering the inferior turbinate bones and containing erectile tissue which was liable to swell in conditions of catarrh and also when the atmosphere was warm and moist. Superabundance of clothing by day and especially by night by interfering with normal perspiration might result in the increased need for loss of fluid from the nose and swelling of this erectile tissue. The prone position often resulted also in increased swelling of the mucous membrane.

Mr Warwick James put forward the following conclusions. The urge for respiration through the nose was so great that mouth-breathing was established with difficulty. Oro-nasal breathing was rare. A negative pressure was normally present in the oral cavity and was lost by failure of one or both oral sphincters. This loss of pressure in the mouth was associated with *impaired action* of the tongue lips cheeks and other moulding forces of the jaws and deformities of the jaws resulted from the impaired and misdirected action of these forces. Failure of the anterior oral sphincter was common but did not indicate mouth-breathing. Failure of the posterior sphincter resulted in absence of fixation of the soft palate to the tongue with impairment of the airway. A backward position of the mandible resulted from failure of either oral sphincter and was most marked when both failed. Nasal obstruction by adenoids rarely occurred although associated catarrh and swelling of the erectile tissue might diminish the airway. Finally deformities of the nose and face were rather the cause of nasal obstruction than the result of it.

Mr T. B. Layton remarked that for some time mouth-breathing was understood to be the cause of a particular configuration of the face which characterized large numbers of people in this country. It was now suggested that mouth-breathing was practically non-existent. Adenoids was a term which had been used to denote a *clinical entity*. It was necessary however to go beyond any local lesion in the nose and throat and search more widely for the cause in some conditions affecting the whole body. Mr A. R. Friel described various mechanical lip-exercising devices for inducing closure of the mouth. Mr Lowndes Yates referring to the importance of posture pointed out that whether a child breathed through its nose or mouth depended upon the position in which it slept. Mr E. D. Davis urged closer co-operation between the laryngologist and the odontologist. Mr J. G. Turner considered adenoids a local disease. A large number of children otherwise well grown nevertheless suffered from all the disabilities that adenoids could produce. Dr R. P. Garrow said that the more he had seen of operations in school children for the removal of tonsils and adenoids the less he liked them. A great service would be done if copies of the paper were sent to every school medical officer in the country. Mr Harold Chapman said that in many cases patients were forced to keep their mouths open owing to the position of the teeth.

Mr Somerville Hastings in reply said that very few children breathed through the mouth though many kept the mouth open. What had been called adenoid facies was a condition in which the mouth was open but not necessarily used for breathing. When adenoid tissue became infected it might act as a septic focus and cause nasal obstruction and give rise to trouble in other ways. Mr Warwick James explained that there were many aspects of the subject and the paper had dealt only with local changes. He agreed as to the importance of posture and the value of lip exercises in correcting bad habits provided the device was suitable and the patient properly instructed.

TUBAL GESTATION

A meeting of the Section of Obstetrics and Gynaecology was held on April 15th at the Royal Society of Medicine when a paper was read by Professor H. Leith Murray on tubal gestation.

Professor Murray said that he had made a detailed analysis of 146 cases of tubal gestation. Few of these had exhibited anything very unusual with these exceptions—a case in which a lithopaedion weighing 3½ oz. was found; a case of combined intra- and extra-uterine pregnancy; a case *complicated by bilateral teratomata* and one associated with acutely necrobiotic fibroids. Only four others out of the whole series were really desperate emergencies. In the majority of cases there was a more or less prolonged history of pain and bleeding. The mortality in this series was two, one patient dying of pulmonary embolism on the eighth day and the other of septic pneumonia associated with a pelvic abscess. The average age was 30·5 years. The youngest patient was 20 and the oldest 42. In this particular series the number of ectopic gestations arising in the right tube was greater than that in the left. In 70·5 per cent. the pregnancy occurred in the ampullar portion of the tube. In discussing the termination of tubal gestation the speaker stated that probably a spontaneous cure did occur in many cases by tubal abortion and less frequently by absorption *in situ*. In 146 cases operated on 50 per cent. were almost extruded or appeared likely to have been so if they had been left. In discussing rupture of the tube Professor Leith Murray divided his cases into (1) primary intratubal rupture—that is tubal abortion; (2) primary extratubal rupture either intraperitoneal or intraligamentary; (3) secondary extratubal rupture intraperitoneal or intraligamentary. Of these he considered that primary intratubal rupture accounted for 92 per cent. Not a single case in the whole series was a primary extratubal rupture. Six cases showed secondary extratubal rupture. Turning now to the aetiology of this condition he supported strongly the view that chronic salpingitis and appendicitis were large factors in causing *ectopic gestation and also* called attention to the fact that a reduced fertility was very frequently found in such cases.

In the discussion Dr Wrigley said that an examination of the figures at St. Thomas's Hospital in the last five years corroborated Professor Leith Murray's observation on the incidence of pelvic inflammation in cases of *ectopic gestation*. In very nearly one-half of the cases he had observed obvious inflammatory lesions were present usually in the Fallopian tube of the opposite side.

Mr A Gemmell and Professor Leith Murray then made a communication on two cases of simultaneous intra and extra uterine pregnancy The authors stated that they had collected 214 cases from the literature Although not of great rarity such cases were probably outside the experience of most gynæcological surgeons The two cases were then described in detail In the first case at operation it was deemed advisable to empty the uterus as well as to excise the ectopic gestation but in the second the intrauterine pregnancy was allowed to go to term After a careful analysis of many papers on this interesting subject the authors came to the conclusion that there were no definite criteria on which to base a prognosis of the fate of the intrauterine ovum but where the tubal gestation was removable by operation the prognosis for the intrauterine foetus would appear to be good In twenty one cases an intrauterine pregnancy took place in a patient who already had an ectopic gestation and in this group three of the patients died

LAW AND ETHICS OF ABORTION

At a meeting of the Edinburgh Obstetrical Society held on March 9th with the president Dr James Young in the chair Professor Sydney Smith read a paper entitled

Abortion—a discussion on its social legal and ethical aspects

Dealing with the legal position of the procuring of abortion as defined by the Defence against the Persons Act of 1861 Professor Sydney Smith said that in this Act the words unlawful emptying of the uterus as mentioned specifically This would indicate that the law recognized a "lawful" operation even although it had been held by many authorities that there was no sanction in law for abortion of any sort whether medically justified or not The speaker took exception to this view and said that the law apparently did recognize that abortion might be performed when there was just cause for the operation What constituted a just cause was a difficult matter to decide as there were no legal pronouncements on the point but up to recent years medical men were of opinion that abortion should be carried out only when it was necessary in order to save the life of the mother or to prevent serious impairment of her health Lately however in discussions by leaders of the medical profession other conditions such as nervous debility neurotic and psychoneurotic states had been put forward as good reasons for inducing abortion and with this formidable and elastic list there would seem to be plenty of scope for the complacent physician He did not agree with a number of these reasons Professor Smith then gave a somewhat detailed account of the question of abortion in the time of Plato and Hippocrates and showed how it had become more and more prevalent in the later years of the Roman Empire when abortion was often committed for sheer vanity so that the breasts should not have their shape spoilt by lactation nor the bellies by the scars of pregnancy In Rome it was usually the midwives the wise women and the sorceresses who lived in the lower districts who committed the acts Before the Christian era abortion was rife and was apparently little thought of and wise writers like Aristotle and Plato appeared to have been quite in favour of it In general the early Greeks and Romans looked with approval on abortion for it was considered that the foetus was not a separate being but part of the mother—to be disposed of as she thought fit Throughout the early Christian era there was no law on the subject but the Church always set its face against the practice and had interpreted the commandment Thou shalt not kill as including abortion The Church still objected to abortion and the Roman Catholic Church did not consider that abortion was justified even to save the life of the mother

Lately there had been growing up a considerable body of opinion which was disinclined to bow to the ethics of past generations and individual knowledge regarding sex matters had been greatly increased Also wider facilities were open to a woman now than formerly and her intellectual standard was on a correspondingly higher plane This had equipped her better for the struggle for existence but had not aided her to bear better the strain of reproduction there was a greater tendency to shirk the discomforts of child bearing and, added to this probably a greater tendency towards nervous and mental instability The modern woman had her own point of view and that was that she had control of her own body and if she was not inclined to go through the trouble and inconvenience of child bearing there was no moral right to compel her to do so This view appeared to be quite illogical for though it must be decided to a certain extent by the individual in the control of her own body the State must exercise control over the destruction of its future citizens

The speaker then gave statistics to show how great was the prevalence of abortion at the present time and how impossible it was in this country at any rate to obtain correct figures because only a very few cases of procuring of abortion came to light In Germany there had been a steady fall in the birth rate with a rise in the abortion rate from 16·8 per 100 conceptions in 1913 to 30 per 100 in 1924 Though the law concerning abortion in Germany was similar to the law in this country there had been many discussions on the advisability of advocating the legalization of abortion on grounds other than medical In Russia the incidence of abortion was so great after the revolution in 1917 and the maternal morbidity and mortality so appalling that the Soviet Government in 1920 authorized the operation in certain circumstances In that country abortion could be carried out only by medical practitioners and in public hospitals it still being a crime for any unauthorized person to interfere with pregnancy before abortion could be induced the woman had to make application to a representative board for authorization to be granted In the year 1924–25 254 000 abortions were carried out in Soviet Russia whereas in Leningrad in 1929 58 000 abortions were registered and only 59 000 births In Russia it was found that abortions were desired principally by multiparous women and not by women pregnant for the first time Professor Smith then gave a series of statistics of reasons for the desiring of abortion and compared them with some of the reasons for refusal of abortion by the committees It had been found in Russia that the legalization of abortion had caused a diminution in maternal morbidity and deaths and that the number of patients entering hospitals for uterine hæmorrhage was steadily decreasing and the number of cases of puerperal sepsis was also said to have decreased In the report of the Departmental Committee on Maternal Mortality and Morbidity the committee came to the conclusion that abortion played a serious part in the production of puerperal sepsis and in the causing of maternal morbidity and deaths He considered that we could effect an immense saving in maternal life and health if we could prevent ignorant intervention with pregnancy This could not be secured by repressive measures and that being so the law of abortion ought to be changed so as to allow these unfortunate desperate women to place their cases before some authority who could upon sufficient cause being shown authorize the termination of pregnancy under decent conditions instead of as at present forcing her to place herself in the hands of an ignorant abortionist

Reviews

OLD AGE AND REJUVENATION

Everyone hopes to attain a ripe old age and how best to do so is of perennial interest Sir HUMPHRY ROLLESTON writes of the *Medical Aspects of Old Age*[1] with the charm elegance and wide knowledge which we now take as a matter of course in his contributions to the literature of medicine The present book is the second edition of an expansion of the Linacre Lecture which he delivered at Cambridge in 1922 It opens with a consideration of the duration of life and leads to the *dismal conclusion* that a larger number of average people now reach old age but to some extent this is a survival of the less fit and the average length of life has not been accompanied by an increase in the staying power of the race The real number of centenarians is not yet known The *majority of persons* claiming to have reached one hundred years come from countries where there is no satisfactory system of birth registration and when this has been placed upon a satisfactory basis it will be interesting to ascertain whether centenarians increase or diminish in number The onset and progress of old age is then carefully detailed and it would be well if the attention of the legal profession were drawn to these chapters It would save many social scandals if it were more generally recognized that grave departures from ethical standards in those who have previously led blameless lives was evidence of senile degeneration and not of vice Sir Humphry Rolleston considers the causes of old age and the various *forms of treatment* which have been advocated for rejuvenescence from the time of Brown Sequard to Voronoff and states that the consensus of opinion is adverse to any real and permanent rejuvenation by any of the operative *measures* which have been advanced up to the present time In regard to the pathological hypotheses put forward by Metchnikoff and Arbuthnot Lane he says The safest conclusion is that normal old age or senescence has not been proved to be due to toxins absorbed from the alimentary canal The normal structural changes occurring in physiological old age are discussed organ by organ and tissue by tissue in a manner which would have delighted Sir George M Humphry who was among the first to interest people in centenarians and their habits Finally a chapter is devoted to the masterly description of old age by the poet physician who wrote the first draft of the book known to us as Ecclesiastes or the Preacher—a description worthy to be placed side by side with the picture of the facies hippocratica which has also come down from classical times The book is well illustrated with six pictures of persons reputed to have attained *fabulous* ages and a portrait of Sir Henry Pitman an authentic centenarian who was registrar of the Royal College of Physicians in London There are two indexes the one of authors the other of subjects both full and accurate

The Conquest of Old Age Methods to Effect Rejuvenation and to Increase Functional Activity has been ably translated by Dr and Mrs Paul from Dr PETER SCHMIDT'S German work published in 1928 to which numerous additions up to the late summer of 1930 have been made The author brought out in 1924 an English work on Steinach's operation and the present large volume which is intended for the educated layman as well as for medical readers contains a strong plea for this method of rejuvenation In addition it deals with the history of rejuvenation from ancient times with endocrinology in general and especially of the gonads the methods of rejuvenation and the results A number of case histories are given but successful cases have admittedly been selected for the author considers that there is not any object in reporting failures The demand for statistics of the results of Steinach's operation of ligature of the vas deferens are regarded by the author as evidence of a lack of insight into the peculiar and exceptional nature of the operation and he contents himself by stating that his results in the two years previous to the publication of this work were better than the 77 per cent of successes published in America by H Benjamin in 1926 During the period since 1920 the author has travelled widely and thus finds it difficult to follow up his cases It is frankly admitted that nothing like 100 per cent of successes can be expected Voronoff's transplantation operation is regarded as necessary only when Steinach's vaso ligature is unlikely to be successful For *rejuvenation of women diathermy* is preferable to x ray exposures of the ovaries Though the work covers a wide field the impression left by this advocacy of rejuvenation by Steinach's operation is not convincing

INDUSTRIAL DISABILITY

The assessment of industrial injuries is considered fully in a new book *Accidental Injuries*[2] by Dr HENRY KESSLER The seven hundred pages of this admirable work cover a wide range of subjects and include an account of the relation of trauma to particularized diseases some of which are not included in the British Schedule of Industrial Diseases 1928 While the general reader as well as the expert will find ample matter for reflection the cases quoted as examples and the tabulated material are for the most part American and hence do not enhance the value of the text for the English reader For those conversant with British methods as practised in our courts however the data thus illustrated will be found of value for comparative purposes

The author's main object is to elaborate a technique and method for estimating the extent of impairment caused by an industrial accident—an aim in which he is definitely successful Each portion of the body is described in great detail from various points of view For example in the section dealing with the upper limb the development adaptation and physiology are severally discussed in relation to the limb as a whole The physiological principles are considered with reference to the musculature the joints and co ordination and the elements of evaluation in terms of function Taking the limb as divided into radicals the hand radical is described in terms of hand tools as a hook a pair of pliers and a ring and its function in this respect is illustrated Examples of disability calculations are given The system is *fairly simple and is dependent in some measure* upon mechanical devices which should assist in the elimination of guesswork Similar treatment is accorded to the lower limb as well as to the spine head injuries the thorax the abdomen There are also sections devoted to hernia the genito urinary apparatus the eye throat nose ear and teeth and face Diseases caused or aggravated by injury are considered in detail The system of calculating visual defects will possibly be found a little difficult of comprehension for those who are not ophthalmic surgeons and the statement that a person is industrially blind whose vision is insufficient for ordinary work is rather vague An example of the numerous conditions which may be considered as results of injury may be given from

[1] *Medical Aspects of Old Age* By Sir Humphry Rolleston B CCVO MCB MD Hon DSc DCL LLD Second edition London Macmillan and Co Ltd 1932 (Pp xv + 295 7 plates 7s 6d net)

[2] *The Conquest of Old Age* By Peter Schmidt MD Translated by Eden and Cedar Paul London G Routledge and Sons Ltd 1931 (Pp xvii + 311 40 plates 21s net)

[3] *Accidental Injuries* By Henry H Kessler MD FACS PHILA London H Kimpton 1931 (Pp xx + 718 157 figures 45s net)

the section on the teeth "Loss of teeth, dependent upon their number and position causes a reduction in the masticating surface difficulty in chewing, prolongation of the time necessary to eat a meal gastric disturbances and occasionally loss of strength" Some entities are included such as the traumatic origin of diabetes insipidus endocarditis and heart block the latter occurring nine months after a severe injury to the chest wall The author considers gastric ulcer a possible sequel to epigastric injury The last chapter is devoted to the rehabilitation of the physically handicapped In it is described the evolution of a scheme which began in New Jersey in 1919 its principles being adopted later by forty four States The services rendered to the disabled are physical restoration vocational training, and placement in a job The importance of attaining the maximum physical restoration in each case by surgical methods rather than by training the disabled for a new occupation is insisted upon

In the general section emphasis is laid upon the biomechanics of injury the elasticity of various tissues being described in terms of Young's modulus The characteristics of specific trauma are admirably dealt with and the end results of trauma are described with reference to the skin neurotrophic and neurovascular disturbances fibrosis muscles nerves bones and joints A form of disability rarely if ever taken into account is referred to as prosthetic It appears that in some occupations at least this form of lowered wage earning capacity should be compensatable Another matter which often causes confusion is the determination of permanent disability—when a condition merits this term and when the patient should be considered to have reached his optimum These matters are discussed at some length The text is copiously and clearly illustrated and admirably captioned for reference purposes There is a full bibliography appended to each chapter an excellent index at the end and a clear table of contents at the beginning Statistical data examples and case records are profuse throughout This is in short an admirable and painstaking work the medical (in contradistinction to the legal) part of which should be of great assistance to the large body of practitioners who have to deal with the many phases of the Workmen's Compensation Act and the contracting out system in this country

DIAGNOSIS OF NERVOUS DISEASES

The seventh edition of Sir JAMES PURVES STEWART'S book *The Diagnosis of Nervous Diseases*[4] adds still further to the mass of valuable information contained in the previous editions In form the book remains unique in the English language and among neurological works it is pre-eminent in that its descriptions of clinical syndromes convey clear impressions of patients suffering from the diseases and lesions in question

In his inclusion of the most recent results of experimental neurology—results which he very fairly acknowledges as appealing to him as being correct—the author has brought this work thoroughly up to date It will however be almost universally agreed that some theories are given unmerited currency Thus the explanation of muscle tonus in terms of the sympathetic innervation of non-striated sarcoplastic elements of skeletal muscle has nothing to recommend itself while the explanation of the sensory changes resulting from peripheral nerve damage in terms of separate protopathic and epicritic fibre systems has outlived its usefulness as an hypothesis and should be abandoned It is to be regretted that in practice is maintained of beginning with a chapter on symptomatology and physiology divorced from the diagnosis the material of all later chapters The effect of this arrangement is to force the book into the form which answers the question Given a symptom what are the diseases from which the patient may be suffering? instead of maintaining the more satisfactory sequence of investigation expressed as given a symptom to what disturbance of function is this due where is the site and what the nature of the lesion what are the other symptoms which may be expected—that is what is the disease present? The form here adopted lends itself too readily to the practice of spotting the disease and to a phenomenological attitude toward patients which may provide an impressive display of clinical acumen in out-patient clinics but which is to be discouraged as a method of approach to neurological problems

The book is admirably illustrated and indexed and deserves the same success which previous editions have earned

SULPHUR BACTERIA

The *Sulphur Bacteria*[5] which form the subject of a monograph by DAVID ELLIS are practically an unknown quantity to the medical bacteriologist He dimly recalls that there are such organisms and that they are characterized by the presence of sulphur granules in their ectoplasm but beyond this his knowledge does not go And yet these sulphur bacteria are of abounding interest and importance to man as a perusal of the monograph will show This heterogeneous collection of micro-organisms whose only excuse for appearing together in the same order is the purely physiological one of sulphur metabolism consume sulphuretted hydrogen and produce sulphates as the chief end products of their metabolism The importance of this to man is that the higher green plants on which he relies directly or indirectly for his food require the sulphates for their development As the author puts it in his introduction these organisms constitute a cog in the machinery of life They present other points of interest Apparently sulphur bacteria may multiply in water conduits choking the pipes with large masses of organic matter and rendering the water unfit not only for human consumption but for use in certain industries The sensitivity of these organisms to light is another most interesting question Light has a directive or phototactic influence on the coloured sulphur bacteria and there is evidence that it also has a photosynthetic action the bacterial pigment being concerned in an anabolic process comparable to that performed by chlorophyll in green plants The author who has devoted many years to a study of these bacteria has given us an excellent account of the subject full of interest for the student of biology

SURGICAL TREATMENT OF PEPTIC ULCER

A book entitled Surgery of Gastric and Duodenal Ulcer its Indications and Results[6] by HORTOLOMEI and BUTURE-ANU though written with a distinct surgical bias nevertheless deals fairly with all aspects of the subject The authors from a wide study of the literature and from their own considerable experience come to very definite conclusions as to the province of medicine and surgery in the therapy of peptic ulcer For them *medical treat-*

[4] *The Diagnosis of Nervous Diseases* By Sir James Purves Stewart K.C.M.G. C.B. M.D. Ed. F.R.C.P. Seventh edition revised London: Arnold and Co. 1931 (Pp. viii + 740. 312 figures. 35s. net.)

[5] *Sulphur Bacteria* By David Ellis D.Sc. Ph.D. F.R.S.E. London and New York: Longmans Green and Co. 1932 (Pp. 261. 66 figures. 21s. net.)

[6] *Chirurgie de l'Ulcère Gastrique et Duodénal* Par V. Hortolomei et V. Buturi-anu. Paris: Masson et Cie. 1931 (Pp. 407. 75 figures. 45 fr.)

ment is likely to be most useful in the pre-ulcerous state in allaying the gastritis which precedes and probably conduces to ulcer formation—that is for patients who subject to hyperchlorhydria have suffered at times from indigestion before meals and acidity after indiscretions in diet In the curing of ulcers medical treatment according to the authors has much reduced claims It is usually successful in recent and uncomplicated ulcers but has little effect in chronic ulceration especially where adhesions to adjacent organs are present For the latter surgical methods are indicated The authors divide these into two main groups *indirect* as in gastro-enterostomy (this is more useful for the relief of the secondary pyloric stenosis than for the treatment of the actual ulceration) and *direct* by which the ulcerated area of stomach or duodenum is excised The authors are of opinion that gastro-enterostomy is suitable only for a restricted number of cases that it exposes the patient to numerous complications and that it does not preclude the possibility of recurrence Complete healing is rather to be expected from resection methods and statistics are quoted to show how this view is coming to be accepted more and more by the surgical world The operative mortality was high until anæsthesia with spinal injection or avertin reduced the death rate and freed the surgeon from anxiety about post-operative pulmonary complications The book to which reference is made in a leading article this week will be read with interest and instruction by physicians as well as by surgeons

OSLER WELCH AND OTHERS

Professor W S THAYER has done well to bring together in book form the twenty-four selected addresses and papers which now appear under the title of *Osler and Other Papers* He has many personal friends on this side of the Atlantic and will gain more among the readers of these attractive essays The first three deal with Osler as the author knew him in Baltimore where for fifteen years they were *in almost daily contact and in the rather puzzling story* The medical education of Jones by Smith his hero admittedly appears under the names of Fowler and Guillaume le Oiseleur In a charming analysis of Osler as a teacher and as a human being his simple life and unstudied manner his epigrams love for his fellow men and stern suppression of unkind criticism of others are graphically brought before the reader

Professor Thayer's affection for another of the famous original teachers of the Johns Hopkins University W H Welch finds expression in an after-dinner speech describing this pathologist hygienist and historian of whom he first heard as the ablest physician in America as having taught hundreds of students a religion of charity and of self-restraint a religion of work not of words Of his colleague the late John Howland he writes with graceful enthusiasm and in the memoir of his teacher Reginald Heber Fitz of Boston who in 1886 invented the word appendicitis he remarks It is an amusing thought that of all men Fitz the most careful and accurate should have been the target of irritated critics because of the introduction into medicine of what they regard as an ill-constructed hybrid Among the scholarly addresses the reader will specially welcome those on the Contributions of Pasteur to Medicine and Humanity delivered at the Sorbonne in 1923 the Richard Bright Oration at Guy's Hospital in 1927 Laennec—One Hundred Years After and his Presidential Address to the American Medical Association in 1928 On the Duties and Problems of the Physician

[1] *Osler and Other Papers* By William Sydney Thayer M.D. LL.D. Baltimore The Johns Hopkins Press London Milford Oxford University Press 1931 (£1 1s. net)

NOTES ON BOOKS

Diseases and Disorders of the Digestive Organs[2] by Dr ADOLPHE ABRAHAMS one of the series of Pocket Monographs on Practical Medicine deserves to be commended for its clarity and common sense Accepting Ryle's classification of dyspepsias the author describes how such cases should be investigated and then proceeds to discuss the different types of dyspepsia in detail The organic diseases of the digestive system are fully described and due importance is given to the treatment of the patient as well as his complaint in cases of functional dyspepsia Each chapter bears the imprint of the author's own experience and practitioners will find much that is useful and applicable in their daily work

Dr FELICE MARTA in his short book *on Gonorrhœa*[3] deals particularly with the public health aspect of his subject though in the later chapters he goes into the question of diagnosis and treatment Like all of those who are engaged in the anti-venereal campaign he protests against the acceptance of gonorrhœa as a trifling disease He points out that it is responsible for a vast amount of ill-health and economic loss notwithstanding the fact that it happens to be a disease which is particularly amenable to public health methods For this reason he discusses the question of prophylaxis and other measures that are capable of reducing its incidence

The fifty-first volume of the *Transactions of the Ophthalmological Society of the United Kingdom*[4] has now been published It comprises the proceedings of this Society and the reports of its affiliated societies during the session 1930–31 As in previous years the communications here brought together cover a wide range of diseases of the eye and the associated neurological conditions The book resembles its predecessors in being highly practical well produced and attractively illustrated

The training of lay inspectors of meat is a difficult one and students must have a working knowledge of the food animals and in particular the position of the various lymphatic glands A booklet[5] by Mr JAMES GOODFELLOW has been produced to assist not supersede practical instruction in this subject It gives a set of diagrams of skeletons topographical anatomy of viscera and cuts of meat showing the position of the main glands of the usual food animals of this country as well as of the horse The diagrams are in colour are well prepared and should be valuable aids to the student

The second edition of LUCAS'S *Forensic Chemistry*[6] has been carefully revised and many of the sections have been rearranged to obtain better co-ordination of the subject-matter This book which is well known to readers interested in criminal investigation describes the various ways in which the chemist may assist in the detection of crime Dealing as it does with the examination of blood stains firearms projectiles forged documents counterfeit coins and poisons and with numerous other conditions in a little over 300 pages no particular subject can be fully described The author however in spite of this manages to place before his readers most of the essential information they require supplementing it by ample references to the literature The section on the examination of firearms and projectiles shows most evidence of revision but we note that no mention is made of the microscopical examination of powder residues which is

[2] *Diseases and Disorders of the Digestive Organs* By Adolphe Abrahams O.B.E. M.D. F.R.C.P. Pocket Monographs on Practical Medicine London J. Bale Sons and Danielsson Ltd 1931 (Pp. 110 2s. 6d. net)

[3] *Gonorrhœa* (Blennorragia) Por Dot. Felice Marta Milano U. Hoepli 1931 (Pp. xvi + 270 30 figures 3 plates L. 12)

[4] *Transactions of the Ophthalmological Society of the United Kingdom* Vol. li. London J. and A. Churchill 1932 (Pp. lv + 687 illustrated 42s.)

[5] *The Lymphatic Glands of Importance in Carcass and Meat Inspection* By James Goodfellow With foreword by Dr. C. Kirkhope M.D. Ch.M. D.P.H. London The Sanitary Engineering Company Ltd. 1932. (Pp. 29 12 diagrams 2s. 6d.)

[6] *Forensic Chemistry and Scientific Criminal Investigation* By A. Lucas O.B.E. F.I.C. Second edition London Arnold 1932 (Pp. 324 18s. net)

often of more importance than their chemical examination In the identification of bullets and cartridge cases as well as in the detection of forgery and various other matters the author is greatly handicapped in his descriptions by the absence of illustrations without which it is difficult to give any adequate idea of those subjects The book is well printed and there is quite a useful index

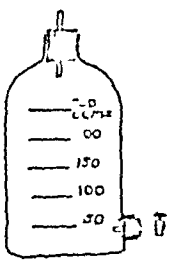
We have received copies of the clinical reports of Queen Charlotte's Maternity Hospital for the years 1925 to 1930 inclusive printed for the hospital by Wilding and Son Ltd Shrewsbury They may be consulted at the Library of the British Medical Association

Reprints of a large number of contributions to medical science originating from the Middlesex Hospital Medical School have now been collated in one volume under the title of *Collected Clinical Papers 1910 31* The book can be consulted at the Library of the Association

PREPARATIONS AND APPLIANCES

APPARATUS FOR ASPIRATION OF FLUID FROM THE CHEST

Dr JAMES MAXWELL (London W) writes The aspirator both illustrated herewith has been made for me by the Scientific Glass Blowing Co and has proved effective and simple to operate It consists of a flat bottomed bottle of about 400 c.cm capacity with two apertures the upper of which is centrally situated and is closed by a tightly fitting rubber stopper which carries a straight glass tube of 6 mm diameter The essential feature of the apparatus is the lower aperture which is situated in the side of the bottle about 1 cm above the base and is closed by a tightly fitting rubber stopper which carries a glass tube guarded by a stopcock as shown in the diagram The bore of the stopcock which is necessarily the narrowest part of the channel should be 4 mm It is a simple matter to fill the apparatus with water after which it is ready for use the upper glass tube is connected by means of rubber tubing with the needle in the chest and the lower drains similarly to a vessel on the floor

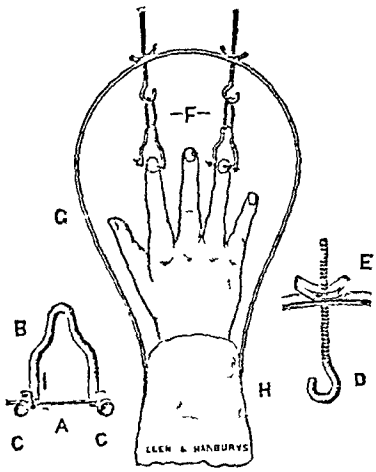


The apparatus has been in use at the Royal Chest Hospital for the past year and has been found to possess certain definite advantages It is perfectly stable and can therefore be rested on any convenient flat surface such as a chair or stool thus avoiding the necessity for attachment to a bed rail which is not always convenient The stopcock takes the place of the customary clip and is much simpler to operate for by this means the flow of fluid can readily be adjusted to suit the needs of the individual case It will be noted that the exit tube is situated a short distance above the actual bottom of the bottle thus allowing for the accumulation of fibrinous and other solid material and minimizing the risk of blockage of the exit tube In addition the apparatus is inexpensive and readily portable the tubes and stoppers being carried separately

The apparatus has been employed for the aspiration of all types of fluid from the chest and has been found satisfactory even with empyemata of medium consistency occasionally when there is much fibrin present clotting may occur in the stopcock especially when the fluid is being allowed to run out slowly but the clot can be easily dislodged or the difficulty might be prevented by filling the apparatus with sodium citrate solution instead of water beforehand in cases where there is reason to anticipate clotting It is essential that both rubber stoppers should fit tightly in order to avoid leakage with consequent loss of efficiency

APPARATUS FOR TREATMENT OF FINGER FRACTURES

Mr C MAX PAGE F.R.C.S (London W) writes The common use of skeletal traction is now a well established method for treating fractures of the long bones less frequently phalanges equally applicable to fractures and dislocations of the joints of the hand and of the metacarpals although the latter call for the use of some specialized apparatus The illustration below shows a simple and inexpensive method for applying traction to the fingers The traction appliance consists of a short length of steel wire A which transfixes the terminal phalanx from front to back through the nail I think it is best to employ rustless steel wire for the purpose wire 0·8 mm thick is suitable A straight needle can be employed instead of the wire but on account of the temper of the metal there is a risk of breakage The wire is held in a strut B which is made out of stout brass wire Milled screws CC hold the wire firmly The pull to be exerted in finger fractures is not great and consequently tensioning of the wire is unnecessary The pull is exerted through the bracket G which is firmly held on to the forearm by a light plaster case H The bracket is conveniently made from an aluminium strip about 1·25 cm × 0·5 cm Holes are drilled in the



bracket in suitable positions for the passage of the threaded hook D The position of this hook is controlled by butterfly nut E Steady traction is obtained by the interposition of a stout rubber band or section of rubber tubing F between the hook and the strut B Such an appliance will pull out any recent fracture of a phalanx or metacarpal in which there is overlap and is powerful enough to reduce a dislocation of the interphalangeal joints of some standing On one occasion I was able to reduce a dislocation at the proximal interphalangeal joint which had been present for seven weeks

The appliance has been made for me by Messrs Allen and Hanburys to whom I am indebted for the illustration

THYRAN

Thyran (Bayer Products Ltd) is a preparation of the thyroid gland made by a new method of fractionation evolved by Professor Blum of Frankfort It has an iodine content of 0·4 to 0·6 per cent A point deserving special mention is that the preparation is biologically standardized by a method based on the quantity needed to reduce the weight of a guinea pig by a certain amount within a certain time Biological standardization of activity is a very desirable precaution that is rarely practised in the case of thyroid preparations Thyran is issued in tablets of 25 mg and the clinical reports show that up to ten tablets a day can be taken for three weeks without toxic effects When used in the treatment of obesity it is less apt to produce toxic side actions than are the usual thyroid preparations It has not yet received extensive clinical trial in this country but the reports from German clinics are very favourable

CRYSTALLINE VITAMIN D

Pure crystalline vitamin D manufactured in this country by British Drug Houses Ltd (Graham Street City Road N 1) is now available for general clinical use in the form of radiostol solution and radiostol pellets The former is a tasteless solution in oil of the crystalline vitamin its vitamin D activity is such that one fluid ounce of the solution is equivalent to fifty fluid ounces (2½ pints) of good cod liver oil The dose of this solution ranges from nine to fifteen drops daily Radiostol pellets contain the pure vitamin incorporated in cocoa butter one pellet is equivalent to a full adult dose of cod liver oil

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SURGERY AND GASTRIC ULCER

While the respective merits of medical and surgical treatment for gastric and duodenal ulcer are still a subject of active discussion increasing experience by physicians and surgeons has led to a clearer delimitation of the problems involved Although medical treatment was earlier in the field the loss of time involved the difficulty of procuring continuity of suitable diet and the reduced capacity for work by the patient for weeks or months were incentives to seek a quicker and possibly more complete cure by surgical means The physicians are handicapped when asked to produce statistical evidence of good results by the facts that many cases are latent that few workers can submit to prolonged rest and dieting and that in the common absence of a clear and exact diagnosis the determination of after results by following up is difficult Medical treatment should assuredly have a trial when the ulcer is acute and uncomplicated and this trial to be adequate should be sufficiently long In certain cases however surgical intervention is imperative as in perforation Surgery is also indicated when there is doubt about the diagnosis between ulcer and cancer and when the ulcer is complicated by stenosis appendicitis or cholecystitis It is in the intermediate cases particularly of chronic ulcers and those which have resisted simple medical treatment that room for discussion arises not only as to the advisability of operation but as to the surgical measures to be adopted The end to be achieved by indirect methods such as gastro-enterostomy [1] is the earlier emptying of the stomach and the neutralization of the gastric juice by regurgitation of bile and pancreatic secretion In this way a highly acid gastric secretion believed to be inimical to the healing of the ulcer is prevented from accumulating in the stomach Though in many instances highly successful, the published results of these methods indicate a by no means unqualified approval of them The ulcer itself was often not dealt with and therefore apt to give further trouble either by deeper penetration into the wall of the stomach or by contraction during the healing process Further the gastritis accompanying or preceding the ulcerative process produced symptoms and required prolonged medical treatment after the operation Surgical opinion has recently inclined to more direct ways of attacking the ulcer—by excision Partial gastrectomy and if the gastritis also is to be treated a fairly complete removal of the stomach are advocated The effect of such drastic procedures is certainly to get rid of the ulcer and the ulcer bearing organ thus preventing recurrence They have now been tried out over a long enough period to enable some idea to be formed of their immediate and later results

The operative mortality of gastro-enterostomy is generally accepted as low In cases in which this operation is particularly indicated—those with a partial pyloric obstruction from a cicatrized ulcer—the outcome is usually excellent and in the presence of a healing ulcer even without further treatment benefit has been obtained Nevertheless in a general hospital series where patients are often exhausted and have cardio-renal complications the operative mortality may reach 4 to 5 per cent or more In the published statistics permanent healing and freedom from digestive symptoms is obtained in as widely varying numbers as 30 and 90 per cent Hortolomei and Butureanu have followed up 127 cases of gastro-enterostomy operated on by themselves at least four years previously Of these patients 54 per cent were not free from symptoms and thirteen had died of complications in the interval Their immediate operative mortality was 4 per cent so that the immediate and late mortality was 13·7 per cent In a series of 104 cases treated by resection of considerable portions of the stomach for gastric and duodenal ulcer the number of deaths following the operation was five These authors (whose book is noticed in another column) find that late complications are extremely rare, and claim that after convalescence their patients are not obliged to follow any definite course of diet or to restrict their mode of life

That this opinion is widely held is shown by Dr Helge Lublin who has analysed the late symptoms after gastro-enterostomy and operations for resection of the stomach for gastric and duodenal ulcer carried out in the Serafimer Hospital in Stockholm Of ninety-eight cases reported eighty seven had gastro-enterostomy and eleven resection In this series there were ten cases of true recurrence (a false recurrence —that is a second or multiple ulcer—being excluded) and ten cases of peptic jejunal ulcer all of them in cases of gastro-enterostomy In a further fifty five cases of which nine had had a Billroth II resection gastric symptoms occurred though evidence of ulcer was lacking These symptoms which usually arise immediately after operation included among others a feeling of weight or dragging pain in the epigastrium shortly after meals vomiting—often bilious—and wasting In case of definite ulcer or where ulcer is presumably the cause of the symptoms these appear much later In a further twenty cases the symptoms were mainly intestinal in the form of colic flatulence constipation and diarrhoea of these two had had resection of the stomach and the remainder gastro-enterostomy The main factors behind the digestive disturbances are probably (1) that normal gastric digestion is reduced by the rapid emptying of the stomach and to a less extent by the lowered acidity and (2) that normal intestinal digestion is hampered by the unphysiological way of emptying the stomach

[1] Leslie Skert *British Medical Journal* 1931 i 475

[illegible] Nov 1931

and the consequent impaired mixture of gastric chyme and duodenal juice. In Dr. Lublin's series of cases the digestive disturbances after complete resection of the stomach, are generally of mild character, if indeed appreciable at all. A striking result in her analysis is that in two-thirds of the cases there was evidence of some degree of non-haemorrhagic anaemia—a sequel to both gastro-enterostomy and resection. The causation of this anaemia is obscure, but is probably to be sought in the disturbances that the operation brings about in the physiology of the digestive organs. Where exclusion of the pylorus has been carried out by ligation or as part of the resection the liability to anaemia appears to be greater.

It was the surgeons who in generation ago drew the attention of the medical world to the clinical features and common occurrence of duodenal ulcer, and during the past thirty years the scope of surgery in the treatment of gastric and duodenal ulcer and the indications for the various operative procedures have become more defined. Improvement in surgical technique has led to more successful results. It may be, however, that greater skill in diagnosis will enable medical treatment to be instituted earlier and in the pre-ulcerative stage, so that the next generation may see medical treatment sufficient and surgery adopted only in neglected or complicated cases.

WORK AND THEORY

The momentous results of Pasteur's discoveries are apt by their very brilliance to distract attention from other aspects of his life and activities, which have a bearing on the prosecution of scientific research. For example his attitude in approaching problems and the principles which underlay his methods of solution deserve a closer attention. Considering the uniform success of his researches it would seem that his methods must have special features peculiar to himself, for it is remarkable that he never undertook an investigation without bringing it to a successful issue, a record which probably few whose work covers fields of any considerable breadth are able to boast of. Whether the problem related to crystallography, to abnormal fermentation of wine, beer, or vinegar, to spontaneous generation, to asepsis, chicken cholera, anthrax, or hydrophobia, the result was in every instance an unequivocal solution. It may be said that this was due to his extraordinarily clear vision, an expression of his genius, and therefore *imitable*, but, admitting this, the whole gospel of scientific research is double unfolded in Pasteur, and a study of his methods must both hardly fail to reveal principles useful to would-be eminently endowed than he was [illegible] requires special qualities.

required what may be termed a "belief in achievement." This he retained throughout his career and it was undoubtedly a stimulating influence in his undertakings. He believed that patient, persistent work animated by a simple aim and single intention if unremittingly pursued, would inevitably be rewarded with achievement. He had no doubt of this. "You have but to walk forward," he says, "and your task will achieve itself." But he also came to realize that work pursued on this principle needed vitalizing if it was to be fruitful and he recognized theory as being the required vitalizing agent. The path of scientific inquiry was to be illuminated by theory, mere demonstration being of little use as an aid to knowledge. A scientific discovery by itself had no more than the merit of its existence, whether a chance observation or the solution of some detached problem; it remained a dead letter unless vitalized by theory which alone was capable of calling into being and developing the spirit of invention. "Without theory practice is but routine born of habit." The point emphasized seems to be that the solution of a problem should always be viewed in the light of a larger conception—a good rule applicable to other than scientific problems, to ideas in general. Finally, Pasteur was fully alive to the fact that unrestrained theory led to diffuseness if not to actual error defeating its own ends, and he laid down a stringent rule in regard to its employment. Reference was made to this in his speech at the inauguration in 1888 of the Pasteur Institute in Paris and his words receive emphasis from the importance of the occasion. "Your enthusiasm," he said, "which is the fruit of your early days keep it, my dear collaborators, but let it ever be attended by a rigorous self-control. Advance no theories, nothing which cannot be proved in a manner simple and decisive." Pasteur's uniform success was, we may be sure, at least partly due to his adherence to the principles alluded to, and as regards the last in particular, he never advanced a step into the realm of scientific assertion unless the incontrovertible reasons for so doing were already in his possession. Pasteur had no objection to an honest belief, writing to Pouchet, he says: "I think you are wrong not in believing in spontaneous generation, but in it is difficult in such a case [illegible] desirable precaution that ideas) but in affirming case of thyroid preparations generation." [illegible] tablets of 25 mg. and the clinical [illegible] up to ten tablets a day can be taken

The fa[illegible] weeks without toxic effects. When used in the co[illegible]ment of obesity it is less apt to produce toxic side actions than are the usual thyroid preparations. It has not yet received extensive clinical trial in this country, but the reports from German clinics are very favourable.

[illegible] Biological

CRYSTALLINE VITAMIN D

Pure crystalline vitamin D manufactured in the country by British Drug Houses Ltd. (Graham Street, City Road, N.1) is now available for general clinical use in the form of *radiostol* solution and radiostol pellets. The former is a tasteless solution in oil of the crystalline vitamin; its vitamin D activity is such that one fluid ounce of the solution is equivalent to fifty fluid ounces (2½ pints) of good cod-liver oil. The dose of this solution ranges from nine to fifteen drops daily. Radiostol pellets contain the pure vitamin incorporated in cocoa butter; one pellet is equivalent to a full adult dose of cod-liver oil.

[illegible] TREATMENT OF FINGER FRACTURES

Mr. C. Max Page, F.R.C.S. (London, W.) writes: The common use of skeletal traction is now [illegible] method is for treating fractures of the long bones [illegible] changes equally applicable to fractures and dislocations [illegible] of the hand and of the metacarpals although [illegible] use of some specialized apparatus. The [illegible] traction shows a simple and inexpensive method for [illegible] to the fingers. The traction appliance consists of a short

PERNICIOUS ANAEMIA

The view that a primary progressive anaemia is a disease separable from the anaemias following say cancer of the stomach has been accepted by clinicians since the time of Addison's original description. A century's work and study have differentiated several other similar conditions—such as sprue and the presence of the tapeworm *Dibothriocephalus latus*—leaving a clinical entity known in this country as primary Addisonian anaemia and on the Continent as Biermer's anaemia. It was Biermer who first introduced the term 'progressive pernicious anaemia'. A useful analysis of a series of 117 cases of pernicious anaemia has been published[1] from the records of the first medical clinic of Serafimerlasarettet in Stockholm. Dr. Birger Strandell, who collected the material, has had the great advantage of examining the carefully recorded clinical notes and films made from the blood in each case. Basing his diagnosis on the blood picture therefore he has accepted only cases showing the characteristic features of pernicious anaemia. Of the total number of patients about half were men and 60 per cent. were above the age of 50. Of the general symptoms languor was the commonest and change of colour—pallor with more or less of a tinge of yellow—was almost constant. Loss of appetite, especially for meat was present in three quarters of the patients and emaciation in about the same proportion. Nearly all cases had at some time of their course a rise of temperature. Of this series only 12 per cent. showed evidence of combined degeneration of the cord and about 40 per cent. had retinal haemorrhages. Symptoms related to the digestive system—such as sore tongue, vomiting, abdominal pain, and trouble with the bowels—were common. In 30 per cent. of the cases vomiting, eructation, or diarrhoea occurred more than five years before the anaemia supervened. Special interest attaches to the association of achylia gastrica with pernicious anaemia; this was found in ninety-five of the ninety-six cases of this series examined with test meals. The exception was a farmer aged 54 whose blood picture was typical though free hydrochloric acid was present in the test meal. The patient died of anaemia. Necropsy revealed ulceration of the ileum and jejunum and the characteristic bone-marrow changes of pernicious anaemia. In all the other cases, even when examined in the remission stage, achylia was invariably found; in these instances histamine was also used. The addition of achylia was always found in these methods indicate a way in which the examination approval of them. The ulcer itself are there were any with and therefore apt to give further trouble of pernicious deeper penetration into the wall of the stomach. But contraction during the healing process. Further the gastritis accompanying or preceding the ulcerative process produced symptoms and required prolonged medical treatment after the operation. Surgical opinion has recently inclined to more direct ways of attacking the ulcer—by excision. Partial gastrectomy and if the gastritis also is to be treated a fairly complete removal of the stomach are advocated. The effect of such drastic procedures is certainly to get rid of the ulcer and the ulcer bearing organ thus preventing recurrence. They have now been tried out over a long enough

[1] Pernicious Anaemia. Acta Medica Scandinavica, 1931, vol. lxxvi, p. 423.

of the nature of a deficiency disease. The changes in the type of blood cells present in the circulation and the early involvement of the stomach would favour the latter theory, and the rapid response of patients to liver products and stomach extracts would point to the same conclusion. The beneficent influence of liver or liver extracts in a disease previously regarded as almost certainly fatal has led to a renewed hopefulness in treatment. As shown by the author's figures, of 117 patients treated in hospital 62 died within a year of their first admission. Nevertheless the course of the disease in a number of cases has been remarkably favourable. In Dr. Strandell's series there were ten cases of cryptogenic pernicious anaemia in which the duration without treatment by liver or stomach was over seven years, and in three more this was probable though not proved. One case had run a course of eighteen and a half years, and the patient had kept in good health for close upon sixteen years without treatment which would seem to be the longest observed remission hitherto recorded in the literature. In Cabot's series of 1,200 cases of pernicious anaemia only 3 per cent. showed a duration of more than seven years. It would seem however that a fair proportion of Dr. Strandell's cases ran a favourable and prolonged course even before the modern treatment with liver and stomach. Thus the statement in most textbooks that a prolonged course of the disease only occurs in exceptional cases may require revision. It is of interest to note that from 1913 it has been the practice in Stockholm to treat patients with large amounts of meat in addition to arsenic and dilute hydrochloric acid. The quantity of meat given daily was 200 grams a head, *in some cases more, in moribund cases minced meat*, and meat extracts were given by stomach tube. The best prognosis appears to be found among men below 50 years of age; seven out of twenty-five (28 per cent.) have run a course of seven years or more.

'EUTOPOTROPISM'

The sense to know where you are well off and go there, the sense to find the fit place, is the definition given by Professor A. C. Lane[1] to the word eutopotropism which he has coined. It apparently means something more than adaptation to environment. The inability to eutopotropize (one word unfortunately leads to another) has plagued the post-war generation and the host of modern psychologies bear witness to this fact. Had Professor Lane been a physician and not a geologist he might have hesitated to advise his audience to go "where you are well off and to the place for which you are fit." The advice is simple and so he says sensible. But it has all the dangerous wayes of the slogan. Commentators on the text constipate are sure put forward many and various resection of the side word fitness and would no entero-tomy. The ramifications that might arise when disturbances are probably [illegible] well off and [illegible] digestion is reduced by the rapid emptying of the stomach and to a less extent by the lowered acidity and (2) that normal intestinal digestion is hampered by the unphysiological way of emptying the stomach.

[1] [illegible] Nature and Society, 1931.

Dr J Vergely has uttered a complaint under the title of "Medecins amateurs" which has recently been echoed in our own columns under the more prosaic heading of *Doctors and district nurses*." Every man or woman who has had a toothache or any of the other minor ills the flesh is heir to is liable to become an amateur physician—given the opportunity. Dr Vergely however refers to the women who became temporary nurses during the war. Their appetite has grown upon what it fed, and, believing themselves intuitively endowed with medical knowledge, they carry on "*une sorte d'exercice illegal de la medecine*" taking advantage of the credulity shown by many patients. To protect themselves against these invaders Dr Vergely tells his fellow practitioners that they have to rely on their own good faith, their conscience, and the appeal to the natural good sense of their patients. Pessimistically he admits that this last argument is the one least likely to prevail. In our issue of March 5th (p. 456) a whole time medical officer of health in an industrial area wrote suggesting that there should be fuller co-operation between nurses and doctors, as in his experience the treatment of many minor ailments which could be more efficiently carried out by a nurse was left to the relatives of the patient. Subsequent correspondence has shown that opinion on this matter is divided the balance on the whole appearing to weigh against the district nurse. The chief complaint is that she 'does too much' that she diagnoses and treats diseases coming within the province of the doctor and that there is a danger of her becoming a *femme-medecin, amateur*. On April 2nd 'Another Devonshire G.P.' wrote to say that the district nurse is one of the general practitioner's staunchest allies,' and praised her assistance in midwifery cases other doctors condemn her lock stock and barrel. There is no smoke without fire and it seems that a district nurse at times cannot resist the temptation to apply the knowledge she has but which should legitimately not be put into effect. Co-operation between doctor and nurse would seem to be a purely individual matter and to the remedy of appealing to the natural good sense of the patient recommended by Dr Vergely should be added that of appealing to the same good sense of the nurse.

BODY MECHANICS EDUCATION AND PRACTICE

A conference on child health and protection called by President Hoover, was held at the White House, Washington, in November, 1930. The report of its subcommittee on orthopaedics and body mechanics is now published under the title of *Body Mechanics Education and Practice*[1], body mechanics being defined as 'the mechanical correlation of the various systems of the body, with special reference to the skeletal, muscular and visceral systems." The purpose of the subcommittee was (1) to investigate the incidence and cause of poor body mechanics, (2) to consider what is being taught about this subject and decide what should be taught, (3) to develop a plan for in this connection ved methods of training in good published biography nd correction of faulty body Pasteur, brought 'reliminary work was done in seriousness and earnes ad special data. By sending stance or from the na

[1] The Century Company London

[1] *The Genius of Louis Pasteur*) A Ousley Ltd (12s 6d)

questionnaires to paediatricians, orthopaedic surgeons, medical schools, and physical training colleges a mass of representative opinion was obtained on questions such as the importance of and scope for, training in body mechanics. Appendix I is a report of group training in posture in an elementary school in Massachusetts, and includes descriptions of methods of examining children and keeping records of their physical condition. A series of silhouettes show the salient features of good and bad postures in different physical types, and important points are tabulated below the diagrams. Appendix II contains a useful plan of a course in physical education for elementary and intermediate schools and also a list of books on the subject. The two main conclusions reached by the conference were (1) That body mechanics should be an integral part of study in medical schools and the basic principle of physical education. (2) That training in body mechanics should be compulsory for the children of the United States of America and opportunity given for corrective training in those with faulty body mechanics. The conference set itself difficult tasks and should accomplish much for the welfare of children. The genealogical tree showing the origin of its committees is rather overwhelming and we are inclined to think that equally good work could have been done by fewer than the hundred and twenty nine subcommittees which evolved from the original planning committee.

NEW TUBERCULOSIS LABORATORIES AT THE PASTEUR INSTITUTE

The continuous increase in the tuberculosis work carried on at the Pasteur Institute, Paris, particularly in the demands made for tuberculin, for Boquet and Negre's complement-fixation antigen and for B.C.G. vaccine has rendered necessary an extension of the already existing inadequate accommodation. It was considered desirable to group all the tuberculosis services together and accordingly a new block of tuberculosis research laboratories has been erected in the gardens of the institute. A description of these laboratories, which are now completed, is given in a recently published pamphlet[1]. Those who are interested in the construction of laboratories will do well to study this publication which contains numerous illustrations or, still better to pay a visit to the new building and judge for themselves the excellence of its design and equipment. When it is considered that the estimated cost was only eight million francs, a sum which before the fall of the pound was equivalent in English money to about £70,000, it is impossible to do other than admire the French for their architectural and engineering efficiency and envy them for being able to erect a building at a cost probably about one-third of what would be required in this country. One of the main objects in view was to afford suitable laboratories for the preparation of B.C.G. vaccine, and to separate these entirely from the remainder of the laboratories in which work involving the use of virulent tubercle bacilli was to be performed. Briefly, the building is of rectangular form and is 70 metres in length. There are three main floors—first second and third—but, owing to the fact that the frontage on the Rue Falguiere is considerably higher

[1] *Les Nouveaux Laboratoires de Recherches sur la Tuberculose et de Préparation du B.C.G. a l'Institut Pasteur*. Paris: Masson et Cie. 1932.

A TUDOR EDWARDS: SURGICAL TREATMENT OF INTRATHORACIC NEW GROWTHS



FIG. 1.—CASE I. *a*. Large mediastinal goitre. Note high diaphragm on right.



FIG. 2.—CASE I. *b*. After removal of tumour.

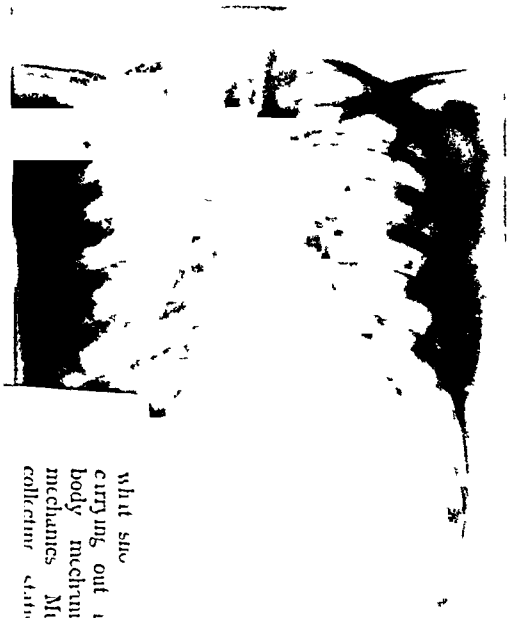


FIG. 3.—CASE II. *a*. Mediastinal teratoma. Lateral view.

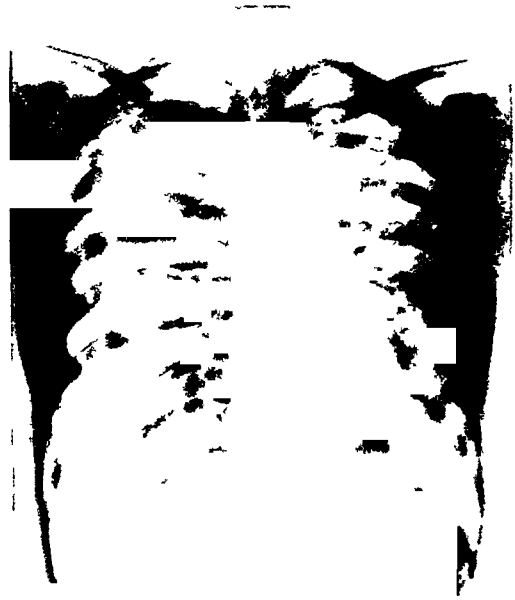


FIG. 4.—CASE II. *b*. Teratoma after removal. Antero-posterior view. Note enlarged pulmonary artery.

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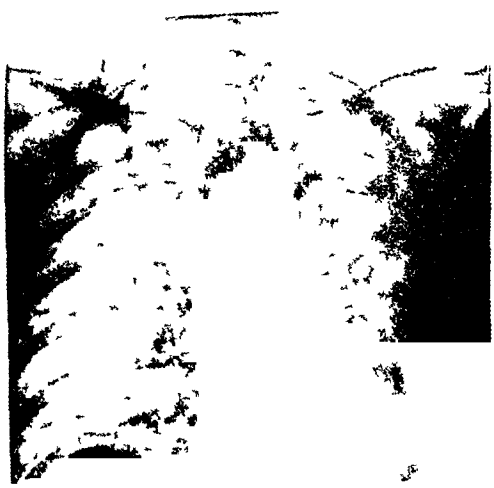
Case III *a*. Intrapulmonary carcinoma



Case III *b*. Three weeks after introduction of seeds. Note appearance of growth



Carcinoma of main bronchus. Radon see



Case IV *b*. One month later. Note clearing up of lung field

P. J. A. BERRY AND P. M. BATES: LORENCEPHALIC IMBECILITY

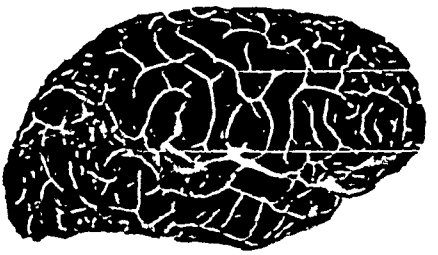


FIG. 1.—External surface right cerebral hemisphere.



FIG. 3.—Cerebellum: inferior aspect.

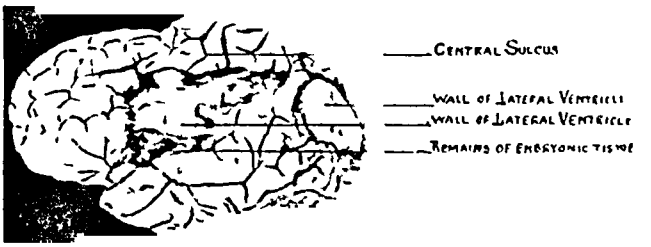


FIG. 2.—External surface left cerebral hemisphere.

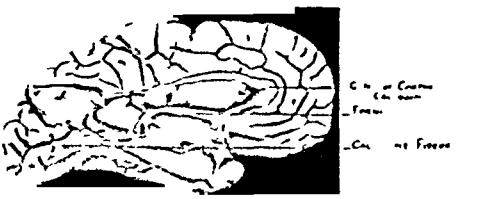


FIG. 4.—Internal surface left cerebral hemisphere.

ALBERT RAMSBOTTOM AND CYRIL C. EASTWOOD: SPONTANEOUS HYPOGLYCAEMIA



Call-Exner and upper ileum from case of spontaneous hypoglycaemia.

H. DAVID ISAACS. COMPRESSION FRACTURE WITH COMMINUTION OF LUMBAR VERTEBRAE



FIG. 1.—Radiograph taken on August 11th, 1931, before treatment.



FIG. 2.—Radiograph taken on August 13th, 1931.

MICHAEL OLDFIELD. CHRONIC GASTRIC ULCER IN A BOY



FIG. 1.—Showing small ulcer crater on posterior surface near lesser curvature of stomach. There is a translucent zone around crater corresponding to the mucous ulcer margin.

SIDNEY B. RADLEY. SUBPERITONEAL UTERINE FIBROID

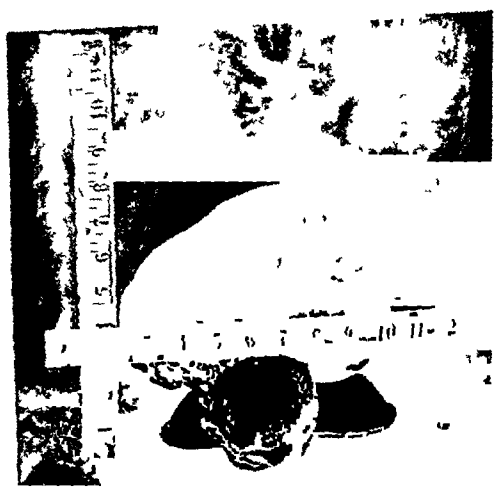


FIG. 1.—Naked eye appearance of tumour.

than that on the gardens of the Pasteur Institute a mezzanine and a ground floor have been rendered necessary on the side facing the institute These two lower floors are given over to the accommodation of normal and infected animals together with a post mortem room for experimental animals and a dark room for radiological examinations The type of animal cage designed by Dr Guerin is of unusual interest consisting of a solid sheet iron box 40 cm in all directions, coated with aluminium paint and provided with a removable grilled lid fitted with a simple bayonet catch The cages can be sterilized by steam and the peat moss which is used as an absorbent, can be burnt in an incinerator The first floor is given up to work on B C G On the second floor there are research laboratories one of which is allocated to foreign visitors wishing to carry out work on tuberculosis Laboratories for the preparation of tuberculin and of the Boquet and Negre antigen together with those for chemical research and for morbid anatomy occupy the third floor Whatever the merits of B C G may be it is evident that in its preparation no amount of care can be too great in order to avoid the dangers inseparable from the use of a living vaccine The council of the Pasteur Institute may be sincerely congratulated on erecting suitable laboratories for this purpose and affording ample accommodation for the conduct of research in all aspects of tuberculosis There is little doubt that the new laboratories will prove a further attraction to the numerous scientific workers from all parts of the world for whom the Pasteur Institute with its great traditions and its admirable record of research holds out the promise of scientific training and achievement

MEDICAL PORTRAITS AT THE R.A.

The one hundred and sixty third exhibition of the Royal Academy opened to public view on Monday It presents specimens of the work of many schools of thought and some abrupt contrasts in modes of pictorial expression but we will not venture to distinguish between the meritorious and the meretricious The medical portraits of which there are several in good positions show no tendency to break away from established practice in each of them the artist has evidently set out to make his subject recognizable at a glance In the principal room will be found Sir Arthur Cope's oil painting of Dr Alfred Cox which is destined for the British Medical Association's headquarters It reveals Dr Cox in meditative mood as so many members must have seen him on the platform or at committee meetings when business is not moving quite as fast as it might The doctor's gown gives an unfamiliar splash of colour but this is the man we know with the considering look that presages a remark very much to the point Near it is an admirable likeness of Professor Thomas Sinclair of Belfast by George Harcourt who has also painted the presentation portrait of Miss Lloyd Still matron of St Thomas's Hospital which hangs in the same gallery In the next room attention is held by Mr J S A Berne's lifelike picture of Professor Blair Bell seaman, white coated against a blackboard and holding a lecturer's wand Here the artist has produced a bold effect without bright colours in contrast to the portrait by Dermod O'Brien of Dr Crofton draped in the vivid scarlet of an Irish M D robe Patient search among the sculptures will discover Percy Metcalfe's design for the Hughlings Jackson medal and in the south room a miniature of Mr C W Proom by Hilda Bowyer The architectural room has some drawings and plans of interest to medical visitors

TUBERCULOSIS SCHOLARSHIPS IN ROME

The Italian Fascist National Federation against Tuberculosis is placing at the disposal of the International Union against Tuberculosis two competitive scholarships at the Benito Mussolini Institute in Rome These scholarships of a value of 6 000 lire each plus board and lodging are intended to enable foreign medical practitioners to reside at the Institute for the purpose of following a course of studies This stage of eight months will correspond with the academic year (from November 15th to July 15th)—namely eight months interrupted by the usual holiday periods The scholarships will preferably be awarded to young physicians who are already familiar with tuberculosis problems and who wish to improve their knowledge of this branch of medicine The kind of work undertaken at the Institute will be subject to an agreement between the director and the candidate Publication expenses resulting from this work may be defrayed partly or entirely by the Institute The scholarships will be awarded by the executive committee of the International Union in September next Names of candidates with particulars of their age qualifications and professional experience must be received by the secretariat of the Union not later than July 15th No candidature will be taken into consideration unless it has been forwarded by a Government or Association belonging to the International Union All applications from Great Britain and Northern Ireland must be forwarded through the National Association for the Prevention of Tuberculosis they should be sent to the secretary N A P T Tavistock House North Tavistock Square W C 1 by July 10th

The next session of the General Medical Council will commence on Tuesday May 24th at 2 p m when the President Sir Norman Walker M D will take the chair and give an address The Council will continue to sit from day to day until the termination of its business

CENTENARY MEETING OVERSEA VISITORS

All overseas delegates and guests and other members from overseas intending to take part in the Centenary Meeting of the British Medical Association next July who desire hospitality for themselves and their wives (if accompanying them) should communicate immediately with Sir Cyril English K C M G 5 Park Street London W 1

Masonic Welcome

The Motherland Lodge [illegible] a special meeting on Monday July 25th to welcome [illegible] Masonic Centenary Meeting [illegible] Communications should be addressed to the secretary of the lodge Lt-Col H Vaughan (Travellers' Club Pall Mall S W 1) Cheques and postal orders should be made payable to the Masonic Centenary Fund

BRITISH SEA COAST RESORTS

CONFERENCE AT BOURNEMOUTH

The third regional conference arranged by the British Health Resorts Association was held last week end at Bournemouth under the presidency of the Mayor, Alderman P M Bricker. Its outcome was the formation of a local branch for the southern region (western section) comprising Weymouth Swanage Poole Bournemouth and Christchurch. Following the pattern of earlier conferences two business sessions were held.

Sir Thomas Oliver took the chair at the morning session on April 30th in the Town Hall and the Mayor welcomed the medical men who were visiting Bournemouth in order to show their interest in this movement. A message from Lord Meston president of the association expressed regret that distance at Geneva prevented him from taking part in a meeting which would mark another milestone down the road to success. In his introductory address Sir Thomas Oliver said that it was their task to draw public attention to the advantages of the health resorts such as Bournemouth so that fuller use could be made of them. The great variety of climate at the principal coastal stations of Britain provided wide opportunity for practical application of the new science of climatology to the treatment and prevention of disease. In past years the choice of a resort had been largely haphazard and without special reference to the nature of a patient's illness. The need of health stations for all classes was likely to increase rather than diminish.

Dr K Lorimer Fox chairman of the medical advisory committee in a paper on Centres of convalescence emphasized the need for a central building at every resort equipped with some simple form of medical baths and designed to include means for recreation in all weathers. England had led the way for over a hundred years in the establishment of convalescent homes. The problem of convalescence in its widest sense was of great importance and the climatic stations of Britain were only at the beginning of what they might accomplish on behalf of our crowded urban populations. Dr J Brownlee Alexander speaking on local advantages to the convalescent patient mentioned the importance of psychical influences which reinforced the benefit of a visit to the seaside. Dr H Gordon Smith medical officer of health for Bournemouth followed with a paper on the effect of climate in therapeutics and Dr Harold Simmons spoke on Bournemouth as a health resort.

The discussion that followed was opened by Dr K A Young and continued by Colonel W Byam who summarized in order of frequency the excuses given by patients for not staying at home resorts as follows: (1) the climate (2) English cooking (3) unfashionableness of home resorts (4) need of change of scene and occupation (5) lack of amusements (6) ban on gambling (7) greater cost of a holiday here (8) absence of facilities for a cure. It seemed to him that a centre where modern methods of diagnosis and treatment could be applied was a necessity in every health resort. Dr A Cawadias touching on the international aspect of the problem said that some hotels in British resorts could compete with any on the Continent and that all had far better sanitation. The need was for data concerning the action of certain climates on certain conditions of health and disease.

At the afternoon session Dr Alfred Cox took the chair and in his opening remarks discussed the reasons that led many people to go to the Continent rather than to home resorts. One was that they got better value for their money. He urged that the seaside resort industry should become fully organized and in this the co operation of the medical profession was indispensable. Hitherto there had been no specialized intensive study of climatology as applied to health. One of the chief aims of the present movement was to persuade local practitioners to get down to this task so that the profession throughout the country might know what places were suitable for particular cases and how their patients would be treated when they got there. His experience was that local doctors could be stimulated into activity if they felt that a movement was in the interests of the public.

Colonel R H Elliot chairman of the executive committee in a paper on the human side of the movement outlined the organization proposed for putting this work on a permanent basis. Two important questions were the setting up of a central bureau and the compiling of an authoritative reference book on British health resorts. It was a great encouragement to him to be standing on the platform that afternoon between the President of the British Medical Association (Dr W G Willoughby) and the Medical Secretary and to be supported by the Chairman of Council (Dr Brackenbury). The main purpose of the movement was to organize the national assets in the way of seaside and other resorts, and to let everyone in Britain and outside know what these assets were. It was proposed to form a council composed of fifty medical men and fifty laymen meeting twice a year with the administrative work in the hands of an executive committee behind which as the backbone of the movement was the advisory medical committee acting as a link between the medical profession and all the other interests concerned.

Dr W S C Copeman honorary secretary of the medical advisory committee gave further details about the medical policy of the Association and submitted resolutions formally constituting a new branch for the local area.

On Saturday night the guests were entertained at a banquet in the Pavilion given by the Bournemouth Corporation. The Mayor proposed the toast of The British Health Resorts Association, and Sir Thomas Oliver replied. The health of the guests was proposed by the Deputy Mayor and Dr W G Willoughby responded in his happiest vein. Sunday was given up to a visit by road to Weymouth where the Mayor presided over a luncheon party at the Gloucester Hotel and to Sandbanks where the visitors were received by the Mayor of Poole at the Haven Hotel.

The next conference of the association will be held at Tunbridge Wells on May 20th.

LONDON VOLUNTARY HOSPITALS COMMITTEE

SECOND ANNUAL REPORT

The London Voluntary Hospitals Committee appointed by the voluntary hospitals for the purpose of consultation with the London County Council as provided by Section 13 of the Local Government Act 1929 has issued this week its report for the year ending March 31st 1932. During the period under review the committee has been in constant communication with the Central Public Health Committee of the London County Council. Important decisions have been arrived at.

Acting upon the suggestion of the Voluntary Hospitals Committee it has been agreed between the two committees to conduct a survey of the medical surgical and ancillary services in the county. The Standing Committee of the Metropolitan Borough Councils has expressed its willingness to co operate by supplying information relating to services for which the borough councils are responsible. The survey which is in progress will show the number of institutions in each area distinguishing between municipal and voluntary the accommodation available for each class of case the staffing of each institution the area from which patients are drawn the facilities for extension the need for further developments and other useful details. The task is one of considerable magnitude as the survey involves institutions comprising some 100 000 beds. It is however hoped that it will be completed in the course of the next two months. It will provide the first authoritative description of the medical surgical and ancillary services of the county. The need for co ordinated information is obvious. Without it the

best use cannot be made of the facilities provided by each system overlapping cannot be avoided and economical effective progress is impossible Further without such a survey it is impossible to give effect to Section 13 of the Local Government Act 1929 which provides for consultation between the municipal authority and the voluntary hospitals within its area

Discussions have taken place between the two committees concerning medical education As a result the Public Health Committee decided to continue existing arrangements between individual teaching hospitals and municipal hospitals The extension of these arrangements is now being considered by both committees and it is hoped that some more thorough and satisfactory means may shortly be devised which will enable a teaching hospital to be linked to a municipal hospital if and when desired The voluntary hospitals have welcomed the decision of the Public Health Committee to appoint salaried short term resident house physicians and house surgeons for service in municipal hospitals being of opinion that these appointments will provide valuable post graduate experience

The two committees have also discussed various proposals made by the County Council for increasing accommodation at certain municipal hospitals and for the establishment of special units such as those for thyroid cases and plastic surgery Projected scales of salaries and wages in municipal institutions have also been the subject of consideration Statements regarding these matters have from time to time been issued to the committee's constituent hospitals

CONSTITUTION OF THE COMMITTEE

The London Voluntary Hospitals Committee is composed as follows

Lord Riddell Royal Free Hospital (*chairman*)
Dr Geoffrey Evans St Bartholomew's Hospital (*honorary secretary*)
Mr A Lawrence Abel F R C S Cancer Hospital
Mr F Arnold Baker Seamen's (Dreadnought) Hospital
Lady Barrett M D Mothers' Hospital of the Salvation Army
Mr O N Chadwick Healey Hospital for Sick Children
Mr Thomas Clipham Belgrave Hospital for Children
Lieut Colonel Clement Cobbold Cordon Hospital
Dr Edmund H Colbeck Cit of London Hospital for Diseases of the Heart and Lungs
Captain the Right Hon C C Craig St George's Hospital
Mr Robert Davies Colley F R C S Guy's Hospital
Professor J S Dudgeon F R C P St Thomas's Hospital
Mr Arthur G Ferard Victoria Hospital for Children
Mr Charles Gibbs F R C S London Lock Hospital
Sir Henry Gooch King's College Hospital
Mr F J Pearce Gould F R C S Middlesex Hospital
Dr A M H Gray University College Hospital
Dr Philip Hamill Metropolitan Hospital
Captain A M Hughes Seamen's (Docks) Hospital
Mr A P B Irwin St Thomas's Hospital (replacing Sir George Makins)
Sir Henry Jackson M P Bolingbroke Hospital (*treasurer*)
Dr J M H MacLeod Charing Cross Hospital
Mr M S Mayou F R C S Central London Ophthalmic Hospital
Mr F Vernon Miles Hampstead General Hospital (*honorary treasurer*)
Mr Robert Milne F R C S London Hospital (replacing Mr H S Souttar)
Mr Arthur Morley Royal National Orthopædic Hospital
Sir Ernest Morris London Hospital
Mr Gilbert C Painter Royal Northern Hospital
Mr D Denham Pinnock F R C S National Temperance Hospital
Dr Arthur Porter Evelina Hospital for Children
Dr Harold Pritchard Miller General Hospital
Mr D W Ross F R C S Central Evangelical Hospital
Dr F Bellingham Smith Queen's Hospital for Children
Mr Waddington Stansfeld Hospital for Consumptives
Mr Thomas G Stevens F R C S Hospital for Women
Mr Alan Taylor West London Hospital
Sir William H Wells West London Hospital
Mr J F Wetenhall West End Hospital for Nervous Diseases
Mr Francis F Wetherall Guy's Hospital
Dr C M Wilson St Mary's Hospital

Ireland

North of Ireland Government and Hospital Administration

Sir Dawson Bates Minister of Home Affairs stated at Dungannon recently in connexion with the proposed erection there of a new hospital to replace the workhouse building that a view had been propounded in certain quarters that there should be less devolution of hospital administration and more centralization in his opinion this view was wrong It was important that a Central Government should delegate powers to local authorities as this had been found to be productive of better results The policy of the Government was to try to promote friendly and happy relations between local authorities and it would not turn down any reasonable proposal which they brought forward He was fully aware of the disadvantages under which the local hospital authorities laboured at present In some places the tendency was for local authorities to accept the inevitable but in Dungannon Dr Mann and his staff under difficult circumstances had accomplished good work When the joint committee had decided on a suitable scheme they could present it to the Government who would examine it carefully The councils he believed could rely on the assistance of the Government in bringing the scheme to fruition Referring to the future policy of the Government with regard to the Poor Law system he said it was the Government's desire to brighten up the lives of those who through no fault of their own had to seek admission to the workhouse In the old days families coming into the union had been separated but the Government aimed at abolishing that obsolete system and establishing comfortable regional homes

Royal National Hospital for Consumption

At the annual general meeting of the governors of the Royal National Hospital for Consumption the report stated that the treatment known as artificial pneumothorax had been more extensively used during the past year and had proved of great benefit to those patients who were suitable for it Sanocrysin or gold treatment had again been given in a number of cases either alone or in conjunction with artificial pneumothorax and good results had been obtained The report called attention to the heavy expenses of the hospital during 1931 and appealed to the public for increased help Only a very small portion of the cost of the x-ray installation appeared in the accounts for the year and nearly £1 000 would have to be found out of the ordinary income for maintenance Dr T G Moorhead President of the Royal College of Physicians in Ireland in his report stated that satisfactory results had been obtained during the year In over 73 per cent of early cases great improvement had been effected while in twenty two cases a complete cure had apparently resulted He would like to call attention to the forward policy which the medical staff had adopted During the last few years anonymous had tried extensively with encouraging results The hospital was now equipped with a thoracoscopy apparatus and pneumothorax treatment on [illegible] possible He sincerely hoped that the committee [illegible] offices would find some means [illegible] of pneumothorax treatment [illegible] The patients who lived in Dublin [illegible] could easily be dealt with [illegible] where special [illegible] twas to be given [illegible] free [illegible] in the [illegible] day He hoped [illegible]

be fitted up for the treatment of bone and other forms of tuberculosis occurring in adults there was a great lack of provision for such treatment in the Irish Free State It had lately been rumoured that in many of the counties of the Saorstat, the county councils proposed to establish their own sanatoriums He hoped that no hasty step would be taken, for he was convinced that from every point of view it was better to utilize the existing accommodation at any rate for all early cases of the disease Better results would be obtained in properly equipped sanatoriums than could be obtained in a multitude of small ones He was sure it would be cheaper to use and even extend the existing sanatoriums Until quite recently Newcastle Sanatorium had by no means been taxed to the full extent of its resources and he believed that that was true of the other Dublin sanatoriums On the other hand separate provision in each county or in group of counties for advanced cases in which nursing only was required was most desirable Such cases could be looked after more comfortably in hospitals than in the patient home and removal to hospital would lessen infection to others Dr Moorhead referred to the lack of provision for after care Public health officers were encouraging and developing a system of domiciliary visits but a great deal more was required The establishment of a tuberculosis colony at Portrane was an important step and he was glad to learn that the colony was now willing to accept patients from sanatoriums other than Peamount Referring to milk Dr Moorhead said he was still strongly of opinion that a Bill to ensure a clean milk supply was absolutely essential prevention was better than cure and in the long run cheaper He hoped that a Milk Bill would be introduced and carried through all its stages before long

Benn Ulster Hospital

The report presented to the annual meeting of the Benn Ulster Eye Ear and Throat Hospital stated that 950 patients were admitted into the wards during 1931, 6 000 new patients attended the extern department and there were 11 042 attendances of old patients Lieut Col A B Mitchell M D in moving the adoption of the report said that the hospital was founded by Edward Benn in 1871 and had therefore carried on its beneficent work for sixty years The original hospital cost £3 180 and £10 000 had been spent in alterations and extensions during the last fourteen years In 1918 the total attendances were 5 875 last year they were 17 032—an increase of almost three times in the fourteen years He explained the marvels of the construction of the human eye ear and larynx and said that the skill and training of their staff in dealing with these delicate organs and the work done by them could not be surpassed in any similar institution The fame of Dr M Keown still clung to the hospital and the staff to-day maintained and surpassed the best work of Dr M Keown Referring to squint Colonel Mitchell said this condition was now rare because of the excellent work done in institutions such as theirs by skilful correction of squint in childhood It was very interesting to note that their hospital had been in the vanguard in the matter of pay wards and paying patients Abuse of the voluntary system had thus been prevented and their annual income materially increased There must always be however a large number of applicants who were unable to contribute and a generous public had enabled the hospital to deal with these unfortunate people for over sixty years and it would not fail them now The steady increase in the attendances at the hospital was a clear proof of the efficiency of the staff However splendid the building and however modern its equipment nothing but first class work could ensure and maintain its popularity

Monkstown Hospital, County Dublin

Dr Bethel A Solomons Master of the Rotunda presiding at the annual meeting of Monkstown Hospital said that 584 patients had availed themselves of the wards of the hospital during the year, while 2 444 had been treated in the dispensary 4 300 accidents had been attended to in addition to 31 accidents arising from motor cars There had been 148 surgical and 157 dental operations 440 attendances in the x ray department and 1 458 massage treatments The operating theatre, through the generosity of Miss Beatty had been reconstructed redecorated and refitted at a cost of £250 The committee after most careful consideration of the financial position of the hospital felt that notwithstanding the objections which some subscribers might have to sweepstakes it would not be in the interest of the hospital to refrain further from participating in the Irish Hospitals Sweepstakes They had accordingly decided by a majority to fall into line with other hospitals The bank overdraft amounted to £1 272

Free State Vital Statistics

The births registered in the Irish Free State during the quarter ending December 31st 1931 numbered 13 222 a birth rate of 17 9 per 1 000 estimated population This rate is 1 below the average for the fourth quarter of the ten years 1921-30 The death rate was 13 per 1 000 (the total number of deaths being 9 620) while the infant mortality rate was 66 as compared with an average of 70 for the fourth quarter of the preceding ten years The number of deaths from all forms of tuberculosis during the quarter was equivalent to an annual rate for the corresponding quarter of the five years 1926-30 The number of deaths ascribed to accidents and diseases of pregnancy and childbirth was equivalent to 4 2 per 1 000 the rate for the fourth quarter of 1930 being 5 1 The summary of the quarterly returns for the whole year shows that the birth rate was 19 3 per 1 000 population as against 19 8 for 1930 and an average of 20 2 for the ten years 1921-30 The mortality rate of children under 1 year was 68 per 1 000 births as against the previous ten year average of 70 per 1 000

Scotland

Edinburgh Royal Blind Asylum

At the meeting of directors of the Royal Blind Asylum and School Edinburgh Dr George Mackay presented his final report as oculist to the institution and described the measures which had lessened the incidence of blindness and ameliorated the condition of the blind during his term of office He said that he had frequently experienced difficulty in diagnosing accurately the causes of blindness on account of the inadequate and misleading history supplied by the applicants for admission or by their guardians or representatives As far back as 1890 he had urged the desirability of inquiry into the physical condition of every school child including eyes and eyesight but it was not until 1904 that the first systematic examination of the eyesight of school children in Edinburgh was conducted by Dr E M Lithgow at the request of Sir Leslie Mackenzie The eye clinic of the Edinburgh School Board was started in 1912 and the introduction still later of schemes for maternity and child welfare had ensured the early recognition of defective eyesight The latest development was the establishment of clinics under expert ophthalmic surgeons through whose certificates alone the benefits of the Blind Persons Act 1920 could be obtained

If the standard of blindness which was already demanded in Scotland and recommended for adoption in England received international approval the worldwide statistics of blindness would be much more reliable than they had been in the past The chairman Dr Thomas Burns said that Dr Mackay had been oculist to the school for thirty-one years his services had brought great credit to the institution and he would continue to be its honorary consulting ophthalmic surgeon

Finlayson Memorial Lecture

The memorial lecture which was recently instituted at the Royal Faculty of Physicians and Surgeons Glasgow was delivered on April 21st by Sir D'Arcy Power F.R.C.S. who took as his subject The progress of surgery at St Bartholomew's London Hospital 1880 to 1940 Dr R Barclay Russ President of the Faculty occupied the chair The lecturer said that he felt his subject would have met with the approval of Dr James Finlayson who was born in Glasgow in 1840 and died in 1906 after having been for more than a quarter of a century librarian to the Faculty and physician to the Western Infirmary During the half-century in which the speaker had been attached to St Bartholomew's Hospital there had been revolutionary changes At the beginning of this period the surgeons lived in what might be called water-tight compartments meeting at weekly consultations but rarely entering each others wards and never visiting foreign clinics It was not surprising therefore that these surgeons at St Bartholomew's failed to understand the significance of the revolutionary changes which were being brought about by Lister and his pupils They were satisfied with their results for they were not accustomed to travel more than a few miles from London and they were without the scientific education which would have enabled them to understand the principles governing the practice of antisepsis The history of operations during this half-century had been one of battles brought to an issue mainly by the method of trial and error especially in connexion with hernia cancer of the breast cancer of the tongue and appendicitis The changes had largely been effected in the present generation following the sound biological training of medical students of the previous generation under Huxley Ilelleston and Ray Lankester

Social Services in Glasgow

Dr A K Chalmers late M.O.H. for Glasgow in the course of a recent lecture to the City of Glasgow Society of Social Service dealt with the requirements of a complete scheme of medical service and the relation of the family doctor to such a scheme He said that the school medical service was the only service which had admitted supervision of the health of individuals over a prolonged period This service accordingly presented a more complete picture of effective provision than existed elsewhere among the civilian population The subject had recently been approached from a new angle for a committee consisting of representatives of the British Hospitals Association and of the British Medical Association had considered and reported upon the subject of institutional treatment This committee stated that institutional treatment should largely displace treatment in the patients own home and that it was likely to increase in the future The lecturer believed that the National Health Insurance Act was having a child and ten for more efficient health service in the future In the present state of medical practice it was estimated that 80 per cent of the Glasgow population were ill without asking for help and it was assumed that this would be doubled if [illegible] were extended to [illegible] ant It was claimed that under the operation of the scheme [illegible] attention which [illegible] illness was coming and could be treated at an earlier stage than formerly but the work of the practitioner was now directed towards prevention and there was a more marked recognition of the social responsibility borne by the profession to the community

Glasgow Ear Nose and Throat Hospital

At the annual meeting of the Ear Nose and Throat Hospital of Glasgow held on April 21st Mr G W Service Lord Dean of Guild who presided referred to the great interest in attendance at the hospital and in applications for admission in recent years During the past year the work of the hospital had increased by 10 per cent and the waiting list for some time had averaged over 2 000 The report of the directors showed that during the past year the attendances had been 39 412 an increase of 6 604 over the number for the preceding year The subscriptions had amounted to £1 814 which was £76 less than for 1940 expenditure however had also shown a decrease of £289 so that the loss on the year's working amounted to £784

England and Wales

Bristol Colony for Mental Defectives

Horfield Colony for Mental Defectives eight miles from Bristol was opened by Sir Hilton Young Minister of Health on Friday April 29th This is the first complete colony to be built since the passing of the Mental Deficiency Act in 1913 It is situated about four miles from the northern boundary of the city of Bristol south-east of the Bristol Gloucester road not far from the well known viewpoint of Almondsbury The colony which is 126 acres in extent was designed by Messrs W S Skerrett and Sons architects to accommodate some 600 inmates with room for extension for about 1 000 It comprises ten homes for the patients a low-grade ward workshop laundry school hospital nurses home and administration block The Lord Mayor of Bristol (Mr John Inskip) presided at the opening ceremony at which some 500 people attended and in his speech congratulated Alderman Ernest Sheppard (chairman) and the Bristol Mental Deficiency Act Committee upon seeing the completion of the work to which they had devoted so many years of effort The Minister of Health also paid tribute to Mr Sheppard saying that it must be a proud day for Alderman Sheppard and his committee to have built and equipped the first complete colony of this kind for dealing with one of the most tragic and most difficult social problems of the day He also referred to the question of [illegible] mental defectives and recalled that [illegible] upon a preliminary investigation by experts of the [illegible] of these children [illegible] He said that he would hereby [illegible] letter and the [illegible] tion

An Anti-Cancer League

The [illegible] West Middlesex [illegible] and treatment [illegible] open [illegible] of [illegible] [illegible] [illegible]

evidence it has received of the necessity for early diagnosis if the best results in the treatment of malignant disease are to be obtained. The danger of making people morbidly over-anxious about cancer is appreciated, but it is believed by those initiating the movement that if the propaganda is undertaken in the right way and it is brought home that early cancer is curable it will have in general the opposite effect, relieving large number of middle-aged or elderly people from the secret unuttered fears and foreboding which now plague them.

Wimbledon has been made the starting point of the campaign and on April 27th at a public meeting in the town hall there over which the mayor presided and which was largely organised by the vicar the Rev. Clarence Hamilton what is to be known as the Mount Vernon Anti-Cancer Education League was inaugurated. In this League members men and women over 40 will promise that however healthy they may be feeling they will visit the doctor for overhaul every six months and will encourage others to do the same. A message was read from the King who is patron of the Mount Vernon Hospital expressing his interest on learning that the campaign was being inaugurated in the royal borough and his best wishes for its success.

An address was given by Dr. Malcolm Donaldson who is acting secretary to the advisory committee at Mount Vernon which is concerned with the matter. Dr. Donaldson stated that it was now beyond question that cancer could be successfully treated if detected at an early stage. The main reason for failure to see a doctor at that stage was the common belief that a swelling did not cause pain it could not be cancer whereas in fact early cancer was in many cases painless. As it was impossible to teach people themselves the detection of the early signs the only practical method appeared to be regular visits to the practitioner. The records of the Ministry of Health regarding cancer of the female breast said Dr. Donaldson showed that only about half the patients sought advice and treatment while the disease was at a curable stage. He dealt briefly with the modern treatment of cancer by radium x rays and operative procedure and with the work at present being done on cancer in the direction of discovery of the cause of the best form of treatment and of the most certain means of early recognition. He also gave examples of various forms of cancer attributable to long-continued irritation such as cancer of the tongue due to a jagged tooth. The well-known film by Dr. R. G. Canti illustrating the division and multiplication of cancer and other cells and the effect of radium upon them was also exhibited. A pamphlet was issued at the meeting bearing the title "Early cancer can be cured" together with a reminding card. It is the policy of the campaign to form as many branches of the League as possible the ideal being to have one in every town.

In a letter addressed to members of the medical profession asking for their co-operation, the authorities of Mount Vernon suggest that for the present the people who are likely to come forward for such examinations will belong to the better-to-do classes. When the movement has spread, as it is hoped that it will to the insured population and their dependants it will be time to consider the question of the best arrangement from the busy practitioner's point of view, for these periodical visitations, and of his remuneration.

Value of Hospital Almoners

With a view to interesting those responsible for the administration of hospitals both public and voluntary in the work of trained almoners, a meeting of hospital representatives was held recently at the Medical Institution Liverpool by invitation of the local training and advisory committee of the Institute of Hospital Almoners the medical officer of health presiding. Dr. R. C. Wingfield, medical director of the Brompton Hospital Sanatorium at Frimley said that though the hospitals, through their out-patient departments, seemed gradually to be taking over much of the work formerly done by the general practitioner it was vitally important that a link with the homes of the patients should be maintained and this could only be secured through the co-operation of an efficient almoner. Miss Macintyre assistant almoner at St. Thomas's Hospital, London discussing some of the functions of the hospital social service worker mentioned particularly her opportunities for preventing the waste of skill and effort of medical men by means of efficient following up of cases discharged from hospital and the utilization of auxiliary social services. By means of expert and kindly inquiry the abuse of hospital resources might be prevented.

King's College Hambleden Department of Anatomy

The Hambleden Department of Anatomy at King's College London which was the subject of a descriptive article in our issue of April 16th (p. 720) was opened on April 27th by the Earl of Athlone, the new Chancellor of the University of London. The Principal of King's College (Dr. W. R. Halliday) said that the ceremony marked the completion of the first stage in the reconstruction of the College to meet the requirements of modern scientific education. The department also represented the College memorial to the second Viscount Hambleden, to whom King's owed more than to any other individual. The generosity of the London County Council to the University had now enabled the Court to make a substantial capital grant (£35,000) to the cost of the Hambleden Department and the completion of the first half of the building scheme. From the Centenary Appeal Fund a sum of £25,000 had been drawn and the remainder of the expenditure on the building was being met from savings made for the purpose. The Earl of Athlone in opening the department said that the department would stand as a witness of how closely interwoven were the schools of the University. Here the students of to-day who would be the doctors of the morrow received their pre-clinical training before passing on to one of the medical schools of the University. These important ties were further strengthened when clinicians from the associated hospital medical schools—Charing Cross St. George's Westminster and King's College Hospital—accepted honorary teaching posts in the medical department of the College, and when College professors responded to cordial invitations to give of their knowledge to the hospital medical schools. He recalled that King's College Hospital was founded by the medical faculty of the College. In 1910 the hospital medical school and the College medical faculty separated amicably the College becoming pre-clinical only while the hospital, now on Denmark Hill was clinical and clinical only. The College then linked itself up with other medical schools and in step with Oxford and Cambridge prepared students up to a point which, he believed was the second examination for the medical degree, and after which they moved on to one of the hospital medical schools for their clinical instruction. The Chancellor concluded with a reference to the late Lord Hambleden saying that he cherished the recollection of working for many years with him on the British Hospitals Association. Professor Duncan M. Blair in proposing a vote of thanks to the Chancellor, said that the opening of this new department was not only a College affair but also a University affair because the medical faculty at King's was a centre of university medical education which worked in conjunction with

the clinical schools of several London teaching hospitals The new department would enable them to play their part in that team with greater efficiency It would certainly be their earnest endeavour to promote still further co operation with the clinicians in the hospital schools in working together on the great problems of common interest In the new department there would be greatly increased research facilities which allowed that co operation with the clinicians to be more extended than had been possible in the past In addition new facilities for microscopical work (which even apart from the normal teaching of histology was an essential part of the modern teaching of anatomy) would be available and it was hoped to prosecute with greater efficiency than had been possible in the past the work in developmental anatomy and neurology which he believed were the most vital branches of anatomy to day The resolution was seconded by Dr E Barclay Smith professor emeritus of anatomy who recalled the fact that the department was originally established in dungeons at the south eastern corner of the building At that time the professor of anatomy was concerned not only with the study of the form but of the function The study of function however soon demanded special treatment staff and equipment and therefore a separate department of physiology was created and he believed that King's College was the first institution in this country to appoint an independent professor of physiology For years the two departments worked side by side in the greatest harmony but the time came when the younger department found increased accommodation in another part of the College and now at length anatomy had followed its example and the two departments were once again topographically and in other respects closely linked together

Correspondence

ADVERTISING AND CANVASSING

SIR —The attention of the General Medical Council has been called to a proposal to provide free medical attendance for purchasers of a commodity which is to be sold through the agency of advertisement and canvassers I am directed to point out that any registered medical practitioner who associated himself with such a scheme might be held to have contravened the Council's Warning Notice in regard to advertising and canvassing and to have rendered himself liable to be summoned to appear before the Council in answer to a charge which if proved might have serious consequences The warning referred to above is as follows

> The practices by a registered medical practitioner
>
> (*a*) of advertising whether directly or indirectly for the purpose of obtaining patients or promoting his own professional advantage or for any such purpose of procuring or sanctioning or acquiescing in the publication of notices commending or directing attention to the practitioner's professional skill knowledge services or qualifications or depreciating those of others or of being associated with or employed by those who procure or sanction such advertising or publication and
>
> (*b*) of canvassing or employing any agent or canvasser for the purpose of obtaining patients or of sanctioning or of being associated with or employed by those who sanction such employment

are in the opinion of the Council contrary to the public interest and discreditable to the profession of medicine and any registered medical practitioner who resorts to any such practice renders himself liable on proof of the facts to have his name erased from the *Medical Register*

—I am etc

NORMAN C KING
Registrar

44 Hallam Street W 1 April 27th

LACTIC ACID IN THE GASTRIC CONTENTS

SIR —During the past five years Dr Alexander Calder and I have made bacteriological and biochemical investigations of the gastric contents of approximately 100 cases of cancer of the stomach During the same period several hundred patients suffering from other diseases were similarly examined A paper dealing with these investigations will appear in the near future but on account of the present interest in the subject I wish in this brief communication to state that in our experience lactic acid is commonly found in cases of cancer of the stomach but is rarely detectable by the ferric chloride or thiophene tests in any other condition In short our experience agrees with that of Dr F Craven Moore (*Journal* April 23rd) and is completely at variance with the figures reported by Drs Murray and Robertson (*Journal* April 2nd)

The quantitative methods employed by Dodds and Robertson for the estimation of lactic acid in gastric juice are capable of demonstrating amounts of lactic acid which are so small that negative results are obtained with the usual clinical tests From a practical point of view it is not of much importance whether such traces of lactic acid are or are not present in normal gastric juice It would however be of real value in diagnosis if it could be shown that a positive ferric chloride or thiophene test occurs more frequently in cancer of the stomach than in any other gastric condition This I believe to be the case although it must be clearly understood that the presence of lactic acid is in no way pathognomonic of gastric cancer since it undoubtedly occurs in other diseases both intra and extra gastric The factors which favour the production of lactic acid are however more frequently present in gastric cancer than in any other type of gastric disease Quantitative methods for detecting lactic acid are too complicated to become routine clinical procedures while the ferric chloride and the thiophene tests have certain disadvantages which if not fully appreciated will lead to erroneous results

Without going into details at present I suggest that the contradictory reports appearing in the literature recently can be explained on this basis —I am etc

STANLEY DAVIDSON

Aberdeen April 26th

MALIGNANT DISEASE OF PHARYNX AND LARYNX

SIR —I was very pleased indeed to read in the *Journal* of April 30th Mr F Muecke's straight out opinion upon the treatment of cancer of the pharynx and larynx I agree entirely with what he says

It is now more than ten years since first I practised and began to preach the complete removal of pharyngeal cancer when it is eradicable by the diathermy knife coupled with the clearance of the cervical gland area from the same side of the neck A small number of colleagues have like Mr Muecke followed the same plan and I am sure I express their opinion as well as my own when I say that the operation has proved to be as satisfactory as one can expect in so deadly a form of cancer But the operation is severe and necessitates a special technique and knowledge Partly for that reason but also no doubt as a result of the recent radium furore it has been to a great extent supplanted by the insertion for prolonged periods of radium tubes even unfortunately in easily eradicable growths On the whole results have not been good yet the practice continues Not to go deeply into the subject but to mention only one point—the most obvious and certain of the sequels of the lengthy lodgement of a foreign body in the malignant area communicating with the septic cavity of the mouth—I may say that severe septic infection is a frequent result

and we find the misery of this most distressing form of cancer intensified by the addition of sepsis not only local but general

On the other hand diathermy even in incurable cases is often useful for when properly used it may be a most merciful remedy I have at this moment, for example two patients under my care both with incurable cancer In one an epithelioma involves the posterior surface of the soft palate and the lateral walls of the nasopharynx When he came he was suffering the acme of incessant facial neuralgia from involvement of branches of the trigeminal in the growth He has been diathermised on several occasions and he has been free from neuralgia since the first The man is able now to talk without tin to his friend The second case is that of an epithelioma of the chief and maxillary antrum Diathermy has also kept this patient active and free from pain for the last six month

So much for hopeless cases As to the results of diathermy excision I have case on my list of three five and even ten years freedom from recurrence Such results in a malignant form of the disease are sufficient evidence only of the value of this method of treatment and I can heartily support Mr Mueller in once more commending it to the notice of laryngologists —I am etc

DE MCKENZIE

London W 1 April 27th

POLYCYTHAEMIA RUBRA AND ACHLORHYDRIA

SIR —Dr Robert Platt in recording his case of polycythaemia rubra vera apparently overlooked the cases reported by Minot and Buchman's paper appeared in 1927 and Osgood Castleman and Drobey's described two cases in 1928 (*Amer Journ Med Sci* 1928 clxv 257) and in 1930 I recorded the first in this country (*Lancet* 1930 i 1129) Of the five cases which have come to necropsy two were found to have an aplastic bone marrow and in both were complicated by syphilis it was my belief that antisyphilitic measures had been the cause of the anaemia Irani (*Schittenhelm's Krankheiten des Blutes* Berlin 1925 ii 111) has shown that salvarsan can produce an aplastic marrow

Dr Platt's case is of special interest in that antisyphilitic measures did not retard improvement and in that—as in the case I recorded—there was chronic glossitis and improvement on liver diet No fractional test meal was carried out in my case and in spite of improvement in the blood condition he died of an intercurrent polyserositis —I am etc

HAROLD AYERS

London W 1 April 27th

ANATOMY AND SURGERY

SIR —The anatomy of the textbooks is admirably suited to the aims of examinations as a memory test it is only excelled by certain of the Chinese classics But the surgeon who turns to these books for a description of the living human body that can help him in his craft finds them (to quote from an early report on the island of Ceylon) replete with innumerable abominations I agree with the reviewer (in the *British Medical Journal* of April 30th) that *Cunningham's Anatomy* (sixth edition) stands second to none of its kind and for that very reason I think that criticism from the surgeon's point of view may be of interest This criticism after an attempt to supplement my scanty understanding of certain regions I would arrange under three main heads

1 A fact of interest in the mechanics of the body which is perhaps only to be expected from those whose work is on the cadaver For example

(*a*) The method of closure of the nasopharynx in speech and swallowing is vaguely and inaccurately described The important point that the tensors and levators of the palate act in opposition is not mentioned Passavant's ridge[1] is described is being opposite the body of the second cervical vertebra whereas it actually is just below the adenoid bed (The adenoids end at the foramen magnum not at the arch of the atlas) Naturally when the ridge is wrongly placed it is not recognized that it is the posterior half of a sphincter whose anterior half is the soft palate though this is obvious enough in a gagging patient

(*b*) The mechanism by which the tonsils however prominent are prevented from descending with the bolus as it is swallowed is not described

(*c*) In discussing the inguinal canal no mention is made of the essential fact that the contraction of the abdominal muscles which is the only force that can drive the abdominal contents through it automatically closes it[2]

(*d*) No mention is made of the definite and important band of fibres which Hesselbach called the internal crus of the internal inguinal ring[3]

(*e*) No mention is made of the secondary fibrous suspension of the testis which takes its weight when the muscles relax This band runs up with the spermatic vessels and spreads on their outer side into the extraperitoneal tissue over the iliacus The structure most resembling it in the books is the internal spermatic fascia which as a funnel shaped investment for the cord from the transversalis fascia I have yet to see dissected out

2 An unfamiliarity with structures which are not well developed in the aged derelicts who come to the dissecting tables though these structures may be of importance earlier in life For example

(*a*) *The tonsil* I am pleased to observe the dawn of doubt regarding the classical description which makes half a dozen arteries concentrate on this anaemic lump of lymphoid tissue[4] There is of course only one and it might be as well to indicate its very constant place of entry Persistent post operative haemorrhage is still described in terms of arteries though to a general surgeon it is obviously venous and the vein that causes it is not described[5] There is no supratonsillar fossa[6] and the hole in the substance of the tonsil which the anatomists persist in calling by this name is very unlike the plan of it in Fig 869

(*b*) *The adenoids* In contrast to the misdescription of the tonsils these are to all intents not described at all It is a solemn thought that though any student would resent as unfair a question about the relations of these large and extremely interesting structures they and the tonsils are the organs which he will most confidently attack on graduation The horrors preached and practised in the surgery of the throat can only be explained by ignorance of anatomy I and I can only be explained by ignorance of anatomy

(*c*) Certain anatomical points in the condition of hypertrophic pyloric stenosis might be mentioned for their surgical importance I admit the wish is egotistical and that the subject borders on pathology[7]

(*d*) There is no description of the lines of junction of the elements of the upper lip though perhaps this is preferable to the usual figure which shows them descending vertically from either nostril The real line of junction can be seen on the mucosa of the undersurface of any baby's lip[8 9]

3 A most confused description of the fibrous tissue of the body This is probably due to that matting of the layers of the cadaver which is produced by preservative and which lends such a sporting interest to examinations in operative surgery For example

(*a*) The classical transversalis fascia continuous above with the renal fascia and inserted below into the crest of the ilium is an anatomical Mrs Harris whose origin is a confusion between the extraperitoneal connective tissue and the aponeurosis of the transversalis muscle I think I can discern the onset of suspicion here too but what is wanted is a categorical statement that the fibrous layer of the peritoneum

[1] Stein *Wien med Woch* 1930 lxxx 1152
[2] Symington *British Medical Journal* 1910 ii 1353
[3] Russell Hamilton *Lancet* 1899 ii 1416
[4] Hesselbach *De Ortu Hernarum* 1816
[5] Browne *Journ Anat* 1928 lxii 82
[6] Hett and Butterfield *Journ Anat and Physiol* 1904 xlv 35
[7] Browne *Arch Dis Child* 1931 vi 129
[8] Retzius Gustav *Biol Untersuchungen* 1 ol xi Pl xvi
[9] Veau *Ann Anat Med Chir* 1926 v 601

the extraperitoneal connective tissue the tela subserosa the transversalis fascia the iliac fascia the renal fascia the visceral layer of the pelvic fascia etc are all the same continuous layer and can only be intelligibly described as such It should be possible in this description to score a point against the surgeons by pointing out that their extraperitoneal approach to the ureter is outside this layer and leads into the cave of Retzius in one direction and behind the kidney in the other

(*b*) The pelvic fascia that mystery which has reduced so many students to a becoming state of modesty by defying them to understand it is a mare's nest It is constructed by the strange device of calling the aponeuroses and tendons of the pelvic muscles its parietal layer and the packing material round the viscera its visceral layer though these two tissues differ developmentally functionally and structurally Cunningham's account of it is the most rational I have seen but the confusion will remain till the word fascia is entirely dropped Anatomy is one of the exacter departments of medicine and one of the first requisites of exact description is a narrow and sharply defined meaning to all terms used Apart from the pelvic fascia compare the fascia lata which is a tendon and the fascia of Camper which is a vague concentration of fibrous tissue Or note that the tendinous expansion of the palmaris longus is an aponeurosis while the precisely similar expansion of the hamstrings is fascia

—I am etc,

London W 1 May 2nd DENIS BROWNE

TREATMENT OF OSTEO ARTHRITIS OF THE HIP JOINT

SIR —Osteo arthritis of the hip joint has usually been regarded as an incurable and progressive disease I am glad to see that both Dr Hernaman Johnson and Dr Douthwaite take a less sombre view of the condition Dr Hernaman Johnson speaks of great improvement and of non recurrence under deep *x* rays in doses not large enough to upset the patient constitutionally Dr Douthwaite claims that the vast majority of patients can be relieved of pain and of much disability by partial or complete restoration of movement by manipulation and the use of a walking calliper He is not so convinced of the value of *x* rays and only has recourse to these if after manipulation pain persists In fact Dr Douthwaite rather goes out of his way to make the point that after *x* rays lasting improvement only occurs in the minority of patients

Whatever the cause of this difference of opinion—and perhaps it is only a matter of dosage—are not both Dr Hernaman Johnson and Dr Douthwaite erring somewhat on the side of optimism? One would like to have something definite in the way of evidence Do radiograms taken a year or two after these methods have been employed show that the disease has not progressed? If manipulation is so successful surely the unqualified practitioner would have reaped a wonderful harvest yet patients commonly state that they have been told by an osteopath that they have arthritis and must consult a doctor for he the osteopath can do nothing for them

The matter is of great importance and the opinion of others who have made a special study of the condition would be valuable What have our orthopaedic surgeons to say in regard to the end results of deep *x* ray therapy and of manipulation? In your last issue Mr Whitchurch Howell at any rate expresses himself in no uncertain terms There are now quite a number of medical men in London who have studied and practise with success methods learnt in the osteopathic colleges of America and elsewhere What is their opinion of the end results in osteo arthritis of the hip? Will not general practitioners who collectively must have the biggest experience of all tell us what they find? The Rheumatism Research Committee of the British Medical Association might with advantage take up the point in any collective investigation which it may be contemplating

Osteo arthritis of the hip joint is a most distressing and disabling disease With all diffidence I would like to suggest that it can seldom be treated successfully by any one method alone but that none the less the problem is a fairly straightforward one since constitutional symptoms are absent and attention can be concentrated on the joint alone

My own experience is that cases must be divided into active and inactive The former comprise those where inflammatory changes predominate and bone change is slight *X* rays usually show hazy outlines and generally some cystic formation is visible The symptoms are severe The inactive type shows more bone change limitation of movement is a feature but pain mostly occurs on walking and rest is not disturbed In the active type manipulation I would suggest is always wrong and deep *x* ray therapy in anything like massive doses may be followed by intense and lasting reaction In every case there is some risk of lighting up the disease by manipulation but far more so in the active case For the walking calliper I fear I have no good word Muscular atrophy such a feature of the disease is always aggravated by its use nor must it be forgotten that the disease is rarely confined to one hip joint

I would like to advance the view that osteo arthritis of the hip is an infective condition of great chronicity and I would suggest that the cystic condition so often seen and incidentally mentioned in your last issue by Dr Matthew Ray is evidence of this for as I have shown these rarefied areas can be reproduced in rabbits at will by the intravenous injection of certain streptococci From these areas which show all the appearances of a localized infection the same streptococci can be recovered If I am right the most hopeful line of attack would appear to be a preliminary course of vaccines accompanied by subsidiary measures to recondition the muscles and gentle stretching to maintain the fullest possible range of movement followed later by deep *x* rays which certainly do help to increase the range of movement and to reduce pain by manipulation and in some cases of marked contracture or intractable pain by operative measures

X rays taken at intervals of a year or two show that vaccines do in fact tend to check the disease Bony change does not increase and hazy outlines clear up Space does not permit any consideration of the details of the vaccine to be used but the patient will be overhauled for foci and pathogen selective culture should not be omitted —I am etc

London W 1 May 2nd H WARREN CROWE

SIR —In your issue of April 23rd there appeared two letters one from a physician and one from a radiologist testifying to the value of *x* rays in osteo arthritis With Dr Kempster's letter I am naturally in entire agreement I note that Dr Douthwaite refers to pain only He does not tell us about the walking or working capacity of these patients before and after treatment This is a matter which from an economic point of view is even more important than the question of pain

I have collected a considerable number of these cases and have recorded their initial condition and their progress according to a simple but practical system On each patient's card is noted in addition to the history (1) walking capacity (2) working capacity (3) pain at night and (4) pain in day The following is the record of a case chosen not because it is exceptional but because the patient was shown before a Divisional meet-

ing of the British Medical Association and will doubtless be remembered by some of your readers

A married woman aged 62 had had pain in both hips since 1911 A radiograph here discloses deformity of both femoral heads and of the acetabulum with abundant osteophyte and destruction of the intra-articular cartilage

She was last seen on November 26th 1930 when the following notes were made *Walks, abducts* well with great difficulty with aid of two sticks and for a few hundred yards only *Rotates, all hips* well *Lies at rest* unable to lie except in middle and on back only *Pain in day time* pain in day time Pain comes on after walking

Sixteen months later April 11th 1932 the following observations were made *Walks* abducts short distance without pain Up to three miles with one stick *Rotates, abducts* able to do the necessary duties of own allotment *Lies* no pain night or day

The radiographic picture does not seem to change but I have not noticed that a crippled patient who has been enabled to walk freely do a full day's work and enjoy freedom from pain is greatly troubled by this fact It cannot rightly be expected on *a priori* grounds that osteophyte would be absorbed or a destroyed intra-articular cartilage be reformed All one can hope for is that the activity of the disease process be arrested Nature will make the best of a bad job within the well known limits of her capabilities

Dr Douthwaite recommends restoration of movement by manipulation and the use of a walking calliper But surely if the capacity of x rays to improve function as well as to relieve pain is once established the agents should be used *in conjunction* with the above measures Here is an obvious opportunity for combined treatment The special plea in my former letter was however that cases should be diagnosed and treated before there is appreciable limitation of movement —I am etc

London W 1 April 27th J HERBERT JOHNSON

THYROID EXTRACT AND PULMONARY EMBOLUS

SIR,—With regard to the memorandum by Mr Fraser and the letter by Mr Hannan on this subject appearing in your issues of April 9th and 23rd respectively surely it is not reasonable to expect any marked prophylactic effect from thyroid which has only been administered over a period of about a fortnight Anyone who has treated a case of hypothyroidism with this gland and who has carried out determination of the basal metabolic rate by some reliable method such as the Douglas Haldane is familiar with the delay in response He well knows that no appreciable increase *in rate* ever occurs in less than a fortnight and that even then it is generally slight

It seems to me that if this method is to be of any value the treatment must be instituted at least three weeks before the operation is to take place —I am etc

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(*a*) The method of closure of the œsophagus very old and and swallowing is vaguely and inaccurately

It is evident then that not only are they brought up on raw milk from birth but as Lieutenant Commander Sampson's report states it remains one of their staple foods throughout life —I am etc

London E 1 April 30th EVELYN SPRAWSON

RICKETS AND VITAMIN D

SIR,—Referring to the letter of Dr Chalmers Watson in your issue of April 23rd I can recall a case of twin sisters who came under my notice in 1909 when I was serving as school medical inspector under the Education Authority in the Midlands One of the twins had the classical symptoms of rickets to a marked degree while the other presented no signs whatever of the disease Both children had been brought up on the same diet At this distance of time I cannot recall details but the circumstance made a vivid impression on my memory and I have since regretted not having drawn attention to it at the time —I am etc

London April 30th EVA MCCALL

ALUMINIUM AND HEALTH

SIR,—May I briefly refer to your comments on my monograph in your issue of March 26th? A possible explanation of the apparent non toxicity of aluminium in nature may be that it exists in vegetation in a colloid form but in any case the amount imbibed in this way is infinitesimal compared with that taken in artificially with cooked foods

As to no occupational disease having hitherto been attributed to aluminium it must be borne in mind that no disease or ill health of any kind in any class of life has previously been attributed to this cause The insidious nature of the symptoms and their unsuspected origin sufficiently account for their being overlooked I would not expect any crude symptoms from imbibed particles for these would not be rendered soluble in the lungs as they are in the stomach Any aluminium dust swallowed in the course of work would be but a trifling addition to that taken daily *in food*

The use of alum for cleansing water will need the gravest consideration in the future as has been pointed out to me by the *Director of Hygiene* of the War Office Our own and many foreign Governments recognize the poisonous effect of alum and forbid its use in baking powders this being at least one instance of divergence from the concordance of expert opinion to which you refer

Negative deductions on healthy young men are worthless for their systems having been actively throwing off this metal in increasing amount since birth can readily reject an additional quantity without apparent ill effects It is a significant fact that it is medical men getting on in years who write thanking me for their recovery from prolonged ill health since stopping aluminium cooking The incredulity of those who have not personally experienced the ill effects of this metal on their own bodies is natural especially when supported by apparently authoritative opinions emanating from America and Germany But these are based on laboratory work and the fact that animal experiments in one country under certain conditions are negative does not disprove positive findings in other countries under other conditions The former may be genuine but the fact that opprobrium alone rewards the latter tends to give their results greater credence

If at any time under any conditions lesions or deranged health have been produced in animals by aluminium salts it is obvious that we must remove all possibility of such a risk to human beings But after all this is a human question, so why waste further time over animal

experiments from the other side of the globe when we have only to step outside our own doors to find abundant first hand proof in our fellow men? The fact that toxic effects can be produced if large quantities of aluminium compounds are given as you say justifies us in taking every possible measure to save humanity from the extreme danger of continually taking in these substances in ever increasing quantities as at present—I am etc

R M LE HUNTE COOPER M D
B S M R C S L R C P

London W 1 April 30th

AETIOLOGY OF CANCER

SIR—Dr Gye in the *Journal* of April 9th uses an expression which may be expected to arouse controversy Such a statement as the obvious conclusion the only conclusion may be applicable to a mathematical proposition if all of the facts are known but the established facts given by Dr Gye are not the only facts and therefore his conclusion may not be the only conclusion There are certain things which have been left out and the conclusion to be derived from these may be that the changes are not so much those to which the word immunity as generally understood can be applied as that an alteration has taken place in the physiological balance of the animal

Dr Gye writes that the tumour in the duck always recedes So there is something in the duck which prevents the growth of this tumour and this something might be an immune body or the natural physiological effect of injecting a foreign body But if normal mouse tissue such as spleen liver testis or other normal tissues and certain substances such as olive oil be injected into a normal mouse it will be found impossible to get cancer to grow in that mouse This cannot be ascribed to an immunity produced by or to an organism A conclusion to be derived from these facts is that the results can have nothing to do with a virus which is diametrically opposite to the conclusion drawn by Dr Gye—I am etc

J TERTIUS CLARKE M R C S Eng
L R C P Lond D P H Camb

Harrow April 30th

BRONCHOMONILIASIS IN JERSEY

SIR—In a recent paper (*British Medical Journal* April 2nd) Dr F H Young has described a condition of chronic bronchial catarrh which commences in early childhood and which persists through adolescence into adult life To recapitulate the condition which is a recognized clinical entity has been described as commencing with an attack of whooping cough or measles Chronic cough and dyspnoea remain there are acute attacks of bronchitis of a fine type which tend to recur with increasing frequency until suspicion of tuberculosis is aroused Such is the typical case history The aetiology is somewhat obscure Adenoids rickets Pfeiffer's bacillus or an unresolved pneumonia have been cited as causes or as contributory factors The treatment is equally unsatisfactory and briefly may be said to consist of hygienic measures and such alterations in the patient's mode of life as will guard against too frequent recurrence of acute attacks of bronchitis There is good evidence that the condition is widespread and that great numbers are crippled by it at an early age I therefore venture to give a short account of work which has been carried out in Jersey during the past ten years believing that we have thrown much light upon this condition as regards both its cause and its treatment

Although it is unusual for a child below 7 years of age to expectorate bronchial secretion we have as a rule succeeded in securing specimens by means of expectorants or by administering emetic dose of ipecacuanha The sputa have been examined direct and by culture and in the great majority the fungus monilia has been found to be present For the past ten years sputa have been examined in this way in addition to the routine examination for tubercle bacilli and cellular content As a result of these findings treatment has been directed against the monilia by means of vaccine and by the exhibition of potassium iodide in full doses by the mouth

In Dr F H Young's paper it is recorded that the sufferers are drawn from the poorer classes for the most part Treatment as we have found to be successful must be long continued From three to five months is a usual course and the drug used in such large doses is costly This has led to the formation of a clinic where suitable cases receive free treatment and medicine The clinic has been established some eighteen months and during that period 120 individuals have been treated with most striking success May I give a typical case history?

A girl aged 9 years Measles three years ago has never been well since Whooping cough nine months ago She is a thin fair child with paroxysmal cough and sputum limbs puny tires very easily teeth and throat healthy slightly furred tongue Dyspnoeic on exertion Monilia cultured from the sputum The chest is well shaped but moves defectively on the left side in its lower half Signs of coarse bronchitis at the angle of left scapula Weight on May 28th 1928 46 lb Potassium iodide 20 grains three times a day given by mouth and vaccine at weekly intervals Weight on August 4th 1928 49 lb Iodide was continued until March 1929 when she weighed 53 lb This child has had no further bronchitis remaining free from cough in both winter and summer alike She attends school regularly and is in all respects normal

We conclude that this condition is one of chronic bronchomoniliasis and that it is relieved by systematic prolonged treatment by vaccine and full doses of potassium iodide Since we have discovered monilia in cow's milk it is considered advisable to sterilize all milk by boiling or pasteurization before its consumption We have noted an increase in these cases during the summer —that is about the time of the calving of cows These observations may have a direct bearing on the causation of June epidemic pneumonia

At a later period in life we frequently find monilia along with the tubercle bacillus in the sputa of cases of pulmonary tuberculosis It would seem to be a fair deduction that moniliasis precedes the infection by the tubercle bacillus and is thus a pre tuberculous condition We are strongly of the opinion that all children who are chronic bronchitics should be subjected to a searching along with the tubercle bacillus in the sputa of cases potassium iodide should be administered in large doses and careful watch should be kept on the body weight and on the physical signs in the lungs—I am etc

H GORDON OLIVER M B B Ch

St Peter's Jersey April 22nd

TREATMENT OF TETANUS

SIR—I have read with interest Dr Leslie Cole's article on the treatment of tetanus in the *Journal* of April 23rd I would however like to include the use of magnesium sulphate as a most valuable method of reducing the spasms This drug which was introduced into the treatment of tetanus by Meltzer and Auer[1] may be given subcutaneously intramuscularly intravenously or intrathecally Intravenously its effect on the spasms is almost dramatic and it is therefore probably the method of choice in an urgent case By this route a 3 per cent solution is given very slowly (about 5 c cm per minute) until relaxation is obtained In a severe case the spasms may return in about four hours and need a further injection Intrathecal injection takes about half an hour to show any result but the effect is much more prolonged Meltzer advises 25 per cent magnesium

[1] Meltzer and Auer *Journ Exper Med* 1906 iv 602

sulphate and a dose of 1 c.cm. per 10 kilograms of body weight or 0.5 c.cm. per 10 kilograms in a child. If any respiratory distress follows the use of magnesium sulphate an intravenous injection of calcium chloride (0.02 per cent. solution) gives immediate relief as it directly neutralizes its action.

The use of magnesium sulphate, of course, in no way replaces the treatment by antitoxin or carbolic acid but is merely an effective measure to reduce the severe spasms without the dangers of repeated chloroform anæsthesia and to tide the patient over until the effect of antitoxin is seen.—I am, etc.

J. A. H. SOWRAY, M.B., M.R.C.P. Lond.

Edinburgh, April 27th.

PREPARATION FOR MARRIAGE

SIR,—I have been reading with great interest and some apprehension of the proposed activities of the British Social Hygiene Council in the matter of preparation for marriage. That those about to marry need some real instruction in matters relating to sex they are in many or most cases taking in with lighthearted appalling ignorance of its seriousness from a physiological and psychological standpoint there is not a shadow of doubt.

Those of us who so often see as I do the unhappy results of this ignorance is exhibited by anxiety states and symptoms in various forms and in not a few cases gross disorder—ending too often in more or less complete functional disorder physiological and psychological very frequently as a consequence in more or less complete disruption of once happy relationships—have for long enough felt the need of some sound pre-nuptial instruction. The only satisfaction left to us at present is that of seeing such persons under suitable advice and management restored to health and happiness (which need never have been lost), when they have been advised to seek such assistance soon enough.

The B.S.H.C. is then absolutely on right lines in making an effort to supply to those about to marry the advice they sorely need. It is however in respect of the proposed manner of imparting this advice that I am apprehensive. If it is to bear good fruit the advice should be within the reach *of every couple contemplating* early marriage and it must be given with the greatest possible care by *thoroughly capable and responsible instructors*. So far I have not seen any mention *of how* the B.S.H.C. proposes to draw up its list of competent advisors (or has already selected them) *which it proposes* to publish (or has published) and place in the hands of persons applying to its bureau for assistance nor have I yet had the opportunity of seeing such list. It would seem however that the general practitioner is not to be considered a competent authority in these matters. Granted that this may be so and in far too many cases is so. It seems to me also the case that a considerable number of gynæcologists neurologists and psychiatrists and a still larger number of general physicians have had equally little or no experience of the duties that the B.S.H.C. is proposing to entrust them with. While I am aware that the *average* general practitioner has not hitherto given these matters the attention they deserve I doubt whether he has given them less attention than has the *average* specialist in those branches of medicine above indicated and I suggest that it is to the general *practitioner* and not to the specialist that the public should be taught to look for competent advice in these *matters*.

It seems to me that the plan adopted by the B.S.H.C. (or about to be adopted) in its splendid effort to bring so greatly needed a service within the reach of the public has been rather ill considered in the best interests both of those it wishes to serve and of the general *practitioner*. The advice needed is of an intimate personal nature and surely it is first of all to the family doctor—who is usually not only that but also the family friend—that the seeker after advice should be encouraged to go. He or she does not go to him (or anyone else) as it is merely because he or she has no idea that such advice is needed or would be helpful.

I suggest that the service which the B.S.H.C. has undertaken to provide would be better *provided* (1) If the public were advised of the existence of the bureau and its purpose. (2) If the council provided the general practitioner (not the public) *with literature setting forth* the evils that now result from the ignorance of couples about to marry and asked *him to see such and such a patient* of his who has applied to the bureau for advice and has been referred to him. (3) If the council supplied the general practitioner with a list of specialists in his neighbourhood to whom he could, if he wished (I am quite sure that he would if he thought his patient would be better served by so doing) refer the inquiring person.

By some such method as this the public would be well served the general practitioner would not feel aggrieved by having his patients advised to seek advice other than from him or through him and if not now feeling competent to deal with such cases as would be referred to him he would very soon take steps to make himself so. Though not one of them I submit that the imparting of such advice is pre-eminently work for general practitioners and that the persons needing it should not be referred to a specialist except by *him*.—I am, etc.

J. W. ASTLEY COOPER.

Meldreth, St. George, April 27th.

FOULING OF FOOTWAYS BY DOGS

SIR,—Those whose fortune it is to dwell in Marylebone will be familiar with those printed notices which the public health authority displays from time to time on our lamp posts and on the sand bins in our streets requesting dog owners not to permit their pets to *foul* the pavements. Even in the Harley Street neighbourhood these timely reminders are to be seen *though* one would have thought that surely there could be no need to indicate the rudiments of hygiene or to stress the elementary requirements of public amenity in such a place. Alas! it would be vain to cherish this pious illusion.

On a recent walk from Marylebone Road to Wigmore Street along a hallowed thoroughfare which shall be nameless the writer had to tread delicately between no fewer than forty-three deposits of dog faeces on the pavement. It can hardly be urged in defence of this horrid state of affairs that non-medical residents in the surrounding district choose—in a puckish spirit—to bring their dogs for exercise to the sombre street in question and thus to keep their own side walks sweet and there seems no escape from the unwelcome conclusion that the medical dog is a singularly dirty and *ill trained creature*.

Any dog may be readily trained to use the gutter if his owner will but take the trouble to teach him to do so. Further the horrified observer who frequents the neighbourhood in the early morning or in the twilight will see that the offending animals are almost invariably *on* the lead when they are rendering the pavements unfit to walk on and he will note with surprise that their mistresses and masters are apparently willing *accessories* before the act. The point need not be laboured but may I suggest that the state of the pavements *in front of* our *consulting rooms* is a reproach to us both as medical men and as dog owners. What must our patients feel when primed with counsels of perfection they *step from our* houses *on* to—what has been described by one who signs himself

AGAG.

London, W.1, April 27th.

Obituary

SIR DAVID DRUMMOND M.D., D.C.L.

Consulting Physician Royal Victoria Infirmary, Newcastle-upon-Tyne; Emeritus Professor of Medicine, University of Durham

We have to announce with much regret the death at Newcastle on April 28th of Sir David Drummond, one of the most distinguished physicians in the North of England, who was President of the British Medical Association in 1921–2.

Born in Dublin in December 1852, David Drummond received his early education at private schools in Ireland and England, and studied medicine at Trinity College, Dublin, graduating M.B. and M.Ch. in 1874. He continued his studies for two years at Prague, Vienna, and Strasbourg before proceeding to the M.D. degree. He then settled in Newcastle and was soon appointed assistant physician to the Children's Hospital. In 1878 he was elected to the honorary staff of the Royal Victoria Infirmary as pathologist and assistant physician. He retired from his appointments at the Infirmary in 1912, and in recognition of his long services was made consulting physician and presented with an illuminated address.



For more than fifty years he was closely associated with the University of Durham College of Medicine at Newcastle. He had been lecturer in physiology, in pathology, and in therapeutics, and from 1911 to 1924 was professor of the principles and practice of medicine in succession to Sir George Hare Philipson. He also served with distinction in the offices of Vice-Chancellor of the University and President of the College of Medicine.

Sir David Drummond was a consistent worker for the British Medical Association. After giving four years to the duties of secretaryship he became president of the North of England Branch in 1891–2, an office he held concurrently with the presidency of the Northumberland and Durham Medical Society. At the Annual Meeting of the Association in Birmingham in 1890 he was vice-president of the Section of Medicine, and at the Newcastle meeting in 1893 he gave the Address in Medicine. He had for some years represented the North of England Branch on the Council before he was, by the suffrage of his fellow-members in that Branch, unanimously nominated to preside over the Annual Meeting of the Association at Newcastle in 1921. The success of that meeting owed not a little to the qualities of mind and heart which had raised Professor Drummond as he then was to the position he held.

For his services in the war as physician to the Northumberland War Hospital he was created C.B.E. in 1920, and three years later he received the honour of knighthood. His own University conferred the honorary degree of D.C.L. upon him, and the University of Glasgow that of LL.D. the Royal Academy of Medicine in Ireland made him one of its honorary Fellows. He had also been president of the Association of Physicians of Great Britain and Ireland. In 1925–6 he was a member of the Royal Commission on Lunacy Law and Administration.

For the following appreciation we are indebted to two colleagues.

Two years after beginning practice in Newcastle David Drummond succeeded Dennis Embleton on the staff of the Royal Infirmary as honorary physician. His colleagues at that time were George Hare Philipson, Byrom Bramwell, and Charles Gibson. When Bramwell migrated to Edinburgh in the following year Drummond took over the post of honorary pathologist to the hospital, and for more than sixteen years found therein one of his greatest interests. Although in his early days he devoted much time to the study of diseases of the brain and cord, his work ranged widely, and he was a pioneer in other fields of clinical medicine. One of the first to recognize and lay down the association between empyema and pneumonia, he also taught the syphilitic origin of general paresis and aneurysm for many years before actually publishing his belief in his Address in Medicine to the British Medical Association at its Annual Meeting in 1895. He was essentially a pathologist physician, and to the end of his long and distinguished career a constant and welcomed visitor in the post-mortem room.

Sir David Drummond was an outstanding representative of a rapidly disappearing class—the older school of true general physicians of whom the profession is so justly proud. The less strenuous times of fifty years ago, when he was laying the foundations of his reputation, doubtless gave opportunity for development and culture which to-day we lack. There are now facilities for scientific progress in medicine which were then wanting, but the circumstances of modern life leave little time for the study of medicine as a fine art, and the cultivation of the manner and grace of Drummond's heyday. No appreciation of Physician Drummond as he was known throughout the North would be adequate without a reference to his invariable and unstudied courtesy, his consideration for others, his genuine sympathy, and generous help to all in need of it. Apart from the justified confidence in his professional attainments, his qualities won for him the respect and love of many friends.

No man consistently held to higher ideals of the duty of a consulting physician in relation to medical ethics; none had greater pride in his profession. His skill and intuition in diagnosis remain a traditional memory among students of the Newcastle school, based as they were on accurate observation and treasured experience. He was at his best with the senior student and young graduate, for it was not always that the junior could follow the rapid steps which led to final diagnosis and prognosis.

Outside the bounds of professional work Sir David read much and was keenly interested in the questions of the day. Of the graver problems of life he spoke seldom, never lightly, and only to his intimates. His belief in the importance of physical fitness was exemplified in his mode of living and the ability to enjoy an open air life in the year of his retirement from active practice was his reward. Like his son Hamilton whose early death was such a loss to the medical school in Newcastle he was a lover of nature and the open spaces. In later years his garden at Marchbankwood was in abiding joy.

Throughout his long life he was a sportsman in the truest sense. In younger days first-rate at cricket he could tell when over 60 years of age enjoy a spell with bat or ball at the nets. Until quite recently he was a keen shot and tireless even over rough country.

The memory of Sir David Drummond as a universally honoured and cultured physician will be cherished by the community of the North of England whom he served, and in the record of the school of medicine he did so much to develop

R. B.
S. McD.

Professor GREY TURNER writes:

Sir David Drummond will always be gratefully remembered by a numerous succession of men now scattered all over the world who came under his influence either as students or house physicians or young practitioners, and each will remember him for his sound teaching, genial personality, and kindly influence and timely help rendered in one way or another. Drummond was a great clinician and clinical teacher who constantly taught and urged the importance of actual contact with patients. He was certainly best at the bedside or in the post-mortem room, for when the opportunity offered he was ardent to carry on the lines of clinical examination into the domain of naked-eye pathology. When I first came under his influence he acted in the dual capacity of honorary physician and pathologist in the old Royal Infirmary, and his keenness in both spheres was infectious. It certainly taught me the paramount importance of correlating the clinical findings with post-mortem examinations, and this was always uppermost in his own mind, and those who remember his Presidential Address at the Annual Meeting of the British Medical Association in 1921 will recollect that this was his theme. He was keenly interested in surgery—*not as an art but as a therapeutic measure*—and in those far-away days he was often readier than some of his surgical colleagues to invoke its aid in doubtful cases. His long and intimate collaboration with his friend and colleague Rutherford Morison was very fertile, and led to many notable enterprises. Their names will always be associated with the operative treatment of ascites in cirrhosis of the liver which by the by was an operation practised in Newcastle with much success until the day arrived when that particular type of disease seemed to largely disappear. It was always delightful to see Drummond at an operation on one of his own cases; no one was ever more enthusiastic and no one more anxious to unravel the pathology. Later in my career I was accustomed to meet Sir David in consultation and each case was an education for me. His example of youthful enthusiasm carried on into old age was in itself a perpetual stimulus which none could witness without being infected. An enormous consulting practice together with his hospital work and his duties in connexion with the medical school often involved him in overwork and many anxieties, but he always had the saving grace of humour, and this often came to his aid and cheered up those about him even in grim circumstances, and it was then that the delightful Irish brogue at other times almost imperceptible became so apparent. In dealing with patients he was habitually courteous and kindly, but on occasion he could be—to say the least of it—unmistakably emphatic, and by observing his methods of handling difficult situations young practitioners gained a great insight into the conduct of their work. All through the war and in the excessively busy years immediately afterwards his energy and capacity for labour were a constant example to us all. Sir David was a most devoted parent, and his chief delight was in the welfare of his family. One son was killed in the war, and another Hamilton Drummond, a surgeon of great promise, after distinguished service in France was killed as a result of a motor car accident in 1925, while a third son, also a war veteran, Dr. Horsley Drummond, *is one of the honorary* physicians to the Newcastle Royal Victoria Infirmary.

D. WELLS PATTERSON, M.B., M.R.C.P.

Consultant Physician Hospital for Diseases of the Skin, Newcastle-upon-Tyne

We regret to announce the death on April 26th of Dr. David Wells Patterson, well known as a dermatologist in the North of England. He was born at Rickmansworth in 1871, and after studying medicine at Newcastle upon Tyne graduated M.B., B.S. at the University of Durham with first class honours in 1897. While an undergraduate he revealed an aptitude for leadership and was elected first president of the Students Representative Council. His academic distinctions included the Armstrong and Charlton scholarships and the Gibson prize. After graduation he spent some years in general practice and put this time to good use not only in gaining medical experience but in the acquirement of a knowledge of men and affairs.

In 1907 Dr. Wells Patterson gave up general practice in order to devote himself to dermatology and was elected physician to the Newcastle Hospital for Diseases of the Skin and assistant physician to the department for that specialty at the Royal Victoria Infirmary. He transferred to the side of general medicine at the Infirmary in 1913 and was appointed honorary assistant physician in which capacity he served until his retirement at the end of last year under the age limit. He obtained the diploma of M.R.C.P.Lond. in 1914 and was for two years president of the Newcastle upon Tyne Clinical Society. During the great war he served first as registrar and later as commanding officer of the 1st Northern General Hospital *with the rank* of lieutenant-colonel R.A.M.C.(T.) and afterwards had charge of the special military surgical hospital at Newcastle. In these posts he showed his gift for administration and was rewarded with the O.B.E. After the armistice he served as consulting physician to the War Pensions Hospital.

At the Annual Meeting of the British Medical Association held in Newcastle eleven years ago Dr. Wells Patterson was vice-president of the Section of Dermatology. He was a man of genial and energetic personality and will long be remembered by his colleagues as an organizer of medical meetings and dinners.

Dr. ARTHUR EDWARD SPROULLE, who died at Rotherfield, Sussex, on April 18th, came of a family of doctors, his father Dr. Thomas Sproulle and his four brothers being medical men. Qualifying L.R.C.P. and S.Irel. at Dublin in 1889, he settled at Withernsea, Yorks, then little more than a fishing village, in 1892 and for thirty-eight years carried on his practice there. When the village became an urban district in 1898 he was appointed medical officer of health, a post he held until his retirement on account of ill-health in 1930. For a large part of the time he was the only doctor in the town and there is no doubt that continuous overwork, particularly during

the war years when he attended large numbers of troops laid the foundations of the illness which caused his death at a comparatively early age Professionally he was a sound and careful physician and the respect in which he was held by his colleagues was shown by their electing him chairman of the East Yorks Division of the British Medical Association and later in 1922 of the East Yorks and North Lincolnshire Branch He held numerous medical appointments including that of medical officer to the Hull and East Riding Convalescent Home and Sanatorium He raised and trained a division of the St John Ambulance Association he was local agent for the Shipwrecked Mariners Association and a member of the crew of the Withernsea lifeboat—rowing in the boat to a number of shipwrecks A colleague writes To know Sproulle was to love him His striking personality and charm of manner immediately gained the confidence of his patients While no call from a really sick person however poor was refused he was inclined to be intolerant of the patient with an imaginary illness so that though retiring a comparatively poor man he leaves behind the love and respect of hundreds

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Dr GEORGE CHARLES WALKER who died at Exmouth on April 27th was born at Kirkwall Orkney in July 1837 He received his medical education at Guy's Hospital and Liverpool and obtained the M R C S in 1860 graduating M D St Andrews in the following year After qualifying he served as honorary medical officer to the Liverpool Northern Dispensary and assistant house surgeon to the Chester General Infirmary and subsequently became honorary consulting physician to the Bootle Borough Hospital He practised for many years in Southport until his retirement to Exmouth about twenty years ago Dr Walker had been a member of the British Medical Association since June 1866 and was a former chairman of the Southport Division He was also one of the original members of the Southport Medical Society He was highly respected by his professional brethren and though he never took a very prominent part in local professional matters any remarks he made at meetings were listened to with attention and his opinions carried weight He is survived by three sons all members of the medical profession and two daughters

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Dr JOHN STRATTON BROGDON of Hartlepool who lost his life in a rock climbing accident on Dow Crag near Coniston aged 31 was the son of Alderman J H Brogdon of Hexham He received his medical education at the Newcastle College of Medicine and graduated M B B S Durh in 1921 He began practice at Hartlepool in 1923 where he held the appointments of honorary radiologist at the Hartlepools Hospital and surgeon to the police Dr Brogdon was a very popular member of the Hartlepools Division of the British Medical Association and was to have been nominated as the next chairman of the Division The funeral which took place at Hexham was attended by prominent public men in the district as well as members of the medical and clerical professions Wreaths were sent by the Hartlepools Division of the British Medical Association the Mayor and Corporation the hospital staff and the local police force

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Dr AUGUSTUS HENRY G JOHNSTON of Scunthorpe died on March 24th while on a visit to London at the age of 68 years He was a native of Westmorland and received his medical education at the school of the Royal College of Surgeons in Ireland He obtained the diploma of L R C S I in 1885 and afterwards took the L R C P I and L M He began practice at Scunthorpe about twenty years ago and subsequently became deputy medical officer of health At the annual meeting of the Scunthorpe War Memorial Hospital held on March 30th the chairman referred to the great assistance rendered to the hospital by Dr Johnston

The following well known foreign medical men have recently died Dr GUSTAVE ARCHAMBAULT professor of dermatology at Montreal aged 48 Dr BURTON ALEXANDER RANDALL emeritus professor of otology at the Philadelphia School of Medicine aged 73 of heart disease Dr NICOLAS CHARLES formerly director of the Maternity Hospital at Liége the first occupier of the chair of gynaecology and obstetrics in the university and founder and editor of the *Journal d Accouchements* aged 87 Dr JAMES RIDDLE GOFFE emeritus professor of gynaecology past president of the American Gynaecological Society aged 80 Dr FELIPE PUIG formerly president of the Uruguay Society of Phthisiology Dr CARLOS E KOHLY Y FERNANDEZ director of *Revista Medica Cubana* Dr PAUL CHARMEIL honorary dean of the faculty of medicine and pharmacy of Lille aged 71 Dr MERIDA NICOLICH an eminent ophthalmologist of Malaga Dr C DEBIERRE honorary professor of the Lille faculty of medicine and corresponding member of the Academie de Medecine and Professor E KAUFMANN a morbid anatomist of Gottingen aged 72

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on April 30th the following medical degrees were conferred

M CHIR—H Taylor

M B B CHIR—J Morris A Eckford A G J Harris R W Mahm

M B—J M Matthew

B CHIR—*R M Dowdeswell J W S H Lindahl J S Barker A H Lankester

* By proxy

UNIVERSITY OF DUBLIN

At the First Summer Commencements in Trinity Term the degrees of Master in Arts and Doctor of Medicine were conferred on Edward Bethel Solomons Master of the Rotunda Lying in Hospital Dublin

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ROYAL COLLEGE OF PHYSICIANS OF LONDON

A quarterly meeting of the Royal College of Physicians was held on April 28th when the President Lord Dawson of Penn was in the chair

Fellowship

The following were elected Fellows of the College

Overseas (10)—Alexander Gordon Biggam O B E M D Ed (Cairo) William Boyd M D Ed (Winnipeg) Roy Samuel Dobbin O B E M D Dub (Cairo) Goldwin William Howland M B Toronto (Toronto) Abd el Aziz Ismail (Cairo) Thomas William James Johnson M D N Z (New Zealand) Frederick Donald Herbert Blois Lawton O B E M B Melb (Melbourne) Harold Douglas Singer M D Lond (Chicago) Hugh Stott O B E M D Lond (Lucknow) and George Charles Willcocks M C O B E M B Syd (Sydney)

Scotland Wales and Provinces (10)—George Allan Allan M D Glas (Glasgow) John Alexander Murray Bligh M D Liverp (Liverpool) William Tresawnell Collier M C M D Oxf (Oxford) George Secretan Haynes M D Camb (Cambridge) Cyril Gray Imrie M D Ontario (Sheffield) George John Langley M B E M D Lond (Manchester) William McAdam M D Glas (Leeds) Percival Brooke Mumford M D Manch (Manchester) Alfred Parkin M D Durh (Newcastle-upon-Tyne) and James Maclure Smellie M D Ed (Birmingham)

London (15)—Edward Arnold Carmichael M B Ed Edward ffolliott Creed M D Oxf Daniel Thomas Davies M D Wales Stanley Dodd M B Camb Geoffre Hadfield M D Lond Charles Felix Harris M D Lond Godfrey Taunton Hebert M D Oxf Richard Anderson Hichens M D Camb Robert Daniel Lawrence M D Aberd Douglas McAlpine M D Glas Sir Frederick Norton Kay Menzies K B E M D Ed Charles Edward Newman M D Camb Charles Cyril Odell M C M B Camb William Gifford Wylie M D Ed and Frederick Hugh Young O B E M D Camb

Membership

The following were admitted Members of the College

John Fleming Brock M B Oxf William Donald Wyndham Brooks M B Oxf Walter Lord Connell M D Q U Ont David McKee Dickson M B N Z Reginald Lilly M D Manch Thomas Miles Gilbert M B Melb Ronald Thomson Grant M D Glas Michael Kremer M B Lond Reginald William Luxton M B Manch William Henry McMenemey M B Oxf Harold Ernest Martin M D Manch Roy Lee Midgley M D Lond Vincent Philip Norman M D Durh John Noel O'Reilly M B Oxf Percy Power M D Lond Roy Kemball Price M P Lond Ahmed Fahmy

Ralph M B Cantab Robert Dick M Edinb Ronald M D McCall Former Staff Surgeon M B Lond Henry Newton Rudd M B Lond Hassan Sultan M B Cantab Mohan Singh M I Punjab Arthur Wyvern Anderson-Stevenson F R C P Edinb George Macdonald Thomson M B S Lond Emrys Williams M D Lond Francis Seaton Wanless F R C S

The thanks of the College were given to Dr Raymond Crawford for his report as Visitor to the Medical Faculty of the Egyptian University and for his report

Appointment of Representatives

The following were appointed as College representatives Dr F C Chandler at the forthcoming Centenary celebrations of the British Medical Association Dr J W Carr on the Professional Claims Advisory Committee Dr A S MacNalty at the eighteenth annual conference of the National Association for the Prevention of Tuberculosis and Dr F J Fremantle at the forty-third congress and exhibition of the Royal Sanitary Institute

Lectures

Dr Harriette Chick will deliver the Oliver Sharpey Lectures on May 3rd and 5th on the relation of light to nutrition and Dr J W McNee the Croonian Lecture on June 2nd 7th and 9th on liver and pancreas their clinical and pathological aspects

Diplomas

Diplomas to practise were granted to the following candidates

[illegible]

The names of the recipients of the Diploma in Tropical Medicine and Hygiene conferred jointly with the Royal College of Surgeons were printed in our issue of April 23rd (p 777)

A Diploma in Gynæcology and Obstetrics was granted jointly with the Royal College of Surgeons to Daniel Peter de Villiers M B Liverp

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

[illegible]

The diploma of the Society has been granted to Messrs J Crowther A R O Tabrum R Perkins L B Reeves, J Tudor and J C Vendoll

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons has this week discussed the Police and Prisons Services and the new Import Duties

A National Health Insurance Amendment Bill will be introduced by the Government in the House of Commons before the Whitsun Recess

Agriculture Estimates Foot and Mouth Disease and Tuberculosis

In introducing on April 28th the Estimates for the Ministry of Agriculture and Fisheries Sir JOHN GILMOUR said investigations had continued into foot and mouth disease He did not claim that the main problem had been solved but progress had been made in directions which enabled the Department to control and deal adequately with outbreaks when they occurred Slaughter was still the only safe and satisfactory way of dealing with the outbreaks of which there had been ninety-ten in this country during the year 1931 In the first quarter of 1932 there had only been one outbreak In April the disease occurred in Kent but there was every hope that it would be confined to a small radius Where animals had not been directly exposed to infection the Department had tried inoculation with serum During 1931 5,525 animals associated with twenty three outbreaks were so inoculated and disease followed only in two of the lots treated It was not possible to be certain of the effects of this treatment

Mr GLOSSOP complained that compensation for a tuberculous cow was lower if when slaughtered the animal proved to have generalized tuberculosis He considered that a cow with advanced tuberculosis in one organ might be a more dangerous source of infection Under the present system of compensation there was no inducement for the owner to notify the local authority on the first suspicion of tuberculosis When it was obvious that the animal would soon die the owner notified it because he knew the compensation would be more than the price he would get from the knacker The object of compensation was not to give money to farmers but to get infected animals notified and slaughtered as early as possible so as to eliminate the scourge He asked the Minister to reconsider the methods on which compensation was paid He also thought the time had come when the Minister should try to secure the production of milk of a higher butter fat content In North America and in Europe milk was sold on its butter fat content

Replying to the debate Sir JOHN GILMOUR regretted that for the present he could not give the grant previously promised for the rebuilding and development of the Royal Veterinary College He trusted this was merely a postponement The authorities of the College had enough funds in their hands to make a beginning

Road Accidents

Mr PYBUS told Mr *Tinker* on April 28th that he had considered the possibility of collecting the number of accident cases under Section 36 Sub-section (2) of the Road Traffic Act 1930 where hospital treatment had been given to injured persons but regretted that the information would not justify the time and labour involved Asked by Sir JOHN HASLAM if he had any reason to doubt figures provided by the British Medical Association showing that only 10 per cent of the money expended by hospitals was recovered from insurance companies Mr PYBUS said he had no information to show that insurance companies were evading the provisions of the Act

Replying to Lord Apsley on April 27th Sir HILTON YOUNG said he would consider whether medical officers of health throughout the country should be asked to distinguish in their reports between deaths from road accidents and all other deaths from violence and accident

Sir H SAMUEL told Dr Salter on April 27th that he could not give the number of children under 14 killed on the public highways by motor vehicles during 1931 as the returns were not classified under age categories The number of persons charged with manslaughter in connexion with deaths due to motor accidents had not hitherto been collected

he would see whether means could be devised to collect and publish this information in future

On May 2nd on a vote for police in England and Wales the Home Secretary Sir HERBERT SAMUEL said the number of persons killed in Great Britain in road accidents last year was 6 691 and the number injured was 202 119 Every day of the year 18 persons were killed and 553 were injured on the roads Fatal accidents last year showed a reduction on the previous year of 614 Non fatal accidents showed an increase of 24 224

The Deaf and Dumb

Sir HILTON YOUNG told Mr Price on April 28th that he could not undertake to introduce legislation providing assistance for the deaf and dumb on lines similar to that given to the blind under the Blind Persons Act

In reply to Dr Fremantle on the same day Sir D MACLEAN said he had received a report from a late medical inspector of the Board of Education who had been appointed in conjunction with the Ministry of Health to ascertain the condition of the deaf in England and Wales The report was not intended for publication and was still under consideration by both Departments

Cholera in India

Presenting the India Office Estimates on April 29th Sir SAMUEL HOARE said he could report definite improvements in health Leprosy surveys were being continued and had increased the number of cases treated in clinics There were over 24 000 such cases in the Central Provinces and 28 272 in Madras a decade ago only 8 000 lepers were cared for in the whole of India For dealing with cholera a bacteriophage had been discovered This minute parasite growing in the cholera bacillus could now be isolated for obtaining a pure culture The varieties obtained had the power to destroy the bacilli of cholera rapidly and were added to the water supply where cholera had broken out or was likely to break out This had been done in the last twelve months in the Nawgong district of Assam In the area dealt with practically no cholera appeared in this cholera season nor in the last two cholera seasons If this was confirmed by further observation it would be a most important advance In the malaria survey also an advance had been made in the last year

Observation Centres for Juvenile Offenders and Prison Dietary

The House discussed on May 2nd a vote for the Prison Commissioners and the prisons in England and Wales Dr SALTER urged that juvenile delinquents should be remanded to an observation centre where their mental and physical condition could be discovered The necessity he said was more urgent having regard to the cases which were unfortunately increasing in proportion to the whole where mental moral and physical damage had been caused by encephalitis lethargica He knew of two adolescents who were suffering from the disease and had been sent to prison whereas if they had been remanded to an observation centre their condition would have been discovered One of them died in prison from the after effects of the disease The other had paralysis of the muscles of the eyeball and other physical signs which would have led to instant detection and altogether different treatment had measures recommended by the Departmental Committee been carried out He could also give the Home Secretary particulars of the case of a young man who was suffering from juvenile general paralysis of the insane He was in prison some months before he was removed to an asylum Belgium had admirable observation schools and a carefully graded system enabled the specialists who controlled the institutions to decide what particular after treatment was required As a result the whole attitude of the authorities towards juvenile offenders had been modified At the London County Council last week there was a prolonged debate on the subject and it was agreed on all sides that development in the direction he had indicated should be carried out He hoped that Sir H Samuel would give his personal attention to the matter Referring to the question of prison dietary Dr Salter said the supply of green vegetables particularly uncooked green vegetables in prison was extraordinarily small and deficient He spoke with some experience of the matter because he had been in prison on more than one occasion It might be said that these were luxuries to which no prisoner was entitled In view of modern knowledge as to the detrimental results of the deprivation of these vitamins they ought to be supplied to every prisoner He asked the Home Secretary to consult his medical advisers in the hope that prison dietary would be augmented or modified

Mr W HUTCHISON said that he recently visited the Maidstone gaol and asked the medical officer questions about the prisoners diet The medical officer informed him that it was a scientific diet and that it had been discovered that prisoners for a short time after entering prison lost weight Then they came to a point at which their weight went up and they became more healthy in the majority of cases than they had ever been before they came into prison

Sir H SAMUEL said that Dr Salter had spoken of the necessity for observation homes particularly for children and in London and for special attention being given to the individual characteristics of the children and other delinquents so that medical or other measures might be adopted and he was right in the view he had expressed The present remand home in London was not satisfactory but that was a matter requiring legislation It concerned the London County Council also and if Dr Salter could persuade the Council to take a forward view on the matter no one would be more pleased than the Home Office or more ready to assist their efforts The prison dietary had been framed after careful medical investigation and as a rule prisoners put on weight considerably after they entered gaol no vadays but he would draw the attention of his expert advisers to the point raised by Dr Salter with regard to the inclusion of fresh vegetables

The debate was adjourned

National Radium Trust

On May 3rd Sir F GRAHAM LITTLE asked the Lord President of the Council if any modification had been made in the terms of the Charter of Incorporation of the Radium Commission by which it was required that one half of original members of the Commission selected by lot should go out of office after a certain date and the remaining original members at a later date Mr BALDWIN in reply said that this requirement in the Charter of the National Radium Trust was varied by a supplemental Charter granted to that body on July 23rd 1931

Mines Vote Debate

The House of Commons in Committee of Supply on May 3rd discussed the vote for the Mines Department of the Board of Trade Mr ISAAC FOOT the Secretary for Mines said that in 1931 the number of accidents gave some ground for encouragement The number of deaths which occurred in the coal mines last year was the lowest in the history of the Department—namely 8s9 which was 0 9 per cent of the men employed or 3 77 for every 1 000 000 tons raised Serious accidents numbered 3 304 the lowest on record All accidents numbered about 140 000 That was 26 000 less than in 1930 and 36 000 less than in 1929 Everything must be done that science could do to make big disasters impossible but the real trouble was the daily wastage Taking the ten years from 1920 to 1929 for every one casualty that arose from explosion there were 1 103 from other causes the most prolific being falls of ground A substantial reduction in accidents could be brought about by the use of protective equipment which one day would be adopted Last year thirty nine boys under 16 years were killed in the mines and over 7 000 were disabled by injury for more than three days There was urgent need for more instruction and education

Captain R T EVANS said that recently a body of doctors expert in the treatment of lung diseases had made inquiries into what they called coal miners lung disease The situation which was disclosed from that pathological and medical investigation was disturbing It used to be thought that coal dust blackening of the lung was in a way a protection against other probable lung diseases but they knew to day that the intrusion of coal dust rendered the victims peculiarly vulnerable to diseases like bronchitis and tuberculosis He had been staggered by the small percentage of miners suffering from lung troubles who received any compensation and he

appeal for an alteration in the regulation governing the ward

Replying to the debate Mr Loot said that the Ringrose safety lamp was being carefully tried in a large number of pits

National Birth Control Conference.—Mr J Brow replying to Mr Potter on April 26th said that the Minister of Health had received and had now under consideration an application from one local authority for sanction for one of its medical officers to attend the conference of the National Birth Control Association in London in the near future

Birth Control Clinics.—Mr Ernest Brow replying to Mr Lever on April 3rd said that clinics for contraceptive advice did not form an integral part of the maternity hospital to which the Ministry of Health distributed grant in aid Grants from the Exchequer were no longer paid direct to maternity hospitals except for the training of midwives

Diacetylmorphine Manufacture in Britain.—Sir Herbert Samuel told Mr Cranfill on April 27th that 14 903 oz of opium and 12 525 74 oz of coal in 2 011 06 cwt of morphine 3 426 oz of diacetylmorphine) 46 560 74 of morphine all told and all and no person had been employed in Britain during the twelve months ended December 31st last The production was not in excess of the requirements for medical and scientific purposes and the Government for the limitation of the manufacture of narcotic drugs was not operative in Great Britain Sir H Samuel told Dr Ironside on April 28th that it was the intention of the British Government to ratify the 1931 Convention for the limitation of the manufacture of narcotic drugs and to enable this to be done the Dangerous Drugs Act 1932 was passed in order to bring the law into conformity with the provisions of the Convention

Silicosis Replies to Mr Tinker on April 27th Sir Herbert Samuel said that silicosis was not notifiable to coal mines but that the returns under the Workmen's Compensation Act showed that in 1930 there were twenty cases in which coal miners received compensation for disablement from silicosis So far as I know only one of these cases occurred in Lancashire and the Medical Board set up in June last has not yet issued any certificate in respect of any coal miner in Lancashire

Mental Defectives (Children) in Elementary Schools.—Sir Donald Maclean told Mr Rhys Davies on April 28th that during the last few years for which returns were available there had been practically no variation in the proportion of children in public elementary schools formally ascertained by school medical officers to be mentally defective but these figures could not be used as a reliable guide owing to the absence of uniformity of standard and other difficulties

Opium Manufacture and Distribution in India.—Replying to Mr Rhys Davies and Mr Cranfill on May 2nd Sir S Hoare said that the distribution and sale of opium in the Provinces of British India was under the control of Ministers responsible to their respective Councils The amount of opium manufactured at Ghazipur for consumption in India depended on the demand from the Provinces There had been a substantial and progressive reduction in recent years The Government of India sold opium for consumption in India to local Governments at cost price

Horses and Dogs for Experimental Purposes.—On May 2nd Mr Duff Cooper replying to Lieut Colonel Applin said that eight horses were used for experimental purposes at the Chemical Defence Experimental Station Porton in 1930 Apart from these no horses or dogs were used for experiments in connexion with chemical defence either at Porton or Cambridge during 1930 and 1931

Milk Reorganization Committee.—Sir Hilton Young states that any proposals for legislation relating to the composition of milk must be postponed pending the recommendations of the Milk Reorganization Committee which has just been announced

Factory Inspectors Report.—The Home Secretary will endeavour to expedite the publication of the Factory Inspectors Report for 1931 to permit a Parliamentary debate before the House of Commons rises in July

Medical News

The 101st annual meeting of the British Association for the Advancement of Science will be held this year at York from August 31st to September 7th inclusive under the presidency of Sir J Alfred Ewing The inaugural meeting of the British Association was held at York in September, 1831, and three further meetings have been held there

The next quarterly meeting of the Royal Medico Psychological Association will be held at 11 Chandos Street W on Thursday May 19th at 2 30 p m Dr Edwin Goodall will open a debate on the following proposition The exciting cause of certain states of disease at present classified under 'schizophrenia' by psychiatrists may be infection The pathogenesis of these states does not in this country receive the close prolonged and co-ordinated clinical and pathological study which it demands

A popular lecture on "Polar lights" will be given by Professor Sydney Chapman J R S to members of the British Science Guild and others on Wednesday May 25th at 4 30 p m at the Royal Society of Arts John Street Adelphi Tickets for which no charge is made can be obtained from the secretary British Science Guild, 6 John Street W C 2

The University of London Medical Graduates Society is holding its annual meeting and dinner at the Langham Hotel on *May 11th* Tickets (price 12s each) can be obtained up to May 9th from the honorary secretaries at 11 Chandos Street, W 1

At the festival dinner of the Corporation of the Sons of the Clergy to be held at Merchant Taylors Hall L C on May 25th Lord Moynihan P R C S will be among the principal speakers

A dance organized by the Ladies Guild of the Royal Medical Benevolent Fund is to be held on Thursday June 9th in the Great Hall of the British Medical Association Tavistock Square W C This function will be the thirteenth of a series which in the past have proved both successful and enjoyable and the committee is most anxious that members of the medical profession and others interested in this Fund should lend their support Tickets (single 6s double 11s) may be obtained from Mrs Oldershaw 26 Upper Wimpole Street W 1

The annual meeting of the British Dental Hospital will be held at the rooms of the British Dental Association 23 Russell Square, W C on Thursday May 19th at 8 p m with the president Sir Norman G Bennett in the chair

The next meeting of the Biochemical Society will be held in the Department of Biochemistry Oxford to day (Saturday), May 7th, at 2 30 p m

At a meeting of the Harveian Society of London in the Paddington Town Hall on Thursday May 12th at 8 30 p m Dr Geoffrey Holmes of Harrogate will give an illustrated lecture on spa treatment with special reference to British spas

A post graduate course on neurology and psychiatry with special reference to treatment, will be held in Vienna from May 30th to June 11th when lectures will be delivered by Professors Eiselsberg Wagner Jauregg Wenckebach Jellinek and Froschels among others Further information can be obtained from Dr Kronfeld Porzellangasse 22 Wien IX

A course of demonstrations in neurology for candidates for the M R C P examinations will be held on Mondays and Fridays from May 20th to July 11th at 6 p m at the National Hospital Queen Square W C 1 Fee for sixteen demonstrations £6 6s Special terms can be arranged for those unable to take the whole course Application should be made to the secretary

The Fellowship of Medicine has arranged four similar courses in medicine surgery and the specialties at the Prince of Wales's Hospital Tottenham from May 23rd to June 4th June 6th to 18th June 20th to July 2nd, and July 4th to 16th Four lecture demonstrations on ante natal treatment will be given by Dame Louise McIlroy at the Royal Free Hospital on Wednesdays June 1st to 22nd Gynaecology will be dealt with at the Chelsea Hospital for Women from June 6th to 18th and during the same period a course in diseases of the chest will be held at the Victoria Park Hospital Three epidiascope and laboratory demonstrations will be given at 10 Bedford Square on May 18th 25th and June 1st at 8.30 p.m. Professor Arthur Hall will give three lectures on epidemic encephalitis at 8.30 p.m. on June 2nd 9th and 16th An evening course of practical demonstrations for M.R.C.P. candidates will be given at the National Temperance Hospital on Mondays and Fridays June 6th to July 1st Application for all syllabuses should be made to the Fellowship of Medicine 1, Wimpole Street W.1

The second German Congress for Psychical Hygiene will be held at Bonn on May 21st when the principal subject will be the eugenic aims of psychical hygiene Further information can be obtained from Dr. Koester Kolner strasse 208B Bonn

The twelfth International Neurological Congress will be held at La Salpetriere Paris on May 31st and June 1st when a discussion will be held on recent advances in the knowledge of epilepsy introduced by Drs. Foerster of Breslau Pagniez of Paris Abadie of Bordeaux and Crouzon of Paris

The tenth International Congress of Psychology which will be held at Copenhagen from August 22nd to 27th is to be followed by tours of inspection to German and Austrian institutes of psychology An advance programme is available, and early application by those who intend to take part should be made to Professor D. Katz 13 Moltkestr., Rostock (Meckl.) Germany

The French National League against Alcoholism recently celebrated in the amphitheatre of the Sorbonne under the presidency of Professor Achard the thirtieth anniversary of the anti-alcoholism movement in the schools which was founded by Dr. Roubinovitch who was presented with the grand diploma of the league

A conference of medical students on medical missionary work in the Tropics will be held at the London School of Hygiene and Tropical Medicine Keppel Street (Gower Street) W.C. on Tuesday May 10th from 3.30 to 7 p.m. The annual medical missionary breakfast of the Medical Prayer Union will be held on Wednesday May 11th, at the Refectory University College Gower Street at 8 a.m. An address will be given by Dr. C. C. Chesterman of Yakusu Congo Belge W. Africa Those wishing to be present at either of these gatherings are asked to notify Dr. Tom Jays Livingstone College Leyton E.10

This week's issue of *Nature* dated May 7th contains an appreciative article by the Duc de Broglie upon the scientific career and work of Lord Rutherford O.M. F.R.S. Cavendish professor of physics University of Cambridge It forms part of the series of Scientific Worthies and is accompanied by a photogravure plate portrait of Lord Rutherford

Drs. C. W. Buckley J. B. Burt and W. Shipton after twenty years' service on the active honorary medical staff have accepted the invitation of the committee of management of the Devonshire Hospital Buxton to remain on the staff for a further five years

The Minister of Health with the approval of the Prime Minister has appointed Sir Arthur Lowry C.B. to act as Deputy Secretary to the Ministry of Health while Sir E. Strohmenger K.B.E. C.B. is seconded for service in the Treasury

Applications for the Norma Macleod studentship in biochemistry must be sent to the secretary of the Lister Institute of Preventive Medicine Chelsea Bridge Road S.W. by June 1st with details of scientific training and career together with the names of two personal referees The studentship is of the value of 100 guineas per annum and is tenable for one year but renewable Candidates must have had a thorough training in chemistry and some knowledge of biology is desirable but not essential

The Import Duties Advisory Committee announces that applications whether in relation to additional duties or to the Free List should be made so far as possible by representative bodies of the trades concerned The committee does not propose to proceed as a rule by formal hearings Applicants therefore should submit their case fully in writing and supplementary statements if required will be called for The committee will give public notice of cases in which it is considering the imposition or modification of 'additional' duties or of variations of the Free List in order that interested parties may make representations which should be addressed to the secretary Import Duties Advisory Committee Caxton House (West Block) Tothill Street S.W.1

The centenary of the birth of the syphilologist Professor Alfred Fournier who died in 1914 will be celebrated in Paris from May 8th to 12th under the patronage of the President of the French Republic A general assembly of the International Union against the Venereal Peril will be held on the 8th the Albert Fournier Institute will be inaugurated by the Minister of Public Health on the 9th and on the following days lectures on various aspects of syphilis will be given at the Hopital St. Louis to which Fournier was attached

To commemorate the centenary of Goethe's death the German Society for Medical Tours has organized a spring tour to Thuringen starting at Weimar on May 19th and ending at Friedrichroda on May 28th The inclusive cost will be provisionally RM. 190

Sir Michael O'Dwyer has been appointed by the National Institute for the Blind to serve as its representative on the Committee of the International Association for the Prevention of Blindness

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W.C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W.C.1 on receipt of proofs

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The TELEPHONE NUMBERS of the British Medical Association and the *British Medical Journal* are *MUSEUM* 1861 9862 9863 and 9864 (internal exchange four lines)

The TELEGRAPHIC ADDRESSES are

EDITOR OF THE *BRITISH MEDICAL JOURNAL* *Aitiology Westcent London*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc.) *Articulate Westcent London*

MEDICAL SECRETARY *Medisecra Westcent London*

The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62990 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

End results of Prostatectomy

DR. ARTHUR RICKETTS (London W.) writes: I should be greatly obliged to any medical man if he could inform me of any authentic case of a man becoming the father of a child after the operation of prostatectomy had been performed upon him I cannot find any mention of such a case in any book including Rendall Short's *Index of Prognosis and End results of Treatment* or in the reports of Mr. Freyer's cases or those of Sir J. Thomson Walker I am making this query because I believe it has never been given an authoritative answer

Sunburn

SURGEON writes I should be grateful for advice as to the best treatment of acute sunburn of which as a ship surgeon on short pleasure cruises I see many cases Iced calamine and zinc oxide lotion with a thin water basis gives temporary relief but often fails to prevent blistering I should appreciate opinion as to the advisability of adding glycerin to the above and as to the efficacy or not of any preparation such as cocoa oil

Plantar Corns

D CHIROPODIST (Bath) writes in reply to CHIRUS I would recommend treatment on the lines adopted for the case mentioned below A deep seated horny growth in the head of the foot causing considerable pain and lameness in spite of frequent treatment with caustic has points to speedy removal by the following Sodium salicylate was applied for two nights before attending for treatment The affected epidermis was then scraped away till the raised surface responsible for the growth was reached and this was treated by daily applications of salicylate of sodium till a firm callus had formed over the whole surface Ten days later the hollow formed by the scraping had completely filled up and healthy skin replaced the horny layer If the scraping of the softened epidermis is not thorough enough at the first attempt the whole process may be repeated in ten days time I should be interested to hear other suggestions

DR ERNEST H BROWNE CURRIE (London) writes Plantar corns of the ordinary type of corns of the vertex and—the latter being especially troublesome and resistant to ordinary remedies—tending to recur even after excision—can usually be permanently cured by the judicious application of radium The case referred to by me in a letter to the *British Medical Journal* a long time ago was March 14th 1908 The cure was satisfactorily I was perfectly normal to all appearance unless of course the patient came under the influence of radium which I only mention would expect to happen There is no pain or any discomfort in the treatment if care is used but I have in the first application usually found that the pain was much I should not entirely gone

Unilateral Oedema

DR JOHN A JOHNSTON (Wembley Park Middlesex) writes In reply to the query by O J regarding the treatment of unilateral oedema (April 23rd p 784) I would venture to say that the advisability of operative treatment has been established I have seen beneficial results follow in a similar case from Sistrunk's operation which consists in removing a long strip of tissue from the thigh and lower leg the thrombosis is marked it is possible that periarterial sympathectomy might have the desired effect

Income Tax

Depreciation and Obsolescence

"D L" replaced his car in October 1931 The cost price of the old car has been reduced by the aggregate depreciation allowances thereon to £168 and £147 was allowed for it against the price of the new car The inspector of taxes is willing to allow the difference of £21 as obsolescence and depreciation on the new car is from the date of purchase Can anything further be claimed?

*** No D L has received an allowance for the total cost of the old car less the £147 in the aggregate of the depreciation and obsolescence allowances and is now beginning to receive similar treatment in respect of the new car It is true that his out of pocket expense was £118 to purchase the new car but to some extent he will have to wait for the operation of the depreciation allowance in future years to give him full recoupment

Public Appointment Expenses

"W J M" inquires whether the following expenses are allowable (1) expense of obtaining a special diploma (2) subscription to an association (3) cost of purchasing books and instruments

*** (1) No such expenses are capital outlay (2) only if the membership is required by the terms of W J M's appointment (3) only to the extent necessary to maintain (but not to improve) the reference library and stock of instruments

Professional Expenses

R K asks for a reference to any leaflet etc setting out the allowances or proportions of allowances usually conceded in connexion with the running expenses of his practice

*** The circumstances of practices differ so much that no useful flat rates or proportions can be laid down for general use and we know of no leaflet that would be helpful The matter was however dealt with rather more fully in a small handbook recently reviewed in the *Journal*—namely *Income Tax and the Professional Man* published at 4s 6d net by Crosby Lockwood and Co

LETTERS, NOTES ETC

First-aid Classes

MR IVOR M HUBBACK M A (Principal of Morley College for Working Men and Women 61 Westminster Bridge Road S E 1) writes We are wanting to start a class here in first aid on Friday afternoons in connexion with a scheme for providing classes for unemployed men and women Unfortunately we are entirely without funds for paying lecturers and are having to rely on the generosity of those who have volunteered to help We have not however as yet heard of any doctor able and willing to spare an hour or two in the afternoon to take a first aid class Several would be students have indicated their wish to attend and we very much hope to be able to arrange for a class to take place I am venturing to ask any of your medical readers whether they can help

Medical Golf

The summer meeting of the Medical Golfing Society will be held on Thursday June 9th at Walton Heath Lord Riddell invites all competitors to be his guests for the day The knock out tournament for the Milsom Rees Challenge Cup has reached the semi final stage Rowley Bristow v Lindsay Ker and Major Strachan R A M C v Squadron Leader Brown

Doctors and District Nurses

COUNTRY PRACTITIONER writes I agree with Dr Barford when he says this sort of thing is happening all over the country and that the British Medical Association ought to take the matter up In addition to maternity irregularities my own experience is that the district nurse is diagnosing and treating skin diseases in children infections and otherwise as a regular practice A short time ago I had a child brought to me with profuse salivation and was told that the nurse had been treating it for five weeks for an eruption of the face I sent this child to hospital where it died (as I was informed a short time later) of meningitis Only last week a mother brought her child with a chicken pox rash just beginning to clear and stated that she came because there was no nurse owing to a change of nurses On account of this change the man removing furniture from the nurse's quarters asked me what should be done with all the drugs there? Surely such practice by a district nurse constitutes a danger to the public

Motorists and Conveyance of Goods

The ruling of the High Court in the appeal of the Automobile Association against the conviction of a Cardiff motorist for conveying goods in a private car has created a situation of importance to every private car owner The A A is advised that it was never the intention of Parliament that the statutes should be interpreted in this way and it is suggested that the decision of the High Court is contrary to the letter and spirit of the law on the subject The point is a simple one Under the schedules of taxation it is provided that for a vehicle to be taxed on weight—that is as a commercial vehicle for carrying goods—it must be "constructed or adapted for use and used for the conveyance of goods or burden of any description whether in the course of trade or otherwise" The Finance Act of 1922 provides that where a vehicle has been taxed on one basis and is subsequently altered or used in such a manner as to bring it into a higher taxable class then the increased tax shall be paid Thus in order to bring the private car into the higher class it must not only be used for goods carrying but also be constructionally adapted or altered for that purpose This is the effect of the view strongly expressed by Mr Justice McNaghten in dissenting from the decision of the other members of the court The Automobile Association is informed that the whole matter is already under the urgent consideration of the Minister of Transport and it is believed that measures will be taken to regularize the position of private car owners

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 50 51 52 53 54 55 58 and 59 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 56 and 57

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 231

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

408 Chronic Miliary Tuberculosis

J SIMON and C CARRASCO (*Prensa medica* December 1931 p 15) who record two illustrative cases state that in recent years a chronic miliary pulmonary tuberculosis has been described its existence having been discovered by radiographic examination Engel has described two forms the first characterized by an acute febrile onset and the other which is less frequent by a sluggish and afebrile course and more favourable prognosis The authors first patient was a boy aged 2½ years who during an attack of pulmonary tuberculosis showed evidence of a miliary dissemination throughout both lungs accompanied by severe constitutional disturbance The general symptoms however gradually subsided although the radiological signs persisted and were still present though considerably lessened two years after the onset The second patient was a girl aged 6 years who had been exposed to tuberculous infection but did not show any clinical symptoms of the disease Radiography however showed the presence of miliary tuberculosis After a few months hygienic and dietetic treatment considerable clinical and radiological improvement occurred so that the case corresponded to Engel s second form

409 Seminal Vesiculitis in Mumps

A VALERIO (*Arch Bras de med* November 1931 p 539) records the case of a man aged 22 who contracted bilateral mumps of which he had had a previous attack at the age of 6 years Five days after the onset he developed pain in the hypogastrium and a sensation of weight in the anus and perineum A few hours later he had a spontaneous and very painful blood stained ejaculation with an increased feeling of tension in the rectum The temperature was 102 4° and the pulse 112 Micturition was frequent and very painful with an occasional terminal haematuria On rectal examination the prostate was found to be normal but both vesiculae seminales were extremely tender swollen and nodular and gave issue on pressure to a muco sanious discharge No gonococci were found and there was no evidence of syphilis Rapid recovery followed treatment by rest warm applications to the abdomen and rectal analgesic suppositories

410 Unusual Gonococcal Sequels

B M BAKER jun and E P CARTER (*Bull Johns Hopkins Hosp* February 1932 p 57) record three cases of unusual sequels to gonococcal infection In the first case the patient being a negress aged 25 there ensued an acute polyarthritis with endocarditis organisms resembling gonococci were demonstrated in smears of the cervix and also in pus aspirated from one of the affected joints A grave general infection developed with delirium high fever tachycardia emaciation marked anaemia and leucocytosis with pneumonia as the terminal event The second patient a negro aged 54 had had acute gonorrhoea 35 years before admission to hospital when he presented a condition of arterio sclerosis hypertension and obstructive jaundice due as shown at the operation to a tumour in the head of the pancreas The development of continued fever with an aortic diastolic murmur leucocytosis general toxaemia and peripheral arterial embolism justified the diagnosis of acute aortic endocarditis Blood cultures both before and after death were sterile but the demonstration of Gram negative diplococci in smears from the aortic valve and of a Gram negative coccus in culture which would not grow on agar and did not ferment dextrose warranted the assumption that the endocarditis was gonococcal The third patient a negro aged 36 was admitted with acute abdominal symptoms leucocytosis and high fever Nothing abnormal was found at the operation apart from a slightly enlarged liver He had no pain or tenderness following the operation but pyrexia of a septic type with leucocytosis and progressive anaemia persisted On the eighteenth day blood cultures were reported positive a small Gram negative diplococcus having been demonstrated with difficulty Death followed on the thirty seventh day and at the necropsy an abscess in the right lobe of the liver was discovered from which definite Gram negative cocci and diplococci were recovered

411 D A PRENDERGAST (*Canadian Med Assoc Journ* February 1932 p 201) believes that acute endocarditis complicating gonorrhoea though far from common is not so rare as is usually thought Two cases one of which ended fatally are reported Except in respect of its better prognosis this condition does not differ markedly from other forms of acute bacterial endocarditis The greatest age incidence is between 20 and 40 years the period in which gonorrhoea is most frequent It occurs most commonly in the more virulent types of gonorrhoea where other complications such as epididymitis and arthritis are present The onset is usually characterized by fever chills sweating palpitation and prostration The cardiac lesions are those of any malignant endocarditis except that the vegetations and ulcerations tend to be particularly large The aortic valves are most frequently involved infarcts petechiae and pericarditis are common The diagnosis is based on the presence of signs of acute general infection with active involvement of the cardio vascular system Isolation of the gonococcus from the blood though affording positive proof is extremely difficult Acute endocarditis in a gonorrhoeal patient is indicative of gonorrhoeal endocarditis The treatment is unsatisfactory and must be chiefly symptomatic complete rest in bed might be of value in cases showing early signs of systemic infection Prendergast alludes to a case reported from Paris which was cured by the use of anti gonococcal serum

412 R J GERMAIN (*These de Paris* 1931 No 539) who records four illustrative cases states that pleurisy is usually a late complication of an attack of gonorrhoea which has not been recognized or neglected It is always secondary to gonococcal arthritis which it follows in from one to fifteen days In addition to signs of a pleural effusion an area of pulmonary congestion can almost always be detected at the apex or base The fluid is at first sero fibrinous it is characterized by an excess of polymorphonuclears and on cultivation yields a growth of gonococci and no tubercle bacilli Recovery may take place by crisis in two or three weeks or gradually by lysis In many cases however the issue is not so favourable other signs of septicaemia develop and death ensues At the post mortem examination the pleurae are found to be filled with pus and the lungs show septic infarcts Diagnosis is made by the negative result of inoculation of guinea pigs agglutination of gonococci by the patient s serum the complement fixation reaction and a positive blood culture

413 Spinal Complications of Typhoid Fever

L K WANG and L J MILTNER (*Chinese Med Journ* January 1932 p 1) discuss what they term typhoid spine and review its aetiology pathology diagnosis and treatment They then describe two recent cases The first patient entered hospital three months after an attack of diarrhoea and general malaise the Widal reaction on admission being strongly positive He complained of severe pain in the back and rigidity of the lumbar muscles there was no visible abnormality The man was obviously ill the pain persisted even when resting in bed and his temperature rose irregularly at times An x ray examination of the lumbar region revealed a destructive

lesion involving the contiguous surfaces of the bodies of the third and fourth lumbar vertebræ and the disk between them The patient was kept quiet in bed but the disease progressed until a month later he was placed in a plaster of Paris jacket From this time he did well New bone was laid down and seven weeks later the x-ray picture indicated that bony ankylosis was complete there was then neither pain nor tenderness in the area The second case was admitted to hospital a typhoid fever and after several complications including broncho-pneumonia in the fifth week and acute appendicitis in the eighth, he began to have severe pain in the back about the fifteenth week The entire lumbar spine was found to be rigid the pain being most acute over the right sacro-iliac joint No abnormality in the lumbar spine was found by x-ray examination but stereoscopic views showed smoothness in the region of the sacro-iliac joint Later x-rays showed definite erosion and involvement of the first and second lumbar vertebræ The pain was severe but was largely relieved by the application of a plaster of Paris jacket The subsequent progress was good and four months later he was able to do light work An x-ray examination then showed complete bony ankylosis and increased condensation of the sacro-iliac area

314 Vincent's Infection of Pleura and Vagina

H D Jeans and S J Stretch (*Journ Amer Med Assoc* January 16th 1932 p 219) who record an illustrative case of a fuso-spirochætal infection of the vagina and pleura state that reports of such infections of regions other than the mouth have been appearing more frequently of late especially those of the respiratory system but cases of fuso-spirochætal empyema are rare most having been secondary to some obvious underlying lung condition such as bronchiectasis lung abscess or pulmonary gangrene In the present instance however the case of a *previously healthy* woman *with no morbid* condition of the *lungs was detected* by clinical or radiological examination Vaginal infection with Vincent's organisms is also *rare* and the authors record their case as the only example on record of the association of pleural and vaginal infection due to Vincent's organisms and of recovery from the empyema in which they were found

Surgery

415 *Secondary Abscess following Appendicitis*

H Angerer (*Zentralbl f Chir* February 6th 1932 p 440) records two cases of abscess occurring six years after perforation of the appendix He remarks that while adhesions and bands recur frequently after appendicectomy the possibility of secondary abscess must be remembered since several cases have been reported The first patient was a man aged 24 who was admitted as a case of pneumonia He had had peritonitis after the operation but had worked regularly in the interval till he began to suffer from epigastric pain anorexia nocturnal pyrexia and malaise Symptoms of acute obstruction supervened with signs of consolidation at the right base The liver and spleen dullness were normal and there was a leucocytosis of 20 000 A pleural puncture yielded clear serum but three days later the fluid was sanious and contained many haemolytic streptococci Screening revealed a collection of gas below the diaphragm The seventh rib was resected, and a large subphrenic abscess *with its* wall formed by necrotic liver tissue was opened *Three* weeks later a pleural empyema was opened The *patient recovered* and in ten months had gained *22 lb* In the *second* patient a girl aged 20, a fistula persisted for several weeks after her operation She remained well for nine *months when* indefinite abdominal pain constipation *and* anorexia supervened followed by symptoms of *acute* obstruction A rounded tender swelling appeared *in* the right hypogastric region and there was a leucocytosis of 15 000 A large abscess containing seven pints of offensive turbid pus and lying between intestinal coils was opened A good recovery ensued Tubercle bacilli were not found in these two cases In the first there was no history of gastro-duodenal ulcer cholecystitis or dysentery and the subphrenic abscess occurred six years after appendicitis The author adds that general experience shows that when such abscesses occur, there is a considerable latent period between the primary and secondary lesion In the second case the abscess was probably secondary to the fistula that had persisted for some weeks after appendicectomy

416 Surgery of the Undescended Testis

O H Wangensteen (*Surg Gynecol and Obstet* February 1932 p 219) points out that the ideal operation for undescended testis is one which will replace and fix it into the scrotum before the onset of those degenerative changes which take place at puberty in such an arrested organ To ensure a good functional result the operation should be undertaken well before puberty, *and preferably* between the ages of 8 and 11 In the adult the only normal site for the testis is in the scrotum since this serves as a thermo-regulating *mechanism* The imperfectly descended testis is *spermatic but before puberty* it resembles *in* every *respect* the *normal* one in the scrotum While the *undescended testis is more likely to* become malignant than the normally descended one *it is in no sense* to be considered as a pre-*cancerous lesion* and testicular malignancy is of infrequent occurrence Wangensteen describes and discusses a method of placing the testis in the scrotum without injury to the testicular blood vessels their adequate mobilization is essential In orchiopexy temporary anchorage in the scrotum is important since without adequate fixation retraction occurs preventing the commensurate growth of the testis The author adds that he has performed this operation with uniformly good results in twenty cases he is satisfied that *protracted* anchorage by approximation of the scrotal skin to that of the thigh is important since only a testis which remains low in the scrotum will develop normal growth

417 Tracheotomy for Oedematous Laryngitis in Scarlet Fever

J D Rolleston and D G Macpherson (*Clin Journ* January *27th* 1932 p 41) record the case of a woman aged *22* admitted to hospital with a mild attack of scarlet fever which became complicated by bilateral cervical adenitis on the sixth day The fauces subsequently became oedematous and on the tenth day she developed urgent dyspnœa so that tracheotomy had to be performed with the patient *in extremis* The tube was removed in two days but much cellulitis and oedema of the neck ensued and ulceration of the tracheal cartilages with perforation of the right lateral wall of the trachea took place Right pleuro-pneumonia developed and 120 c.cm of straw coloured fluid were removed from the right pleural cavity Direct examination of the fluid showed the *presence* of polymorphonuclear leucocytes and a pure growth of *haemolytic* streptococci was found on culture Finally *complete* recovery followed In the authors experience it was unique for mild scarlet fever to be complicated by Ludwig's angina with œdema of the larynx necessitating urgent tracheotomy

418 An Aetiological Factor in *Dupuytren's* Contraction

G Roussy G Lévy and C Rosenbaum (*Ann de Med* January 1932 p *21*) believe that at least a certain type of Dupuytren's contraction is of medullary origin and record a case in support of this view *Clinically* this type is marked by an association *of* the palmar aponeurotic contraction with disturbances of the sensitivity as regards heat or with evident signs of syringomyelia anatomically medullary cavities of *different origins* have been noted in the grey matter Initial signs of the affection are predominance of the ulnar fingers *relative* integrity of the thumb and index finger and prominence of the flexor tendons in the palm and of the tendon of the small palmaris longus in the wrist The appearance of the hand and its pathological alteration resemble that

seen in syringomyelia The constant presence of the syndrome of Claude Bernard Horner and the predominance of symptoms involving the ulnar nerve suggest the existence of lesions in the parts of the cord giving rise to the eighth cervical and first dorsal roots The frequency of vasomotor and trophic troubles with disturbance of the sweat glands and the rare coincidence of contraction of the plantar aponeurosis would indicate involvement of the sympathetic system also The treatment advocated is radiotherapy of the lower cervical and upper dorsal regions of the cord This is contraindicated and specific treatment must be adopted if specific vascular lesions are diagnosed and especially if syphilis is suspected

419 Treatment of Empyema

C A HEDBLOM (*Journ Amer Med Assoc* December 26th 1931 p 1943) classifies empyema as pyogenic (acute or chronic) and tuberculous which is always chronic though there may be no clinical evidence of pulmonary tuberculosis In acute pyogenic empyema the fundamental principle in treatment is complete and early drainage without embarrassment of the respiration or circulation this is maintained until the cavity is obliterated by re expansion of the lung In the early stages of an acute empyema the two pleural cavities function as one Open drainage then lowers the respiratory function of both lungs—a sequel of material import if there is a coincident pneumonia or other toxaemia or the patient is very young or very old The method advocated is closed drainage or aspiration through a rubber catheter and irrigation of the cavity with normal saline or antiseptic solution repeated every two hours during the day and once or twice at night Irrigation is continued until the cavity is obliterated or until there is no further decrease in the size of the cavity In the latter event rib resection and drainage is indicated as also in cases with large bronchial fistulas In chronic pyogenic empyema closed drainage and irrigation with antiseptic fluid is advocated preliminary to operation For large cavities a posterior extra pleural thoracoplasty in two or more stages is the method of choice followed by the removal of the thickened pleura over the residual cavity Open drainage is contraindicated in sterile cases of tuberculous empyema If there is no associated pulmonary tuberculosis the pus is aspirated and filtered air is substituted in such amounts as to keep the pleural pressure at less than the atmospheric tension so that the lung may re expand If there is pulmonary tuberculosis a positive pneumothorax operation and collapse of the affected lung is indicated In both types of cases a plastic operation as for the non tuberculous cases may eventually be necessary

420 Results of Resection in Hirschsprung's Disease

A W FISCHER (*Zentralbl f Chir* January 30th 1932 p 261) discusses the variability in the results of resection of the hypertrophied intestine in Hirschsprung's disease An investigation of the cases operated upon in the Frankfort Clinic in 1927 gives a very gloomy picture of the prognosis The majority of the published figures show that surgical intervention lengthens life by only one or two years The author describes a case in which a total colectomy was performed the lower sigmoid being anastomosed with the ileum Many subsequent observations revealed an increasing dilatation of the lower ileum which gradually surrounded the remainder of the small intestine and also displayed haustration Fischer believes that the formation of a valve where the widened and movable sigmoid joins the fixed rectum is responsible for the great majority of cases of Hirschsprung's disease The bad results of operation especially resection are attributed to the persistence of this valve mechanism which leads to a simple dilatation and hypertrophy of the intestinal wall above it The author concludes that for the successful treatment of the disease a method of resection which removes the valve can alone be considered Valve formation can be obviated and good results obtained by a prolapse method of fixing the pelvic colon

Therapeutics

421 The Possibilities of Renal Opotherapy

S DEJUST DEFIOL and MARIANNE ROMME (*Presse Med* February 13th 1932 p 238) recalling the work of Brown Sequard and Dieulafoy forty years ago pioneers in the use of renal extracts in the treatment of renal disease state that the earlier workers were seeking only for a diuretic action and did not realize that it might be possible to replace artificially a deficient renal secretion Moreover the early extracts caused damage in some cases by the action of protein elements which it is now possible to remove The present authors have used an extract freed from albumin and lipoids and have obtained promising results as regards lowering the blood urea increasing the urinary output and reducing albuminuria The last effect has been more constantly obtained than the increase of urinary output Reduction of arterial tension has been achieved in a number of cases but this result depends on such a variety of factors that they hesitate to regard renal extract as a specific remedy for the condition The diuretic effect has been found to reach a maximum on the third day of treatment a result distinguishing it from treatment with chemical diuretics The authors consider that opotherapy can be divided into two main groups (1) the group including thyroid pituitary suprarenal and pancreatic hormones—isolatable substances having a definite action on a number of bodily systems and capable of being pushed to a point of toxicity and (2) a group comprising renal hepatic and splenic extracts which have a limited action (through unknown substances) only on the corresponding organ and stimulating the natural action without toxic effect In their opinion the action of renal extract in promoting and increasing natural action is more rational than that of chemical substances which only cause a passive diuresis

422 Inhalation Therapy in Pneumonia

Y HENDERSON (*New England Journ of Med* January 28th 1932 p 151) summarizes the reasons for using a mixture of 5 to 7 per cent carbon dioxide and 95 to 93 per cent oxygen (carbogen) in the treatment of pneumonia The deeper breathing which is thus induced prevents the development of occlusion and tends to open up any parts of the lung previously occluded While carbon dioxide is being inhaled morphine or other narcotic drugs may be used more freely to counteract excitement and restlessness and the respiratory stimulus of this gas tends to counteract the depression of breathing which these drugs otherwise induce The solution of carbonic acid which results in the blood is stated to have a bactericidal action on the pneumococcus and a resolving effect on the pneumonic exudate particularly when morphine or other narcotic and respiratory depressant drugs are being administered While carbon dioxide tends to lower the *p*H of the blood and the pneumonic exudate it does not decrease the blood alkali or contribute to the induction of acidosis but rather the reverse The author describes a special tent for the convenient administration of carbogen with a resulting 50 per cent concentration of oxygen this concentration is generally sufficient to overcome cyanosis and is as high as is considered advisable When oxygen alone is used the atmosphere in the tent contains from 1 6 to 2 per cent of carbon dioxide from the patient's breath When 7 per cent carbogen is used the carbon dioxide atmosphere ranges between 4 5 to 5 per cent owing to diffusion to the outside air this amount deepens the breathing but not excessively The temperature under the tent is from 3° to 7° F lower than that of the room and the humidity of the atmosphere is usually from 44 to 57 per cent The windows of the tent are composed of cellophane which is much less inflammable than celluloid they are made large so as to prevent the patient from feeling isolated or imprisoned The author cites animal experiments in support of his contention that this form of treatment is really curative and not merely a way of relieving the symptoms in pneumonia

423 Arsphenamine Treatment of Early Syphilis

A B Cannon and Mary B Kartulis (*Journ Amer Med Assoc* November 21st 1931, p 1521) record a study of the comparative value of arsphenamine, neoarsphenamine, and silver arsphenamine in the treatment of early syphilis in 136 cases. The points especially investigated were the disappearance of visible lesions, reversal of the Wassermann reaction, complications arising from the administration of the different drugs, and the number and nature of relapses. Arsphenamine proved to be the most satisfactory in all respects. The authors state that it involves fewer injections, a smaller dosage, and a shorter time to give a negative Wassermann reaction. Its reactions, immediate and delayed, are slightly fewer than those of neoarsphenamine, and the percentage of relapses is appreciably lower. The effects in the few cases in which the silver salt was tried suggest that it may be more desirable than neoarsphenamine. Both preparations have the advantage of being already neutralized. Silver arsphenamine possesses a lower toxicity than either of the other products, and can often be given to a patient who reacts severely to arsphenamine or neoarsphenamine.

424 Treatment of Experimental Strychnine Poisoning

R J Lyons (*Cronica Medica* January 15th 1932 p 58) finds that intravenous anæsthesia by somnifen (diethylallylisopropyl barbiturate of diethylamine) prevents clonic contraction in dogs given lethal doses of strychnine, and in 88 per cent saves life. Death was due to myocardial paralysis in the remaining 12 per cent, a figure lower than the 14·5 per cent fatality rate in untreated cases. In the primary strychnine clonic contraction are prevented by the administration of therapeutic doses of somnifen. The narcotic action of the drug is localized in the central portion of the spinal reflex arc. The anæsthetic dose to be injected into the dog's intravenously ranges from 0·10 to 0·15 gram per kilo of body weight. Hypodermic injection of morphine or intravenous injection of morphine copalamine, so far from improving the anæsthesia produced by somnifen in the dog considerably increases the toxicity; its use is therefore contraindicated.

425 Treatment of Erysipelas

S Zaffiri (*Riassegna med* January 15th 1932 p 32) has treated forty cases of severe facial erysipelas, of which he records twelve examples in patients aged from 16 to 66, by intramuscular injections of colloidal electric rhodium. The drug proved painless and gave rise to little or no local or general reaction. It was not toxic and did not produce symptoms of intolerance even when its use was continued for some time, nor did it give rise to anaphylaxis.

Neurology and Psychology

426 Chronic Subdural Haematoma

Chronic subdural haematoma is frequently unrecognized although it occurs more often than middle meningeal haemorrhage. A Kallas (*Brain*, December 1931, p 430) reviews eight cases, emphasizes the importance of accurately localizing signs, and maintains that a correct diagnosis of the site of the lesion should invariably be followed by operation and complete recovery. Trauma of the head often trivial is the most important aetiological factor; this displaces the brain antero posteriorly with a resulting tear of one or more cerebral veins as they enter the superior longitudinal sinus, and with subsequent bleeding into the subdural space. A surprisingly long latent period in most cases is best explained on the assumption that there is slow intermittent bleeding into this space. The diagnosis of this condition is based on a history of trauma which after a latent interval is followed by the insidious onset of headache, drowsiness, vomiting, and coma. The most characteristic clinical symptom is a peculiar lethargy alternating from drowsiness to coma with periods of alertness in a few hours or days. Misleading pyramidal tract signs, explainable in one of three ways are frequently noted, and are discussed. A dilated, fixed pupil, on one side even with homolateral paresis or bleeding from the opposite ear indicates the existence of a lesion on the same side. Spontaneous recovery is most unlikely and operation should be performed without delay. This will vary with the patient's condition and the various procedures are described. In seven of the eight cases the lesion was unilateral, and in one it was bilateral. With a unilaterally dilated pupil an opening should be made first on this side; if no pupillary inequality exists a bilateral trephine operation should be performed simultaneously. The two postoperative complications most to be feared are cerebral oedema and extradural haemorrhage.

427 Extramedullary Tumour of the Spinal Cord

In order to illustrate some difficulties in diagnosing spinal tumours G A Preston, M A Stewart and R J Wright Smith (*Melbourne Hosp Clin Reports* December 1931, p 134) record and discuss a case of an extramedullary spinal tumour. In this patient aged 49 the course of the disease was marked by three distinct periods: an insidious irritative onset with pain in the sacral region which gradually involved the lumbar area and was succeeded by root pains—duration 6 months; subsidence of the irritation with no definite evidence of nerve or spinal cord interference—duration 3 months; and a gradually increasing interference with the sensory and motor functions and sphincter control—duration 5 months. These pointed to gradually increasing compression of the cord by the use of lipiodol injections and x-ray films a tumour was located in the lower dorsal region. A laminectomy extending from the eighth thoracic to the first lumbar vertebra was performed and the tumour was excised which proved to be a fibroblastic meningioma. Complete recovery resulted. The nature of the root pains during the early stages warranted investigation of the alimentary and urinary tracts as being possible sites of lesions. The authors remark that spondylitis noted in this patient is not unusual at this age; its nature should however be carefully assessed when confined to a small area since localized spondylitis is frequently indicative of spinal cord tumour. The spinal fluid showed xanthochromia, massive coagulation and normal cell and globulin contents. Such a combination is characteristic of large tumours of the lower thoracic cord the conus medullaris and the cauda equina; excess of globulin without cell increase is most frequently found at other levels. The post operative headache of unusually long duration which occurred in this patient was probably due to leakage of cerebro spinal fluid at the operative site.

428 Torsion Spasm

H G Garland (*Journ Neurol and Psychopathol* January, 1932 p 193) reports a case of torsion spasm (dystonia lenticularis) one of the group of diseases and clinical syndromes which show evidence of striatal dysfunction. His patient was a Jew aged 17 and the case was remarkable in that pyramidal involvement was the first manifestation of the disease. Although there were no involuntary movements in the hemiplegic limbs there was undoubtedly an increase in muscle tone in them at those moments when the trunk was involved in a major spasm. The hemiplegic limbs were wasted, but through out the illness the patient was able to dress himself and could move about the house. At no time was there any sphincter disturbance, loss of consciousness hallucinations visual disorder dysphagia, or deafness. Garland remarks that while this case appears to be typical as regards its Jewish incidence progression and the type of involuntary movements, there was also an associated progressive hemiplegia. The patient showed no signs of cirrhosis of the liver or corneal pigmentation and the possibility of the aetiology being post encephalitic cannot be entirely excluded. The condition certainly seems to be inherited possibly as a Mendelian recessive. In the present case minor involuntary movements of the trunk muscles are at all times to be seen including the abdominal muscles on the hemiplegic side.

Obstetrics and Gynaecology

429 Rectal Gonorrhoea

According to L. BICKEL and L. ABRAHAM (*Zentralbl. f. Gynak.* January 23rd 1932 p. 200) there is a consensus of modern opinion that rectal gonorrhoea in women is almost devoid of signs, subjective or objective. Its frequency in cases of urogenital gonorrhoea has recently been reported as being 10 per cent. to 75 per cent. Such variations are due to varying methods of using the swab to different criteria of bacteriological investigation and to alterations in the proportions of acute cases in various reported series. The authors recommend Glingar's method of examining slides from the particles of mucous membrane derived from a rectal washout with 50–100 c.cm. of lukewarm water. In their view it is essential that the suspected diplococcus should be Gram negative but it need not necessarily be intracellular. Using such criteria they found rectal gonorrhoea in 20 out of 100 out patients suffering from urogenital gonorrhoea including 13 acute cases. Of the 87 chronic cases no fewer than 15 patients had a clinical history placing the infection at least ten years back, and 65 had no gonococci in the cervix or urethra; these chronic cases gave 16 instances of rectal gonorrhoea. The authors ascribe infection of the rectum to the anatomical events of defaecation and to contamination from infected urine. Since purulent rectal discharge is absent in chronic gonorrhoea of the rectum, and since the force of gravity is opposed to the entry of discharge in the vagina, rectal gonorrhoea probably plays little part in causing the chronicity and intractability of gonorrhoea in the female. Nevertheless rectal gonorrhoea affords a source of re-infection of the genitalia by the fingers, toilet paper or instruments.

430 Haemorrhagic Retinitis in Vomiting of Pregnancy

H. J. STANDER (*Surg. Gynecol. and Obstet.* February 1932 p. 129) describes two cases of haemorrhagic retinitis associated with severe vomiting in pregnancy, a complication he believes which has hitherto been unrecorded in the literature. Both patients developed a diffuse haemorrhagic retinitis quite different from the arteriosclerotic type and giving the impression of a diffusion of blood elements through the capillaries due to changes in the permeability of their walls. In the first instance the pregnancy was terminated eight days after the patient first complained of blurred vision but death followed shortly afterwards; the necropsy revealed central necrosis in the liver and necrotic areas in the anterior lobe of the pituitary gland. In the second case which terminated in recovery the pregnancy was brought to an end immediately; blurring of the vision began after lasting for a fortnight the retinitis gradually disappeared. The author has noted similar lesions in the hypophysis in two fatal cases of vomiting of pregnancy, in two of eclampsia, and in one of chronic nephritis during pregnancy. He remarks that while these lesions may have been associated with hyperglycaemia it is conceivable that some toxin may have caused the necroses in the liver and in the pituitary gland. The condition is of grave prognostic significance and is an indication for the immediate termination of the pregnancy. In all patients suffering from severe vomiting in pregnancy repeated examinations of the retina are strongly indicated.

431 Medical Induction of Labour

R. L. DODDS (*Journ. Obstet. and Gynaecol. of the British Empire.* Winter 1931 p. 827) gives a statistical report of 138 cases in which an attempt was made to induce labour medically by the following method. After administration of an ounce and a half of castor oil followed in two hours by an enema and hot bath, 20 grains of quinine sulphate were dissolved in dilute sulphuric acid and given in three two hourly doses of 10, 5 and 5 grains. If labour did not start within eleven hours from the beginning of this course two 0·5 c.cm. injections of pituitary extract were given with an interval between them of one hour. In 63 cases the pains started before the pituitary extract had been given. In 136 cases one course sufficed to induce labour within twenty-four hours after the first dose of quinine, in 43 two courses and in 5 three courses had to be given, so that the total successes numbered 183 or 54 per cent. The proportion of successes was greatest in the post-mature and least in the premature cases; it was greater in patients with albuminuria than in the remaining non-toxaemic group, although this contained fewer premature cases. Those patients requiring second or third courses had some degree of uterine inertia during labour and had a specially high instrumental rate. Stillbirths and neonatal deaths amounted to 14·6 per cent.; the surviving infants showed no special nutritional defects. In about 1·5 per cent. of the labours a stillbirth was possibly but doubtfully attributable to quinine—a proportion which is little different from that of unexplained stillbirths in natural labours. No higher success rate was obtained by giving 50 instead of 20 grains of quinine.

432 The Value of Radiography in Gynaecology

G. COTTE (*La Gynecol.* January 1932 p. 34) discusses the diagnostic value of radiography in gynaecological work under three headings: (1) simple radiological exploration, (2) after the injection of gas into the peritoneal cavity, and (3) after the injection of opaque substances into the uterus. Under the first heading he deals with foreign bodies in the uterus or vagina, calcified uterine myomas and dermoid cysts of the ovary. The third procedure involves the necessity of being alive to the possibility of a ureteral calculus being overlooked. In doubtful cases an opaque sound in the ureter obviates error. The method of rendering apparent the outlines of the pelvic organs by the injection of oxygen or carbon dioxide into the peritoneal cavity is only mentioned to be condemned having been superseded by the third procedure of injecting opaque substances into the uterus and adnexa. Lipiodol (40 per cent.) is stated to be the only substance used for this purpose in France. A sufficient amount should be introduced to allow films to be taken anteriorly and laterally. Accidents with lipiodol are extremely rare. This method has been found of particular use in investigating cases of sterility; obliterations of the passages at any part being made visible. Functional dysmenorrhoea has benefited from a radiological exploration of the uterus. Hydrosalpinx or unilateral sclero-cystic oöphoritis can also be diagnosed thus, and in the investigation of all pelvic tumours such an exploration is most helpful. It reveals at the same time any anomalies of size or shape of the pelvic contents and also the movements of the uterus and tubes.

433 Early Recognition of Cancer of the Uterus

F. EMMERT (*Journ. Amer. Med. Assoc.* December 5th 1931 p. 1684) emphasizes the advisability of detecting a pre-cancerous condition potentially dangerous lesions being cervical tears, erosion, eversion and leucoplakia. This last affection is a disorder of certain mucous membranes characterized by an increased formation of keratin in the superficial layers of the squamous epithelium and a marked hyperplasia of all the other constituents of the mucous membrane until it resembles the epidermis in macroscopical appearance. These changes result in the production of bluish pearly or grayish white plaques which are either level with the surrounding mucosa or slightly raised if the hyperplastic process has been excessive. For the macroscopic recognition of these changes Hinselmann's colposcope is useful. It consists of a pair of binoculars mounted on an adjustable upright stand. The lenses magnify an object from ten to thirty times. By the use of this instrument an unsuspected frequency of leucoplakia was found—namely, in 1 out of 115 patients examined only 10 per cent. were perfectly normal, 10 per cent. had a congenital extension of the epithelium of the cervical canal over the vaginal portion and 80 per cent. showed some degree of erosion. Leucoplakia is most commonly detected in the transitional

zone at the periphery of the erosion A case is reported in which a very early stage of malignant degeneration was recognized by means of the colposcope at a time when there were no symptoms and the usual clinical examination would have failed to arouse any suspicion

434 Diabetes and Pregnancy

C Brecsard (*Nord Mag f Laegevid* January 1932, p 34) records twelve cases in women aged from 22 to 44 in whom pregnancy was complicated by diabetes With the exception of one patient in the pre insulin era all were treated by insulin The total number of pregnancies among the twelve patients was seventeen eight of the seventeen children died (a mortality of 47 per cent) but the only fatal case among the mothers was that in which insulin was not employed Bruns, Gerards and Jacobsen conclusions are as follows The prognosis of diabetes in pregnancy is favourable as regards the mother but bad as regards the child Patients with *mild forms* of diabetes usually pass through their pregnancy without those complications which are liable to occur in severe forms of the disease The patients react well to insulin treatment The course of labour and the puerperal period in diabetic patients show no deviation from the *normal*

Pathology

435 The Significance of the Pituitary Gland in Parturition

H Hitter and P Hoet (*Journ of Physiol* February 8th 1932 p 134) have attempted to decide whether the theory of Dixon and Marshall (who attributed the onset of labour to increase of posterior pituitary hormone in the blood) or that of Bourne and Burn (who postulate a *sensitization* of the uterus by an ovarian hormone to a normal amount of circulating pituitrin) is most nearly correct The experiments of Cow who found that the action of adrenaline in relaxing uterine muscle can be reversed by previous treatment of the muscle by pituitrin have been used as a means of detecting any increase of pituitrin in the blood Bourne and Burn used oestrin which is not protein free Repeating their experiments the present authors also found an increase of sensitization of the uterus to pituitrin but when they employed progynon *which is protein free* this sensitization was not obtained Since also using Cow's adrenaline test a stimulant action was obtained in the case of animals near term they conclude that an actual increase of pituitrin in the blood is responsible for the onset of labour They have also investigated the effect of the proportion of calcium in the saline solution where an experimental uterine preparation is suspended and have found that the effect of pituitrin is increased not in direct proportion to a full in calcium content, but to decrease of its proportion to that of potassium The interior pituitary hormone which is found in the urine of pregnancy also has an effect in enhancing the action of pituitrin Thus the factors leading to onset of labour appear to be an actual increase of pituitrin in the blood together with increased sensitivity of the uterus to its action caused by increase of the K-Ca ratio in the blood and increased secretion of the anterior pituitary hormone

436 A Pathogenic Study of Parasyphilis

In previous experiments on rabbits C Levaditi P Lurine and R Schoen (*C R Soc de Biologie* January 22nd, p 86) demonstrated that after inoculations of *Treponema pallidum* into the cerebrum or spinal canal the virus is not localized in the brain but rapidly leaves the central nervous system to invade the whole organism Since experiments had not yet been performed on animals more akin to the human the authors pursued their investigations on monkeys These confirmed the previous findings and showed that the normal neuraxis constitutes an insuperable barrier to the rapid increase of dermotropic strains of the syphilitic virus Such intra neuraxial increase of the *Treponema pallidum* and the diseases it causes including general paralysis and tabes are only possible under two conditions the progressive creation of strains of syphilitic virus with elective neurotropic affinities and the occasional diminution (transient or permanent) of the natural resistance of the neuraxis to the virus The qualities natural or acquired of the pathogenic agent and of the soil on which it is implanted are of primary importance in determining the aetiological and pathogenic factors of parasyphilis

437 Comparison of the Pirquet and Mantoux Tuberculin Tests

S A Slater and Kathleen Jordan (*Amer Rev Tuberculosis* February 1932 p 218) record the results of an investigation into the comparative value of the Pirquet and Mantoux methods of performing the tuberculin test The work was conducted in a wealthy rural community where living conditions were good the people intelligent and the death rate from tuberculosis during the last five years had been less than 0 25 per 1 000 White school children between the ages of 6 and 18 years were tested schools being selected in the different sized towns and in the country districts so as to afford the best representation of the whole area The Pirquet test was performed by scarifying the skin of the forearm through a drop of undiluted old tuberculin the Mantoux test by injecting 0 1 c.cm of a 1 in 1000 dilution considered as equivalent to 0 1 mg of old tuberculin into the skin of the forearm The two tests were performed simultaneously and the results were read 48 hours later Of a total of 1 006 children tested 105 or 10 4 per cent reacted to the Mantoux and 92 or 9 15 per cent to the Pirquet test Analysing more closely it was found that 42 or 4 2 per cent reacted to the Mantoux but not to the Pirquet procedure while 29 or 2 88 per cent reacted to the Pirquet but not to the Mantoux test 63 or 6 3 per cent reacted to both tests It was observed that the average age of those reacting only to the Mantoux test was 14 years and of those reacting only to the Pirquet test 10 6 years The reason for this difference is not clear but the authors regard it as indicating that the Pirquet test is preferable in the younger and the Mantoux test preferable in the older children On x ray examination of the reactors fifteen children were found with demonstrable tuberculous lesions The proportion of reactors in the whole population was very low being not more than 26 per cent even in persons 18 years old The authors believe that extensive use may be made of the tuberculin test not only to ascertain by further observation the probability of a tuberculin positive child developing clinical tuberculosis but also in country areas where the degree of tuberculization is low of detecting the source of infection among the adult population by examining the families in which positively reacting children are found

438 Evolution of the Renal Syndrome in Amyloisis

M Labbé R Boulin I Bertrand and L Justin Besançon (*Bull et Mem Soc Méd des Hôp de Paris* January 18th p 24) maintain that cases of amyloisis far from having always a pure symptomatology are frequently associated with other clinical manifestations than those of lipoid nephrosis They describe a case of tuberculosis of eight years duration in which the liver was found to be enlarged during two years it passed through three phases In the first there was polyuria accompanied by hypoazoturia in the second simple albuminuria was present with slight temporary oedema and lastly there ensued the azotaemic phase The early appearance of the Congo red reaction which was twice positive was regarded as a danger signal of great importance suggesting amyloid degeneration A little piece of the anterior surface of the liver was removed through a small incision under local anaesthesia this procedure being regarded as safer than the usual trocar method The sections of this piece of liver are described and three drawings are published to show that at least in certain conditions hepatic amyloisis can begin in the interior of the cells themselves and not in the intercellular tissue This is spoken of as a rather late rehabilitation of the anatomical expression "amyloid degeneration

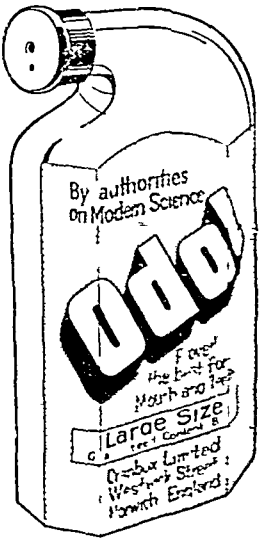
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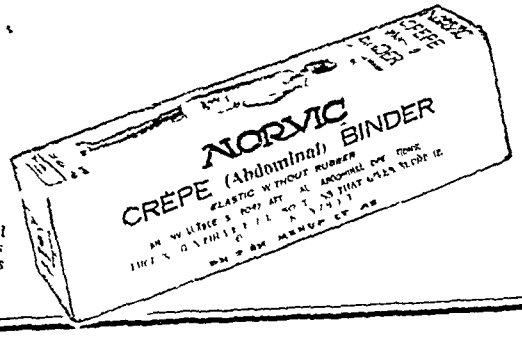
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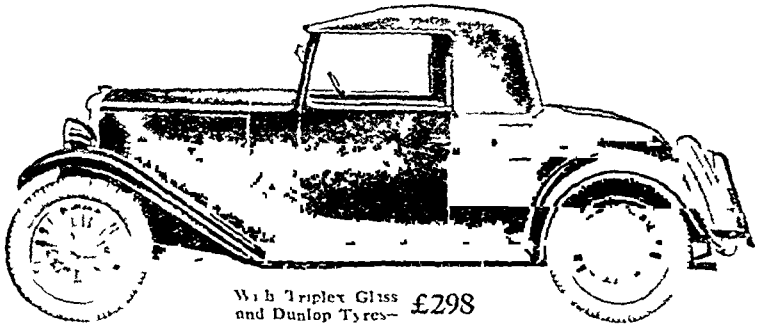
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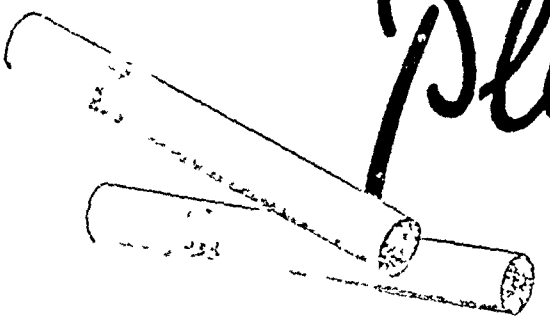
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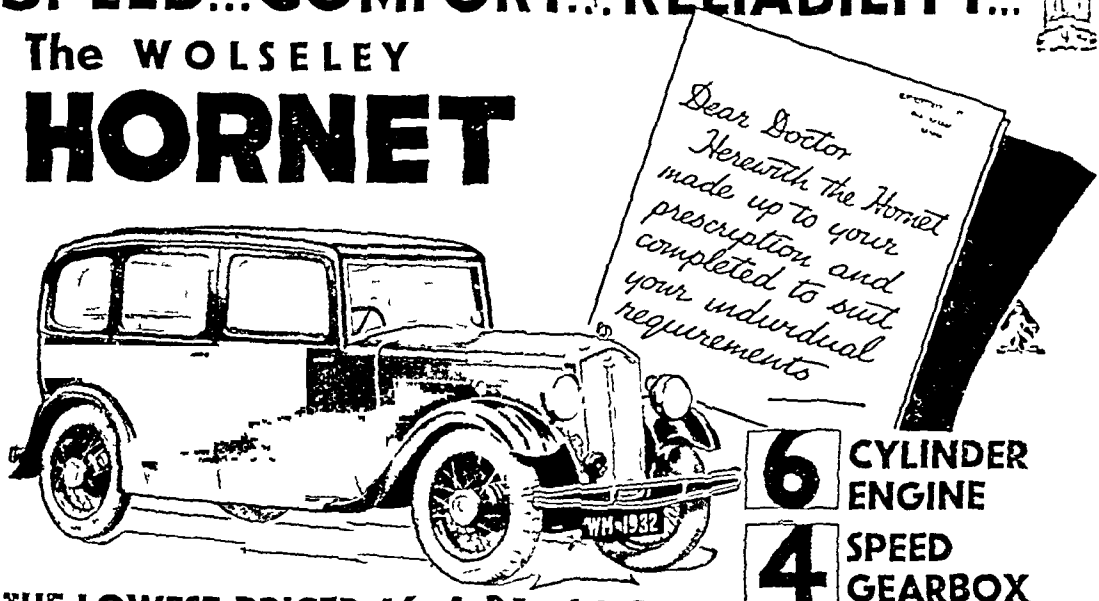
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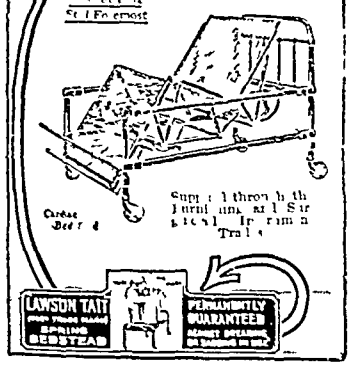
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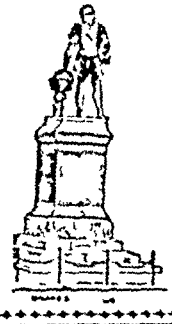
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CHARING CROSS HOSPITAL MEDICAL SCHOOL
LONDON, W C 2

M R C P COURSE

A Course in Preparation for the July Examination for MEMBERSHIP OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON will be held commencing on Monday May 9th 1932

The Course will extend over ten weeks and will comprise daily instruction including SPECIAL LECTURE AND DEMONSTRATION

FEE TWENTY GUINEAS

Applications for the few remaining vacancies should be addressed to the Dean from whom further particulars may be obtained

LONDON SCHOOL OF DERMATOLOGY
St John's Hospital for Diseases of the Skin,
Leicester Square W C 2

Conducted by the Honorary Staff of the Hospital together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospitals Lectures and *Demonstrations* every Tuesday and Thursday at 5 p m from October to March and four times weekly during May Clinics daily at 2 p m and 6 p m Saturdays 2 p m only Pathological Laboratory for Instruction or Research work
For further particulars fees etc apply to J E M WIGLEY M B Dean

LIVERPOOL SCHOOL OF TROPICAL MEDICINE
(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine *commence* on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D T H must possess the D T M of this University)
For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pembroke Place Liverpool

INTENSIVE POST-GRADUATE SUMMER COURSES

Four Courses (each of two weeks) designed to suit general practitioners will be given at the NORTH EAST LONDON POST GRADUATE COLLEGE (THE PRINCE OF WALES'S GENERAL HOSPITAL TOTTENHAM N 15) on the following dates

May 23rd to June 4th June 6th to 18th
June 20th to July 2nd July 4th to 16th
Full particulars from the Dean

DEFECTIVE SPEECH.

Remedial Tuition on modern lines for Stammer, Aphonia Cleft Palate Tracheotomy and Disturbed Co-ordination by ERIC MIALL A L C M Speech Instructor at Middlesex Hospital
Short courses in elocution accent clarity and public speaking
17, CAVENDISH SQ, LONDON, W 1
Telephone Langham 1830

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1932

The Post-Graduate Courses in

(1) A GENERAL PRACTITIONER'S COURSE from August 15th to September 10th

(2) A GENERAL SURGICAL COURSE from August 10th to September 15th

Fee for either of these Courses £10 10 0 or for both £20 10 0

(3) A COURSE IN OPHTHALMOLOGY AND LARYNGOLOGY AND DISEASES OF CHILDREN from July 11th to September 10th Fee £10 10 (Minimum number 5)

In addition to the above there will be Special Courses during the Autumn and Winter

SUMMER TERM

SURGICAL PATHOLOGY—Mr Walter E Dandy and Clinical Assistants Fee £4 4s

OPHTHALMOSCOPY—Drs Graham Fergus and Ian Fraser Classes limited to Fifteen Fee £3 3s

SUMMER AUTUMN AND SPRING TERMS

CLINICAL SURGERY (including Fracture)—Surgical Staff Clinical Lectures (During August Clinical Lectures will be delivered by Members of the Staff) Fee £5 5s

CLINICAL MEDICINE—Medical Staff Clinical Lectures (During August Clinical Lectures will be delivered by Members of the Staff) Fee £5 5s

DISEASES OF EAR NOSE AND THROAT—Staff Ear Nose and Throat Department Practical Instruction in Operative Work Fee £5 5s

VENEREAL DISEASES—Mr Lees FRCSE Ward Class Clinical Lectures Fee £3 3s

DISEASES OF EAR NOSE AND THROAT—Dr Clinical Classes Clinical Lectures Fee £3 3s

DURING THE PERIOD OF THE GENERAL COURSES (July to September)

PATHOLOGY OF THE NERVOUS SYSTEM—Dr Fee £5 5s

DISEASES OF THE BLOOD—Dr Course Fee £3 3s VACCINE THERAPY—Dr Fee £1 1s

MODERN DIAGNOSTIC METHODS Drs Dow and Cuthbert and Clinical Assistants 3 months Fee £4 4s

X-RAY PHYSICS AND ELECTROTECHNICS—Mr Course Fee £3 3s

ULTRA-VIOLET RADIATIONS AND THEIR USES—Dr Course Fee £3 3s

OPHTHALMOSCOPY—Drs Graham Fergus and Practical Instruction Fee £3 3s

CLINICS IN RELATION TO MEDICINE—Mr J A Fraser Wards Fee £3 3s

Further particulars may be had on application to the Honorary Secretary Post Graduate Courses in Medicine Edinburgh

NATIONAL HOSPITAL, QUEEN SQUARE, MEDICAL SCHOOL

M. R. C. P.

A Course of DEMONSTRATIONS in NEUROLOGY for Candidates for the MRCP examination will be held from MAY 20th to JULY 11th on MONDAYS and FRIDAYS at 6 0 p m

Fee for 16 demonstrations £6 6 0 Special terms can be arranged for those unable to take the whole course of lectures

Applications should be made to the Secretary J G GREENFIELD *Dean of the Medical School*

INSTITUTE OF PATHOLOGY & RESEARCH

ST MARY'S HOSPITAL, LONDON, W 2

A Course of Lectures on PATHOLOGICAL RESEARCH IN ITS RELATION TO MEDICINE has been arranged for the SUMMER SESSION These Lectures will be given in the Lecture Room of the Bacteriological Department of the Institute on TUESDAY AFTERNOONS at 5 p m as under —

MAY 17th	SUBJECT
Major Melville Sinclair C M G R A M C (Ret) (Surgical Specialist Ministry of Pensions)	Fractures of the Lower Extremity (With Lantern Slide Demonstration)
MAY 24th	
Prof Edgar Douglas Adrian M D F R S (Fellow Trinity College Cambridge Emeritus Professor Physiology)	The Nervous Mechanism of Respiration
MAY 31th	
Prof Martin Hahn (Prof of Hygiene University Berlin)	On the Lübeck Trial and the Scientific Principles involved in Chemotherapeutic and Antitoxic Immunity
MAY 31	
Donald Hunter M D F R C P (Lond) Assistant Physician Medical Tutor Lecturer in Pharmacology (St Mary's Hospital)	The Clinical Significance of Studies in Calcium Metabolism
JUNE 7th	
Sir Henry Hallett Dale M D F R S F R C P (Lond) Secretary (Director of the National Institute for Medical Research)	Recent Work on Histamine and Some Allied Substances of the Circulation
JUNE 14th	
Prof R T Leiper M D F R S (Prof of Helminthology London School of Tropical Medicine)	Human Schistosomiasis

These Lectures are open to all Members of the Medical Profession and Students of Medicine

MEDICAL SUPERINTENDENT

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners are invited to attend the Practice of the Hospital Special opportunities are afforded for seeing Operative Obstetrics and Operative Gynæcology (about one half of the cases admitted require operation) Clinical Lectures are delivered at 2 p m daily at the Hospital and in the Autumn Practical Courses are held Classes for Practical Midwifery are also held

Further information can be obtained from the Dean

Entrance fee £5 5s WALTER SPENCER

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F R C S (Eng), Primary 1926-31	173
	Fin 174
F R C P (Lond), 1914-31	199
D P H (Various) 1926-31 (Complete Exam)	308
F R C S (Edin), 1921-31	50
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Applications Welcome

EXAMINING BOARD IN ENGLAND

IN 1932
ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

FIRST MEDICAL EXAMINATION
The Examination will commence on Monday June 13th.

SECOND EXAMINATION (OLD REGULATIONS)
This Examination will commence on Thursday June 9th.

FINAL EXAMINATION (NEW REGULATIONS)
This Examination will commence on Thursday June 9th.

THIRD OR FINAL EXAMINATION
This Examination will commence on Monday July 4th.

DIPLOMA IN LARYNGOLOGY AND OTOLOGY
Part I. (Primary) will commence on Monday June 27th and Part II. (Final) on Monday July 4th.

DIPLOMA IN PSYCHOLOGICAL MEDICINE
Part I. (Primary) will commence on Monday June 20th and Part II. (Final) on Friday July 1st.

DIPLOMA IN PUBLIC HEALTH
Part I. (Primary) will commence on Monday June 27th and Part II. (Final) on Friday July 8th.

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE
The Examination will commence on Friday July 8th.

DIPLOMA IN OPHTHALMIC MEDICINE AND SURGERY
Part I. (Primary) will commence on Monday June 27th and Part II. (Final) on Friday July 8th.

Last day for receiving applications for admission to the Examinations, Wednesday June 1st.

Regulations and Forms of Application may be obtained on application to the Secretary, Royal College of Physicians of London, 11 St. Andrew's Place, Regent's Park, N.W.1.

HORACE H. HEW
Senior Censor

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL

(University of London)
DENMARK HILL, S.E.5

ADVANCED MEDICAL COURSE.

A Course on Clinical Medicine suitable for M.R.C.P. and M.D. examinations will be held from Tuesday, May 24th, to Friday, June 3rd.

Further particulars can be obtained on application to the Dean, Dr. Lyle Hospital Medical School, Denmark Hill, S.E.5.

UNIVERSITY OF LONDON

A Course of Two Lectures on *The Urine and Nervous System* will be given by Professor W. R. Ross (Director of Physiology in the University of Durham) at UNIVERSITY COLLEGE, LONDON (Gower Street, W.C.1) on MAY 12th and 13th at 5.30 p.m. At the first lecture the Chair will be taken by Prof. F. A. LOCKETT EVANS, M.D., F.R.C.P., Jodrell Professor of Physiology in the University. Lantern and film illustrations.

Admission free, with or card.

S. J. WORSLEY,
Academic Registrar.

UNIVERSITY OF LONDON

Applications are invited from Graduates of the Universities of London in Medicine and Surgery for the GEOFFREY DE PENCIER TRAVIS FINE STUDENTSHIP FOR RESEARCH IN OTO-RHINO-LARYNGOLOGY. The Studentship is of the value of £450 a year and is tenable in the first instance for one year.

Applications should reach the University on or before June 13th, 1932, and must be made on the prescribed form which may be obtained together with further particulars from the Academic Registrar, University of London, South Kensington, S.W.7.

ST. MUNGO'S COLLEGE

FACULTY OF MEDICINE

CHAIR OF PHYSIOLOGY

The Governors invite applications for the above CHAIR which will be vacant as from the end of the Summer Session. Applications with seven copies of testimonials must be lodged with me not later than May 27th, but acting applicants may obtain full particulars from the Secretary.

THOS. F. ROBERTSON,
97 West Regent St., GLASGOW, Secretary.
Glasgow.

Royal College of Physicians of London

CHARLES MELVILLE HORN SCHOLARSHIP IN CLINICAL MEDICINE

The next Examination for this Scholarship will be held at the Royal College of Physicians of London on Tuesday June 21st and following days.

The Examination is open to any Student of Medicine who is holding a Medical qualification to be specified by the date of his passing his professional Examination in Medicine and Therapeutics for a Medical qualification, who has studied for a period of not less than two and a half and not more than five years at a Medical School in London recognised by the Royal College of Physicians of Edinburgh in finding Medical Classes recognised by the Medical Faculty of the University.

The Scholarship is of the value of Twenty Guineas and is tenable for one year.

Intending candidates are required to send their names to the Registrar of the Royal College of Physicians, 11 St. Andrew's Place, London, N.W.1, by not later than 4th June with evidence of the date of their Medical Studies from the Dean of the Medical School and evidence of the date at which they passed their Examination in Anatomy and Physiology.

RAYMOND CRAWFURD, M.D.,
11 St. Andrew's Place, Regent's Park, N.W.1. Registrar.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

ELECTION OF PROFESSORS AND LECTURERS

Notice is hereby given that the Council is prepared to receive applications for election to the following HUNTERIAN PROFESSORSHIPS AND CERTAIN LECTURESHIPS AND PRIZES, when vacancies occur during the ensuing year.

Candidates for Hunterian Professorships should be Members of the College.

Letters from Widows, Trustees, Executors, Solicitors, or other persons will be considered only when accompanied by the written consent of the candidate.

Applications, in writing, must be sent to the Secretary's Office before Monday, May 30th, and candidates are requested to furnish a list of the papers or other Lectures or Demonstrations which they propose to give.

S. HOLLEST COWELL,
May 7th, 1932. Secretary.

CHELTENHAM COLLEGE

TWELVE SCHOLARSHIPS AND EXHIBITIONS (open to Members of Public Schools Junior Scholarships (limited to the value of £80 (increased to £100 for special merit). Junior Exhibitions of £40 and £30. Entrance Scholarships of £80 and £60. Entrance Exhibitions of £40 and £30. Scholarships of £80 and £60 open to sons of Public Officers. Several Leaving Exhibitions of £40 and £30 open to boys under 16 on June 1st, 1932. Special Scholarships and Exhibitions for boys intending to enter the Army. Preliminary Examination (at Candidates' Schools) on Monday and Tuesday, May 23rd and 24th, 1932. Final Examination (at Cheltenham) on Tuesday and Wednesday, May 31st and June 1st, 1932. Apply Bursar, Cheltenham College.

THE LISTER INSTITUTE OF PREVENTIVE MEDICINE

MORNA MACLEOD RESEARCH STUDENTSHIP IN BIOCHEMISTRY

Applications are invited for the above Studentship which is of the value of 100 guineas per annum and is tenable for one year but renewable at the discretion of the Governing Body.

Candidates must have had a thorough training in Chemistry and some knowledge of Physics is desirable but not essential. The student will be required to undertake research under the direction of the Head of the Biochemical Department.

The appointment will date from July 1st or any subsequent date not later than October 1st.

Applications with details of scientific training and career and the names of two personal referees should be sent to the Secretary, Lister Institute, Chelsea Bridge Road, London, S.W.1, by June 1st.

CITY OF LONDON MATERNITY HOSPITAL,

CITY ROAD, E.C.1

MIDWIFERY TRAINING SCHOOL

MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complications. Monthly or Fortnightly Courses.

LADIES TRAINED as Midwives and Monthly Nurses in accordance with C.M.B. regulations.

PRIVATE WARDS for paying patients.

MATERNITY NURSES sent out to private cases.

NAVAL DENTAL SERVICE

The Admiralty is prepared to receive applications from qualified Dental Surgeons for entry into the Royal Navy as DENTAL OFFICERS.

Three vacancies are to be filled. Candidates must be of less than 28 years of age at date of entry (under certain circumstances an allowance for actual service not exceeding six months in respect of a period not exceeding one year as House Surgeon at a Dental Hospital approved by the Admiralty) and must have registered under the Dentists Act as qualified Practitioners. Dental Surgeons in Great Britain and Ireland will be required to appear before a Selection Committee and to pass a professional examination by a Board of Naval Medical Officers as to their physical fitness for entry.

The regulations for entry and the form to be filled up by candidates may be obtained on application to the Medical Director-General of the Navy, Admiralty, London, S.W.1.

The form of application accompanied by the necessary documents must reach the Medical Director-General not later than July 1st.

LEICESTERSHIRE COUNTY COUNCIL.

MEDICAL SUPERINTENDENT

COMBINED COUNTY SANATORIUM AND FEVER HOSPITAL
(180 Beds—120 Tuberculosis and 54 Fever)

The Leicestershire County Council invite applications for the appointment of a Medical Superintendent at their newly erected Combined Sanatorium and Fever Hospital at Markfield from registered Practitioners of not more than 40 years of age who have had extensive practical experience in the diagnosis and treatment of Pulmonary Tuberculosis and also of Infectious Diseases. It is also desired that he should have sound administrative abilities and experience in the training of nurses for examination.

The salary attached to the appointment will be at the rate of £850 per year (together with the use of an uniform) and house (rates and taxes free) with light, coal and laundry, and will rise, subject to satisfactory service by annual increment of £50 to £950. The salary is subject to a temporary reduction of approximately 5 per cent. The foregoing emoluments are valued at £1150 per year.

The gentleman appointed will be required to devote the whole of his time to the duties of his office, and the appointment will be subject to a recent satisfactory medical certificate being provided and to the provisions of the Local Government and Other Officers Superannuation Act 1922.

The candidate appointed will be under the control and supervision of the County Medical Officer, and will be required to furnish such advice and assistance appertaining to his office as may be required.

The appointment will be subject to three months' notice on either side, and the successful candidate will be required to commence duties early in September.

Applications on the prescribed form obtainable from the undersigned, and accompanied by copies of not more than three testimonials, should be addressed to the undersigned, and received not later than Monday, May 23rd.

Canvassing of members of the County Council, either directly or indirectly, will be considered a disqualification.

10 New Street, Leicester. W. J. PEEP, Clerk to the County Council.
April 25th, 1932.

COUNTY BOROUGH OF ROCHDALE

ASSISTANT MEDICAL OFFICER OF HEALTH

The Health Committee invites applications from duly registered Medical Practitioners for the post of Assistant Medical Officer of Health at a salary of £600 rising by annual increments of £25 to £700 per annum, in addition to board and residence at the Infectious Diseases Hospital, and an allowance of £50 per annum for upkeep of motor car (the salary is subject to a temporary economy cut of 8½ per cent).

Candidates must be unmarried, and must be qualified to hold an appointment as Tuberculosis Officer and Venereal Disease Officer in accordance with the Local Government (Qualifications of Medical Officer and Health Visitor) Regulations, 1930, and must possess the Diploma of Public Health.

The successful candidate will work under the direction of the Medical Officer of Health, and will perform such public health duties as may be assigned to him. He will not engage in private practice.

Forms of application may be obtained from the Medical Officer of Health, Public Health Offices, Rochdale, to whom all applications accompanied by copies of three recent testimonials and endorsed "Assistant Medical Officer of Health" should be returned not later than Wednesday, May 18th.

Town Hall, Rochdale. WM. HENRY HICKSON, Town Clerk.
April 30th, 1932.

SURREY COUNTY COUNCIL

ASSISTANT MEDICAL OFFICER

[illegible]

BOROUGH OF WALTHAMSTOW

ISOLATION HOSPITAL CHINGFORD

RESIDENT MEDICAL OFFICER

[illegible]

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE

ASSISTANT TUBERCULOSIS OFFICER

[illegible]

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE

NEWCASTLE GENERAL HOSPITAL

RESIDENT [illegible] ASSISTANT [illegible]

[illegible]

BOROUGH OF [illegible]

HEALTH [illegible]

[illegible]

CITY OF CARDIFF

CITY LODGE INSTITUTION

ASSISTANT MEDICAL OFFICER

[illegible]

CITY OF LEICESTER

RESIDENT MEDICAL OFFICER

[illegible]

CITY OF BRISTOL

[illegible]

[illegible]

COUNTY BOROUGH OF [illegible]

HEALTH

[illegible]

[illegible]

CHESTER ROYAL INFIRMARY
(1 Beds)

MANSFIELD AND DISTRICT HOSPITAL

LINCOLN COUNTY HOSPITAL

CHESTER ROYAL INFIRMARY

THE ROYAL CHELTENHAM HOSPITAL NEW BUILDINGS
(100 Beds)

DERBYSHIRE ROYAL INFIRMARY
DERBY
(General Hospital—350 Beds)

ASHTON UNDER LYNE (200 Beds)

CHESTER ROYAL INFIRMARY

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL
(General Hospital—150 Beds)

DONCASTER ROYAL INFIRMARY
(183 Beds)

NORTH ORMESBY HOSPITAL
MIDDLESBROUGH

POOLE HOSPITAL FOR ACCIDENTS

TORQUAY HOSPITAL
(General Hospital—146 Beds)

ROYAL HAMPSHIRE COUNTY HOSPITAL
WINCHESTER
(198 Beds)

ROYAL HAMPSHIRE COUNTY HOSPITAL
(158 Beds)

ROYAL ISLE OF WIGHT COUNTY HOSPITAL RYDE

BRADFORD ROYAL INFIRMARY

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL

THE PRINCE OF WALES'S GENERAL HOSPITAL London N 15

CENTRAL HOSPITAL
PLYMOUTH
(50 Bed)

WEST HOSPITAL CLOVELLY ROAD
Balham S W 12

LONDON JEWISH HOSPITAL
Stepney Green E 1
(General Hospital—108 Beds)

BEDFORD COUNTY HOSPITAL
(124 Beds)

RICHARD MILL MEMORIAL HOSPITAL CHESTER

TEMPORARY MEDICAL OFFICER

Applications are invited for the temporary appointment of MEDICAL OFFICER to the Hospital, which is a small isolation hospital with accommodation for 14 patients. The salary will be at the rate of £4 4s. per week. The appointment will be terminated by one month's notice on either side. Applications, stating age, qualifications and experience, together with the names of two referees, should be sent to the undersigned not later than May 14th.

CHARLES E. HAZELL
Clerk to the Joint Hospital Board

Chester, April 19th, 1932.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST
Brompton, S.W.

Applications from duly qualified Medical Men are invited for the post of JUNIOR HOUSE PHYSICIAN at the SANATORIUM at Frimley. The appointment is for six months. At the expiration of this term of office the successful candidate will be eligible to apply for another appointment of the same duration, but not for a further term. The Honorarium attached to the post is £100 per annum with full board and lodging. Applications, with testimonials, should be sent to the undersigned not later than May 1st.

FREDERICK WOOD,
Secretary.

Brompton, S.W.3.
April 11th, 1932.

QUEEN'S HOSPITAL, BIRMINGHAM

QUEEN ALEXANDRA MEMORIAL HOUSE

Applications are invited for the appointment of SENIOR RESIDENT OBSTETRICAL ASSISTANT in the Queen Alexandra Memorial House, Birmingham. The appointment is for one year from July 1st next, and is open to Women Graduates in Medicine of the University of Birmingham. The salary is £100 per annum, with board, lodging, and laundry. Applications, which must be received not later than June 1st next, should be addressed to the undersigned, and should state the age, qualifications, and experience of the candidate, and should be accompanied by the names of three persons to whom reference may be made.

CHARLES HOLROYD,
Registrar.

Birmingham, May 2nd, 1932.

CHESTER ROYAL INFIRMARY (with B.C.G.)

HOUSE PHYSICIAN required (resident) to take up duties May 23rd next. Salary £120 per annum, with board, residence, and laundry.

Applications, endorsed "Medical," to be sent to the undersigned not later than May 14th.

W. H. CLAGUE, M.D., M.R.C.P.,
Hon. Secretary, Medical Committee.

BENGAL MEDICAL SERVICE

Wanted ASSISTANT SURGEONS for the Bengal Medical Service. Candidates must be between the ages of 21 and 25 years on the 1st January, 1933, and must have passed the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Physicians and Surgeons, Edinburgh, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Physicians and Surgeons, Glasgow, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Physicians, London, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, London, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Edinburgh, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Glasgow, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Ireland, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Dublin, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Belfast, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Edinburgh, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Glasgow, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Ireland, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Dublin, or the Final Examination for the Diploma of Licentiate in Medicine and Surgery of the Royal College of Surgeons, Belfast.

CALCUTTA NORTH, AND ANCILLARY INFIRMARY

WANTED ASSISTANT IN SURGICAL DEPARTMENT

MANCHESTER ROYAL INFIRMARY

SURGICAL OUT-PATIENTS

The Committee of Management invite applications for the appointment of Assistant Surgeon to Out-Patients.

The duties are to commence on the first Monday in October next.

The appointment is for two years, and the salary is £120 per annum.

Applications, stating age, qualifications, and experience, should be sent to the undersigned not later than May 21st next.

CHARLES E. HAZELL,
Clerk to the Committee.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH (200 beds)

RESIDENT ANAESTHETIST AND HOUSE SURGEON (non-living-in).

HOUSE SURGEON (living-in).

Salary £100 per annum in each case.

Applications, stating age, qualifications, and experience, to be sent to the undersigned not later than May 14th.

ARTHUR H. CASH,
Secretary.

April 12th, 1932.

NORTH STAFFORDSHIRE ROYAL INFIRMARY, STOKE-ON-TRENT (300 beds)

HOUSE SURGEON

The Committee invite applications for the post of House Surgeon, which will be vacant on May 30th. Salary £120 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience, should be sent to the undersigned not later than May 14th.

W. STEVENSON,
Secretary to the Infirmary.

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY, DEVONPORT

Applications are invited for the post of ASSISTANT HOUSE SURGEON (unmarried) at the Royal Albert Hospital and Eye Infirmary, Devonport. The appointment is for six months, and the salary is £80 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience, should be sent to the undersigned not later than May 14th.

FRANK E. WESTLAKE,
Secretary.

ALTRINCHAM CLINICAL HOSPITAL (200 beds)

NORTH STAFFORDSHIRE ROYAL INFIRMARY, STOKE-ON-TRENT

ASSISTANT HOUSE SURGEON

MIDDLESEX HOSPITAL

THE ROYAL FREE HOSPITAL, GRAY'S INN ROAD, W.C.1

THE ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW

KENT COUNTY CHILDREN'S HOSPITAL, HOLLINGBOURNE

CHILDREN'S HOUSE SURGEON

STOCKTON AND THORNABY HOSPITAL

HOUSE SURGEON

ROYAL INFIRMARY, EDINBURGH

HOUSE SURGEON

THE ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH

CHESTER ROYAL INFIRMARY
(1 B)

...With effect from ... next ... the ... intm nt of HONORARY OPHTHALMIC SURGEON ... Applications ... Secretary ... Infirmary ... Chester ...

...Applications are invited for the ... Matron ... Salary ... Applications ... Secretary

ROYAL HALLAMSHIRE HOSPITAL AND CUTLERY WORKERS' HOSPITAL

HOUSE MEDICAL OFFICER

[illegible]

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

Brompton, S.W.

Application from duly qualified MEDICAL MEN are invited for the post of JUNIOR HOUSE PHYSICIAN at the SANATORIUM. Salary [illegible]. The appointment is for six months. Applications for an interview should be addressed to the Secretary, Hospital for Consumption, Brompton, S.W., and should reach him not later than [illegible]. THE HOSPITAL CANNOT PAY TRAVELLING EXPENSES.

FREDERICK WOOD, Secretary.

April 13, 1932.

QUEEN'S HOSPITAL, BIRMINGHAM

CASUALTY APPOINTMENT

Applications are invited for the appointment of CASUALTY SURGICAL OFFICER. The appointment will be for six months, and the salary will be £100 per annum. Applications, stating age, qualifications, and experience, should be sent to the undersigned not later than Saturday, April 23rd, 1932. Canvassing will disqualify.

C. HELPER, Secretary.

Birmingham, April 13, 1932.

CHESTER ROYAL INFIRMARY

(ELECTRICAL)

RESIDENT PHYSICIAN required for [illegible] with [illegible] Applications, stating age, qualifications, and experience, should be sent to the undersigned not later than [illegible]

WILLIAM CLAYTON, Secretary.

BETHNAL GREEN SANATORIUM, HEMEL HEMPSTEAD

CLINICAL ASSISTANT

Applications are invited for the appointment of CLINICAL ASSISTANT to the TUBERCULOSIS DEPARTMENT. [illegible]

CITY OF NOTTINGHAM HOSPITAL

SENIOR HOUSE SURGEON

Applications are invited for the appointment of SENIOR HOUSE SURGEON. [illegible]

MANCHESTER ROYAL INFIRMARY

SELECTION BOARD FOR THE [illegible]

The Board for the [illegible] will meet in the Supreme Court of Judicature, Manchester, on Wednesday, May 11th, 1932, at 10 a.m. [illegible]

ERNEST HAZELL, Secretary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH

[illegible]

RESIDENT ANAESTHETIST AND HOUSE SURGEON to the [illegible]

HOUSE SURGEON (male).

Salary £100 per annum in each case. [illegible]

ARTHUR R. CASH, Secretary.

April 12, 1932.

NORTH STAFFORDSHIRE ROYAL INFIRMARY, STOKE-ON-TRENT

HOUSE SURGEONS

The Committee of Management are prepared to appoint [illegible] House Surgeons to the Hospital. [illegible]

W. STELFOX, Secretary.

ROYAL ALEXANDRA HOSPITAL AND ALBERT EDWARD INFIRMARY, LIVERPOOL

Applications are invited for the following ASSISTANT HOUSE SURGEONSHIPS [illegible]

FRANK T. [illegible]

ALTRINCHAM CLINICAL [illegible]

[illegible]

NEWCASTLE-UPON-TYNE [illegible]

[illegible]

MIDDLESEX HOSPITAL

[illegible]

THE [illegible]

HOUSE SURGEON

[illegible]

KENT COUNTY COUNCIL [illegible]

HOSPITAL, [illegible]

[illegible]

ST. [illegible] AND [illegible]

[illegible]

[illegible]

ROYAL [illegible]

[illegible]

[illegible]

[illegible]

WORCESTERSHIRE COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER (Male)

The attention of candidates is drawn to the above appointment, particulars of which were published in the issue of April 23rd, p. 778.

CITY OF PLYMOUTH

RESIDENT MEDICAL OFFICER

Applications are invited from duly qualified medical practitioners for the post of Resident Medical Officer at the City Hospital, Plymouth—a General Hospital of 400 beds.

The person appointed will work under the direction of the Medical Superintendent and will be an assistant to the Public Health Department. Candidates should have had previous experience as House Surgeon or House Physician.

The salary will be at the rate of £3 0 per annum, subject to the usual deduction of superannuation. The appointment is limited to one year, at the end of which time it will terminate, but may be renewed for a further year. Applications, stating age, experience, and qualifications, together with copies of three recent testimonials, should be sent to the Medical Superintendent.

Further particulars may be obtained from the undersigned.

Canvassing, directly or indirectly, will be a disqualification.

Applications, endorsed "Resident Medical Officer," should be delivered to the undersigned not later than Monday, May 16th, 1932.

JOHN SANKEY, M.D., M.R.C.P.H.

Town Hall, Plymouth. Medical Officer of Health.

April 29th, 1932.

CITY OF THE SOKEN

SENIOR ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above appointments, which will be subject to the Local Government (Superannuation) Acts, 1922 to 1929, and to the Regulations of the Council.

The salary for the former appointment will be £600 per annum, rising by annual increments of £25 to £700 per annum, and for the latter appointment £450 per annum, rising by annual increments of £25 to £500 per annum.

Applicants should be registered medical practitioners, and should have had experience in Public Health work.

Forms of application may be obtained from the undersigned, to whom they should be returned not later than May 14th, 1932.

CHARLES BUTLER, Clerk of the Peace.

County Hall, Spalding.

May 1st, 1932.

PUBLIC HEALTH AND EDUCATION

COUNTY OF THE HOLY TRINITY

Applications are invited for the appointment of Assistant Medical Officer of Health and School Medical Officer for the Holy Trinity Area of the County of Hertford.

The salary will be £450 per annum, rising by annual increments of £25 to £500 per annum.

Applicants must be registered medical practitioners, and should have had experience in Public Health work.

Forms of application may be obtained from the undersigned, to whom they should be returned not later than May 14th, 1932.

CHARLES BUTLER, Clerk of the Peace.

County Hall, Hertford.

May 1st, 1932.

CITY AND COUNTY OF THE CITY OF CHESTER

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly registered practitioners of not more than 40 years of age, possessing qualifications in Medicine, Surgery and Midwifery, experience and training in Public Health for the appointment of Medical Officer of Health and School Medical Officer.

The inclusive salary in respect of the combined appointments will be £800 per annum, rising by annual increments of £50 to a maximum of £1,000 per annum, together with a car allowance of £100 per annum.

Further particulars of the duties, terms and conditions of the appointment and form of application can be obtained on application to the undersigned.

Applications, which must be made on the form provided, are to be endorsed "Medical Officer of Health," and delivered to the undersigned not later than May 30th.

Canvassing, directly or indirectly, will be a disqualification.

Town Hall, Chester. J. H. DICKSON, Town Clerk.

May 2nd, 1932.

OLDHAM ROYAL INFIRMARY

Applications are invited for the following HOUSE SURGEON

Salary at the rate of £175 per annum with board, residence, and laundry.

The appointment will be for a period of six months.

Application, stating age, experience and qualifications, together with copies of three recent testimonials, must be forwarded to the undersigned not later than Saturday, May 14th.

H. D. CLOUT, General Supt.

THE GLASGOW ROYAL MENTAL HOSPITAL

The Directors propose on or after May 20th to consider the appointment of a PHYSICIAN SUPERINTENDENT. Information regarding the appointment may be obtained on application to the Secretary, J. JOHNSTON, C.A., 190 West George St., Glasgow.

WANTED — HOUSE SURGEON (MALE) immediately. County Hospital, Huntingdon. Salary at £125 per annum and usual allowances. Apply Senior Medical Officer.

WEST RIDING MENTAL HOSPITAL

STORTHES HALL, KIRKBURTON, near HUDDERSFIELD

Applications are invited for the position of ASSISTANT MEDICAL OFFICER, male and unmarried. Candidates must be fully qualified and registered. Salary £350 rising by annual increments of £25 to £450 per annum with board, apartments, laundry, and attendance valued for superannuation purposes at £120 per annum.

Candidates who possess or obtain the Diploma in Psychological Medicine will receive an additional £50 per annum.

The appointment is subject to the provisions of the Asylums Officers Superannuation Act, 1909, and the salary is subject to a present temporary deduction of £17 5s. per annum.

Laboratory facilities exist for clinical and research work, and preference will be given to candidates who are desirous of specializing in Psychological Medicine.

Application, giving full particulars and enclosing copies of three recent testimonials to be sent immediately to the Medical Superintendent.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL

Broad Street, Holborn, W.C.2

The Committee of Management is prepared to receive applications for the appointment of a REFRACTION OFFICER to commence as soon as possible, for duty on Mondays and Thursdays.

The appointment is tenable until July 31st next, and if the candidate is considered suitable he will be reappointed for a further period of six months from August 1st, 1932. Salary is at the rate of £100 per annum.

Intending candidates must be duly qualified Medical Practitioners and have had experience in refraction work, and are requested to call upon the Staff of the Hospital, a list of whose names and addresses can be obtained from the General Office.

Applications, with copies of testimonials, are to be sent at once to the Secretary, from whom further particulars can be obtained.

CUMBERLAND INFIRMARY, CARLISLE.

(160 Beds.)

Resident Medical Staff—Four.

Required at once, a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON. Previous experience desirable, but not essential. Appointment to September 30th. Salary at the rate of £100 per annum, board, residence, etc.

Applications, stating age, nationality, qualifications, with copies of not more than four testimonials, should be sent immediately to the undersigned.

J. C. HOWITT, Secretary.

ROYAL BERKSHIRE HOSPITAL, READING.

REQUIRES

a RESIDENT MEDICAL OFFICER to take charge of the Recovery Hospital (60 beds), and to act also as Pathological House Assistant at the Royal Berkshire Hospital.

The candidate must be fully qualified and registered.

Remuneration at the rate of £150 per annum, with board, residence, and laundry.

Applications, with copies of testimonials to be sent to the undersigned on or before May 17th.

F. A. LYON, Secretary.

ROYAL BERKSHIRE HOSPITAL, READING.

REQUIRES

A HOUSE SURGEON as from June 1st. The Candidates must be fully qualified and registered. Remuneration at the rate of £150 per annum, with board, residence, and laundry.

Application, with copies of testimonials to be sent to the undersigned on or before May 20th.

F. A. LYON, Secretary.

LEICESTER ROYAL INFIRMARY

(472 Beds.)

There is a vacancy for a SURGICAL DRESSER (Final Year Student preferred).

Honorarium 10s. 6d. per week, for approved service, board, etc., provided. Three months' appointment, or as otherwise arranged.

Applications, forthwith, to the House Governor and Secretary of the Hospital.

May 3rd, 1932.

ROYAL CORNWALL INFIRMARY, TRURO

(84 Beds.)

HOUSE SURGEON (male) required, with experience of Anæsthetics. Salary £170 per annum, board and washing. Apply, with copies of three recent testimonials, to the Secretary, of whom further particulars may be obtained.

WORCESTERSHIRE COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER (Male)

The attention of candidates is drawn to the above appointment, particulars of which were published in the issue of April 23rd, p. 778.

CITY OF PLYMOUTH

RESIDENT MEDICAL OFFICER

Applications are invited from duly qualified medical practitioners for the post of Resident Medical Officer at the City Hospital, Plymouth—a General Hospital of 400 beds.

The person appointed will work under the direction of the Medical Superintendent and will be an assistant to the Public Health Department. Candidates should have had previous experience as House Surgeon or House Physician.

The salary will be at the rate of £300 per annum, subject to the usual deduction of superannuation. The appointment is limited to one year, at the end of which time it will terminate, but may be renewed for a further year. Applications, stating age, experience, and qualifications, together with copies of three recent testimonials, should be sent to the Medical Superintendent.

Further particulars may be obtained from the undersigned, to whom they should be returned not later than May 7th.

JOHN SANKEY, M.D., M.R.C.P.H.

Town Hall, Plymouth. Medical Officer of Health.

April 29th, 1932.

PUBLIC HEALTH AND EDUCATION

COUNTY OF THE HOLY TRINITY

Applications are invited for the appointment of Assistant Medical Officer of Health and School Medical Officer for the Holy Trinity Area of the County of Hertford.

The salary will be £450 per annum, rising by annual increments of £25 to £500 per annum.

Applicants must be registered medical practitioners, and should have had experience in Public Health work.

Forms of application may be obtained from the undersigned, to whom they should be returned not later than May 14th, 1932.

CHARLES BUTLER, Clerk of the Peace.

County Hall, Hertford.

May 1st, 1932.

CITY AND COUNTY OF THE CITY OF CHESTER

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly registered practitioners of not more than 40 years of age, possessing qualifications in Medicine, Surgery and Midwifery, experience and training in Public Health for the appointment of Medical Officer of Health and School Medical Officer.

The inclusive salary in respect of the combined appointments will be £800 per annum, rising by annual increments of £50 to a maximum of £1,000 per annum, together with a car allowance of £100 per annum.

Further particulars of the duties, terms and conditions of the appointment and form of application can be obtained on application to the undersigned.

Applications, which must be made on the form provided, are to be endorsed "Medical Officer of Health," and delivered to the undersigned not later than May 30th.

Canvassing, directly or indirectly, will be a disqualification.

Town Hall, Chester. J. H. DICKSON, Town Clerk.

May 2nd, 1932.

OLDHAM ROYAL INFIRMARY

Applications are invited for the following HOUSE SURGEON

Salary at the rate of £175 per annum, with board, residence, and laundry.

The appointment will be for a period of six months.

Application, stating age, experience and qualifications, together with copies of three recent testimonials, must be forwarded to the undersigned not later than Saturday, May 14th.

H. D. CLOUT, General Supt.

THE GLASGOW ROYAL MENTAL HOSPITAL

The Directors propose on or after May 20th to consider the appointment of a PHYSICIAN SUPERINTENDENT. Information regarding the appointment may be obtained on application to the Secretary, J. JOHNSTON, C.A., 190 West George St., Glasgow.

WANTED — HOUSE SURGEON (MALE) immediately, County Hospital, Huntingdon. Salary at £125 per annum and usual allowances. Apply Senior Medical Officer.

WEST RIDING MENTAL HOSPITAL

STORTHES HALL, KIRKBURTON, near HUDDERSFIELD

Applications are invited for the position of ASSISTANT MEDICAL OFFICER, male and unmarried. Candidates must be fully qualified and registered. Salary £350 rising by annual increments of £25 to £450 per annum with board, apartments, laundry, and attendance valued for superannuation purposes at £120 per annum.

Candidates who possess or obtain the Diploma in Psychological Medicine will receive an additional £50 per annum.

The appointment is subject to the provisions of the Asylums Officers Superannuation Act, 1909, and the salary is subject to a present temporary deduction of £17 5s. per annum.

Laboratory facilities exist for clinical and research work, and preference will be given to candidates who are desirous of specializing in Psychological Medicine.

Application, giving full particulars and enclosing copies of three recent testimonials to be sent immediately to the Medical Superintendent.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL

Broad Street, Holborn, W.C.2

The Committee of Management is prepared to receive applications for the appointment of a REFRACTION OFFICER to commence as soon as possible, for duty on Mondays and Thursdays.

The appointment is tenable until July 31st next, and if the candidate is considered suitable he will be reappointed for a further period of six months from August 1st, 1932. Salary is at the rate of £100 per annum.

Intending candidates must be duly qualified Medical Practitioners and have had experience in refraction work, and are requested to call upon the Staff of the Hospital, a list of whose names and addresses can be obtained from the General Office.

Applications, with copies of testimonials, are to be sent at once to the Secretary, from whom further particulars can be obtained.

CUMBERLAND INFIRMARY, CARLISLE.

(160 Beds.)

Resident Medical Staff—Four.

Required at once, a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON. Previous experience desirable, but not essential. Appointment to September 30th. Salary at the rate of £100 per annum, board, residence, etc.

Applications, stating age, nationality, qualifications, with copies of not more than four testimonials, should be sent immediately to the undersigned.

J. C. HOWITT, Secretary.

ROYAL BERKSHIRE HOSPITAL, READING.

REQUIRES

a RESIDENT MEDICAL OFFICER to take charge of the Recovery Hospital (60 beds), and to act also as Pathological House Assistant at the Royal Berkshire Hospital.

The candidate must be fully qualified and registered.

Remuneration at the rate of £150 per annum, with board, residence, and laundry.

Applications, with copies of testimonials to be sent to the undersigned on or before May 17th.

F. A. LYON, Secretary.

ROYAL BERKSHIRE HOSPITAL, READING.

REQUIRES

A HOUSE SURGEON as from June 1st. The Candidates must be fully qualified and registered. Remuneration at the rate of £150 per annum, with board, residence, and laundry.

Application, with copies of testimonials to be sent to the undersigned on or before May 20th.

F. A. LYON, Secretary.

LEICESTER ROYAL INFIRMARY

(472 Beds.)

There is a vacancy for a SURGICAL DRESSER (Final Year Student preferred).

Honorarium 10s. 6d. per week, for approved service, board, etc., provided. Three months' appointment, or as otherwise arranged.

Applications, forthwith, to the House Governor and Secretary of the Hospital.

May 3rd, 1932.

ROYAL CORNWALL INFIRMARY, TRURO

(84 Beds.)

HOUSE SURGEON (male) required, with experience of Anæsthetics. Salary £170 per annum, board and washing. Apply, with copies of three recent testimonials, to the Secretary, of whom further particulars may be obtained.

NEWARK GENERAL HOSPITAL

(50 Beds.)

Wanted a fully qualified RESIDENT HOUSE SURGEON, unmarried. Salary £175 per annum, with board, residence, and laundry. Applications, stating age and qualifications, with copies testimonials, to be sent to W. J. CRAMP, 10 (Secretary), 27, Kirk Gate, Newark, Notts.

CONNAUGHT HOSPITAL

Walthamstow, E.17

(100 Beds, with Three Resident Medical Officers.)

RESIDENT MEDICAL OFFICER (male) required. Salary £100 per annum. Appointment for six months from June 1st, with board, residence, and laundry. Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should be received not later than Monday, May 16th, by the Secretary.

LESLIE S. PETTISON.

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association BMA House Tavistock Square WC1 (in the case of Scottish appointments with the Scottish Medical Secretary — Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** (contd.)	**PUBLIC HEALTH**
EBBW VALE MON (*Workmen's Medical Society*)	MARKHAM MAIN SICK AND ACCIDENT SOCIETY APPTHORPE (*Medical Practitioner*)	ANGLESEY COUNTY COUNCIL (*Senior Assistant Tuberculosis Officer*)
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	MEXBOROUGH AND SWINTON TRADES AND LABOUR COUNCIL (*Medical Practitioner*)	FOLKESTONE BOROUGH (*Assistant Medical Officer of Health*)
LOWESTOFT MEDICAL INSTITUTE (*Medical Officer*)	NEATH AND DISTRICT (*Medical Aid Association*)	PONTEFRACT COUNTY COUNCIL (*Assistant Medical Officer of Health*)
LLWYNYPIA CLYDACH VALE TENYCRAIG GLAMORGAN (*Workmen's Medical Scheme*)	OAKDALE MON (*Medical Officer for Medical Aid Association*)	SOUTHAMPTON COUNTY BOROUGH (*Child Welfare Officer and Health Visitor*)
MARDY GLAMORGAN (*Workmen's Medical Scheme*)	OGMORE VALLEY GLAMORGAN (*Llynvarn Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)	STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS (*Tuberculosis Officer*)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association BMA House Tavistock Square WC1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (*All Friendly Societies Appointments*)	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St. Sydney N.S.W.	QUEENSLAND (*Brisbane Associated Friendly Societies Institute*)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane	WELLINGTON NEW ZEALAND (*Contract Practice Appointments*)	Dr. G. I. JASON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 196 Wellington N. Zealand
VICTORIA (*All Institute or Medical Dispensaries*)	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch) British Medical Association Medical Societies Hall East Melbourne Victoria	(*Toowoomba Associated Friendly Societies Medical Institute Toowoomba*)		WESTERN AUSTRALIA (*Contract and Lodge Practices*)	Hon. Sec. Western Australian Branch British Medical Association No. 6 Barrack Street N.S.W. Chambers Perth Colonies Telegrams Western Australia

By Order of the Council

ALFRED COX, Medical Secretary

May 4th 1932

NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM Queen Square W.C.1

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer and should be sent to the undersigned accompanied by three recent testimonials not later than Monday May 9th. The salary is £200 per annum with board and residence. Applicants should state if they are willing to take a post of House Physician (salary £150).

GODFREY H. HAMILTON, Secretary.

KENT COUNTY MENTAL HOSPITAL Chartham near CANTERBURY

ASSISTANT MEDICAL OFFICERS (2) Single Men Graduates of British Universities with not less than £400 per annum rising by annual increments of £25 to £450 per annum with board residence and washing. Applications should be sent to the Medical Superintendent not later than May 10th.

The appointments will be subject to the Rules and Regulations of the Committee and to the Conditions of Service of the Medical Officers. The Committee will be prepared to consider applications from Medical Officers who have had experience in Mental Hospital work and who are desirous of obtaining an appointment carrying a salary of £500 per annum with an extra £50 per annum while performing the duties of Pathologist to the Hospital. Applications for this appointment should be sent to the Medical Superintendent not later than May 10th.

ASSOCIATED HOSPITAL MANCHESTER

HOUSE PHYSICIAN required for the Hospital. Salary at the rate of £100 per annum. Applications should be sent to the Secretary not later than May 14th.

THE ELIZABETH BEATRICE HOSPITAL Corner of Wardell Road Richmond Road and Tunborough Road Earl's Court S.W.5

This Hospital which has recently been rebuilt is in full working order with an extensive Out Patient Department has vacancies for the HONORARY CLINICAL ASSISTANTS for the following Clinics

Medical—Dr. S. Ward Friday 2 p.m. Two vacancies

Medical—Dr. B. Buckley Sharp Tuesday 2 p.m. Two vacancies

Out Patient—Mr. L. S. Worton F.R.C.S. Monday 1.30 p.m. One vacancy

Ante Natal Department—Mr. H. S. Forshaw F.R.C.S. Monday 9 a.m. One vacancy

Consultant—Mr. H. S. Forshaw F.R.C.S. Thursday 2 p.m. One vacancy

Ear Nose and Throat Dept.—Mr. A. J. Wilson F.R.C.S. Friday 10 a.m. One vacancy

Applications with full particulars and testimonials should be sent to the undersigned not later than May 11th.

Further information can be obtained from the Medical Superintendent.

WILLIAM LOVELL, Secretary.

Princess Beatrice Hospital Richmond Road S.W.5

LIVERPOOL SANATORIUM DELAMERE FOREST FRODSHAM (175 Beds)

ASSISTANT TO THE MEDICAL SUPERINTENDENT

Applications are invited for the appointment of Assistant at the Liverpool Sanatorium at a salary of £250 per annum. The appointment will be for three months in the first instance and will be confirmed and the salary increased to £300 per annum if the services are satisfactory.

Applications should be sent to the undersigned not later than Monday May 16th.

Further particulars may be obtained from the Medical Superintendent at the Sanatorium.

Applications should be sent to the undersigned not later than Monday May 11th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL CHURCH STREET BIRMINGHAM

OUT PATIENT OFFICERS

TWO OUT PATIENT OFFICERS are required at the above Hospital to attend Patients at the Out Patient Department. Salary at the rate of £100 per annum. Medical Practitioners with registrable qualifications will be preferred. Appointments will be for six months with possibility to re-election. Applications should be sent to the undersigned not later than Saturday May 21st.

Further particulars may be obtained from the undersigned.

C. A. JAMES, Secretary.

April 21 1932

LEICESTER ROYAL INFIRMARY (502 Beds)

RESIDENT ASSISTANT ANAESTHETIST

Applications are invited for the appointment of Resident Assistant Anaesthetist at a salary of £200 per annum. Candidates must be Registered Medical Practitioners and must have had experience in Anaesthetics.

Applications should be sent to the undersigned not later than Monday May 16th.

April 29 1932

BUTTERWORTH HOSPITAL

(Appointments continued on p. 58)

ASSISTANCIES

WANTED ASSISTANT WITH HOSPITAL experience £200 to £250 [illegible] Apply with full particulars and copies of testimonials to BMA House Tavistock Square WC1

WANTED IMMEDIATELY INDOOR LADY ASSISTANT [illegible] Apply Miss [illegible] BMA House Tavistock Square WC1

WANTED IMMEDIATELY ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED FOR JUNE ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT ENGLISH OR [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED — SECOND ASSISTANT FOR [illegible] BMA House Tavistock Square WC1

WANTED AN OUTDOOR ASSISTANT [illegible] BMA House Tavistock Square WC1

WANTED OUTDOOR ASSISTANT (LADY) [illegible] BMA House Tavistock Square WC1

ASSISTANT WANTED JUNE 1ST 12 months or longer (male or female of [illegible] BMA House Tavistock Square WC1

ASSISTANT OUTDOOR MALE SINCLE wanted for [illegible] BMA House Tavistock Square WC1

ASSISTANTSHIP WITH YEAR PARTnership in Woman's Practice North London Well qualified woman wanted [illegible] BMA House Tavistock Square WC1

MEDICAL WISHES ASSISTANTSHIP WITH [illegible] BMA House Tavistock Sq WC1

WOMAN DOCTOR SEEKS ASSISTANT [illegible] BMA House Tavistock Square WC1

MEDICAL POSTS DISPENSERS etc

WANTED A QUALIFIED DOCTOR TO CO [illegible] Tavistock Square WC1

A LADY DISPENSER LOOKKEEPER [illegible] BMA House Tavistock Square WC1

DOCTOR'S DAUGHTER 24 HALF QUALI [illegible] BMA House Tavistock Square WC1

DOCTOR REQUIRING QUALIFIED [illegible] BMA House Tavistock Square WC1

LADY DISPENSER BOOKKEEPER YOUNG [illegible] BMA House Tavistock Square WC1

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SUFFOLK—SMALL TOWN—APTNERSHIP £3 300 p a (one third share after short Panel about 1 600 Fees 5/ to 21/ Good detached corner house 6 bed etc and surgery garage etc Rent at £120 p a or will Premium 2 years Purchase Per onus will sell and recommended—No 9015

WEST RIDING — OLD ESTABLISHED PRACTICE in undisturbed town over £1 000 p a Panel 400 Two appointments Fees 3/6 to 10/6 Surgery at 21/ Modern house 2 reception rooms 3 bed rooms 4 other rooms on the third floor let off Premium for Practice and Lease (43 years to run) £2 800 cash of which £950 can be raised on mortgage—No 9014

SOUTH COAST—FASHIONABLE RESORT—Central Practice non-dispensing with select Panel Income over £950 Visits 5/ to 10/6 Good house 2 reception rooms 3 bed rooms 4 other rooms on the third floor let off Premium for Practice and Lease (43 years to run) £2 800 cash of which £950 can be raised on mortgage—No 9014

LONDON E — £950 P A INCREASING Total only 18 month ample scope Panel 320 at fee of Visit from 3/ House corner 2 reception 3 bed waiting room et Garage Rent £110 p a Could sublet about £50 Premium £950 or offer—No 9013

EAST END—CASH PRACTICE INCOME £850 Panel 5-7 Premium £1 900 House leasehold £60 p a 10 years to run Waiting fees 5 and 10 Surg 3 6 with fired some 5/ Old established Present hands 5 years—No 9004

SURREY HILLS — OLD ESTABLISHED Country PRACTICE unopposed £650 p a Fees 3 6 to 10/6 Panel 400 Premium 14 years Purchase Good house 6 reception rooms Good garden about 1 acre with tennis court £1 600 or rent £80—No 8992

MIDLANDS—£3 000 A YEAR OLD ESTAB Same hands over 30 year Partner 5 years One third share for sale now more later at 2 years purchase House available to rent Station close Fees 7/ to 21/ Extensive district very little opposition Panel 1 600 Personally known and recommended—No 9005

LONDON NORTH — £1 000 P A MIDDLE and working class panel 650 Visits 3/6—5 6 up Premium one years purchase Good house main road Leasehold £1 750 48 yrs to run—No 9005

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LONDON E C—Mixed Cash and Panel PRACTICE Suitable house available facing main thoroughfare held on lease at £95 p a Receipts nearly £700 Panel 450 (1 cope) Fee 1/6 to 10/6 Midwifery not undertaken Premium £1 000

HOME COUNTIES—Old-established Country PRACTICE Excellent freehold house Receipts over £1 200 Panel nearly 900 Premium 1½ years purchase

LONDON S W—West End PRACTICE non-panel non-dispensing Attractive house on lease Receipts £1 400 Fee 1 gn upward Premium £2 600 to include lease carpets fixtures fittings etc

LONDON W 1—Better-class G P Select panel Suitable house available at low rental Receipts approx nearly £720 Panel 400 increasing Fees 5/- to 1 gn Midwifery not undertaken Premium £1 200 cash

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LONDON N E — Mixed suburban G P — Medium-sized corner house Receipts nearly £800 Panel approx 1 000 increasing scope Premium £1 340 for Practice leasehold house £900 or near offer

YORKSHIRE—Town PRACTICE in industrial locality Medium-sized house (5 b e) Receipt approx £700 Panel 520 Fees 2/6 up wards Premium for Practice and freehold house £2 000 cash

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2 MIDLAND CITY — Old established general and venereal PRACTICE Receipts last year £2 740 Panel 500 recently established increasing Exchange to rent Prem £3 250
3 SOMERSET — Country NUCLEUS near Western City growing good class district Receipts £280 p a Small panel Low prem for quick sale Choice of house
4 COUNTRY PRACTICE — Old-established in pleasant country Last year £1 750 accts sig Panel 946 Appts £120 In present hands 23 years Good house garage large yard House & Practice £5 000 Borders of Monmouthshire
5 LONDON E—Cash and Panel PRACTICE Earning £550 p a Panel 320 Plenty of scope Good house on lease Prem £500
6 DEVON—Near Sea—PARTNERSHIP Half share of £1 200 p a increasing Panel 600 Good house with large garden for sale Premium £1 200
7 LONDON E.—BRANCH SUPERVISORY—Average taking last 3 years £765 Panel 350 House to rent Great scope for man living on premises Price £1 000
8 PRICE in rapidly £569 p a Accts 1½ years Purchase
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2 7 MINS OF PICKLEWOOD N W — Half share of well established cash and panel Practice Receipts last year £1 650 including panel of 1 400 increasing daily Premium £1 700 some might remain over
3 NEAR SHEPHERDS BUSH W — Well established cash and panel Practice Receipts average £1 650 p a panel 650 Flat available Premium £1 850 part might remain at interest
4 LANCS — Large Town — Old established mixed class PRACTICE Receipts average over £2 000 a year panel 1 200 Nice house rent £60 Prem £3 000 including book debt worth £1 200 and drug £100
5 LONDON E. (Suburb) — Well established PRACTICE with excellent scope Densely populated district Receipts estimated at £850 p a panel 320 Nice house on lease Premium £550
6 LONDON N (10 min Finsbury Park)—Well-established Cash and Panel PRACTICE. Rec £1 000 a year panel 650 Nice house Lease Prem for quick sale £1 000
7 NEAR HOLLOWAY N — Old established PRACTICE for disposal at about Receipts average £650 per annum panel over 300 House on long lease Premium only £900 Good scope for increase
8 SCOTLAND — DEATH VACANCY — Well established PRACTICE Receipts average nearly £800 p a panel 666 Nice house and garden price £800 Premium for Practice £1 000
9 LONDON N (near St Pancras) — Well established cash and panel PRACTICE Receipts last year £1 050 panel 550 Rent of surgery £1 weekly in hand Premium £550 including linen and furniture

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Candidates must be registered Medical Practitioners and have held a resident Hospital appointment.

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The appointment is made for six months and is non-resident.

Salary at the rate of £150 per annum with lunch.

All candidates must be in attendance to appear before the Joint Committee, if required, at their meeting on Wednesday, June 1st, at 5 p.m. precisely.

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The appointments are made for six months. Salaries at the rate of £100 per annum, washing allowance £5, and residence in the Hospital.

Candidates must be unmarried and possess a legal qualification to practise.

All candidates must be in attendance to appear before the Joint Committee, if required, at their Meeting on Wednesday, June 1st, at 5 p.m. precisely.

Forms of application and copies of the rules may be obtained from the Secretary.

By Order of the Board of Management,
JAMES McKAY,
May, 1932. Secretary.

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Applications are invited for the post of RESIDENT HOUSE SURGEON at this Hospital. Salary at the rate of £150 per annum with board, rooms and laundry. Duties to commence July 1st next.

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JESSE J. HERSTAND,
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WEST RIDING.—OLD ESTABLISHED PRACTICE in industrial town over £1,000 p.a. Panel 400. Two appointments. Fees 5/6 to 10/6, some at 21/-. Modern house, 3 bed rooms, 2 reception rooms with lounge surgery. Sell or let. Premium £1,500, £1,000 down, balance by instalment.—No. 8797.

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LONDON, E.—£550 P.A. INCREASING. Retail only. 18 months' ample scope. Panel 320 at present. Visits from 3/-. House, corner, 2 reception, 3 bed, waiting room, etc. Garage. Rent £110 p.a. Could sublet about £50. Premium £350 or offer.—No. 9013.

EAST END.—CASH PRACTICE. INCOME £850. Panel 574. Premium £1,200. House leasehold £60 p.a. 10 years to run. Visiting fees 5/- and 10/-. Surg. 3/6 with med. some 5/-. Old established. Present hands 5 years.—No. 9004.

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LONDON, NORTH.—£1,000 P.A. MIDDLE and working class panel 650. Visits 3/6—5/6 up. Premium one year's purchase. Good house, main road. Leasehold £1,750, 48 yrs. to run.—No. 9005.

NORTHERN TOWN.—VERY OLD ESTAB.—One-fifth share of over £5,000 p.a. Panel of 4,000. Fees 5/- upwards. Choice of houses. Scope for Midwifery, Anæsthetics, Eye and E.N.T. work.—No. 9002.

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YORKSHIRE — Near Coast — Agricultural locality — Attractive house separate entrance for surgery for sale freehold Receipts average approximately £800 p a Panel 620 Fees 3/6 upward Premium 1½ years purchase for Practice house £900

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SUFFOLK —*Old established Country* PRACTICE situated in charming locality Good sized house with ground to rent on lease Sport of all kind Receipts average over £1 500 Panel 1 000 Appt worth £250 to £260 p a Premium 1½ years purchase

LONDON S W (Near West End) —Mixed better class PRACTICE Main thoroughfare Suitable house to rent at exceptionally low rental Receipts approx £1 000 p a all cash Panel 730 increasing Fees 3/6 to 1 gn Premium to include Practice lease drugs furniture etc £3 500 or near offer

LONDON E C —Mixed Cash and Panel PRACTICE Suitable house available *facing main thoroughfare held on lease at £95 p a* Receipts over £700 Panel 450 (cope) Fees 1/6 to 10/6 Midwifery not undertaken Premium £1 000

HOME COUNTIES —Old established Country PRACTICE Excellent freehold house Receipts over £1 200 Panel nearly 900 Premium 1½ years purchase

LONDON S W —West End PRACTICE non panel non dispensing Attractive house on lease Receipt £1 400 Fees 1 gn upward Premium £2 600 to include lease carpets fixtures fittings etc

LONDON W 1 —Better class G P Select panel Suitable house available at low rental Receipts approx nearly £720 Panel 400 increasing Fee 5/ to 1 gn Midwifery not undertaken Premium £1 200 cash

WEST END Harley Street locality —NUCLEUS good class non-dispensing Practice Excellent leasehold house Receipt £500 p a approx Prospects of good transfer appointment (in addition) Premium for house and Practice £5 000 or near offer Good mortgage obtainable

LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment Premium 2 years purchase or near offer

LONDON N E — Mixed suburban G P — Medium sized corner house Receipts nearly £800 Panel approx 1 000 *increasing scope Premium £1 340 for* Practice lease hold house £900 or near offer

YORKSHIRE —Town PRACTICE in industrial locality Medium sized house (5 beds) Receipts approx £700 Panel 520 Fees 3/6 upwards Premium for Practice and freehold house £2 000 cash

SOUTH LINCOLNSHIRE —In busy rapidly increasing Town Practice Receipts £2 500 Panel 1 500 Suitable house available 1/3 share with view to succession 2 years purchase

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2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipt £874 Good house for sale Garage etc

3 SOUTH OF ENGLAND —Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

4 MIDLANDS —Panel and Private PRACTICE *Receipts considerably over £700* Panel over 600 and both increasing rapidly Appointments worth about £70 House to rent Garage etc

5 SOUTH WALES —Contract and middle class PRACTICE Receipts average £1 100 Panel about 1 000 *Good house to rent.* Lawn garage etc

6 LANCS —Old estab and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent

7 BERKS —(Country Town) —PARTNERSHIP (2/5ths share) with short prelim Assistantship and ultimate succession Receipts over £1 200 Panel 550 and good scope Appts worth about £250 Good fees and house

8 LANCS (LARGE TOWN) — Non dispensing non panel large Surgical Practice Receipts aver £1 179 p a and unlimited scope Good house etc

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1 CORNWALL —PRACTICE in small country town near sea Averages £1 300 p a Panel about 637 Plenty of scope especially for a Surgeon Prem £2 000 Good house for sale

2 MIDLAND CITY — Old established general and venereal PRACTICE Receipts last year £2 740 Panel 500 recently established increasing Excellent house to rent Prem £3 250

3 SOMERSET — Country NUCLEUS near Western City growing good class district Receipts £280 p a Small panel Low prem for quick sale *Choice of house*

4 COUNTRY PRACTICE — Old established in pleasant country Last year £1 750 net Appts 23 years Good house garage large yard House & Practice £5 000 Borders of Monmouthshire

5 LONDON E —Cash and Panel PRACTICE Earning £550 p a Panel 320 Plenty of scope Good house on lease Prem £500

6 DEVON —Near Sea —PARTNERSHIP Half share of £1 200 p a increasing Panel 600 Good house with large garden for sale Premium £1 200

7 LONDON E —BRANCH SURGERY —Average takings last 3 year £765 Panel 375 House to rent Great scope for man having on premises Price £1 000

8 STAFFORDSHIRE —PRACTICE in rapidly growing district returning £569 p a Nett Profits Panel 414 From 1½ years purchase Good house for sale £1 000 or rent £72 p a

9 LANCASHIRE — Good-class PRACTICE in pleasant seaside resort Panel 250 Receipt £870 p a Price £1 000 Good house

10 WESTERN CITY —Club and panel of 451 £220 p a Premium £300 Good house

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1 LONDON (10 mins Regent Park) —DEATH VACANCY —Old established mixed class Practice Receipts *stated £900* 600 on panel Very nice house garden long lease low rental of £50 p a Premium £1 500

2 7 MINS OF CRICKLEWOOD N W — Half share of well established cash and panel Practice Receipts last year £1 600 including panel of 1 400 increasing daily Premium £1 700 *some might remain over*

3 NEAR SHEPHERDS BUSH W — Well established cash and panel Practice Receipt average £1 650 p a panel 600 Flat available Premium £1 800 part might remain at interest

4 LANCS — Large Town — Old established mixed class PRACTICE Receipt average over £2 000 a year panel 1 200 Nice house rent £60 Prem £3 000 including book debt worth £1 200 and drugs £100

5 LONDON E (Suburb) — Well established PRACTICE with excellent cope Densely populated district Receipts estimated at £800 p a panel 320 Nice house on lease Premium £650

6 LONDON N (10 mins Finsbury Park) — Well established Cash and Panel PRACTICE Rec £1 000 a yr panel 600 Nice house on lease Prem for quick sale £1 000

7 NEAR HOLLOWAY N — Old established PRACTICE for immediate sale Receipts average £650 per annum Panel over 500 House on long lease Premium only £600 Good scope for increase

8 SCOTLAND — DEATH VACANCY — Well established PRACTICE Receipts average nearly £800 p a panel 666 Nice house *and garden price £800* Premium for Practice £1 000

9 LONDON N (near St Pancras) — Well established cash and panel PRACTICE Receipts last year £406 panel 350 Rent of surgery £1 weekly inclusive Premium £550 including drug and furniture

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1. HOME COUNTIES.—Partnership in good-class ... dispensing Practice in favourite town ... reach of London. No panel. Suitable house could be obtained. Share of about £900 p.a. at first at 2 years' purchase. Applicant must have good Medical degree and be proficient anaesthetist.

2. S.W. OF ENGLAND.—Partnership in rapidly increasing Dispensing Practice of about £2,300 p.a. in first-rate town. No panel. Suitable house to rent. Share with £1,000 p.a. at 2 years' purchase. Applicant must be well qualified and a good Physician. Preliminary visit invited.

3. S. COAST.—Practice averaging £1,160 p.a. in Residential Town and Health Resort. Panel 1,056. Practically no dispensing and not much midwifery. Scope for considerable increase. Premium £2,000.

4. HOME COUNTIES.—Practice carried on by Medical Woman in country district about 15 miles from London. Receipts last year £799. Panel about 100. Detached house (4 bedrooms) with garage and about half an acre of garden. Price £2,000. Scope for increase. Premium £500.

5. KENT.—Partnership in middle and working-class Practice nearly £4,450 p.a. in an industrial town. Panel about 2,400. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. One-fifth share, 2 years' purchase.

6. LONDON, WEST END.—X-ray and Electrotherapeutic Practice. Receipts 1931 nearly £620. Large house (8 bedrooms) to rent on lease. Premium £925.

7. S. WALES.—Partnership in sound Practice in one of the principal towns. Receipts average £4,000 p.a. (about £700 from the panel). One-third share at first at 2 years' purchase.

8. MIDLANDS.—Partnership in sound non-dispensing Practice of over £5,700 p.a. in beautifully situated county town. Panel 2,000. Good well-qualified Physician required, aged 30-35. One-fifth share at 2 years' purchase with early increases. Good Hospital with prospect of appointment on Staff in near future.

9. N.W. OF ENGLAND, Seaside Resort.—Good-class non-dispensing PRACTICE of about £3,000 p.a. No panel. Fees 10/6 to £1 1s. and more. Excellently situated house for sale. Good introduction. Premium £3,000.

10. S. COAST.—Fashionable Health Resort. INCREASING PARTNERSHIP in steadily increasing Practice at ... months' ample scope. Small select panel. Share worth about £800. Visits from 5/. House purchase. Incoming Partner should be Oxford-bred, waiting-room, etc. p.a. Could sublet about ... or offer.—No. 9013.

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... — OLD ESTABLISHED ... unopposed £650 ... Panel 400. Prem. ... house, £4 at about ...

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13. N. OF ENGLAND.—Inland Health Resort. Non-dispensing PRACTICE averaging £1,150 p.a. Small select panel. House (7 bedrooms) with large garden for sale or rent. Premium for Practice 1½ years' purchase.

14. E. DEVON.—Practice averaging nearly £1,300 p.a. in beautifully situated Market Town. Panel 886. House (6 bedrooms, 2 attics) with garage and garden for sale. Scope for increase. Premium 1½ years' purchase.

15. LONDON, S.W.—Practice £580 p.a. in suburban district. Small panel. Considerable scope. House (3 bedrooms) on main road, rent £70 p.a. Premium £750.

16. LONDON, E.—Cash and Panel Practice of nearly £550 p.a. in populous area. Panel 320. Shop-fronted house (3 bedrooms) with garage for sale or rent. Premium for quick sale £500.

17. S. OF ENGLAND.—Practice £1,035 p.a., in flourishing and attractive town within 90 miles of London. Panel over 800. House (6 bed and dressing room) with half an acre of garden, for sale. Scope. Premium 1½ years' purchase.

18. LONDON, W.—Practice £550 p.a. in suburban district. Detached double-fronted house (6 bed and dr. ... rooms) with small garden for sale. Premium 1 years' purchase.

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Practices and Partnerships for Disposal (continued)

19 MIDLANDS — Partnership in Practice averaging £8,300 p.a. in famous and attractive country town. Partner should have experience in general Surgery and of Ear, Nose and Throat work and be trained in a London Hospital. ⅙ one-seventh share at 2 years, purchase and further shares later. Preliminary Assistantship.

20 W. OF ENGLAND —Partnership in old-established Practice of about £1,545 p.a. in first-rate City. Panel 1,348. Choice of houses. Share worth about £700 p.a. at 2 years' purchase.

21 MIDLANDS — Steadily increasing Practice of between £1,100—£1,200 p.a. in thriving town one and a half hours by rail from London. Excellent house (6 bedrooms), garage and garden for sale. Cottage Hospital. Premium 1½ yrs. purchase.

22 LONDON, S.W. — Cash Practice about £1,100 p.a. near Victoria. Panel about 1,250 which could be considerably increased. Valuable corner residence for sale. Premium for Practice £1,000.

23 LONDON, E. —Cash and Panel Practice of £840 p.a. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

24 ESSEX —Partnership in Practice of £5,400 p.a. *in developing country district easy distance of coast.* Panel 3,600. Detached house (6 bedrooms), garage and good garden for sale. Scope for increase. One-fourth share 2 years' purchase.

25 S. COAST —Practice averaging £480 p.a., in rural district on outskirts of popular holiday resort. Panel 400. Rent of Surgery, premises 10/- weekly. Premium £600.

26 EASTERN COUNTIES — Partnership in Practice averaging £4,400 p.a. in market town. Suitable house available. Share of £1,000 p.a. at first, at 2 years' purchase. *Cottage Hospital. Applicant must have surgical experience.*

27 W. OF ENGLAND —Partnership in Practice nearly £2,600 p.a. in country town. Panel about 1,000. Good house (5 bedrooms), garage and garden of about half acre to rent. Good educational facilities. Cottage Hospital. Premium one-third share £1,550.

28 MIDLANDS —Practice averaging £1,710 p.a. in growing town with nice surroundings. Panel 1,100. House available later. Good hospital and scope for surgery. Premium 1½ years' purchase.

29 HOME COUNTIES [illegible] Practice averaging £1,150 p.a. in growing [illegible]. No panel. Detached house (4 bedrooms), convenience and attractive garden to rent. Premium 1½ years' purchase.

30 MIDLANDS —Practice £727 p.a. in clean flourishing manufacturing town. Panel 570. House (3 bedrooms), garage to rent. Premium 1 year's purchase.

31 SHROPSHIRE — Practice £800 p.a. in Market Town. Panel 170. Suitable house to purchase. Premium 1½ years' purchase.

32 WALES — Partnership in Practice over £4,000 p.a. in manufacturing town. Panel 4,700. Suitable house to rent. Premium one-third share at 1½ years' purchase.

33 S. WALES — Mixed Practice in growing district of seaport town. Receipts last year over £800. Panel 760. House (5 bedrooms), garage and garden to rent. Good prospects for coped. Premium £1,200.

34 LANCASHIRE — Practice £2,100 p.a. in industrial district on outskirts of manufacturing town. Panel 1,460. House (5 bedrooms) with garage to rent on lease. Premium 1 year's purchase.

35 N. WALES —Practice in small Watering-place. Receipts 1931 £575. Panel 238. Modern house very easily run with ample accommodation at nominal rent. Very bracing climate. Excellent shooting, hunting. Scope for increase. Premium £450.

36 W. OF ENGLAND —Partnership in Practice *in pleasant country town.* Cash receipts average about £5,200 p.a. (including panel and appointments over £1,500 p.a.). Charming old house (5 bedrooms and attics etc.), garage and beautiful garden. Plenty of sport. Scope for increase. Premium for one-fifth share 2 years' purchase.

37 LONDON, N.W. —Practice in suburban district. Receipts 1931 £700. Panel 300. Corner house (5 bedrooms), garage and garden to rent on lease. Premium £750.

38 SUSSEX — Country Practice between £1,200 and £1,300 p.a. in delightful part. No panel. Large residence (9 bedrooms etc.), garage and garden of four acres to rent on lease. Premium £1,800.

39 N. OF ENGLAND —Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgery, anæsthetics and obstetrics. Share of three-fifteenth at 2 years' purchase.

40 LONDON, N.W. —Non-dispensing Practice in good residential district. Receipts last year nearly £900. No panel. Ten-roomed house with garage and large garden to rent. Premium £1,200.

41 N. MIDLANDS — Partnership in Practice about £3,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years' purchase.

42 S. WALES —Increasing Practice of £900 p.a. in pleasant Market Town. Panel 150. Well situated house (non-basement) with 3 bedrooms for sale. Cottage Hospital. Premium.

43 DURHAM —Practice of over £500 p.a. in residential and colliery district near large towns. Panel 370. Substantially built 9-roomed house for sale. Scope for increase.

44 KENT —Country Practice of over £800 p.a. in beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms), central heating, ground of 2½ acres, orchard etc. for sale. Sport. Premium 1½ year's purchase.

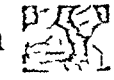
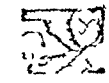
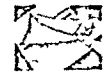
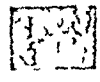
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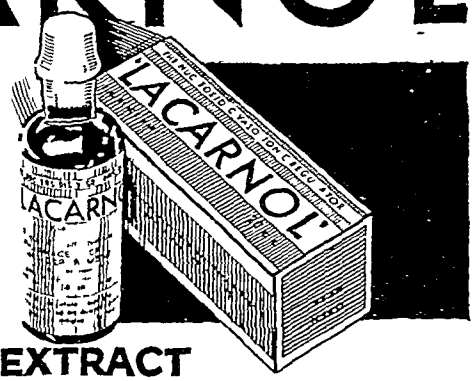
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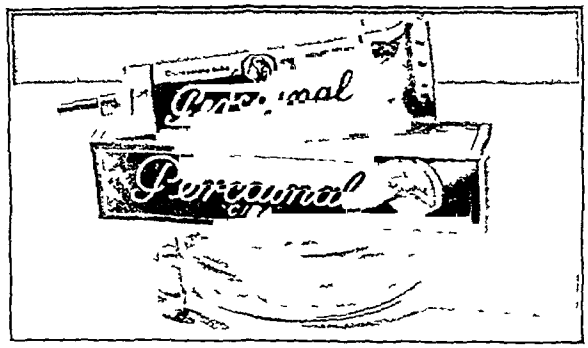
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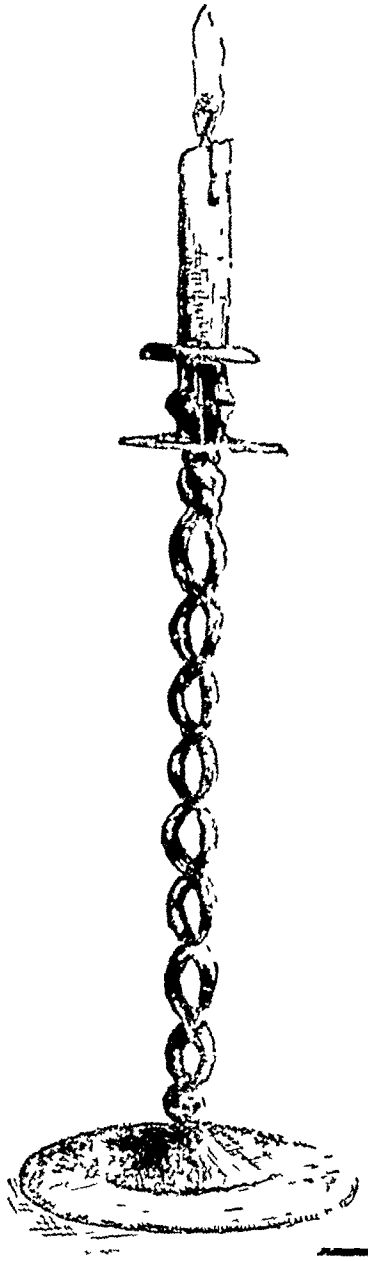
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ORIGINAL ARTICLES

Vasovagal Syncope and the Carotid Sinus Mechanism By Sir Thomas Lewis M D F R C P F R S 873

Effect of Pituitrin in Malignant Disease By E. W Richis F R C S and M Krfmer B Sc M B 877

Septic Foci and Normal Labour By Helen Leyton M D 880

Spinal Anaesthesia in Acute Obstruction By A S Dott Russell M B L S and E R Sworn M B F R C S 882

Observations on the Treatment of Chronic Ulcers of the Leg By M Lumanski M D 885

MEMORANDA

Heredity and Epilepsy By J S Manson M D 887

Death from Rupture of Liver in a Newborn Infant By H A Pirr M P C S and H C Barlow M B 887

REPORTS OF SOCIETIES

British Orthopaedic Association Three Orthopaedic Problems 888

REVIEWS

Muir and Ritchie 889

Stoeckel's Gynaecology 889

Forerunners of *Homo sapiens* 889

Early Learning and Teaching 890

Hobbies of a Surgeon in Retirement 890

Notes on Books 891

OBITUARY

Sir Thomas Legge M D 913

Harry Leigh de Legh M D 914

Richard Joseph Bodkin L R C P S 914

MEDICO LEGAL

Medical Man Awarded Damages for Personal Injury 914

High Court Decision against Osteopath 914

UNIVERSITIES AND COLLEGES

University of Dublin 914

Royal College of Physicians Edinburgh 914

Royal College of Physicians of Ireland 915

THE SERVICES

North West Frontier Operations 915

Deaths in the Services 915

(*See also* p 920)

LEADING ARTICLES

The Collective Inquiry into Breast Cancer 892

The Nomenclature of Diseases 892

THE WEEK

[illegible] 893

[illegible] 894

[illegible] 894

Improvements in the Tuberculosis Service 895

Hughlings Jack on Memorial 895

Malaria in South Africa 895

The Manson Medal 896

Roll of Bio-Physical Assistants 896

GENERAL ARTICLES AND NEWS

The Incidence of Cancer of the Breast, and its History After Treatment. Report on Collective Inquiry by Arthur P Luff M D F R C P 897

"Fallen Idols" Sir James Berry's Oration 904

London Public Health Services First Year of Unified Hospital Control 903

Centenary Meeting Overseas Visitors 914

Preparations and Appliances 891

Medical Notes in Parliament 915

Committee on Medical Branches of the Services 915

Maternity and Infant Welfare 915

Dumping of Refuse 915

Medical News 916

LOCAL NEWS

Australia—

The Royal Australasian College of Surgeons 905

Memorial to Dr R H Todd (With Portrait) 906

Infantile Paralysis in New South Wales 906

Sydney Hospital Finances 906

Scotland—

Prof G M Robertson's Successor 907

Edinburgh Municipal Hospitals 907

Health of Dunfermline 907

Hannah Dairy Research Institute 907

England and Wales—

The L C C and the Spahlinger Treatment 908

[illegible] 908

Hospital 908

Coroners Inquests in London 909

Lord Mountmahon and Yorkshiremen 909

CORRESPONDENCE

L C C Pathological Service By H. P Dean M D F P C P 909

Failure of Intravenous Liver Therapy in Pernicious Anaemia By Stanley David on M D F R C P Ed 910

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LETTERS AND ANSWERS

Plantar Corns 918

Sunburn 918

Income Tax 918

Doctors and District Nurses 918

Orthoptic Treatment 918

Ionization of Nasal Cavity 918

Twitching of Eyelids 919

John Locke's Books and MSS 919

Medical Golf 919

Vacancies and Appointments 919-921

Election of Members of Council 919

Branch and Division Meetings to be Held 920

Naval and Military Appointments 920

Diary of Societies and Lectures 922

Post-graduate Courses and Lectures 922

Association Intelligence and Diary 922

Births Marriages and Deaths 922

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL.

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INDEX TO ADVERTISEMENTS.

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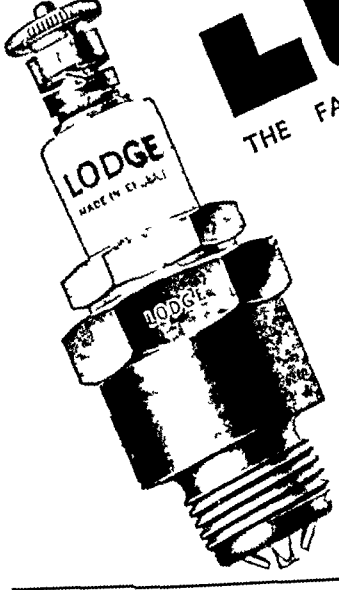
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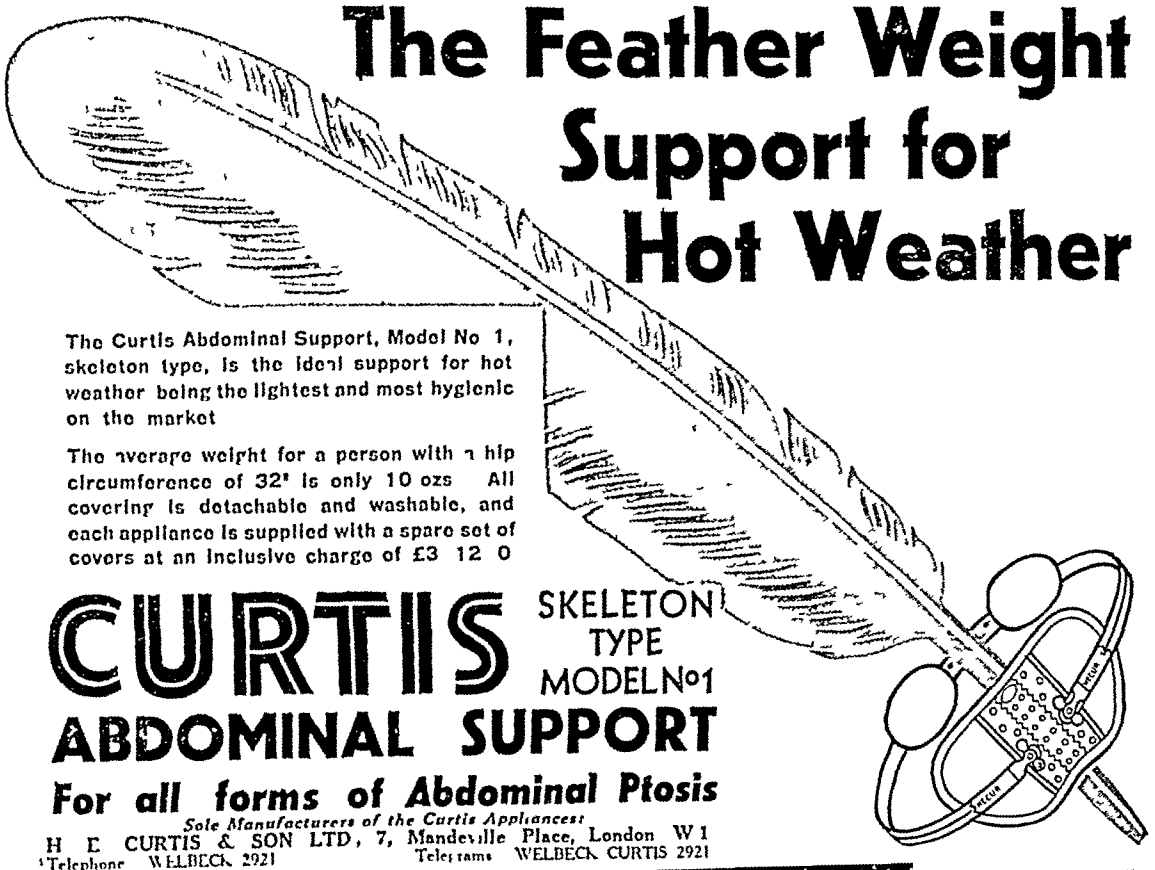
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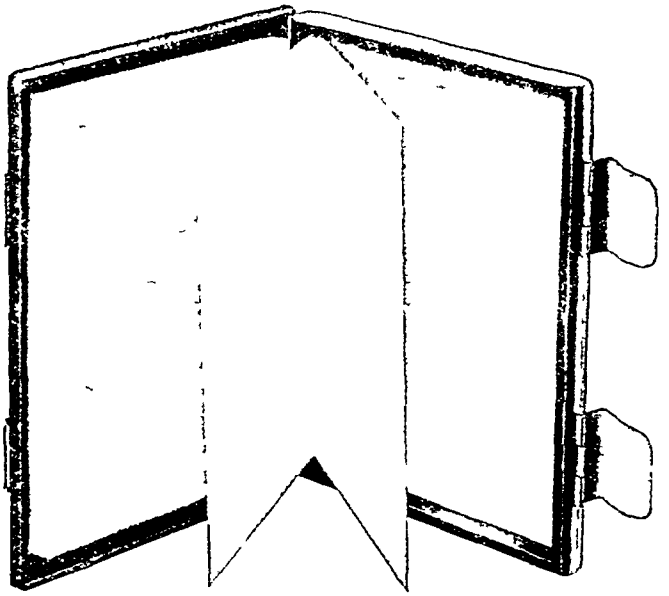
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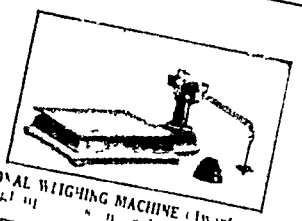


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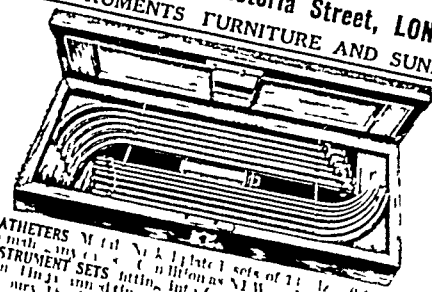
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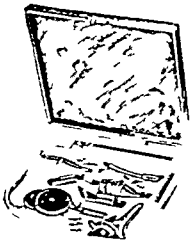
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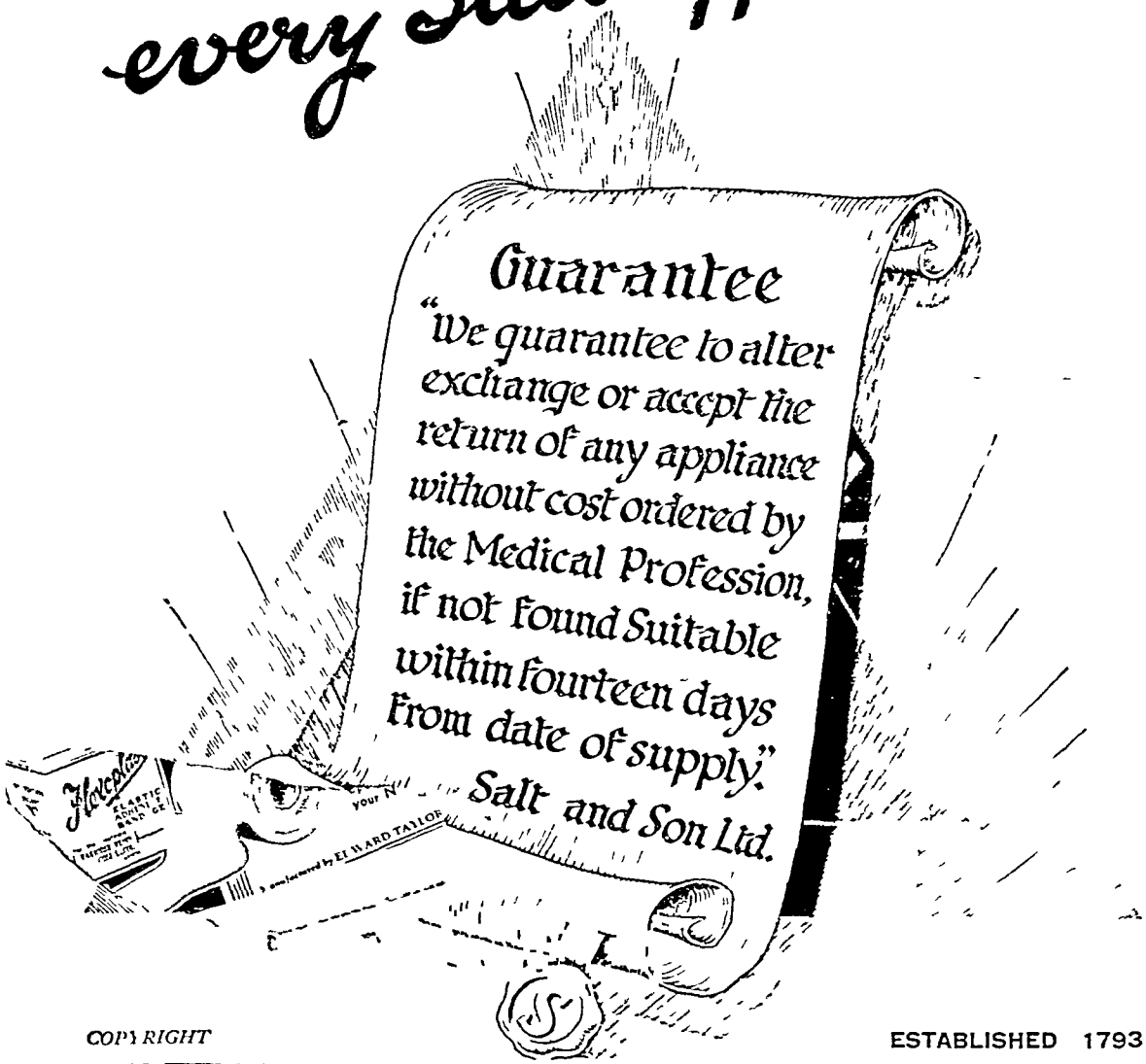
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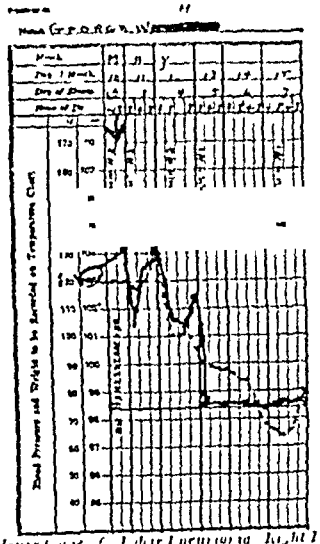
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NO COMPLICATIONS In the case of influenza the prompt resolution of the fever and the absence of relapse or complications are striking

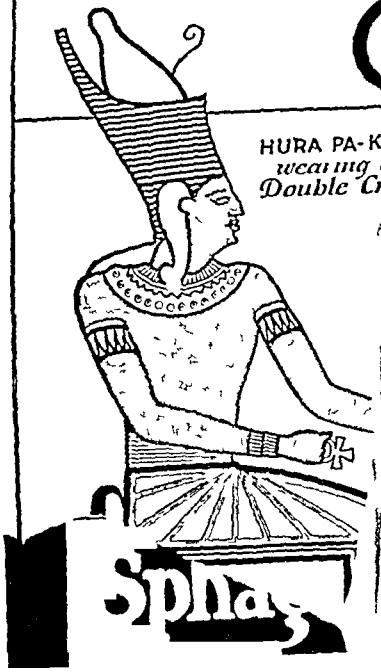
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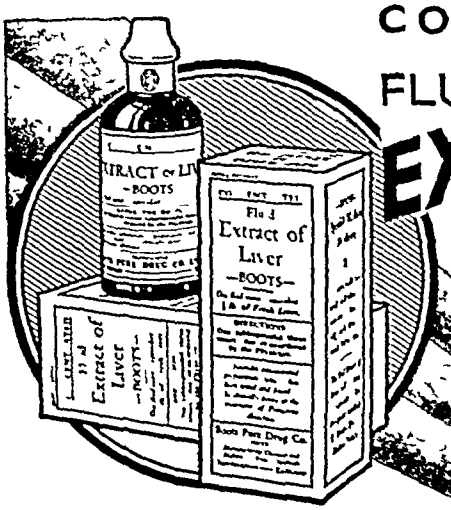
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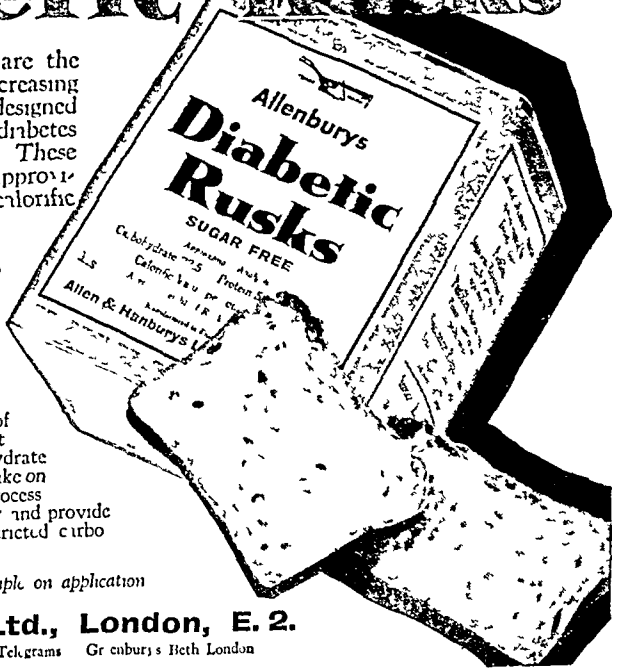
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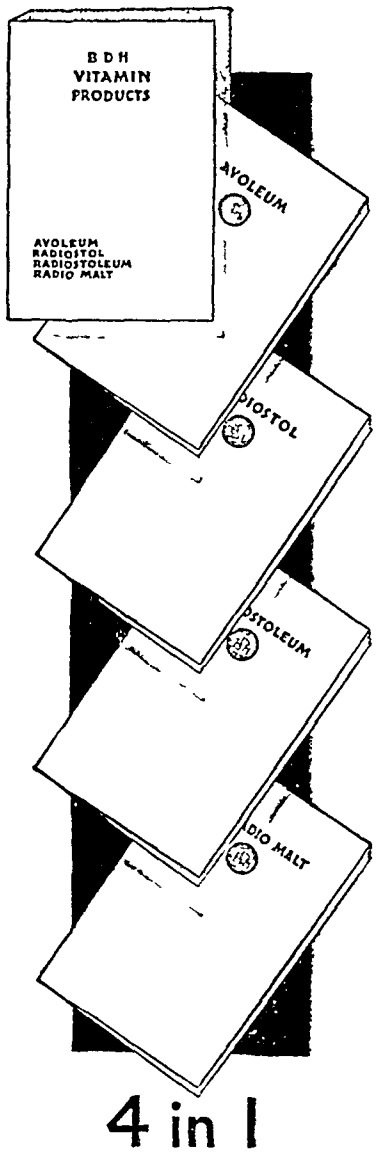
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RADIOSTOLEUM possesses Vitamin D activity equal to that of RADIOSTOL SOLUTION Its source of Vitamin D is pure crystals of RADIOSTOL (Calciferol B D H) It is standardised by chemical physical and physiological methods to a Vitamin A activity equivalent to 60 times that of good cod liver oil RADIOSTOLEUM CAPSULES are equal in Vitamin A activity to 120 times the same volume of good cod liver oil one capsule being equivalent to three quarters of a fluid ounce of good cod liver oil

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Samples for clinical trial on request

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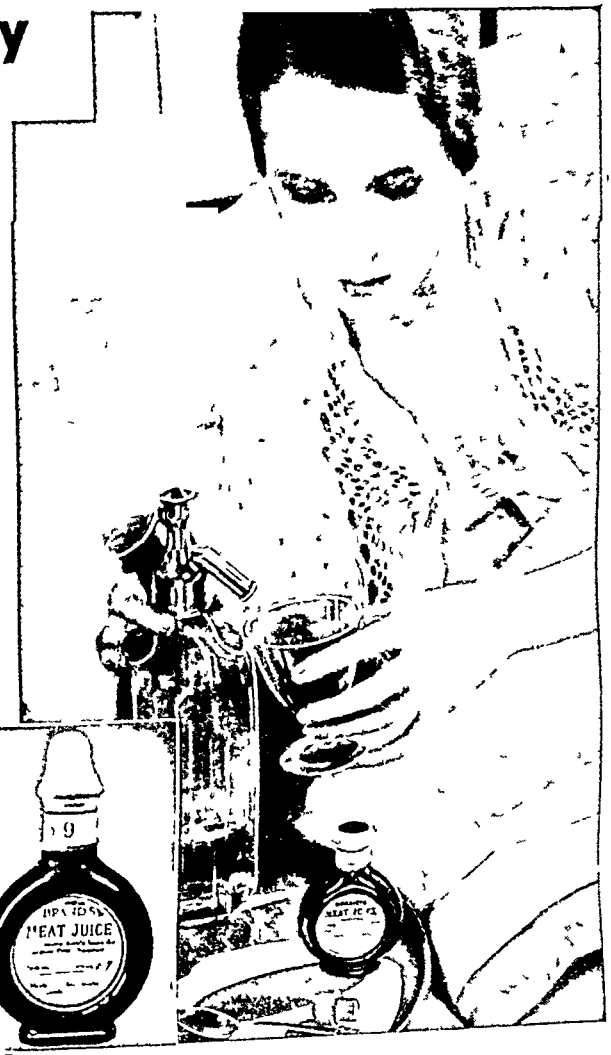
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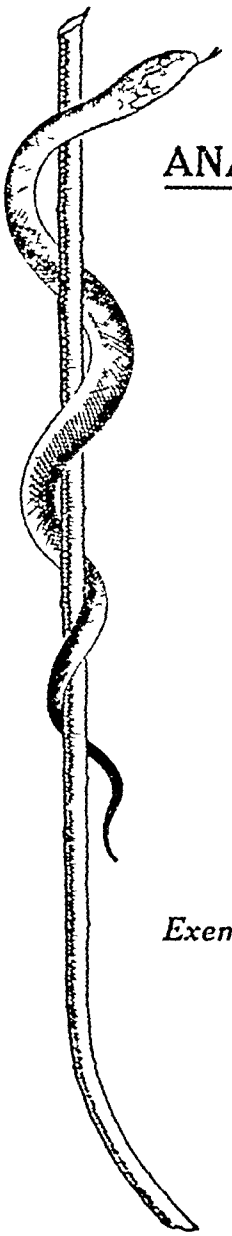
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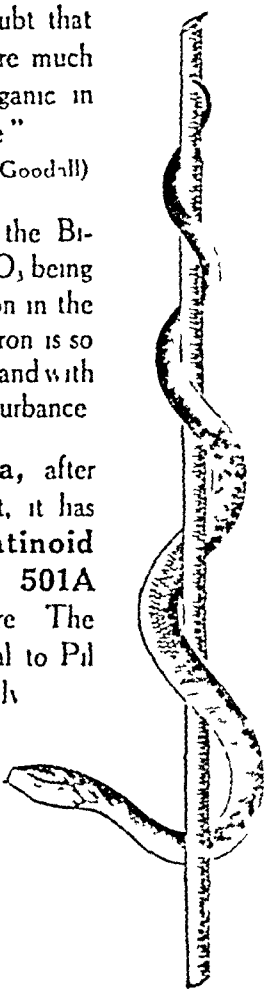
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GROUP FROM FRESCO DEPICTING THE INTERIOR OF A HOSPITAL DURING THE VISIT OF THE MEDICAL STAFF —The group reproduced shows the preparations for an operation the nature of which is not clear The surgeon is washing the feet of the patient while from behind him an assistant presents with his right hand a surgical instrument and holds in his left a pot of ointment Among the many famous hospitals constructed to satisfy the demands created by an awakened study of medicine may be mentioned the Ospedale Maggiore (1456) capable of accommodating 2000 patients the Santa Cruz hospital at Toledo (1504) and Greenwich Hospital founded in 1695



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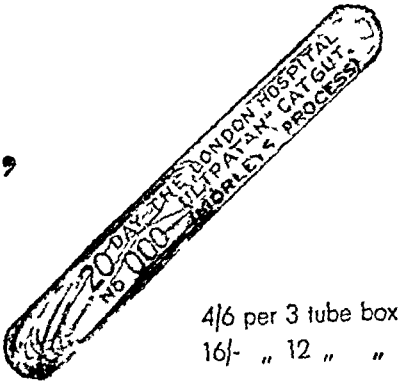
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A Lecture

VASOVAGAL SYNCOPE AND THE CAROTID SINUS MECHANISM

WITH COMMENTS ON GOWERS'S AND NOTHNAGEL'S SYNDROME

BY

SIR THOMAS LEWIS, M.D., F.R.C.P., F.R.S.

(From the Department of Clinical Research, University College Hospital, London)

In the present article a form of fainting is described for which the term vasovagal syncope will be found most appropriate. It forms a common and interesting disturbance of a transient kind. It will be described and discussed in relation to a mechanism that has been under close investigation in recent years. There is another and distinct condition with which terminology tends to confuse it—namely, what I shall call for convenience Gowers's syndrome; there is also a third condition probably comprising a vasomotor disturbance—namely, Nothnagel's syndrome, and thought by some to be identical with Gowers's syndrome. The available evidence relating to these last two maladies will be considered sufficiently to allow us to see what there is in it of significance from the standpoint of the vascular system.

VASOVAGAL SYNCOPE

Thirteen years ago I became interested in what may be called common fainting attacks, or more precisely vasovagal syncope. Such attacks had long been known, but although many essays were written in the eighteenth and nineteenth centuries upon syncope, actually it was not until the analysis of disordered action of the heart-beat was accomplished that a real basis for differentiating between forms of syncope trivial and grave was found. I have previously indicated the belief that that very active phase of clinical work during which cardiac irregularities were sorted out meant far more to medical progress than the mere analysis of disordered action of the heart-beat. It brought with it a sharpened and more real point of view, clear recognition that much of what had stood for knowledge in medicine was hypothesis based on slender foundations, and a more insistent demand that reasoning from ascertained facts should replace speculation. Syncope may be cited as an illustration of this changed outlook. Graphic methods of studying the heart's mechanism soon enabled type of syncope due to disordered action of the heart to be divided off and because these became well defined in the process they were divided off with finality. Other and common or types were for the moment left where they were, but not without its becoming manifest by contrast that their nature was almost unknown. Although the form of syncope of which I shall speak was widely recognized as a thing apart it had received no study. The very simplest facts necessary to its correlation and description, such facts as the change in appearance, could be presented were practically unknown, and [illegible] recent it remained undefined and its essential nature could not be recognized. It [illegible] that if patients were to be studied who were subject to these fainting attacks and their circumstances during them [illegible] objects by Cohnheim and by [illegible] been [illegible]

[illegible]

[illegible]

[

Of syncope occurring as it well known it may in response to pain I speak a little more diffidently but I have strong reason to suspect that syncope during the painful phase of coronary thrombosis during the manipulation of diseased joints in gallstone colic and in renal colic is of the kind discussed but in the case of most of the different observations have not been made as yet positively to identify the form of syncope they should be made and that is chiefly why I am instancing them

Phenomena of the Attack

The description of the attacks may begin with an actual example others will be found in our original report

A soldier aged 21 was invalided from active service From his shoulders until the time when he was seen he had been unable to play strenuous games owing to breathlessness and the early onset of exhaustion He was invalided for the symptoms of became he had fainted while on guard duty when attempting to salute an officer of high rank of whom he became aware abruptly He was an undersized and poorly developed man presenting no clear signs of disease in heart or other organs On December 18th 1916 the patient was sitting and a few cubic centimetres of blood had been withdrawn from a vein in the arm and the needle removed He was watching the operation and began to feel queer as though his stomach had turned upside down he complained of dizziness facial pallor was noticed and he head fell forward to his knees He was placed at once on a long cane chair and further observed He then turn the pallor was intense and he was in the The pulse was imperceptible the heart sounds distant its rate 60 beats being 50 per minute the action was for the most part regular a single premature beat being heard From time to time there were retching movements The pupils were little if at all dilated The patient was limp mentally confused or actually unconscious for several minutes a heavy sweat broke out over his forehead pending over chest and body the pallor remained extreme Respiration was slow and sighing The pulse was imperceptible for several minutes as it returned the systolic blood pressure was registered at 60 mm a little later the pressure fell to 55 then to 50 the pulse rate varied between 50 and 60 One minute after the onset some recovery was observed the pulse rate had risen to 64 and the blood pressure to 80 Nine minutes after the onset the patient was able to respond to questions The pulse rate was 88 and the blood pressure 105 the blood pressure gradually rose to 110 Half an hour later he was able to leave the chair and walk unsupported across the room He was tremulous and tired for thirty six hours subsequently His average blood pressure in ordinary circumstances was 118 and the pulse rate 80 to 90

To generalize the central feature of the attack is the syncope In some cases the loss of consciousness occurs without warning of any kind and may then result in a heavy fall and injury More usually the subject is aware that fainting is imminent and sits or lies down deliberately or slips or falls more slowly and involuntarily to the ground [illegible] warning consists of a feeling of instability [illegible] humming of vision and a feeling of [illegible] over my sense of rotation or of [illegible] before the eyes often a very [illegible] entrating auditory vertigo The [illegible] ever while the subject is lying [illegible] n the history is often crucial in [illegible] l from major attacks of cardiac [illegible] standing or sitting position is [illegible] r and frequent form of giddiness [illegible] to syncope which is due to a [illegible] is characteristic of this giddiness [illegible] d to the act of rising to the erect [illegible] pe here described there may be [illegible] hair feeling in the abdomen some [illegible] CAUSE [illegible] t experienced in falling rapidly in chill or in association with nervousness it is generally accompanied by nausea sometimes by retching sometimes by the feeling that the bowels will be moved shortly

In uncomplicated cases I have not known patients to speak of precordial distress or constriction or of any real alarm The symptoms that have been discussed all belong to the attack, to describe them as premonitory is merely to say that they occur before consciousness is actually lost, the cardiovascular changes leading up to loss of consciousness have already begun From the start there is a progressive lowering of blood pressure and almost always a steep fall of heart rate the pulse usually becoming imperceptible and the heart rate falling to 50 or 40 (unusually to 30 or 20) beats per minute Pallor accompanies this fall of blood pressure increasing in intensity it ultimately becomes extreme in the face but is absent or much less evident in dependent parts such as the hands This pallor is of the type associated with simple drainage of blood from the skin to dilating visceral vessels The cerebral manifestations indicate the degree and duration of cerebral anæmia and from the standpoint of the circulation are to be regarded as incidental When the circulatory changes happen gradually syncope is led up to by feelings of insecurity and dimness of vision objectively by incoordination confusion of speech restlessness yawning and decreasing response to questions and to physical stimuli actual loss of consciousness with flaccidity ' If the changes are sufficiently pro found the [illegible] al reflex vanishes there may be slight clonic [illegible] the face upper limb and trunk The tongue is not bitten nor is the urine passed In the severer attack respirations are slow deep and sighing sweating is almost invariable breaking out on lips and forehead or over the body generally usually free it sometimes drenches the clothing

Recovery is invariable and is generally slower than is the onset in it the patient is limp and inert and the skin is pale and wet The attack is almost always brief lasting usually from two to ten minutes occasionally longer it leaves the patient tremulous weak and sometimes with severe headache these after effects are usually brief but may last for hours A large quantity of watery urine is often passed after the attack

Cause of the Syncope

The slow pulse in the attack is due as has been shown polygraphically to a slowing of the whole heart irregularity a common feature of vagal slowing is often displayed The proof that slowing is vagal is given by atropine which promptly drives the rate to levels usual under atropine

The slowing of the heart to 50 or 40 exceptionally to 30 beats per minute is insufficient to induce unconsciousness such rates are frequently seen in cases of heart block that are without symptoms The idea that because the vagus is responsible for the slowing the force of ventricular contractions will be weakened is open to serious doubt Appreciable weakening of the beats from this cause has not been demonstrated in mammals in the dog the heart rate may be reduced to one half by vagal stimulation without altering the mean blood pressure materially Undoubtedly the main cause of the fall of blood pressure in these attacks and the enfeeblement or loss of pulse is independent of the vagus and lies in the blood vessels Atropine while raising the pulse rate up to and beyond normal levels during the attack leaves the blood pressure below normal and the patient still pale and not fully conscious Attacks in which the blood pressure sinks without a lowering of pulse rate and the patient verges on unconsciousness whenever the pressure reaches certain low levels have been encountered Thus

the cause of syncope is rarely a cardiac lesion but the vagus additional to the clinical picture by inducing convulsions absence of heart beat manifestation. The combination of cardiac vascular effect will fully justify the attention to the consideration of the views which possibly very relevant to the pathology of the cases discussed.

Carotid Sinus Reflex

In recent years a very great deal of interest has been aroused in a mechanism connected with what is now called the sinus carotidicus. This mechanism has been shown to exercise a powerful controlling influence upon heart rate blood pressure and respiration and especially in regulating the circulation to the brain. A rise of pressure within the carotid sinus results in a reflex lowering of heart rate and of systemic pressure the former is produced through the vagus and the latter through vasomotor nervous channels (Hering)[2] and through an effect on suprarenal secretion (Hermans)[3].

This important discovery has come to us originally as so many have through clinical observations. Hering is in the true sense of the word the discoverer in that his careful and prolonged researches first gave proof that a special mechanism exists and located it. Hering was led to this investigation during the period when he was carrying out his important clinical observations upon patients suffering from irregularity of the heart. He was struck by the lightness of pressure upon the carotid sheath near the bifurcation of the artery that sometimes suffices to produce slowing of the heart rate and it seemed to him improbable that the latter could result from stimulation of the vagus. The fact that pressure upon the carotid region of the neck will slow the heart had of course been known for many years previously and such pressure has often been referred to though incorrectly as Czermak's experiment[4]. This physiologist published his observations upon pulse slowing in 1866 both he and Waller[5] whose publications came four years earlier attributed the effect to stimulation of the vagus nerve. But the original observation is neither Waller's nor Czermak's but is Parry's. This Welshman famous as clinician and experimenter wrote in 1799[6] as follows:

In patients whose hearts have been beating with great quickness and force I have often in a few seconds stopped their motion many pulsations in a minute by pressing on one of the carotid arteries. An instance of this kind occurred in the case of the late Admiral X. His pulse was quick and already very full and tense. Pressure on one carotid almost instantly reduced the pulse from sixty to forty beats in a minute without having previously altered either its frequency or strength. The latter returned to its former state as soon as the pressure was removed.

The carotid artery contains the receptor part of a mechanism the glossopharyngeal nerve conveys the impulse to the medulla but here it produces two effects: influences they inhibit the heart and the blood pressure motor tone. This remarkable and seemingly paradoxical group of reflex cardiovascular effects is associated with the depressor nerve is stimulated (see Bayliss and Hermans and Boeke) that is why depend the [illegible] central parts of the nervous system. As a general [illegible] it is not highly probable that the [illegible] efferent parts of this [illegible] the clinical syndrome of vasovagal [illegible] not vagal effects are known [illegible] vasomotor effects?

[illegible]

anterior pillar of the fauces and there was a malignant ulcer over the bottom of the gingival groove opposite the sites of the molar teeth The mouth could be opened only three quarters of an inch No glands were palpable in the neck X-ray examination showed no evidence of bony involvement He declined treatment by surgery or radium Blood pressure 185/125

Treatment produced no reaction until the dose of pituitrin reached 1 c.cm but when there was pallor coming on about ten minutes after the injection there was at no time any considerable pain reaction After six weeks the ulceration and induration had advanced and the swelling on the outside of the face was more marked enlarged glands were palpable in the left submaxillary region He left hospital after eight weeks but returned treatment elsewhere for a further three weeks The blood pressure had fallen to 175/110 and it continued to fall the lowest point reached being 135/115 At the end of eleven weeks he had a left hemiplegia of cerebral onset thought to be due to thrombosis The growth was larger and approaching the surface of the cheek and the glands in the submaxillary region were larger firm and fixed to the mandible The patient died twelve weeks after starting treatment no post mortem examination was made The total amount of pituitrin given in this case was 214 c.cm and of theelin 27 c.cm

The cause of the cerebral thrombosis could not be ascertained with certainty but the possibility of its being due to lowering of the blood pressure must be entertained He had however sustained a head injury five years previously as a result of which there was a slight weakness on the right side

CASE IV

Epithelioma of Vulva

M M female aged 60 Nine months history of vulval soreness with frequency and difficulty in micturition On the right side of the vulva was an ulcerated and bleeding growth 3 inches by 1 inch extending into both sides of the vestibule There were enlarged glands in both groins Section showed keratinizing squamous celled carcinoma Blood pressure 140/80

Treatment produced some local pain—not sufficient to require the use of a sedative The patient was always constipated The blood pressure fell to 115/65 and the growth gradually increased in size She died after five weeks treatment no post mortem could be held

CASE V

Epithelioma of Vulva

J I female aged 61 History of a lump in the vulva for one year and incision of an abscess in the left groin three weeks before admission On the right labium was an ulcerated mass 3 inches by 1½ inches extending around the posterior commissure to the left labium and internally around the urethral orifice and into the vagina In the left groin was an indurated mass discharging pus and in the right several hard enlarged glands Section showed keratinizing squamous celled carcinoma

Treatment produced a sharp local pain reaction and generalized pallor as the dose was increased the pain became more severe No change took place in the primary growth but the glands in the groin became larger and new secondary glands developed She was discharged home after six weeks treatment having received 59·5 c.cm of pituitrin and 16 c.cm of theelin

In both this and the previous case the growth was readily observable the changes that took place were all in the direction of extension

CASE VI

Carcinoma of Rectum

I K female aged 27 History of nine months constipation with the passage of blood and slime On rectal examination there was a fixed ulcerating carcinoma completely encircling the bowel lumen and extending down to within 2 inches of the anus Laparotomy showed that the upper edge of the ring of rectal growth had already extended to the peritoneum and there were enlarged glands in the mesorectum No other secondary deposits were found The growth was considered inoperable and a left inguinal colostomy was performed

Treatment produced considerable local pain reaction and pallor After six weeks the growth was larger on rectal examination its lower margin reaching to within 1 inch of the anus Treatment was stopped on account of the very poor general condition

CASE VII

Carcinoma of Rectum

M I female aged 27 Six months before treatment started she came to hospital on account of constipation pain in the left lower abdomen, and frequency of micturition There was a mass rising from the pelvis into the left side of the abdomen and on rectal examination this was felt as an indefinite mass in the posterior and left wall of the rectum extending in front to within 2 inches of the anus There was evidence of a vesico-rectal fistula *Left inguinal* colostomy was performed the growth was felt to be spreading between the layers of the left broad ligament and was deemed inoperable After colostomy she improved at first put on weight and lost her urinary symptoms but she returned in six months with increasing pain in the back The growth had increased slightly in size Blood pressure 108/80

Treatment caused at first a severe local pain reaction even with a dose of only 0·5 c.cm of pituitrin Later on with larger doses the pain was not so severe (it was thought to be worse when no theelin was given) finally there was no pain after the injection The colostomy acted fairly regularly about twenty minutes after an injection and there was considerable haemorrhage from the rectum which diminished if the injection was omitted for a few days After six weeks treatment spread over a period of nine weeks with intervals the mass could still be felt in the left lower abdominal quadrant By rectum could be felt a fungating carcinoma extending around the whole circumference of the rectum In front it reached to within about 1½ inches of the anus and was fixed to the recto-vaginal septum behind it reached about 3 inches from the anus and was fixed to the sacrum Considerable haemorrhage followed examination There was X-ray evidence of secondary new growth in the sacrum probably by direct extension Blood pressure 100/70 This patient still felt that the injections were doing her good and was anxious to continue them although the growth had become larger

Cases VI and VII were two rather similar examples of carcinoma of the rectum in young women The growth continued to extend under treatment in each case although there was in *Case VII* some evidence of more rapid breakdown in the centre with resulting haemorrhage and extrusion of small sloughs

CASE VIII

Secondary Carcinoma of Mesenteric Glands

C B male aged 86 Nine years before he had had a colostomy and perineal excision of the rectum for carcinoma Eight years later a mass of glands was excised from the left groin and found to contain secondary columnar celled carcinoma Before starting treatment his condition was as follows the scars in the perineum and groin were healed with no evidence of recurrence above the colostomy opening there was a mass of glands palpable firm not tender moving slightly on respiration and apparently on the course of the inferior mesenteric vessels The colostomy acted regularly twice daily Blood pressure 190/80

Treatment produced some aching round the waist but no definite local pain reaction With a 1 c.cm dose of pituitrin the colostomy acted regularly five to ten minutes after the injection *After eighteen* days treatment the blood pressure was 180/85 After ten weeks treatment the abdominal tumour was unchanged the general condition was not so good and he complained of pain in the lower chest for which no physical signs were found He was getting weaker and treatment was stopped and subsequently he felt more comfortable Four weeks later the abdominal tumour was in *statu quo* Blood pressure 130/60

This was a case of slowly growing carcinoma which had gone for eight years before a recurrence appeared Treatment had no apparent effect on the subsequent course of the disease

CASE IX

Carcinoma of Prostate

F H male aged 64 Six months previously permanent suprapubic drainage had been established elsewhere for carcinoma of the prostate On examination the prostate was moderately enlarged stony hard and nodular and infiltrating the base of the bladder the median sulcus was obliterated X ray of the pelvis showed no definite bony secondaries He complained of considerable pain passing down the backs of both legs and of irritation in the perineum On the personal suggestion of Dr Susman it was decided to give him a short course of treatment with the idea of relieving his pain He was treated for ten days during which time there was *no local pain reaction and no alteration in the amount of* pain he suffered He died eleven weeks after starting treatment Post mortem examination showed the prostate filled with scirrhous carcinoma spreading into the seminal vesicles and pelvic cellular tissue and bony secondaries in the sacrum

Injections of pituitrin up to 2 c cm twice daily with theelin 0 3 c cm had no effect in alleviating the pain

COMMENTS

Except in Case I where there was a local diminution in the oedema of the tongue overlying the growth there was no beneficial effect which could be attributed to the injections of pituitrin and theelin All the cases followed the usual course of the disease for the particular type of growth In no case was life prolonged nor was there regression of any of the growths

PHYSIOLOGICAL EFFECTS OF PROLONGED ADMINISTRATION OF PITUITRIN

The cases described above were investigated from the following points of view blood pressure—immediate and remote effects electrocardiographic changes onset and distribution of pallor and other vessel changes changes in urinary volume and presence or absence of glycosuria and effects on the bowels

Blood Pressure

In most of the cases the immediate effect was to lower the blood pressure the systolic being more affected than the diastolic The extent of the drop varied from nothing up to 50 mm systolic The maximum fall of diastolic pressure was 30 mm

Typical figures were as follows

Initial blood pressure 180/130—injection 2 c cm pituitrin intramuscularly After 5 minutes 175/130 after 10 minutes 160/120 after 15 minutes 150/115 after twenty minutes 150/115 after thirty minutes 145/115 after forty minutes 150/110 after fifty minutes 160/110 after sixty minutes 165/120

In two of the patients a rise of blood pressure was obtained *after the first injection but it was of negli*gible dimensions—in one case from 185/120 to 190/120 and in the other from 130/75 to 135/80 Both these cases on the following days showed a fall of blood pressure similar to that noted above so that the rise obtained on the first occasion was doubtless emotional in origin In those cases in which pituitrin was given for a long period the resting level of the blood pressure showed a tendency to fall It is impossible to say to what extent this fall was due to the low diet the partial rest in bed (very few were entirely confined to bed) or the pituitrin As an example of the extent of the effect it may be mentioned that in one case the blood pressure fell from 190/80 to 130 60 in three months and in another from 160/85 to 140 75 in a month These results differ from those *obtained by* Sacks This worker using doses up to 1 c cm subcutaneously in man found minute rises while doses of 1 40 to 1/20 c cm intravenously produced immediate rises after one to three minutes of 5 to 15 mm systolic pressure

Electrocardiographic Effects

Records were taken before the administration of pituitrin *and at times varying from one minute to forty five minutes* afterwards In most cases lead II only was employed but in some of the later ones all three leads were recorded The records showed very little change as the result of pituitrin administration There was little effect on heart rate *some subjects quickening to the extent of two beats* a minute others slowing to a similar extent There were no changes in rhythm Those graphs which showed any changes had a slight increase in amplitude of all the waves this being most marked in P and T waves but little else was seen There were no ectopic beats Gruber and Kountz using *intravenous* doses of pitressin of a similar amount per kilogram body weight in the dog found marked changes in the shape and rhythm of the curves[3] Goldenberg and Rothberger[4] also obtained marked electrocardiographic changes in animals given intravenous injections These they attribute to constriction of the coronary arteries by pitressin The absence of such changes in our records even after doses of 4 c cm may be due to the different route of administration and the slower absorp*tion into the circulation*

Changes in Skin Vessels

Pallor came on very soon after the injections in all cases It took about five to ten minutes to develop and lasted twenty to thirty minutes It was not found that the latent period of development or the duration of the pallor was altered in any way during the course of the investigations Pallor was most marked in the face nose and ears but was distinct in the skin of the arms and trunk In several subjects it was noticed that between the injections the blush area on the face and nose was a good pink colour thus giving the patient a very deceptive air of well being This was not due to any increase of haemoglobin as was shown by blood counts and by the anaemic appearance of the mucous membranes It was thought that the flush was due to dilatation of the skin vessels in this area of a paralytic nature following the repeated firm constriction

Urinary Volume

It is well known that intramuscular injection of pituitrin in the normal subject has an anti-diuretic effect[5] In these investigations a decrease in the volume of urine excreted though not to the extent expected from the effects seen on normal subjects was observed This effect was not maintained as the treatment progressed This is in accord with the diminution in effect of a given dose of pituitrin noticed in subjects with diabetes insipidus In two cases faint traces of sugar appeared in the urine at the beginning of treatment but this disappeared later It must be remembered in this connexion that the patients were on a Beaumont and Dodds diabetic diet XI * and this would counteract any tendency to glycosuria In one case though 2 c cm of pituitrin were given twice daily the urinary volume was 40 ounces or less on only five days out of thirty In another case the urinary volume on 2 c cm twice daily was less than 40 ounces on seventeen occasions out of twenty two and on reduction of the dose to 1 c cm twice daily it was below 40 ounces on three occasions out of fifteen The urine was never concentrated to a specific gravity of more than 1020

Bowels

The effect on the bowels was surprisingly slight. Only two patients both with colostomy showed stimulation of bowel movement In both an evacuation occurred

* The contents of carbohydrate 54 grams protein 106 grams fat 114 9 grams—total calories 1 679

ten to twenty minutes after each injection The other patients were confined in spite of the injections, and required the same dose of aperients during as before treatment Those patients having normal evacuation were unaffected by the treatment Only one patient complained of transient abdominal griping following the injections but the reaction was inconstant

We are indebted to Mr Victor Bonney and Mr A T Webb Johnson for permission to treat and observe some of their cases and to Dr Stanley White of Messrs Parke Davis and Co for generous supplies of pituitrin and theelin The urine analyses were carried out in the Courtauld Institute of Biochemistry Middlesex Hospital Lieut Colonel J M Weddell R A M C kindly continued the treatment in one case and allowed us to see the patient subsequently

[1] Watson Williams *British Medical Journal* 1931 ii 701
[2] Davis *Hern Journal* 1931 xxxi 183
[3] Bernard Harris *Journal Obstet and Gynæc Emp* 1930 xxxvii 1
[4] Gauss and Lydtin *Zeitschrift für Geburtsh und Gynäk* 1931 lxxxvi 1
[5] Bland Sutton *Hunterian Lectures* 1924 p 207

SEPTIC FOCI AND NORMAL LABOUR

BY

HELEN LLEWELYN M D

Though it is not always easy to say what constitutes a normal labour no one could deny that some of the cases met with in the Oxford district are both normal and ideal One comes across women who have an almost painless first stage of labour and only some acute discomfort and a few expulsive pains in the second and third stages If there were the usual cases the question of applying anæsthetics in normal labour would not arise The present investigation was undertaken to try to find out what there was in environment physique, or general conditions which gave one normal woman an easy labour while others apparently as normal suffered so acutely

With this object in view an exhaustive analysis was made of the notes of cases taken in during the last two years at the Oxford Maternity Hospital Each detail was tabulated and a comparison made between the short and long labours From this it was found that one factor stood out prominently as being associated not with short but with long labours This was the presence of a septic focus in the mother as indicated either by a note made by the antenatal doctor or by a rise of temperature during the puerperium

After the notes had indicated this point the hospital cases for the five years 1926 to 1930 inclusive were tabulated as to age parity pelvic measurements and weight of baby (to cut out all cases of disproportion) presentation the time of the first stage and the total length of labour respectively and the presence or absence of any evidence of a septic focus in the mother All cases of disproportion, malpresentation, placenta praevia and abnormality other than sepsis were excluded and only L O A cases considered (For the last two years R O A cases are given for comparison) These normal cases were divided into four groups—country primiparas and multiparas and town primiparas and multiparas—in order to see if the country women suffered less than their town sisters as is the general impression of those working among them

The B M A standard was at first taken as indicating a + temperature but it was soon found that this did not cover the cases in which notes had been made of a septic focus during the antenatal period Many of these cases showed a rise to only 99° F on three or more occasions during the puerperium and this latter standard was therefore taken as indicating the presence of some chronic septic process, even when no note had been made of such by the antenatal doctor This is again of course, a purely arbitrary standard, and probably all cases with a rise of temperature to 99° should be suspect However for the purposes of this investigation a rise of temperature to 99° on three or more occasions during the puerperium (usually ten days) is that called a + T° although it is likely that a number of cases in which there was a more or less dormant infection are included in the negative cases

The most common chronic infections noted were

Septic teeth	17 7 per cent
Tonsillitis	2 9
Chronic rheumatism	2 5

while a previous septicæmia or mastitis and gonorrhœa all amount to about 1 per cent of the total cases

Since the average figures for each group do not indicate the frequency with which short labours occur some of the actual figures are given

TABLE I—*Total Percentage of + T° Cases Among Town and Country Cases (all Types)*

	Town	Country		Town	Country
1926	19 3	6 0	1929	6 9	5 7
1927	13 8	13 0	1930	4 5 2	4 7 7
1928	20 0	19 5			

TABLE II—*Normal L O A Cases 1926*

	Average Time 1st Stage	Total Time	Age	Weight of Baby
Town primiparas (42 cases)				
18 + T	18 hours	19½ hour	4	7 4 lb
24 − T	11½	15¼	23¼	7 4 lb (Cons 7)
Country primiparas (73 cases)				
8 + T	18	20 "	25	8 lb (Cons 7)
22 − T	10	11	24	6 7 lb
Town multiparas (15 cases)				
3 + T	8½	9¼	31	7 4
45 − T	5½ "	6½	29¼	7 2 "
Country multiparas (24 cases)				
All − T	6	7	8	7 4

Town Primiparas	Of the − T s 2 were under 5 hrs	1st stage 6 hrs total	7
	2	6	11
	All + T s were over 10		
Country Primiparas	Of the − T s 1 was under 4 hr	1st stage 5 hrs total	6
	1	5	6
	2 were	6	7
	2	7	8
	Of the + T s 1 was	11	14
	All others were over 14		16
Town Multiparas	Of the − T s 2 were under 2 hrs	1st stage 3 hrs total	4
	1 was	3	5
	9 were	4	5
	6	6	7
	Of the + T s 1 was	4½	6
	Others were over 10		11
Country Multiparas	Of these 1 was under 50 min	1 st stage 1 hr total	3
	3 were	2 hrs	4
	3	3	7
	6	6	

TABLE III—*Normal L O A Cases 1927*

	Average Time 1 st Stage	Total Time	Age	Weight of Baby
Town primiparas (60 cases)				
16 + T°	15½ hours	17 hours	25½	6 13 lb
44 − T°	9½	11¾	23¼	6 12 "
Country primiparas (32 cases)				
7 + T	11½	13	23	7 0 "
25 − T°	7	10	20	6 13 "
Town multiparas (58 cases)				
3 + T°	11	12	33	7 11
55 − T°	6½	8	8	7 0 "
Country multiparas (41 cases)				
4 + T	14½	16	0	7 11
37 − T°	5	6	30	7 0

TABLE III—*continued*

Town Primiparas	Of the + T's 1 was under 1 hr 1st stage 2 hrs total	
	2 were " 2 hrs " 3 "	
	3 " " 3 " " 4 "	
	Of the + T only 1 was " 5½ " " 8 "	
Country Primiparas	Of the + T's 1 was under 2 hrs 1st stage 3 hrs total	
	2 were " 3 " " 4 "	
	Of the + T's 1 was " 4 " " 5 "	
	Others over 8 " 10 "	
Town Multiparas	Of the + T's 2 were under ½ hr 1st stage 1 hr total	
	2 " " 1 " " 2 hrs "	
	7 " " 2 hrs " 3 "	
	Of the + T's the shortest was 10 " 12 "	
Country Multiparas	Of the + T's 1 was under ½ hr 1st stage 1 hr total	
	3 were " 1 " " 2 hrs "	
	7 " " 2 hrs " 3 "	
	5 " " 3 " " 4 "	
	Shortest + T 12 " " 14 "	

TABLE IV—*LOA Cases 1925*

	Average Time 1st Stage	Total Time	Age	Weight of Baby
Town primiparas (7 cases)				
25 + T	15½ hours	21 hours	25	7 1 lb
44 − T	9 "	12½ "	1	6 10 "
Country primiparas (3 cases)				
15 − T	15	17 "	2	7 0
22 − T	8 "	10 "	9½	7 1
Town multiparas (7 cases)				
8 + T	10 40 "	11 40 "	23	7 6
45 − T	5 50 "	6 23 "	30	7 8
Country multiparas (3 cases)				
11 − T	13 30 "	1 "	31	8 3
45 − T	5 0 "	6 30 "	32	8 12

TABLE V—*LOA Cases 1929*

		Average Time 1st Stage	Total Time	Age	Weight of Baby
Town primiparas (5 cases)					
5 + T		1 1 hours	16 1 hrs	20 7	6 11 lb
22 − T		12 4 "	13 9 "	"	7 0 "
Country primiparas (5 cases)					
31 − T		15 31 "	17 2 "	21 8	6 "
13 − T		8 "	9 "	21 8	6 7 "
Town multiparas (5 cases)					
1 + T		15 "	1 "	25	7 3 "
2 − T		5 8 "	6 "	27	7 2 "
Country multiparas (3 cases)					
11 − T		10 6 "	11 8 "	30 2	8 "
4 − T		5 6 "	6 3 "	31	7 3 "
Town Primiparas	Of the + T's 1 was under 3 hrs 1st stage 4 hrs total				
	5 were " " 6 "				
	Of the + T's 1 was " 2 " " 5 "				
	All others were over 6 " " 8 "				
Country Primiparas	Of the + T's 1 was under 12 hrs 1st stage 5 hrs total				
	3 were " " 6 "				
	Of the + T's the lowest was 6 " " 8 "				
Town Multiparas	Of the + T's 2 were under 1 hr 1st stage 1 hr total				
	13 " " 3 hrs " 4 "				
	Of the + T only 1 was " 3 " " 4 "				
Country Multiparas	Of the + T's 1 was under ½ hr 1st stage 1½ hrs total				
	3 were " 2 hrs " 3 "				
	6 " " 3 " " 4 "				
	Of the + T's 1 was " 2 " " 3 "				
	1 " " 3 " " 4 "				
	All others were over 6 " " 8 "				

TABLE VI—*LOA Cases 1930*

	Average Time 1st Stage	Total Time	Age	Weight of Baby
Town primiparas (7 cases)				
47 + T	15 11 hours	17 hrs	22 5	7 0 lb
20 − T	10 "	13 9 "	22 "	7 2 "
Country primiparas (4 cases)				
33 + T	1 6 "	22 5 "	20 "	6 5 "
21 − T	11 7 "	13 6 "	20 "	6 8 "
Town multiparas (52 cases)				
19 + T	11 1 "	13 4 "	30 "	7 5 "
43 − T	5 9 "	7 6 "	30 7	8 1 "
Country multiparas (9 cases)				
29 + T	12 9 "	14 5 "	30 3	7 2 "
30 − T	4 3 "	5 1 "	29 3	7 7 "
Town Primiparas	Of the + T's 2 were under 5 hrs 1st stage 6 hrs total			
	2 " " 2 " " 4 "			
	Of the + T's 2 " " 6 " " 8 "			
	All others were over 11 " " 13 "			
Country Primiparas	Of the + T's 3 were under 5 hrs 1st stage 7 hrs total			
	3 " " 7 " " 8 "			
	Of the + T's 2 " " 5 " " 7 "			
	3 " " 7 " " 12 "			
Town Multiparas	Of the + T's 3 were under 1½ hrs 1st stage 2 hrs total			
	4 " " 2½ " " 3 "			
	7 " " 5½ " " 6 "			
	Of the + T's 2 " " 4 " " 5½ "			
	3 " " 7 " " 10 "			
	All others were over 9 " " 12 "			
Country Multiparas	Of the + T's 5 were under 2 hrs 1st stage 3 hrs total			
	7 " " 3 " " 4 "			
	8 " " 5 " " 6 "			
	Of the + T's 1 was 1 hr 2 "			
	5 were 5 hrs 6 "			
	All others were over 10 " " 12 "			

TABLE VII—*ROA Cases 1929*

	Average Time 1st Stage	Total Time	Age	Weight of Baby
Town primiparas (25 cases)				
16 + T	21 9 hours	25 2 hrs	25 6	6 8 lb
9 − T	9 "	11 "	27	7 5 "
Country primiparas (27 cases)				
19 + T	20 1 "	23 7 "	25 1	7 0 "
8 − T	12 5 "	15 "	20 5	7 5 "
Town multiparas (33 cases)				
15 + T	8 8 "	10 3 "	27 2	7 7 "
18 − T	5 5 "	6 6 "	23 "	7 2 "
Country multiparas (10 cases)				
8 + T	7 5 "	9 3 "	29 8	7 0 "
17 − T	6 2 "	7 2 "	29 2	7 7 "

TABLE VIII—*ROA Cases 1930*

	Average Time 1st Stage	Total Time	Age	Weight of Baby
Town primiparas (31 cases)				
1 + T	12 6 hours	15 5 hrs	23	7 1 lb
17 − T	11 4 "	13 "	20	7 3 "
Country primiparas (22 cases)				
1 + T	17 7 "	19 8 "	20	7 0 "
10 − T	15 6 "	17 5 "	22 2	6 1 "
Town multiparas (33 cases)				
17 + T	9 0 "	11 2 "	27	8 "
21 − T	5 5 "	6 5 "	28 8	7 "
Country multiparas (20 cases)				
12 + T	10 2 "	11 8 "	27	7 "
13 − T	5 3 "	6 "	29	7 5 "

Note—The average time for the primiparas in the above table was 14 hours.

The above tables show that in the year 1926 the number of patients coming from the country districts who had a

even any induction of this measure, in fact the condition of the patient after operation is much improved. Case 16 is a possible exception to this but we are satisfied that the pre-operative condition was amply sufficient to account for the fatal result.

Illustrative Cases

Out of a series of cases of acute obstruction treated at St. Thomas's Hospital since May, 1931, the following have been elected to illustrate the value of spinal anaesthesia from several points of view. In all cases the drug employed was procaine (hydrochloride of a butyl oxy cinchonine and diethylethylene diamide).

Spontaneous Reduction of Hernia

Case 1.—Male, aged 67. Right inguinal hernia for twenty years. Sudden onset of abdominal pain and vomiting on day of admission. Hernia was irreducible. Treatment: Spinal. Hernia partially reduced. After condition satisfactory.

Case 2.—Male, aged 55. Umbilical hernia for ten years. Irreducible for seven days. Complete constipation and faeculent vomiting for two days. Patient very ill, abdomen distended. Treatment: Spinal. Spontaneous reduction with copious evacuation of bowel. Operation postponed. Recovery excellent. Radical cure of hernia ten days later.

Case 3.—Male, aged 40. *Umbilical hernia for six months.* Strangulated for twenty hours. Colicky abdominal pain. Hernia irreducible. No vomiting, or abdominal distension. Treatment: Spinal. Spontaneous reduction followed.

Stricture as Cause of Obstruction

Case 4.—Male, aged 70. *Abdominal pain for three weeks.* Vomiting and complete constipation for one week. *Old abdominal scar.* Abdomen distended and tender. Auricular fibrillation of some hours' standing. *Very poor operation risk.* Diagnosis: Acute obstruction probably from a band. Treatment: Spinal. Bowels were evacuated and operation deferred. Discharged from hospital. Bowels open regularly.

Case 5.—Male, aged 81. Alternating diarrhoea and constipation for nine months. *Colic and constipation for forty-eight hours.* No vomiting. Abdomen grossly distended. Inoperable *carcinoma of rectum.* Considered unsuitable for operation. Treatment: Spinal, which was *followed* by evacuation of the bowel in fifteen minutes. Condition after anaesthetic satisfactory. *No further obstructive signs but* died six days later. *No post mortem examination.*

Case 6.—Female, aged 72. *Operation had been performed for carcinoma* of sigmoid. Secondary growths present. Lateral anastomosis was performed. After four days signs of obstruction developed and there was faeculent vomiting and abdominal distension. Treatment: Enemata, purgatives and enemata failed. Spinal was *given—immediate evacuation of the bowel* and uninterrupted recovery.

Note.—Spinal anaesthesia was used as a therapeutic measure in Cases 5 and 6.

Early Evacuation Following Relief of Obstruction

Case 7.—Female, aged 65. Incisional hernia for fifteen years, strangulated for 2 days. Abdomen distended. Vomiting present. Treatment: Spinal. Obstruction was in the small bowel. Reduction of gut followed immediately by evacuation of *bowels. Very well next day.* Recovery uninterrupted.

Case 8.—Male, aged 64. Five months right femoral hernia strangulated for several hours. Suffering from haemochromatosis, diabetes and pulmonary tuberculosis. Treatment: Spinal. Sac contained plum-coloured but viable small bowel. Reduction and immediate evacuation of bowel followed. *Good recovery.*

Case 9.—Male, aged 74. Right inguinal hernia for one year. Colicky abdominal pain, constipation and vomiting *for five days.* Chronic bronchitis and glycosuria present. Strangulated hernia and abdominal distension. Treatment: Spinal. Bowel was plum-coloured and viable. Reduction followed immediately by copious evacuation. *Good recovery.*

Evacuation Through Stoma

Case 10.—Male, aged 50. Had ten *previous operations* for perforated gastric ulcer, liver abscess and obstruction. Colicky abdominal pain, vomiting and constipation for five days. No result from enemata. Abdominal distension and faeculent *vomiting present.* Treatment: Spinal. Ileostomy performed, which immediately drained copiously in gushes synchronous with the peristaltic waves. *Good recovery.*

Case 11.—Male, aged 16. Operation for removal of gangrenous appendix was followed twelve days later by vomiting and colicky pain. During the next six days obstructive symptoms gradually increased. Abdominal distension and *frequent vomiting present.* Treatment: Spinal. Ileostomy performed. Bowel immediately emptied very well. Discharged fit nineteen days later.

Case 12.—Male, aged 60. Colicky abdominal pain for five days. Vomiting and absolute constipation *present.* Abdominal *distension. Tumour felt* high up per rectum. Enemata given with no result. Treatment: Spinal. Carcinoma of sigmoid found. Paul's *operation performed.* Bowel evacuated well on table. *Recovery uneventful.* Readmitted one month later for closure of colostomy.

Case 13.—Female, aged 68. Seven days abdominal colic with *absolute constipation.* Very distended. Fixed carcinoma of rectum felt per rectum. Treatment: Spinal. Colostomy performed. Opened at once and drained very well immediately. Very *good recovery.*

Cases Requiring Anastomosis

Case 14.—Male, aged 47. Attacks of abdominal colic and vomiting for three months getting worse. Abdomen distended. Vomiting present. Treatment: Spinal. There were strictures of small gut due to secondary growths. Peristalsis vigorous. Two lateral anastomoses performed. Difficulty experienced in performing anastomosis since proximal loops had not been first drained and the vigorous peristalsis caused distension of the suture line. Died five days later. *Post mortem* examination: Obstruction not relieved. Diffuse carcinomatosis of intestines with fibrosis. Anastomoses sound and had not leaked.

Case 15.—Female, aged 48. Operation for pyosalpinx 1929. Admitted *with* five days' absolute constipation, vomiting and severe abdominal pain. *Abdomen distended and tender. rectum ballooned. Faeculent vomiting present. Very ill. Treatment:* Spinal. Small gut gangrenous and obstructed by a band. *Resection of 18 inches of small bowel. Contents of* proximal loop drained and end to end anastomosis performed easily. Very fit for three days. Died. Post mortem examination: General peritonitis. Suture line quite sound but another loop found to be gangrenous.

Case with Severe Collapse

Case 16.—Female, aged 66. Acute small bowel obstruction *for four days.* Obese, collapsed and cyanosed. Very distended. Faeculent vomiting present. Treatment: Spinal. Gall-stone obstruction in the lower ileum. Removal of stone. Died six hours later. This patient was almost moribund and the advisability of operation was doubtful. The operation was long and difficult and in the opinion of the anaesthetist her condition was no worse at the end than at the commencement *of the operation.* We are satisfied that the anaesthetic was in no way responsible for the fatal termination.

We quote this case to show that spinal anaesthesia can be given to a patient *in extremis* without in itself producing a fatal result.

We are indebted to the surgical staff of St. Thomas's Hospital for permission to publish their cases.

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OBSERVATIONS ON THE TREATMENT OF CHRONIC ULCERS OF THE LEG

BY

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In recent years considerable attention has been directed to the treatment of chronic ulcers of the leg and a number of important contributions have been made to the discussion of the problem The British Medical Association instituted a collective investigation of the subject amongst members of the profession and issued in 1928 a very valuable report by A P Luff embodying the results The importance of the question was also urged last year by A Dickson Wright in an address given before the Medical Society of London in which he estimated the incidence of chronic ulcer of the leg in this country as 1 in 180 and stressed the grave economic loss resulting *from disablement caused by this very chronic and intractable condition* Another important aspect of the leg ulcer problem is in my opinion the sanitary one because every indolent ulcer of the leg is the breeding ground of a great variety of pathogenic organisms—staphylococci streptococci and others Sabouraud defines these ulcers as chancre streptococcique There is a certain potential danger of infection from such patients to those around them especially if erysipelas happens to complicate the ulcer and the patient becomes afterwards a carrier of this disease The crowded conditions under which the poor live makes the spreading of any infection so much easier In a woman of child bearing age such an ulcer may become a potential source of sepsis during her pregnancy or puerperium There is also a possibility of conveying sepsis to a maternity case by the handy woman suffering from a neglected leg ulcer if she is in attendance on the case

TREATMENT IN COMMON USE

Of remedies and methods recommended and used for the treatment of chronic ulcer of the leg there is an amazingly great number and it would be difficult to enumerate them all here Amongst the most approved ones in recent times according to Luff's report the following may be mentioned (1) Unna's zinc gelatin impregnated bandages (2) the skin grafting method (3) injection of sclerosing solution into varicose veins (4) ultra violet radiation

The sclerosing injection of veins has, in practice not entirely justified the early hopes and expectations of its advocates According to Professor Sicard who introduced the method in 1916 there are some contraindications to it and it gives good results only in ulcers of moderate size with no considerable secondary changes Moreover in order to avoid septic infection he does not recommend starting the injections until the ulcers have been made aseptic and healing This method has also the drawback of not being quite safe and liable to cause complications such as embolism sloughing of the skin and others It is further the deeper veins of the tissues which are concerned in the venous return of blood from the ulcerated surface and these cannot be injected Again varicose veins are very rarely the sole cause of chronic ulcers of the leg and are for the most part only one of the factors in their production There are many people with varicose veins who have no ulcers and there are many cases of chronic ulcers of the leg in which no varices are present At all events a chronic ulcer which is caused entirely by varices on the leg can be relieved by a well fitting bandage and antiseptic dressing

Experience shows that none of the above methods is by itself sufficient to effect a cure or even to afford relief in all cases of leg ulcer Even a combination of them as in A Dickson Wright's method does not always bring about such a result Moreover as a preliminary to all of them the ulcer must be brought to a healthier and more aseptic state As to the extensive callous ulcer of the leg of many years standing most of the dermatologists are agreed that very little can be done for them and the surgeon recommends amputation of the limb as the best treatment for such cases

The method recommended by A Dickson Wright for which he claims good results deserves mention here In his own description the details of treatment are as follows (1) The uppermost varicose veins are injected with a 5 per cent solution of sodium morrhuate (2) The leg is bandaged very firmly and evenly (3) Absolute abstention from local treatment of the ulcer No cleansing no ointments —no matter how foul how deep or how long standing the ulcer (4) Extensive ulcers are skin grafted (5) Permanent support of the limb by an elastoplast bandage or a Bourgeaurd bandage The disadvantages of the method *in Dickson Wright's own words are (1) Eczema under* the bandage (2) A generalized eczema on face and forearms although rare very annoying (3) Occasionally a generalized dermatitis (4) Itching (5) Recurrence To these may be added discomfort from tight bandaging for a few days to which many patients may object even for a shorter space of time In view of these disadvantages as well as the fact that a certain surgical skill is required for its practice the method will probably fail to commend itself to the general practitioner In old people with arteriosclerosis it would scarcely be endurable and not devoid of risks

THE PRINCIPLE OF RATIONAL TREATMENT

Before describing my method I should like to make a few remarks on the physiological and pathological principles on which it is founded as well as describing the therapeutic nature of the remedies used in it

In devising this method of treatment of chronic ulcer of the leg I considered that whatever the original cause of an ulcer may have been the essential conditions for its persistence in not healing—that is its chronicity—are (1) the presence in the sore of bacteria and their toxins acting destructively on the tissues and impeding healing (2) certain trophic changes and lowered vitality in the tissues with resulting diminished resistance to bacterial action The chief indications for the treatment of a chronic non specific ulcer which form the basis of my method thus resolve themselves into (*a*) combating the microbic infection and preventing reinfection by the use of suitable antiseptic remedies (*b*) improving the nutrition of the tissues and stimulating their natural power of repair by remedies promoting granulation and epithelization To fulfil the first indication I use a 1½ per cent solution of hydrogen peroxide which is equal to the *B P* solution containing 10 volumes of oxygen diluted with an equal volume of water I consider this solution the best antiseptic for the initial disinfection of an ulcer since it acts quickly by means of the liberated oxygen on the bacteria (anaerobic and others) destroying them and mechanically dislodging them as well as the debris of dead cells and leucocytes from the deeper parts of the sore and so assisting in their removal from the ulcer The oxygen liberated from the H_2O_2 solution acts at the same time as a tonic on the devitalized tissue cells it also causes a certain amount of local active hyperaemia by its mild irritation of the tissues with resulting beneficial leucocytosis

The hydrogen peroxide solution not being suitable for prolonged disinfection some other antiseptic must be used for this purpose I have found from long experience and recent bacteriological tests that balsam of Peru is the most suitable one as it combines good antiseptic properties with valuable granulating and epithelizing qualities It is safe in use being non toxic and does not decompose at pro-

tects granulation, and makes easy the removal of the dressing. Balsam of Peru has been known as a healing remedy for centuries and owes its parasiticidal (in cubes) and disinfectant properties to benzyl and other esters of benzoic and cinnamic acid. It has been used *in combination* with silver nitrate in the treatment of ulcers in the form of ointment. Balsam of Peru is insoluble in water and almost all substances except chloroform and alcohol. The emulsion prepared with gum acacia is ineffective. After many experiments I found that glycerin mixes well with the balsam when 5 to 10 per cent. of alcohol (70 per cent.) is added. This makes a uniform and not too viscid solution suitable for dressing wounds. An 8 to 12 *per cent. solution of* the balsam has considerable antiseptic properties and proved very successful as a dressing for ulcers and wounds.

The value of glycerin in my *method* is not only in its being a good solvent for the balsam of Peru but also in its antiseptic and osmotic properties which render it a superior vehicle to vaseline, lanolin, etc. As an antiseptic it inhibits the growth of bacteria by abstracting water from their protoplasm without injuring tissue cells. *Its bacterial* and *leucocyte properties make it hypertonic*; thus causing an active flow of lymph and leucocytes *from the* surrounding tissues which washes out the organisms embedded in them and so drains the ulcer. The lymph contains antibodies according to Sir A. E. Wright's theory, has a certain valuable bactericidal action on micro-organisms. *Over the hypertonic* salt (5 per cent.) solution (used in Sir A. E. Wright's method) glycerin has the advantage that it does not irritate the tissues or cause pain as does the concentrated salt solution and is more suitable for routine ambulatory treatment. Glycerin also possesses antiseptic properties which the salt (5 per cent.) solution does not. I have for many years used glycerin solutions of antiseptics (boric acid, iodine, thymol, etc.) in the treatment of infected wounds in preference to aqueous solutions. But although glycerin has thus a certain antiseptic action it is much below that of the 10 per cent. solution of balsam of Peru in glycerin, as I was able to prove from bacteriological control tests.

The Method in Detail

1. At the first dressing the affected limb is washed with soap and warm water, the ulcer is cleansed with sterile water or physiological salt solution.

2. A *pad of sterile non medicated wool or lint* is soaked in a 3 per cent. solution of hydrogen peroxide (equal to the *B.P.* preparation diluted with an equal volume of water). It is then wrung out and is applied to the ulcer for half to three quarters of an hour. From time to time some of the hydrogen peroxide solution is poured on the wool to keep up the concentration of oxygen in it.

3. After three quarters of an hour the wool is removed and the surface of the ulcer is dried with sterile gauze. A dressing of gauze soaked in an 8 to 10 per cent. solution of balsam of Peru in glycerin to which 5 per cent. of alcohol is added to assist solution is placed on the surface of the sore and covered with a pad of sterile non-medicated wool which is kept in position by a roller or crepe bandage applied from the foot to the knee without much compression. The leg should however be raised while the dressing is being applied.

4. If ulcers [illegible] the first few days twice [illegible] there is no discharge [illegible] wound and subsequently [illegible] with the [illegible]

begun the strength *Evacuation Through Stoma*
be reduced to 5 or aged 50. Had ten previous operations for
to protect the edges ulcer liver abscess and obstruction
vaseline to which main vomiting and constipation for five
In some cases after a few enemata. Abdominal distension and
cent ointment of the balsam *Treatment* Spinal Ileostomy
for the glycerin solution 70% drained copiously in gushes
solution answers the purpose the waves. Good recovery.

The method can be described *Operation* for removal of gan
principle of osmosis for the capsule twelve days later by *vomiting*
and the choice of suitable antiseptics next six days obstructive
taneously disinfect it as well as Abdominal distension and
by stimulating granulations and adapted very well. Dis
it to be very efficient and successful. Spinal Ileostomy
chronic ulcers and it can easily be abdominal pain for five
practice even by the patient himself ration present. Ab
inexpensive entails no pain or risk to up per rectum
very little trouble to the medical or other Spinal Cancer
the case. I never observed any toxic effects performed. Bowel
tion of the balsam. The eczema and general ful. Readmitted
the patient also usually improved. Bacterio- *abdominal* colic
gations have confirmed the soundness of the ed carcinoma
underlying the method. I have tried it with Colostomy
benefit in patients suffering from all kinds of chronic
specific ulcers. It proved of particular value
called varicose ulcers of the leg where other
of treatment have failed or are inapplicable.

Reasons of space do not allow me to give colic and
detailed description of all the clinical trials and *men* dis
logical tests made in connexion with this method. here were
work was carried out under proper supervision peristalsis
trol at the surgical and dermatological clinics difficulty
University directed respectively by Professors loops
Quervain and Dr. Naegeli and at the Bacterio- caused
Institute directed by Dr. Sobernheim professor of Post
teriology and hygiene, Bern. car
und

To all the above mentioned professors and their staff 09
particularly to Professor Sobernheim whose guidance d
the most important part of my work was very valuable
I desire to offer my thanks for their courtesy and facilities
given in carrying out my investigation.

Summary

From many years experience in general practice confirmed by recent clinical and bacteriological tests I came to the conclusion that

1. Even the most extensive ulcers of the leg of non-specific character may heal under adequate ambulatory local treatment provided the patient's general health is not too greatly impaired.

2. The treatment should be directed towards eliminating microbic infection and stimulating the inherent natural forces of repair of the damaged tissues.

3. A solution of 8 to 12 per cent. of balsam of Peru in glycerin and alcohol answers this purpose best since not only has it a bactericidal action on the pyogenic organisms of the ulcer but it simultaneously *promotes* repair of damaged tissues by stimulating the granulating as well as the epithelization process.

4. Glycerin acts as a good excipient for the balsam of Peru and is useful as an exosmotic and hypertonic for draining ulcers and intensifying the antiseptic and penetrative action of the balsam of Peru.

5. Other methods should only be used after the above has been given a fair trial.

6. In ulcers of distinctly varicose character some support of the limb by elastic bandages may be applied for some time preferably only during the day time.

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Treatment of Indolent Ulcers of the Leg

OBSERVATIONS ON THE TRE CHRONIC ULCERS OF a OBSTETRICAL

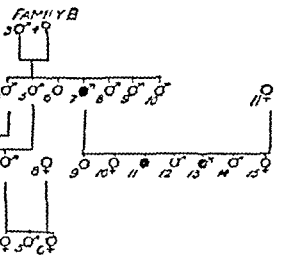
BY

M UMANSKI, M D BERN

LATE MEDICAL SUPERINTENDENT HEP

D EPILEPSY

In recent years considerable epilepsy is much in dispute to the treatment of chron which has been ascertained number of important cont as a small contribution to the the discussion of the prob ciation instituted a colle amongst members of a very valuable report The importance of year by A Dickson the Medical Societ incidence of chr 1 in 180 and from disablem able condition ulcer prol because eve



ground of attended this man for over years He began to staphyloco have epileptic fits at the age of 8 as he grew older these ulce they increased in frequency—both minor and major certain pr attacks He died in hospital in 1925 of status to those epilepticus at the age of 26 He had consider complica able musical talent and had been proficient with the clarinet and piano

a carr Died at age of 7½ of fits following an attack by under w a savage dog infection Stillborn age sui and 6 Normal during Committed suicide by jumping into canal aged 35 possil he was in no financial or domestic difficulties and hav seemed perfectly normal half an hour before the if sh suicidal act

—1 Now aged 63 and my chief informant There is no history of epilepsy in his family I have known his mother brothers and sisters for over twenty t years

g 2 3 and 4 Normal 2 died of yellow fever in South a America aged 37

ti 5 Epileptic fits began at the age of 26 He was a professional cricketer but owing to these fits he l had to give up His friend equipped him with a small lending library which he still keeps

6 Mother of IV 1 Never had fits died aged 61

7 8 9 10 12 14 and 15 No history of epilepsy

11 Had severe epileptic fits Fell into the fire during a fit and died in hospital of burns

13 Had epileptic fits—frequent spells with periods of quiescence still alive

II —1 Unaffected

2 Unaffected Mother of III 6 and grandmother of IV 1

3 No history of epilepsy but had violent fits of anger and friends avoided him on this account Sudden resentment at an objectionable remark caused him to hang himself at the age of 50

4 Unaffected

5 Dropped dead at his work aged 30

6 8 9 and 10 Unaffected

7 Epileptic fits commenced about the age of 39 or 40 Did not work afterwards and died at the age of 60

I —1 2 3 and 4 Unaffected

This pedigree is small and incomplete especially with regard to the descendants of Generation III It shows however five true epileptics in twenty five descendants of I 3 and I 4—family B in three generations 1 in F_1 3 in F_2 1 in F_3 generations IV 3 stillborn is omitted in this enumeration and IV 2 is not reckoned an epileptic because the evidence for epilepsy is not conclusive This enumeration gives 20 per cent of epileptics in the descendants of I 3 and I 4 and points to a strong hereditary factor In the descendants of I 1 and I 2—family A—there are two impulsive suicides—II 3 and IV 5

As IV 1 was the worst case of epilepsy I have seen the question has occurred to me whether III 6—mother of IV 1—acted as a carrier in her germ cells from both her paternal and maternal sides of a loss of inhibiting factors on cerebral function This loss would seem to be sub lethal in effect for her family became extinct in a few years Does this point to natural eugenic factors tending to preserve the normality of the race? If this operates they do so only in the severer types of the disease the milder forms survive and propagate This seems to be in accordance with the transmission of mental defect and Berry and Gordon in their book *The Mental Defective* classify idiopathic epilepsy as a special type of mental defect

In this pedigree the age of onset varies from 8 to 40 years and this should be borne in mind when studying pedigrees of epileptic families It may be that some die before the age of onset and are classed as normal This is a fallacy which should be remembered when an attempt is made to draw any conclusions as to the relation of heredity to epilepsy

Warrington J S MANSON M D

DEATH FROM RUPTURE OF THE LIVER IN A NEWBORN INFANT

The following case seems to be worthy of record for rupture of the liver as the cause of death of the newly born infant appears to be rare Most of the textbooks on midwifery do not mention it and reports of such cases in the literature are exceedingly few

On March 1st 1932 Mrs A aged 22 a primipara was *delivered of a male infant weighing 10 lb 14 oz* The labour lasted about twenty three hours the presentation being left occipito anterior and terminated naturally but with considerable laceration of the perineum The infant started to breathe shortly after the head was born There was a good deal of delay in the birth of the shoulders and towards the latter part of this delay breathing ceased and some cyanosis became apparent After the birth of the shoulders breathing restarted with slight stimulation Neither shaking nor compression of the chest was used

The child was well formed and apparently quite healthy On the second and third day it seemed quite well and was fed from the breast On the fourth morning it was observed that it was slightly jaundiced but otherwise well In the afternoon the nurse noticed that the child seemed weak and listless and *from that time the weakness increased until* at 6 A M on the fifth day it collapsed and died

At the post mortem examination two hours after death there was slight jaundice and marked pallor of the lips and mucosæ The abdomen was tumid and contained fluid The peritoneum on being opened was found to be full of dark liquid blood and all the organs appeared healthy except the liver On the inferior surface of the right lobe was a haematoma the size of half a billiard ball full of dark blood and about the centre of the haematoma there was an irregular half an inch long incision in the capsule of the liver through which blood was leaking Around the edges of the tear was a small soft clot

It is noteworthy that the child lived four days and appeared quite well although the injury to the liver probably took place at birth the child was very large while the mother's pelvis was average in size The haematoma must have gradually increased in size until the fourth day when the capsule of the liver burst allowing a free escape of blood into the peritoneal cavity

H A PRITCHARD LRCP MRCS

H CECIL BARLOW MB Lond

Lincoln LRCP MRCS

These more highly developed than the former are included within the genus *Homo* but are not considered worthy of the specific attribute *sapiens* with which the six living *races of mankind* are dignified The account which the author gives of the circumstances attending the discovery of the three early Piltdown skulls is very interesting and should serve as one of the difficulties which anthropologists have to encounter in obtaining material The book closes with a chapter on the question of the location of the birthplace of mankind

EARLY LEARNING AND TEACHING

Three recent books may well be noticed together They are *The Children We Teach*[1] by Dr Susan Isaacs *The Gateways of Learning*[2] by Margaret Drummond and *Education of the Backward Child*[3] by David Kennedy Fraser All three authors are teachers and writers of much practical experience and well known for their expository powers Their books therefore are authoritative interesting and full of suggestions capable of immediate application Each is intended primarily for members of the teaching profession but in the education of the very young whether normal or retarded alliance between the doctor and the teacher is essential to success and for their effective cooperation in understanding of one another's outlook and methods is of fundamental importance Hence each of these books has a value and interest for members of the medical profession From this aspect the first-named volume is perhaps of most importance It contains less of psychological details than the other two which on internal parallel lines pursue in greater particularity the methods of what may be called laying the foundations *of instruction in oral expression in reading writing* and drawing in spelling and composition and in arithmetic

The point of view from which Dr Isaacs has written her book *is more nearly akin to that of the medical practitioner* She is recording primarily the children's individuals with varieties of feeling understanding and interest undergoing personal development at different rates and in diverse directions and the consideration of the methods of teaching and training by which they should *be dealt with* arises only secondarily or indirectly She is concerned with what is now spoken of as the primary school age from 7 to 11 years and she devotes attention not merely to the children's intellectual development during that period but also to their social development and reactions This is novel and valuable She emphasizes the life of the individual as opposed to that of the non-existent average child and draws a noteworthy distinction between the function of the psychologist who looks at the development of children all round and as a whole whose wider view enables him to see rather more of the broader laws of their development and who has more leisure to find out what children are really like in themselves and the concern of the teacher who is faced with the practical urgency of training children in this class or that school Especially interesting are the sections on children's thinking children's errors and the beginnings of reason and the case of the child who is backward in reading or in arithmetic is not overlooked

Here we use and Dr Isaacs uses the word backwardness of the normal child It would be well if its use could always be limited in this way One obvious criticism of Mr Kennedy Fraser's book is that in his title there is implied a much wider connotation and that he does not give the same connotation to the word backward throughout his volume Indeed it varies very widely There is a continuous curve of variability in mental power from the idiot to the normal person and the distinctions of the mentally defective from the normal of the various classes of defectives from one another and of the dull and backward class of normals from those above them are quite arbitrary though some of them are legally convenient Mr Kennedy Fraser seems to apply the term backward sometimes to the whole class of subnormals *sometimes to the higher grade* feeble minded only and sometimes to the dull and backward class only It would be better to employ the term *retarded in the educational sense* when the whole class is *meant* Even with reference to those commonly referred to as dull and backward it would be convenient to use the former adjective only of those who *are inherently of lower mental power and to restrict the* term backward to those who are temporarily retarded owing to adventitious circumstances which should be overcome Mr Kennedy Fraser not only recognizes but emphasizes this last distinction and considers the various causes of temporary backwardness such as physical disability irregularity of school attendance bad home conditions and even bad teaching He performs a valuable service too in refusing to consider the maladjusted child as in the same category

> Until the conditions of thinking and acting are at least approximately adjusted to the child's intellectual level no satisfactory conditions for feeling can be arranged When ever we come across a child who is obviously unhappy in his school work we ought first of all to find out the level of his inborn capacity and then set him to work on tasks suited to this level If he still remains unhappy then we should *apply the methods of child guidance to discover* and if possible remedy the unsatisfactory features in his emotional environment

There is some evidence however that Mr Kennedy Fraser is inclined to attach a too rigid or disproportionate value to the exact intelligence quotient

In the preface to *Gateways of Learning* Miss Margaret Drummond says that it *is not a book on methods of* teaching This is too exclusive a negative though it is true that no special technique is advocated The aim is said to be to set out the basic facts in regard to the psychological make-up of the child and the psychological relation between child and teacher and in regard to the sphere of subjects to be taught The aim is excellently accomplished

THE HOBBIES OF A SURGEON IN RETIREMENT

Dr PETER MCBRIDE the famous Edinburgh rural surgeon retired from practice as long ago as 1910 and since then as his pleasantly written book *The Philosophy of Sport* abundantly proves has led an active and enjoyable life With wide interests not only in sport but in literature to which he has contributed several books he has solved the problem of retirement and is obviously well provided with what in these circumstances are usually spoken of as hobbies and have recently been described as occupations without financial return The psychology of sport which is much discussed in the ten chapters dealing with various forms and aspects of sport has rarely been seriously considered Dr McBride indeed points out that the nearest approach is to be found in Thouless's *Social Psychology* from which he makes some abstracts In the chapter on health sport and games he pays some attention to the psychological value of golf and

[1] *The Children We Teach* By Susan Isaacs M A Bsc London University of London Press Ltd (Pp 176 3 3d net)
[2] *The Gateways of Learning* By Margaret Drummond M A London University of London Press Ltd (Pp xii + 190 60 figures 6 net)
[3] *Education of the Backward Child* By David Kennedy Fraser M A Bsc I R S E London University of London Press Ltd (Pp 204 illustrated 6s net)

[4] *The Philosophy of Sport* By P McBride M D I R C P Ed London Heath Cranton Ltd 1922 (Pp x + 190 7 6d)

perhaps rather unexpectedly does not give this form of exercise a high place from the point of view of health It is true that he almost apologizes for saying that even two rounds a day will not keep a man in anything like the best possible condition and when the benefit from one day's golf in the week is under consideration suggests that the effect of the tempting lunch at the clubhouse with an extra drink or two thrown in makes it very doubtful if the health balance is really favourable rowing and riding are much better In another chapter he describes in detail the exercises he has practised himself and found more satisfactory than those of the *Army Manual of Physical Training (1914)* and points out that when recommending exercises to patients the medical man should have had practical experience A graphic picture is drawn of the changes seen at ten yearly intervals of friends who originally slim and active become physically lazy connoisseurs of the larder and cellar and as a result florid protuberant in the lower waistcoat area and old before 50 Easily read this book is full of sound advice concealed by the kindly humour of a wise and experienced senior by no means grave

NOTES ON BOOKS

In his well written book *Biology and Mankind*[1] Mr S A McDOWALL who is the author of several other publications on evolution and is chaplain and senior science master at Winchester summarizes the knowledge which a biological student should have as a foundation and deals with evolution heredity and the biological aspects of social and political conditions The volume covers part of the ground of a biological course which has been given to the older boys at Winchester for more than a dozen years and many of their seniors who are wise in reading what is set out in such an attractive style will wish that they had shared this admirable education Rightly convinced that every man should have a knowledge of the established facts of biology the author has set them out in an extremely interesting manner no doubt the result of long experience and has clearly shown the direct and important bearing they have on the future of the race His view of eugenics is thoroughly broad minded and he throws out a warning of the evil days to come if the present birth restriction of the able bodied and able minded continues and procreation among the degenerate and mentally poor is not restrained

Dr H C A LASSEN'S thesis on *Paratyphoid Infections in Avitaminotic Rats*[2] based on his investigations in the State Serum Institute and University Institution of Hygiene Copenhagen is divided into six parts Its purpose is to record clinical observations on infections in diseases due wholly or partly to vitamin deficiency Subjects dealt with are xerophthalmic dystrophy scurvy and rickets spontaneous infections in experimental animals on a diet deficient in one or more vitamins previous experimental investigations on the significance of the diet to resistance against infections and against intoxications with bacterial toxins previous experimental investigations on the significance of the diet on the production of antibodies and the writer's personal investigations A bibliography of recent literature is appended Lassen's main conclusions are as follows (1) vitamin A deficiency disposes in a marked degree to an increased susceptibility to infection especially paratyphoid (2) vitamin B is hardly of any significance as a factor in creasing resistance (3) vitamin C is perhaps of some significance in this respect but its role is disputable (4) vitamin D is hardly of any significance to the organism as far as infection is determined

[1] *Biology and Mankind* By S A McDowall B D London Cambridge University Press 1931 (Pp xviii + 229 46 figures 6 net)

[2] *Experimental Studies on the Course of Paratyphoid Infections in Avitaminotic Rats with Special Reference to Vitamin A Deficiency* By H C A Lassen Copenhagen Levin and Munksgaard 1931 (Pp 248)

Little work has been undertaken into the immunological reactions of reptiles since the original researches of Metchnikoff at the beginning of the century Taking advantage of the rich reptilian fauna in South Africa the authors of a recent booklet[10] have undertaken a series of experiments into the subject of bacterial intoxications as well as venoms and antitoxic immunity in these animals Briefly their conclusions are as follows The susceptibility to tetanus toxin varies with the species lizards on the whole being most susceptible and tortoises least so young crocodiles are intermediate and some of the snakes are more or less susceptible Tortoises and crocodiles are relatively susceptible to diphtheria toxin while snakes are more resistant In general all are very resistant to dysenteric and typhoid intoxications Crocodiles are least resistant to viperine venom while tortoises are very resistant lizards being less so Crocodiles show about the same resistance to colubrine venoms tortoises are more susceptible while lizards are more resistant although not so much so as to viperine venom In all the above cases the antigen persists in the blood for long periods and in general rise in temperature accelerates the development of symptoms

[10] *Immunological Studies in Reptiles and their Relation to Species of Immunity in Higher Animals* By E Grasset M D and A Voutendyk Johannesburg Publications of the South African Institute for Medical Research No xxiv 1931

PREPARATIONS AND APPLIANCES

ALTERNATIVE ICE BAG OR HOT BOTTLE

We have received from Messrs F Davidson and Co (143 Great Portland Street London W 1) several samples of a new type of combined hot water bottle or ice bag made by Braun of Melsungen The bags are made of red rubber in a variety of shapes for application to different parts of the body After the ice or water has been put in the flattened rectangular neck in which is inserted a malleable metal plate is rolled up and the bag is watertight All the shapes are well designed particularly those intended for the application of heat or cold to the eye and throat The advantages of a rubber bottle which requires no cork or stopper is easy to fill and does not leak are a considerable recommendation for these appliances

CHEAP GOGGLES FOR ACTINOTHERAPY CLINICS

Dr W BEAUMONT (honorary medical director of the Institute of Ray Therapy Camden Road N W) draws attention to a new type of goggle for protecting the eyes of patients having artificial sunlight treatment The appliance made of non flam special intensified material is similar in appearance to the ordinary green tennis eye shade except that it fits closely round the eyes It is impervious to the ultra violet red and near infra red rays is light adjustable easily cleaned and costs only 9d The manufacturers are Messrs Solport Bros 184-192 Goswell Road London E C 2

CRYSTALLINE DIGITALINE AND OUABAIN

We have received from the Laboratory Nativelle Ltd samples of various preparations of Digitaline Nativelle and Ouabaine Arnaud The former product is of considerable historical interest because the isolation of crystalline digitalin by Nativelle in 1872 was one of the fundamental advances in our knowledge of the digitalis glucosides The preparations are biologically standardized and 1 mg Digitaline Nativelle equals 2½ cat units The makers claim that as regard therapeutic effect 0 1 mg Digitaline Nativelle equals 0 1 gram of the international standard digitalis powder Crystalline ouabain was first isolated by Arnaud from the wood of *Acokanthera ouabaio* and was later found to be identical with the active principle of the seeds of *Strophanthus gratus* Ouabain has better defined physico-chemical properties than any other active principle obtained from the various species of strophanthus and has been recognized by the *United States Pharmacopoeia* as a standard for comparison in biological assays The manufacturers point out that these preparations are pure products with an accurately standardized activity and that their exact therapeutic properties have been established by many years of clinical experience

cause of the allergy may vary He found that some of his cases negative to tuberculin, gave strongly positive skin reactions to an endotoxin produced from a haemolytic streptococcus, which he believes to be the organism of acute rheumatism He defines erythema nodosum as a type of hyper reactive tissue response to different bacterial allergens Under this heading can come both tuberculous and rheumatic cases, and it is possible that an epidemic due to the rheumatic type might occur through a carrier of the haemolytic streptococcus, just as Landau's cases arose from a "carrier" of tubercle bacilli In both cases the importance of the occurrence of examples of erythema nodosum lies in the fact that the source should be carefully looked for, and the tuberculous or rheumatic patient who is the cause of the mischief found before further harm is done

AETIOLOGY OF MYOPIA

Recent work and publications on myopia have cast some doubt on the theories and principles which have been held for a long time, and which, up to the present have been considered serviceably correct That there are a great many such theories is in itself evidence that no one satisfactory explanation of myopia exists There is now a tendency among some observers to regard certain types of myopia as physiological—forming part of a continuous series of refractive conditions of the eye which extend from myopia through emmetropia to hypermetropia They endeavour to substantiate this hypothesis by stating that the incidence of various degrees of refractive error when plotted in graph form give a binomial curve But, in order to obtain this curve they have to disregard all cases of myopia showing crescents or alternatively all cases of more than 6 D Even supposing that these omissions are allowable—and many ophthalmologists would not agree —the disproportionate amount of emmetropia results in a serious departure from this curve and has to be explained by arguments not altogether convincing Again new theories challenge the general view that in most cases myopia is due to axial elongation of the globe, for analysis of fifty three emmetropic eyes has shown that considerable variations exist in the refraction of the cornea and lens and in the axial length the total refractive power being the same in all these cases As a corollary to this it is stated that the eye of a myope of 6 D may have the same axial length as that of a hypermetrope of 4 D It has therefore been suggested that there is no sharp line of demarcation between the three states of refraction If only fifty three cases could be found in support of this view out of an admitted preponderance of emmetropia it might be questioned whether they do not really represent abnormalities rather than the true state of the normal eye Other investigators state that what is known as myopic fundus changes are the result of abiotrophic or developmental changes at the posterior pole of the eye and that the axial length of the globe is in fact secondary to the growth of the retina They deny that the condition of the sclerotic coat or the cornea is the primary cause and believe that hereditary myopia is due to an inherited tendency of the retina to grow to a large size If this is actually the case, certain views upon detachment of the retina now widely held would have to be revised The other theories quoted above do not quite fall into line with what is found in practice, and will have to undergo some modifications before they can be generally accepted Nevertheless, new ideas such as these are certainly useful in shaking ophthalmology out of the rut of conservatism, and by calling for a re examination and reassessment of existing theories, they tend to advance the solution of the problems of myopia a step further As Mr Sorsby[1] has lately pointed out, it is in the school that myopia most often commences, and it is there that inquiry must be made into its nature and causation

T H HUXLEY AND ALDOUS HUXLEY

A lecture by Mr Aldous Huxley would quicken anyone's interest but when it is in memory of his grandfather, Thomas Henry Huxley, the anticipatory pleasure is increased[2] Both men make an especial appeal to the medical profession apart from their non Aesculapian activities T H Huxley was a scholar of Charing Cross Hospital, and for a short time a surgeon in the Royal Navy The description of a case of tuberculous meningitis in *Point Counter Point*, and the future of obstetrics outlined in *Brave New World*, suggest that an undergraduate literary society of the hormonic millennium may discuss "Aldous Huxley as a physician" "By what seems a strange paradox," he says "the older scientists survive mainly as artists" That men of letters may survive as scientists would be a stranger paradox But is it improbable? In a brave new world in which only savages quote Shakespeare, may not Wells Shaw Aldous Huxley and the morbid little band of psycho analytical novelists survive only in so far as they have contributed to science? However that may be, the man of science who is also a man of letters has a double chance of survival and T H Huxley as a literary man is still a living force The lecturer therefore approached him as a purely literary critic He prefaced his analysis of Huxley's style with a short disquisition on literary criticism Critics, he said contented themselves too often with the mere application of epithets It was the pattern in which words were arranged that gave quality and intensity to their meaning and it was the business of the critic to show how our judgements are affected by variations in word patterns Discussing the relations between literature and science, he pointed out that while science is investigation it is no less communication without communication it would be useless "But all communication is literature In one of its aspects then science is a branch of literature" He committed himself still further and stated that all communications whatsoever were literature, qualifying this by saying that potentialities for beauty were unequal 'A good account of deep sea fish can never be as richly, variously and subtly beautiful as a good poem about love" He divides Huxley's writings into three classes the purely descriptive, the philosophical and sociological, the controversial and the emotive To describe an object with precision says Mr Aldous Huxley is extremely difficult and for this kind of writing Huxley had a remarkable talent How difficult it is to say

[1] Sorsby Arnold School Myopia *Brit Journ Ophthal* April 1932 217
[2] Huxley Memorial Lecture 1932 T H Huxley as a Man of Letters By Aldous Huxley London Macmillan and Co Ltd

clearly what a thing is, and how it works writers (and readers) of medical articles well know Quoting passages from Huxley's philosophical writings Mr Aldous Huxley shows that his literary style derived its effect from his mastery of rhythm and from the use of caesura sentences The classical use of caesura sentences he says is to be found in the poetical books of the Bible and was a device constantly employed by Sir Thomas Browne This kind of sentence is fitted for 'the utterance of profound rather melancholy aphorisms Huxley never indulged in literary elegances at the expense of accuracy and truth and seldom made use of metaphor and simile His weakest point was Mr Aldous Huxley says vocabulary In his controversial writings he was courteous but 'used every device for the expression of sarcasm and irony' Those who heard and those who read this memorial lecture have the double pleasure of gaining some insight into the methods of writing of two literary artists

IMPROVEMENTS IN THE TUBERCULOSIS SERVICE

The Joint Tuberculosis Council's report on improvements in the tuberculosis service has been published at a very suitable time as it should help to emphasize certain points in Dr MacNalty's report on tuberculosis which we reviewed in a recent issue (April 9th p 675) Its sound observations on the training in tuberculosis of medical students have already been made the starting point of what should be a very valuable discussion in other quarters But in respect of the tuberculosis service itself this all too brief report makes some weighty observations particularly in Section IV on the principles underlying administrative arrangements for a specialist tuberculosis service The list of signatories is worthy of notice in showing that here we have the opinions of men experienced in every possible branch of tuberculosis work and it is doubtful whether if any report on tuberculosis in this country were called for a better body of men could be chosen to provide it Therefore though Section IV may not be so interesting to the general medical public as the other sections it is in some ways the most important of them all It is true that the success of the service depends upon its personnel and thus that every effort must be made to train and attract the right men to it but that is not all that is necessary The administration in some districts is so inconceivably bad and the facilities for proper work so entirely lacking that it is impossible for any doctor to carry out the duties of tuberculosis officer with any semblance of efficiency On the other hand we have in England many areas where the administration is excellent It should not be an insuperable task for those who are centrally responsible to discover these areas examine them and compile a list of the minimum essentials for efficiency The granting of central funds would then surely give the power of insisting on these minimum essentials in all districts We cannot quite agree with the report where it says only large administrative areas can afford (*a*) well equipped dispensaries with x-ray apparatus, (*b*) institutional accommodation for all types of cases The money is there it is only a question of spending it on essentials instead of dissipating it on useless effort It is to be hoped that in conjunction with Dr MacNalty's this report will bear fruit but this section at least must be criticized as being too restrained and condensed One can easily visualize a member of the public health committee of a local county council reading it through failing to grasp more than a quarter of its message and being in no way disturbed in his somnolent complacency

HUGHLINGS JACKSON MEMORIAL

At the annual general meeting of the Section of Neurology of the Royal Society of Medicine on Thursday next at 8 p m Dr T Watts Eden will present the first Hughlings Jackson medal to Sir Charles Sherrington Almost exactly a year ago we published a letter signed by representative physicians surgeons and scientists asking for support for a fund to commemorate the name of Hughlings Jackson A pamphlet has now been issued to subscribers to let them know what has been done with the money raised and to give them a short history of the lectureship and of the events that led up to its foundation and endowment It is written by the treasurer of the fund Dr Wilfred Harris to whose energy in promoting the scheme and tracing out the records Mr Leslie Paton pays tribute in an addendum John Hughlings Jackson, born in 1835 was one of the first four joint editors of *Brain* of whom Sir James Crichton Browne now aged 92 alone remains to us Crichton Browne was the active spirit in founding the old Neurological Society in 1885 and Jackson was its first president Of the ninety-five original members twelve are still alive In 1897 fourteen years before he died the society founded a lecture in honour of Jackson and with some interruptions it has been delivered triennially ever since The last by Sir Charles Sherrington on 'Quantitative management of contraction for lowest-level co ordination' appeared in our issue of February 7th 1931—a few days after its delivery Hitherto no memento or fee has been provided for the lecturer but the fund now raised will suffice to endow the lectureship with a gold medal and an honorarium every three years What remains over after such provision will go towards the purchase of books and periodicals on neurological subjects for the library of the Royal Society of Medicine each volume being marked by a special book plate with Jackson's profile portrait as designed by Mr Percy Metcalfe for the medal to indicate its origin from the fund



MALARIA IN SOUTH AFRICA

In an appendix to the annual report of the Department of Public Health of the Union of South Africa for the year ending June 1931 [1] Professor N H Swellengrebel of the University of Amsterdam has furnished a valuable and exhaustive memorandum on the endemicity and control of malaria in the Transvaal and Natal He discusses fully the social epidemiological and entomological aspects of malaria in the Union and the control of the disease in the Transvaal the sugar belt of Natal and the railways As a result of his observations he can offer some useful suggestions for the prevention of the disease while his conclusions

[1] The Government Printer Pretoria (2s 6d)

confirm certain well recognized facts and difficulties concerning the transmission and control of malaria over the vast regions of tropical and subtropical Africa. A survey of the various South African species of anophelines showed that the chief carriers of the disease were *A. (Cellia) costalis* and *A. (Myzorhynchus) funestus*, and that fortunately the two mosquitos were extremely selective in their breeding places, thus rendering possible the application of "species sanitation." *A. costalis* breeds in muddy pools, open drains, and small collections of water exposed to the sunlight rather than in large rivers or swamps filled with vegetation, and interference with "vleis" and swamps by drainage and clearing might render such places suitable for its breeding. This happy preference for certain definite breeding places renders anti-larval measures simpler and less expensive. Swellengrebel is doubtful naturally about making sweeping recommendations for anti-larval control over vast areas, because the demographical conditions make this application an extremely difficult undertaking, but he suggests that anti-larval measures be carried out tentatively on a limited scale and continuously guided by research. Further, he warns the authorities that anti-larval measures though indispensable for the eradication of malaria should not be regarded as a *sine qua non* for malaria control over the whole of South Africa. He sees no reason to feel discouraged if future experience proves the impossibility of the general application of such measures. A third mosquito, *A. (Cellia) pharoensis*, which breeds in morasses, has been found infected, but so far there is no evidence that this species plays an important part in the transmission of human malaria. Emphasis is laid on the important fact that research in malaria is an essential part of the system of malaria control in the Union. It is proposed that a control station should be established in the Transvaal so as to achieve close co-ordination of the epidemiological and entomological findings. Intensive research would then be possible over a long period on the same spot in order to determine the changes of conditions throughout the whole year. Conditions in the Natal sugar belt differ in some respects from those existing in the Transvaal. In this area estate sanitation makes anti-larval measures against *A. costalis* a practical proposition of considerable economic importance.

THE MANSON MEDAL

The Manson medal for tropical medical research, given triennially by the Royal Society of Tropical Medicine and Hygiene, has this year been awarded to Dr. Theobald Smith, who in association with Kilborne in 1893 showed that red water fever in cattle was transmitted by ticks and at the same time demonstrated the passage of infection through the ova of one generation of ticks to the next. This discovery proved that a protozoal parasite of mammals could be disseminated by the bite of a blood-sucking arthropod. Probably because Theobald Smith was dealing with a disease of cattle rather than a human disease this landmark in the history of medicine received scant recognition though it preceded the better known work of Bruce on the transmission of sleeping sickness and that of Ross on malaria. Furthermore in 1893 Manson's hypothesis regarding the mosquito transmission of *Filaria bancrofti* constituted only half the truth, since he thought man was infected via mosquito contaminated water either by swallowing the escaped microfilariae or through their penetrating the skin of man. Indeed, it was not until March, 1900, when Low demonstrated filarial embryos in the proboscis of infected mosquitos sent to Manson from the younger Bancroft that the true mechanism of their entry during biting was understood. It is thus no overstatement of the case to say that Theobald Smith was the first to transfer the insect transmission theory of protozoal disease from the realms of hypothesis to those of established fact. In 1904 he reported anaphylactic symptoms in dogs and rabbits, and in a letter to Ehrlich wrote the original description of the classical anaphylactic shock in guinea pigs often known as the Theobald Smith phenomenon. In 1907 he proved that it was possible to immunize guinea pigs actively by the injections of a balanced mixture of diphtheria toxin and antitoxin, and two years later suggested further investigations of the method with a view to its ultimate application to human beings, thus anticipating von Behring and Park's work by several years. The previous recipients of the Manson medal have been Sir David Bruce (1923), Senator Ettore Marchiafava (1926), and Sir Ronald Ross (1929).

ROLL OF BIO-PHYSICAL ASSISTANTS

We publish this week as a Special Supplement the complete list of names on the *Register of Bio-Physical Assistants* revised to March 31st. It was in 1928 that the Representative Body of the British Medical Association first drew attention to the need for registration of lay persons to whom medical practitioners could with confidence send their patients for electrical treatment and actinotherapy. A small committee of experts was formed to draw up a scheme, which, after presentation by the Science Committee, was approved by the Council of the Association. In January, 1929, the Court of the Society of Apothecaries of London decided to adopt and to further this scheme for granting diplomas after examination to bio-physical assistants and for the establishment of a register. Regulations were drawn up, and the first *Register of Bio-Physical Assistants* appeared in book form under the Society's direction. Our purpose in publishing the revised edition of this register is to make it widely known to members of the medical profession in a form convenient for ready reference. The entries in Part I. are arranged in alphabetical order, with postal addresses; in Part II. the names are re-grouped geographically. Since the British Medical Association was primarily responsible for the setting up of the roll we hope that members will preserve this Supplement and send their patients who require treatment by light and electricity to technicians holding the Society's diploma.

Sir Arthur Keith will deliver the Stephen Paget Memorial Lecture at the annual general meeting of the Research Defence Society to be held on Wednesday, June 15th, at 3 p.m. in the lecture hall of the London School of Hygiene and Tropical Medicine, Keppel Street, W.C. The title of the address will be announced later.

The Morison Lectures before the Royal College of Physicians of Edinburgh will be delivered on May 23rd, 24th, and 25th at 5 p.m. by Dr. James Collier, on "The pathology and clinical features of some types of peripheral neuritis."

Collective Investigation

INTO

THE INCIDENCE OF CANCER OF THE BREAST, AND ITS HISTORY AFTER TREATMENT

Report by

ARTHUR P LUFF CBE MD BSc FRCP

CONSULTING PHYSICIAN TO ST MARY'S HOSPITAL HONORARY DIRECTOR OF COLLECTIVE SCIENTIFIC RESEARCHES TO THE BRITISH MEDICAL ASSOCIATION

The British Medical Association in 1928 initiated a collective investigation scheme and started with an inquiry into the treatment of varicose ulceration which was followed in 1929–30 by an inquiry into the after history of gastro enterostomy in connexion with both of those investigations reports have been issued[1] In 1929 it was decided to conduct an inquiry into the incidence of cancer and its history after treatment A memorandum was issued to medical practitioners stating that the inquiry was limited to the following conditions carcinoma of the breast cervix rectum and tongue It was to cover a period of one year from October 1929 to September 1930 and practitioners taking part in the inquiry were requested to keep a record of all cases that came under their notice during that period It was stated that the scope of the inquiry was not limited to new cases but was to include any cases that came under their notice during the period under review The object of the inquiry was to obtain precise information as to the previous history of patients suffering from the above mentioned forms of carcinoma of the actual evolution of the disease itself and especially of the first symptom which had called attention to it of the result of any treatment undertaken and of the duration of the disease when treated and untreated Questions were included relating to family history in the hope that the answers would throw some light on the influence of hereditary predisposition on the causation of cancer Forms dealing with the questions to be answered were issued to those members of the Association who were willing to take part in the inquiry

The returns of cases of cancer of the breast only are dealt with in this report The returns for cancer of the cervix tongue and rectum will be reported on later

In determining the results of treatment the cases that survived have been divided into two groups (*a*) the survivals that had been under observation at the time of reporting for less than four years and (*b*) those that had been under observation at the time of reporting for four or more years As a corollary of the one year period laid down in the memorandum a large number of cases were returned which had been under observation at the time of reporting for less than four years although it is highly probable that many of them if they had been kept under more prolonged observation would have passed into the other group of four or more years Therefore in connexion with this report it must be kept in mind that the number of survivals for four or more years in good health after operation does not represent the number which would have been reached if all the cases had been kept under observation for a longer period nevertheless it will be found that the number of cases though comparatively small is of great value in comparing the survival rates under different conditions

[1] *Brit. Med. Journ.* December 22nd 1928 December 14th and 28th 1929 February 2nd 1930

Reports of 1 651 cases of cancer of the breast have been received The reports are analysed as follows

Married cases (living)	877
Single cases (living)	277
Deaths (married and single)	370
Male cases	13
Reports inadequately filled in	115

The 13 male cases and the 115 cases the reports of which were inadequately filled in have been rejected as useless for the purposes of this inquiry The remaining 1 523 returns have been carefully collated and the results are embodied in the various tables followed by the comments made thereon and the deductions that have been drawn

AGE INCIDENCE

The age was not given in 11 cases

TABLE I—*Incidence of Cases*

Age	No. of Cases	Percentage
19–30 years	10	0·7
30–40 "	93	6·1
40–50 " " "	350	23·0
50–60 " " "	493	32·3
60–70 "	353	23·1
Over 70	187	12·3

This table shows that two thirds of the cases occurred in patients of 50 years and over Of the 10 cases under 30 years of age two occurred at the remarkably early ages of 19 and 21 and as a matter of interest the following details of these cases are given

1 Aged 19 years at time of operation Unmarried Lump in breast first noticed by patient one year before complete operation was performed No palpable enlargement of axillary glands Microscopical examination demonstrated carcinoma Prophylactic treatment with x rays was used fortnightly for ten months after operation Patient was in good health at time of reporting (two years after operation) Grandmother died of cancer

2 Aged 21 years at time of operation Unmarried Lump in breast noticed a short time before complete operation was performed No palpable enlargement of axillary glands Microscopical examination demonstrated carcinoma Secondary deposits occurred in abdomen six to twelve months after operation and in spine later Death fourteen months after operation No family history of cancer

CHILD BEARING IN RELATION TO CANCER OF THE BREAST

Among the total of 1 146 married women 844 were parous 250 were non parous and no information was given in 52 cases The parous have been divided into two groups (*a*) those that had less than four children and (*b*) those that had four or more children and in Table II the percentages in the two groups as furnished by the returns of this inquiry are contrasted with the corresponding percentages in the same group of the married parous women in the entire population as calculated from the figures given in Table 19 p of vol xiii of the 1911 Census Report by the Registrar General

TABLE II

No. of Children	Cases from Present Inquiry		Census Figures	
	Number	Percentage	Number	Percentage
Less than 4	644	76·3	1 [illegible]	[illegible]
4 or more	200	23·7	[illegible]	45·0

Attention has been directed by some writers to the possibility of the association of cancer of the breast with the production of a large number of children but such association is not borne out by the figures given in this inquiry since if such an association existed the

percentage of cancer of the breast cases in women that had four or more children would be higher than the 48 per cent of all married parous women whereas it is considerably lower The figures in Table II tend to show that the greater the number of children the less is the liability to cancer of the breast

Cancer of the Breast in Parous and Non-parous Married Women and in Single Women

In Table III the percentage of cancer of the breast in the parous and non-parous married women, as furnished by the return of this inquiry are compared with the relative percentage of parous and non-parous married women in the entire population as calculated from the 1911 Census (reference 1 above)

TABLE III

Married Women	Cancer of Breast Returns of Present Inquiry	Census Returns of 1911 for the Entire Population
Parous	Per cent 77·0	Per cent 83·0
Non-parous	23·0	17·0

The table shows that there is a relatively higher proportion of cancer of the breast in non-parous women than in parous as compared with the relative proportions of parous and non-parous women in the entire population

In Table IV the percentages of cancer of the breast in married and single women as furnished by the returns of the inquiry are compared with the relative percentages of married and single women in the entire population at 45 years of age and upwards as calculated from Table 33 of the general tables of the census report for 1921

TABLE IV

	Cancer of Breast Returns of Present Inquiry	Census Returns of 1921 for the Entire Population
Married	Per cent 75·0	Per cent 85·0
Single	25·0	15·0

The table shows that there is a relatively higher incidence of cancer of the breast in single women than in married as compared with the relative proportions of married and single women in the entire population Tables III and IV taken together apparently show that *there is a somewhat greater liability to cancer of the breast in both non-parous and single women than in the parous and married women* All the above-mentioned statistics tend to support Lane-Claypon's reference[1] to the possible beneficial physiological effects of marital intercourse on the aetiology of cancer

The statistics in Table V have been worked out from the returns of this inquiry to ascertain whether the fertility or non-fertility of women has any influence on the after-operation results

TABLE V

	Survivals for Four or More Years in Good Health after Operation	Recurrences after Operation
	Per cent	Per cent
Married (parous)	25·3	22·3
Married (non-parous)	28·2	24·3
Single	29·1	20·9
Parous that had less than four children	23·6	21·1
Parous that had four or more children	29·1	24·4

From this table it would appear that the influence of fertility or non-fertility of women on the after-operation results is negligible It may be mentioned in addition that the return of the total number of deaths after operation among the parous is practically the same as that among the married non-parous and single women combined

SUCKLING

Information as to suckling was given in 506 of the married cases that were alive after operation at the time of reporting Of these women 429 suckled their children and 77 did not No very reliable information can be gained from so small a number of cases but it was thought desirable to compare the survival rate for four or more years and the recurrence rate in the two groups, and the results are shown in Table VI

TABLE VI

	Survivals for Four or More Years in Good Health after Operation	Recurrences after Operation
Suckled	Per cent 23·5	Per cent 22·8
Non-suckled	23·6	15·6

From this table it would appear that suckling has some prejudicial effect on the after-operation results although it must be remembered that the statistics are obtained from a comparatively small number of cases

FIRST SYMPTOMS THAT DIRECTED THE PATIENT'S ATTENTION TO THE BREAST CONDITION

Information on this point was given in 931 cases (married and single) as shown in Table VII

TABLE VII

First Symptom Noticed by Patient	No. of Cases
Lump in breast	740
Lump and pain	81
Pain	48
Discharge from nipple	35
Retraction of nipple	23
Hardness of breast	9
Enlargement of axillary glands	2

It will be seen from this table that pain alone as a first symptom was present in only 5·1 per cent of the cases

Interval between First Symptom and Operation

The interval of time that elapsed between the first symptom that directed the patient's attention to the breast condition and the date of operation was given in 715 cases (married and single) who all survived after operation and Table VIII shows in column (*a*) the long periods which many patients allowed to elapse before seeking medical aid although in the great majority of the cases operation followed within a few days of the recognition of the condition by the medical practitioner In columns (*b*) and (*c*) are shown respectively the survival rates for four or more years and the recurrence rates among the various periods

TABLE VIII

Interval of Time between First Symptom and Operation	(*a*) Percentages of Time Intervals	(*b*) Survivals for Four or More Years in Good Health after Operation	(*c*) Recurrences after Operation
		Per cent	Per cent
Under 1 month	37·1	31·3	13·9
1-3 months	23·6	29·0	14·7
3-6 months	15·1	23·5	27·0
6-12 months	11·9	23·5	27·1
Over 1 year	16·2	16·4	34·5

[1] Report No 28 on Cancer of the Breast Ministry of Health 1921 p 103

This table shows the fairly corresponding decrease in the survival rate in good health for four or more years and the fairly corresponding increase in the recurrence rate according to the length of time allowed to elapse between the first recognition by the patient of breast trouble and the operation

Among the returns of deaths after operation information was given in 192 cases of the interval of time that elapsed between the first symptom that directed the patient's attention to the breast condition and the date of operation Table IX shows the respective mortality rates for the different time intervals

TABLE IX

Interval of Time between First Symptom and Operation	Respective Mortality Rate
	Per cent
Under 1 month	5 2
1 3 months	10 7
3 6 months	15 6
6 12 months	25 5
Over 1 year	37 0

This table shows the fairly corresponding increase in the post operative mortality rate according to the length of time allowed to elapse between the first recognition by the patient of breast trouble and the operation

BREAST TROUBLES ANTECEDENT TO CANCER

In only 19 8 per cent of all the cases was any history obtainable of breast trouble preceding the cancer The various forms of such trouble are given in Table X The form of injury in the majority of cases was a blow of some kind but the history of the injury was in many cases of a somewhat dubious nature

TABLE X

Breast Troubles Antecedent to Cancer	No of Cases
No history of any trouble obtained	1,221
Injury	139
Chronic mastitis	73
Abscess	37
Sore nipple	30
Lactation	24

Preceding breast troubles do not appear to be a factor of much importance in the development of cancer of the breast

PAIN IN CONNEXION WITH THE GROWTH

Pain was completely absent prior to operation in two-thirds of the cases and in the great majority of those in whom it occurred the pain was not of a severe character

FAMILY HISTORY

This consisted of statements made by the patients to the medical practitioners of any relatives that had died of cancer but it was impossible for the medical practitioners in most of the cases to verify the statements Only 23 1 per cent of the patients gave a family history of cancer the remaining 76 9 per cent stated that they were not aware of the existence of cancer in any members of their families The 23 1 per cent was made up as follows

15 7 per cent gave a history of 1 relative that had died of cancer
2 8 per cent gave a history of 2 relatives that had died of cancer
1 6 per cent gave a history of 3 or more relatives that had died of cancer

As regards the sex distribution of the alleged cancer among relatives—

63 7 per cent gave a history on the female side only
30 1 per cent gave a history on the male side only
6 2 per cent gave a history on both the male and female sides

So far as the results of this inquiry throw light on family history go it would appear that the influence of hereditary predisposition on the causation of cancer of the breast is not a dominant factor

SITUATION OF TUMOUR

TABLE XI

Situation	Incidence
Left breast	9
Right breast	8
Both breasts	1

The situation was further given in the returns according to the position of the tumour in the centre or in one of the quadrants of the breast The tumours in the central position include the small number of cases in which the entire breast was involved

TABLE XII

Situation in Breast	Incidence
Upper outside quadrant	43 9
Centre	9 9
Lower outside quadrant	14 4
Upper inside quadrant	11 1
Lower inside quadrant	6 6

CHARACTERS OF THE TUMOUR

Information as to induration mobility and ulceration was given in 1 470 cases

TABLE XIII

Character of Tumour	Incidence
Induration	4
Mobile	1
Fixed	94 3
Ulceration	1 5

The majority of the cases of ulceration occurred in the inoperable cases and those in which operation was refused

STAGE OF THE DISEASE

This refers to the absence or presence of secondary spread at the time of examination of the patient and when first seen The classification used is similar to that adopted by Lane Claypon (Report No 81 p 17 to the Ministry of Health 1928)—namely

Class A—Axillary glands not obviously involved

Class B—Axillary glands involved but not to such extent as to further spread of the disease

Class C—The disease extends beyond the axillary glands

The relative percentages in the three classes of all the cases including the inoperable cases and those that refused operation are shown in Table XIV

TABLE XIV

Stage of Disease	Incidence
Class A	[illegible]
Class B	[illegible]
Class C	[illegible]

The 73 per cent in Class C is of course [illegible] weighted by the comparatively large number of inoperable cases that occurred among those operated on and those that refused operation This is clearly shown by the rate

percentages in the 130 inoperable cases in which information was given as to the stage of the disease and which are shown in Table XV

TABLE XV

Stage of Disease	Percentage
Class A	4·6
Class B	36
Class C	60·8

Post-operative Results according to the Stage of the Disease

Information of the stage of the disease was given in 626 cases (married and single) which all survived after operation and were alive at the time of reporting. The relative percentages in the three classes are shown in Table XVI

TABLE XVI

Stage of Disease	Percentage
Class A	43·2
Class B	51·6
Class C	5·2

This table roughly represents the proportion of operations performed on the three classes of cases that were alive at the time of reporting. The survival rates for four or five years and the recurrence rates in the three classes are shown in Table XVII

TABLE XVII

Stage of Disease	Survival for four or more Years in Good Health after Operation	Recurrences after Operation
	Per cent	Per cent
Class A	75	19·5
Class B	16	2·8
Class C	3·3	70·0

This table shows the marked decrease in the survival rate and the marked increase in the recurrence rate in proportion to the extent and spread of the disease prior to operation.

DISCHARGE FROM NIPPLE

The returns showed that discharge was present in 80·8 per cent. of the total cases; discharge was present in 6·6 per cent.; no information was given in 12·96 per cent.

NATURE OF OPERATIONS

The number of operations recorded was 1,203, of which 89·2 per cent. were of the complete kind and 10·8 per cent. of the incomplete kind; in many of the cases the incomplete operation had to be performed owing to the advanced and widespread nature of the disease. Of the operations 67 per cent. were performed in hospitals, 31 per cent. in nursing homes and 2 per cent. in private houses.

Of the 971 cases (married and single) followed by survival at the time of reporting 882 were of the complete type. The survival rate for four years and the recurrence rate in the two types are shown in Table XVIII

TABLE XVIII

	Survival for Four or more Years in Good Health after Operation	Recurrences after Operation
	Per cent	Per cent
Married (parous)	29·1	18·8
Married (non-parous)	33·6	4
Single		
Parous that had less than four children	29·1	
Parous that had four or more children		

From this table it would appear that the influence of fertility or non-fertility of women on the after-operation

[1] Report No. 28 on Cancer of the Breast, Ministry of Health, 1924, p. 103.

MICROSCOPICAL EXAMINATION OF GROWTHS

The results of the microscopical examinations were given in 696 cases. These were classified into the following four groups:

1. *Scirrhus*.—This group includes those described as scirrhus and definitely malignant.
2. *Medullary*.—This group includes those described as pleroidal celled, encephaloid, colloid, adeno-carcinoma and glandular celled.
3. *Carcinoma*.—This group consists of those simply described as carcinoma.
4. *Duct cancer*.—This group includes those described as columnar and papillary in ducts.

Among the 696 cases scirrhus occurred in 37·8 per cent. of the cases, medullary in 33·9 per cent., carcinoma in 22·7 per cent., duct cancer in 5·6 per cent.

Owing to the collection of such a number of cases in which reliable micro-copical examinations had been made it appeared that it might be of interest to contrast in the four groups (*a*) the survival rates for four or more years in good health and the recurrence rates, (*b*) the relative proportions of the four types in those that suckled their children and in those that did not, (*c*) the relative age incidence, (*d*) the relative proportions of the four types according to the stage of the disease (see p. 899), (*e*) the relationship of pain to the four types. The results are given in Tables XIX–XXIII

TABLE XIX

Type of Growth	Survivals for Four or More Years in Good Health after Operation	Recurrences after Operation
	Per cent	Per cent
Scirrhus	31·4	16·2
Medullary	47·9	20·4
Carcinoma	33·6	14·9
Duct cancer	35·1	10·8

This table shows that the survival period for four or more years is lower in the medullary type and that recurrences are much less frequent in the duct type and are more common in the medullary type.

TABLE XX

Type of Growth	Those that Suckled	Those that did not Suckle
	Per cent	Per cent
Scirrhus	35·7	41·9
Medullary	30·8	39·6
Carcinoma	4·4	23·7
Duct-cancer	8·1	2·3

This table shows that the proportion of duct cancer is much higher in those that suckled than in those that did not. If suckling has any influence on the development of cancer of the breast the above figures would tend to show that it is rather more prone to produce the duct type; but as the number of women who did not suckle is small no very reliable deduction on this point can be drawn from the returns of this inquiry.

TABLE XXI

Type of Growth	Under 50 Years of Age	50 Years and Over
	Per cent	Per cent
Scirrhus	38·6	61·4
Medullary	44·5	55·5
Carcinoma	41·7	58·3
Duct cancer	44·4	55·6

This table shows that under 50 years of age scirrhus is the commonest type, but that over 50 years of age it is the least common type of cancer of the breast.

TABLE XXII—*The Four Types in Relation to the Stage of the Disease*

Type of Growth	Class A	Class B	Class C
	Per cent	Per cent	Per cent
Scirrhus	46·7	50·0	3·3
Medullary	4·6	49·1	4·3
Carcinoma	48·9	48·9	2·2
Duct cancer	51·3	48·7	0·0

This table shows that the numbers of cases in the A and B group were approximately the same for the four types. No cases of duct cancer were in the C group.

TABLE XXIII

Type of Growth	Pain Present	Pain Absent
	Per cent	Per cent
Scirrhus	40·0	60·0
Medullary	28·0	72·0
Carcinoma	9·2	63·8
Duct-cancer	33·3	66·7

This table shows that the absence of pain is more marked in cases of the medullary type than in the other types. In the great majority of all the cases the pain was not of a severe character.

Among the returns of deaths after operation the results of the microscopical examination of the growths were given in 151 cases, and Table XXIV shows the relative mortality in the four types.

TABLE XXIV

Type of Growth	Mortality
	Per cent
Scirrhus	3·4
Medullary	4·3
Carcinoma	1·6
Duct-cancer	0·7

This table shows that the death rate is much the highest in cases of the medullary type, and is extremely low in cases of the duct type.

All the figures in this section show that cancer of the medullary type is the severest form of the disease.

HISTORY AFTER OPERATION OF ALL PATIENTS ALIVE AT THE TIME OF REPORTING

Information was given in 910 cases as follows:

Survival after operation in good health at time of returns	Under 4 years	51·9%
	4 years and over	27·4
Recurrences after operation		20·7

It is unfortunate in connexion with this inquiry that of the survivals after operation there are so many cases that had been under observation for less than four years at the time of reporting, since it is highly probable that many of them if they had been kept under more prolonged observation would have passed into the other group of four years and over. As mentioned in the early part of this report it must be carefully kept in mind that though the number of survivals for four years and over does not represent the number which would have been reached if all the cases had been kept under observation for a longer period yet the total number of cases has been of great importance in comparing the survival rates under different factors.

Secondary Deposits (Recurrences) after Operation

Information was given in 204 cases as to the times of occurrence after operation of the secondary deposits and the results are shown in Table XXV.

TABLE XXV

Time of Occurrence of Deaths (or Other Events)	Percentage of Deaths
Under 1 year	46
1 to 3 years	42
3 to 6 years	10
Over 6 years	2

This table shows that practically three-fourths of the deaths occur within three years of the operation.

INOPERABLE CASES

The total number of inoperable cases recorded was 1,[illegible]. The reasons given for the inoperability are shown in Table XXVIII.

TABLE XXVIII

Reasons given for Inoperability	Percentage
Disease too far advanced	68
Advanced age	6
Other causes	6
Invalid	5
Complications	5
Threatened	5
Known to be	6
Not specified	3

TABLE XXV

Time of Occurrence of Secondary Deposits	Percentage
Under 1 year	46
1 to 3 years	42
Over 3 years	12

Sites of Secondary Deposits

Information was given in 486 cases of the sites of the secondary deposits after operation. 247 had a single site and 239 in multiple sites. TABLE XXVI shows the percentages of the relative sites in the 247 single recurrences.

TABLE XXVI

Site	Percentage
Axilla	30
Other bone	9
Supraclavicular gland	11
Skin	16
Within abdomen	9
Within chest	5

The multiple deposits occurred in two or more of the following sites: skin, supraclavicular gland, within chest, within abdomen, other bones, pleura, brain.

DEATHS AFTER OPERATION

No attempt can be made from the returns to calculate the post operative mortality of cancer of the breast, the number of deaths returned merely represent such deaths that came under the notice of the practitioners making the returns during the period from October 1929 to September 1930, and therefore bear no actual relation to the total returns.

It was thought desirable to ascertain the relative mortality rates during the different periods that elapsed between operation and death. Information on this point was given in 275 cases (married and single), and the results are shown in Table XXVII.

TABLE XXVII

Time of Occurrence of Deaths (or Other Events)	Percentage of Deaths
Under 1 year	46
1 to 3 years	42
3 to 6 years	10
Over 6 years	2

This table shows that practically three-fourths of the deaths occur within three years of the operation.

INOPERABLE CASES

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Threatened	5
Known to be	6
Not specified	3

TREATMENT BY X RAYS AND RADIUM

Reports were sent in of 802 cases that received x ray treatment and of 171 cases that received radium treatment. As the methods of radium treatment, the dosage, the number and the duration of the treatments were not given in several of the cases, classification on those lines was impossible. The particulars have been classified in the following groups:

X Rays Employed after Operation as a Prophylactic Measure

This treatment was used in 245 cases.

TABLE XXXIX.—*X Rays as a Prophylactic.*

Time of Employment of Rays after Operation	No. of Cases	Percentage
Within 1 month	83	34·0
1–3 months	93	38·0
3–6 months	10	4·3
Over 6 months	5	2·1
Not stated	54	22·0

Several of the cases were under observation after the treatment for only a comparatively short time at the date of reporting, but the results for all the cases are given in Table XXX.

TABLE XXX.

Result	No. of Cases.	Percentage.
Survivals in good health at time of reporting—		
Under 1 year	23	9·5
1–4 years	59	24·1
Over 4 years	19	7·9
Extension of growth to other parts	37	15·3
Deaths	69	28·4

X Rays Employed after Operation for Treatment of Secondary Growths

This treatment was used in 67 cases.

TABLE XXXI.—*X Rays for Treatment of Secondaries.*

Time of Commencement of Treatment after Operation	No. of Cases	Percentage
Under 1 year	3	4·7
1–2 years	18	28·9
2–4 years	8	11·9
4–6 years	5	7·5

Some of the cases were under observation after the treatment for only a comparatively short time at the date of reporting, but the results for all the cases are given in Table X

	Cases.	Percentage
		4·5
		4

Simple		
Parous that had less than four children	291	
Parous that had four or more children		

From this table it would appear that the influence of fertility or non-fertility of women on the after operation

[1] Report No. 28 on Cancer of the Breast. Ministry of Health 1921, p. 103.

Radium Employed after Operation as a Prophylactic Measure

This treatment was used in 52 cases. Needles or tubes were used in 80 per cent. of the cases, surface treatment in 13 per cent., and seeds in 7 per cent.

TABLE XXXIII.—*Radium as a Prophylactic.*

Time of Employment of Radium	No. of Cases	Percentage
At time of operation	36	69·2
Within 3 months of operation	13	25·0
Over 3 months after operation	3	5·8

The majority of the cases were under observation after the treatment for only a comparatively short time at the date of reporting, but the results for all the cases are given in Table XXXIV.

TABLE XXXIV.

Results	No. of Cases.	Percentage.
Survivals in good health at time of reporting—		
Under 1 year	21	40·4
1–4 years	14	27·0
Over 4 years	4	7·7
Extension of growth to other parts	6	11·4
Deaths	7	13·5

Radium Employed after Operation for Treatment of Secondary Growths

This treatment was used in 52 cases.

TABLE XXXV.—*Radium for Treatment of Secondaries.*

Time of Commencement of Treatment after Operation	No. of Cases	Percentage
Under 1 year	14	27·0
1–2 years	17	32·6
2–4 years	7	13·4
4–9 years	14	27·0

Several of the cases were under observation after the treatment for only a comparatively short time at the date of reporting, but the results for all the cases are given in Table XXXVI.

TABLE XXXVI.

Results	No. of Cases	Percentage
Apparent cure at time of reporting—		
Under 1 year	10	19·2
1–4 years	8	15·4
Secondary growth kept in check	5	9·6
Extension of growth to other parts	18	34·6
Deaths	11	21·2

So far as any deductions can be drawn from so small a number of cases (104 in all) it would appear that radium is of greater benefit as a prophylactic agent than for the treatment of secondary growths.

As regards the four types of cancer (see p. 900) and their reaction to radium, the worst results as shown by the extension of the disease to other parts were obtained in the medullary type.

Comparison of the Results of Prophylactic Treatment

Table XXXVII. shows the survival and recurrence rates among (*a*) the cases that had no prophylactic treatment after operation, (*b*) the cases that had *x* ray prophylactic treatment after operation, and (*c*) the cases that had radium prophylactic treatment after operation. For the [illegible] of this table all the survivals in good health at

the date of reporting are made up The periods during which they had been under observation varied from a few months to several years but the average periods were practically the same in the three groups

TABLE XXXVII

	No of Cases	Survival in Good Health		Recurrences	
		No of Cases	Per cent	No of Cases	Per cent age
(a) Prophylactic treatment after operation	758	689	90 9	149	21 0
(b) X ray prophylactic treatment after operation	166	139	83	36	21 7
(c) Radium prophylactic treatment after operation	45	39	86 7	6	13 3

This table shows that x ray prophylactic treatment after operation is apparently useless since the survival and recurrence rates are practically the same as in the cases that had no prophylactic treatment On the other hand it shows the beneficial effects of radium prophylactic treatment after operation as represented by the higher survival rate and the lower recurrence rate although it must be borne in mind that the number of radium cases is a small one from which to draw reliable deductions

RADIUM TREATMENT WITHOUT OPERATION

This treatment was used in 69 cases Radium needles were employed in 48 cases radon seeds in 13 cases and surface application in 8 cases No useful deductions can be drawn from so small a number of cases especially as they had been under observation for only comparatively short periods at the time of reporting

BRIEF SUMMARY OF RESULTS

1 The liability to cancer of the breast is not increased by the production of a large number of children The results of this investigation tend to show that the greater the number of children the less is the liability to cancer of the breast

2 A relatively higher proportion of cancer of the breast occurs in non parous married women and in single women than in parous married women

3 Fertility and non fertility of women appear to have no influence on the after operation results as shown by the survival rate and the recurrence rate

4 A painless lump was the first symptom that directed the patient's attention to the breast condition in 79 5 per cent of the cases a painful lump in 8 7 per cent and pain alone in 5 1 per cent

5 The longer the interval of time allowed to elapse between the first recognition of the disease and operation the worse is the result as shown by the survival rate the recurrence rate and the mortality rate

6 Preceding breast troubles (injury mastitis abscess sore nipple and Paget's disease) do not appear to be a factor of much importance in the development of cancer of the breast

7 Pain was completely absent in two thirds of the cases and was not of a severe character in the great majority of the remaining cases

8 From the results of this investigation it would appear that the influence of hereditary predisposition on the causation of cancer of the breast is not a dominant factor Only 5 4 per cent of the patients gave a family history of cancer

9 There is a marked decrease in the survival rate and a marked increase in the recurrence rate after operation in proportion to the extent and prolongation of the interval prior to operation

10 The figures in the report show the great superiority of the complete over the incomplete operations as regards both series of results

11 The [illegible] cancer indicate [illegible] form of the disease is known by experience to have a relatively low [illegible] high death rate

12 Under 50 cases of cancer in the [illegible] type and over 50 years of age the [illegible] type of cancer of the breast

13 Prophylactic treatment [illegible] apparently useless

14 Prophylactic treatment with radium after operation exercises a beneficial effect as regards the [illegible] survival rate and the lower recurrence rate compared with the post operative cases that received no prophylactic treatment or received prophylactic treatment with x ray This deduction as to the value of prophylactic treatment with radium is however open to the objection that the number of cases is small only 45 cases

LONDON PUBLIC HEALTH SERVICES

FIRST YEAR OF UNIFIED HOSPITAL CONTROL

Londoners are sometimes accused of lack of civic pride and it is perhaps true that the metropolitan boroughs are not always able to arouse a great enthusiasm of local feeling amongst those who live there But the county of London a county of more than a hundred square miles existing under the largest local government authority in the world is certainly more inspiring The change from the muddle of the last century when the government of London was mediaeval to-day its County Council deputations and criticisms of this or that part of its administration excite the envy of other capitals To take but one aspect the magnitude of its activities in public health—as disclosed in the recently published second volume of the annual Report of the Council for 1930[illegible]—is simply Under the Local Government Act of the year 1929 which was a specially interesting period in the Council's work because of the large number of hospital and institutional services which passed under its unified control Those who have grown up under independent authorities

TRANSFERRED HOSPITALS

The new Central Public Health Committee of the Council consisting of twenty one members of the Council co-opted began its work at the end of 1929 Under the present it has had only one chairman Dr [illegible] Lambert The hospital institutional and other services of the Metropolitan Asylums Board number [illegible] with accommodation for [illegible] boards of guardians for whom [illegible] 27 000 From the moment it received [illegible] these institutions the committee began [illegible] enlargement and it still has [illegible] extension on hand [illegible] the fact that each hospital [illegible] at least one [illegible] month [illegible] committees to deal with [illegible] subcommittees the [illegible] no of whom were [illegible] been noted This [illegible] successfully [illegible] suggested that [illegible] the boards of guardians [illegible] [illegible] were [illegible] Besides [illegible] legislation [illegible] [illegible] The [illegible]

Memorial to the Late R H Todd

As a tribute to the great work carried out by the late Dr R H Todd during his many years of service as honorary secretary of the New South Wales Branch of the British Medical Association the assembly hall of the British Medical Association House in Macquarie Street Sydney was named the Robert H Todd Assembly Hall. During the year Dr Todd was to have occupied the presidential chair of the New South Wales Branch and would have been called upon to preside at many meetings in this hall. On Sunday, February 21st, 1932 the impressive ceremony of dedicating the chamber to the memory of Dr Todd was performed. The meeting was opened by Dr George Bell president of the New South Wales Branch who briefly outlined Dr Todd's career and referred in eulogistic terms to his work his worth, and his lovable nature. Dr Bell was followed by Mr C H Jagger London Dr Newman Morris representing the Victorian Branch Dr I S Mewers representing the Queensland Branch Dr C H Shearman Sydney, representing the Western Australian Branch Dr I Sydney Morris representing the Tasmanian Branch Dr W N Robertson Queensland ex-chairman of the Federal Committee of the British Medical Association and the first chairman of directors of the Australasian Medical Publishing Company Limited Sir Louis Barnett New Zealand Professor I P Sanders Sydney Sir Henry Newland South Australia chairman of the Federal Committee. The depth of feeling shown by the speakers especially those who had known him well was evidence of the love and esteem which Dr Todd well earned during a lifetime of noble endeavour. At the conclusion of the addresses the ceremony of dedication was performed by Sir Henry Newland at whose behest the members of the large gathering stood for one minute with bowed heads in silence.



Infantile Paralysis in New South Wales

The poliomyelitis epidemic that has passed through the State of New South Wales during the past five months appears now to be on the decline. It has generally been considered in New South Wales that the season for infantile paralysis is the latter part of summer and the early part of autumn—that is February to April. The present epidemic was not subject to this rule for it was raging in December, and reached its maximum intensity in January. In previous epidemics there was always a sharp decline in the numbers of reported cases once the fastigium was reached; in this one the incidence remained constantly very high for a period of some seven weeks. This epidemic is further noteworthy for the fact that it has been responsible for a greater number of cases per month than any previously recorded epidemic in New South Wales.

In 1926 the New South Wales Department of Health first made endeavours to obtain immune serum for the treatment of infantile paralysis. The efforts of the Department did not meet with an enthusiastic response. When in 1929 a sum of £5 was offered for every pint of blood, donors were still difficult to find. It became apparent that a committee of some sort was necessary to organize the collection and preparation and distribution of serum to assist in early diagnosis and to obtain the co-operation of medical practitioners in treatment. From the recognition of this necessity the Infantile Paralysis Committee came into being in 1930. The formation of this committee was made possible through the efforts of Sir Charles Clubbe president of the Royal Alexandra Hospital for Children who made a public appeal for funds resulting in the subscription of a sum of £2 000 and who threw his energy and enthusiasm into the work of organization. The committee is composed of the following: Sir C Clubbe (chairman) Dr E W Turfax Dr R Dick Dr Edgar Stephen and Dr A H Tebbutt (honorary director). Dr Karen Helms occupies the position of medical officer and secretary. The Infantile Paralysis Committee has carried out a great deal of important work during the comparatively short period in which it has functioned. Numerous donors have been obtained; this itself was a task fraught with very considerable difficulties not the least of which was an extensive search of the various hospital records; it speaks well indeed for the zeal of Dr Helms that her quest has met with such a large measure of success. Twenty thousand cubic centimetres of serum have been prepared at the Royal Prince Alfred Hospital by Dr A B Lilley the bacteriologist at that institution and centres have been established in various parts of the State where serum may be obtained by medical practitioners requiring it. This is the first occasion on which immune serum had been employed on a large scale in any epidemic in New South Wales. Previously no more than about eighteen patients had been so treated here.

Up to the time of writing some 350 cases of poliomyelitis have been reported in this epidemic and there have been some 40 deaths. An interesting feature is that whereas the epidemic commenced in the metropolitan area of Sydney and during the early stages by far the greater number of cases occurred in Sydney now the incidence is higher in the towns and country and though the actual numbers have decreased the proportions are reversed.

Sydney Hospital Finances

There seems to be no end to the list of hospitals in financial difficulties. It was disclosed at the Sydney Hospital's annual meeting on February 29th that the debt owing to tradespeople at the end of December 1931 was over £20 000. In the words of Mr J Travers M L C chairman of the board of directors the hospital was only carrying on through the forbearance of the tradespeople. Mr Travers also stressed the point that many people now thought it was no longer necessary to make voluntary donations to the hospital under the belief that it was amply provided for by the revenue from the State lottery. The Minister for Health Mr Ely who presided at the meeting admitted that the revenue from the lottery had fallen far short of the Government's expectations. He said he was struck when perusing the hospital's annual report with a statement that read as follows: To enable the hospital to carry on its services to the community with the same standard of efficiency as hitherto it is necessary that it should have a much larger annual subsidy from the Government. The board of directors is determined to keep the hospital going as long as possible. Sydney Hospital has never closed its doors and it is hoped that the Government will help the board to preserve that record. Mr Ely declared that the hospital would have the Government's co-operation. No doubt the hospital authorities feel that an increase in the Government's subsidy would be of considerably greater value.

Scotland

Professor G M Robertson's Successor

The announcement has now been made of the appointment of Dr David Kennedy Henderson physician superintendent of the Glasgow Royal Mental Hospital to succeed the late Professor George M Robertson in the conjoint appointment of physician superintendent of the Royal Edinburgh Hospital for Mental Disorders and professor of psychiatry in the University of Edinburgh The appointment to the chair is made by a joint committee of the University and of the managers of the Royal Edinburgh Hospital for Mental Disorders who presented the funds for the endowment of the chair Professor Henderson was born at Dumfries and after studying at Edinburgh graduated M B Ch B in 1907 proceeding M D in 1913 He joined the Royal Faculty of Physicians and Surgeons Glasgow in 1919 He became clinical assistant under Sir Thomas Clouston at the Royal Asylum at Morningside and later spent some six years abroad—working as assistant physician in the Manhattan State Hospital New York as resident psychiatrist in the Phipps Clinic Johns Hopkins Hospital Baltimore under Professor Adolf Meyer in Munich under Professor Kraepelin and with the late Sir Frederick Mott at Claybury London During the war he served as a major in the R A M C in France Since 1921 he has been physician superintendent of the Glasgow Royal Mental Hospital Gartnavel and lecturer in psychiatry in the University of Glasgow In 1931 he delivered the Morison Lectures in the Royal College of Physicians of Edinburgh taking as his subject Social psychiatry

Edinburgh Municipal Hospitals

A memorandum by the town clerk of Edinburgh upon proposed arrangements with the University of Edinburgh in regard to municipal hospitals and a report of a committee formed by representatives of the Town Council and of the University on the same subject have recently been circulated The memorandum mentions the provisions of the Local Government (Scotland) Act 1929 under which the Corporation with the approval of the Department of Health for Scotland may provide hospital facilities in its area and states that it is proposed to utilize Pilton (formerly a public health hospital) with Craigleith and Seafield (formerly Poor Law hospitals) in order to increase the accommodation at present available in the voluntary hospitals It states that with certain alterations and minor adjustments these hospitals can be rendered suitable for the purposes of general hospitals including teaching On the question of the remuneration of the staff the committee shows itself to be entirely out of accord with modern opinion and the recent practice of other municipal hospitals It suggests that the system of co operation proposed implies that the remuneration of the medical staff would be arranged in such a way that the rules on this subject applicable to the voluntary hospitals would as far as possible apply to the municipal hospitals so that there would not be any competition between them It may be stated in passing that the staffs of voluntary hospitals in Edinburgh receive as yet no payment for the treatment of patients but that in the Royal Infirmary for the past 200 years the staff have been permitted by the managers to hold clinical classes for which they charge regular fees these fees being paid to a clinical account in the Infirmary which is divided annually among the teachers subject to certain deductions The shares payable in respect of the professors are paid not to them but to the University which employs them at a definite annual salary the shares payable in respect of the other physicians and surgeons go to the individuals direct The annual amount received by a physician or surgeon from these class fees amounts approximately to £300 while the assistants receive an honorarium not exceeding in any case £100 per annum It thus appears that the intention of the Edinburgh Corporation is to pay for treatment as well as for teaching a sum much less than that which is generally regarded as the minimum salary of the physician or surgeon employed to render treatment only at a municipal hospital In the policy drawn up by the Labour Party with regard to hospitals it was recommended that members of the senior staff should receive a salary of £500 per annum in return for giving an eight hour week while juniors should give a six hour week at a salary of £300 per annum further the minimum salary recommended by the British Medical Association for such an appointment whether its holder is or is not entirely responsible for the treatment of the patients is for a daily attendance £500 per annum

Health of Dunfermline

The annual report of Dr C Barclay Reckie medical officer of health for the burgh of Dunfermline states that unemployment and bad trade have not prevented a fairly high standard of health from being attained There has been a lower incidence of infectious disease throughout the year, the total number of cases notified being 758 of which 157 occurred in Rosyth The area of which Dunfermline is the centre is well provided with hospitals and out patient departments For a population of 34 954 in the burgh there are seven hospitals sanatoriums and nursing homes available with a total of 471 beds giving one hospital bed per 74 of the population There are seventeen out patient departments provided by or on behalf of the health authority including child welfare clinics school clinics clinics for tuberculosis venereal disease remedial exercises ultra violet rays dental services malnutrition rheumatism etc of these ten are managed by the Carnegie Dunfermline Trust Special attention is drawn in the report to the results of school medical inspection and of the treatment provided for children at various clinics Reference is also made to the work of the Davaar Maternity Home under the management of the Dunfermline and Fife Councils The year 1930 was a record in the history of this home with 323 admissions but in 1931 the figures had risen to 438 Sixteen ante natal cases were admitted for treatment with successful results and there were forty seven cases of abnormal or complicated confinement with a successful result in every case so far as the mother was concerned Of the 282 normal cases 215 were delivered with and 67 without medical attendance There were twelve cases of puerperal pyrexia and one of puerperal sepsis while four maternal deaths occurred during the year due respectively to post partum eclampsia pyelonephritis puerperal septicaemia and pulmonary embolism giving a case mortality of 0 9 per cent

The Hannah Dairy Research Institute

With a view to providing a national centre for research in dairying in Scotland a committee under the chairmanship of Sir Donald MacAlister was appointed by the Secretary of State for Scotland in 1927 and the necessary institute dairy farm and laboratories were erected at Kirkhill Ayr on ground generously presented by Mr J M Hannah A report of the work of the institute for the two years ending March 31st 1932 reveals the lines on which the scientific and practical aspects of dairy farming have been studied concurrently Early last year the new laboratories were opened and primary consideration was given to the possibility of making more use of home grown foodstuffs so that herd owners might be made less dependent on the expensive high protein concentrates Home grown foods are being analysed in order to

determine the quality, as well as the quantity of their protein contents and the comparative nutritive value of proteins of various compositions is being ascertained by feeding trials. Research work has begun on the physiology and biochemistry of milk secretion and progress has been made in elucidating the transport of milk precursors in the blood. It has been established that milk sugar is derived from the blood glucose and that the milk proteins owe their origin—in part at any rate—to the free amino acids. Previous conceptions about the derivation of the phosphorus content of milk have been reversed and the importance of blood investigation has been established in the work of solving the problems concerned in lactation. The actual chemical transformations which lead to the production of milk in the secretory glands are now being explored. In a survey of Scottish tuberculin tested herds it was found that the average number of reactors did not exceed 3 per cent. each year while in well established herds the proportion was much lower. At least 90 per cent. of these reactors were found to have contracted the tuberculous infection from within the source which can therefore be eliminated in future. A grant from the Medical Research Council has been allotted to promote experiments designed to facilitate the adoption of a more general scheme for the voluntary eradication of bovine tuberculosis. Following the discovery that milk fever was accompanied by a fall in the blood calcium content the intravenous injection of calcium gluconate has been successfully employed as curative treatment. It has been shown that such a fall in the blood calcium is brought about by the injection of certain nitrogenous substances which may explain why milk fever presents symptoms typical of tetany. Work on the aspect of the disease is continuing.

England and Wales

The LCC and the Spahlinger Treatment

Public attention having recently been drawn to the Spahlinger method of treatment for tuberculosis, the medical officer of health to the London County Council (Sir Frederick Menzies) has submitted to the Central Public Health Committee at its request a full and technical report on the subject. In a summary he points out that in the past M. Spahlinger's claim has been that he had an effective remedy for tuberculosis but in spite of every inducement he, for many years declined to disclose the precise composition of his preparations so that no conclusive results could be obtained when the investigations were made by other competent observers. On January 29th last at a meeting in a private house in London M. Spahlinger distributed copies of a document purporting to disclose his formulæ. This document was published verbatim in the *Lancet* and *British Medical Journal* of February 6th and contained the only information yet available. Although in the past M. Spahlinger's claim had been to provide a remedy for patients suffering from tuberculosis and the present formulæ, in the popular mind provided a possible method of treatment it was to be noted that the formulæ were actually for the preparation of vaccines to be used for preventive inoculation and no mention whatever was made of these preparations having been used for curative purposes. Although M. Spahlinger claimed that he had disclosed full details of the method of preparation the fact remained that so much information of fundamental importance was missing that no competent bacteriologists working independently from the formulæ would be in the least likely to obtain the claimed preparations. From the information available it was in the opinion of the medical officer of health no evidence that the vaccine was efficacious nor any evidence which would at present justify the trial of this vaccine under the auspices of the Council on human beings. No information was yet available concerning the serum formerly used for curative purposes.

When the report of the Central Public Health Committee on this subject was due to be brought before the Council it was postponed, it being understood that M. Spahlinger desired the opportunity to make some observations to the committee and these will be considered at the next meeting.

Allegations against a Municipal Hospital

Serious allegations were made in a recent issue of the periodical *John Bull* concerning the circumstances of the admission and treatment of a patient in Highgate Hospital. It was alleged that there was delay in attendance of a hospital doctor, wrong diagnosis of the patient's complaint, an unsuitable diet, acute suffering of the patient from thirst and want of nourishment and failure to notify the patient's wife of his serious condition. The article stated that the circumstances taken together formed a terrible indictment of and caused the gravest disquietude as to the general administration of municipal hospitals. A committee of inquiry was immediately appointed by the London County Council and sat for a whole day taking evidence. The members of the committee included Dr. Florence Barrie Lambert, Mr. H. L. Eason and Dr. Henry Robinson as well as a number of lay members. As the result of a close investigation the committee is satisfied that the facts elicited afford no justification whatever for the reflections made on the organization and administration of municipal hospitals. The report concludes: As to the action taken by the proprietors of the periodical in which the article appeared in giving publicity to statements without adequate and proper inquiry and in basing on them an indictment of municipal hospitals we desire to register our disapproval in the strongest terms and to express our sympathy with the medical superintendent and staff of Highgate Hospital as regards the undeserved reflections cast upon them.

Mr. Chesterton at the Marie Curie Hospital

Mr. G. K. Chesterton was the principal speaker at the annual meeting of the Marie Curie Hospital (Hampstead) held at Mrs. Walter Runciman's house on May 6th and contrived in a happy way to bring into relation two great physicists, one of the sixteenth century and the other of the twentieth—namely, Copernicus and Madame Curie. Mr. Chesterton reminded the meeting that the latter although French by marriage was, like Copernicus, a Pole by birth. Copernicus's discovery furnished a turning point in the history of science and was one great example—the discovery of radium was another—of how a great scientific achievement bestrode the continent of Christendom and knit together nations. But with all respect to Copernicus and to the solar system—against which the speaker would not utter a word of disparagement—it was more important to have cured one poor old woman, to have freed her from all fear and reproach of cancer than to have discovered the whole truth about the astronomical universe. Thus as a benefactor of mankind Madame Curie was to be enthroned above Copernicus her fellow countryman. Mr. Chesterton said that he was present merely to pay a private debt in testifying to the great help given to a dear friend of his at the Marie Curie Hospital. He supposed there was some sort of value in that wholly ignorant testimony but beyond that he had no sort of claim whatever to speak in a medical assembly. Miss Chadburn, M.D., chairman of the board of management who presided over the meeting mentioned that the institution at Hampstead had managed to end its second year free of debt, thanks largely to a wireless

appeal by Sir Oliver Lodge Five minutes broadcasting brought in £1 680 Miss Hurdon M D the director said that since the clinic work began in 1925 nearly 800 cases of uterine cancer had been treated by radium most of them from London and the Greater London area Unfortunately nearly three fourths of the cases came in in a very advanced state but of the comparatively early cases all the early operable cases and 82 per cent of the borderline cases were living and with very few exceptions the patients were free from all signs and symptoms of cancer A number had passed the standard five year period During 1931 the number of in patients was 472 and the out patient attendances numbered 1 294 Sir Cuthbert Wallace congratulated the hospital on its achievements and spoke of the value of such team work as the hospital represented

Coroners Inquests in London

The number of deaths reported to the London coroners in 1931 was 8 155 as against 8 037 in the previous year Of these deaths 2 593 took place in mental hospitals and other institutions The circumstances connected with the deaths reported were investigated by the coroners and inquests were held in 3 603 cases a decrease of 274 as compared with 1930 Inquests numbering 166 were held on infants under 1 year of age During the year the coroners directed post mortem examinations in 2 723 of the inquest cases and in 2 486 of the remaining cases in which no public inquiry was necessary A verdict of murder was returned in 12 cases as compared with 11 in the previous year Three inquests were held in connexion with executions Two verdicts of manslaughter were recorded The total number of suicides was 635 an increase of 41 on the previous year Deaths from want of attention at birth have decreased from 34 to 28 In all 2 050 people met their death by accident as against 2 073 in 1930 Injuries accounted for 41 deaths and there were 58 deaths by drowning A verdict of death from natural causes was returned in 609 cases and there were six verdicts of cause of death unknown Inquests on newly born children decreased from 54 to 51 and a verdict of murder of a newly born child was returned in one case In 23 cases it was decided that the child was stillborn Excessive drinking accounted for 50 deaths a decrease of 16 on last year The total cost to the London County Council of inquiries made by the coroners and of inquests held in 1931 was £36 729

Lord Moynihan and Yorkshiremen

Lord Moynihan of Leeds the new president of the Society of Yorkshiremen in London was entertained by that body at a luncheon on May 4th He painted a sombre picture of what London would have been without the incursion of Yorkshiremen or even if while the rest of Yorkshire had sent its quota to the metropolis the contribution of Leeds had for some reason been withheld He gave a list of ten important academic bodies or professional or business associations headed by the Royal College of Surgeons all of whose presidents a year ago were Leeds men He doubted whether any other city not excluding London had so many people holding national positions at the same time Lord Moynihan went on to say that he knew the Yorkshireman inside and out and proceeded to discuss Yorkshire qualities—courage ability to get things done grim taciturnity refusal to admit second best honesty of mind bedrock integrity and refusal to be turned aside by the shimmer on the face of things when searching for truth at the core The chairman at the luncheon Mr J Addyman Gardner praised the Leeds School of Medicine which he said was now the best equipped in the country and owed much to the influence and broad outlook of Lord Moynihan

Correspondence

L C C PATHOLOGICAL SERVICE

SIR,—Recent correspondence in your columns has emphasized the great difficulties which arise in the provision of laboratory services for hospital patients unless the laboratory is in or very near the wards and the out patient department It is important and often essential that specimens for examination should be taken to the laboratory without delay and for some examinations it is desirable that the specimen should be collected by the pathologist It is important also that the pathologist should have access to the ward and the clinician and the patient access to the laboratory I regret discussions and interchange of opinion between clinician and pathologist are as important for the welfare of the individual patient as for the advancement of the science and practice of medicine It is difficult for a pathologist to maintain interest in the examination of specimens sent by clinicians whom he seldom meets from patients whom he has never seen Ideas for research are not likely to occur unless the laboratory worker has easy access to the wards and opportunities for the discussion of cases with physicians and surgeons The clinician will seldom make good use of the laboratory unless it is accessible to him and unless he has ample opportunity of discussing his cases with the laboratory worker

It can I think be regarded as axiomatic that no hospital is adequately equipped unless it has its own laboratory and its own pathologist as an integral part of its establishment The pathologists of the voluntary hospitals have within their own hospitals all the material which they require for investigation and research and they have the opportunity to do good work in close association with their clinical colleagues They would gain no advantage from the examination of a large number of specimens delivered by messengers from the hospitals of the L C C It is true that some of these L C C hospitals are institutions for the care of the incurable but many perhaps the majority are general hospitals which take for medical or surgical treatment cases of acute and chronic disease the same types of acute and chronic disease as the voluntary hospitals Some of these L C C hospitals are new and modern buildings with wards and operating theatres which compare not unfavourably with the best of the voluntary hospitals

The resources of laboratory medicine ought to be as freely available in the diagnosis and treatment of cases within the municipal hospitals as in the voluntary hospitals and each of these hospitals ought to have its own pathologist and its own laboratory It is obvious that the provision of a laboratory for each general hospital with 250 beds under the control of the L C C would involve a large sum of money and it may be necessary to postpone the development of a complete scheme for the municipal hospitals until better times Meanwhile group laboratories have been established and each of these group laboratories does the work of its own hospital and of the hospitals in the adjacent district In the future much will depend on the policy adopted by the L C C and its advisers towards the group laboratories If a policy of centralization is adopted if the group laboratories remain few in number and each is enlarged to deal with an increasing number of specimens sent from outlying hospitals the disadvantages attached to the sending of specimens by post and messenger will prevent the development of an adequate laboratory service but if as I hope and believe it is the policy and intention of the L C C to increase the number of its pathologists

and laboratories the present system of group laboratories can be looked on as a transition stage towards the establishment of a pathological unit in each large hospital As a temporary measure the pathologists of the voluntary hospitals might be willing to help the municipal hospitals but the laboratories of the voluntary hospitals have been provided and equipped for the work of their own hospitals and they could not be asked to cope with much additional work from outside The work of the municipal hospitals could not be done in the laboratories of the voluntary hospitals without additional buildings, equipment and staff Money which is available for hospital laboratories should be spent in the building and equipment of laboratories in hospitals which have no laboratories and not in the enlargement of existing laboratories to enable them to undertake outside work, work for which the clinical laboratories of the voluntary hospitals were never intended

Intercourse and co-operation between the pathologists of the voluntary and municipal hospitals is most desirable and the municipal pathologists will gain much by visits exchanged with their colleagues in the voluntary hospitals The experienced pathologists of the great London medical schools can do much to help their colleagues in the municipal hospitals by friendly visits and advice but it would be a misfortune both for the voluntary hospitals and for the municipal hospitals if the laboratories of the voluntary hospitals undertook routine work from outside and became in effect the group laboratories of the I C C The hospitals of the I C C form a huge group of institutions which contain clinical material unrivalled in amount and variety even by the hospitals of the great London medical schools For this great group of municipal hospitals a liberal provision of pathologists and laboratories is essential not only for the welfare of the patients but for the advance of medical science The municipal hospitals of London contain a wealth of material which can and should provide unrivalled opportunities for investigation and research If these opportunities are to be realized if the patients are to receive the advantages of modern methods of diagnosis and treatment the provision in the I C C hospitals of well staffed and well equipped laboratories is essential —I am etc

H R DEAN

Department of Pathology
Cambridge May 6th

FAILURE OF INTRAVENOUS LIVER THERAPY IN PERNICIOUS ANAEMIA

SIR —The case of severe anaemia described in detail by Dr J G McCrie in your issue of April 30th can, without any hesitation be classified as pernicious anaemia The fact that the antianaemic factor was administered by the intravenous route rules out the possibility that the failure to respond to treatment was the result of defective absorption from the gastro-intestinal tract The only satisfactory explanation of the absence of response to treatment must be the impotency of the material employed This is surprising and extremely unfortunate in view of the undoubted beneficial results obtained with the original samples of hepatex P A T by Wilkinson and others Further evidence that the batch of material used by Dr McCrie was impotent is given by my own experience in the treatment of two cases of pernicious anaemia with the same material approximately about the same date A complete absence of response occurred in both cases which subsequently reacted excellently to the administration of liver extract by mouth I understand the manufacturers recognized the impotency of that particular sample and that it has been withdrawn I have since heard that subsequent preparations have been shown by clinical trial to be active

In your issue of February 13th 1932 I described the beneficial effects which followed the intramuscular injection of Ganssen's liver extract issued by Bayer Products Ltd under the trade name of 'campolon In the present issue of the Edinburgh Medical Journal (May, 1932) confirmatory results are published by Dr R M Murray Lyon Since the publication of my paper I have treated two cases of pernicious anaemia with a batch of campolon of extremely poor activity and there is every reason to believe that one of the patients would have died had not blood transfusion been given Eventually both patients responded well to a home made liver extract of my own Bayer Products Ltd inform me that they have received clinical evidence from Germany of a similar kind in regard to this particular sample, which has been withdrawn from circulation A recent sample of campolon which I tested within the past month on two cases of pernicious anaemia was found to be potent

It has long been recognized that impotent brands of liver extract and gastric tissue for oral administration have appeared on the market but it was hoped that the purified and concentrated materials for intravenous and intramuscular injection which have recently been produced would have a constant activity Unfortunately this has not turned out to be so as is clearly shown by the cases referred to above

It would be unfair to blame the manufacturers for this state of affairs, since no satisfactory potency test exists other than clinical trial on patients suffering from pernicious anaemia Impotent preparations will continue to be sold until a suitable method of assay is forthcoming —I am etc,

University of Aberdeen May 5th STANLEY DAVIDSON

ORIGIN OF TUMOURS

SIR —Mr Lockhart Mummery's article The origin of tumours in your issue of April 30th is rather too provocative The aberrant growth theory of cancer dies hard it has shifted from cell surroundings through cytoplasm nucleus and chromosomes and now is settled down in the Hindenburg line of gene mutation—a strong line for the gene is invisible and can be neither proved nor disproved The holders of the infective origin are faced by a hypothesis which admits of neither proof nor disproof

He says "Tumour cells grow by their own division and not by converting neighbouring cells into tumour cells' This is now almost regarded as an adage but does it mean anything? If a section of primary non-allergic tuberculosis of the lung is examined sheets of epithelioid cells, often in active mitosis will be seen—that is arising from their own division In such a case similar metastases of the same type of cell may be found in kidney or spleen This appearance was and probably still is regarded as neoplastic by the ill informed In certain old standing gonorrhoeal warts there are large areas of epithelial cells often showing metaplasia frequent mitoses, and deep penetration into the hypodermis A fragment of such a wart removed from the surface epithelium, would probably be labelled epithelioma by most pathologists Again, the cells have grown by their own division and not by converting neighbouring cells into 'neoplastic cells

But let us grant the theory of gene mutation Then cancer is simply a normal abnormality—that is an error of normal growth It is only pathological inasmuch as unlike Peter Pan it insists on keeping on growing up It is a normal growth and therefore can produce no reaction except by pressure or replacement Do we find this?

We see many signs of intoxication even in relatively early and [illegible] infected cancers, pyrexia is frequent, altera-

tions in the colloidal stability of the blood leading to a multiplicity of tests giving 70 to 80 per cent of positives we sometimes see the spontaneous cure of chronic rheumatism as the cancer arises we frequently find leucocytosis and less often eosinophilia There remains the cachexia which may occur in small and uninfected growths How does a gene mutation cause such symptoms?

Worse still the gene mutation theory absolutely vetoes any hope of medical treatment ever being effective It will be quite impossible to check cancer—that is unrestrained normal growth—without also stopping the necessary growth regeneration of the remaining cells of the body a cure would be followed by death from senility within a few weeks But we find that this does not follow I have described a medical system of treatment practised in a public hospital clinic and have demonstrated cases in which complete regression of malignant growths has taken place—and the patients are alive and well for periods up to four years These cases have been followed by many well known surgeons How can the holders of the gene concept explain this occurrence?—I am etc

Bristol May 3rd A T TODD

SIR —I fear that Mr Lockhart Mummery has like others confused the chemical and morphological ideas of protoplasm Chromosomes and genes are not the efficient causes of the life process but products of it As Ernst Haeckel says they are the phylogenetic outcomes of the manifold differentiations which the originally homogeneous and structureless plasm has undergone in the course of millions of years In short they are the result of evolution which one should note is always orderly and definite

After the death of the cell these differentiated structures remain just as in a cell aggregate like the human body which evolution has made so perfect the differentiated cells comprising the various organs are still present after life has departed and until decomposition sets in But life and growth are not evolution Though evolution cannot take place without life life could occur without evolution Life is primary and is accompanied by chemical changes every minute of the day evolution is secondary and the changes it brings about take generations The two are entirely different things

It is the constant succession of chemical changes in the protoplasm of cells whether structureless or differentiated which constitute life and growth and it is to some subtle alteration in the chemistry of the life process that we must look for irregular manifestations of growth—I am etc

Upholland Wigan May 3rd J THOMSON SHIRLAW

FOULING OF FOOTWAYS BY DOGS

SIR —Many must have rejoiced to see the letter in your issue of May 7th It is urgent that public opinion on this matter should be aroused for the streets of the medical neighbourhood resemble a vast latrine for dogs Both sides of practically every doorstep are soaked with urine Those whose duty it is to clean the doorstep and railings have several times a week to remove excrement frequent doses of lysol and sulphur placed on the stones are not enough to prevent this nuisance Often have I wished that the Japanese custom prevailed here—removal on entering a house of all outdoor footwear For the soiled pavement is cleaned only by rain and the shoes of passers by We may be thankful we do not realize what is left on our carpets If bacteriologists examined the dust in carpet and floor sweepers light might be thrown on the causes of many obscure maladies

Enlightened public opinion can cure all this revolting condition in front of our houses Some thirty years ago not only the pavements but also the floors of all public vehicles were liberally covered with spittoons Within a few years by means of lectures letters in newspapers and notices describing the danger of tuberculosis the aspect of the streets and floors was entirely altered

It is the duty of members of the medical profession to speak to everyone who is attending a dog on a footway or a doorstep to tell them of the dangers of this habit and of the advisability of training the animal to use the gutter—I am etc

London W 1 May 9th AGNES SAVILL M D

CYSTIC DILATATION OF THE COMMON BILE DUCT

SIR —I am led by Mr Julian Taylor's letter on this subject in your issue of April 23rd to report an observation of my own

In November 1926 I operated on a married woman of 30 (three months pregnant) who had had a variable and painful swelling in the right side for five years She was not jaundiced and since pyelography showed a normal pelvis in the right kidney the nature of this cystic swelling was obscure Exploration revealed a cystic dilatation of the common duct Within the cyst two openings were seen on its posterior wall from one of which bile was flowing An attempt was made to reconstruct the duct in the manner of an endoaneurysmorrhaphy while the anterior part of the cyst was sutured to the parietes and drained Six weeks later (as the discharge of bile continued) I reopened the abdomen and identified the openings in the cyst wall as the mouths of the cystic and hepatic ducts No passage towards the duodenum could be found I made an anastomosis between the dilated common duct and the duodenum The patient was discharged on the fifteenth day feeling better than she had done for months and five months later was delivered of her baby

She was readmitted two years later with jaundice fever and a tender swelling of the right hypochondrium A thick walled abscess cavity four inches across in the right lobe of the liver was drained After this she was well for three months then began to have attacks of pain shivering and jaundice I explored the abdomen in October 1930 There was a narrow stoma barely admitting a probe between the duodenum and the distended common duct which was filled with turbid bile The anastomosis was reconstructed with a flap of duodenum and the common duct temporarily drained

A month later she began to be jaundiced again and was readmitted in April 1931 with severe pains in the upper abdomen intense jaundice vomiting and fever She rapidly became worse and died a few days later At the post-mortem examination the liver was found to be riddled with abscesses but unfortunately the relation of these to the bile ducts was not determined

I formed the opinion that the abscess which developed two years after the first operation was due to infection of a pre-existing (congenital) dilatation of an intrahepatic bile duct and this view is supported by the post-mortem finding in Mr Julian Taylor's case If cystic dilatation of the common duct is usually associated with dilatation of the intrahepatic ducts the results of subsequent infection following choledocho-duodenostomy are likely to be serious —I am etc

Hull April 30th HAROLD LEVY

SPRUE IN MALTA

SIR —In the *Journal* of March 12th (p 471) Dr [illegible] reported a case of sprue in Malta and remarked that the chief interest in the case lay in the fact that this being the first authenticated instance of sprue reported in Malta From the history given of the patient having been for years in the Near East —Palestine or Egypt presumably—surely there is no important point in the fact that the case was reported from Malta for it is not very probable

that the disease was *acquired in the Near East* in spite of the length of the intervening period of about thirteen years? It would be interesting to learn details of the patient's condition between the time of his leaving the Near East and the diagnosis of sprue in Malta. The history of cases like this is important, in that they suggest that sprue is the result of a definite infection acquired in endemic regions.—I am, etc.

Sutton Mallet, Somerset, April 30th — H. H. KING, Lieut.-Colonel I.M.S. (Retired), Director, Imperial Bureau of Entomology.

MALIGNANT DISEASE OF PHARYNX AND LARYNX

SIR,—I beg, to say how indebted I feel to Mr. Marcks (April 16th, p. 818) for his lucid and apt classification of throat cancer more particularly from the point of view of treatment. It should however, be clearly remembered in the connexion that if a graft is likely to follow it largely depends upon when rather than how, the treatment—whatever its nature—is employed. If those cases mentioned by Dr. McKenna (May 7th, p. 859) had been subjected to diathermy in the early stages the results might have been different. As regards how diathermy is accomplished I am strongly in favour of diathermy puncture to the malignant area in the throat and of repeated applications over a wider and wider surface; this certainly acts well and when performed on inoperable glands in the neck is most useful in giving relief. The method is simple—namely a long incision over the glandular mass, the skin being freely reflected and fifty or sixty diathermy punctures made into the exposed parts. This is carried out under strictly aseptic precautions, the incision being rapidly stitched up and healing taking place by first intention. This may be repeated at intervals of a few days or weeks.—I am, etc.,

London, W., May 7th — WM. STUART LOW.

THE USE OF THE SELF

SIR,—The review in your issue of April 30th of Mr. F. Matthias Alexander's latest book, *The Use of the Self*, is as full and valuable as could be expected in the space allotted to it, but the contents of the book, and especially of the chapter on "Diagnosis and medical training," merit much more attention than can be given in any review, and should be very carefully studied by everyone who is interested in the advancement of the medical profession. Those who do study this book will, I think, agree with me that if one half of the statements contained in it are true then not only our methods of diagnosis and training but even our conception of disease itself require radical alteration. And Mr. Alexander having arrived at his conclusions by experiment and by experiment only, is prepared to demonstrate the truth of all his statements. May I suggest that it is time the profession as a whole inquired carefully into a theory and practice that will, I am convinced, very shortly prove revolutionary to all our present standards?—I am, etc.,

Manchester, May 9th — R. G. McGOWAN.

SACRO-ILIAC DISPLACEMENTS

SIR,—I have read with great interest your report (April 16th, p. 710) of the discussion on backache and the orthopædic surgeon by the Devon and Exeter Medico-Chirurgical Society. Concerning the question of sacro-iliac displacements however I am not quite in agreement with everything that was said at that meeting, and as during the last twenty years I have seen about 2,000 cases of such displacements I venture to think that a few remarks on the subject may prove of interest.

Sacro-iliac displacements are much commoner than is generally supposed, they may be rotary (the commonest kind) or upwards, downwards, forwards or backwards *en masse*. They pass undiagnosed for the simple reason that they are not looked for. Reposition is quite easy and painless provided that the technique is correct. It must, however, be admitted that this is by no means easy to acquire. I have never used a general anæsthetic in order to produce the necessary muscle and joint relaxation before performing reposition. I find that carefully administered vibrations and gentle passive movements are all that is required to effect this.

Mr. Norman Capener, in the discussion referred to, stated that the osteopath employed manipulations for reposition of vertebræ which have been established as long as medicine has existed. I have never (except during recent years) seen any such manipulations described in medical literature, and I should be glad to know where they have been published.—I am, etc.,

London, W.1, May 6th — EDGAR CYRIAX.

RICKETS AND VITAMIN D

SIR,—I was much interested in the case referred to by Dr. Chalmers Watson in the *Journal* of April 23rd. Some years ago a case of severe rickets in a boy of 9 years came under my notice. He was very stunted, his arms were bowed and the lower limb bones more particularly the leg bones were much deformed; the clavicles were misshapen. There was no albuminuria. He could only walk in a feeble fashion. The condition was very gross; radiographically the bone ends were rickety. He had lost his incisor teeth and further extractions were required. A twin sister was well grown and showed no signs of rickets. The children had been brought up under the same conditions (neither had been breast-fed); the home conditions as ordinarily understood were good and the mother was of an intelligent and careful type. There was a family of eight, two or three of the other members had shown rickety deformity of the lower limbs but had "outgrown" it. The response to the administration of cod-liver oil and various antirachitic vitamin D remedies was slow; the boy being treated in an institution alongside children who made satisfactory progress. He became fairly vigorous but relative dwarfing and a considerable degree of bone deformity persisted. For the latter, osteotomy was performed in each leg.—I am, etc.,

Cosforth, Newcastle upon Tyne, May 3rd — WILLIAM MACKENZIE.

PREPARATION FOR MARRIAGE

SIR,—Two letters signed by Sir Arthur Newsholme and Dr. Allan, in your issue of April 9th on preparation for marriage and the Personal Problems Bureau to be set up by the British Social Hygiene Council raise two quite distinct questions, without suggesting the answers to either. The first concerns the policy of the British Social Hygiene Council on birth control and the second raises the question of who are the experts in the physiology and psychology of sexual relations competent to give advice in preparation for marriage.

With regard to the first Sir Arthur suggests that the National Council for Combating Venereal Diseases was reformed under the euphemistic title of British Social Hygiene Council with the avowed object of preventing these diseases, [only?] by the promotion of chastity and continence, and, in consequence (presumably?) has hitherto refrained from action which would imply approval of artificial birth control. The society published in 1926 an official pamphlet on *The Foundations of Social Hygiene* to which was appended a signed statement on

continence purporting to certify that sexual intercourse is unnecessary from which it followed that the preaching of abstinence was sufficient prophylaxis against these dread diseases Quite apart from questioning the justification for the implicit optimism of relying on the magic of words to lower the incidence of venereal diseases let alone to lower the abortion rate and the illegitimacy rate which are undoubtedly rising by comparison with a falling birth rate we may perhaps be excused a feeling of bewilderment when we find some of the same names appearing both on the cover of the *Foundations of Social Hygiene* and in the list of vice presidents of the Society for Constructive Birth Control and when we discover the same distinguished men of science working with equal zeal for both these opposed crusades

With regard to the second point Dr Allan is concerned with the undesirability of undermining a patient's confidence in the ability of the family doctor by any suggestion that he is not competent to advise on the problems which in a technical sense are sometimes called sexological But as a matter of fact is he? Even the specialist gynaecologist can frequently lay no claim to being in a technical sense a psychologist nor need he be an expert in the technique of contraception The study of the special problems involved in the variable and complex sexual adjustments that are a part of marriage is based on researches that are anthropological sociological and psychological as well as physiological No doubt under the able direction of Mrs Neville Rolfe the Personal Problems Bureau may claim to be adequately certified as trained sexologists but surely general medical practitioners will hardly make that claim?—I am etc

GEORGE PITT RIVERS
Honorary Secretary International Union for Scientific Investigation of Population Problems

Lowther Lodge London S W 7 April 27th

THE SACRUM

SIR,—In the review of *Cunningham's Anatomy* published in to-day's *Journal* I notice your reviewer draws attention to a statement made in the book that the sacrum was a sacrificial bone in ancient times and wonders on what grounds this statement is made In view of this perhaps the following will be of interest to other readers besides anatomists

In the Jewish literature of somewhere between the sixth and the ninth centuries of the present era there is to be found the following legendary conversation between Emperor Hadrian and Rabbi Joshua ben Chananiah (second century) From which part of the skeleton asked the emperor will man be resurrected? From the luz of the spinal column answered the rabbi How can you prove it? asked Hadrian In reply Rabbi Joshua brought that bone before the king and subjected it to the following tests He threw it into the fire but it was not consumed He then put it into water but it would not soften He tried to crush it with a grindstone but failed Finally he hammered it on an anvil and although both the hammer and the anvil broke the bone remained intact The luz referred to represents the sacrum—or possibly the coccyx which being the indestructible nucleus of resurrection was accepted by Mahommedan as well as Christian anatomists and theologians as the sacred bone and was often referred to in the Middle Ages as Jew bone This legend of the resurrection bone which was accepted by Vesrroes is true is based on the 20th verse of Psalm XXXIV the second part of which is capable of being translated in two ways The Authorized Version translates it as not one of the [illegible] the bones of the righteous is broken but the translation of the Revised Version —namely one of them could not be broken — equally admissible The very pious Jews bow down in the course of certain portions of the prayer until the lumbar spine bends on the sacrum in order to emphasize resurrection

Similar legends about the indestructibility of different parts of the body are found in heathen antiquity The right thumb of King Pyrrhus is recorded by Pliny (vii 7) as having been supposed to be indestructible by fire (hunc cremari cum reliquo corpore non potuisse traditum) —I am etc

W M FRIDMAN M D M R C P

London W 1 April 30th

Obituary

SIR THOMAS LEGGE C B E M D

Late Senior Medical Inspector of Factories Home Office

We much regret to announce the death on May 7th at Warlingham of Sir Thomas Legge medical adviser to the Trades Union Council and for many years senior medical inspector of factories at the Home Office His wide knowledge of occupational diseases and industrial hygiene was always at the disposal of any organization or person seeking expert information and guidance

Thomas Morison Legge youngest son of the Rev James Legge D D LL D first professor of Chinese in the University of Oxford was born at Hong Kong on January 6th 1863 From Magdalen College School he went to Trinity College Oxford and thence to St Bartholomew's Hospital He graduated M B B Ch in 1890 obtained the D P H in 1893 and proceeded M D in the following year after a period of post-graduate study in Vienna He served as secretary of the Royal Commission on Tuberculosis 1890–5 and was then appointed senior medical inspector of factories At the Annual Meeting of the British Medical Association in 1902 he was honorary secretary of the Section of Industrial Hygiene and Diseases of Occupation and vice-president of the same Section in 1905 In that year he gave the Milroy Lectures before the Royal College of Physicians taking as his subject industrial anthrax The rapid development of the work of the Factory Department of the Home Office that followed the passing of the Workmen's Compensation Act of 1906 provided Legge with a widening field for his abundant energy In the course of his duties he travelled much and sat on many committees dealing with compensation for industrial diseases anthrax painters' colic buildings and tuberculosis in cattle

His published writings included a paper on public health in European capitals (1896) reports on cataract in glass workers (1908) and on epithelomata as cancer in relation to the manufacture of patent fuels (1911) He was also joint author with Sir Kenneth Goadby of *Lead Poisoning and Lead Absorption* and translator and editor of Rambousek's *Industrial Poisoning* The Royal College of Physicians awarded him the Bisset Hawkins medal in 1923 for his work during the preceding ten years promoting public health He was created C B E in 1918 and received the honour of knighthood on the occasion of 1925 In 1927 he delivered a Cantor Lecture on the teaching of industrial medicine and in the two following years the William Withering Memorial Lecture at Birmingham University and the Shaw Lecture to the Royal Society of Arts He also gave the Lettsomian Lectures at Boston and the Cartwright Lectures at Bradford and was lecturer on factory law at the universities of Manchester and on industrial poisons at the London School of Hygiene and Tropical Medicine

Sir Thomas Legge represented the British Government on the Advisory Hygiene Commission of the International Labour Office at Geneva and took an active part in drafting the International Convention which forbade the use of white lead in the internal painting of buildings. When in 1926 the British Government issued regulations applying the term of the Convention to this country, he resigned his appointment at the Home Office as a protest against the inadequacy of the regulations. Three years later he accepted an invitation to become medical adviser to the newly-formed Insurances section of the Trade Union Congress. For some time past he had been a valued occasional contributor to the *British Medical Journal* on matters relating to occupational diseases and factory hygiene and on the international aspects of workmen's compensation. He was a man of charming personality with a cultivated mind and a deep sense of social responsibility.

We have to announce the death on April 11th of *Dr Harry Leeson Ivor*. He was the son of a naval surgeon and he was born at Cape Town in 1867. After studying at the Bedford General Laboratories for a year he went in 1885 to St Bartholomew's Hospital where he took his M.R.C.S. and L.R.C.P. He obtained the M.D. degree of Durham in 1907. After acting as assistant at Hetton he practised at Jedburgh for over twenty years. In 1915 he was appointed the 4th Yorkshire Battalion to France and in their first engagement at Ypres distinguished himself by gallant conduct in saving fifteen wounded men from a burning farmhouse or cellar. His name is believed to have been three times put up for the V.C. After being severely wounded and invalided home he was soon appointed S.M.O. No. 2 Section Tynemouth Garrison with headquarters at Tynemouth. After the war he took up appointments with various collieries in Durham and Yorkshire as compensation doctor where he gained the confidence and esteem of both the companies and the miners. He was a keen sportsman an expert on bird culture and a prominent Freemason.

The death occurred on April 28th at his residence in Bristol Road Edgbaston Birmingham of Dr Richard Jeffrie Bankes a well-known practitioner in Birmingham for nearly forty years though he never took any part in public life. He built up a large private practice and was much loved and respected by his patients to whom his professional services were most willingly given. He obtained the triple qualification of the Conjoint Board of Scotland in 1892 and was 65 years of age. He leaves a widow and two daughters.

Medico-Legal

MEDICAL MAN AWARDED DAMAGES FOR PERSONAL INJURY

In the King's Bench Division before Mr Justice Swift and a common jury on May 3rd Dr Frances Joyce of Camberwell claimed damages for personal injuries against Mr Stanley L. Wilson of Kingston on Thames. The plaintiff's case was that in July last while riding his bicycle in Camberwell a motor car driven by defendant collided with him with the result that he was thrown from his bicycle and received a lacerated wound from elbow to wrist tearing the ulnar nerve and affecting the use of his hand in the performance of surgical operations. The defendant denied negligence and alleged that plaintiff contributed to the accident by failing to keep a proper look-out. The jury found for the plaintiff and awarded him £5 000 damages and £244 special damages. Judgement for Dr Joyce was entered accordingly with costs.

On the following day Mr Justice Swift granted leave of execution pending consideration of an appeal the ground of appeal being that the damages were excessive and against the weight of evidence. The judge said that he would not grant a stay except to give the defendant an opportunity of inquiring of the Court of Appeal whether that court thought the damages were excessive. He himself did not think they were having in mind that the plaintiff was a professional man who practice depended on the use of his hands and the appearance he presented to his patients. The stay was granted on condition that half the amount of the damages was paid to Dr Joyce at once the remainder with the special damages to be paid into court and await the decision of the Court of Appeal. The appeal said the judge must be entered within seven days or execution would be unrestrained and he wished to make it quite plain that £2 500 would not be recovered in any event.

On May 10th the Court of Appeal (Lords Justices Scrutton Greer and Slesser) varied the terms on which Mr Justice Swift had granted stay of execution pending appeal. The Court directed that £500 should be paid to Dr Joyce without any conditions as to its non-recovery and that the balance of the sum awarded as damages be paid into Court within fourteen days.

HIGH COURT DECISION AGAINST OSTEOPATH

On May 11th a Divisional Court consisting of the Lord Chief Justice Mr Justice Avory and Mr Justice Macnaghten unanimously allowed an appeal on behalf of the Medical Defence Union against a rule by the Marylebone magistrate that an osteopath who described himself as an osteopathic physician and surgeon had not committed an offence under the Medical Act 1858. The magistrate had dismissed a summons brought by the Union against Mr A. E. Shakesby for a letter and osteopath of Dorset Square N.W. for wilfully and falsely assuming the titles physician and surgeon. According to the evidence given at the police court Mr Shakesby had upon his doorplate Professor A. E. Shakesby D.O. (London) Bone-setter Osteopathic Physician and Surgeon.

The Divisional Court held that the case must go back to the magistrate with a direction to convict and the Union was allowed the costs of the appeal.

A report of the proceedings with the judgements of the Lord Chief Justice and Mr Justice Avory will be given in our next issue.

Centenary Meeting—Oversea Visitors

All overseas delegates and guests and other members from overseas intending to take part in the Centenary Meeting of the British Medical Association next July who desire hospitality for themselves (and for their wives if accompanying them) should communicate immediately with Sir Crisp English K.C.M.G. 82 Brook Street London W.1.

Masonic Welcome

The Motherland Lodge 3861 is arranging a special meeting on Monday July 25th to welcome as its guests medical Freemasons on their visit in connexion with the Centenary Meeting. Brethren from overseas who wish to be present should write (or cable) as soon as possible to the secretary of the Motherland Lodge Mr Arnold West (Trafalgar Buildings 1 Charing Cross W.C.2—cable address Bullewest London) giving details of Lodge, Masonic rank etc.

Universities and Colleges

UNIVERSITY OF DUBLIN

There was an error in the announcement under this heading last week. The degrees of M.A. and M.D. have been conferred on Dr Edward Bethel Solomons. His uncle Dr Bethel Solomons Master of the Rotunda took the M.D. in 1912.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

At a quarterly meeting of the Royal College of Physicians held on May 3rd with the President Dr Robert Thin in the chair Dr William Lindsay Lamb (Aberdeen) took his seat as a Fellow and Dr John McIntosh Morgan M.C. (Dundee) was elected a Fellow.

Sir Norman Purvis Walker was elected a representative of the College on the Committee of Management of the Triple

Qualification and Dr A Fergus Howat was elected a trustee of the College

Edith Kate Dawson M A M B was awarded the Lister Fellowship for original research

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly business meeting of the College held on May 6th James Michael O Donovan M D N U I was admitted to the Fellowship and S P Bhiwandker was admitted to the Licence in Midwifery

The following successful candidates at the Conjoint Final Examination with the Royal College of Surgeons in Ireland were admitted to the Licences in Medicine and Midwifery Bridget M M Dunlevy P Hughes Thirza M P Johnson D Kinsella

The Services

The Royal Naval Volunteer Reserve Officers Decoration has been awarded to Surgeon Commander I C D Irvine R N V R

NORTH WEST FRONTIER OPERATIONS

The names of Major H C Godding M C R A M C and Third Class Assistant Surgeon J Edwards and Sub Assistant Surgeons S Alexander and Harwant Singh of the Indian Medical Department are included in the list mentioned in a dispatch by General Sir Philip Chetwood G C B K C M G D S O Commander in Chief in India for distinguished services in connexion with the military operations on the North West Frontier of India from October 1930 to March 1931

DEATHS IN THE SERVICES

Lieut Colonel Cecil Willoughby Johnson R A M C (ret) died on March 18th aged 74 He was born at Agra on October 11th 1857 and was educated at Edinburgh University where he graduated M B and C M in 1882 Entering the Army as surgeon on January 31st 1885 he became lieutenant colonel after twenty years service and retired on October 11th 1912 He served in the Sudan in 1885-6 in the Frontier Field Force and was present at the action of Giniss receiving the Egyptian medal and the Khedive's bronze star on the North West Frontier of India in 1897-8 gaining the Frontier medal with a clasp and throughout the South African war 1899-1902 when he took part in operations in Natal the Transvaal the Orange River Colony and Cape Colony and was present at the relief of Ladysmith including the actions of Colenso Vaal Krantz Tugela Heights and Pieter's Hill and subsequently in actions at Reit Vlei Belfast and Rundam and received the Queen's medal with five clasps and the King's medal with two clasps After his retirement he was re employed in the war of 1914-18

Major General Bruce Morland Skinner C B C M G late R A M C died suddenly at Colchester on May 3rd aged 74 He was born in India on April 5th 1858 was educated at St George's and took the M R C S in 1879 and the L R C P Ld in 1881 Entering the Army as surgeon on July 29th 1882 he became lieutenant colonel after twenty years service colonel on May 4th 1912 and temporary surgeon general in 1916 he retired on December 26th 1917 and was granted the honorary rank of major general on April 26th 1918 He was secretary to the Medical Advisory and Nursing Boards at the War Office from 1902 to 1907 commandant and director of medical studies at the Royal Army Medical College from August 15th 1912 to August 4th 1914 was given the M V O in 1906 and was honorary surgeon to the Viceroy of India in 1910-11 He served in the campaign on the North West Frontier of India in 1897-8 gaining the Frontier medal with a clasp in the South African war from 1899 to 1901 when he served in the Orange Free State as P M O of a Division and took part in the relief of Kimberley and in the actions at Paardeberg Poplar Grove and Driefontein was mentioned in dispatches in the *London Gazette* of April 10th 1901 and received the Queen's medal with five clasps and in the war of 1914-18 when he served as D M S of an army and as deputy inspector of medical services in 1918-19 was five times mentioned in dispatches—in the *London Gazette* of January 1st 1916 January 4th 1917 May 29th 1917 December 24th 1917 and May 25th 1918—and received the C M G in 1916 and the C B in 1918 He was the author of many papers in scientific journals on the geology of the Indian Frontier and of South Africa and also on plague In 1884 he married Monica daughter of Henry Whiteside who survives him and had three sons and one daughter

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Parliament has adjourned over Whitsuntide The House of Commons rose on May 13th and will resume on May 23rd It has this week read the Limitation Bill and the National Health Insurance Bill a second time

On May 9th the Epsom College Bill passed through committee of the House of Commons without amendment and was read the third time

Committee on Medical Branches of the Services

Dr ELLIOT replying on May 10th to Mr Liddall said that it was not yet possible to forecast when the inquiry which was being conducted by the Committee on Medical and Dental Branches of the Defence Services might be completed May 19th 1931 would be completed The cost of the committee to date was about £200 Mr LIDDALL asked if twelve months was not long enough for the committee to produce a definite report Dr ELLIOT said that the committee's work was suspended for some time during the crisis last autumn but it was now sitting again

Maternity and Infant Welfare

Sir HILTON YOUNG told Mr Parkinson on May 5th that the comparative figures for 1930 and 1931 showing the provision made for the care of mothers and babies by local authorities and voluntary agencies in England and Wales were

Services	1930	1931
Ante natal clinics		
Local authorities	978	1,014
Voluntary agencies	194	196
Maternity homes and hospitals		
Provided by local authorities	66	63
Provided by voluntary agencies	144	138
Number of beds provided by local authorities	1,316	1,322
Number of beds provided by voluntary agencies	219	191
Institutions transferred to local authorities under Part I of Local Government Act 1929 which include maternity wards	5	
Number of beds in the wards	395	386
Nurses employed for the nursing of expectant mothers and children under 5 years of age suffering from infectious or other illness	204	227
Convalescent homes for expectant and nursing mothers or children under 5 years of age		
Provided by local authorities	17	14
Provided by voluntary agencies	1	
Number of beds provided by local authorities	—	—
Number of beds provided by voluntary agencies	43	43
Homes for mothers and babies		
Provided by local authorities	6	6
Provided by voluntary agencies	11	
Number of beds provided by local authorities	18	18
Number of beds provided by voluntary agencies	7	26

Dumping of Refuse

On May 5th in the Standing Committee which was considering the Town and Country Planning Bill Captain ACLAND TROYTE moved a new clause to the effect that refuse from one county should not be dumped in a part of another county save with the consent of the council of that county Sir HENRY JACKSON said that while it was a matter of town planning but could be dealt with by amendment of the Public Health Act 1875 A departmental committee had reported that it was possible to dump dust to

give no offence and that there were practical difficulties in giving county councils power to exclude refuse For London boroughs the only alternatives were to dump the refuse outside the borough or to take it out to sea and the latter course was extremely expensive Sir HILTON YOUNG replied that the object of the clause was to prevent pollution with the object of the clause but could not accept it as it would create a crisis in administration He had the subject under consideration and hoped to find some solution which would reconcile the two points of view He gave no undertaking to bring in legislation The things were far better settled by agreement between the parties After further debate the dumping of Shoeburyness rubbish in Derbyshire and of London rubbish in Hertfordshire Essex and Kent the proposal was lost by 14 votes to 12

Government Commissions still at Work

Dr ESSLEMONT told Mr JOWITT on May 5th that among commissions and committees appointed since 1929 and still at work were

Inquiries whether (1) pecuniary compensation and (2) pensions in course of payment under mule spinners' certificates should be included in the Schedule of Industrial Diseases to which section 43 of the Workmen's Compensation Act 1925 applied A further interim report on this was not ready

Inquiries into the causes of the shortage of officers and nurses in the local and general branches of the three Defence Services and into general recommendations for remedies were not

Inquiries whether the enactments applying to England and Wales should be consolidated with (1) local enactments of local governments and (2) matters relating to public health should be grouped in consolidating legislation

Inquiries into the working of the Acts as to compensation and the operation of articles of food order Bill in full

Road Accidents and Ventilation of the Mersey Tunnel

On May 6th Mr PYBUS when opening a debate on the Ministry of Transport paid tribute to the injury and loss of life on the highways of the United Kingdom He said public opinion was awakened to the appalling record Mr PYBUS also said that it was very rare from every hospital in the country that people injured on the road were taken in sometimes for weeks or even months but the hospitals received no remuneration for the expense incurred The Minister should consider that

Mr RHYS DAVIES said it was curious that the Automobile Association could not take up the question of payment to hospitals in respect of its own members The association paid the legal charges of its members and should contribute something to the medical and hospital charges as well

Mr PYBUS in his reply did not refer to hospitals He mentioned that difficulties had been found in ventilating the Mersey Tunnel The Government had given £2 500 000 as a grant to that tunnel and could not increase their liability

Cerebro spinal Fever at Windsor—Mr DUFF COOPER replying to Mr Groves on May 9th said that no primary vaccination during service in the Army had been performed on any of the nine cases of cerebro spinal fever which had occurred this year at Windsor The most recent revaccination was in June on December 16th last on a case which occurred one driven last Five of the cases had been inoculated that be was three and one case was immunized against wound from elbow 1932 affecting the use of his operations The defendant denied that plaintiff contributed to the accident by not keeping a proper look out The jury found negligence and awarded him £5 000 damages and £24 for special treatment Judgement for Dr Joyce was entered accordingly

On the following day Mr Justice Swift granted a stay of execution pending consideration of an appeal the ground of appeal being that the damages were excessive and against the weight of evidence The judge said that he would not grant a stay except to give the defendant an opportunity of inquiring of the Court of Appeal whether that court thought the damages were excessive He himself did not think they

of sleepy sickness was paralysed and crippled and who instead of being sent to a suitable home was detained at Rampton an institution for mental defectives where he suffered ill treatment which necessitated the removal of his right eye and whether he would cause an inquiry to be made into the conduct of this institution to ensure that in future only cases in which radical mental defect was present were kept there Mr L BROWN replied that the attention of the *Minister of Health had been called to this case* Harold Lee *was feeble minded and partially paralysed* He was sent in the first instance to a residential special school for mental *defectives his mother having stated that he was dangerous and beyond her control* Owing to his violent behaviour he could not be retained at the special school and was ultimately sent to the special block for children at Rampton In May last year the patient on his own admission dislocated his own right eye and this injury *necessitated* its removal There was no foundation for the allegation that this was due to ill treatment The circumstances of the case had been very fully examined and the Minister of Health did not consider that any further inquiry was called for If Dr Williams desired any further information the Minister would be glad if he would communicate with him

Medical Profession and Climatology—Replying on May 5th to Mr MCENTEE Sir HILTON YOUNG said that attention was paid to the subject of climatology by the medical profession The subject was included in the course for diplomas in *public health* The importance of facilities for treatment at health resorts was dealt with in a report on chronic rheumatism issued by his Department

Approved Societies without Surplus—In answer to Mr BUCHANAN on May 4th Mr L BROWN said he had invited certain approved societies who had no surplus funds under the National Health Insurance Act to submit a written statement of the representations they wished to make as he did not feel that their proposed deputation would be justified

Experiments on Animals—On May 10th Sir H SAMUEL informed Mr GROVES that the twelve experiments performed *on animals under Certificate A without anaesthetics during* 1930 at the place No 222 registered for the purpose were the feeding of animals for the *purpose of tests* The registered premises *were the Research* [illegible] 149 and J and J *Colman's Carrow Works* [illegible] 119 *experimenters were experienced research* [illegible] 3 015 158 165

Medical

Sir Ronald Ross celebrates his [illegible] to-day (Friday May 13th)

Lord Dawson of Penn [illegible] the committee of the R[illegible]

The annual dinner [illegible] will be held at the [illegible] Street, W C , on Thu[illegible]

The annual mee[illegible] Medical Psychol[illegible] Clinic) will be he[illegible] Central Marylebo[illegible] Chairman of C[illegible] and after the [illegible] Minister of [illegible] director of [illegible] years wor[illegible]

The a[illegible] Radiologi[illegible] be held [illegible] 8 p.m. [illegible] plet[illegible] re[illegible] c[illegible]

Spring of Refuse

[illegible] Committee which was con[illegible] Planning Bill Colonel [illegible] Country to ensure that refuse [illegible] any planned area [illegible] clause to be dumped in any planned area [illegible] the consent of the council of [illegible] should not be dumped in any planned area [illegible] county give with the consent of the council of [illegible] Sir Henry Jackson said this was not a matter [illegible] county but should be dealt with by amendment [illegible] Act 1875 A departmental committee [illegible] reported that it was possible so to dump dust as to

[illegible] of the British Institute of [illegible] the Rontgen Society) will [illegible] Street, W on May 19th at [illegible] ness part of the meeting is com[illegible] be read by Dr J C Mottram on the [illegible] and gamma radiation in the treatment [illegible] and on the action of radium on blood supply [illegible] ite reaction On May 20th medical members [illegible] ited to visit the x ray department of St Bar[illegible] Hospital Cases will be shown and short [illegible] read by Dr S Cochrane Shanks on x ray treat[illegible] of ringworm and by Dr P H Whitaker on [illegible] and lymphography by thorium

Sir Norman [illegible] the College on the

A sessional meeting of the Royal Sanitary Institute will be held in the Guildhall Gloucester on Friday May 27th when discussions will take place on slum clearance to be introduced by Dr R B Berry medical officer of health Gloucester and on technical methods and devices in connexion with the pasteurization of milk to be introduced by Sir Weldon Dalrymple Champneys Bt medical officer Ministry of Health and Dr R Schigman Dr George F Buchan will occupy the chair

At the meeting of the Royal Microscopical Society to be held on Wednesday next May 18th in the B M A House Tavistock Square at 5 30 p m Professor Hamilton Hartridge will describe microscopical projectors for making drawings and for lecture purposes and Drs P R Peacock and Woodhouse Price will discuss the cinematographic examination of serial sections as an aid to histology

The next monthly clinical meeting for medical practitioners at the Hospital for Epilepsy and Paralysis Maida Vale W will be held on Thursday May 26th at 3 o'clock when Dr Douglas McAlpine will demonstrate Tea will be provided Those intending to be present are asked to send a card to the secretary

The fifth Malcolm Morris Memorial Lecture under the Chadwick Trust will be given on Monday May 23rd at the Royal Society of Arts John Street Adelphi W C by Sir Ernest Graham Little who has chosen as his subject Dermatology as an outpost of medicine The chair will be taken by Sir Harold Morris K C at 5 15 p m

A Mid Wales spa conference arranged by the British Health Resorts Association will be held at Llandrindod Wells from May 20th to 23rd by invitation of the Urban District Council and the Medical Society of Llandrindod Wells The business sessions will be held at the Pump House Hotel on Saturday May 21st In the morning Sir Humphry Rolleston will take the chair and in the afternoon Sir William Willcox

The Royal Medico Psychological Association announces that an examination for the Gaskell gold medal prize and the examination for the certificate in psychological medicine will take place at the Maudsley Hospital Denmark Hill S E on May 27th and 28th at 10 a m There is no fee for entrance to the Gaskell prize examination Applications for entry to either examination should be sent to the registrar Dr D F Rambaut St Andrew's Hospital Northampton before May 20th

The council of Epsom College Royal Medical Foundation will shortly award a Prince pension of £30 a year to a duly qualified medical man of not less than 55 years of age If the candidate is a single man or a widower his income independent of any allowance from the College or from the Royal Medical Benevolent Fund must not exceed £100 per annum If he is married the combined income of himself and his wife must not exceed £150 per annum Forms of application should be obtained forthwith from the secretary Epsom College 49 Bedford Square W C 1 and must be returned completed to him not later than June 15th 1932

The Irish Hospitals Nursing and Midwifery Conference will be held in Dublin at the Mansion House and the Institution of Civil Engineers of Ireland on May 16th 17th and 18th The addresses will deal with specialized nursing mental nursing maternity and child welfare midwifery public health tuberculosis the clinical domestic and financial administration of hospitals and certain medical topics Full details of the sessions of the conference and the official visits may be obtained from the secretary 70 Lower Leeson Street Dublin

A national conference on maternity and child welfare will be held in the Council Chamber of the Guildhall London on July 4th 5th and 6th It will be preceded by a clinical week end for medical practitioners organized on behalf of the National Council for Maternity and Child Welfare and its constituent bodies by the National Association for the Prevention of Infant Mortality in co operation with the maternity and child welfare group of the Society of Medical Officers of Health Particulars may be obtained in due course from Miss Halford Carnegie House 117 Piccadilly W 1

The seventeenth French Congress of Legal Medicine will be held at the Medico Legal Institute Paris from May 23rd to 25th under the presidency of Dr Bayart of Lille when papers will be read on lesions of the liver in drowning by Dr L Martin of Lyons traumatic Parkinsonian syndromes by Drs Naville and Monakow of Geneva and psychanalysis in legal medicine by Dr Genil Perrin of Paris

Sir Herbert Samuel will deliver his presidential address before the British Institute of Philosophy entitled Philosophy and the ordinary man on Wednesday May 25th at 8 30 p m at University College Gower Street W C Tickets can be obtained by the general public from the Director of Studies University Hall 14 Gordon Square W C 1

The annual report for 1931 of the Ross Institute and Hospital for Tropical Diseases Putney Heath S W 15 contains an account of the way in which the Indian branch is actively promoting the eradication of malaria on tea planting estates by expert investigation of the local causes of infection and their effective treatment Research work at the Institute during the year has included the study of diseases due to fungi the bacterial agents in intestinal diseases and the preparation of serums against certain specific organisms Visits have been paid by delegates from the Institute to Northern Rhodesia in connexion with inquiries into the biology of mosquito and the value of certain new antimalarial drugs) East Africa Italy Albania Holland and the Fen districts of England

Dr Hugh S Cumming has been reappointed surgeon general of the United States Public Health Service for another four years

Letters. Notes. and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

Cause of Urethral Discharge

Dr E C March (Reading) writes Can any of our readers throw some light on the following problem I have been called in to see a young married man who complains briefly of the following symptoms He had an attack of rheumatism or meningism in the [illegible] night four subsequently a volume of [illegible] of the right leg and even by the [illegible] considerable fluid in the [illegible] was raised a little On the [illegible] a urethral discharge which [illegible] next day thus preventing [illegible] discharge had been [illegible] accompanied by pain on [illegible] obviously honest statement from [illegible] was not infected and from which [illegible] I am convinced that the condition was [illegible] What was it

ign is the relatively frequent escape of the apices and especially the localizing of the lesions in the middle portions near the hilus of both lungs All specific treatment (mercury arsenic or bismuth) is rapidly efficacious in pulmonary syphilis more particularly in recent or undiagnosed and untreated cases Potassium iodide should be used only in the chronic form in which pulmonary sclerosis predominates The latter condition is less amenable to treatment hence the need for an early correct diagnosis

444 Auricular Fibrillation

D McKenzie and B M Baker jun (*Amer Journ Med Sci* January 1932 p 35) have observed 575 consecutive patients suffering from auricular fibrillation confirmed by electrocardiogram Of the number in 34 per cent the condition was of rheumatic origin while in 48 per cent either arteriosclerosis or hypertension or both appeared to be the aetiological factor Hyperthyroidism and syphilis were believed to account for 8 per cent and 3 per cent respectively The higher incidence of auricular fibrillation occurring in the sixth decade instance are very much below that of 12 but the authors have described two patients in whom the arrhythmia was recorded The author comments on the rarity of auricular fibrillation in association with syphilitic heart disease of the total group of 575 patients syphilis was recorded as the aetiological factor in only eight It was found that auricular fibrillation may be induced by digitalis therapy chiefly when individual idiosyncrasy or failure to prevent the arrhythmia in the ventricle normally by concomitant blockade is responsible for digitalis intoxication does preceding it A study of auricular fibrillation mainly from the standpoint of prognosis and treatment has also been made by W D Stroud I B Lawson and J V Klauder (*ibid* p 48) who have observed 251 patients They found that while the average age of onset in the rheumatic group was 30 years that of the non rheumatic group was 50 years Analysis of seventy seven cases showed that the prognosis was especially poor if fibrillation started before the age of 20 years in even such instances the subsequent duration of life averaged only one year When the arrhythmia set in after the age of 40 the average duration of life was five years Restoration of normal rhythm by quinidine occurred in two thirds of the sixty six patients so treated but the authors found that even if normal rhythm was restored the duration of life was only about one year longer than in those fibrillators not receiving quinidine

Surgery

445 Preliminary Pneumothorax in Intrathoracic Surgery

J Arci (*Bull Acad de Méd*, February 9th 1932 p 212) has found as the result of experimental and operative experience that a preliminary pneumothorax performed by degrees according to the tolerance of the patient contributes most effectively to the success of intrathoracic operations He insists on the importance of studying the radiographic appearances at intervals of a few days, to estimate whether atelectasis is sufficiently complete and, in the case of tumours to enable really accurate diagnosis to be made, he has found that nitrogen is the best gas for use in replacement Performing a preliminary pneumothorax, he has undertaken a number of experimental operations on sheep, thoracotomy even when an extensive opening has been made, was well tolerated Operations such as partial or complete lobectomy produced signs of respiratory embarrassment and in the case of a very wide thoracotomy resulted in the death of the animal with signs of acidosis and asphyxia The most successful operation was that of lobectomy, performed after resection of a single rib and the use of retractors as in the operation on human subjects Protection of the collapsed lung during the operation, by swabs moistened with artificial serum minimizes shock, and prevents mishaps attendant on re-expansion Provided that this precaution is taken, and that handling of the lung is minimal asphyxial accidents are avoided A preliminary pneumothorax followed by thoracotomy with resection of a single rib is the ideal procedure for approach according to this author

446 Acute Pancreatitis with Impacted Calculus

R Reding P La Haye and Fr Drome (*Le Scalpel* February 13th, 1932 p 207) report the case of a woman 33 years old admitted into hospital with severe epigastric pain of three hours duration—a girdle pain, radiating to the right hypochondrium and the back but not to the shoulder She had vomited bile with no relief of the symptoms There was no history of previous illnesses On examination the temperature was 99° F and the pulse 62 regular and small The heart and lungs were healthy, and the abdomen was soft but with tenderness in the epigastrium and over the gall bladder The bowels had moved twice the urine was rich in bile pigment, and there was a slight leucocytosis Nausea was present but no further vomiting occurred Morphine and hot fomentations did not relieve the pain After six hours the pulse rose to 102 the abdomen became tympanitic and the patient presented signs of collapse Vaginal examination was negative except for a prolapsed ovary in the pouch of Douglas and the abdomen was opened in the mid line below the umbilicus The peritoneal fluid was blood stained but the appendix and uterine appendages were healthy The abdomen was closed and opened again in the mid line above the umbilicus The gall bladder was found to be distended and full of calculi one being palpated in the bile duct and another in the ampulla of Vater they were both expressed into the duodenum The lesser sac was opened and the pancreas explored On the anterior surface of its body was a vesicle measuring 2 inches by 1 inch This disappeared after haemorrhage from a blood vessel in the lesser sac The body of the pancreas was soft on palpation but the head was indurated The opening into the lesser sac was closed without drainage Cholecystostomy was performed the gall bladder being emptied of about fifty calculi and drained The subsequent progress of the patient was normal

447 Intussusception

H J Shelley (*Arch of Surg* February 1932 p 318) states that the treatment for intussusception is primarily surgical the procedure being determined by the state of the bowel found at the time of operation An early diagnosis is of the greatest importance and ensures a relatively simple operation while the patient is in a good condition The disorder can often be discovered by placing the right index finger in the child's rectum and the left hand on the abdomen with the child in a sitting position If a tumour is present this will usually drop down between the hands of the examiner In cases of doubtful diagnosis x-ray examination will be of value and also a barium enema to show the site of the obstruction Intussusception may be reduced also by the use of pressure enemas or air insufflation, but this should be followed by abdominal exploration to ensure that reduction is complete and that no gangrene tumour or perforation is present Most cases of intussusception are easily reduced by careful manipulation, but if this is not possible the bowel may be incised at the point of invagination, and the intussusception be reduced Alternatively enterostomy above the lesion which may be followed by spontaneous reduction, or a lateral anastomosis between the afferent and efferent loops of intestine with subsequent fixation invagination has proved satisfactory In cases of gangrenous intussusception a resection followed by a lateral anastomosis is the ideal operation but if the condition of the patient is not good enough to allow this a double barrel resection is a life saving procedure and must be followed by an extra abdominal ileostomy When a gangrenous intussusception is complicated by perforation the quickest procedure must be adopted to remove the damaged intestine and relieve the obstruction The modified Mikulicz operation followed by adequate drainage is the operation of choice

in these cases. Pre-operative treatment should include the administration of water, salt and dextrose by hypodermoclysis or infusion. A case is reported of a child aged 15 months in whom the intussusception had perforated and was irreducible and gangrenous. A modified Mikulicz resection with drainage of the peritoneal cavity was performed and the child made a good recovery.

448 Prevention of Peritoneal Adhesions

A. OCHSNER and E. CARSIDE (*Surg. Gynecol. and Obstet.* February 15th 1932, p. 338) point out that though post-operative peritoneal adhesions are protective in the presence of infection they may mar the outcome of an otherwise successful operation. Normally peritoneal adhesions disappear after completing their useful-ness, the fibrin being digested by a proteolytic ferment from the polymorphonuclear leucocytes. If the fibrin is not removed it becomes organized and replaced by fibrous tissue. Fibrous adhesions may occur especially in subjects with an inherent tendency to fibrous tissue development. In an investigation covering a period of five years the present authors have tested the efficacy of digestive ferments in preventing peritoneal adhesions. Solutions of trypsin and papain (a vegetable digestive ferment) were extensively tried, and the latter proved to be by far the most efficacious. Trypsin was used in one of 11 clinical cases but did not prevent the recurrence of adhesions. The other cases in which papain was employed have remained symptom-free for from six months to five years. From their clinical and experimental observations Ochsner and Garside are convinced that the intraperitoneal injection of papain solution is entirely without danger.

449 Staphylococcal Septicaemia

G. MARAÑON and MORROS (*Arch. de med. cir. y esp.* March 5th 1932, p. 189), who record an illustrative case, state that staphylococcal septicaemia is relatively rare, especially when compared with streptococcal infection, forming only 6 per cent. of all septicaemias according to Simmonds. Metastases are most frequently found in the thorax, kidneys and perirenal tissue. The prognosis mainly depends on the patient's resistance. The present case was that of a man aged 24, debilitated by syphilis, gonorrhœa and soft chancre, who developed staphylococcal septicaemia secondary to a boil on the neck. An empyema ensued and a pure culture of staphylococci was obtained from the pus. Death followed a few hours after pleurotomy. At the post-mortem examination a perirenal abscess was found together with an abscess in the substance of the kidney. The other organs were normal.

450 Acute Pancreatitis

C. R. JONES (*Amer. Journ. of Surg.* March 1932, p. 510) divides acute pancreatitis into two varieties, the hæmorrhagic which may result in gangrene, and the suppurative type found in the infectious diseases which cause abscesses in and about the pancreas. There may also be cases of bacterial invasion of the pancreas giving rise to abdominal symptoms. The gangrenous type of pancreatitis may be caused by trauma, apoplexy or by over-distension under pressure by bile or other fluid causing a backward pressure and distending the gland so as to bring about some slight solution of continuity in the blood vessels. Disease of the pancreas may be secondary to diseases of the biliary tract. The causes of pancreatic abscess may be extending inflammation as ending in inflammation, hæmorrhagic necrosis, an infectious disease or hæmatogenous. Peripancreatitis may exist as an extension from perigastritis or duodenitis or other adjacent inflammations. Symptoms of the gangrenous type of pancreatitis are vomiting, intense pain, profuse sweating and possibly swelling and tenderness. The skin is pale and dusky. Death may occur from shock, collapse or in operation and a post-mortem examination may disclose evidence of fat necrosis. Treatment in all forms of acute pancreatitis must be surgical and in the hæmorrhagic necrotic type should be immediate. Even when the operation is more radical with partial or total abscess-cavity resection, a better chance of recovery is undertaken as soon as possible. A case is reported which a robust man aged 40 was [illegible] with severe abdominal pain. There was a history of indefinite pain in the epigastrium for two years. Laparotomy disclosed blood-stained serum under the liver and round the gall-bladder and duodenum. The head of the pancreas was hæmorrhagic and œdematous. The peritoneum was opened over the head and right half of the pancreas and drainage was instituted. The patient made a good recovery and remains in excellent health. Emphasis is laid on the importance of operation at the earliest possible moment.

Therapeutics

451 Combined Antivirus and Vaccine Treatment of Acne Vulgaris

A. IVAKTIN (*Russ. med. Woch.* February 5th 1932, p. 173) has prepared an autogenous vaccine in cases of acne vulgaris by inoculating the contents of a number of pustules on agar or sugar agar and making a control of the resulting cultures. He has also prepared an antivirus by Besredka's method. Increasing doses of the vaccine were given every four or five days, half of each dose was injected in divided portions intracutaneously and half subcutaneously, not more than 0·2 c.cm. of the intracutaneous dose being introduced at the same time. Local compresses of the antivirus were applied after the vaccine injections had been continued for twelve to fifteen days. Before the antivirus was applied the skin was washed with warm water and cleansed with ether. As an alternative to the compresses the antivirus may be applied as an ointment, one part of antivirus to two parts of ointment consisting of white vaseline and lanoline (1:2) or eucerinum anhydricum may be used as a base. Very satisfactory results were obtained from the combined treatment in a number of cases, provided that the injections were continued long enough, some patients required ten to fifteen injections, others as many as thirty to forty.

452 Serotherapy in Tularæmia

I. JOSHAY (*Journ. Amer. Med. Assoc.* January 23rd 1932, p. 552) treated ten cases of tularæmia with a specific serum prepared from a goat inoculated with formaldehyde suspensions of *B. tularense*. Doses of 10 c.cm. were usually given intravenously on both the first and the second day in hospital. No reaction occurred. Nine patients showed abrupt cessation of fever, malaise, arthralgia and myalgia forty-eight hours after the second injection and rapid reduction in size of the affected lymph glands, none of which suppurated. In one patient who was moribund on admission he considered the serum therefore is considered by Joshay to be a prompt and reliable treatment for tularæmia.

453 Intravenous Injection of Anti-gonococcal Vaccine

J. GATE, P. CUILLERET and C. L. POYET (*Bull. Soc. Franç. de Derm. et de Syph.* January 1932, p. [illegible]) describe the effects of intravenous injection of anti-gonococcal vaccine given in order to [illegible]. A man aged 26, who was admitted with [illegible] rheumatic orchi-epididymitis of five days' duration. The initial urethritis had occurred about [illegible] previously. On admission it was [illegible] therapeutic injection of gonococcal vaccine was [illegible] for the treatment of the orchitis there was given a series of hypodermic injections of [illegible] commencing with 0·5 c.cm. and [illegible] 2 c.cm. on alternate days. The [illegible] doses which were well borne, [illegible] painful local inflammatory reaction. The eighth dose, 2 c.cm., was given slowly. When the eighth dose, 2 c.cm., was given

0·5 c.cm. was injected by mistake into a vein, the remainder of the dose being given hypodermically. Ten minutes later the patient exhibited severe symptoms of shock—acute dyspnœa with rapid breathing, intense cyanosis and syncope with extreme pallor. The pulse could not be counted and he sweated profusely. He was relieved quickly by diffusible stimulants and inhalations of oxygen. He recovered consciousness but complained of headache and exhaustion. In a few hours the temperature rose to 102°2. Next day he had recovered except for a slight headache. The orchitis subsided in a few days without further vaccine treatment. The authors indicate two facts as meriting attention: the severity of the shock following the intravenous injection of vaccine and the rapid disappearance of the orchi-epididymitis, which seemed to melt away under what they believe to have been the anaphylactic shock. The fact of the patient having been sensitized by the previous injections appears to explain the severity of the shock. This had in spite the therapeutic action due to the production of an antigen.

454 The Administration of Anti-diphtheritic Serum

R. DEBRÉ, G. RAMON and J. BERTRAND (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, March 14th, 1932, p. 366) have made a comprehensive and detailed experimental study of anti-diphtheritic serum and its action; they record various practical inferences that may be drawn therefrom. Their investigations indicated that this serum owing to its antitoxin content could limit and check diphtheritic infection and that a single dose containing a relatively large amount of antitoxin should be administered at the onset of the disease. The size of the initial dose should be determined by considering the age and weight of the patient and especially the apparent severity of the infection; it should contain between 15,000 and 50,000 antitoxin units. If the initial dose proves to be ineffective a second should be administered as speedily as possible. The serum may advantageously be given both subcutaneously and intramuscularly, half the dose being introduced by each route. A high degree of concentration of the serum is not desirable; serums with a high antitoxin content are also frequently concentrated as regards proteins and this retards the neutralization of the toxin by the antitoxin. For treatment serums naturally rich in antitoxin should be employed; concentrated and purified preparations should be reserved for prophylactic use, for which they present certain advantages. A valuable adjuvant measure is disinfection of the nasopharynx and tonsils with an arsenical preparation.

455 Treatment of Disseminated Sclerosis

D. PAULIAN (*Paris Méd.*, February 13th, 1932, p. 145) considers that this disease is an encephalo-myelo-neuritis, one of a group which includes, for example, the encephalomyelitis following infectious fevers or vaccination. The causative virus or neurotropic viruses with close biological resemblances may be held responsible for all the members of the group. Paulian recommends deep radiotherapy and vaccines. The spinal column, or brain, if there are cerebral symptoms, is irradiated with a dose of 300 R on the skin each session. In all the four cases here reported neuro-vaccine was given intravenously in gradually increasing doses of 1, 2, 3 c.cm., either alone or with a 10 per cent. solution of calcium chloride or gluconate, to which may be added a 33 per cent. solution of sodium cacodylate 0·5 to 3 c.cm. Used alone neuro-vaccine injections are followed by a temperature reaction of 100° to 102° F. and the dose can only be repeated after an interval of two or three days, when the temperature is normal again. The author is in the habit of giving 18 to 30 injections of neuro-vaccine which may be repeated if necessary after an interval of one or two months. At the conclusion of the sessions of radiotherapy Paulian recommends daily transmedullary ionization with a 1 per cent. solution of calcium chloride and later iodide ionization. Four cases are reported, three patients were women aged respectively 19, 26 and 31 years and one was a man 26 years old. Good results were obtained in all from this method of treatment.

Anaesthetics

456 Carbon Dioxide in Anaesthesia

D. G. RENTON (*Med. Journ. of Australia*, January 23rd, 1932) points out that while the administration of CO in the course of anaesthesia has many beneficial results there are limitations to its usefulness and in some cases it may do actual harm. Too high a percentage at any stage causes an excessive secretion of saliva and mucus and may lead to post-operative vomiting. In inducing anæsthesia with ethyl chloride or ether, time is saved by adding CO_2. In the case of patients who are very ill or suffering from shock the association of CO_2 with ethylene and oxygen deepens the respiration, raises the blood pressure, and promotes the speed and smoothness of the induction. During the stage of maintenance of anæsthesia the CO_2 is shut off unless there is an indication *for it*—as shown by any depression of the respiration or weakening of the pulse. Deepening of the unconsciousness is obtained by adding a little CO as well as by increasing the anæsthetic when the surgical procedure which called for such deepening has been completed. Withdrawal of the anæsthetic and temporary continuance of the CO quickly renders the anæsthesia lighter. The chief risks of CO administration are found when a bag or other closed system is in use, for the proportion present in the respired gas mixture may rise unduly and prolonged stimulation of the respiratory centre lead to its fatigue. Care should also be exercised in the recovery stage when the respiration should not be unduly stimulated, for this is followed by a washing out of too much CO from the patient and a compensatory period of respiratory depression. At the termination of an endotracheal or pharyngeal anæsthesia this gas is not only useful but necessary, it drives out the accumulated anæsthetic from the body and restores the blood CO_2 to the normal level from which it had necessarily fallen in these two types of anæsthetic induction. In the post-operative stage it is advisable to give short spells of CO_2 inhalation—for five to ten minutes at a time at intervals of two hours in the first twenty four hours, at four hour intervals in the second twenty four hours, at six hour intervals in the third twenty four hours, and so on for as long as may be deemed advisable. In this way collapsed and airless areas in the lungs are opened up and ventilated.

457 Rectal Anaesthesia by Magnesium Salts

P. KOTZOGLU (*Deut. med. Woch.*, April 1st, 1932, p. 535), in view of the difference of opinion as to the absorption of magnesium salts by the bowel, carried out experiments on dogs and found that in a large number of cases general anæsthesia could be effected by the rectal injection of combined solutions of magnesium and lithium chlorides. A clinical trial was then made on twenty-six patients with rectal injections of either magnesium sulphate or chloride. In three cases general anæsthesia was produced by magnesium chloride alone and the operation was performed without the aid of any other anæsthetic. Lithium chloride was tried on only two patients since it produced more severe intestinal irritation than the magnesium salts. No bad after effects were observed in any of the patients treated by magnesium sulphate and chloride or lithium chloride.

458 Avertin Anaesthesia

A. DE WEERDT (*Le Scalpel*, April 9th, 1932, p. 459) agrees with Kirschner that *in order* to obtain a perfect anæsthesia with intravenous avertin a very concentrated solution must be used. This obviates the introduction of a great quantity of foreign matter into the circulation and also produces a more rapid anæsthesia. Kirschner's apparatus is recommended and the technique of its use is described. A 3 per cent. solution of avertin in physiological serum heated to 40° C. should be employed. The dosage must be regulated by the patient's weight (0·03 gram per kg.); this should be given rapidly in 45

seconds. Complete anæsthesia can be obtained in five minutes; it lasts from three to ten minutes and can be supplemented if desired with ether. Avertin anæsthesia can be slightly prolonged by injecting morphine-scopolamine or sedol half an hour before the operation. The awakening is particularly good, malaise, nausea and agitation being absent. Shock is also largely avoided by this method, and no ill effects have been noted. The respiration is slightly accelerated and superficial, and cyanosis usually occurs. Should respiratory paralysis ensue, the appropriate remedial measures must be employed. Avertin anæsthesia is contraindicated in serious hepatic, renal, and intestinal diseases, advanced tuberculosis, cachexia, and in grave anæmias.

459 H. HILDE (*Med. Welt*, March 26th, 1932, p. 455) points out that the greatest value of avertin is in anæsthetics lies in the fact that by rectal introduction the psychological effect can be cut out. Again, avertin is easily administered, and 86 per cent. is quickly absorbed by the healthy rectum in 25 minutes; one disadvantage is that it is impossible to stop absorption once it has commenced. The anæsthetic has been found to have a selective paralysing action on the respiratory and circulatory centres. It is especially indicated in operations for exophthalmic goitre, since in these patients psychological shock can be completely eliminated. It also has a place in operations for hare-lip and cleft palate in children, plastic operations in adults, thoracoplasty, and rib resection. Emergency operations may be successfully carried out under avertin anæsthesia, and Hilde uses it to induce euthanasia in cases of carcinoma with metastases in the vertebral column and pelvis. Although an ideal anæsthetic in operations for abdominal conditions which are complicated by heart or lung disease, it is not well tolerated by anæmic or cachectic patients, or those in whom there is an acute septic inflammatory process present, and is contraindicated in such cases. No special pre-operative treatment is needed; enemata are forbidden since they decrease the absorptive power of the rectum. Morphine is not injected because it has, together with avertin, a cumulative action which paralyses the respiratory centre. Patients with exophthalmic goitre are given pseudo-enemata three to four days before operation; the same procedure is carried out in children to accustom them to retain the drug on the day of operation. Overdosage and bad technique account for most of the disadvantages and dangers. The dose for each patient has to be calculated; the amount of avertin in a 3 per cent. solution should not exceed 8 grams in a woman and 10 grams in a man. It is dissolved in amyl hydrate (1 gram to 1 c.cm.) and distilled water at body temperature is added. The solution should be administered slowly (20 to 30 minutes being taken) so that too rapid absorption may not occur.

Obstetrics and Gynaecology

460 High Caesarean Section

V. Cocq (*Bruxelles Medical*, March 20th, 1932, p. 579) records his impressions of the value of high Caesarean section and enumerates the indications for this operation based on a critical survey of 300 personal cases as compared with fifty in which the low Caesarean procedure was employed. He compares the two operations from the point of view of simplicity of technique, the nature and frequency of accidents which may occur, the maternal mortality, the late sequels which may be imputed to the operation, and the foetal mortality. Although the low operation is indicated in certain forms of dystocia, Cocq considers it would be a mistake to look upon the high procedure as superseded. In the treatment of contracted pelvis, disappointment is likely if a segmental Cæsarean operation is tried instead of podalic version. In clean cases, high Cæsarean section is considered the technique is simple, accidents are rare, uterine rupture is not to be feared, and there are fewer risks of tears since the wound is larger and further removed from the dangerous region. The author finds that the foetal mortality is exceptional, adhesions are [illegible] operation are less likely to interfere with a repeated operation, [illegible] in a succeeding pregnancy, possibly [illegible] in the low operation, but Cocq did not [illegible] as frequent as some authors state, and [illegible] section should not be used as a prophylactic [illegible] should always be given the benefit of trial [illegible].

461 Primary Abdominal Pregnancy

R. HASSELBALCH (*Zentralbl. f. Gynäk.*, February 13th, 1932, p. 404), who records a personal case, calls attention to the rarity of primary abdominal pregnancy by the fact that he could find only thirty-three cases recorded. A factor in the abdominal implantation of the ovum is the migration of the fertilized ovum from the left ovary to the right side of the pelvis, where there is no Fallopian tube to catch the ovum. The rarity of primary abdominal pregnancy prevents a differential diagnosis being made with certainty. The only possible treatment consists in operation as quickly as possible. Hasselbalch's patient was a multipara aged 24, who had had an abortion two and a half years previously and had undergone right salpingo-oophorectomy in the previous year. She developed violent abdominal pain after coitus, being in the fourth month of pregnancy. Laparotomy was performed on the following day, and a living foetus (which died within a few minutes of removal) was found between the intestinal coils below the liver. Death ensued two days after the operation.

462 Ovarian and Uterine Carcinoma

SUSAN R. OLCOTT (*Surg., Gynecol. & Obstet.*, March, 1932, p. 490) has endeavoured to ascertain the frequency with which ovarian papillary cystadenocarcinoma is associated with carcinoma of the fundus uteri. A series of cases operated upon at the Mayo Clinic during the seventeen years in which carcinoma appeared in both these structures is recorded, and the possible modes of extension from one organ to the other briefly reviewed. In 520 cases of uterine adenocarcinoma ovarian involvement occurred in 11·9 per cent.; in 616 cases of ovarian papillary cystadenocarcinoma there was associated uterine carcinoma in 8·6 per cent. From the cases [illegible] in which the disease was not far advanced it [illegible] evident that the blood and lymphatics were not [illegible] of metastasis. The author thinks that the Fallopian tube should be considered as one means through which implantation takes place. Because of the similarity of adenocarcinomatous cell in the embryologically [illegible] tissues it is often difficult to determine which [illegible] is primary and which a secondary, or whether they may not originally have been two independent growths. In ovarian carcinoma the possibility of [illegible] the uterine endometrium even when [illegible] evidence of tumour extension [illegible] in mind, and hysterectomy [illegible] must be seriously considered.

463 Referred Pain of Ureteral Origin

The efficacy of [illegible] (*Lettres Internationales de Médecine et de Chirurgie*, February, 1932, p. 259) claims that [illegible] to the mild [illegible] the nerve supply of the [illegible] conditions of the [illegible] assume special [illegible] the unfortunate [illegible] curious [illegible] ureter [illegible] nerves over the [illegible] Diabetes of the [illegible] pain. Professor [illegible] therapeutic [illegible] by [illegible] obtained when [illegible]

were cured It is well recognized that lesions of the urinary tract may be confused with those of the pelvic organs gall bladder and appendix The incidence of this referred pain of ureteral origin was 10 per cent in 1 161 recent cases Comparatively few of these patients presented obvious urinary symptoms as their chief complaint Very few even with vesical irritability showed either pyuria or recent inflammation of the bladder or urethra The clue to their causative lesions was the correct interpretation of the pain A series of typical cases is recorded with note of the areas to which pain was referred in such condition as afterwards proved to be renal ptosis hydro, or stricture of the ureter, and tumours of the ureteral meatus Urograms made by the pyelo opaque method were employed to demonstrate the local condition

Pathology

464 Occurrence of Avian Tubercle Bacilli in Milk

K J Worthington and H Dimmock (*Vet J Zeitschr der Haustiere* March 7th 1932 p 71) draw attention to the frequency in cattle of infections with the avian type of tubercle bacillus Examining mixed samples of milk by guinea pig inoculation and by cultural methods they have succeeded in a number of instances in isolating acid fast bacilli in culture from milks that gave rise to no detectable lesions in guinea pigs Investigation of these strains by the usual cultural and animal inoculation methods has shown that they are undoubtedly of avian type It was observed that positive results were obtained only with milk comin, from milk farms having about two score animals in the herd of milk from large farms avian tubercle bacilli were never isolated in routine cultures The individual animals in six small farms were examined both the milk and the lung mucus being tested by cultural and animal inoculation methods From seven cows on four different farms avian tubercle bacilli were recovered in culture Large farms were then investigated and by the examination of individual animals the authors succeeded in obtaining six cultures of avian bacilli from milk and three from lung mucus So far as could be ascertained the infected animals were quite healthy Comparison of the avian strains of cattle origin with avian strains isolated from fowls showed that the former were as highly pathogenic for rabbits as the latter The situation of the lesions in infected cattle was not established but the authors recall Plum's findings of avian tubercle bacilli in the uterus of pregnant cows

465 The Nature of the Agent Transmitting Fowl Leukaemia

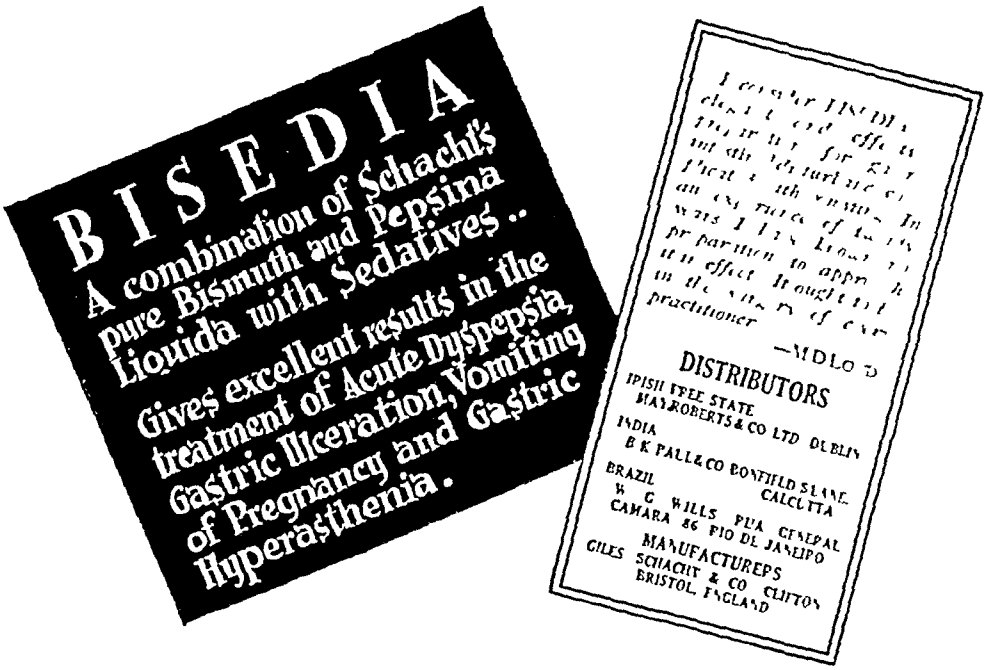
J Furth (*Journ Exper Med* March 1932 p 465) cites evidence to show that the concentration of the transmitting agent of fowl leukaemia is approximately the same in cell free plasma as in suspensions of blood cells The smallest amount of plasma producing the disease was 0 000001 c cm and of cell suspension 0 00001 c cm This observation seems sufficient to exclude the possibility that transfer by plasma is due to a small number of cells remaining in it for leukaemic blood diluted 1 in 1 000 000 still contains 100 to 1 000 leucocytes per c cm, yet is unable to produce leukaemia moreover, observation failed to reveal the presence of cells in the original undiluted plasma yet the same plasma in high dilution proved infective The incubation period of the disease was prolonged by decreasing the amount of plasma injected diminution of the number of leukaemic cells injected had, however much less effect in lengthening the incubation period The author concludes that the filterable agent in plasma presumably brings about a neoplastic formation of some of the elements in the bone marrow of the host whereas leukaemic cells are themselves capable of multiplication in susceptible hosts Transfer of the disease by cells is essentially a tumour graft, whereas transfer by cell free plasma acts only by inducing a neoplastic process in the tissues In a second paper (ibid p 479) the author states that the virus will pass through all siliceous filters and is probably more or less similar in size to the bacteriophage In a third paper (ibid p 495) experiments are recorded on the resistance of the transmitting agent It was found that the filterable virus in blood was able to withstand drying for at least fifty four days It was not inactivated by freezing in liquid air At 37 5° C it lost its activity within fourteen days but retained part of its activity for this time if it was kept at 4° C

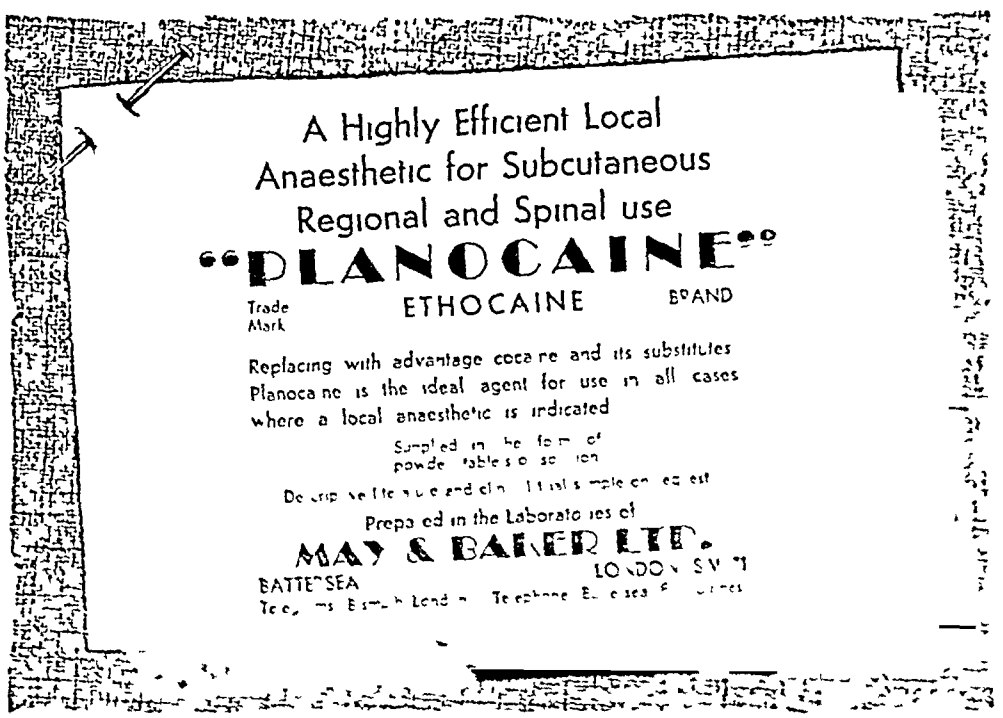
466 Action of the Heavy Metals in Anaemia

K W Schultze (*Klin Woch* March 19th 1932, p 497) established anaemia in a number of young rats by feeding them with pure cow's milk a practically mineral free diet and observed the results of adding to the milk small amounts of nickel cobalt copper, and iron on the production of red blood cells and haemoglobin Daily doses of 0 5 mg nickel had no effect on the anaemia but doses of 2 mg caused a rapid increase of the erythrocytes and a slow rise in the haemoglobin with older animals nickel exerted no influence on the blood picture Cobalt induced a marked fall in the body weight and the animals usually died about the tenth day in the older animals there was an increase in the number of red cells and in the haemoglobin with a fall in the body weight Copper had a considerable influence in producing erythrocytes but only a slight effect on the haemoglobin formation in older animals a dose of 2 mg reacted only in one case Administration of 1 mg of iron to the older animals was without effect But with young rats a like dose rapidly relieved the anaemia It is explained that in grown rats there is a sufficient store of iron in young animals this is not the case and they can easily assimilate an extra dose of it A pure milk diet soon causes anaemia in young animals whereas older animals are longer resistant and can be restored to the normal by doses of cobalt nickel and copper without iron the prophylactic administration of these heavy metals can hinder the production of anaemia A stimulus to the haemopoietic system by these heavy metals reacts on the anaemia of grown animals by the equal new formation of haemoglobin and red cells —a constant colour index with younger animals under a similar stimulus red cells can be formed but owing to iron deficiency the haemoglobin synthesis fails and the colour index falls In erythropoiesis the production of red cells and the formation of haemoglobin are independent whereas iron influences both in the same manner, the nearly related metals cobalt nickel and copper exert a formative stimulus and with deficiency of iron do not effect the synthesis of haemoglobin The catalytic effect of various metals depends on a formative stimulus on the red bone marrow, the results of liver therapy in anaemia are probably in great part due to the action of copper

467 Syphilis and Cancer

The possibility that syphilis may be a factor in the genesis of adenocarcinoma with hepatic cirrhosis was first suggested by Menetrier in 1917 A Tournaire and P Renault (*Bull Soc Franç de Derm et de Syph* February 1932 p 269) report and fully describe a case, which apparently confirms this theory of the carcinogenic action of syphilis In this patient the disease, contracted thirty nine years previously had been only moderately treated and showed a recrudescence of activity twenty two years later with a positive Wassermann reaction Alcoholism appeared to intensify markedly the action of the syphilitic infection on the liver These two processes caused a series of attacks of hepatic congestion, and the liver became permanently hypertrophied some thirty eight years after the onset of syphilis Laparotomy was then performed, and a typical trabecular epithelioma evidently originating from the hypertrophic cirrhosis was found The patient died about three months later The authors believe that a pre existent syphilitic inflammation although often noted in various other organs has rarely been considered in the case of hepatic epithelioma, particularly of the adenocarcinomatous type


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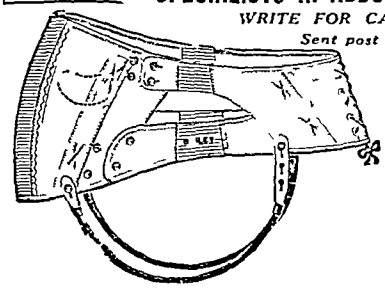
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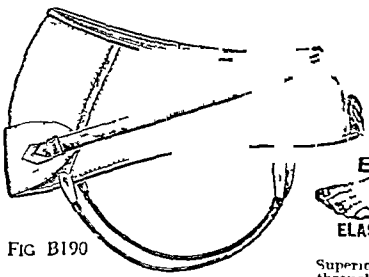
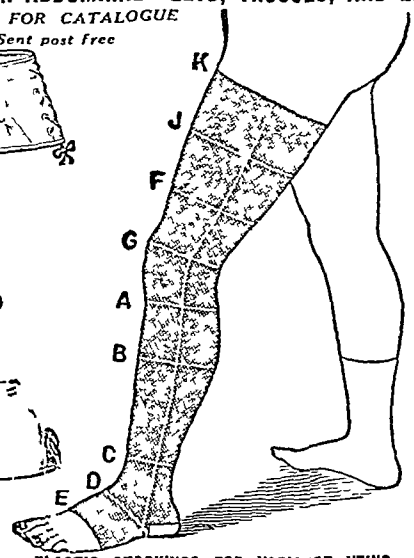


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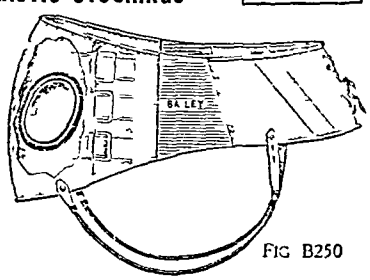
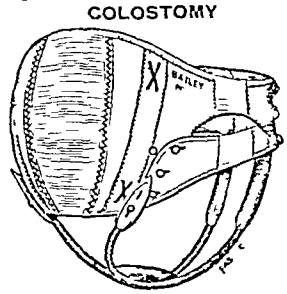


FIG B250
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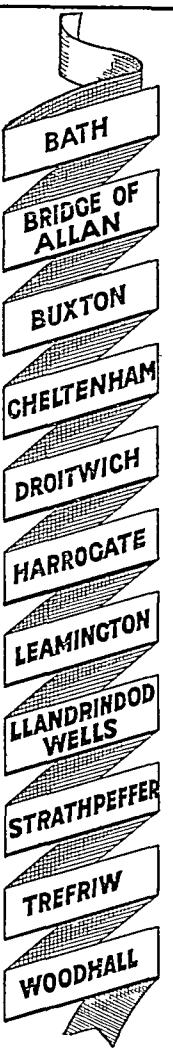
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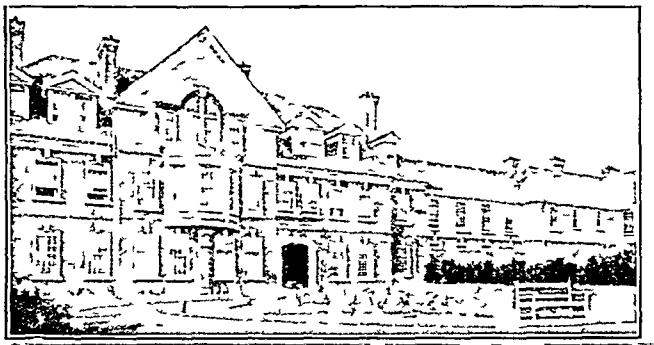
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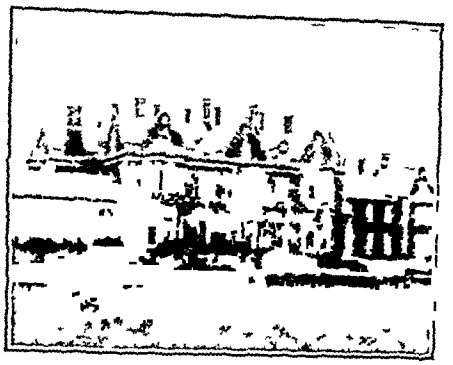
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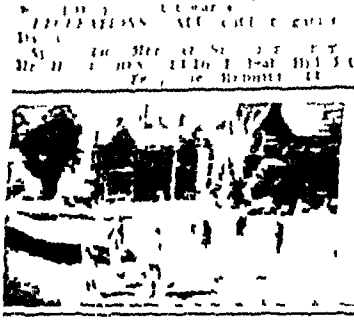
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The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis Courts Entertainments dances and indoor amusements held throughout the year

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT

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Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine clad hills with sea and mountain views Modern treatment including ARTIFICIAL PNEUMOTHORAX SANOCRYSIN etc X ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L M S Main Line to Holyhead 4½ hours from London Resident Physicians DENNISON PICKERING M D (Cantab) J A HENNESEY M B Ch B Matron Miss S A EDDY S R N Late Sister in Charge Royal Hospital Annexe Sheffield

For particulars apply to the SECRETARY Pendyffryn Hall Penmaenmawr N Wales (Phone 20)

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All modern forms of treatment are available There are X ray and ultra violet ray installations Full nursing staff The Sanatorium stands in gardens and private grounds of 65 acres at an altitude of 862 feet above sea level surrounded by woods and moorland All rooms are heated by hot water pipes and electrically lighted

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For full particulars apply to *The Secretary* Nordrach upon Mendip Blagdon Bristol. *Telegrams* Nordrach Blagdon Telephone Blagdon 23

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The MUNDESLEY SANATORIUM

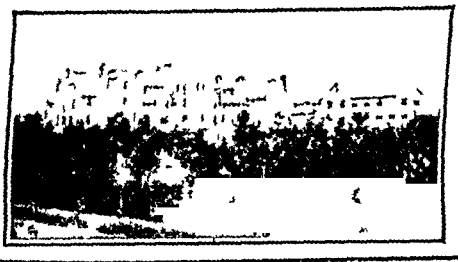
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for the Treatment of RHEUMATISM, ARTHRITIS, FIBROSITIS, NEURITIS, ARTERIO-SCLEROSIS and HYPERPIESIS, Diseases of the LIVER and GALL BLADDER, GASTRIC CATARRH and COLITIS, SKIN DISEASES, ANAEMIA and Convalescence from Acute Illness

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The Board hopes that this will meet with approval
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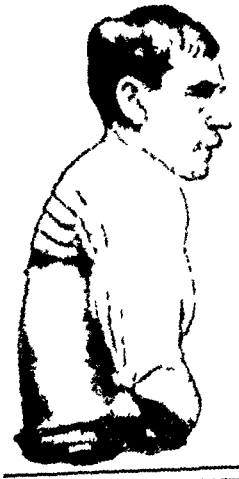
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Admission free without ticket

S J WORSLEY
Academic Registrar

UNIVERSITY OF GLASGOW

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The Board of Curators proposes to consider the making of an appointment to fill the above Chair in June

Information regarding the Chair may be obtained on application to the Secretary of the University Court The University, Glasgow May 1932

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Four Courses (each of two weeks) designed to suit general practitioners will be given at the NORTH EAST LONDON POST GRADUATE COLLEGE (THE PRINCE OF WALES'S GENERAL HOSPITAL TOTTENHAM N 15) on the following dates

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June 20th to July 2nd July 4th to 16th

Full particulars from the Dean

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	1906 31 Final	174
M R C P (Lond),	1914 31	199
D P H	(Various) 1906 31 (Completed Exam)	308
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IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1932

The POST GRADUATE COURSES to be held this year are as follows

(1) A GENERAL PRACTITIONERS COURSE from August 15th to September 10th

(2) A GENERAL SURGICAL COURSE from August 10th to September 15th

The composite fee for each Course will be £10 10 for the four weeks or £6 6s for either the first or second half of the

(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND DISEASES OF CHILDREN from July 11th to August 6th Fee £10 10s (Minimum number 12)

In addition to the above the following *Special Courses* have been arranged

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OPHTHALMOSCOPY—Drs Graham Ligertwood and Paterson May 2nd to 12 Mc three times weekly Fee £2 2 Minimum number 5

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DISEASES OF EAR NOSE AND THROAT—Staff of Ear Nose and Throat Department Royal Infirmary Minimum number 5 Fee £10 10s

VENEREAL DISEASES—Mr Lees FRCSEd Ward 5a Royal Infirmary Minimum number 5 Fee £10 10s

DISEASES OF EAR NOSE AND THROAT—Dr Douglas Guthrie This Class will meet twice weekly at the Eye and Throat Department Cowgate [Start Fee £4 4s

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The St Cyres Lecture

for the year 1932

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Subject

"THE RIGHT HEART AND ITS THERAPEUTICS"

By Dr J STRICKLAND GOODALL

Members of the Medical Profession are cordially invited

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A Course of DEMONSTRATIONS in NEUROLOGY for Candidates for the MRCP examinations will be held from MAY 20th to JULY 11th on MONDAYS and FRIDAYS at 6 0 p m

Fee for 16 demonstrations £6 6 0 Special terms can be arranged for those unable to take the whole course of lectures

Applications should be made to the Secretary

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	SUBJECT
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Prof Lovat Dickson Allan MD FRS (Fellow Trinity College Cambridge Fullerton Professor Royal Society)	The Nervous Mechanism of Respiration
MAY 24th	
Prof Martin Hahn (Prof of Hygiene University of Berlin)	On the Inhalation Trial and the Scientific Principle Involved in Calmette Antituberculous Inoculation
MAY 31st	
D Noel Hunter MD FICP (Lond) Asst Phys Med Throat and Nose Hospital	The Clinical Significance of Status in Calcium Metabolism
JUNE 7th	
Sir Henry Hallett Dale MD FICP (Lond) LLD RS (Director National Institute for Medical Research)	Recent Work on Hormones of the Circulation
JUNE 14th	
Prof J T Irvine MD FRS (Prof Belfast and University of London)	Helminth Migrations

These Lectures are open to all Members of the Medical Profession and to all Students in Medical School without fee

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Dates of the Courses 1932 33

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(University of London)

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MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complications. Monthly or Fortnightly Courses.

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Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday November 21st 1932 and Monday May 15th 1933.

For regulations apply to the Registrar of the Society, Water Lane, E.C.4.

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For further particulars and illustrated prospectus apply to the School Secretary.

C. J. WILSON (W.C.) M.D. F.R.C.P. *Dean*

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The Examination for the CASSELL COLD MEDAL AND PRIZE and the Examination for the DIPLOMA AND CERTIFICATE IN PSYCHOLOGICAL MEDICINE will be held at the MAUDSLEY HOSPITAL, Denmark Hill, London, on Friday, May 20th, and Saturday, May 28th, 1932.

The Examination will commence at 10 a.m. each day.

Application for entry to either Examination should be made to the Registrar, 58 Queen Anne Street, W.1, not later than April 30th.

There is a fee of £5 5s. for each Examination.

The Examination for the CASSELL PRIZE will be held at St. Andrew's Hospital, Northampton, before Friday, May 20th.

There is a fee of £2 2s. for entrance to the Examination.

PRIZE EXAMINATIONS.—The entrance fee for the Examination for CERTIFICATE in Psychological Medicine is three guineas payable to the Registrar.

DANIEL F. LAMBERT, M.D.
Registrar

St. Andrew's Hospital, Northampton.

F.R.C.S. (Edin.)

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Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September and December. For Regulations apply to the Secretary, College of Preceptors, Bloomsbury Square, London, W.C.1.

COUNTY COUNCIL OF INVERNESS

PARISH OF SOUTH UIST (BENBECULA DIVISION)

Applications are invited from registered Medical Practitioners (with experience in operative surgery preferred) for the appointment of LOCAL MEDICAL OFFICER of the Benbecula Division of South Uist.

Income is derived from the following sources:
(1) County Council in respect of services to that authority—approximately £200 per annum
(2) Private Practice
(3) Highlands and Islands Medical Service Fund

NOTE.—A special grant will be available in respect of Surgical qualifications and service.

Applications with statement of qualifications and experience accompanied by copies of three recent testimonials to be lodged with the undersigned not later than Thursday, May 26th.

County Buildings, Inverness. J. W. McKILLOP
May 9th 1932 County Clerk

MEDICAL CORRESPONDENCE COLLEGE

19 WELBECK ST. LONDON W.1 Tel. Welbeck 8391

PROVIDES HIGHLY SUCCESSFUL ORAL AND POSTAL COACHING FOR ALL MEDICAL EXAMINATIONS

Special Preparations for all Surgical Qualifications

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And all other Surgical Degrees and Diplomas.

- The remarkable success of Students of the Medical Correspondence College at the higher Surgical Examinations is specially noteworthy.
- Both at the Primary and Final F.R.C.S. England the majority of our Students are successful at the first attempt, and Candidates who have failed at these Examinations on several previous occasions get through without difficulty after going through our courses.
- The Surgical Tutors of the College all hold either the M.S. London or F.R.C.S. England and are highly experienced teachers.
- The Postal Courses are thoroughly clear, concise and up to date, and the text questions are carefully selected from those set at previous Examinations so as to embrace all parts of the subject. By working systematically through the Course the Student is brought up to the examination standard in the minimum time and much unnecessary reading is saved.

VALUABLE BOOK

How to Pass the F.R.C.S. free on application to the Secretary.

COUNTY COUNCIL OF DURHAM

ASSISTANT WELFARE MEDICAL OFFICER

The County Health Committee invite application for the appointment of an Assistant Welfare Medical Officer (woman) at a commencing salary of £500 per annum (subject to such temporary reduction as the County Council may order) rising by annual increments of £25 to £600 per annum. Travelling expenses will be paid by the County Council according to scale.

The appointment will be held subject to three months' notice on either side and to the following conditions:

(1) The officer appointed must be a registered Medical Practitioner between the ages of 25 and 45 years, must devote the whole of her time to the duties of the office and must not engage in private practice.
(2) She should either have held a previous appointment as Medical Officer of an Ante Natal clinic, with the approval of the Minister of Health or have had at least three years' experience in the practice of her profession and special experience of practical Midwifery and Ante Natal work. The holding of a Diploma in Public Health and practical experience in Bacteriological Laboratory work will be deemed additional qualifications for the post.
(3) She will be subject to the directions of the County Medical Officer.
(4) She will be required to reside in Durham City or such other place as required by the Council.
(5) She must be prepared if called upon to act as Locum Tenens to other members of the Medical Staff of the County Medical Officer.
(6) The appointment will terminate on marriage.
(7) The candidate appointed will be required to pass the County Council's medical examination, and will be subject to the provisions of the Local Government and Other Officers' Superannuation Act 1922.

Applications endorsed "Assistant Welfare Medical Officer" with copies of not more than three recent testimonials must be received by the County Medical Officer, Shire Hall, Durham not later than the 28th instant.

Shire Hall, Durham. HAROLD JEVONS
May 9th 1932 Clerk of the County Council.

RICHARD MURRAY HOSPITAL BLACKHILL CO DURHAM

RESIDENT MEDICAL OFFICER

Application are invited for the post of Resident Medical Officer (male) at the above Hospital which has accommodation for 16 maternity cases and 16 surgical and medical cases. The salary offered is £450 per annum (subject to a temporary reduction of £8 8s 9d per annum) rising by annual increments of £25 to £500 per annum with board apartment and laundry in addition.

Candidates must be fully qualified and registered Medical Practitioners between the ages of 25 and 30 with special experience in Major Operative Surgery and in Midwifery and preference will be given to candidates who have held an appointment in a general hospital. The person appointed will be required to devote his whole time to the duties of the office which will include the general medical control of the institution under the direction of the Joint Board and will be debarred from private practice but will be required to undertake the medical supervision of an adjacent small Convalescent Home for mothers and young children.

The appointment is included in the Superannuation Scheme of the Durham County Council and a deduction of 5 per cent will be made from the salary in accordance with the provision of the Local Government and Other Officers Superannuation Act 1922 and the appointment will be subject to passing the medical examination in connection therewith.

The appointment will be terminable by three months notice on either side.

Applications marked Resident Medical Officer together with copies of three recent testimonial must be received by the undersigned not later than May 21st.

Shire Hall, Durham. W. T. McDERMID, Secretary to Joint Board.

April 27th 1932.

BIRMINGHAM AND MIDLAND EYE HOSPITAL CHURCH STREET BIRMINGHAM

OUT PATIENT OFFICERS.

TWO OUT PATIENT OFFICERS are required at the above Hospital to attend on three appointed mornings each week. Salary at the rate of One Guinea per Session. Candidates must be registered Medical Practitioners. Appointment will be for a period of one year with eligibility to re-election.

Application with testimonial stating age and qualification should be sent to the undersigned not later than Saturday May 21st.

Copy of Rules governing the posts can be obtained on application.

C. A. MASON, Gen. Supt. & Sec.

April 21st 1932.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (140 bed) invite applications for the post of HOUSE SURGEON and CASUALTY OFFICER (male).

Salary at the rate of £150 per annum with residence, coal and laundry.

The appointment is for six months and is renewable.

Duties to commence on June 1st.

The Resident Staff consists of a Resident Surgical Officer and House Surgeon.

Applications accompanied by not more than three recent testimonial to be sent to the undersigned.

Dated this 2nd day of May 1932.

ARTHUR H. LIMB, Secretary.

CAERNARVONSHIRE AND ANGLESEY INFIRMARY BANGOR (General Hospital)

Wanted HOUSE SURGEON. Salary £100 per annum with residence, board and lunch.

Hospital contains Orthopædic, Eye, Ear, Nose and Throat Wards and V.D. Department. The post offers good opportunity for practical Surgical Nursing.

Applications stating age, nationality and experience, with copies of three recent testimonials, to be sent to the Secretary not later than May 8th.

CITY OF LONDON MATERNITY HOSPITAL, OLD ST., E.C.

Applications invited from fully qualified medical practitioners for the post of ASSISTANT RESIDENT MEDICAL OFFICER. Vacant July 1st (first or third appointment at £80 per annum). If satisfactory appointee becomes Senior there will be at £100 per annum. Forms of application and further particulars may be had from the undersigned. June 4th.

EDITH B. CANNINGS, Secretary.

THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR, ISLE OF WIGHT

Applications are invited from registered Medical Practitioners for the post of SENIOR ASSISTANT RESIDENT MEDICAL OFFICER male of British nationality at the above Hospital (16 bed). Previous experience in Tuberculosis Work essential.

The appointment will be for three years terminable at any time during that period by three months notice on either side. The successful candidate will be required to pass a medical examination and be in average sound sickness after appointment.

Commencing salary £400 per annum with full board residence and laundry all round for unmarried or £500 per annum with unfurnished house for married person, rising by annual increments of £25. Applications stating age, whether married or single and full details of qualification and experience with copies of three recent testimonials to be sent to the Medical Superintendent at the Hospital by May 23rd.

H. R. POWE, Secretary.

MANCHESTER ROYAL INFIRMARY

MEDICAL OFFICER TO OUT PATIENTS

The Board of Management invite application from registered Medical Practitioners for the above appointment.

The duties are to assist in the treatment of Medical Out patient on two mornings per week. The appointment (non resident) is for one year but the holder of the office is eligible for re-election on two subsequent occasions for a similar period. Salary £35. Candidates must state age and send twelve copies of their application and testimonial to the undersigned on or before 9 a.m. on Thursday May 26th.

By Order,
FRANK C. HAZELL,
General Superintendent & Secretary.

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL Maid one (110 Bed)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON (male) which become vacant North. Candidates must be fully qualified registered medical practitioners and of British birth and nationality and should have had experience of Ophthalmology. The hospital is recognised by the Examining Board for the D.O.M.S. The appointment will be for six month but may be renewed for a second six month. Salary at the rate of £200 per annum with board residence and washing.

Application stating age together with copies of not more than three testimonial should be sent to the undersigned not later than as early as possible.

JOHN W. STICKLAND, Secretary.

RADCLIFFE INFIRMARY & COUNTY HOSPITAL OXFORD

Application are invited for the following post which will become vacant on July 1st.

HOUSE PHYSICIAN.

The appointment is for six months with salary at the rate of £120 per annum with board etc.

Candidates must be male and qualified.

Application with four copies of three testimonial to be sent to the undersigned not later than Saturday June 4th.

A. C. E. SANCTUARY, Administrator.

RADCLIFFE INFIRMARY & COUNTY HOSPITAL OXFORD

Application are invited for the post of RESIDENT MEDICAL OFFICER (female) at the Tuberculosis Branch of the Radcliffe Infirmary. The Officer will have Residence and Board free from July 1st next.

The appointment will be for six months in the first instance. Salary at the rate of £80 per annum.

Application with copies of three testimonial should be sent to the Secretary, Radcliffe Infirmary, not later than Saturday June 4th.

A. C. E. SANCTUARY, Administrator.

QUEEN'S HOSPITAL, HOMERTON

OPEN APPOINTMENT

Applications are invited for the appointment of SENIOR CASUALTY OFFICER at the Queen's Hospital, Homerton. Candidates must have had experience in Surgery, Medicine, Midwifery and Anæsthetics. Salary at the rate of £150 per annum with board, residence and laundry. Applications, stating age, qualifications and experience, together with copies of three testimonials, should be sent to the undersigned not later than Monday May 21st, after which date no further applications will be considered.

C. HILFORD, House Governor & Secretary.

Birmingham Road, Homerton, E.9.
May 2nd 1932.

HOSPITAL OF ST. CROSS [illegible] (115 Beds)

[illegible] invited for the post of THIRD [illegible] RESIDENT MEDICAL OFFICER. Qualified [illegible] Salary at the rate of £60 per annum [illegible] all [illegible] Six [illegible] annual [illegible] applicants [illegible] from [illegible] resident [illegible] Candidates [illegible] Monday May 23rd. The [illegible] Hospital offers [illegible] opportunity [illegible] Certificates [illegible] Applications [illegible] with [illegible] testimonials [illegible] to be sent [illegible] Secretary.

(Signed) COLBURN, Superintendent.

MANCHESTER BABIES HOSPITAL Burns Lane, DEVONSHIRE (60 Beds)

Applications are invited from [illegible] for the post of JUNIOR RESIDENT MEDICAL OFFICER. Appointment is for six months. Salary at the rate of £50 per annum with laundry. Application to be made with copies of testimonials and marked "H.M.O." to [illegible].

Applications are also invited for the post of SENIOR RESIDENT MEDICAL OFFICER. Appointment for six months (from July 1st). Salary at the rate of £120 per annum with laundry. Only candidates with previous Hospital experience need apply. Applications with copies of testimonials to be sent to the undersigned marked "S.M.O." not later than May 27th.

ANGELA LOFTY, Secretary.

ROYAL FREE HOSPITAL AND LONDON (FEMALE) SCHOOL OF MEDICINE FOR WOMEN

Applications are invited for the appointment of RESIDENT ASSISTANT PATHOLOGIST. Salary £150 with board and residence. Duties to commence July 1st. Intending candidates who must be qualified should submit applications and testimonials to the undersigned not later than three days before the date when they will reach one of the undersigned from whom further particulars may be obtained by post on Friday June 3rd. No forms of document must be furnished.

REGINALD H. GARRATT, Secretary.

Royal Free Hospital, W.C.1.

ROYAL FREE HOSPITAL (Grays Inn Road, W.C.1)

Applications are invited from July qualified and registered Medical Students for the following posts:

CASUALTY OFFICER.

Duties to commence June 1st or as soon thereafter as possible. Salary £10 per annum.

Candidates for the above posts must state in their applications whether they have passed the Final Examination and if so the date when they obtained their qualifications. Applications with copies of three testimonials to be sent to the undersigned not later than May 21st.

REGINALD H. GARRATT, Secretary.

SEAMENS HOSPITAL SOCIETY

KING GEORGE V. SANATORIUM FOR SAILORS, THELNETHAM, HARTSMERE. Medical Treatment [illegible] Sailors [illegible] Pulmonary Tuberculosis.

Applications are invited for the post of ASSISTANT MEDICAL OFFICER [illegible] for the first [illegible] Salary at the rate of £ [illegible] per annum [illegible] Applications [illegible] Secretary [illegible] Hospital [illegible] Medical Officer [illegible] Secretary [illegible] Medical Officer [illegible] Secretary [illegible] Medical Officer [illegible] Secretary

GLAMORGAN COUNTY COUNCIL

PUBLIC ASSISTANCE COMMITTEE

LLWYNYWERN CHEMICAL WORKS MEDICAL OFFICER

Applications are invited for the appointment of Medical Officer to the Llwynywern Chemical Works, Morriston, Swansea. The appointment will be subject to the Factory and Workshop Acts, 1901 to 1929, and the Regulations made thereunder, and to the Rules of the Public Assistance Committee. The salary will be at the rate of £150 per annum, and the appointment will be terminable by one month's notice on either side.

Applications must be made on the prescribed form, to be obtained on sending a stamped addressed envelope to the undersigned, and must be returned, accompanied by three recent testimonials and endorsed "Medical Officer," not later than noon on Thursday, May 19th.

FRANCIS C. CARVER, Town Clerk.

Town Hall, Cardiff.

May 6th, 1932.

CITY OF CARDIFF

CITY FEVER INSTITUTION

ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment, which is subject to the Rules and Regulations of the Public Assistance Committee, and will be terminable by one month's notice on either side. The salary will be at the rate of £150 per annum, rising by annual increments of £10 to £200 per annum, and the appointment will be subject to the provisions of the Superannuation Act, 1922.

Applications, stating age, qualifications, and experience, together with copies of three recent testimonials, must be delivered to me by 5 p.m. on Monday, May 23rd, 1932.

Canvassing directly or indirectly will be a disqualification.

J. H. DICKSON, Town Clerk.

City Hall, Cardiff.

May 2nd, 1932.

CITY AND COUNTY OF THE CITY OF CHESTER

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly registered medical practitioners, not more than 40 years of age, for the above appointment. Experience in commercial or local government work will be an advantage.

The salary will be £800 per annum, rising by annual increments of £50 to £1,000 per annum, together with a car allowance of £150 per annum.

Further particulars of the duties, terms and conditions of service can be obtained on application, to which must be sent the names of three persons to whom reference can be made, not later than May 30th, 1932.

Canvassing will be a disqualification.

The appointment is subject to the Rules of the Public Assistance Committee, and to the Superannuation Act, 1922.

J. H. DICKSON, Town Clerk.

Town Hall, Chester.

May 2nd, 1932.

BOROUGH OF WALTHAMSTOW

ISOLATION HOSPITAL, CHINGFORD

RESIDENT MEDICAL OFFICER

Applications are invited for the above appointment from registered Medical Practitioners (male or female) who have had at least three years' general professional experience, including the tenure of a Hospital appointment. Preference will be given to candidates with experience at a recognised Infectious Diseases Hospital.

Salary £300 per annum, rising by annual increments of £25 to £450 per annum, with board, lodging, laundry and attendance. The appointment will be terminable by one month's notice on either side.

Applications must be made on the prescribed form, to be obtained on sending a stamped addressed envelope to the undersigned, and must be returned, accompanied by three recent testimonials and endorsed "Resident Medical Officer," not later than noon on Thursday, May 19th.

FRANCIS C. CARVER, Town Clerk.

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE

ASSISTANT TUBERCULOSIS OFFICER

The County Council of the West Riding of Yorkshire invite applications for the appointment of an Assistant Tuberculosis Officer. Candidates must be qualified in accordance with the Regulations of the Minister of Health.

Salary £500 per annum, rising by annual increments of £25 to £600 (the commencing salary is subject to a temporary deduction of £10 per annum).

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922.

Further particulars and form of application may be had from the undersigned, by whom all application forms, together with copies of not more than three testimonials, must be received not later than May 31st.

CHARLES McCRATH, Clerk of the County Council.

County Hall, Wakefield.

April 19th, 1932.

WORCESTERSHIRE COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER (Male)

The above-mentioned Council are about to appoint an Assistant County Medical Officer and applications are now invited for this post.

Applicants must be registered Medical Practitioners between the ages of 25 and 45 and will be required to possess such qualifications and experience as will form the Council's Tuberculosis Scheme will form the chief part of the Officer's duties. He should have special experience in Tuberculosis and in Artificial Pneumothorax treatment. A Diploma in Public Health is desirable. The successful candidate will work under the supervision of the Chief Tuberculosis Officer, who is appointed Medical Officer in charge of Hospitals.

The person appointed will be required to reside in the district assigned to him by the County Council and to devote the whole of his time to the work.

The salary will be £600 rising by £25 per annum to £700 with an allowance of £140 per annum for use of his own motor car but the salary will be subject to a temporary cut of approximately £26 per annum.

The engagement to be subject to three months' notice on either side. The post is designated under the Local Government and Other Officers Superannuation Act, 1922.

Applications (on forms to be obtained from the County Medical Officer, County Buildings, Worcester) accompanied by not more than three recent testimonials must be received by the noon on May 23rd addressed to the County Medical Officer, County Buildings, Worcester.

Canvassing disqualifies and neither the names of the members of the County Council nor of the Committee will be supplied.

(Signed) C. H. BIRD, Clerk of the County Council.

Shirehall, Worcester.

May 2nd, 1932.

URBAN DISTRICT OF HESTON AND ISLEWORTH

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified Medical Men with a Public Health qualification for the position of Assistant Medical Officer of Health and School Medical Officer.

Candidates will be required to carry out medical inspection of school children, child welfare work and dental anæsthetics and perform such other duties as may be allotted as Assistant to the Medical Officer of Health and School Medical Officer.

The person appointed will be required to devote his whole time to the duties and will not be allowed to engage in private practice.

The salary will be at the rate of £500 per annum, rising to £700 per annum by increments of £25 per annum from which the following temporary deduction will be made on account of the national financial emergency:

Up to £150—nil

£150 to £250—24 per cent

£250 to £500—5 per cent

In fixing the commencing salary consideration will be given to the previous experience and length of service of the officer appointed. A deduction of 5 per cent will be made from the salary in accordance with the provisions of the Local Government and Other Officers Superannuation Act, 1922, which has been adopted by the Council and the appointment will be subject to passing the Council's medical examination in connection therewith.

Copies of the application form and terms of appointment can be obtained from the undersigned.

Applications accompanied by copies of not more than three recent testimonials must be delivered not later than May 30th, must be signed by no one connected with the Council.

H. J. BAKER, Clerk to the Council.

Council House, Hounslow.

May 6th, 1932.

WEST OF SCOTLAND SOUTH SCHOOL OF TROPICAL RESEARCH INSTITUTE GLASGOW

Applications are invited for the post of DIRECTOR. Salary commences £850. Candidates must be skilled in modern clinical and laboratory methods and techniques, and be capable of undertaking and directing Research Work in Mental and Nervous Diseases. Each application should state qualifications and experience to be sent to the Secretary, Dr. H. MACDONALD, Hawkhead Asylum, Crookston, Glasgow, from whom all further particulars may be obtained.

COUNTY BOROUGH OF SOUTH SHIELDS

HARTON HOSPITAL (310 Beds)

Applications are invited for the appointment of TWO HOUSE SURGEONS (male). Salary £150 per annum each, together with board, residence and laundry. The appointments are for one year.

Applicants must be registered Medical Practitioners and unmarried. Forms of application may be obtained from the undersigned, and should be returned to him, together with copies of not more than three testimonials, not later than May 28th, 1932.

Canvassing will disqualify.

Town Hall, South Shields.

May 3rd, 1932.

JAMES TAYLOR, Acting Town Clerk.

COUNTY BOROUGH OF CARDIFF

ASSISTANT MEDICAL OFFICER OF HEALTH

The Health Committee will shortly appoint an Assistant Medical Officer of Health, whose duty will be to assist the Medical Officer of Health in the administration of the Maternity and Child Welfare Scheme, the Tuberculosis Scheme, and the Venereal Diseases Scheme.

The salary will be £400 per annum, rising by annual increments of £25 to £500 per annum, and the appointment will be subject to the Superannuation Act, 1922.

Applicants must be registered Medical Practitioners, and must possess the Diploma in Public Health of one of the Universities or Royal Colleges of Physicians in the United Kingdom, and must have had experience in Public Health work.

Applications, stating age, qualifications, and experience, together with copies of three recent testimonials, must be delivered to me not later than May 30th.

J. H. DICKSON, Town Clerk.

City Hall, Cardiff.

May 2nd, 1932.

WELLINGBOROUGH AND EAST NORTHANTS WAR MEMORIAL HOSPITAL (100 B.)

Applications are invited by the Electric Committee for the appointment of HONORARY OPHTHALMIC SURGEON.

Applicants should state their age and qualifications together with copies of not more than three recent testimonials, which must be delivered to the undersigned not later than May 28th.

By Order,
JESSIE SPENCER, Secretary.

Extract from Rules.

The Committee of Management invites applications for the appointment of an HONORARY DENTIST. Further particulars should be obtained from the undersigned, to whom an applicant is required to send their application with testimonials not later than Tuesday, May 24th.

J. P. WHITTINGHAM, Secretary.

WEST END HOSPITAL FOR NERVOUS DISEASES

Inpatient Department: Glocester Gate, Regent's Park, N.W.1.
Outpatient Department and Secretary's Office: 73, Welbeck Street, W.1.

The Committee of Management invites applications for the appointment of an HONORARY DENTIST. Further particulars should be obtained from the undersigned, to whom an applicant is required to send their application with testimonials not later than Tuesday, May 24th.

J. P. WHITTINGHAM, Secretary.

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH

HOUSE PHYSICIAN required; male and unmarried. Salary £120 per annum with board, residence, and washing. There are three Resident Staff; the successful candidate will be eligible for the post of House Surgeon in due course.

Applications, stating age, qualifications, previous experience (if any), with copies of three recent testimonials, should be sent to the undersigned not later than Tuesday, May 24th.

T. FORE WATTS, Secretary, Superintendent.

POPLAR HOSPITAL FOR ACCIDENTS, East India Dock Road, Poplar, E.14.

The Committee invites application for the appointment of SECOND RESIDENT OFFICER at a salary at the rate of £175 per annum, all found. Candidate must have held appointment of Resident Surgeon at a Hospital. Applications must be accompanied by a statement of the candidate's qualifications, and be forwarded to the Secretary with three recent testimonials, not later than Thursday, May 19th. The appointment is for a period of six months.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone Rd., N.W.1.

DISTRICT RESIDENT MEDICAL OFFICER (male or female) required to commence duties on June 1st or earlier if possible. Applicant must be registered. The appointment is until September 30th. The salary is at the rate of £80 per annum with board, residence, and washing; all waived (4 weeks). Application, with copies (not originals) of not more than three testimonials, should be sent to the Secretary's Office, 31, Queen Anne Street, W.1, not later than Saturday, May 21st. Canvassing is prohibited.

ARTHUR WATTS, Secretary.

LANCASHIRE SANATORIUM, THE FURNESS, CUMBERLAND

Wanted, ASSISTANT MEDICAL SUPERINTENDENT. Sanatorium experience essential (X-ray useful). Commencing salary £300 with board.

Applications, with copies of three recent testimonials, should be sent to the Secretary, 34, Bedford Street, Carlisle, by May 21st.

COVENTRY AND WARWICKSHIRE HOSPITAL (350 Beds).

RESIDENT CASUALTY OFFICER (male) wanted. Salary £120 per annum, with board, washing, and attendance. Candidates should be between the ages of 21 and 25. Applications, stating age and qualifications, and giving the names of three referees, should be sent to the undersigned not later than May 21st.

MAURICE HOLLIS, Secretary.

May, 1932.

ESSEX COUNTY HOSPITAL, COLCHESTER. (160 Beds.)

Wanted, ASSISTANT HOUSE SURGEON. Salary £70, with board, residence, and washing. Must be registered.

Applications, with three recent testimonials, to be sent to the undersigned not later than May 16th, by—

ALEX. D. BUCK, Secretary.

THE CENTRAL HOSPITAL, BENT GROVE, SHEFFIELD.

Applications are invited for the following resident appointments:

ASSISTANT ANAESTHETIST. Salary £120 per annum.

July 15th.—HOUSE PHYSICIAN, £70 per annum.

HOUSE SURGEONS (Three), £70 per annum.

Application, giving full particulars of qualifications and experience, should reach the undersigned not later than May 23rd.

A. H. LEANEY, Hon. Governor.

May 9th, 1932.

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON. (256 Beds.)

CASUALTY HOUSE SURGEON (male) required. Salary £120 per annum, with board, residence and laundry. Candidate must be a Member of the British Empire and be duly registered under the Medical Act. They must be unmarried and when elected under 30 years of age.

Application, with copies of recent testimonials, should be sent immediately to the undersigned.

L. L. W. LANCASTER-CAVE, Secretary-Superintendent.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, London, N.W.1.

VACANCY ON STAFF.

The Committee of Management invite applications for the post of HONORARY SURGEON to Out-patients, for Medical attention. Candidates must be Fellows of the Royal College of Surgeons of England.

Applications, stating age, with full particulars of their present and previous hospital appointments, should be addressed to the Secretary, 10 a.m., Friday, June 3rd.

C. H. HAWKINS, Secretary.

STOCKTON AND THORNABY HOSPITAL, STOCKTON-ON-TEES. (140 Beds.—Three Resident.)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male), for a period of at least six months, duties to commence June 1st. Salary £160, with board, residence, and laundry. Candidates must be duly qualified and unmarried.

Applications, stating age, nationality, and experience, together with copies of three recent testimonials, to be sent to the undersigned.

J. WILKINSON, Secretary.

ANCOATS HOSPITAL, MANCHESTER.

HOUSE PHYSICIAN required to commence duty on June 1st next for a period of six months. Salary at the rate of £100 per annum, with board, apartments, etc. Candidate must be registered under the Medical Act.

Applications, stating age, qualifications, experience, if any, to be forwarded to the undersigned on or before May 18th, together with copies of three recent testimonials.

By Order of the Board,
HERBERT T. PATTISON,
General Superintendent, Secretary.

LIVERPOOL MATERNITY HOSPITAL, Oxford Street.

HOUSE SURGEON required for the six months commencing April 1st next. Salary at the rate of £90 per annum, with board, residence, and laundry. Previous experience as House Surgeon essential. Membership of a Medical Defence Society a recommendation.

Applications, stating age, qualifications, experience, together with copies of two testimonials, to be sent to the Secretary, 34, Rodney Street, Liverpool, by May 20th.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS.

HOUSE SURGEON (male) required. Applications are invited for the post of Assistant Surgeon at a salary of £[illegible] per annum, the duties [illegible]

[illegible]

NEWARK GENERAL HOSPITAL (100 Beds).

Wanted, a fully qualified RESIDENT HOUSE SURGEON, unmarried. Salary £[illegible] per annum, with board, residence, and laundry.

Applications, with copies of three recent testimonials, to be sent to W. J. CRAMPTON (Secretary), 27, Kirk Gate, Newark.

DERBYSHIRE [illegible]

[illegible]

OPHTHALMIC HOUSE SURGEON (Male).

[illegible]

Applications, stating age, qualifications, and salary required, should be sent to the undersigned not later than [illegible]

WALTER [illegible] SMITH,
Secretary.

May 2, 1932.

DONCASTER [illegible] INFIRMARY.

[illegible]

CASUALTY HOUSE SURGEON required. Salary £[illegible] per annum, with board, residence, and laundry. Candidate must be registered under the Medical Act. The appointment is for six months, but the successful candidate will be expected to remain for a longer period if required.

Applications, stating age, qualifications, and experience, should be sent to the undersigned not later than [illegible]

WALTER [illegible] SMITH,
Secretary.

ELIZABETH GARRETT ANDERSON HOSPITAL, [illegible]

Wanted, for the [illegible]

HOUSE PHYSICIAN, HOUSE SURGEON, ASSISTANT, THREE HOUSE SURGEONS, [illegible]

Applications, with full particulars, to the Secretary, [illegible]

May 2nd.

JEAN P. WHITTAKER, Secretary.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.

Wanted, ASSISTANT PHYSICIAN. Candidates are offered [illegible] ASSISTANT TORIUM DEPARTMENT. Salary £[illegible] per annum, with board, residence, and laundry. Candidates must be registered under the Medical Act.

Applications, stating age, [illegible] should be sent to the undersigned not later than May [illegible]

W. H. T. SYKES, Hon. Secretary.

ROYAL ALBERT HOSPITAL AND FEVER INFIRMARY, DEVONPORT.

A vacancy for an ASSISTANT HOUSE SURGEON [illegible] duties to [illegible] with [illegible] should be forwarded to the undersigned on or before [illegible] delay.

By Order of the Committee,
FRANK TOWL, Secretary.

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (120 B.)

HOUSE SURGEON required (Ma[illegible]

Salary £[illegible] per annum [illegible]

THE [illegible] INFIRMARY, [illegible]

[illegible]

ROYAL [illegible] HOSPITAL

[illegible]

HOUSE SURGEON, [illegible]

[illegible]

THE [illegible] HOSPITAL, [illegible]

[illegible]

HOUSE SURGEON, [illegible]

[illegible]

SURREY COUNTY COUNCIL

ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of an Assistant Medical Officer. Candidates must be qualified in Public Health and must have had experience in the work of a Local Authority. The appointment will be subject to the provisions of the Local Government Superannuation Act, 1922, and to the Rules of the Council applicable to officers in the Medical Service. Salary £450 per annum, rising by annual increments of £25 to £500 per annum, subject to the passing of a medical examination. Applications, stating age, experience and qualifications, accompanied by copies of four testimonials, not earlier than May 24th, to be addressed to the undersigned.

HUBERT MILLARD
County Hall, Kingston-on-Thames.
May 10th, 1932.

LONDON COUNTY COUNCIL

Applications are invited for the appointment of a Female Assistant Medical Officer in the Public Health Department at a salary at the rate of £450 per annum, rising by annual increments of £15 to £500 per annum. The appointment will be subject to the provisions of the Local Government Superannuation Act, 1922. Applications, on forms obtainable from the Education Officer, Victoria Embankment, W.C.2, must be returned to the Education Officer not later than May 21st.

By Order of the Council,
JAMES G. LEGGE,
Clerk of the London County Council.
May 3rd, 1932.

LONDON COUNTY COUNCIL

Applications are invited for appointment as Tuberculosis Medical Officer (part-time) in District No. IX (Deptford). Applications until December 31st, 1932, in the direction since.

The candidate appointed will be required to reside in or near the district and to carry out the duties prescribed by the Public Health (London) Act, 1891, and Orders of the London County Council made thereunder. The candidate appointed will be required to preside at his own expense at an approved dwelling during at least three hours each week.

Remuneration at the rate of £210 a year, subject to deduction on account of superannuation.

Forms of application, with further particulars of the duties, may be obtained by candidates personally from the Medical Officer of Health (Staff Division), County Hall, Westminster Bridge, S.E.1, returnable by May 20th.

Canvassing disqualifies.

EVELINA HOSPITAL FOR SICK CHILDREN
Southwark, S.E.1

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from June 13th (first two months in Casualty and Out-patient Departments). Salary at the rate of £150 per annum, with board and residence.

Applications, stating age, experience and qualifications, accompanied by copies of four testimonials (of whom at least three must be recent), to be sent to the undersigned not later than May 24th, from whom further particulars can be obtained.

By Order of the Committee of Management,
W. D. SPINNEY,
Secretary Superintendent.
May 10th, 1932.

KING GEORGE HOSPITAL
Ilford (London)

Applications are invited for the appointment of HOUSE SURGEON (male). Salary £100 per annum with board, residence and laundry. Term six months with eligibility for a further period. Applications should be sent immediately to the Secretary.

CITY AND COUNTY OF KINGSTON-UPON-HULL

HULL MUNICIPAL MATERNITY HOME AND INFANTS HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER
(Male)

The Committee invite applications from unmarried or widowed Women Medical Practitioners for the appointment of Junior Resident Medical Officer at the Maternity Home and Infants Hospital, Hessle Road, Hull.

Salary at the rate of £100 per annum, with board, lodging, and residence at the Maternity Home.

The appointment will be for six months, with a view to a further period of office.

The successful candidate will be required to undertake the duties of Anæsthetist.

Medical officers appointed will be given opportunities of obtaining post-graduate experience in obstetrical and gynæcological practice, and in the treatment of venereal diseases.

The Council require the whole of the time of the officers appointed to be devoted to the duties of the appointment which will also include attendance at occasional evening meetings of the Committee.

Applications, endorsed "Junior Resident Medical Officer," stating age, qualifications, and experience, together with copies of three recent testimonials, must be delivered at the Maternity Home, Hessle Road, Hull, not later than Monday, May 16th, 1932.

Canvassing will disqualify.

ARTHUR E. HOWARD,
Medical Officer of Health.
Health Department, Guildhall, Hull.
May 4th, 1932.

CITY AND COUNTY OF BRISTOL

ASSISTANT MEDICAL OFFICER OF HEALTH

The Council desire applications for a whole-time appointment as Assistant Medical Officer of Health. Age not exceeding 40 years. Salary £500 per annum, rising by annual increments of £25 to £600 per annum (a temporary reduction).

The appointment will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1922.

Duties will commence on a date to be arranged.

Applications, in the handwriting of the candidate, delivered to the Council's Solicitor, Council House, Bristol, not later than noon on Saturday, May 21st, 1932, must be accompanied by copies of not more than three recent testimonials, and should be addressed to the undersigned.

Canvassing will disqualify.

JOSIAH CLEEN,
Town Clerk.
May 4th, 1932.

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL
(220 Surgical and Medical Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post. There are five Resident Visitors at the rate of £150 per annum with board, apartment and laundry.

Applications, stating age, together with copies of three recent testimonials, should be sent to the undersigned.

G. SUNNUCK,
April 18th, 1932. Supt. & Secretary.

CONNAUGHT HOSPITAL
Walthamstow, E.17
(100 Beds with Three Resident Medical Officers)

RESIDENT CASUALTY OFFICER (male) required. Salary £100 per annum. Appointment for six months from June 1st with board, residence and laundry. Applications, stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received not later than Monday, May 16th, by the Secretary.

HAROLD S. PHILLIPS.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION
GLOUCESTER

There is a vacancy for an ASSISTANT SURGEON on the Acting Medical Staff of this Institution.

Candidates should send in their applications, with testimonials and references to the diplomas and testimonials, and letters to the undersigned on or before the day, June 14th.

F. J. SIMMONS, Secretary.

ESSEX COUNTY COUNCIL

PUBLIC ASSISTANCE DEPARTMENT

MEDICAL OFFICER

The Public Assistance Committee invite applications for the appointment of Medical Officer at the Mild and Public Assistance Institution and Children's Home, The Gables, Maldon.

The remuneration for the Institutional appointment will be at the rate of £120 per annum, plus £10 per annum for the Children's Home, and the emoluments etc. will be supplied by the Committee.

The successful applicant will be required to pass a medical examination.

It is probable that superannuation contributions at the rate of 5 per cent. will be deducted from the salaries in accordance with the provisions of the Local Government and Other Officers' Superannuation Act, 1922.

Applications for the above position to be made on form obtainable from the Public Assistance Officer, Industrial Buildings, Duke Street, Chelmsford, must be returned to him by May 21st.

By Order,
Shire Hall, JOHN H. GOOLD,
Chelmsford. Clerk of the County Council.
May 5th, 1932.

ESSEX COUNTY COUNCIL

PUBLIC ASSISTANCE DEPARTMENT

CONSULTANT OPHTHALMOLOGIST

The Public Assistance Committee invite applications for the appointment of Consultant Ophthalmologist who will be required to attend an average of one half-day session per month, mainly at the OLDCHURCH HOSPITAL, ROMFORD, or elsewhere in the County on request. The appointment is for one year in the first instance.

The remuneration will be at the rate of fifty guineas per annum, plus travelling expenses in accordance with the County scale.

Applications for the above position to be made on forms obtainable from the Public Assistance Officer, Industrial Buildings, Chelmsford, must be returned not later than May 21st to the County Medical Officer, County Hall, Chelmsford, in an envelope endorsed "Consultant Ophthalmologist."

By Order,
Shire Hall, JOHN H. GOOLD,
Chelmsford. Clerk of the County Council.
May 3rd, 1932.

CITY OF LIVERPOOL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment at the SMITHDOWN ROAD HOSPITAL (1,200 Beds), Liverpool, for a period of one year at a salary of £200 per annum (subject to the usual deductions authorised by the Council), together with the usual residential allowances. Canvassing will be deemed a disqualification.

Applications to be made upon forms obtainable from the Medical Officer of Health, Municipal Annexe, to be endorsed "Resident Assistant Medical Officer," and returned to the undersigned so as to be received not later than Tuesday, May 24th.

Municipal Buildings, Liverpool. WALTER MOON, *Town Clerk.*
May 9th, 1932.

MANCHESTER AND DISTRICT RADIUM INSTITUTE

The following appointments are contemplated to the staff of the Institute. They offer a unique opportunity of acquiring experience in Radium Therapy (and Deep X-ray). Both appointments are for six months in first instance but with view to reappointment for another month.

1. ASSISTANT MEDICAL OFFICER (male) at £500 per annum. Candidates must possess either the D.M.R.E. or F.R.C.S. and have had a good general Surgical experience but not necessarily previous experience in Radium Therapy.
2. CLINICAL ASSISTANT at £250 per annum. Candidate must have an excellent academic record and preferably some subsequent experience.

Application, with copies of testimonials to be sent to the Honorary Secretary not later than June 3rd.

KING EDWARD HOSPITAL FUND
(London)

Applications are invited for the appointment of HOUSE SURGEON (male). Salary £100 per annum with board, residence etc. Term six months with eligibility for a further period. Applications should be sent immediately to the Secretary.

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE IRON *(Workmen's Medical Society)*	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE *(Medical Practitioner)*	AYR COUNTY COUNCIL *(Specialist Officer Hospitals)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE *(Workmen's Medical Scheme)*	FOLKESTONE BOROUGH *(Assistant Medical Officer of Health)*
LOWESTOFT MEDICAL INSTITUTE *(Medical Officer)*	NEATH AND DISTRICT *(Medical Aid Association.)*	ROXBURGH COUNTY COUNCIL *(Assistant Medical Officer of Health)*
LLWYNPIA CLYDACH VALE, PENYCRAIG GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE IRON *(Medical Officer for Medical Aid Association*	SOUTHAMPTON COUNTY BOROUGH *(VD Officer and Lady)*
MARDY GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS *(Tuberculosis Officer)*

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135, Macquarie St. Sydney N.S.W.	**QUEENSLAND** *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane	**WELLINGTON NEW ZEALAND** *(Contract Practice Appointments)*	Dr. G. F. V. A. Secretary (Hon. Secretary New Zealand Branch) British Medical Association P.O. Box 1... Wellington N.Z.
VICTORIA *(All Institute or Medical Dispensaries)*	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch) British Medical Association Medical Society's Hall East Melbourne Victoria			**WESTERN AUSTRALIA** *(Contract and Lodge Practices)*	Hon. Secretary Australian Trade Interests Association Clerk of the Peace NSW Chambers Perth Western Australia

May 11th 1932 — By Order of the Council — ALFRED COX Medical Secretary

THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London W.C.1

A PART-TIME JUNIOR CASUALTY OFFICER is required on July 9th to assist in the Casualty Department from 10 a.m. to 3 p.m. (Saturday 10 a.m. to 1 p.m.) under the direction of the Casualty Officer.

The work of this officer includes a large number of Tonsillectomies and other minor operations.

Candidates must be registered Medical Practitioners and have held a responsible Hospital appointment.

Candidates are invited to send in their applications addressed to the Secretary before 12 o'clock on Monday May 30th accompanied by not more than three testimonials which will be returned after the appointment has been made.

The appointment is made for six months. Salaries at the rate of £100 per annum, board, residence and washing £5 a week and residence in the Hospital.

Candidates must be unmarried and possess a full qualification to practice.

All candidates must be in attendance to appear before the Joint Committee if required at their Meeting on Wednesday June 1st at 5 p.m. precisely.

Forms of application and copies of the rules may be obtained from the Secretary at the Hospital.

By Order of the Board of Management
JAMES McKAY
May 1932 Secretary

LINCOLN COUNTY HOSPITAL.

Wanted JUNIOR HOUSE SURGEON, male unmarried. Salary at the rate of £150 per annum, rising to £200 per annum at the discretion of the Visiting Surgeons. Board, residence and washing will also be provided.

Every candidate for the appointment must be registered under the Medical Acts.

Applications stating age and full particulars of experience to be sent to the undersigned not later than Saturday May 21st.

Canvassing disqualifies.

ARTHUR MOORE,
Hon. Secretary Superintendent.
April 25th 1932

THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London W.C.1

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on July 1st.

Gentlemen are invited to send in their applications addressed to the Secretary before 12 o'clock on Monday May 30th with copies of not more than three testimonials which will be returned after the appointment has been made.

Candidates must be unmarried and have held a responsible Hospital appointment.

The appointments are made for six months. Salaries at the rate of £100 per annum, board, residence and washing £5 a week and residence in the Hospital.

Candidates must be unmarried and possess a full qualification to practice.

All candidates must be in attendance to appear before the Joint Committee if required at their Meeting on Wednesday June 1st at 5 p.m. precisely.

Forms of application and copies of the rules may be obtained from the Secretary.

By Order of the Board of Management
JAMES McKAY
May 1932 Secretary

ALTRINCHAM GENERAL HOSPITAL
(100 beds)

Applications are invited for the post of SENIOR and JUNIOR HOUSE SURGEONS (male). Salaries at the rate of £120 per annum respectively, with board, residence and laundry. The latter will be provided.

Application, stating age and experience, to be forwarded to the undersigned not later than May 21st.

Canvassing disqualifies.

SECRETARY.

NEWCASTLE-UPON-TYNE EYE HOSPITAL.

Wanted a RESIDENT HOUSE SURGEON (male) Salary £1 per week, with board, residence and laundry.

Applications, stating age and experience, to be sent to the undersigned not later than May 21st.

CHARLES A. WILSON,
The Eye Hospital, Secretary.
Newcastle-upon-Tyne.

MANCHESTER ROYAL INFIRMARY
MEDICAL REGISTRAR (Male)

The Board of Management of the Royal Infirmary invite applications for the appointment of a Medical Registrar, which will be required to enter on his duties on July 1st.

Applicants must be registered Medical Practitioners and have had at least one year's experience as House Physician or House Surgeon in a Hospital.

The appointment will be for one year, and will require the whole time of the Registrar (Sundays excepted) from 10 a.m. to 1 p.m. and from 2 p.m. to 4 p.m.

The Registrar will be required to reside in the Infirmary.

Salary £150 per annum.

Applications, together with copies of three recent testimonials, must be sent to the undersigned not later than May 23rd.

Canvassing disqualifies.

ELSIE C. HAZE
May 3rd, 1932 Secretary

THE CHILDREN'S HOSPITAL

Applications are invited for the post of RESIDENT MEDICAL OFFICER.

Salary £ per annum.

Further particulars may be obtained from the undersigned.

SECRETARY.

THE ROYAL VICTORIA INFIRMARY

Applications are invited for the post of HOUSE SURGEON.

Salary £ per annum.

Applications, stating age, qualifications and experience, to be sent to the undersigned not later than May 21st.

Canvassing disqualifies.

SECRETARY.

(Appointments continued on p. 50

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W.C.1
Telegraphic Address Articulate London
Telephone Museum 9351 (4 lines)

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PARTNER WANTED WITH PRELIMINARY assistantship (indoor) of about six months for lucrative industrial practice on Tyneside Unmarried man preferred Suitable house to let for married man Commence August 1 Share worth about £900 not for sale at 2 years Further cluse more later State full particulars and if capital available enclosing photograph—Address No 2705 BMA House Tavistock Sq W C 1

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Advertisements intended for insertion under the Locums heading should be drafted in such a way as to make it clear whether a post is offered or required

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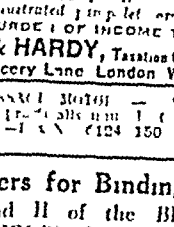
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APPOINTMENTS—Contd

WOKING AND DISTRICT VICTORIA HOSPITAL
(General Hospital—50 Beds)

FEMALE RESIDENT MEDICAL OFFICER (unmarried) required for duties from 15th September next Applicants must be duly qualified and registered Salary £100 per annum with board residence and laundry

Appointment for six months and renewable for further six months

Applications stating age etc and accompanied by copies of recent testimonials to be addressed to the Hon Secretary from whom all particulars may be obtained They must be received on or before May 20th

Personal canvassing not allowed

H MANNING DRIVER Hon Secretary
Woking & District Victoria Hospital

QUEEN VICTORIA JUBILEE CONVALESCENT HOME.

The Governors invite applications for the post of a SURGEON to the above Institution An honorarium of £120 per annum will be given

Applications must be made to the Secretary on or before May 19th from whom all particulars may be obtained

ARNEST ASHMEAD F C A
Exchange Chambers Secretary
Bristol

HORTON GENERAL HOSPITAL BANBURY, OXON (60 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male or female) Vacant May 24th The appointment is for six months Salary £150 per annum with suit of rooms board laundry

Applications with references to—
RICHARD H IRESLOTT
Secretary House Governor

CAMBERWELL HOUSE LONDON S E 5

A vacancy for a THIRD ASSISTANT MEDICAL OFFICER has arisen in this Mental Hospital Commencing salary £300 per annum with board lodging and laundry Candidates of either sex must be under the age of 30 Applications together with full particulars should be sent to the Medical Superintendent

BRISTOL GENERAL HOSPITAL

A meeting of the Electing Committee will be held at the Hospital on Wednesday June 8th at 1 o'clock p m to elect an HONORARY OBSTETRIC PHYSICIAN AND GYNAECOLOGIST Application for the appointment will be made by Mr H J DAVIS SMYTH Honorary Assistant Obstetric Physician and Gynaecologist Also to elect an HONORARY ASSISTANT OBSTETRIC PHYSICIAN AND GYNAECOLOGIST

By Section 7 5 5 4 of the Rules of the Hospital no person shall be eligible to the office of Assistant Obstetric Physician and Gynaecologist unless he possesses a registered Medical qualification and undertakes to practise solely as a Physician or Obstetric Physician and Gynaecologist

Candidates are requested to send their applications with copies of testimonials and proof of qualification to the undersigned on or before Wednesday June 1st from whom further particulars may be obtained

By Order of the Committee
THOMAS W GREGG
May 11th 1932 Secretary

BRISTOL GENERAL HOSPITAL

A meeting of the Electing Committee will be held at the Hospital on Wednesday June 8th at 1 o'clock p m to elect an HONORARY SURGEON

Application for the appointment will be made by Mr D G C TASKER Honorary Assistant Surgeon Also to elect an HONORARY ASSISTANT SURGEON

Candidates are requested to send their applications with copies of testimonials and proof of qualification to the undersigned on or before Wednesday June 1st from whom further particulars may be obtained

By Order of the Committee
THOMAS W GREGG
May 11th 1932 Secretary

PERTH AND KINROSS JOINT COUNTY COUNCIL

A FIRST ASSISTANT MEDICAL OFFICER (male) is required for service under the above Joint County Council

The position of DEPUTY and Hospital experience are essential Experience in any branch of Public Health including Tuberculosis and School Medical work will be added recommendations Salary £600 per annum rising by annual increments of £25 to £750 subject to satisfactory service

Forms of application may be obtained from the County Medical Officer York Place Perth with whom completed applications accompanied by copies of three recent testimonials should be lodged not later than May 28th

Counties Buildings T B MARSHALL
Perth County Clerk
May 2nd 1932

METROPOLITAN HOSPITAL Kingsland Road London E.8

The Committee of Management are prepared to receive applications for the appointment of a SURGEON to the Ear Nose and Throat Department (male) Candidates must be Fellows of the Royal College of Surgeons of England and not engaged in general practice

Candidates will be required to call upon members of the staff

Twenty applications complete with copies of recent testimonials must reach the undersigned from whom further particulars may be obtained not later than first post on Saturday June 4th

HERBERT F RUTHERFORD
Secretary & House Governor

METROPOLITAN HOSPITAL Kingsland Road London E 8

There is a vacancy for ONE CASUALTY OFFICER (male) Salary £100 per annum

Candidates must possess a registered Medical and Surgical qualification of the United Kingdom

Applications with copies of three recent testimonials and certificate of ability to administer anæsthetics to be sent forthwith to the undersigned

HERBERT F RUTHERFORD
Secretary & House Governor

THE WELSH NATIONAL SCHOOL OF MEDICINE

Applications are invited for the CHAIR OF OBSTETRICS AND GYNAECOLOGY

The appointment is a part time one and the salary is £300 per annum

Twelve copies of application are necessary and must be received by June 11th Six testimonials are required but the names of three referees must be given

Further particulars of the appointment may be obtained from the Secretary Welsh National School of Medicine The Parade Cardiff

S C EDWARDS Secretary

CHESTER ROYAL INFIRMARY
(211 Bed)

Applications are invited for the appointment of HONORARY OPHTHALMIC SURGEON to fill the vacancy caused by the death of Mr J TREVOR WILLIAMS

Candidates must hold the Degree of Master of Surgery of a University in the United Kingdom or the Irish Free State or a Fellowship of a Royal College of Surgeons, or one of the recognised Diplomas in Ophthalmology provided that any Junior member of the Chester Royal Infirmary Staff appointed before March 5th 1929 not holding one of the above qualifications and undertaking to secure the same within two years after the date of election shall be eligible to apply and if appointed to hold the office as Acting Honorary Ophthalmic Surgeon on condition of fulfilment of the above Regulations within that period

The Honorary Assistant Ophthalmic Surgeon is a candidate for the appointment and candidates are requested to state whether in the event of his appointment they will be prepared to accept the appointment of Honorary Assistant Ophthalmic Surgeon

The Surgeon appointed will be required to reside within five miles of Chester Cross and limit his practice to his special subject he will be required to attend Out patients and will be allotted 1 bed

Applications with copies of not more than three recent testimonials should be delivered addressed to the Chairman Board of Management Royal Infirmary Chester on or before May 28th

Canvassing prohibited

By Order of the Board of Management
Chester J ROWSE MITCHELL
May 2nd 1932 Secretary

DEVONSHIRE HOSPITAL
BUXTON DERBYSHIRE (300 Bed)
(A National Hospital for Rheumatism and Allied Diseases)

Applications are invited for the post of ASSISTANT HOUSE PHYSICIAN (male) to commence duties on July 1st Candidate must be fully qualified and registered The appointment is for a minimum period of six months and may be extended for a further period of six months Salary commencing £150 per annum and rising to £175 after three months service with board residence and laundry

Application endorsed Assistant House Physician stating age experience and qualification together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained

The appointment offers special facilities for any gentleman preparing a thesis or wishing to undertake research work and the Hospital contains a Pathological Laboratory and Biochemical and X ray Department

Canvassing will disqualify

By Order of the Committee of Management
A PRESTON TURNER
General Supt and Secretary

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Applications are invited from fully qualified and registered Medical Men for the following posts

ONE RESIDENT MEDICAL OFFICER Salary £200 per annum
TWO HOUSE SURGEONS Salary £120 per annum
ONE HOUSE PHYSICIAN Salary £120 per annum
ONE OBSTETRIC HOUSE SURGEON Salary £120 per annum
ONE HOUSE PHYSICIAN AND RESIDENT ANAESTHETIST Salary £120 per annum
ONE CASUALTY OFFICER Salary £150 per annum

The Hospital contains 217 beds including 50 Maternity Beds and other special departments

Candidates who should previously have held Hospital appointments must send applications accompanied by testimonials to the undersigned not later than Wednesday May 25th The appointments will date from July 1st and will be for six months The Resident Medical Officer will be eligible for reappointment for a further six months

MICHAEL JACKSON (Major) Secretary

EAST SUFFOLK AND IPSWICH HOSPITAL
(265 beds—Resident)

Application are invited for the post of HOUSE SURGEON now vacant Salary at the rate £120 per annum Board Residence and laundry Previous experience essential

Applications from British (male) candidates stating age qualifications and experience and accompanied by three recent testimonials to be sent to the undersigned

The Hospital MITHLP GRIFFITHS
Ipswich Secretary

ROYAL BERKSHIRE HOSPITAL
READING

REQUIRES
A HOUSE SURGEON as from June 1st The Candidate must be fully qualified and registered Remuneration at the rate of £150 per annum with board residence and laundry

Application with copies of testimonials to be sent to the undersigned on or before May 20th

F A LYON Secretary

APPLICATIONS ARE INVITED FOR THE POST of HONORARY CONSULTANT GYNAECOLOGIST to the LONDON LIGHT AND ELECTRICAL CLINIC Candidates must be Fellows of the Royal College of Surgeons or Members of the Royal College of Physicians

The Honorary Consultant Gynaecologist is required to attend the Clinic once a week

Application with not more than two recent testimonials should be sent not later than June 15th to the Secretary at the London Light and Electrical Clinic Lanelagh Road S W 1

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LONDON—HIGH CLASS PRACTICE, OVER £2 500 p a Large Old Established and Children Specialist must have had experience in these branches Fully Hospital appointment Ample scope for increase—No 9022

RIVERSIDE SUBURB AND RESORT—HALF share of over £2 800 p a with possibilities of succession Panel 1 300 and many Class Visiting fees 5 to 21 Good family house to rent at £100 p a Purchaser should be man of some experience in good class practice—No 9020

EASTERN COUNTIES—EASY TERMS AN old established rural PRACTICE on line of rail at present worth about £800 per annum for sale on very easy terms owing to serious ill health Spacious modern Small house with garden at rental—No 9019

LONDON W — INCREASING NUCLEUS residential about £300 with select panel of 100 Fees 6 to £1 Lovely maisonette with consulting and 2 bedroom bathroom Client Rent £100 p a and Premium £450 Would sell together or separately—No 9018

SUFFOLK—SMALL TOWN—PARTNERSHIP £3 500 p a One third share after report probably Very Panel about 1,600 Fees 5/ to 21/ Good detached modern house 6 bedrooms Good surgery garage Tenant at £120 p a or sell Premium 2 years purchase Highly recommended—No 9015

WEST RIDING — OLD ESTABLISHED PRACTICE in industrial town over £1 000 p a Panel 1 400 Two assistants Fees 5/6 to 10/6 some at 21 Modern house 3 bedrooms 2 reception rooms with lounging Sell or let Premium £1 6 0 £1 000 down balance by instalment—No 8797

SOUTH COAST—FASHIONABLE RESORT—Good class Practice non dispensing with select panel Income over £1 500 Visits 5/ to 10 6 Good house 2 reception rooms 3 bedroom 4 other rooms on third floor Let off Premium for Practice and lease (43 years to run) £2 800 cash of which £950 can be raised on mortgage—No 9014

EAST END—CASH PRACTICE INCOME £850 Panel 574 Premium £1 200 House let at £60 p a 10 years to run Visiting fees 5 and 10 Surgery 3 6 with medicine 5 Old established Present hands 5 years—No 9004

SURREY HILLS — OLD ESTABLISHED Country PRACTICE unopposed £650 p a Fees 3 6 to 10 6 Panel 400 Premium 1½ years purchase Good house 6 bedrooms 2 reception rooms Electric light Good garden about 1 acre with tennis court £1 600 or rent £80—No 8992

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LONDON NORTH — £1 000 P A MIDDLE and Working class Panel 600 Visits 3 6—5 6 up Premium one years purchase Good house main road Lease hold £1 50 to run—No 9005

NORTHERN TOWN—SALE OF OLDEST ESTABLISHED one fifth share of over £3 000 p a Panel over 6 000 Fees 5/ upwards Chance to specialise for Midwifery Anaesthetics Ear Nose and Throat work—No 9002

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WELSH BORDER —UNOPPOSED COUNTRY PRACTICE in beautiful district Average cash receipts £1 100 p a including transferable appointments £300 p a Panel 756 Cottage Hospital Excellent house 4 reception 4 bedrooms Garage and large garden Rent £70 p a or would sell for £1 250 Premium 1½ years purchase Welsh not essential —No 337

MANCHESTER -Old established PRACTICE Cash receipts last year £1 513 Panel 1 697 Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1½ years purch —No 323

NORTH WALES COAST — Mixed PRACTICE in beautiful district Average gross cash receipts £1 200 p a Panel 750 Excellent house 2 reception 3 bedroom electric light and modern conveniences low rental Premium for quick sale £1 350 (to include drugs and Surgery fittings) —No 348

MANCHESTER —PRACTICE averaging £661 p a Panel 154 Good scope House contains 2 reception 5 bedroom Garage and garden Rent £70 p a Premium for quick sale £450 —No 226

LANCS — PLEASANT COUNTRY TOWN —Sound mixed PRACTICE Average cash receipts £1 374 p a Appointment now transferable approximately £65 p a Panel 1 037 Excellent house 3 reception 6 bedroom garage and large garden Premium—Practice—1½ years purcha —No 326

MANCHESTER —Middle-class PRACTICE in pleasant Suburb Cash receipts 1931 £1 327 Panel 459 Charming house 3 reception 6 bedroom billiard room Large garden and garage Premium—Practice—1½ years purcha —No 322

EAST COAST —SEASIDE TOWN —Old-established mixed-class PRACTICE Average cash receipts £1 701 p a Panel 686 Excellent living and professional accommodation 2 reception 6 bedroom Garage and small garden Rent £100 p a on long lease Premium 1½ years purchase —No 332

CHESHIRE COAST TOWN near LIVERPOOL — Middle-class PRACTICE Average cash receipt £1 184 p a Appointment £80 p a Small select panel Excellent corner house 3 reception 5 bedrooms Premium—Practice—1½ years purcha —No 317

NR LIVERPOOL —COAST TOWN —Mixed PRACTICE Cash receipts last year £700 Panel 400 Good house (built 1927) 3 reception 4 bedroom Garage and garden Premium 1 years purchase —No 344

DEATH VACANCY —LANCS TOWN —Mixed-class PRACTICE Average cash receipt £1 634 p a Panel 829 Scope for urgent third Could accommodation to rent Premium 1 years purch — No 55

NEAR MANCHESTER — Pleasant Town —Old-established PRACTICE Average cash receipts £995 p a Panel 902 Excellent detached house (freehold) 3 reception 5 bedroom Garage and garden Premium—Practice—1½ years purchase —No 234

EAST YORKS —Country Town near Coast —Unopposed mixed PRACTICE Cash receipts last year £860 Panel 630 Excellent detached house 3 reception 4 bedrooms garage and large garden Premium 1½ years purcha —No 346

MANCHESTER —Residential Suburb —Middle class PRACTICE Suitable for two in Partnership (one a good Surgeon) Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses to rent with ample accommodation Premium 1½ years purchase —No 277

CHESHIRE TOWN near MANCHESTER —PARTNERSHIP in old established Practice Average cash receipts £5 151 p a Panel 3 600 Excellent house 2 reception 3 bedroom garage and garden Premium—one fifth share—£1 700 —No 333

VENEREAL DISEASES PRACTICE — Northern City —Cash receipts last year £1 625 Convenient house to rent at £65 p a Premium—any reasonable offer —No 340

NR LIVERPOOL —PARTNERSHIP in good-class Practice Cash receipts approx £3 000 Good house available Premium—one third share—3 years purchase —No 309

NEAR PRESTON —PRACTICE offering scope Cash receipts last year £700 Panel 300 Good house 2 reception 4 bedroom To rent £70 p a Premium 1½ years purchase —No 294

LARGE LANCS TOWN —MIXED PRACTICE Average cash receipts £1 288 p a Panel 1 089 Scope for increase Good house 3 reception 4 bedroom garage and garden Premium 1½ years purchase —No 347

NORTH WEST COAST — SEASIDE RESORT — Old-established PRACTICE Cash receipts £874 Panel 250 Excellent freehold house 2 reception 5 bedrooms Garage and garden —No 266

MANCHESTER —MIXED PRACTICE (suitable for two in Partnership) Cash receipts last year £2 840 Panel 2 156 Good scope Two excellent houses with ample accommodation Premium—1½ years purcha —No 321

CHESHIRE TOWN Nr MANCHESTER —Pleasant Suburban-class PRACTICE Cash receipt 1931 £7 8 last four months £562 Panel over 100 Excellent detached corner house 2 reception 5 bedroom garage and garden —No 340

MEDICAL WOMAN'S PRACTICE — MANCHESTER —Old-established Cash receipt 1931 £645 Panel 250 Good scope Excellent house 3 reception 6 bedroom Garage Rent £60 p a or 1 a Premium 1 years purcha —No 330

WANTED IMMEDIATELY —INDOOR AND OUTDOOR ASSISTANTS FOR TOWN AND COUNTRY PRACTICES WITH OR WITHOUT VIEW Good salaries offered State full particulars LOCUMTENENTS (male and female) SHOULD REGISTER AT ONCE FOR IMMEDIATE ENGAGEMENTS

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Phoenix Chambers South Parade, Leeds
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72 High Street, Belfast
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All communications to be addressed to the Branch Manager BRITISH MEDICAL BUREAU 33 CROSS ST., MANCHESTER

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1880)

12, Stratford Place,
Oxford Street, W.1.

Telephone Mayfair {1782 / 1783

The Bureau has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business, and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending readers to consult Mr. A. V. STORIA, the General Manager, in all transactions requiring the services of a Medical Agent.

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

The business undertaken by the British Medical Bureau is divided under the following heads:—

TRANSFER OF PRACTICES, PARTNERSHIPS, etc.

Medical Practitioners desirous to dispose of Practices, or desirous to take Partners, are advised to negotiate the business through the British Medical Bureau. Vendors may depend upon receiving introductions only to eligible and bona fide purchasers. All information is treated in strictest confidence. Full and trustworthy information regarding Practices, Partnerships, etc., for disposal, supplied gratis to Purchasers.

ASSISTANTS AND LOCUM TENENS

Assistants and Locum Tenens can be secured at short notice. It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out.

RESIDENT PATIENTS

Medical Men wishing to receive Resident Patients should enrol their names on the books of the British Medical Bureau. A large number of Patients are placed yearly through this medium.

ACCOUNTANCY

The British Medical Bureau has its own staff of qualified Accountants wholly engaged on medical work—Valuation of Practices for purchasers, Income Tax, Auditing Accounts, etc.

Practices and Partnerships for Disposal — Full particulars sent free

1 EASTERN COUNTIES.—Third Partner required in old-established Practice of £4,500 p.a. in pleasant Market Town within easy reach of London. Well-appointed House for sale at about £1,000 p.a. Option to purchase in two equal shares within 3 years.

2 W. MIDLANDS.—Practice nearly £2,100 p.a. in small residential country town amidst beautiful surroundings. Share of £1,100. Excellent house (6 bedrooms and attics) in own grounds with orchard for sale. Sport of all kinds. Premium 14 years' purchase.

3 N. OF ENGLAND.—Ophthalmic Practice of over £1,000 p.a. in an important town. Excellent scope for one having special and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

4 N.E. ENGLAND.—Rapidly increasing 11 MEDICAL in well-built seaport town. Receipts past year £1,700 including select panel of under £50. Well-situated house (6 bedrooms) in good residential part for sale. Ample scope for increase. Premium £2,750.

5 HOME COUNTIES.—Country Practice averaging £1,120 p.a. in pleasant district easy distance of London. Panel 600. Very nice detached bungalow residence (5 bedrooms), garage and well-stocked garden to rent on lease. Excellent scope. Premium 1½ years' purchase.

6 NORTHUMBERLAND.—Practice of £2,000 p.a. in small industrial town. Panel 1,040. House for sale. Premium—Practice—1½ years' purchase.

7 S. AFRICA.—Practice (mainly among the White population) of about £2,000 p.a. in a famous Town. Pleasantly situated detached bungalow (6 bedrooms), garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

8 N. WALES.—Small Seaport Town.—Practice (including about £800 p.a. Panel) 750. Excellent house (3 bedrooms) with modern improvements. Sport of all kinds. Premium £1,250 to include fittings, etc.

9 HOME COUNTIES.—Partnership in good-class non-dispensing Practice in favourite town, easy reach of London. No panel. Suitable house could be obtained. Share of about £800 p.a. at first at 2 years' purchase. Applicant must have good Medical degree and be proficient anaesthetist.

10 S.W. OF ENGLAND.—Partnership in rapidly increasing better-class non-dispensing Practice of about £2,200 p.a. in first-class town. No panel. Suitable house to rent. Share worth £1,000 p.a. at 2 years' purchase. Applicant must be well qualified and a good Physician. Preliminary Assistantship.

11 S. COAST.—Practice averaging £1,160 p.a. in Residential Town and Health Resort. Panel 1,056. Practically no dispensing and not much midwifery. Scope for considerable increase. Premium £2,000.

12 HOME COUNTIES.—Practice carried on by Medical Woman in country district about 15 miles from London. Receipts last year £799. Panel about 100. Detached house (4 bedrooms), with garage and about half an acre of garden. Scope for increase. Premium—house and Practice—£2,500.

13 KENT.—Partnership in middle and working class Practice nearly £4,450 p.a. in an industrial town. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. One fifth share 2 years' purchase.

14 LONDON, WEST END.—X-ray and Electro-therapeutic Practice. Receipts 1931 nearly £620. Large house (8 bedrooms) to rent on lease. Premium £925.

15 S. WALES.—Partnership in sound Practice in one of the principal towns. Receipts average £4,000 p.a. (about £700 from the panel). One third share at first at 2 years' purchase.

16 MIDLANDS.—Partnership in sound non-dispensing Practice of over £5,700 p.a. in beautifully situated county town. Panel 2,000. Good well-qualified Physician required aged 30-35. One fifth share at 2 years' purchase with early increases. Good Hospital with prospect of appointment on Staff in near future.

British Medical Bureau

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Practices and Partnerships for Disposal (continued)

17 S COAST.—Fashionable Health Resort.—PARTNERSHIP in steadily increasing Practice about £3,300 p.a. Small select panel. Share worth about £800 p.a. at 2 years. Purchase. Incoming Partner should be Oxford, Cambridge or London man.

18 LONDON, S.E.—Practice averaging about £1,050 p.a. in one of the best Residential Suburbs. Panel nearly 400. Very nice house (5 bedrooms) in own grounds with garage and large garden, the lease of which is for sale. Scope for increase.

19 OPHTHALMIC PRACTICE.—Exceptional opportunity for a PARTNERSHIP. Applicant should be aged about 30, and must have the D.O. Oxford or D.O.M.S. and must have held Ophthalmic Hospital post preferably in London. A share worth nearly £1,200 p.a. at first.

20 N. OF ENGLAND.—Inland Health Resort. Non-dispensing PRACTICE averaging £1,130 p.a. Small select Panel. House (7 bedrooms) with large garden for sale or rent. Premium for Practice 1½ years' purchase.

21 LONDON, S.W.—Practice £580 p.a. in suburban district. Small panel. Considerable scope. House (3 bedrooms) on main road, rent £70 p.a. Premium £750.

22 S. OF ENGLAND.—Practice £1,035 p.a., in flourishing and attractive town within 90 miles of London. Panel over 800. House (6 bed and dressing rooms) with half an acre of garden for sale. Scope. Premium 1½ years' purchase.

23 LONDON, W.—Practice £550 p.a. in suburban district. Detached double fronted house (6 bed and dressing rooms) with small garden for sale. Premium 1½ years' purchase.

24 W. OF ENGLAND.—Partnership in old-established Practice of £1,165 p.a. in first rate City. Panel 1,350. House (4 bed and dressing room) to rent. Share worth £550 p.a. at 2 years' purchase.

25 MIDLANDS.—Steadily increasing PRACTICE of between £1,100—£1,200 p.a. in thriving town one and a half hours by rail from London. Excellent house (6 bedrooms), garage and garden for sale. Cottage Hospital. Premium 1½ years' purchase.

26 LONDON, S.W.—Cash Practice about £1,100 p.a. near Victoria. Panel about 1,250, which could be considerably increased. Valuable corner residence for sale. Premium for Practice £1,000.

27 LONDON, E.—Cash and Panel Practice of £840 p.a. in populous district. Panel 570. Small house to rent or lease. Premium 1½ years' purchase.

28 ESSEX.—Partnership in Practice of £5,400 p.a. in developing country district, easy distance of coast. Panel 3,600. Detached house (6 bedrooms), garage and good garden for sale. *Scope for increase. One fourth share, 2 years' purchase.*

29 S. COAST.—Practice averaging £480 p.a. in rural district on outskirt of popular holiday resort. Panel 400. Point of Surgery. Premium 10/- weekly. Premium £600.

30 W. OF ENGLAND.—Partnership in Practice nearly £2,600 p.a. in country town. Panel about 1,000. Good house (10 bedrooms), garage and garden of about half acre to rent. Good educational facilities. Cottage Hospital. Premium one third share £1,550.

31 MIDLANDS.—Practice averaging £1,710 p.a. in growing town with nice surrounding. Panel 1,100. House available if required. Good hospital and scope for surgery. Premium 1 years' purchase.

32 HOME COUNTIES.—Non-dispensing Practice averaging £1,150 p.a. in growing residential watering place. No panel. Detached house (4 bedrooms) with every modern convenience and attractive garden to rent. Premium 1½ years' purchase.

33 MIDLANDS.—Practice £727 p.a. in clean flourishing manufacturing town. Panel 570. House (3 bedrooms), garage to rent. Premium 1½ years' purchase.

34 SHROPSHIRE.—Practice £800 p.a. in Market Town. Panel 1,170. Suitable house to purchase. Premium 1½ years' purchase.

35 S. WALES.—Mixed Practice in growing district of seaport town. Receipts last year over £800. Panel 760. House (3 bedrooms), garage and garden to rent. Good prospects for scope. Premium £1,200.

36 W. OF ENGLAND.—Partnership in Practice in pleasant country town. Cash receipts average about £5,200 p.a. (including panel and appointments over £1,500 p.a.). Charming old house (5 bedrooms and attics etc.), garage and beautiful garden. Plenty of sport. Scope for increase. Premium for one fifth share 2 years' purchase.

37 LONDON, N.W.—Practice in suburban district. Receipts 1931 £700. Panel 300. Corner house (5 bedrooms), garage and garden to rent on lease. Premium £750.

38 N. OF ENGLAND.—Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgery, anaesthetics and obstetrics. Share of three fifteenths at 2 years' purchase.

39 LONDON, N.W.—Non-dispensing Practice in good residential district. Receipts last year nearly £900. No panel. Ten roomed house with garage and large garden to rent. Premium £1,200.

40 N. MIDLANDS.—Partnership in Practice about £3,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years' purchase.

41 S. WALES.—Increasing Practice of £900 p.a. in pleasant Market Town. Panel 750. Well situated house (non-dispensary) with 3 bedrooms for sale. Cottage Hospital. Premium.

42 DURHAM.—Practice of over £500 p.a. in residential and colliery district near large town. Panel 350. Substantially built 3 room dwelling house for sale. Scope for increase.

43 KENT.—*Country Practice of over £800 p.a.* in beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms), central heating, grounds of 2½ acres or orchard for sale. Sport. Premium 1½ years' purchase.

44 HOME COUNTIES.—Partnership in exceptionally well and rapidly increasing Practice of at £6,000 p.a. in delightfully situated Country Town. Distance of Attractive house (9 bedrooms) to rent. Partner must be F.R.C.S. and be aged about 30. Appointment on Hospital Staff. Premium for one-sixth to one-fourth share 2 years' purchase. Preliminary visit to Partnership.

45 KENT.—Country Practice of about £850 p.a. Panel 550. Good house and garden for sale. Premium £11

MEDICAL PARTNERSHIPS TRANSFER AND ASSISTANTSHIPS (PLEASE APPLY STOREY) Page 12, C

All communications to be addressed to Mr. A. V. STOREY, General Manager

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 WEST SUSSEX [illegible] PRACTICE in [illegible] Practice [illegible] Light Carriage Price for leasehold £1 200 £800 on mortgage Good sport and excellent schools Very good Surgical prospects Premium for share £2 000

15 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA —PARTNERSHIP —A fourth share is offered owing to the retirement of one of four partners in an old-established Practice in very pleasant country district Income £5 400 p a with good panel list Light Dispensing hours with ample accommodation garden etc for 3/4 Premium 2 years purchase

16 WITHIN 50 MILES OF CITY OF LONDON —COUNTY TOWN —PARTNERSHIP —A one third or two fifths share is offered in a well established middle and working class Practice having very good scope for increase Receipts average over £2 000 p a Panel of nearly 2 600 Fees 2/6 to 5/- Choice of houses on rental or for purchase Premium 2 years purchase

17 LONDON SOUTH WEST — Old established mainly better-class non panel and non dispensing PRACTICE averaging about £1 100 p a [illegible] to £1 Only few cases of midwifery at 10 gns Corner house with 3 reception 6 bedrooms etc Electric light Garage Rent or rates £150 p a Premium £1 250

18 LONDON SOUTH —Middle class PRACTICE producing about £1 000 p a including panel of 600 Fees from 2/- upwards Very little midwifery Seven room house with professional accommodation Price £1 750 or would be rented Premium £1 500

19 MANCHESTER —Middle and better class PRACTICE in residential district Average gross cash receipts for past three years £1 270 including panel of 1 170 Convenient house can be purchased for £1 000 £600 on mortgage Premium 14 years purchase

20 EASTERN COUNTIES — COUNTY TOWN — Very well established old non panel PRACTICE in favourite town Average gross cash receipts for last three years £3 201 last year £3 309 No appointments Fees 5/- to 21/- Only about 20 cases of midwifery 15 to 25 gns Very nice house with 2 reception 6 bedrooms dispensary room etc and professional rooms Price for free hold £4 000 half on mortgage Premium £5 000 Hospital of over 200 beds and good surgical scope if desired Ill health sole reason for sale

21 SURREY —Delightful residential district within 25 miles — Well established PRACTICE averaging about £550 p a with good scope Panel of 250 Detached house in 11 acres of ground 6 reception 4 bedrooms etc) rent on lease £120 p a Premium £850

22 LANCS — LARGE TOWN —PARTNERSHIP —A one third share is offered in an old established mixed class Practice averaging approximately £2 000 p a Panel of 2 850 Fees from 2/6 Suitable house with reception 3 bedrooms etc Surgery and waiting room Rent on long lease £50 p a Premium £1 000 to include book debts etc

23 MANCHESTER —Old-established PRACTICE averaging £640 p a Panel of 154 Offers good scope Fees 3/6 to 10/6 Midwifery 3 to 4 gns House contains 4 reception 5 bedrooms bathroom etc Rent on lease £70 p a Premium for immediate sale £450

24 SOUTH WEST OF ENGLAND —FAVOURITE TOWN —PARTNERSHIP —A share producing about £1 000 p a with further increase later is offered in an old established non panel and non-dispensing Practice having large scope for development Fees from 5/6 to 21/- Midwifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be experienced and hold M D London

25 SOUTH OF ENGLAND —FAVOURITE COAST TOWN —Old-established chiefly better class PRACTICE producing about £1 800 p a Small selected panel Fees 3/6 to 10/6 Not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

26 NORTH MIDLAND CITY — PARTNERSHIP —Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/- Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

27 PARTNERSHIP — WEST OF ENGLAND — A share producing about £700 p a is offered in a well established Practice, averaging over £1 500 p a Ultimate succession Inter Panel of nearly 1 400 Choice of houses Premium £1 400

28 MIDLANDS —PARTNERSHIP —A one third share is offered in a very sound middle and working class Practice held by the senior partner for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/- Midwifery from 3 gns (about 60 cases) Suitable house available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kinds and very good school within reach From 2 years purchase

ASSISTANTS REQUIRED (1) NORFOLK Large Town —Outdoor £450 p a Very good mixed class Practice Suitable accommodation all found Must be able to drive a car Roman Catholic preferred

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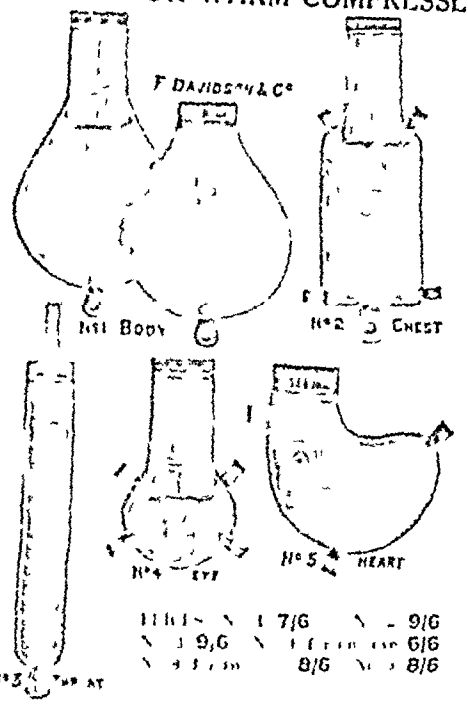
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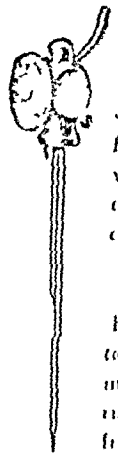
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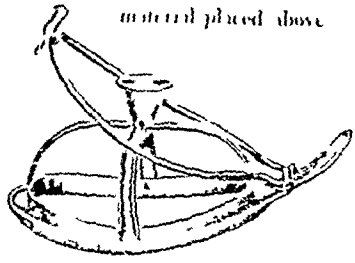


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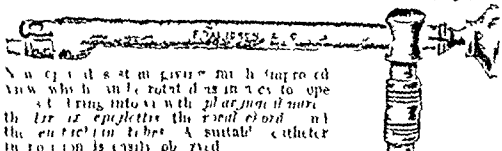


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The British Medical Journal

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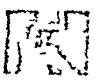
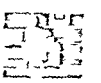
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CONTENTS

MAY 21 1932

ORIGINAL ARTICLES

Menopausal Insanity and Bacterial Toxaemia By T Gilman Moor M.D. M.R.C.P.I. 923

The Menopause and its Complications By Gibbon Fitzgibbon M.D. F.R.C.P.I. 924

Phototherapy in Erysipelas By J. M. Davidson M.D. 927

Carbon Dioxide Absorption Methods in Anaesthesia By Francis J. Evans M.B. B.S. (Illustrated) 931

Takayama's Solution in the Identification of Blood Stains By Aubrey V. Gilvarg M.B. 932

Two Further Cases of Sarcoma Associated with Known Trauma By David H. Hatfield M.B. B.S. 933

Ambulatory Treatment of Varicose Veins by Combination of Ligation and Injection By V. Dickson Wright M.S. F.R.C.S. (Illustrated) 934

MEMORANDA

Bi-ophthalmic Hyperpituitarism and Bisophthalmic Hypopituitarism By J. Parkes Weber M.D. F.R.C.P. 935

Case of Suspected Rat-bite Fever By Peter Hutchison M.B. Ch.B. 936

REPORTS OF SOCIETIES

London Association of the Medical Women's Federation
Diagnosis of Pregnancy 936

Manchester Medical Society
Malignant Disease 937

West London Medico-Chirurgical Society Exercise Surgery 938

Aberdeen Medico-Chirurgical Society Calcium Metabolism 939

REVIEWS

The Medical Annual 1932 940
Diseases of the Kidney 941
Psychiatry 941
Physiology of Exercise 942
Social Insurance 942
Notes on Books 943

OBITUARY

William Dove Macfarlane M.B. C.M. 950
Harold Seddon M.D. 950
H. H. F. Scathiff M.R.C.S. 951

LEADING ARTICLES

The Milk Problem 945
Parliament and National Health Insurance 945

THE WEEK

Intestinal Diseases and Urinary Complications 946
Royal Society Conversazione 946
The Parathyroids and Generalized Osteitis Fibrosa 947
Artificial Preparation of Vitamin A 948
Applied Physics of To-day 948

GENERAL ARTICLES AND NEWS

The First Hundred Years. The B.M.A. and the Poor Law 949
Conference on Radium The Fourgrim Bomb 952
Royal Medical Benevolent Fund 953
Preparations and Appliances (Illustrated) 953
Medical Notes in Parliament
National Health Insurance Bill 952
Workmen's Compensation 954
Medical News 955

CORRESPONDENCE

Public Health Intelligence By I. Jackman M.D. 959
Treatment of Dysmenorrhoea By H. Leith Murray M.D. 959
Vasovagal Syncope By J. A. Ede M.D. F.R.C.P. 959
Aetiology of Duodenal Ulcer John J. Lobb F.R.C.S.Ed. 959
Origin of Tumours By Hastings Gilford F.R.C.S. 957
Osteo-arthritis of the Hip By A. H. Douthwaite M.D. F.R.C.P. 957
Lactic Acid in the Gastric Contents By Ian Murray M.D. and Andrew B. Robertson M.D. 957
Fallen Hills or False Goals? By Sir C. Gordon Watson F.R.C.S. 958
Thyroid Extract and Pulmonary Embolus By F. H. Hannan M.D. 958
Local Anaesthesia for Jaw Resection By C. Hamblen Thomas F.R.C.S. 959
Dietary and Dental Caries By E. Cooper Black M.B. and C. Mathu M.D. 959
Ethyl Carbamine By V. C. S. Court M.D. 959
Preparation for Marriage By W. J. Lax M.D. 960
Fouling of Footways by Dogs By Charles Porter M.D. and M. I. Law M.D. 960

LOCAL NEWS

England and Wales—
National Institute for the Deaf 955
Home Ambulance Service 955

Ireland—
Public Health Congress in Belfast 956
Grant to Mental Hospital 956
Village Settlements for the Unemployed 956

Scotland—
Presentation to Scottish Medical Secretary 956
Glasgow Royal Mental Hospital 956

UNIVERSITIES AND COLLEGES

University of Cambridge 961
University of London 961
University of Edinburgh 961
Royal College of Surgeons of England 961

MEDICO-LEGAL

High Court Decision Against Optician 965
Action for Negligence Against Doctor 965

LETTERS AND ANSWERS

Unilateral Oedema 967
Plantar Corns 967
Income Tax 967
V.H.I. Invalid Home 968
Tea and Sugar 968
Oedema in the Newborn 968
Fallen Idols—Correction 968

Vacancies 968
(See Index to Classified Advertisements)

The SUPPLEMENT contains

Centenary Meeting London July 1932: Provisional Programme and Summary of Hotel Accommodation.

Annual Representative Meeting List of Delegates and Visitors

Medical Research Council and the Patent Law

Current Notes

National Insurance Panel Service

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

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VACCINES & CULTURE MEDIA—

X RAY & ELECTRO MEDICAL APPARATUS—

CONTRACT PRACTICE & OTHER APPOINTMENTS—

IMPORTANT NOTICE—

APPOINTMENTS 19

HOSPITAL &c VACANCIES—

BATHS SPAS &c—

HOTELS & HEALTH RESORTS—

HYDROS & PRIVATE HOSPITALS—

HOMES & ASYLUMS—

INEBRIETY—

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SANATORIA—

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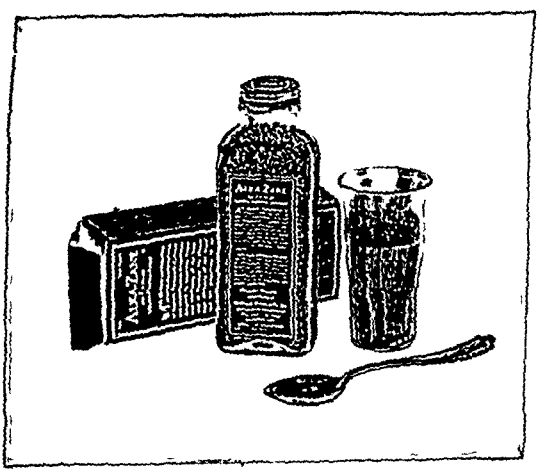
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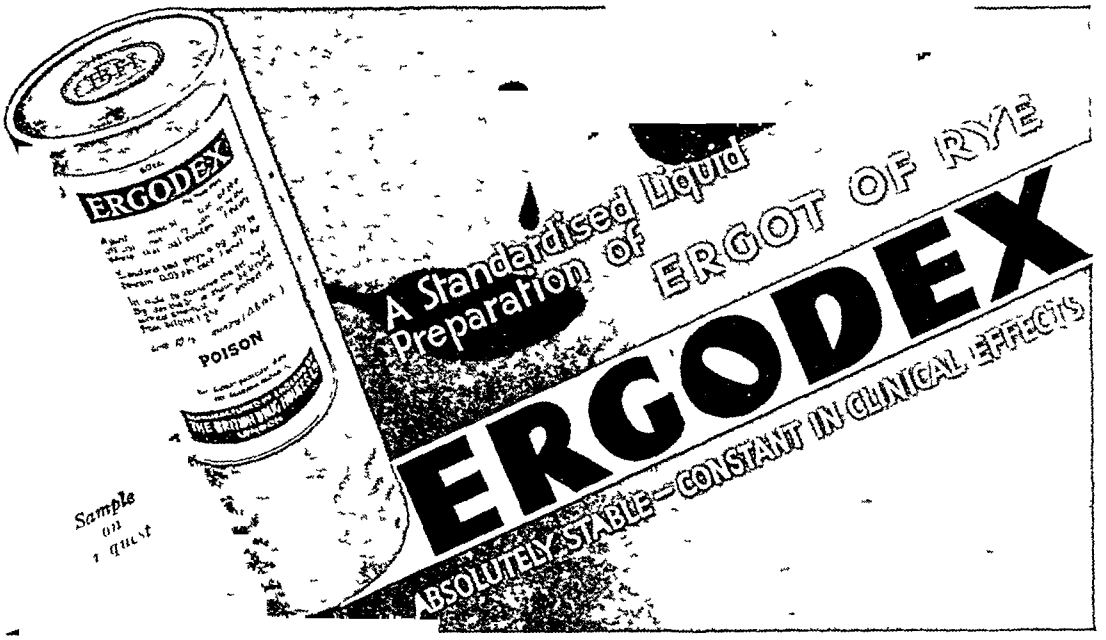
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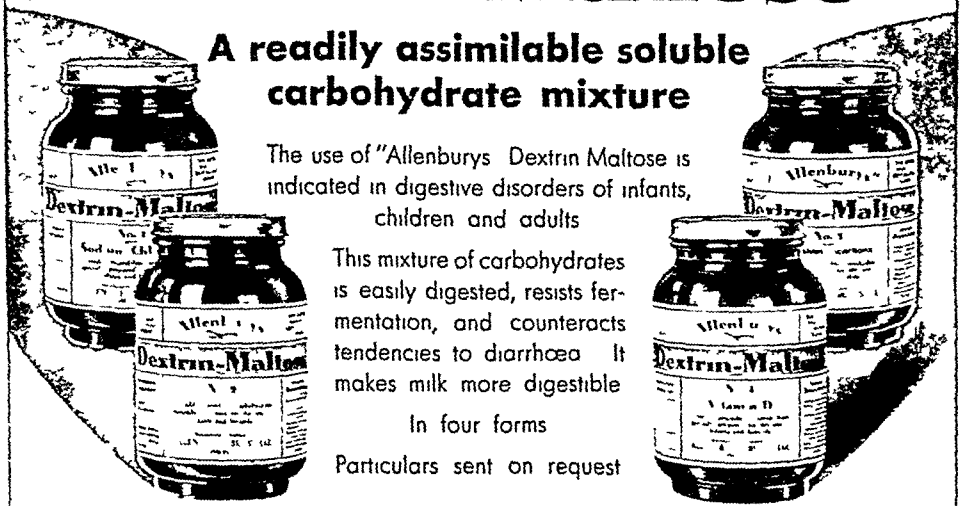
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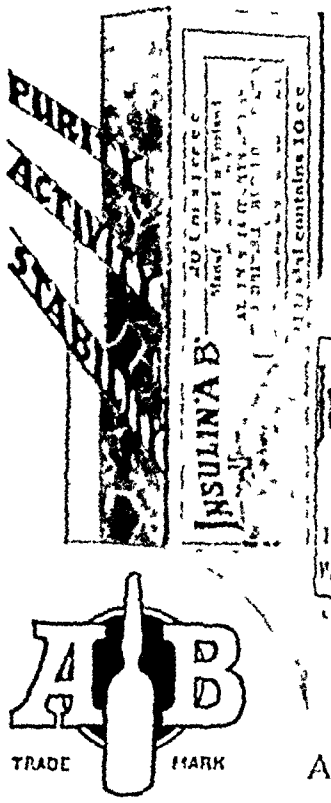
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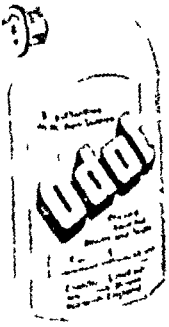
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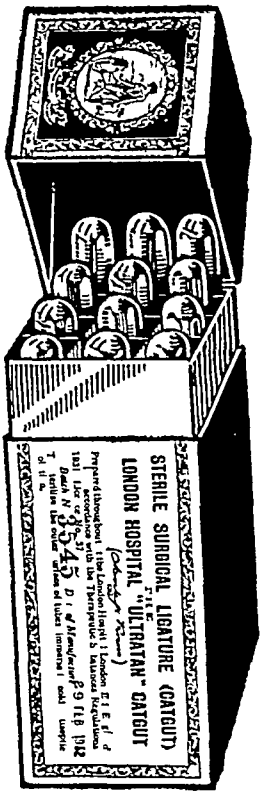
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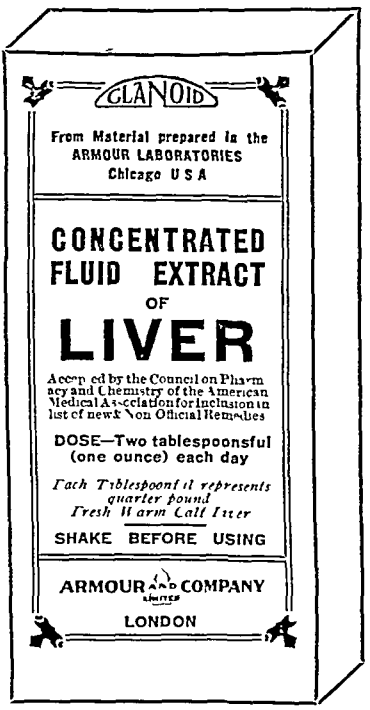
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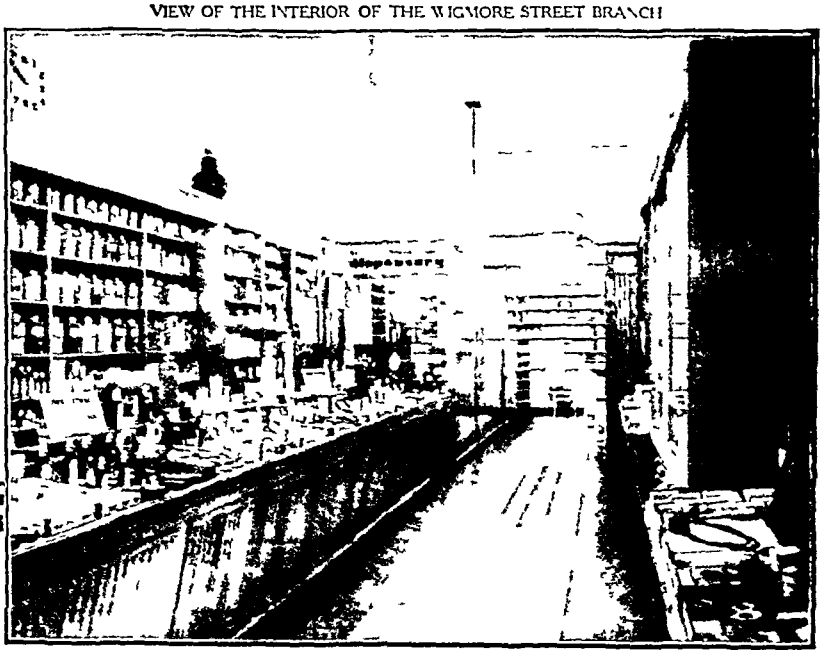
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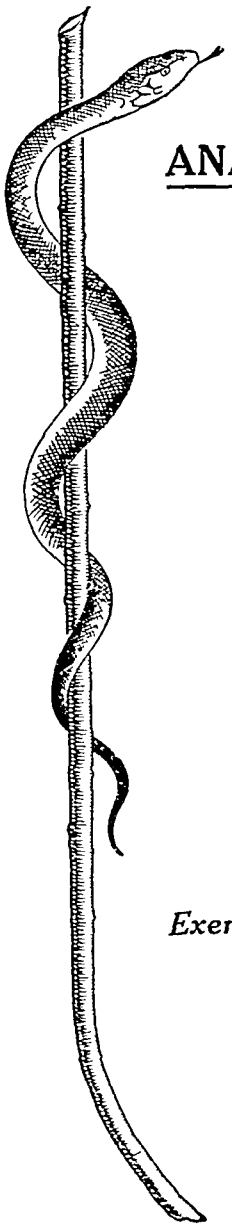
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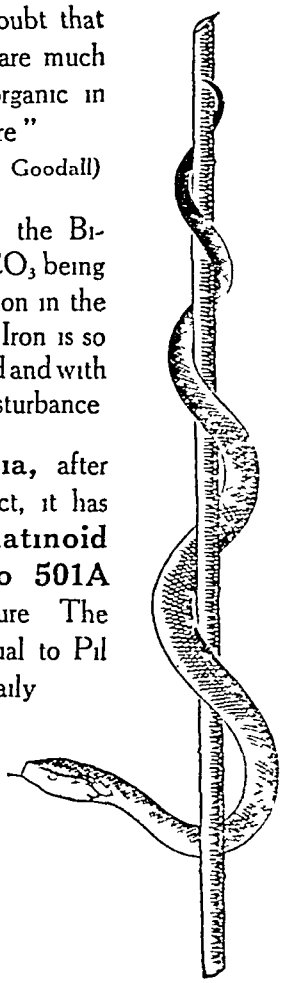
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This is the standard preparation

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Observations
ON
MENOPAUSAL INSANITY AND BACTERIAL TOXAEMIA

BY
T. GILLMAN MOORHEAD, M.D., F.R.C.P.I.
CONSULTING PHYSICIAN, MEATH HOSPITAL, DUBLIN

Focal sepsis as a factor in the causation of mental disease was one of the subjects under discussion at the Annual Meeting of the British Medical Association in Edinburgh in 1927. To this discussion William Hunter contributed the opening paper and reviewed the subject at considerable length. He quoted the experience of Cotton in America and of Graves in Birmingham to the effect that the removal of septic foci frequently led to improvement or complete recovery in cases of even apparently hopeless insanity. Hunter rightly laid stress on the fact that the only test of the part played by a septic focus as a cause of insanity in any given individual was the test of removal of that focus. In the discussion that followed there was by no means general agreement as to the part played by sepsis in mental disorder, and it was pointed out that focal sepsis existed just as frequently in the sane as in the insane. One speaker accused Hunter of arguing from and drawing general conclusions from a single case.

In reporting a case of menopausal insanity apparently due to focal sepsis it is not desired to draw any general conclusions, but as similar cases may exist it appears to be of importance to examine every case of insanity occurring at the climacteric for possible septic infection. At the Winnipeg meeting of the Association in 1930 the nervous and mental manifestations of the climacteric formed the subject of a discussion in the Section of Mental Diseases and Neurology, but in the opening paper no mention was made of uterine or other sepsis as a possible cause of such disturbed mental conditions. The main exciting cause was agreed to be endocrine imbalance. This may be regarded as the orthodox and generally accepted view.

It will be seen in the report of the present case that the existence of uterine sepsis was not at first recognized, nor was its importance realized at an early date. One reason for this was that the theory of endocrine imbalance as the cause of all menopausal insanities was accepted by both the physicians attending the case and that when surgical treatment for the removal of the uterus was discussed it seemed impossible to them that such an operation could favourably influence an insanity the prime cause of which was ovarian deficiency. The existence of uterine sepsis was indeed far from obvious even to expert gynæcological examination, owing to the absence of vaginal discharge. Probably most cases of menopausal insanity are due to endocrine deficiency, but as already stated, on the chance of others being due to sepsis and remediable by the removal of that sepsis, it is thought right to call special attention to the following case.

HISTORY OF CASE

A married woman aged about 50 years came under my care in October 1930. She had been previously well known to me over a period of some years. The history I obtained was as follows. Up to about eighteen months before the beginning of her present illness she had been a perfectly healthy active and cheerful woman. She had had two healthy children—now adults—and two miscarriages. Early in 1929 she began to suffer from irregular uterine bleeding. This led her to consult a gynæcologist who told her that the uterus was slightly enlarged and performed a curettage. Slight if any improvement followed this, and at subsequent examinations a diagnosis of fibrosis uteri was made. Operation was discussed but since the patient was unwilling—the condition not being very severe—operative treatment was not carried out.

During the spring of 1930 some friends noticed that her manner had to a certain extent changed. She was more silent than usual and was apathetic. *In July 1930* she went for a holiday with her husband. During this holiday she suffered from severe uterine haemorrhage and felt very unwell. On her return home she was in fair health till one day she received a severe mental shock in the shape of a telephone message telling her of the illness of a relative. Half an hour afterwards she was found lying on her bed in a semi-conscious state. She was then unable to answer questions and had apparently forgotten everything that had happened to her in the previous few months. She was removed to a nursing home where a tentative diagnosis of cerebral thrombosis was made, though it is probable that the condition was really one of acute stupor. She recovered slowly, and after two months was able to return home, although her mental state was far from normal, her memory being extremely defective. Her voice at this time was clear, but when spoken to she generally repeated what was said to her, *and presented in many ways the phenomenon of* automatism.

In October 1930 as already stated I first saw the patient. At this date she was able to be up daily and to take short walks, but had developed delusions of persecution, was still automaton-like in her conversation, and was greatly depressed. Week by week her condition worsened, outbreaks of irritability and excitement alternating with depression. Finally in December 1930, after a consultation with Dr. Bewley, she was again removed to a nursing home where she remained continually confined to bed for the next ten months.

Dr. Bewley, who was in attendance with me from January to September 1931, describes her condition as follows:

> For most of the time she was unable to speak, and unable to stand or walk. All her muscles were excessively flabby; she apparently did not recognize people. There was dribbling of saliva all the time, constant incontinence of urine and fæces, and her expression was quite devoid of any intelligence. There was sobbing and crying, sometimes nearly all day. She seemed to me quite hopeless.

During these ten months, with the exception of a short period of distinct mental improvement in August, she became from the psychological point of view progressively worse. There was extreme depression, frequent fits of weeping, sometimes extreme restlessness with shouting, hallucinations—especially of sight—and many delusions.

In September 1931 she was seen by an alienist who diagnosed præsenile dementia and gave a very bad prognosis. During the greater part of this time there was frequent incontinence of urine and fæces, her physical condition varying from time to time. At one period she was pyrexial for about a month, the pyrexia probably being the result of thrombosis of veins in the left broad ligament, a thrombosis which extended to the left femoral vein. On another occasion there was a pyrexia of about three weeks' duration with severe stomatitis and one albuminuria, and on a third occasion several septic spots appeared scattered over the body. Gynæcological examination at this time showed that the uterus was somewhat enlarged and softer than normal. From time to time there was slight vaginal discharge, but this was by no means persistent.

In April 1931 the idea was first suggested that a hysterectomy might possibly relieve the symptoms. At this date the diagnosis was one of menopausal insanity due to ovarian and other endocrine deficiency, and it was therefore from a physiological point of view an operation was thought undesirable. Further the patient's physical condition was so poor that it was believed that such an operation would prove fatal.

In October 1931 however the physical condition had improved although there was occasional mild exacer-

parents and Dr FitzGibbon was invited to see the case. He expressed a definite opinion that the operation could be performed without risk and further stated that he thought both the mental and physical phenomena were the result of septic absorption from the uterus.

The Operation

On October 7th 1931 a complete hysterectomy was performed both ovaries having previously been removed at the same time. The excised uterus was found to be in a much more septic condition than had been anticipated. Dr FitzGibbon reported that at operation there were no peritoneal adhesions of any kind. The uterus was retroverted and the parametrium on the right side of the cervix was sclerotic and contracted. The whole of the cervix from the vaginal fornices with the uterus and cervix were removed. The tubes normal both tubes and ovaries were removed. The tubes normal atrophied and ovaries small atrophied. The tubes normal chronic ovaries small atrophied. The tubes normal simple follicular cysts continued some [illegible] wall of cysts 1 to 1½ inches thick. The uterus 4½ inches long [illegible] at 3 inches. The cervix was 1½ inches [illegible] vaginal portion 1 inch super[illegible] Dr Rolette who had an opportunity of seeing [illegible] follow[illegible] specimen immediately after removal reported as [illegible]

The uterus was much larger than [illegible] the enlargement [illegible] to a general swelling rather than [illegible] tumour. There was [illegible] fibroid or other [illegible] tumour. The cavity [illegible] and did not present [illegible] suspect of tubercle. The uterus [illegible] but gave a grey [illegible] colour. The cut surface [illegible] In some of the [illegible] the subject of a [illegible] affecting both the muscle and the endo[illegible] but at most [illegible] To appreciate the degree [illegible] the uterus should be compared with a normal [illegible] which would be about [illegible] walls about ½ inch [illegible] all round with [illegible] vaginal cervix [illegible] walls about ½ inch [illegible] all round with [illegible] path[illegible]

Result of Operation

From the physical point of view the patient stood the operation well and apart from a mild heart attack three weeks later probably caused by small emboli reaching the lungs she made an uninterrupted recovery. The most striking result of the operation however and that which leads to the publication of this note is the fact that almost immediately after the operation her mental condition showed a most remarkable improvement. A week before the operation in experienced almost regarded her condition as one of hopeless [illegible] dementia. Three weeks after the operation she was able to reply sensibly to simple questions. After a week she began to notice her surroundings and to recognize her friends and relatives. In a fortnight there was evidence of returning memory. From that day there has been progressive improvement physically and mentally. At the time of writing, this note five months after the operation the patient is able to go out for daily walks and drives she eats well sleeps well and enjoys the visits and conversation of her friends. She writes short letters can read the newspaper for a short period and her face has recovered its old expression of intelligence. She still tires easily but continues to improve in every respect from week to week.

Discussion

It was unfortunate that in this case no bacteriological examination of the specimen was made but the report of Dr Rowlette formerly pathologist to the Rotunda Hospital leaves no doubt that the condition was one of chronic bacterial infection. Such infection would explain the pyrexial attacks from which the patient suffered and also the venous thrombosis. Further it seems almost certain that the septic condition of the uterus was the cause of the mental symptoms. The actual result of the operation from a therapeutic point of view was more dramatic than it is possible to convey in words. Before the operation the patient was apparently hopelessly insane and was rapidly passing into a condition of complete dementia. Immediately after the operation she began to improve and the improvement as above stated has been progressive.

Dr FitzGibbon to whom the credit of effecting this cure is due holds the opinion that many of the customary phenomena of the menopause can be averted or cured by removal of the uterus even when no infection is present. He believes that in the process of involution of the uterus toxic products are formed in that organ which are absorbed into the blood and give rise to flushings and other symptoms. He further holds that if the uterus is enlarged or fibrotic toxins will be formed in greater quantity than in normal individuals and that more serious menopause symptoms are therefore likely to arise in these cases. He is a strong advocate of performing hysterectomy in all menopause cases when the uterus is enlarged and in all cases when menopausal symptoms are severe.

To me Dr FitzGibbon's view is entirely novel and my own belief is that the cure brought about in the present case was due to the removal of a definitely septic focus but the result was so remarkable and the operation so easily borne that I feel it would be worth while giving a thorough trial to Dr FitzGibbon's views in all cases of menopausal insanity provided the services of an expert gynaecological surgeon can be obtained. The case at any rate suggests the advisability of dealing radically with all foci of septic infection in cases of menopausal or other insanity.

THE MENOPAUSE AND ITS COMPLICATIONS

BY

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The case of menopausal disturbance cured by hysterectomy recorded by Dr Moorhead (p. 923) in which the condition of the patient was compatible with a diagnosis of senile dementia should suggest that the generally accepted ideas on the menopause are not quite correct. Dr Moorhead indicates that I place a different interpretation on the clinical symptoms generally supposed to be due to the menopause from that usually accepted. It was owing to these views that I expressed the opinion I did in Dr Moorhead's case and in this paper I wish to propound and as far as possible explain my own views for that purpose I must give my summary of the case which was an extreme one of its type but my beliefs are not in any way based on it although it adds considerable support to them.

Dr Moorhead's Case

I have been personally acquainted for many years with the patient. She was married when 22 years of age and had one child soon after marriage. She acquired a retroversion of the uterus after her confinement and had two early abortions and a second child seven years after marriage. The uterus then remained in retroversion. There was evidence of septic infection at her confinement but this cleared up and the patient subsequently led a normal active healthy life. The monthly periods were always of the heavy type and became more so from the age of 45 this as usual was considered to be associated with the approach of the menopause.

When 49 years of age curettage was performed on account of the menstrual loss but without benefit. The uterus was found to be retroverted and enlarged. The possibility of a fibroid was considered as well as hysterectomy this was not done as the existence of a fibroid was very doubtful and the monthly periods continued to occur regularly. At

this time the patient had considerable domestic responsibilities which she willingly assumed and always appeared indefatigable

In July 1930 at the age of 51 she received a shock and collapsed into a condition suggestive of a brain lesion This was the beginning of her illness as described by Dr Moorhead *The monthly periods continued regular but heavy until* January 1931 when a period of amenorrhœa set in and continued for six months Then vaginal discharge appeared and the uterus was douched a moderate degree of haematometra being discovered and removed The next monthly period occurred after twenty eight days it was profuse but not prolonged A few weeks after this I first saw the patient I found the uterus in retroversion it was enlarged to three or four times the size of a normal non pregnant uterus the vaginal portion of the cervix projected about three quarters of an inch into the vagina and the supravaginal portion was very bulky giving an indurated non elastic resistance On the right side the parametrium was hard and indurated making palpation through it difficult There was a fairly profuse viscid leucorrhœal discharge with a very slight if any purulent element In my opinion there was sufficient evidence of chronic induration of the supra *vaginal cervix and surrounding parametrium for* these parts to be the centre of a chronic toxic absorption capable of producing a very considerable degree if not the whole of the patient's general and mental debility This opinion was based on my observations of the enormous improvement in the physical and mental state of several patients upon whom I had performed hysterectomy for very similar uterine states causing disturbance at or after the time of the menopause and particularly of the two cases to be described

TWO OTHER CASES

1 *A married woman aged 66 years last confinement at age* of 26 was referred to me on account of slight but persistent haemorrhagic discharge from the vagina Menstrual bleeding had ceased at the age of 52 Shortly after this she had lost a son during the great war and since then had lost interest in everything had developed a mild melancholia complained of very *little objected to interference* and seemed merely to wish to be left alone The uterus was removed by vaginal hysterectomy Six months later I learned that my patient had resumed all her former social activities and enjoyed seeing visitors paying visits going to entertainments and even going for trips from home

2 A widow aged 48 years with one child 16 years old had for the past two or three years suffered from debility supposed to be due to menopausal bleeding She was described by her relations as doing nothing but mope after her son Five months after a hysterectomy had been performed she had assumed a cheerful mental aspect quite different from her former state taking a keen interest in life generally and enjoying outdoor sports

I was much impressed by the physical and mental change in these two patients Both had small fibroids of the uterus which ultimately indicated treatment by hysterectomy but in neither was the uterine bleeding sufficient to produce the degree of physical and mental depression from which they suffered In the former the menopause was delayed but no bleeding had occurred for ten years and then it was only a stained discharge In the latter the menstrual loss was heavy there was some anæmia but not sufficient to make the patient seek advice The removal of the whole uterus was followed in a short time by an unexpected and remarkable improvement in the physical and mental well being of the patients

On following up other patients treated by total hysterectomy during or after the menopause I found similar marked improvement in the general and psychological conditions I have subsequently performed hysterectomies on a number of women suffering from persistent ill health of the varying type diagnosed as neurasthenia at the time of the menopause and operation has been followed by complete restoration to health and well being

OBSERVATIONS ON DR MOORHEAD'S CASE

To revert to Dr Moorhead's case I wish to emphasize several facts that are commonly present in the type of case with which I am dealing

1 The patient had borne children shortly after marriage and then passed a long period of sterility continuing until the time of the menopause One of her confinements was complicated by a septic infection which ultimately cleared up and although the uterus remained in retroversion her pelvic state did not apparently influence her health adversely This condition is a basic factor in the development of the subsequent disturbances but owing to the remoteness of its acute period and the long interval of apparently good health it is quite forgotten and overlooked at the time of the menopause It naturally occurs most commonly in women who have borne children but is not restricted to them It may develop in childless women or in women who have never had any complication in their confinements as a terminal chronic state of other septic infections of the cervix *parametrium and uterine appendages and—as in the two* cases recorded above—as the result of the presence of fibroids of the uterus which in themselves were causing little disturbance

2 The patient from the time she reached the age of 43 or 44 and so had entered that stage of existence usually termed the period of the change of life had serious responsibilities cast upon her which induced her to take little notice of her own state of health and to disguise her disabilities From the acceptance of the *common* belief that these were only part and parcel of what every woman has to expect for a few years at her age she overcame her physical deficiencies by will power hoping that in a few years she would once more be fit This again is a common incident in the life of many women as they reach the forties Family social or assumed duties have increased and they are reluctant to admit that these are burdensome They feel that to do so would be to admit old age They see many other women older than themselves easily able to do what they find burdensome and therefore they disguise the facts but frequently develop an irritable and morbid temperament although fulfilling—and to the outside observer well able to fulfil—their duties

3 The onset of the patient's illness was apparently sudden It is a very common termination at the ages from 48 to 52 in women who have been suffering from menopausal disturbance for several years They develop some trivial illness this is followed by debility altogether out of proportion to the illness which persists in spite of treatment The nature and intensity of symptoms vary and lead to variation in diagnosis which in the milder cases often ends in a final diagnosis of neurasthenia or menopause neurosis with the deferred hope that health will be restored when the menopause is complete

4 Six months after the patient's breakdown the monthly periods ceased and remained absent for six months there was little improvement as the result of this the general debility was slightly diminished At the beginning of the period of amenorrhœa the possibility of a uterine origin of the whole trouble was considered but abandoned owing to the termination of the menstrual cycle uterine symptoms and the appearance of slight improvement Uterine bleeding again started and the patient's condition had become comparable with a diagnosis of severe dementia præcox and progress was Her mental state extreme degree of depression characterized a mild case The women have been treated that health will be attained again when they are through the change of life Some of them find that when the monthly periods have finally ceased their general health does not improve—rather it

feel worse. They are then left without the hope of ultimate recovery of health and fall into a chronic state of debility and depression without interest lacking in energy a nuisance to themselves and their families and generally spoken of as "poor So and so".

The cases reviewed above were one of extreme physical and mental disturbance developing in association with the menopause and the fact established that the disturbances were terminated by the performance of a total hysterectomy. We consider these symptoms due to the normal physiological change of the menopause or were they the effect of a pathological condition brought into activity by the menopause? This question can be answered by a review of the menopause in a normal individual and the whole course of the active genital period of a woman's life up to it.

The Normal Menopause

Physical and mental alterations in the character of women are extremely common at the time of the menopause, such that they are looked upon as necessary results of that change. They vary from profound and permanent lack of all health to light and transient disorders. Women suffering from these disorders rest and obtain from them advice to the notice of their friends and the medical profession thus setting a standard for the exclusion of the characteristic suffering of that change in a large group of women who do not suffer.

If a large number of women who had reached the age of 50 years could be examined without selection they could be divided into the following groups:

1. (*a*) A large group comprising both parous and non parous women who, monthly period having already ceased and who have at no time experienced any inconvenience or disturbance. They would state either that their period stopped suddenly having been previously normal or that their period had gradually diminished and ceased to reappear slightly once or twice in the next six months and then disappeared completely. Such women are invariably active, healthy and young looking for their age.

(*b*) A moderate group of women whose periods still continue with little alteration or disturbance.

2. (*a*) A small group of women chiefly parous whose periods have ceased but who before the complete termination had for a year or more experienced excessive loss and resultant debility while some had towards the end a few prolonged intervals and floodings. Such women will have returned to good health dependent on the length of time that has elapsed in which they can recuperate.

(*b*) A moderate group of women whose periods persist but are and have been for some years heavier than normal. They suffer varying degrees of ill health and loss of energy. Many of these women will follow the course of those above but quite a large number will follow the course of those in Group 3 (*b*).

3. (*a*) This is a very small group—chiefly persons whose periods have ceased after several years disturbance and general ill health but whose ill health has persisted or even increased.

(*b*) A group of women whose periods after several years of excess have become irregular and often prolonged and whose general health is seriously degenerated. The aberration of the menstrual cycle will call for attention the menopause will be completed by operation or degeneration will progress and terminate under various nomenclatures or even fatally.

4. In addition to these groups there would be a number of women who on account of marked disturbance in the menstrual function after the age of 40 were found to have tumours or other gross pathological conditions of the genital organs and in whom the menopause was induced by operation.

It seems unreasonable to assume that all the first three groups are merely variations of a normal physiological process while the need for operative treatment arose in the fourth group from an accidental pathological lesion unassociated with the menopause. It appears more logical to conclude that the characters exhibited in Group 1 are those of the normal physiological process. Those of Group 2 are slight aberrations from the normal induced by pathological lesions while those in Group 3 are definitely the outcome of pathological lesions quite as much in need of treatment by operation as was found necessary in Group 4. A review of the child bearing period of a woman's life seems to justify this assumption.

The age of puberty may to some extent be compared to the age of the menopause—they come at the extremes of a woman's reproductive life. In the one there is a hypertrophic change often in previously damaged other an atrophic change in healthy tissues in the tissues. Taking large groups of girls—for example in schools—it is quite an exceptional event to find marked physiological or psychological disturbances developing at the age of puberty and such cases as do occur are nearly always found to be due to some definite pathological condition or gross developmental abnormality. The vast majority exhibit progressive development for two or three years without any disturbance in general health. By analogy it seems reasonable to suppose that the atrophic tissue changes taking place at the menopause should be spread over a period of years that slight variations in the local manifestations of cessation should occur that the atrophy should continue over a period of one or two years and that menstruation should finally cease without any or with only slight disturbance. A very large number of women do follow this course but as the menopause is a process of atrophy and in many cases the organs have suffered damage or change from the normal state a large number will exhibit faults in the physiological process.

The Age of the Menopause

The age of women when the menopause is completed as defined by the cessation of monthly periods ranges from 40 to 55 years but a number of facts seem to indicate that the atrophic changes commence in the vast majority of women within fairly restricted limits of age probably from 42 to 46 years. How long the atrophy will take to become complete varies and depends upon the physiological state of the health of the organs.

On investigation of the ages of 1 700 women confined in the Rotunda Hospital it was found that only thirteen women were 49 eight 44 and five 45 years of age. During seven years out of 12 500 confinements there was only one woman aged 47. There was no woman over 45. These women are of a class who do not avoid pregnancy and even allowing for the attrition of advancing years the falling off in the power to conceive after the age of 45 is too great and indicates some change preclusive of conception. That this change is one involving the uterus and endometrium rather than the ovaries and the process of ovulation is suggested by the facts that the sexual habits and desires of women are not diminished at the time their power to conceive has ceased and that at operation on women at this age the ovaries are usually found normal in appearance and containing normal corpora lutea. In an analysis[1] of cases of fibroids of

the uterus treated by operation in the Rotunda Hospital during seven years it was found that the majority developed symptoms calling for attention about the age of 45 although other facts indicated that the fibroids had been in existence for upwards of ten years This suggests that the fibroids are not the cause of the symptoms but that the symptoms are the result of some change which develops about the age of 45 in the surroundings or the nutrition of the tumours

The above facts seem to indicate that as puberty normally occurs between the ages of 13 and 16 so the menopause normally begins between the ages of 42 and 46 and should normally be completed in two to three years without disturbance of the general health

The Size of the Uterus

The fully developed nulliparous uterus is described as an organ three inches long with a cavity of two and a half inches and after childbirth it is supposed to retain a general increase in size This latter statement is correct in a very large number of instances but that it is a normal outcome of childbirth is doubtful If a woman who has had an easy spontaneous labour without puerperal complications is examined six months later and the uterus is found in a normal anteverted position the latter will present no appreciable difference from the nulliparous organ—the external os is slightly relaxed but the cervix is no more bulky and the cavity is only two and a half inches long Such women are not often examined except in immediate association with a pregnancy During the *menopause* and for some years after the termination of menses the uterus undergoes atrophy and a considerable reduction in size How long this change takes to be completed in a normal case has never been even approximately estimated nor has it been established to what size a normal uterus should return That the body of the uterus undergoes a marked diminution in size is clinically evident and also that the vaginal portion of the cervix ceases to exist [2] while the narrowing of the vaginal vault indicates that the supravaginal portion of the cervix is also reduced The cavity of the uterus is smaller in all directions This would appear to be the normal course

Criteria of Normal Menopause

The normal character of the menopause and the condition of the uterus may be thus summarized

1 The menopause consists of an atrophy of the genital organs from the developed state adaptable to child bearing to a state closely resembling that of the organs preceding puberty

2 This change should occur without either physiological or mental disturbance

3 It normally commences between the ages of 42 and 46 and is completed within two or three years There are normal exceptions on both sides of these ages

4 The uterus at the beginning of the menopause should be little if at all larger than the uterus of a young nulliparous woman—that is three inches in length with a proportion of body to cervix of two to one and the cavity two and a half inches long

5 When the atrophy of the menopause is complete the uterus is considerably reduced in size in all its parts being two to two and a half inches long with a cavity one and three quarters to two inches in length and no vaginal portion of cervix

Pathology of Uterus at the Menopause

Women at the time of the menopause may be divided into three groups—virgin nulliparæ and para They are all liable to have developed pathological conditions during the child bearing period but with increasing frequency in the order of the groups All groups may have congenital lesions but these do not influence the menopause—with the exception of retroversion Retroversion in some nulliparous women appears to produce in the process of time a hyperplasia of the uterus This is probably the result of excessive congestion at the menstrual periods causing excessive flow which associated with defective drainage stimulates uterine action and produces muscle hypertrophy

In the group of virgins the incidence of fibroids is the chief factor, these are always associated with hypertrophy of the uterine muscle and may in time be extruded outside the muscle becoming subserous The muscle may undergo involution but if this does not occur the uterus remains in a state of hyperplasia at the time of the menopause If the fibroids become submucous they produce discharge and promote the tendency to chronic infection which frequently involves the cervix causing chronic cervicitis The secondary results of retroversion also lead to chronic infection of the same sort as shown by the common association of erosion There are thus in the virgin two common potent causes of metritis and cervicitis which are of long standing and persist at the time of the menopause

In the nulliparous group there is added the common incidence of ascending infections independent of either fibroids or displacement

In the parous group the risk of acquired lesions is enormously increased Besides all those of the other groups there is the frequent occurrence of acquired or post partum retroversion In an investigation of 100 women after normal uncomplicated confinements twenty seven were found to have retroverted uteri six weeks post partum and nine of these had retroversion before they became pregnant Retroversion of the uterus whether acquired or a return to the congenital condition is practically always associated with subinvolution which persists and becomes a chronic hyperplasia if the retroversion is not corrected while the subinvolution is in an acute or subacute stage This practice is far from common and the retroversion is allowed to persist It is a common cause of one child sterility if it occurs once it will recur after all subsequent pregnancies Although it does not often cause symptoms during the living in period it develops about the ninth day and seriously interferes with the free drainage of the uterus during the remainder of the puerperium It is a potent cause of low chronic infection productive of chronic metritis and cervicitis Lacerations of the cervix especially those involving tissue above the vaginal portion add the devitalizing effect of prolonged pressure on the cervical tissues in protracted labour promote the chances of infection which although of a low type calls for no observation during the puerperium is the cause of the indurated enlarged cervices so commonly found in parous women

The causes of pathological states of the uterus at the time of the menopause may be summed up as follows (1) ascending infection promoted by stagnation of normal or other discharges from the uterus and cervix (2) laceration and damage during childbirth of the cervix and parametric tissues exposing these tissues to chronic infection (3) septic infection following childbirth (4) gonococcal infection upon which secondary infection supervenes—far less common than of yore and (5) growth and influence of ovarian stimulation on fibroids The pathological lesions which are produced and influence the course of the menopause are (1) chronic hyperplasia of the body of the uterus (2) chronic

metritis with chronic cervicitis and (3) chronic cervicitis with or without parametric induration. A cervix with these conditions therein is an increased vascularity the smaller uterus are hypertrophied and there is venous congestion.

During the active child bearing period of life these lesions produce varying degrees of leucorrhoea calling for palliative treatment such as routine douching, application of caustics and curettage. These treatments have no more curative effect upon the chronic infection than a splash in chronic tonsillitis. Amputations of the cervix often cure when the portio vaginalis is the part involved but they frequently stop far short of removing the main centre of infection which is the supravaginal portion. When the period of the menopause is reached and atrophy of tissue is being proceeded the vitality of the tissue is reduced and the production of toxins from the chronic infection is increased. The local condition leucorrhoea has been accepted as inevitable while more or less menstrual loss relieves the woman at the time but is considered a normal part of the menopause.

Effect of Pathological Lesions on the Menopause

The simple lesion of chronic hyperplasia commonly three to five portion to recovery or associated with blood. The over-stimulation of the ovarian tissue has to end in atrophy. There is therefore a prolongation of the process with excessive strain at the period and resulting debility but a normal the completion of the process is not prevented. When the atrophy is finished the uterus remains larger than it should be being about the size of a nulliparous uterus and the woman recovers from the temporary debility. Sometimes the menstrual losses are so profuse as to call for treatment and curettage is found to give temporary relief which help to tide matters over. In others the loss is sufficient to call for more active treatment and excellent results are obtained by x rays or radium. This is the lesion that exists in the second group of women previously described as seen at 50 years of age.

The most pronounced lesion is chronic metritis with chronic cervicitis. There is always hyperplasia this varies in amount and is often very marked. This lesion during the process of atrophy produces all the symptoms due to hyperplasia and varying in proportion with it but the symptoms are increased by the added element of toxic absorption. When the atrophy is complete the menses may cease or become irregular but the general health does not improve and often further deteriorates. This is the lesion that exists in the third group of women at 50 years of age. Various treatments short of total hysterectomy are resorted to for the menopause and are credited with being of benefit if the menses terminate irrespective of the permanent loss of fertility in the women quite inconsistent with their age. These are the cases that do not give satisfactory results with x rays and radium. This is to be expected as they contain the chief contraindication to this treatment—septic infection. As this is not obvious it is overlooked and this lesion is only excluded from x ray treatment when it is accompanied by evidence of chronic pelvic peritonitis parametritis and adhesions.

The third lesion—chronic cervicitis—may be associated with simple hyperplasia when the local symptoms referable to that will be present and follow the course already described but the general symptoms will be increased. When hyperplasia is not present the menopause so far as the menstrual cycle element is concerned is passed uneventfully but there is an unaccountable element of not well being. This not well being continues after the menses have ceased and may ultimately die out with no permanent ill effects but many women show premature ageing and if the infection does not die out their ill health persists. Women with this lesion come under Groups 2 (*a*) and 3 (*a*) at the age of 50. Of the various treatments adopted for this condition x rays and radium have the same influence as in the other lesions but diathermy needs to be especially mentioned. Its application may hasten and even promote the dying out of the infection when this is limited to the portio vaginalis but when the infection extensively involves the cervix and especially when the parametrium is affected its action is not sufficiently penetrating.

Summary

All through this paper reference to any individual symptom of the menopause has been avoided as a whole they are too various and undefined, with the exception of flushings and sweating. These two are much the least important they are probably as near as an abnormality can be to a natural incident. They are probably wholly of ovarian origin and occur in women who pass through an absolutely normal menopause but in the women they more often arise after the menses have ceased and are seldom sufficient to call for more than transient notice and an assurance that nothing serious is wrong. It is when they are associated with the conditions considered in this paper that they are increased and call for serious comment and are so often intractable to treatment. They respond to all sorts of treatments which improve the general health and relapse when the general health deteriorates.

The writer is in no sense advocating hysterectomy as a universal treatment for ill health at the time of the menopause. The differential diagnosis of the lesions described is a difficult and minute matter. It is seldom possible to make an early decision—such cases are mentioned in Group 4 of women at 50. In the majority of instances a decision will be reached only after a period of observation but the lesions which exist at the onset of the menopause can be observed and should be sufficient to indicate treatment by hysterectomy if the ill health increase. Serious and permanent damage may thus be prevented. When hysterectomy is resorted to it must be of the total type. I believe that the failure to observe the benefits of hysterectomy in these cases has in the past resulted from the common practice of performing the high partial operation this relieved the menstrual symptoms but did not remove the toxic element.

Conclusions

1. The menopause should occur with as little disturbance as puberty.

2. During the child bearing period of life many women acquire pathological lesions of the uterus which frequently induce chronic bacterial infection of the uterine body and cervix.

3. When the atrophy of the menopause occurs the toxic influence of the infection is stimulated.

4. The pathological lesions delay and disturb the normal course of the menopause.

5. The toxic absorption causes ill health and frequently persists after the menopause is completed.

6. If the aberration of the menopause or the toxic effects are severe treatment by total hysterectomy is indicated to prevent permanent damage to the future health.

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PHOTOTHERAPY IN ERYSIPELAS

BY

J M DAVIDSON M D D P H

ED BURGH

Much has been written and continues to be written regarding the treatment of erysipelas each new remedy enjoying a passing popularity only to be discarded in favour of the next The mere multiplicity of methods itself testifies to their inefficacy or their lack of universal applicability and indicates the need for further experiment Local applications used empirically, have largely given place to attempts at specific therapy mainly in the form of serums and vaccines but while this would appear to indicate a distinct advance it is generally admitted that wide variations in the response to antitoxin and vaccine therapy exist

In these circumstances I feel justified in submitting records of the following cases and advocating on deductions drawn from their study the early employment of ultra violet radiation as a means by which practically all cases may be advantageously treated The series consists of fifty one cases for the most part consecutive treated at the Edinburgh City Hospital

Literature

Although records of the treatment of erysipelas by ultra violet rays have been published by a few Continental and later American writers workers in this country appear to have altogether neglected the investigation of this line of attack

Koenig[1] was one of the first to experiment with this mode of treatment having employed it as early as 1919 using a quartz mercury vapour lamp While admitting its efficacy in certain cases he pointed out that in others it failed to attain the desired object Later Petersen[2] treated fourteen infants suffering from erysipelas in a similar manner and although two of his cases in which treatment was commenced at a late stage died the remaining twelve recovered All his cases were under 10 months three of those surviving being newborn infants with umbilical infection Considering the usual death rate of erysipelas in infants these results were remarkably good He specified dosage simply in terms of time and distance from the lamp used his commencing dose being less than that necessary to produce an erythema Cruise[3] in 1922 reported a series of one hundred cases treated thus and in almost every case the temperature fell promptly after the first irradiation and the spread of the inflammation ceased His results he says were so constant that they cannot be attributed to chance Brunauer[4] attributes the varying results obtained by previous workers in this field to the variable methods in which the treatment was applied He recorded fifteen cases treated thus his technique differing from that previously adopted in that he covered the centre part of the lesion and irradiated only the spreading edge His results were good

Becker[5] also using a mercury vapour lamp recorded two cases in which actinotherapy had immediate good results and recommended exposure to one and a half times the erythema dose of an area extending 4 cm beyond the erysipelatous area in all lines Later he reported that in eight infants ranging in age from 18 days to 12 months with erysipelas treated by means of ultra violet radiation with one and a half times the erythema dose only one death occurred and that was in an infant aged 20 days in whom erysipelas followed operation for umbilical hernia

Hess[6] in Minneapolis in an interesting and instructive report implies the results obtained in treating a large number of cases of erysipelas by various methods his conclusions being that the various methods used give practically the same end results with some slight advantage to the ultra violet rays The dose employed was one that required to produce a mild erythema normal skin—less than the sunburning dose Later Hess and Paton[7] recorded very good results in a long series of cases adopting precisely the technique employing the same technique and dosage

Results in a Series of Fifty one Cases

In the series of cases to be described the source of ultra violet light was a standard model air cooled quartz lamp The efficiency of the lamp was tested by estimating the erythema dose for a series of patients with the arc at a fixed distance of 12 inches from the skin surface In practically all the cases following an exposure of two and a half to three minutes at this distance a mild but definite erythema resulted In a few of the cases under consideration the individual erythema dose was estimated before treatment was commenced but as individual differences in response at such short range proved to be very slight and as such a preliminary investigation entailed deferring actual treatment two and a half to three minutes was assumed to be the universal erythema dose except in the case of infants For actual treatment one and a half times to twice the erythema dose was employed In all cases before estimating the erythema dose and before commencing treatment the lamp was allowed to burn for at least five minutes to ensure as far as possible constancy of output

Technique of Treatment

Before treatment was commenced any soothing preparation previously applied to the part especially if greasy was carefully removed from the affected area and surrounding skin All cases except infants were exposed for five minutes with the arc at a fixed distance of 12 inches In the case of infants a slightly shorter exposure was employed when the actual individual erythema dose was not estimated In all cases part or all of the inflamed area according to its extent was included in the exposure with a margin of about ½ inch of healthy skin when this was possible the rest being protected by some light covering In facial and head cases generally the eyeballs were protected by small pads of cotton wool fixed by a narrow strip of adhesive plaster but the eyebrows were left uncovered and each part of the spreading edge was systematically exposed to rays falling as far as possible perpendicularly When the entire involved area was easily covered by one exposure this completed the treatment but occasionally part of the lesion which at the time of admission was assumed to have subsided was neglected and had to be treated later In the few cases in which definite extension occurred through the erythematous area the treatment was repeated one or two days later if a margin of healthy skin could still be included Following light treatment the affected part was left uncovered or at least without dressings except in two instances in which pain was a prominent feature and in these lint wrung out in cold water and frequently renewed was sufficient All other treatment was symptomatic

The cases treated ranged in age from 7 months to 74 year and included primary cases and cases [illegible] to accidental wounds operation wounds and contusions As usual there was a marked preponderance of facial cases

Subacute cases showing no evidence of [illegible] constitutional disturbance were not treated and are excluded in the series Table I shows the ages and sex [illegible]

TABLE I [illegible]

| Sex | Age in completed Years | | |

Immediate Effects

During the exposure the patient in no instance complained of discomfort. On the contrary, the sensation of warmth produced appeared to be appreciated. In the course of a few hours the healthy skin included in the radiation area showed an intense erythema with a degree of oedema, the appearance being so similar to that of the erysipelatous area as to render the edge of the latter at times indistinguishable. Later, oedema of the actual lesion was slightly increased. At this stage, as a rule, there was no complaint of pain, even when, as occasionally happened, there was a crop of tiny vesicles on the affected area or an oozing of serum. Local applications were unnecessary. By the end of forty-eight hours the oedema had generally abated, and the affected skin became dry and wrinkled. By this time also there was a critical fall in temperature in thirty-one of the thirty-nine cases in which the whole edge of the lesion was included. In twenty-three of these cases the fall commenced within twenty-four hours. The further course of case was for the most part uneventful.

With the dose adopted—up to twice the normal erythema dose—vesiculation following irradiation seldom occurred, and when it did appear it was of no additional clinical importance, the course of the illness in only one case being modified. In this exceptional case the production of vesicles in a crop of purpuric appearance and of extraordinary profundity, affected the whole of both cheeks and parts of the face.

Ultimate Effects

To gain a true conception of the value or otherwise of radiation therapy it was essential that the cases treated should be adequately controlled. This was done by selecting for each case treated a similar case treated by other means. In allocating controls the hospital records for the past five years were searched, special attention being paid to a consideration of age, sex, localization and extent of lesion, duration of illness, and complications present. In all cases it was found possible to allocate a suitable control.

In assessing the therapeutic value of phototherapy employed this attention was paid to (1) the duration of the pyrexia, (2) the extent of spread of the lesion after treatment, (3) the incidence of complications, and (4) the occurrence of relapses. The mortality rate in such a short series of cases is of little value. Of fifty-one cases treated four died—all complicated cases. The first was a child of 13 months on whom a mastoidectomy was performed after the onset of erysipelas and before phototherapy was commenced; the second death occurred in the case of a female aged 30 with concurrent pneumonia and nephritis; the third was a case of puerperal septicaemia and pneumonia; and the fourth was a female aged 55 already under treatment for severe cardiac decompensation who died suddenly from cardiac failure.

Duration of Pyrexia.—The forty-seven cases treated and ending in recovery were of varying degrees of severity, and in estimating the effect of treatment the temperature chart was taken as the safest single guide, the disease being presumed to have ceased on the day on which the morning or evening temperature was first subnormal and did not subsequently rise except in the presence of an obvious complication. In some of the cases only one section of the spreading edge and neighbouring skin was irradiated; in others a margin of healthy skin all round the inflamed area was included in the exposure, and in the remainder the whole lesion together with the surrounding skin was irradiated.

The results of treatment are briefly summarized in Table II.

TABLE II.—*Duration of Pyrexia in Cases Ending in Recovery.*

Series	Duration of Illness before Admission (Days)	Average Duration of Fever (Days)	Average Duration of Fever after Treatment (Days)
47 cases treated by U.V. rays	3·96	7·81	3·85
47 controls	4·10	9·26	5·16
In the 39 cases in which it was found possible to include the whole of the spread in each the results were as follows:			
39 cases treated by U.V. rays	3·72	6·97	3·25
39 controls	3·91	9·03	5·12
In 23 cases in which the whole affected area and a surrounding margin of healthy skin were irradiated the results were even better:			
23 cases treated by U.V. rays	3·43	5·53	2·10
23 controls	3·31	7·92	4·61

Similarly of eight cases in the series in which treatment was commenced early in the disease—on the second day of illness—the average duration of fever was again 5·5 days as against 9·6 days in the corresponding control cases.

Extent of Spread.—Definite spread of the dermatitis through the irradiated area of healthy skin occurred in a few cases, principally in those cases in which treatment was commenced at a comparatively late stage and the lesion was obviously very active. This was noticed particularly in cases of the wandering type when two or more exposures of the spreading edge at intervals of two days were necessary before spread was arrested.

Incidence of Complications.—The sole complication seen in cases treated and surviving was streptococcal abscess which occurred in two cases.

Incidence of Relapses.—Relapse occurred in one of the forty-seven cases. The inflamed area was promptly re-irradiated and the condition subsided completely within twenty-four hours of the onset. In another case not included in the series in which the initial attack in spite of serum therapy lasted seventeen days there were four relapses. The first occurred thirteen days after the temperature had reached normal and the temperature remained elevated for a further six days. Eleven days later another relapse occurred and it was decided to try actinotherapy. On this occasion the patient ran a mild temperature for only forty-eight hours. Ten days later she again relapsed and was promptly irradiated this time without any recorded rise of temperature. After a further ten days a final extensive relapse took place and under actinotherapy the temperature was again normal within three days.

A brief account of a case in which the erysipelas commenced while the patient was in hospital is interesting. The patient, a female aged 34 years, was convalescent after diphtheria. The erysipelas commenced on the twelfth day in hospital and on the morning of the thirteenth day involved both cheeks, orbital regions and glabella. There was considerable oedema with numerous small vesicles on the affected area and a rapidly advancing well-marked edge all round the lesion. The patient was markedly toxic and confused. The affected parts were subjected to three exposures of ultra-violet light at one sitting—one to each cheek and one to the glabellar region—on the afternoon of the second day, with gratifying results. No further spread occurred, the common feature in such cases of oedema of the external auricle failed to appear, the mental condition improved forthwith, and there was a critical fall of temperature.

From these results it would appear that if acute cases of erysipelas come under treatment sufficiently early prompt exposure of the affected part to what is customarily considered an overdose of ultra-violet rays would in a large proportion of cases abort the lesion. The method also has the advantage of being easily applied and of effecting a considerable saving of dressings and

linen as no local applications following treatment are necessary or indeed desirable A dosimeter is unnecessary If the operator takes the trouble to estimate at regular intervals the efficiency of the lamp used the erythema dose for the individual is easily and quickly ascertained and even when this is not done but the dosage gauged from previous experience with the lamp in use there is a wide margin of safety

SUMMARY AND CONCLUSIONS

1 A report is presented on fifty one cases of erysipelas treated by exposure to an artificial source of ultra violet light the exposure being one and a half times to twice that required to produce a definite erythema on normal skin

2 The treatment of erysipelas particularly the early case by ultra violet light appeared to give better results than other methods in use

3 The method is easily applied usually available devoid of danger cleanly and inexpensive

4 The technique is simple and can be carried out with any ultra violet lamp of known efficiency

The cases detailed are from the records of the Edinburgh City Hospital The opportunity for and inception of this investigation are due to Dr W I Benson superintendent of that institution to whom the writer is much indebted

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CARBON DIOXIDE ABSORPTION METHODS IN ANAESTHESIA

BY

FRANKIS T EVANS MB BS

ANAESTHETIST ST FAITH'S REVIEWS HOSPITAL

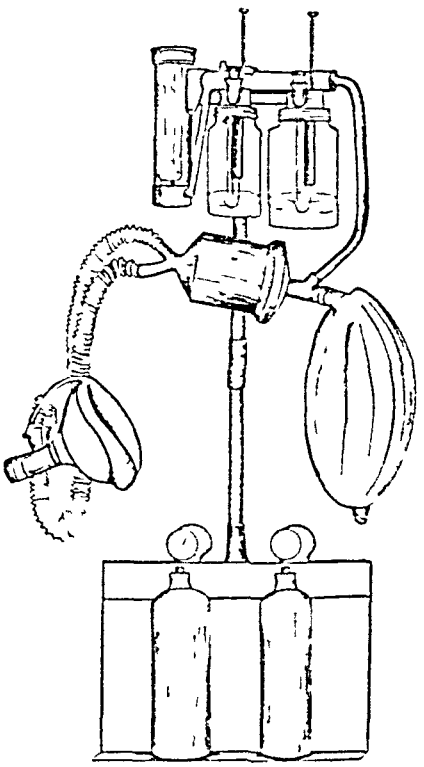
Nitrous oxide and oxygen is now so universally used that the anæsthetist has to transport an apparatus of considerable bulk and enormous weight It was in an attempt to find a really portable apparatus that a trial of the carbon dioxide filtration method was decided upon This method has many advantages and as far as can be seen no disadvantages

In the past carbon dioxide filtration had fallen into disrepute owing to the large size of the canister and the fact that it was bulky and awkward to hold right up at the face piece Nowadays all this is changed by the use of wide bore Siebe Gorman tubing with flap valves to ensure the unidirectional flow of expired gases This enables the absorber unit to be attached to the anæsthetic stand head of the table or gas machine itself while the application of the mask to the face is no longer a wearisome task By means of this unidirectional method of flow of respired gases the absorber canister need not be the bulky apparatus of the past Much experimental work has been done on this method in America by Lundy Heidbrink Company and Foregger Company and McKesson to mention a few so that it is by no means an innovation Hewer also employed the method some years ago in this country In the writer's opinion however the success of the apparatus lies (1) in the unidirectional method of flow (2) in the dead space and (3) in effecting this with as little resistance as possible to the flow Accuracy in oxygen supply is another step towards perfection for a minimum of 0 c cm of oxygen per breath will make an enormous difference in the composition of the respired gases For this purpose I have had constructed a special flowmeter for small flows of from 250 c cm oxygen upward

Briefly the principle is a well known one of the absorption of the patient's carbon dioxide by soda lime The patient rebreathes the same amount of nitrous oxide continuously as this is given out from the lungs unchanged Oxygen is used constantly of course and it is necessary to give correctly graded quantities of this latter gas continually Either when employed can be added to replace what has been used up By this method one consumes an extremely small quantity of gas One or two gallons per hour is the usual amount as opposed to 100 to 150 gallons per hour—a great saving

APPARATUS

This consists of a circular rebreather as compared with the ordinary single tube to and fro method In the face piece mount are two very fine flap valves made from thin Paul's tubing These valves are the most important



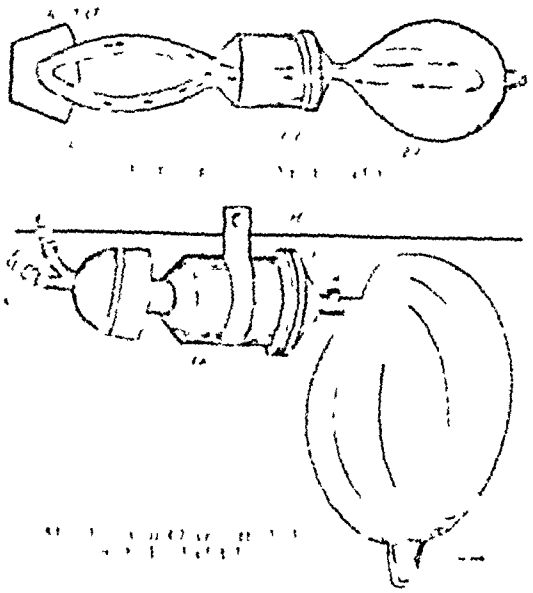
[illegible] of the [illegible] both [illegible]

part of the apparatus as they regulate the flow of the [illegible] unidirectional [illegible] impeded In the [illegible] tubes run to a [illegible] absorber The [illegible] and holds a [illegible] position by two [illegible] and cork The [illegible] full of [illegible] the [illegible] quantity [illegible] of oxygen [illegible]

oxygen etc Ether is admitted to the apparatus in one of two ways—by a Clover inhaler or by the oxygen tube from a Boyle's machine

Position of Administration

The anæsthetist is supported by clips to the Boyle machine *between the face piece and* The patient is induced with gas and oxygen till conditions is right Then a Clover inhaler is fixed over the face to ensure a perfect fit of the face piece this is most important The expiratory valve is now closed down tightly and the gas flow stopped The oxygen supply is reduced to 00 to 200 c.c. per minute Ether is now added from the Clover if this instrument is being used or by the oxygen tube allowed to bubble through the ether in the Boyle's machine



In practice it is found that one minute's oxygen always has to be given so that a few cubic centimetres are added from time to time to keep the bag full but actually only one to two gallons are needed per hour One cannot use this method on laughing gas as gas always leaks away a little and it has been shown that nitrous oxide is excreted by the skin in small amounts One charge of soda lime lasts for six to eight anæsthetic hours and all the apparatus can be sterilized by boiling The flutter valves are easily replaced, and give no trouble No provision has been made for switching out the absorber from the circuit It is so easy to plug the bag directly on to the Y piece that it was felt advisable to avoid further sources of possible leaks In practice it is found that the respiration rate with the absorber in use is quite unchanged its depth too being almost unaltered and not nearly as great as that obtained with a Clover's ether inhaler or similar closed method of anæsthesia

Conclusions

The method has no disadvantages Its advantages which are many are as follows

1 To the patient (*a*) No loss of heat through the lung and therefore (*b*) less risk of bronchitis etc (*c*) Minimal use of ether

2 To the anæsthetist (*a*) No smell of anæsthetic in the theatre (*b*) Economy in gas and ether (*c*) Extreme portability—twenty five gallon cylinders need only be carried instead of hundred gallon ones—a great saving in weight

The apparatus was made for me by A Charles King Ltd, Devonshire Street W 1

THE USE OF TAKAYAMA'S SOLUTION IN THE IDENTIFICATION OF BLOOD STAINS*

BY

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Though the importance of the production and identification of crystals derived from blood in medico legal cases has received much emphasis in the literature little change has occurred in recent years in the methods employed for their demonstration

History of Tests

Teichmann in 1853 noted the appearance of brownish rhombic crystals when blood was treated with glacial acetic acid and a trace of sodium chloride These crystals were later identified as being those of hæmatin chloride and since then it has been recognized universally that their presence is proof of the identity of the suspected stain with blood Unfortunately it was soon found that such crystals could only be demonstrated with difficulty and uncertainty Many attempts to modify the technique and to simplify the procedure were made but few of these modifications had much to offer Probably the best was devised by Sutherland[1] who suggested that a small drop of normal saline should be evaporated to dryness on a slide before the fragments of the suspected stain were deposited on it glacial acetic acid was then added and the slide heated gently Even this method frequently fails of its object Later Donoghue and Bürker[2] suggested the use of pyridine for demonstrating hæmochromogen crystals in blood Pyridine used alone however gave rather uncertain results and attempts were made to devise a solution containing this reagent which would be more successful Takayama[3] in 1912 suggested a solution of the following composition

Pyridine	3 ml
Sodium hydrate 10 per cent solution	5 ml
Dextrose sat solution	7 ml
Distilled water	7 ml

Mahler[4] in 1923 and Kerr and Mason[5] in 1926 reported favourable results with this solution and since this time it has found mention in a hesitating way in some of the textbooks though it has obviously not attained the recognition to which its usefulness entitles it It has given unfailing satisfaction in my own hands and I feel that it deserves to be incorporated more widely into routine usage Sutherland in a textbook article on blood stains describes his own routine method of examination of suspected stains as follows He removes a tiny fragment of the material containing the stain plunges it into boiling water for a few seconds transfers it to a slide and removes the water by blotting A drop or two of 10 per cent KCN solution is now added and the slide again blotted finally a drop of strong ammonium sulphide solution is placed on the fragment a cover slip adjusted and the preparation examined microscopically If blood is present a salmon pink colour will be seen and microspectroscopic examination will show the spectrum of hæmochromogen He feels that no further proof of the presence of blood is required

Technique of Method

The method of using Takayama's solution to be described accomplishes all that Sutherland's method does but in addition demonstrates hæmochromogen crystals

* From the Bacteriological Institute Medical Department Hong Kong (Hon Dr A R Wellington Director of Medical and Sanitary Services)

and does so with simplicity and certainty I have never failed to obtain crystals in a known positive case Occasionally an old stain may require a little longer treatment but the result seems to follow just as surely It must be emphasized that the reagent should be freshly prepared if prompt reaction is expected It gives satisfactory results for about two months only although I have obtained crystals using a solution six months old

The method is as follows With a sharp scalpel a portion of the suspected stain is scraped off the weapon or other article on to a clean slide *The smaller the fragment the better* The largest portion on the slide should not exceed about half the size of an ordinary pin's head I find that the minute scraping which sometimes adheres to the scalpel usually suffices this often has to be removed with another scalpel or some instrument possessing an edge Taking care that this is not blown off the slide a drop of Takayama's solution is placed on it and a cover slip adjusted It is important that the drop be not too large otherwise the cover slip will float on the surface and the formation of crystals will be delayed In the case of a stain on fabric a good method of procedure is to cut out the stained portion and having placed it on the centre of a slide to scrape gently the surface of the stain with a sharp scalpel until a few minute fragments of fluff are deposited on the slide a drop of the solution is then added as before It is necessary that the laboratory bench be free from air draughts lest the material on the slide be blown away before the solution is added On microscopical examination (which should be immediate) if the blood is present a distinct pinkish area will very soon be seen among the debris on the slide As soon as this is identified the ocular of the microscope should be removed and the tube of a hand spectroscope with a wave length scale inserted in its place The characteristic bands of haemochromogen should be made out and the reading of the scale taken Emphasis is laid on the necessity for immediate examination as I have found that the spectrum is much more distinct and more surely obtained before crystal formation than after Usually if the blood stain is reasonably fresh crystals will form in from two to five minutes but it is well to leave a slide for re-examination some hours later before recording a negative

The crystals are so characteristic in colour and shape that they cannot be mistaken by an observer with even a little experience They are of a pink to salmon pink colour and in shape are flat and rhomboid The ends of individual crystals are often splintered Some crystals terminate in a blunt point like the blade of a pocket-knife others again are quite rectangular Seen on edge they are like sharp lines There is a strong tendency to sheaf formation The best crystals are the rather fine separate ones seen off the edge of the fragment actually in the solution against a clear background These take longer to form and are rather small but are well worth study under the oil immersion lens Another characteristic type of crystal which I have seen occasionally is derived from fairly fresh blood stains The crystals are curved instead of flat and tend to lie so as to present their thin surfaces uppermost the result being a number of fine curved dark pink lines giving a most striking appearance to the microscopical field Such crystals as do not lie completely on their sides may be seen to present the same rectangular structure and there are practically always plenty of the more usual flat forms to be seen as well

The colour change described by Kerr and Mason after the addition of Takayama's solution—namely green brown dark red to pink—has not been observed certainly by myself but this does not seem of great importance I have found the use of heat entirely unnecessary where delay occurs in crystal formation I merely leave the preparation at room temperature for fifteen minutes to half an hour examining it at intervals Should the material for study be scanty and crystals few and possibly very fine necessitating the use of a high magnification care should be taken to focus down very slowly and cautiously to watch for fine crystals on the surface of the preparation Often this is the first place at which crystal formation occurs and they may be picked up at this point many minutes before being seen at any other level in cases of difficulty It is unfortunately very easy to focus past the surface and miss these crystals Where they are slow in appearing I have found that they may at times be caused to appear by gently tapping the microscope stage

GENERAL CONSIDERATIONS

Carried out in this manner we thus have a perfectly definite diagnostic triad a colour reaction the formation of specific crystals and the production of certain bands at specific points in the spectrum No other known substance but blood will give these three reactions in the circumstances described If a positive result has been obtained in this manner no further test is necessary in order that testimony may be borne as to the presence of blood In fact it is bad practice to use other tests the results of which may possibly be negative in the presence of blood and whose positivity does not alone justify one in affirming that the stain is of blood Should such tests be negative or doubtful the positive evidence already obtained is immediately weakened in the eyes of a jury Logically speaking a test the results of which are open to criticism cannot strengthen the results of one possessing an absolute value It is good practice however if sufficient material is available to obtain a solution of the stain and to demonstrate if possible the spectrum of oxy or methaemoglobin macroscopically and then by treatment with caustic soda and ammonium sulphide solution obtain the spectrum of haemochromogen This too is also an absolute test for blood Unhappily the material available is all too frequently insufficient for this procedure and it is in such cases especially that the procedure described is invaluable

No claim to originality in the use of the method is intended but it is felt that a description of a good routine application of Takayama's solution is needed and that some such method deserves far wider usage than it appears to have at the present moment among those practising forensic medicine

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TWO FURTHER CASES OF SARCOMA ASSOCIATED WITH KNOWN TRAUMA

BY

DAVID H HALER

PATHOLOGIST INFANTS HOSPITAL S W LATELY ASSISTANT PATHOLOGIST PRINCE OF WALES'S HOSPITAL W

In a recent article in the *British Medical Journal* I was able to record two cases of sarcoma in association with known trauma In the following note I propose to describe two similar cases wherein two totally different organs were involved

CASE I

In the first case the patient a boy of 17 was playing with his dog in the garden when he received a blow on the right testicle This was attended with marked pain and rapid swelling which was treated as a traumatic haematocele As

the swelling did not subside he attended the out patient department and the swelling was tapped yielding a few ounces of obviously altered blood In spite of treatment the swelling continued to get larger at a rather more rapid rate The following fortnight the patient commenced to feel unwell remained in bed his appetite failed and he experienced later more than usual pain

Physical examination revealed a well nourished youth with a large right chest cystic swelling which was somewhat opaque to transillumination only lightly tender and thumb punctured On pressure the swelling was progressively diagnosed as a haematoma and operation performed through a right mammal incision when a large tumour of the mammary gland was expected This was removed a fortnight after the original injury

A curious late result of the operation the general health of the patient was somewhat good until eighteen days later when acute facial dyspnœa occurred The patient died in spite of treatment Although there was rapid healing of local wounds post mortem examination revealed no evidence of pelvic secondary deposit or pulmonary and pleural involvement He had therefore survived operation approximately seven months after original accident

Post mortem Examination—Extensive emaciation There was a large healed incised wound left inguinal area and scrotum and penis and testis The testis was in the abdominal cavity and the cardiac cysts lymph nodes and other abdominal viscera were normal

There was a pathological fracture of right humerus with a large soft tissue callus and fracture of left humerus with callus Both lungs were studded with primary and plaque like secondary growths all over the pleural surfaces and numerous intrapulmonary deposits The original growths involved the cutis and subcutaneous tissue of the original wound

Several blood clots were present in the cord of the left ventricle and there were numerous pulmonary and pleural secondaries

Microscopically abundant metastatic deposits chiefly in the lungs which infiltrate the entire chain

Section of primary and secondary growth showed a typical round and spindle celled sarcoma with extremely active mitosis

Case II

In July 1931 a Sealyham bitch aged 12 was chasing a cat in the garden when she tripped herself on one left breast She wounded herself and was dressed by the owner with a boracic dressing The lesion healed by secondary intention leaving rather a puckered scar At the time of the original injury there was a good deal of bruising seen and the swelling associated with this never subsided The case was first seen by a veterinary surgeon in September 1931 when he found an enormous mammary growth showing at its most prominent part a recently healed puckered scar The tumour was excised under general anæsthesia and the wound healed briskly by first intention

In December 1931 a swelling began to appear from under the ribs the dog went off her food and the swelling continued to increase in size This was shown later to be a large secondary hepatic deposit The animal died from asthenia and secondary liver growths in January 1932 There was no post mortem

Examination of Specimen—Large nodular encapsulated tumour of left mammary region—weight 2 lb (total weight of the animal 12 lb) The tumour bears on the cutaneous surface a stretched fibrous scar the area of skin surrounding this is depressed and sections taken at this point show a dense belt of fibrous tissue separating skin from tumour which elsewhere pushes up immediately beneath the skin Large areas of the tumour show yellow or haemorrhagic degeneration with some hyaline colliquative necrosis and cystic degeneration

Microscopical appearances In one area there is considerable epithelial hyperplasia elsewhere the skin is thinned and atrophic The cutaneous appendages extend well into the scar tissue Some dilated epithelial lined spaces are seen these are possibly of sweat gland origin The tumour itself is composed of spindle cell sometimes closely packed sometimes oedematous and interspaced with inflammatory cells There is a certain amount of variation in cell size and form Large vascular spaces many formed of tumour cells are present Much hyaline degeneration is also seen The tumour is a fairly malignant spindle celled sarcoma

The cases both of which have been confirmed by careful microscopical examination are interesting from the point of view of the association of sarcoma and known trauma

I am indebted to Mr Dickson Wright for permission to publish Case I I should also like to express my thanks to Mr C H Bryans M R C V S of Bournemouth who so kindly provided the history in Case II as well as the pathological material

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AMBULATORY TREATMENT OF VARICOSE VEINS BY COMBINATION OF LIGATION AND INJECTION

BY

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Some disappointment is caused in certain cases of very extensive varicose veins by the difficulty experienced in inducing large veins to react to the various sclerosing solutions It has been suggested that in these cases two solutions should be injected more or less simultaneously so as to produce a precipitate of insoluble quinine salicylate crystals in the interior of the vein I have always felt this to be a very dangerous procedure for obvious reasons Further it is fairly certain that a considerable number of these large veins will recanalize after a time even when they have been coaxed into thrombosing Maingot has recently said that 30 per cent recanalize with sodium morrhuate injections and Howard Jackson and Mahon have found 9% per cent to recanalize after sodium chloride injections in a careful analysis of forty eight cases followed for a year or more

Technique of Method

Feeling that the solution of both problems lies in a combination of ligation and injection I have used the simple technique here described for the ligation of varicose veins as part of the ambulatory treatment The vein selected for ligation is the parent vein of a group of veins and the most prominent rather than the highest portion of it is selected for ligation

The skin is sterilized and anaesthetized with novocain solution An incision half an inch long is then made *across* the line of the vein and when the subcutaneous tissue is reached the small retractor shown in Fig 1 is inserted (This instrument is an adaptation of Irwin Moore's beautifully designed laryngo fissure retractor) The vein is then picked up and freed from connective tissue the retractor removed and turned round and the prongs inserted under the vein and separated Owing to the self retaining nature of the retractor the vein is thus kept on the stretch and elevated out of the wound (Fig 2) While so held 2 c.cm of 5 per cent sodium morrhuate are injected into the lumen of the vein The object of this injection is to fix the thrombus which will form after the ligation above and below the ligature Two ligatures of catgut are now passed round the vein at least an inch apart and the vein divided between them

(Fig 2 A) Should the portion of vein selected have any tributaries they should be ligated as a preliminary to tying the main vein It is essential that the vein should be tied cleanly without the inclusion of any connective tissue and attention to this with the large stumps beyond the ligatures precludes any chance of a ligature slipping The wound can be closed with fine silkworm gut passed through hypodermic needles (Fig 2 B) so as to reduce the number of instruments required The retractor and vein stretcher has been made for me by Messrs Mayer and Phelps and I have found it useful in other minor operative

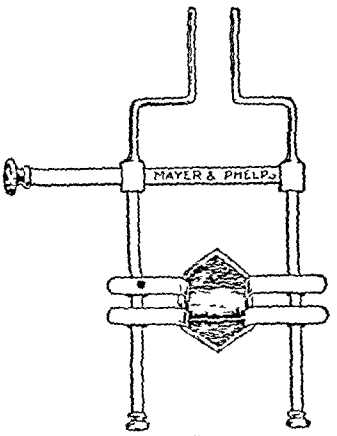
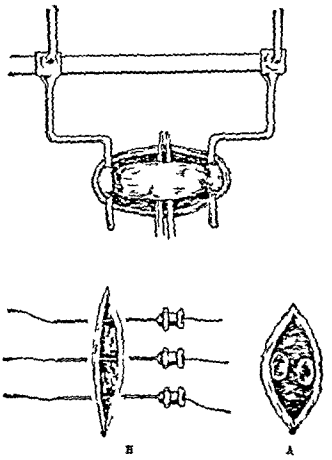


FIG 1



B A

FIG 2

procedures usually performed single handed where the main difficulties are to keep the wound open and to check oozing These are overcome by this small instrument

Specific Advantages

The advantage of this procedure over injection alone is that it hastens the treatment because a much smaller number of injections are needed to produce results Such an advantage is too obvious to stress It is moreover absolutely certain to produce results whereas injection alone often disappoints The veins below the ligature collapse so that bulky clots do not form there is less pain and the induration of the vein resolves more quickly Lastly the method gives a greater guarantee against recurrences than injection alone I have now treated over one hundred cases by this method without complication of any kind and I have come to regard it as a very valuable adjunct to injection treatment of varicose veins of certain types Moreover it seems to be perfectly safe and does not necessitate the patient lying up or abstaining from work The results are so good that I am surprised multiple ligation was not the method of choice in pre injection days instead of the rather ruthless and unsurgical procedures often employed in the past with results which did far from justification to them

The following illustrates well the type of case which benefits most from this treatment

CASE RECORD

Miss J had had repeated attacks of ulceration for the last ten years She was of stout build Both legs showed the scars of ulceration and there were extremely bulky and extensive varicose veins from the groins to the feet The ulcers had always healed as a result of long rests in bed Most of the doctors she had consulted previously had held the veins to be too hopelessly diseased to make a cure by injection worth attempting One doctor had made a series of seven injections in one leg from one of which she developed a necrosis but from none of them did any thrombosis result On account of this history and the extent of the veins I regarded her as a case best treated by a combination of injection and ligature With the right leg I performed three ligation injections and three simple injections and secured a complete and uniform thrombosis of all the veins without any severe reaction On the left leg two ligation injections and three simple injections sufficed to effect a very satisfactory cure I feel sure that with injection alone the treatment would have been very tedious—possibly rather painful—and in this type of case the veins would be likely to recur

I wish to thank Messrs Mayer and Phelps for supplying the blocks

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

BASOPHILIC HYPERPITUITARISM (CUSHING'S ENDOCRINE PITUITARY SYNDROME) AND ? BASOPHILIC HYPOPITUITARISM

If Professor Harvey Cushing is right in his suggestion that the remarkable syndrome which he has recently discussed (*Johns Hopkins Hosp Bull* 1932 l 137) is due to the presence of a basophil adenoma in the anterior lobe of the pituitary body and for which he has suggested the term pituitary basophilism it might well for convenience be referred to as Cushing's syndrome at all events till more is known on the subject My own case of Cushing's syndrome I described (*Brit Journ Dermatol and Syph* 1926 xxxviii 1) under the cumbersome heading of Cutaneous striae purpura high blood pressure amenorrhœa and obesity and to complete the clinical title I might have added with severe trophic changes in the skin of the legs Incidentally I should like to correct a slight error in Professor Cushing's careful reference to the case The minute basophilic adenoma in the anterior lobe of the pituitary body was discovered by Dr E Bock (a pupil of Professor Aschoff) who was at that time working as pathologist at the German Hospital This was almost the first case of the kind in which a pituitary basophilic adenoma was definitely stated to have been present I afterwards lent the paraffin block and a photomicrograph of an admirable section made by Professor H M Turnbull was sent to Professor Cushing whence that slight error

Of the various case collected by Professor Cushny, he own patient died in 1912 still living and I may add that every typical example in a young woman aged 18 years who had character ic cutaneous changes was seen by us with Dr Adolphe Abrahams in 1925 and so far as I know getting on fairly well in the circumstances with high blood pressure and haematuria. The high blood pressure and the renal changes are of the greatest interest and suggest that a pituitary basophilic adenoma like tumour is extremely rare primary endocrine tumour of the chromaffine cells of the suprarenal medulla may be an exceptional cause of persistent high blood pressure and of arterial sclerotic changes.

In the future of Cushing syndrome will doubtless become more frequently recognized from time to time but their early recognition will be difficult and doubtful. If Cushing syndrome is really due to basophilic hyperpituitarism which I consider a convenient term to distinguish it from acidophil hyperpituitarism—the cause of eosinophilic adenoma, the basophil—it may be expected that basophil hyperpituitarism never occurs without changes in the basophil cells of other endocrine glands. In the common I cannot help thinking of the small basophil prostate was particularly abundant in the hypertrophied part of the body but I have never had a chance to examine the prostate in Cushing syndrome though the less may I have to add that in this I should much welcome information.

One is very much struck by a temporary basophilic hyperpituitarism as a part factor in connexion with a high adrenalin strain atrophy of adrenal cortex and true cortical with typhoid fever and other infections.

The case of suprarenal tumour is not necessarily malignant to adrenal endocrine activity and this should be borne in mind in regard to the possible effects of basophil and of eosinophil adenomata. Similarly the cases with thyrotoxic symptoms in Graves's disease are not necessarily due with the large goitres. In this connexion may also note that in myeloid and lymphatic leukaemia the bone marrow may be full of immature white cells even though the circulating blood shows an absolute leucopenia.

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CASE OF SUSPECTED RAT BITE FEVER

The following are some notes of a rather unusual type of infectious disease recently seen at Cumnock, Ayrshire.

On July 29th 1941 the patient aged 10 was playing in the burgh rabbit hutch when he was bitten by a rat on the dorsum of the right big toe. The rat appeared to be in poor condition for it was caught by the boy and swung round by the tail before biting him. The wound was dressed and iodine applied. Healing took place in the usual way and was not characterized by any unusual feature.

The boy was first seen by the family doctor on August 21st when he complained of severe headache and general malaise of four days' duration. The temperature was 104.5° F. and the pulse relatively slow, 100. (This was noticeable in all the subsequent attacks.) There was some tenderness on pressure in the right iliac fossa; enlargement of the inguinal gland would probably account for this. The urine showed a trace quantity of albumin but no casts. At this stage the possibility of typhoid fever was considered. The Widal test however was negative. There was on this occasion a small patch of erythema at the root of the nose. This was ascribed to a bite. It reappeared in subsequent attacks. The boy's temperature came down by lysis in four days, and on August 27th he was able to get up.

On September 3rd he had a recurrence. His face was swollen and he complained of pain in the calves. There was some redness of the fauces with hoarseness of the voice and this occurred in subsequent attacks. The glands in the posterior triangle of the neck were enlarged and tender as were also those in the axilla and groin. No palpable splenic enlargement was noted. On this occasion the temperature came down by crisis in twenty-four hours to 99° F. At this time the possibility of rat bite fever was not entertained as a history was obtained of the rat bite.

On September 11th a further recurrence took place. A rash now appeared on the face, abdomen, and buttocks. This was in the form of small rings with a raised, red, erythematous outline and a pale smooth centre. The temperature again came down by crisis and the rash rapidly faded.

On September 16th he had another recurrence, the temperature being 105° F. The erythematous patches were more numerous and defined, more numerous than formerly. At this juncture the history of the rat bite was obtained and the condition was diagnosed. The glands were again enlarged and tender. He had subsequent attacks every four to five days with each onset temperature 104° to 105° F. and coming down by crisis in eighteen to twenty-four hours. He remained well between the attacks.

The week after this attack he was given stabilarsan 0.1 gram, followed at intervals of a week by further doses of 0.15 and 0.2 gram. It was thought this dosage should be sufficient to stop the attacks entirely, but a further recurrence necessitated a larger dose of 0.4. No further attacks took place.

He was later admitted to the Victoria Infirmary, Glasgow, and was under the charge of Dr. Douglas Russell. His temperature however remained normal and no rash developed, although he had no further treatment. He is now well and at home.

Blood films taken during the attacks showed no abnormality apart from some leucocytosis. A sample of blood was also injected into a guinea-pig without any result.

I am indebted to Drs. McQueen Armitage and Hay of Cumnock for bringing this case to my notice, also for the clinical details.

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Reports of Societies

DIAGNOSIS OF PREGNANCY

At a meeting of the London Association of the Medical Women's Federation held on April 26th with Dr. LETITIA FAIRFIELD in the chair, Lady BARRETT proposed that a group should be formed for the study of anaesthesia in midwifery, the group to be composed of women obstetricians and gynaecologists in London. This proposal was accepted.

Dr. CLAUDIA DODDS then delivered an address on the Zondek-Aschheim test. Tests for pregnancy used in the past, she said, had shown a large percentage of error, but the accuracy of the Zondek-Aschheim test had been confirmed by everyone who had used it. During pregnancy the urine contained oestrin and a hormone secreted by the anterior lobe of the pituitary. It was upon the anterior lobe hormone that the test depended; this stimulated the development of ovarian follicles and ovulation, as a result of which oestrin was secreted. It was non-specific, inducing changes in the ovary of the female and in the testis of the male; oestrin however was a specifically female hormone. When the urine of a pregnant woman was injected into immature mice it produced ovarian changes which could be used for the diagnosis of pregnancy. The exact day on which the anterior lobe hormone first appeared in the urine of a pregnant woman had not been ascertained. It was present by the third day after the first missed menstrual period, and it was thought to appear after embedding of the ovum. The

amount of hormone secreted in the urine increased rapidly and reached a maximum during the first two months of pregnancy it disappeared on about the eighth day of the puerperium The oestrin in the urine increased more slowly and reached a maximum between the third and seventh months it also disappeared on about the eighth day of the puerperium Five immature female mice each weighing 6 to 8 grams were used in making the diagnosis and received injections of 5 c cm of urine over a period of three days they were killed 100 hours later and the ovaries examined If the result was positive the following changes would be found (1) The ovaries might be enlarged and pinkish with enlarged follicles visible macroscopically and microscopically These changes were not diagnostic of pregnancy they might follow the injection of urine from patients suffering from carcinoma endocrine disturbances such as hypothyroidism from the menopause or from patients who had been castrated (2) One or more blood points might be seen on the ovary and on microscopical examination massive bleeding into the follicles would be found (3) Corpora lutea might be present The second and third changes were diagnostic of pregnancy The test was valuable in distinguishing the amenorrhoea of pregnancy from amenorrhoea due to other causes Fibroids complicating pregnancy sometimes led to difficulties of diagnosis In pulmonary tuberculosis heart disease or chronic nephritis the test was particularly useful in establishing the early diagnosis of pregnancy it could also be used in making the differential diagnosis between ectopic gestation and acute salpingitis or adnexal tumour A positive result was not proof of a living pregnancy but only of living placental tissue In the presence of hydatidiform mole and chorion epithelioma the test was often positive with unusually high dilutions of urine The greater the dilution the greater was the suspicion of some abnormality of the placental tissue If the test had become negative following delivery and subsequently became positive again there was a strong suspicion that chorion epithelioma was present She described a case of this kind in which panhysterectomy had been performed the Zondek Aschheim test had again become negative following the operation and had remained negative ever since There had been no sign of recurrence

Dr DULCIE STAVELEY then spoke on the diagnosis of pregnancy by *x* rays The fact of pregnancy she said was usually established before *x* rays were used For diagnostic purposes radiography had little value before about the sixteenth week though in the United States it was claimed that a diagnosis could be made at the fourteenth week Usually a ray examination was used to confirm the diagnosis A method of injecting lipiodol into the uterus in order to make an earlier diagnosis was said not to cause abortion but it only showed a rounded swelling in the wall of the uterus which was not in itself diagnostic of pregnancy Adiposity of the patient might help to obscure the picture and a lively baby sometimes spoiled the film by moving The spine was the first part of the foetus to become visible upon *x* ray examination and showed first as a row of stippled dots patches of calcification in a fibroid might be confused with the early appearance of the spine The maturity of the foetus could be estimated by the size of the spine and skull and by the appearance of the various bones in the skiagram The os calcis appeared between the twenty-first and the twenty ninth week the astragalus between the twenty fourth and the thirty second week and the epiphysis of the femur at about the thirty sixth week In a post mature foetus the epiphysis of the upper end of the tibia might be seen Estimation of maturity however could not be made more accurately than within a fortnight X ray investigation was valuable in clearing up the diagnosis in suspected multiple pregnancy A dead foetus could often be recognized by a sagging attitude overlapping of the cranial bones and by the fact that no growth was seen to have taken place when a second examination was made after an interval Often too the foetus would be found to be in exactly the same position at the second examination as at the first Malpresentations—such as breech with extended legs face and transverse presentations—could be demonstrated by radiography The placenta was not normally visible but it might show calcified patches which might be useful in the diagnosis of placenta praevia Abnormalities in the mother such as lordosis scoliosis spondylitis osteomalacia or deformities of the pelvis or hip joint could be demonstrated Disproportion between the head and the pelvis could not be demonstrated well by a lateral view but recently it had been made possible to take a vertical radiograph showing the fit of the head in the pelvis and measurements could be made against a calibrated scale Abnormalities of the foetus such as anencephaly hydrocephaly and even spina bifida might be demonstrated radiographically before birth Dr Staveley showed lantern slides of radiograms of the conditions described

TWO PAPERS ON MALIGNANT DISEASE

At a meeting of the Manchester Medical Society held on April 6th papers were read by Dr R Ralston Paterson and Professor S L Baker on The radio sensitivity of tumours and The virus theory of cancer respectively

Radio sensitivity

Dr PATERSON said that tissues varied markedly in their response to radiation—*x* rays and *γ* rays The property of tissue which underlay this variable response was called radio sensitivity or at the other end of the scale radio resistance In particular tumours showed a wide range of such sensitivity By contrasting the sensitivity of growths with the sensitivity of the skin—in both cases using the minimum lethal dose as the standard—it was possible to place tumours in four groups—radio sensitive tumours epitheliomata adenocarcinomata and radio resistant tumours The first group comprised pathologically a heterogeneous number of growths though clinically it included many highly malignant growths which metastasized early The lethal dose for this group of tumours was less than the lethal dose for the skin and thus sufficient radiation to produce lethal changes could be given by external methods of radiation alone External methods of irradiation *x* rays in larger tumours external radium in more localized tumours thus became the treatment of choice

In epitheliomata were included also the epithelial tumours of the breast excepting true adenocarcinoma because whatever their nature they acted from the point of view of their reaction to radiation as did the squamous epitheliomata This group included a high percentage of the malignant tumours and was therefore correspondingly important To produce lethal changes in those growths a quantity of irradiation must be used which was approximately in the region of the lethal dose for skin They did not therefore lend themselves to satisfactory curative treatment by external methods of irradiation alone and had in practice to be treated if by irradiation at all by localized irradiation which could only be achieved by means of radium The treatment of choice must therefore always lie between such localized irradiation methods and surgery This choice was made by a contrast of the ease or difficulty of technical procedures involved of functional results or of probable survival by one or other method

In the third group adenocarcinomata, growths appeared to require a lethal dose greater than the skin lethal dose and normally equal to the lethal dose for the tumour bed. Irradiation whether external or localized could therefore only act as a general cautery. In view of the fact that there were many safer and less expensive cauteries irradiation seemed contraindicated and the treatment of choice in this group was always surgery.

Radio-resistant tumours were heterogeneous pathologically but for the most part of connective tissue origin. Like normal connective tissue they were highly radio-resistant and it would appear that the lethal dose for them was not only greater than the lethal dose for the skin but even greater than the lethal dose for the normal tissues in which these *tumours tended to grow*. The use of irradiation to effect direct curative action appeared more likely to do damage to the normal than to the abnormal tissue and was thus definitely contraindicated. In this group however should surgical extirpation be impossible another process became available—that called by Ewing growth restraint. Here repeated small doses of irradiation were used to produce an effect on the endothelial lining of the vascular system of the tumours a process resembling endarteritis obliterans ensued with resulting cessation of or marked slowing of growth. These four groups covered the whole field of tumours and gave an indication as to the choice of treatment once one knew to which group any particular tumour belonged. In this field of radiotherapy there were two likely fields for research work in the future. In the pathological field there was the problem of ascertaining the exact criteria underlying the relationship between pathological types and radio-sensitivity. In the experimental field attempts were being made to increase radio-sensitivity either by alterations in the time factor of treatment or by intravenous method. Could such increased radio-sensitivity be produced tumour would then be rendered more amenable to irradiation therapy.

The Virus Theory

Prof. G. BARRY said that although many and various predisposing causes of cancer were known the fundamental cause of the abnormal cell proliferation which was the central fact of cancer could be narrowed down to two possibilities. (1) The biological or mutation theory which postulated an alteration or mutation of the cell initiated by some chemical or physical stimulus. This change once initiated was handed on to subsequent generations of cells by the ordinary laws of cell inheritance the inheritance of an acquired character. (2) The virus theory which postulated a continuously acting cause an infection of the cell by an agent which multiplied and was thus carried on through successive generations of cells.

In the case of mammalian tumours there was a great weight of both histological and experimental evidence in support of the cell as the cancer unit. Cancer in mammals could only be transmitted experimentally by grafting living tumour cells to new hosts of the same species. No cancer-causing agent had ever been separated from the cells of mammalian tumours. There was no experimental evidence that suggested that a living virus could be responsible for the production of a tumour until in 1911 Peyton Rous published his first account of a fowl sarcoma transmissible experimentally from bird to bird by a filterable agent separable from the tumour cells. It was now known that many different types of sarcoma in the fowl could be transmitted in this manner. The fowl sarcomata apart from this peculiar property of filterability differed in no way from mammalian sarcomata. The tumours occurred sporadically and there was no evidence of infectivity under natural conditions. The tumour was essentially a local lesion and there was considerable evidence to show that metastases were produced by detached cell fragments as with mammalian tumours and not by the dissemination of the infective agent about the body. A strain of fowl sarcoma was not always filterable and often passed through stages where it could only be transmitted by cell suspensions. Carcinomas occurred in fowls but a transplantable strain had never been established and their filterability had therefore not been studied. The exact bearing of these fowl tumours upon mammalian cancer remained at the present time a matter of conjecture but the facts so far obtained were so peculiar and striking that a continued investigation of them was clearly indicated.

"EXCESSIVE SURGERY"

A meeting of the West London Medico-Chirurgical Society was held on May 4th with Dr. H. H. MILLS in the chair when the subject for discussion was "Excessive Surgery."

Mr. HAMBLEN THOMAS gave a brief sketch of the history of surgery, pointing out how at various times the physician and the surgeon had eclipsed one another. Most surgical treatment of disease to-day, apart from repair or correction of deformity, consisted in removal with a varying amount of mutilation and there was always a certain amount of risk to the patient's life. Occasionally one wondered whether operation need be so extensive as in the removal of the breast for carcinoma where the results of simple amputation were as good as those of the extensive Halstead operation. A cerebral decompression was often attended with better results than say an extensive resection of the colon for toxæmia—to take an instance of drastic surgery. Occasionally surgery was misdirected as when tonsils were removed in cases where their disease was secondary to overlooked nasal trouble.

Dr. GEOFFREY EVANS said that as a physician he was rather conscious that pain was from time to time the cause of excessive surgery. A number of patients were operated on unnecessarily for functional abdominal pain—spastic colon and the like. With regard to gastric ulcer one had to recognize the fact that medical treatment was very successful in this condition and surgery also. He believed that if one was afraid of death from haemorrhage or feared perforation one should get the surgeon to operate but if that fear did not obtain the patient should be allowed to go on for two or three years with medical treatment an operation only taking place if that was unsuccessful. In this territory where physicians and surgeons were watching each other frank collaboration as carried out at present in London was obviously the ideal. The moral of his remarks was that surgery was not at present excessive but he rather feared that it might become so.

Mr. ZACHARY COPE discussed the factors which had to be considered before deciding to operate. With regard to the patient himself he expressed the view that it was no part of the surgeon's duty to say to the patient "If you do not have this done you will die." He had known patients recover after that had been said. If a patient was over-persuaded into an operation the surgeon had gone half-way towards failure at the start. Again no operation ought to be done before a routine examination had been made. The man who was quite sure of his diagnosis before he examined was often wrong. The next thing to remember was not to operate merely because the patient had something which was abnormal. For example every man over 50 or 60 probably had some enlargement of the prostate but this in itself was no ground for operation unless it gave rise to symptoms. Further, one

ought not to operate in any condition which was amenable to medical treatment until such treatment had been thoroughly tried The economic condition of the patient had a bearing here In the case of duodenal ulcer for example patients in poor circumstances might be relieved from time to time by medical treatment and have to lay up again and these frequent illnesses might ultimately have the result of causing them to lose their job In these cases one should operate sooner for gastric or duodenal ulcer than one would in persons belonging to a class which could afford to be cured several times before going to the surgeon There was also a time in the history of each disease which was the best time to operate It was worse than unwise to operate at an unpropitious moment The surroundings of the patient had to be considered and in most cases the hospital or nursing home gave the patient a much better chance of recovery than did his own domicile Another point to remember was that although every qualified man was justified in law in undertaking any operation every surgeon knew that he had his limitations and the specialist limited himself to those diseases for dealing with which he had a special aptitude It was for every surgeon and every practitioner to consider whether there were not limitations to the range of his capabilities

Mr SAINGSTER SIMMONDS classified physicians and surgeons under four heads the ultra medical physician who kept the patient with pyloric stenosis from the surgeon until he was moribund the equally excessive surgical surgeon who would do a thyroidectomy for every case of goitre the surgically minded physician who would treat a gastric ulcer medically and give it a thorough chance and only if he failed hand it over to the surgeon and the medically minded surgeon who if he had a gastric ulcer himself would have it treated medically for a long time before he had it treated surgically One reason why surgery was being overdone was because the training of the surgeon was so encircled The whole hospital system of London gave rise to such watertight compartments that very few surgeons had any training in general practice He learned that in Spain it was the custom if the doctor said that there should be an operation for another consultant to be called in and only if the two agreed together was the operation consented to

Dr MAURICE SHAW said that there were quite a number of cases in which one was bound to do a laparotomy and nothing was discovered These operations might be classed as excessive surgery but he scarcely thought that such a definition would be justifiable The surgeon had the right to complain that sometimes the physician did not send him his cases early enough sending them only after medical treatment had failed He thought that surgery after all as the Greek word from which chirurgery was derived signified was a handicraft and while he did not object to the surgeon being a diagnostician what he would most like to see was physicians absolutely competent in the diagnosis of all complaints and surgeons competent in performing operations in their own particular branch Mr F McG LOUGHNANE could not agree that there was excessive surgery his belief was that there was not enough surgery being done at the present moment If only certain conditions were operated upon earlier many maladies would be prevented He contested in particular Mr Cope's remark that mere enlargement of the prostate was not a sufficient reason for operation If an enlarged prostate which gave no symptoms was investigated by the cystoscope and the urethroscope it would show signs of becoming damaged The PRESIDENT (Dr Mills) expressed his belief that if infants and young children were more thoroughly examined from the preventive point of view a great many of the gastro intestinal complaints of later years would be obviated A good deal of tonsillar disease was preventable with proper treatment of the infant and young child Very many children also suffered from a mild catarrhal cholecystitis and much of that type of disease was preventable also He urged that infants children and young adolescents should periodically be submitted for examination

Mr HAMBLEN THOMAS in reply agreed that preventive treatment was a most important thing and that a number of tonsillar and other conditions could be prevented Dr Maurice Shaw had suggested that the physician had stimulated excessive surgery but the surgeon did look to the physician for his guidance

CALCIUM METABOLISM

At a meeting of the Aberdeen Medico Chirurgical Society on May 5th with the president Mr F K SMITH in the chair Professor DAVID CAMPBELL read a paper entitled

The clinical application of recent studies in calcium metabolism

Outlining the vital importance of inorganic mineral elements in the diet of which calcium is not the least important and the presence of calcium in the tissues of the body Professor Campbell pointed out that the diet was man's only source of calcium and that the minimum daily requirement for an adult was 0·45 gram if active growth was proceeding much more would be required In the absorption of calcium from the gastro intestinal tract the first step was the conversion of the insoluble compounds into a soluble form which was done very efficiently by the hydrochloric acid of the gastric juice Calcium was absorbed only as long as it remained in an acid or neutral medium after which it was precipitated as insoluble compounds and excreted in the stools as phosphates and insoluble soaps It was usually estimated that about 60 per cent of the calcium taken by the mouth was absorbed from the intestine Some of the calcium excreted in the faeces was however re excreted after having been absorbed Turning to the clinical application of these facts the speaker pointed out that Telfer's observations on the mineral composition of human milk which proved it to be closely adjusted to the growth needs of the infant meant that the intake was very little in excess of requirements and that therefore prolonged breast feeding was likely to cause osteoporosis and general stunting of growth from deficiency of lime Secondly if a child were fed during the first few months of life on whole cow's milk there was increase of bone forming elements but there was also considerable increase in the bulk of the faeces leading to an abnormal state of the alimentary canal a faulty absorption of fat and a marked reduction in the absorption of iron owing to the relatively small amount of iron in cow's milk This would apply especially if the child were fed on diluted cow's milk and explained the prevalence of nutritional anaemia in infants and young children The factor which above all others controlled the absorption of calcium and phosphorus in adequate quantity however was vitamin D Professor Campbell illustrated by slides the effect of vitamin D on the excretion of calcium phosphorus and magnesium in the urine and faeces and on the retention of these elements Rickets both early and late and osteomalacia were now recognized to be due to defective utilization of the bone forming elements as a consequence of deficiency of vitamin D Other factors preventing the absorption of calcium from the intestinal canal were coeliac disease with its severe chronic intestinal indigestion and idiopathic steatorrhoea In some cases no cause could be found and the speaker described the case of a man aged 39 years who had pains all over the body with marked decalcification of

most of the bones and spontaneous fractures the serum calcium was 8 mg. per cent. In spite of large amounts of milk, hydrochloric acid, calcium chloride, cod liver oil and ultra-violet ray therapy, no alteration took place either in the serum calcium or the amount of calcium absorbed from the intestine.

Gross overdosage with irradiated ergosterol had been shown to produce decalcification of the bones of the skeleton, and it had recently been suggested that the effect of vitamin D was rather to prevent excretion of calcium by the gut than to increase absorption. The factor regulating the maintenance of the serum calcium level had been shown to be the secretion of the parathyroid glands. If the calcium content of the blood fell, the whole neuro-muscular system became hyperexcitable, the condition known as tetany developing. Professor Campbell described two cases which had come under his observation, illustrating the effects of loss of the parathyroids. Both were cases where the parathyroids had been removed in operations on the thyroid gland. From the metabolic studies carried out on these cases it was found that Collip's parathormone was active in raising the level of the serum calcium, but as a therapeutic measure for use in cases of parathyroid tetany it was ineffective unless given in large and repeated doses. The intravenous injection of 10 c.cm. of a 10 per cent. solution of calcium chloride was an excellent emergency treatment, producing relief of symptoms rapidly, the effect lasting for about a day and a half. It had been found, however, that the best treatment was to present continuously to the bowel large doses of calcium chloride; if this were insufficient, 50 to 100 c.cm. of normal hydrochloric acid along with two litres of milk per diem were added to increase absorption. Both cases had been found to have complete achlorhydria after the operation. It had also been repeatedly noted in both cases that the severity of the symptoms depended upon a slight change in the serum calcium level rather than on the actual level, so that the important thing to know was the direction in which the serum calcium level was moving. Reports of cases of tumours of the parathyroids showed that increased secretion of the parathyroid caused hypercalcæmia, excretion of calcium from the tissues in far larger amounts than the intake, and the condition of generalized osteitis fibrosa. Removal of the tumour caused the serum calcium to fall to normal, and improvement in the symptoms of the condition. There was thus a great storehouse of calcium in the spongiosæ of bone which could be removed by the action of the parathyroid hormone. The important factor in the effective calcium content of the serum was the ionized calcium. Calcium was believed to be present in the serum as a supersaturated solution of acid calcium phosphate, which is relatively insoluble, and therefore poorly ionized. The carbonic acid of the plasma converted this into the more soluble, and therefore better ionized, calcium bicarbonate and calcium hydrogen phosphate; thus a tendency to the alkalotic state would render the calcium less soluble. Clinical illustrations of this were to be seen in gastric tetany from excessive vomiting, tetany from hyperpnœa, ingestion of an excessive amount of alkali, and in infancy the convulsions occurring in fever. Professor Campbell was doubtful of the efficacy of calcium therapy in hæmorrhagic conditions where no deficiency of calcium had been proved, and in œdema, urticaria, asthma, and allied conditions, though he stated that it was claimed to be effective in the treatment of lead poisoning, leading to the deposition of the lead in the bones as a harmless temporary deposit. Another use of calcium was in the therapy of milk fever of cows.

The PRESIDENT, Professor L. S. P. DAVIDSON, Dr. McCIE, Dr. JOHN CRAIG, and Dr. LYALL took part in the keen discussion which followed this paper.

Reviews

THE MEDICAL ANNUAL, 1932

Wright's *Medical Annual*[1] has been so long recognized as the leading conspectus of medicine in the English language that it is difficult to realize that it has only been established fifty years. Even the oldest practitioners can now scarcely recall a time when they did not instinctively turn to this book for the latest information on new methods in every branch of medicine. The present edition is entitled the Jubilee Volume, and the publishers in their foreword look back with justifiable pride to the remarkable success of their publication.

Started in 1883 as a modest volume of some 300 pages and printed in Bristol by the present proprietors for a London publisher, it ran an unsuccessful course for the first two years, when it continued existence was threatened by the financial collapse of the publisher concerned. Mr. Hartland S. Wright, one of the then partners (now chairman of directors), had the foresight to see possibilities in the undertaking, and under the new regime, and in collaboration with the late Dr. Percy Wilde, the *Annual* at once began to assume a position of real importance.

The first editor, Dr. Percy Wilde, is described as a man of great vigour of mind, with a distinct bias towards heterodoxy—in other words, he was a homœopath who practised with much success in Bath. He conceived the idea that an annual medical survey could be written which should be committed to no particular system of practice, and should consider critically and impartially every possible avenue of progress. It was Wilde's plan to invoke the aid of any member of the profession to write on such topics as he might be thoroughly qualified to discuss. In this Jubilee Volume there is a complete list of contributors from the beginning, together with a special supplement containing portraits of the three editors who have been connected with the *Annual* and some 200 of the 193 who have at one time or another been contributors. If the *Medical Annual* owes its success to any one feature above others, there can be little doubt that the catholicity in its choice of contributors would constitute that feature.

Wrights of Bristol have been pioneers of illustrated medical journalism in this country, thanks to the discerning zeal of Mr. Hartland S. Wright, who has been intimately associated with the production of the *Annual* from its inception. Now it is announced with regret that he has been compelled to relinquish active work at the advanced age of 83. Dr. Percy Wilde edited the *Medical Annual* from its foundation till 1910, when he was succeeded by Dr. Carey Coombs, who at first acted alone, and since 1919 in conjunction with Mr. Rendle Short. There is little need to dwell at length upon the contents of the present volume, which does not materially differ from its predecessors except that it is rather larger than usual and contains more illustrations than ever before. A novel departure is the inclusion of articles on veterinary surgery and allied subjects, such as distemper, mange, foot and mouth disease, and tuberculosis in animals. Other special articles are those on continued pyrexia and the dysenteries, of its origin and a review from Holland of the present position with regard to the treatment of rheumatic diseases. Cancer and its treatment is discussed in several well-balanced articles which leave no suggestions unconsidered. In general surgery we learn that the modern tendency is to abandon many of the amputation methods that used to be taught in operative surgery classes, and that even Syme's time-*honoured* method is not free from

[1] *The Medical Annual. A Year Book of Treatment and Practitioner's Index.* Fiftieth year. 1932. Edited by Carey F. Coombs, M.D., F.R.C.P., and A. Rendle Short, M.D., B.S., B.Sc., F.R.C.S. Bristol: J. Wright and Sons, Ltd. London: Simpkin Marshall, Ltd. 1932. (Pp. c + 674; illustrated. 20s. net.)

objections In passing there is one fault to find—the authors of this review on amputations must learn that the famous Edinburgh surgeon was Syme not Symes There is an excellent account amply illustrated of the treatment of hand and arm infections based on Kanavel's work this is of the utmost importance to all practitioners and not merely to professed surgeons Recent advances in methods of anaesthesia are clearly and fully described There is no need however to multiply instances of the thorough manner in which the pathways of progress are explored Every reader of Wright's *Medical Annual* knows what to expect and in the Jubilee Volume he will meet with no disappointments

The publishers and editors are to be congratulated on the continued success of this work which we hope will appear for many years to come spreading wisdom and knowledge through the profession at large

DISEASES OF THE KIDNEY

In *Diseases of the Kidney* Mr W GIRLING BALL and Dr GEOFFREY EVANS have attempted as they state in the first sentence of their preface to give an account of kidney disease from the viewpoint of a physician and surgeon in close collaboration Such composite works are not common nowadays despite the increasingly close co operation between physician and surgeon in all branches of clinical medicine referred to by the authors and we find difficulty in foretelling what class of our profession will derive most benefit from this book It will no doubt be widely read both in its medical and in its surgical parts The authors have endeavoured as they say to make the book thoroughly practical The general practitioner will be interested in the brief description of diagnosis and medical treatment rather than in operative methods The pure physician and the pure surgeon will want more than the brief information which the limits of such a book necessarily enjoin The medical student must study the medical and surgical aspects of renal disease quite separately for his examinations This is indeed our chief criticism two books have been compressed into one within a limited space Even the close co operation between a physician and a surgeon each of high reputation cannot overcome this disadvantage Nevertheless we must recognize the careful preparation and selection that have been bestowed upon the work and the pains taken by the authors in compressing the text to eliminate waste words and vague discussions

A few points for criticism may be taken at random in the medical side of the book Some quite important renal conditions—to name two examples anuria and paroxysmal haemoglobinuria—are so briefly discussed that the description is of small value Bacilluria is not actually mentioned as a clinical condition apart from pyelitis while urinary carriers of pathogenic organisms (*B typhosus* etc) are not considered Renal tube casts (not mentioned in the index) are in view of their importance in different varieties of nephritis inadequately described on page 81 The method of identifying doubly refracting lipoid material in casts by crossed Nicol's prisms should be made clear There is of course ample room for individual opinion upon the vexed question of nephrosis as a clinical or pathological entity and the bias of the physician author is evident and quite justifiable But in a textbook of this kind the opposition of such authorities as Christian on the clinical side and Aschoff on the pathological side to the existence of true nephrosis might have been given more prominence Since in any case pure nephrosis is a rare clinical condition in comparison with other medical diseases of the kidney it seems to us that relatively too much space has been given to its description The chapter on hyperpiesia with its three appendices is a good one but mention might have been made of the difference in the prognosis of this disease in men and women as strikingly shown for instance in the figures of Blackford Bowers and Baker (*Journ Amer Med Assoc* February 1st 1930) because this is of great practical importance

The surgical chapters will probably appeal to a large number of readers for they are up to date and give a clear impression of the views of to day even in the short chapter dealing with operations upon the kidney space is found to give a useful survey not only of the standard operations but to discuss briefly but clearly the value of plastic operations upon the renal pelvis in cases of hydronephrosis Chapter III which deals with the examination of a urinary case will be found very helpful to all commencing the study of urology because it is full of detail and thoroughly practical though not all will agree with the view that the use of an irrigator is the safest method of washing out the bladder for cystoscopy Here are also *included some well chosen reproductions of x rays representing* normal and common abnormal pyelograms Renal calculus also is clearly discussed and well illustrated The chapter on hydronephrosis is particularly interesting for the subject is attracting special attention at the present time but the statement that this condition is rarely congenital is surely contradicted by the increasing number of such cases which are demonstrated nowadays in infants and children and also by the frequency with which abnormal vessels clearly congenital anomalies are found in cases of hydronephrosis No one can say either in what manner or how long such an abnormality may take to produce the pelvic distension and renal damage which so often only becomes obvious in adult life

The authors have been very well served by their publishers The paper and printing are excellent and the reproduction of the 8 coloured plates and 169 other illustrations is also first rate The illustrations of pathological specimens (nearly all from St Bartholomew's Hospital Museum) are a notable feature of the book

Diseases of the Kidney By W Girling Ball F R C S and Geoffrey Evans M D F R C P London J and A Churchill 1932 (Pp xiii + 424 169 figures 8 plates 36s)

PSYCHIATRY

HENDERSON and GILLESPIE'S *Text Book of Psychiatry*[3] has already won a foremost place among the many manuals on mental disease and the appearance of a third edition two years after the second affords proof of its continued popularity By adopting a biological standpoint throughout in which mental illness is envisaged as the final product of morbid reactions to environmental stresses the authors have contrived to do equal justice to the medical and social factors involved in its production and by presenting the setting in which a mental breakdown occurs and without which it cannot properly be understood they have succeeded in making their subject a living one The arrangement of the text follows the same lines as in previous editions the grouping of the psychoses being into affective schizophrenic paranoid and organic reaction types The chapter on epilepsy has been expanded and brought up to date and an entirely new chapter on the psychiatry of childhood has been added to the text In addition a summary is given of the more important laws governing mental disorder in the United States and on the Continent

[3] *A Text Book of Psychiatry* By D K Henderson M D F R F P S and R D Gillespie M D M R C P D P M Third edition Oxford Medical Publications London Milford Oxford University Press 1932 (Pp xii + 595 18s net)

When we turn to Dr Wiersma's *Lectures on Psychiatry* we find ourselves on altogether different ground. It is true that the subject-matter is the same, but the mode of treatment is entirely dissimilar. The lectures given by Dr Wiersma in book *represent the* [illegible] psychiatry and neurology in the University of Groningen from 1926 to 1930. They might therefore be thought to provide ample fare for the [illegible] student. And yet although the psychiatrist [illegible] to derive much benefit from the lectures the subject to the mode of presentation, it will be more [illegible] Indeed [illegible] psychologists have [illegible] The *Lectures* are highly [illegible] The author has deliberately omitted all [illegible] and treatment. He has [illegible] entirely his attention mainly on the study [illegible] and the disturbances of perception [illegible] and volition which in differing [illegible] to the [illegible] accompaniment of all the [illegible] From the angle of approach there is much [illegible] He discriminates of temperamental [illegible] to the degree of emotionality is fully [illegible] Nor is [illegible] recorded of investigations [illegible] of fixation and retention of [illegible] In the consideration of the [illegible] the author treats at length of [illegible] methods as aesthesiometry, marking test [illegible] graph and galvanogram—all accompanied by [illegible] chart. The psychoses are discussed [illegible] not so much as clinical entities but as [illegible] phenomena for psychological investigation. Dr Wiersma pays tribute to Freud and to "the psychoanalytic school in the general sense of that word" but there is little indication from the text of any real indebtedness. His conclusion as to the causes of obsessive symptoms is that they are only rendered possible by a low degree of co-ordination:

> As a result of this images force their way from the periphery to the centre and cannot be repressed. They disturb the normal flow of thought which is then no longer free and under voluntary control. The disintegration dissociation or sinking in is thus primary. All the other symptoms are closely related to it.

Such an interpretation of obsessive phenomena leaves their meaning unexplained. A vast amount of painstaking experiment is revealed in these lectures and Dr Wiersma has succeeded in providing his readers with a fund of information of real importance in the investigation of psychotic states.

PHYSIOLOGY OF EXERCISE

Recent progress in the practice and understanding of physical training has been so considerable that for the fourth edition of *Physiology of Exercise* Dr F. A. SCHMIDT, with assistance from Dr KOHLRAUSCH, found it necessary to rewrite his book almost entirely. This edition has now been translated from the German by Dr C. Spath. The book is a considered study of the effects of physical exercise on the growth and development of the body, and of the physiological processes occurring in the different organs as a result of muscular work. Having surveyed the development and proportions of the normal body at different age periods, the author discusses the modifications which can occur as a result of physical training, and stresses the need for consideration of these in childhood and adolescence. In analysing the mechanics of movement a chronophotographic method has been used which makes possible the mathematical calculation of work *done* in motor activities. With patience and thoroughness Dr Schmidt describes what is known *through* physiological research of the actual effect of exercise on the heart, lungs, muscle groups and nerves, and the changes in metabolism occurring during fatigue. Of more general interest is the consideration of how far constitution and physique affect an individual's choice of sport. The so-called asthenic type is not likely to excel in weight-lifting, but may achieve distinction in running or jumping. The wrestler is usually an intermediate type between the pyknic and muscular, and the "well proportioned" is often an all-round athlete. Throughout the book the harmonious development of the body as a whole is insisted upon, and guidance is given in ways of avoiding harmful training. We feel that undue prominence is given to the translator's name on the cover of the book, which at first glance might suggest joint authorship.

SOCIAL INSURANCE

An admirably complete and clear account of *The British System of Social Insurance* will be found in a volume recently published under that title[a] written by PERCY COHEN. In a short introduction Mr Neville Chamberlain describes the book as "exhaustive, lucid and reliable," and these adjectives are excellently chosen to set out its qualities. In his own preface the author says: "Within the compass of a book of moderate dimensions I have endeavoured to set out in language as free from technicalities as the subjects permit the history of the different systems, the salient features of the Acts of Parliament, and their application to the different sections of the population." This has been done, with reference successively to Health Insurance, Widows' and Orphans' Pensions, Old Age Pensions (contributory and non-contributory), Unemployment Insurance, Workmen's Compensation, and Industrial Assurance, with a brevity, accuracy and clarity which is truly astonishing. The sections of most interest to medical practitioners are naturally those relating to National Health Insurance and to Workmen's Compensation, but it would be of great advantage to general practitioners and to some classes of specialists if they were to make themselves acquainted with the main facts stated and described in the other sections also. Each section begins with a short account of the history and development of the social movement to which it relates. Contrary perhaps to what might be expected these accounts are really interesting, and though brief omit nothing of essential importance. Indeed without them it would be very difficult to understand the reason for many of the provisions of the legislative enactments. This is particularly illustrated in the section dealing with Workmen's Compensation. The book is quite up to date, embodying the effect of regulations made only a few months ago—such as those relating to silicosis and asbestosis—and having full descriptive references to the Government Actuary's Report on the Third Valuation of Approved Societies, and to the relevant parts of the May Report and governmental action relating thereto. Clear statements will be found on such complicated or seemingly obscure subjects as "excepted employments" and "exempt persons," on the prolongation of insurance and the extended year, on Class K," and on aged members ceasing to be employed. The only slight omission noticed is that it is within the power of insurance committees to impose on insurance practitioners a lower limit than 2,500 persons, and it would

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[a] *Lectures on Psychiatry*. By J. D. Wiersma, M.D. London: H. K. Lewis and Co. Ltd. 1932. (Pp. viii + 610; 143 figures. 25s. net.)

[b] *Physiology of Exercise*. By Ferdinand August Schmidt, M.D., and Wolfing Kohlrausch, M.D. Authorized translation from the German by Carl B. Spath, M.D., assisted by Emil Keith, A.M., and Leopold Swarz, Ph.D. Philadelphia: F. A. Davis Company. 1931. (Pp. 216; 41 figures. 2.50 dollars.)

[a] *The British System of Social Insurance*. By Percy Cohen. With introduction by the Right Hon. Neville Chamberlain, M.P. London: P. Allan. 1932. (Pp. 278. 12s. 6d. net.)

be desirable whenever this maximum number is mentioned to note that the average number of insured persons on the list of a practitioner is in the neighbourhood of 1 000 and that the ordinary or general number is less even than this The book can be very highly recommended

NOTES ON BOOKS

The March instalment of the *Annals of Medical History*[1] opens with the first part of Sir Wilmot Herringham's account of the life and times of William Harvey which deals with the first twenty two years of his life and the conditions at the older universities thus expanding Sir Wilmot's Harveian Oration in 1929 on "Circumstances in the life and times of William Harvey" The second and concluding part of Dr Dempster's article on John Locke physician and philosopher is occupied by a reproduction of his *Observationes Medicae* In a well illustrated and attractively written appreciation of Leonardo da Vinci as a physiologist Miss Leona Baumgartner of New Haven has had the advantage of utilizing Professor J F Fulton's library of works bearing on this remarkable genius Leonardo da Vinci's portrait adorns the cover of this instalment and that of Raymond Vieussens appears as the frontispiece thus reproducing the frontispiece of his Neurographia to which Professor R H Major refers in his interesting article on Vieussens and his treatise on the heart In 1929 Dr Joseph Walsh's article showing reason to believe that Galen was born on September 22nd A D 130 appeared in these Annals and was countered by the late Professor Ilberg who argued that the date was a year earlier Dr Walsh in a scholarly documented article now courteously maintains his thesis The origin of the University of Bologna and its history are eloquently related by Dr Giuseppe Franchini of Modena Obstetrics in Mexico before 1600 is the title of an article by Mr Nathan van Patten and Dr D W Montgomery contributes a valuable note on the historical position of *Coccidioides immitis* among the pathogenic fungi of the skin Dr W C Souter's recent account of Harvey in Aberdeen is the subject of a pleasant editorial and there are a number of reviews including one of Dr G C Peachey's *John Heaviside Surgeon*

We learn from the preface to the second edition of the *List of the Transactions Periodicals and Memoirs in the Library of the Royal College of Surgeons*[2] which we owe to the courtesy of the Librarian that the first separate list was first printed in 1890 This second edition which has been prepared for the printer by Mr W A Fusedale contains approximately twice as many entries as the first It runs to 169 pages It is hoped that research workers will avail themselves of this list which is on sale at the College price 2s 6d

VIGNERON'S *Manuel des Calculs de Laboratoire*[3] deals generally with the mathematical problems that present themselves in physical chemical and biological laboratories Treating of such diverse subjects as the theory of errors the calibration of laboratory glassware and the diagrammatic representation of polyphase systems it approaches them from an essentially practical standpoint It indicates the natural sources of experimental error points out the effects of their incidence and shows how to evaluate them and how to derive the due correction The manual is thus not only an aid but also an incentive to accuracy A chapter is devoted to methods by which mathematical solutions may be simplified Another chapter deals exhaustively with the laws of chemical reactions generally and shows how the results of experiment are to be correlated with the laws by which they are governed No extensive knowledge of mathematics is postulated only an elementary knowledge of the principles of the infinitesimal calculus is required on the part of the reader The book is commendably lucid and will prove most useful to those whose work demands experimental accuracy

Italian Medicine[10] is the latest addition to the series of historical medical manuals known as Cho Medica which is appearing under the editorship of Professor E B KRUMBHAAR The present volume is written by Dr CASTIGLIONI the professor of the history of medicine at the Royal University of Padua The book like its predecessors in the series is most readable and is a mine of information packed into 134 pages The long procession of names shows the eminence to which Italians have attained in every branch of medicine Leonardo and Spallanzani Fracastoro and Castellani Morgagni and Theodoric with a host of lesser teachers are known throughout the world and about each of them Professor Castiglioni has something interesting to say In two hours he places his readers in a position and with the desire to go to original sources for further information The editor is to be congratulated upon his successful translation, and the publishers upon their decision to provide a larger number of illustrations than are contained in some of the earlier volumes

[1] *Annals of Medical History* New Series Vol iv No 2 March 1932 Edited by Francis R Packard M D New York Paul B Hoeber Inc London Baillière Tindall and Cox (Pp 109–218 illustrated Subscription in Great Britain £1 1s 6d per volume of six numbers)

[2] *List of the Transactions Periodicals and Memoirs in the Library of the Royal College of Surgeons of England* Second edition London Taylor and Francis 1931 (Pp 169 2s 6d)

[3] *Manuel des Calculs de Laboratoire* Par H Vigneron Preface de P Lecaul Paris Masson et Cie 1931 (Pp 183 42 figures 40 fr)

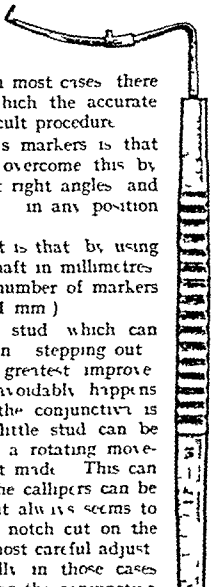
[10] *Italian Medicine* By Arturo Castiglioni M D Translated by E B Krumbhaar Cho Medica New York P B Hoeber Inc 1932 (Pp xi + 134 11 figures 1 50 dollars)

PREPARATIONS AND APPLIANCES

SCLERAL MARKER

AN ACCESSORY TO THE IGNI PUNCTURE TREATMENT OF DETACHED RETINA

Dr STEWART MACKY D O M S Western Ophthalmic Hospital N W writes To overcome the difficulty in some cases of marking out the position for the scleral puncture when using the ordinary callipers Amsler devised his set of eleven markers Simple and effective as these are in most cases there still remain a few instances in which the accurate measuring of the distance is a difficult procedure



The fault we find with Amsler's markers is that they are too straight We have overcome this by simply bending the shaft nearly at right angles and find the marker now sits snugly in any position of the eye

Another addition or improvement is that by using a sliding collar and marking the shaft in millimetres we have been able to reduce the number of markers to two (10 to 15 mm and 16 to 21 mm)

The collar also carries a blunt stud which can safely be rested on the limbus when stepping out the distance We find this the greatest improvement Even if (as sometimes unavoidably happens during retraction of the wound) the conjunctiva is drawn up over the limbus this little stud can be slipped under the fold and with a rotating movement a very accurate measurement made This can be done in most instances where the callipers can be used of course but the sharp point always seems to me rather dangerous The simple notch cut on the original Amsler marker needs the most careful adjustment to ensure accuracy especially in those cases where it is difficult to avoid rucking the conjunctiva over the limbus

My thanks are due to Mr J Cole Marshall for his suggestions and for allowing me to try out various modifications in his clinic at the Western Ophthalmic Hospital

Another use of this instrument is the accurate definition of the equator in following Jameson's technique for recession of the recti muscles in cases of squint

Messrs John Weiss and Son Ltd have made this instrument and can now supply it.

British Medical Journal

SATURDAY, MAY 21st, 1932

THE MILK PROBLEM

The problem of the inadequate supply of good milk is one that has always exercised those concerned with the public health of the country. We do not consume per head of population as much milk as most of our nutritionists—on the evidence it is held, that is not in the best interests of the nation's health. It was stated in Parliament about a year ago that the consumption of milk in Scandinavia is six times as much as that in England and in Canada twice what it is in this country. It may to a certain extent be true that the public has not been sufficiently instructed in the value of milk as a food despite the efforts of health authorities, but this is, however, very little than useless to tell people to "drink more milk" if there does not exist everywhere the power they can afford and work still if much of the milk is not of the best quality. The state of affairs at the moment is clearly set out in the report of the special committee appointed by the People's League of Health to make a survey of tuberculosis of bovine origin in Great Britain.[1] This committee found that 10 per cent. of milch cows in the country are infected with tuberculosis, that 6·7 per cent. of raw market milk contains living tubercle bacilli, and that 2,000 deaths and 1,000 fresh cases of bovine infection, a severely conservative estimate, occur in the population every year. Lord Moynihan declared last year in the House of Lords that over 30 per cent. of tuberculosis in children came from cattle, and that 70 per cent. of non-pulmonary tuberculosis was borne by milk. From these figures it is possible to form some estimate of the amount of disease and crippling which must exist, but which no statistics can accurately measure. It is true that tuberculosis is diminishing, but one of the contributory factors is the devoted effort made during the past ten or twenty years to improve the conditions in which milk is produced and in which the children of the country live. Moreover other diseases are spread by milk—such as diphtheria, typhoid and paratyphoid fevers, scarlet fever, undulant fever, and septic sore throat.

The problem of sufficient milk consumption is therefore the problem of safe milk supply. During the past year several determined attempts have been made to face this question and to set down in black and white its exact scope and the best measures for dealing with it, both immediately and ultimately. The memorandum on bovine tuberculosis in man issued by the Ministry of Health contained much valuable information, and the report of the committee of the People's League of Health also puts forward a detailed and constructive plan which would co-ordinate all existing efforts. So exhaustive has its work been that a Royal Commission, the appointment of which has been suggested would not be likely to add anything of value to our knowledge of the subject and would certainly waste much time and money in covering the same ground. Broadly speaking there are two ways of ensuring a supply of harmless milk. One is to eradicate tuberculosis from dairy cattle, the other is to pasteurize all milk except that produced under ideal conditions from tubercle-free herds. Obviously the former method is hard, the latter comparatively easy. No one taking a long view of the national welfare would however concentrate on the latter and neglect the former. The question is: How to set about the colossal task of eradication and to what extent can the palliative measure of pasteurization be used in the meantime? The committee has given a definite lead towards eradication by recommending three groups of procedures. The first, prophylactic vaccination of cattle, is still in the experimental stage. The second method is to increase the number of tubercle-free herds. The Departmental Committee on the Production and Distribution of Milk which reported in 1919 recommended that official veterinary assistance in diagnosis and eradication should be given, and that certificates should be issued to owners who complied with the necessary conditions, it also urged the establishment of a system of milk grading. The Ministry of Health provided a system of grading in 1922, but the Ministry of Agriculture has given no assistance of the kind recommended. The committee of the People's League of Health is much impressed with the value of such a scheme, and states that cattle-breeders would welcome some indication that the authorities intended to assist them. In recommending measures for the detection and elimination of open cases of tuberculosis, it points out that the Tuberculosis Order of 1925 issued by the Ministry of Agriculture has failed chiefly because sick animals are not detected early enough. It puts forward detailed suggestions for amplifying and improving the Order, and advocates an educational campaign to ensure the good will of the farmers. All its suggestions follow lines already in force, and give a clear lead to those who desire to secure its ends. The Milk (Special Designations) Order, 1923, represents a definite attempt to encourage owners to maintain tubercle-free herds, but is somewhat unsatisfactory. The names are to many persons misleading. 'Grade A,' which anyone might reasonably suppose to be the best, is in fact the lowest of the three; 'Certified' sounds rather like a 'pass degree' but is in fact the highest; "Grade A (T T)" means very little without special explanation. A revised table of designations should clear up these anomalies.

The question of how far to use the immediate measure of pasteurization is a very controversial one. The spread of tuberculosis and other milk-borne diseases from cattle to man can be prevented with practical

[1] *British Medical Journal*, April 9th, 1932, p. 618.
[2] *Ibid.*, 1931, i. 933.

certainty by pasteurization Professor J C G Ledingham, one of the foremost authorities on the laboratory aspect of the problem, thinks that no raw milk is really safe and eminent physicians hold that all milk except certified milk should be pasteurized The arguments on the other side are that pasteurization impairs the value of milk and by rendering dirty and diseased milk innocuous discourages farmers from improving their dairy hygiene or keeping tubercle out of the herds The consensus of opinion is that undesignated milk should be pasteurized but the best means of ensuring that this precaution is practised all over the country is debatable Pasteurization is a precise scientific process laid down in the Milk Order the milk must be exposed to a temperature of between 145° and 150° F for thirty minutes and then at once cooled below 55° It demands special plant and expert attention and is therefore not within the scope of many small producers To make the pasteurization of all undesignated milk compulsory would inflict great hardship on those who cannot afford the plant and staff and would probably cause a serious diminution in the supply besides which such a measure could only be enforced by a larger number of qualified officials than could possibly be made available for some years Dr W G Savage however elaborated some little time ago[1] a scheme for giving the bigger local authorities power to require that all ungraded milk entering their area should be pasteurized Such a scheme would, he claims enable effective supervision to be exercised over the milk supply of large concentrations of people it would provide valuable experience of pasteurization and it would check the practice of treating milk by various heat processes many of them unscientific and casual merely in order to prevent it from going bad It has been adopted by the committee and at present holds the field

The evidence on whether pasteurized milk is as nutritious as raw milk is very conflicting Some workers have shown that pasteurization impairs vitamin C and changes several of the other constituents of the milk, but many physicians children s hospitals and medical officers of health state that milk so treated has a highly satisfactory nutritive value The work of Mr C E Sprawson however recently reported to the Odontological Section of the Royal Society of Medicine - suggests that raw milk has an important factor that pasteurized milk has not Mr Sprawson finds that a daily ration of raw milk given to children will protect from caries any tooth that has not completely formed If this is confirmed current thought about pasteurization will have to be revised its confirmation might have the salutary effect of reinforcing the resolve of the country to purify the sources of its milk We are glad that the committee suggests that the pasteurization of graded milk might be left to the discretion of retailers as a precaution against milk-borne disease and the effects of warm weather and does not propose to follow those authorities who would pasteurize everything but certified milk as a routine measure To do so would in our opinion, stultify the elaborate care with which graded milk is produced Grade A (T T) milk is as safe as is needed for everyday life

[1] *Lancet* 1931 i 546

[2] *British Medical Journal* January 30th 1932 p 190

PARLIAMENT AND NATIONAL HEALTH INSURANCE

The debate in the House of Commons on the second reading of the National Health Insurance and Contributory Pensions Bill reported in our Parliamentary Notes this week was of much interest The Bill is rendered necessary by certain tendencies revealed at the third valuation of the assets and liabilities of approved societies which if allowed to continue unchecked would endanger, and perhaps destroy the financial stability of the insurance scheme In an article dealing with the results of the valuation[1] we mentioned three major matters in respect to which modifications of the system were urgently called for as being serious handicaps to its successful working These were the superabundance of small approved societies the lack of balance between the benefits to which women were entitled and the contributions made by them and the position of married women within the scheme The first of these points is not touched by the Bill the other two are met by a reduction in the amount of cash benefits in the case of women and especially married women In addition the Bill proposes that arrears of contributions caused by unemployment which since 1928 have been excused in full shall in future be excused only to the extent of one-half the other half having to be met by the insured person himself if he wishes to remain in full benefit The arrangements still make generous provision for the insured person in arrears, both as regards medical benefit and as regards pension rights and even the proposed reduction in cash benefits will leave these at above the pre-war level As the Minister of Health pointed out national health insurance was designed only to provide an assured minimum it did not pretend to provide maintenance for the insured person when out of work not a penny was being taken away from the fund what he was doing was to adjust matters so as to ensure that the money would go round and that the scheme did not break down

The debate showed that the position of the scheme in our national life and the importance of preserving its contributory and insurance character were amply recognized Sir Hilton Young himself described it as 'the prize of our social organization and an example to the world and said that we must maintain the very foundation of the scheme which was that it was a contributory scheme based on the principle that people got what they paid for That was an element

[1] *British Medical Journal* January 9th 1932 p 67

[illegible] [illegible] Mr Rhys Davies [illegible] he is to be attacked towards the medical [illegible] of to be he is in maintaining a [illegible] to find a remedy which has [illegible] to be had to admit that there [illegible] there was not anxious [illegible] the Bill continued to [illegible] insurance [illegible] that now in the future [illegible] and that it was till the [illegible] problem in the world In the [illegible] the Bill did not develop [illegible] Only from the South West of Scotland [illegible] of a consensus of antagonistic [illegible] McGovern and that he and his friends [illegible] with the national health insurance [illegible] doctors and Mr Macquisten [illegible] was angry but with the people [illegible] to the medical profession to becoming [illegible] Mr Maxton however though [illegible] with the opposition thought that [illegible] had been made out It is [illegible] that the Scottish people knew by this time [illegible] importance to attach to such expressions of [illegible] The changes proposed by the Bill do not affect in any way the position of the medical profession or of insurance practitioners in relation to national health insurance but the recognition of that position in the speech of Mr Ernest Brown Parliamentary Secretary to the Ministry of Health and the repudiation by Mr Llewellyn Jones and Dr O Donovan of such attacks as were made upon it nevertheless deserve acknowledgment

One outcome of the statement of the Minister of Health is to make it clear that until the year 1935 at the earliest there can be no legislative proposals for enlarging the scope of the National Health Insurance Acts in any direction that involves increased expenditure or liability He ended at 1935 because there is then due under the statutes a general actuarial survey of all the conditions and circumstances of national health insurance, and that would give an opportunity for reviewing the situation The British Medical Association as representing the profession still stands for an extension of a national health contributory insurance scheme to provide consultant and specialist as well as general practitioner services and to include, broadly and under proper conditions, the dependants of the present class of insured persons and others of like economic status It is more than doubtful, however whether conditions will even by 1936, be such as to allow of so large an extension, and we may note here as a matter of general interest that the Insurance Acts Committee has appointed certain of its members to consider the possibility of extensions of a more gradual character and to open consultations with the Ministry of Health and the Department of Health in Scotland on this subject

INTESTINAL DISEASE AND URINARY COMPLICATIONS

The general impression derived from a combined discussion by the Sections of Urology and Proctology at the Royal Society of Medicine, on May 11th, was that urinary complications are not so common in diseases of the large intestine as might be anticipated In spite of the close proximity and associated function of the urinary and intestinal organs diseases rarely spread from one to the other For instance, in inflammatory and ulcerative lesions of the large intestine it is rare for the infection to pass to the bladder or kidneys It seems in fact that diseases of the large intestine do not predispose to urinary infections unless some definite defect exists in the urinary tract This rule is well exemplified by the urinary infections that result from excision of the rectum At the stage at which carcinoma of the rectum is usually diagnosed less than 3 per cent of patients have an infected urine As a result of injury to the nerve supply of the bladder during rectal excision patients are unable to pass urine naturally for a few days after the operation and during this period or immediately after about 40 per cent of men and 70 per cent of women develop a *B coli* infection of the urinary tract We here have an example of interference with normal function determining infection in an otherwise resistant organ Diverticulitis of the colon is an intestinal disease which is fairly commonly associated with urinary complications The inflammatory thickening of the colon and local peritonitis which accompanies the condition may result in adhesions between the colon and bladder leading eventually to a vesico colic fistula—incidentally a comparatively late complication This disease appears to be the commonest cause of such a fistulous communication between the colon and bladder At an earlier stage of diverticulitis urinary complications may take the form of pericystitis and perivesical abscess both of which cause frequency and perhaps painful micturition In most cases the best treatment for vesico colic fistula is immediate colostomy The opening in the bladder usually closes after the establishment of a colostomy, and the cystitis improves While most surgeons are in favour of this policy the recent discussion showed that some preferred an inguinal and others a transverse colostomy It is to be regretted that better records are not available of the ultimate prognosis in cases of vesico colic fistula, permitting comparison of different methods of treatment

THE ROYAL SOCIETY CONVERSAZIONE

A guest of the Royal Society at one of its conversaziones should be a polyglot for in the plurality of worlds inhabited by men of science strange and diverse languages are spoken Yet to these languages there is a common grammar—the scientific method There is increasing room to-day for the application of this method to medicine, which is becoming more and more of a science and less and less of an art Those who deplore this trend must feel that the President of the Royal Society, Sir F G Hopkins is partly responsible for it through his great work in biochemistry—a science that more than any other has had its repercussions on medicine in recent times Many interesting medical exhibits were shown on May 11th The National

Institute for Medical Research put up an apparatus to demonstrate how crystalline vitamin B is prepared A solution of ergosterol in ether is passed under pressure from purified nitrogen through a silica spiral round a mercury vapour lamp One milligram of the white crystals of calciferol finally obtained represent 40 000 rat doses A series of preparations showed the effect of calciferol in rickets and also the results of overdosage—renal calculi calcification of the vessels of the heart etc Fat removed from vitamin B but having so to say a family connexion with it, was an exhibit illustrating the technical application of x-ray crystal analysis By this method it has been shown that the only crystalline constituent of enamel and dentine is apatite In the enamel these crystals are regularly arranged at an angle to the surface of the tooth their disposition in the dentine is disorderly Great interest was shown in the five exhibits set up by the Imperial Cancer Research Fund Three of these were devoted to the effects of vital staining with trypan blue Fibroblasts of embryonic and adult tissues of the mouse growing *in vitro* segregate trypan blue in the form of granules Malignant fibroblasts (sarcoma cells) do not segregate the dye but are actively phagocytic A series of beautifully stained preparations showed that while mammary gland cells of the mouse stain *in vitro* with trypan blue mammary carcinoma cells do not Similar observations on other types of carcinoma indicate that the failure to segregate acid dyes such as trypan blue is one of the characteristics of cancer cells Another interesting observation was that vital staining with trypan blue reveals no difference between the filterable tumours of the fowl and the malignant tumours of mammals The other two exhibits dealt with the action of radium on malignant growths Irradiation of tumour cells *in vivo* results in an immediate action on the mitochondria which become vesicular Mitosis is inhibited but after an interval the cells increase in size By a series of carefully controlled experiments it has been shown that a therapeutic dose of radium damages malignant cells but that this damage is not sufficient to kill them The regression of a tumour treated by radium is not due to a selective lethal action on the malignant cell but results from the combined injury on the tumour parenchyma and on the tumour bed This injury induces the ordinary processes of repair with invasion of leucocytes and the laying down of fibrous tissue Radium in other words knocks the tumour partly out of action and leaves the body to deal with it after its own fashion Other experiments have shown that the therapeutic effect of irradiation is strictly local there is no general indirect effect on the whole organism Microscopical sections shown by the Lister Institute demonstrated the presence of elementary bodies (Borrel bodies) in fowl pox and the conglomeration of these known as Bollinger bodies The Paschen bodies of vaccinia and variola were also shown Professor Ledingham exhibited specimens of the causative organism of pleuro pneumonia and agalactia As he pointed out at the Royal Microscopical Society [1] the organism of bovine pleuro pneumonia is probably a bacterium or fungus possessing elements so small as to be able to pass through the lower grades of filters An interesting lecture was given by Professor Adrian on the activity of nerve cells and sense organs Brief waves of activity or impulses are discharged in rapid succession down each nerve fibre These impulses give rise to electric charges which can be amplified and recorded During the lecture the discharges of activity from a ganglion in the tail of a water beetle and the arrival of impulses in Mr B H C Matthews's triceps were recorded by a loud speaker Space does not allow comment on other exhibits among which however we must mention one showing the abnormalities induced by the x-ray treatment of the seeds of *Primula sinensis* the inheritance of such abnormalities is being studied Nor must we omit the fossil form Eocarcinus which throws important light on the evolution of the crab from the lobster Eocarcinus was it seems the lobster who decided to become a crab Once more the Royal Society has given its guests an opportunity of getting a glimpse of the intense activity that ceaselessly goes on in the scientific world untroubled by political strife and remote from the vicissitudes of the metal gold

[1] *British Medical Journal* April 30th p 709

THE PARATHYROIDS AND GENERALIZED OSTEITIS FIBROSA

Since Collip's work on the parathyroid gland and his isolation of the hormone in 1925 a great many observations have been made on its physiological properties and on its relation to disease especially certain diseases of bone Secondary hyperparathyroidism occurs in abnormal skeletal conditions such as osteomalacia secondary carcinoma of bone and multiple myelomata, while the hyperparathyroidism of generalized osteitis fibrosa (von Recklinghausen's disease) is now considered to be primary In other words generalized osteitis fibrosa is not strictly a disease of bone but a manifestation of the metabolic disturbances following excessive parathyroid secretion The part played by the parathyroids in this 'disease has been carefully investigated in recent years the work of Donald Hunter[1] in this country affording an excellent example of the way in which medicine can make its contribution to physiology Oversecretion of the parathyroids results in an increased output of phosphorus and calcium in the urine and a hypercalcaemia the most marked feature being the elevation of the blood calcium It has been shown that these calcium salts are derived from the bones The urinary output of calcium in generalized osteitis fibrosa may be as much as six or seven times greater than normal therefore the most prominent feature in the bones is resorption This disease was described by von Recklinghausen in 1891 and distinguished by him from osteomalacia In 1904 Askanazy reported a case in which a parathyroid tumour was found at necropsy It was some time however before the significance of this association was grasped The first operation for the removal of a parathyroid tumour in this disease was performed in 1926 by Mandl of Vienna Since then the existence of hyperparathyroidism has been demonstrated in thirty two cases of generalized osteitis fibrosa in twenty one of which a parathyroid tumour was removed at operation Another case has recently been published by G Gordon

[1] Hunter Donald and Turnbull H M *Brit Journ Surg* October 1931 xix 203

Taylor P Wyatt and S L Baker.[1] In the case one bone in which a fracture of the femur had occurred had previously been amputated at the hip joint on account of suspected malignant growth. The patient was admitted but with fracture of the other femur and the thumb was removed. X-ray photographs taken after the removal of a parathyroid tumour showed increased density of bone and localized appearance of the healed areas of fracture. Next to pain in the case was the relation of the blood calcium at 9·9 mg. per 100 c.cm. [illegible] The author quotes other cases in which a normal blood calcium was associated with severe symptoms and signs of [illegible] pain and tenderness of bones, pathological fractures, thirst and polyuria, hypotonicity of the [illegible] and vomiting.—C. I. Cosin has drawn attention to another—namely excessive growth of hair. The value of clinical research to the understanding of a disease but of normal health is well illustrated by the contributions of medicine to endocrinology. The end of the classroom in this branch of physiology will be manifest in the discussion on the clinical and medical aspects of recent work on bone disease arranged by the Section of Medicine at the Centenary Meeting in July.

ARTIFICIAL PREPARATION OF VITAMIN A

In a letter to *Nature* (May 14th) Dr. J. P. Bowden and Dr. C. P. Snow from the Laboratory of Physical Chemistry, Cambridge, give a short account of experiments they have been carrying out on the vitamins A, B, C, and D. Employing photochemical and spectroscopic methods of chemical analysis they have made several important observations. By these measures they believe they have produced vitamin A artificially. Biological experiments are at present being carried out to confirm this. The method briefly is this (to quote the authors): "The procedure was to study the absorption spectrum of the substance and then to irradiate it with an intense beam of light of similar wave length to that of an absorption band selected after consideration of the spectroscopic data. When applied to a suitable pre-vitamin, monochromatic irradiation with light of the correct wave length produces maximum yields of the vitamin; on the other hand, when the destruction by irradiation of the biological activity of a vitamin is effected by the elimination of an absorption band, the activity can be linked up conclusively with the presence of the band." When a complicated molecule such as a vitamin, is irradiated with rays of varying wave lengths, some of the rays may be decomposing it into different substances while others may be bringing about a recombination of these substances. In the technique adopted by Drs. Bowden and Snow this difficulty is overcome as by means of quartz crystals, they are able to obtain a beam of ultra-violet light of any desired wave length. In this way, by monochromatic irradiation of carotene, they have obtained a substance which absorbs light in a way known to be characteristic of vitamin A. Other important observations have been made on vitamins B_1, C, and D; a fuller account of these experiments will be published later. To quote the authors once more: "It is already clear that irradiation with monochromatic light has very great advantages (as compared with the use of filters) for photochemical experiment in the ultra-violet, especially in the case and certainty with which an absorbing group can be eliminated from a complex organic molecule by irradiation with light of related frequency."

[1] Taylor C. Wyatt P. and Baker S. L. *Ibid.* April 16th, xiv, 100.
[2] Cosin C. I. *Guy's Hospital Reports*, July 1931, lxxxi, 297.

APPLIED PHYSICS OF TO-DAY

As a legacy from the earlier stages of the medical curriculum most of us still possess a few sparks of interest in general science. Perusal of the National Physical Laboratories' annual report for 1931[1] may therefore provide entertaining study for all but a few medical philistines. The space devoted to medicine, which is admittedly small, deals mainly with x-rays, radium, and experiments with dental alloys, fogs, and meat wrappers. It is noteworthy, by the way, for the coining of the new word "spreadability" as applied to butter—hardly a matter for congratulation. The report refers to the internationally recognized and measurable roentgen unit in x-ray dosage, recalls the part played by the National Physical Laboratory in formulating recommendations for the protection of x-ray workers, describes its activities in inspecting hospital x-ray units, and records that four grams of radium have passed through the hands of the laboratory staff for testing during the year. A practical problem was touched in the study of ventilation in long-distance motor coaches, but this appears to have been concerned more with the design of the ventilator than with preventing the entry of exhaust gases. For the rest, the report deals mainly with investigations in the realm of applied physics, a range which includes anything from the design of barges and the resilience of the steel girders used in the British Museum to experiments illustrating the mathematical theory of fluid motion as revealed by the effect of varying wind pressure on the surface of water. Aeronautical science occupies considerable space, and some interesting questions are dealt with. The "wind tunnel" is mentioned in connexion with aerodynamics in general and aeroplane designs in particular, while "spinning" and "buffeting"—the latter a condition of instability due to eddy currents formed in flight—are some of the problems discussed. Among the great diversity of other subjects coming within the ambit of the laboratory are acoustics, wireless, navigation, metal plating, electrical cables, motors and insulators, and the use of x-rays in industry.

[1] The National Physical Laboratory. Report for 1931. London: H.M. Stationery Office. (1s. net.)

We publish in our *Supplement* this week the full provisional programme for the Centenary Meeting of the British Medical Association, together with a list of hotels in London offering accommodation, and other information useful to members who propose to take part in the proceedings. The *Supplement* also contains an abstract of the memorandum on Medicine and the Patent Law, submitted by the Medical Research Council to the Departmental Committee.

The First Hundred Years

NOTES ON THE HISTORY OF THE ASSOCIATION

THE British Medical Association which was founded at Worcester in July 1832 by Sir Charles Hastings celebrates its centenary next July under the Presidency of Lord Dawson of Penn We publish below the sixth of a series of advance extracts from the *History of the Association* which Mr E Muirhead Little F R C S at the invitation of the Council is preparing for publication at the time of the commemorative proceedings in Worcester and London The first article appeared on December 5th 1931 the second on January 2nd 1932 the third on January 30th the fourth on March 26th and the fifth on April 9th

THE ASSOCIATION AND THE POOR LAW

At the Annual Meeting held at Oxford in July 1835 it was unanimously resolved that a committee be appointed to consider the best means of affording medical relief to the sick poor and more especially with reference to the operation of the new Poor Law Act Thus the first shot was fired in the long drawn out battle between the medical profession and the bureaucrats and guardians in which the Association championed not only the rights of the general practitioner but also the best interests of the sick poor

The chief allegations made at this meeting were that many boards of guardians having in view almost exclusively the pecuniary interests of the ratepayers were anxious to simplify their arrangements and adopt the smallest possible expense that in their endeavours to do so they necessarily legislated on medical subjects to the great detriment of the sick poor and to the offence and injury of the professional body—for example the power to decide on the necessity of medical relief is left in a marked way to the discretion of non medical officers Another cause of just complaint was the practice of the boards in some unions of dividing them into districts of great extent comprehending many parishes and a large population all confided to one medical officer thereby placing him at a distance from the sick Delay in attendance must necessarily follow and danger in illness has thereby been increased Moreover in some unions a charge per case had been adopted at the very low rate of 2s 6d varying a little to 3s 6d according as the number of cases in the parish per annum diminished —a case implying any description of illness and of whatever length short of twelve months or any accident requiring surgical attention midwifery excepted—these terms being pressed upon practitioners by threats of the introduction of young adventurers fresh from the medical schools To realize the parsimony and inhumanity of such guardians it must be observed that the charge of 2s 6d was a charge per sick person requiring immediate treatment and not a charge per head of all paupers sick and well

The report of the Poor Law Committee which was read at the next Annual Meeting was printed and published in a separate form and circulated It became and long remained authoritative on this subject The following passage is deserving of reproduction

> The office of parish surgeon should combine the highest qualifications of the medical body it being clear that no professional responsibility whatever public or private equals it in variety or extent It embraces and presents in daily profusion cases in medicine surgery and midwifery requiring as profound knowledge and diligent care as any public institution affords for each of these branches singly *It should unite therefore an acute perception of the incipient stages of disease with well directed efforts for its prevention* accompanied by the most diligent and scientific treatment

The words italicized seem almost prophetic in their wisdom Sir James Mackenzie took the same point of view and urged the same argument in speaking of the role of the general practitioner in our own time

The report did not mince matters It stated that it appeared

> That hardly had the new law come into action when a prejudice was conceived by its administrators against the medical profession and although they were necessarily and totally unacquainted with the various bearing of this important subject not less than with the best mode of effecting an alteration yet in general they distrusted and sternly resisted the suggestions of those who alone were able to assist them—namely the medical practitioners Nothing is more clearly borne out by the evidence your committee has collected than this circumstance though it is gratifying to them to state that in *some unions* and in the sphere of operation of *some assistant commissioners* a more conciliatory spirit has been evinced

Instances were given of cases in which boards of guardians had evinced a desire to meet the fair demands of the professional body and in these cases it had almost invariably happened that the assistant commissioners on the Central Board had refused to ratify the appointments made The degrading system of tender by candidates for Poor Law medical posts was emphatically condemned by the committee

In addition to the grievances complained of at the last Annual Meeting a new one had arisen—that is the institution of medical clubs intended to provide medical relief for two classes of the poor—the independent labourer and the pauper The assistant commissioners in Essex Gloucestershire etc proposed clubs of this kind At Epping the guardians were to have the privilege of adding to the pauper schedule any name they might think proper during the contract paying only at the same rate as for those originally included As the committee remarked such clubs were entirely different from the recently established medical clubs which had nothing to do with pauperism If such clubs were established by the guardians wholesale abuse of the rates would be certain to follow and a position reached similar to that in Ireland in later years where in many places all the population below the gentry were the recipients of gratuitous medical treatment through the Poor Law medical officers who were thus robbed of a considerable part of the income which they ought to have received

The evils of too large medical districts may be exemplified by one case quoted in the report

> In the Wheatenhurst Union comprehending *fourteen* parishes and necessarily much travelling the Commissioners induced the guardians to waive a contract with the established practitioners and to engage *one* young man from the schools who had neither a horse nor instruments

It is noteworthy that in this case as well as many others the authorities in London probably actuated by doctrinaire theories were even worse sweaters than the guardians on the spot who considered their own and their friends pockets After complaining of the indignities often put upon medical officers by boards of guardians the report states

> Those medical men who have presumed to express an opinion unfavourable to the new medical arrangements have

frequently been marked for oppression by the authorities and some have even been induced to withdraw or withhold their names from petitions to Parliament against the system from apprehensions of injurious consequences to themselves

But if the treatment of the profession by the Poor Law authorities was scandalous the treatment of the poor was even more so Sick paupers had in many cases to go long distances to the relieving officer and then to the medical officer should the former in his wisdom think the case a fit one for medical relief

In those unions where a payment per case had been adopted the relieving officer had a stronger inducement to refuse in order than when a contract at a fixed sum existed because by so doing he saved the parish money Several instances have occurred where a disorder in its incipient stage has been denied medical aid because the relieving officer thought the illness not sufficiently serious for attendance Protracted disease or death has occasionally been the consequence

As regards remedies the committee confessed that it was very difficult to suggest any but it plainly stated one great principle that should be observed in future legislation on the subject—namely that the remuneration should not be determined between the interested parties one of which was concerned to reduce it below par and the other to raise it above par A third party should be called in and the scale of remuneration fixed by legislative enactment The committee also recommended the separation of charges for drugs from those for professional services and that wherever possible a dispensary should be fitted up for the supply of medicine to the sick paupers of all the parishes within a reasonable distance at their joint expense while the medical officers should be paid only for the duties which they perform—namely for attendance with a graduated charge for journeys according to the distance and the number of patients It will appear from the above that the chief recommendations of the committee were in principle identical with the arrangements made under the Insurance Act nearly three quarters of a century later with this important difference under the insurance system the doctors are not paid per item but per person on list whether well or ill—obviously more conducive to the encouragement of preventive medicine

It was also resolved at the meeting in 1836 that a petition stating the evils arising out of the Poor Law Amendment Act as regards medical relief and praying for redress should be immediately presented to both Houses of Parliament

A second report of the Poor Law Committee of the Association was made to the Anniversary Meeting at Cheltenham in 1837 and published in volume VI of the *Transactions* The most important recommendations were

That there should be a general professional superintendence of the whole body of union medical officers by a Poor Law Medical Board or by one or more Poor Law Commissioners exercising powers similar to those with which the heads of the Army and Navy medical departments were invested

The committee in a spirit of prophecy looked forward with hope to a period when a Poor Law Medical Board might form a section of a National Board of Health Many things were to happen and generations were to pass away before we the successors of those committeemen were to see this provision fulfilled They repeated their former recommendation that the provision of medicines should be separated from that of medical attendance and they strongly recommended the entire abolition of the system of determining the amount of remuneration by tenders The form and amount of remuneration came in for much discussion which settled down into the recommendation of payment by salary based on a certain percentage of the poor rate in each parish The ratepayers in each parish should elect their own medical officer A petition to Parliament embodying these in the name of the Association was signed by the President

Dealing with the profession itself the Poor Law Committee says

Your committee are led by present occurrences to regret the want of some general discipline some presiding over the members of our profession an influence which is exercised in every profession except the medical It is to be hoped that a higher standard of qualification would ultimately accomplish the desired end but in the meantime something should be done to check the wretched spirit of rivalry speculation the undue bidding and the jobbing which unfortunately are but too frequently to be found among men

In 1842 a special report of the Poor Law Committee of the Association was published in which while congratulating the profession on the measure of success attained the committee discussed the general medical regulations and explanatory circular issued by the Poor Law Commissioners and recommended by the President of the Royal College of Surgeons The following reforms were welcomed (*a*) Tenders for medical attendance were now abolished but it was regretted that the guardians were still left at liberty to fix the price of medicines without reference to any fixed scale or any principle of computation (*b*) Qualifications in both medicine and surgery were henceforth to be required of candidates for union appointments The regulations as to districts of districts were an improvement but were subject to criticism Some areas were much too large The committee urged its objections to the still remaining practice of contracting for medical services

The introduction of a Government Bill for amending the new Poor Law was promised and the committee hoped that the result would be satisfactory if the *principle* on which salaries were to be calculated was to be determined by Parliament The attitude of mind of the Poor Law Commissioners may well be judged from a passage in their Eleventh Annual Report which ran as follows

In fixing this amount [of salary of the medical officers of Poor Law unions] it is necessary that we should keep in view the value at which the services of a medical man are attainable for the purpose under the existing circumstances of the profession

A meeting of medical officers of Poor Law unions with a view to an amelioration of the existing system of medical relief was held in London on October 28th 1847 in which about 200 medical men took part The secretary stated that meetings of medical practitioners had previously been held in various parts of the country to discuss this subject At this meeting it was unanimously resolved that having regard to the nature of the demands made upon medical men charged with attendance on the poor

the scanty remuneration awarded constitutes a grievance which cannot be too strongly stated and for which redress should earnestly be sought [the remuneration] being granted on no fixed principles or scale varies greatly in different localities but that in almost all it is so disproportionately small and in very many of them falls so far short of the expense incurred as to render a large portion of the medical relief bestowed on the sick poor a tax on individual members of the medical profession instead of resting like clothing food and other forms of relief upon the rate paying parishioners in *general*"

A second resolution pointed out that the present system was in the long run uneconomical The Committee had stated in 1839 that the fixed remuneration for permanent paupers in rural districts should be such as to afford the practitioner 6s or 6s 6d a case to be supplemented if necessary up to 10s But the guardians regarded the instructions of the Commissioners—in the Holborn Union the guardians would not pay the medical officers for midwifery cases A committee was appointed by this meeting to watch events and further the interests of Poor Law medical officers This committee and

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In February 1849 Lord Ashley who had been chairman in 1844 of the committee of the House of Commons on the subject of medical relief to the sick poor presided over a meeting of the Convention of Poor Law Medical Officers at which it was decided to present a petition to Parliament Among other grievances it was pointed out that new sanitary duties had been imposed upon Poor Law officers by the Nuisance Removal and Diseases Prevention Act without the provision of any remuneration

In 1851 a deputation from the Convention had an interview with Lord John Russell at which Sir George Grey was present It presented a memorial setting forth the grievances of three thousand Poor Law medical officers who were responsible for medical attendance on three million poor It concluded by suggesting the following principles 1 Permanence of office during competency and good conduct 2 Remuneration in proportion to the *extent and nature of the duties* 3 *Responsibility to* professional authority under medical inspectors Lord John Russell promised that he would specially communicate with the President of the Poor Law Board with reference to the objects sought by the deputation

In 1854 a committee of the House of Commons which had been appointed to inquire into the mode in which medical relief was then administered in the different unions in England and Wales and to ascertain whether any additional facilities might be afforded to the poor in obtaining medical aid made a report in which it deprecated an entire change in the system as administered under the general consolidated Order of 1847 Although the terms of reference seem to have contained no allusion to the grievances of medical officers some of the recommendations did incidentally bear upon them For instance a reduction of large areas was recommended as were security of tenure of office and increase of inadequate salaries

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> It must be understood that we have to fight the boards of guardians for every penny of increased remuneration we wish to give to the miserably underpaid Poor Law medical officials Those engaged in this struggle should remember that as far as its opponents are concerned the battle will turn upon the mere question of pounds shillings and pence It may be all very well for us to descant upon its human aspect as regards the poor but neither the Poor Law Commissioners nor the boards of guardians will view it for one moment in this light

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The Poor Law dispensary system was the subject of questions in the House of Commons in August 1870 In the same year the *Journal* recorded the fact that a petition to the House of Commons in support of Dr Brady's Poor Law Officers Superannuation Bill was extensively signed and that the Royal College of Surgeons of England presented a petition to the same effect signed by its president and two vice presidents The result was that in the Superannuation Act of that year a clause made it permissible to grant pensions to Poor Law medical officers though it was not until some time later and after much pressure that such officers became entitled to pensions as a right The subject of dispensaries came to the front again in 1872 when the Poor Law Committee reported a conference with the Poor Law Officers Association and the interview of a joint deputation with the President of the Local Government Board Especial attention was directed to the importance of establishing dispensaries and the objections to Poor Law officers as medical officers of health of large districts were pointed out

No great agitation for legal action has since been required but the two Associations have not felt able to relax their vigilance on behalf of the sick pauper and his doctor As medical relief was made more efficient so the cost of pauperism decreased but some boards of guardians were incapable of realizing this fact and persisted in attempts to deprive medical officers of their rights so that from time to time the Association had to intervene In the retrospect for 1884 instances of successful action are recorded but the editor of the *Journal* thus summarized the situation

> In no previous year has there been exhibited by boards of guardians generally so great a disposition to deny their liability and to refuse absolutely to pay extra fees to which medical officers considered that they were entitled and we have further to point out that on appeal to the central department the views of the guardians have either been upheld or it has declined to interfere

The writer concluded by expressing the belief that the only hope of improvement lay in an increase in the number of medical Members of Parliament

In 1885 the disputes which had been frequent as to the disposal and treatment of lunatics in workhouses were settled by an Act which rendered it legal to admit and detain for a certain time persons alleged to be of unsound mind In the same year the disfranchisement of paupers was annulled thus assimilating England with Irish paupers who have never been so disqualified The editor's comment on this was It will be interesting to note whether the English poor will now be less averse from seeking parish relief It now seems doubtful whether the English pauper felt the least interest in the question In the same article it was noted that the abuse of the issue of dispensary tickets in Ireland was carried to such an extent as to annihilate completely all private practice among the small shopkeepers tenant

frequently been marked for oppression by the authorities and some have even been induced to withdraw or withhold their names from petitions to Parliament against the system from apprehensions of injurious consequences to themselves

But if the treatment of the profession by the Poor La v authorities was scandalous the treatment of the poor was even more so Sick paupers had in many cases to go long distances to the relieving officer and then to the medical officer, should the former in his wisdom think the case a fit one for medical relief

'In those unions where a payment per case had been adopted the relieving officer had a stronger inducement to refuse an order than when a contract at a fixed sum existed because by so doing he saved the parish money Several instances have occurred where a disorder in its incipient stage has been denied medical aid because the relieving officer thought the illness not sufficiently serious for attend ance Protracted disease or death has occasionally been the consequence

As regards remedies the committee confessed that it was very difficult to suggest any but it plainly stated one great principle that should be observed in future legislation on the subject—namely that the remuneration should not be determined between the interested parties one of which was concerned to reduce it below par and the other to raise it above par A third party should be called in and the scale of remuneration fixed by legislative enactment The committee also recommended the separation of charges for drugs from those for pro fessional services and that wherever possible a dispensary should be fitted up for the supply of medicine to the sick paupers of all the parishes within a reasonable distance at their joint expense while the medical officers should be paid only for the duties which they perform—namely for attendance, with a graduated charge for journeys according to the distance and the number of patients It will appear from the above that the chief recom mendations of the committee were in principle identical with the arrangements made under the Insurance Act nearly three quarters of a century later with this im portant difference under the insurance system the doctors are not paid per item but per person on list whether well or ill—obviously more conducive to the encourage ment of preventive medicine

It was also resolved at the meeting in 1836 that a petition stating the evils arising out of the Poor Law Amendment Act as regards medical relief and praying for redress should be immediately presented to both Houses of Parliament

A second report of the Poor Law Committee of the Association was made to the Anniversary Meeting at Cheltenham in 1837 and published in volume vi of the *Transactions* The most important recommendations were

That there should be a general professional superin tendence of the whole body of union medical officers by a Poor Law Medical Board or by one or more Poor Law Com missioners exercising powers similar to those with which the heads of the Army and Navy medical departments were invested

The committee in a spirit of prophecy looked forward with hope to a period when a Poor Law Medical Board might form a section of a National Board of Health Many things were to happen and generations were to pass away before we the successors of those committeemen were to see this provision fulfilled They repeated their former recommendation that the provision of medicines should be separated from that of medical attendance and they strongly recommended the entire abolition of the system of determining the amount of remuneration by tenders The form and amount of remuneration came in for much discussion which settled down into the recommendation of payment by salary based on a certain percentage of the poor rate in each parish The rate payers in each parish should elect their own medical officer A petition to Parliament embodying these r in the name of the Association was signed by the Presid

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farmers, and others who in England and Wales have always paid for such medical attendance

In 1892 the Parliamentary Bills Committee made an effort on behalf of the Irish dispensary medical officers 'enabling them to obtain redress for their manifold and serious grievances' In 1894 and 1895 a committee of the British Medical Association made exhaustive inquiries into the nursing in workhouse infirmaries in England and Ireland which disclosed many defects and led to salutary reforms

In 1905 the Poor Law again came to the front when in December of that year a Royal Commission was appointed to inquire into the Poor Laws and the relief of distress As far as it was concerned with medical relief its proceedings were closely watched by the Association which tendered evidence on the subject of the sick poor on whose behalf Dr J C McVail made a careful investigation the results of which were laid before the Commission The abolition of boards of guardians was recommended by both the majority and minority reports of the Commission The former recommended among other things that medical assistance should be reorganized on a provident basis in accordance with the recommendations of the report of the British Medical Association on contract practice and with Dr McVail's special investigation while the latter advocated a whole-time medical service by salaried medical civil servants

As the *Journal* remarked it was a discursive document containing many passages of fervent eloquence even its summary of conclusions reading more like an article in a monthly magazine than the various recommendations of a Royal Commission for fresh legislation Some of the changes which it recommended have since been made such as the formation of a Ministry of Labour one of the duties of which would be to organize a National Labour Exchange There had been nearly one hundred reports to Parliament on Poor Law matters since 1834 but none of them like this including pauperism as a whole

Soon after the earliest reports of the Commission were issued a special Poor Law Reform Committee of the Association was formed which studied the subject and reported from time to time to the Council

The introduction of the National Health Insurance Bill of 1911 diverted attention for a while and dealt with a large part of the field covered by the Commission's researches After the passing of the Act, the war and post war troubles occupied the legislature The formation of the Ministry of Health and the passing of the Local Government Act of 1929 which came into force in April 1930 have deprived many of the recommendations of the Commission of more than historical interest The boards of guardians are now abolished and the administration of poor relief of all kinds placed in the hands of county councils and county boroughs

CONFERENCE ON RADIUM

We have received for publication this week the following report of a conference on radium therapy with special reference to the use of the "four-gram bomb"

This Conference owed its origin to doubts emphatically and publicly expressed as to whether the policy of the Radium Commission was in certain respects mistaken and in particular as to whether its decision to convert the existing single unit (in use at the Westminster Hospital) of 4 grams of radium into four units of 1 gram each was sound There were present

Lord Dawson of Penn	President of the Royal College of Physicians (in the chair)
Lord Moynihan	President of the Royal College of Surgeons
Mr Wilfred Trotter	Representing the Medical Research Council
Sir Frederick Menzies	Chief Medical Officer L C C
Dr Watts Eden	President of the Royal Society of Medicine
Mr H S Souttar	Representing the British Medical Association
Prof Arthur Hall Mr Ernest Miles Prof Woodburn Morison	Representing the Radium Commission

The Conference first considered a memorandum, the salient parts of which are as follows

'What this Conference can usefully do is to consider how far the radium centres within the purview of the Radium Commission with their equipment measures and men, and available funds are at the present time suitable places for the use of the 4 gram bomb

'It is impossible to avoid the conclusion that the benefits from the bomb to patients under conditions existing in the Westminster Hospital have been problematical that the use of the bomb is at present experimental involving considerable outlay of money and that the Westminster Hospital which exists primarily for treating the sick poor does not consider it justifiable to employ its funds in the prosecution of this piece of experimental medicine

When the Conference has heard the evidence on which this conclusion is based it may or may not agree with this conclusion which would not involve condemnation of bomb therapy as such But does it not bring us to this conclusion—namely that the testing out of new methods of radium therapy for example surface radiation and other similar problems requires a special institute staffed by skilled radium therapeutists? England is in serious need at the present time of such a fully equipped radium institute and equally is in need of more skilled radium therapeutists

At the present time we are at serious disadvantage compared with for example Sweden France Belgium etc each of which countries possesses a radium institute well equipped and staffed Our present deficiency in men and means is accounted for by the straitened condition of the national finances The hospitals of this country are having grave difficulty in maintaining their present standard of work and have no money to institute new services

RESOLUTIONS ADOPTED

The Conference next considered written and oral evidence and then after full discussion unanimously passed the following resolutions

1 That in view of all the circumstances this Conference is of opinion that the Radium Commission arrived at a sound conclusion in discontinuing the use of the 4 gram bomb at the present juncture though this decision is without prejudice to the question of the therapeutic value of 4 gram or even larger aggregations of radium

2 That in the opinion of this Conference a fully equipped radium institute is needed in London where the more difficult and speculative problems connected with radium and ray therapy can be studied by the combined efforts of a trained staff

The Conference was in agreement with the Radium Commission that a scientific inquiry on certain aspects of the radium problem would be of value and after discussion unanimously passed the following resolution

3 That in the opinion of the Conference an expert committee should be appointed with the following references (*a*) What is the scientific case for mass radiation by radium and what are the advantages

and dangers attaching to the use of such radiation? (*b*) What are the advantages and risks of massive surface radiation by radium compared with those of radium needles and radon seeds? This committee to obtain any evidence and seek any information which it may think necessary *its proceedings to be private and its report to be made to the Conference*

TECHNICAL COMMITTEE ON MASS RADIATION

The following is the constitution of this technical committee on mass radiation

Lord Dawson of Penn P R C P
Lord Moynihan P R C S

Chairman Mr Henry Souttar

Physics
The Lord Rayleigh F R S
Professor J C M Lennan

Radiotherapy and Medicine
Dr Roy Ward (Radium Institute)
Dr G F Stebbing (Lambeth Hospital L C C)
Dr B W Windeyer (Middlesex Hospital)

Surgery
Mr Cecil Rowntree (Cancer Hospital)
Mr Geoffrey Keynes (St Bartholomew's Hospital)

Gynaecology
Mr Louis Rivett (Middlesex Hospital)
Dr Elizabeth Hurdon (Marie Curie Hospital)

Experimental Radiation
Dr W Cramer (Imperial Cancer Research Laboratory)

ROYAL MEDICAL BENEVOLENT FUND

At a recent meeting the committee voted fifty five grants amounting to £997 Subscriptions and donations are very urgently needed in order that the activities of the Fund may be maintained Legacies are needed to support the Annuity Department Cheques should be made payable to the Honorary Treasurer Royal Medical Benevolent Fund 11 Chandos Street Cavendish Square W 1 The following are particulars of a few cases helped

Daughter aged 85 of M D who died in 1869 at the age of 79 The applicant even at her advanced age is still trying to maintain herself by her own efforts She is assistant organist at the Parish Church and also teaches music to children and by these means earns £22 10s She lives in her own small house and takes in one lodger who pays £27 6s a year Up till recently she let three rooms in her house but the tenant died last year and the applicant has been unable to re let It was discovered that this old lady's total income was £76 16s out of which she had to pay rates of £12 13s Fund voted £26 in four instalments for a period of one year to be renewed annually if circumstances remain the same

M R C S aged 56 married wife aged 59 The applicant had a stroke in the autumn of 1931 and is wholly incapacitated from his professional duties His practice was small and very little is expected from it Private income of applicant and his wife does not exceed £50 a year Fund voted £40 payable in four instalments over a period of one year

Widow aged 59 of M R C S was left penniless by the death of her husband in 1925 At first the applicant took a house and maintained herself by taking paying guests Afterwards she took a post as housekeeper which she retained until her health broke down She has now had to undergo a severe abdominal operation and a medical report states that she will not be fit for remunerative work in the future The applicant therefore becomes entirely dependent on her two daughters aged 30 and 22 both of whom have employment but with small salaries Fund voted £26 payable in four instalments over a period of one year

The Ladies Guild of the Royal Medical Benevolent Fund still receives many applications for clothing especially for coats and skirts for ladies and girls holding secretarial posts and suits for working boys The Guild appeals for second hand clothes and household articles The gifts should be sent to the Secretary of the Guild Tavistock House (North) Tavistock Square W C 1

England and Wales

National Institute for the Deaf

The Lord Mayor Sir Maurice Jenks will preside at the annual meeting of the National Institute for the Deaf at the Mansion House London on Friday May 27th The Archbishop of Canterbury and Lord Charnwood will be the chief speakers The Institute was founded only eight years ago and has already firmly established itself as an indispensable national organization for promoting the welfare of that large section of the community which suffers from deafness in varying degrees Perhaps its greatest success has been in developing a fuller public understanding of the affliction and a deeper and more practical sympathy with those whose lives are burdened by it By setting up counties associations for the deaf the Institute has united public and private effort for their welfare in every part of the country Its services are freely available to the deaf and those interested in them The Institute maintains a home for deaf women a hostel for working deaf boys and a centre of instruction in lip reading for those who have become deaf It takes a strong stand in protecting the deaf from the exploitation of unscrupulous persons who seek to profit by advertising impossible cures or reliefs It encourages and undertakes research in any direction likely to benefit the deaf All this important work of the Institute for a class which has been almost entirely overlooked in the past is too little known

Home Ambulance Service

The thirteenth annual report of the Home Service Ambulance Committee of the Order of St John and the British Red Cross Society for 1931 states that the average number of patients carried annually in each ambulance has increased in the past three years by 12½ per cent This increase in ambulance transport work is attributed to two causes first the change in the social and economic conditions of the country has made it increasingly difficult for patients to arrange for the accommodation of nurses and of all the requisites of the sick room in their own homes This has led to an increased demand for paying wards in hospitals and for nursing homes with a consequent demand for suitable means of transport Secondly radiographic work and treatment by processes making use of special electrical and heating apparatus have become part of the ordinary routine of medical practice and it is on the ambulances of the service that the doctor largely relies for the conveyance of patients to hospitals and clinics where such treatment can be administered Referring to the first aid work of the service the committee states that reports from all parts of the country show that the first aid administered promptly after road accidents has been instrumental in mitigating the more serious consequences of injuries In 1931 in Great Britain there were 24 695 more road accidents and 24 250 more persons injured than in 1930 but the number of deaths resulting therefrom was actually 620 fewer than in 1930 and this the committee suggests may be attributed to the work of the first aid attendants of the service The example set in this country has now been followed in all parts of the world and so important is such a first aid road service considered to be in any ordered road traffic system that a standing international committee has been set up under the auspices of the League of Nations to promote and encourage its development in all countries The Ambulance Committee recognizes that in the event of an epidemic or of a war affecting the civil population the authorities would inevitably look to the Home Service to provide assistance for the sick and injured and the units are applying themselves to the acquisition of a

thorough knowledge of first aid in cases of gas poisoning so that the service may be in a position to render assistance under conditions of chemical warfare The committee regrets that there should be two types of stretcher—the Army type and the Tutley type—but stresses the desirability of ambulances being constructed to accommodate both the long and the short stretcher During 1931 110 895 patients were transported bringing the total number since the service was set up to 1 069 295 Five stations have been equipped since the last annual report and at December 31st 1931, there were 122 ambulances affiliated to the service

Ireland

Public Health Congress in Belfast

The Royal Institute of Public Health held its annual meeting at the Queen's University Belfast In his presidential address entitled Public health in the community the Marquess of Londonderry said that to day they had a Ministry of Health with an official medical staff and 1 400 medical officers of health under local authorities There were 5 000 medical practitioners connected with the service of the Poor Law 500 tuberculosis officers 3 000 attached to the maternity and child welfare services, and a host of practitioners engaged in the national health insurance scheme The purpose of preventive medicine was to improve environment, to develop innate capacity to avoid disharmony in the body and to prolong life Housing broad and clean streets parks and open spaces, water supply drainage collection of refuse industrial hygiene and wholesome sufficient food all led to the creation of a sanitary environment Maternity services infant welfare and child hygiene were designed to build a healthy race Vaccines and anti toxic serums created by immunity a resistant body The destruction of infective agents the segregation of infectious persons disinfection quarantine avoidance of cough spray or expectoration were methods of reducing mass infection Clinics dispensaries hospitals sanatoriums and health insurance were medical services for the early diagnosis and treatment of disease There was preventive medicine in a nutshell We were too apt to regard the State as a sort of universal provider The presence of the Royal Institute which they welcomed to Belfast showed that there was still a powerful voluntary force for disseminating health truths throughout the land The State could not do everything One of the main sources of the strength of British institutions in their hold upon the affections of the people was the willingness of all parties in the State to seek and secure the co operation of voluntary organizations Meanwhile although the State could build houses it could not create homes it could maintain public order but it could not teach manners it could not prescribe length of days nor abolish disease or death

Grant to Mental Hospitals in Northern Ireland

Complaints that the grants to mental hospitals were too small were made in the Northern House of Commons when the committee stage of the Mental Treatment Bill was passed The Minister of Commerce Mr J Milne Barbour for the Minister of Finance moved a money resolution in connexion with the Bill He said that the Minister of Home Affairs when moving the second reading pointed out that the basis of the Government grant towards the maintenance of rate aided patients in mental hospitals was one of the subjects examined by the Financial Relations Committee The recommendations of that committee were still under consideration and although members might feel some disappointment that the resolution did not lay down the actual basis of the grant for future application it would be unreasonable to press the Minister of Finance to deal with these grants in a piecemeal fashion An amendment was moved that the resident medical superintendent of each mental home should submit to the Ministry a report on the mental and bodily condition of the patients The Minister of Home Affairs declined to accept the amendment, as it would mean that reports on 4 600 patients would be forwarded to the Ministry at the beginning of each year and would cause an undue amount of work The Bill proposed that these reports should be supplied one year after the date of admission of each patient so that the reports could come in daily throughout the year

Village Settlements for the Tuberculous

In a recent address Mr H E F Hall manager of the Peamount Industries referred to the first village settlement for the tuberculous founded at Papworth Cambridgeshire by Sir Pendrill Varrier Jones in 1918 and said that the patients were taught a trade there while undergoing treatment When the patient was considered by the medical officers to have had sufficient treatment he was given the opportunity of colonizing and becoming a wage earner in the industries attached to the settlement instead of leaving the sanatorium The ex patient became a self supporting wage earner At Peamount just over two years ago a similar scheme was established and Ireland owed it to the Women's National Health Association and to Lady Aberdeen its president that this scheme was now taking shape with the invaluable advice of Sir Pendrill Varrier Jones and the staff at Papworth They had started by erecting a small workshop, to day there were firmly established industries which employed over fifty men, the majority of whom came to them without any previous training So far they had only been able to establish two departments representing a similar number of trades They had attained a very important position in the manufacture of wooden portable buildings and for the past two years their products had been sent to the four provinces These products had sold purely on their merits in the open market and the aggregate turnover had quickly reached five figures The patient or ex patient instead of being a charge on the local board of health or on State insurance funds now became a self supporting wage earner almost independent of State or local assistance In 1931 Peamount received only £11 10s in donations from the general public the fact that the sanatorium might derive some benefit from the sweepstakes probably contributed to the smallness of the figure Future extension of the scheme would include the building of cottages or bungalows for married patients and the erection of hostels where single men might be permanently housed all settlers being under medical supervision

Scotland

Presentation to Scottish Medical Secretary

A presentation by his former patients in Pathhead Midlothian was made on May 6th to Dr R W Craig who took up his duties as Scottish Medical Secretary of the British Medical Association at the beginning of this year The Earl of Stair in presenting to Dr Craig a grandfather clock of the Queen Anne period a bookcase a violin and four silver candlesticks said that for two generations the most vital moments in the lives of the inhabitants in the Pathhead district had been presided over by a Dr Craig He remembered well the older Dr Craig who was affectionately known in his (the speaker's) family as 'Cascara' because of his fondness

for prescribing that remedy The presentation was a mark of very great affection from the patients whom Dr Craig had served since he succeeded his father in 1904 In returning thanks for the gifts Dr Craig said that it was a source of pride to him that a man who had played such a prominent part in the service of both Church and State as Lord Stair should do him the honour of coming to hand over these magnificent gifts and he returned sincere thanks to him and to all his friends A doctor's life was a hard one but there was no life like it It had many compensations for although the doctor was brought daily into contact with suffering and saw much of the dark side of life he also met with suffering bravely borne and with quiet hope and faith in the grave crises of life which gave him an overwhelming sense of admiration for human nature There was no monotony about a doctor's life and there was much humour Further there was no medical practice like a country practice since the people in the busy towns did not have such an intimate understanding with their doctor as those in the lonely country places He had had great difficulty in making up his mind about his new appointment The British Medical Association was an Empire wide organization with Branches in England Scotland Ireland Canada India Australia and South Africa and was celebrating this year its 100th birthday Its work was therefore very onerous and responsible and he felt that his duty lay in this direction Mrs Craig was presented with a silver kettle on behalf of friends in Pathhead and district

Glasgow Royal Mental Hospital

The report for the year 1931 of Dr D K Henderson physician superintendent of the Glasgow Royal Mental Hospital shows that the total number of patients under treatment during the year was 682 the number in hospital on the last day of the year being 545 Admissions totalled 127 of which 79 were voluntary Persons discharged numbered 137 of whom 60 were recovered and 23 improved 40 patients died The report points out that the large number of voluntary patients has an influence on those who are inclined to consider a mental hospital as a place of confinement rather than of treatment Referring to the discharges the report states that the public does not in general realize that upwards of 60 per cent of patients have made recoveries enabling them to live socially and to conform to the ordinary standards of everyday life The institution has been granted a Supplementary Charter changing its name from that of the Glasgow Royal Asylum for Lunatics to the Glasgow Royal Mental Hospital and attention is drawn to the close association of the hospital with the University and with the Western Infirmary The institution has been an important teaching adjunct to the University since 1880 when the lectureship in psychiatry was founded An official association with the Western Infirmary was formed in 1910 when Dr Oswald then physician superintendent of the asylum was appointed physician to the out patient department of the Infirmary The work in the Infirmary has increased enormously at a clinic held once a week 183 new patients have applied for consultations in the past year with altogether 670 visits The work has been facilitated by the help of a social worker and of a trained psychologist This department acts both as a treatment and as an advisory centre but its principal value is in teaching since it allows students to familiarize themselves with the early types of nervous illness which they are likely to meet subsequently in practice Special efforts are being made to develop this clinic along the lines of a child guidance clinic for the purpose of solving the problem of difficult children—that is children who come up to a good standard intellectually but are unable to adapt themselves satisfactorily to their home life The report comments particularly on the treatment of general paralysis with malaria organisms In a series of 20 cases treated at the Mental Hospital 10 patients were discharged as recovered 6 were not improved and 4 died On the other hand in a series of 34 cases not treated in this way only 4 were discharged as recovered or relieved while 26 died The recovery rate therefore of cases treated with malaria has been from 30 to 50 per cent while the recovery rate in patients treated otherwise was only 3 per cent A more recent attempt to treat the disease by the production of artificial fever through the agency of diathermy has been made with the object of avoiding if possible the complicated infection of the patient with malaria and this is under trial

Correspondence

PUBLIC HEALTH INTELLIGENCE OF THE HEALTH ORGANIZATION OF THE LEAGUE OF NATIONS

SIR —May I through the courtesy of your columns bring to the notice of public health administrators the facilities that exist in the Health Organization of the League of Nations for the supply of information relating to the detailed application of different public health methods in various countries? In addition comparative information is available with regard to epidemiological statistics and public health legislation

The Health Organization is willing to supply as far as possible data on the above branches of preventive medicine Inquiries are however limited to those from the heads of large administrations or the heads of scientific institutions who should indicate the purpose for which the information is required in view of the amount of work that unconsidered requests necessarily involve Furthermore inquiries should be limited to information that is not already in the medical press All inquiries should be addressed to the Medical Director Health Section marked Public Health Intelligence League of Nations Geneva Switzerland —I am etc

LUDWIK RAJCHMAN
Medical Director

Geneva May 2nd

TREATMENT OF DYSMENORRHOEA

SIR —Dr Kennedy's most interesting contribution to the pathology and treatment of dysmenorrhoea in the *Journal* of April 23rd (p 746) tempts me to comment on the origin of uterine colic I am sure he is right in emphasizing the psychological element in these cases For many years my ward sisters have specially observed these cases and all are emphatic that patients admitted for severe menstrual colic who happened to be in hospital just before or at the onset of a period have very rarely exhibited real upset—and this in spite of the usual type of history such as collapse in the street doubled up with pain every month and the like I am quite convinced that obstruction is an exceptional factor and that some other hypothesis has to be considered for the majority of cases of uterine colic The cochlear uterus never shows a cavity of less than 2½ inches nor do I believe that the level of the internal os (a point very easily defined while gently passing a sound) is higher than normal Cases that have been studied anatomically are too few for generalization I distrust any conclusion based on a decision by bimanual examination as to the thickness of the uterine wall I prefer to regard the organ as anatomically full sized but physiologically somewhat immature The steady decrease of uterine colic about the age of 25 is very significant

Dr Kennedy therefore has good reason for recommending treatment by a hormone known to stimulate the uterus These cases are really very near the normal and should react readily to treatment of that description At the same time with the preparation used Dr Kennedy's results are not as good as those produced by a really scientific operation of dilatation The rationale of this treatment is to paralyse the cervix and not to overcome an obstruction On occasion I have found just as much difficulty in dilating a cervix (say for sterility) where dysmenorrhœa was absent as in cases exhibiting acute uterine colic Provided that there be no lack of polarity between the contracting corpus and the relaxing cervix colic is impossible Complete paralysis can readily be produced by a full dilatation but it is not everyone who appreciates what full dilatation represents For many years I have used very finely graduated metal dilators of Hawkins Ambler type In the routine operation of dilatation to paralyse I have no fixed limit of dilatation but am satisfied to stop when I know that the cervix is paralysed this is easily judged by lessened resistance To produce this result I frequently use as many as thirty to thirty three dilators In fractions of an inch size No 24 represents 16/32 size 30 20/32 and size 33 22/32 Very gentle dilatation on this basis has the merits of thoroughness and safety

Some years ago I analysed the results in 68 consecutive patients 45 5 per cent were completely cured for a period of one year or more 28 per cent were greatly improved and 17 5 per cent slightly improved there was no improvement in 6 per cent , and two patients stated that they had been affected adversely These results are certainly very much better than those stated by Dr Kennedy but they will only be produced by the type of careful but very thorough dilatation that I have described At the same time the obliteration of pain as the result of the mental excitement of impending operation tempts me to believe that with more active and powerful hormone treatment in the future operation may become unnecessary —I am etc

Liverpool May 10th H LEITH MURRAY

VASOVAGAL SYNCOPE

SIR —Sir Thomas Lewis's paper on this subject should provide an important stimulus to a better precision in the observation and analysis of some interesting and common seizures It also suggests the need for a better precision in nomenclature for most clinicians have I believe been in the habit of applying the term vaso vagal attack not to fainting or syncope but to those other attacks which Sir Thomas Lewis groups under the heading of Gowers's syndrome I cannot think that Sir Thomas does adequate justice to Gowers's description It is true that this description was incomplete and that we can now paint the picture of these very remarkable attacks in more decided colours and finer detail but it is also perfectly clear that he was attempting to depict certain very striking phenomena and that these are quite as real and as worthy of separate analysis as the phenomena of syncope, vertigo and epilepsy

In the past ten years I have collected notes of upwards of fifty cases of Gowers's syndrome and I am hoping to find time to analyse them in the near future In a few instances I have observed the patients in their attacks They are entirely different from ordinary syncope but it is difficult to avoid the conclusion that they also depend partly on a vasovagal disturbance or as I have preferred to call it until we know more upon some kind of medullary storm which is incidentally reflected in the cardiovascular system Loss of consciousness is rare but in one of my cases this occurred and at the same time the pulse rate was down to 19 In previous attacks without loss of consciousness rates of 44 and 32 were recorded Pallor and coldness are usually present and onlookers are alarmed by the aspect of the patient The attacks are much more prolonged than ordinary faints The most impressive subjective sensation is the angor animi or sense of dying which is very constant but which may be replaced by a sensation of fading away or floating in space There is heaviness in the limbs or even a sense of fixed immobility akin to that which accompanies some cases of angina pectoris The patient feels either that he cannot or dare not move Precordial pain and uncomfortable sensations in the left arm and pain or pressure in the left side of the neck are common The attacks are followed by great prostration similar to that which succeeds migraine and this may endure for a day or two There are remarkable variations in the blood pressure which may I believe both rise and fall Like fainting the condition occurs more readily in subjects who are debilitated or unfit I have one example of the condition occurring in a father and son at the same age Precipitating causes include visceral disturbance anxiety and emotion As with syncope and vertigo one of the strongest perpetuating causes is the apprehension which the attacks themselves engender With natural individual variations these storms are remarkably true to type

Sir Thomas Lewis would seem to imply that studies of these attacks have not helped us to understand vaso motor disturbances and that they had better be left in a group apart among the nervous disorders But surely there are nervous and vasomotor elements both in syncope and in Gowers's syndrome and what we really need to do is to study both conditions anew dispassionately without any specialist bias and whenever possible with the help of the precise methods which he advocates My own experience suggests that both vagal and vaso motor phenomena are a part of Gowers's syndrome —I am etc

London May 13th J A RYLE

AETIOLOGY OF DUODENAL ULCER

SIR —The contributions to the *Journal* by Mr Morley and Dr Hurst on April 9th and 30th are extremely interesting as regards the aetiology of duodenal ulcer

Personal observation leaves me equally strongly convinced that the hypersthenic stomach precedes the onset of duodenal ulcer but as regards the explanation of events seen to accompany duodenitis and duodenal ulcer I find myself somewhat at variance with both these authorities The problem that requires final elucidation in the pathogenesis of duodenal ulcer is the correct sequence of events which culminates in that condition Given that the hypersthenic stomach does precede the ulceration is it not till the establishment of the latter that the pyloric spasm and irritability develops?

Radiological examination of stomachs giving dyspeptic symptoms shows that without duodenal ulcer you may have pyloric spasm and the hypersthenic stomach and so also as Hurst points out these two conditions may exist after the successful treatment of the ulcer Finding too that the normal symptomless stomach is in the main neither of an exaggerated hyper nor hypo sthenic type it would seem reasonable to conclude that the primary upset lies in distortion of the normal function of the pyloric sphincter I do not intend in this correspondence to dwell on the present views as to the effect of reflex sympathetic activity resulting in disturbance of normal pyloric function but it seems to me that consequent to such disturbance lie those changes in stomach function

which result in displacements and pathological conditions of that organ It would seem that when symptoms appear in the dyspeptic or the subject of duodenal ulcer the stomach is making unusual efforts to maintain its normal function against the distorted function of the pylorus Its primary efforts may take the form of a hypertonicity with hypertrophy giving the hypersthenic stomach Not every stomach appears capable of this change or the hyperactivity breaks down and it passes to the asthenic type with not infrequently some degree of dilatation and delay in emptying As Hurst points out this sequence may be reversed by treatment

Given that the danger of duodenal ulceration exists during the hypersthenic stage of this sequence it would suggest to me that the primary factor in duodenal ulceration is a traumatic congestion of the duodenal wall following the change in propulsive force and direction of flow of the stomach contents Attracted by this hypothesis it has interested me to find that treatment of duodenal ulcer where organic pyloric constriction does not exist is greatly facilitated by therapy calculated to depress sympathetic excitation to the pyloric sphincter

It would seem true that the permanent cure of a duodenal ulcer by medical means depends on two factors either a scar impervious to the aetiological factor results or the prolonged rest diet and therapy result in a permanent cure of the reflex exciting cause of the distorted pyloric function I should be interested to hear from physicians investigating this subject what percentage of permanent cures of duodenal ulcer are obtained where duodenal spasm and hypersthenic stomach remain after treatment —I am etc

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ORIGIN OF TUMOURS

SIR —The genetic approach to the solution of the cancer problem so ably and forcibly brought forward by Mr Lockhart Mummery (*British Medical Journal* April 30th) is a little older than his reading has led him to suppose For the first published statement he will have to go back to 1911 In the early years of the century I was engaged in a study of the problem of the diseases of intrinsic origin and found that among them must be included the tumours innocent and malignant The record of this work was published in a book entitled *The Diseases of Postnatal Growth and Development* The tumours are therein dealt with on a genetic basis as coming within the range of the laws of variation and heredity

The conviction that it is in this direction that we shall find the answer to the conundrum of cancer led to a further pursuit of the subject In 1925 under the name of *Tumours and Cancers* I published a book which contained the outcome of twelve or thirteen years of fairly arduous work To my thinking the weight and quality of evidence I had there gathered together in favour of the genetic origin of cancer was overwhelming The causes of cancer its nature and the means for its prevention to me stood out as clearly and as sufficiently as do the causes of syphilis or malaria But then my opinion went for nothing for I was the advocate not the judge And unfortunately the birth of this book chanced to fall at the same time as the birth of a new theory of cancer founded upon its origin in some outside parasite The noise of its reception was therefore little more than a whisper compared with the acclamation and ovation which followed the accouchement of the much more popular book It is therefore by no means surprising that this book and still less the book which preceded it should have escaped Mr Lockhart Mummery's notice But now a time has come when the tremendous publicity which for a quarter of a century has been given to theories of cancer founded upon laboratory research seems to have abated Nothing can surely be more reasonable than that during this lull the question of the origin of cancer in some internal excess or defect or perversion should receive the attention it merits

The wealth of ingenuity and of ability displayed by those who have adopted theories of extrinsic origin has not been wasted Although unsuccessful in this main venture they have been eminently successful in clearing the way for theories founded upon an intrinsic origin This being the case what can be more likely than that the genesis of human cancer is a biological study If so it belongs to that branch of biology which is concerned with origins and is known as genetics

Mr Lockhart Mummery's paper seems to have come just at the right time and I much hope that it will receive the attention it deserves If it does then under the aegis of his position and authority and with his leadership there seems every likelihood that the day is not far off when we shall have as complete a control of cancer as we now have of typhoid fever or tuberculosis —I am etc

Reading May 8th HASTINGS GILFORD

TREATMENT OF OSTEO ARTHRITIS OF THE HIP JOINT

SIR —In the *Journal* of May 7th Dr Warren Crowe stresses the danger by manipulation of a joint of lighting up the disease He has furthermore no good word to say for the walking calliper claiming that it aggravates muscular atrophy Apparently he considers that the frequency of bilateral disease is also a point against the use of this appliance

The whole object of manipulative treatment of an osteo arthritic hip is to restore movement which has been checked by muscular contracture and by the formation of adhesions If the condition were due to a microbial invasion of the joint for which there is no evidence there would always be a danger of causing a flare up In practice however this does not happen It is quite futile to mobilize any severely affected hip joint unless a calliper be worn subsequently This apparatus by relieving the hip of its weight bearing function allows of free movement unassociated with further destruction of the articulation The result is the reverse of that suggested by Dr Warren Crowe in fact every patient finds that an increase of muscular bulk necessitates a readjustment of the splint after three to six months In bilateral disease two callipers should be worn and even then it is possible for the patient to walk and to play golf

Of the numerous *osteo* arthritic patients who have been treated by vaccines I have yet to meet with one who has derived benefit therefrom —I am etc

London W 1 May 9th A H DOLTHY AITF

LACTIC ACID IN THE GASTRIC CONTENTS

SIR —It is apparent from their letters that Dr F Craven Moore (*Journal* April 23rd) and Professor Stanley Davidson (May 7th) attach special significance to the appearance of lactic acid in the gastric contents as evidence of gastric carcinoma Our independent observations led us to the conclusion that this view is not justified and our work is confirmatory of the previously published results of Professor Dodds and Dr J D Robertson as pointed out in their letter published on April 9th

While Dr Craven Moore seems to believe that practically without exception lactic acid in gastric contents indicates gastric carcinoma Professor Davidson writes although it must be clearly understood that the presence of lactic acid is in no way pathognomonic of gastric cancer The factors which favour the production of lactic acid are however more frequently

Dr Kennedy therefore has good reason for recommending treatment by a hormone known to stimulate the uterus These cases are really very near the normal and should react readily to treatment of that description At the same time with the preparation used Dr Kennedy's results are not as good as those produced by a really scientific operation of dilatation The rationale of this treatment is to paralyse the cervix and not to overcome an obstruction On occasion I have found just as much difficulty in dilating a cervix (say for sterility) where dysmenorrhœa was absent as in cases exhibiting acute uterine colic Provided that there be no lack of polarity between the contracting corpus and the relaxing cervix colic is impossible Complete paralysis can readily be produced by a full dilatation but it is not everyone who appreciates what full dilatation represents For many years I have used very finely graduated metal dilators of Hawkins Ambler type In the routine operation of dilatation to paralyse I have no fixed limit of dilatation but am satisfied to stop when I know that the cervix is paralysed this is easily judged by lessened resistance To produce this result I frequently use as many as thirty to thirty three dilators In fractions of an inch size No 24 represents 16/32 size 30 20/32 and size 33 22/32 Very gentle dilatation on this basis has the merits of thoroughness and safety

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ORIGIN OF TUMOURS

SIR —The genetic approach to the solution of the cancer problem so ably and forcibly brought forward by Mr Lockhart Mummery (*British Medical Journal* April 30th) is a little older than his reading has led him to suppose For the first published statement he will have to go back to 1911 In the early years of the century I was engaged in a study of the problem of the diseases of intrinsic origin and found that among them must be included the tumours innocent and malignant The record of this work was published in a book entitled *The Diseases of Postnatal Growth and Development* The tumours are therein dealt with on a genetic basis as coming within the range of the laws of variation and heredity

The conviction that it is in this direction that we shall find the answer to the conundrum of cancer led to a further pursuit of the subject In 1925 under the name of *Tumours and Cancers* I published a book which contained the outcome of twelve or thirteen years of fairly arduous work To my thinking the weight and quality of evidence I had there gathered together in favour of the genetic origin of cancer was overwhelming The causes of cancer its nature and the means for its prevention to me stood out as clearly and as sufficiently as do the causes of syphilis or malaria But then my opinion went for nothing for I was the advocate not the judge And unfortunately the birth of this book chanced to fall at the same time as the birth of a new theory of cancer founded upon its origin in some outside parasite The noise of its reception was therefore little more than a whisper compared with the acclamation and ovation which followed the accouchement of the much more popular book It is therefore by no means surprising that this book and still less the book which preceded it should have escaped Mr Lockhart Mummery's notice But now a time has come when the tremendous publicity which for a quarter of a century has been given to theories of cancer founded upon laboratory research seems to have abated Nothing can surely be more reasonable than that during this lull the question of the origin of cancer in some internal excess or defect or perversion should receive the attention it merits

The wealth of ingenuity and of ability displayed by those who have adopted theories of extrinsic origin has not been wasted Although unsuccessful in this main venture they have been eminently successful in clearing the way for theories founded upon an intrinsic origin This being the case what can be more likely than that the genesis of human cancer is a biological study? If so it belongs to that branch of biology which is concerned with origins and is known as genetics

Mr Lockhart Mummery's paper seems to have come just at the right time and I much hope that it will receive the attention it deserves If it does then under the aegis of his position and authority, and with his leadership there seems every likelihood that the day is not far off when we shall have as complete a control of cancer as we now have of typhoid fever or tuberculosis — I am etc

Reading May 8th HASTINGS GILFORD

TREATMENT OF OSTEO ARTHRITIS OF THE HIP-JOINT

SIR —In the *Journal* of May 7th Dr Warren Crowe stresses the danger by manipulation of a joint of lighting up the disease He has furthermore no good word to say for the walking calliper claiming that it aggravates muscular atrophy Apparently he considers that the frequency of bilateral disease is also a point against the use of this appliance

The whole object of manipulative treatment of an osteo arthritic hip is to restore movement which has been checked by muscular contracture and by the formation of adhesions If the condition were due to a microbial invasion of the joint for which there is no evidence there would always be a danger of causing a flare up In practice however this does not happen It is quite futile to mobilize any severely affected hip joint unless a calliper be worn subsequently This apparatus by relieving the hip of its weight bearing function allows of free movement unassociated with further destruction of the articulation The result is the reverse of that suggested by Dr Warren Crowe in fact every patient finds that an increase of muscular bulk necessitates a readjustment of the splint after three to six months In bilateral disease two callipers should be worn and even then it is possible for the patient to walk and to play golf

Of the numerous *osteo* arthritic patients who have been treated by vaccines I have yet to meet with one who has derived benefit therefrom —I am etc

London W 1 May 9th A H DOUTHWAITE

LACTIC ACID IN THE GASTRIC CONTENTS

SIR —It is apparent from their letters that Dr F Craven Moore (*Journal* April 23rd) and Professor Stanley Davidson (May 7th) attach special significance to the appearance of lactic acid in the gastric contents as evidence of gastric carcinoma Our independent observations led us to the conclusion that this view is not justified and our work is confirmatory of the previously published results of Professor Dodds and Dr J D Robertson as pointed out in their letter published on April 9th

While Dr Craven Moore seems to believe that practically without exception lactic acid in gastric contents indicates gastric carcinoma Professor Davidson writes

> although it must be clearly understood that the presence of lactic acid is in no way pathognomonic of gastric cancer The factors which favour the production of lactic acid are however more frequently

present in gastric cancer than in any other type of gastric disease As Professor Dodds states it has been known for a great many years that the lactic acid content varies roughly inversely with the HCl content Surely the factors favouring the production of lactic acid are to be found in the achlorhydria of gastric cancer in association with the fact that the *B acidi lactici* is as we have pointed out always present even in the normal stomach We look forward to the report which Professor Davidson promises to publish in order to discover whether or not he found lactic acid present in cases of achlorhydria associated with other causes than cancer Our series of achlorhydric cases is admittedly small but out of the ten cases gastric carcinoma was definitely excluded in four by the clinicians in charge Still all gave an immediate positive reaction with the thiophene test and it appeared to us that it was the achlorhydria and not the carcinoma *per se* which favoured production of lactic acid

In explanation of the contradictory nature of certain reports Professor Davidson suggests that the disadvantages of the thiophene test may be responsible Admittedly certain difficulties arise in connexion with the test particularly in the presence of bile Even if this is surmounted there is a further possible difficulty of interpretation The test may be positive immediately or may be delayed We have clearly convinced ourselves that the speed of development of the colour is definitely related to the amount of lactic acid present In our paper our cases were grouped accordingly Can it be that certain workers consider the immediate reaction alone as positive and disregard the delayed reaction? While this perhaps would not explain the discrepancies completely it seems possible that as your correspondent suggests the difficulties with the thiophene test may be at least partly responsible It would help to clarify these investigations if the technique of the test were standardized — We are etc

Anderson College of Medicine Glasgow May 9th

IAN MURRAY
ANDREW B ROBERTSON

FALLEN IDOLS OR FALSE GODS?

SIR —Sir James Berry in his address to the Medical Society of London has revived an old controversy which most surgeons had considered settled During the period that Sir James Berry was surgical registrar at St Bartholomew's I was house surgeon to Mr Howard Marsh and his junior Mr Bowlby (as he then was) and I can claim to have been brought up in the conservative school better styled perhaps the school of delayed action In those days it frequently happened that appendix cases were not admitted until a swelling had called attention to the necessity for surgical treatment The acute fulminating cases were too often labelled 'peritonitis' and failed to reach hospital in the operable stage or if they did often failed to survive The statistics that Sir James gives of a series of cases admitted to the medical wards give no true picture of the mortality of appendicitis at that period The expectant policy which Sir James advocates in the cases that have become localized and are developing abscess is a policy of safety which was very commonly adopted in those days and is perhaps not followed as often as it should be at the present time

I am in agreement with Sir James with regard to the dangers of feeding purgatives etc when an expectant policy is adopted and also to the risks of approaching an inflammatory mass via the general peritoneal cavity I cannot however help feeling that Sir James in his address has lost sight of the important fact that there are *two distinct types of the acute appendix* (obstructive) type which is ushered in with malaise rise of temperature tenderness and pain which is ultimately localized to the appendix region Many of these cases subside under appropriate expectant treatment though if diagnosed and operated on early they run on the whole less risk than by expectant treatment The best policy to adopt in this type of case is a matter of opinion and each case must be judged on its merits

The other type is the acute obstructive (or mechanical) appendix which has an entirely different onset with sudden severe pain and vomiting which continues unless spontaneous relief occurs In these cases there is seldom any warning and no initial malaise or inflammatory signs It is these cases where a stercolith occludes the lumen which fulminate rapidly unless spontaneous relief occurs and end in gangrene and perforation When perforation occurs there is often sudden relief of both pain and distress and a short quiescent period results which may be most misleading until the signs of peritonitis develop The absence of inflammatory signs and the sudden cessation of acute symptoms sometimes give rise to a faulty diagnosis of intestinal colic To delay operation in this type an hour longer than is absolutely necessary is to run a very grave risk To adopt deliberately a waiting policy when an obstruction has been diagnosed is to invite perforation and disaster and a policy such as this must be responsible for many deaths

Professor Wilkie not long since called attention in the medical press to the importance of recognizing these two types and for many years I have taught students the importance of distinguishing between these two classes and the urgent necessity for prompt treatment in the obstructive cases It is true that after the first twenty four hours or so the two types often cannot be distinguished because inflammatory signs are added to the obstructive but it is in the first twenty four hours that the great risk of perforation and general peritonitis occurs which can and should be avoided if diagnosis is sound and the urgency realized I venture to think that Sir James Berry by omitting to refer to this type of case may mislead many and in so doing be responsible for more lives being lost than might be saved by following his precepts in other types of appendix inflammation If as Sir James says the idol of modern methods is beginning to totter let us not turn to false gods —I am etc

London W May 13th C GORDON WATSON

THYROID EXTRACT AND PULMONARY EMBOLUS

SIR —I am pleased to see that Dr J A Smyth has contributed in the *Journal* of May 7th to the correspondence on this subject Developments in surgical technique have reduced the incidence of shock and sepsis in major surgery to negligible proportions whereas the incidence of pulmonary embolism remains unaltered and forms in my opinion the most important surgical calamity encountered at the present time

Any constructive criticism on this subject is therefore extremely valuable and may lead to improvements in the results already shown by workers in the field of thyroid extract prophylactic treatment of pulmonary embolism Dr Smyth's statement that there is a delay in the response to thyroid extract in cases of hypothyroidism is I believe correct

In the prophylactic treatment of pulmonary embolism however one has at least seven days in which to produce the desired metabolic changes since pulmonary embolism is but rarely encountered until a week after the operation I have as yet not failed to produce a tachycardia within five days following operation with the assistance of adequate doses of thyroid extract

It has been shown that body movement and deep breathing will diminish the incidence of pulmonary embolism these measures are however rarely appre

ciated by the patient owing to the production of pain Thyroid extract will however speed up the circulation very effectively and forms a ready means of attaining the desired end As I pointed out in the *Journal* of April 23rd large doses of thyroid extract are often required and my technique has been to push the dosage of extract until the pulse rate rises to some 120 beats per minute at which point sweating and tremor are usually well marked phenomena

The figures of American workers in this field are very impressive but they have erred in not laying sufficient stress upon the theoretical grounds on which the use of thyroid extract is based with the result that the stigma associated with yet another claim of endocrinology is attached to a therapeutic effect which can be attained if necessary with any form of thyroxine suitable for oral administration —I am etc

London W May 7th JOHN H HANNAY M D

LOCAL ANAESTHESIA FOR TONSILLECTOMY

SIR —I was interested very much by Mr Costello's article on the use of local anaesthesia in the removal of tonsils (May 7th p 839) Some of the advantages are that there is no vomiting no risk of suffocation no hidden bleeding no anaesthetic nausea and no necessity for a nurse to be in close attendance during a recovery period as in general anaesthesia The bleeding is less at the time of the operation and is less likely to occur later A matter of importance to the patient in these times of financial stress is that he does not have the expense of an anaesthetic fee Pantocain I have found a more satisfactory drug than cocaine for surface anaesthesia as it is less toxic and can be used freely

The removal of tonsils under a local anaesthetic is the usual procedure on the Continent possibly because general anaesthesia has not reached such a high art as in Great Britain But the English are unaccustomed to the thought of an operation with a local anaesthetic and many are psychically unsuitable Women are better than men —I am etc

London W May 11th C HAMBLEN THOMAS F R C S

DIET AND DENTAL CARIES

SIR —With reference to the subject of Raw milk and dental caries discussed in the *Journal* in February Dr Harry Campbell has rendered a service in stressing what is perhaps the most important means of preventing caries among civilized children Does not Mr Sprawson's statement that raw milk should be part of the daily food until 14 years need modifying would not up to 5 years be all sufficient? Calcification commences in the unerupted teeth germs at the seventeenth week of intrauterine life and goes on in the permanent teeth during the first few years of life Cannot the ideal dental development in man be better learnt from noting the custom of primitive races who have no source of milk other than human rather than in institutions for children in England? The children of the uncontaminated aborigines of the interior of Australia are I am informed suckled till 3 and sometimes even 5 years old I understand that till 3 years is quite common with primitive peoples The Australians of the interior have particularly well developed arches and teeth and decay is almost unknown Presumably after three years the necessary vitamins and salts can be obtained in the ordinary diet Sucking at a breast develops jaws whereas drinking milk out of a cup certainly does not The paediatricians and bacteriologists will surely have something to say against unboiled milk for children in connexion with tuberculous infections Is it worth the risk?—I am etc

Adelaide South E COLLIER BLACK M B B S

SIR —Being so far away I was not able to join sooner in the controversy concerning raw milk and dental caries I not only agree with Mr Sprawson but go further I have shown conclusively in my book on pulmonary tuberculosis that weak or tuberculous children do better on raw milk than when it is boiled or pasteurized that cow's milk does not necessarily cause tuberculosis in man (a conclusion which Koch arrived at after careful investigation) and that it is not raw fresh milk but want of it or improper feeding with cooked milk that encourages the development of tuberculosis in children I have seen these conclusions confirmed over and over again not only in England but in this far off India The nutritive value of breast milk or cow's milk depends upon the nutrition of the mother or the cow If they are not properly fed with a well balanced food containing protein vitamins and various salts such diseases as caries rickets and tuberculosis are likely to supervene —I am etc

Thambaram Sanatorium Chrompet near Madras April 20th C MUTHU

ETHER CONVULSIONS

SIR —So far apparently no satisfactory explanation has been found for the convulsions which occur in some cases during ether anaesthesia It is now I think well known that occasionally in certain individuals tetanic spasms may be produced by over breathing with its consequent hyperventilation of the lungs which are thus washed free of CO causing a change in the reaction of the body towards the alkaline side Might not a somewhat similar mechanism be the cause of the convulsions occurring under ether? If so then we have an easy and rapid remedy for abolishing them in the immediate administration of carbon dioxide This procedure has actually been carried out experimentally in a case of spontaneous over breathing tetany (vide an article on this subject by R A McCance *Quart Journ Med* April 1932 247) The same writer also points out how little over breathing may be necessary to produce tetany —I am etc

A C S COURTS M D B S
Honorary Physician Chesterfield Royal Hospital
May 6th

PREPARATION FOR MARRIAGE

SIR —I have found the correspondence on preparation for marriage as interesting as it is amusing and I would heartily endorse the letter of Dr J W Astley Cooper with its warning about the limitations of specialists The matter is obviously one where the general practitioner with his more intimate knowledge of the people concerned and the environmental and other influences to which they have been and will be exposed is best suited to advise—provided he has taken the trouble to equip himself for the task A little help given to him in acquiring necessary information might be well expended

There is however another aspect of the case Our ancestors and generally speaking all plants and animals have conducted their mating without specialist advice for so long a period that the question arises whether people who require this ought to marry at all The thought of a race that cannot manage its own love affairs is too terrible to contemplate —I am etc

Falkirk May 7th W J LOGIE

FOULING OF FOOTWAYS BY DOGS

SIR —The letter signed Agag in your issue of May 7th on this subject has an interest for me for particular reasons It is my privilege to act as medical officer of health for the district that includes the dread thoroughfare to which your correspondent makes thinly veiled reference To the embarrassment of my children

who have to suffer the frequent gibe of thoughtless and heartless companions therefor the leaflets and posters mentioned carry my name So also will another shortly to appear which will run somewhat as follows

Since the beginning of the year a number of persons have been convicted for allowing their dogs to foul the footways and fines of £1 and costs have been imposed on several defendants

For the increase in the number of prosecutions and the amount of the penalties the police are responsible For their greater encouragement I propose to send them a copy of 'Agag's letter —I am etc

CHARLES PORTER
Medical Officer of Health Metropolitan Borough of St Marylebone

London W 1 May 12th

SIR —The St Marylebone authorities are to be congratulated on the brilliancy of their idea in displaying the warning notices so low down on the lamp posts that every dog who runs along Wimpole Street may read — I am etc

London W 1 May 13th M B RAY

Obituary

WILLIAM DOVE MACFARLANE, M B C M

Late Professor of Midwifery Anderson College Glasgow

Dr William Dove Macfarlane of Glasgow died suddenly on the night of May 6th He had been engaged at an examination that day and had travelled to his coast residence as usual in the evening

Entering the University of Glasgow in the middle eighties he took the science and medical curriculum and graduated M B C M in 1890 During his college career he served under many well known masters who have also passed to their rest Among them may be mentioned the late Sir William Gairdner Sir George McLeod and Sir Hector Cameron Many of his fellow students distinguished themselves and obtained world wide recognition in later life After graduation Macfarlane served the usual period as resident surgeon in the Victoria Infirmary Glasgow and was house surgeon to Mr A E Maylard He then studied for a considerable time in Germany and Austria where he came under the influence of many of the great surgeons of the latter part of the last century Returning home he started in practice with his father in Busby where he continued to work for about thirteen years during which time he embraced every opportunity of acquiring further surgical knowledge and gaining a wide general clinical experience

Deciding finally to specialize in surgery he gave up general practice and settled in Glasgow Shortly after his arrival he was appointed assistant surgeon to the gynaecological department of the Glasgow Royal Infirmary where he was for a time assistant to the late Dr Balfour Marshall About 1910 he was appointed full surgeon with charge of wards to the Glasgow Royal Samaritan Hospital for Women where he continued to work with great acceptance to his colleagues and to the profession In 1911 he was appointed professor of midwifery and diseases of women in the Anderson College of Medicine Some time later he was appointed external examiner in his own subject to the University of Glasgow He was a brilliant teacher in his clinical and systematic classes being able to draw upon a wide clinical knowledge and store of clinical facts and focus them upon the condition with which he was particularly dealing It was most instructive to be present when he was making a differential diagnosis and arriving at a definite clinical decision and seldom was he wrong As an operator he was not rapid but he was not slow Everything he did was done deliberately and he took no unnecessary risks his ultimate results being of the highest order

About 1920 in view of the many claims of his hospital and private practice he relinquished his chair in the Anderson College and in 1924 to the regret of the community he decided to resign hospital practice and confine himself to private work which he continued until the time of his death Shortly after his retirement from hospital work he was appointed one of the directors and was also elected to the board of management of the Glasgow Royal Maternity Hospital In both these positions he did an enormous amount of work and attended a great number of meetings In addition he was continually being asked to represent those institutions at conferences He was a Fellow and Councillor of the Royal Faculty of Physicians and Surgeons Glasgow and one of the original Fellows of the recently founded College of Obstetricians and Gynaecologists A lifelong member of the British Medical Association, he was secretary of the Section of Obstetrics and Gynaecology at the Annual Meeting in Glasgow in 1922 From time to time he published articles but he was not a prolific writer and though often requested to write a textbook on his own subject he never consented to do so Socially he was one of the most charming men to meet There was kindness and generosity in his every word and action and his help in any capacity was never asked for in vain There must be in all corners of the globe to day men who realize that to him they owe their all Had it not been for his helping hand in the early part of their careers they probably would not occupy the position they enjoy to day

W J M

L F writes By the death of Dr W D Macfarlane the Glasgow medical school and hospitals have lost one of their most devoted servants and the profession as a whole a loyal colleague Ever since he retired prematurely from active hospital work and teaching Dr Macfarlane exerted himself indefatigably towards the improvement of clinical teaching and the co ordination of the various facilities for the study of obstetrics and gynaecology in his native city For this work Dr Macfarlane was peculiarly qualified He had been in his earlier years a successful teacher of students and graduands and hospital chief as well as operating gynaecologist He was a man of wide culture and sound judgement and possessed of high ideals But perhaps his greatest assets were his kindly and genial disposition and his charitable and strictly honest nature These qualities enabled him to act the part of true ambassador and not infrequently to resolve what often appeared irreconcilable forces As one who had the good fortune to be associated with him in certain spheres of this work I can bear testimony to the great and lasting value of his influence

PROFESSOR SEIDELIN

Professor Harald Seidelin M D died at Antwerp on April 29th Born at Aarhus (Denmark) in 1878 he took his medical degree at the University of Copenhagen After holding various hospital appointments in Denmark he went in 1904 to Mexico and henceforth devoted his life to the study of tropical diseases He became professor of pathology and bacteriology in the University of Yucatan and director of the Laboratory and Hospital O Horan There his work was largely concerned with research into the causes and treatment of yellow fever and many publications in Spanish appeared from his pen during this period Returning to Europe in 1910 he worked for a few months at the Lister Institute from which he published various articles in the *Journal of Hygiene* From 1911 to 1915 he worked at the Liverpool

School of Tropical Medicine as scientific secretary to the Yellow Fever Bureau during which period he was associated with Sir Ronald Ross Sir Rubert Boyce and other leading tropical scientists

From the Liverpool School of Tropical Medicine he undertook a number of scientific expeditions (1) The yellow fever expedition to Yucatan 1911–12 (2) The International Congress of Hygiene at Washington September 1912 at which he read a paper on the nature and control of yellow fever (3) Expedition to Jamaica 1912–13 to investigate the nature of a disease called vomiting sickness This expedition was undertaken at the desire and with the support of the British Colonial Office He visited also at this time Trinidad Barbados the Panama Canal zone and Columbia (4) Expedition to West Africa 1913–14 under the Yellow Fever Commission of the Colonial Office when he worked at Accra and at the Research Institute at Yaba near Lagos

From 1915 to the time of his death he was working in the Belgian Congo and devoted seventeen years to the organization and development of the medical service of the S A des Huileries du Congo Belge (one of Lever Brothers companies) being appointed principal medical officer in 1917 a position which he took up at the express wish of the late Lord Leverhulme During the outbreak of yellow fever at Matadi (Belgian Congo) in 1917 Professor Seidelin readily collaborated with the Government in combating the epidemic Under his able leadership the medical service of the S A des Huileries du Congo Belge developed rapidly into a highly organized and efficient centre of scientific activity He was assisted by thirteen doctors four sanitary agents and some 130 native dispensers He designed and supervised numerous hospitals for Europeans and for natives dispensaries and lazarets and carried on a great and highly successful campaign against sleeping sickness During the seventeen years he was in the Congo he did much bacteriological and pathological research work and issued numerous publications He was honoured by the Belgian Colonial Government in 1929 with the decoration of Chevalier de l Ordre Royal du Lion

Seidelin had great personal charm and was a linguist of outstanding ability being equally fluent in Danish English French Spanish and German and he had a wide knowledge of European literature He will be greatly missed by all who had the privilege of knowing him

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Dr HAROLD HARRIS ELBOROUGH SCATLIFF who died at Brighton on April 29th aged 56 years was educated at Brighton College Keble College Oxford and St George's Hospital Medical School He graduated M A Oxon in 1902 and obtained the diplomas of the English Conjoint Board in the following year He was honorary surgeon to the Brighton Throat and Ear Hospital to the St John's Convalescent Home (for throat and ear cases) and to the Aged Pilgrims Friendly Society Home as well as physician to St Saviour's Hostel Brighton In the R A M C (T F) he attained the rank of major on the staff of the Second Eastern General Hospital and received the Territorial Decoration Dr Scatliff was a man of generous nature and wide interests The variety of his services to his fellow men was betokened by the number of organizations represented at the funeral service at St Mary's Church on May 3rd where many members of the Brighton Division of the British Medical Association assembled to pay respect to their colleague's memory His widow Dr Helen Mary Scatliff is honorary physician to the New Sussex Hospital for Women and Children

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The following well known foreign medical men have recently died Dr MAURICE VALLAS professor of surgical pathology at the Lyons Faculty of Medicine aged 66 Dr LOUIS ERNEST BARIL honorary physician to the Paris hospitals Dr MARCEL NATHAN a Paris psychiatrist aged 53 Dr ERNEST REVILLIOD a prominent physician of Geneva Dr HEINZ DAHMANN extraordinary professor of oto rhino laryngology at the Dusseldorf Medical Academy Dr PAUL SAXL an eminent Vienna physician aged 50 Dr GEORG KOSTER extraordinary professor of psychiatry and neurology at Leipzig University aged 65 Dr W J GOLD a prominent paediatrist of Moscow Dr MAX RUBNER the eminent hygienist and physiologist of Berlin aged 78 Dr ALBERT GROSSE professor of clinical obstetrics at the Nantes School of Medicine and Professor BALDO ROSSI surgeon and rector of Milan University aged 64

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on May 13th the following medical degrees were conferred

M D—R K Debenham
M B B Chir—H B Padwick

UNIVERSITY OF LONDON

Lord Dawson of Penn and Dr A M H Gray have been reappointed to the Senate for the period 1932–6 by the Faculty of Medicine and the General Medical Schools respectively

LONDON HOSPITAL MEDICAL COLLEGE

A course of six lectures on the structure of molecules in relation to biology and medicine will be given by Dr J K Murrack in the Bearsted Clinical Theatre of the London Hospital at 5.15 p.m. on June 14th 16th 21st 23rd 28th and 30th The course is open to students of the University and members of the medical profession are cordially invited

The prizes and certificates gained by successful students during the current academic year will be presented in the College library by the Hon Sir William H Goschen (chairman of the House Committee of the hospital) on Friday June 24th at 3 p.m.

MIDDLESEX HOSPITAL MEDICAL SCHOOL

A series of six lectures on certain aspects of the reflex control of the circulation will be given by Professor Samson Wright at the Middlesex Hospital Medical School Mortimer Street W on Mondays and Thursdays May 23rd 26th and 30th and June 2nd 6th and 9th at 5 p.m. Admission to the lectures is free without ticket

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UNIVERSITY OF EDINBURGH

A graduation ceremonial took place in the Upper Library Hall on May 9th when the following degrees and diplomas were conferred

PH D—W A Bain

DIPLOMA IN PUBLIC HEALTH—Euphemia T Guild Janet C Ronaldson

DIPLOMA IN PSYCHIATRY—C D Bruce A S M'Culloch Flora M Stewart

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE—J L Dover J M K A Lowson Major J Menzie R A M C

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons of England was held on May 12th when the President Lord Moynihan was in the chair It was announced that the Lister Medal for 1933 for distinguished contributions to surgical science had been awarded to Sir Charles Ballance K C M G C B who will deliver the Lister Memorial Lecture at the College in 1933

It was reported that a bequest to the College by the late Mr J W Groves had now become payable The bequest is expected to amount to about £10 000 and the interest derived from it is intended for the purposes and objects of the museum including the purchase of collections

A diploma in gynæcology and obstetrics was granted jointly with the Royal College of Physicians to D P de Villiers

Diplomas of membership were granted to 154 candidates who had passed the final examination in medicine surgery and midwifery of the examining board in England (The list of the successful candidates was printed in the report of the meeting of the Royal College of Physicians of London in our issue of May 7th p 868)

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Mr GROVES has given notice that on May 24th he will introduce a Nursing Profession (Wages and Hours) Bill

NATIONAL HEALTH INSURANCE BILL

In moving on May 11th that the National Health Insurance and Contributory Pensions Bill be read a second time Sir HILTON YOUNG said this was a Bill to ensure the financial stability of the national health insurance scheme There were 17 000 000 persons insured under the scheme who contributed year by year £26 000 000 The annual exchequer contribution was £6 500 000 In twenty years £494 000 000 had been expended in benefits For the first ten or fifteen years large surpluses were earned and additional benefits could be paid and £117 000 000 had been accumulated by the societies the greater part of that sum being earmarked against actuarial liabilities In the past ten years £21 000 000 had been paid in additional benefits Some years ago the finances of the scheme began to show a less prosperous condition and Mr Greenwood called for a special report This brought out that the sickness benefit of married women had increased between 1921 and 1927 by 106 per cent above expectation and their disablement benefit 159 per cent above expectation In consequence Mr Greenwood issued in 1931 a circular calling for a more careful supervision of claims made and better medical certification in respect of the claims These remedies did not meet the case With the country as a whole severely depressed claims were increasing particularly women's claims and owing to unemployment the arrears from contributions was falling off At the beginning of this year came the Government actuary's report upon the scheme for the third valuation period which revealed that the health insurance scheme was living upon its accumulations For the second to the third valuation the surplus assets of the approved societies increased only by £12 500 000 and that was an illusory increase At present the rate of increase in the surplus assets of the approved societies and of the schemes as a whole was *nil* After the second valuation 95 per cent of the approved societies gave additional benefits After the third valuation additional benefits had to be reduced in respect of 6 250 000 contributors and had to be discontinued in respect of 4 250 000 No fewer than 480 societies and branches found themselves with a deficiency If the scheme continued as at present it would break down by the end of the next valuation period During the last valuation period the claims of women were £4 000 000 in excess of expectation and the excess was greatest in the last year The average yearly loss per head on married women was now three and a half times greater than with respect to unmarried women Only two things could be done to increase the contributions or to decrease the benefits The contributions of all women would have to be raised from 8½d to 10d making them higher than for men It was impossible to place any increased contribution upon either the employer or the employed Turning to the alternative of a decrease in benefits he said it would be unfair to call on unmarried women to bear the burden Unmarried women in the scheme outnumbered married women by four to one The married women had no strong deterrent from going out of work for a time and on to the fund Therefore it was essential and just to make a distinction between married and unmarried women Even after the reductions which he proposed the benefits of married women would still be above the pre war level The rule that disablement benefit should be half the sickness benefit would be restored

Passing to the question of arrears of contributions due to unemployment Sir Hilton Young proposed that half of these should be excused this would reduce the burden on the approved societies by £1 000 000 a year There were 80 000 men and women who owing to unemployment would pass completely out of insurance at the end of this year Sir Hilton Young proposed that they should receive a further free year of medical benefits in 1933 This would cost £50 000 and could not be repeated in future years He also proposed concessions to the man who after lapsing from employment was returning to insurance He proposed that up to the end of 1935 such a man should regain his right to full rates of benefit after twenty six contributions If a man sick at the end of the time of going out of insurance the insurance would be extended to the end of the half year He added that a deputation of approved societies had asked him to take some such action as was proposed in this Bill

Alleged Lax Certification

Mr RHYS DAVIES moved the rejection of the Bill He said that he agreed that the solvency of the scheme must be secured there was no section of the community that was not anxious to see the scheme based on insurance and actuarial principles If the original contracts had been carried out by the State and the usual subsidy to the fund continued the surplus on the third valuation would have been equal to that on the second In spite of all that had been said about the scheme it was still as it stood to-day the safest and soundest social insurance scheme in the world Had it not been for the fact that the Ministry induced many of the approved societies to separate for valuation purposes the funds of the men from those of the women those societies would never have had reason to complain of the heavy claims of married women A large proportion of the increase in the sickness claims of married women came from the loose certification of the panel practitioners The medical practitioner to-day was not adopting the same attitude towards panel practice as when he was employed by the old friendly societies If the panel practitioner of 1932 did his work as conscientiously as his predecessors did for the friendly societies twenty years ago the House would not be faced with the problem of married women's claims to-day The Ministry of Health had been so dissatisfied with some panel practitioners that it had set up what was called a regional medical service Approved societies that were dissatisfied with the certification of the ordinary panel practitioner sent thousands of case annually for second medical opinion Were it not for the work of the regional medical officer the percentage of the increase might easily reach double what it was now The situation regarding certification was not satisfactory Medical practitioners dealing with national health insurance ought to be employed by the State He saw no other way to secure proper certification

Mr MCCOVERN Is the hon member suggesting that the medical profession are passing people for benefit who are not suffering from illness?

Mr DAVIES The average panel doctor is doing his work well but there are certain practitioners who are known to be granting medical certificates improperly

Mr HOWARD said that if they did away with the opportunity which was allowed to patients to transfer from one practitioner to another they would prevent the granting of these easy certificates

Mr DAVIES said that those who administered the scheme knew too of the extravagant claims of some dentists opticians and surgical instrument makers By adopting a better system of administration by securing better medical certification and by the elimination of what he termed unmurrable types of cases from the scheme it would still be possible to save the married women and the single women from any reduction of benefit

A Proposed Amendment

Mr LLEWELLYN JONES said that some of those who were associated with the administration of national health insurance felt that the Bill did not go far enough and that the whole position would not be safeguarded by this measure On the committee stage it was proposed to put down an amendment which contemplated that all married women should automatically be transferred to a special class as from the date of marriage and become entitled to the benefits of that class whether or not they continued in employment those who ceased employment would ultimately pass out of insurance in the same manner as at present and those who continued in employment would require for full insurance by shorter waiting periods than at present He disagreed with the attack which had been made on the panel practitioners by Mr Rhys Davies For over twenty years he had been chairman of the Insurance Committee for the county of Flint and he could not remember a single case of a complaint by an approved society against a medical man in his county regarding irregular certification On the whole the great mass

of medical practitioners on the panel endeavoured to administer the Act in the most straightforward manner in the interests of their patients He was quite sure that if complaints about improper certification were reported to the British Medical Association immediate action would be taken During the past few months an attempt had been made by insurance committees with the concurrence of the Ministry of Health to arrange for conferences of medical men representatives of insurance committees and of friendly societies and he was satisfied that those conferences had resulted in a vast amount of good

Mr MILLER said that the panel doctors rendered excellent service It was a matter for co operation between all parties concerned in this question of health insurance A deputation of approved societies had expressed its firm conviction that the present position of affairs must be met in the way the Minister of Health had met it He hoped that the Minister having taken the advice which was rendered to him in the interests of the societies and of the insured persons would also take the advice which would be tendered to him in the form of the new clause to be submitted in committee Otherwise he agreed with the main principles of the Bill

Mr MAXTON asked if the Minister of Health ought to allow the question of the solvency of the fund to take first importance The main purpose of the national health insurance scheme was the maintenance of the general health of the community One of the most obstinate problems was that of the maternal death rate in childbirth and he urged the Minister to bear that matter in mind when he picked out the married women as the special instrument for achieving a solvent balance sheet He asked the right hon gentleman if it was sound national economy to risk a serious deterioration in the health of the nation The Government was asking the sick women to shoulder an added burden to save the nation from collapse

Mr SKELTON said that the Bill would to a considerable extent solve the problem of arrears which had pressed so heavily on the Scottish friendly societies The Scottish Department had attempted to solve the problem of the increase in the claims of married women Its report would show what had happened since June 1930 in relation to sickness and insured persons in Scotland and the report would tabulate the number of certificates given by medical men That would furnish a double check on how far in certain districts certain complaints and ailments were prevalent and the proportions in which medical men gave certificates The first report for the year from July 1st 1930 to June 30th 1931 would be published shortly

Difficulties of Certification

Dr FREMANTLE said that he was much interested in the scheme which had just been propounded by the Under Secretary for Scotland—a kind of sleuth hound Sherlock Holmes scheme for the investigation of the crimes or otherwise of the medical profession Of all those who were concerned with the question of the health of the people generally none would wish more strongly than the medical men themselves that this inquiry should be successful in running down any real negligence on the part of the panel practitioner Mr Maxton had mentioned a case in which a panel doctor with his human appeal was apparently in his estimation right and the regional medical officer bound to consider only the financial aspect of the matter was Mr Maxton concluded in the wrong If the regional medical officer because he served the Government and the insurance scheme was bound to consider finance only and not humanity what became of Mr Maxton's whole structure of socialism and of the State scheme that was entirely bound under the State when the officers would all be officials holding public offices? It was true that the panel doctor often knew and the regional medical officer who came in from outside did not know the real human side of the case and that was what had to be considered in the difficulty about certification If these matters were to be judged by bureaucratic method and if one doctor who certified 50 per cent more patients than another was to be adjudged wrong it would reduce the whole national health insurance scheme to ridicule

He agreed that the difference in certification for sickness benefit could not all be attributed to malingering but that nevertheless some must be attributed to it He did not like the use of the word malingering or the phrase false certification because it led them astray The great majority of people did not deliberately break the law or cheat but they were human and the result was that on the one hand they naturally took benefits as they came to them and on the other hand the doctor signed certificates as a matter of course not meaning to deceive anyone or to betray anything but in the hurry of his ordinary practice and because he hated signing these things The medical profession were probably the most unbusinesslike people in the world in their general practice because their work had such a compelling human appeal It was natural for practitioners to do what they could for their patients and to do what their patients wished them to do

Decrease in Certification

The insurance system (Dr Fremantle continued) had to be financially sound if it was not to break down and the systems of public health and public assistance had to be improved wherever possible The question was how could this be done The figures showed an increase in certification up to 1927 but he was rather surprised that the Minister had not also remarked that the figures since then showed a definite improvement He rather left the impression that there had been this constant increase in certification for sickness and disablement benefit among women As a matter of fact for the last three years there had been a considerable improvement Disablement and sickness were practically stationary at a level slightly above that reached in 1927 for unmarried women while those for married women had substantially increased The Minister was banking on having a 10 per cent improvement during the next few years The figures for the last three years of the Hearts of Oak Society with which he was proud to be associated in the work of honorary arbitrator certainly did not show that there was likely to be a 10 per cent improvement The figures for women's sickness in 1930 were £70 benefit per 100 members and in 1931 £60 Disablement benefit was reduced for all women from £52 to £49 with different figures for spinsters as opposed to married women There was not very much reduction and that reduction really corresponded to the reduction in the scale of benefits He was afraid that the 10 per cent reduction on which these estimates were framed would not be sufficient and that was why he hoped they might be able to get support for the amendment It was a natural reasonable and right suggestion in accordance with the hon member's diagnosis of the trouble Women when they were married tried wherever they could to retain benefit so long as they remained in the same class The suggestion in the amendment was that they should go into a separate class—Class K—until they were definitely disabled and then they would go back to Class E and get their benefit A further reduction in sickness and disablement without any real hardship would be secured

He had been asked also to support an amendment put forward by the National Association of Insurance Committees to prolong medical benefit along with the prolongation of pension rights Obviously they would all wish to see that if possible but it depended on finance He understood from his society that it would not be practicable to make that further concession of medical benefit for another two years but he hoped that the matter would be properly looked into and that they would see about it in committee

Sir H CAUTLEY asked if there was any information in the possession of the Ministry showing the effect of paying benefit for the first three days One heard rumours and stories of how members of approved societies in town wished to take a holiday a long week end of four or five days a complacent doctor did not take very much trouble and the members went on benefit for those week ends He wondered whether that benefit which he had always mistrusted had not been abused and if there had not been laxity in this administration

Pressed for further details by Dr O DONOVAN Sir H CAUTLEY said that he only heard that this state of affairs existed Numbers of people told him so but otherwise he was not prepared to justify it He was asking for information and whether there were any statistics on the subject He also asked if it would not be advisable to alter the system of the relationship of the panel doctor and his insured patients

At present no notice had to be given of any change of doctor Could a doctor be more secured in his position by two three or four months notice being required from a patient before he could change his doctor? At present the doctor was put in the position that if he refused to sign a certificate that a panel patient was ill the patient might in the heat of the moment apply for a change in his medical attendant While he did not suggest that the doctor did not try to do his best in a very difficult situation he said that it was not fair to him and that he ought not to be placed in that position

Practitioners and their Fees

Mr MACQUISTEN said that there was no more unpopular Act among the masses of the people than the National Health Insurance Act The vast mass of doctors had been reduced from a profession to becoming tax collectors They did nothing but collect and fill up forms and were insulted by committees of laymen and surcharged if they gave patients medicines which were a little expensive The medical profession had been largely degraded by the position into which its members had been put by this abominable Act A different breed of men had come into the profession A doctor friend of his in Edinburgh told him that he was getting £1 500 a year for a few working men waiting in his consulting room in the evenings He said that he got £75 a quarter from people who were too indignant to nominate a doctor and whom he therefore did not attend and he felt as if he were getting money under false pretences He (Mr Macquisten) asked why he did not chuck it and his reply was that if he did so some other fellow would get it that it helped to pay for his car and household expenses and enabled him to build up a West End practice on the backs of the poor It was all nonsense to talk about the Act protecting the people's health Dr O Donovan had asked Sir H Cautley to give instances in regard to his references to the medical profession He (Mr Macquisten) would give instances To begin with a substantial percentage of doctors practically wiped their boots on the panel patients when it was impossible for the patient to change his doctor When the patients got some liberty and the chance of changing their doctor there was the inevitable result of competition for patients

Mr A GREENWOOD said it was difficult to ascribe reasons for the increase in the claims among married women but he was satisfied that the long drawn out trade depression was one of the most important While he did not suggest that the doctors were acting dishonestly or that married women were trying improperly to obtain benefits under the national health insurance scheme it was undoubtedly true that there were cases of lax certification by doctors and a desire on the part of insured persons to get something to which they were not entitled It was not fair to reduce the disablement benefit of the single women

Government Reply

Mr ERNEST BROWN said that solvency was not an abstraction but an essential condition of paying not only the proposed benefits but any benefits at all In making the proposed changes the Government had had to do it so as best to guard the pension rights of these poor people as far as possible consistently with a sound scheme Dr Fremantle and other members had raised the question of a special class for married women That was a case which could be presented during the committee stage of the Bill when everything for and against the proposal would be heard with great care by the Minister of Health Everyone knew that the most subtle and difficult of all approved societies problems was the decision as to when a married woman was or was not sick It was not only a difficulty for the doctor but for the approved society Even in the smaller towns where everyone's movements were known it was very difficult to decide whether there was laxity or not in regard to certification of married women It was certain that the actuarial risk in the case of married women under an insurance scheme was out of all proportion to the risk in the case of men or single women Because that risk had assumed such great proportions the Minister of Health had felt it right to face the problem in the way which he had done and to say regretfully that the only thing to be done was to tackle the question of what was the risk in terms of the solvency of the scheme in the case of married women

"A Corrosive Contribution"

Dr O DONOVAN said he had heard a most corrosive contribution to the debate They had heard from Mr Macquisten that doctors accepted their money as if that money were obtained under false pretences It was no help to clear thought or any aid to debate that a profession should have attached to it so criminal a libel and so vile a libel They were told on the authority of Mr Macquisten that a new breed of men had come into the medical profession He would assure the House that those who were entering the medical profession proceeded to the ancient universities where they studied athletics and the humane arts and they entered the hospitals to be taught the same traditions of medicine as existed before the National Insurance Act was ever thought of He (Dr O Donovan) was troubled to think that it should be thought in the House of Commons that a member of the medical profession ought to be perfectly content to maintain his family on a salary of £300 a year that he should live until death called him in a miasma of disease and in the midst of the direst poverty on such a sum and that on the other hand if he took service under the panel and received £1 500 a year he ought to be troubled in his conscience and refuse to work It had been a blessing to the profession that thanks to the National Health Insurance Act doctors could now bring up their sons to that profession which they loved and hand on from father to son the great tradition of service He submitted that the Insurance Act had brought into the profession a wider selection of keen minds anxious to maintain the public health The Act had worked well because it had received the co operation of an intelligent and learned profession Acting through the British Medical Association the medical profession had worked cordially with Governments of all nations for the people's health and because of the co-operation the fruits of this Act had been good The British Medical Association would celebrate the centenary of its foundation this year in London under the presidency of Lord Dawson and hours would be devoted by the keenest minds to the discussion of public health problems They had seen members of the medical profession drawn into public life because through the Insurance Act they had been interested in public health administration They had not segregated themselves entirely in the atmosphere of the sick room Owing to this Act which had been so much derided our medical research through the medium of the Medical Research Council had been placed on a footing which was the admiration of Europe Through that they had been able with the co operation of the large voluntary hospitals to bring every modern device of science and the help of specialists to the home of every one of His Majesty's subjects He apologized for delaying the House but a corrosive acid should have some antidote (Cheers)

The Bill was read a second time by 245 votes to 49

On May 13th Sir HILTON YOUNG told Mr Rosbotham that only one approved society in Great Britain with a membership of about 34 000 insured persons had been obliged to reduce its cash benefits below the normal statutory rates

Workmen's Compensation

Answering Mr Hicks on May 11th Sir P CUNLIFFE LISTER said three Conventions relating to workmen's compensation were adopted at the seventh session of the International Labour Conference Of these the Convention relating to workmen's compensation for accidents had not been ratified in respect of the United Kingdom The Convention relating to equality of treatment for national and foreign workers had been substantially applied in the Dependencies in which workmen's compensation legislation already existed The Convention relating to occupational diseases had been applied in Malta and (so far as non native workmen were concerned) in Northern Rhodesia The administration of compulsory sickness insurance schemes as contemplated in the two Conventions which were adopted at the tenth session of the International Labour Conference was not at present practicable in the Colonies and Protectorates In the majority of the Dependencies however free medical and hospital treatment was provided either by the Government or by large employers of organized labour Certain of the objects of these Conventions were to a great extent attained without any specific contributions from the persons who derived benefit from the facilities provided

Prison Dietaries.—In reply to Mr Rhys Davies on May 11th Sir HERBERT SAMUEL said that special attention had of recent years been devoted to the improvement of prison dietaries and to securing a proper standard of skill and care in their preparation The food and the kitchens were regularly inspected and were also seen by visiting justices on their visits It would be impracticable to collect particulars of complaints made by individual prisoners about their food but he was satisfied there was no general cause for complaint regarding either quality or preparation Apart from the events at Dartmoor in January there had been no disturbance at any prison nor any general complaint arising from dissatisfaction with the food

Local Government Law.—Replying to Mr Liddall on May 12th Sir HILTON YOUNG stated that the Committee on Local Government Officers hoped to present its report early in 1933 and the Committee on Local Government and Public Health Law Consolidation would issue an interim report covering the consolidation of the law of local government by the end of 1932

Chemical Defence.—Mr COOPER told Mr Rhys Davies that certain scientists at the Universities of Oxford Cambridge and London were carrying out experiments on chemical defence problems for which payment was made to them from Army funds

Medico-Legal

HIGH COURT DECISION AGAINST OSTEOPATH

WRONGFUL USE OF WORDS PHYSICIAN AND SURGEON

On May 10th and 11th before the Lord Chief Justice Mr Justice Avory and Mr Justice Macnaghten the case was heard of Whitwell *v* Shakesby which turned upon the legality of a description of himself by the respondent as an osteopathic physician and surgeon. In December last the Marylebone magistrate dismissed a summons by the Medical Defence Union taken out on information under the Medical Act by Mr F D Whitwell against Mr A E Shakesby bone setter and osteopath of Dorset Square N W for wilfully and falsely using the title physician and surgeon in contravention of the Medical Act 1858 Evidence was then given that a doorplate on the respondent's residence bore the inscription

Prof A E Shakesby D O (Lond)
Bonesetter
Osteopathic Physician and Surgeon

Mr Shakesby's name did not appear in the *Medical Register* The magistrate held that Mr Shakesby had not brought himself within the Act as he had described himself not as a physician and surgeon but as an osteopathic physician and surgeon which description only amplified his profession of bonesetter He agreed however at the request of the Medical Defence Union to state a case for a higher court

Mr Hilbery K C who with Mr G D Roberts (instructed by Messrs Hempson) appeared for the appellant contended that the Medical Act 1858 contained an absolute prohibition against the use of the titles physician and surgeon by an unregistered person and that the use of the words bone setter and osteopathic could not justify or legalize Mr Shakesby's action in using those titles Osteopathy was not regulated supervised or recognized by any statute Mr Maurice Healy K C who appeared with Mr E H G Roberts for the respondent contended that there had been no false pretences Mr Shakesby was entitled to describe himself as a bonesetter and the words osteopathic physician and surgeon might be regarded as amplifying that description and having a grander sound The words qualified the description physician and surgeon and it was not implied that Mr Shakesby was registered under the Medical Act Mr Shakesby's use of the term was based on a directory issued by the Incorporated Association of Osteopath Ltd which stated that a member had a right to the title osteopathic physician and surgeon He had honestly believed that he was entitled so to describe himself and even if he were wrong in that belief there was no evidence of wilful and false pretence

Mr Hilbery in reply pointed out that bonesetter could not mean the same thing as physician Even if the title physician were taken in some popular sense which it had long since ceased to possess it could not suggest the same thing as bonesetter but in fact the word physician now had a narrow significance and meant qualified and registered under the Medical Act It was impossible to suppose that anyone put in the words *osteopathic physician and surgeon for no purpose* It was said that they were put in because they sounded grander The question was obviously what lay behind the phrase They were not merely grander but they gave the appearance of qualifications which the respondent did not in fact possess

JUDGEMENT

The Lord Chief Justice said that the respondent was charged with wilfully and falsely using the titles physician and surgeon contrary to Section 40 of the Medical Act 1858 The learned magistrate had found that the respondent used the titles wilfully within the meaning of the Act especially as he had disregarded a written warning given him last September It was found further that the statement in a certain directory could not and did not afford any defence but the magistrate had also found that by the use of the words bonesetter and osteopathic the respondent had qualified the phrase physician and surgeon so that this became merely an amplification of the description bone setter and therefore the respondent had not used the titles falsely within the meaning of the Act As he (Lord Hewart) understood the word amplification it meant something further which was added and if that was so the respondent was describing himself not only as a bonesetter but also as a physician and surgeon He read to the court Section 40 of the Medical Act 1858 which prescribed the penalty for falsely pretending to be a registered person He was not sure *that he quite followed the meaning of the finding of the* magistrate that the word osteopathic qualified the phrase physician and surgeon so that the title physician and surgeon became an amplification of the description bone setter *But he was satisfied that there ought to have been* a conviction Stress had been laid by counsel upon the case of Ladd *v* Gould (reported 24 J P 357) That was a case tried two years after the passing of the Medical Act in which a chemist had put upon his door the words Surgeon and mechanical dentist and it was found by the magistrates that he had used the word surgeon simply to show what branch of the business of dentistry he carried on and not to represent himself as a surgeon *within the meaning of the* Act There was no such finding as that in this case—in other words there was no such finding as that the words physician and surgeon were employed to describe what branches of osteopathy the respondent carried on The *purpose of the Act in this part of it was clearly set out by Lord* Coleridge in a case reported in 56 J P (406) in which he quoted with approval the words of Lord Bramwell The question depends on the construction of Section 40 of *the* Medical Act 1858 That section is intended to protect the public from being imposed upon by persons untruly representing themselves to be legally qualified medical men Mr Maurice Healy in his ingenious argument seemed to the Lord Chief Justice to have been urging two contradictory things He had said at one time that these words physician and surgeon were used by the respondent as mere surplusage yet he had also said that they were used by him because they were something grander—a grander title than the word bonesetter Why grander Only because as he thought they appeared to convey that respondent had qualifications which in fact he had not and which the Medical Act 1858 prevented him from assuming without the lawful right so to do He therefore felt that the appeals ought to be allowed and the cases to go back to the magistrate with a direction to convict

Mr Justice Avory said that he was of the same opinion He thought that the description upon the plate did imply that the respondent was either registered under the Medical Act or was recognized by law as a physician and surgeon within the meaning of Section 40 In his view the description bonesetter by itself would imply that he was a person not qualified under the Medical Act not registered and not entitled to the use of the description physician and surgeon When the magistrate said that in his opinion by the use of the word bonesetter he qualified the title

physician and surgeon his lordship with respect differed He thought that the learned magistrate unconsciously fell into contradiction when he said on the one hand that the words were merely amplification and on the other that they qualified the title He agreed with him that the words physician *and surgeon* were *an amplification of the description bone* setter and by that amplification the respondent was representing himself to be in fact a physician and surgeon and by so representing himself brought himself within the Act implying that he was recognized by law as a physician and surgeon There was one other passage in the judgement of Lord Coleridge to which the Lord Chief Justice had alluded namely It is obvious that there are different qualifications and examinations for the different heads of medical practice and that those to which a doctor of medicine must be subject and upon which he must enter are quite different from those required for an apothecary (The case then being dealt with was one in which the man was registered as an apothecary and had further represented himself as a doctor of medicine) Lord Coleridge proceeded To call yourself a physician because you are an apothecary is a fraud upon the public the very thing that this Act of Parliament was intended to prevent It was intended by the legislature that persons who employed a medical practitioner should know what sort of examination he has passed and under which of the various heads of medical practice he is classed That appears to me Mr Justice Avory went on *a fortiori* in this case when a person who is not qualified and who describes himself as bonesetter —that is a person not qualified—in addition represents himself to be qualified as a physician and surgeon—in other words as a person who has been registered or is recognized by law as a physician and surgeon On those grounds he agreed that the appeal should be allowed and the magistrate directed to convict

Mr Justice Macnaghten said that he was of the same opinion The appeal was therefore allowed with costs against the respondent

ACTION FOR NEGLIGENCE AGAINST IRISH DOCTOR

At the Sligo Circuit Court on May 3rd and 4th before Judge Moonan and a jury an action was brought by Mrs Sarah Boyle widow against Dr Michael Martin of Cashelgarron claiming £300 damages on account of alleged negligence in the treatment of her late husband The deceased a farm labourer aged 40 was taken ill with severe abdominal pains on December 21st 1930 On the following day Dr Martin was called in and gave certain medical treatment but the pain and other symptoms continued and on December 29th the patient was removed on the doctor's instruction to the fever hospital Here the physician Dr Hugh M Loughlin called in Dr C J M Carthy surgeon in charge of the county surgical hospital who found the patient to be suffering from a very acute and gangrenous appendix An operation was performed but the patient eventually died in the surgical hospital It was urged on behalf of the plaintiff that Dr Martin should have been aware of the appendicitis instead of which he at first gave certificates indicating that the patient was suffering from dyspepsia and afterwards apparently suspecting typhoid had the patient removed to the

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practitioner the onus was on the plaintiff to show a lack of skill Point had been made of the statement that on the day before the patient was removed to hospital the doctor did not call until some hours after he had been sent for but this was no evidence of negligence especially as it was not proved at what hour he actually received the message Nor was an erroneous diagnosis evidence of negligence for that depended upon whatever difficulty there might have been in diagnosing appendicitis at the time the doctor saw the patient and both the medical witnesses called by subpoena for the plaintiff agreed as to the difficulty of making the diagnosis at that stage

The jury therefore on the judge's direction answered No to the question Did the defendant treat George Boyle negligently? '

Medical News

The Bolingbroke Lecture before the South West London Medical Society will be given by Sir Humphry Rolleston at the Bolingbroke Hospital Wandsworth Common S W on Wednesday May 25th at 9 p m The subject is 'Advances in medicine during the last fifty years Members of the medical profession are cordially invited

The Glasgow University Club London will dine at the Cafe Royal 68 Regent Street, W on Friday June 10th at 7 15 for 7 30 p m The Very Rev Sir George Adam Smith D D LL D Principal of the University of Aberdeen is to be in the chair Any Glasgow University men who though not members of the club desire to attend are requested to communicate with the honorary secretaries 62, Harley House N W 1

The annual general meeting of the Fever Group of the Society of Medical Officers of Health will be held at the house of the society on Friday May 27th at 3 30 p m A paper on isolation hospital construction by Mr W H Hobday F R I B A , will be read

A meeting of the Medico Legal Society will be held at 11, Chandos Street W on Thursday May 26th at 8 30 p m Colonel L W Harrison R A M C will read a paper on the medico legal aspects of venereal disease a discussion will follow

A dance organized by the Ladies Guild of the Royal Medical Benevolent Fund is to be held on Thursday June 9th in the Great Hall of the British Medical Association Tavistock Square W C This function will be the thirteenth of a series which in the past have proved both successful and enjoyable and the committee is most anxious that members of the medical profession and others interested in this Fund should lend their support Tickets (single 6s double 11s) may be obtained from Mrs Oldershaw 26 Upper Wimpole Street W 1

The ward at the Royal Free Hospital in memory of Dame Mary Scharlieb M D M S will be dedicated by the Bishop of London on Tuesday May 31st at 4 45 p m and a memorial tablet will be unveiled by Lord Ruddell president of the hospital The speakers will include Lady Barrett Dr Rosa Clark and Dame Louise McIlroy

The Duke of York will preside at the one hundred and eleventh annual court of the Seamen's Hospital Society on June 8th when he will declare open the new surgical wing of the Dreadnought Hospital and the out patient department Until 1870 the hospital was housed in the old *Dreadnought man-of war* moored off Greenwich The present building and the new wing is one of the seven establishments of the Society which now cares for over 33 000 sick and injured seamen every year

A post graduate course on the biology and pathology of tuberculosis will be held at the Institut Pasteur and the tuberculosis clinic of the Hopital Laennec Paris under the direction of Professors Albert Calmette and Leon Bernard respectively from June 13th to July 30th The fee is 300 francs Further information can be obtained from Dr L Negre Institut Pasteur 96 Rue Falguiere, Paris

The Fellowship of Medicine and Post Graduate Medical Association announces a whole day course in medicine and surgery at the Prince of Wales's Hospital Tottenham from May 23rd to June 4th This is especially suitable for general practitioners wishing for refresher work and it will be followed by three similar courses June 6th to 18th June 20th to July 2nd and July 4th to 16th Other courses include diseases of the chest at the Victoria Park Hospital June 6th to 18th occupying the whole of each day and gynaecology at the Chelsea Hospital June 6th to 18th occupying most of each day Episcope and laboratory demonstrations will be given at 10 Bedford Square W C on clinical pathology at 8 30 p m on May 25th and June 1st Lectures on epidemic encephalitis will be given by Professor Arthur Hall on June 2nd 9th and 16th at 8 30 p m the first and third at 11 Chandos Street Cavendish Square and the second at Bush House Kingsway Four demonstrations *on ante natal treatment* will be given by Dame Louise McIlroy at the Royal Free Hospital on Wednesdays June 1st to 22nd at 5 p m The above courses and lectures are open only to members of the Fellowship of Medicine

The summer post graduate course at the Royal Northern Hospital Holloway will commence on May 23rd and terminate on July 6th The periods from May 23rd to 27th and from June 13th to 17th will be an intensive course devoted to teaching in the wards and various departments of the hospital The last three lectures and demonstrations of the series will be given at the Royal Chest Hospital, City Road which is a branch of the Royal Northern Group The lectures and demonstrations are open to all medical practitioners free of charge Tea will be provided on each occasion at 4 15 p m

In view of the proposed inquiry by the Minister of Health into the scientific issues involved in the sterilization of mental defectives a conference organized by the Eugenics Society will be held at Caxton Hall Westminster on May 23rd In the morning Sir Thomas Horder will discuss medical and legal aspects and Mrs C B S Hodson and Miss Hilda Pocock will give an account of sterilization in other countries at the afternoon session Professors Carr Saunders and Ruggles Gates will discuss the social and moral aspects of sterilization

The annual meeting of the French Association for the Advancement of Science is this year to be held in Brussels from July 25th to 30th The Medical Electrology and Radiology Section will be under the chairmanship of Dr Felix Sluys and among the papers to be read is one by Dr Glorieux of Bruges on injuries to the vertebral column Professor Rechou of Bordeaux and Dr Delherm and Dr Kuhn Morel of Paris will present papers on the radio and electro therapeutical treatment of goitres Professor Gunzburg Brussels will present a report on the electrical treatment of chronic rheumatic affection Particulars of the work of the Section and conditions of membership can be obtained from Dr E Daubresse Morelle 154 Rue de la Roi Brussels

The International Congress of Phonetic Sciences will be held in Amsterdam from July 3rd to 7th under the presidency of Dr J van Ginneken The congress should appeal not only to those interested in phonetics but also to psychologists psychiatrists neurologists anthropologists and biologists Further information can be obtained from the general secretary Dr L Kaiser Ruysdaelkade 136 Amsterdam

The fifth congress of the International Society for Logopedia and Phoniatry (remedial training of speech and voice) will be held in Budapest July 14th to 17th The reports will be given in German and in Italian Communications and discussions at the congress can be held in English German French and Italian Further information may be obtained from Professor Dr Fröschels Vienna IX Ferstelgasse 6 or from Doz Dr Stern Vienna IX Mariannengasse 15

The fourteenth International Congress of Physiology will be held in Rome from August 29th to September 3rd under the presidency of Professor Filippo Bottazzi of the Naples Institute of Physiology The subscription is 100 lire Further information can be obtained from the general secretary Professor Sabato Visco R Istituto di Fisiologia Naples

The Ministry of Health reminds county and county borough councils that they should submit not later than September 30th next a scheme to be effective from April 1st 1933 to March 31st 1937 for payment of annual contributions to voluntary associations providing maternity and child welfare services It should be prepared after consultation with associations in the existing scheme and reasons must be given for any omission of such an association or any proposed variation in the amount of the annual contribution

Dr Ludwig Pick professor of anatomy at Berlin University has been elected Dunham lecturer at Harvard for the year 1931–32 and Dr Friedrich Gudzent professor of medicine at Berlin has been invited by the Royal Egyptian Medical Society to lecture on gout and rheumatism at Cairo

Major H E S Richards *M C* Chief Medical and Health Officer Government of Grenada has been re appointed a member of the Executive Committee of the Island of Grenada

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal British Medical Association House Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861 9862 9863 and 9864 (internal exchange four lines)

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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 2290 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Unilateral Oedema

Dr CHARLES HAGENBACH (Hayle Cornwall) writes I have had very good results in a case where the oedema extends up to the groin Elastoplast bandages were first used but did not wear well and caused skin irritation although gradually reducing the girth of the limb I followed up with cerabin bandages and the patient is now very comfortable Three bandages were first required but now two and a quarter suffice They last ten or twelve weeks and the skin is unaffected The part around the knee gives way first and may be replaced separately if desired The top of the bandage should be finished with a double thickness and short unequal nicks—less than an inch in length—cut in it so that there shall not be a definite edge over which the skin might bulge and become chafed Liberal powdering of the outside of the bandage for a few days will overcome the stickiness resulting from body warmth

Plantar Corns

WELCOME RELIEF (Hull) writes in reply to Clavus I had tolerated severe discomfort for some year making walking for any distance practically impossible due to plantar corns beneath the head of the metatarsals associated with an intensely irritable exfoliative and serous dermatitis between the toes *Having used* a scalpel frequently having sought the opinion of several professional

colleagues without any beneficial effect and having applied salicylic acid collodion without improvement I was ultimately constrained to put myself with reservation into the hands of a chiropodist whose treatment has resulted in my complete relief For some time he relieved the corns of pressure by the application of pads of felt about a half inch in thickness adhesive on one surface and bound on with two lengths of strapping so placed that the pads (about 2 inches wide by 1½ inches back to front) lay with their anterior border directly behind the heads of the metatarsals Their presence made no difference to bathing but they became loose after about a week and required renewing I applied friar's balsam between the toes nightly or as required (the usual zinc oxide boric acid and starch powder is useless in my experience) Ultimately the chiropodist has supplied me with a soft leather insole with a sponge rubber pad at the tarsal arch and a small sponge rubber pad at about the position formerly occupied by the pads of felt which are thereby replaced I now give my feet no consideration whatever The interdigital irritation has entirely ceased even when my feet are hot and the plantar corns though presumably still present are relieved of pressure and therefore of the stimulus to growth I regret that I was compelled to seek advice outside the profession but I shall never regret having done so I may say that one is aware of the presence of the pads of felt in the early stages but that later their absence is much more distressing

Income Tax

Cash Basis Partnership

B has been assessed for fifteen years on the cash basis in respect of a practice in which he was previously a partner He contemplates taking his son into partnership and inquires how this will affect the basis of calculation of his income

*** The taking of a new partner into a practice technically constitutes a succession —for example the transfer of the practice from A to A and B —but unless the partners desire it the succession will not involve treating the practice as if it had ceased and recommenced as would happen in the case of a transfer of the whole practice from A to B Consequently there seems to be no valid reason why there should be any change in the basis of calculation of the profits—for example by discarding the cash basis for the earnings basis At the same time it is the latter basis which is technically correct and it is therefore important that it should be correctly understood By the earnings basis is meant the calculation of the gross income of the practice according to the value of the debts booked for the year in question The simplest way of reckoning that value is to start with the cash receipts of the year and add thereto the increase (or deduct therefrom the decrease) in the value of the debts at the end as compared with the commencement of the year Thus if the debts owing at January 1st 1931 were £747 nominal valued on a detailed valuation at £654 and the corresponding amounts at December 31st 1931 were respectively £793 and £687 the gross income on an earnings basis would be the cash received in 1931 plus (£687 − £654 =) £33 In the first year of the change to the earnings basis it will be realized that only the increase (£33) and not the total amount (£687) of the unpaid debts should be brought into the calculation

Examination Fees

J F has a full time appointment but is allowed to do examination work in his own time The fees received are unconnected with his ordinary work Are they assessable to income tax?

*** Yes they are clearly liable as money received for services rendered

LETTERS NOTES ETC

A Holiday Home

In accordance with the will of the late Miss E M Galloway her trustees have established at Boldre New Forest Hants a home of rest at which gentlefolk who are in straitened circumstances may reside for a holiday of up to about three weeks free of cost except for travelling expenses and any extras The home is intended for the benefit of persons of either sex married or single provided they are unable otherwise to obtain any place for temporary rest and the enjoyment of residence in the country for a few weeks Situated about two miles from Lymington and about two and a half from Brockenhurst the home with its gardens grounds and meadowland covers in all an area of nearly 26 acres It is not a nursing home and applicants for admission should not be actually suffering from disease or in a condition requiring special feeding nursing or medical attention Applications addressed to Messrs Fitzpatrick Graham and Co of 95A Chancery Lane W C 2 should be forwarded or recommended by members of the Association who are aware of the financial circumstances of the applicant

Tea and Sugar

Mr CHARLES E HECHT M A honorary secretary of the Food Education Society writes from 29 Gordon Square W C 1 In connexion with the tea and sugar duties statements have been made by those holding responsible positions that cannot be justified *Thus we are told that the carbohydrates in sugar are absolutely essential to health* and that children especially need sugar to build up the frame In truth far more than the amount of sugar required by the body is obtained through the mastication of bread potatoes puddings and other starch containing foods which all sections of the community partake of in excess Where circumstances permit these can be supplemented by honey and by raw fresh or dried fruit Sugar is in short a luxury and one that plays havoc with teeth and digestion Similarly the restoration of the tea duty may prove to be a blessing in disguise The excessive and improper use of that popular and if taken as in China and in Russia virtually harmless beverage is responsible for a mass of superfluous suffering disability and premature death As long ago as 1910 the *British Medical Journal* declared that cheap tea and sugar have done disservice to our people and since then the consumption of both has increased by leaps and bounds We are further informed that the taxes will militate against the health of the people The action of the Chancellor on the contrary is calculated to have a beneficial effect It may result also in the housewife laying out her too often scanty resources to better advantage The Food Education Society will be happy to be of service in these difficult days

Oedema in the Newborn

Dr T R ROBERTS (Sheffield) writes Dr Gibbens in his clinical lecture on oedema in the newborn in the *Journal* of May 7th states that nephritis as a cause of oedema in the newborn is very rare and that the earliest reported case is that of a child 3 months old Two months ago I saw a baby 3 days old whose clinical picture was that of an acute nephritis Parturition had been normal and at birth the child showed no unusual features On the third day however oedema of the face hands and feet was apparent I saw this baby on the third day and its temperature was 101° F (axilla) Urinary analysis revealed a smoky urine which became almost solid on boiling Microscopically epithelial and blood casts were present It was only with the greatest difficulty that sufficient urine for examination was obtained The child died in eighteen days Unfortunately a post mortem was refused From the third day onwards the oedema became more widespread gradually involving the thighs shoulders and back and eventually ascites developed The oedema diminished on the day of death

Fallen Idols Correction

In our report of Sir James Berry's oration before the Medical Society of London published in the *Journal* of May 14th (p 904) there was a mistake On page 905 middle of left hand column the word surgical appeared instead of medical The sentence should run When he was a resident at St Bartholomew's thirty one patients were admitted to the medical wards with appendicitis or pericarditis as it was then called and treated in the old fashioned way

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A notice appears in our advertisement columns (p 51) asking the Glasgow doctor who witnessed a motor accident in Belfast on December 31st 1931 when a police constable was injured to communicate with an insurance company

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Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 45 46 47 48 49 52 and 53 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 251

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

468 Chronic Thromboses of the Pulmonary Artery

L DESCLIN and M REGNIER (*Arch des Mal du Cœur* December 1931 p 726) describe two cases in which complete thrombotic obstruction of the bifurcation of the pulmonary artery was associated with gangrenous changes in the lung They believe that infarction of the lung arises in nearly every instance as a consequence of embolism since evidence of thrombosis is almost constantly found in the femoral vein and especially because no arteriosclerotic or inflammatory cause is discovered locally in the pulmonary artery The detection of iron by histo chemical examination of the obstructing mass and the history of abrupt onset in many patients also speak in favour of an embolic origin The fact that an individual may survive complete pulmonary artery obstruction may be explicable on the basis of compensatory function by the bronchial arteries in association with patency of the foramen ovale Obviously in such instances the obstruction must take place gradually and it therefore appears likely that a non occlusive embolism is followed by secondary thrombosis or that successive emboli gradually cause complete obliteration of the lumen In one of the cases described gangrenous abscesses were present in both lungs in the other a single zone of suppuration involved that lung which had initially been deprived of its blood supply The authors believe that in their patients gangrenous bronchopneumonia led to suppuration the defective state of the circulation conducing to these changes Patients in whom obstructive changes are taking place in the pulmonary artery will obviously show signs of increasing embarrassment of the right ventricle progressive dyspnoea cyanosis and oedema ultimately leading to ventricular defeat

469 Eosinophilia in Hodgkin's Disease

K HOLZKNECHT (*Munch med Woch* February 19th 1932 p 295) who records two illustrative cases states that the occurrence of eosinophilia in Hodgkin's disease has long been known being found according to Ziegler in from one quarter to one third of all cases He regards the occurrence of eosinophilia as an important diagnostic sign especially when as in his two cases the deep seated abdominal glands are affected and an exact proof of the existence of the disease by histological examination is impossible In Holzknecht's patients a man aged 56 and a woman aged 73 the eosinophilia was as high as 34 5 and 25 per cent respectively Both derived considerable benefit from *x* ray treatment but their final state is not recorded

470 The Incubation Period of General Paralysis

E LOMHOLT (*Hospitalstidende* December 3rd 1931 p 1175) has investigated the length of the incubation period of general paralysis on two principles and both have led to the conclusion that it is between eighteen and nineteen years The first principle followed was to compare the age at which patients were admitted for the first time to the St Hans Hospital in Denmark with the age at which they first contracted syphilis Among the 315 male patients suffering from general paralysis admitted for the first time to hospital in the period 1925–30 there were 186 about whom information was obtained as to the age when syphilis was contracted The shortest incubation period was five years and the longest was forty seven years the average incubation period was 18 6 years The second principle followed was to compare the average at which syphilis was contracted with the average age at which patients were first admitted to hospital for general paralysis Among 827 men treated between 1920 and 1927 for recent syphilis at two hospitals in Copenhagen the average age at the time was 26 years The average age of 315 patients at the time of their first admission to the St Hans Hospital for general paralysis was 44 5 years If from this age 26 is subtracted (the average age at the time of infection) an incubation period of 18 5 years is obtained It is remarkable that with two such independent calculations the difference in the estimate of the length of the incubation period should only be that between 18 6 and 18 5 years Earlier calculations have put this incubation period at only ten to fifteen years but in the light of the present study the author considers that an estimate of ten to twenty five years would be nearer the mark

471 Umbilical Diphtheria

A G SIGNY and R D BRUCE (*Arch Dis in Child* February 1932 p 43) who record an illustrative case state that this rare condition was first described by Löwenstamm in 1875 but the first authentic case proven by culture and bacteriological examination was recorded by Toch in 1896 The present case occurred in a male infant who was admitted to hospital when 17 days old with the diagnosis of erysipelas of the umbilicus Four of eight other children in the family had recently been removed to a fever hospital with faucial diphtheria Birth had been quite normal and the cord had separated on the fourth day but on the fourteenth day the abdominal wall round the umbilicus looked red and raw On admission a purulent exudate was oozing from the umbilicus which lay at the base of a crater 1/10 to 1/8 inch in depth and filled with a yellowish green slough Stretching for half an inch around was a greyish-white area dotted with small red spots and beyond this was *a further ring of brawny red skin* The temperature rose to 100° F on the day following admission and then gradually became normal The peri umbilical inflammation spread for four days and then began to recede Throat and nose swabs were negative but swabs from the umbilicus showed virulent diphtheria bacilli Death ensued on the twelfth day Macroscopically all the organs were normal and microscopically there was no abnormality of the heart muscle but the suprarenal glands showed intense congestion of the medulla

Surgery

472 Congenital Pyloric Stenosis

E J DONOVAN (*Annals of Surgery* February 1932 p 174) advocates early surgical treatment in all cases of congenital hypertrophic pyloric stenosis as soon as the correct diagnosis has been made Medical treatment except for mild cases which respond to treatment in a week is not so satisfactory since it is uncertain and prolonged Pyloric stenosis is much more common in boys than girls out of 119 cases reported 104 occurred in boys and 71 of the patients were first born children The aetiology is probably that of a developmental hyperplasia of the circular muscle of the pyloric ring of congenital origin the growth of this muscle being sometimes great enough to occlude almost entirely the lumen of the pylorus and to form the characteristic tumour This tumour is usually about 2 5 c cm in length of cartilaginous consistency and stopping abruptly at the duodenal end while it merges gradually with the stomach at the gastric end The average age for the onset of symptoms is three weeks vomiting being the first sign of the lesion This may follow each meal and is nearly always projectile With the loss of nourishment the children become dehydrated and emaciated Visible gastric peristaltic waves may be seen in the epigastrium and a pyloric tumour to the right and above the umbilicus can always be felt Pre operative transfusions and hypodermoclyses of 100 c cm of 3 per cent glucose solution have converted

the mortality from six cases in the first nineteen operated on to only one death in the remaining 100 cases The Fredet Rammstedt submucous pyloroplasty was used in every instance and the sequels demonstrated the satisfactory and permanent results of this operation Of the 112 patients who survived 95 have been followed up for periods of weeks to four years Of these patients after leaving hospital three died from other diseases independent of pyloric stenosis The remaining 92 made good recoveries and became entirely free from gastric symptoms

473 Non Specific Prostatitis

L I ETTER (*Urol and Cut Rev* February 1932 p 97) states that until recently non specific prostatitis has been neglected whereas now it occupies a very important place among genito urinary diseases ranking along with the teeth and tonsils as a source of focal infection The most likely sources of infection are (1) direct extension from infection of the posterior urethra and trigone (2) by the lymphatics which surround the gland and (3) directly through the blood stream from infections elsewhere in the body The predisposing causes are foci of infection especially the teeth tonsils and colon acute infections such as influenza typhoid fever and scarlet fever injuries such as trauma of the perineum and urethra and excessive sexual intercourse The exciting causes are *B coli* which produces a very severe infection the *Staphylococcus albus* and *aureus* diphtheroids short strains of streptococci and typhoid or paratyphoid bacilli Some rare cases due to malaria or trichomonas have also been reported In the acute stage there is fever pain frequency of micturition and an aching in the rectum and perineum sometimes there is a milky urethral discharge In the chronic stage the patients are restless and nervous they suffer from premature ejaculations and impotence as well as from backache in the sacral region Diagnosis is made by the history a rectal examination, and a bacteriological study of the expressed secretion Treatment consists in removal of all foci of infection building up the resistance of the individual prostatic massage warm irrigations of some antiseptic such as potassium permanganate or the instillation of a mild silver salt into the posterior urethra

474 Surgery in Syringomyelia

A GANS and W F SUERMONDT (*Nederl Tijdschr v Geneesk* March 5th 1932 p 1087) record a case of syringomyelia in a man aged 47 who presented extensive sensory disturbances especially for pain and temperature as well as paralysis of the legs The site of the disease was found in the lower part of the dorsal cord and in the lumbar cord Since all treatment including radiotherapy was unsuccessful and the patient's state was getting worse laminectomy was performed As in the other recorded forty five cases of operation for syringomyelia a large cavity was found in the spinal cord filled with clear fluid The cavity was opened by a longitudinal incision and was drained into the subarachnoid space A month after the operation the symptoms began to subside and since then the improvement has continued with considerable diminution of the paralysis and sensory disturbances

475 Bilateral Double Ureter

S VIDAKOVIC (*Zentralbl f Gynak* February 6th 1932 p 344) who records an illustrative case states that double kidneys with unilateral multiple ureters have frequently been described while Stammler has reported a case of bilateral reduplication of the ureter which ended in the urethra In Gottlieb's case there was a bilateral reduplication of the renal pelvis and ureter Vidakovic's patient a woman aged 56 had bilateral double kidneys and blind cystic dilatation of the double ureters which ended in the lateral vaginal wall Posner's symptom was absent but there was only recurrent cystitis and occasional dysuria Death followed six days after the operation from peritonitis

Therapeutics

476 Autohaemotherapy in Cutaneous Diseases

Although autohaemotherapy has long been employed in cutaneous diseases no satisfactory explanation has yet been offered of the mechanism of its action Variation in technique may produce different clinical results and those obtained by one method cannot be assumed to be true for any other N BURGESS (*Brit Journ Derm and Syph* March 1932 p 124) cites the opinions of numerous authorities on this subject and records the effects of intramuscular injections of freshly drawn whole blood in cases of various skin affections and in normal controls The results showed that their action does not depend on the production of a leucocytosis that they have no effect on the erythrocytic sedimentation rate and that there is no relation between the injections and the haemoclasic reaction Following recent work by Barber and Ortel on the presence of a specific proteose in the urine of patients suffering from allergic conditions proteose was obtained from the urine of normal persons and cases of various dermatoses No constant effect on the production of proteose by a single whole blood injection could be demonstrated

477 Bromide Intoxication

C SIPPE and J BOSTOCK (*Med Journ of Australia* January 16th 1932 p 85) have conducted an investigation with a view to obtaining data as regards the frequency exact production and the commoner symptoms of bromide poisoning and the determination of the absorption and excretion times with the optimum concentration of bromides in the blood They found Walter's modification of Hauptman's method of estimation very reliable and useful as regards clinical requirements The intoxication level seemed to be very variable but might occur when the blood bromide content reached a level of 200 mg in 100 c cm Absorption of these salts is rapid but elimination is slow unless sodium chloride is administered Symptoms of poisoning include somnolence fatigue loss of energy inability to concentrate staggering gait hallucinations delusions emotional depression and sometimes acute mania The frequency of such symptoms appears to be higher than is generally suspected and little attention need be paid to the possibility of a rash since these other manifestations are more common and significant Too rapid withdrawal of bromides in such cases is inadvisable since acute melancholia or mania may ensue The authors advise a delay of two or three days before sodium chloride treatment is started they then give 1 drachm of common salt in water three times a day They obtained only inconclusive results when trying to estimate the value of arsenic as a preventive of bromide poisoning

478 Repeated Malaria Therapy

WAGNER JAUREGG demonstrated that the morphological changes of *Plasmodium vivax* in human blood are quite different from and shorter than those occurring in the mosquito After a number of passages from man to man the gametocytes become scanty hence malarial parasites inoculated from man to man and without passage through the mosquito tend to disappear A MARIE (*Bull et Mem Soc Méd des Hop de Paris* February 12th 1932 p 102) has seen cases in which fever does not occur in malaria treatment Also *Spirillum duttoni* when employed in the treatment of general paralysis may act atypically The febrile cycles vary according to the inoculation route continued fever may follow intracerebral injection instead of the rhythmic recurrences that intravenous injection induces Since 1913 Marie working with Levaditi and de Martel has followed the direct intracerebral route in a few cases of general paralysis injecting salvarsanized serum into the Sylvian cisterna In recent years with Levaditi and Lepine he has injected *Spirillum duttoni* in four cases of general paralysis One patient a man aged 40 had contracted syphilis when

20 He had typical mental pupillary and motor symptoms with a positive Wassermann reaction in the blood and cerebro spinal fluid Six days after intracerebral inoculation fever (ranging from 101° to 105° F) commenced and persisted for a month A year later definite mental and physical improvement was maintained Two other cases followed a similar course nine months later the amelioration was continuing but spirochaetes were still present in the blood The fourth patient died from intercurrent pulmonary infection The necropsy revealed perivascular and meningeal inflammation but no trace of spirochaetes Marie believes that the alternating temperature of recurrent fever is due to an acquired systemic immunity and to the acquired resistance of the spirilla to the antibodies This immunity must involve the whole nervous system since there is no evidence of local functional or anatomical change

Radiology

479 Treatment of Mammary Carcinoma

F E ADAIR (*Annals of Surgery* March 1932 p 410) contrasts the method and results of treatment of mammary carcinoma by surgical means or by irradiation Surgical treatment aims at the absolute extirpation of the entire disease process by a wide careful radical extirpation of the breast its contiguous tissues and its drainage basins The irradiation method aims at devitalizing the cancer tissues and changing the character of the cancer bed into a firm fibrotic and occasionally even a calcified mass thereby gradually strangling starving and rendering the cancer cells impotent of cell division and metastasis The aim in irradiation is to produce a killing effect on a proportion of the cancer cells and a locking up of the cancer in a fibrotic mass To achieve a permanent cure by this method a generous period of time must be allowed for the mutation of tissues If the cancer bed strangles the cancer by an excess production of fibrous tissue and the cancer cells are starved by endarteritis and a diminished food and blood supply the disease will remain a local process Three cases are reported in which the mammary cancer was inactivated by proper irradiation therapy The most successful results have been those obtained by the combined interstitial insertion of radium together with external radium packs and high voltage *x* rays Details are given of 199 cases of mammary cancer in which the follow up records are available for a period of at least five years Thirty seven cases were treated by irradiation methods only of these patients twelve (36 3 per cent) have survived for more than five years Combined irradiation and surgical treatment were associated in 137 cases of these patients fifty two (40 6 per cent) are still living five years subsequently A further twenty three cases were treated by surgery only but only two (10 per cent) were living at the end of five years As a general rule an average five year cure occurs in 35 per cent of cases of radical mastectomy

480 Radiography of the Urinary Tract

E A VICKERY and H O CHESLEY (*New England Journ of Med* February 4th 1932 p 220) report a series of seventeen cases in which intravenous injections of *iopax* were used in the diagnosis of diseases of the genito urinary tract Nearly half of the diagnoses were made by this method alone leading to the conclusion that it should precede all cystoscopies and thus spare the patient the ordeal of a cystoscopy in a large percentage of cases Its value in those cases in which retrograde urography is contraindicated or impossible (for example inflammatory bladder conditions impassable stricture enlarged prostate or the presence of extensive malignant disease) is obvious and it is especially useful in children The method also provides valuable comparative data by affording a pyelogram of both kidneys Moreover since the drug raises the specific gravity of the urine information as to the eliminating function of the kidneys can be obtained by observing the specific gravity at intervals after administration Iopax is an organic iodine pyridine combination containing about 42 per cent of iodine it is soluble in water up to about 50 per cent very stable of low toxicity and capable of being sterilized For a person of average weight 30 grams dissolved in 110 c cm of double distilled water and sterilized for twenty minutes in an autoclave may be injected into the median basilic vein after being reduced to body temperature by means of two 50 c cm syringes or by gravity

481 Radium in Actinomycosis

R B ENGELSTAD (*Norsk Mag f Laegevid* February 1932 p 161) states that since S A Heyerdahl in 1927 reported twenty one cases of cervico-facial actinomycosis which had been cured by radium treatment twenty eight fresh cases of the disease have been treated by radium at the Rikshospital Oslo with the following results twenty five patients were completely cured one died from staphylococcal meningitis one is still under treatment and one when last heard of had almost completely recovered The cosmetic results were very good The ordinary dose was 33 to 35 mg radium which was best given with 33 mm lead filter in forty eight hours The number of applications varied considerably in different cases Healing appeared to be delayed by previous incisions

482 Treatment of Cancer with Insulin and X Rays

F GENTIL and S F GOMES DA COSTA (*C R Soc de Biologie* February 19th 1932 p 511) report a case of inoperable left mammary cancer with lymphangitis and cutaneous nodules which demonstrated the efficacy of combined treatment with insulin applications and *x* rays An irradiation over three fields with a total dosage of 900 R per field (given fractionally in twenty days) had produced no effect on the neoplasm Da Costa having previously noted the beneficial effects of insulin applications on cutaneous cancers this method was then tried A solution of insulin was applied locally twice daily for six weeks at the end of which time the growth was much reduced only an area near the nipple remaining A second irradiation of 600 R over two fields only now produced vesicle formation epidermitis and the disappearance of all metastatic nodules Insulin was again applied followed by a third irradiation with 150 R over two fields This caused necrosis of the remainder of the tumour with formation of a thick scab At the present time (a year later) the lesion is apparently healed the patient has gained in weight and her general condition is satisfactory The authors believe that these results were due to radio sensitization of the tumour by the insulin

Obstetrics and Gynaecology

483 Diabetes Mellitus and Pregnancy

H NOLLF (*Münch med Woch* March 4th 1932 p 380) emphasizes the fact that although the urine is tested for albumin in pregnancy it is seldom tested for sugar When sugar is found its presence is either ignored or its significance is overestimated The fermentation test should be employed in every case of glycosuria to differentiate glucose and lactose the former only is fermentable The appearance of lactose is of no importance for it is sometimes found in early pregnancy when milk secreted in the breast is partly reabsorbed Lactose appears in the blood and is excreted in the urine Glucose may be found in the glycosuria of pregnancy or diabetes mellitus The differential diagnosis can only be made by estimation of the blood sugar which remains normal in the first of these conditions There is a maternal mortality of 30-75 per cent and a foetal mortality of 66 per cent in cases of diabetes occurring with pregnancy A correct diagnosis is essential especially now that with improved treatment by dieting and insulin a diabetic patient can be so far restored that conception occurs more frequently than in

the past The diabetic's health generally deteriorates at the commencement of pregnancy but it improves as the foetal pancreas enlarges and is able to produce enough insulin to regulate the sugar metabolism of both organisms Parturition and the consequent removal of the foetal secretion is followed by a relapse Sometimes diabetes appears for the first time during pregnancy is latent after parturition and reappears in a subsequent pregnancy Dangers which accompany pregnancy in a diabetic include (1) *coma due to acidosis (the most serious)* and (2) the intrauterine death of the foetus which usually occurs in the second half of gestation Such a complication removes insulin from the mother and exposes her to the added danger of protein absorption from the dead foetus Puerperal sepsis is more common because of the lessened resistance of the diabetic to infection Changes in the blood vessels give rise to an increased risk of haemorrhage Nolle states that pregnancy should be terminated in the first three months but he believes that adequate treatment by insulin and careful observation of the patient to prevent the special dangers connected with this condition may justify the grave risk of allowing the pregnancy to go to term when both parents desire a living child

484 Cervical Stricture

A H CURTIS (*Journ Amer Med Assoc* March 12th 1932 p 861) summarizes the causes of uterine stricture as genital infection the use of instruments radium surgical interventions fibroid tumours and age changes senile vaginitis is usually attributable to cessation of the menstrual function giving rise to atrophy of the cervix coupled with shrinking of its canal Consequently when the canal has to be explored for any reason great gentleness is necessary and specially made dilators of small calibre are often very useful Important symptoms of this condition are persistent leucorrhoea dysmenorrhoea the passage of tar like menstrual blood and pelvic discomfort of varying intensity there may be considerable ballooning of the cervix above the level of the *stricture and an increase in the capacity of the uterus* pyometra being usually attributable to obstruction of this kind Curtis thinks that the natural efforts of the organ to overcome the effects of a stricture may be a factor in the production of an endocervical cancer the constant pressure and trauma at the occluded portion resulting in superficial cells being forced into the deeper tissues where they are free to grow uncontrolled The retention of mucoid secretion or tarry blood by the stricture may also give rise to serious lesions of the upper genital tract and pelvic peritoneum The author urges that every patient who has been treated by the introduction of radium through the cervical canal ought to be kept under observation in order to prevent a stricture from developing Treatment ranges from simple dilatation to amputation of the cervix and even vaginal hysterectomy

485 Bone Metastases in Carcinoma of the Uterus

According to E PHILIPP (*Zentralbl f Gynak* January 2nd 1932 p 45) secondary affection of bone in cancer of the uterus is less rare than is usually believed He suggests that its increased frequency at present is due to the longer survival of patients owing to the more common use of radium therapy Bone metastases follow operative as well as radium treatment and are usually found in the latter case in patients who are free from local recurrence they occur in cancer of the body as well as in that of the cervix The bones are invaded by continuity from the blood stream or from secondary growths in lymph glands in the extremities spontaneous fractures are common Pain when the vertebrae are not affected may be slight and in pelvic bone metastases locomotion although difficult is preserved for long periods Comparatively protracted survival is common but bony metastases respond to deep x radiation less in uterine than in other carcinoma cases Radiology offers the only certain diagnosis and in the author's experience has proved specially useful in deciding problems of incapacity from the health insurance viewpoint

Pathology

486 Sodium Thiosulphate in Avertin Poisoning

A BOLLIGER (*Med Journ of Australia* January 23rd 1932 p 125) has observed a frequent reduction in the excretion of sodium thiosulphate injected intravenously during uncomplicated and complicated pregnancy puerperium in dogs This suggested that a portion of the thiosulphate might act as a detoxicating agent Experiments were performed with avertin in standardized doses a lethal anaesthesia being induced and sodium thiosulphate being given intravenously subcutaneously or rectally before with or after the drug To the surviving animals a similar or smaller dose of avertin without sodium thiosulphate was given at a later date Occasionally the urinary excretion of sodium thiosulphate during and after anaesthesia was determined and sometimes the phenolsulphonephthalein excretion during the same period was estimated The minimal lethal dose for dogs was found to be below 0·7 c.cm per kilogram of body weight One dog received 0·71 c.cm per kilogram and in four minutes anaesthesia supervened 20 c.cm of a 2·5 per cent sodium thiosulphate solution were injected subcutaneously The animal recovered after seventy minutes of complete relaxation A fortnight later a similar dose of avertin without sodium thiosulphate proved fatal in twenty five minutes In all the subsequent experiments the results were similar In ten cases of cardiac failure bowel lavage with thiosulphate and artificial respiration resuscitated three animals Bolliger advises this treatment for patients who exhibit alarming symptoms during avertin anæsthesia

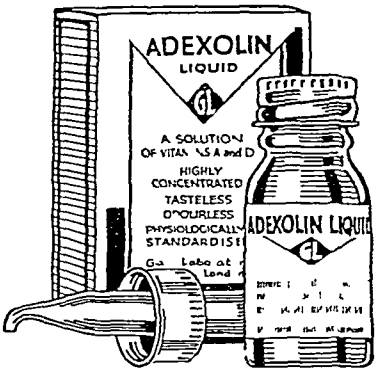
487 Physical Properties of Red Blood Cells

G DONDI (*Arch Pat e Clin Med* December 1931 p 231) has made a systematic study of the relations between the form and volume of red blood cells with special reference to the erythrocytometric formula *and the* volume index He finds in different blood conditions that the values are displaced in varying *degree* and direction from his previously established standards Comparing the corpuscular index (colour index) and the volume index (ascertained by the haematocrite) he distinguishes a true hypochromic anæmia (in which the unit of volume is not saturated with *pigment the* saturation index being lower than unity) and a relative hypochromic anæmia in which *the saturation* index is normal but the volume index is low owing to the presence of small red cells Comparing the volume index and the mean diameter there is definable a true microcytosis in which both these indices are reduced proportionally and a false microcytosis—the classical constitutional haemolytic icterus—in which the mean diameter is more diminished than the volume

488 Abnormally Shaped Erythrocytes

G CHENEY (*Journ Amer Med Assoc* March 12th 1932 p 878) who reports fourteen cases of the occurrence of non pathogenic elliptic erythrocytes states that only thirty three instances of this abnormality seem to have been recorded All his cases were members of three generations of one family and he concludes *that* the transmission indicates the presence of a simple Mendelian dominant Although this condition has *been* associated by some with secondary anæmia and also with sickle cell anæmia there is at present insufficient evidence to justify belief in such a relationship Apart *from* the unusual shape of the red corpuscles the blood is normal in every way, and no pathological changes have yet been detected in the bone marrow although in three cases the sternum was punctured *for the purpose of an investigation* of this possibility The incidence of such cells in the blood remains constant and does not increase if the blood is allowed to stand in contrast *with* what takes place in sickle cell anæmia Curtis discusses the possible significance of this condition *he concludes* that there is no evidence to regard it as other than a curious but transmissible anomaly which has no relation to health

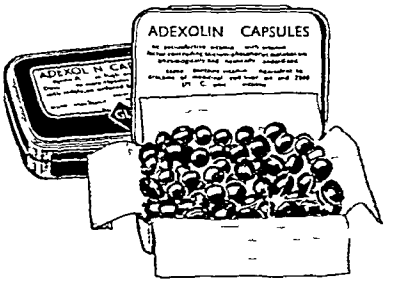
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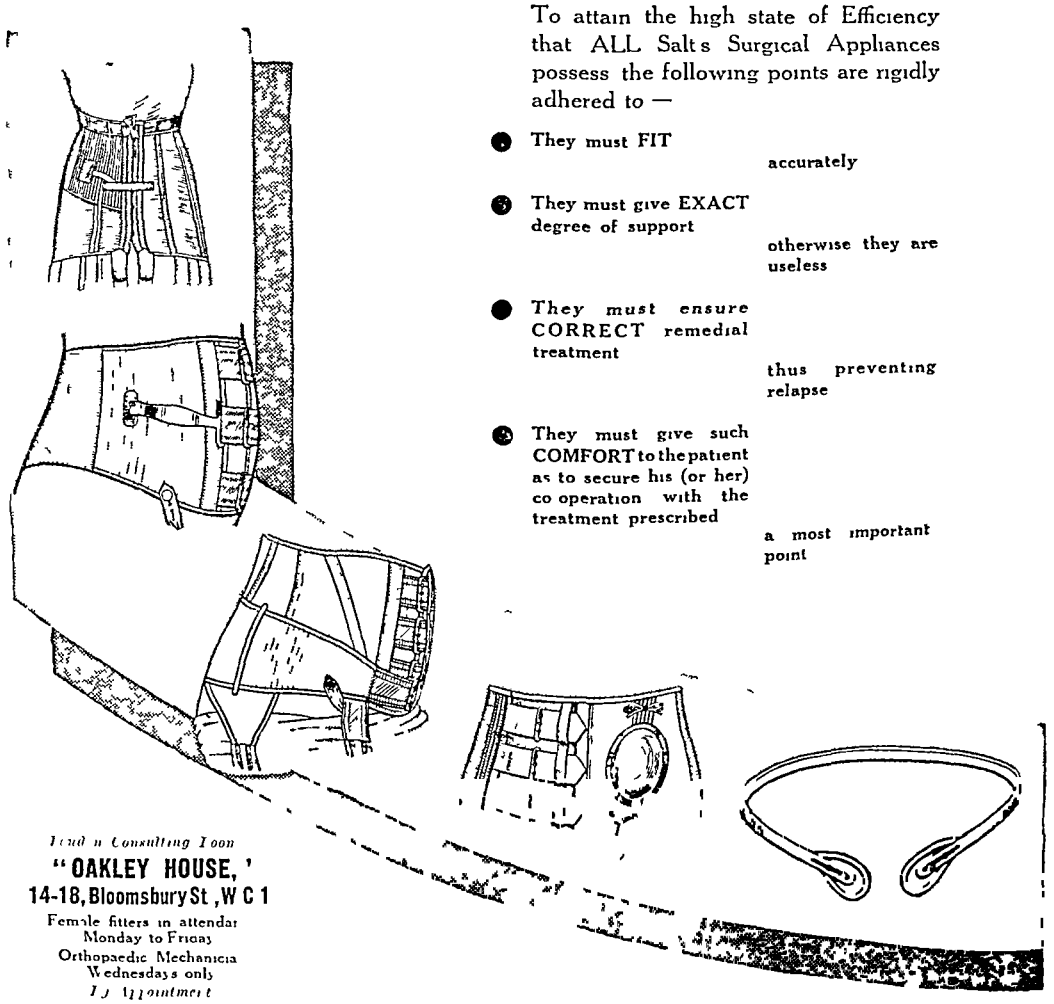
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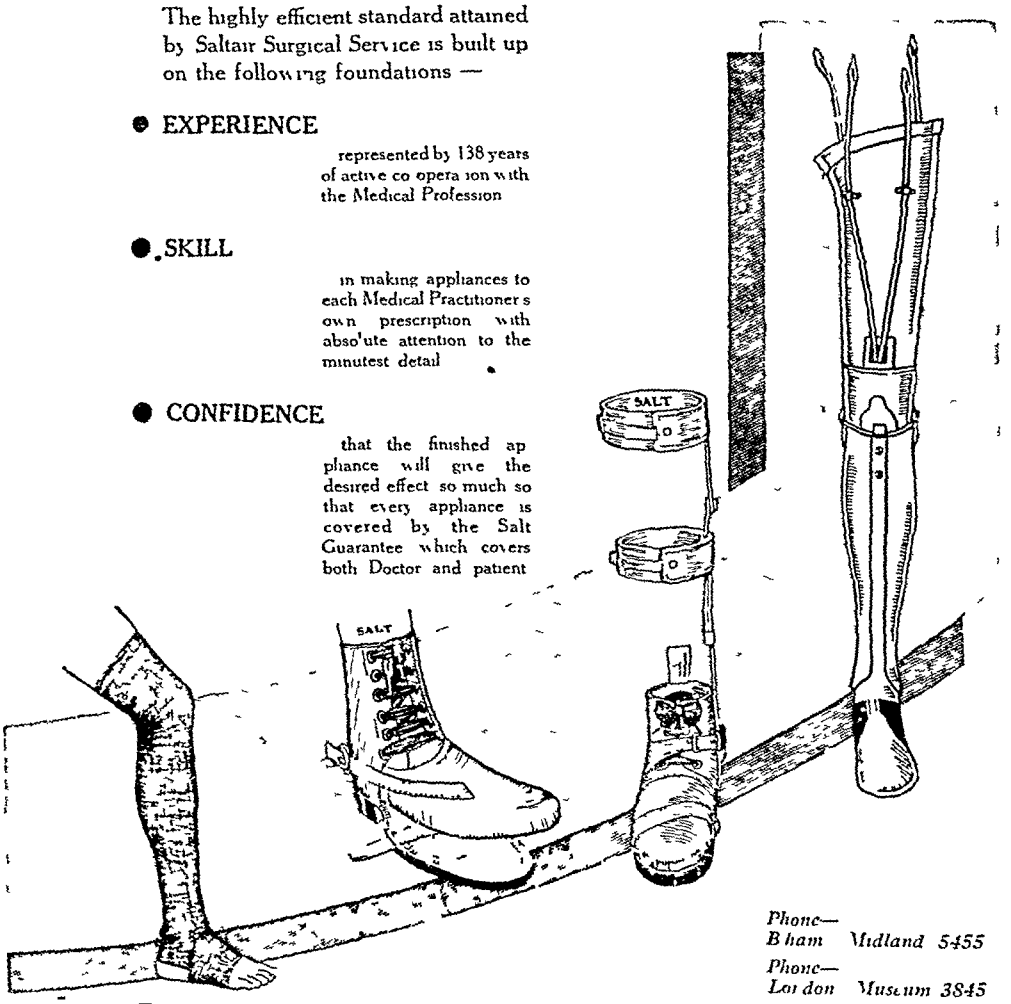
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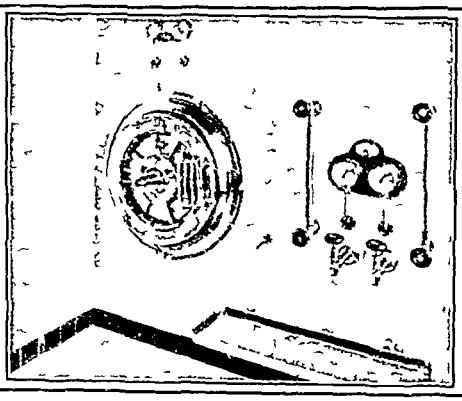
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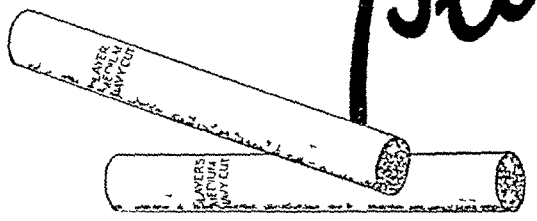
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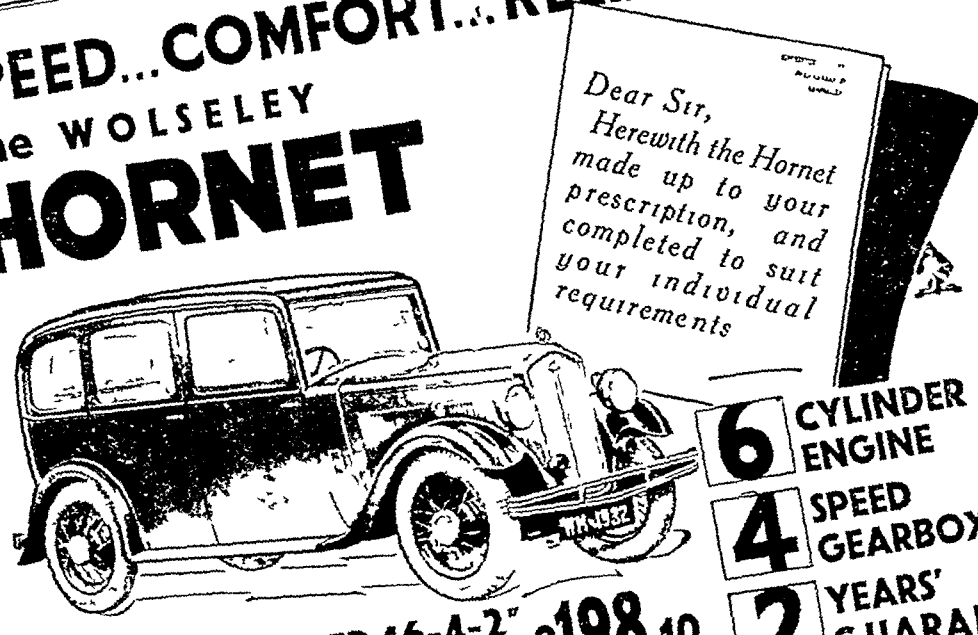


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For Mental Disorders with or without certificates
Resident Physician CECIL C W BOWER

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The Home is situated on Deeside three miles from Aberdeen amidst delightful surroundings of garden park and woodland attractively laid out for the occupation and recreation of those resident It is beautifully decorated and comfortably furnished Rest and privacy are assured and all forms of treatment are available

The patients may be attended by their own physician or by the Physician Superintendent

The minimum charge is £4 4s a week

For further particulars application should be made to the PHYSICIAN SUPERINTENDENT Royal Mental Hospital Aberdeen or to the MATRON Wellwood Nursing Home Cults Aberdeenshire (Telephone No 31 Cults)

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,
Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Reg Tel Address Bethlem Beckenham — *Telephone* Springpark 1180—1181

Station Eden Park (Southern Railway)

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Telegrams SUBSIDIARY LONDON — *Telephone* NORTH 0888

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Convalescent Home **Kearsney Court Dover** For further particulars apply to the **Medical Superintendent**

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Telegrams 'Alleviated London — **Telephone** Rodney 4741-4742

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Illustrated Brochure on application to the Medical Superintendent The Old Manor Salisbury — Telephone 51

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.
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MAY 31st DONALD HUNTER M D F R C P (Lond) Asst Phys & Med Tutor London Hospital)	The Clinical Significance of Sodium in Calcium Metabolism
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FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W. (Langham 4266)

NATIONAL HOSPITAL, QUEEN SQUARE, MEDICAL SCHOOL

M. R. C. P.

A Course of DEMONSTRATIONS in NEUROLOGY for Candidates for the M R C P examinations will be held from MAY 20th to JULY 11th on MONDAYS and FRIDAYS at 6 0 p m

Fee for 16 demonstrations £6 6 0 Special terms can be arranged for those unable to take the whole course of lectures

Applications should be made to the Secretary J G GREENFIELD *Dean of the Medical School*

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

The following arrangements have been made for POST-GRADUATE TEACHING in Glasgow during the Summer of 1932

A A General Medical and Surgical Course from August 22nd to September 16th
Fee £10 10s or £6 6s for first or second fortnight

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary Post Graduate Medical Association The University Glasgow

UNIVERSITY OF LONDON

A Course of six Lectures on *Certain Aspects of the Reflex Control of the Circulation* will be given by Professor SAMSON WRIGHT (Professor of Physiology in the University) at the MIDDLESEX HOSPITAL MEDICAL SCHOOL (Mortimer Street W 1) on MONDAYS AND THURSDAYS MAY 23rd 26th and 30th and June 2nd 6th and 9th at 5 p m

Admission free without ticket

S J WORSLEY
Academic Registrar

UNIVERSITY OF LONDON

DE SALICETO STUDENTSHIP

The University of London invite e Laura de Saliceto Stud nt Bracin ment of Cancer Re earch ture mu not les than two years ach the University not healthiest *other particulars may* emic Regi trar Uni ington S W

The Secretary (Dept

UNIVERSITY OF LONDON

Applications are invited from Graduat s of the University of London in Medicine and Surgery for the GEOFFREY DUVEEN TRAVIT ' ' ' ' RFSEARCH IN The Studentship ear and is tenable in the first instance for one year

Applications should reach the University on or before June 11th 1932 and must be made on the prescribed form which may be obtained together with further particulars from the Academic Registrar University of London South Kensington S W 7

ASSOCIATION OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND

Annual Meeting	3rd June 1932
Golf Tournament	4th June 1932
Annual Dinner	4th June 1932

J P BRENNAN } Hon Secretaries
JAMES SMITH }

Copies of the Rules of the Association can be obtained from the Hon Secretaries

INTENSIVE POST-GRADUATE SUMMER COURSES

Four Courses (each of two weeks) designed to ... given at the ... RADUATE ... WALES S ... COLLEGE ... 15) on ... GENERAL ... the following dates

May 23rd to June 4th	June 6th to 18th
June 20th to July 2nd	July 4th to 16th

Full particulars from the Dean

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and April 10th (Candidates for the D T H must possess the D T M of this University)

For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Lem Brokes Place Liverpool

POST GRADUATE STUDY

Do you wish to Specialize in any Branch of Medicine or Surgery ?

Clinical and practical instruction either individual or in small classes on the lines of the Vienna Post Graduate Clinic Courses in the following specialities can be arranged —

Cystoscopy and Urethroscopy
Ureteral Catheterisation Proctoscopy and Sigmoidoscopy Radium Therapy Fluoroscopy and X Ray diagnosis Diathermy Electrocardiography Pathological Histology of the Nervous System for D P M candidates Psychotherapy and Psychoanalysis

Postal oral, clinical, and practical coaching for all the higher Medical Examinations can be commenced at any time Preparation of M D Theses for all Universities M.R.C.P., F.R.C.S., and the various special diplomas

Post Coupon for full details of any Course We specialise in Post graduate Instruction

THE SECRETARY
MEDICAL CORRESPONDENCE COLLEGE,
19 Welbeck Street London W 1

Sir —*Please send me a copy of your Guide to Medical Examinations and details of Post graduate Courses by return*

Name ..

Address ..

Course in which interested ..

CITY AND COUNTY OF BRISTOL

ASSISTANT MEDICAL OFFICER OF HEALTH

The Council invite applications for a whole time male Assistant Medical Officer of Health Age not exceeding 40 years Salary £500 by annual increments of £25 to £700 subject to a temporary reduction The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

The duties will consist principally of examination of children in the Council's Secondary Elementary and Special Schools treatment in School Clinics etc but the officer appointed will also be required to work in all Departments of the Medical Officer of Health of the City and Port

Application which must be on a form provided for this purpose should be accompanied by not more than three recent testimonials and must be received by the undersigned not later than Saturday May 28th Envelopes should be endorsed Assistant Medical Officer of Health

Canvassing will disqualify

Council House JOSIAH GREEN
Bristol Town Clerk
May 9th 1932

WESTON SUPER MARE GENERAL HOSPITAL (80 BEDS)

HOUSE SURGEON

Applications are invited for the post of RESIDENT HOUSE SURGEON at the Hospital salary at the rate of £150 per annum with board residence and laundry Duties to commence July 1st next

Applicants (single and qualified) must be registered in Great Britain

the Hospital

HESTER HURSTHOUSE
Secretary

ST MARK'S HOSPITAL FOR CANCER FISTULA AND OTHER DISEASES OF THE RECTUM
City Road London E C 1

RESIDENT SURGICAL OFFICER (Male) required July 1st for 6 months Salary £120 per annum and allowances with board residence and laundry The appointment is open to women graduates Applications with copies of three recent testimonials should be sent to the Medical Superintendent not later than June 1st

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL
(University of London.)
DENMARK HILL, S E.5

ADVANCED MEDICINE COURSE.

A Course in Clinical Medicine Pathology Morbid Histology and Biochemistry suitable for M D and M R C P examinations will be given for seven weeks commencing on May 24th 1932

Further particulars can be obtained on application to the Dean King's College Hospital Medical School Denmark Hill S E.5

ST BEES SCHOOL,
CUMBERLAND

Fees £120 a year inclusive having been reduced from £144 in the case of boys who enter the School before July 1933

Scholarship Examination begin July 7th. For Prospectus apply Head Master

Doctor-Schoolmaster, late Public School R M O and Master Preparatory School Housemaster and Doctor and ex M O H has a Preparatory School particularly intended for DELICATE AND BACKWARD Boys on the healthiest part of Kent Coast and facing the Sea Individual care and tuition in small classes Large sunny and airy dormitories All games Large playing fields Excellent Examination Record Two Resident Trained Nurses Home Doctor's orders accurately carried out Prospectus and all particulars from W R Leycester Drawbridge M R C S L R C P S Allan's Preparatory School Sea Road West Gate-on-Sea Thanet

UNIVERSITY OF DURHAM

PROFESSORSHIP OF BACTERIOLOGY at the University of Durham College of Medicine Newcastle upon Tyne

Applications are invited from specially qualified registered medical graduates for the above post

Salary £1 000 per annum The person appointed will be required to commence duties early in September 1932

Further particulars as to the appointment may be obtained from the Registrar University of Durham College of Medicine Newcastle upon Tyne to whom application must be received not later than June 18th 1932

GEORGE HALL Registrar

May 17th 1932

UNIVERSITY COLLEGE GALWAY

THE PROFESSORSHIP OF MEDICINE

The Governing Body invites application for the foregoing PROFESSORSHIP salary £336 £350 a year The Duties for receiving application June 30th 1932 Additional Particulars can be obtained from the Secretary

NATIONAL HOSPITAL QUEEN SQUARE W C

ASSISTANT PATHOLOGIST Application are invited for the post of Assistant Pathologist Candidate must be medically qualified and have had training in Clinical Pathology and Biochemistry Attendance will be required for six half-days a week and the appointed Officer will work under the Pathologist Salary £250 per annum The appointment is for one year and the holder is eligible for re-election

Application should be sent to the undersigned on or before Saturday June 4th

GODFREY H HAMILTON
Secretary

NATIONAL SANATORIUM BENENDEN Kent

RESIDENT ASSISTANT MEDICAL OFFICER (Male) required at Benenden Sanatorium (150 beds) in July Salary £300 per annum rising by annual increments of £25 to £350

Preference given to candidate with experience in Tuberculosis and Pneumothorax Treatment

Application with copies of three recent testimonials should be sent to the Medical Superintendent not later than Thursday June 2nd

ESSEX COUNTY HOSPITAL, COLCHESTER (400 BEDS)

Wanted immediately ASSISTANT HOUSE SURGEON (male) Salary £120 with board and lodging and washing Medical experience qualification required

Applications with three recent testimonials to be sent to me by May 27th to—

ALFRED C FUCK Secretary

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQ LONDON W C 1

(FOUNDED A 1882)

Principal Mr E S WEYMOUTH M A (Lond)
POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

M D (Lond),	1901-31 (9 Gold Medallists during 1913 31)	355
M S (Lond),	1901 31 (including 4 Gold Medallists)	22
M B, B S (Lond)	Final 1906 31 (Completed Exam)	280
F R C S (Eng),	*Primary* 1906 31	173
	Final	174
M R C P (Lond),	1914-31	199
D P H	(Various) 1906-31 (Completed Exam)	308
F R C S (Edin),	1918 31	50
M R C S L R C P	Final 1910-31 (Completed Exam)	501
M D	Various By Thesis	Numerous successes

Preparation for the above and also for Medical Preliminary and for all examinations leading up to M R C S L R C P or M B of various Universities also for D P M D O M S D T M & H D I O D G O D M R E M M S A L M S S A etc Numerous successes

ORAL CLASSES

M R C P M D Primary and Final F R C S F R C S (Edin) Final M B B S and M R C S L R C P Museum and Microscope Work Also Private Tuition

MEDICAL PROSPECTUS (48pp)

CONTENTS —The method and the cost of entering the Medical Profession *Particulars of all Medical Examinations* Postal Courses and Oral Classes Suggestions for the Higher Medical Degrees Special Courses Open for the Special Diploma

Medical Prospectus gratis along with list of Tutors etc on application to the Principal Mr E S WEYMOUTH M A 17 Red Lion Sq London W C 1 (Telephone HOLBORN 6315)

DISTRICT MEDICAL OFFICER FOR INDIAN STATE RAILWAYS

The Secretary of State for India requires the services of one approximately District Medical Officer on the Indian State Railways Candidate must be male British subject of pure European descent and should be between 25 and 32 years of age They must possess a qualification registered in Great Britain and Northern Ireland under the Medical Acts in force at the time of appointment Commencing pay £500 per annum rising by annual increments of £25 to £600 per annum at the end of 10 years' service and by further increments of £50 to £700 per annum at the end of 15 years' service Free passages to India in accordance with the Rules applicable to officers of the Indian State Railways

Copies of the regulations and forms of application can be obtained from the Secretary Services and General Department India Office S W 1 and must be returned not later than July 30th 1932

BOROUGH OF RICHMOND (SURREY)

MEDICAL OFFICER TO ANTENATAL CLINIC

Applications are invited for the appointment of Medical Officer to the Antenatal Clinic

The Clinic will be held at the Town Hall Richmond on Tuesday afternoons and the salary will be fixed at the rate of £1 11s per session

Applications stating age experience and qualifications and three recent testimonials should be sent to the Medical Officer of Health Health Office 11 Paradise Road Richmond not later than 3rd June 1932

EDWIN M NEAVE Town Clerk
Town Hall Richmond Surrey
May 20th 1932.

BRISTOL GENERAL HOSPITAL

A meeting of the Election Committee will be held at the Hospital on Wednesday June 8th at 1 o'clock p.m. to elect an HONORARY OBSTETRIC PHYSICIAN AND GYNAECOLOGIST. Application for the appointment will be invited by Mr. H. T. Drew Smyth. Honorary Consulting Obstetric Physician and Gynaecologist, and by Mr. H. J. Paterson, Honorary Assistant Obstetric Physician and Gynaecologist, to elect an HONORARY ASSISTANT OBSTETRIC PHYSICIAN AND GYNAECOLOGIST of the Hospital.

By Section 7 (5) (a) of the Rules of the Hospital no person shall be eligible to the office of Honorary Obstetric Physician and Gynaecologist unless he possesses a registered Medical qualification and undertakes to practise solely as a Physician or Obstetric Physician and Gynaecologist.

Candidates are requested to send their applications with copies of testimonials and proofs of qualification to the undersigned on or before Wednesday June 1st from whom further particulars may be obtained.

By Order of the Committee
THOMAS W. GREGG
Secretary

May 11th 1932

BRISTOL GENERAL HOSPITAL

A meeting of the Election Committee will be held at the Hospital on Wednesday June 8th at 1 o'clock p.m. to elect an HONORARY SURGEON.

Application for the appointment will be made by Mr. D. C. Tasker, Honorary Assistant Surgeon, also to elect an HONORARY ASSISTANT SURGEON.

Candidates are requested to send their applications with copies of testimonials and proofs of qualification to the undersigned on or before Wednesday June 1st from whom further particulars may be obtained.

By Order of the Committee
THOMAS W. GREGG
Secretary

May 11th 1932

ELLINA HOSPITAL FOR SICK CHILDREN
Southwark S.E.1

Applications are invited for the post of CASUALTY AND OUT-PATIENT OFFICER (Male) for six months. Salary at the rate of £120 per annum with board and residence. Hours of duty from 9.30 a.m. to 5.30 p.m. from Monday to Friday inclusive, Saturday until 1 p.m., no Sunday duty.

Applications, stating age, experience and qualifications, accompanied by copies of four testimonials to be sent at once to the undersigned.

Further particulars from the Secretary.

By Order of the Committee of Management
W. H. SIDNELL
Secretary Superintendent

May 13th 1932

ELLINA HOSPITAL FOR SICK CHILDREN
Southwark S.E.1

Applications are invited for the post of HOUSE PHYSICIAN (Male) for six months from 12th June (first two months in Casualty and Out-Patient Department). Salary at the rate of £120 per annum with board and residence.

Applications, stating age, experience and qualifications, accompanied by copies of four testimonials to be sent to the undersigned not later than 24th May from whom rule and other particulars may be obtained.

By Order of the Committee of Management
W. H. SIDNELL
Secretary Superintendent

May 13th 1932

MILLER GENERAL HOSPITAL
Greenwich Road S.E.10

Applications are invited for the following posts:

HOUSE SURGEONS (Two). Salary £100 per annum.

HOUSE PHYSICIAN. Salary £100 per annum.

CASUALTY OFFICER. Salary £150 per annum.

Candidates (male) must be unmarried. Board, residence and laundry are provided. The appointment are for six months from July 1st. Applications, stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, to be sent to the Secretary as soon as possible.

May 18th 1932

WARRINGTON INFIRMARY & DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried. The applicant must be of British nationality and must be duly qualified Medical Practitioner. Salary £175 per annum with board, apartments and laundry.

Applications, stating age, with copies of three testimonials, should be sent in at once to the undersigned.

By Order
HENRY I. BOOT
Superintendent & Secretary

May 9th 1932

ROYAL FREE HOSPITAL
Gray's Inn Road W.C.1

Applications are invited for the following appointment:

FIRST HOUSE SURGEON
SECOND HOUSE SURGEON with care of Orthopaedic Bed
THIRD HOUSE SURGEON
FIRST HOUSE PHYSICIAN
SECOND HOUSE PHYSICIAN
GYNAECOLOGICAL HOUSE SURGEON
OBSTETRIC HOUSE SURGEON

Duties of the above seven posts to commence July 1st tenable for six month

RESIDENT ANAESTHETIST

RESIDENT OBSTETRIC ASSISTANT (Salary £100 per annum)

DISTRICT OBSTETRIC ASSISTANT (Salary £100 per annum)

Duties of the above two posts to commence August 1st tenable for five months

Preference is given to applications from former Students of the London (Royal Free Hospital) School of Medicine for Women. Candidates who must be duly qualified registered Medical Women should submit applications stating age and accompanied by copie of three recent testimonial to the undersigned on or before June 4th

REGINALD F. GARRATT Secretary

ROYAL FREE HOSPITAL
Gray's Inn Road W.C.1

Applications are invited from duly qualified and registered Medical Men for the following post:

HOUSE PHYSICIAN to the Children's Department duties to commence July 1st.

Candidates for the above post must submit applications stating age and accompanied by copie of three recent testimonials to the undersigned on or before June 4th.

REGINALD R. GARRATT Secretary

ROYAL FREE HOSPITAL
Gray's Inn Road W.C.1

Applications are invited from duly qualified and registered Medical Men for the following post:

CASUALTY OFFICER

Duties to commence June 1st for seven months. Salary £150 per annum with board and residence.

Candidates for the above post must submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before May 25th.

REGINALD R. GARRATT Secretary

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL
Spring Garden Edinburgh
(60 Beds)

Applications are invited from fully qualified medical women for the post of JUNIOR HOUSE SURGEON at the above Hospital—rising to SENIOR HOUSE SURGEON at the end of three month. Honorarium at rate of £25 per annum for first three month, £50 per annum for second three months.

The appointment is for six months from July 1st 1932. Board residence and laundry provided. Application with copies of testimonial to be sent to the Secretary of the Hospital on or before June 10th.

BIRKENHEAD GENERAL HOSPITAL

Applications are invited for the appointment of HONORARY ASSISTANT SURGEON.

Candidates must be Fellows of the Royal College of Surgeons of England or Edinburgh or be prepared to obtain this qualification within three years of appointment.

Application stating age qualifications and experience with copies of three testimonials should be sent to the undersigned by Monday June 6th.

W. H. DANIELS F.C.I.S.
May 14th 1932 Secretary Superintendent

BIRMINGHAM & MIDLAND EYE HOSPITAL
Church Street BIRMINGHAM

HOUSE SURGEON required at the above Hospital.

Salary £110 per annum and £10 laundry allowance.

Application together with copie of not more than three testimonial should be received not later than first post on Thursday June 9th.

Further particulars can be obtained from the undersigned.

C. J. MASON Gen. Supt.

BEDFORD COUNTY HOSPITAL
(124 Beds)

SECOND HOUSE SURGEON (male) fully qualified unmarried required for a term of not less than six months at once. Salary £140 with board lodging and laundry.

Applications stating age nationality qualification together with three recent testimonials to be sent to the Hon. Secretary Hon. Medical Staff Committee as soon as possible.

HOSPITAL OF ST. CROSS RUGBY
(114 Beds)

Applications are invited for the post of THIRD MALE RESIDENT MEDICAL OFFICER. Qualified.

Salary at the rate of £100 per annum with full board etc.

Six months appointment and eligible on completion of service for extension or other resident posts.

Candidate must be prepared to commence duties on Wednesday June 1st. Applications to be received by Tuesday May 24th.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.

Application stating age nationality and full details with copies of three recent testimonial to be sent to the undersigned.

(Signed) W. COCKBURN
Superintendent and Secretary

ROYAL VICTORIA INFIRMARY
Newcastle upon Tyne
(672 Beds)

MEDICAL REGISTRARS—Open appointment

Applications are invited for the posts of MEDICAL REGISTRARS (four vacancies) to take up duty on August 1st 1932.

Candidates must be registered in Medicine and in Surgery.

The salary is at the rate of £250 per annum (non-resident).

Further particulars regarding duties, times of attendance etc. may be obtained from the House Governor and Secretary to whom application with copies of three testimonials should be sent not later than Saturday May 28th 1932.

S. DUNSTAN
House Governor and Secretary

May 13th 1932

THE ROYAL HOSPITAL WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required duties to commence June 1st.

The Hospital contains 240 beds includes the usual special department and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical practice.

Candidate must be registered under the Medical Acts and unmarried. Salary.

The appointment is for six month. Salary at the rate of £100 per annum board furnished room and laundry provided.

Applications with copies of testimonials to be forwarded to the undersigned forthwith.

W. H. HARLER
April 29th 1932 House Governor

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN
(Whitehouse Loan Edinburgh)
(56 Beds including Jadium Ward)

Applications are invited from fully qualified medical women for the following posts at above Hospital—JUNIOR HOUSE SURGEON, rising to SENIOR HOUSE SURGEON at the end of three month. Honorarium at rate of £25 per annum for first three month, £50 per annum for second three month.

The appointment is for six months from July 1st 1932. Board residence and laundry provided. Application with copies of testimonials, to be sent to the Secretary of the Hospital on or before June 10th.

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N.W.1

Applications are invited for the post of PENSIONER MEDICAL OFFICER (male). The appointment will be for a period of six month at a salary of £175 per annum and will date as from June 10th next. Preference will be given to those who have held resident posts. Candidates must submit application, stating qualifications age etc. with copies of not more than three testimonial by Friday June 3rd addressed to the Secretary.

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N.W.1

Applications are invited for the post of HOUSE SURGEON (male). The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 10th next. Candidates must submit applications stating qualifications etc. with copies of not more than three testimonial by Friday June 3rd addressed to the Secretary.

ROYAL CORNWALL INFIRMARY TRURO
(84 Beds)

HOUSE SURGEON (male) required duties to commence Anaesthetics. Salary £170 per annum, board and laundry provided. Apply with copies of three recent testimonials to the Secretary of whom further particulars may be obtained.

COUNTY COUNCIL OF DURHAM

ASSISTANT WELFARE MEDICAL OFFICER

The County Health Committee invite applications for the appointment of an Assistant Welfare Medical Officer (woman) at a commencing salary of £400 per annum (subject to such temporary reduction as the County Council may order) rising by annual increments of £25 to £500 per annum. Travelling expenses will be paid by the County Council according to scale.

The appointment will be held subject to three months' notice on either side and to the following conditions:

(1) The officer appointed must be a registered Medical Practitioner between the ages of 25 and 45 years and must devote the whole of her time to the duties of the office and must not engage in private practice.
(2) She shall either have held a previous appointment as Medical Officer of an Ante Natal clinic with the approval of the Minister of Health or have had at least three years' experience in the practice of her profession and special experience of practical Midwifery and Ante Natal work. The holding of a Diploma in Public Health and practical experience in Bacteriological laboratory work will be deemed additional qualification for the post.
(3) She will be subject to the directions of the County Medical Officer.
(4) She will be required to reside in Durham City or such other place as required by the Council.
(5) She must be prepared if called upon to act as Locum Tenens to other members of the Medical Staff of the County Medical Officer.
(6) The appointment will terminate on marriage.
(7) The candidate appointed will be required to pass the County Council's medical examination and will be subject to the provisions of the Superannuation Act, 1922.

Application and Medical Officer's certificate must be received by the County Medical Officer, Shire Hall, Durham, not later than the 28th inst.

SHIRE HALL, DURHAM. HAROLD JEVONS, Clerk of the County Council.
May 9th, 1932.

COUNTY BOROUGH OF EAST HAM

ASSISTANT MEDICAL OFFICER

Applications invited for position of full-time Assistant Medical Officer for duties primarily in connection with Maternity and Child Welfare work under supervision of Medical Officer of Health. Age not to exceed 45 years. Salary £300 rising annually by £25 to a maximum of £400 per annum subject to 5 per cent. deduction for superannuation and a temporary abatement of 4 per cent. approved. Previous experience in similar appointment under a local authority will be reckoned in calculating commencing salary. Definite experience of Children's Diseases essential and possession of D.P.H. or similar qualification desirable. Preference will be given to those with previous experience in Maternity and Child Welfare work.

The successful candidate will be required to pass a medical examination and to reside in the neighbourhood.

Forms of application obtainable from undersigned upon receipt of a stamped addressed foolscap envelope must be returned by 9 a.m. on June 2nd.

Canvassing will disqualify.

By Order,
TOWN HALL, EAST HAM. C. LUSTACE WILSON, Town Clerk.
May 11th, 1932.

COUNTY BOROUGH OF HALIFAX

ST LUKE'S HOSPITAL.

JUNIOR RESIDENT MEDICAL OFFICER

The Health Committee of the Halifax Corporation invite applications for the post of Junior Resident Medical Officer (male, unmarried) for St. Luke's Hospital (containing 448 beds) for Medical, Surgical and Maternity cases. The salary will be £250 per annum, rising by annual increments of £10 to £300 per annum. The appointment will be for a term of not exceeding one year, and is terminable by one month's notice on either side.

Applicants must be duly qualified registered Medical Practitioners.

Forms of application and conditions of appointment may be obtained from the undersigned, to whom they must be returned, together with copies of not more than three recent testimonials, not later than May 23rd.

By Order,
THE TOWN CLERK'S OFFICE, HALIFAX. FRED SAUNDERS, Town Clerk.
May 14th, 1932.

WORCESTERSHIRE COUNTY COUNCIL.

ASSISTANT COUNTY MEDICAL OFFICER (Male)

The above-mentioned Council are about to appoint an Assistant County Medical Officer and applications are now invited for this post.

Applicants must be registered Medical Practitioners between the ages of 25 and 45 years. Special experience and qualifications in Tuberculosis will be necessary as work under the County Tuberculosis Scheme will form the chief part of the Officer's duties. He should have (1) at least three years' experience in the practice of his profession (2) spent in general clinical work a period of no less than eighteen months, of which not less than six months have been spent in a Hospital as resident officer in charge of beds occupied by general medical or surgical cases and (3) received special training for a period of not less than six months in the diagnosis and treatment of tuberculosis and in Artificial Pneumothorax treatment. A Diploma in Public Health is desirable. The officer who is appointed will work under the supervision of the Chief Tuberculosis Officer.

The person appointed will be required to reside in the district assigned to him by the County Council and to devote the whole of his time to the work.

The salary will be £600 rising by £25 per annum to £700 with an allowance of £140 per annum for use of his own motor car but the salary will be subject to a temporary cut of approximately £26 per annum. The engagement to be subject to three months' notice on either side. The post is designated under the Local Government and Other Officers' Superannuation Act, 1922.

Application (on forms to be obtained from the County Medical Officer, County Buildings, Worcester) accompanied by not more than three recent testimonials must be received by twelve noon on May 23rd, addressed to the County Medical Officer, County Buildings, Worcester.

Canvassing, disqualifies, and neither the names of the members of the County Council nor of the Committee will be supplied.

Shirehall, Worcester. (Signed) C. H. BIRD, Clerk of the County Council.
May 2nd, 1932.

URBAN DISTRICT OF HESTON AND ISLEWORTH

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified Medical Men with a Public Health qualification for the position of Assistant Medical Officer of Health and School Medical Officer.

Candidates will be required to carry out medical inspection of school children, child welfare work and administer dental anæsthetics and perform such other duties as may be allotted as Assistant to the Medical Officer of Health and School Medical Officer.

The person appointed will be required to devote his whole time to the duties and will not be allowed to engage in private practice. The salary will be at the rate of £500 per annum rising to £700 per annum by increments of £25 per annum from which the following temporary deduction will be made on account of the national financial emergency:

First £150—nil
£150 to £250—2½ per cent.
£250 to £500—5 per cent.

In fixing the commencing salary consideration will be given to the previous experience and length of service of the officer appointed. A deduction of 5 per cent. will be made from the salary in accordance with the provision of the Local Government and Other Officers' Superannuation Act, 1922, which has been adopted by the Council and the appointment will be subject to passing the Council's medical examination in connection therewith.

Copies of the application form and terms of appointment can be obtained from the undersigned.

Applications accompanied by copies of not more than three recent testimonials must be delivered not later than May 30th.

Council House, Heston. H. J. BAKER, Clerk to the Council.
May 6th, 1932.

WEST OF SCOTLAND NEUROPSYCHIATRIC RESEARCH INSTITUTE GLASGOW

Applications are invited for the post of DIRECTOR. Salary commences £850. Candidates must be skilled in modern clinical and laboratory methods and technique and be capable of undertaking and directing research work in Mental and Nervous Affections.

Applications, stating qualifications and experience, to be sent to the Secretary, Dr. J. H. MACDONALD, Hawkhead Asylum, Paisley, Glasgow, from whom all further particulars may be obtained.

COUNTY COUNCIL OF MIDDLESEX

DISTRICT MEDICAL OFFICER AND PUBLIC VACCINATOR

The County Council are about to appoint a duly qualified Medical Practitioner to the district under the Vaccination Acts, 1867 to 1907, comprising the Parish of Hampton Wick and the Urban District of Teddington.

DISTRICT MEDICAL OFFICER HAMPTON WICK (LONGFORD) AND STANWELL

Salary £97 10s. per annum plus expenses. The appointee will require to reside within the district in accordance with the Public Health Act, 1875, and must be registered in the Register of Medical Practitioners kept under the Medical Acts, 1858 to 1886, and must have had adequate experience in the practice of midwifery or otherwise be duly qualified to the satisfaction of the Council.

PUBLIC VACCINATOR HAMPTON WICK (LONGFORD) AND STANWELL

The person appointed will be required to produce to the Council a certificate of proficiency in vaccination unless he is required as a condition of obtaining any diploma he may for the time being possess.

He will be required also to enter into a contract with the Council in a form approved by the Minister of Health. The contract will provide for the payment of the minimum fee fixed by the Minister in that behalf by Order.

Application (1) name (2) age (3) qualifications and experience accompanied by copies of not more than three recent testimonials must be received by the undersigned not later than June 4th.

No special application forms are provided, but must be endorsed "District Medical Officer" or "Public Vaccinator" as the case may be.

Canvassing directly or indirectly will be a disqualification.

ERNEST S. W. HART, Clerk of the Council.
Middlesex Guildhall, Westminster, S.W.1.
May 10th, 1932.

CITY AND COUNTY OF KINGSTON UPON HULL

HULL MUNICIPAL MATERNITY HOME AND INFANTS HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER (Woman)

The Corporation invite application from unmarried or widowed Women Medical Practitioners for the appointment of Junior Resident Medical Officer at the Maternity Home and Infants Hospital, Hedon Road, Hull.

Salary is at the rate of £100 per annum together with board, washing and residence at the Maternity Home.

The appointment will be for six months with possible extension for a further period of six months.

The medical officer appointed will be given every opportunity of obtaining Post-graduate experience in abnormal cases of Midwifery in the treatment of Dietetic Errors in children and in the treatment of Venereal Disease in pregnant women.

She will be required to devote the whole of her time to the duties of the appointment which will also include opportunities for occasional attendance for the sake of experience at Ante Natal, Post Natal and other clinics. She will also act as Anæsthetist at the Maternity Home.

Conditions of appointment and forms of application may be obtained from the undersigned.

Completed application (in an envelope endorsed "Junior Resident Medical Officer, Maternity Home") together with copies of three recent testimonials must be received not later than midday on Tuesday, May 31st.

SYDNEY CRIBB, Medical Officer of Health, Health Department, Guildhall, Hull.
May 13th, 1932.

LONDON COUNTY COUNCIL

Applications are invited for the post of TEMPORARY DISTRICT MEDICAL OFFICER (Part-time) in District IV. area IV. (Deptford).

[illegible]

The salary attached will be £[illegible] per annum, rising by annual increments of £[illegible] to £[illegible] per annum, subject to deduction on account of the present national financial emergency.

[illegible] will be required to enter into a contract with the Council in a form which may be approved by the Ministry of Health. The contract will provide for the payment of £[illegible] a year subject to [illegible] months' notice on either side.

Forms of application, which must be returned [illegible] and endorsed "District Medical Officer," may be obtained from the undersigned.

[illegible] Hall, Westminster, S.W.1.
[illegible] not later than May 27th.

Canvassing [illegible].

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St Quintin Avenue North Kensington W 10
(50 Beds)

HOUSE SURGEON (male or female) required for seven months from June 1st Salary for first four months at the rate of £75 a year after which should he or she be appointed Senior Resident (of two) the duty would be at the rate of £100 a year with board residence and laundry in each case It is desirable that applicants should have held a resident house appointment Applications with copies of three testimonials *if possible must be submitted* on a form to be obtained from the Secretary and must reach the Secretary not later than first post on Friday May 27th

RADCLIFFE INFIRMARY & COUNTY HOSPITAL OXFORD

Applications are invited for the post of RESIDENT MEDICAL OFFICER (female) at the Tuberculosis Branch of the Radcliffe Infirmary The Officer will be appointed as from July 1st next

The appointment will be for six months in the first instance Salary at the rate of £150 *per annum*

Applications with copies of testimonials should be forwarded to the undersigned at the Radcliffe Infirmary not later than Saturday June 4th

A G F SANCTUARY *Administrator*

RADCLIFFE INFIRMARY & COUNTY HOSPITAL OXFORD

Applications are invited for the following post which will become vacant on July 1st
HOUSE PHYSICIAN

The appointment is for six months with salary at the rate of £120 per annum with board etc

Candidates must be male and qualified

Applications with four copies of three testimonials to be sent to the undersigned on or before Saturday June 4th

A G F SANCTUARY Administrator

SAMARITAN FREE HOSPITAL FOR WOMEN
Marylebone Road London N W 1

VACANCY ON STAFF

The Committee of Management invite applications for the post of HONORARY SURGEON to Out patients for Monday afternoon Candidates must be Fellows of the Royal College of Surgeons of England

Applications stating age with twelve copies (not originals) of three recent testimonials should be sent to the undersigned at the Hospital on or before 10 a m Friday June 3rd

G H HAWKINS Secretary

STOCKTON AND THORNABY HOSPITAL
STOCKTON ON TEES
(140 Beds—*Three Resident*)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) for a period of at least six months duties to commence June 1st Salary £160 with board residence and laundry Candidates must be duly qualified and unmarried

Applications stating age nationality and experience together with copies of three recent testimonials to be sent to the undersigned

J WILKINSON Secretary

THE DEWSBURY AND DISTRICT GENERAL INFIRMARY (100 Beds)

Applications are invited for the post of SECOND HOUSE SURGEON Salary £150 with board residence and laundry

The duties mainly comprise work in the Casualty Department and the duties of House Physician

Applications stating age and experience (if any) together with copies of recent testimonials to be sent to the undersigned before Monday May 30th The appointment commence July 1st

H G PRICE Secretary Supt

THE ROYAL EYE AND EAR HOSPITAL BRADFORD

Wanted JUNIOR HOUSE SURGEON (male) for July 1st Salary £150 with board residence and laundry

Applications stating qualifications age etc with copies of recent testimonials to be forwarded to the undersigned on or before May 31st

F BRIGGS Secretary Supt

UNIVERSITY COLLEGE HOSPITAL
Gower Street W C 1

Applications are invited for the honorary post of ASSISTANT PHYSICIAN to University College Hospital

Applicants should be Graduates of the University of Oxford or Cambridge of not more than five years standing and must be registered for practice in the United Kingdom Forms of application and further particulars can be obtained by letter to the Secretary

VICTORIA HOSPITAL FOR CHILDREN
Tite Street Chelsea S W 3

New appointment for a SURGEON in charge of the Ear Nose and Throat Department

The Committee of Management invite applications for the above mentioned post

Candidates must be Fellows of the Royal College of Surgeons of England

Applications should be sent to the Secretary at the Hospital not later than Saturday June 11th

By Order
D St JOHN BAMFORD
Secretary

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL
(220 Surgical and Medical Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post There are five Residents Salary at the rate of £150 per annum with board apartments and laundry

Applications stating age together with copies of three recent testimonial should be sent to the undersigned

G SUNNUCK
May 17th 1932 Supt & Secretary

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST

Wanted immediately an ASSISTANT MEDICAL OFFICER for the CROSSLEY SANATORIUM Delamere Forest Cheshire (110 beds) Salary £200 per annum with board apartments and laundry Candidates must be duly registered Medical Practitioners

Applications stating age with copies of testimonial to be sent not later than May 28th to W Hunter Secretary Hardman Street Deansgate Manchester

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST

Applications are invited for the post of HONORARY PHYSICIAN

Candidate must be on the *Medical Register* and Graduates of Medicine of a British University or members of the Royal College of Physicians Applications stating age and accompanied by copies of testimonials to be sent in *not* later than May 28th to W HUNT Secretary *Consumption Hospital* Hardman Street Manchester

DONCASTER ROYAL INFIRMARY
(185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Previous Hospital experience desirable Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and *renewable*

Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Superintendent

DONCASTER ROYAL INFIRMARY
(185 Beds)

HOUSE SURGEON (male) required for Surgical Unit of 50 beds Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable Application accompanied by not more than three recent testimonial to be sent to the undersigned

WALTER R SMITH
Secretary Superintendent

CHELSEA HOSPITAL FOR WOMEN
Arthur Street S W 3

There will be a vacancy for a JUNIOR HOUSE SURGEON (male) on July 1st Appointment for six months Salary £100 p a He will be expected to proceed to the Senior Post (six months salary £120 p a) at the end of his term of office Candidates must be duly registered and preferably unmarried Applications accompanied by copies of three testimonials should be sent not later than Thursday May 26th to the Secretary HERBERT H JENNINGS

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS
Victoria Park E
(Bus Tram and Rail Cambridge Heath L N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Application with copies of three testimonials should be sent to the undersigned on or before Friday June 17th

GLORGE WATTS Secretary

CUMBERLAND INFIRMARY CARLISLE
(160 Beds)
Resident Medical Staff—Four

Required at once a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON Previous experience desirable but not essential Appointment to September 30th Salary at the rate of £150 per annum board residence etc

Applications stating age nationality qualifications etc with copies of not more than four testimonials should be sent immediately to the *undersigned*

T C HOWITT Secretary

DERBYSHIRE ROYAL INFIRMARY DERBY
(Central Hospital—347 Beds)

Applications are invited for the post of HOUSE SURGEON for General Surgery

Candidates must be qualified and registered under the Medical Acts

The appointment is for twelve month

Salary will be £150 per annum with apartments, board etc

Applications with copies of testimonials to be sent to the undersigned

WALTER BANKS
May 20th 1932 Supt & Secretary

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

A vacancy for an ASSISTANT HOUSE SURGEON (unmarried) exists Applicants must be duly registered and unmarried and the appointment will be for six month Salary £100 p a with board apartments and laundry free

Applications stating age accompanied by copies of not more than three testimonials should be forwarded to the undersigned without delay

By Order of the Committee
FRANK ROWE Secretary

NOTTINGHAM GENERAL HOSPITAL

RESIDENT CASUALTY OFFICER (male) is required at the above Institution The appointment is for six months with salary at the rate of £200 a year with board residence and laundry

Candidates are desired to send applications to the undersigned giving age qualification and experience together with copies of testimonial not later than Wednesday June 8th *Duties to commence on or about* July 14th

PETER M MACCOTT
House Governor and Secretary

OLDHAM ROYAL INFIRMARY

Applications are invited for the following
HOUSE SURGEON

Salary at the rate of £175 per annum with board residence and laundry

The appointment will be for a period of six months

Applications stating age experience and qualification together with copies of three testimonials must be forwarded to the undersigned not later than Wednesday May 25th

H J CLOUT General Superintendent

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH

HOUSE PHYSICIAN required male and unmarried Salary £120 per annum with board residence and laundry There are three residents and the successful candidate will be eligible for the post of House Surgeon in due course

Applications stating age qualifications previous experience (if any) with copies of three recent testimonial should be sent to the undersigned at once

GEORGE WATTS Secretary Superintendent

HORTON GENERAL *HOSPITAL*, BANBURY OXON (60 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male or female) Vacant May 24th *The* appointment is for six months Salary £150 per annum with suite of room board laundry

Applications with *references* to—
RICHARD H JEFFCOTT
Secretary House Governor

HEELS COUNTY MENTAL HOSPITAL Hill End St Albans

JUNIOR TEMPORARY MEDICAL OFFICER required (male not exceeding 40 years *of age* duties from June 10th 1932 to early in October £3 7 6 per week plus board etc Apply to the Medical Superintendent

LONDON JEWISH HOSPITAL
St Jones Drive N W 11
(General Hospital—108 Beds)

CLINICAL ASSISTANT required in the Actinotherapeutic Department
Apply to the Secretary

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARKHAM MAIN SICK AND ACCIDENT SOCIETY, ARMTHORPE. *(Medical Practitioner.)*	ANGLESEY COUNTY COUNCIL. *(Small-pox Fever Hospital Services.)* *(Visiting Physician.)* *(Chief Medical Officer.)*
CILFACH GOCH, GLAMORGAN *(Workmen's Medical Scheme.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	FOLKESTONE BOROUGH *(Assistant Medical Officer of Health.)*
LOWESTOFT MEDICAL INSTITUTE *(Medical Officer.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	LONDON COUNTY COUNCIL. *(Assistant Medical Officer of Health.)*
LLWYNYPIA, CWMDACH VALE, TYNYCWAIG, GLAMORGAN *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.*	SOUTHAMPTON COUNTY BOROUGH *(M.O. Officer and Pathologist.)*
MARDY, GLAMORGAN *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	STAFFORDSHIRE, WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS *(Tuberculosis Officer.)*

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch), British Medical Association, Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*		WESTERN AUSTRALIA *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

May 18th, 1932. By Order of the Council. ALFRED COX, Medical Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.1.

A PART-TIME JUNIOR CASUALTY OFFICER is required on July 9th to assist in the Casualty Department from 10 a.m. to 3 p.m. (Saturdays 10 a.m. to 1 p.m.) under the direction of the Casualty Officer.

The work of the officer includes a large number of Casualty attendances and other minor operations.

Candidates must be registered Medical Practitioners and have had a responsible Hospital appointment.

Gentlemen are invited to send in their applications, addressed to the Secretary, before 10 o'clock on Monday, May 30th, accompanied by copies of not more than three testimonials or written applications for the purpose.

The appointment is made for six months and is non-resident.

Salary at the rate of £100 per annum with board.

All candidates must be in attendance to appear before the Joint Committee if required at their meeting on Wednesday, June 1st, at 5 p.m. precisely.

Forms of application and copies of the rules may be obtained from the Secretary at the Hospital.

By Order of the Board of Management,
JAMES McKAY,
Secretary.

May, 1932.

THE WILLESDEN GENERAL HOSPITAL, N.W.10.

OUT-PATIENT DEPT. CLINICAL ASSISTANTS.

Applications are invited for appointment to the following sessions:

MEDICAL—Tuesday afternoon, Friday afternoon.

SURGICAL—Friday afternoon.

Applications must be received not later than the first Monday in July, and should be addressed to the Secretary of the Hospital, who will furnish further details of the appointments.

May 11th, 1932.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.1.

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on July 1st.

Gentlemen are invited to send in their applications, addressed to the Secretary, before 12 o'clock on Monday, May 30th, with copies of not more than three testimonials given specially for the purpose and also evidence of their having held a responsible Hospital appointment.

The appointments are made for six months. Salaries at the rate of £100 per annum, laundry allowance £5, board and residence in the Hospital.

Candidates must be unmarried and possess a legal qualification to practise.

All candidates must be in attendance to appear before the Joint Committee if required at their Meeting on Wednesday, June 1st, at 5 p.m. precisely.

Forms of application and copies of the rules may be obtained from the Secretary.

By Order of the Board of Management,
JAMES McKAY,
Secretary.

May, 1932.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION, GLOUCESTER.

There is a Vacancy for an ASSISTANT SURGEON on the Active Medical Staff of this Institution.

Candidates should send in their applications, with testimonials and references, to the undersigned on or before Thursday, June 2nd.

F. J. SIMMONS, Secretary.

NEWARK GENERAL HOSPITAL (100 beds).

Wanted a fully qualified RESIDENT HOUSE SURGEON, unmarried. Salary £150 per annum, with board, residence, and washing. Must have had surgical experience. Applications, stating age, qualifications, and experience, with copies of three recent testimonials, to be sent in by May 24th to the undersigned, from whom further particulars may be obtained.

CAMPION (Secretary), 2, Park Gate, Newark, Notts.

SEAMEN'S HOSPITAL SOCIETY.

KING GEORGE'S SANATORIUM FOR SAILORS, LIPHOOK, HANTS.
(For the Treatment of Pulmonary and Non-Pulmonary Tuberculosis.)

Applications are invited for the post of ASSISTANT MEDICAL OFFICER, carrying salary at the rate of £200 per annum, with quarters and board. The appointment is for six months in the first instance. There is no allowance for a married man. Application, with copies of three recent testimonials, to be sent in by May 24th to the undersigned.

Seamen's Hospital, Greenwich, S.E.10. R. E. V. BAX, Secretary.

May 9th, 1932.

WEST END HOSPITAL FOR NERVOUS DISEASES.

In-patient Department, Queen Square, W.C.1.
Out-patient Department and Secretary's Office, Welbeck Street, W.1.

The Committee of Management invite applications for the appointment of an HON. ASSISTANT PHYSICIAN.

Particulars of the appointment may be had from the undersigned, to whom applications should be sent on or before Tuesday, May 24th.

J. P. WESTENHAM, Secretary.

EAST SUFFOLK AND IPSWICH HOSPITAL.

(2 beds.)

Applications are invited for the appointment of HOUSE SURGEON.

Salary £250 per annum, with board, residence, and washing.

Applications, stating age, qualifications, and experience, with copies of three recent testimonials, to be sent in by May 24th to the undersigned, from whom further particulars may be obtained.

Secretary.

(Appointments continued on p. 52.)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
T/A ARTICULATE WESTCENT LONDON
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All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

WANTED—ASSISTANT WITH HOSPITAL and general experience Six guineas weekly (indoor) State height and capital if any with reference Send photograph Accommodation for wife can be provided—Address No 2984 BMA House Tavistock Square W C 1

WANTED — EXPERIENCED ASSISTANT in Indoor or Outdoor Good house available if desired Work pleasant Partnership later on if suitable Good salary and prospects—Address No 2924 BMA House Tavistock Square W C 1

WANTED IMMEDIATELY —MALE OUTDOOR ASSISTANT for Glamorgan Colliery Practice Cottage Hospital and opportunity for Anæsthetics Newly qualified would suit Salary £400 with room and attendance—No 2831 BMA House Tavistock Sq W C 1

WANTED IMMEDIATELY ASSISTANTSHIP in Light Hospitality charge of Branch Surgery Experienced Obstetrician and Anæsthetist Very active Side drive cycle etc Country or town Terms easy—Address No 2931 BMA House Tavistock Square W C 1

WANTED YOUNG OUTDOOR ASSISTANT Hospital Private and Panel Practice in Yorkshire Moortainer preferred able to drive car Qualified Salary £400 State age and particulars—Address No 2913 BMA House Tavistock Square W C 1

WANTED -OUTDOOR MALE ASSISTANT Hospital for Country Practice in North of England Must be recent Graduate State full particulars—Address No 2909 BMA House Tavistock Square W C 1

WANTED AT ONCE INDOOR ASSISTANT South Wales Light Practice mixed Practice Good salary Full particulars No 2710 BMA House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practice with and without view Good salaries State full particulars—BRITISH MEDICAL BUREAU 36 Cross Street Manchester

WANTED—MALE ASSISTANT WITH VIEW Instantaneous Practice Manchester British Practice Full particulars and photo if available—Address No 2153 BMA House Tavistock Square W C 1

WANTED — MALE ASSISTANT (YOUNG) in Hoylake £300 Sitting room for Eat Hoylake Health or Scotch preferred —Address No 2934 BMA House Tavistock Sq W C 1

ASSISTANTSHIP OUTDOOR WITH DEFINITE Partnership early Partnership wanted middle July by well qualified Man aged 34 married well experienced Practice and Panel Practice some knowledge Midwifery Location (for near) Preferred—No 2911 BMA House Tavistock Square W C 1

MEDICS REQUIRED MAN OR WOMAN Assistant Pleasant West London Practice Experience essential Knowledge of French desirable Opportunity for advancement—Address giving full particulars No 2926 BMA House Tavistock Sq W C 1

PARTNERSHIPS

NO 2907—MEDICAL CORRESPONDENTS Many openings for Medical Correspondents Write for full details

WANTED — PARTNER TO TAKE OVER share in good class Practice within 25 miles London Share meantime worth £1 200—£1 300 Premium 2 years purchase House in connection with Practice for sale Married man preferred but not essential Good appointments are held—Address No 2928 BMA House Tavistock Square W C 1

WANTED — PARTNERSHIP IN OCTOBER in country Practice 1 or S W Counties By active and experienced Practitioner Married House to rent Income £1 400 up Capital available—Address No 2615 BMA House Tavistock Square W C 1

LANCS TOWN—PARTNERSHIP IN GOOD and old established Practice with receipts of over £1 700 yearly and increasing Panel 2 550 Price for one third to commence £1 000 —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

NEW COAST SEASIDE RESIDENTIAL £2 000 p a (audited) ONE HALF SHARE at 2 years purchase small panel Experienced keen on medicine about 40 years of age Abstainer and loyal Full particulars—No 2914 BMA House Tavistock Square W C 1

PARTNERSHIP £550 P A AT 2 YRS IN Practice of £1 150 p a including panel 1 350 and appt (transferable) £350 Scope very good Mids not now done Ultimate succession to whole probable soon House £700 or Flat £60 p a—Address No 2619 BMA House Tavistock Square W C 1

REQUIRED BY EXPERIENCED PRACTITIONER leaving a large Practice in Midland a SHARE in a Practice on or near South Coast returning about £2 000 p a Single Practice would be considered House preferably to rent with about 4 bedrooms—Apply No 4092 PERCIVAL TURNER 4/5 Adam Street W C 2

SHARE IN OLD ESTABLISHED MIXED CLASS Practice within 30 miles London Current receipts over £5 000 Panel about 5 000 Part freehold modern house with large garden tennis court and garage for sale Price £2 800 One third share at 12 years purchase Good educational and sporting facilities Applicant should be married and experienced in general practice—Address No 2980 BMA House Tavistock Square W C 1

MEDICAL POSTS DISPENSERS etc

DISPENSERS SUPPLIED TO DOCTORS and HOSPITALS AT SHORT NOTICE WITHOUT FEE Qualified and experienced in private and panel practice Permanent and part time Book keepers Dispensers Secretary Dispensers Nurse Dispensers Chauffeuse Dispensers and Receptionists

Write wire or phone Central 3679
The Reliance Bureau for Dispensers
12 Holborn Viaduct E C 1

A LADY DISPENSER BOOKKEEPER required immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY 101 WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

MALTA—ENGLISH MEDICAL MAN WISHES to hear of OPENING in Malta—Address No 2929 BMA House Tavistock Square W C 1

CHEMPRACTITIONER (T C 3) ENGAGED over 12 years mainly Insurance and Personal Injury work increasing would be glad to hear from any with similar practice view to Partnership or Succession Treated in strictest confidence—Address No 2910 BMA House Tavistock Square W C 1

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W C 2

FINAL YEAR STUDENT DESIRES POSITION for July to October Own car—Address No 2901 BMA House Tavistock Sq W C 1

FRCS ENG M D LOND RETIRED ACCUSTOMED to Insurance would HELP busy Practitioner with surgery or other WORK part time in City or North West London—Address No 2906 BMA House Tavistock Square W C 1

LADY WITH HOSPITAL AND EXPERIENCE desires POST as NURSE RECEPTIONIST and possible Secretary to London Doctor or Dentist Highest references Free June 1st—Address No 2905 BMA House Tavistock Square W C 1

LADY EXPERIENCED SECRETARIAL DUTIES POST as in London or Home Counties Part time Can drive car—Address No 2936 BMA House Tavistock Square W C 1

LADY DISPENSER BOOKKEEPER (HALF) seeks RE ENGAGEMENT good testimonials —Address No 2919 BMA House Tavistock Square W C 1

TYPEWRITING AND DUPLICATING undertaken by Expert Testimonials Theses Legal Documents Numerous letters of appreciation from Doctors —BEATRICE RADFORD (B) 341 Finchley Road N W 3 Phone Hampstead 6430

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION 85 Eccleston Square S W 1 (Telephone Victoria 2722) supplies qualified Dispensers Bookkeepers Laboratory Assistants Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dietal Clerks Orderlies Porters Caretakers etc without charge to prospective employers

TYPEWRITING DUPLICATING AND TRANSLATIONS of all descriptions Medical work a speciality Testimonials typed and returned the same day Moderate charges — THE CHARTERHOUSE TYPEWRITING BUREAU 18 Charterhouse Square E C 1 Clerkenwell 66

WOMAN DOCTOR SEEKS APPOINTMENT temporary or permanent 10 years excellent and varied experience at home and abroad — Address No 2904 BMA House Tavistock Square W C 1

NAVAL MEDICAL OFFICER RECENTLY retired requires EMPLOYMENT—Address No 2930 BMA House Tavistock Square W C 1

WOMAN LICSE WANTS PART TIME WORK outdoor ASSISTANTSHIP in or near London 4 days each No petients Special exp Children and Orthopædics Free now — Address No 2981 BMA House Tavistock Square W C 1

LOCUMS

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The oldest and only Agency who for 50 years has supplied substitutes at short notice without fee to principals
4 ADAM St Strand London W C 2
Phone
Teleg Temple Bar 9011
Epsomian Lond Phone 9142
After Office Hours

WANTED — WORK (LOCUMS ETC) BY MB BS Irishman Retired general practice few years ago Never entirely out of harness At 149 Experienced every branch Will undertake major surgical Police and militia Medical Testimonials Disengaged all classes of practice (did Locum last year again next month) and London Neurologist Free anytime except June 8th to 30th Own car anywhere England Wales—CHILDS 68/72 Cromwell Rd S W 7

WANTED—LOCUMS BY MEDICAL WOMAN Free June Aug and Sept Reduced terms for Seaside South or S E Coast preferred Interview arranged—Address No 2923 BMA House Tavistock Square W C 1

A MEDICAL MAN WHO HAS HAD HIS OWN Practice (private and panel) and a number of BMA Cheques LOCUM or PART TIME Work—Address No 2932 BMA House Tavistock Square W C 1

DOCTOR REQUIRES LOCUMS EARLY and end of June Panel Practice free June and September Own car Golf Tennis Boating Visits to be provided—Address No 2905 BMA House Tavistock Square W C 1

EXPERIENCED MD REQUIRES LOCUM ENGAGEMENTS six guineas travelling expenses Own car London preferred—Address No 2908 BMA House Tavistock Square W C 1

LOCUM WANTED BY WOMAN MB ChB DPH etc (married—no children) then July exp GP public health work and diphtheria preferred Would interview Own car Free June till Oct seaside or country —No 2915 BMA House Tavistock Square W C 1

LOCUM JENNS—EXPERIENCED 1907 St Bart and C I work qualified 1907 St Bart available for engagements for summer—Apply stating terms LOCUM The Lodge Hawthorn Lancing 57

LOCUM—METHODIST HOSPITAL LONDON at present with Private Practice EXCHANGE considered Apartment Address Particulars—Address No 2906 BMA House Tavistock Square W C 1

PRACTICES

WANTED BY LETTERED PRACTITIONER PARTNERSHIP SUCCESSION in South of England County for several partners—£2,000–£3,000 purchase of Practice with or without Land. Any capital available up to £10,000 for practice in district to be given.—Address No. 2777 BMA House, Tavistock Sq., W.C.1.

WANTED BY MD (EDIN.) PRACTICE OR PARTNERSHIP not less than £1,000 p.a. Abstainer, 5 ft. 10, 42, married, ex H.S. Has car, well qualified to Hall Large district. Has midwifery and certificates. Excellent testimonials. Capital available.—Address No. 2778 BMA House, Tavistock Sq., W.C.1.

WANTED—COUNTRY PRACTICE, INCOME about £1,000. Modern house with garden. Cash available.—Address No. 2918 BMA House, Tavistock Square, W.C.1.

EAST ANGLIA.—WELL ESTABLISHED INCOMING Country PRACTICE. About £1,800 p.a. Last 3 years £1,200–£1,400. Certificates. Electric lighting, gas and main water. Minimum—Practice £1,000 p.a. £1,000.—Address No. 2787 BMA House, Tavistock Sq., W.C.1.

HOME COUNTIES.—PRACTICE FOR SALE.—Long established. Income over £1,000. Increasing. Fairly good. Exceptionally fine house and garden to rent. Immediate possession.—Address No. 2420 BMA House, Tavistock Sq., W.C.1.

LONDON, W.—COMPACT PRACTICE. WELL established. Income £750. Limited to 1 in. Central. Growing residential district. Great scope. Moderate rental. Minimum £1,000. Sale or part.—Address No. 2982 BMA House, Tavistock Square, W.C.1.

MEDICAL PRACTICE IN CENTRAL SCOTLAND. Cash receipts approximately £800. House with consulting room and waiting room; also garage. Premium for Practice £1,000 or offer. Purchase price of House £1,000.—Apply MACKENZIE & JOHNSTONE, S.S.C., 40 Melville St., Edinburgh.

MID WALES PRACTICE FOR SALE. THIS summer in Market Town. Last year's receipts £1,140. House with modern conveniences and garden. Minimum £1,200.—Address No. 2917 BMA House, Tavistock Square, W.C.1.

MISSIONARY BODIES OBLIGED TO REMAIN in England desire LOCUM for practice or Lady requires part time as Maternity surgical preferably in Hospital.—Address No. 2583 BMA House, Tavistock Square, W.C.1.

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SUSSEX.—FAVOURITE SEASIDE RESORT. Partnership. Panel. Receipts £1,100 including panel £1,500. Needed for retirement. Interesting. Locum for holiday if desired.—Address No. 2991 BMA House, Tavistock Square, W.C.1.

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FOR DISPOSAL, SEASIDE, NO TERRIBLE—Detached HOME for Doctor retiring with Practice. Fine consulting room and surgery, with separate entrance. Dispensary. Hot and cold water. Electric light. Nice garden. Rent £52 10s. Inspection by appointment.—Apply CLAUDE TURNER & SON, 41 Albert Street, W.C.2.

A HIGH CLASS QUIET UP-TO-DATE FINAL HOUSE (part) to Hospital. Excellent Consulting (ground floor) Room. Telephone. Hospital Practice. Electric Light. Bath. Partial Board if desired.—Apply Dr. [illegible], 11 Cavendish Square, W.1.

CONSULTING ROOMS TO LET — HALLEY Street, Wimpole Street and Harley Street. Well appointed Rooms suitable for Specialist, Dentist, Masseuse, etc. Rent from £52 10s. Apply Dr. [illegible], 11 Cavendish Square, W.1. Telegrams, [illegible], London.

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DENTAL SURGEON (L.D.S.) YOUNG HOSpital trained, desires USE of CONSULTING ROOMS for two days weekly in centre of Clapham.—Particulars—Address No. 2922 BMA House, Tavistock Sq., W.C.1.

FOR SALE.—WELL BUILT HOUSE IN LEEDS. Has 4 bedrooms, 2 reception rooms, kitchen, bathroom, etc. Suitable for Doctor. Price £1,000.—Apply Hillier & Sons, 8 Park Row, Leeds.

GOOD OPENING FOR DOCTOR DESIRABLE HOUSE on main road. Near to doctor's residence. 3 rooms, kitchen, bathroom, with 2 rooms above. Apply for interview.—HOYLE, 28 Long Lane, Avenue, Huddersfield.

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HALLEY STREET.—PART TIME CONSULTING ROOM TO LET. Large Waiting Room. Telephone, attendance, etc. Letters, messages, appointments attended to and forwarded.—Address No. 2912 BMA House, Tavistock Square, W.C.1.

LONDON, S.E. (CLOSE TO BAKER ST.) HAS small furnished FLAT TO LET in upper part of residence. Moderate rental to suitable tenant.—Address No. 2921 BMA House, Tavistock Square, W.C.1.

NO. 40 HARLEY STREET, LONDON, W.1.—TO BE LET in this magnificent and modern building MEDICAL and DENTAL SUITES or for laboratory. Use of furnished reception room, electric lift, central heating.—Particulars of H. CIBSON, Metro Railway General Office, Baker Street Station, London, N.W.1.

OPHTHALMIC SURGEON REQUIRES occasional USE of CONSULTING ROOM in Harley or Wimpole Street.—Address No. 2903 BMA House, Tavistock Square, W.C.1.

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TWO CONSULTING ROOMS TO LET (UNfurnished or furnished) in Nottingham Place, W.1. Ground floor and first floor. Suitable for Medical Practitioner, Masseuse, Dentist, Specialist, etc. Restricted. Rent £100 per annum. Apply Messrs. LEAMAN & Co., 5a, Queen Victoria Street, E.C.4.

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WOULD the GLASGOW DOCTOR who witnessed a MOTOR ACCIDENT in DONEGALL SQUARE, BELFAST, on the 31st DECEMBER 1931, when a Police Constable was injured please COMMUNICATE at once with the ACCIDENT DEPARTMENT, CENTURY INSURANCE COMPANY, 7 Leadenhall Street, London.

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VICTORIA HOSPITAL BURNLEY
(125 Beds)

HOUSE PHYSICIAN (Male)

Applications are invited for the above Post which will become vacant on June 1st next The duties include the giving of a certain number of anæsthetics The appointment is for six months from June 1st and carries a salary of £150 per annum with board etc This Hospital is approved by the London University for the purpose of the M B and M S examinations

Application stating age nationality and qualifications together with copies testimonials should be addressed to the undersigned forthwith

GEO W COOLING
Superintendent and Secretary

ROYAL CHEST HOSPITAL
City Road E C 1
(Royal Northern Group of Hospitals)

HOUSE PHYSICIAN (part time)

The post of MEDICAL REGISTRAR (part time) will become vacant on July 1st

Candidates will be required to attend at the hospital at least three half days a week The appointment is for one year with eligibility for annual re election for a further period not exceeding two years Honorarium £50 per annum

Applications with copies of testimonials should be sent on or before June 1st to the undersigned from whom rule of the post can be obtained

GILBERT C PAINTER Secretary
Royal Northern Hospital Holloway Road N 7

VICTORIA CENTRAL HOSPITAL
Wallasey

Applications are invited for the position of JUNIOR HOUSE SURGEON (Male) Salary at the rate of £120 per annum with Board Residence and Laundry with prospects of appointment to Senior House Surgeon in six months time at a salary of £150

Candidate chosen would be appointed for six months

Application with copies of testimonials to be sent to the Secretary

ST JOHN'S HOSPITAL FOR DISEASES OF THE SKIN London W C 2

Application for the post of INPATIENT MEDICAL REGISTRAR are invited to be sent to the undersigned on or before Saturday morning June 4th

Honorarium £50 per annum

Applicant must be duly qualified and registered Medical Practitioners Particulars of the duties can be obtained on application

LEONARD C R TULPIN
Secretary

May 13th 1932

ST THOMAS'S HOSPITAL

VACANCY

An impending vacancy in the appointment of a PHYSICIAN in charge of the Skin Department Candidates must be Members or Fellows of the Royal College of Physicians

Applications giving full academic career with dates of testimonials to be sent to the Clerk to the Governors not later than Saturday June 4th

CENTRAL HOSPITAL
ILMOUTH (50 Beds)

Wanted a fully qualified RESIDENT HOUSE SURGEON to commence duty June 10th Salary £150 per annum with board residence and laundry Appointment for six month or twelve if mutually desired

Applications stating age together with not more than three recent testimonials to be sent to the undersigned not later than May 30th

W W UFFEIL Secretary

COVENTRY AND WARWICKSHIRE
HOSPITAL (307 Beds)

RESIDENT CASUALTY OFFICER (male) wanted Salary £125 per annum with board laundry and attendance provided

Candidates must be duly qualified and registered Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately

(Miss) R HOOPER Secretary

May 9th 1932

ALTRINCHAM GENERAL HOSPITAL
(100 Beds)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS (male) Salaries at the rate of £150 and £120 per annum respectively with board residence and laundry The appointment is for six months in the first instance and experience Applications stating age and experience together with copies of recent testimonials to the Secretary General Hospital Altrincham

EAST SUFFOLK AND IPSWICH HOSPITAL
330 Beds (Hospital 265 Recovery Home 65)
Seven Residents

APPOINTMENT OF RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical and Surgical Officer (Male) who will also act as Medical Superintendent of the Hospitals Convalescent Home (under the title of R M O) Previous administrative and surgical experience essential

Preference given to a candidate who is a Fellow of one of the Royal Colleges of Surgeons of the United Kingdom Married men are eligible for the appointment The salary for a single man is £350 per annum with board apartments and laundry The salary for a married man is £500 per annum with house free of rate but without board

Duties to commence on July 1st 1932 or as soon after as possible

Application stating age qualifications and medical surgical and administrative experience with three recent testimonials to be sent to me on or before June 7th 1932

ARTHUR GRIFFITHS Secretary

The Hospital Ipswich

THE CANCER HOSPITAL (FREE)
(Incorporated under Royal Charter)
Fulham Road London S W 3

The Committee are prepared to receive applications for the post of HOUSE SURGEON Salary at the rate of £100 per annum

The appointment is for six months and subject to rules

Candidates must call upon each member of the Medical Committee not later than Tuesday June 14th 1932

A copy of the rules and the name and address of the Medical Committee may be obtained from the Secretary

Previous experience as a House Surgeon is indispensable

Applications with three (copies only) testimonials to be sent to the undersigned not later than the first post on Saturday June 4th 1932

J COURTNEY BUCHANAN Secretary

EAST HAM MEMORIAL HOSPITAL
Shrewsbury Road E.7
(100 Beds)

Application are invited for the post of RESIDENT MEDICAL OFFICER Duties to commence on July 1st The appointment will be for six months in the first instance but the successful candidate will be eligible for reappointment Salary at the rate of £200 per annum with board residence and laundry Preference will be given to candidates who hold the Diploma of I R C S Application stating age experience and full particulars together with copies of testimonials should reach the undersigned by June 11th

REGINALD PERRY Secretary

ELIZABETH GARRETT ANDERSON HOSPITAL Euston Road

Wanted fully qualified Medical Women for the following posts

HOUSE PHYSICIAN OBSTETRIC ASSISTANT THREE HOUSE SURGEONS Appointments for six months from July 1st next Salary at the rate of £50 per annum with board residence and laundry

Application with copies of three testimonials to be sent to the undersigned by Friday May 27th

JEAN R MURRAY Secretary

INDOOR HOUSE SURGEON WANTED FOR GLASGOW EAR NOSE AND THROAT HOSPITAL Honorarium £100 per annum with board etc The appointment affords a splendid opportunity for acquiring a sound knowledge of diseases of the Ear Nose and Throat

There may also be a vacancy for an OUTDOOR HOUSE SURGEON honorarium £100

Application with testimonial to be sent to the Secretary D N MACKAY 38 Bath Street Glasgow

GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL London W 1

HOUSE SURGEON required on July 1st Salary £100 per annum with board lodging and laundry

Application stating age qualification and experience together with copies of three testimonials should reach the undersigned on or before June 4th

F P CARROLL Secretary Supt

KING GEORGE HOSPITAL
Ilford (London)

Applications are invited for the appointment of HOUSE SURGEON (Male) Salary £100 per annum with board residence etc Term six month with eligibility for a further period Applications should be sent immediately to the Secretary

WAREHAM AND PURBECK RURAL DISTRICT COUNCIL

APPOINTMENT OF MEDICAL OFFICER OF HEALTH

Applications are invited for the appointment of Medical Officer of Health for the above District

The appointment is a part time one and in the first instance will be for a period ending March 31st 1933 and subject to the approval of the Minister of Health Applicant should possess the qualifications required by Article 5 of the Sanitary Officers Order 1926

The salary will be at the rate of £140 per annum and an allowance at the rate of £10 per annum will be paid for travelling expenses

The gentleman appointed will be appointed also as Medical Officer of the Council's Isolation Hospital at a salary at the rate of £15 per annum

The salaries are subject to a temporary abatement of 2 per cent in view of the National situation

Applications stating age qualification and experience accompanied by recent testimonials should reach me not later than June 2nd

LIONEL H WARD
Clerk to the Council

Council Offices West Street Wareham
May 14th 1932

COUNTY COUNCIL OF SUTHERLAND

PARISH OF FARR

Applications are invited from registered Medical Practitioners for the appointment of LOCAL MEDICAL OFFICER of the Parish of Farr in the County of Sutherland

Salary from the County Council in respect of services £200 per annum and an excellent dwelling house with garage Rent and taxes free Income from other sources Highlands and Island Medical Service Fund and the Panel Practice approximately £441 representing a total income of £641 and private practice in addition

Applications with statement of qualifications and experience accompanied by six copies of three recent testimonials and of the application to be lodged with the undersigned on or before June 4th 1932

ARCHD ARCO County Clerk

County Clerk Office
Golspie May 16th 1932

QUEEN CHARLOTTE'S MATERNITY HOSPITAL
Marylebone Road N W 1

ASSISTANT RESIDENT MEDICAL OFFICER (Male) required to commence duty on July 1st 1932 Applicants must be registered Appointment for three months On completion of the appointment the selected candidate will be expected to proceed to the post of Senior Resident Medical Officer (for three months) on the recommendation of the Medical Staff The salary of the Assistant Resident Medical Officer is at the rate of £80 per annum and of the Senior Resident Medical Officer £100 per annum with board residence and washing allowance (4 weeks) Application with copies (not originals) of not more than three testimonials will be received by the Secretary up to June 4th

ARTHUR WATTS Secretary

LONDON COUNTY COUNCIL

Applications invited from duly qualified Medical Practitioners for appointment as CLINICAL ASSISTANT at St Stephen Hospital Fulham Road S W 10 Salary (subject to temporary reduction) £100 a year to either with meal when on duty Appointment for six months in the first instance but may be extended for a further period of six months Duties are to be undertaken by the Medical Superintendent and include if necessary attendance at the Council's Institutions under the control of the Council

Form of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 34) County Hall Westminster Bridge S E 1 returned by June 3rd 1932. Canvassing disqualifies

Further information can be obtained from the Medical Superintendent at the Hospital

CITY OF SALFORD

Applications are invited from fully qualified Male Medical Practitioners for the post of JUNIOR ASSISTANT (whole time) in the Venereal Diseases Treatment Centre at which the yearly attendance and new cases treated are about 100 000 and 2 000 respectively The appointment will be on a temporary basis at a salary at the rate of £300 per annum Applicants should have had previous experience in the treatment of venereal diseases and must be registered Medical Practitioners Forms of application may be obtained from the Medical Officer of Health 145 Regent Road Salford to whom they should be returned as soon as possible and not later than June 4th accompanied by copies of not more than three recent testimonials

H H TOMSON Town Clerk

QUEEN MARY'S HOSPITAL FOR THE EAST END, E.1.
Telephone Mansion House 2240

Applications are invited from duly qualified registered Medical Men for the following appointments:

ONE RESIDENT MEDICAL OFFICER. Salary £200 per annum.
TWO HOUSE SURGEONS. Salary £120 per annum.
ONE HOUSE PHYSICIAN. Salary £120 per annum.
ONE OBSTETRIC HOUSE SURGEON. Salary £120 per annum.
ONE HOUSE PHYSICIAN AND RESIDENT ANAESTHETIST. Salary £120 per annum.
ONE CASUALTY OFFICER. Salary £150 per annum.

The Hospital contains 217 beds, including Maternity Block and other special departments.

Candidates who should previously have held Hospital appointments must send applications in a complete typewritten form to the undersigned not later than Wednesday, May 25th. The appointments will date from July 1st and will be for six months. The Resident Medical Officer will be eligible for reappointment for a further six months.

RALPHAEL JACKSON (Major), Secretary.

GENERAL TRAINING IN HOSPITAL
York Road, Lambeth, S.E.1

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER and ANAESTHETIST. Salary at rate of £100 per annum with board and residence and laundry. Appointment for three months, commencing July 1st. The successful candidate will subject to satisfactory practice be required to succeed the Senior Medical Officer's post for a further three months.

Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned not later than June 3rd next.

May 21st. THOS. HEAPS, Secretary.

Telephone: WELBECK 2728
Telegrams: "ASSISTIAMO, LONDON"

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W. J. HICKS, Secretary

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BRIGHTON, 23 Upper Baggot St.
TELEPHONES
London: 1277 Welbeck (Two lines).
Manchester: 3122 Ardwick.
Glasgow: 4777 Douglas.
Brighton: 3333.
TELEGRAMS
Telegrams: Surgical Gateway, London.
Telegrams: Surgical Gateway, Manchester.
Telegrams: Surgical Gateway, Glasgow.
Telegrams: Surgical Gateway, Brighton.

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qualified to carry out the treatment prescribed can be obtained from The Secretary, CSMMG, Tavistock House (North), Tavistock Square, W.C.1. [illegible]

Trained Nurses Co-operation, [illegible]
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Terms post free on application.

WEST RIDING.—OLD ESTABLISHED PRACTICE IN outskirt of industrial town. Assessed £1,040 p.a. Rent £400. Two apartments, 5/6 to 10/6, some at 21/. Modern house, 3 bedrooms, reception, large surgery, etc. Stable and loft. Alternative house with 6 bedrooms, 2 reception, 3 separate surgeries, etc. Rent £100. Very suitable. Built for doctor. Premium £1,500.—No. 024.

CHANNEL RESORT.—RADIOLOGICAL PRACTICE. About £2,000 p.a. Scope for Electrotherapy. No opposition. Population of 40,000 covered by Practice. Premises centrally situated at rental of 21/ per week. Premium for good will and plant (cost £800) £700.—No. 3023.

LONDON.—HIGH CLASS PRACTICE OVER £2,500 p.a. Largely Obstetrical and Children. Successor must have had experience in these branches, preferably Hospital appointments. Ample scope for increase.—No. 022.

SOUTH MIDLANDS.—COUNTY PRACTICE. About £1,000 in first year. Good opening for young man. Opportunity. Fees 2/6 to 7/6, including extras. Very little midwifery. Good house, 2 reception, bath, surgery, etc. Electric light. Premium £800. Premium for practice £400.—No. 1021.

RIVERSIDE SUBURB AND RESORT.—HALF share of over £2,800 p.a. with possibilities of succession. Panel 1,300 and some good class. Visiting fees 5/ to 21/. Good family house to rent at £100 p.a. Purchaser should be man of some experience in good class practice.—No. 6040.

LONDON, W.—INCREASING NUCLEUS. Practice about £300 with select panel of 100. Fees 7/6 to 21/. Lower maximum with consulting and 2 bedrooms. Bath. Kitchen. Rent £100 p.a. including. Premium £450. Would sell first or part only.—No. 018.

SUFFOLK.—SMALL TOWN.—HALF-SHARE £3,500 p.a. One-third share after short term. Average panel about 1,100. Fees 5/ to 21/. Good detached consulting, etc. Excellent surgery, garage. Rent at £120 p.a. or full premium 4 years' purchase. Personally visited and recommended.—No. 3015.

SOUTH COAST.—FASHIONABLE RESORT.—Good class Practice. Non-dispensing, with select panel. Income over £450. Visits 5/ to 10/6. Good house, 2 reception rooms, 3 bedrooms, 4 other rooms on the third floor. Let off. Premises for Practice and part (43 years to run) £2,800 cash of which £350 can be raised on mortgage.—No. 9014.

EAST END.—CASH PRACTICE. INCOME £850. Panel 574. Premium £1,200. House (to be sold) £60 p.a. 10 years to run. Visiting fees 5/ and 10/. Surgery 3/6 with medicine 5/. Old established. Present hands 5 years.—No. 004.

SURREY HILLS.—OLD ESTABLISHED COUNTRY PRACTICE unopposed. £600 p.a. Fees 3/6 to 10/6. Panel 400. Premium 1½ years' purchase. Good house, 6 bedrooms, 2 reception, electric light, good garden and 1 acre with tennis court. £1,400 or rent £80.—No. 8[illegible].

MIDLANDS.—£7,000 A YEAR OLD ESTABLISHED Panel Practice. 9 years. Partner 9 years. One-third share if required. Private at present. Fees 5/ to 21/. House to let at £100 p.a. if required. Good house, 6 bedrooms, 2 reception, electric light, good garden and 1 acre with tennis court. £1,400 or rent £80.—No. 8[illegible].

LONDON NORTH.—£1,000 P.A. MIDDLE Class Practice. £1,600. Visits 5/—[illegible] years' purchase. Good house, 6 bedrooms, bathroom, 2 reception rooms, etc. Rent £100. Premium £1,500 or 8 years' purchase.—No. 007.

NORTHERN TOWN.—VERY OLD ESTABLISHED Practice. £2,000 p.a. Panel 1,400. Fees 5/ to 21/. Good house, 6 bedrooms, bathroom, 2 reception rooms, etc. Rent £100. Premium £1,500 or 8 years' purchase.—No. 002.

LAND OTHER SUBJECTS FOR DISPOSAL.
Particulars on application.

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YORKSHIRE —Town PRACTICE in industrial locality Medium sized house (5 beds) Receipts approx £700 Panel 520 Fees 2/6 upward Premium for lease and freehold house £2 000 cash

MIDDLESEX W —PARTNERSHIP in Suburban Practice situated in rapidly growing residential locality Receipts (approx) £2 000 Panel (increasing) 650 Medium sized house available Premium for 1/3 or 2/5 share 2 years purchase

LONDON N W —PARTNERSHIP in well established mixed class Practice Receipts approx £2 500 Panel 1 800 Branch Surgery Premium for 1/3 or 1/2 share 2 years purchase Suitable accommodation available

LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment Premium 2 years purchase or near offer

HOME COUNTIES —PARTNERSHIP in good class Practice Receipts over £6 000 p a Suitable house available Premium for 1/3 share 2 years purchase Highly suitable to young physician with good degrees

SUFFOLK —Old established Country PRACTICE situated in charming locality Good sized house with grounds to rent on lease Sport of all kinds Receipts average over £1 500 Panel 1 000 Appts worth £250 to £260 p a Premium 1½ years purchase

HOME COUNTIES —Old established Country PRACTICE Excellent freehold house Receipts over £1 200 Panel nearly 900 Premium 1½ years purchase

LANCASHIRE — Industrial middle class PRACTICE with convenient house (4 beds) Receipts nearly £2 000 Panel 1 200 Fees 3/6 upwards Highly suitable for husband and wife Premium £3 000 to include book debts or 1/3 share Partnership with view to succession at £1 200 Suitable for lady Doctor

LONDON E C —Mixed Cash and Panel PRACTICE Suitable house available facing main thoroughfare held on lease at £95 p a Receipts nearly £700 Panel 450 (scope) Fees 1/6 to 10/6 Midwifery not undertaken Premium £1 000

YORKSHIRE — Near Coast — Agricultural locality — Attractive house separate entrance for surgery for sale freehold Receipts average approximately £800 p a Panel 620 Fees 3/6 upwards Premium 1½ years purchase for Practice house £900

LONDON W 3 —NUCLEUS G P in growing locality Receipts over £400 p a Scope for increase Panel 70 Fee 2/6 upwards Premium for quick sale £500

LONDON S W —Old established mixed working class PRACTICE with scope for young and energetic man Receipts approx £1 000 p a Panel 1 780 Fees 1/6 upwards House to rent or for sale Premium £2 500

NORTHANTS — Well established mixed PRACTICE Suitable corner house available Receipts over £1 100 Panel 993 Fees 2/6 upwards Prem £1 800

SOUTH AFRICA —Farming Locality —Mixed PRACTICE with Bungalow and 2 acres of ground Receipts £500 p a Premium 1 years purchase (Interview London)

LONDON S W (Near West End) —Mixed better class PRACTICE Main thoroughfare Suitable house to rent at *exceptionally low rental* Receipts approx £1 000 p a all cash Panel 730 increasing Fees 3/6 to 1 gn Premium to include Practice lease drugs furniture etc £3 500 or near offer

LONDON S W —West End PRACTICE non panel non dispensing Attractive house on lease Receipts £1 400 Fees 1 gn upwards Premium £2 600 to include lease carpets fixtures fittings etc

LONDON W 1 —Better class G P Select panel Suitable house available at low rental Receipts approx nearly £720 Panel 400 increasing Fees 5/ to 1 gn Midwifery not undertaken Premium £1 200 cash

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1 WESTERN CITY —PARTNERSHIP for young Practitioner Fifth share returning last year £530 net Increase to two fifths with in four years Panel 3 120 increasing Good house to rent £45 p a Price £900 to include book debt No dispensing

2 CORNWALL —PRACTICE in small country town near sea Averages £1 300 p a Panel about 637 Points of scope especially Surgeon Prem £2 000 Good house for sale

3 MIDLAND CITY — Old established general and venereal PRACTICE Receipts last year £2 740 Panel 1 500 recently established increasing Exch to rent Prem £3 000

4 DEVON —Near Sea —PARTNERSHIP Half share of £1 200 p a increasing Panel 600 Good house with large garden for sale Prem for Partnership £1 200 Good scope

5 COUNTY PRACTICE — Old established in pleasant country Last year £1 750 accts 3½ Panel 9–10 Appts £120 In present hands 23 years Good house garage large grnd House & Practice £5 000 Borders of Monmouthshire

6 S DEVON —Small country PRACTICE returning £300 p a Panel over 200 increasing Scope Easy house with grounds in charming locality to buy

7 LONDON E —BRANCH SURGERY Average takings last 3 years £765 Panel 375 increasing Has on lease Great scope for man with, on or no premises Prem £1 000

8 BEDFORDSHIRE. — Country PRACTICE about £500 p a Good house to buy or rent Premium £400

9 LANCASHIRE — Good class PRACTICE Pleasant seaside resort Panel 250 Receipts £870 p a Price £1 000 Good house

10 SEA PRACTICE.—Small Summer Nucleus with Hse in Eng Price £1 250 together

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2 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Garage etc

3 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE Receipts average £800 p a. Panel 550 Appointments £350 Good house to rent Considerable scope for energetic man

4 LANCS —Old estate and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent

5 BERKS —(Country Town) —PARTNERSHIP (4/5ths share) with short prelim Assistantship and ultimate succession Receipts over £1 200 Panel 550 and good scope Appts worth about £250 Good fees and house

6 LANCS (LARGE TOWN) —Non dispensing non panel largely Surgical Practice Receipts over £1 179 p a and unlimited scope. Good house etc

FINANCIAL ASSISTANCE afforded to approved applicants for the purchase of Practices or Partnerships on very reasonable terms. Full particulars on application.

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FOR SALE

1 LONDON N W (Near Kilburn) —Well established cash and panel PRACTICE Receipts last year £1 700 Panel over 1 400 Fees in daily Rent £80 p a Premium £2 800 payable £1 600 down rest by arrangement

2 LARGE MIDLAND CITY —Well established PRACTICE Receipts average £1 600 p a Panel 1 500 Nice house Low rent 15 guineas a quarter Premium £1 650 or near offer

3 10 MINS PADDINGTON —Old established PRACTICE Receipts £1 600 p a Panel 2 177 Nice house rent £100 p a Premium little over 2 years purchase

4 LONDON S E —Well established PRACTICE to be had on very reasonable terms Receipts last year £1 335 Panel 640 Premium about £1 550 payable only £550 down rest by arrangement over

5 NEAR KENNINGTON S E.—Old established mixed class PRACTICE Receipts average £1 000 a year Panel 750 Large house on lease £8 a month Prem £1 800 or near offer

6 LONDON W (Suburb) — Well established PRACTICE Receipts average £425 p a small Panel District growing Goods to be sold Premium £500 Vendor selling through ill health

7 LONDON E (Near Liverpool Street) —Mixed class PRACTICE Receipts about £550 p a panel over 600 Rent £ prem £2/6 weeks inclusive Premium £ 50

8 BERKS —Old established uncomp Country PRACTICE Receipts average £1 420 p a including fair panel Nice house rent £45 p a Beautiful district Premium £2 000

9 10 MINS FULHAM S W —Well established mixed class PRACTICE Receipts average £1 650 p a panel 650 Flat available Premium £1 850 part may remain over

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NORTHERN BRANCH

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FOR DISPOSAL

Full Particulars Free on Request.

FARCE LANCS TOWN—MIXED PRACTICE Average cash receipts £1 88 p.a. Panel 1 089 Scope for increase Good house reception 4 bedrooms Freehold—Practice —11 years purch—No 3 3

EAST COAST—SEASIDE TOWN—Old-established mixed PRACTICE Average cash receipts £1 701 p.a. Panel 685 Excellent house and offices Private practice Detached house Garage and garden Premium 14 years purchase—No 03

MANCHESTER—MIXED PRACTICE Cash receipts about £1 600 Panel 1 00 Good house (no lease) Garden and garage Unopposed Premium £1 0 —No 603

EAST YORKS—Country Town near Coast—Unopposed MIXED PRACTICE Cash receipts last year £8 0 Panel 630 Excellent detached house Reception 4 bedrooms garage and large garden Premium 14 years purchase—No 346

MANCHESTER—PRACTICE average Panel 1 1 4 Good house consulting and reception rooms Garage and garden Let £70 p.a. Premium for quick sale £450 —No

WELSH BORDER — UNOPPOSED COUNTRY PRACTICE in Radnorshire Average annual receipts £1 100 p.a. Large panel Present assistant £ 00 p.a. Partnership if desired Modern house Garage and large garden Rent £ 0 p.a. Premium £1 250 Principals only to write—No 03

MANCHESTER Middle-aged PRACTITIONER £ p.a. Cash receipts £ Panel £ Large house Garage and garden Premium £ or purchase by instalments—No 0

DEATH VACANCY LANCS TOWN—Main PRACTICE Average cash receipts £1 4 p.a. Panel Excellent house Garage and garden Premium £ or purchase by instalments—No

MANCHESTER MIXED PRACTICE Partnership Cash receipts £2 40 Panel Good house Garage and garden Premium £ or purchase by instalments—No

NORTH WALES COAST — PRACTICE Average cash receipts £ Panel Good house Garage and garden Premium £ or purchase by instalments—No

NEAR MANCHESTER PRACTICE

LANCS—PLEASANT COUNTRY TOWN—Short PRACTICE Average cash receipts £1 3 4 p.a. Approximate basis £60 p.a. Panel 1 0 Detached house Garage and garden Premium £ or purchase by instalments—No

MEDICAL WOMAN'S PRACTICE — MANCHESTER Established Cash receipts 1931 £945 Panel 4 0 Excellent house 3 reception 6 bedrooms Garage Let £80 p.a. on lease Premium 1½ years purchase—No

CHESHIRE COAST TOWN near LIVERPOOL — Main PRACTICE Average cash receipts £1 1 4 p.a. Approximate £80 p.a. Small Panel Excellent detached house Reception rooms Premium—Practice —11 years purchase—No

SPECIAL NOTICE

For the convenience of Practitioners Branch Offices have been opened as under —

LIVERPOOL & DISTRICT
28 Exchange Street East Liverpool
(Tel Central 19 0 Grams Locum Liverpool)

YORKSHIRE
Phoenix Chambers, South Parade Leeds
(Tel)

NORTHERN IRELAND
72, High Street Belfast
(Tel Grams Locum Belfast)

MANCHESTER—PRACTICE Cash receipts about £4 78 p.a. Panel 1 400 The house has been entirely modernised and is in excellent condition Premium £2 0 —No

NORTH LIVERPOOL—EAST TOWN—Main PRACTICE Cash receipts last year £709 p.a. Panel 490 (Limit 1 2) Small Garage and garden Freehold house Purchase—No 344

VENEREAL DISEASES PRACTICE — Newly created appointment Salary £1 4 Duties to commence about Applications to be made before

CHESHIRE TOWN NR MANCHESTER—Main PRACTICE Cash receipts £1 31 £ 8 Panel £ 32 Excellent house Garage and garden Premium £ 00 Excellent opportunity for

SOUTH WEST COAST — SEASIDE RESORT — PRACTICE Cash receipts £ 4 p.a. Panel Detached house Garage and garden Premium £ or purchase by instalments—No

NR LIVERPOOL PARTNERSHIP

CHESHIRE TOWN MANCHESTER—PARTNERSHIP

EAST LANCS—PRACTICE

WANTED JULY 1ST—ASSISTANT

ASSISTANT

All communications should be addressed to the Branch Manager BRITISH MEDICAL BUREAU 33 CROSS ST., MANCHESTER

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Practices and Partnerships for Disposal — **Full particulars sent free**

1 EASTERN COUNTIES — Third Partner required for sound old established Practice of £4 500 p a in particularly pleasant Market Town within easy reach of sea Panel 1 600 Suitable house Premium 2 years purchase for share of about £1 000 p a Option much increased share within 3 years

2 INLAND SPA & HEALTH RESORT — PARTNERSHIP in Practice averaging £3 000 p a (about 50 per cent Spa work) Panel 900 Excellent detached house (7 bed rooms) garage and garden for sale or rent Great scope for suitable Partner in Spa work Premium one third share 2 years purchase.

3 LONDON, W C —Partnership in Practice about £1 000 p a Small panel Small flat to rent if desired One half share with succession in five years Premium 2 years purchase

4 S AFRICA —Practice of £2,000 p a in a Township in one of the richest Districts in the Union Charming Bungalow to rent Premium to include Book Debts Dressings Surgery and Household furniture £1 500

5 W MIDLANDS —Practice nearly £2 400 p a in small residential country town amidst beautiful surroundings Panel about 1 100 Excellent house (6 bedrooms and attics) in own grounds with orchard for sale Sport of all kinds Premium 1½ years purchase

6 N OF ENGLAND —Ophthalmic Practice of over £1 600 p a in an important town Excellent scope for one keen on clinical and operative Ophthalmology Large house in first class condition for sale Purchaser should be well qualified Premium £2 500

7 N E ENGLAND — Rapidly increasing PRACTICE in well built seaport town Receipts past year £1 700 including select panel of under 550 Well situated house (6 bed rooms) in good residential part for sale Ample scope for increase Premium £2 750

8 HOME COUNTIES — Country Practice averaging £1 120 p a in pleasant district easy distance of London Panel 900 Very nice detached bungalow residence (5 bedrooms) garage and well stocked garden to rent on lease Excellent scope Premium 1½ years purchase

9 NORTHUMBERLAND — Practice of £2 000 p a in small industrial town Panel 1 040 House for sale Premium—Practice—1½ years purchase

10 S AFRICA —Practice of about £2,000 p a in a famous Town Pleasantly situated detached bungalow (5 bedrooms) garage, and small garden for sale Good hospital (with private wards) Premium £1 100

11 N WALES —Small Seaport Town —Practice doing about £800 p a Panel 750 Excellent house (3 bedrooms) with modern conveniences Sport of all kinds Premium £1 350 to include drugs fittings etc

12 S W OF ENGLAND — Partnership in rapidly increasing better class non-dispensing Practice of about £2 200 p a in first rate town No panel. Suitable house to rent Share worth £1 000 p a at 2 years purchase Applicant must be well qualified and a good Physician Preliminary Assistantship

13 S COAST — Practice averaging £1,160 p a in Residential Town and Health Resort. Panel 1 056 Practically no dispensing and not much midwifery Scope for considerable increase Premium £2 000

14 HOME COUNTIES — Practice carried on by Medical Woman in country district about 15 miles from London Receipts last year £799 Panel about 100 Detached house (4 bedrooms) with garage and about half an acre of garden Scope for increase Premium—house and Practice—£2 500

15 KENT —Partnership in middle and working class Practice nearly £4 450 p a in an industrial town Panel about 2 600 Detached house (4 bedrooms) with garden to rent Plenty of scope for increase One fifth share 2 years purchase

16 LONDON, WEST END — X-ray and Electro therapeutic Practice Receipts 1931 nearly £620 Large house (8 bedrooms) to rent on lease Premium £925

17 MIDLANDS —Partnership in sound non-dispensing Practice of over £5 700 p a in beautifully situated county town Panel 2 000 Good well qualified Physician required aged 30 35 One fifth share at 2 years purchase with early increases Good Hospital with prospect of appointment on Staff in near future

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1883)

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Practices and Partnerships for Disposal (continued)

18 S. COAST.—Fashionable Health Resort.—PARTNERSHIP in Practically Non-existent Practice showing [illegible] £700 p.a. Suitable [illegible] Share with all [illegible] £400 p.a. at 2 years. Further [illegible] Oxford, Cambridge or Edinburgh man.

19 LONDON, S.E.—Practice averaging about £1,000 p.a. in one of the best Residential Suburbs. Early 400 Visits per Day. Good Class Connection with large and handsome garden. Rare opportunity for increase.

20 OPHTHALMIC PRACTICE.—Exceptional opportunity for PARTNERSHIP. Applicant [illegible] aged about 30 and must have the DO (Oxford) DOMS, and [illegible] have full Ophthalmic Hospital [illegible] preferably in London. A share with early £1,200 p.a. at first.

21 N. OF ENGLAND.—Inland Health Resort. Non-dispensing PRACTICE averaging £1,100 p.a. Small but genteel House (5 bedrooms) with large garden and [illegible]. Premium for Practice 3½ years' purchase.

22 LONDON, S.W.—Practice £480 p.a. in suburban district. Small but genteel House (3 bedrooms) on main road. Rent £70 p.a. Premium £500.

23 S. OF ENGLAND.—Practice £1,045 p.a., in flourishing and attractive town within 50 miles of London. Last year £900. House (6 bedrooms) with half an acre garden. Premium 3½ years' purchase.

24 LONDON, W.—Practice £500 p.a. in suburban district. Detached fully-fronted House (6 bedrooms) with small garden. Premium 3 years' purchase.

25 W. OF ENGLAND.—Partnership in old established Practice of £1,100 p.a. in first-class Town. Last year £1,170. House (4 bedrooms) and Surgery with £50 p.a. at 2 years' purchase.

26 MIDLANDS.—Steadily increasing Practice between £1,100–£1,200 p.a. in thriving town, one and a half hours from London. House (6 bedrooms) garage, and garden. Premium 3½ years.

27 LONDON, S.W.—Cash Practice about £1,100 p.a. over Year. Partnership £120 with [illegible] Share of Profits. Present Assistant £100.

28 LONDON, E.—Cash and Panel Practice of £640 p.a. in [illegible]. Last year £750. Small House to rent or [illegible] 3½ years' purchase.

29 ULSTER.—Partnership in Practice of £1,400 p.a. in [illegible] Town. Present Partner [illegible] Share with [illegible] Premium 2 years' purchase.

30 S. COAST.—Practice averaging £480 p.a. [illegible] Practice. Last year £400. [illegible] Share.

31 W. OF ENGLAND.—Partnership in Practice [illegible] £700 p.a. in [illegible] Town. Last [illegible] Share with [illegible] Premium [illegible].

32 MIDLANDS.—Practice over £1,000 to £1,710 p.a. in growing town with rare opportunity. House and [illegible]. Good [illegible] Premium 3½ years' purchase.

33 HOME COUNTIES.—Non-dispensing Practice averaging £1,100 p.a. in growing [illegible] with [illegible] Premium 3½ years' purchase.

34 MIDLANDS.—Practice £727 p.a. in clean [illegible] Premium [illegible] Share. Present Partner [illegible] Premium 3 years' purchase.

35 SHROPSHIRE.—Practice £800 p.a. in Market Town. Last [illegible] Share. Premium 2½ years' purchase.

36 S. WALES.—Mixed Practice in growing district. Receipts last year £850. House (3 bedrooms) garage and garden. Good [illegible] Premium £1,200.

37 N. OF ENGLAND.—Partner required in [illegible] Practice. [illegible] £400. Applicant must be [illegible] and [illegible]. Share with [illegible] Premium.

38 LONDON, N.W.—Non-dispensing Practice in good residential district. [illegible] No panel. Town [illegible] with garage and garden to rent. Premium £1,200.

39 N. MIDLANDS.—Partnership in Practice about £3,000 p.a. in one of the [illegible] Last year over £3,000. Small [illegible] (3 bedrooms) to rent. Certain [illegible] Share. Premium [illegible] 2 years' purchase.

40 S. WALES.—Increasing Practice of £900 p.a. in [illegible] Market Town. [illegible] Share. Present Partner [illegible] to Hospital. [illegible] Premium.

41 DURHAM.—Practice of over £700 p.a. in [illegible] Share with [illegible].

42 KENT.—Country Practice of over £800 p.a. [illegible] Practice.

43 HOME COUNTIES.—[illegible] Practice. [illegible] Share. [illegible] Premium.

44 KENT.—Country Practice [illegible].

All communications to be addressed to Mr. A. V. STOREY, General Manager.

BOVRIL MEDICAL AGENCY, Ltd.

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Accountancy and legal services furnished by the Agency where desired, at moderate inclusive charges
No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 BELGRAVIA DISTRICT—Good class non panel non dispensing PRACTICE worth over £1 400 p a Fee 1 to 2 guineas Very little mid wifery Attractive house in excellent position (2 reception 4 bed rooms 3 bathrooms etc.) on lease rent £250 p a Premium £2 600 to include lease carpets curtains fittings and fixtures Good introduction given

2 ESSEX—COAST TOWN—Very old established non panel (but good scope for this if wished) middle class PRACTICE averaging £1 156 p a Visits 5/ to 10/6 medicine extra Very little mid wifery Expenses light Detached house with 2 reception 3 bed rooms bathroom etc Garden Rent £100 p a on lease Premium 1½ years purchase

3 EASTERN COUNTIES—(Within one mile of the sea)—Very old established and increasing country PRACTICE situated in pleasant o n district Cash receipts for the three years ending March 31st last average £1 820 last year £1 940 including appts (transfer all) and panel producing about £750 Visits 5/ upwards Mid wifery 2 to 7 gns Nearest opposition 5½ miles Very good hou e (6 bedrooms bathroom with h and c etc) built by Vendor and standing in 1½ acres of ground tennis court orchard garage Price for freehold £2 700 part on mortgage Premium £2 750

4 WITHIN 45 MILES OF LONDON—PARTNERSHIP—A *half share* is offered in a very old established country Practice situated in attractive district within reach of favourite town Average gross cash receipts for last three years over £2 600 Panel of 1 400 and appts worth about £240 Visits 3/6 to 10/6 with medicine extra Mid 2 to 5 gns About 50 cases yearly Modern house with 2 reception 4 bedrooms etc and professional rooms Electric light Good garage Garden of about half an acre Price for free hold £1 650 £1 100 on mortgage Sport of all kinds and very good schools within reach Premium 2 years purchase

5 YORKS—EAST [illegible] unopposed PRACTICE within reach of [illegible] town Cash receipts for last 12 months [illegible] 630 Fees 3/6 to 10/6 House contains 3 [illegible] and professional accom modation Garage One acre of garden Price for freehold £900 part on mortgage Hunting shooting golf etc Premium £1 175

6 SOUTH COAST TOWN—Chiefly middle class non panel PRACTICE averaging over £500 p a but offering cope for increase Fees 2/6 to 10/ Eight roomed house with kitchen etc and profe sional rooms Can be rented or purchased Premium £600 Vendor retiring

7 SOU [illegible] COAST TOWN—PARTNERSHIP —A succession eventually) is offered in [illegible] el and non-dispensing Practice established many years Average gross cash receipts over £3 500 Fees 10/6 to 21/ Suitable house can be obtained Sport of all kinds and first class social and educational facilities Premium for share £3 000 Ingoing Partner must be experienced in good class work and interested in Medicine

8 [illegible] ry PRACTICE in very attractive district for last year over £900 including panel worth £53 Fees 2/6 to 10/6 Suitable house in very good repair with 2 reception 4 bedrooms etc Large garden with paddock etc Very good sport Price for Prac t e and House £2 200

9 WITHIN THREE MILES OF CHARING CROSS—Well established middle and working class PRACTICE offering good scope Gross c h receipts average approximately £2 000 p a Panel of over 1 200 Fees from 1/6 Visits 2/6 Suitable accommodation avail able Premium £3 500

10 SOUTH WEST OF ENGLAND—COAST TOWN—Old-establi hed middle and working cla s PRACTICE producing about £500 p a Panel of 550 Fees from 3/6 No midwifery Eight roomed hou e can be rented at £90 p a Premium £300

11 LONDON NORTH WEST—Very desirable old established non panel and non dispensing PRACTICE situated in a pleasant open resi dential suburb Cash receipts average nearly £2 400 p a Good house available Freehold for sale Premium 2 years purchase with good introduction

12 PARTNERSHIP—EASTERN COUNTIES—A third Partner is required in a good mixed cla s Practice situated in very pleasant market town within reach of the sea The share offered at first will produce about £1 000 p a with increase eventually up to one half Practice is old-established and producing about £4 500 p a Panel of 1 600 Choice of houses or ingoing Partner could reside in rooms Pre mium 2 years purchase

13 SOUTH WEST OF [illegible] —A one third share is offere l in a good [illegible] actice situated in an attra tive country [illegible] Ho pital of 50 beds and good Surgical scope Average gro s cash receipts over £3 000 p a S lected panel of 570 Fees 4/ to 21/ Choice of house Premium 2 years purchase

14 YORKSHIRE—PROSPEROUS TOWN—PARTNERSHIP—A one third share (with increa e later) is offered in a good middle-cla s non panel Practice averaging £3 300 p a Fees 3/ to 2 gns Nice house with 2 reception 4 bedrooms etc Small garden Electric light Garage Price for leasehold £1 200 £800 on mort ge Good sport and excellent schools Very good Surgical prosp cts Premium for share £2 000

15 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA—PARTNERSHIP—A fourth share is offered owing to the retirement of one of four partners in an old established Practice in very pleasant country district Income £5 400 p a with good panel backing Detached house with ample accommodation garden etc for sale Premium 2 years purchase

16 WITHIN 70 MILES NORTH OF LONDON—COUNTY TOWN—PARTNERSHIP—A one third or two fifths share is offered in a well established middle and working class Practice having very good scope for increase Receipts average over £2 000 p a Panel of nearly 2 000 Fees 2/6 to 7/6 Choice of houses on rental or purchase Premium 2 years purchase

17 LONDON NORTH WEST — Old-establi hed mainly better-class non panel and non dispensing PRACTICE averaging about £1 100 p a Fees 7/6 to 21/ Only few cases of midwifery at 10 gns Corner house with 3 reception 6 bedrooms etc Electric light Garden Garage Rent on lease £150 p a Premium £1 250

18 LONDON NORTH—Middle class PRACTICE producing about £1 000 p a including panel of 660 Fees from 2/ upwards Very little midwifery Seven roomed house with professional accommodation Price £1 500 or could be rented Premium £1 500

19 MANCHESTER—Middle and better-cla s PRACTICE in residential district Average gross cash receipts for past three years £1 270 including panel of 1 170 Convenient house can be purchased for £1 000 £600 on mortgage Premium 1½ years purchase

20 EASTERN COUNTIES — COUNTY TOWN — Very well-established chiefly better class non panel PRACTICE in favourite town Average gross cash receipts for last three years £3 201 last year £3 309 No appointments Fees 5/ to 21/ Only about 20 cases of mid wifery from 5 to 25 gns Very nice house with 2 reception 6 bed rooms dressing room etc and professional rooms Price for free hold £2 000 half on mortgage Premium £5 000 Hospital of over 200 beds and good surgical scope if desired Ill health sole reason for sale

21 LINCS [illegible] —[illegible] on third share is offered [illegible] averaging approxi mately [illegible] /6 Suitable house with 2 [illegible] waiting room Rent on long [illegible] lude book d bts etc

22 MANCHESTER—Old established PRACTICE averaging £640 p a Panel of 154 Offers good scope Fees 3/6 to 10/6 Midwifery 3 to 7 gns House contains 4 reception 5 bedrooms bathroom etc Rent on lease £70 p a Premium for immediate sale £450

23 SOUTH WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP —A share producing about £1 000 p a with further increase later is offered in an old established non panel and non-dispensing Practice having large scope for development Fees from 3/6 to 21/ Mid wifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be experienced and hold M D London

24 SOUTH OF ENGLAND—FAVOURITE COAST TOWN—Old-establishe [illegible] ne about £1 800 p a Small chiefly better class [illegible] h midwifery Good s lected panel Fee [illegible] Freehold for sale house with ample Premium £3 000

25 NORTH MIDLAND CITY — PARTNERSHIP—Two Partners are re quired to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No visits and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

26 PARTNERSHIP — WEST OF ENGLAND — A share producing at [illegible] £700 p a is offered in a well established Practice averaging over £1 500 p a Ultimate succession later Panel of nearly 1 400 Choice of houses Premium £1 400

27 MIDLANDS—PARTNERSHIP—A one third share is offered in the [illegible] sound middle and working class Practice held by the [illegible] for 35 years Average gross cash receipts for the past three years nearly £3 000 Panel of over 1,600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable hou available on rental with 2 reception 3 bedrooms etc Small garden Garage Sport of all kind and very good schools within reach Prem 2 years purchase

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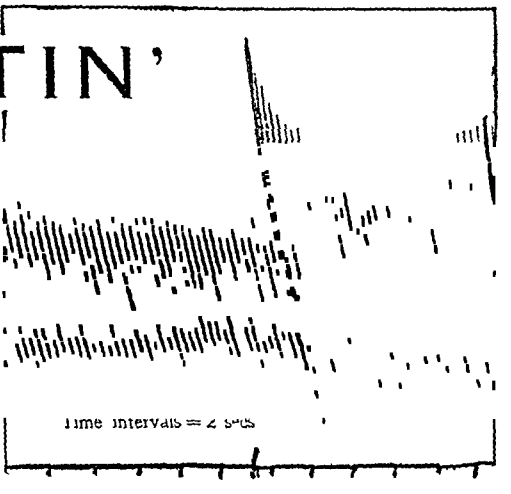
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CONTENTS

MAY 28, 1932

ORIGINAL ARTICLES

The Diagnosis and Treatment of Carcinoma of the Colon By Sir Charles Gordon Watson F R C S 969

Notes on 1 500 Cases of Asthma By James Adam M D 973

The Occurrence of Polycythaemia and the Value of Liver Therapy in Asthma. By H H Moll M D M R C P (With Charts) 976

The Mean Temperature in Non Febrile Hospital Patients By D M Lyon M D F R C I Ed and H L Wallace M B F R C P Ed (With Chart) 980

Carcinomatous Gastro Colic Fistula Simulating Enteric Fever By J G Starkey Smith M D 982

MEMORANDA

Ethmoidal and Frontal Sinusitis By Donald A P Macalister F R C S 985

Perineal Injury Two Unusual Cases By G H Stell F R C S 985

REPORTS OF SOCIETIES

Royal Society of Medicine
The Teaching of Obstetrics 984
Induced Malignant Tertian Malaria 987

Ophthalmological Society of the United Kingdom Senile Cataract 988

Royal Society of Tropical Medicine and Hygiene
Relapsing Fever on the Gold Coast 989

Royal Academy of Medicine in Ireland Pancreatic Sarcoma 989

REVIEWS

Operative Oto-Rhino-Laryngology 990
Dietetics for the Surgical Case 990
Mental Deficiency Practice 990
The Iris in Vertebrates 991
Hæmorrhoids and Anal Pruritus 991
Notes on Books 992

OBITUARY

Andrew Ellis Wynter M D 1012
The Late Dr C C Walker 1013
Alfred Herbert Marsh L S A 1013
W Howard Blackburn M B 1013
Evan Herring Hare F R C S 1013

UNIVERSITIES AND COLLEGES

LEADING ARTICLES

Oleothorax 993

The Problem of Schizophrenia 994

THE WEEK

The Centenary Dinner 994
Polluted Rivers 994
995
996
996
997
997

GENERAL ARTICLES AND NEWS

The Hughlings Jackson Medal Presentation to Sir Charles Sherrington 1000

Medical Problems of Contraception Conference in London 999

British Health Resorts Association First Spa Conference 1001

Medical Education in Hungary 998

Medical Notes in Parliament
Children's Bill 1014
Sanitary Condition of British Ships 1014

Medical News 1015

LOCAL NEWS

Ireland—
1003
1003
1003
1003
1003

England and Wales—

THE SERVICES

Royal Army Medical College 1014
Territorial Army Medical Officers' Association 1014

(For Naval Military and Air Force Appointments see Supplement)

LETTERS AND ANSWERS

Inhaling Tobacco Smoke 1016
1016
C
1016
1016
Medical Golf 1016
Return of Testimonials 1016

CORRESPONDENCE

Conference on Radium By H S Souttar F R C S 1005
Cancer Research and Treatment 1005
The Origin of Tumour By J P Lockhart Mummery F R C S 1005
Post Operative X Rays in Breast Cancer By J H Douglas Webster M D and N S Finzi M B 1006
Lactic Acid in the Gastric Contents By F Izod Bennett M D 1006
Intravenous Liver Therapy By H A Mitchell M D 1007
Diet and Dental Caries By Evelyn
007
008
Gibb M D 1008
Sacro-Iliac Displacement By Norman Capener F R C S 1009
Local Anæsthesia for Tonsillectomy By Michael Vlasto F R C S 1009
The Use of the Self By A Murdoch M B 1009
Preparation for Marriage By Leonard P Lockhart M D 1010
Cobalt in Hæmatopoiesis By H Sheridan Baketel M D 1010
Aluminium and Health By Leo Spira M D 1010
Breech Delivery By J Shirley Cullcutt M B 1011
The Student in Irons By Harold H Sanguinetti M D 1011
A Gentle Protest By H E MacDermott M D 1011
The Sacrum By A G Timbrell Fisher F R C S 1012
Coca Addiction a Century and More Ago By F J Allen M D 1012

Vacancies 1016

(See also page 263 of Supplement)

The SUPPLEMENT contains

General Medical Council President's Address

Conference on Medical Patents.

Insurance Acts Committee Proceedings at May Meeting

The Hospital Policy

A Medical Officer's Salary

National Ophthalmic Treatment Board Addition to Eye Service Centres

Association Notice Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated.

PUBLISHERS

Churchill J & A
Beaumont & Dodds—Medicine
Bourne A W Ob tetri etc
Bray G W —Allergy
Cameron, A T —Biochemistry
Oakvie W H —Surgery
Lewis H K & Co Ltd
Clinical Journal 4
Elliot T H —
Couching for Cataract 4
Glaucoma 4
Scott G L —Morphine Habit 33
Mallinson Publishing Co Ltd
Coles K A —Income Tax etc 4
Oxford Medical Publications
Elliot R H —
Care of Eye Cases 4
Treatise on Glaucoma 4
Tropical Ophthalmology 4

ASSURANCE COMPANIES—
Century Insurance Co Ltd 1
Medical Insurance Agency 7

BRASS NAME PLATES &c —
Cockes Nam Plates 31
Herbert J & A —Name Plates 1
Lewis & Co Ltd —Name Plate 31
Osborne F & Co —Name Plates 31

DEBT COLLECTION—
British Medical Protection Society 4

FOOD PREPARATIONS—
17
over
15
Co
20
Trufood Ltd —Humanized Trufood 10
Valentine's Meat Juice 36

SURGICAL APPLIANCES—
Allen & Hanburys Ltd —
London Hospital Catgut 25
Becker-dorf Ltd —Leukoplast 1
Curtis & Son—Support 6
Fleming & Co —Surgical Equipment 32
Hamblin, T Ltd —
32
31
32
6
39
11
8
ri
32

HOSPITAL &c FURNITURE—
Bailey W H & Son—
Operation Table 31
Staples Mates 29

MOTOR CARS TYRES &c —
Leeds Sparkins Plug 4
Second-Land Motor for Sale 43

CHEMISTS &c —
ri
16
10
Anglo-French Drug Co Ltd —
Elixir Bromo-Valerianate 23
Bayer Products Ltd —Elixyran 21
Boot Products 11 13
British Drug Houses Ltd —
Caprokol 13
Ephedrine B D H 15
Burroughs Wellcome & Co —
Infundin 47
Carnrick C W Co —
Hormotone Cover ir
Continental Lab Ltd —
Lactobyl 17
Cranbury Ltd —Oriol 23
2
18
37
12
10
18
13
May & Baker, Ltd —
Theocardional 16
Middleys Ltd —Medicinal Therapy 14
Mond Stafford Inre Refining Co —
Monsol 17
11
2
10
19
Sharp & Dohme Ltd —
Caprokol 1
Wander A Ltd —Ovaltine 14
Wyleys Ltd —Naphthin 11

PRINTING & STATIONERY—
Anderson & Son—Account Forms 48
Barlock Co —Barlet Typewriters 48
Taylor's Typewriters 32

TAILORING & UNDERCLOTHING—
Hall H —Medical Service Dress 48
Irish Linen Mesh Co Ltd —
Linen Mesh Underwear 3

TOBACCO & CIGARETTES—
Players's No 3 30

TRANSLATIONS TYPEWRITING—
Radford B —Typewriting etc 47

VACCINES & CULTURE MEDIA—
Allen & Hanburys Ltd —
Vaccines 26

WINES & SPIRITS—
Bollinger's Champagne 4

X RAY & ELECTRO MEDICAL APPARATUS—
9
5
Physical Therapy 30

BATHS SPAS &c —
39
39
9
6
38
Llandrindod Wells 36

HOTELS & HEALTH RESORTS—
Clifton Hotel 36
Margate 38
Pembridge Court Hotel 36
St Austell Bay Hotel 38
Wildbad 38

HYDROS & PRIVATE HOSPITALS—
Bournemouth Hydro 38
39
39
39

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 4

HOSPITAL &c VACANCIES—
49

St Thomas's Hospital 43
Salford City 44
43
48
51
44
43
49
44
44
49
41
41
49
41
43
49
50
45
49
49

INEBRIETY—
Bay Mount Paignton 33
33
33
Rendlesham Hall, Woodbridge 33

SCHOOLS &c —
Coltman's Hone School, Warford 39
Paton—School for Boys & Girls 39
St Bees School Cumberland 9

HOMES & ASYLUMS—
Barnwood House Gloucester 34

MEDICAL SCHOOLS &c —
City of London Maternity Hospital 43
College of Preceptors 49
1
1
1

SANATORIA—
Lenzie Hydro Sanatorium 1
Torrs Hey Sanatorium 37
Victoria Sanatorium 33

TUTORS & LECTURERS—
49
41
41
53
41

TRANSFER AGENTS—
Bovril Medical Agency Ltd 55
British Medical Bureau 54
Lee & Martin Ltd 51
Manchester Medical & School Agency 0
Prescot & Hadley Ltd 1
The Medical Agency 1
Turner L Ltd 46 59
Western Medical Agency Bristol 51

ASSISTANTS PRACTICES &c —
Assistancies Wanted and Vacant 46
46 47
46
46
47

NURSING INSTITUTES—
Cavendish Nurses 0
New Mental Nurses Co-Operation 0
Nurses Association 59

MISCELLANEOUS—
Consulting Room &c to Let 47
Income Tax Consultant—Hardy 43
Medical Defence Union 1
Miscellaneous Sales etc 43

It must be understood that the acceptance by the British Medical Association of an Advertisement does not imply a recommendation and that no responsibility is accepted with regard to the accuracy of the statements therein contained.

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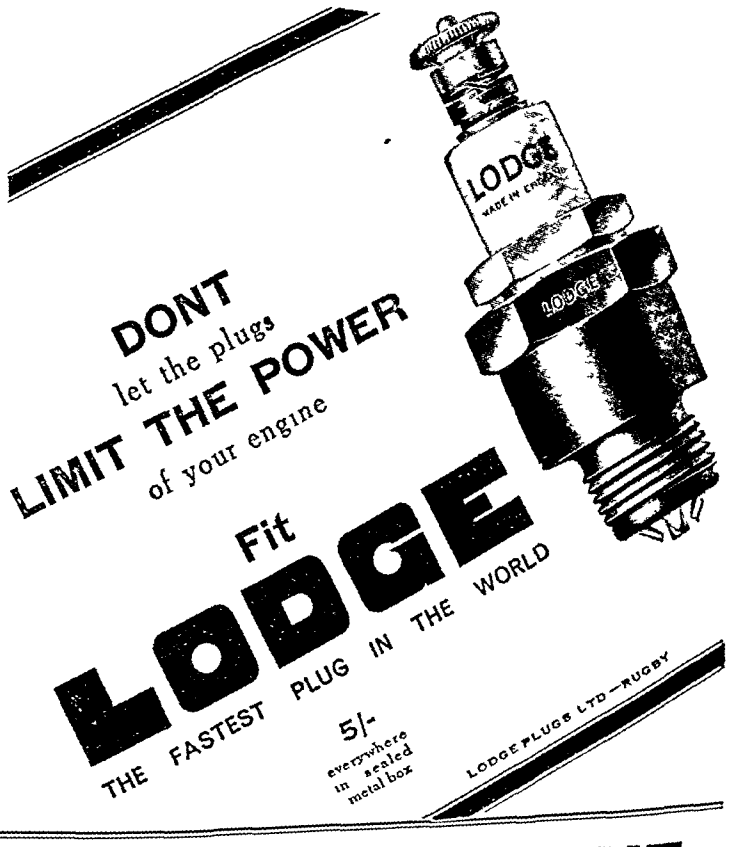
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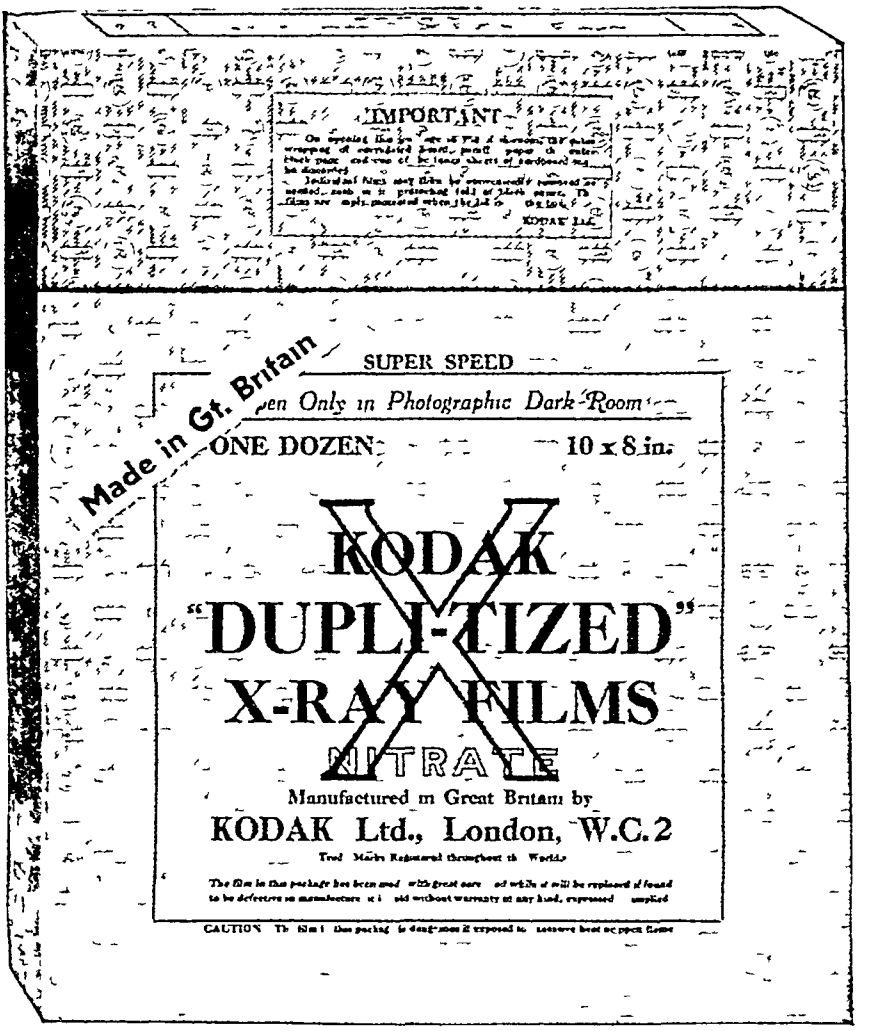
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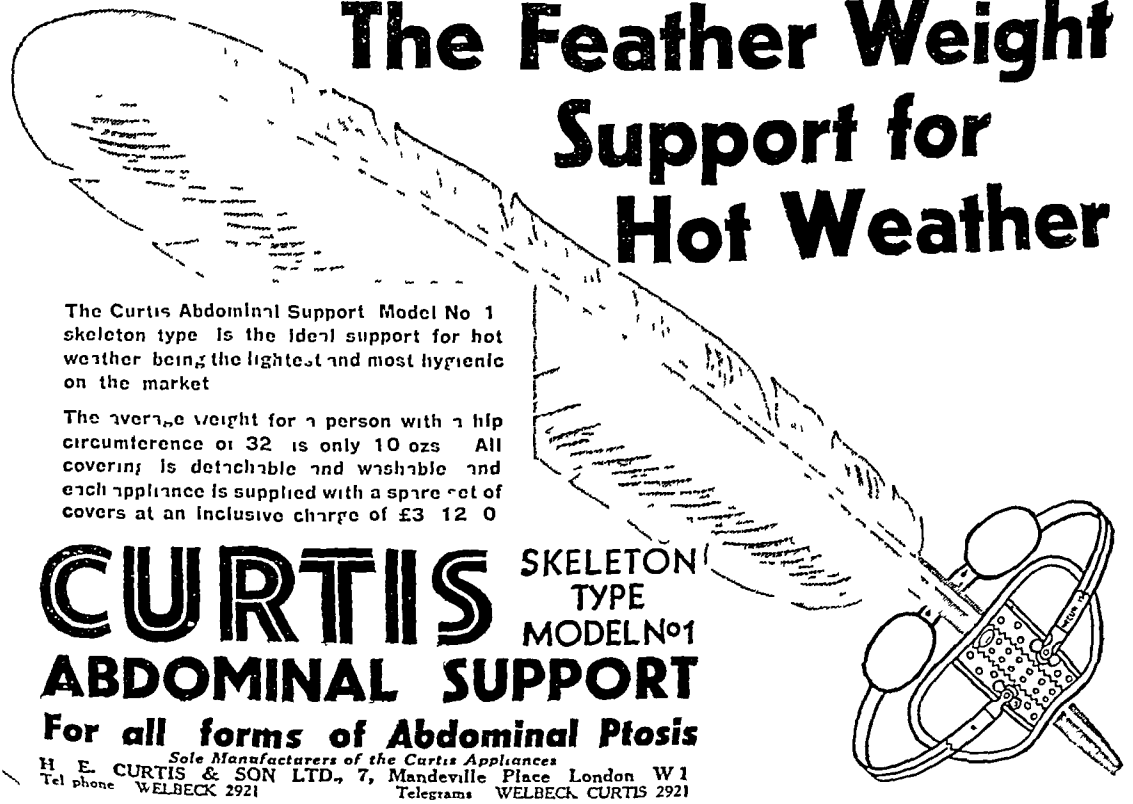
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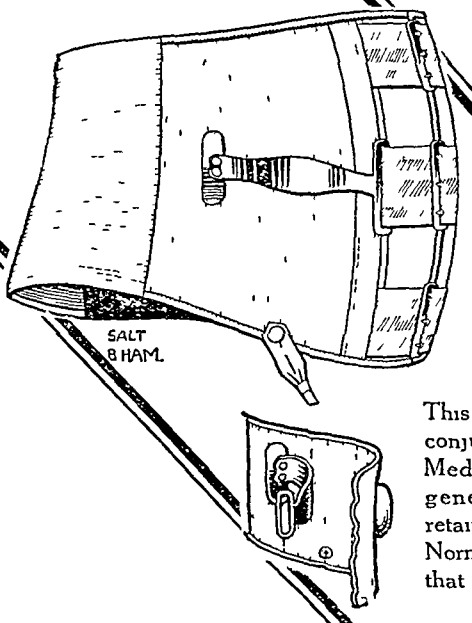
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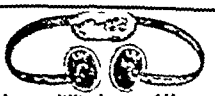
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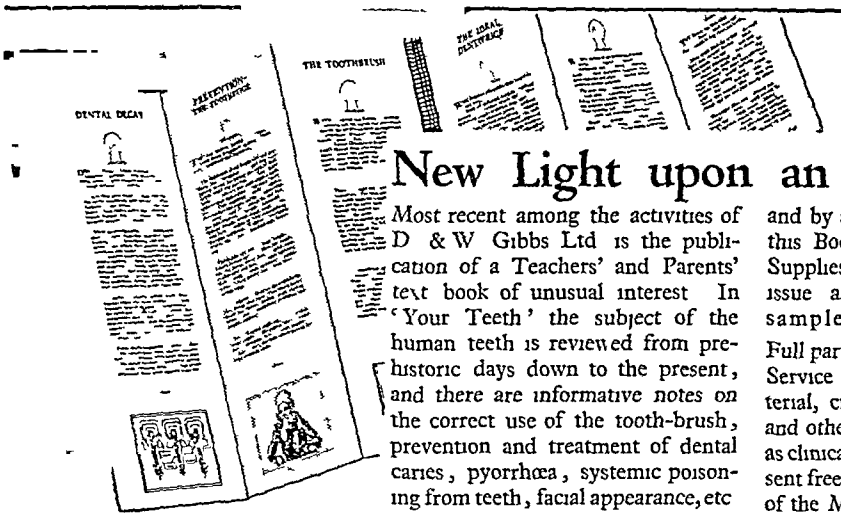
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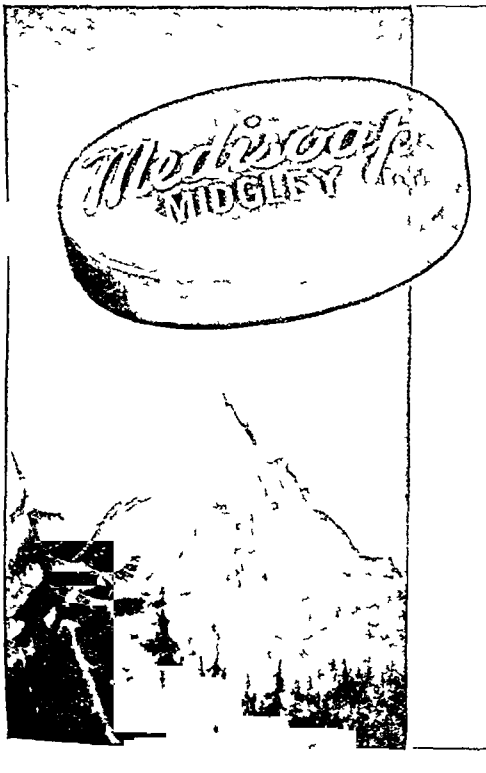
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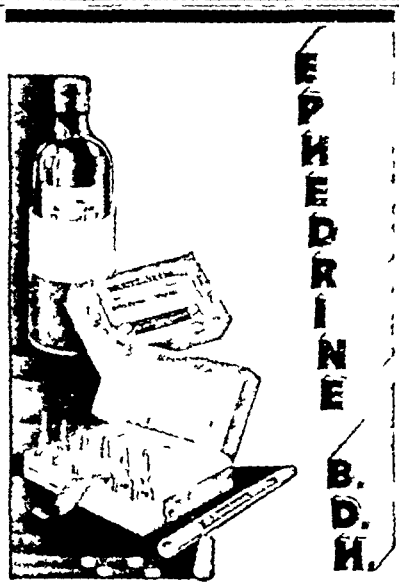


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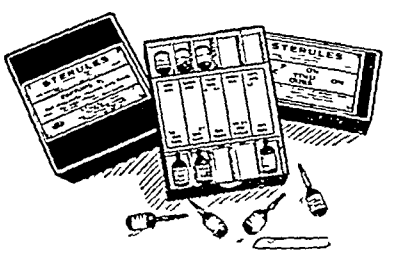
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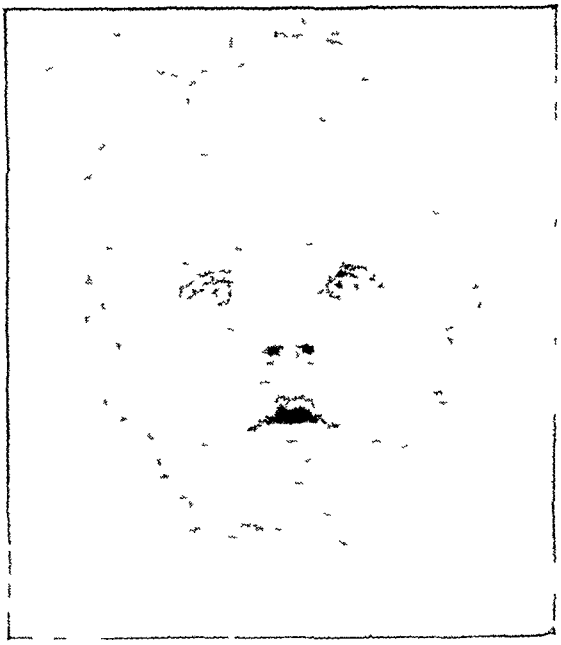
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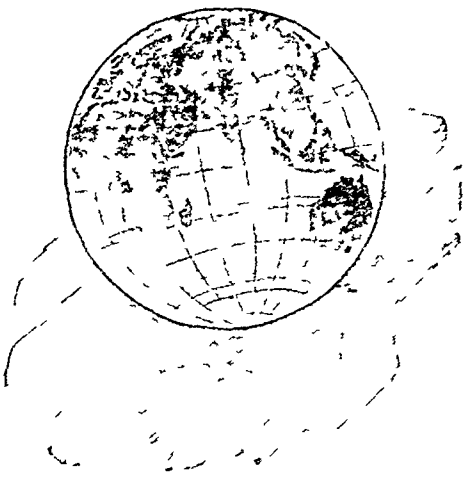
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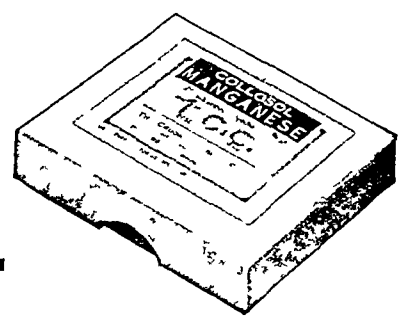
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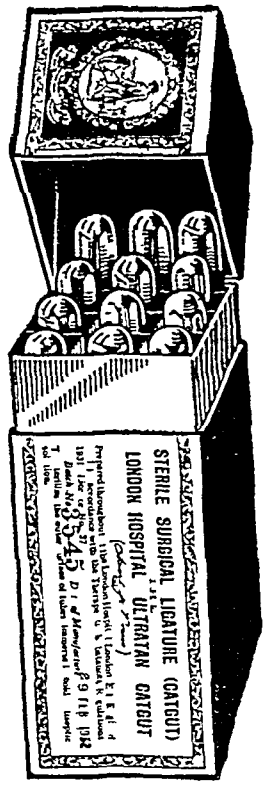
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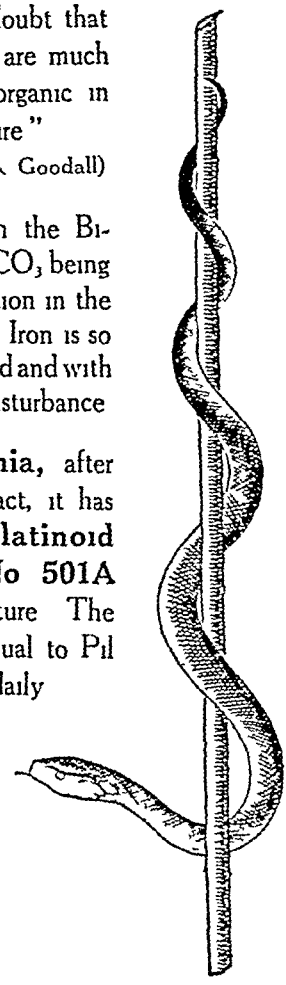
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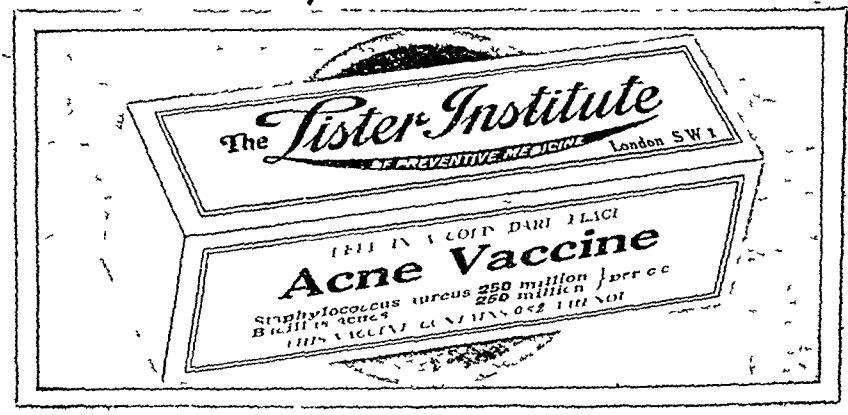
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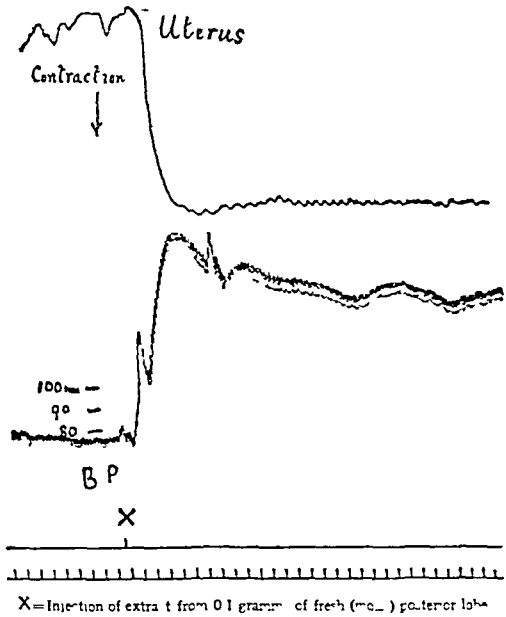
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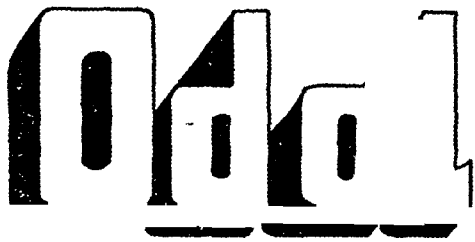
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In early Christian times and throughout the Middle Ages dissection of the human body was regarded with abhorrence as a sin against the *doctrine of resurrection* operations which involved the shedding of blood were also forbidden In these circumstances surgery was looked upon as a contemptible art and the actual process of dissection when it was undertaken, was carried out by a menial layman A step towards progress was made when Mondino instituted the practice of dissection at Bologna University and carried out the dissections with his own hand The illustration here reproduced shows a human dissection in progress, but it is still the lowly demonstrator who is carrying out the operation *guided by the staff of the Osteor or* The tutor-physician in his robes sits high above the proceedings in his professorial chair giving his lecture to the students who stand round the table

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A Paper
ON
THE DIAGNOSIS AND TREATMENT OF CARCINOMA OF THE COLON*
BY

SIR CHARLES GORDON WATSON K.B.E. F.R.C.S.
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL CONSULTING SURGEON TO ST. MARK'S HOSPITAL FOR DISEASES OF THE RECTUM

In the stomach and large intestine we meet only too frequently with the same type of malignant disease whereas in the small intestine carcinoma is rare. The explanation may be that the stomach and large gut are constantly dealing with solid matter which moves on slowly and the small gut mainly with fluids quickly passing on. The surface epithelium of the stomach and colon must undergo more active reproduction and be more subject to irritation and mechanical injury than that of the small intestine.

Superficial tumours of the external and internal body covering (that is skin and mucosa) are derived from alterations of the surface epithelium. We know that certain chemical substances are the exciting cause of certain skin cancers and we may perhaps assume that in the stomach and colon repeated irritation by the contents of the alimentary tract at some weak spot (for example a gastric ulcer) excites a higher activity in reproduction of the epithelium a disturbance or irregularity in its reproduction and diminished differentiation so that the cells grow abnormally and given some stimulus as yet unknown grow independently and form tumours.

If we can accept the theory that mutation in the chromosomes of somatic cells is the causal factor in independent cell growth—that is malignancy—we must I think on the analogy of germ cell mutations regard heredity as playing a big part in the independent growth of those particular cells which have been started on their downward path is the result of chronic irritation either by a specific or a non-specific irritant. The hereditary factor in carcinoma of the colon and rectum is very strong and it is common to find cancer of the colon and rectum affecting several members of the same family.

The alimentary canal is developed from the fore mid and hind guts. The fore gut receives and prepares the food for digestion and absorption by the mid gut which extends from the jejunum to about the middle of the transverse colon and in doing so is engaged in active mechanical work on solid material causing wear and tear of its epithelium and consequently active reproduction. The small intestine portion of the mid gut takes up and absorbs the solids and the large intestine portion absorbs the fluids. Hunger is appeased by the small bowel and thirst by the large. It is essential for the contents of the small bowel to be fluid to suspend the solid particles which are to be absorbed by the valvulae conniventes. By the time the fluid reaches the caecum the only solid material remaining is waste. The hind gut which extends from the middle of the transverse colon to the rectum stores and then excretes the waste products of digestion. This portion like the stomach is actively engaged with solid material and its epithelium must be subject to considerable wear and tear.

EARLY DIAGNOSIS

Early diagnosis is often difficult. Usually the first symptom noted by the patient is some disturbance in the regularity of the action of the bowels a certain capriciousness in their action which has replaced a former cast-iron regularity. Associated with this sometimes there is a reflex pyloric spasm causing gastric distension which often misleads both patient and doctor.

When a patient who has passed the meridian of life complains that he no longer enjoys that clockwork regularity with his bowels that has been his privilege and joy through life it behoves you as his medical man to take something more than passing notice. It may well be that some indiscretion in diet or a disturbance in the normal routine of life has caused a temporary irregularity which is soon corrected. On the other hand careful inquiries may elicit no obvious explanation for this rather sudden capricious behaviour of his bowels. In some instances the explanation is that the normal peristalsis of the colon has been disturbed by an outgrowth into the lumen of the bowel. Unfortunately it sometimes happens that the danger signal is not fully appreciated and the bowels may after a period of irregularity adjust themselves to altered circumstances and again become reasonably regular for a time or sufficiently so to allay suspicions. Then perhaps a little later irregularity returns and becomes more persistent or a sudden attack of subacute obstruction occurs.

A history such as this demands a careful abdominal examination. Many growths of the caecum transverse colon and iliac and pelvic colons are palpable more especially if there is faecal accumulation behind them. A lump in the pelvic colon undetected on abdominal examination is often discovered on bimanual examination or by the sigmoidoscope.

Growths in Proximal Colon.—If a growth arises in the caecum or ascending colon or the proximal transverse colon the bowel wall is irritated and peristalsis is increased. The fluid contents of this portion of the gut are pushed on hurriedly into the distal colon so that diarrhoea results. Later when narrowing of the bowel commences peristalsis becomes exaggerated and diarrhoea increases. In these circumstances sooner or later some bleeding due to congestion usually occurs which can be detected in the stools either by the naked eye or by tests for occult blood. Sometimes the amount of blood lost daily over a long period gives rise to obvious and perhaps severe anaemia and this loss may be unrecognized because it is small in amount at any one time and does not attract attention in dark-coloured faeces. An excess of mucus when present described by the patient as slime is more likely to be noticed.

Pain in the early stages is rarely complained of but a sense of discomfort of erratic and uneasy movements of the bowel—sometimes with gripings and often with borborygmi—develops as the growth encroaches on the lumen. Frequently the patient is able to localize the seat of trouble from a sensation of wind being held up at a certain spot followed by the gurgling of borborygmi which usually signals relief. In these cases visible peristalsis can sometimes be excited by gentle massage of the abdomen though this is usually a late sign.

Growths in Distal Colon.—A growth in the hind gut or distal half of the colon unlike the proximal does not usually excite diarrhoea until ulceration has occurred but rather tends to delay the passage of faeces and to cause constipation. As the growth advances and begins to constrict the lumen so it tends to produce obstruction more readily than in the proximal colon where the contents are fluid.

Tumours of the colon often grow to a considerable size without giving rise to noticeable symptoms and so escape detection. Fortunately growths in the caecum and transverse and pelvic colons are often palpable and when a growth is causing faecal delay accumulation of faeces above the growth gives rise to a palpable tumour especially in the pelvic colon. For the most part colon

*Read before the Guildford Division of the British Medical Association April 19.

growths are low in grade of malignancy which applies especially to the hypertrophic types and, unlike growths of the stomach are slow in giving rise to metastases To this the colloid growths are an exception Fortunately too the lymphatic and blood supplies correspond a fact which enables the glands and lymphatics to be removed with the wedge of mesentery corresponding to the resected area

Speaking generally carcinomas of the colon unlike carcinomas of the rectum rarely attack the young In a series of seventy five cases I have met with only two in persons under 30

More than half the growths involve the pelvic colon and in a considerable number of these the diagnosis can be made with the sigmoidoscope Many growths of the lower end of the pelvic colon are treated as rectal growths by radical excision or by colostomy alone and appear in statistics as rectal carcinomas

While a probable diagnosis can frequently be made on clinical symptoms and sometimes confirmed by palpation an absolute diagnosis is more often obtained by x rays *X* rays may be misleading and certain fallacies must be borne in mind (*a*) faeces or gas in the bowel, or air in the enema may give an apparent filling defect (*b*) delay at the recto sigmoidal junction or at the junction of the pelvic and descending colons may be non pathological (*c*) spasticity may occasionally simulate the filling defect due to a tumour especially in the distal half in such instances a further examination is made after injecting atropine to relieve spasm

The barium meal and the barium enema both have their values A meal requires repeated observation to visualize a filling defect whereas an enema visualizes the contour of the colon throughout or up to the point of obstruction at one inspection in a much shorter time The enema by expanding the colon beyond the normal emphasizes any irregularity in contour A limited stenosis which permits a meal to pass without check may show a complete block when an enema given rapidly in the reverse direction excites spasm Apart from a filling defect dilatation above this point is often noted with an enema especially in the cæcum when the growth is in the proximal half Growths in the pelvic colon hepatic or splenic flexures may not be visible in an anterior view owing to overlap and only recognized in an oblique picture

An ordinary radiogram of the abdomen without the use of barium may be quite useful in showing distension of some portion of the colon with gas This is sometimes of great value in assisting diagnosis in cases of acute obstruction if the patient is not too ill to be examined In such circumstances an obstruction—for example in the pelvic colon—may come out quite clearly The colon above the obstruction can often be demonstrated as obviously distended if the rectum is then inflated with air a shaded interval representing the obstructing growth may be obvious between the two distended areas A radiographic examination of this nature can be carried out quickly and may serve to differentiate between small and large gut obstruction

Pathology in Relation to Treatment

The behaviour of a growth in the colon depends not only on the histological character but also on the soil There is no doubt that the family history in these cases is important Time will not permit me to discuss the relation between adenomata and adenocarcinomata in the colon but there is good evidence to show that adeno carcinoma frequently develops in an adenoma We know too that multiple adenomatosis of the colon runs in families and that sooner or later the victims of this disease will develop one or more carcinomata and that these families tend to die out [1]

It is a noticeable feature of colon growths that the large proliferative type tends to be less malignant and less prone to invade the glands than the small scirrhous type which ulcerates early and is inclined to invade the glands in the mesentery which like the primary growths are hard and small when involved Consequently, large growths with adhesions and without metastases should not be regarded unfavourably but looked upon as evidence of good resistance Prognosis must be considered good in this type of case if a satisfactory radical operation can be performed In some instances large soft glands are encountered in the proliferating or encephaloid type of growth and it is important to note that these often prove to be inflammatory

When however an adenocarcinoma shows evidence of colloid degeneration the prospects of cure are greatly diminished In colloid cases growth is more rapid the peritoneum is invaded early and free fluid quickly forms Metastasis spreads widely in the glands which grow to a large size and develop colloid change If a growth is recognized as colloid in type less risk to life should be taken when considering the advisability of radical treatment because prognosis is not good even with ideal surgical procedures

Treatment

It is probable that there are few situations in the body where radical operation for carcinoma offers such promising results especially in early cases A wide resection and anastomosis is as a rule not difficult The lymphatics run with the vessels and converge on the apex of the resected mesentery Lymphatic spread is usually slow and if colloid cases are excepted the grade of malignancy of adenocarcinoma of the colon is low This is especially true of the hypertrophic type

While it is true that in cases favourable for radical surgery the prognosis is good meticulous care is required for radical surgery to be successful The blood supply of the colon is not so good as that of the stomach the contents of the colon are dangerously infective to the peritoneum and gas distension after resection may be disastrous if there is no safety valve Risks are far greater than in cases of gastric resection and statistics from all sources show that the operative mortality rate for re sections is high whereas the ratio of recurrence is low in comparison with gastric resections In radical surgery for cancer of the colon and rectum a high operability rate gives a high mortality rate and vice versa If radical surgery is reserved for the freely mobile case both the operative mortality rate and the ratio of recurrence will be low and in estimating the value of statistics in these cases we ought to know the percentage treated by radical measures to those treated by palliative measures This is true for surgery of the rectum as well as for the colon There can be no doubt that many cases of carcinoma of the colon which are adherent to the parietes or to other viscera can be mobilized and resected with good end results in a percentage of cases a percentage which is necessarily lower than in freely mobile cases

Preliminary Drainage in Obstructed Cases

It must be laid down as an axiom that preliminary drainage reduces the mortality of radical surgery to about half and that in the absence of preliminary drainage measures must be adopted at the time of resection to prevent post operative distension and to avoid leakage at the anastomotic line if distension occurs by means of a safety valve which will allow the escape of gas and fluid

It is universally agreed that resection and anastomo is should never be performed in the presence of acute or

subacute obstruction and that a preliminary caecostomy is usually the wise course to adopt Opinions differ as to the respective merits of a so called blind caecostomy (that is a caecostomy performed without exploration of the abdominal cavity and often under local anaesthesia) and an exploratory laparotomy to locate the seat of obstruction followed by a caecostomy or in some cases colostomy The main argument against a blind caecostomy is the possibility of a mistake in diagnosis The strongest argument in its favour is that the mortality of the operation in acute cases is considerably lower than it is for the exploratory method

When obstruction is subacute the case for blind caecostomy is not so strong In some of these a freely mobile growth can be safely marsupialized and the colon drained by the method of Paul or a variant of this though it is doubtful if the end results of cases treated by this type of operation can be compared with planned resections in the quiescent period It is seldom possible to remove the mesentery as freely as one would desire in a Paul's operation and the resulting anastomosis will not have that freedom in the abdominal cavity which is desirable and can often be secured by resection in the quiescent period

Preliminary Caecostomy in Obstructed Cases

This relieves obstruction whether acute subacute or threatened and allows free drainage of faecal contents It prevents recurrent distension with gas and so relieves pain and allows the muscular coats of the bowel to recover tone after distension It also relieves secondary infection following obstruction thus preventing ulceration behind a growth and the risk of perforation and permits irrigation of the colon behind the growth By thus relieving obstruction pain infection etc the general condition of the patient is enormously improved so that the chances of recovery from a severe resection operation later are *much more favourable*

In many instances of carcinoma of the colon such warnings as a medical man might recognize the patient may often ignore and a sudden acute obstruction may be the first symptom complained of When this happens it is often a blessing in disguise because it compels preliminary drainage The gradual onset of obstruction is less favourable because the bowel does not recover its normal tone and healthy content so readily when distension and the resultant toxaemia has become chronic

Radical Treatment in the Quiescent Period

In the absence of any active or threatened obstruction the question of preliminary drainage either by caecostomy or short circuit before resection has always to be considered Each case must be judged on its merits If the patient by virtue of age or infirmity is not regarded as a good operative risk safety first should be the guiding rule In cases of doubt when the growth is in the caecum ascending colon or hepatic flexure the risks of resection will be diminished by a preliminary ileo colostomy (transverse colon) If the growth is in the splenic region or descending colon a preliminary short circuit between transverse and sigmoid should be performed if a two stage operation is indicated

When the growth is in the transverse iliac or pelvic colon I prefer a one stage operation with proximal drainage at the time of resection and in resections of the pelvic colon aided by a long rectal tube passed through a stretched sphincter These short circuit operations though occupying less time than the combined resection anastomosis are not without risk and sometimes owing to adhesions which may follow hamper the surgeon in his subsequent resection It must not be forgotten that two operations mean two anaesthetics and a longer recumbent period with their attendant risks and disadvantages in elderly people It is difficult sometimes when carrying out a two stage resection to avoid leaving blind ends to the anastomosis which may act as stagnant reservoirs causing pain and discomfort I have twice operated for this condition and removed the superfluous ends

On the whole anastomosis followed by resection has more disadvantages than anastomosis and resection in one stage and should not be employed in cases regarded as good operative risks It seems probable that in the bad risks (we are not considering here cases with obstruction) preliminary drainage followed by a one stage resection anastomosis should be regarded as the operation of choice and there are those who feel that preliminary drainage should be the standard practice for all cases whether good or bad risks and none can quarrel with their view which is justified by statistics of operative mortality

I have however had so much success in the absence of any degree of obstruction with the one stage resection anastomosis and proximal drainage that I do not think I could get better results with preliminary drainage which however I never hesitate to employ when obstruction in any form exists or has previously been noted

I ought to refer to those cases involving the lower portion of the pelvic colon which are too low to permit of resection and anastomosis Some surgeons treat these by abdomino perineal resection I believe however that there is no justification for removing the rectum in these cases provided that it is possible to clamp and divide the pelvic colon below and some two inches (more if *possible) clear of the growth In these circumstances* the lower end is closed and the pelvic colon removed leaving a permanent colostomy This operation becomes necessary sometimes with a short fatty pelvic colon when the growth is high enough in the pelvic colon to permit of resection and yet when removed does not leave enough colon to allow an anastomosis without tension When there is much fat in the mesentery and in the appendices epiploicae an anastomosis is more difficult It is not so easy to secure accurate apposition and there is more risk of defective blood supply A live patient with a colostomy is better than one dead with a faulty anastomosis Generally speaking a lateral anastomosis is safer than end to end because suturing is easier and wider areas of peritoneum can be opposed to one another At the same time the opening can be made wide enough to allow for any subsequent contraction and wider than the normal diameter of the resected portion so that subsequent gaseous distension does not unduly stress the sutured area

In resections of the pelvic colon an end to end anastomosis is usually adopted as it is considered wise to remove as much colon above and below as is possible under the circumstances—that is consistent with an end to end anastomosis When this can be done while the cut ends are outside the peritoneal cavity the operation is easier and safer than when conducted within the abdomen Subsequent safety from leakage is helped considerably by the use of a large rectal tube passed through the sphincter (which has been previously stretched) and into the anastomotic area

Palliative Operations

In the absence of visceral metastasis and visceral metastasis is usually a late manifestation the majority of cases of cancer of the colon can be treated on radical lines if there is no obstruction or provided that obstruction has been relieved and provided also that the patient is a fit subject for the treatment proposed A colon growth which at first sight may appear hopeless by fixed can usually be mobilized with care to allow free resection though it may be necessary to remove a portion of another

viscus with it and the operation may be difficult and long

As already stated the higher the percentage of cases treated radically as against palliative treatment the higher is the operative mortality rate because it is inevitable that many of the more complicated cases must fail to survive heroic procedures Nevertheless the successful cases fully justify heroic attempts and many cases that at first look hopeless are permanently cured by bold surgery The position with regard to gastric carcinoma is quite different

When visceral metastasis or general dissemination of the peritoneum has occurred much may be done to give relief by a short circuit when this is possible It may sometimes be doubted whether a nodule felt in the liver which cannot be seen is a metastasis or not In such instances the patient should be given the benefit of the doubt It is certainly better to remove a growth which may cause much distress to the patient and leave a nodule in the liver which may ultimately cause the patient's death than to leave behind a growth which must ultimately kill the patient having mistaken an angioma *fibroma etc for a secondary deposit*

The Technique of Resection

It is an unfortunate thing that whereas the ultimate prognosis of radical surgery for malignant disease of the colon is so good in comparison with that of many other regions of the body the technical difficulties are such that many who could be cured if surgery was well and truly done fail to survive the operation So great are the risks of anastomotic leak either by infection spreading through the suture line or through inadequate blood supply or a combination of both that some surgeons deliberately avoid a one stage operation (even with preliminary drainage) and prefer a two stage method such as Paul devised

Devine of Melbourne has introduced a modification of Paul's method An enterotome shaped to encourage peritoneal adhesions along the line of the anastomotic opening about to be produced is employed at the time of marsupialization and the two divided ends after turning back a cuff of the peritoneal and muscular coats of the bowel are closed down over the enterotome except for the necessary drain In this way the final closure is accelerated and much time saved In this type of operation under favourable conditions as regards the amount of bowel available to be drawn outside I have found that a direct lateral anastomosis can sometimes be made at the first operation while the two cut ends are left open and fixed to the parietes after the growth has been resected The use of the enterotome is thus avoided but the operation takes longer and is not suitable for obstructed cases

The risks referred to above can only be countered by the most careful attention to detail Free exposure of the area to be dealt with is essential and except when operating on the transverse colon can best be secured by a long lateral oblique incision In the case of growths at the splenic angle which are often adherent to spleen stomach etc the best incision is along the distal half of the twelfth rib and extended forwards The distal half of the rib is resected and an admirable exposure then secured

The next important point is to protect the surrounding viscera from possible contamination To this end Pringle and others devised and adopted the so called aseptic method of end to end anastomosis which though it has definite advantages as regards contamination is not proof against risks of haemorrhage from the cut ends In one instance where I adopted this method in a non malignant case a serious haemorrhage into the bowel occurred De Martel has devised a special clamp which diminishes the risks of contamination during resection though the clamp is not very suitable for end to end anastomosis

I have a strong preference for the lateral anastomosis when possible To open the bowel I use the electric cautery which prevents haemorrhage at the time and assists the sutures in preventing reactionary haemorrhage later on The line of anastomosis is always protected by suturing appendices epiploicae or omental tags accurately round the junction A small safety valve (using a No 12 catheter) is made with the cautery proximal to and clear of the anastomosis and this is brought up to the wound after omentum has been sutured round it In pelvic colon resections a large rectal tube is substituted for the safety valve though sometimes both are employed As far as it is possible to do so such areas of the parietes as have been bared of peritoneum should be obliterated or covered by omentum and every bleeding point carefully secured Any collection of blood following operation adds to the risks of infection or adhesions later and any bare area to some adhesions which may give rise to complications later sometimes wrecking an otherwise *successful operation*

I need hardly add that adequate drainage to the site of anastomosis is essential It is also advisable to drain the abdominal wall the tissues of the abdominal wall are easily infected and secondary abscess is not uncommon

STATISTICS

I have taken ten years statistics—two periods of five years The year 1926 has been left out as only one case was operated on in that year All cases of pelvic colon growths have been included which were or might have been if operable treated by abdominal resection Cases with growths in the region of the recto sigmoidal junction treated by excision of the rectum or by colostomy though anatomically growths of the colon have been excluded Those cases recorded as obstructed are cases operated on for acute obstruction Several of these were desperate cases some with perforation of the caecum In three of them resections were performed at a later date after obstruction had been relieved In the remainder peritoneal or visceral metastasis prevented radical procedures Cases with subacute obstruction are not included under this heading

It is of some interest to compare the two five year periods It may be chance only that the percentage of acute cases dealt with is lower in the second period or it may be an indication of earlier diagnosis The improvement in the statistics for resected cases is noticeable This no doubt is partly due to increased experience and improvement in technique It may be noted that whereas in the first period there were two deaths attributed to shock there were none in the second The more frequent use of blood transfusion before and after operation combined with gas oxygen ether anaesthesia (and in some the use of avertin which reduces the ether to a minimum) has considerably reduced the risks of shock in severe operations

In these statistics all causes of death after operation and before the patient leaves the hospital are included under operation mortality One of the resected cases a man over 70 made an excellent surgical recovery and died rather suddenly from heart failure a week later Another patient who appeared to be going to recover died of pulmonary embolism on the eighth day Of the three deaths from peritonitis two were due either to defective blood supply or imperfect suturing of the anastomosis and the other to contamination as the anastomosis was intact In the case of death from ileus dilated stomach and peritonitis the anastomosis was sound

it was found at operation that the patient's colon had not been properly cleared out and there was a mass of faeces proximal to a growth in the splenic flexure It would have been much wiser to delay resection in this case until after drainage and irrigation of the colon

It is noticeable that there was only one death in the cases of palliative short circuit this being due to broncho pneumonia This favourable mortality rate in comparison with that of resection and anastomosis suggests that interference with efficient blood supply of the line of anastomosis by resection of the mesentery is the main factor in anastomotic leak and a fatal issue and one that must be guarded against most carefully The risks of imperfect blood supply in end to end anastomosis are certainly greater than in lateral I generally employ the lateral method for this reason except when it is not possible as is most often the case with the pelvic colon It is certain that the mortality for resections in the distal half of the colon and especially the pelvic colon have a higher mortality than those of the proximal colon

I have not attempted in this paper to deal with end results The cases in the first series referred to have not yet been followed up The real test of good statistics is end results—that is the percentage of five year cures of all cases operated on exclusive of those found to have visceral metastasis at operation It is not enough to show a good percentage of resection recoveries these cases should also form a high percentage of the total operation For example one surgeon might explore ten cases of carcinoma of the colon all free from metastasis and resect three of them (all early cases) with no death and these three might survive five years while the remainder with short circuit or colostomy survive only a few months or years Another surgeon meeting the same series of cases might be bold enough to resect seven of the ten with one death and four of the surviving six might live five years The statistics of the former surgeon would be operation mortality nil percentage of five year cures 30 and the statistics of the latter operation mortality 14 per cent percentage of five year cures 40 When it is recognized what can be accomplished in colon surgery the surgeon who errs on the side of boldness will save more cases in the long run

1921 1925			1926 1931			Total		
Cases	Operation Mortality	Percentage Mortality	Cases	Operation Mortality	Percentage Mortality	Cases	Operation Mortality	Percentage Mortality
41	9	21 9	34	7	20 5	75	16	21 0
Obstructed								
11	4	36 3	5	3	60 0	16	7	43 7
Resected								
29	5	2 7	23	3	13	52	8	17 7
Anastomosis only								
6	0	nil	3	1	33 3	9	1	11 0
Colostomy only (non resected)								
5	0	nil	3	0	nil	5	0	nil

* This case is not included in resections remainder colon [illegible] or mid rectal lesion
† Two of mid rectal lesion of operation
‡ One case of [illegible] to the one operation
§ Two [illegible] 2 per cent Local recurrence failure
¶ One case of [illegible] Hodgkin's disease in

CONCLUSION

I have not attempted in this paper to do more than give expression to my own experience I am conscious of the fact that few surgeons meet with sufficient cases to get that volume of experience which is really necessary to become expert Carcinoma of the colon is a far less common disease than carcinoma of the rectum and I have excised something like five times as many rectums as I have resected colon growths As the volume of cases dealt with increases so the full range of possible pitfalls and complications becomes unfolded and the surgeon learns how to avoid these and to improve both his technique and his statistics I know that this is true in my case for excision of the rectum and I feel confident that with continued experience in the treatment of carcinoma of the colon I shall be able to improve both my technique and my results more especially if by stimulating interest in early diagnosis cases come for treatment at an early stage In this connexion it is worth noting that my operative mortality of resections from 1921 to 1925 was 23 per cent and for 1926–31 only 13 per cent and I may add that the last thirteen cases in this series survived operation

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NOTES ON 1,500 CASES OF ASTHMA

BY

JAMES ADAM M A M D

LARYNGOLOGIST TO GLASGOW CORPORATION HOSPITALS AND TO LANARKSHIRE COUNTY HOSPITALS

In this survey only such facts as may throw light on some of the more important points raised in recent controversy will be touched upon It is particularly essential that in asthma figures should be closely correlated to clinical facts as neglect of this has led to misleading statistics

DIAGNOSIS

Chevalier Jackson[1] wisely says that all is not asthma that wheezes and that asthmatoid wheeze is a frequent symptom of inspirated foreign body with missed diagnosis but when later he suggests that asthmatics should be regularly bronchoscoped one may reply that there are simpler and more acceptable means of settling the diagnosis and usually of giving relief Adrenaline will not ease asthmatoid wheeze but usually gives prompt relief in genuine asthma Eosinophils crowd the sputum in asthma are scanty in the asthmatoid and mostly replaced by polymuclears they are usually above 4 per cent in asthmatic blood below it with probably a polymucleosis in the asthmatoid Wheeze plus eosinophilia is asthma wheeze without it demands scrutiny of the diagnosis wheeze plus tough viscid sputum crowded with eosinophils *is* asthma wheeze plus purulent sputum with few eosinophils but with many polymuclears is not simple asthma It is too often forgotten that asthmatic sputum is not purulent Even the clinical history as the records abundantly show will prove the diagnosis Dyspnoea coming on typically between 2 and 4 a m or on waking or after food is not asthmatoid but asthmatic Attention to these points has in this series excluded other dyspnoeic conditions—renal cardiac and arteriosclerotic

urea and may even be doubled falls within ten minutes after injection of adrenaline and may be halved rises with a hot bath but may fall owing to adrenal stimulation if followed by a cold douche when the basophils are apt to increase These are general statements with exceptions and do not apply where the count is approximately normal

Bezançon and Bernard however in their valuable monograph[1] on the eosinophil cell are not correct in saying that eosinophilia occurs in every case Eosinopenia may occur in hypopietic asthmatics, as will be shown below Even in such cases and others with a low count there may be excess eosin staining of the granules in the polynuclears The highest count in the present series was 68 per cent, and all the polynuclears showed this excess stain This high count however, was probably related not to the patient's asthma, which was slight and improved steadily but to a slowly spreading eruption of haemangiomatous papules (Examinations for intestinal parasites always negative) When asthma has been associated with chronic skin affections the eosinophil count has been high Bezançon and Bernard suggest that the eosinophil is more akin to the mononuclear than to the polynuclear cell, but the excess eosin staining of the latter already mentioned is against this view On the other hand the high counts in cases with chronic skin complications seem to favour their view that the eosinophil may have an origin from tissue as well as from the bone marrow They also bring much evidence to show that eosinophilia is a response to proteins autogenous but ill metabolized or foreign (heterogeneous) In short it is a sign of toxaemia

Blood Pressure

Normal pressure characterizes most cases I have shown[4] this holds for chronic cases and the fact that asthma begins in half the cases before the age of 15 also shows it But there are two other types of asthmatics—hypo- and hyperpietic Both wheeze on exertion, and for the same reason—namely that they have a narrow threshold on which to meet strain and there tends to be congestion in the pulmonary circuit But wheeze that comes only on exertion is not asthma and one may well especially in the case of the hyperpietic hesitate about diagnosis Where wheeze comes also at typical times—2 to 4 a m on waking—and where there is in addition eosinophilia one is justified in diagnosing asthma when it is absent the diagnosis should be rejected Moreover as both asthma and hyperpiesis may be of toxic nature it is not remarkable that the hyperpietic should develop asthmatic symptoms This type often responds astonishingly to treatment found useful for asthma—regulation of diet, weekly fast and blue pill dimol and iodide and belladonna Hyperpietics formed only 7 5 per cent of adult asthmatics in this series The hypopietics are also a small class—10 7 per cent—but often more refractory to treatment They are apt to be languid in mind and body finicky and not co operative Not only do the adrenals lag but one wonders whether the pituitary is not at fault some of the patients being tall and lanky The usual detoxicating treatment would be harmful to them Blood pressure of 95/60 is not uncommon—in one man of 5 ft 11 in it was 78/65 with eosinophils 2 per cent The eosinophil percentage in this type is low, on an average 4 per cent in one it was 0 5 per cent, but there was excess eosin staining of the polynuclears The highest tally was 11 per cent in a man of 6 ft with systolic pressure 100

In so called cardiac asthma the dyspnoea is not of asthmatic type and there is no eosinophilia such sputum as was present in a recent case was crammed with polynuclears and not eosinophils But there is stasis in the pulmonary circuit and there must be an element of this in both the hypopietic and hyperpietic types of asthma as shown by the wheeze on strain This must mean congestion and Chevalier Jackson[2] has observed congestion, not spasm in the bronchi of asthmatics he has bronchoscoped Such congestion does not bar bronchiolar spasm but might rather tend to it The bronchioli cannot be seen through a bronchoscope and spasm would hardly manifest in the larger bronchi because of their cartilaginous walls

Toxicosis

That a toxic factor bulks large in asthma I have tried for thirty years to show on the ground of the clinical history and of therapeutic results not equalled so far as I know by any other method of treatment The truth of the theory is now more generally admitted Bezançon and Bernard hold that eosinophilia means toxaemia There is further proof in the frequent inversion of the leucocytic formula the mononuclears being in excess and becoming a minority again after detoxication—for example a woman aged 54 with a history of twenty years asthma had in percentages eosinophils 7 polynuclears 37, small lymphocytes 33 large lymphocytes 23 after a month's treatment, with improvement the respective figures were 6, 65 23 6 Further in agranulocytosis which is admittedly of toxic origin this inversion is carried to an extreme the white cells being almost wholly mononuclear In asthma the toxaemia is milder and more chronic the eosinophils being the response, if they are present at all in agranulocytosis the outlook is more hopeful Again if there is toxicosis in asthma increase of the toxic load by addition of a waste product like urea should show response It does this not only raising the eosinophil percentage but in one case it sent the patient into intractable status asthmaticus the eosinophils rising from 11 to 22 per cent Other evidence which I have already given[4 3] need not be repeated here

Acidosis or Alkalosis?

This question is subsidiary to that of toxicosis Triefensee[6] on clinical and chemical grounds McDowall[7] on the basis of experiments with dilute acids on the bronchi and others regard asthma as an alkalosis If estimation of alkali reserves by the van Slyke process with or without paraffin is to be trusted there has in the series never been the slightest suggestion of this condition—to the contrary in fact The normal is stated as ranging between 53 and 73 c cm CO bound as bicarbonate in 100 c cm plasma figures below 53 indicating a tendency to acidosis, above 73 to alkalosis The following two sets of figures can be contrasted

50 and under, 25 cases	wheezing 2 not wheezing
50 to 59	1 case wheezing 23 not wheezing

The average among 12 was 46 during attack, 59 when free

Moreover with detoxication the alkali reserve rises gastric subacidity rises eosinophils fall wheeze disappears

Case	Date	Eosinophil Per cent	Alkali Reserve	Wheeze
Mrs h	31/12 /0 5/1/31	8 5	50 67	Severe Gone
McL	8/8/31 31/8 31	14 4	47 51	Present Gone

If asthma recurs the reserve falls and eosinophils rise This swing of the eosinophils in one direction and of the alkali reserve in the other as wheeze comes or goes is one of the most interesting features of asthma

Adrenals

As Cramer[8] and Migee[9] have shown toxic products absorbed from the intestine or elsewhere first stimulate then exhaust the adrenals a fact that goes a long way to support the toxic theory of asthma This is corroborated

by the value of adrenaline in allaying spasm Necropsy also confirms this In a woman of 41 asthmatic for nine years and an adrenaline addict who had injected 7 oz in a week and 1 oz in one night necropsy showed that the adrenal medulla was almost wholly destroyed Dr J A M Cameron [10] who did the necropsy for me reports two similar cases one with asthma for ten years one for twenty Also there was darkening of the skin in at least two cases as is common in chronic asthmatics suggesting affection of the cortex In one of the three necropsies the cortex was oedematous in one it contained collections of leucocytes in the third the whole gland was extremely small Further there are cases which suggest that adrenal failure may be an early sign of senile decay This seemed to be the case in two sisters with intractable asthma and Hurst has mentioned similar cases

ALLERGY

Allergic manifestations other than asthma mainly of the skin were found in 55 per cent In most cases direct attention was not paid to this as the toxic soil on which allergy and asthma flourish was regarded as of more importance than the allergens a point which is also raised by Bezançon and Bernard [3] For example a man of 68 with asthma for six years and dermatitis herpetiformis for two years who had had a year's treatment from a dermatologist without benefit was sent to me for his asthma Within three months his dermatitis had vanished and his asthma improved without attention to his skin Sometimes avoidance of the allergen is the shorter road and the patient will then always take it Asthma that comes before sleep but soon after going to bed usually indicates sensitiveness to feathers A man who got little benefit from me except for six weeks after resection of his septum found his asthma disappear during two visits to England but recur immediately on his return home His skin flared to tests with egg and with parrot feathers He gave away his parrot and lost his asthma yet takes eggs with impunity Skin tests however I rarely need Three cases improved promptly on removal from mould laden houses

HEREDITY

Family history of asthma or its allies was found in only 26 per cent This is about half the figure found by Comby [11] in Paris Rackemann [1] in Boston and Bray [12] in London Comby wondered why asthma was more common in the city than in the country among the rich than among the poor As he emphasizes the importance of heredity as do allergists generally it is like asking why heredity is more common in the city and with the rich than in the country and with the poor! Others have raised a similar question but allergists have never answered it The answer seems simple My smaller figure is of patients drawn not from large cities like London and Paris but from smaller towns where they are mostly within two minutes' walk of green fields Asthma is largely bred by our indoor life and the sophistications that go with our civilization Half of Bray's young patients were single children—proof itself of sophistication—and single children are usually pampered There are no greater liars than statistics that bolster up the heredity of asthma It is no more hereditary than gout Few would now claim that gout which is disappearing with altered habits is hereditary—asthma is increasing for like reasons Only in the sense indicated by Professor McBride [14] in his paper on Habit the driving factor in evolution is asthma hereditary and this implies the heritability of acquired characters just as Sir William Roberts [15] insisted for gout The heredity of asthma is only rarely Mendelian No matter what the apparent history of heredity may be most asthmatic children and many adults can be permanently cured for a toxicosis is bred not inherited but a *tendency* to it may be increased by bad habit prolonged in one direction through several generations

THE NOSE

In adults the nasal condition suggested attention in 58 per cent but frequently they did not get it because the toxic state prevalent in asthmatics affects the mucosa of nose and bronchi as well as skin Detoxication helps all it has an effect on the nose by reducing mucosal blobbiness and irritability It is too little recognized that brisk exercise constricts turbinals as does adrenalin General measures are therefore usually tried before direct nasal treatment unless there are polypi or sinusitis which should be treated at once In affections of the nose in children the importance of vitamins must be emphasized for it is certain that they help the mucosae and probable that they help the endocrines

Sinusitis occurred in 10 5 per cent In treating this as in the case of all nasal operations ectomizing surgery should be avoided the minimum interference should be the aim The mucosal lining of a sinus should not be removed in the case of the antrum a free infraturbinal opening occasional douching the use of argyrol or ionization and *time* are often sufficient No part of the lower turbinate need be sacrificed as by levering it inward sufficient operative access can be obtained Polypi were found in 14 per cent They are rich in eosinophils whereas those from non asthmatics are rich in basophils Zinc ionization has been found valuable in helping to prevent recurrence after removal of polypi

It is true that asthmatics are often worse after nasal surgery Unless they have been detoxicated they usually have an attack within forty eight hours of operation this is to be expected because the nose being the respiratory orifice is the most sensitive area in the respiratory tract but if the deterioration is permanent it means bad surgery The importance of a clean nose yet having enough structure left to function is shown by the difficulty of curing an asthmatic mouth breather Only four such cases in 1 500 can I recall During sleep the turbinals fill up and mouth breathing is apt to result which may be a factor in the frequent occurrence of asthmatic attacks in the small hours

PROGNOSIS

In the recent book [16] by Coca Walzer and Thommen (p 269) Walzer declines to use the word cure of asthma because as Kahn says a hereditary factor is present not in a certain fraction of the cases but in 100 per cent This is true but a platitude that holds for all diseases from tuberculosis to coma The allergist can only hope that his patient may be kept symptom free and that the period of well being will be permanent This also is probably true—for allergists—because they neglect the conditions which breed allergy and are causing it to increase To neglect any of the factors making for asthma—hereditary nasal toxic allergic—is blind and fatal Little is said in the book of the toxic factor (attention to which alone will give better results than attention to the allergic factor alone) and in the elaborated detail of the thirty three necropsies recorded [17] mention is made of the adrenals in none—a glaring omission considering the use of adrenaline in asthma and of the effect of toxicosis on the adrenals However Hurst also speaking not from the allergic angle says the cure of asthma is not to be [illegible] The answer is simple If the nose and throat have no such defects of chronic morbidness as open the life in the open and if the following treatment and hygienic and diet treatment 90 per cent of asthmatic children and 75 per cent of adults can be cured and so are

Of adults less can be said but the majority can be cured or so improved provided there is no hypertrophy of

bronchiolar muscle as to make all the difference between health and disease The following table speaks for itself The eight cases are not selected they are old cases of whom I have heard *accidentally* while compiling this paper most of them I had not seen for years The reader will note that the nose demanded treatment in all but one was beneficial in all harmful in none that the family history was positive in all but two that the asthma was severe in most and its duration over ten years in five

Case No.	Date of Attendance		At Time of First Visit		Nose	Family History	Years Free from Asthma
	First	Last	Age	Duration of Asthma in Years			
I 1080	1925	1927	14	11	+	+	5
II 149	1911	1912	14	10	+	+	20
III 995	1925	1927	45	1	+	+	3
IV 550	1918	1921	31	27	+	−	9
V 749	1915	1920	28	4	−	−	5
VI 1480	1930	1930	43	6	+	+	2
VII 677	1918	1922	24	14	+	+	8
VIII 754	1919	1928	60	1	+	+	3

CASE NOTES

I Single child puny irregular at school in bed three months before first visit Septum resected Is now 20 and has never lost a day since treatment has not wheezed for five years

II Single child puny mouth breather worse week ends Nasal and orthodontic treatment Now a tall athletic man no mouth breathing

III Six feet 11 st systolic pressure 100 Wheezed on least exertion Can now do two rounds of golf Has three children none asthmatic

IV Inveterate asthma Rejected for army on account of heart disease which cannot now be detected Teeth nose diet all badly needed attention

V Engineer in India skin tested at Calcutta and found positive to fish fowl egg milk mutton beef tomato cucumber Called on furlough to say he has had no asthma for five years

VI Planter in Borneo writes thence to say he has had no asthma for two years Septum resected

VII In his fourteen years asthma had a free interval of three years while leading open air life in Australia on return home was seldom free for not three years

TREATMENT

This has been indicated above and given in detail elsewhere I would only add that it may save trouble in the case of an asthmatic lady if before the rhinologist looks at her nose and the allergist tests her skin they look at her shoe heels and at her feet Free life in the open is not possible without good feet nor is a cure of asthma without them a right life and a righteous nose

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THE OCCURRENCE OF POLYCYTHAEMIA AND THE VALUE OF LIVER THERAPY IN ASTHMA

BY

H H MOLL M D M R C P *

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POLYCYTHAEMIA

In the course of an investigation on the effect of liver therapy in asthma it has been noted that polycythaemia is frequently found in cases of true spasmodic asthma In thirty eight cases of asthma counts of over 6 million red cells were recorded in thirty one cases (81 5 per cent) not infrequently the red cell count was over 7 millions in two cases it was over 8 millions and in one of these the highest figure was 8 750 000 red cells per cubic millimetre It has been noted also that the polycythaemia occurring in asthma was of an oscillating character and that the total red cell count when taken at different times showed variations of 1 to 2½ millions The haemoglobin percentage increase did not follow the rise in the total number of red cells at all closely and usually the colour index was below 1

Symptoms of polycythaemia were entirely absent and although some cases had a high colour or cyanosis this was not a constant feature and cases with definite emphysema and marked cyanosis often presented a normal or low normal red cell count Splenomegaly was observed once only in a case which was however exceptional in many other respects There was no reticulocytosis and no immature red cells were observed The condition appeared to be one of relative polycythaemia which varied according to the state of the patient

Relation to Emphysema

The presence of emphysema did not materially affect the red cell count and polycythaemia was found as frequently without emphysema as with it (See Table I)

TABLE I

Emphysema	R B C over 6 Millions	R B C under 6 Millions
Present	11	4
Absent	10	2
Not mentioned	10	1

Polycythaemia was found both in recent cases and in cases of several years standing in approximately one half of the cases the duration of the disease was under ten years and in the other half over ten years In one case a count of over 8 millions was recorded three weeks after the first attack the patient had ever had The fact that a high red cell count may be found both in recent and in chronic cases suggests that emphysema is not an important factor in the determination of polycythaemia in asthma Moreover the condition of emphysema in asthma is often not true organic emphysema but a state of inflation of the lung which subsides with suitable expiratory exercises and with the abatement of the asthmatic attacks Even in cases of true emphysema with bronchitis polycythaemia is not so constantly found as is generally supposed

Lemon[1] investigated twelve cases of varying grades of emphysema and chronic bronchitis with cyanosis in order to ascertain the possible variations in the blood volume resulting from deficient oxygenation of the pulmonary blood The appearance of many of these patients suggested the existence of polycythaemia He did not find

* With a grant from the Asthma Research Council

any decisive changes in the total circulating cell volume and blood volume Although the volume of the cells was not raised the haemoglobin in the average cell was definitely increased The erythrocytes varied from 4 to 6 86 millions with a mean of 5 02 millions In four cases the values were more than 5 millions and in only two cases over 6 millions

Incidence in Allergic Cases

An analysis of the incidence of polycythaemia among the different types of asthma showed that it was more frequently found in the allergic type—namely in cases of manifest allergy or in those in which allergy could definitely be suspected by a family or personal history of allergy Polycythaemia was found at one time or another in each of six cases of definite allergy—that is cases with a definite history of sensitivity and with positive dermal tests confirming the history These included *one case sensitive to wheat one to pollen* and cat hair two to pollen and two to feathers The highest counts recorded in these cases were over 8 millions in one case over 7 millions in three cases and over 6 millions in two cases In the group of cases without evidence of allergy—that is with negative skin tests and without a personal or family history of allergy—polycythaemia was not so frequently found This group which I have labelled not allergic includes cases in which no definite evidence of allergy could be ascertained together with four cases of bronchitic asthma Of the four cases of bronchitic asthma two showed polycythaemia and two did not (See Table II)

TABLE II

Type	R B C over 6 Millions	R B C under 6 Millions
Allergic	22	2
Not allergic	9	5

The fact that polycythaemia occurs more frequently in the allergic type of asthma than in the non allergic is also shown by the age incidence of cases showing high red cell counts The ages of the patients of my series ranged from 15 to 67 years and 85 per cent of cases with polycythaemia were under 40 years of age My series does *not* include children but Bray in a series of blood counts carried out on 100 consecutive asthmatic children observed that high red cell counts were of frequent occurrence On repeating the blood counts at different times in the same case it was found that the total red cell counts varied considerably if taken shortly *after an attack or during a prolonged* free interval Usually a mean of two readings from separate pipettes was taken and blood counts were all done by the same observer in order to ensure uniformity of results

Seasonal and other Variations

High red cell counts were usually found immediately after an attack and for varying periods up to one month after an attack whereas during periods of freedom of over one month the total number of red cells tended to fall again to the normal figure High red cell counts were also found in cases with constant wheeziness or with frequent minor asthmatic attacks

In Fig 1 sixty nine counts on thirty eight cases of asthma have been plotted out according to the length of time between taking the blood count and the last attack of asthma When two counts from the same patient have been recorded the highest and lowest figures are given It will be seen that of forty five counts taken within a month from the last attack twenty eight (or 62 2 per cent) were over 6 millions while of twenty-four counts taken during free intervals of one month or more only six (or 25 per cent) were over 6 millions Often variations of 1 to 2½ millions were found to occur in accordance with the state of the patient It was found that the red cell count rose as the result of a severe

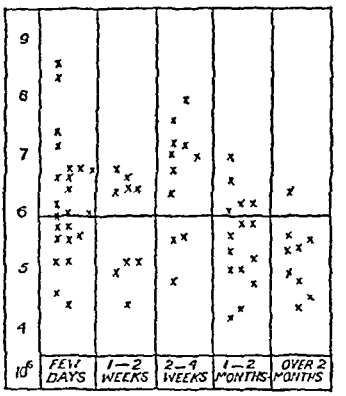


FIG 1—The correlation between sixty nine red cell counts in thirty eight cases of asthma and the time elapsed between taking the blood count and the last attack of asthma

attack or of a succession of attacks and that it fell again as the patient improved and the free intervals became longer These variations in the red cell count were particularly striking in the seasonal types of asthma Pollen-sensitive cases invariably gave high counts during the hay season and in some cases a definite rise occurred from May to June and July to fall again in the autumn (See Fig 2)

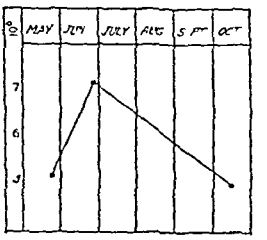


FIG 2.—Graph showing seasonal variation of the red cell count in a pollen sensitive patient (Case 13)

On the other hand it was noted that in the infected type of asthma with a good deal of bronchitis and with seasonal variations to cold and damp weather a rise in the red cell count occurred in the winter instead (See Table III)

TABLE III

Case No	Type	Remarks	Blood Count			Date
			Hb	R B C	C I	
13	Pollen cat hair positive skin tests	Worse in summer	74 92 86	5 25 7 91 5 03	0 70 0 68 0 85	27/5/30 25 6/30 13/10/30
16	Pollen positive skin test	Worse in summer	78 94 52	5 39 6 48 5 93	0 72 0 73 0 73	20/5/30 21/7/30 16/12/30
22	Pollen positive skin test	Only in summer	83 98 90	6 40 7 30 4 68	0 69 0 70 1 00	8/1/30 23 9 30 8 3 32
23	Pollen positive skin test	Worse in summer	99 88	6 70 5 79	0 70 0 80	8/7/30 21/9/30
27	Feathers pollen positive skin tests	Worse in summer	80 86	7 73 6 23	0 58 0 71	30/7/30 7/3 31
15	Bronchitic asthma (chronic bronchitis and emphysema)	Worse in winter	62 62 64 72 77	4 36 4 63 5 41 5 05 5 64	0 70 0 67 0 64 0 72 0 70	21/6/30 1/7/30 8/10 30 3/12 30 23/2/31

Suggested Interpretations

From these observations it appears that polycythaemia in asthma has a definite relation to the state of the patient and that a fall in the red cell count may be regarded as a sign of therapeutic improvement Usually a fall of a million in the red cell count signifies that the attacks

have become less severe, and that the intervals of freedom have lengthened to one month or longer In this respect a red cell count is of greater help than a differential white cell count for eosinophilia Although Spangler[3] considers the eosinophilic index an important indication of the reactive power of the individual Van Leeuwen and Niekerk[4] found that eosinophilia gave no indication of the severity of the case or of therapeutic improvement

It is difficult to express an opinion on the nature of the polycythaemia in asthma but the fact that it occurs chiefly in the allergic type of asthma and that it is definitely related to the asthmatic attacks suggests that it may be due to the stimulative effect of anoxaemia or to concentration of blood from loss of fluid The extreme variability of the polycythaemia and the slight or negligible increase in total cell volume and blood volume found by Lemon[1] in cases of chronic bronchitis and emphysema seem to oppose the former idea It is more likely that the polycythaemia which occurs in asthma is a relative one and that it is a condition in which the volume of the individual cell is decreased and that consequently there is an increased number of cells for each cubic millimetre of blood without an increase in the total cell volume or blood volume In favour of this theory are the observations made by Descamps (Joltrain) [5] who found that the red blood corpuscles in the course of peptone shock are subjected to a diminution of volume corresponding to the loss of fluid from the transudation of plasma through the dilated capillaries

LIVER THERAPY

Liver treatment has been carried out on fifty three cases of asthma of which twenty three were males and thirty were females This treatment was tried because it has been frequently assumed that the liver action in asthma is defective Manwaring[6] has shown that the liver is the site of the anaphylactic reaction in dogs and that shock does not occur when the liver is thrown out of circulation

Details of Investigation

Patients who underwent liver treatment were kept under observation for periods varying from a minimum of three months up to one and a half years In the great majority of cases liver extract (Armour) was administered in the dose of one to one and a half ounces a day over periods of several months In some cases the treatment was stopped for a few months and then resumed Usually a minimum period of three months liver treatment was necessary before the full beneficial effect was observed In some cases half a pound of whole liver lightly cooked was taken by the patients instead of liver extract or alternately with the liver extract but it was found that whole liver was usually badly tolerated by asthmatic patients and that it gave rise to gastric disturbances In assessing the results of treatment patients have been considered improved when the attacks definitely diminished in frequency and severity All patients who have undergone liver treatment have been circularized and have been asked to reply to a questionary In addition to liver treatment most cases have received a routine treatment consisting of a diet breathing exercises, and ephedrine A certain number of cases have also received nasal treatment If however a patient materially improved on general treatment and there was some doubt as to the influence of liver treatment the case was excluded from the present series As liver treatment was being put to a test it was carried out on a miscellaneous group of cases and often on cases which had failed to respond to other therapeutic measures In the series of cases treated with liver there have been no cures—that is complete freedom for a minimum period of two years the longest period of complete freedom observed was ten months Marked improvement however has been noted in several cases, and often attacks occurring at intervals of two to three weeks have been reduced to three a year Of fifty three cases treated with liver thirty two cases (or 60 3 per cent) were improved and twenty one failed The results obtained are shown in Table IV

TABLE IV

Type of Case	Improved	Failed
Allergic	24	7
Not allergic	7	14
T B T case	1	—
	32 (60 3 %)	21 (39 7 %)

Illustrative Cases

The percentage of therapeutic successes is not high but it might have been higher had a careful selection been *made of the most suitable cases Failures included* nine cases of bronchitic asthma with definite lung damage and two cases of asthma caused by recurrent polypi Best results were observed in the allergic group of cases and especially in those cases showing manifest allergy—that is, all cases with a history of sensitivity and with positive dermal tests confirming the history The latter included sixteen cases of which fourteen were improved and two failed to do so The majority of these cases were sensitive to inhalants (pollen feathers and animal hair) In some individual cases the results obtained by liver therapy were very striking indeed

Case 7—Male aged 67 Worked in the corn market for nine years and developed asthma during the last four years Contact with flour invariably brought on an attack Positive skin test (scratch) to wheat When he first attended the clinic he was markedly wheezy and cyanosed had attacks nearly every day and had been at a standstill for the last two years The asthma was not seasonal

Treatment with one ounce of liver extract daily was started in April 1930 and continued for six months thereafter he has been taking from 2½ to 4 lb of whole liver lightly cooked per week up to the present time (*February 1932*) He has very definitely improved and now has only occasional attacks of asthma with intervals of freedom of several months

Blood counts taken during the first ten months of treatment showed a steady fall in the number of red cells

Before Not taken				
After 2 months	Hb 84	R B C 6 88	C I 0 60	27/5/30
After 3½ months	Hb 100	R B C 6 10	C I 0 60	10/7/30
After 10 months	Hb 88	R B C 5 46	C I 0 86	7/1/31

Case 22—Female aged 21 Asthma since the age of 9 years following an attack of pneumonia *Definitely seasonal* and attacks occur only in the summer Used to have attacks more or less continuously from June to September Positive skin test (intradermal) to a grass mixture extract Works as a carpet setter and is exposed to dust

Liver therapy (one ounce of liver extract daily) was started in June 1930 and was continued until March 1931 It was resumed in June 1931 and continued up to the present time During the first summer (1930) she was under treatment she had several attacks but last summer (1931) she was very much better and she only had four slight attacks She is now working overtime Two counts taken during the summer (1930) showed definite polycythaemia while one taken recently showed a normal count The fall in the red cell count in this case is probably due to seasonal variation There was no fall in the red cell count during the first course of liver therapy

Blood counts				
Before	Hb 88	R B C 6 40	C I 0 69	8/7/30
After 2½ months	Hb 98	R B C 7 30	C I 0 70	23/10/30
After 20 months	Hb 90	R B C 4 88	C I 1 00	8/3/32

The following case is interesting in view of the unusual features and because there was some evidence of liver dysfunction

Case 5.—Female aged 32. Worked in T.N.T. factory during the war from 1915 to 1918 and has never felt well since. Asthma started five years ago after her first pregnancy. On first attending the clinic the spleen was definitely palpable and there was a definite icteric tinge of the skin. The van den Bergh test gave a positive indirect reaction. The attacks used to occur every fortnight all the year round. Liver treatment (one ounce of liver extract daily) was started in June 1930 and continued up to the present time. Lately she has reduced the dose of liver extract to half an ounce daily. After six months of liver therapy the splenomegaly had disappeared and the van den Bergh test gave a negative reaction. She has been completely free from attacks for the last ten months.

Blood counts taken over varying periods showed a fall in the number of red cells:

Before	Hb 90	R.B.C. 7·00	C.I. 0·65	20/6/30
After 1 month	Hb 80	R.B.C. 6·44	C.I. 0·66	20/7/30
After 3½ months	Hb 74	R.B.C. 5·25	C.I. 0·74	
After 6 months	Hb 74	R.B.C. 6·62	C.I. 0·60	7/1/31
After 16 months	Hb 72	R.B.C. 4·98	C.I. 0·72	24/11/31

Effect of Liver on Red Cell Count

The response to liver treatment and the improvement of the patient was usually marked by a fall in the red cell count which at times was considerable and amounted to as much as 2½ millions. In some cases a diminution in the red cell count occurred fairly soon and within about a month from starting liver treatment while in other cases the fall took longer or was broken by a temporary rise. Occasionally patients claimed to be feeling better although the red cell count showed a rise but such a response was the exception and occurred in only 25 per cent. of cases. Cases which did not improve on liver treatment either showed a definite rise of the red cell count or no change at all. This was particularly noticeable in three cases of bronchitic asthma. In Fig. 3 the variations in the red cell

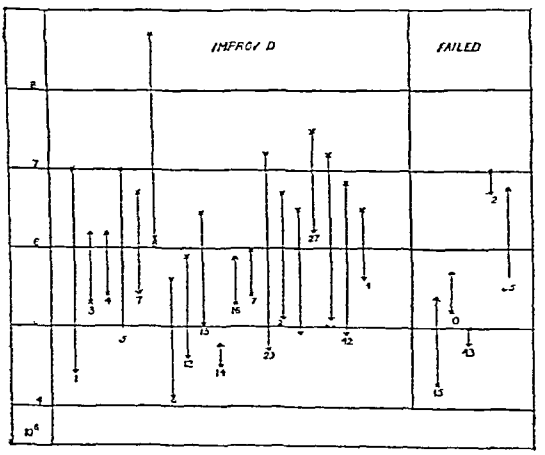


FIG. 3.—Graph showing variations in the red cell count in the course of liver therapy. The type of variation is indicated by the direction of the arrows. The ciphers refer to the case numbers. Identified allergics 7, 13, 16, 23, 27. Unidentified allergic 1, 3, 4, 14, 17, 20, 42, 44. Not allergics 8, 9, 12, 24, 26, 30, 43. Bronchitic asthma 15, 21, 33. TNT cases 5.

count occurring in twenty four cases treated with liver have been graphically recorded by means of arrows. The ciphers refer to the case numbers. Cases 13, 23 and 27 were seasonal types of asthma and sensitive to pollen and in these cases the fall in the red cell count may be ascribed to the ordinary seasonal variations mentioned above.

Cases with an initial high red cell count responded better to liver therapy than those in which the count was constantly at a normal or low normal level; this may be explained by the fact that a large proportion of failures consisted of cases of non-allergic asthma and of bronchitic asthma in which polycythaemia was usually found to be absent. (See Table V.)

TABLE V

Red Cell Count	Improved	Failed
Over 6 millions	19	8
Under 6 millions	3	4
Not done	10	9

Its Influence on White Count

No appreciable degree of eosinophilia was observed even after prolonged treatment with liver extract while there were not sufficient cases taking whole liver for a conclusion to be drawn. Meulengracht and Holm[7] have observed that the intake of liver extract did not give rise to eosinophilia but that the ingestion of raw liver constantly showed a marked one. In some cases (see Table VI. Cases 20, 5) a slight rise in the eosinophils

TABLE VI

Case	Blood Count			White Cells	Eosinophils		Liver Treatment
	Hb	R.B.C.	C.I.		Per cent.	Total	
5	90	7·07	0·65	7,500	2·0	150	Before
	72	4·93	0·72	——	6·5	—	After 6 months (improved)
20	81	7.32	0·55	10,700	1·0	107	Before
	68	7·10	0·69	10,600	2·5	265	After 10 days
	86	5.36	0·86	7,50	8·0	59	After 6 weeks (improved)
15	62	4·35	0·70	6,400	6·0	384	Before
	67	4·63	0·67	9,100	1·5	135	After 2 weeks (failed)
18	90	5·49	0·83	7,700	5·0	385	Before
	82	6.27	0·68	6,300	3·5	220	After 2 weeks (failed)
11	92	6.59	0·71	8,00	3·5	287	After 6 weeks
12	85	4·68	0·95	4,900	2·0	98	After 11 weeks
17	93	7·70	0·63	8,50	3·5	292	After 10 weeks

was observed as the red cell count dropped and the attacks of asthma lessened while in other cases (15, 18) not responding to liver therapy the eosinophils dropped as the red cell count rose. Gillespie[8] has also noted that the eosinophils varied according to the state of the patient and that during an attack there was a marked fall.

Unsuccessful Cases

Of the cases which failed to respond to liver therapy about 10 per cent. were actually made worse either because it caused gastric disturbances such as flatulence or nausea or because it was definitely asthmagenic and brought on attacks. This occurred more frequently when taking whole liver than with liver extract. Matzger[9] has reported a case of pernicious anaemia in which the administration of liver extract intensified attacks of bronchial asthma. Held and Goldbloom[10] have also reported a case of pernicious anaemia showing allergic phenomena due to liver extract but they expressed the opinion that although allergy may have played a part the amino-acids in the liver extract probably caused a rapid increase in the uric acid in the blood which in turn caused the unusual phenomena. Adam[11] tried liver therapy in four cases of asthma and found that in three cases liver made the asthma worse while in the fourth it seemed to be beneficial.

GENERAL CONSIDERATIONS

It is not clear how liver therapy influences the asthmatic state The fall of the red cell count observed in cases which responded favourably to liver therapy might suggest that the effect was due to lowering the number of red cells thereby diminishing pulmonary congestion from the polycythaemia Stephan[1] has noted a decrease of erythrocytes in a series of five cases of symptomatic polycythaemia in non asthmatic subjects by the administration of liver substance But it has already been mentioned that the reduction of polycythaemia noted in the present series of cases has been interpreted as a sign that the patient had improved and not as a direct effect of liver therapy Such variations and falls in the red cell count have been observed in seasonal cases of asthma quite independently of liver treatment and also in a few cases which have improved with some other form of treatment For instance, a marked fall in the red cell count occurred in one case of asthma after the treatment of an antrum infection It is also unlikely that liver treatment may act by lowering the blood pressure as the great majority of the cases responding to liver therapy had a normal or low normal blood pressure Similarly other effects of liver substance such as diuresis and lowering of the blood sugar do not offer any satisfactory explanation as to how they may influence asthma Liver therapy may provide a substance which plays a part in the antigen antibody reaction in man and which is lacking in patients suffering from asthma On the other hand the beneficial effect may be due to a process of desensitization in virtue of the rapidly assimilable amino acids present in the liver extract

Skin sensitivity to an intradermal injection of a 1 in 1 000 solution of liver extract has been tested on ten normal control cases on six cases of asthma with positive skin tests and on four cases of asthma with negative skin reactions A reaction consisting of a wheal and erythema occurred in all three groups of cases but was most marked in the cases of the second group

The same series of cases has been tested also against an intradermal injection of hepatex P A F In the normal control cases blanching of the skin was observed but no wheal formation occurred In the asthmatic groups, however and especially in cases with positive skin tests a definite wheal with surrounding erythema appeared five to fifteen minutes after the injection and lasted about an hour In a case of asthma with positive dermal reactions to a pollen extract and to hepatex P A F 0 1 c.cm of the latter was repeatedly injected intradermally at two hourly intervals into the same area of skin It was found that after the fourth injection the skin had become desensitized and ceased to give a reaction These observations suggest that the liver fraction active in pernicious anæmia may have antigenic properties

SUMMARY

1 Polycythaemia frequently occurs in true spasmodic asthma especially in the allergic type

2 It is often found after a severe attack or a series of attacks and may last for varying periods Usually after a free interval of a month the count tends to fall to a normal level again

3 Seasonal variations in the red cell count have also been noted to occur the count being highest in the summer in the pollen sensitive cases and in the winter in the infective type of asthma

4 A fall in the red cell count has been found to correspond with the lessening in the frequency and severity of the attacks and may therefore be considered as an indication of therapeutic improvement

5 Liver therapy has been tested in fifty three cases of asthma and has proved beneficial in 60 3 per cent of the cases It has been found to be most effective in the allergic type of asthma and in those cases showing an initial high red cell count

6 In the course of liver therapy a fall in the red cell count has been noted to occur in those cases which have improved on the treatment

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THE MEAN TEMPERATURE IN NON FEBRILE HOSPITAL PATIENTS

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Although changes in body temperature in disease have been recognized for many centuries it was not until the nineteenth century that the clinical thermometer came to be generally used in medical practice The convenient modern instrument was first introduced to medicine by Sir Clifford Allbutt in 1867 Before this date the clinical thermometer was an unwieldy object and was not adapted for ordinary practice Since we are not concerned here with the temperature in febrile diseases it may be of interest to refer to a few of the observations on body temperature in healthy individuals which were made by some of the pioneers in medical thermometry The whole subject of medical thermometry was very ably expounded by Wunderlich in his classic treatise published in 1868 Prior to this in 1845 John Davy[1] made a large number of observations on himself over a period of eight months and found his mean temperature to be 98 4° F taken in the mouth Barensprung gives the figure 98 93° F as the mean axillary temperature in *healthy* active individuals between the ages of 21 and 70 This reading has since been considered to be too high and the error is thought to have been due to the employment of a defective thermometer Other authorities have obtained varying results for the mean axillary temperature Ringer and Stuart found 99 1° Liebermeister 98 4° Billet 98 06° Billroth 98 8° More recently M H Whiting[2] carried out investigations on the mean temperature in a large prison population She found the mean temperature to be 98 37° for the whole population and 98 38° in those who were apparently in perfect health It must be clearly understood that all these figures quoted represent the mean temperature in healthy *active* persons and not in individuals confined to bed

As a result probably of Davy's experiments the figure 98 4° has come to be regarded in English speaking countries as the normal temperature in man This is the fact is evidenced by the way in which clinical thermometers and temperature charts are marked for it is common knowledge that these have engraved upon them a

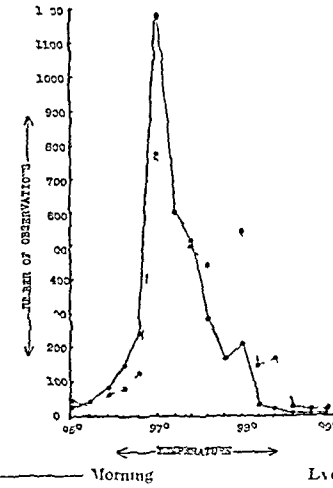
heavy line corresponding with the figure 98·4° F. A reference to the illustrations of temperature charts in various authoritative textbooks[4] goes further to show that 98·4° is now the accepted normal temperature in man. On the Continent temperature charts are marked with a heavy line opposite the figure 37° C. (98·6° F.) as may be seen from the illustrations of charts in French and German medical literature.

Diurnal Temperature Variations

It is an accepted fact that the body temperature in man shows considerable variation during the twenty-four hours. Sahli[5] showed that the minimum temperature occurs in the first few hours after midnight, a first maximum is reached during the forenoon and a second maximum between 5 and 8 p.m. Liebermeister[6] found that the daily variation amounted to 1·8° F., comparing the absolute maximum and minimum, and 0·9° F. when comparing the morning and evening temperatures. Again it must be emphasized that these figures apply only to individuals in active life. Further it should be remembered that the accepted normal standard of 98·4° is *the mean or average temperature of a healthy active* person and not the maximum reading above which the presence of fever may be assumed. This point is emphasized since it is apparent that 98·4° is now regarded in clinical work not as the mean body temperature in man but rather as the upper limit of normality, and the reason for this misconception would appear to be the purely arbitrary markings on thermometers and charts. If the readings rise above the heavily engraved line on the temperature chart the patient is considered to be *febrile*; if below the line the temperature is usually stated to be subnormal, although little importance is attached to low readings unless they are extreme. Temperature charts may be misleading in another direction since they fail to allow for the fact that the patient is usually confined to bed when frequent temperature records are being made. The normal reading of 98·4° F. is the mean temperature in active life and cannot be regarded as an accurate standard in patients confined to bed for long periods.

Rationale of Investigation

The reason for this communication is the frequent observation that non-febrile patients and patients convalescing after a febrile illness show consistently low temperature readings when lying in bed, as may be seen from the records on the charts. In fact it is the exception in such individuals for the temperature ever to reach *the normal* line even over comparatively long periods. An endeavour has been made therefore to determine the average or mean temperature when lying in bed of a number of patients who were admitted to hospital suffering from non-febrile complaints. Many of these were suffering from some gastric disorder and were *admitted to hospital for investigation*; others suffered from debility, neurasthenia, hypertension, etc. All were apparently afebrile on admission. Although these patients were not normal within the strict meaning of the word in that they were all suffering from some disability, the troubles which beset them are generally regarded as being unassociated with an alteration in body temperature. Similar observations regarding body temperature in healthy persons would be very instructive, but it is felt that it would be extremely difficult to persuade a number of individuals in perfect health to remain in bed over a long period for the purpose of having their morning and evening temperatures recorded. The thermometer readings which are analysed in this paper were recorded in the usual routine method adopted in a large hospital. The temperatures were taken at 7 a.m. and 7 p.m. in the closed axilla with a half-minute instrument left *in situ* for three minutes. A total of 250 patients was investigated in this way, and morning and evening temperature readings were taken in each case over a period of fourteen days. The results are depicted in the graph which shows the frequency distribution of the morning and evening temperatures respectively.



Graph showing frequency distribution of morning and evening axillary temperatures.

Mean temperature at 7 a.m. 97·2° F. ± 0·004
Mean temperature at 7 p.m. 97·45° F. ± 0·006

Results and Discussion

It will be seen from the graph that the *mean morning* and evening temperatures in this series of cases are 97·2° F. and 97·45° F. respectively. The average of the two readings is 97·32° F. which is slightly more than 1° below the normal temperature reading.

It has been shown by Davy and many other observers that exercise will raise and rest lower the level of the body temperature, so that low readings were to be expected in these observations carried out on patients lying in bed. In this series the mean temperature taken at 7 p.m. is at a slightly higher level than the 7 a.m. temperature. This is in accordance with the results obtained in healthy individuals by *most observers*—for example William Ogle in 1866 found that the maximum temperature occurred between 6·30 and 7·30 p.m. and the *minimum* between 6 and 6·30 a.m. On the other hand Thierfelder[8] found the morning temperature to be slightly higher than the evening temperature in a number of healthy adults and Davy[9] has shown that his own temperature at 7 a.m. was 98·5° and at 7·30 p.m. 97·7° F. These figures quoted apply of course to healthy active individuals and cannot therefore be compared with observations made on patients confined to bed for many days. In view of the well-known clinical fact that the evening temperature in many febrile diseases tends to be at a higher level than the morning temperature it is interesting to note that some observers have found the reverse to be true in healthy active life.

In connexion with the results obtained in this investigation *the interesting question arises as to whether the figure* 98·4° F. can be regarded as the upper limit of normality in an individual confined to bed for several weeks. It is a *not infrequent experience to find* in the case of a patient lying in bed that the temperature record will fluctuate between 97° and 98° for a period of many days and will

then rise suddenly to the normal reading of 98 4° eventually falling again to the region of 97° Since the temperature in such a case has not risen above the black line on the chart little or no attention is paid to this variation yet if the reading had overtopped the line by 0 2° or 0 4° the patient would be stated to have a slight temperature and a diligent search would be made for the cause It would seem that there is a tendency when dealing with individuals who are confined to bed to forget that the temperature figure 98 4° F is the normal for a healthy active individual and not for a patient who remains in the recumbent posture for a long period If a patient calls at his doctor's house in the middle of the day and the temperature is found to be 99° that patient is considered to be slightly febrile It does not seem unreasonable to assume therefore that if the temperature of a recumbent individual suddenly rises from 97° to 98 4° that individual is also slightly febrile despite the fact that the temperature has not risen above the conventional limit Since the figure 98 4° represents the mean temperature of a person in active health it need not also represent the mean temperature of a patient lying in bed Further if this figure be regarded for the sake of convenience, as the upper limit of normality in active life it does not follow that we are justified in regarding it thus in individuals who are confined to bed It is possible therefore that there is some danger in the emphasis laid on the temperature reading of 98 4° by marking this figure with a heavy line on clinical charts since by so doing no allowance is made for individual variation nor for the fact that the patient is physically inactive

SUMMARY

The mean body temperature in a series of 250 non febrile hospital patients who were confined to bed was found to be 97 2° F at 7 a m and 97 45° F at 7 p m

It is suggested that the heavy line marked on clinical thermometers and temperature charts corresponding with the figure 98 4° F is misleading since this figure represents the mean temperature in active life and not the upper limit of normality in a patient lying in bed

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A CASE OF CARCINOMATOUS GASTRO-COLIC FISTULA SIMULATING ENTERIC FEVER

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T G STARKEY-SMITH M D LOND

HUNGERFORD

During the first two or three weeks after this patient came under observation the clinical picture was very suggestive of enteric fever The insidious onset the gradual rise of temperature with at first a relatively slow pulse the foul tongue the diarrhoea and the tympanites all pointed in this direction The persistently negative bacteriological and serological findings however made the provisional diagnosis of enteric seem increasingly improbable The finding of pus cells and of undigested red blood corpuscles in the stools on December 18th suggested the possibility of an acute ulcerative colitis it being assumed that the ulcerative process involved the upper half of the colon and thus accounted for the absence of tenesmus and explained the constant tenderness below the right costal margin The possibility of diverticulitis or of carcinoma of the colon was also discussed but it was felt difficult to explain the long continued pyrexia on this basis without there being any palpable tumour or any evidence of subphrenic abscess and whilst there was a normal blood count

The possibility of a gastro colic fistula was also discussed but it was thought that the absence of any vomiting and still more of any faeculent vomiting or belching almost put this diagnosis out of court However there was no evidence of any perigastric or subphrenic abscess to explain the pyrexia

In spite of the valued assistance of three consulting physicians and of three pathologists the diagnosis remained a matter of speculation prior to the necropsy

CLINICAL HISTORY OF CASE

The patient a professional man aged 52 was seen by me on the morning of December 7th 1931 He had always been delicate inclined to be neurasthenic and subject to frequent intestinal disturbances comprising alternate states of diarrhoea and constipation for which he had tried numerous remedies His health had much improved during the last ten years since taking liquid paraffin

The history of the present illness began apparently three weeks before he took to his bed on December 7th with slight colly wobbles followed by loose motions usually twice daily During the last twelve days he had felt sufficiently depressed and ill to remain in bed for half the day He had no headache nor did he feel feverish until the evening of December 6th when his temperature taken by a medical relative was found to be 99° F

When first seen by me on the morning of December 7th the temperature was 98° the pulse 80 Examination showed him to be a man of spare build He lay quite comfortably in bed The expression was composed and mentally he was quite alert The breath was foul and the tongue thickly coated with white fur Abdomen slightly tumid but moved well on respiration Tenderness was present below right costal margin and to a lesser extent above the pubes Liver and spleen were not palpable No masses were felt There were no spots Nothing abnormal was found in the chest and central nervous system The pulse was soft and easily compressible Blood pressure 100/70 Rectal examination revealed some ballooning of the rectum otherwise there was nothing abnormal Routine urine tests were negative At 6 p m the temperature was 101° pulse 100

During the next few days the temperature gradually rose to 104° the chart exhibiting the step ladder effect described as typical of enteric fever The general condition became weaker his frame more shrunken and abdomen more distended He complained much of nausea during the first few days but there was no vomiting Two or three pea soup stools were passed painlessly each day A pathologist's report dated December 13th was as follows Agglutination reactions against the enteric dysentery Salmonella and Brucella groups negative in all dilutions Blood cultures proved sterile A differential blood count was normal

PROGRESS

On the 14th the patient twice passed considerable quantities of blood and clots per anum Two stools passed on the 15th resembled dark pea soup and contained curds There was no recent blood The motions remained limited to two or three per day and on no occasion were they associated with tenesmus The agglutinations and blood cultures were again tried on the 18th with negative results No pus or organisms were found in the urine The faeces contained large numbers of pus cells and some normal looking red blood cells Cultures from stools were negative for enteric and dysenteric organisms

During the morning of the 18th the abdomen became greatly distended and rigid and the respirations were noticed to be entirely thoracic The patient was rather collapsed and complained of general abdominal pain Pulse 130 to 140 A surgeon was called in consultation but during the afternoon the abdominal distension largely subsided and abdominal respiration

returned there being also an improvement in the pulse and the general condition It was considered that surgical measures were not indicated and that an exploration would be inadvisable During the day four or five extremely offensive stools were passed containing curds and a few small clots The possibility of ulcerative colitis was mooted Gentle irrigations of the colon with saline were begun followed by starch and opium enemata Kerol capsules were given by mouth

On the 22nd as the patient seemed eager for a fuller diet some slightly more solid elements were introduced Charcoal was given with the object of relieving the flatulence and deodorizing the stools At 6 a m on the 24th he suddenly collapsed and became comatose with a feeble flickering pulse and it was thought that death was imminent At about 5 p m however there was a dramatic recovery the pulse became stronger and his mental alertness returned There was no material change in his condition during the next few days and he remained quite free from pain Diarrhoea was less frequent and offensive The temperature varied between 100° and 103° Pulse 130 to 140 Tenderness was still present under the right costal margin and there was considerable epigastric distension

After January 3rd 1932 the course of the illness gradually became less favourable and wasting and general enfeeblement were more apparent By January 10th his condition was distinctly worse abdominal distension persisted and tenderness in the right hypochondrium was still present There was no visible peristalsis but the gastric outlines showed up clearly Frequent hiccupping was a distressing feature of the illness at this stage There was little diarrhoea only one or two motions after each lavage His vitality slowly but steadily declined until death followed on January 21st

Post mortem Findings

The post mortem examination revealed a fistula connecting the stomach with the transverse colon The fistula and the adjoining portions of the colon and stomach were matted together by a growth apparently carcinomatous in nature The stomach fistula and the colon distal to the growth contained quantities of charcoal The small intestine caecum and ascending colon were completely empty

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

ETHMOIDAL AND FRONTAL SINUSITIS

The following case is one of unusual interest both to the ear nose and throat specialist and to the general practitioner

A boy aged 6 was attended by the family doctor on account of swelling and redness of the left eyelids I was asked to see the patient and did so on January 19th 1932 The left eyelids more especially the upper one were swollen and red but no particular tenderness was present over the frontal sinus either on the floor or over the anterior wall only a little tenderness was elicited at the inner canthus No tenderness was felt over the antrum The conjunctiva was not involved by any inflammatory change The temperature was 99 8° F On examining the nose pus was seen in large quantity in the left middle meatus and to a lesser degree in the right middle meatus The pharynx and ears were normal On questioning the mother I elicited the fact that a similar condition had occurred the year before At that time both eyes had been affected but the condition had cleared up spontaneously As the symptoms were not very acute it was decided to keep the patient under observation

On January 22nd the swelling of the eyelids had much diminished but ocular paresis was present The left eyeball was unable to turn inwards beyond the sagittal plane Vision was normal for objects and printing On careful palpation I was able to detect a swelling at the inner canthus I considered an operation necessary and Howarth's operation was performed that afternoon in hospital under ether combined with injection of the incision line with novocain adrenaline solution The frontal sinus was found to be full of pus with polypoidal changes in the lining mucosa The ethmoidal labyrinth was cleared out completely and the sphenoidal sinus was opened up A small abscess was found far back under the orbital periosteum related to the lamina papyracea of the ethmoid bone and around this abscess there was much thickening The inner orbital wall was removed well back towards the apex of the orbit and the superior orbital fissure Finally the middle turbinal was largely removed A rubber tube was placed in position according to Howarth's technique after formation of a more anterior and direct fronto nasal duct The external wound was completely closed On January 24th ocular paralysis had passed off temperature was normal and the general condition good The child made an uneventful recovery and was discharged from hospital on February 13th

The interesting features of this case are

1 The extreme youth of the patient associated with such marked pathological sinus changes

2 The exact causation of the ocular paresis In my opinion this was due to a periostitis which spread backwards from the site of the abscess which was related to the orbital surface of the lamina papyracea and had caused a neuritis of the sixth nerve at the superior orbital fissure This is probable as this nerve occupies the most medial position of any of the structures in the superior orbital fissure

3 The fact that the vision of the left eye remained unimpaired to visual tests throughout the illness

4 The rapid disappearance of the ocular paresis which followed adequate surgical treatment

Donald A P Macalister
Coventry F R C S Ed D L O

PERINEAL INJURY TWO UNUSUAL CASES

The publication of the following records is warranted by the uncommon nature of the injury in each case

Case I

A married woman 34 years old three months pregnant while going downstairs two hours previous to admission tripped on one end of a loose stair rod which was sharp pointed She fell and the rod coming up like a tip-cat entered her perineum On admission to hospital three inches of the stair rod were seen to be protruding from the left side of the perineum The patient complained of great pain in the back especially on attempting to move there was some pain in the abdomen and the chest There had been no vomiting cough or haemoptysis The pulse was 86 the temperature and respirations were normal and there was no evidence of shock No abnormal physical signs were found in the chest or the abdomen

Under ether anaesthesia the abdomen was explored through a right paramedian incision It was found that the rod had traversed the vagina and transfixed the right broad ligament passing beside the pregnant uterus It had then crossed the pelvis without injuring any coils of gut had pierced the external iliac vein as it lay in the angle between the internal and external iliac arteries and had entered the substance of the psoas muscle Running upwards in the substance of this muscle it had missed the renal vessels and the duodenum by a very narrow margin and was next seen crossing the interval between the duodenum and the liver disappearing into this latter organ

The rod was removed gradually by traction on its lower end and the point followed in its course There was little bleeding from the liver but when the rod was removed from the hole in the external iliac vein which it had been plugging the vein bled freely and had to be ligatured The rent in the broad ligament was repaired and the abdomen closed drains being left in the subhepatic and pelvic region for twenty four hours On comparing the rod which was 2 ft 6 in long with the patient's body it was evident that

the point must have reached the level of the manubrium sterni after piercing the diaphragm and the lung

Convalescence was uninterrupted except for the coughing up on one occasion of an ounce or two of pus presumably from a lung abscess which did not give any physical signs There was no abdominal or perineal suppuration and the pregnancy was continued the patient being discharged fit and well Unfortunately however labour at full term was complicated by intestinal obstruction from adhesion of a loop of gut to the laparotomy scar and she died elsewhere

It seems almost incredible that a sharp rod should run through the body from the perineum to the upper end of the thorax without seriously injuring anything more vital than the external iliac vein An x ray examination would have been interesting but the patient s condition did not justify the extra unnecessary movement

CASE II

A railwayman aged 26 years was riding on a van and jumped off to alter the points He missed his jump and landed in a sitting position on the points lever which penetrated his anus and he had to be lifted off the lever by his friends On admission to hospital he was in agony with severe abdominal and perineal pain He was not shocked the pulse being 60 and the temperature 96° There was considerable laceration and oedema of the anus and board like rigidity developed in the lower abdomen

Under ether anaesthesia the abdomen was explored through a lower right paramedian incision A considerable amount of free blood was encountered in the peritoneal cavity and the first thing removed from the bottom of the pelvis was a piece of the patient s trousers which had been carried up on the end of the lever On clearing away the blood it was seen that the lever which must have penetrated a distance of at least a foot had ruptured the anterior wall of the rectum to the extent of two inches and had then traversed the pelvis and torn a hole six inches across in the pelvic mesocolon injuring the left external iliac vein which was bleeding fast The peritoneum was not grossly soiled with faeces The vein was ligatured the rents in the rectum and mesocolon were repaired a left inguinal colostomy was performed and the pelvis drained

Convalescence was retarded by a considerable amount of pelvic suppuration The temperature remained at the level of 102°–103° and a quantity of pus was discharged from the anus five days later another pint of pus was evacuated by an incision in front of the coccyx following which the temperature fell to and remained normal Five weeks after the first operation the colostomy was closed and following a somewhat protracted period of healing the patient was discharged fit

By a curious coincidence these cases were operated on within two days of each other and in both the external iliac vein was found to be torn

G H STEELE M S F R C S
Assistant Surgeon Royal Surrey County Hospital Guildford

Reports of Societies

THE TEACHING OF OBSTETRICS

SYMPOSIUM OF OBSTETRICAL TUTORS

A discussion on the teaching of obstetrics in which a large number of obstetric tutors took part was held in the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on May 20th Mr VICTOR BONNEY presiding

Mr EARDLEY HOLLAND in opening the discussion said that the advances in the teaching of obstetrics had been steady but a great deal still remained to be done It was only in 1886 that obstetrics became a necessary subject for qualification and during all the years since then not only the obstetric teachers but the British Medical Association had done their best to secure improvement and had petitioned the General Medical Council to that effect The General Medical Council had also done its best but had been thwarted by the licensing bodies and the medical schools In the post war period events had moved much more rapidly In 1919 the council of the present Section appointed a committee to inquire into the teaching of obstetrics and gynaecology and an excellent and really bold report was produced No fault was found with systematic teaching but the practical instruction given was condemned chiefly owing to the lack of facilities for in patient teaching The chief recommendation of that committee was for a great expansion of the in patient lying in departments, or for large maternity hospitals or centres with a whole time head The present regulations were issued by the General Medical Council in 1923, though they were not fulfilled in all the medical schools The most significant thing that had happened in regard to the teaching of obstetrics in this country was the recent report of the Departmental Committee on Maternal Mortality and Morbidity This was really the Magna Charta of obstetrics The General Medical Council naturally lost no time in circulating the recommendations to the licensing bodies but of course it was of no use for the General Medical Council to make regulations unless these were carried out by the bodies in question The licensing bodies had rather turned down the suggestions of the Departmental Committee The Conjoint Board policy was against the recommendations, but it was right to say that its policy was dictated by the inadequacy of the facilities at present in the London medical schools The present discussion would no doubt largely centre on the teaching to be given to the undergraduate What was the product which the schools aimed to turn out? All they could hope to do was to turn out a reasonably safe practitioner of midwifery not an obstetric specialist It was the custom to decry systematic lectures but he believed most firmly in their value because a difficult subject could be presented much more vividly and clearly in that way than by reading a textbook As to clinical instruction the principle that students should be *taught* on in patients was so well established as to need no elaboration Two points merited discussion the optimum number of beds which it was desirable to have to give full value to the teaching and also whether obstetric beds should form part of a general hospital to which a medical school was attached or should be in special hospitals like the maternity hospitals The difficulty in providing beds had been the main problem all the way through and London in this respect was in an unfortunate position The present number of obstetric beds in the London hospitals associated with medical schools was 259 They were distributed as follows Charing Cross 19 Guy s 21 King s College 24 London 21 Middlesex 14 Royal Free 37 St Bartholomew s 17 St George s 11 St Mary s 10 St Thomas s 21 University College 52 Westminster 12 In some cases the numbers might have been slightly increased since this compilation was made The maternity beds represented about 7 per cent of the total beds in the hospitals These 259 beds ought to be capable of accommodating 6 000 cases in a year given a fortnight a case These would provide twelve cases each for 500 students the disadvantage was the small units into which they were divided The period of training had given rise to a great deal of discussion He himself was in favour of six *months* training but it was of no use giving a six *months* course unless the time could be fully occupied At present the General Medical Council was inclined to lay more weight on a longer period of residential study than on a larger number of cases He found his own students woefully ignorant of the anatomy and physiology of reproduction and much of his time as a teacher was taken in teaching the student

what he should have been taught while studying his anatomy and physiology Another practical point was that more use should be made of the phantom He would like to have a special dummy or phantom room where students could practise the manœuvres daily under supervision

Mr L CARNAC RIVETT (Middlesex) said that the clinical aspect was taught at Middlesex primarily in a course of lectures given three times a week their ambition was *to make them clinical rather* than systematic lectures *Great importance* was also attached to tutorial classes Ante natal clinics were also held twice a week conducted by the two assistant obstetric surgeons The teaching of practical obstetrics to be efficient should include instruction to each individual student on the actual delivery of cases not only in normal labour but in all such obstetric operations as the student in later practice was ever likely to have to perform himself At the Middlesex owing to the commercializing of its neighbourhood the district was disappearing they had an average of about eight cases a month On the completion of the rebuilding of the hospital it was expected that they *would have forty* obstetric beds in his opinion the minimum for the teaching of obstetrics should be fifty He considered the sister midwife to be an ideal teacher for normal deliveries and he could see no objection to training students and pupil midwives together It was hoped to organize the department so that each student would be given ten cases in the wards and twenty in the district So far as abnormal deliveries were concerned at Middlesex the teaching was hampered owing to the absence of material Thanks to ante natal care the number of abnormal deliveries was very small The only solution he could suggest was to concentrate on large *hospitals If* three or four hospitals of 250 beds each were established and all the obstetrical teaching concentrated in those there would be much more opportunity of teaching the students abnormal cases

Mr NINIAN FALFNER (Rotunda Hospital Dublin) considered that it was necessary to insist on two months residence for students in maternity hospitals and that attendance at a larger number of hospitals should also be required He desired further to see the gradual development of post graduate training in conjunction with a special degree He believed in the preservation of systematic lectures first because these gave the student a sense of discipline and secondly because they were delivered by men whose experience was lengthy and therefore particularly useful in teaching As to teaching forceps deliveries the number of such deliveries at the Rotunda was not very great and it would be quite impossible to ensure that every student performed a forceps delivery On the other hand it did seem wrong that a man should go out into practice and feel trepidation when first called upon to perform a simple obstetrical manœuvre like the application of forceps In time he thought it would be possible with larger hospitals and greater provision of beds to ensure that men had the opportunity of carrying out such practice It was interesting to note that where deliveries were carried out by students on the district the mortality compared most favourably with the general statistics That was possibly due to the fact that while doctors were notoriously always in a hurry the student was hardly ever so As to the use of phantoms he believed that such methods had a definite field of usefulness but should be regarded more as a preparatory adjunct than as a substitute for the actual performance of the various manœuvres

Mr J M BELL (Queen Charlotte's) said that he had obtained the views of a number of recently qualified men These men believed themselves to be in a position to diagnose and treat common gynaecological conditions and regarded their training in gynaecology as adequate With regard to obstetrics however their answers were different With few exceptions the newly qualified man attended his first confinement in fear and trembling The theoretical teaching in both obstetrics and gynaecology was excellent One matter which needed attention was the question of birth control Few students had any definite ideas on birth control and yet this might be the problem presented to them by their first patient He believed that *the practitioner should be in a position to tell his patients* the methods and the limitations of the practice It would also be an advantage to have cases of normal labour demonstrated to students quite early in their clinical career They would then be able to appreciate the problem described to them in their systematic lectures The ideal would be to have a resident obstetric tutor though that was not practicable with the small isolated units in this country

Miss GLADYS HILL (Royal Free Hospital) said that the most useful contribution she could make to the discussion would be an expression of the personal experience and opinions of a number of students—now graduates in medicine the majority of them in general practice—who had been trained since the institution of the gynaecological and obstetrical unit at the Royal Free Hospital She had sent out a questionary and had analysed nearly one hundred replies A certain number of those replying appeared to have derived benefit from lectures but the number was small and some of those who spoke of such benefit qualified their appreciation In obstetrics apart from district work the labour ward teaching was considered to be the most valuable form of instruction followed by demonstrations with phantoms The lantern and cinematograph had a relatively small appeal The most striking result of the inquiry was that for imparting lasting knowledge clinical teaching held pride of place

Mr W J H M BEATTIE (St Bartholomew's) considered that the teaching of gynaecology to students was comparatively easy but obstetrics was more difficult chiefly because of the large number of students and the small amount of obstetric material There were many teaching hospitals in London but only a small obstetrical unit in each The lack of sufficient material was the only fundamental difficulty in the teaching of obstetrics to students in this country He believed that tutorial and practical demonstrations should take precedence over systematic lectures In his school apart from the usual systematic lectures given by others he took a tutorial class four times a week during each term That method of teaching was particularly useful not only from the examination point of view but also in making the student think for himself Too much attention was paid to the theoretical and academic side of teaching owing to the fact that the immediate aim of the student was to pass his qualifying examination Routine practical work both in gynaecology and in obstetrics was easy to teach as both subjects were circumscribed as compared with medicine and surgery Most students considered it unnecessary to attend as a routine the gynaecological operations but they *did desire to perform* at least one forceps delivery More generalized post graduate teaching in both obstetrics and gynaecology would be an important factor in the better education of the recently qualified man

Mr W G MACKAY (Glasgow Maternity Hospital) said that the methods employed in teaching obstetrics depended primarily upon the teacher's objective In some countries especially America the training was very extensive and the attempt was made to produce skilled obstetricians He put forward certain principles that the students

should be made conversant with the principle of preventive medicine as typified in ante natal care they must be impressed with the supreme importance of antiseptics and they must learn the limitations of operative intervention in domestic practice The student in Glasgow was first introduced to the study of obstetrics by a preliminary course of lectures and tutorial classes in the university With regard to the relative importance of these he thought the preliminary course should consist of about forty lectures and ten tutorial classes The subjects of the anatomy and physiology of reproduction were very specialized and it seemed to him impossible to teach them early in the curriculum and apart from obstetrics with any degree of success In the management of labour very exact instruction was given particularly as regards the precautions to be taken against infection The student delivered three cases in hospital under supervision before being permitted to undertake outdoor deliveries in the hospital service Too often the outlook of the student differed from that of the teacher The teacher looked to the future whereas the majority of the students appraised the value of the teaching from the point of view of passing examinations • The matter could be remedied by making the final examination more clinical in character

Mr A J WRIGLEY (St Thomas's) said that the success or failure of teaching in any branch of medicine was to be gauged by the adequacy of the student's equipment for practice in after life and he complained that the student was not taught to conduct his cases in hospital or even on the district as he would have to conduct them in the exigencies of his practice The teaching was conducted from the hospital or nursing home aspect which was not that of the busy practitioner He believed the only really valuable instruction in practical obstetrics was the sporadic teaching that went on all too infrequently in the labour wards and the ante natal clinics In the labour wards the work was done very largely by inexperienced house officers The shortage of clinical material was obvious but while an increase was desirable it was of far greater importance to revise and improve the methods of teaching on the cases at present available The mere addition of another ten to the number of women delivered and of one month to the curriculum with the present methods of teaching and supervision would be without value The moral was that more time should be devoted to obstetrical training and perhaps less to such matters as surgical dressing but one had only to imagine the reception of any such suggestion at a meeting of the medical staff of any of these institutions Members of the honorary staffs never seemed to find it possible to teach in the labour ward whereas they spent many hours in demonstrating on the gynaecological side He did not believe in the expediency of a whole time resident teaching staff in obstetrics unless its members had practised for some years prior to appointment

Mr J B BLAIKLEY (Guy's) said that everyone was agreed that lectures only played a small part in the teaching of obstetrics They were necessary inasmuch as they gave one a set time for the laying of a foundation on which the student could build The actual practice in the labour room and the clinical teaching in the wards was of infinitely more value Actually at Guy's with their twenty one beds they had seldom any difficulty in finding sufficient material on which to teach in the ward and if men were content to spend sufficient time living adjacent to the hospital within three months they could see pretty well every complication of labour At present the men mostly lived only a week or a fortnight near the hospital and spent about three weeks on the district In that time they might quite well see very little abnormal Practical teaching could not really be started until a man was qualified and himself in a position of responsibility He thought that examinations played a very important part in the student's mind as to the manner in which he set about his learning and therefore they should be kept as practical as possible He deprecated the present tendency to stiffen the examination by widening the scope of questions so that they roamed within such realms as biochemistry with which there was no need for the practitioner to have any close familiarity He did not like teaching by midwives at all He thought that where midwives and students both learned in the same hospital it ought to be on competitive lines there ought to be a feeling of rivalry between the two

Mr R A BREWS who said that he had been an obstetric tutor at the London Hospital for the last four years gave an outline of the curriculum Every student was taken for five months For the first month his work was ante natal for the second month he was resident in hospital and delivered normal cases under supervision usually getting eight or ten cases in the third month he was still resident and conducted deliveries in the district in the last two months he was chiefly employed in gynaecology In addition to that an arrangement existed whereby during the whole of the five months the student received instruction for about two hours a week from the special physicians to the children's department he was instructed by them in infant care and that instruction was of considerable importance Every month about four or five new students were received as the students changed their job each month it was most difficult to keep one's teaching elementary enough for the incoming students He urged the necessity for individual tuition among the tutors It was all very well for their seniors to walk about the lecture rooms and propound matters with the help of microscopical slides and pictures That was excellent in its right place but he thought that the obstetric tutor had to get hold of his man individually talk to him and ask him questions In his experience he had found this very difficult for the reason that a large number of students were reading for *medicine* and *surgery* when they ought to be reading for *midwifery*

Mr J C MOIR (University College Hospital) believed that models were very useful in teaching midwifery but a great deal depended upon the sort of model At University College there was a definite programme of this work which repeated itself in cycles every four or six weeks The foetus used was a real foetus treated in such a manner as to retain its flexibility and the phantom was one specially supplied from Vienna He agreed with Mr Eardley Holland's remarks about systematic lectures It was only by such lectures that the principles of the subject could be taught to the student If he wandered through textbooks he became lost in detail But there was an important qualification to be made In London schools more teaching seemed to be done by informal classes and demonstrations and there was less insistence upon the systematic lecture He believed that the reason why the lecture system was less popular in the South was because the members of the classes came in at different stages of the medical curriculum It was absurd for example to give a lecture on the nature of ovarian cysts to men who had not had a course in pathology and did not know the meaning of the words carcinoma and sarcoma So long as men were allowed to start their medical studies at different times of the year the method of teaching which depended upon systematic lectures was so heavily handicapped as to be ineffective unless supplemented by other teaching

Mr J D FLEW (University College Hospital) said that at his hospital they had eighty five beds—thirty for gynaecology and fifty five for obstetrics There was

enough material for the student himself to deliver at least twenty cases In spite of these advantages the quantity of abnormal material was very small He felt that as a general rule the main idea in the teaching of obstetrics should be to make a man extraordinarily efficient in handling the perfectly normal labour and fit to deal with such emergencies as might arise unexpectedly during labour but that other operations should be left entirely out of the normal medical curriculum The young practitioner should be trained to recognize the abnormalities when he saw them and also to realize that they were not within his sphere so that he could call in somebody more competent to deal with them Far more attention should be given to nursing points How many students had ever sat on a bed and watched a baby being breast fed? The student when he went into general practice would be asked what sort of maternity belt should be worn How many students could answer that? For a certain part of his curriculum the student should be turned into a nurse As for ante natal treatment this had been going on for ten years or more and yet maternal mortality had not decreased nor had the incidence of eclampsia It ought to be ensured that ante natal treatment was properly given

Miss K I PARKES (King's College Hospital) said that obstetrics was the most difficult branch of medicine to teach effectively She believed that once the student was on the road the tutorial system was more effective and was preferred by students Most of them were rather keen on obstetrics but gynaecology was the subject in which it was impossible to rouse any particular enthusiasm The subject of venereal diseases was studied during the months devoted to gynaecology and was she thought somewhat neglected A more regular attendance at the venereal diseases clinics should be encouraged Instruction in the actual conduct of labour was difficult to give but the aim was to turn out a student who would be able to conduct a normal labour and who would have witnessed the treatment of the common deformities Although students were well versed in actual delivery they were often rather backward in the management of the puerperium

Mr C D READ (Westminster Hospital) after saying it would appear that tutorial classes would always be necessary to supplement the groundwork covered by systematic lectures gave some criticisms by Westminster students with regard to the plan of teaching These students felt that insufficient detail was given on the question of antisepsis in adverse surroundings such as when attending a confinement in the slums Again forceps application was taught almost entirely on the dummy and they wanted to know whether opportunities could not be given for seeing it practised in the hospital Very few abnormalities about which they were taught were actually encountered in the hospital this being due to the fact that 90 per cent of the cases in the hospital and in the district were booked cases If the student could be brought into touch with a larger proportion of emergency cases it would be all to the good The cinematograph might be used in teaching but it was costly

In further discussion Dr J M WYATT pointed out on the question of systematic lectures that the student had to attend lectures for nine months or a year before actually beginning his obstetrics and gynaecology In the qualifying examinations he thought that examiners should try to make their questions practical and not over theoretical He took exception to the remark of one speaker that there had been no decline in the mortality from eclampsia Cases of that kind were now rarely seen at St Thomas's and he thought there must be some general improvement Dr J S FAIRBAIRN said that the dummy was useful but he would have it employed only after the student had seen some obstetric operations He might then practise on the dummy in the light of what he had learned in the labour room He expressed appreciation of the discussion but wished there had been a little more emphasis on the enormous importance of creating an atmosphere of prevention throughout the whole course He also complained of some of the questions set by the examiners A MIDDLESEX STUDENT added a few words from the student's point of view He wanted all lectures to be clinical demonstrated with clinical material before the student's eyes He also spoke of the value of talkie demonstrations and had much appreciated a cinematograph film illustrating Caesarean section He felt that instead of students standing on the outskirts of an operative scrum they should have more individual teaching

Mr VICTOR BONNEY in closing the discussion said that he had held peculiar views about obstetrics for many years He still thought that obstetrics should be recognized as a branch of surgery He had visualized a state of affairs in which surgery would embrace obstetrics and obstetrics would be part of the training of the surgeon This would rectify the difficulty arising out of the shortage of operative experience in obstetrics

Mr EARDLEY HOLLAND in reply commented upon the most stimulating and refreshing discussion and in reference to what had been said about the examiners he made an allusion to the correspondence lately appearing in the *British Medical Journal* under the heading The student in irons and said that it was time someone wrote under the title The examiner in manacles

INDUCED MALIGNANT TERTIAN MALARIA

In a joint contribution made to the Section of Tropical Diseases and Parasitology of the Royal Society of Medicine on May 5th Colonel S P JAMES Dr W D NICOL and Dr P G SHUTE suggested that the employment of *Plasmodium falciparum* in malaria therapy was more effective and not necessarily more dangerous than the use of *P vivax* or *P malariae*

The authors discussed the problem whether there is more than one species of malignant (crescent forming) parasite and adduced evidence that in all their cases though eight strains were employed only one species was concerned—namely the Italian malignant tertian parasite *P falciparum* They attributed the existing confusion on this point to the fact that investigators had relied insufficiently on morphological and biological evidence and had been too much influenced by clinical observations on which deductions as to the periodicity of sporulation were erroneously based They suggested however that within the species there might be various geographical races which while not morphologically different could be recognized as being distinct by their clinical virulence immunological reactions and other biological properties In explaining the temperature curves of cases of malignant malaria they threw doubt on the view held by some that this condition was due to a type of parasite which completed its asexual life cycle in a shorter period than forty eight hours and they did not think it necessary to assume that the duration of the life cycle was variable or irregular The existence of a malignant quotidian parasite need not therefore be postulated Malignant tertian malaria it was added differed from the benign tertian condition in that recrudescences could not be limited to a period of eight weeks after recovery from the primary attack Although some of the seven mosquito infected patients who had been under continuous observation at Horton for a year or more after their recovery from the primary attack had many recrudescences during the first six

months none had subsequently shown a relapse or a recurrence

As regards treatment of the malarial attacks, it was pointed out that there were two factors of outstanding importance (1) the degree of natural or acquired tolerance or 'immunity' possessed by the patient and (2) the clinical virulence of the particular strain which caused the infection It was urged that the usual practice of administering quinine in an attack of malignant tertian malaria as soon as the diagnosis had been made was not always in the best interests of the patient Recrudescences tended to be less severe than the primary attack and a certain degree of immunity could be gained which would be of lasting value There was also a possible risk of blackwater fever when symptoms of continuous after treatment with quinine were adopted to protect against relapses Finally the new synthetic anti malarial preparation atebrin (formerly known as erion and prepared at Elberfeld) was reported as having been highly effective in seventeen cases the dose being 0 3 gram daily for five days one patient required a second course of treatment The testing of this substance was made under conditions arranged to exclude certain chemotherapeutic errors which had undoubtedly tended in the past to confuse the estimation of the value of quinine It was added that this new synthetic substance with its remarkable curative properties appeared to be particularly worthy of further attention in view of the fact that in the present investigations the results were achieved in cases infected with strains of *P falciparum* against which quinine had proved ineffective in conferring permanent cure

SENILE CATARACT

The annual congress of the Ophthalmological Society of the United Kingdom was held on May 12th to 14th in the Department of Physiology Edinburgh University under the presidency of Dr A H H Sinclair

Dr Sinclair in his opening address discussed the intracapsular operation for cataract extraction and showed an excellent film of the operation as performed by himself The Bowman Lecture on ocular movements was delivered by Professor J Van der Hoeve

The subject for special discussion on May 13th—senile cataract the pre operative and post operative management and complications—was introduced by Dr A J Ballantyne He said that the operation consisted in making an incision into the wall of the eyeball and removing a cataractous lens through it It sounded a straightforward proceeding yet it was hedged round with difficulties and possibilities of disaster Complications might exist before during or after operation All the standard methods were capable as shown by statistics of giving a long series of first class results It could be said that antisepsis and asepsis had not achieved the same triumphs in ophthalmic as in general surgery for infection of the wound the iris and the ciliary body was still a serious complication, though actual wound infection was now less than it was thirty years ago Such infection might not be evident until three days after operation In this he did not think endogenous infection played a great part though it probably did in the non purulent inflammations of the iris and the ciliary body The endogenous factor might be in the form of gastro intestinal toxins toxic products of tissue metabolism the toxins of bacteria or of micro organisms themselves Trauma was not apparently a necessary precursor of ocular inflammations Dr Ballantyne said that he thought exogenous infection to be of paramount importance in these cases even in low grade intraocular inflammations

Discussing prophylactic asepsis he mentioned that many surgeons found that finer movements and the sensitiveness of the fingers were too much hampered by wearing rubber gloves at operation He strongly favoured the wearing of a mask over mouth and nose by both operator and assistants The danger from chronic dacryocystitis could be obviated by excising the sac by ligaturing the canaliculi or by cauterizing the puncta before the intra ocular operation was considered He always had a culture made from the conjunctiva two days before operation and the eye was cleansed twice daily by irrigation with normal saline followed by the instillation of 1 in 1 000 acriflavine drops Should the eye appear to be clean on the operation day a final application of lotion and drops was made while the patient was on the table If however, an abundance of pneumococci streptococci or of *Staphylococcus aureus* was found operation was postponed and a further course of irrigation with the addition of 1 per cent mercurochrome drops was carried out He had had excellent results from the use of acriflavine and mercurochrome In a recent inquiry into the value of various antiseptics silver nitrate emerged very honourably Speaking further of endogenous causes of trouble Dr Ballantyne said that the treatment of any glycosuria present, the removal of septic teeth and other obvious sources of focal sepsis and the giving of a purgative a day or two before the operation were the usual pre operative measures but it must be remembered that latent syphilis and tubercle might cause uveal inflammation after cataract extraction Bowel and kidney conditions in the patient should also be investigated more often and with greater thoroughness than was usual Surgeons still cherished the traditional fear of diabetes a disease which was at one time regarded as an absolute bar to operation because of the liability to profuse haemorrhage and the sluggish healing of the tissues in these subjects In 2 000 cataract operations on diabetes performed by Wheeler in New York haemorrhage into the anterior chamber occurred in 28 94 per cent as against only 5 per cent in ordinary patients In diabetics, even in the absence of haemorrhage iritis was not uncommon complication of the operation These patients also showed an increased tendency to prolapse of iris after simple extraction or after extraction with iridectomy Should hyperglycaemia appear after the operation there should be no delay in giving insulin—with present knowledge it should be possible to prevent the onset of diabetic coma Albuminuria *per se* was not a bar to operation, but it might point to cardiovascular or renal disease He discouraged douching and avoided pressure or anything which might induce spasm of the lids He had seen only two cases of sympathetic inflammation of the other eye after operation Another post operative complication was glaucoma, but in over a hundred cases of cataract in nursing homes he had seen no more than four of glaucoma this might follow any type of operation and the interval might vary from a few to twenty years The best results seem to have been obtained by iridectomy and sclero corneal trephining, and especially trephining at the angle of the anterior chamber opposite the original wound His custom was to cover only the operated eye as with both covered patients were depressed mentally Nor did he insist on the supine posture so long as the patient was immobile and comfortable Mental trouble sometimes ensued and the commonest form was delusions of persecution

Sir Arnold Lawson remarked that as the conjunctiva was normally clean he regarded most of the antiseptic washings and other precautions against contamination unnecessary and thought that they often wrought harm by their irritant action Certainly no cataract operation should be undertaken when there was any risk of pathogenic infection He had injected cultures of such organisms as *B xerosis Staphylococcus albus* and

Staphylococcus citreus into the conjunctivae of rabbits and guinea pigs always with negative results All that was necessary was to exclude the presence of conjunctival discharge if a dangerous organism was present there was always a discharge from the eye Never—certainly in private practice—had he experienced a case of intraocular suppuration These operations were usually performed on patients of fairly advanced years hence every care should be taken to have them in the best general condition when operating He agreed with those who considered oral sepsis to be an unfavourable factor in these cases It was most essential in his opinion to secure a complete dilatation of the pupil as soon as possible after the operation

Sir RICHARD CRUISE stressed the importance of securing the confidence of the patient and of reassuring him He always gave a sedative If there was reason to anticipate haemorrhage 5 c.cm of haemostatic serum was given a few hours before operation In some cases he used nembutal Lieut Colonel WRIGHT (Madras) said he thought that the present percentages of complications after this operation were so small that they represented no more than a reasonable average proportion of accident Mr R FOSTER MOORE expressed the firm view that no intracapsular extraction would stand the test of time for the main reason that there was a danger of vitreous loss The behaviour of the patient was an important factor and could not be controlled by the surgeon he favoured the older method largely on that account

Mr JOHN MARSHALL and Dr C W CRAHAM read papers on blindness and its certification in which they explained in detail the working of the scheme for certification of the blind in Scotland The advantages they claimed were that (1) there was a regional authority responsible for the certification of blindness for all purposes (2) there was a board system and (3) it provided a satisfactory method for the investigation of the causes of blindness Mr J H FISHER expressed admiration of the example set in Scotland in this matter of certification of the blind which was important not only to those afflicted with blindness but also to the ordinary taxpayer

RELAPSING FEVER ON THE GOLD COAST

A meeting of the Edinburgh Branch of the Royal Society of Tropical Medicine and Hygiene was held on May 12th with Lieut Colonel E D W GREG I.M.S (ret.) in the chair when Dr HELEN RUSSELL read a paper on relapsing fever on the Gold Coast Her study included observations on the clinical picture and pathology of the louse borne relapsing fever which she had seen in West Africa in 1929 and 1931 To the tropical pathologist the miliary lesions of the spleen form the most useful guides in the differential diagnosis between this condition and the other fevers associated with toxic jaundice Slides from the various organs from fatal cases were demonstrated including kidney sections containing lime casts—a point of considerable importance because lime casts had been held by some workers to be characteristic of yellow fever She had studied the disease experimentally in one of the local rats *Cricetomus gambianus* both normal and splenectomized In these animals the disease also relapsed and each time the spirochaete appeared in one individual rat it was serologically a new type On passage of blood of relapses to new hosts the spirochaetal type can be made to alternate with unfailing regularity The relapsing fever spirochaete had apparently the capacity to vary serologically almost indefinitely given the necessary serological environment an attribute which allied it to the trypanosomes and perhaps other protozoa rather than to the bacteria This capacity for endless serological readaptation might also be a characteristic of the spirochaetes of syphilis and yaws Schobl had suggested that the periodic remanifestations of yaws and syphilis were relapses if this was so they might also be associated with serological changes in *T. pallidum* and *T. pertenue* The difficulty in treating spirochaetal and protozoal diseases might be closely associated with the capacity of the infecting organism to readapt itself serologically and might explain the importance of giving the specific remedy at a certain stage in the disease only and then if possible in adequate doses Dr Russell asked if the spirochaetal variation could be regarded as a mutation because the serological change was transmitted indefinitely when the spirochaete was passed directly from animal to animal

Colonel GREIG demonstrated a patient suffering from a very early stage of dermal leishmaniasis There was no ulceration merely a small oval papule on the left forearm On puncturing the margin of the papule and making smears from the juice numerous examples of *Leishmania tropica* were seen inside the large mononuclears The patient a European lady came from Gujarat Punjab She first noticed the lesion about December 1931 and it has not increased much in size since Dr HELEN RUSSELL also showed a blood film from a case of sickle cell anaemia in a West African native and sections of tissue from other cases showing the sickle cell phenomenon which was always associated with persons of negro blood and appeared to be inherited

PANCREATIC SARCOMA

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland held on May 6th with the president Dr J T WIGHAM in the chair Dr C J SHORTALL read a paper on sarcoma of the pancreas and described a case of primary sarcoma in that gland

He said that sarcoma occurred very rarely and in a review of the literature on the subject he could only find a limited number of well authenticated cases of primary pancreatic sarcoma In 1925 Marxer stated that no case of round celled sarcoma in that site had been described The history of his case was as follows The patient a man aged 31 years was admitted to St Vincent's Hospital on February 23rd 1932 suffering from severe epigastric and loin pains which had commenced in the previous December Vomiting was infrequent For a time he had been treated for a gastric ulcer Jaundice appeared shortly before admission and gradually became more intense Slight epigastric distension and extreme tenderness in this region with ecchymosis were noted The blood count revealed a mild secondary anaemia and the serum gave an immediate direct positive van den Bergh reaction Cholecystographic examination showed a liver shadow which was denser than normal but there was failure of concentration of the substance in the gall bladder The stools were clay coloured and contained excess of undigested fat The patient died on April 8th 1932 At post mortem examination the abdomen was found to contain bile stained fluid To the naked eye the whole pancreas seemed to be involved in a tumour-like growth which at its head compressed and occluded the common bile duct The liver and the other abdominal organs were deeply bile stained and the gall bladder was distended Microscopically the pancreatic growth was shown to be a round celled sarcoma with small isolated patches of normal gland substance containing acini ducts and islets of Langerhans A single secondary deposit was found in the liver another in the wall of the gall bladder, and others in the right lung.

A number of other pathological conditions were discussed

Reviews

OPERATIVE OTO RHINO LARYNGOLOGY

Professor PORTMANN with four of his colleagues has produced in two lordly volumes an account of the operative surgery of the ear the nose and the throat[1] as practised in his clinic All the ordinary operations both great and small are described and in addition a few which are probably more in vogue at Bordeaux than elsewhere though there is no lapse into fads and eccentric methods It would perhaps be more correct to say that there is a procedure described to meet all the ordinary requirements for neither alternative nor untried operations are included but only those actually used at Bordeaux The descriptions, with an account of the indications and possible complications are given in a concise and compact style and are clarified still further by a profusion of diagrams and pictures illustrating every operative step

Professor Portmann describes the style of the writing as presque telegraphique but the limitation indicated suggests that the term oracular would be more fitting than telegraphic We do not use this expression in any disparaging sense but in order to explain that the book is written in such a way that the dogmatic advice of Professor Portmann must either be accepted or rejected He has no message of philosophy for the operator who pondering over difficulties in diagnosis and technique turns to his books for suggestions alternatives to suit unexpected situations and fresh ideas generally This is not to impugn the advice of Professor Portmann which is generally excellent and for all who are content to let someone else do the thinking he is a safe and reliable guide A surgeon who occasionally undertakes this class of work or one recently appointed to the staff of a hospital might find the book highly useful for reference on technical points

On the whole the dogma is orthodox and naturally a greater reliance is placed on local anaesthesia than is usual in this country There are however some points not without importance which cannot escape attention The plastic operation on the meatus after the radical mastoid operation would as it is described extend so far into the concha as to lead to a severe deformity of the pinna and expose the inner wall of the tympanum unnecessarily Even if successful surgically the patient might well resent the success from an aesthetic standpoint The external operation on the frontal sinus is liberally illustrated with seventeen pictures showing precisely the various steps but in seven the patient has changed from the supine to the Father William position which most operators would find inconvenient if this be what is intended Again the method proposed for performing the operation of laryngectomy provides indifferent drainage and is likely to be followed by severe sloughing which is stated to be almost the rule though it is well known that the ultimate results obtained after this operation in Bordeaux are good The loss of flexibility from ignoring alternative methods is here very evident

We congratulate Professor Portmann on his choice of the artist whose skill has made the pictorial part of these two volumes almost equal in lively representation to a visit to the operating theatre itself Professor Portmann has established an international reputation in the surgical side of otology and laryngology and this *magnum opus* in which his practice and teaching are crystallized will be welcome to his numerous admirers and students

[1] *Traité de Technique Opératoire Oto Rhino Laryngologique* Par Georges Portmann Publié avec la collaboration de MM H Retrouvey et Jean Desplas Paul Le Fur et G Martinaud Paris Masson et Cie 1932 (Pp 850 467 figures 2 plates Paper cover 200 fr bound 250 fr the two volumes)

DIETETICS FOR THE SURGICAL CASE

The scientific study of dietetics as a branch of medicine has in recent years received much attention The vague rules of the old practitioners have given place to precise formulae involving calories specific dynamic action and other matters which have emerged from the many researches carried out in the last twenty five years Reliance on these formulæ without the exercise of that judgement which comes from accurate clinical observation leads to failure in the dietetic treatment of disease Combined with this judgement the results of recent researches in dietetics find application in almost every field of medical science The tendency to regard this new knowledge as a useful aid only in special conditions such as gout diabetes, or obesity is one which indicates a very narrow view of its value The recent publication under the aegis of Professor van Noorden of a small volume on the application of dietetics in surgical conditions by an expert in metabolic work and a surgeon in collaboration is timely The preparation of patients for operation and their after treatment are so often a matter of routine even in the larger hospitals that any untoward sequel is rarely considered from the point of view of errors in diet In such conditions as diabetes of course the necessity for surgical intervention brings with it the added responsibility of carefully controlled diet But attention is not generally paid to diet to the extent it deserves in ordinary surgical cases except to give those general directions which so often are no directions at all

The authors of the volume before us have been at considerable pains to present the principles on which rational dietetic treatment of the surgical case should be based Being something of a pioneer work they in the theoretical part restrict themselves to shortly stated general principles In the application of these principles to the actual problems of surgical practice the book reveals great experience and practical sense The details of diet before and after operation in almost every type of case the methods of preparation of the dishes and a large number of recipes are given in an uncomplicated way so that the book may be recommended to nurses and sisters as well as to surgeons As a statement of the practice of so famous a school as the Viennese the book will be of special interest to our own teachers of surgery

[2] *Diatetik bei chirurgischen Erkrankungen* Von Dr I W Lapp und Dr H Neuffer Wien und Berlin Julius Springer 1932 (Pp x + 188 7 figures RM 9 bound RM 10 80)

MENTAL DEFICIENCY PRACTICE

The book with this title[3] by Drs F C SHRUBSALL and A C WILLIAMS is the most recent addition to the steadily growing list of works dealing with the various aspects of mental deficiency It is written primarily from the administrative point of view and is chiefly intended for the use of those practitioners who are concerned with the diagnosis and disposal of defectives under the Mental Deficiency Act and perhaps more particularly the Education Act After dealing with the concept of mental deficiency a subject regarding which it may be remarked there is still a great deal of misconception the authors then consider briefly in turn the subjects of classification pathology, aetiology and the various clinical types of defect Regarding heredity in view of the claims of certain fervid advocates of sterilization that a large proportion of defectives are the children of defective parents it is of interest to note that of a very large number of defective children in the London special schools in only 5 per cent of cases was the father or mother known to be defective

[3] *Mental Deficiency Practice* By F C Shrubsall MD FRCP DPH and A C Williams MRCS LRCP DPH London University of London Press Ltd 1932 (Pp viii + 252 illustrated 12s 6d net)

On the other hand the parents were subnormal or unstable in 50 per cent of average intelligence in about 35 per cent and slightly above the average in nearly 10 per cent These figures confirm the views which have been expressed by most workers of experience among defectives and indicate the comparatively slight preventive effect which would result from the sterilization of defectives

Having in mind the main purpose of the book the authors rightly devote three chapters to the subjects of clinical examination mental tests and diagnosis These are sound and practical and in addition to a description of the chief tests used for diagnostic purposes useful information is given as to the methods of application and the chief difficulties which may be experienced A study of these chapters should serve to correct the all too prevalent idea that the diagnosis of mental defect consists merely in the automatic application of certain routine tests As the authors truly say—and it cannot be too strongly emphasized— the assessment of mentality is not a mere matter of so many tests per cent passed but involves observation of the whole behaviour The last half of the book deals with administrative disposal and procedure It discusses the legal basis describes the different kinds of training care and control which are available deals with the various duties of education authorities and local authorities under the Acts and concludes with filled in specimens of the numerous official certificates and forms

This is a valuable addition to the literature of mental deficiency It does not profess to deal exhaustively with the clinical side of the subject Its point of view as we have said is mainly the administrative one but in regard to this it will undoubtedly prove to be a sound and accurate guide It is a book which should be in the hands of all those who are in any way concerned with the administrative disposal of mental defectives

THE IRIS IN VERTEBRATES

Ophthalmology is perhaps fortunate among the special branches of medicine in that it provides a large number of *points of contact with other subjects Being very much* concerned with both surgery and medicine it establishes very close relations with branches of science as far divorced as optics and the psychology of perceptions while on innumerable occasions it makes excursions into the practical affairs of industries and commerce It is only to be expected therefore that among ophthalmologists should be met people of wide interest extending beyond the boundaries of the clinical practice of their subject An excellent example of this tendency is provided in a monograph written by IDA C MANN on the iris pattern in vertebrates[1] issued by the Zoological Society a work which forms a milestone in a long series of researches undertaken by her on the embryological and phylogenetical development of the eye

It is well known that the appearance of the normal iris in man and animals is extremely variable the variability depending on the arrangement of the blood vessels the shape of the pupil the distribution of pigment and the degree of translucency of the tissues The problem the writer has set before herself is to determine how far these differences indicate fundamental types in the zoological kingdom how far they are governed by the vascular arrangements of the developing eye and to what extent they are determined by and correlated with function and habitat A solution of these problems can only be reached by an immense amount of patient investigation carried out frequently in difficult circumstances on living animals many of whom have not been examined before with this end in view Over two hundred eyes were investigated in the Zoological Gardens in London throughout the very wide range of 139 species including mammalians birds reptiles amphibians and fishes Some of the work must have been tedious and patience consuming but the results are of extreme value and interest and are set out in a fascinating manner with a detailed and tabulated summary lavishly illustrated by fifty seven coloured plates the work of the author herself The conclusion reached is that on the whole the hypothesis is tenable that the essential structure of the adult iris in the various species is determined by the embryonic ocular circulation especially the presence or absence of a pupillary membrane and the number and position of the branches of the hyaloid artery These arrangements however are neither sufficiently clear cut between different species nor sufficiently constant in the same species to form a basis for a complete and adequate classification of the vertebrates while the supposition that the less basic variations such as the degree of pigmentation and the shape of the pupil might be correlated with function or habitat although supported by a large number of instances is definitely complicated by other unknown factors

HAEMORRHOIDS AND ANAL PRURITUS

Dr LOUIS A BUIE of the proctological section of the Mayo Clinic in writing a monograph on *Proctoscopic Examination and the Treatment of Haemorrhoids and Anal Pruritus*[2] divides his work into three parts In Part I he gives his idea of the attitude of mind desirable between doctor and patient and describes the use of Hirschmann's anoscope and Hanes's table for proctological examinations The inverted position is illustrated three times Fig 7 is satisfactory Fig 9 gives so little additional information as to be superfluous and Fig 10 strikes us as being unsatisfactory We agree that it is not wise to attempt to evaluate the severity of a haemorrhoidal disorder with the patient in the inverted position Thrombosed external haemorrhoids are dealt with in this section and frequently referred to as tumours or growths and not until much later is the fact that they are really ruptured veins mentioned Part II is labelled Haemorrhoids though much that the author has to say has already been said in Part I He maintains that infection is the condition which is responsible for haemorrhoids but with such scanty remarks to support this belief that we are entirely unconvinced The author favours partial sacral block as a regional anaesthesia for haemorrhoid operations and quotes the description of Lundy Under the heading of Pre operative and post operative sedation 10 grains of chloretone are given at 9 15 in the morning At 9 30 3 grains of embutal are given by the mouth and at 10 o clock an injection of morphine We are not informed of the time of the operation and post operative sedation is quite omitted in this part of the book The operation which the author favours is a combination of clamp ligature and suture We agree that suturing of the skin should be avoided when possible Figs 45 to 47 are very like Figs 48 to 52 except that in the latter considerable *suturing of the skin takes place* The chapter on post operative care is poor With regard to injection treatment the author uses quinine and urea for carefully selected cases The prescription of his solution is not given nor is any dose stated The discussion of cases for treatment by injection is admirable Part III gives an extremely detailed description of histological changes in anal pruritus Dr Buie's treatment is to inject

[1] *Iris Pattern in the Vertebrates* By Ida Mann D Sc M B B S F R C S Reprinted from the *Transactions of the Zoological Society* Part 4 1931 (Pp 399–514 2 figures 4 plates)

[2] *Proctoscopic Examination and the Treatment of Haemorrhoids and Anal Pruritus* Mayo Clinic Monographs By Louis B Buie B A M D F A C S Philadelphia and London W B Saunders Company (Pp 178 72 figures 16s net)

from 20 to 40 c cm of 40 per cent ethyl alcohol beneath the skin around the anus Sloughing occurs in the majority of cases and six to eight weeks are necessary for the lesions to heal No statistics are given to encourage us to attempt this drastic treatment The bibliography is scanty and incomplete

The monograph by Dr LAWRENCE GOLDBACHER of Philadelphia entitled *Haemorrhoids the Injection Treatment and Pruritus Ani*[6] is an attractive little work His chapter on anatomy is sketchy with insufficient attention to detail when the arteries and veins of the rectum and anal canal are being described External haemorrhoids are dealt with very fully He persistently refers to thrombotic external haemorrhoids and makes no reference to the fact that the external haemorrhoid must be ruptured before thrombosis occurs and never uses the modern term of haematoma ani We do not agree that operation is the only one proper way to treat external thrombotic haemorrhoids The author's description of internal haemorrhoids is good but again with insufficient attention to accurate detail His own instrument the anascope speculum is very attractive It consists of an ordinary cylindrical speculum about one fifth of the circumference of which is made in the form of a slide He claims that this instrument combines in one the anascope the Brinlerhoff or slide speculum and (to a certain extent) the bivalve speculum It permits of a distal view and of any desired amount of a lateral view of the rectal wall at the same time It is a pity that in the diagrams (Figs 19 20 and 21) which illustrate the speculum in use an inaccuracy has crept in showing the distal end a complete circle instead of the slide leaving a gap as in Figs 17 and 18 The author uses 5 per cent phenolized cotton seed oil for almost all types of haemorrhoids and gives very careful details of his method of preparing the phenolized oil and of his method of injecting it beneath the mucous membrane of the upper part of the haemorrhoid His methods are commendable for their simplicity and his special haemorrhoid injection needle appears very satisfactory In our opinion differentiation of types of case suitable for injection and suitable for operative procedure is insufficiently dealt with and although Dr Goldbacher advises operation for third degree haemorrhoids the technique is dismissed in a short paragraph His illustrative cases are of some interest but detailed statistics are absent For cases of pruritus ani Dr Goldbacher uses the same 5 per cent phenolized oil solution and injects 10 c cm beneath the skin at the area of the most intense irritation and to a depth of three quarters of an inch Further injections are made at intervals of five to seven days wherever irritation is felt care being taken that the injections do not penetrate the sphincter muscles

NOTES ON BOOKS

MRS DREVER the wife of Dr J R Drever, who has had to resign the office of Scottish Medical Secretary of the British Medical Association owing to ill health to the great regret of all those with whom he came in contact has lately given a series of broadcast talks to children in Scotland on the story of the clans She has now published these in book form and the volume will appeal to a large public The romance of Scotland cannot be separated from the story of her great families and

> Breathes there the man with soul so dead
> Who never to himself hath said
> This is my own my native land!

Apart from the true Scot however are all those (and what legion they are) who like to boast that they had a Macdonald or a Mackay or a Forbes amongst their ancestry Such folk may find in this book a clear and readable record of the origin and story of these clans their struggles with their neighbours their defeats and victories and their associations with the ever romantic figure of the young Charles Edward If these tales are primarily intended for boys and girls fathers and mothers will find that they will fill in half an hour at the end of a tiring day with an effortless interest which will amply repay the purchase of this book

An extremely comprehensive clear and accurate picture of the whole medical problem of benzol (benzene) poisoning is presented in a mimeographed brochure[8] bearing this title and published by the Industrial Health Conservancy Laboratories Cincinnati U S A The book which consists of 84 typewritten pages deals with the history chemistry and industrial uses of benzol the medical medico legal and prophylactic aspects of poisoning by it and besides containing chapters on impurities tests and the toxicity of homologues gives a very copious bibliography A considerable part of the work is devoted to animal experiments and some new investigations into the relative toxicity of pure and impure benzol are of interest Arising out of the latter it appears that leucopenia is *not the universal accompaniment of poisoning* and that single blood counts made as the sole routine practice in preventive examination in factories and elsewhere are of restricted value A sustained leucopenia in suspected benzol poisoning is valuable in diagnosis but is not in itself pathognomonic A good summary of treatment is given in the book The publishers are to be congratulated upon this production and upon the increased demand for it which has necessitated an early reprinting

Abstracts of Dissertations Approved for the Ph D M Sc and M Litt Degrees in the University of Cambridge for the Academical Year 1930–31[9] consists of brief synopses of studies in various branches of science including agriculture biology botany geology zoology biochemistry physics and chemistry and mathematics Among those of interest to the medical profession are Studies in respiration by J Caldwell Resting bacteria and enzyme action by B Woolf and Drug addiction by K S Grewal

The French Medical Annual for 1932[10] edited by Dr CAMILLE LIAN assisted by thirty six collaborators has recently been published Like the ten previous issues it contains a concise account of recent contributions to the literature of various departments of medicine mainly though not exclusively by French writers An index to the volumes of the last four years as well as one for the current issue is appended

The eleventh edition of *Guy's Hospital Nursing Guide*[11] is not only a handbook of the Nurses League of that hospital but also a guide for prospective nurses Nearly one half of the volume is devoted to useful nursing information and to articles on medical electricity national health insurance courses of training etc

Researches Published from the Wards and Laboratories of the London Hospital during 1931 is a collection of thirty two contributions to medical science which appeared in various publications throughout the year The volume is published by Messrs H K Lewis and Co Ltd price 7s 6d

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Haemorrhoids the Injection Treatment and Pruritus Ani By Lawrence Goldbacher M D Second revised edition Philadelphia J B Lippincott Company (Pp 207 31 figures 3s 6d dollar net)

The Book of the Scottish Clans for Children (and Grown ups) By Helen Drever Illustrated by Malcolm Trotter Edinburgh Wm Green and Sons Ltd (Pp 224 illustrated 6s net)

[8] *Benzol (Benzene) Poisoning* By Carey P McCord M D in collaboration with Nora Cox and Charlotte O'Boyle Second edition Cincinnati Ohio The Industrial Health Conservancy Laboratories 1932 (Pp 84 2 dollar)

[9] London Cambridge University Press 1932 (Pp 101)

[10] *L'Année médicale pratique* Publiée sous la direction du Dr Camille Lian Préface de M le Professeur Emile Sergent Huitième année Paris R Lepine 1932 (Pp xxii + 646 12 figures 25 fr)

[11] *Guy's Hospital Nursing Guide and Handbook of Nurses Training and Register of Nurses Trained at Guy's Hospital* Edited by the Matron London Nash and Co Ltd 1932 (Pp 227 3s)

British Medical Journal

SATURDAY, MAY 28th, 1932

OLEOTHORAX

The taunt of never being first in the field of medical advance is so often levelled at us by the non-medical public that we should be very grateful to Dr Tattersall for his letter on the origin of oleothorax treatment published in the *Journal* of April 23rd. Rightly or wrongly, we take a pride in our distaste of advertisement and so perhaps we should not grumble if others are preferred before us. Dr Tattersall, speaking of Dr de Carle Woodcock's first use of oleothorax in 1912, describes it as a refinement of treatment and anyone who reads Dr Munro's report[1] of his experience of the treatment and the fuller and very beautifully illustrated monograph on the subject recently published by R. W. Matson[2] will agree with the nicety of this description. Refinement suggests delicacy and the need for delicacy is emphasized by Matson in these words: 'Certain it is that oleothorax therapy requires far more technical skill, keener judgement in the selection of material and far closer observation of cases than is required in artificial pneumothorax therapy.'

Dr Munro acknowledges that his paper is only a brief report on a most interesting series of cases and in contrast to this the very full discussion of the dangers and difficulties of the treatment in Matson's monograph is of extreme value. Gilbert[3] in a paper read before the Tuberculosis Association spoke as highly of the value of oleothorax treatment but also emphasized its pitfalls. The full realization and ventilation of its difficulties is the surest way to bring a valuable form of treatment to perfection and to ensure its universal use on suitable occasions. If dangers are not pointed out one or two calamities all the more tragic because unsuspected and avoidable will inevitably postpone its development or worse still perhaps cause its permanent shelving. But with such encouragement as these papers bring us and with the resulting improvement in technique the dangers should disappear and Dr Munro's and Dr Matson's percentage of 55 to 60 successful cases should be replaced by a much higher figure. It is hardly clear-sighted however to argue on percentages of successful results when discussing the use of oleothorax for it is admittedly employed only for those cases that are not responding satisfactorily to artificial pneumothorax treatment. It has been said in belittlement of artificial pneumothorax that its end-results are no better than those obtained from the ordinary routine treatment—a fallacious argument for most physicians only subject patients to treatment by lung collapse when they see that routine treatment is going to or has failed. Similarly with oleothorax it is a refinement used only when artificial pneumothorax fails and if it does fail there can only be one result so that even a 5 per cent. success from oleothorax would be sufficient reason for congratulation. For another reason this line of treatment demands careful consideration. It is always a comforting thought that when things are going ill and an artificial pneumothorax is necessary should this fail there still remains hope in the last line of defence—surgery. But surgery is indeed the very last line and a grim one to be avoided if possible. The fact that oleothorax can be interposed as an intermediate line of defence (moreover without in any way interfering with the chance of surgery being successful should it become ultimately necessary) makes it a most valuable weapon for the physician and a blessed relief for the patient. That surgeons have realized this and also that oleothorax can be carried out actually in conjunction with surgical operation has been demonstrated by Ballon[4] in a recent article.

The exact indications for its use have not yet been unanimously defined. That it can be employed to 'block' or prevent early threatened obliteration of an artificial pneumothorax cavity, that it can be used to stiffen the pleura and prevent mediastinal bulging and that it can produce a better collapse in an obstinate lung (though it is possible that this can be done by the introduction of any fluid such as normal saline) is generally agreed. But whether it may serve as a substitute for artificial pneumothorax for economic reasons is apparently a debatable point; so is its correct employment in cases with effusions—serous, purulent or secondarily infected. Since however so many divergent views are held about the importance of effusions in artificial pneumothorax and their treatment this lack of agreement with regard to the correct use of oleothorax is not surprising. It is enough to say that in this connexion it has many successes to its credit. It is in these cases particularly that its intricate technique appears. Although it is easy enough to teach that an effusion should be completely removed and replaced by oil and easy enough to do in many cases those who have had experience of the behaviour of an air-containing pleural cavity will know that unexpected difficulties may occur not the least being the occasional lack of tolerance by the patient of intrapleural manipulation. It has also to be remembered that any of the oils employed may be highly irritative to the pleura producing profound reactions which have to be either avoided or taken into consideration and so adding further complications to the technique. To do this method justice and to develop it we must learn that oleothorax is not to be regarded as a labour-saving device nor as a hack cure-all but as a valuable refinement to be used with delicacy and discretion.

[1] Munro. Oleothorax with Observations on Twenty Cases. *British Medical Journal*, March 26th, 1932.
[2] Matson. Oleothorax. *American Review of Tuberculosis*, April 1932.
[3] Gilbert. Oleothorax. *Tubercle*, 1930, xi, 289.
[4] Ballon. New Experiences with Oleothorax. *Archives of Surgery*, April 1932.

THE PROBLEM OF SCHIZOPHRENIA

The Association for Research in Nervous and Mental Disease has published a volume[1] containing the contributions presented on the subject of schizophrenia at the tenth annual meeting of the association, held in 1929. This amplifies and supplements many of the papers included in a larger volume published by the association in 1928. The problem is approached from many points of view—anatomical, clinical therapeutic, and psychological—and a number of interesting studies are presented and discussed, the longest of which is a thoroughly practical contribution by Dr. E. A. Strecher on prognosis in schizophrenia. Two other studies, which also have a bearing on the problem of prognosis, are concerned with the "personality of the schizophrenic" and the relation of "onset to outcome." Dr. T. Trentzch describes a neuro-circulatory test which he believes might prove serviceable in the diagnosis of early dementia praecox, and though his method may be by no means infallible, the idea at the back of it may be important for a physiological test which would reveal the potential subject of a schizophrenic breakdown would clearly be of use.

Dr. W. Freeman confirms once more the work of Mott and his co-workers on the deficiency of catalytic iron in the schizophrenic brain. Drs. W. Malamaud and D. Rothschild describe an important research on the distribution ratio of bromides in schizophrenia which shows that in this disorder there is increased resistance in the barrier between the blood and the cerebro-spinal fluid. This work calls to mind the theory of C. von Monakow and R. Mourgue that the symptoms of the psychoses have a relation to dysfunction of the choroid plexus and ependyma ecto-mesodermic barrier. On the therapeutic side Dr. L. C. Hinsie gives a survey of statistical reports on the results of various forms of treatment in schizophrenia. Dr. Gregory discusses the problem of affective reintegration in the schizophrenias and gives an account of his experience in the treatment of a paranoid patient by means of a modified form of the psycho-analytic technique. A particularly interesting paper is one on the use of sodium amytal in katatonia by Dr. W. J. Bleckwenn. After taking this drug patients returned to a normal state for several hours. In a short contribution by Dr. W. Speilmeyer, on the problem of the anatomy in schizophrenia the opinion is expressed that the findings in the brain suffice to establish the organic basis of this malady but they do not suffice to isolate the process and to establish it as an entity. Reference must be made also, to the vigorous dynamic erudite and (sometimes) obscure address by Dr. Smith Ely Jelliffe on "Vigilance, the motor pattern and inner meaning in the behaviour of some schizophrenics." Dr. Jelliffe is always interesting even though (to quote Dr. Macfie Campbell) we may not dare to follow him in his journey from the temple of Diana to the Ionic milieu.

It is rather surprising to note how the question of the possibility of a toxic origin in schizophrenia appears to have receded into the background so far as American psychiatry is concerned, judging of course by this symposium. Possibly this may be due to the exaggerated claims made some years ago for the therapeutic results obtained in dementia praecox by attempts to remove areas of focal infection. At the same time by analogy from psychic disturbances which are known to be the result of toxaemia, and also from the nature of schizophrenic symptoms, the possibility of a toxic origin of this condition can scarcely be ignored, even though we may not at present know the nature of the poisonous substance. It may be pointed out that interesting work is still being carried out, which appears to support a toxic origin in cases of schizophrenia. As an instance, reference may be made to an interesting physiological research, by Dr. Fr. Meyer of Neu-haldensleben Asylum on the reticulo-endothelial system in a series of schizophrenics. In the course of this work he was led to form the opinion that the organisms of these patients showed evidence of a struggle between the defences of the body and toxic influences the outcome of which—favourable or unfavourable—determines the psychic state. Although Dr. Meyer does not attempt to formulate a special schizophrenic theory he considers that his research gives support to those who hold the view that toxic factors play an important part in the causation of dementia praecox. This brief outline of some of the work which is being carried out on what is a very obscure but widespread disorder serves to make it evident that no effort is being spared to elucidate its pathology, and there would seem to be no reason why in course of time these investigations should not be crowned with success.

[1] *Schizophrenia (Dementia Praecox)*. An Investigation of the Most Recent Advances. Vol. I of a Series of Research Publications. Baltimore: The Williams and Wilkins Company. London: Baillière Tindall and Cox. (21s. net.)

[2] *Das Reticulo-endothelial System der Schizophrenie*. Von Dr. Fr. Meyer. Berlin: S. Karger.

THE CENTENARY DINNER

H.R.H. the Prince of Wales has consented to be the principal guest at the Centenary Dinner of the British Medical Association, which will be held under the Presidency of Lord Dawson of Penn in the Albert Hall on Thursday, July 28th.

POLLUTED RIVERS

As the town population of England increases and available sources of underground water approach nearer to exhaustion, communities in search of new or augmented supplies must look either to uninhabitated uplands or to the rivers which pass through their territory, draining it in their course. Of the upland areas the more accessible are in many cases already utilized by the enterprise of far-seeing authorities those more remote present problems in engineering and may involve

financial commitments of a formidable kind The rivers, on the other hand, flowing close by provide adjacent and never-failing water which after purification by well known methods may be relied upon as safe and suitable for both domestic and industrial purposes It seems inevitable therefore that as the population grows denser rivers will be more and more resorted to as sources of supply and that the examples of London York, and Chester will tend to be increasingly followed by other authorities Under these conditions the problems of rivers pollution originally touching amenity only become related to the health of communities, so that all information regarding them assumes a new importance Our knowledge of the questions involved and of the means for their solution has been advanced in recent years by the studies carried out under the auspices of the Water Pollution Research Board In its report for the year ended June 30th 1931 the Board presents a further instalment of its account of the survey of the River Tees which flowing through an industrial area receives trade and sewage effluents The absence of life in its tidal reaches in those sections where changes of salinity are greatest as the tide rises and falls cannot be attributed solely to sewage for a survey of the comparatively pure estuary of the Tay revealed the same phenomenon It was found also that in the Tees the killing of fish was not necessarily due to deoxygenation of the water by sewage since tar acids and cyanides in lethal proportions were also present In the non tidal reaches the most important agents in fostering life in the water appeared to be not the larger aquatic plants but the minute forms which cover every stick and stone and maintain the oxygen content of the river even in its lowest depths The question of the persistence of sewage in polluted estuaries was explored by hydrographical observations on the tidal Tees During each cycle of the tide the topmost layer of water to the depth of a fathom had a strong net movement downstream but below one fathom the deeper and more saline water made its way in the reverse direction Hence polluting matter is not readily carried out to sea unless it is in the surface layer when it reaches the estuary The Tees receives a charge of sewage from the Skerne at Croft Thereafter for some twenty miles downstream no further pollution enters A good opportunity was thus afforded of studying the process of self-purification It was noted that in summer with the higher temperatures then prevailing the river purified itself more quickly and completely than in winter the sewage fungus extending further downstream in the latter season Among other topics of interest referred to are the further investigation of beet sugar factory effluents and the consideration of methods for the disposal of the liquor effluents from gas works The use too of zeolites as water softeners has again been under notice The synthetic products appear on the whole to have higher exchange values than glauconites or porous minerals Zeolites have been used with success in the treatment of waters containing heavy metals in solution All detectable traces of lead zinc and tin were removed I or copper a manganese zeolite was necessary In all these ways progress is being made and the stock of practical knowledge extended by the work of the Board

TOXAEMIA OF PREGNANCY

The mammalian embryo depends for its existence on the exchange of nutritive and waste material between its own circulation and that of the mother but this simple exchange is limited to inorganic substances such as oxygen carbon dioxide and salts Maternal proteins cannot pass directly into the foetal circulation because the foetus is always a distinct chemical entity The albumins of the one may be demonstrably different from the albumins of the other and indeed the two bloods may belong to different groups and be incompatible Hence the transfer of organic food from mother to child involves an active digestive process in the placenta the maternal colloids must be broken down into simpler substances and rebuilt into the complex bodies suitable for the foetal circulation The placenta must therefore secrete enzymes, indeed the digestive power of the human chorion has been demonstrated by placing pieces of it on culture media which are dissolved by the villi As the placenta degenerates in the course of pregnancy its protective power for the individuality of the foetus is gradually transferred to the liver this is probably the reason for the relatively enormous size of that organ in the foetus In the simpler forms of placenta the maternal and foetal blood are always separated, not only by the three layers of foetal tissue but also by the three unbroken maternal layers—endothelium connective tissue, and epithelium The two epithelial layers are merely apposed The uterine glands become extremely active and their secretion is mixed with extravasated maternal blood and debris in the space between the two On this mass—the histiotrophe—the trophoblast exerts its digestive action and the transformed proteins are taken up into the foetal circulation From this relatively simple form the placenta specializes along the line of removing first the maternal epithelium then the maternal connective tissue and finally the maternal endothelium until in the haemochorionic type found in mankind monkeys some bats, rodents and insectivores maternal blood is in direct contact with the digestive foetal epithelium This means that the circulating proteins of the mother can be directly acted upon in the placental blood spaces but if they are to be broken down and re formed fit for absorption into the blood of the foetus a certain amount of time must elapse That is to say the rate of circulation of the maternal blood in these spaces must be considerably slowed down This is brought about by the final modification of the haemochorionic type which is seen in woman and the apes—the villous form Professor Otto Grosser of Prague lecturing at University College recently declared his belief that only in the villous type of placenta can the circulating colloids of the mother be used for the nourishment of the foetus In the other form—the labyrinthine haemochorionic placenta where the circulation is more rapid—there is always some supplementary arrangement some provision of histiotrophe and he believes that the actual placenta serves almost exclusively for the exchange of simpler substances such as respiratory gases In the villous type the foetus depends entirely on haemotrophe—nourishment obtained directly from the mother's blood—and the placenta adapted to this end is a highly specialized structure It is not by any means more efficient than the simpler types the placenta of the

cow can supply the needs of a foetus twenty times the weight of a human child Nevertheless, this is the method adopted for the human species, and its essential feature the stagnation of the maternal blood in contact with foetal tissues is also its danger The delay is brought about by running the maternal blood into a kind of marsh so that any impulse from the maternal circulation is effectively 'damped' It is not certain what mechanism eventually expels it from the marsh, Professor Grosser believes that the mechanism is the periodic uterine contractions which are known to occur throughout pregnancy Whatever the mechanism, it may fail in some degree The blood may coagulate, obstruct the circulation, and cause the formation of white infarcts, so that the placenta cannot fulfil its functions adequately Moreover, the expulsive mechanism may fail to come into play at just that moment when all the broken down maternal albumins have been taken up by the foetal capillaries If a wave of contraction clears the placental spaces at a time when breakdown products are present in them, these substances will be returned to the maternal circulation having all the properties of foreign proteins To this mishap Professor Grosser ascribes the toxaemia of pregnancy regarding it as a kind of allergic phenomenon and yet another example of the dangers of over specialization This interesting theory will not be of much comfort to the physician Only a short while ago Professor Munro Kerr[1] was saying that few aetiological problems more urgently called for solution than that of the toxaemias of pregnancy The maternal theory the pressure theory, and the foetal theory still have almost as much evidence to support them as the placental theory and experts differ Meanwhile no one can foretell which woman at which point in her pregnancy will fail to hold her own in the long struggle between her protective mechanisms and the disturbance created in her system by the 'foreign body" of her child There would be hope of helping her in her ordeal if it could be proved that some special chemical substance or its absence or some endocrine imbalance was responsible for turning the scale against her but if Professor Grosser's suggestion be correct, the only hope will be some process of desensitization to the breakdown products of her own tissues or to the partly built up products of her child's trophoblast

PREVENTIVE MEDICINE IN THE RAND MINES

Encouraging results from intensive medical supervision of those engaged in the mining industry are reported by Dr A J Orenstein superintendent of sanitation in the Rand Mines Group The morbidity rate for all diseases fell from 349 per 1 000 in 1930 to 316 in 1931, while the number of patients admitted to hospitals fell from 63 059 to 59 813 There was a reduction in the incidence of pulmonary tuberculosis and miners' phthisis The special precautions against the risk of accidents resulted in a decline from 441 per 1 000 in 1930 to 409 in 1931 and this notwithstanding the fact that there has been a general increase in the depth of mining An investigation is in progress to determine the extent to which native workers can be safeguarded from disease by dietetic measures In one mine extra rations of meat have been issued to "underweight" natives with apparent success, and the procedure is now being tried in other mines In several places vitaminized monkey-nut oil is being supplied with a view to increasing the vitamin A content of the diet Dr Orenstein hopes that in another year or so it will be possible to correlate the findings, and issue practical recommendations Prophylaxis against hookworm infestation is now proving very effective, and there has been a heavy fall in the incidence of this infection since 1928, when active measures were begun Attempts to secure the earlier diagnosis of tuberculosis by the Vernes flocculation optometry test have yielded promising results and experiments in ozonizing the air of a waiting station underground are proceeding

[1] *Edin. Med. Journ.* April 1932, p. 52.

THROMBO ANGIITIS OBLITERANS AND ITS RELATION TO TOBACCO

It is customary to regard thrombo angiitis obliterans as an uncommon disease attacking almost exclusively middle-aged male Hebrews, and particularly those addicted to cigarette smoking These conceptions must be modified when the clinical studies carried out of late years in America Japan, and other countries are taken into account For it is becoming increasingly recognized that the disease attacks many races occasionally females, and not uncommonly those who do not use tobacco In a recent publication B T Horton and G E Brown[1] state that approximately 700 cases of thrombo angiitis have been observed at the Mayo Clinic and they put on record a series of ten female patients afflicted with the disease The average age of these women was 39 years and only four of them smoked cigarettes to excess, three were Jewish and seven were Gentiles Symptoms referable to occlusive processes in the arteries had been present for periods of a few weeks to many years and apart from the condition of the affected extremities, which were also in two instances the seat of superficial migrating phlebitis the general examinations were negative Six of these women showed trophic changes such as ulcers, superficial gangrene, or the loss of digits of the involved extremities The tobacco factor in the production of this disease is an interesting problem A year ago N W Barker[2] investigated this question in a study of 350 patients at the Mayo Clinic and found that 91 per cent were cigarette smokers as compared with 56 per cent in a control group of normal men Of the patients afflicted with thrombo angiitis 62 per cent smoked upwards of twenty cigarettes daily, while among the controls only 33 per cent were addicted to this extent Further analyses showed that none of the few non smokers suffering from the disease had either gangrene or amputation whereas the malady was apt to run a particularly malignant course among excessive smokers Future observations on the results of discontinuance of tobacco by the subjects of thrombo angiitis and the possible future increase in the disease among women concomitantly with the increasing use of tobacco by them may yield more information It is a curious fact

[1] *Proc. Staff Meetings Mayo Clinic* February, 1932, p. 107.
[2] *Ibid.* February, 1931, p. 65.

that heavy cigar and pipe smokers are rarely afflicted with the disease This is all the more peculiar since it has been estimated[1] that a cigar is equivalent to eight or ten cigarettes It has been suggested in explanation of this anomaly that the vapour of cigarette paper may contain some deleterious agent which is inhaled and which may be largely responsible for the arterial inflammation W J Mayo in discussing this problem regarded the pipe as the adult pacifier which takes the smoker back to his childhood days and suggested that pipe smoking might be least harmful because the pipe was usually out He referred to the production of methylnol in the combustion of paper and alluded to the suggestive fact that those who work with burning paper in garbage are apt to suffer from the symptoms commonly experienced by excessive cigarette smokers

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LEAGUE OF NATIONS HEALTH BULLETIN

As was announced in the *Journal* of April 30th last the League of Nations has decided to publish in a Quarterly Bulletin the material issued by its Health Organization The periodical will appear simultaneously in English and French but it is not an official organ and the Health Organization does not assume responsibility for opinions expressed therein The first number is of remarkable interest It contains articles on immunization against diphtheria milk supply of American cities tropical pneumonia results of anti rabies treatment and the floods in China It is probable however that the article by Sir George Newman headed Medical education in England will be generally regarded as the most important It is the first of a series which is to deal with problems of medical training in various countries, a study arising out of a request made to the League by the Chinese Government The title of Sir George Newman's article does not indicate the broadness of its content It contains a general statement as to the recruitment and training of medical students and in appendices gives the resolutions and rules of the General Medical Council in regard to professional education and examination and to diplomas in public health It has an informative section on research work but it also comprises an important survey of the present status of the medical profession in this country particularly in its relation to preventive medicine and State requirements and of the educational needs of the situation The keynote is struck in the words (the italics are Sir George Newman's) The old order has vanished *But the practitioner remains* and although he appears to be restricted in sphere because of the growth of specialism he is not less important or effective To the headings in the older medical textbooks—diagnosis prognosis and treatment—are now added causation and prevention and the relative emphasis of medical teaching and even practice is being gradually readjusted in accordance with this Obviously curative medicine and remedial surgery must have immediate priority but the ultimate goal is prevention There is no division of the profession into curative and preventive practitioners The tendency is to establish a unity not a divorce between the two Private practitioners whether general or special but particularly the former are finding their functions more and more preventive every day and the functions of whole time public health officers are often curative in purpose In this connexion it is interesting to note that Sir George Newman sets out in full and with approval the statement made by the British Medical Association with the concurrence of the Society of Medical Officers of Health on the relation of the private practitioner to the public health medical officer and to the work of clinics It would be well if all concerned would from time to time remind themselves of the eleven important articles of this statement and if the statement were re-published at intervals for the benefit of new entrants into private practice or the public health service The essential requirements of an improved and readjusted medical training undergraduate and post graduate and the true principles in accordance with which medicine should be applied to communal need are set forth clearly and wisely and if only they were at once and always put into practical effect both the progress of medicine and the advancement of public health would be the more speedy and satisfactory

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TWO HUNDRED YEARS OF FRENCH SURGERY

The Academie Royale de Chirurgie celebrated the bicentenary of its foundation in Paris on October 7th 1931 in the presence of the President of the Republic and many Ministers of State The occasion is of interest in taking us back to the beginning of scientific surgery an event which occurred some years earlier in France than in England In Paris as in London the surgeons had long been allied with the barbers In Paris a royal edict of Louis XV brought about a complete separation in England the divorce took place by mutual consent The French surgeons celebrated the event by founding a National Society of Surgery which held its first meeting on December 24th 1731 English surgeons obtained a Charter and became the Company of Surgeons which met for the first time on July 1st 1745 at the Stationers Hall when John Ranby the newly elected first master presented his colleagues with a fine loving cup The Academie Royale de Chirurgie may be said to have standardized French surgery for it published a series of transactions containing valuable papers admitted foreign surgeons of distinction as honorary members and gave a medal and prizes for good work The Revolution swept it away but from its ashes rose the Academie de Medecine and the Societe Nationale de Chirurgie The story is told by M de Lapersonne president of the Academy of Medicine and by Jean Louis Faure in two charming addresses illustrated with portraits of those to whom the National Society of Surgery owes much

[1] League of Nations Quarterly Bulletin of the Health Organization Annals for Great Britain Northern Ireland and the Crown Colonies (Allen and Unwin Ltd 40 Museum St W C 1 Price eighteen shillings annual subscription post free)

A meeting to make known the aims of the British Provident Association (to which reference was made in the *Journal* of April 23rd p 766) will be held under the chairmanship of the Lord Mayor of London at the Mansion House on Wednesday June 8th at 5 o'clock The speakers will be Lord Lloyd Lord Dawson of Penn Lord Moynihan Sir Alan Anderson and Professor Winifred Cullis

A NOTE ON MEDICAL EDUCATION IN HUNGARY

A display of great effort following national disasters is characteristic of active nations Thus in post war Hungary painstaking efforts are being made to remodel her cultural political and economic life Reforms in medical education are especially urgent because of the great damage caused to the health of the population by war Yet these post war changes do not affect so much the course of the medical education as its extent Two new universities have been erected but the curriculum of studies as well as the principles of medical training remain apart from minor changes much the same as they were in pre war times

REMARKS ON MEDICAL CURRICULUM

It still takes six years for a student of medicine to obtain the degree of M D During this time he studies for ten terms and does a year of hospital practice There are two terms in a year the first of which begins at the end of September and lasts to the end of December The second is longer—from the end of January to the end of June The curriculum is as follows

First Year—Chemistry physics and anatomy 32 hours of lectures and practical work per week

Second Year—Anatomy and physiology 30 to 40 hours of lectures and practical work per week

Third Year—Pathological anatomy pharmacology and hygiene 5 hours per week each (lectures) Internal medicine and surgery 7½ hours each of lectures 8 hours per week is devoted to practical work in pathological anatomy and 10 hours to practical medicine and surgery

Fourth Year—Gynaecology and obstetrics together 15 hours per week dermatology ophthalmology and neurology 5 hours per week each

Fifth Year—Internal medicine and surgery together 15 hours per week forensic medicine general pathology and paediatrics 5 hours each per week with 10 hours devoted to practical work in medicine and paediatrics

The curriculum has deliberately been described in some detail so as to make clear the relative emphasis placed on the various subjects It will be noted that it falls into two parts The first two years are devoted exclusively to science subjects Of these chemistry and physics are subjects of the science faculty The lectures on pure chemistry extend to general inorganic and organic chemistry The practical chemical work gives some experience in qualitative and quantitative analytical chemistry but none in organic chemistry All the universities have now chairs and institutes for medical chemistry as parts of the medical faculties the student therefore has an opportunity of obtaining some knowledge of chemistry as applied to the study of biological problems

A difference between the English and Hungarian universities is that physiology and anatomy are subjects of the medical faculty In the science faculties there are no chairs in these subjects and therefore students of pure science cannot graduate in them The four terms of lectures on anatomy include systematic anatomy histology and embryology Special lectures are generally given on topographical anatomy During his work in practical anatomy the student acquires skill in dissection and learns the histological methods Physiology is almost exclusively experimental In the universities where a special course in practical medical chemistry does not exist the classroom work in physiology includes practical work in the chemistry of body constituents and analysis of body fluids the student also carries out selected experiments from each chapter of physiology

The fifth term is really a turning point in the curriculum since with this begins the three years study of the clinical subjects Coincident with the admission to the wards begins the study of pathological anatomy This subject is taken very seriously and considerable experience is required of the student in making post mortem examinations By the end of the second term he has generally conducted some ten post mortems quite independently To give a detailed description of the study of the different clinical subjects would carry us too far The aim of the clinics is to bring the student into the closest contact with the greatest variety of cases This is ensured mainly by visits The student spends the greater part of his afternoon in the different clinics where he has one or more cases which he follows up in detail The lectures being really demonstrations generally make clear the difference between the demands on a general practitioner and those of the more scientific outlook of a clinic

Growing recognition of the importance of preventive methods and sanitation made a closer study of hygiene necessary This subject also includes lectures on eugenics and biological statistics It is fully realized that in most villages the doctor will meet a variety of purely hygienic problems and that he should therefore be able to act as a public health officer During the last two terms a synthesis of the varied clinical subjects is given in the lectures on general pathology which includes serology bacteriology and pathological physiology

With the tenth term the second division of the studies (the clinical) comes to an end and with the third part begins the one year of compulsory hospital practice During this year the candidate does the usual hospital work of a full day physician He works three months in the clinic of internal medicine two months each in the surgical ophthalmological and gynaecological clinics and a month each in the paediatric dermatological and neurological clinics This stage ends his studies and if the candidate passes the examinations he gets the degree of M D The examinations are all oral and most of them include practical work During the whole course there are four examinations The first consists of two parts chemistry and physics at the end of the first year and physiology and anatomy at the end of the second In anatomy and physiology practical knowledge is also required The candidate, besides answering different questions has to perform a dissection make use of some histological method and perform different experiments in physiology and biochemistry The second examination closes the tenth term and consists of pathological anatomy (practical) and general pathology and pharmacology (the last two oral)

The third examination in the clinical subjects takes place at the end of each period of work In internal medicine it lasts for a week During this time the candidate is examined in practical and theoretical problems of internal medicine on a great variety of cases which are new to him In surgery gynaecology and ophthalmology the examination is divided into two parts—the clinical part and operations the latter being performed on cadavers Lastly during the final medical examination the candidate is examined in forensic medicine and hygiene

COMPARISON OF HUNGARIAN WITH ENGLISH SYSTEM

The result of a medical education does not depend so much on the different subjects the student is taught as on how he is trained in these subjects This training will depend largely on the aim of medical education which in Hungary seeks to provide the country with a sufficient number of reliable general practitioners capable of discriminating between simple cases and those requiring the care and equipment of special institutions The question

arises at once If the curriculum gives no room for specialization where and how are the specialists trained who work in these institutions? Here lies I believe a fundamental difference between the English and Hungarian medical education The former is based on early specialization whereas in Hungary the differentiation begins only after a general and more diffuse study The specialists physiologists pharmacologists surgeons gynaecologists etc are all trained in the respective university institutes The young doctor joins that particular institution which appears to suit him best If he wants to be a specialist he has to work there two years at least Naturally there is no general curriculum for these studies Each professor stamps his institute with his scientific individuality

All the Hungarian universities being State universities the above curriculum is general but there are slight variations at the different universities At the Debreczen University it was felt that by the omission of zoology and botany from the medical course the student might lack a broad biological outlook A chair of general biology has therefore been established At Budapest it was thought that the peculiar position of the physician in the community needed some special philosophical and ethical study Lectures in medical ethics are therefore given by a special lecturer The fact that physiology and anatomy are taught by the medical faculty appears to have this advantage—that the student of medicine is influenced and inspired in the wards being there deeply impressed by his close contact with human suffering The idea of clinics and hospitals being in the hands of the State is foreign to the English mind yet it has certain advantages the uniformity of the curriculum and the even standard might be quoted as two resulting from the fact that all the professors demonstrators and laboratory assistants as well as nurses are civil servants They are all full time workers yet they are allowed to have private practice The universities are naturally autonomous bodies the faculties electing their own professors and assistants They are also free to dispose of their own funds being responsible only to the Minister of Education

THE UNIVERSITIES

As already pointed out the system of medical education has not changed since the war but the number of students taught has greatly increased Till 1914 Hungary covering an area of 280 000 square kilometres with a population of 18 000 000 had only two universities one in Budapest and another in Kolozsvar (Transylvania) Just before the war broke out an Act of Parliament authorized the building of two others—one in Debreczen and the other in Pozsony Although the country made enormous sacrifices the work of construction was carried on during the war and at its end the medical faculty of the Debreczen University was housed and the University of Pozsony was already functioning although not yet in its own buildings At the end of the war two-thirds of the Hungarian territory was occupied by Czechs and Rumanians Thus Pozsony and Kolozsvar fell into their hands The universities in these cities had to be abandoned and the impoverished population of Hungary started to build new homes for them A beautiful new group of buildings was erected in some six years in Szeged for the University of Kolozsvar The University of Pozsony found a new home in Pecs Meanwhile the medical faculty of the Debreczen University has also been finished and equipped like the other two new universities on the most modern lines At the present time Hungary has four universities very evenly distributed over the country and quite a number of large municipal hospitals With a population of some 9 000 000 and a good ambulance service all but every urgent and difficult case has a fair chance of expert treatment in well-equipped and modern clinics

Another instructive way to consider Hungarian medical education is from the numerical point of view A few figures may be quoted The yearly turnover of the four medical faculties is some 300 000 new cases the total number of beds is approximately 7 000 and on 17 000 major operations are carried out Professors number about 90 and assistants 300 with about three times as many volunteers Medical men working in the four faculties total at least 1 500 and the number of medical students a little below 2 500 The Hungarian universities unlike the English are inexpensive Many students have maintenance grants and many more pay reduced fees or none at all Ample facilities for sport are provided

A B L BLZ AK M D

MEDICAL PROBLEMS OF CONTRACEPTION

CONFERENCE IN LONDON

The conference on medical problems of contraception held under the auspices of the National Birth Control Association from May 20th to 22nd at the Caxton Hall Westminster was intended to bring together those engaged in the research and the clinical practice of the subject Over 200 persons including laboratory workers medical officers of clinics health officers private practitioners and a few lay people who came as delegates of clinics or had some other special interest in the problems of contraception were present at each of the four sessions and at the last session they were unanimous in asking the National Birth Control Association to organize a similar conference at an early date

Sir THOMAS HORDER who is president of the National Birth Control Association welcomed the members of the conference reminded them that contraception was not alone among medical problems in lacking a perfect solution There was no more reason for failing to make use of existing knowledge in the one case than for leaving the control of tuberculosis wait until a perfect cure for this disease had been discovered During the past twelve months the Birth Control Investigation Committee a purely scientific body had been incorporated with the National Birth Control Association and in the new synthetic body there was as the present conference illustrated ample provision for a liaison between the practical and scientific sides of the movement

SPERMATOXINS AND HORMONES

In opening the first session which concerned itself with the application of experimental biology to contraceptive practice Dr LANCELOT HOGBEN professor of social biology London School of Economics discussed the alternatives to chemical and mechanical methods that a study of the reproductive process might disclose Physiological methods were generally speaking of two kinds the first being based on the application of embryological technique and the second on what was known about the way in which reproductive activity was controlled by hormones circulating in the blood stream The injection of normal fluid into warm blooded animals resulted in the formation of spermatoxins which in the female produced sterility through their presence in the [illegible] of the genital tract or perhaps in the germ cells themselves Much research remained to be done—on the exact [illegible] duration of the sperm toxic effect—before it could possible to apply the [illegible] with [illegible] Turning to the second group of [illegible] Dr Hogben recalled that it was possible by [illegible] and in the female to destroy the [illegible] of the gonads with [illegible] effects [illegible] of the [illegible] elements but in sufficient [illegible] [illegible] sexual behaviour was [illegible] There was no [illegible] biological [illegible] [illegible] [illegible]

the association between sexual behaviour and reproduction sacrosanct Among the problems for immediate investigation he suggested the following At what stage of the menstrual cycle of the human female was the ovum liberated? What was the duration of life of the human sperm and the survival power of the human ovum? How and to what extent could the two ovarian hormones —namely oestrin which provoked heat and lutein which was necessary for the maintenance of pregnancy— be used for the production of sterilization? Would it be possible to use pituitary secretions to a similar end? Research in these fields was not popular it was hampered by prejudice and tradition But before any significant advance could be effected in the technique of contraceptive practice it would be necessary to organize substantial funds to endow both pure and applied research in the physiology of reproduction

Dr L W CANN of Guy's Hospital epitomized and discussed some of the conclusions to be derived from recent work on the production of spermatoxins in males and females He drew attention to the fact that spermatoxic immunity like immunity to bacteria could be active or passive though the latter was necessarily of very short duration Observations on the rabbit showed that injection of sperms could produce spermatoxins that were effective not only against sperms of the species from which they were taken but against rabbit sperms too It might therefore be possible to avoid the use of human sperms in applying this method to the production of sterility in women

Mr C W BELLERBY in discussing the possible uses of sex hormones in the production of sterility explained that though injection of oestrin prevented embedding of the ovum it did not prevent fertilization In an early stage of pregnancy its effect would be to produce re absorption in a later stage it would be abortifacient It was probable that oral administration of oestrin would be as effective as its injection

Dr C P BLACKER honorary secretary to the Birth Control Investigation Committee said that the remarks that had just been made about sex hormones seemed to justify a hope that these might be effectively used for contraceptive purposes It had been pointed out that oestrin could be prepared from the urine of pregnant women that there was a reasonable probability of its being prepared in pure form synthetically and that it was effective when taken orally on an empty stomach All these statements were in his view most encouraging

SPERMICIDAL PREPARATIONS

Dr BLACKER in opening the session on spermicidal preparations and their effects said that under the auspices of the Birth Control Investigation Committee investigations were being pursued to find both a powerful spermicide and a vehicle which while being mechanically effective itself would not neutralize the spermicidal action of the chemical contraceptive The next step if this knowledge was to be applied to the manufacture of a clinically satisfactory contraceptive was to discover the minimal amount of the spermicide that would do damage to the female genital tract In concluding Dr Blacker stressed the importance of finding a contraceptive that would resist tropical heat Such a discovery in view of the immeasurable volume of suffering caused in India and China by excessive child bearing would rank among humanity's greatest benefactions

Dr JOHN R BAKER of the Department of Zoology and Comparative Anatomy University of Oxford set out the standards that must be aimed at in seeking for a satisfactory chemical spermicide Such a substance must not only be lethal to sperms it must be freely soluble harmless compatible with the vehicle used cheap and aesthetically unobjectionable When all likely substances had been classified in relation to these standards it would be easy to choose a few for practical test in birth control clinics Dr Baker then described his technique for testing spermicidal power and gave in general terms some of the conclusions to which this work had led him One interesting discovery was that human and guinea pig sperms were closely similar in their reactions to chemicals —an amazing fact when it was remembered that the common ancestor of man and the guinea pig must have lived in pre Eocene times There existed he had found in human semen a substance which protected sperms from certain chemicals especially sodium oleate and this fact seemed to have considerable significance for chemical contraception Cinchonine cinchonidine and quinidine all had the same killing concentration as quinine bisulphate One of these substances might probably be found to have practical importance Cinchonine was cheaper than quinine and if it were found to be of use in contraception methods might be evolved for producing it even more cheaply The extreme solubility of these salts suggested by Dr Baker rendered them far more suitable for use in suppositories than bisulphates or simple hydrochlorides

Dr W H FLOREY professor of pathology University of Sheffield described an investigation he had conducted on vehicles for use with spermicidal substances He emphasized the need for extreme care in ensuring that none of the substances used should have irritant qualities Quinine and urea tablets had a harmful effect on the mucosa of the vagina and uterus The investigations both of Dr Baker and Dr Florey had been conducted under grant from the Birth Control Investigation Committee

Dr C I B VOGE of the Department of Animal Genetics University of Edinburgh described exhaustively the results of his investigation probably the most complete that has been made into the properties of the contraceptives now available on the market His exposition was concerned mainly with the unsatisfactory aspects of existing contraceptive products but it was as he pointed out only by analysing the defects in products now on the market and by the application of such knowledge as had been presented at the conference that a more satisfactory technique would be evolved

In the course of the discussion that followed the view was expressed that though there was no reason for assuming that any of the chemicals or pessaries would have ill effects it was important to be sure that the substances used were not only free from an immediately irritant effect but unlikely to produce lesions even after a prolonged latent period

(To be concluded)

THE HUGHLINGS JACKSON MEDAL

PRESENTATION TO SIR CHARLES SHERRINGTON

At a meeting of the Section of Neurology of the Royal Society of Medicine held on May 19th with Dr STANLEY BARNES the president in the chair the Hughlings Jackson *Gold Medal* was presented to Sir CHARLES SHERRINGTON O M G B E

Sir JAMES CRICHTON BROWNE said that he had been asked to say a few words on this occasion he supposed because he was the oldest surviving friend of that illustrious clinician whom they were to commemorate that evening He first met Hughlings Jackson in 1862 seventy years ago Jackson told him he had been a pupil of Laycock's at the Cork City Hospital where Laycock was physician before he was appointed professor of medicine in the University of Edinburgh and where Jackson served under him In 1873 David Ferrier performed his first operations at the West Riding Asylum Wakefield in his (Sir James's) laboratory these were described in a long paper which appeared that year in the *West Riding Asylum Medical Reports* That paper at once attracted the attention of Hughlings Jackson he was profoundly interested in it because he had really anticipated the results arrived at He had taught for many years that epilepsy and epileptiform seizures were experiments performed by disease upon the brain revealing to them in the rough the localization of certain classes of movements in the hemispheres Immediately after Ferrier's experiments Hughlings Jackson came down to visit him at the West Riding Asylum where there was a rich mass of material for it had 1 500 beds with always at least a hundred epileptics As a result of that visit he contributed an article to that year's volume of the *Reports*

upon the localization of movements in the cerebral hemispheres In 1874 he wrote upon recovery from double optic neuritis In 1875 he contributed a most important paper upon temporary mental defects following upon the epileptic paroxysm Sir James mentioned that he forwarded a copy of this paper to a judge who had just sentenced a man to death The result was that it saved the man's life for the judge after reading the paper intervened at the Home Office and sent the epileptic to Broadmoor In 1876 Hughlings Jackson contributed a paper upon epilepsies and epileptic discharges Sir James Crichton Browne recalled that after his translation to London Hughlings Jackson and Ferrier said to him

As your *West Riding Asylum Reports* have come to an end we must have a neurological journal of some kind in this country The result was that *Brain* was projected After some negotiation *Brain* was started and the first editorial team consisted of Sir John Bucknill Hughlings Jackson Ferrier and himself Out of *Brain* grew the Neurological Society and Hughlings Jackson became its first president Looking back he remembered Hughlings Jackson not so much as the great neurologist but as the kind dear and generous friend the man of culture and refinement who could turn from an intricate pathological problem to a light novel He had followed from afar off the magnificent work which Sir Charles Sherrington had done on the lines laid down by Hughlings Jackson and with advantages of research which Jackson did not possess

Dr T WATTS EDEN (president of the Society) said that this was an occasion when many different branches of medicine would desire to join with neurologists in paying honour to their great men for the great men of medicine were the possession not of the department with which they were most intimately concerned but of medicine as a whole It would be unpardonable for him to say anything about the merits either of the Master whose work this Trust was intended to commemorate or of the great physiologist who had done them the honour of accepting the first Hughlings Jackson Medal He supposed that Hughlings Jackson would for ever be regarded as one of the greatest clinical observers the world had ever seen Sir Charles Sherrington's observations had disclosed a domain of nerve function which was hardly dreamed of in Hughlings Jackson's time He now had the pleasure of presenting Sir Charles with the medal the cheque and the diploma of honorary membership of the Section of Neurology

Sir CHARLES SHERRINGTON acknowledging the presentation said that the gift which it was his privilege to receive that night in the name of the Master of neurology Hughlings Jackson constituted an encouragement which nothing could exceed One of the circumstances that increased his pleasure was that the inauguration of the medal receiving the support of many from a distance to whom Hughlings Jackson was a great name and whose writings were those of a great leader on the subject had been emblematic of that international co-operation which was universal where medicine and science were concerned In addition to that was the fact that this inauguration had been brought about by a number of those to whom Jackson was more than a name—a living personality whom they met and knew intimately and with whom they had studied side by side Neurology as was the case with all subjects had its various aspects—clinical and laboratory and experimental—and Hughlings Jackson was an inspiration to both He inspired the laboratory worker just as much as he did the clinician There were enthusiasts who made time to cultivate both aspects even in such a time of specialism as the present To himself continued Sir Charles the laboratory had always seemed such a busy place that he could not get outside it though never from lack of interest in what was being done elsewhere However generous colleagues had evidently overlooked these shortcomings and in making the award of the medal had generously singled him out who had been working on a narrow line No one had been more fortunate in his colleagues than he had On their behalf as well as on his own he expressed deep appreciation of this gift for a greater distinction could not be conferred on any neurologist than to receive this medal

Mr LESLIE PATON spoke of the pleasure it gave him to be present on this occasion The idea of inaugurating this fund came to him shortly before Sir Charles Sherrington was due to give the Hughlings Jackson Lecture He the speaker was happy in the choice of friends to collaborate in the idea and particularly in the gentleman he had asked to act as treasurer and secretary Probably many of those present knew the amount of work Dr Wilfred Harris had put into the matter

BRITISH HEALTH RESORTS ASSOCIATION

FIRST SPA CONFERENCE

A meeting of the British Health Resorts Association was held under the chairmanship of Sir HUMPHRY ROLLESTON Bt at Llandrindod Wells Spa from May 21st to 23rd This organization which is largely medical in its inception and aims seeks to evaluate for the benefit of the profession and laity the true place which health resorts and spas should play in modern therapeutic usage It is not surprising that this type of treatment should be increasingly demanded by the modern town dweller who even if he lead a sedentary life is subjected to the nervous stresses inseparable from civilization and will ultimately in a large proportion of cases show evidence of the fatigue factor which is being gradually recognized as the basis of many pathological conditions rheumatic and otherwise It has lately been thought by many prominent members of the medical profession that our therapeutic resources of this nature have not been sufficiently investigated and classified from an impartial point of view and this is one of the primary objects of the association Its findings will in due course be considered and published in pamphlet or book form by a Medical Advisory Committee under the chairmanship of Dr Fortescue Fox This would constitute a real advance in the neglected fields of medical climatology and balneology and would enable the conscientious medical man to prescribe the correct type of health resort for his patients as accurately as he at present prescribes his drugs and on the corresponding indications An important Statement on the British spas was presented at the morning session and Dr JUDD LEWIS presented an outline of the new classification of mineral waters which his Standard Measurements Committee of the International Society of Medical Hydrology has been preparing for some years

Sir WILLIAM WILLCOX took the chair at the second session and delivered a summary of the medical aspect of the whole question He outlined the policy of the association and urged the profession to take the subject seriously Dr LANGDON BROWN then touched on the renaissance in physical medicine in recent years which he considered as a healthy reaction from what he termed the mortuary school of medicine There was a long discussion in which many medical men took part including Colonel R H ELLIOT chairman of the executive council of the association Drs S ERNEST DORE BROWNING ALEXANDER W S C COPEMAN R ACKERLY C V WORTHINGTON and J MURRAY

Sunday was devoted to a visit to the coastal resort of Aberystwyth where the party was received by the Mayor and Corporation They afterwards visited the new Welsh National Library and the hospital returning to enjoy a concert given in their honour by the Royal Mountain Ash Male Choir

This is the third congress arranged by the association at a British health resort since its foundation in February

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The China Flood Relief Committee through its medical commission headed by Dr J Heng Liu has maintained seventeen hospitals comprising 860 beds thirteen clinics and thirteen travelling clinics The staff consists of 90 medical officers 144 nurses and 99 sanitary inspectors The total expenditure incurred during six months was 420 000 dollars

Ireland

Tuberculosis in Relation to National Health

At the Irish Hospitals Medical Services Exhibition held in the Mansion House Dublin Dr Arthur Trimble chief tuberculosis officer Belfast delivered a lecture on tuberculosis in relation to national health He said that in Great Britain and Ireland alone tuberculosis killed annually at least 40 000 people In addition to this wastage of human life there was the tremendous cost to the community of treating tuberculosis Ireland and Scotland between them probably spent not far short of a million pounds per annum In Ireland the death rate from tuberculosis was higher among females than males in England the rate was higher among males The course of the disease in Ireland was generally acute and febrile whereas in England it was chronic and fibrotic Tuberculosis rarely ever passed from the parent to the unborn child but a child's tissues were easily infected Infection generally occurred during childhood and the percentage of persons infected was about 75 Dealing with the question of cure Dr Trimble said that three methods seemed to have stood the test of time and experience—fresh air nourishing food and rest—but the most important was rest To prevent tuberculosis being contracted by the use of milk containing tubercle bacilli a rigid and unceasing milk inspection in every area by one central authority was necessary What was required was a responsible Government authority with a well equipped central authority having facilities for testing milk by animal inoculations and an amendment of the law making it impossible for a milk producer or a milk vendor to carry on the sale of milk should his licence have been endorsed on three occasions

Work of the Midwife

At the Irish Hospitals Nursing and Midwifery Conference Dr Bethel Solomons read a paper on the work of the midwife in which he stated that the generally trained and certified nurse was required to undergo a six months and the untrained nurse a twelve months course in obstetrics previously the courses had been for four months and six months respectively They were altogether too short and the question now arose whether they should be lengthened still further The midwife in Sweden was compelled to take two post graduate courses of two weeks each before she was 50 and she must retire at 55 In 1927 in Sweden 2 895 midwives reporting 78 647 confinements conducted in more than 90 per cent without a doctor The training of nurses with doctors had a great advantage and Dr Solomons said he was not in favour of establishing special hospitals for the training of midwives such as existed in Sweden and Denmark He advocated compulsory post graduate work the midwife should be compelled to take a two weeks course every five years in a recognized maternity hospital and this course should be at the expense of the county council and should not count in the midwife's vacation Dr Kerry Reddin assistant medical officer of health Dublin said that the advent of the Public Health Act 1875 opened a new field—preventive medicine—in child welfare work the value of which was now generally recognized In 1918 the Maternity and Child Welfare Act laid down the principle for all schemes and had effected a great decrease in infant mortality Dublin was in an unusual position in possessing an excellent midwifery service through the medium of three large maternity hospitals—Rotunda Coombe and National Maternity Hospitals—and twelve clinics were held in various parts of the city weekly

Women's National Health Insurance

A memorandum has been issued by the Ministry of Labour of Northern Ireland concerning the National Health Insurance and Contributory Pensions Bill now before the House of Commons It states that since the scheme of health insurance in Northern Ireland and Great Britain is an entity covering the whole of the United Kingdom and as the pensions scheme is closely related thereto some changes will be necessary in the law in Northern Ireland Certain of the matters dealt with in the Imperial Bill although in some respects coming within the jurisdiction of the Parliament of Northern Ireland nevertheless concern also funds which are common to the whole of the United Kingdom and can best be dealt with only by an Act of the Parliament of the United Kingdom The Imperial Bill contains a clause that so far as it relates to these matters it will become operative in Northern Ireland only if and when provision to that effect is made either (*a*) by an Act of the Parliament of Northern Ireland or (*b*) by an Order of the Governor of Northern Ireland in Council made in pursuance of such an Act The Northern Ireland Bill accordingly proposes the application of the Imperial Bill and the provisions which would be thus applied are explained in an appendix to this memorandum As the health insurance scheme is an entity the figures in the appendix relate to the United Kingdom as a whole separate figures for Northern Ireland are not available Estimates show however that the excess expenditure on women's benefits has been even higher proportionately in Northern Ireland than in Great Britain This is due to the fact that women form the greater number of the insured population on account of the importance of the textile industry in Northern Ireland The loss of contribution income to societies due to unemployment has also been higher in Northern Ireland than in Great Britain

Royal Victoria Eye and Ear Hospital, Dublin

The report read at the annual general meeting of the Royal Victoria Eye and Ear Hospital stated that 2 453 patients from all parts of Ireland were admitted to beds in the hospital In the out patient department 12 161 new patients were registered and 2 667 persons returned for further treatment making a total of 14 828 who received attention during the year The aggregate number of visits paid by these patients was 38 680 an average of 127 per day The debit balance on the revenue account had been increased from £6 695 to £7 591 Many annual subscribers had died or left the country or were not in a position to subscribe with the result that the lists had fallen to about half the original amount The Hospital Sunday Fund Committee would not include the Royal Victoria Hospital in the next allocation of funds owing to the decision to participate in the hospital sweepstakes The chairman Lord Glenavy said that the hospital had been a participant in the last two sweepstakes but had not yet been informed of the amount it would receive Assistance from sweepstakes might not always be available, and the continued support of the public was needed

Laboratory for Pathological Research

At the last meeting of the committee of management of Grangegorman Mental Hospital Dr O C Donelan resident medical superintendent said that there were 1 909 males and 1 839 females in the institution 920 men and 715 women being in Portrane These figures showed an increase of 39 males and a decrease of 18 females as against the figures for the corresponding period of last year Since the fire in the wooden buildings of a London mental hospital when a large number of patients were

burned to death the housing of patients in similar buildings at Gringegorman and Portrane had been a source of some anxiety In response to Dr Donelan's suggestion that the committee should urge on the Government the desirability of making a grant from the receipts of the hospital sweepstakes for the purpose of replacing these buildings with stone structures it was decided to appoint a deputation to wait on the Minister for Local Government Mrs Walsh moved that provision be made in the institution for the establishment and maintenance of a fully staffed and equipped laboratory for pathological research in insanity and nervous diseases She urged that the committee should request the Minister for Local Government and Public Health to consider the desirability of providing and maintaining such a laboratory out of the funds available under the Public Charitable Hospitals Act Gringegorman being the largest mental hospital in the country would be the most suitable centre for the laboratory and it could be made available for similar institutions

Scotland

Post Graduate Courses in Glasgow

A summer session for post graduate teaching in Glasgow has again been arranged under the auspices of the Glasgow Post Graduate Medical Association The teaching facilities will fall chiefly into two divisions (*a*) general medical and surgical course and (*b*) clinical assistantships During the last two weeks of August and the first two weeks of September a whole-time course for which an inclusive fee is charged will be conducted in some of the general and special hospitals The course will include most of the subjects of interest to the practitioner—the mornings being occupied with general medicine and surgical diagnosis and minor surgery in the Victoria Infirmary and the Western Infirmary and the afternoons with special subjects in the special hospitals or special departments of the general hospitals two subjects being dealt with each afternoon Clinical assistantships which are limited in number are available in the summer months as well as at other times during the year They are designed to make provision for graduates who desire opportunity for detailed study of one or other of the specialties Full particulars may be obtained from the secretary Glasgow Post Graduate Medical Association The University Glasgow

Home Relief of Incurables in Scotland

At the annual meeting of the Royal Society for Home Relief of Incurables and the Dunlop Cancer Fund on May 18th the chairman Sir T B Whitson said that the increase of unemployment during the year was reflected in the number of applications for relief which had been received from all parts of Scotland extending from Shetland to Dumfries and the society in the past year had distributed a sum of £5 415 to 486 beneficiaries as compared with £4 887 to 445 beneficiaries in the preceding year The total revenue for the year had amounted to £7 674 with an expenditure of £6 222 With regard to the Dunlop Cancer Fund a sum of £1 769 was distributed last year as against £2 076 in the preceding year a reduction mainly due to the shortness of the life of annuitants who often did not survive to receive a full year's grant Mr W W M'Kechnie secretary of the Scottish Education Department emphasized the moral value of the financial help given by the society He believed that before long the number of incurable diseases would be greatly reduced In Edinburgh they were proud of the fact that they had made provision for the education of 400 mentally defective children but they would be still prouder if they could get rid of the mentally defective and close the schools

Carnegie Clinics in Dunfermline

The Carnegie Dunfermline Trustees in their report for the year 1931 refer to investigations regarding health in children conducted under the direction of the Trust During the past year the trustees had had under consideration the establishment of a centre for the study and control of juvenile rheumatism as it was felt the problem of this disease was one of national importance second only to that of tuberculosis A centre was inaugurated at the beginning of the present year and arrangements had been made with Dr Charles McNeil physician to the Royal Edinburgh Hospital for Sick Children and professor of child welfare and health at Edinburgh University to visit Dunfermline once a month for the purpose of supervising the work Another experiment was carried out during June among school children in Dunfermline at the request of Professor Courtis of Detroit Professor Courtis had been conducting in the United States an investigation to determine the relationship between physical and mental growth and was carrying out similar investigations in Rome Geneva and London The Carnegie Trust bore the expenses of the investigation in Scotland which was carried out by students of the Dunfermline College of Hygiene and Physical Education the Dental School in Edinburgh and Edinburgh University under the superintendence of Dr Mackenzie medical officer of the Trust valuable results had been obtained which would be published later

Investigation of Defective Hearing

At a recent lecture demonstration given in Edinburgh by Mr A W G Ewing Ph D lecturer to the department for training teachers of the deaf Manchester University an audiometer an apparatus giving eight pure tones was used to test the hearing of a child with slightly defective speech By this apparatus it can be discovered how far off a child can hear speech and how far consonants are indistinct With the aid of charts and gramophone records it was demonstrated that the two important types of partial deafness were high note deafness and low note deafness analogous to colour blindness in vision Gramophone musical records were played in such a way that first of all only the low notes came through and next only the high notes in each case only a word was distinguishable here and there as heard by a partially deaf person Dr Ewing said that in some cases an apparently totally deaf person had responded to three notes in the register given loudly and experiments were being conducted to ascertain whether something could be done to make such a person hear by amplifying still more those sounds which came through

Central Midwives Board

The examinations of the Central Midwives Board for Scotland held simultaneously in Edinburgh Glasgow Dundee and Aberdeen have now been concluded Out of 172 candidates who appeared for the examination 159 passed Of these 30 were trained at the Royal Maternity Hospital and 16 at the Elsie Inglis Memorial Hospital Edinburgh 61 at the Royal Maternity Hospital 7 at Stobhill Hospital 2 at the Eastern District Hospital and 2 at the Western District Hospital Glasgow 9 at Govan Maternity Hospital 5 at Bellshill Hospital 3 at Barshaw Hospital 1 at Motherwell Maternity Home 4 at the Maternity Hospital Aberdeen 11 at the Royal Infirmary Dundee 5 at the Royal Infirmary Perth and the remainder at various recognized institutions

England and Wales

Forthcoming Hospitals Conference in Liverpool

In view of the forthcoming joint conference of the British Hospitals Association and the Incorporated Association of Hospital Officers to be held in Liverpool from June 9th to 11th an excellently produced handbook and programme has been produced by the Liverpool Conference Committee It bears the title Liverpool 1801-2001 and the cover sketches convey the appearance of Merseyside at the beginning of the nineteenth century with windmills and sailing ships and as the artist imagines it at the beginning of the twenty first with air liners and mammoth architecture The handbook contains a description of Liverpool and its associated towns also a full catalogue of the voluntary medical institutions of Merseyside and district nearly forty in number an account of the work of the Merseyside Hospitals Council with its penny in the pound scheme, now five years old and finally a survey of the municipal health services of Liverpool Birkenhead, Bootle and Wallasey The joint conference is to be officially welcomed by the Lord Mayor and to be visited by H R H Prince George Some of the proceedings are to take place on board the White Star liner *Laurentic* including a discussion on hospital service for persons of moderate means to be opened from the lay point of view by Major R H Thornton and from the medical point of view by Dr J C Matthews senior physician Liverpool Royal Infirmary On the second day there are to be discussions on hospital planning opened by Dr D J Mackintosh medical superintendent of the Glasgow Western Infirmary and on the maintenance of voluntary hospitals under modern conditions by Major Raphael Jackson secretary Queen Mary's Hospital Stratford The international aspect of hospital affairs will be put forward in an address by Dr E H L Corwen of New York secretary general of the International Hospital Association No setting more appropriate than Liverpool with its high standard of institutional charity and its progressive municipal spirit could be found for a hospital conference

British Red Cross Society

The report of the British Red Cross Society for the year 1931 shows an increase in every branch of the society's work At the Clinic for the Treatment of Rheumatism Peto Place the total attendances for the year numbered 86 969 as compared with 35 183 for 1930 During the year 3 046 new general patients attended for preliminary consultation Analysis of the records of patients discharged shows that 46 per cent remained at work during treatment 12 6 per cent were considered fit to work after treatment 9 per cent were still unable to return to work 8 2 per cent were transferred elsewhere and 24 2 per cent were unclassifiable According to the Medical Board's report a greater number of early cases of rheumatism are now attending the clinic than when it was first opened in 1930 The chairman's introduction to the report expresses the hope that increased financial support for the clinic will be forthcoming in 1932 Requests for blood transfusion during the year numbered 2 078 as compared with 1 627 in 1930 and 1 360 in 1929 The proportion of successful cases was the highest on record 56 per cent were classed as good very good or excellent 23 per cent were satisfactory 17 per cent showed temporary improvement but were followed by death and 4 per cent showed no apparent benefit It is to be regretted that the accounts of the service show a deficit for the first time It is felt that a large number of private patients who can afford to make a contribution in return for a blood transfusion still fail to do so and medical men are asked to bear this in mind at the time the call is made and not leave the matter to the charitude of the patient The number of Voluntary Aid Detachments of the society continues to increase the total now being 761 The Junior Red Cross has a membership of 20 349 A Red Cross Society has been formed in New Zealand and it is hoped to establish branches on the Gold Coast and in Swaziland It was announced at the statutory meeting of the society on May 4th that the Queen has expressed her willingness to accept the first of the new service medals which are now being issued by the St John Ambulance Association and the British Red Cross Society to their members for long and efficient service

Central Midwives Board

At the last monthly meeting of the Central Midwives Board for England and Wales the Standing Committee reported a letter from the county medical officer of health for Hampshire stating that he had had difficulty with midwives who summoned medical aid under Rule E 20, in cases in which they were *not* actually in attendance upon a patient—for example a midwife was engaged with another case or was ill or otherwise unable to attend when sent for but nevertheless summoned medical aid In his opinion the Board's rules clearly required that a midwife must be in attendance and actually present with the patient before she could summon medical aid under Rule E 20 but there were apparently some midwives who thought otherwise The Board agreed to reply (*a*) that it was perfectly clear from the wording of the Rule that inability of the midwife to attend a case was not an emergency which required the summoning of medical aid (*b*) that normally it would be wrong for a midwife to summon medical aid under Rule E 20 until she had been to the case and seen that medical aid was necessary but if she was satisfied that the patient was suffering from a condition which required immediate medical aid she should summon it in accordance with Rule E 20 She should attend the case at the earliest possible moment either personally or by a qualified substitute Approval as lecturers was granted to Mr W H George and Dr Lucy M T Masterman of Birmingham

Dental Needs of the People

The dental problems of the community were the subject of an address given at the annual meeting of the British Dental Hospital last week by the president Sir Norman Bennett Twenty years ago there was a sharp line between private and hospital practice and those who were socially intermediate between the two classes hardly came into the picture Improvement in social conditions and ways of life better general education and the development of preventive medicine had created a different state of affairs altogether The prevention and treatment of dental disease including inspection and treatment of school children had become an integral part of and a vital factor in general hygiene The condition of recruits' teeth during the great war was another factor which had brought home to the public that if prevention rather than treatment of disease was to become a live policy the problem of dental disease was of prime importance The passing of the Dentists Act in 1921 placed the profession on a new and sound footing and afforded opportunities for advancement in public service hitherto impossible Though this advancement had been remarkable and the Dental Board of the United Kingdom had done excellent work the profession had contributed little towards schemes of dental treatment which might be called really national in their application to all classes

and truly preventive in character The profession was becoming restive under the inequalities irregularities inefficiencies and indignities of the present system of public dental service At present the dependants of the insured population were not covered by medical insurance—a logically absurd but financially necessary state of affairs The aim should be a complete dental service for expectant mothers welfare centres and schools together with the teaching of prevention and of dental hygiene as far as present knowledge went The fatal gap of four or five years after the age of 14 during which there was no provision for the adolescent must be eliminated to prevent the benefits of school dentistry being thrown away For the dependants of the insured and that large class above insurance limit which was unable to afford remunerative fees for work done the British Dental Hospital was of value Working on a co operative basis it provided sound treatment for fees which its patients could afford to pay For twenty one years it had been an example of the success of the clinic system and had been able to bring good dental treatment to those who would otherwise have swelled the crowd attending dental hospitals or have gone without treatment altogether Sir Norman Bennett suggested that the committee of the hospital might consider the inauguration of an experimental scheme for treating young people on a capitation basis

Correspondence

CONFERENCE ON RADIUM

SIR —As a member of the conference held on March 4th at the College of Physicians to consider the question of the radium bomb I feel that certain passages in the report of that conference which appears in your current issue are likely to lead to misunderstanding

In a memorandum placed before the conference it was suggested that we as a country are far behind the Continent both in the equipment of our institutions and in the skill of our personnel I was fortunately able from my own first hand knowledge of the work which is being done both in this country and abroad to show that this was not the case and I understood that I had succeeded in convincing the other members of the conference In the necessarily brief report of the conference this does not however appear

We were however all agreed that workers in this field have not so far been able to obtain the facilities accorded in Continental countries where the resources of the State are more directly available for the service of medicine It will be generally agreed that a fully equipped radium institute on a really adequate scale in the centre of London and supported by the laboratories physical and pathological and the *x* ray equipment which are common practice on the Continent would be of great value and would enable us to co ordinate and to show to better advantage the admirable work which is already being done by individuals —I am etc

H S SOUTTAR

London W 1 May 20th

CANCER RESEARCH AND TREATMENT

SIR —The public press is just now full of the idea that London is in need of yet another radium institute It is quite true that in some respects we are behind other countries—France Belgium and Sweden for instance—in our provision for research at any rate It is quite untrue as is often stated that Britain is behind other countries in its personnel—namely in regard to radiologists and physicists Possibly in this country we may have been inclined to put the cart before the horse in giving pride of place to the surgeon If we are to make any real progress the radiologist and the surgeon must do their job in double harness and not as a tandem What seems wrong with us to day is not the accommodation for the cancer patient but the absolutely unjustifiable division of interests and the wasteful competition Just let us consider what would happen were (*a*) the Cancer Hospital (*b*) the Radium Institute (*c*) the Mount Vernon Hospital and (*d*) the Marie Curie Hospital all to unite and form a great combination Radium and high voltage *x* ray therapy biological and biochemical research pathological research could all find their place

We have many great and influential people at the head of our Cancer Campaign Is the rough outline indicated above too fantastic or impossible given determination and good will? In the near future I believe that the people of this country will recognize the futility and waste of our present system in the running of many establishments in the provision and duplication of costly apparatus when without any unsurmountable difficulty they might all be under one management or at any rate so interdependent that each might retain its own identity while pooling many interests for the common good —I am etc

London W 1 May 20th RADIOLOGIST

THE ORIGIN OF TUMOURS

SIR —Dr A T Todd's letter on this subject in your issue of May 14th criticizing my paper contains several interesting arguments which call for a reply His chief objection to the somatic mutation theory of tumours appears to be that the gene cannot be seen and consequently gene mutation cannot be studied under the microscope The same objection could also be brought against the atom or the molecule Cancer research has been going on for a very long time without any definite theory having been established Had the explanation been within the range of the microscope there can be little doubt that it would by this time have been discovered as no scientific problem has been more thoroughly investigated than that of cancer But the range of human vision is very limited and a great many phenomena occur which can never be seen by human eyes For instance the movement of atoms in the neighbourhood of the cathode of an *x* ray tube and the combination of atoms to form a molecule as when hydrogen and oxygen combine to form water can never be seen We only know that they occur by observing and measuring the results One of the greatest achievements of the human brain has been the ability to think in terms of things outside the range of human vision and experience and the greatest advances in modern science have been thus evolved Modern physics could not have come into existence without the atomic theory and without the conception of the molecular structure of chemical compounds chemistry would still be in much the same state as it was in the time of the alchemists The gene bears much the same relation to biology as the atom does to physics and it is hoped it will advance our knowledge to an equal extent To deride it because it cannot be seen is absurd

That tumour cells grow by their own division and not by converting neighbouring cells into tumour cells is only one of the facts about them and it does not follow that this phenomenon occurs only in neoplastic tissue

I cannot agree with Dr Todd's arguments with regard to cachexia I have seen at least as many cases of tumours as he has and I have never seen any evidence of cachexia in small early growths unless there has been direct interference with the function of some gland or

organ When tumour cells have invaded another tissue than that in which they arose and are growing rapidly in abnormal surroundings as for instance when an adeno carcinoma has invaded the connective tissue, some bio chemical change in the lymph passing from that area is not unlikely nor is it in any way incompatible with the mutation theory It has never been proved that there is any change in the blood resulting from a simple adenoma of the intestine or a fibromyoma of the uterus

I have had the privilege of seeing Dr Todd s treatment and inspecting a number of his cases at Bristol If I remember correctly he injects a solution containing selenium and a lead salt It is a well known fact that tumour cells are often more readily affected by highly toxic substances in the blood than normal cells Such substances as copper lead arsenic and selenium have all been known to produce regression of tumours usually sarcomata A similar phenomenon has often been observed as the result of acute sepsis accompanied by high tempera ture as in those cases where a sarcoma has disappeared after an acute attack of erysipelas or septicaemia But the fact that tumours occasionally regress as the result of toxic substances in the blood is neither a good argument in favour of the infective theory of tumours nor one against the somatic mutation theory

With regard to the argument of Dr J T Shirlaw I must confess that I find myself unable to understand the point of it but with some of his statements I do not agree He says evolution is always orderly and definite On the contrary it is not always either orderly or definite He goes on to say that evolution has made the human body so perfect But the human body is by no means perfect it is not even as perfect as that of many of the lower animals if by perfect we mean as well adjusted to the requirements of the individual and his relation to the environment —I am etc

London W 2 May 17th J P LOCKHART MUMMERY

POST OPERATIVE X RAY TREATMENT IN BREAST CANCER

SIR —Without knowing what was the principle of selection of cases for post operative x ray treatment or the methods of x ray treatment employed the conclusion No 13 of the British Medical Association s collective in vestigation on breast cancer (May 14th p 897) *should* not be accepted at its face value

Thus I know several surgeons who do not refer their straightforward Stage I cases for x ray treatment but only those in which the completeness of the operation is in doubt—that is Stage II and Stage III cases And I have seen not a few patients during x ray courses given elsewhere who had been having in my opinion quite inadequate treatment in the area covered in the doses administered or in the number of treatments given There are in fact so many factors involved that a large literature has grown up on this subject and it is worthy of more than dismissal in a few lines of praise or of detraction

I reported on 182 five year cases last year at the Paris International Radiology Congress with a 42 per cent five year cure Many statistics show that this is double the surgical five-year cure of patients of whom similarly three quarters were in Stage II at operation and some in Stage III The results of Forssell (Wester mark) Anschutz Holfelder Hintze Guedès Buchholz Pfahler and Widman Lee and others strongly support the value of post operative x ray treatment while many results suggest strongly that pre operative treatment as well adds to the likelihood of freedom from recur rence over three year and longer periods

Sir James Berry s remarks about the erroneous deduc tions which may be made from statistics (p 904) are very apposite to the issue in question —I am etc

London W 1 May 14th J H DOUGLAS WEBSTER

SIR —In your issue of May 14th in the report on The incidence of cancer of the breast and its history after treatment there is a statement under the summary of *results which cannot be allowed to pass unchallenged* This is No 13 Prophylactic treatment with x rays after operation is *apparently useless* There are several reasons why statistics compiled in this sort of way are even more unreliable than statistics usually are

In the first place it is the experience of every English radiologist that with a few notable exceptions very few surgeons send *all* their cases for prophylactic treatment A large number and I believe the majority send only those cases in which they think recurrence is likely to be expected and one has seen many cases sent for pro phylactic treatment who have died of distant metastases where the area treated with x rays has remained free from disease until the end or near the end It is obvious therefore that in the cases of these surgeons no com parison can be made between those in which prophylactic treatment is carried out and those in which it is not

The second comment is that under the scheme of this inquiry only cases are dealt with which come to the notice of medical practitioners during one particular year Now the patients who remain well may not be seen by him in this particular year especially those who have remained well for many years The statistics published by Forssell in the *British Journal of Radiology* (May 1930 iii No 29 p 209) show a definite and considerable im provement in results when *all* cases are submitted to post operative prophylactic radiation treatment Still greater improvement in results is obtained when pre operative treatment is employed in addition My personal inquiries show that stronger dosage is used in the pre operative cases which may to a certain extent account for the further improvement in the results Though not stated in this article the treatment used in these cases is x rays as can be seen from the published reports of Stockholm Radiumhemmet (Westermark *Acta Radiologica* April 1930 xi No 59 f 1) Referring to the improvement in results Forssell adds This circumstance is all the more remarkable since the material of the Radium Home chiefly consists of tumours in an advanced stage

When such a categorical statement as Dr Luff s is made by an irresponsible person one is in the habit of dis regarding it—radiology has had the misfortune of having had only too many such statements made about it which have subsequently been proved to be false—but when a statement like this is published with the full authority of our Association behind it it is likely to do a terrible amount of harm I must therefore protest against the publication of this sweeping conclusion which may appar ently be justified by the figures given but which is certainly not justified by properly compiled statistics —I am etc

N S FINZI

London W 1 May 23rd

LACTIC ACID IN THE GASTRIC CONTENTS

SIR —I have read with interest the recent correspondence in your columns on the subject of the diagnostic value of the presence of lactic acid in the gastric contents A somewhat extensive practical experience of the perform ance of fractional gastric analysis and still longer acquaintance with the clinical aspects of cancer of the stomach have long since led me to the conclusion that

whilst the academic interest of the presence of lactic acid is by no means exhausted its practical value as a diagnostic test is non existent

By clinical examination fractional gastric analysis and careful examination of the stomach with x rays it is possible to make an accurate diagnosis in 99 per cent of cases of cancer of the stomach within forty eight hours of their presenting themselves for examination During the last six years I have known such a case to be inaccurately diagnosed only on one occasion including cases seen both in hospital and in private practice But the diagnosis has never rested on the presence or absence of lactic acid it has depended on the detection of gastric deformities by x rays and on the detection of partial or complete obstruction with or without secretory abnormalities—usually with bleeding—by means of examination of the stomach before and at intervals after a test meal The work which I carried out some years ago during the tenure of a Beit Memorial Fellowship and the work which Professor Dodds and Dr Robertson have subsequently carried out in the Courtauld Institute of Biochemistry go to confirm the somewhat obvious hypothesis that lactic acid in the stomach is a consequence of bacterial activity together with diminished activity on the part of the normal gastric secretion conditions which are to be found more frequently it is true in cancer of the stomach than in any other circumstance but which are of very small diagnostic value

I have long maintained that fractional gastric analysis should be a clinical procedure and in the hands of those with clinical experience it is of inestimable value in affording clues to the presence of obstructive phenomena and of secretory defects It is very regrettable that the high degree of precision in the diagnosis of cancer of the stomach which has been obtained by means of fractional gastric analysis combined with x ray examination during many past years is not more widely appreciated but it is doubtful whether a revival of the theory of the supposed specific importance of lactic acid will help to make the knowledge of this more general —I am etc

London W 1 May 19th T IZOD BENNETT

INTRAVENOUS LIVER THERAPY

SIR —One case of failure following the use of intravenous liver therapy has been reported by Dr J G McCrie in your issue of April 30th To this is added Professor Davidson's letter in your issue of May 14th in which two further cases are reported as having failed to respond with campolon and two with hepatex P A F and which have subsequently reacted satisfactorily to the oral administration of liver Professor Davidson concludes that the only satisfactory explanation of this absence of response must be the impotency of the material employed Without wishing to contradict directly Professor Davidson's statement might I venture to suggest that we all endeavour to retain a true sense of proportion in approaching the problem Naturally failures receive much more prominence than successes even though as is the case with hepatex P A F for one reported failure there are hundreds of successes reported enthusiastically from practically every country of the world

Our knowledge of pernicious anaemia and especially of the role of liver fractions in its treatment is by no means complete but it is becoming increasingly clear that the vitamin B complex is intimately linked up with it Preparations such as hepatex P A F for intravenous use are by reason of the method of manufacture devoid of vitamin B whereas liver extracts for oral administration such as hepatex are extremely rich in this vitamin and it may well be that in the partial or complete absence of it the so called pernicious anaemia fraction will not be able to bring about the necessary stimulation of haemopoietic function

Hepatex P A F was never intended to supplant oral liver therapy but for those cases which require speedier treatment the prompt response obtained intravenously is of course very desirable I suggest that before such highly purified fractions can be effective an adequate supply of vitamin B must be present either stored in the patient or administered as food and I recommend the simultaneous administration of some such thing as marmite or preferably an oral extract of liver if this is practicable It may be that this offers an explanation of failures and in any case I do feel that any conclusion of impotency of a therapeutic product on the evidence of three cases is to be deplored

I agree with Professor Davidson that until a satisfactory method of assay other than by clinical test is evolved the whole position will not be satisfactorily explained but I suggest that until that time it is unwise to come to any conclusion that failure can be definitely attributed to impotency of the preparation The manufacturers of these preparations realizing that other factors may be at work in pernicious anaemia do not claim infallibility but with the ever increasing mass of clinical evidence in favour of intramuscular and intravenous therapy in front of them need not be unnecessarily perturbed by isolated reports of failure which cannot be shown to be definitely the result of an impotent product They can only continue to issue in good faith what appears warranted from the clinical tests which in the case of hepatex P A F at any rate precede the issue of each batch —I am etc

Runcorn May 18th H A MITCHELL M D

DIET AND DENTAL CARIES

SIR —Dr Couper Black's query as to whether my statement that raw milk should be part of the daily food until 14 years needs modifying is very pertinent and calls for reply It raises the query How long should the human child's suckling period be? The answer is No one really knows but by analogy with the most caries free races and animals it seems it should be about one-quarter of the growth period—say six years The question naturally follows Then why recommend raw cow's milk up to 14 years? There are three reasons

1 There is clinical evidence that it lessens the incidence of caries in permanent teeth considerably if taken up to that age even when not started till nearly 10 the incidence of caries in second permanent molars in children on raw milk as compared with those on pasteurized milk and cod liver oil was as 11 to 77 a few years later

2 Six years might be quite long enough if a primitive diet was eaten but such teeth cannot cope with the diets of civilization loaded as they are with refined fermentable carbohydrates so one requires a super tooth—hence the lengthened period which clinical experience justifies (Reason 1)

3 Cow's milk is after all only a substitute and it is indeed *Dei gratia* that it should so act at all

As Dr Couper Black suggests and I have pointed out the incidence of caries does lessen in the teeth erupted when the child is older and more in a position to exercise choice in its foods especially if these foods are of the right type

Concerning Australian aboriginals the incidence of caries varies considerably from *nil* (in one district only Cape York 17 skulls) to 35 per cent this higher incidence is suggested by Campbell (Adelaide) to be more or less in ratio with the amount of civilized foods used—that is to say the permanent teeth are free from caries rather than immune to it—but nursing their babies till

3 to 5 years should make the deciduous teeth immune and Campbell found no case of caries of these teeth in the thirty seven children's skulls he examined Apparently Dr Couper Black has not seen the original paper or he would know that I have made considerable reference to the incidence of caries in primitive races as compared with their period of suckling The margin of safety against caries allowed by nature seems to be a narrow one and the adults of primitive races seem to be caries free mainly by virtue of the physical characters of their foods

Finally Dr Couper Black asks Is it worth while? That is not for me to say though I have opinions on the subject Is it desirable to recommend that children be nourished on the infected secretions of diseased animals after pasteurization or sterilization? I am perfectly well aware that the putting into action of the counsel of perfection is at present impossible in this country but that is no reason why it should remain so —I am etc

EVELYN SPRAWSON

London Hospital Dental School May 21st

VITAMIN D AND RICKETS

SIR —I am grateful to Drs Eva McCall and William Mackenzie for their references to analogous cases of rickets in twins given in their interesting letters of May 7th and May 14th I am also interested in the lack of any criticism from either the clinical or laboratory side of the view advanced in my original letter that excessive reliance on the results of laboratory research on vitamins was tending to lead clinicians astray It would I think be advantageous if no general recommendations about the clinical value of synthetically prepared vitamins based on laboratory research were issued without some guidance from skilled clinicians

Concerning the general nature of vitamins and the *relation of vitamin D to rickets* I have in the past two years submitted definite and to me conclusive evidence in support of the main contention in my letter and also definite evidence in favour of an alternative theory of vitamins—namely The identity of vitamins with the light energy and wave lengths in particular areas in the electro magnetic spectrum (*Proc Roy Soc Med* 1931 Section of Electro Therapeutics) Valuable confirmatory evidence in support of this view has been advanced in the past few weeks by some published results of Drs Bowden and Snow Cambridge on the relation of light to vitamins My investigations have led me to conclude that the study of vitamins from the newer biophysical angle will profoundly change much of the teaching at present regarded as established by results of investigations from the purely biochemical side —I am etc

Edinburgh May 17th CHALMERS WATSON

EFFECT OF PITUITRIN IN MALIGNANT DISEASE

SIR —The nine cases detailed by Mr E W Riches and Dr M Kremer in your issue of May 14th are of interest in showing that the clinical observations demonstrate very little evidence of any physiological or therapeutic result of the treatment employed Focal reaction in the malignant growth areas was fairly definite in three slight or transitory in three and absent in a further three cases

In forty six cases which have been and are still under observation or treatment at the Southport Infirmary Walton Infirmary Liverpool Eye and Ear Infirmary Liverpool and privately most are of a similarly advanced type including carcinoma of the tongue larynx oesophagus stomach rectum and cervix and in many negative clinical findings have so far been observed

In attempting to estimate the value of any treatment there appears a need for some method of observation (if such were available) additional to those employed in the article referred to and in the cases at present under observation the modification, not yet published of the vanadic acid flocculation test introduced by Bendien of Zeist has been employed as a serological method of observing evidence of therapeutic response The test has proved very sensitive and by estimation with the Zeiss interferometer a factor expressing the unit value of thermo labile and ether labile substances is found present which differentiates between malignant and non malignant serums giving in 200 cases—which include advanced early and non malignant conditions—a clinical correspondence of 95 per cent The method has also detected changes in the serological reaction before any clinical evidence of change has been noted by careful observation In this way a control has been made upon the reactionary response to treatment such as has been shown to occur with pituitrin and theelin and a reduction or temporary omission of the treatment resulted in the lessening of toxicity and evidence of some clinical and serological improvement In three less severe cases showing apparent arrest the appearance of *recurrence has been anticipated* by the serum test findings becoming more positive from four to eight weeks before any clinical evidence of recurrence was observed

Also there is evidence that without any treatment a tendency to spontaneous and temporary improvement may occur and such reactions or apparent response must not be attributed to any therapeutic measure without control There does however appear to be need for a clinical serum test to assist in following up such observations in cases of malignancy and this modification of the Bendien flocculation reaction is in my experience the most sensitive and satisfactory one for the purpose having tried out many others that have been introduced during the past ten or twelve years —I am etc

E CROSBY LOWE MBE, MB BS

Liverpool May 17th

SIR —I am much interested in the article by Mr Riches and Dr Kremer For some years I have been of the opinion that the malignancy of new growths was due to some content of the cells which is absent in non malignant growths Lecithin lipoid struck me as being the likely constituent With the aid of Mr F C Arnaud F I C of this town every case of malignant disease operated upon by me during the past six years has been examined for lecithin lipoid Some fifty cases have been so examined We have only failed in one instance and that was a case of epithelioma of the hypopharynx which had been treated by deep x rays at Guy's Hospital The higher the malignancy the greater the amount of lecithin lipoid found For instance in epidermal cancer a trace was found whereas in rodent ulcer a much larger amount A greater amount was found in sarcoma than in carcinoma and a smaller amount in the secondary deposits in glands than in the primary growth It is absent in fibroma papilloma and in simple adenoma I have injected it in a suitable medium in malignant growths but with no effect on the growth the mixed infection however has been markedly affected for the better the general health also being improved It is of interest that lecithin lipoid is present in the functioning cells of the pituitary thyroid suprarenal, and ovary —I am etc

J ARDINGTON GIBB

Senior Aural Surgeon Kent County Ophthalmic and Aural Hospital

Maidstone May 14th.

SACRO ILIAC DISPLACEMENTS

SIR,—Referring to the letter by Dr Edgar Cyriax in which he discusses the report in the *Journal* (April 16th p 710) of my lecture on backache I am aware that the diagnosis of sacro iliac displacement is frequently made by some people though I believe it is made upon very slender evidence The making of a diagnosis is no satisfactory proof that the condition exists One needs better evidence than second sight or what the Americans call a hunch I of course presume that Dr Cyriax has better ways of detecting this lesion

I am not alone among orthopaedic surgeons in regarding minor displacements of the sacro iliac joint sufficient to cause symptoms to be of infrequent occurrence I can myself say that in the examination of several thousand backache cases I have seen relatively few that gave definite evidence of displacement at this joint The phenomenon thus generally labelled is a common one and is (most orthopaedic surgeons agree) amenable to manipulative methods

A discussion of the causes of acute low backache is very liable to degenerate into an acrimonious squabble I will therefore say no more than that in my lecture I attempted to draw attention to a field that suggested possibilities for further investigation for the solution at any rate of many of those cases of severe backache *not* due to sacro iliac displacement I believe that the condition *may* be due to a disturbance of muscle physiology rather than of anatomical relations I suggested that a clue to this might be found in the work of Sherrington and his disciples upon the physiology of the lower motor neuron and in the recent work in connexion with the biochemistry of muscular activity Reference to the abstract report may make this clearer

In my lecture I did not state that manipulative methods used by osteopaths had been described in ancient medical literature There is good reason to suppose however that such empirical methods good and bad have been used by bonesetters as long as medicine has existed Were not bonesetters employed by physicians as barber surgeons were and as masseuses and mechanotherapists are by the profession to day?

One further question I would like to ask is whether the acute condition under discussion is not a disease more or less peculiar to modern civilization In any case the factors of psychoneurosis and fatigue are large ones—I am etc

Exeter May 16th NORMAN CAPENER

LOCAL ANAESTHESIA FOR TONSILLECTOMY

SIR,—I regret to find myself in disagreement with my friend and colleague Mr Hamblen Thomas over the matter of tonsil removal under local anaesthesia Although it is not so stated I presume that when extolling its advantages he is referring to operations on adolescents and adults Even on the Continent—where admittedly the technique of local anaesthesia in operations on the upper respiratory tract has received greater attention than in this country—it is appreciated that to subject children to tonsil enucleation whether by the reversed guillotine or by the method of dissection is hardly making the punishment fit the crime I can speak from personal experience on this point because my own tonsils were removed abroad under local when I was in my young teens and the hideous memory thereof persisted for many years and is not yet entirely effaced While agreeing with Mr Thomas in his statement that there is less haemorrhage at the time of the operation I disagree with him that there is less likelihood of post operative haemorrhage Indeed, it is particularly because post operative haemorrhage is so rare after tonsil enucleation under general and so relatively frequent after operation under local that I perform the operation under local as seldom as possible

But there are other reasons for preferring general to local anaesthesia in this connexion (1) The avoidance of all pain in all cases during the operation is in my experience impossible (this may in a measure be due to my faulty technique) (2) The extra time which has to be devoted by the surgeon to the production of anaesthesia (this is I am afraid a confession of laziness) (3) The production of local anaesthesia is by no means always the painless procedure which the ardent protagonists of local anaesthesia would have us believe I am referring in this connexion more perhaps to mental than to physical pain (4) Modern methods of anaesthesia are so perfect that the patient is almost completely relieved of risk to life or to operative anxiety (5) The surgeon by his operative technique can prevent blood from entering the digestive tract and thus largely obviate post anaesthetic vomiting for which complication the anaesthetist is too often made to shoulder the blame

Finally believing as I do in the old adage Charity begins at home I prefer that the anaesthetist should pocket his well earned fee than that the general public should be relieved of a small financial liability which for the reasons stated above I submit that it is in their interest to incur—I am etc

London W 1 May 23rd MICHAEL VLASTO

THE USE OF THE SELF

SIR,—Your reviewer of Mr F Matthias Alexander's book *The Use of the Self* ends by saying The book will be found helpful and suggestive to both the medical practitioner and the educationist but gives no indication of what kind of help may be had from reading it so as to encourage others to study it I can understand his diffidence because until he has experimented on himself as Alexander did, or experienced the changes in himself that result from a course of lessons from Alexander he could not realize the changes that take place in the functioning of his various organs as the result of the new use induced and consequently the help that the practice of the new use of the self always brings I have discussed this subject with many medical men and I find that like your reviewer they can describe generally the contents of the book but that they say they do not know exactly what it means and have no standard from which to criticize it They seem to think that each person's use is inborn and natural and therefore correct for that person so why disturb it and make him conscious of his use ' and become a potential hypochondriac? It is the one way to cure a hypochondriac But putting on one side all those so called healthy persons with their inborn natural use what about all the sick and diseased persons who once were healthy with inborn natural use? Why did not this use keep them healthy in body and mind instead of filling our hospital out patient departments with incurables (according to Dr Colin Mackenzie) and producing the chronic cases in general practice both of which bring the whole subject of present day diagnosis treatment and medical training into question?

Mr Alexander is not a medical man—in fact he has not a degree to his name—but he has given in his books the results of years of observation in dealing with badly co ordinated human beings and his considered conclusions therefrom and offers them to the medical profession as his contribution towards the problems that have defied the best brains in the profession and out of it since the world began In this connexion I would like to quote

from a leader on Research in medicine in the *Times* of December 29th 1927

Experience amply shows that progress in knowledge may be achieved by any one of those who are seeking the truth and that every worker possesses a chance of great achievement All true scientific work is deserving of encouragement since all true scientific work is endowed with potentiality of service on the greatest scale Men of science no less than laymen have need to take this truth to heart In the study of nature there is neither academic nor extra mural orthodox nor unorthodox It is a curious fact that the greatest discoveries in medicine have proceeded from services lying outside the schools but it is not the less true that the work of the schools has usually been essential to the development of every new idea

Alexander has given the schools an idea, it is for them to develop it—I am etc,

Bexhill May 20th A MURDOCH

PREPARATION FOR MARRIAGE

SIR—Dr W J Logie's letter in your issue of May 21st calls for some comment The subject is too serious and too complicated to be dismissed quite as easily as he suggests I agree that the general practitioner is the person best suited to give the advice required provided as Dr Logie adds he has taken the trouble to equip himself for the task I suggest however that it is not because the practitioner has not *troubled* to equip himself but because he is often unaware of the need for so doing Personally I believe that the need is really very urgent and that it only requires more emphasis in order to convince doctors of the necessity for study and action

Dr Logie alleges that our ancestors managed very well without specialist advice and I think he is probably correct but the position to-day is not what it was in a more primitive age Economic considerations render contraception an absolute necessity for most people and the eugenic implications of this call for very earnest consideration in each particular case In addition the growth of mental faculties in the human species renders mating a far more complicated process than it was in an earlier evolutionary epoch Primitive peoples as Dr Malinowski has shown us have established mating as a high and beautiful thing by satisfying psychological as well as physiological needs but they are unhampered by the economic restrictions of Western civilization Nor do they inherit ideas bred in the monasticism of the Middle Ages

I suggest that much of the chronic invalidism of to-day is directly associated with lack of proper satisfaction in marriage I know married men who have not the slightest idea that their wives need repeated wooing nor that love is an art not easily acquired I know wives who though they have borne several children have never had sexual satisfaction and who indeed have an idea that they ought not to expect it In such a soil the psychoneuroses flourish If our profession can shed some light into this darkness it will still further have deserved well of mankind

Actual physical union should be but the end of a process which rightly and wisely followed is one of the most spiritually elevating and creative things in life Sexual intercourse is not merely physically procreative It is or should be a vitalizing spiritual experience and a source of deep and lasting mental satisfaction This is because man is little lower than the angels and is not as Dr Logie appears to suggest on an equal sexual footing with the beasts in the jungle A race that cannot manage its own love affairs is I admit too terrible to contemplate but the fact remains that at our very doors we can indulge only too readily in this contemplation if only we look at the facts A complicated education is necessary to enable man to cope with the modern civilization which he has created by the use of his mental powers and an ever increasing demand for a fuller mental life This self same development of the mind has made of true marriage a greater thing than mere procreation Education is sorely needed if the institution of human marriage is to retain its sanctity The alternative is to allow marriage to drift under the pressure of modern conditions into a mere materialistic legal contract devoid of beauty and mental creative power The law may make a couple one flesh but only education can make of many marriages a spiritual unity as well

A medical friend asserted recently that when biology was adequately taught in all schools we should largely have solved the nation's marital problems Surely this points to the existence of a body of opinion which is entirely materialistic and which ignores the existence of that vital difference between man and all other living creatures—namely that creative satisfaction of beauty which from age to age under the influence of increasing knowledge is ever widening its frontiers—I am etc

Breston Notts May 22nd LEONARD P LOCKHART M D

COBALT IN HAEMATOPOIESIS

SIR—I have noted in the *British Medical Journal* of November 21st 1931 the query by J A R T as to cobalt together with the answer by Dr William C Hoffman of Glasgow in your issue of November 28th Dr Hoffman mentions that endomin a haematopoietic manufactured by Reed and Carnrick contains a certain amount of cobalt In this connexion may I direct attention to a paper, Production of experimental polycythæmia with cobalt by James M Orten F Aline Underhill Edward R Mugrage and Robert C Lewis of the University of Colorado School of Medicine (*Proc Soc Exper Biol and Med* November 1931) In their studies on nutritional anæmia they observed that if animals were continued on the milk iron and copper diet supplemented by a mixture of manganese cobalt nickel and zinc a marked polycythæmia developed which could not be produced by the milk iron and copper diet alone Upon trying all the possible combinations of these metals it was found that cobalt was responsible for the polycythæmia The normal percentage of haemoglobin in rats is about 13 with about 9 000 000 red cells per cubic millimetre These figures were increased by the use of cobalt to 19 4 per cent haemoglobin and 14 599 000 red cells They found in common with other investigators that copper and of course iron are absolutely essential Cobalt cannot replace copper but supplements its action —I am etc

Jersey City N J April 29th H SHERIDAN BAKER

ALUMINIUM AND HEALTH

SIR—To emphasize the ill effects resulting from the use of aluminium utensils for cooking purposes I wish to draw your attention to my two articles[1] describing a series of signs and symptoms which although not previously amenable to any kind of treatment rapidly disappeared when these utensils and other sources of metallic poison were discontinued *Not only* did all the gastro-intestinal disorders anorexia severe flatulence constipation colicky pain etc improve in a most striking manner but such dermatoses as pruritus acute and chronic urticaria

[1] Some Skin Manifestations and their Relation to the Disturbances of the Gastro-intestinal Tract *Irancet British Medical Review* October 1928 Also Chronic Poisoning by an Irritant contained in Cooking Utensils and Tap Water *ibid* December 1928 Also No 3

dysidrosis cheiropompholyx boils etc which hitherto yielded to no recognized method of treatment disappeared within a very short time

Only a medical man who like myself has been a victim of such poisoning can realize the importance of these findings The treatment suggested was as strikingly successful in a large number of patients as in my own case Medical men and patients alike who first took a sceptical view on the subject were soon convinced of the correctness of the statements This is shown in the case of Dr Le Hunte Cooper who kept an open mind on the problem when reading the mentioned articles on their publication in 1928 Dr Cooper's statement in the issue of the *British Medical Journal* of May 7th (p 862) that no disease or ill health of any kind in any class of life has previously been attributed to this cause (that is aluminium) appears then not to be in accordance with the very definite clinical and laboratory findings concluded a few years ago and confirmed in medical practice every day — I am etc

London N W 6 May 7th LEO SPIRA M D

BREECH DELIVERY

SIR —Owing to the still unsettled teaching concerning breech delivery I feel justified in quoting the following case in support of my letter published on September 26th 1931

The patient was a primigravida aged 23 years with the breech presenting Pains were good but only occurring at intervals of ten minutes The description starts with a pain which delivered the child to above the umbilicus The legs were extended Almost immediately convulsive like movements of the child were observed and the cord was felt but was not pulsating By abdominal pressure the trunk with extended legs was delivered and the arms which appeared to be folded across the chest were brought down A Sims speculum was introduced along the posterior wall of the vagina to the bridge of the child's nose and mucus in the neighbourhood wiped away The child immediately coughed cried and respiration commenced The time at this stage was 4 10 p m Further efforts to complete delivery failed Unfortunately the usual preparation and technique for a breech delivery had not been observed a mistake for which I hold myself entirely responsible The extraction forceps were not ready but were immediately put in to boil Delivery was finally completed at 4 35 p m the child being alive apparently none the worse having respired comfortably in the meantime Incidentally the manœuvres were carried through without rupture of the perineum

Various observers give different intervals of time for how long a child can survive the asphyxia consequent upon its circulation to the placenta being arrested Be that as it may one draws one's own conclusion but the case refutes with certainty the statement that the provision of an airway to the child is obtained more by luck than judgement —I am etc

J SHIRLEY CALLCUTT M B Ch B
Maternity Hospital Kingsbury N W May 2nd

THE STUDENT IN IRONS

SIR —Under the above heading there has been a most interesting correspondence in the *Journal* in the course of which a fairly varied assortment of suggestions has been made for relieving the student of his irons I do not know how long the sense of discomfort and dissatisfaction in the minds of the educationists mentioned by Dr Ryle has endured but I have a suspicion that it considerably post dated that sense in the minds of the general practitioners In 1928 I attempted in my presidential address to the West London Medico Chirurgical Society on The general practitioner a retrospect and a prospect to voice this dissatisfaction and I am delighted to observe that Dr Crichton Miller finds a solution of some of the difficulties in the recognition of the fact that the training needed to make a good member of a hospital staff is not best suited to develop a good general practitioner to quote from my address Dr Crichton Miller and I may differ about details but the general recognition of the truth of the above statement will help considerably in formulating any proposals for the removal of the irons

I did not believe in 1928 and I do not believe now that too much time is devoted to the preliminary studies although these might well be brought into closer relation with clinical work Insufficient preliminary work results in an inability to make satisfactory use of post graduate study The whole future of medical education depends on the foundations being properly laid but if the general practitioner is to fulfil his functions properly it will be necessary to curtail his later undergraduate studies in certain directions while extending them in others The curtailment might take the form of deeper study of a restricted number of diseases—namely those more commonly met with—sufficient knowledge of other and rarer diseases being inculcated to develop the student's understanding of the principles of medicine The necessary pruning will have to be very carefully done or the result may be a very lop sided education

When it comes to extension to my mind the question is not nearly so difficult so many important aspects of medicine have long had little or no place in the student's education On December 5th 1931 Dr P Bauwens in a letter to the *Journal* deplored the absence from such training of provision of tuition in physical methods and a recent visit to Bournemouth under the auspices of the British Health Resorts Association reminded me of the deficient knowledge the medical profession in general had of those two most important subjects—climatology and hydrology When one recalls how profound are the effects of climatic changes on each one of us and ponders on the widespread belief throughout the ages in the beneficial effects of baths when further one recalls that the Father of Medicine Hippocrates wrote *Airs Waters and Places* it indeed seems strange that modern medical education pays no attention to these important subjects and that as a result our health resorts in many respects so up to date may have to look in vain to the medical profession for advice on how to develop their amenities so as to attract and provide for that type of patient whom residence in the particular locality may be expected to benefit

There are other serious omissions from the education best suited to the general practitioner but *festina lente* a few steps at a time will suffice —I am etc

London W 8 May 7th HAROLD H SANGUINETTI

A GENTLE PROTEST

SIR —For one reason or another we in Canada are accustomed to open the *British Medical Journal* with a sense of comfortable anticipation It gives us a lead which Canadian medical journalism is quite willing to follow especially in the quality of your writing May I be allowed however to enter a mild protest against the employment in your columns of the term chronic pelvic woman (March 26th) Possibly we are apt to forget that English is an elastic medium and in our enthusiasm we strive for stiffer and more nearly stereotyped forms of expression than the language will permit but even so I cannot see the justification for Mr Aleck Bourne's title

The acute abdomen and the chronic abdomen have come to stay but whilst the odour of their cheapness

still hangs about them they do define well understood conditions I am not so sure about these chronic pelvic women Admittedly Mr Bourne had trouble in finding a descriptive title for his address but he did not have trouble enough Even the powerful precedent of Dr Hutchison is not quite convincing Dr Hutchison ought to have known better and besides there is only one Dr Hutchison! Also he had the grace to use a girdle of inverted commas which might well have been borrowed for the chronic pelvic woman

Think of the offspring we may expect Chronic coeliac cohorts will appear who will eagerly compare notes with chronic cranial cranks! The elasticity of our journals is considerable but will not you Sir use your editorial powers to ensure that such terms do not appear without the tailoring suitable for their uncouth nature?—I am etc

Montreal May 3rd H E MacDermot

*** The question is does a girdle add grace to naked uncomeliness?—Ed *B M J*

THE SACRUM

Sir,—Dr W M Feldman's letter in the *Journal* of May 14th concerning the sacrum and the legendary conversation between the Emperor Hadrian and Rabbi Joshua ben Chananiah is of considerable interest He is doubtless aware that Samuel Butler in *Hudibras* Part III Canto II refers to this rabbinic theory in characteristic doggerel metre as follows

> The learned Rabbins of the Jews
> Write there's a bone which they call Luz
> I the rump of man of such a virtue
> No force in Nature can do hurt to
> Therefore at the last great day
> All th other members shall they say
> Spring out of this as from a seed
> All sorts of vegetals proceed
> From whence the learned sons of art
> Os sacrum justly call that part

—I am etc

London W 1 May 14th A G Timbrell Fisher

COCA ADDICTION A CENTURY AND MORE AGO

Sir,—If my memory can be trusted nothing was said of the dangerous qualities of coca when it was first boomed in England some time in the seventies of the last century It was announced that the leaves either raw or as an infusion were used in South America to avert fatigue and preparations such as coca wine were placed on the market and recommended as valuable stimulants The anaesthetic property of cocaine was announced I think about 1885 It was later than this that we began to hear of the danger of cocaine addiction and its ruinous effect on the nervous system and to most of us this danger appeared to be recently discovered But evidently the danger had long been known only too well in South America and should have served as a warning to the rest of the world In the *National Cyclopaedia* (London Charles Knight) published in 1848 I recently came upon the article quoted below which describes a state of things already long prevalent

Coca the dried leaf of *Erythroxylon coca* is one of those stimulating narcotics which belong to the same class as tobacco and opium but is more remarkable than either of them in its effects on the human system The effects of this drug are said to be of the most pernicious nature exceeding even opium in the destruction of mental and bodily powers The coca leaf is chewed by the Peruvian mixed with finely powdered chalk and brings on a state of apathy and indifference to all surrounding objects The desire for this drug increases so much with indulgence in it that a confirmed coca-chewer is said never to have been reclaimed

The immoderate addiction of the Peruvians to the use of this drug is such that their forests have long since ceased to be able to supply their wants and the cultivation of the plant has been carried to a very great extent not only under the Incas but beneath the local government of the Spaniards who seem to have been no more able to resist the temptation of a large revenue from the monopoly of this article than European nations from the consumption of ardent spirits The cultivation of coca is therefore an important feature in Peruvian husbandry

The exciting principle of the coca has not yet been inquired into The leaves yield an infusion of a green colour which produces the same terribly stimulating effects on the system as the chewed leaf The practice of indulgence in this pernicious habit gives rise to numberless diseases jaundice and derangement of the nervous system with pains in the head and such a prostration of strength that the patient speedily loses all appetite A total inability to sleep ensues which aggravates the mental depression of the unhappy individual who in spite of all his ills cannot relinquish the use of the herb to which he owes his sufferings but craves brandy in addition The appetite becomes quite irregular sometimes failing altogether and sometimes assuming quite a wolfish voracity especially for animal food Thus do years of misery drag on succeeded at length by a painful death

Reference is given to Poppig *Reise in Chile etc* vol II Hooker *Companion to Botanical Mag* I and II —I am etc

Shap on Mallet F J Allen

Obituary

ANDREW ELLIS WYNTER M D

Dr Andrew Ellis Wynter whose death occurred on May 7th at the age of 70 was the second surviving son of Dr Andrew Wynter Editor of the *British Medical Journal* from 1855 to 1860 Like his father his interest in medicine was seriously rivalled by a wider outlook on life After a distinguished career at Epsom College and St Bartholomew's Hospital at both of which he obtained scholarships showing the best of his nature by interest in collateral activities he practised for about five years at Beckenham The routine and limitations were however distasteful and when the South African war broke out he joined the expedition and served through the greater part being present at Modder River before being invalided home in the summer of 1900 Once imbued with the fascination of travel he visited by turns all the British Dominions developing a passionate enthusiasm for the Empire which dominated his after life When the war between the U S A and Spain occurred he joined the American Forces as surgeon and served in Cuba There were more medical than surgical casualties and he was himself invalided with what was called typho malaria which entailed three months hospital treatment The subsequent years were occupied in further travelling including an expedition in Central Africa at the time that country was being opened up to British occupation In 1914 being over age for active service he employed himself in recruiting and later served on board merchant ships running the gauntlet of submarines during their intensive activity

For the last twelve years Dr Wynter took an active part in social work subscribing regularly to the many institutions in aid of the youth of the present generation —dockland settlements orphanages and emigration movements—besides numerous public institutions such as the Colonial Institute English Speaking Union and Freemasonry His ideals were socialistic but of the kind that gives rather than takes living frugally on a small income he devoted two thirds to public service Such men are ever widely appreciated and can ill be spared

THE LATE DR G C WALKER

A colleague sends the following note supplementing the obituary published on May 7th Dr George Charles Walker the oldest member of the British Medical Association who died at Exmouth aged 94 acted as medical officer to the s s *Great Eastern* when she was employed in laying the submarine cable to North America He *proceeded M D of St Andrews travelling by sea to* Scotland to save the railway fare and entered general practice at Bootle where he was honorary physician to the borough hospital In 1885 he moved to Southport, and in a few years built up an extensive consulting practice in mental and nervous diseases being often called to Liverpool and Manchester So busy was he for the next twenty years *that when a stranger in a railway* train one day asked him his age he replied at first 60 calculation showed that he must be 70 and he realized that there were ten years in his life so packed with work that he could remember nothing of them After he passed the age of 70 he became less busy and in 1921 retired to Exmouth His devotion to his work which had caused *him to spend his holidays formerly in attending the Paris* hospitals still endured Till the last week of his life he read the medical journals and kept up his plate and was always glad to discuss cases or advise on points of medical *etiquette He belonged to the finest type of old English* clinician familiar in his youth with diseases such as typhus and plague which are now unknown in English *general practice but always ready to hear and receive* new ideas and very ready indeed to help the younger members of the profession he had served for so long

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Dr ALFRED HERBERT MARSH who died on March 10th at New Eltham was born in 1864 and after studying medicine at Owens College Manchester obtained the L S A in 1887 He earned his living as an unqualified assistant during his studentship and for financial reasons was unable to proceed to further diplomas He became assistant to Dr T Moreton of Northwich and succeeded to the practice After several years the onset and progress of severe deafness induced him to leave England for British East Africa with the intention of taking up farming He went to Nairobi and took an *x* ray outfit among other medical equipment for he had had experience in radiology since its inception in 1895 He joined the Rontgen Society about that time His services were much in request not only in *x* ray work but in pathology and obstetrics He was very popular and was elected a member of the Medical Council of Nairobi In 1913 owing to increasing difficulty of hearing he returned to England and took up dairy farming On the outbreak of the war he became radiologist at the Epsom Red Cross Hospital In 1918 he was commissioned in the R A M C as radiologist to the No 57 General Hospital in Marseilles and was soon appointed *x* ray specialist to the Marseilles base On returning to England he was appointed radiologist at the Royal Herbert Hospital Woolwich where he worked for some years and was later appointed radiologist to the London Jewish Hospital His son Dr Frank Marsh is now a pathologist with the Anglo-Persian Oil Company on the Persian Gulf

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Dr W HOWARD BLACKBURN medical officer of health for Lowestoft since 1927 died on May 11th aged 40 At Cambridge he graduated B A in 1914 with first class honours in the Natural Sciences Tripos and after studying medicine at St Bartholomew s Hospital he qualified M R C S L R C P in 1916 and almost immediately took up a temporary commission in the Navy After the war he returned to take his M B and Ch B degrees in 1921 and the D P H in 1922 He then entered the public health service as deputy M O H for St Helens A Colleague writes 'Blackie had an enormous capacity for work and it was this intense love for his work which laid him low in that his illness commenced with influenza when working at high pressure during an outbreak of diphtheria at Lowestoft Despite his illness however he would not give up and was in harness until practically the last morning from the mayor the tribute that it was simply the way he gave himself up to his duty that was the cause of his death Everybody who knew him regrets the passing of a colleague of the highest type and a staunch friend

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EVAN HERRING HARE M A F R C S was born at Putney in 1851 and was educated at Guildford Westminster and St John s College Oxford His death which *took place on April 25th calls to mind experiences of more* than half a century ago when in 1876 Serbia backed unofficially by Panslavist Russians made war on Turkey The British National Society for Aid to the Sick and Wounded in War a society which had been formed to help the sufferers in the Franco German war of 1870-1 was still in being but was slow to act Thereupon sympathizers with the Serbians organized the Eastern War Sick and Wounded Fund under the chairmanship of Sir E Letchmere which sent out a number of surgeons under the direction of Mr MacKellar of St Thomas s Hospital to form an ambulance at the seat of war in Serbia Those surgeons of whom E H Hare was one did good work at the front in difficult circumstances for *the commissariat and supply department was defective* Later in the year the British National Society took over the ambulance and sent out a party of surgeons under Mr (afterwards Sir William) MacCormac in which I held a warrant as dresser My first acquaintance with Hare was in billets at a little village behind the front line Subsequently I served with him in the British Ambulance *in Belgrade and accompanied him on a tour of the Drina* front For his services in this war he received the Gold Cross of the Order of Takova from King Milan of Serbia In 1879 Hare served as a civil surgeon in Zululand under Sir Garnet Wolseley After his return to London he resumed his studies and obtained in 1887 the diploma of Fellowship of the Royal College of Surgeons Meanwhile he had gone into general practice first at Kew and afterwards in Hornsey where he settled in 1886 and where he lived for the rest of his life He acquired a large practice and became the valued friend of a large number of people in Hornsey as the presence of a congregation of some five hundred at his funeral on April 29th testified He took an active interest in local affairs particularly in Church matters and the Boy Scout movement He was chairman for four years of the Hornsey (Central) Conservative Association and was also a Knight Companion of the Primrose League Hare was a man whom many people trusted and rightly for he kept his head in trying circumstances it might have been said of him that he was a good man to go tiger shooting with He lost two sons in the great war and is survived by a widow two sons and two daughters

E M L

Universities and Colleges

UNIVERSITY OF OXFORD

It is proposed to confer the honorary degree of D C L upon Lord Moynihan P R C S immediately before he delivers his Romanes Lecture on Wednesday June 8th on The Advance of Medicine

NATIONAL UNIVERSITY OF IRELAND

At its meeting on May 19th the Senate decided that the honorary degree of M D should be conferred upon Sister Anna Dengel B Sc M B B Ch B A O foundress and first Superioress General of the Society of Catholic Medical Missionaries

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

A meeting of the Royal College of Surgeons of Edinburgh was held on May 16th when Mr John Wheeler Dowdin president was in the chair The following fourteen successful candidates out of eighty two entered who passed the requisite examinations were admitted Fellows

C P C Anderson P M Ballantyne J Bruce S K Chatterji D I de Villiers D McK Dickson D Cansu J R C Kirkpatrick H B Lieberman W Patrick L I Pinsker G L Reid J K S Thomson R I Verco

The Liston Victoria Jubilee Prize instituted in 1887 by Dr Robert Halliday Cunning and awarded triennially for the greatest benefit done to practical surgery by a Fellow or

Licentiate of the College has been awarded to Norman McOmish Dott F R C S Ed

The Ivison Macadam Memorial Prize was after a competitive examination in organic and inorganic chemistry awarded to Mr B Wiesenfeld

The Henry Arthur Dalziel Ferns Bursary was after a competitive examination in organic chemistry in its application to medicine awarded to G B Drummond

The Bathgate Memorial Prize was after a competitive examination in materia medica and therapeutics awarded to M B Spiegel

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have been approved at the examination indicated

MASTER OF MIDWIFERY.—R G Bradford W A Rees J L M Wood

CONJOINT DIPLOMA IN MEDICAL RADIOLOGY

Regulations have now been issued for the diploma in medical radiology (D M R R C P and S Eng.) which has recently been instituted by the Royal College of Physicians of London and the Royal College of Surgeons of England. The examination is divided into two parts: the first comprising physics as applied to radiology, the second medical radiology with special reference to its clinical application including radio-diagnosis, x-ray therapy and radium therapy. Both parts will be held in June and December of each year. Candidates may enter for them either together or separately subject to the production of the required certificates. The course for the diploma extends over one academic year (nine months) of full-time study subsequent to the attainment of a recognized medical qualification. At the discretion of the committee of management the conditions of admission may be modified in special cases but exemption will not be granted from any part of the examination. A syllabus has been drawn up for Part I of the examination but not for Part II. The fee for admission or readmission to each part is six guineas. Copies of the regulations may be obtained from the secretary at the Examination Hall, 8–11 Queen Square, W C 1.

The Services

ROYAL ARMY MEDICAL COLLEGE

The War Office announces that the prizewinners in the junior class of instruction for officers of the Royal Army Medical Corps and the Indian Medical Service at the Royal Army Medical College at the session which terminated on April 29th last were as follows:

Herbert Prize (Highest Aggregate) and *Fayrer Memorial Prize (Pathology)*
Lieutenant F A B Sheppard M B B S (Melbourne University) I M S

Marshall Webb Prize (Military Medical Administration)
Lieutenant P T L Day M R C S L R C P (Guy's Hospital) R A M C

Parkes Memorial Prize (Hygiene)
Captain W Happer M B Ch B M R C P (Edinburgh University) I M S

De Chaumont Prize (Hygiene)
Lieutenant J M Low M R C S L R C P (St Mary's Hospital) R A M C

Ranald Martin Prize (Tropical Medicine)
Lieutenant M Sendak M B B S M R C S L R C P (St Mary's Hospital) I M S

Tulloch Memorial Prize (Pathology)
Lieutenant R D Macrae M B Ch B D P H (Aberdeen University) R A M C

First Montefiore Prize (Military Surgery)
Lieutenant R I Reid M B B Ch B A (Trinity College Dublin) I M S

Second Montefiore Prize (Military Surgery)
Lieutenant W A N Marrow M R C S L R C P (Middlesex Hospital) I M S

TERRITORIAL ARMY MEDICAL OFFICERS ASSOCIATION

The annual meeting and dinner of the Territorial Army Medical Officers' Association will be held at the Dorchester Hotel on Saturday, May 28th. Meeting 7.30 p.m. Dinner 8 p.m. Tickets 12s. 6d. (exclusive of wines). All Territorial Army medical officers (active and retired) are invited to be present. The honorary secretary's address is 37 Russell Square, W C 1.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons spent four days this week in committee on the Finance Bill and then discussed the Sunday Entertainments Bill. *Legislation is expected at* an early date on miners' hours.

Amendments tabled to the National Health Insurance and Contributory Pensions Bill include one in the name of Dr Fremantle. This proposes that insured married women with the exception of those re-entering full-time employment shall cease to be entitled to standard benefits and become entitled to benefits on a special scale including a single maternity benefit within two years of the date of marriage and medical benefit for a period of approximately eighteen months after marriage. The same amendment is backed by members in touch with the friendly societies.

Mr Groves had given notice to present on May 24th a Bill to lay down minimum wages and maximum hours for the nursing profession. Mr Groves was not present, and the Bill was not moved.

Children's Bill

The Children and Young Persons Bill passed through the report stage in the House of Commons on May 12th. Mr RHYS DAVIES proposed a new clause to provide that no person under the age of *18 not being a child should* be employed more than forty-eight hours in any week. Lady ASTOR later moved a new clause authorizing local authorities to make by-laws prescribing the number of hours to be worked by such young persons in certain trades. After a long discussion both proposals were defeated. Sir HERBERT SAMUEL and Mr OLIVER STANLEY arguing that the Bill was not appropriate for dealing with the matter. Sir Herbert Samuel added that a convention was being negotiated at Geneva on the employment of children. The British Government anticipated that legislation would be needed to implement that convention. Other amendments were made at the instance of the Government. One exempted from the Infant Life Provisions and Part I of the Children's Act all institutions certified or approved by the Board of Control and in which no children or young persons are received who are not mental defectives.

Sanitary Condition of British Ships

On May 24th Mr RUNCIMAN told Mr Logan that he was aware that the medical officer of health to the Port Sanitary Authority of Manchester had stated in his report for 1930 that of *1 324 British* vessels entering the port of Manchester in that year 395 had been found on inspection to be insanitary. That number covered defective as well as insanitary vessels and *in many* cases the ships had small defects due to voyage damage or wear and tear which were remedied before the ships sailed again. The action taken to improve the crew accommodation in British ships was indicated in a statement which the President of the Board of Trade circulated on July 7th. As regards mortality due to disease arising from the character of the occupation, the special investigation of which the House was informed on December 24th 1929 had been completed and the report would be published as soon as possible. It would show that the shipping industry did not compare unfavourably with other industries in that respect.

Animals for Experimental Purposes.—Replying to Sir Robert Gower on May 13th Mr DUFF COOPER for the War Office said that in the year 1931 eleven animals—not horses or dogs—were used at the Physiological Laboratory, Cambridge, for chemical defence experiments. At the Chemical Defence Research Establishment, Porton, 579 animals were so used, none being horses or dogs. In 1932 from January to April no animals were employed for this purpose at the Cambridge Laboratory, 127 at Porton but no horses or dogs.

Medical News

The King on the recommendation of the Home Secretary has approved the appointment of Mr Digby Cotes Preedy K C M A LL M Cantab L S A Lond to be Recorder of Oxford Mr Cotes Preedy was in 1903 house-physician to St George's Hospital and was called to the Bar in 1904

H R H the Princess Royal will open the new pavilion of the Country Branch of the Hospital for Sick Children at Tadworth Court Surrey on Monday May 30th at 3 30 o clock

The City of London Corporation will entertain the delegates of the annual meeting of the Association of Port Sanitary Authorities at dinner in the Guildhall on Thursday June 9th at 7 30 p m

The annual general meeting of the London and Counties Medical Protection Society will be held at Victory House Leicester Square W C 2 on Wednesday June 1st at 4 p m It will be preceded by an extraordinary general meeting at 3 30 p m

The Physical Society of London and the Optical Society will hold a joint discussion on vision at the Imperial College of Science and Technology South Kensington on Friday June 3rd (first session 2 30 to 5 30 p m second session 7 to 9 30 p m) Twenty eight papers by British and foreign contributors have been promised Visitors will be cordially welcomed No tickets are required

The Fellowship of Medicine and Post Graduate Medical Association reminds its members that the first of a series of four lecture demonstrations on Wednesdays at 5 p m will be given on June 1st at the Royal Free Hospital by Dame Louise McIlroy Professor A J Hall will give the first of his three lectures on epidemic encephalitis at 11 Chandos Street Cavendish Square at 8 30 p m on June 2nd A demonstration on splenic enlargement will be given at 10 Bedford Square W C on June 1st at 8 30 p m Forthcoming whole day courses include medicine surgery and the specialties at the Prince of Wales's Hospital Tottenham June 6th to 18th gynaecology at the Chelsea Hospital for Women June 6th to 18th diseases of the chest at the Victoria Park Hospital June 6th to 18th A course in diseases of children will take place from June 25th to July 9th at the Children's Clinic and other hospitals and a week end course in diseases of the chest will be given on June 25th and 26th at the Brompton Hospital A fortnight's course in dermatology will take place at the Blackfriars Skin Hospital from June 27th to July 9th in the afternoons

The twelfth international congress of neurology will be held at La Salpetrière Paris on May 31st and June 1st when the subject of discussion will be recent advances in the clinical knowledge morbid anatomy pathogenesis and treatment of epilepsy introduced by Foerster of Breslau Pagniez and Crouzon of Paris and Abadie of Bordeaux

At the meeting of the Claro Area guardians committee of the West Riding County Council held on May 20th Dr B Holroyd of Pannal near Harrogate was unanimously elected chairman for 1932–3 This is the third successive year in which Dr Holroyd has been so appointed

The report on the Lebanon Hospital for Mental Diseases (Asfuriyeh near Beirut) by Professor Watson Smith who has been medical director for twenty three years was presented at the annual meeting of subscribers held in London on May 4th From a small beginning this voluntary hospital has become one of the most important branches of the Public Assistance and Medico Legal Services of Syria and its benefits to the individual are indicated by the fact that 3 714 patients have now been under treatment there Dr E W G Masterman the chairman of the London Committee presented the general report and pointed to the steady progress made year by year and the importance of the international character of the hospital

The first issue appeared in April of a new Italian periodical entitled *Rassegna Internazionale di Oto rino laryngologia* It is composed of very brief abstracts of articles on diseases of the ear nose and throat which have been published in the leading medical journals of the world Professor G Bilancioni president of the Italian Society of Oto rhino laryngology contributes a commendatory foreword in which he emphasizes the need of such a publication which will enable investigators in these branches of medical science to be notified of the advances made throughout the world The editor of the new periodical is Professor G Guida and the annual subscription is 30 lire The editorial address is Via Nomentana 41 Rome

The issue of *Paris medical* for May 14th contains an account by Professor Laignel Lavastine of the life and work of Professor Jean Alfred Fournier the centenary of whose birth was recently celebrated in Paris

Early last year the Hungarian Minister of Public Welfare and Labour offered a prize of 2 000 Swiss francs for original work on the aetiology of trachoma and appointed as a jury of award Mr A F MacCallan (London) Dr Victor Morax (Paris) Professor L Maggiore (Bari Italy) Professor Carl Prausnitz (Breslau) and Professor Emile de Grosz (Budapest) On the recommendation of the jury the prize has been awarded jointly to Drs Ugo Lumbroso (Tunis) and J Taborisli (Palestine) Drs Cattaneo (Sassari) P Olitsky (New York) Rotth and Kanyo (Budapest) and C Trapezontzewa (Moscow) receive honorable mention

The Karl Ludwig medal which is awarded annually for the best original work on diseases of the circulation has been awarded to Professor Friedrich Moritz of Cologne

The Berlin square formerly known as the Luisenplatz has been renamed Robert Kochplatz

Letters, Notes, and Answers

All communication in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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QUERIES AND ANSWERS

Treatment of Moles

M writes A lady who is now 27 years of age developed a mole on the nape of her neck three years ago Since that time other moles have appeared on the face and neck at irregular intervals The original mole when I saw it recently measured 3 cm in diameter and was of a dark melanotic colour the others are of varying but smaller size and their colours are stated by the lady to be getting darker None are pedunculated Sundry treatment by various specialists has been suggested and any advice given to the lady that x rays or radium should be used is promptly negatived by her since she is afraid that melanotic sarcoma may develop as a result I would be glad to hear of any alternative suggestions for treatment

Plantar Corns

DR GRAHAM GRANT sends the following Scotsman's cure for plantar corns Beg borrow or obtain a pair of cork soles and place them white side up on the floor Cover the corns with ink and put each foot accurately down on the cork sole If this is done with care a black stain will be left at the site of each corn Cut these out and put the soles in your boots Even if there is a bursa under the corn the removal of friction ensures immediate comfort and ultimate cure

Inhaling Tobacco Smoke

DR R CAUTLEY HOLDERNESS (Bury) writes in answer to Dr Ryan's query (May 14th p 918) From my own observations I am convinced that the smoke is inhaled in the vast majority of cases if it goes beyond the pharynx at all Dr Ryan's experiment of inhalation however does not fulfil the usual conditions in this particular—namely that most inhalers dilute the smoke in one or both of the following ways (1) Having drawn the smoke into the mouth they dilute it by a short expiratory puff and then inhale (2) They draw in air simultaneously through the nose thus diluting the smoke in the pharynx as it passes to the larynx One may practise this oneself and at the end of the following expiration the smoke again appears which would be impossible if the smoke were swallowed That some few smokers inhale the undiluted smoke is indeed a fact but in them owing to insensitivity of the laryngeal mucous membrane developed by continuous inhalation the unpleasant effects remarked by Dr Ryan are not noticed To an experimenter I agree the effects are most unpleasant With regard to the absorption of poisonous products that CO is absorbed into the blood has been shown by the late Professor Dixon in experiments reported in the *Journal* some time ago and the effects of nicotine absorption have also been demonstrated In practice however the fact that the smoke inhaled is in most cases very dilute means that the quantities of poisonous by products absorbed are too small to give rise to serious symptoms as a rule On the other hand oversmoking may give rise to marked ill effects—for example tobacco amblyopia or to more acute conditions such as extrasystoles or nausea and vomiting

Income Tax

Motor Car Depreciation

W S bought a car in 1930 for £120 and was allowed 20 per cent of £120 = £24 depreciation as for 1931–2—or possibly 1930–1 In 1932 a mechanical breakage occurred the car will not pay for repairing and another car is being bought What can be claimed for 1931–2 or 1932–3?

*** The fact that the car has become valueless to W S will probably be held to be due to inherent defect or some cause other than the *wear and tear for which alone* the depreciation allowance is provided The £61 value quoted by the collector is the written down value after allowing 20 per cent for the first three years—that is £24 + £19 + £16 The best way of dealing with the income tax side of the question is to sell the car for what it will fetch (say £*x*) and claim as an obsolescence allowance £61 − £*x*—treating that amount as a professional expense of the year 1932

X ray Equipment Depreciation

M D Ed has expended £750 on apparatus in respect of which he has claimed depreciation the inspector of taxes wants to allow renewals only As our correspondent points out he may die or retire at a time when depreciation has accrued but full renewal expenditure has not been incurred and allowed

*** The Acts make a distinction between implements utensils or articles employed for the purposes of the profession and machinery or plant so used renewals only applying to the former and depreciation (*plus* obsolescence) *or* renewals to the latter at the option of the taxpayer No doubt a number of the smaller and less expensive pieces of apparatus might properly be held to be implements etc rather than machinery or plant We suggest that M D Ed might make a short list of the more expensive and durable items showing the cost and date of purchase in each case and send that to the inspector with a formal request that a 10 per cent allowance on a written down basis shall be given for such apparatus the cost of maintaining the rest of the equipment to be dealt with on a renewals basis We believe that that course has been adopted by mutual agreement in other cases

LETTERS, NOTES ETC

Congenital Malformation of the Heart in two Successive Pregnancies

DR H GOOCH (Church Stretton) writes On September 9th 1930 a healthy primipara aged 33 years was confined at the end of the eighth month of her pregnancy Uterine contractions were painless and the child was born quickly without much warning It was a female deeply cyanosed and died about seventeen hours after birth Post mortem examination revealed a patent foramen ovale On May 21st 1932 the patient was confined again this time with no warning at all Again the pregnancy terminated at the end of the eighth month The child was a female deeply cyanosed and died twenty one hours after birth the foramen ovale being patent The parents have asked me what chance there is of any future pregnancy resulting in a normal child I should like to hear from any of the readers of the *Journal* who may be interested in this subject Some twenty years ago I attended a woman in two successive confinements the result in each case being spina bifida and death in two or three weeks Subsequently this woman produced three perfectly healthy children

Vasovagal Syncope

DR EDGAR CYRIAX writes I have read with great interest Sir Thomas Lewis's lecture on vasovagal syncope in the *Journal* of May 14th In it there is one point that calls for comment and that is the question of priority of application of vagus nerve pressures Although many authors before the time of Czermak had applied pressure to the carotid arteries and thereby unknowingly affected the vagus nerves the first who knowingly applied such pressure with the specific intention of stimulating the vagi was P H Ling (1776–1839) the father of Swedish gymnastics There is evidence that he applied them to patients during the years 1830 and 1833

Medical Golf

The members of Dumbartonshire Division competed in the Divisional stage of the Treasurer's Cup golf competition on Wednesday May 18th over Helensburgh golf course There was a small entry and heavy rain rather spoiled the afternoon's play and made good scoring difficult Dr William Gibson Old Kilpatrick was the winner with a net score of 76 and Dr L Crombie Dalmuir the runner up with a net score of 77

Return of Testimonials

T C writes Practitioners and others seeking posts are asked by the *principals* for testimonials etc Copies are generally sent but very often never returned *These* if printed cost a little and if copied take up a lot of time so I think it only fair to have them returned and within a reasonable period I have even got testimonials back long after the post was filled and not a word to say from whom or where—even hospitals return them in the above manner At least the box number of the B M A address could be sent to guide the unfortunate seeker from further trouble

A Disclaimer

MR EVELYN SPRAWSON writes It has been brought to my notice that my name has been used in an advertisement by a driving firm this has been done without my knowledge or permission and I have written requesting its discontinuance

Corrigendum

In the account of the Royal Society conversazione in the *Journal* of May 21st (p 947) "vitamin B" should read vitamin D

We are asked to announce that on and after June 1 t the address of the Anglo French Drug Co Ltd will be 11 and 12 Guilford Street W C 1

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 41 42 43 44 45 48 49 and 50 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 263

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

489 Paralysis of the Spinal Accessory Nerve in Cerebro spinal Fever

C CHARLEUX (*Bull Soc de Ped de Paris* December 1931 p 608) records the case of a boy aged 6 years who on the sixth day of an attack of meningococcal meningitis developed paralysis of the left spinal accessory nerve as shown by paralysis of the palate difficulty in swallowing and hoarseness of voice and falling of the head to the right side A laryngoscopical examination disclosed paresis of the left vocal cord no other form of paralysis was present and the knee and anl le jerks were normal The meningitis gradually cleared up but the paralysis of the spinal accessory persisted as shown by partial reaction of degeneration and atrophy of the left sterno mastoid although the palatal and laryngeal involvements subsided

490 Atypical Encephalomyelitis following Revaccination

D PAULIAN C APICESCO and M FINKELSTEIN (*Bull et Mem Soc Med des Hop de Paris* February 29th 1932 p 237) record the case of a girl aged 7 who was vaccinated without any sequels at the age of 1 year Two days after revaccination at the age of 7 she developed fever and twelve days later complained of pain in the calves Walking was increasingly difficult the upper extremities became involved and contracture of the vertebral column followed The sphincters remained intact Some improvement took place but the issue of the case is not recorded

491 Early Diagnosis of Pulmonary Tuberculosis

In spite of the adoption of modern methods of precision in the diagnosis of pulmonary tuberculosis BRAEUNING (*Klin Woch* March 5th 1932 p 401) has discovered that many errors are still made Statistics from several German sources confirm this In tuberculosis early recognition of active infection is as important as appropriate treatment Only about 15 to 25 per cent of all cases of open tuberculosis are being diagnosed according to him and these are often termed closed tuberculosis The following possibilities should be remembered (1) In 70 to 85 per cent of all cases consolidation is absent the disease being open from the commencement (2) The patient may seek advice in the early stage and the disease may not be recognized Braeuning suggests that such cases are becoming more numerous (3) The patient may seek advice too late Many patients with open tuberculosis are ill only for a few weeks or months Two German authorities who examined 100 patients sent for sanatorium treatment of apical tuberculosis found that 99 5 per cent of the diagnoses were erroneous Of 2 677 patients 392 were regarded as cases of pulmonary tuberculosis but only in 67 per cent was the diagnosis confirmed In 397 cases of apical catarrh the diagnosis was incorrect in 52 per cent On the other hand among 1 843 cases termed non tuberculous Braeuning found 21 per cent of tuberculosis and 10 per cent of these had open lesions Ordinary physical examination of 10 000 reputedly healthy students disclosed 0 08 per cent of active and 0 04 per cent of open tuberculosis When investigated radiographically the percentages rose to 0 54 active (nearly sevenfold) and 0 35 open tuberculosis (nearly tenfold) The author concludes that no lung should be termed healthy without an *x* ray examination which is imperative in all doubtful cases and in any case persisting three weeks or longer An *x* ray examination is also essential in all who have had a respiratory affection within a year No patient complaining of thoracic pain should be termed healthy without such examination Braeuning adds that less than 25 per cent of all cases of open tuberculosis are seen in the earliest stage A very large number of patients seek advice in the early stage but the disease cannot be detected without *x* ray examination on which in many cases the patient's fate will depend

492 Chronic Streptococcal Toxaemia

J D HINDLEY SMITH (*Brit Journ Child Dis* January March 1932 p 25) who records six illustrative cases in patients aged from 5 to 49 years maintains that chronic streptococcal toxaemia is a disease which is far more widespread than is recognized at present it appears to be on the increase especially in the most active centres of civilization Three stages may be distinguished the symptoms in each case being as follows The primary stage is seen between the ages of 3 and 4 years and is characterized by the occurrence of sore throats inflamed tonsils enlargement of the neck glands recurrent cold and chronic catarrh The secondary stage develops between the ages of 9 and 12 with anaemia feverish colds and sore throats septic tonsils nervous excitability influenza (especially during the winter) scarlet fever erythema nodosum rheumatic fever and endocarditis The average age of incidence of the tertiary stage is 40 years it is signalized by fibrositis of the muscles of the shoulder girdle and posterior occipital area, chronic arthritis of the larger joints (amounting in some cases to complete ankylosis) fibrotic changes in the nerve sheaths and fibrosis and stenosis of the heart valves Treatment with specific autogenous vaccines is attended by a high percentage of success

493 Primary Urogenital Infection in Paratyphoid Fever

CREUX (*Bull et Mem Soc Med des Hôp de Paris* February 19th 1932 p 242) records a case of primary urogenital infection in the form of pyelocystitis and orchi-epididymitis due to *B paratyphosus* B Apart from pyuria the urinary symptoms were very slight the genital symptoms were more pronounced but atypical in that though the testes and epididymis were very swollen they were neither spontaneously painful nor tender and that the inflammation was very slow in subsiding

Surgery

494 Tuberculosis as a Sequel of Trauma

R BERNARD and M STASSEN (*Bruxelles Medical* March 13th 1932 p 543) discuss the incidence of tuberculosis after trauma and record the case of a collier aged 40 who in April 1931 was struck by a stone estimated at 20 kilos which fell on him from the height of about one metre This produced a large lacerated contused wound over the right iliac crest exposing the periosteum over it The wound was vigorously cleaned carefully disinfected and closed by seven sutures Healing proceeded without pyrexia but a small haematoma developed under the scar this was evacuated a week later Almost complete cicatrization resulted but a small area of ulceration repeatedly appeared Resection and skin grafting were performed on two occasions but complete healing was never achieved In February 1932 when the patient was admitted to hospital there was present just in front of the anterior iliac spine an ulcer which was irregular with violet coloured edges rather soft and partly undermined The cavity was somewhat winding with a small fistula at the upper end The anterior part was adherent to the bone and the base was filled with grey detritus The patient had a good family history but he had had pleurisy during the war and had later been gassed He had had a cough from time to time since the pleurisy A complete

clinical and biological examination revealed a slight positive skin reaction to tuberculin and a fibroid condition of the right apex It was ultimately concluded that the patient had a post traumatic tuberculous ulceration The authors conclude by defining the differential diagnosis between tuberculosis syphilis leprosy sporotrichosis, and actinomycosis in such ulcers

495 Diagnosis of Hydatid Disease

Z KAIRIS (*Zentralbl f Chir* March 19th 1932, p 714) emphasizes the value of the presence of hydatid thrill as an aid to diagnosis of this disease The sign is most commonly found in hydatid disease of the liver and of the peritoneal cavity and is present in 4 per cent of all cases The author remarks that although a similar thrill may be present in other pathological conditions such as cystadenoma of the ovary hydronephrosis and ascites it is pathognomonic of hydatid disease if present in the region of the liver but would even so not render unnecessary other methods in the diagnosis of this infection The detection of a hydatid thrill does not depend on the presence of associated secondary cysts since it can be elicited in primary ecchinococcal cysts Moreover it is not due to high tension of the cysts since flaccid ones produce a similarly well marked sign Kairis adds that hydatid thrill is most easily elicited in thin walled, moderately tense cysts the walls of the abdomen and thorax playing no part in its production

496 Surgical Treatment of Epilepsy

Remarking that the research of Gamble Ross and Tisdall on water metabolism has solved many problems in the study of epilepsy G W SWIFT (*Surg Gynecol and Obstet* March 1932 p 566) discusses inferences which can be drawn He shows that the periodic convulsive seizures associated with so called idiopathic epilepsy begin with a gradual accumulation of cerebro spinal fluid over the cortex and in the cerebral cisterns causing a constant irritation to the cortex particularly to the motor areas a state of general hydration is always essential for these seizures The blocking of the cerebro spinal fluid may be due to inflammation of the arachnoid or Pacchionian bodies or to pressure on any venous channel from the superior longitudinal sinus to the heart Anomalous development of the venous dural sinuses especially the transverse is an important factor in epilepsy In such cases mobilization of the transverse sinus will restore a sufficient venous return to prevent the accumulation of cerebro spinal fluid in the subarachnoid spaces This operation which is applicable however in only 20 per cent of the cases and the accompanying treatment are described Post operative haemorrhage is the only complication that may arise it can be avoided by paying careful attention to all the vessels during the operation Contraindications to this operation are the presence of inflammatory disturbances resulting in obliteration of the openings into the superior longitudinal sinus localized accumulations of cerebro spinal fluid are not benefited by it The results of this mobilization are a markedly improved mental condition and a decrease in attacks of both the grand and petit mal types Summaries of three groups of cases are given in tabulated form

497 Hypertrophic Pyloric Stenosis in Adults

H KLOSE and A BERNSTEIN (*Med Welt* March 26th 1932 p 440) describe a condition in adults over the age of 40 which is similar to the congenital hypertrophic pyloric stenosis of infants These patients who give a long history of gastric trouble with or without symptoms of stenosis are often subjected to operation on suspicion of carcinoma but radiography reveals a pyloric stenosis 2 to 3 cm in length The stomach is only slightly dilated and the emptying time is apparently increased Peristalsis is marked The differential diagnosis by *x* rays between early carcinoma and this benign hypertrophy of the pylorus is difficult The chief points in favour of the latter condition are the regularity of the stenosed pylorus the appearance of normal mucous membrane and the fact that antispasmodics occasionally influence the stenosis to a slight extent At operation the only pathological finding macroscopically or microscopically is a simple muscular hypertrophy of the pylorus, this of itself does not necessarily cause clinical symptoms for they are due to the existing degree of stenosis which is probably associated with pyloric spasm The authors believe that this condition is due to a work hypertrophy following excessive peristalsis or hypertonia of the stomach which occurs in gastritis, gastric ulcer and carcinoma and other abdominal conditions, such as appendicitis cholecystitis and pancreatitis A careful radiographical examination should be made in all cases so that an early gastric carcinoma may not be overlooked In doubtful cases laparotomy should be performed and the gastric condition be carefully examined The operations advised for the relief of the condition are the Heinicke Mikulicz or Finney's pyloroplasty and Ramm stedt's pyloromyotomy The authors strongly recommend partial gastrectomy (Billroth II) so that the possibility of gastric carcinoma being present may be definitely excluded

Therapeutics

498 The Place of Vaccines in Clinical Treatment

R A KEILTY (*Journ Lab and Clin Med* March 1932 p 545) defines a vaccine as a vaccinogenic (antigenic) solution possessing the power of producing specific antibodies *in vivo* Vaccine therapy must begin with the study and isolation of specific aetiological organisms, the suspension must be so prepared that the vaccinogenic factor whether or not of protein nature is as nearly unaltered as possible and is accurately determined and measured Keilty is not in favour of using any solution containing a viable organism which may become virulent and therefore employs killed bacteria in the preparation of vaccines He selects those prepared from a multiple flora exclusively on their quantitative incidence in culture and their allergic cutaneous reactions The present trend in dosage is to start with small amounts 0 1 c cm increased in 0 1 c cm stages and given every other day over a long period Each individual case must be regarded as a separate entity and hence the best results are obtained by careful experimenting In preparing vaccines Keilty pays no attention to the bacterial count but makes heavy suspensions and varies the dosage according to general reactions He emphasizes the desirability of the occurrence of general reactions for immunity producing purposes and adds that vaccines must not be regarded as panaceas but only as useful adjuncts to other treatment

499 Treatment of Anaemia in Premature Infants

C VAN CREVELD and N I HEIJBROEK (*Nederl Tijdschr v Geneesk* March 12th 1932 p 1233) examined the blood of 110 premature infants including several twins during the early months of life The development of the so called physiological anaemia of premature infants could not be prevented by the administration of liver or liver substitutes, nor of reduced iron or small quantities of copper or manganese sometimes combined with iron On the other hand [illegible] liver extract or reduced iron with a [illegible] D seemed to have a favourable influence on the growth and development of the premature infant The authors draw attention to the icteric index and show that the fall in the number of red corpuscles and of the haemoglobin after birth continues as long as the icteric index of the blood serum is high A well marked and prolonged haemolysis appears to be one of the most important factors in the development of anaemia in the premature infant The percentage of reticulated cells rapidly falls in the premature infant but afterwards rises again until a new maximum is attained The authors object to the term aplastic anaemia being applied to the anaemia found in premature infants

500 Intrapulmonary Medication

M JACOBS (*Amer Review Tuberc* March 1932 p 342) suggests that in advanced and inoperable cases of pulmonary excavation the prognosis may be considerably improved by the introduction into the lungs of various drugs dissolved in oil followed by postural drainage Expectoration is thus mechanically facilitated and the amount of sputum is reduced cough is diminished and the temperature pulse and respiration are greatly improved Jacobs has found a 1 in 5 000 solution of metaphen in oil to be the best agent it is a mercury compound and in a solution of this strength has a very high germicidal action without being toxic or irritating Each 5 c cm of the solution contains 1 mg of metaphen From 5 to 10 c cm should be introduced into each lung after the larynx and trachea have been anæsthetized by 4 per cent cocaine solution In one hundred treatments five of which are recorded in detail no untoward effects were noted no haemoptysis or gastric or renal disturbances (symptomatic of mercury intoxication) occurred All the patients were in late stages of tuberculosis with cavities in both lungs Jacobs recommends however that this treatment should not be given after a recent haemoptysis a temperature indicating septic infection is no contraindication unless acute tuberculous consolidation is present

Disease in Childhood

501 Congenital Obstruction of Female Urethra

O ADDISON (*Arch Dis in Child* February 1932 p 25) who records an illustrative case states that while congenital obstruction of the male urethra by a diaphragm or more frequently by valves of mucous membrane in connexion with the verumontanum has been recorded from time to time in the female any kind of congenital obstruction of the urethra is very rare Addison's patient was a girl aged 4 years who had been undeveloped since birth and had always had difficulty in passing urine The bladder was very hard and prominent the urine contained a thick deposit of pus and gave a profuse growth of streptococci A cystogram revealed a small bladder with greatly enlarged and convoluted ureters The blood urea rose to 42 7 mg per 100 c cm three days before death which was preceded by vomiting and increasing drowsiness The necropsy showed pyonephrotic kidneys dilated ureters and bladder and a tag of mucous membrane in the urethra folded upon itself and forming an oval projection on the posterior wall

502 Measures for Reduction of Infant Mortality

P HERTZ (*Ugeskrift for Laeger* February 18th 1932 p 175) describes the arrangement in Denmark for the care of children who are born out of wedlock whose mothers are divorced or deserted or who are for other reasons being maintained at the public expense In Copenhagen such children so long as their age is under 4 years are under the supervision of fully trained nurses above this age no special training is required of the women who supervise them The frequency of the supervisory visits is inversely proportional to the age of the children who when younger than 6 months are visited every tenth day This interval is increased to fourteen days between the ages of 6 and 18 months and to one month for the children between the ages of 18 months and 7 years After the seventh year each child is visited six times a year Between 1925 and 1930 the number of new born children in this category in Copenhagen has ranged from 2 000 to 2 200 each year Of the 384 deaths among these children in this period there were seventy in 1925 there were only forty six in 1929 and forty eight in 1930 In the first half of 1931 only seventeen deaths occurred As many as 121 of these deaths were due to uncomplicated bronchopneumonia and sixty seven to bronchopneumonia occurring as a complication of some other acute infectious disease It will thus be seen that about 50 per cent of all the deaths were due to broncho pneumonia In the period 1927–29 the difference in the death rates among legitimate and illegitimate infants has greatly diminished in 1927 the death rate was 21 per cent higher among the illegitimate than the legitimate whereas in 1929 the slight difference in the two groups was actually in favour of the illegitimate This achievement was all the more striking since the infants coming under public welfare control were as a class much worse off in the matter of lodging breast feeding etc than the infant population of Copenhagen taken as a whole

503 Hirschsprung's Disease

F W RANKIN and J R LEARMONTH (*Amer Journ of Surg* February 1932 p 219) advocate either bilateral lumbar ganglionectomy and ramisection or division of the presacral and inferior mesenteric nerves in cases of megacolon they report eight cases so treated The causes of this disease are congenital defects obstructive processes such as elongation of the mesentery torsion of a segment or multiplication of the intestinal loops anatomical factors such as valve conditions aplasia of the muscular ture above the rectum mechanical obstruction and general systemic conditions infective conditions and neurogenic processes In Hirschsprung's disease dilatation and hypertrophy are noted in the affected segment or even in the entire bowel the sigmoid is affected in about 50 per cent of cases The dilatation is very great the circular and longitudinal fibres of the muscular coats are thickened and hypertrophied there is elongation of the mesentery which may cause volvulus with increase in blood vascular elements and enlargement of the lymphatic chains Symptoms of megacolon occur soon after birth and continue progressively extreme constipation and enlargement of the abdomen being the most characteristic Treatment must aim at diminishing the dilatation of the colon overcoming the excessive control by motor nerves and relieving any opposition to expulsion of the content offered by the internal sphincter In the operation advocated these results are brought about by division of the inferior mesenteric nerves and of the presacral nerves In the eight cases reported all but three of the patients were under the age of 13 In every case neurectomy exerted a direct influence function was returned and the obstipation and dilatation were overcome in varying degree The safety of the operation and its desirability in selected cases are emphasized it was found that the functioning of any viscera by interruption of important efferent or afferent fibres was not affected nor did the division of the inferior mesenteric nerves endanger the mechanism for defaecation

Obstetrics and Gynaecology

504 Mural Sarcoma of the Uterus

S A WOLFE (*Amer Journ Obstet and Gynecol* February 1932 p 232) who records a series of thirteen primary and mixed sarcomas of the uterus distinguishes between the primary mural type and the secondary type which originates in pre existing fibromyomas although both types are of myogenic aetiology and arise from orthotopic embryonal rests The mixed uterine sarcoma is a primary growth of the teratoid type The author believes that the degree of maturation of the component cell determines the appearance rate of growth and clinical malignancy and defines three varieties (1) differentiated muscle cell tumours (myoma malignum) which resemble fibromyomas grow slowly and rarely recur or give rise to metastases (2) more actively growing cell tumours (spindle fu iform round and giant celled sarcomas) which are homogeneous and opaque infiltrate early and metastasize through the blood stream and (3) mixed celled tumours composed of embryonal elements which grow rapidly and recur promptly Both the two main types of sarcoma are more common after the menopause when fibroids as a rule

are less active Wolfe finds that curetting is effective as regards diagnosis in 50 per cent of cases of either type He states that radical extirpation followed by post operative radiation is indicated in growths which are still confined to the uterus while palliative radiotherapy may be of some benefit in advanced cases He adds that the prognosis though generally grave is surprisingly good in cases of myoma malignum while the outlook is fair in the case of sarcomas arising in fibroids if of small size and confined within the capsular limits of the original growth

505 Severe Pyelitis in Pregnancy

E HELD (*Gynecol et Obstet* March 1932 p 206) points out that fatal cases of pyelitis in pregnancy were not rare before the introduction of treatment by ureteral catheter ization and even now are not unknown According to figures from the University clinic at Geneva in cases of pregnancy pyelitis one third of the infants are premature and two fifths of these (one seventh of all the infants) die shortly after birth In certain rare cases the infection is of the gravest degree from the first with jaundice vomiting diarrhoea rapid pulse and dry tongue treat ment is then hopeless In assessing the gravity of a given case and planning its treatment help is afforded by tests of the kidney function and blood urea estimation a blood culture and radiological examination which is indispens able in refractory cases Should medical treatment fail Held recommends drainage of the renal pelvis by catheter for one or several days a *B coli* bacteriophage may be instilled simultaneously through the ureters and adminis tered by the mouth and Vincent's anti *coli* serum be injected If these measures fail to control the septic process or if renal insufficiency does not respond rapidly to medical treatment (including the intravenous injection of hypertonic glucose serum) an operation on the kidney (nephrostomy or decapsulation) is justified in unilateral cases but in bilateral involvement termination of the pregnancy is indicated Hysterotomy is associated with less shock during the second half of the pregnancy and vagino cervical emptying of the uterus is best during the first half

506 Pre menstrual Sterility and Family Restriction

K OGINO (*Zentralbl f Gynak* March 19th 1932 p 721) summarizes the evidence on which he concludes that in a woman with a twenty eight day menstrual cycle the eleven days preceding menstruation constitute a period of sterility A similar conclusion has been reached independently by Knaus and both have recommended its application for the purpose of voluntary restriction of conception when desired during marriage According to Ogino in a menstrual cycle of any duration the period of ovulation consists of five days from the sixteenth to the twelfth day before menstruation the nineteenth to twelfth days (that is the ovulation period plus the three pre ceding days allowance being made for three days survival of fertility of the spermatozoon) constitute the period of conception From the twenty fourth to the twentieth day preceding the menses conception is possible in very rare instances from the eleventh day preceding up to the time of the menses sterility is certain Ogino's evidence briefly is as follows In fourteen pregnancies following a known date of conception that date never fell within the eleven days after the ovulation period these days always proved sterile in 242 coituses practised during five marriages which were observed for nearly ten years None of thirty nine women who married during the days following the ovulation period yet became pregnant within three months after marriage conceived before having one post nuptial menstruation and seventeen women who became pregnant without menstruating after marriage were found to have married during or before the sixteenth to twelfth days of the cycle In the practical application of his findings Ogino advises patients who desire to restrict their fertility without recourse to absti nence or anti conceptional measures that the tenth to seventeenth days after menstruation are those of probable conception and the days after the seventeenth those of sterility It is admitted that the utility of the advice is diminished in those women (possibly about 50 per cent) whose menstrual cycle varies considerably in duration from time to time For example in a woman with minimal or maximal cycles of twenty six to thirty six days the conception period might extend from the eighth to twenty fifth day so that immediately before a minimal cycle the premenstrual sterility period is reduced to one day only

Pathology

507 The Blood in Diphtheria

P LANDOWSKI (*These de Paris* 1932 No 39) who records 100 cases in children aged from 13 months to 14 years states that the amount of blood urea is almost constantly increased in the severe and malignant forms of diphtheria and there is often a slight hyperazotaemia in moderate or mild attacks The hyperazotaemia of malignant diphtheria may be due either to disintegration of the tissues as is most frequently the case or to acute nephritis which may be fatal or clear up entirely In diphtheria azotaemic nephritis is manifested by a minimum of symptoms among which the nervous and digestive are the most prominent Hypochloraemia is frequent in diphtheria being barely appreciable in the mild forms but more considerable in severe attacks Hypocholesterin aemia in diphtheria is very frequent at the onset and at the height of the attack but in convalescence there is hypercholesterinaemia which precedes a return to the normal condition Hypoglycaemia is the rule in malignant diphtheria and is fairly frequent in mild attacks so that it has no prognostic significance The fall in the amount of glucose which in most cases is merely a laboratory find ing may in exceptional cases be manifested by symptoms of pallor vertigo anxiety and occasionally syncope which are improved by injections of glucose There does not appear to be any parallelism between the course of the glycaemia and that of the cholesterinaemia in cases in which there is a simultaneous fall in the sugar and cholesterin content of the blood suprarenal insufficiency does not appear to be responsible The number of red cells is usually but little affected at the onset or during the height of the attack but a fall occurs in convalescence The haemoglobin value on the other hand is more or less diminished at the height of the disease The number of leucocytes varies considerably in the course of diphtheria but a leucocytosis exceeding 20 000 is always a grave sign Polymorphonucleosis is the rule at the height of the disease and slight eosinophilia appears in convalescence The bleeding time is little if at all affected either in mild or moderately severe attacks but in haemorrhagic attacks the bleeding time is prolonged The coagulation time is not affected The sedimentation rate is always accelerated at the onset and height of the disease In almost all favourable cases whether mild or severe the acceleration is considerable usually exceeding 40 mm an hour On the other hand in malignant forms with a fatal issue the rate is relatively moderate and in most cases does not exceed 30 mm an hour

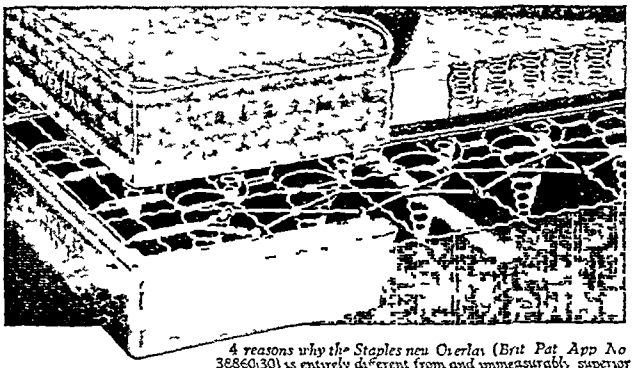
508 Preparation of Bacterial Antigens

T THJOTTA and E WAILER (*Norsk Mag f Laegevid* March 1932 p 275) prepared a gonococcal antigen for use in the complement fixation test in gonorrhoea by drying the emulsions in a desiccator and storing them in the dried condition The appropriate dose for use in the test was fixed by titration before the drying was done After emulsifying in distilled water until the original volume of the emulsion was restored the necessary amount of saline solution was added to give the concentration needed in the test The authors claim that this method saves much labour and makes it possible to prepare large quantities of antigen at a time and to store them without any deterioration Dysentery and typhoid antigens have also been prepared in this way with good results

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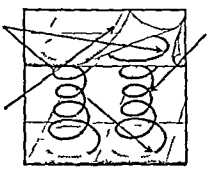
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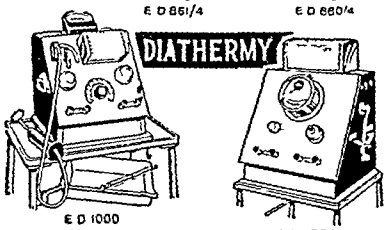
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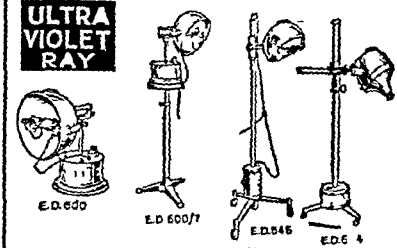
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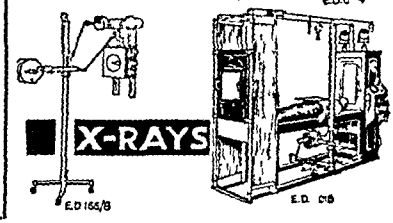
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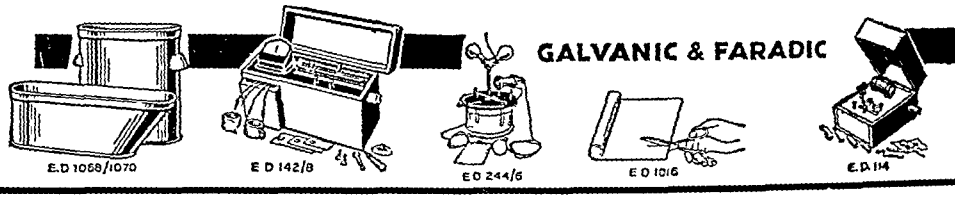
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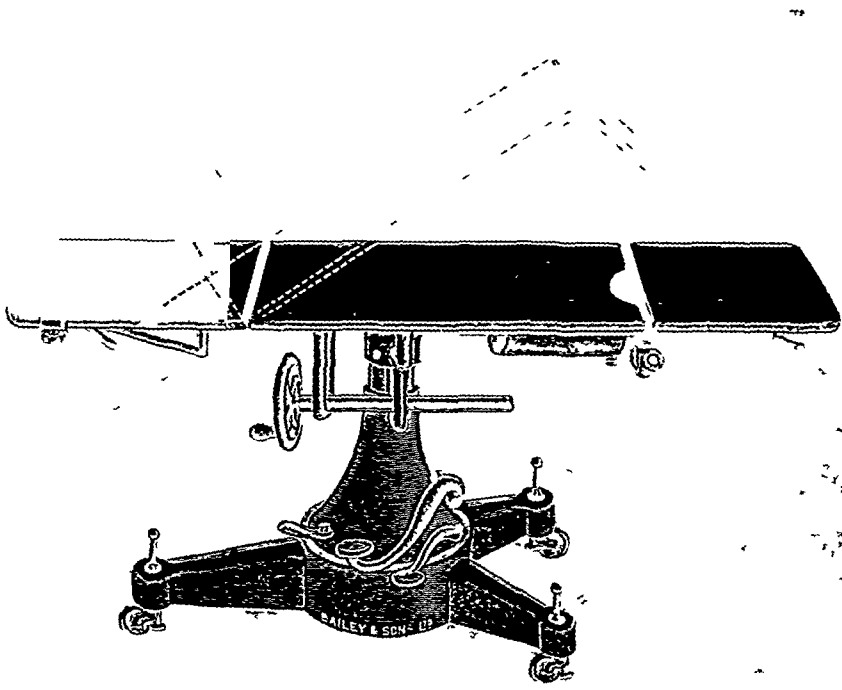
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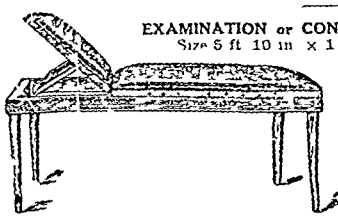
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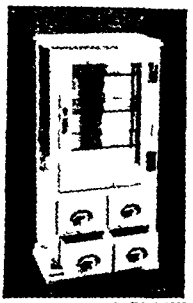
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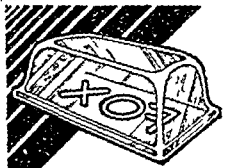
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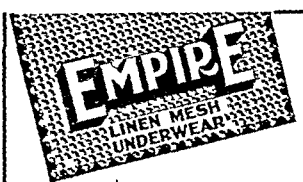
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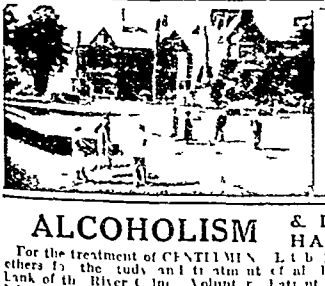
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EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1932

The POST GRADUATE COURSES to be held this year comprise

(1) A GENERAL PRACTITIONERS COURSE from August 15th to September 10th

(2) A GENERAL SURGICAL COURSE from August 15th to September 10th

The composite fee for each Course will be £10 10s for the four weeks or £6 6s for either the first or second fortnight

(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND DISEASES OF CHILDREN from July 11th to August 6th Fee £10 10s (Minimum number 12)

In addition to the above the following *Special Courses* have been arranged

SUMMER TERM

SURGICAL PATHOLOGY—Mr Wade F R C S Ed and other May 10th Fee £4 4s
OPHTHALMOSCOPY—Drs Graham Ligertwood, and Paterson May 2nd 12 Meetings thrice weekly Fee £5 5s Minimum number 5.

SUMMER AUTUMN AND SPRING TERMS

ll of Royal Infirmary Fee £4 4s
(During May and October) Fee £3 3s
Nose and Throat Department Royal Infirmary Minimum number 5 Fee £10 10s
Royal Infirmary Minimum number 5 Fee £10 10s
Guthrie This Class will meet twice weekly at the Ear and Throat Dispensary Cambridge
OF THE GENERAL COURSES (AUGUST SEPTEMBER) [Street Fee £4 4s
ynolds and James K Slater Minimum number 6 Fee £3 3s
£3 3s VACCINE THERAPY—Dr A Nimmo Smith Fee £3 3s
R Gilchrist and C P Stewart Minimum number 6 Fee £4 4s
man Kemp B Sc A I C Fee £3 3s
obert Aitken Fee £3 3s
rson Minimum number 5 Fee £5 5s
ser Roberts M A H Sc Fee £3 3s
Secretary Post Graduate Courses in Medicine University New Buildings Edinburgh

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a m to 4 p m—Post Graduates may enrol at any time for any period from 1 week to 3 months—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant aided Scheme for Post Graduate Study by Insurance Practitioners"—Anaesthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital Hammersmith, W 6

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL

MEDICAL SCHOOL.

(FOUNDED 1816)

Telephone TEMPLE BAR 1457 BROAD STREET, HOLBORN, W C 2 (Near British Museum Station)

The Hospital has been rebuilt and contains 86 beds, including fourteen private rooms for paying patients The new building has been specially designed for clinical teaching and post graduate study

Classes for the D O M S Examination Part I and II commence in May, 1932

Out patients are seen daily at 1 30 o'clock Operations are performed at 3 p m ... Ophthalmic Surgeons or Hospital tary of the Hospital

MEDICAL CORRESPONDENCE COLLEGE,

19 Welbeck Street, London, W 1

CONJOINT BOARD EXAMINATIONS

Candidates taking the First, Second, or Final Conjoint Examinations should make sure of passing at the first attempt by enrolling for the short intensive Revision Courses of the College

POSTAL, ORAL, PRACTICAL, CLINICAL COURSES MICROSCOPE AND MUSEUM WORK

Highly qualified Tutors with accurate knowledge of the special features of these examinations

Write at once for booklet How to Pass the Conjoint Board Examinations Sent free on application

Address The Secretary
MEDICAL CORRESPONDENCE COLLEGE
19 Welbeck Street London W 1

INSTITUTE OF PATHOLOGY & RESEARCH

ST MARY'S HOSPITAL, LONDON, W 2

A Course of Lectures on PATHOLOGICAL RESEARCH IN ITS RELATION TO MEDICINE has been arranged for the SUMMER SESSION These Lectures will be given in the Lecture Room of the Bacteriological Department of the Institute on TUESDAY AFTERNOONS at 5 p m as under —

	SUBJECT
MAY 31st DONALD HUNTER M D F R C P (Lond) Asst Phys & Med Tutor London Hospital)	The Clinical Significance of Studies in Uranium Metabolism
JUNE 7th SIR HENRY HALLETT DALE M D F R C P (Lond) Sec R S (Director National Institute for Medical Research)	Recent work on Hormones of the Circulation
JUNE 14th Prof R T LEIPER M D F R S (Prof Helminthology University of London)	Helminth Migrations"

These Lectures are open to all Members of the Medical Profession and to all Students in Medical Schools without fee

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

CLINICAL OBSTETRICS

Special facilities are offered at the Royal Maternity and Women's Hospital for the study of Clinical Obstetrics including Ante natal work during the months of August and September

Particulars may be obtained from the House Superintendent Royal Maternity and Women's Hospital Rottenrow Glasgow

MASTERY OF MIDWIFERY

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday November 21st 1932 and Monday May 15th 1933

For regulations apply to the Registrar of the Society Water Lane E C 4

CITY OF LONDON MATERNITY HOSPITAL,

CITY ROAD, E C 1

MIDWIFERY TRAINING SCHOOL

MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complications Monthly or Fortnightly Courses

PUPILS TRAINED as Midwives and Monthly Nurses in accordance with C M B regulations

PRIVATE WARDS for paying patients

MATERNITY NURSES sent out to private cases

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March June September and December For Regulations apply to the Secretary College of Preceptors Bloomsbury Square London W C 1

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQ LONDON, W C 1

(LOCKED IN 1882)

Principal Mr F S WEYMOUTH M A (Lond) POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

M D (Lond), 1901 31 (9 Gold Medallists during 1913 31) **355**

M S (Lond), 1901 31 (including 4 Gold Medallists) **22**

M B, B S (Lond) *Final* 1906 31 **280**
(Completed Exam)

F R C S (Eng), *Primary* 173
1906 31 *Final* 174

M R C P (Lond), 1914 31 **199**

D P H (Various) 1906 31 **308**
(Completed Exam)

F R C S (Edin), 1918 31 **50**

M R C S L R C P *Final* 1910 31 **501**
(Completed Exam)

M D Various By Thesis Numerous successes

Preparation for the above and also for Medical Preliminary and for all examinations leading up to M R C S L R C P or M B of various Universities also for D P M D O M S D T M & H D T & D C & O D M R E M M S A L M S S A etc Numerous successes

ORAL CLASSES

M R C P M D Primary and Final F R C S F R C S (Edin) Final M B B S and M R C S L R C P Museum and Microscope Work Also Private Tuition

MEDICAL PROSPECTUS (48pp)

CONTENTS —The method and the cost of entering the Medical Profession *Particulars of all Medical Examinations* Postal Courses and Oral Courses Higher Medical Degrees Higher Surgical Degrees for the Special Courses Opening the Career

Medical Prospectus gratis and post free along with list of *Tutors* etc on application to the Principal Mr F S WEYMOUTH, M A 17 Red Lion Sq London W C 1 (Telephone HOLBORN 6313)

STAMMERING SPEECH DEFECTS

BEHNKE METHOD Estab 1882 Cases non resident treated at 39 Earls Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE'S House on the Chilterns

STAMMERING CLEFT PALATE SPEECH LISPING 3/9

of Miss BEHNKE 39 Earls Court Sq S W 5

F R C S (Edin)

FULL PREPARATORY COURSE with Anatomical Clinical Lectures M B (Lond) and Surgical Diploma tuition for next Exam will commence shortly POSTAL TUITION at any time—H C OTTER F R C S Surgeons Hall Edinburgh

Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric and Prelim
Chemistry Physics and Biology Lab
MANCHESTER TUTORIAL COLLEGE
32 Oxford Rd Manchester

Refraction and the Ordering of Glasses

CLASSES taught by Lecturer Ophthalmic Surgeon and Lecturer £8 8s for 10 lessons Miss N 123 F.M.A. Hughes Tavistock Square W C 1

ROYAL CORNWALL INFIRMARY TRURO
(84 Beds)

HOUSE SURGEON (male) required with experience of Anesthetics Salary £150 per annum board and washing Apply with copy of three recent testimonials to the Secretary of whom further particulars may be obtained

ROYAL COLLEGE OF PHYSICIANS OF LONDON

The next ordinary PROFESSIONAL EXAMINATION for the MEMBERSHIP will commence on Friday July 15th 1932

Candidates are required to give twenty-one days notice in writing to the Registrar of the College to whom all certificates and testimonials required by the By laws must be sent at the same time

Candidates who propose to submit published work under the regulations now in force are required to give twenty-eight days notice and should apply in writing to the Registrar without delay for detailed instructions as to the procedure they should follow

RAYMOND CRAWFURD M D
Pall Mall East S W 1 Registrar

ROYAL COLLEGE OF PHYSICIANS OF LONDON

Dr J W McNEE D S O will deliver the CROONIAN LECTURES on June 2nd 7th and 9th at 5 o'clock at the College Pall Mall East S W 1

Subject Liver and Spleen their Clinical and Pathological Relations

Any member of the Medical Profession admitted on presentation of card

By Order of the President
H M RAPHOW
Secretary

SEAMEN'S HOSPITAL SOCIETY

LOST CADAVERS FOR SHIP SURGEONS

The Seamen Hospital Society announces that Part 3 of the Course in Clinical Subject will be held from July 11th to July 29th 1932 at the Dreadnought Hospital Greenwich S E 10

Further particulars may be obtained on application to the Secretary Seamens Hospital Society Greenwich S E 10

DEVONSHIRE HOSPITAL BUXTON DERBYSHIRE (300 Beds)
(A National Hospital for Rheumatism and Allied Diseases)

Applications are invited for the post of ASSISTANT HOUSE PHYSICIAN (male) to commence duties on July 1 Candidates must be fully qualified and registered The appointment is for a minimum period of six months and may be extended for a further period of six months Salary commencing £150 per annum and rising to £175 after three months service with board residence and laundry

Application endorsed Assistant House Physician stating age experience and qualification together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained

Special facilities for the study of writing and the Hospital laboratory and Biodepartment

of Management
VINCENT TURNER
General Supt and Secretary

HOSPITAL OF ST CROSS RUGBY
(114 Beds)

Applications are invited for the post of MALE RESIDENT MEDICAL OFFICER Qualified

Salary to commence at the rate of £100 per annum rising to £150 per annum with full board etc

Six months appointment and eligibility on completion of service for further extension of six months

Candidates must be prepared to commence duties on Wednesday June 1st Application to be received by Monday May 30th

Travelling expenses allowed to Hospital on commencement of duty

Certificates and references and FOUR copies of applications must be received by the undersigned not later than May 30th

Full details with regard to the above may be obtained from the undersigned

(Signed) W COCKBURN
Secretary

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST HALLOWES HOUSE EDMONTON

HOUSE SURGEON required for one year Applicants should be qualified and have had hospital training Salary £100 per annum with board residence laundry and uniform

Applications stating qualifications and experience together with copies of three recent testimonials should be sent to the Secretary at the above address

COUNTY COUNCIL OF SUTHERLAND

EDUCATION DEPARTMENT

ASSISTANT OCULIST

Applications are invited for the post of Assistant Scholars Oculist to the Education Department Candidates must be fully registered and must have already had experience of Hospital Surgery and Ophthalmology and must produce evidence of having passed the Primary Examination for the Diploma of Ophthalmology of the Royal College of Surgeons of England The appointment will be subject to the approval of the Education Committee of the County Council and will be terminable by one month's notice on either side The salary will be £300 per annum with travelling expenses in connection with the County Scheme

The person appointed will be required to pass the Local Government Superannuation Examination and will be subject to the provisions of the Superannuation Act 1922 and will be required to devote the whole of his time to the duties of the office and to reside at a place to be approved by the Education Committee The appointment will be subject to three calendar months notice on either side expiring on the 15th day of any calendar month Candidates must be British subjects and will be required to produce satisfactory evidence of their qualifications and experience Applications must be returned not later than June 15th 1932 and should be addressed to the Director of Education Sheriff Hall Dunbar from whom a copy of the terms and conditions of appointment may be obtained on application

THOS B TILLEY
Director of Education

Sheriff Hall Dunbar
May 18th 1932 (No 59)

DISTRICT MEDICAL OFFICER FOR INDIAN STATE RAILWAYS

The Secretary of State for India proposes shortly to make one appointment to the District Medical Officer on the Indian State Railways Candidates must be male British subjects of pure Asiatic domicile and should be under 32 years of age They must possess a qualification registered in Great Britain and Northern Ireland under the Medical Acts in force at the time of appointment Commencing pay £600 per mensem including overseas pay subject at present to a temporary deduction of 10 per cent The officer selected will in addition be permitted to take private practice subject to the sanction of competent authority Leave Provident Fund Gratuity and Pension in accordance with the rules generally applicable to officers of Indian State Railways

Copies of the regulations and forms of application can be obtained from the Secretary Services and General Department India Office S W 1 Closing date for receipt of applications July 30th 1932

COUNTY COUNCIL OF SUTHERLAND

PARISH OF FARR

[illegible] Medical Officer of Health and Public Vaccinator of the Parish of Farr

[illegible] in respect of services £200 per annum and an official dwelling house with garden Rent and taxes free *Income from other sources* Highland Area Panel Medical Service Fund and the Private Practice approximately £441 representing a total income of £641 and private practice in addition

Application with statement of qualifications and experience accompanied by copies of three recent testimonials and of the application to be lodged with the undersigned on or before June 4th 1932

ARCHD ARGO County Clerk

County Clerk's Office
Golspie May 16th 1932

WARRINGTON INFIRMARY & DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried

Applicant who must be a Registered Practitioner must be duly qualified Medical Practitioner Salary £175 per annum with board residence and laundry

Applications stating age with copies of three recent testimonials and of the application to be lodged with the undersigned on or before June 4th 1932

H E CROFT
Superintendent

Infirmary
March 1932

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

TWO HOUSE PHYSICIANS required [illegible] Applications stating [illegible] £150 per annum [illegible] Applications to be sent to the Secretary

ROYAL AIR FORCE MEDICAL SERVICE

Vacancies exist for MEDICAL OFFICERS in the ROYAL AIR FORCE

CONDITIONS OF APPOINTMENT

Candidates will be selected after interview by a selection board without competitive examination

They must be of pure European descent They must be British Subjects, the sons of British Subjects and registered under the Medical Act

Selected Candidates will be appointed to Short Service Commissions (for 3 years extensible to 5), and those under 28 years of age at the time of entry will be eligible for subsequent selection to Permanent Commissions, should they be desirous of remaining in the service

Hospital appointments held since qualifying, will, under certain conditions, qualify candidates for ante date of commission, the age on entry to qualify for a Permanent Commission, if necessary, being increased by a period equal to the 'antedate'

Excellent opportunities exist for clinical professional work, both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology, Ophthalmology, and other special branches, adequate provision being made for permanent officers to attend Post graduate courses of study

OUTFIT ALLOWANCE

An officer, who has not previously held a commission in H M Forces, will receive an outfit allowance of £50 on joining

PAY, ALLOWANCES, PROMOTION, ETC

The following table shows the current rates of PAY per annum for the various ranks

IN ADDITION to pay, officers receive quarters (with fuel and light), rations and attendance, or, if these are not available in kind, they are given cash ALLOWANCES in lieu as shown in the table

MARRIED OFFICERS who have attained the age of 30 YEARS receive either Married Quarters or ALLOWANCES at the MARRIED RATES

Service	Rank	Pay	Allowances (Home rates)		Pay plus allowances at Home rates	
			Married	Single	Married	Single
On entry	Flying Officer	£389	£193	£119	£ 91	£ 08
After 2 years on promotion to	Flight Lieut	£422	£290	£119	£611	£511
years to		£198	£2 0	£119	£1 18	£ 05
motion to	Squadron Leader	£ 33	£233	£154	£ 88	£ 10
8 and 10 years to		£413	£293	£157	£1 04	£ 09
	Wing Commander	£894	£271	£187	£1 178	£1 081
years to		£1 022	£231	£187	£1 256	£1 209
	Group Captain	£1 137	£306	£218	£1 413	£1 365
By selection to	Air Commodore	£1 293	£362	£309	£1 660	£1 607
By selection to	Air Vice Marshall	£1 65 1	£376	£310	£2 0 0	£1 961

ALLOWANCES AT STATIONS ABROAD

In addition to the current pay shown above officers stationed abroad are provided with furnished Quarters (with fuel and light) and rations, or allowances in lieu, and receive Colonial and servant allowances The present total of the allowances (including Colonial and servant allowances) payable when provision in kind is not available is as follows —

	EGYPT		PALESTINE		MALTA		MALAYA	
	Married	Single	Married	Single	Married	Single	Married	Single
Flying Officer	£1 9 p a	£ 96 p a	£1 6 p a	£ 96 p a	£2 16 p a	£178 p a	£0 9 p a	£253 p a
Flight Lieutenant	£139	£ 98	£1 3	£ 96	£2 15	£1 11	£6 9	£ 81
Squadron Leader	£1 9	£ 18	£153	£2 80	£2 16	£147	£6 9	£113
Wing Commander	£210	£277	£ 17	£ 17	£119	£162	£15	£110
Group Captain	£311	£369	£ 97	£ 83	£334	£198	£110	£11

The married rates are payable only when the officer is accompanied by his family If unaccompanied, he is treated as unmarried for the purposes of his own accommodation, or allowances in lieu, and receives a consolidated allowance in respect of the separated family as follows —

Flying Officer	£109 per annum
F/Lieut & Sq Ldr	£136 per annum
Wing Comdr & Grp Captain	£173 per annum

Iraq & Sudan —Families are normally not allowed in these countries, and officers are provided with accommodation, etc, for themselves, and receive Colonial and servant allowances The present rates of Colonial allowance amount to £142 p a (Iraq) and £55 p a (Sudan) In addition, married officers receive the consolidated allowance for separated families at the rate shown above

Aden & Transjordan —Families are only allowed at these stations if public married quarters are available Married officers, accompanied by their families, are accordingly provided with married accommodation, etc, and receive a servant allowance of 2/ a day and a Colonial allowance of 10/ a day at Aden and 7/ in Transjordan All other officers are provided with unmarried accommodation, and receive servant allowance of 2/ a day and Colonial allowance of 5/ at Aden and 3/3 a day in Transjordan In addition, married officers separated from their families receive the consolidated allowance at the rates shown above

Rates of allowances abroad are fixed in relation to costs in the particular country

The rates of pay of the Royal Air Force Medical Branch are fixed on an inclusive basis, and the fact that specialist pay and charge pay are not payable as separate emoluments was taken into account when the rates were fixed

GRATUITIES

Short service officers who complete their full period of service on the active list may be granted gratuity as follows on transfer to the reserve £350

After 3 completed years £700

After 5 completed years

Permanent officers who are allowed to retire voluntarily before qualifying for retired pay may be granted gratuity as follows

After 10 but less than 15 years' commissioned service £1,500

With 15 or more than 15 years' commissioned service £2,500

RETIRED PAY

The current rates of service retired pay range from £465 a year, normally earned after 20 years' service, to £939 10s, the maximum for which an Air Vice Marshal is eligible (at current rates)

Rates of retired pay are subject to alteration upwards or downwards within certain limits according to fluctuations in the cost of living

Full particulars as to the conditions of service . . contained in Air Ministry Pamphlet 25, a copy of which, together with form of application can be obtained on application to the Secretary, Air Ministry (D M S), Adastral House, Kingsway LONDON, W C 2

NOTTINGHAMSHIRE COUNTY COUNCIL.

TUBERCULOSIS OFFICER

Applications are invited for the appointment of Tuberculosis Officer (male) at a commencing salary of £700 per annum rising subject to satisfactory service by annual increments of £50 to a maximum of £950 per annum together with travelling expenses in accordance with the County Council's Scale. The salary is subject to a temporary deduction of 5 per cent.

Candidates must be fully qualified and registered Medical Practitioners who prior to April 1st 1930 have held the appointment of Tuberculosis Officer with the approval of the Minister of Health or who have subsequently qualified

(1) had at least three years experience in the practice of their profession;
(2) spent in general clinical work a period of not less than eighteen months of which not less than six months have been spent in a Hospital as Resident Officer in charge of beds occupied by general medical or surgical cases; and
(3) received special training for a period of not less than six months in the diagnosis and treatment of Tuberculosis.

The possession of a Diploma in Public Health will be an advantage.

The person appointed will be required to take charge of several Dispensaries and to perform such other duties as may be prescribed from time to time. He will be a member of the Staff and act under the control and direction of the County Medical Officer of Health and will be required to devote his whole time to the duties of the office and to reside in such part of the County as may be approved.

The appointment will be terminable by three months' notice on either side and will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1922. The selected candidate will be required to pass a medical examination.

Form of application may be obtained upon application at my office at the undermentioned address and applications with copies of not more than three recent testimonials must be delivered to the County Medical Officer, Shire Hall, Nottingham not later than Tuesday, June 14th.

J. TWEEDALE MEARS,
Clerk of the County Council.

County House,
Nottingham.
May 14, 1932.

CITY OF SALFORD

Applications are invited from fully qualified Medical Practitioners for the post of JUNIOR ASSISTANT (whole time) in the Venereal Diseases Treatment Centre at which the yearly attendances and cases treated average 100,000 and 4,000 respectively. The appointment will be on a temporary basis and the salary will be at the rate of £300 per annum. Applicant should be under 35 years of age and have had previous experience in the treatment of Venereal Diseases.

Form of application may be obtained from the Medical Officer of Health, 145, Regent Road, Salford, to whom they should be returned accompanied by copies of not more than three recent testimonials not later than June 4th, 1932.

H. H. TOMSON, Town Clerk.

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

NEWCASTLE GENERAL HOSPITAL.

HOUSE SURGEON (Male).

Applications are invited for the above post from fully qualified and registered Medical Practitioners. The salary in respect of the appointment which is payable for six months at the rate of £150 per annum will be at the rate of £100 per annum.

Applications, stating age and qualifications, together with copies of not more than three recent testimonials, to be sent to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, not later than Monday, May 30th, 1932.

CITY OF SHEFFIELD

KING EDWARD VII. HOSPITAL, RIVELIN VALLEY.

RESIDENT HOUSE SURGEON required immediately for the above Hospital which is for the treatment of Surgical Tuberculosis and other Orthopædic conditions (130 beds).

The appointee will be required to act as Out-patient Clerk and Theatre Assistant, and will obtain clinical experience in Medicine and Children's Work.

Salary at the rate of £150 per annum, with board and lodging.

Applications, stating age, experience, and enclosing copies of three recent testimonials, will be received by the undersigned not later than Saturday, June 4th, 1932.

Applicants will be informed as to date of interview.

COUNTY COUNCIL OF MIDDLESEX

DISTRICT MEDICAL OFFICER AND PUBLIC VACCINATOR

The County Council invite applications from duly qualified Medical Practitioners for the undermentioned appointments:

DISTRICT MEDICAL OFFICER
HARMONDSWORTH (LONGFORD) AND STANWELL.

Salary £97 10s. per annum plus a bonus of £5. The officer appointed will be required to carry out his duties in accordance with the Public Assistance Order, 1930, of the Minister of Health to reside in the district and to name to the Council some duly qualified Medical Practitioner who will in the event of his absence or death undertake his personal attendance at his place.

PUBLIC VACCINATOR
HARMONDSWORTH (LONGFORD) AND STANWELL.

The person appointed will be required to produce to the Council a certificate of proficiency in vaccination under such certificate was required as a condition of obtaining any diploma licence or degree which he possesses.

He will be required also to enter into a contract with the Council in accordance with the Vaccination Order, 1930, of the Minister of Health. The contract will provide for the payment of the minimum fees laid down in the order.

Application stating (1) name, (2) age, (3) qualifications and experience accompanied by copies of not more than three recent testimonials must be received by the undersigned not later than June 4th.

No special application form is provided. Envelopes must be endorsed "District Medical Officer" or "Public Vaccinator" as the case may be.

Canvassing directly or indirectly will be a disqualification.

ERNEST S. W. HART,
Clerk of the County Council.

Middlesex Guildhall,
Westminster, S.W.1.
May 10th, 1932.

MANCHESTER AND DISTRICT RADIUM INSTITUTE.

The following appointments are contemplated to the staff of the Institute. These offer a unique opportunity of acquiring experience in radium therapy (and diagnosis).

Both appointments are for six months in the first instance but with a view to re-appointment for further six months.

1. ASSISTANT MEDICAL OFFICER—Salary £300 per annum. Candidates must be registered with the G.M.C., and have had a good general Surgical experience but not necessarily previous experience in radium therapy.
2. CLINICAL ASSISTANT at £250 per annum. Candidates must have an excellent academic record and preferably some subsequent experience.

Application with copies of testimonials to be sent to the Honorary Secretary not later than June 3rd.

COUNTY MENTAL HOSPITAL, LANCASTER.

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Candidates must be single and under 30 years of age. Commencing salary £500 rising by annual increments of £25 to £600 with further increase on promotion subject to a deduction of 5 per cent. until the Superannuation Act. There are no emoluments. The successful candidate will be required to live in the Hospital but provided with board, lodging, etc., free, but a charge of £100 a year is made.

A temporary deduction from the gross salary will be made on account of the statutory one of £60 being £18 15.

The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum.

Applications, giving full particulars with testimonials (copies only), must be forwarded to the Medical Superintendent by June 2nd.

WARWICKSHIRE COUNTY JOINT COMMITTEE FOR TUBERCULOSIS.

KING EDWARD VII. MEMORIAL SANATORIUM, HEATHCOTE HILL, Nr. WARWICK.

Applications are invited for the post of JUNIOR MEDICAL OFFICER. Candidates must be single and have had experience in tuberculosis work. The salary will be at the rate of £200 per annum, with board, lodging, and laundry.

The appointment will be for six months in the first instance, but with a view to re-appointment for a further six months.

The successful candidate will be required to reside in the Sanatorium.

Applications, stating age, experience, and enclosing copies of not more than three testimonials, should be sent to the Medical Superintendent.

LONDON COUNTY COUNCIL.

Applications invited for appointment to the post of RESIDENT ASSISTANT MEDICAL OFFICER, Grade I (temporary), AT CLOCK HOUSE IN THE LANE HOSPITAL, Lane Street, W.12.

The duties will be of a general nature and are assigned by the Medical Superintendent in accordance with the requirements of the Council.

The salary is £350 rising annually by £25 to £450 per annum, together with board, lodging, and laundry.

Candidates must be duly registered Medical Practitioners, and have had experience in general hospital practice.

Forms of application (stating age, qualifications, and experience) may be obtained from the Medical Officer of Health (Staff Division), County Hall, Westminster, S.E.1, returnable by June 10th. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendent at the Hospital.

LONDON COUNTY COUNCIL.

Applications invited for appointment to two positions of RESIDENT ASSISTANT MEDICAL OFFICER, Grade I, at QUEEN MARY'S HOSPITAL FOR CHILDREN, CARSHALTON.

The duties, which are of a general nature, are assigned by the Medical Superintendent and include maternity and infectious cases.

The salary (subject to temporary deduction) is £350 rising annually by £25 to £450 per annum, together with board, lodging, and laundry.

Candidates must be duly registered Medical Practitioners, and have had experience in general hospital practice.

Forms of application (stating age, qualifications, and experience) may be obtained from the Medical Officer of Health (Staff Division), County Hall, Westminster, S.E.1, returnable by June 8th. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendent at the Hospital.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners for appointment as JUNIOR PHYSICIAN (temporary) in the CHEST DEPARTMENT at NORTH-WESTERN FEVER HOSPITAL, Lawn Road, Hampstead, N.W.3. Salary £80 per annum, together with board, lodging, and laundry.

Candidates must be duly registered Medical Practitioners, and have had experience in diseases of the chest.

Appointment for six months in the first instance, but with a view to re-appointment for a further period of six months. Duties are assigned by the Medical Superintendent, to whom all necessary information as to the duties may be obtained.

Form of application (stating age, qualifications, and experience) may be obtained from the Medical Officer of Health (Staff Division), County Hall, Westminster, S.E.1, returnable by June 8th. Canvassing disqualifies.

The Medical Officer of Health will give Council's usual further information if required.

LONDON COUNTY COUNCIL.

Applications invited from duly qualified Medical Practitioners for appointment as CLINICAL ASSISTANT at St. Giles's Hospital, Fulham Road, S.W.10. Salary (temporary deduction) £100 a year, with board and lodging.

Appointment for six months in the first instance, but with a view to re-appointment for a further period of six months. Duties are assigned by the Medical Superintendent, to whom all necessary information as to the duties may be obtained.

Form of application (stating age, qualifications, and experience) may be obtained from the Medical Officer of Health (Staff Division), County Hall, Westminster, S.E.1, returnable by June 3rd. Canvassing disqualifies.

Further inquiries should be addressed to Medical Superintendent at the Hospital.

MANCHESTER [illegible] INFIRMARY

SURGICAL OFFICE[illegible] TO OUT-PATIENTS

[illegible]

CITY OF BIRMINGHAM MENTAL HOSPITAL

JUNIOR MALE ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole-time appointment from gentlemen under 35 years of age who are duly qualified and registered Medical Practitioners A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an

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The commencing salary will be £350 per annum plus the usual residential emoluments of board lodging laundry and attendance Subject to twelve months service satisfactory to the Committee an increase of £50 will be granted and th reafter increases of £25 per annum up to a maximum salary of £450 per annum An additional £50 per annum will be paid to the holder of the D P M qualification or to a person obtaining the D P M after appointment The salary and emoluments will be subject to a temporary deduction amounting to £9 7s 6d per annum in accordance with the scale of Temporary Abatements from Salaries approved by the City Council

The successful candidate will be required to pass satisfactorily a medical examination and to join the Scheme under the Asylums Officers Superannuation Act 1909 He will be required to serve in such institution belonging to the Mental Hospitals Committee as they may from time to time direct The appointment is subject to one month's notice on either side

Applications stating full particulars of qualifications experience and appointments held accompanied by copies of three recent testimonials must be addressed to Dr J C GRAVES Chief Medical Officer City Mental Hospital Rubery Hill [illegible] ed not later than

Town Clerk
Council
Birmingham

SEAMEN'S HOSPITAL SOCIETY
Greenwich

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL Greenwich for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and washing Candidates must be male Applications with copies of three testimonials to be sent in by June 8th to the undersigned

R L V BAX
Secretary
Greenwich
May 19th 1932

SEAMEN'S HOSPITAL SOCIETY
Greenwich

RESIDENT MEDICAL OFFICER required at ALBERT DOCK HOSPITAL Connaught Road E 16 for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and washing Application with copies of three testimonials to be sent in by June 8th to the undersigned

R L V BAX
Secretary
Greenwich
May 19th 1932

ST THOMAS'S HOSPITAL

VACANCY

An impending vacancy in the appointment of a PHYSICIAN in charge of the Skin Department Candidates must be Members or Fellows of the Royal College of Physicians

Applications giving full academic career with copies of testimonials to be sent to the Clerk to the Governors not later than Saturday June 4th

ST THOMAS'S HOSPITAL

VACANCIES

The appointment of two MEDICAL REGISTRARS for one year with possible extension for further two years

Applications with full details of academic career to be forwarded with copies of testimonials to the Clerk to the Governors not later than June 4th

ROYAL SOUTH HANTS SOUTHAMPTON HOSPITAL (247 Beds)

RADIUM OFFICER is required for a National Radium Regional Centre at Southampton (Royal South Hants and Southampton Hospital) Candidates must hold the qualification of D M R T and have had special experience of Radium Therapy Salary £600 per annum to commence Applications stating age and qualifications should be sent to the undersigned not later than June 18th

HY TRUSSON Secretary

EAST SUFFOLK AND IPSWICH HOSPITAL
330 Beds (Hospital 265 Recovery Home 65) Seven Residents

APPOINTMENT OF RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical and Surgical Officer (Male) who will also act as Medical Superintendent of the Hospitals Convalescent Home (under the title of R M O) Previous administrative and surgical experience essential

Preference given to a candidate who is a Fellow of one of the Royal Colleges of Surgeons of the United Kingdom Married men are eligible for the appointment The salary for a single man is £350 per annum with board apartments and laundry The salary for a married man is £500 per annum with house free of rates but without board

Duties to commence on July 1st 1932 or as soon after as possible

Applications stating age qualifications and medical surgical and administrative experience with three recent testimonials to be sent to me on or before June 7th 1932

ARTHUR GRIFFITHS Secretary
The Hospital Ipswich

SALFORD ROYAL HOSPITAL
(263 Beds)

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30th
ly at the rate of

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Salary at the

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Salary at the

The appointments are for a period of six months with board and residence

Candidates must be registered under the Medical Acts

The Hospital has the approval of the Royal College of Surgeons of England and appointments here are recognised for the English Fellowship (Final)

Forms of application which may be obtained from the undersigned must be delivered on or before June 8th

By Order of the Board
RICHARD NEWALL
Salford Royal Hospital Assistant Secretary
May 23rd 1932

SALFORD ROYAL HOSPITAL
(263 Beds)

Applications are invited for the office of MEDICAL REGISTRAR Candidates must be registered Medical Practitioners The appointment is for a period of one year Salary commencing £250 per annum

Applications accompanied by copies of recent testimonials stating age qualifications and experience must be forwarded to the undersigned without delay

By Order of the Board
RICHARD NEWALL
Salford Royal Hospital Assistant Secretary
Salford

DONCASTER ROYAL INFIRMARY
(185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Previous Hospital experience desirable Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable

Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER F SMITH
Secretary Superintendent

DONCASTER ROYAL INFIRMARY
(185 Beds)

HOUSE SURGEON (male) required for Surgical Unit of 50 beds Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER F SMITH
Secretary Superintendent

COVENTRY AND WARWICKSHIRE HOSPITAL (307 Beds)

RESIDENT CASUALTY OFFICER (male) wanted Salary £125 per annum with board laundry and attendance provided

Candidates must be duly qualified and registered Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately

(Miss) R HOPER Secretary

May 9th 1932

ROYAL FREE HOSPITAL
Gray's Inn Road W C 1

[illegible] ollowing

[illegible] care of

[illegible] Y

[illegible] ommences

[illegible] (alary

£100 per annum)

Duties of the above two posts to commence August 1st tenable for five months

Preference is g [illegible] to m
Students of the
School of Med
who must be d
Women should
and accompanie
monials to the undersigned on or before June 4th

REGINALD R GARRATT Secretary

ROYAL FREE HOSPITAL
Gray's Inn Road W C 1

Applications are invited for the appointment of ASSISTANT PHYSICIAN Intending candidates (men or women) who must be members of the Royal College of Physicians should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before June 18th The elected candidate will be expected to assume the appointment during the Autumn

REGINALD R GARRATT Secretary

ROYAL FREE HOSPITAL
Gray's Inn Road W C 1

Applications are invited from duly qualified and registered Medical Men for the following Resident post

HOUSE PHYSICIAN to the Children's Department duties to commence July 1st

Candidates for the above post must submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before June 4th

REGINALD R GARRATT Secretary

ROYAL SALOP INFIRMARY
SHREWSBURY (156 Beds)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST

Applications are invited from fully qualified [illegible] of Casualty Officer and
[illegible] June 1st next
[illegible] of six months
further period
[illegible] 50 per annum
of six
with board residence etc the Resident Staff comprises Resident Surgical Officer House Physician and Casualty Officer

Applications stating age qualifications experience nationality and accompanied by copies of three recent testimonials to be sent to the undersigned

J W NORRIS
Secretary Supt
Board Room
May 17th 1932

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL
(220 Surgical and Medical Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post There are five residents Salary at the rate of £150 per annum with board apartment and laundry

Applications stating age together with copies of three recent testimonials should be sent to the undersigned

C SAUNDBY
Supt & Secretary
May 17th 1932

CORBETT HOSPITAL STOURBRIDGE

RESIDENT HOUSE SURGEON required to commence duties on July 1st Appointment will be for six months and will determinable by six weeks notice on either side Salary at the rate of £200 per annum with board apartments and laundry

Applications with copies of testimonials to be sent to the undersigned

W C H WESTON Secretary
The Corbett Hospital Stourbridge

CAMBERWELL HOUSE LONDON S E 5

A vacancy for a THIRD ASSISTANT MEDICAL OFFICER has arisen in this Mental Hospital Commencing salary £300 per annum with board lodging and laundry Candidates of either sex must be under the age of 30 Applications together with full particulars should be sent to the Medical Superintendent

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** (contd.)	**PUBLIC HEALTH**
FBBW VALE MON (*Workmen's Medical Society*)	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE (*Medical Practitioner*)	AYR COUNTY COUNCIL (*Springvale Fever Hospital, Ayr Estate*) (*Female Assistant Medical Officer*)
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE (*Workmen's Medical Scheme*)	AYR COUNTY COUNCIL (*Assistant Medical Officer of Health*)
LOWESTOFT MEDICAL INSTITUTE (*Medical Officer*)	NEATH AND DISTRICT (*Medical Aid Association*)	FOLKESTONE BOROUGH (*Assistant Medical Officer of Health*)
LLWYNYPIA CILFACH VALE, PENYCRAIG GLAMORGAN (*Workmen's Medical Scheme*)	OAKDALE MON (*Medical Officer for Medical Aid Association*)	SOUTHAMPTON COUNTY BOROUGH (*Deputy Medical Officer of Health*)
MARDY GLAMORGAN (*Workmen's Medical Scheme*)	OGMORE VALLEY GLAMORGAN (*Llydiate Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)	STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS (*Tuberculosis Officer*)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House, Tavistock Square, W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (*All Friendly Society Appointments*)	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 105 Macquarie St. Sydney N.S.W.	QUEENSLAND (*Brisbane Associated Friendly Societies Institute*) (*Toowoomba Associated Friendly Societies Medical Institute Toowoomba*)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane	WELLINGTON NEW ZEALAND (*Contract Practice Appointments*)	Dr. G. F. WATSON (Hon. Sec. New Zealand Branch) British Medical Association 10 Hobson St. Wellington, N.Z.
VICTORIA (*All Institute or Medical Dispensaries*)	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch) British Medical Association Medical Society Hall, East Melbourne, Victoria			WESTERN AUSTRALIA (*Contract and Private Practices*)	Hon. Sec. Western Australian Branch British Medical Association, No. 6 Barrack St. Perth, Western Australia

May 25th 1932 — By Order of the Council — ALFRED COX, Medical Secretary

THE CANCER HOSPITAL (FREE)
(Incorporated under Royal Charter)
Fulham Road, London, S.W.3

The Committee are prepared to receive applications for the post of HOUSE SURGEON. Salary at the rate of £100 per annum.

The appointment is for six months and subject to renewal.

Candidates must call upon each member of the Medical Committee not later than Tuesday, June 14th, 1932.

A copy of the rules and the names and addresses of the Medical Committee may be obtained from the Secretary.

Previous experience as a House Surgeon is indispensable.

Applications with three (copies only) testimonials to be sent to the undersigned not later than the first post on Saturday, June 4th, 1932.

J. COURTNEY BUCHANAN, Secretary.

NORTH ORMESBY HOSPITAL
MIDDLESBROUGH

HOUSE PHYSICIAN required, male and unmarried. Salary £120 per annum with board, residence and laundry. There are three patients and the successful candidate will be eligible for the post of House Surgeon in due course.

Applications stating age, qualifications, previous experience (if any), with copies of three recent testimonials, should be sent to the undersigned at once.

GEORGE WATTS, Secretary Superintendent.

NOTTINGHAM GENERAL HOSPITAL

RESIDENT CASUALTY OFFICER (male) required at the above Institution. The appointment is for six months, with salary at the rate of £80 a year, with board, residence and laundry.

Candidates are desired to send applications to the undersigned, stating age, experience, and copies of testimonials, not later than Wednesday, June 8th.

It is to commence on or about July 16th.

LITTLE M. MACDOLL,
House Governor and Secretary.

VICTORIA HOSPITAL, BURNLEY
(125 Beds)

HOUSE PHYSICIAN (Male)

Applications are invited for the above post, which will become vacant on June 1st next. The duties include the giving of a certain number of anæsthetics. The appointment is for six months from June 1st and carries a salary of £150 per annum, with board, etc. This Hospital is approved by the London University for the purposes of the M.B. and M.S. examination.

Application, stating age, nationality and qualifications, together with copies of testimonials, should be addressed to the undersigned forthwith.

CLEO W. COOTING,
Superintendent and Secretary.

THE WILLESDEN GENERAL HOSPITAL
N.W.10

OUT-PATIENT DEPT. CLINICAL ASSISTANTS

Applications are invited for appointment to the following sessions:
MEDICAL—Tuesday afternoons
—Thursday morning.
SURGICAL—Friday afternoon.
Applications must be received not later than first post on Monday, June 6th, and should be addressed to the Secretary of the Hospital, from whom further details of the appointments may be obtained.

May 11th 1932

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Lond. W.C.2

Applications are invited for the post of IN-PATIENT MEDICAL REGISTRAR, for a period of six months from June 20th.

Honorarium £2 per annum.

Applications, stating age, qualifications, and experience, together with copies of testimonials, should be sent to the undersigned not later than June 4th.

DONALD C. TUDIN,
Secretary.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN
(Wards at 10 Lauriston Place)
(56 Beds, including 5 for Maternity)

Applications are invited from women graduates in Medicine of the University of Edinburgh for the following appointments:

SENIOR HOUSE SURGEON, for three months. Honorarium £50, with board and lodging.

SECOND HOUSE SURGEON, for three months. Honorarium £40, with board and lodging.

The appointments will be from July 1st, 1932. Applications, with copies of testimonials, to be sent to the Secretary of the Hospital on or before June 10.

EAST HAM MEMORIAL HOSPITAL,
Shrewsbury Road, E.7
(160 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER. Duties to commence on July 1st. Salary £120 per annum, with board, residence, and laundry. Applications, with copies of three recent testimonials, should be sent to the undersigned at once.

H. M. LEWIS,
Secretary.

ST. MARK'S HOSPITAL FOR DISEASES OF THE RECTUM AND ANUS
CITY ROAD, E.C.1

RESIDENT SURGICAL OFFICER

(Appointments continued on p. 48.)

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1

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ASSISTANCIES

WANTED BY DMT & E ASSISTANTSHIP with view to Radiological Practice with possibility of Hospital appointments preferably near London or in Scotland Small amount capital available—Address No 3004 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries—State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WANTED — ASSISTANT OUTDOOR Scotch Graduate with experience of general practice Midlands Permanency if suitable Full particulars and photo—Address No 3033 B M A House Tavistock Sq W C 1

WANTED — INDOOR ASSISTANT £300 p a all found except washing Mixed Practice Young Graduate preferred—Address No 3015 B M A House Tavistock Sq W C 1

LADY DOCTOR WANTED AS RESIDENT ASSISTANT in private Mental Home near London Salary according to experience — Address No 3001 B M A House Tavistock Square W C 1

M B DUPH REQUIRES ASSISTANTSHIP 2 yrs experience C P both private and panel Used to sole charge can manage branch Well received Excellent ref Send particulars —Address No 3008 B M A House Tavistock Square W C 1

LOCUMS

FOR LOCUM TENENS APPLY TO PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4 ADAM ST Strand London W C 2
Teleg Epsomian Lond Phone Temple Bar 9011
After Office Hours Epsom 9142

WANTED — LOCUMS PART TIME WORK or Preliminary Assistantship with view to Partnership or Succession later by experienced Practitioner Knowledge of refractions Excellent credentials—No 3016 B M A House Tavistock Sq W C 1

WANTED — LOCUM LADY PREFERRED able to drive car July 11th to Aug 8th Work light Nurse Dispenser kept £7 7s weekly —Address No 3005 B M A House Tavistock Square W C 1

WANTED—LOCUM TENENCIES BY SCOTS Graduate 6 years G P had own Practice and thoroughly experienced Free now and till October—Address No 3011 B M A House Tavistock Square W C 1

WANTED — LOCUM FOR AUGUST PREferably at seaside Hospitalits for wife and boy of 12 Own car Terms as arranged —Address No 3030 B M A House Tavistock Sq W C 1

AS LOCUM—EXPERIENCED G P DESIRES LOCUM work during next few months any period preferred from regular employers Terms by arrangement — Address Locum Rock Cottage Combe in Teignhead Newton Abbot, Devon

HOSPITALITY—EASY PRACTICE NO MID wifery offered family 2—4 weeks about August near South Coast Similar wanted S or E Coast or Exchange Practice—Address No 3024 B M A House Tavistock Square W C 1

LOCUM REQUIRED WHOLE JULY—HOUSE board for party three or four Bring car Petrol oil provided Charming seaside village Small Practice Panel under 600 Night work almost nil Agricultural district No collieries NEAR—LLIGH Llanbrynmair Montgomeryshire

LOCUM WORK WANTED BY MEDICAL Man aet 40 10 years own practice Experienced General Surgeon Any period before September First class references social and professional—Address No 3020 B M A House Tavistock Square W C 1

LOCUMS WANTED BY M R C S L R C P aet 30 keen reliable well received Motorist 5 years experience C P panel, and pass London S or F England preferred not essential Free June 21st—Address No 3002 B M A House Tavistock Square W C 1

LOCUMS OR TEMPORARY ASSISTANTSHIP required by Medical Woman Several years experience private and panel practice Able to drive car—Address No 3022 B M A House Tavistock Square W C 1

LOCUM WANTED FOR TWO WEEKS FROM JULY 14th Light rural Practice Seven guineas inclusive Own car preferred — Address No 3036 B M A House Tavistock Square W C 1

LONDON M B MUCH EXPERIENCE All types general practice wishes to take LOCUM TENENCY 3 or 4 weeks following July 25th Can bring own car—Address No 3135 B M A House Tavistock Square W C 1

WOMAN DOCTOR WANTED AS LOCUM from June 23rd for eight weeks N London No midwifery—Address No 3023 B M A House Tavistock Square W C 1

PARTNERSHIPS

WANTED—PARTNER TO TAKE OVER 1/4 SHARE in mixed Country Practice in South Durham Married man preferred Assistance Good house garden and garage—Address No 3136 B M A House Tavistock Square W C 1

LONDON S W (SUBURB) — PARTNER wanted for old established mixed class Practice excellent scope for active man Share for sale worth £600 a year Large panel House available Premium moderate Good opportunity — Apply LEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

PARTNER (WOMAN) REQUIRED WITHIN six months by Medical Woman leaving good class non dispensing Practice near London Experience of C I work and practical Surgery (especially E N T) essential further details on application WOMEN'S EDUCATIONAL UNION 2 Langham Street W 1

PARTNER REQUIRED IN A VERY SOUND and increasing middle class Practice on outskirt of good Lancashire Town near sea ONE THIRD SHARE for disposal at 2 years purchase Average receipts £3 000 p a Married man of about 30 with some experience preferred — Address No 3014 B M A House Tavistock Square W C 1

PARTNERSHIP £550 P A AT 2 YRS IN Practice of £1 150 p a including panel 1 350 and appt (transferable) £350 Scope very good Mids not now done Ultimate succession to whole probable soon House £700 or less £60 p a—Address No 2619 B M A House Tavistock Square W C 1

PARTNERSHIP WANTED BY F C S ED aet 30 with good hospital experience in middle and better class Practice where definite scope for surgery South preferred but not essential Income £1 000 to £1 500 Capital available Preliminary Assistantship desired—Address No 3027 B M A House Tavistock Square W C 1

PARTNERSHIP IN MIDLAND COUNTY Borough panel and private receipts £3 800 per annum 1/3 share for disposal at 2 years purchase Suitable house to rent Easy terms to suitable man—Address No 3133 B M A House Tavistock Square W C 1

PARTNER WANTED (AFTER PRELIMINARY Assistantship three months) Third Share offered 1½ years purchase Mixed Practice Mid town Male young unmarried Resident surg Some capital essential Good scope—No 3132 B M A House Tavistock Sq W C 1

REQUIRED BY EXPERIENCED PRACTITIONER leaving a large Practice in Midlands a SHARE in a Practice on or near South Coast returning about £2 000 per annum Single Practice would be considered House preferably to rent with about 4 bedrooms.—Apply No 4092 c/o PERCIVAL TURNER LTD 4 and 5 Adam Street W C 2

SOUTH COAST—PARTNERSHIP IN FIRST class non-disp Practice of £3 000 p a in fav seaside resort successful few yrs from £2 350 fine mod house £3 500 Applicant should be exp Grad in medicine not under 40 —No 822 B M A House Tavistock Sq W C 1

THIRD PARTNER REQUIRED IN HIGH class Practice non panel non dispensing Higher medical degrees desirable Share producing £1 250 p a—Address No 3017 B M A House Tavistock Square W C 1

MEDICAL POSTS DISPENSERS etc

DISPENSERS SUPPLIED TO DOCTORS and HOSPITALS
AT SHORT NOTICE WITHOUT FEE
Qualified and experienced in private and panel practice Permanent and part time Book keeper Dispensers Secretary Dispensers Nurse Dispensers Chauffeur Dispensers and Receptionists
Write wire or phone Central 3679
The Reliance Bureau for Dispensers
12 Holborn Viaduct E C 1

MALTA—ENGLISH MEDICAL MAN WISHES to hear of OPENING in Malta—Address No 3006 B M A House Tavistock Square W C 1

A LADY DISPENSER BOOKKEEPER supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

AN EXPERT SECRETARY LADY AGED 28 seeks POST with Doctor Thoroughly efficient in all subjects shorthand typewriting languages etc West End district preferred Part or full time—Address No 3018 B M A House Tavistock Square W C 1

AS SECRETARY AND BOOKKEEPER LADY visits Doctors Dentists and others daily or as required Charges moderate Good references—Miss WOODWISS 142a Albert Palace Mansions S W 11

DESIRES POST town and country Tall good appearance distance immaterial months trial if desired Good references and will accept any reasonable salary—D c/o 28 Marchmont St W C 1

DOCTOR'S DAUGHTER DESIRES POST AS Shorthand Would drive driving exp Nurse BMA House Tavistock Square W C 1

DOCTORS REQUIRING QUALIFIED Nurse Dispensers Secretary ens rs are invited ple Bar 5858 Thur ind ay House 171 Shaftesbury Avenue Lon on W C 2

GENTLEWOMAN, 36 SEEKS ENGAGEMENT as MATRON SECRETARY HOUSEKEEPER in first class Nursing Home Qualified in all three professions Linguist Excellent testimonials Interview London—Address No 3035 B M A House Tavistock Square W C 1

LADY SECRETARY HIGHLY EFFICIENT entered shorthand typing fluent French requirements C M B from Q C H seeks suitable POST in town or country — M 19 Carlton Val N W 6 Phone Maida Val 2477

LADY DISPENSER BOOKKEEPER (HALF) seeks PERMANENT ENGAGEMENT good time allowed—Address No 2919 B M A House Tavistock Square W C 1

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION 85 Eccleston Square S W 1 (Telephone Victoria 2422) supplies qualified Dispensers Bookkeepers Laboratory Assistants Male Nurses Mental Attendants Sanitary Assistants Male Nurses Mental and Special Treatment Ordinary Dental Clerks Ordinary Porters Caretaker etc without charge to prospective employers

LADY SEEKS POSITION WITH DOCTOR AS SECRETARY RECEPTIONIST Short hand typing book keeping Moder te remun eration Cit or country Willing to be g ner ally u eful —Address Miss B 16 Camborne Avenue W Ealing W 13

MB CHB FRCS IS FREE ONE OR more AFTERNOONS or EVENINGS during week Also all day Saturdays and Sundays Any kind of work Within 50 miles of London Own car — Address No 3025 BMA Hou e Tavi tock Square W C 1

TYPEWRITING AND DUPLICATING undertaken Theses Legal Doc appreciation f om (B) 341 Finchley Road N W 3 Phone Hamp stead 6430

NAVAL MEDICAL OFFICER RECENTLY retired requires EMPLOYMENT —Addre No 3007 BMA Hou e Tavistock Square W C 1

PRACTICES

WANTED —LARGE INDUSTRIAL PRACTICE within two miles radius of Kilburn Station Large panel e ntial yielding £2 000 —£4 000 per annum Ample capital available —Addre No 3012 BMA Hou e Tavistock Square W C 1

WANTED BY EXPERIENCED PRACTI tioner PRACTICE or PARTNERSHIP (agreeable to short preliminary A si tantship) in Lon lon or Home County £1 000—£1 500 p a *with panel Immediate cash available* — No 3032 BMA House Tavistock Sq W C 1

WANTED BY EXPERIENCED ANAESTHE TIST general PRACTICE £1 800 p a in residential di trict London Preferably non panel and with anaesthetic appointment Good hou e and garage es ential —Addres No 3010 BMA Hou e Tavi tock Square W C 1

WANTED A PRACTICE OR PARTNER SHIP preferably with scope for X Ray work in a provincial town or abroad Hous to rent Some capital available — Address No 3037 BMA Hou e Tavi tock Sq W C 1

W ARTNERSHI 800 by M B net pe Hou e to ren 3031 BMA Bo

WANTED —COUNTRY PRACTICE INCOME about £1 000 Modern hou e with gar den Cash available — Address No 3028 BMA House Tavistock Square W C 1

BEDS — COUNTRY PRACTICE PRETTY di trict Nice hou e electric light garden garage Receipts £500 excellent scope Panel small Oppo ition weak Price I ractice and hou e £1 200 — MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Stre t

WANTED — GOOD PANEL PRACTICE Yorkshire or Lancashire city Ample capital available —Address No 3021 BMA Hou Tavistock Square W C 1

WANTED — TOWN OR COUNTRY PRAC TICE in Scotland Income about £1 000 Hous to rent Capital available —Address No 3034 BMA House Tavi tock Sq W C 1

BRIGHTON —CASH AND PANEL PRACTICE for sale with corner twelve roomed house and garage In good position b tween Downs and Sea Cash receipts £1 200 yearly Panel 750 1½ years purcha e House £2 000 — Addre No 3019 BMA House Tavi tock Square W C 1

COUNTRY PRACTICE £370 P A PANEL and private Pub lic Med O House 5 bed bath 2 reception profe room with separate entrance Good garder garage stable Hunting Trout fi hing Rent moderat 1½ year —Addre No 3131 BMA House Tavi tock Square W C 1

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LANCS — PRACTICE IN PLEASANT DIS trict Receipts £280 excellent cop Good hou e gardens garage £48 Price— I ractice and good debts (£300)—£700 or offer part deferred — MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown St

LARGE MIDLAND CITY — WELL ESTAB li hed PRACTICE Receipts average £1 600 p a panel 1 500 Nice hou e large garden rent 15 gns per quarter Premium £1 650 or near offer — Apply PEACOCK & HADLEY LTD 19 Craven St Strand W C 2

LONDON N W (NEAR KILBURN)—WELL establish d co h and panel PRACTICE Receipts la t year £1 700 panel over 1 400 increasing daily Rent £80 p a Premium £2 800 payable £1 600 down rest pr aid over —Apply PEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

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Advertisements intended for in ertion under the Locums heading should be drafted in such a way as to make it clear whether a po t is offered or required

All communications should be addressed to THE MANAGER BRITISH MEDICAL JOURNAL B M A HOUSE, TAVISTOCK SQUARE W C 1 Telephone Museum 9861

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NO 40 HARLEY STREET LONDON W 1 — TO BE LET in this magnificent and modern building MEDICAL and DENTAL SUITES or for laboratorie Use of furni hed reception room electric lift central heating —Particulars of H GIBSON Metro Railway General Offices Baker Street Station London N W 1

RESIDENTIAL CLUB FOR GENTLEMEN —Hampden Club Hampden Street N W 1 clo e to king s Cro s Station Large Club rooms 3 0 bedrooms and bed itting rooms 15/ to 25/ p r week Illu trat d I ro pectus Secretary Mu eum 3424

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APPOINTMENTS—Contd

BOROUGH OF HORNSEY

LADY ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above appointment at a salary of £600 rising by annual increments of £20 to £750 per annum subject to a temporary deduction of 2½ per cent on the first £250 5 per cent on the next £250 and 10 per cent on the remainder

Intending applicants should obtain particulars of the duties and conditions of the appointment from the Medical Officer of Health Town Hall Highgate N 6

Applications should be sent to the undersigned on or before June 15th

Town Hall Highgate N 6 E B CROASDELL Town Clerk
May 24th 1932

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered practitioners (male) for the post of JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER at the NORTH WALES SANATORIUM Hlan gwyfan near Denbigh (236 beds for pulmonary and non pulmonary cases) Salary £250 per annum plus maintenance (subject to an emergency deduction of £10 12 6d per annum) The appointment is limited to a period of one year

Applications stating age qualifications and previous experience etc together with copies of three recent testimonials should reach the undersigned not later than June 3rd

Memorial Offices Wellgate Street Cardiff D A POWELL Principal Medical Officer

DUNDEE ROYAL INFIRMARY

The Directors invite applications for the following appointment to the Honorary Staff— VIZ ASSISTANT VISITING MEDICAL OFFICER FOR DISPASES OF THE SKIN Particulars of duties etc may be obtained from the Medical Superintendent and applications accompanied by twenty four copies of three recent testimonial should be received by the undersigned not later than June 20th

WM I FERGUSON Secretary
May 20th 1932

SAINT MARYS HOSPITAL FOR WOMEN AND CHILDREN Plaistow E 13

Applications are invited for the post of CLINICAL ASSISTANT in the Medical Out patient Department with access to the Ward The appointment is for six months Attendance on Monday afternoons at 2 o clock Applications with copies of three recent testimonial to be sent to the undersigned as soon as possible

A ERNEST WILKES Secretary

KING GEORGE HOSPITAL ILFORD (London)

Applications are invited for the appointment of additional HOUSE SURGEON (male) Salary £100 per annum with board residence etc Term six months with eligibility for a further period Applications should be sent immediately to the Secretary

THE WARNEFORD MENTAL HOSPITAL OXFORD

SECOND ASSISTANT MEDICAL OFFICER male and unmarried wanted immediately Apply with copies of three testimonials to the Medical Superintendent

MANCHESTER ROYAL EYE HOSPITAL

JUNIOR HOUSE SURGEON required Salary £120 per annum with residence board etc Applications (with copies of testimonials) endorsed House Surgeon to be addressed to the Chairman of the Board of Management not later than June 10th

H R NORTH Secretary

LANCASHIRE COUNTY COUNCIL

PUBLIC ASSISTANCE COMMITTEE

LAKE HOSPITAL AND DARNTON HOUSE ASHTON UNDER LYNE NEAR MANCHESTER

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Hospital and Institution comprising 300 and 600 beds respectively

Candidates must be unmarried

Salary subject at the present time to an emergency abatement of 5 per cent at the rate of £170 per annum together with the usual residential emoluments The successful applicant will be required to commence duty on July 1st

The appointment will in the first instance be for a period of six months the successful applicant being eligible for reappointment for a further period of six months at the end of that period

Applications accompanied by copies of not more than two recent testimonials should be addressed to County Medical Officer Public Assistance (Hospital and Medical) Department County Offices Preston not later than June 13th Envelopes should be endorsed Junior Resident Medical Officer

GEORGE FTHERTON Clerk of the County Council
County Offices Preston
May 24th 1932

COUNTY BOROUGH OF WOLVERHAMPTON

ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation invite applications for the post of Assistant Medical Officer of Health (male) The salary will be £650 per annum rising by annual increments of £25 to a maximum of £750 per annum to be subject to percentage deductions (1) occasioned by the reduction in the cost of living figure and (2) in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1922 The successful candidate will be required to pass a medical examination and to devote the whole of his time to the duties of the office

Candidates must hold a registrable qualification in Public Health and have special experience in Maternity and Child Welfare work and Infectious Diseases

Application endorsed Assistant Medical Officer giving age degrees and qualifications and particulars of previous post graduate experience accompanied by copies of three recent testimonials must be received by me not later than June 8th

Town Hall Wolverhampton J BROCK AITON Town Clerk
May 1932

LONDON COUNTY COUNCIL

Applications are invited for appointment as ASSISTANT MEDICAL OFFICER (male) and over 30 years of age in the Mental Hospital Service Candidates must be registered to practise both in medicine and surgery in England must have held at least one year's professional standing and must have held a residential position in a general hospital for six months or have had comparable general experience Salary (subject to temporary reduction) £475 a year rising to £550 a year (additional allowance of £50 a year to holders of D P M) No emolument Charges for board lodging etc (at present £2 9 a week) if required to be resident Pensionable under Asylums Officers Superannuation Act 1909 Application form giving full particulars obtainable from Chief Officer (Ref B) Mental Hospitals Dept Artillery House Artillery Row S W 1 Applications must be received by June 8th Canvassing disqualifies

GENERAL INFIRMARY SALISBURY
(General Hospital—161 Beds)

TWO HOUSE SURGEONS (male) required to commence duty on July 4th

Candidates must be unmarried fully qualified and registered Salary £150 with board etc

Application with copies of testimonials to be sent to the House Governor and Secretary from whom a copy of the rules may be obtained on application

ST MARYS HOSPITALS MANCHESTER.

HOUSE SURGEON for the WHITWORTH ST WEST HOSPITAL (Male resits) The appointment is from June 14th to Oct 1st Salary at the rate of £50 per annum with board and residence

Applications with copies of three testimonials to be sent to the undersigned on or before June 6th

R PATCHETT Secretary

CARDIFF ROYAL INFIRMARY
(Associated with the Welsh National School of Medicine)

HONORARY OPHTHALMIC SURGEON REQUIRED

Applications are invited for the vacancy arising in the office of Honorary Ophthalmic Surgeon

A candidate for the office must be a Doctor of Medicine or Master of Surgery in one of the Universities of the United Kingdom or a Fellow of one of the Royal Colleges of Surgeons in the United Kingdom or a Fellow or Member of the Royal College of Physicians of London or a Fellow of one of the other Royal Colleges or a Fellow of one of the Royal Colleges of Physicians in the United Kingdom and he shall confine himself in his practice to his specialty

The present Honorary Assistant Ophthalmic Surgeon is a candidate for the post

Each candidate is required to send fifty copies of his application and testimonials (for circulation among the Members of the Election Committee and Medical Board) stating age qualifications appointment held etc and endorsed Honorary Ophthalmic Surgeon to reach the undersigned on or before Saturday June 11th.

LEONARD D PEA
Secretary

DERBYSHIRE ROYAL INFIRMARY DERBY
General Hospital—347 Beds)

Applications are invited for the post of HOUSE SURGEON for General Surgery

Candidates must be qualified and registered under the Medical Acts

The appointment is for twelve months Salary will be £150 per annum with apartment board etc

Application with copies of testimonials to be sent to the undersigned

WALTER BANKS
May 20th 1932 Supt & Secretary

VICTORIA HOSPITAL FOR CHILDREN
Tite Street Chelsea S W 3

New appointment for a SURGEON in charge of the Ear Nose and Throat Department

The Committee of Management invite applications for the above mentioned post

Candidates must be Fellows of the Royal College of Surgeons of England

Applications should be sent to the Secretary at the Hospital not later than Saturday June 11th.

By Order
D ST JOHN BAMFORD
Secretary

WEST HAM & EAST DENBIGHSHIRE WAR MEMORIAL HOSPITAL (109 Beds)

TWO RESIDENT HOUSE SURGEONS (male or female) required by the above Hospital to commence on July 1st next Appointments for a period of not less than six months Salary £150 per annum with board and laundry

Applications stating age nationality experience and qualification accompanied by copies of three recent testimonial to be sent to the undersigned not later than Monday June 13th

LESLIE SPENCER
May 20th 1932 Secretary

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) The appointment will be for a period of six months at a salary of £175 per annum and will date as from June 10th next Preference will be given to those who have held resident posts Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 3rd addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of HOUSE SURGEON (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 10th next Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 3rd addressed to the Secretary

NATIONAL SANATORIUM BENENDEN
Kent

RESIDENT ASSISTANT MEDICAL OFFICER (Male) required at Benenden Sanatorium (150 beds) in July Salary £200 per annum rising by annual increments of £25 to £300 Reference given to candidates with experience in Tuberculosis and Pneumothorax Treatment Applications with copies of three recent testimonial should be sent to the Medical Superintendent not later than Thursday June 2nd

MILLER GENERAL HOSPITAL
Greenwich Road S E 10

Applications are invited for the following posts

HOUSE SURGEONS (Two) Salary £100 per annum

HOUSE PHYSICIAN Salary £100 per annum

CASUALTY OFFICER Salary £150 per annum

Candidates (male) must be unmarried Board residence and laundry are provided The appointments are for six months from July 1st next Applications stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials to be sent to the Secretary as soon as possible

May 18th 1932

ALL SAINTS HOSPITAL (FOR GENITO URINARY DISEASES)
Central Street West Square Southwark S E 11
(New Premises opening June 15th 1932)

RESIDENT HOUSE SURGEON (male) required on July 1st for six months being three months as Junior House Surgeon with salary at £100 per annum followed by three months as Senior House Surgeon with salary at £150 per annum Applications giving particulars of age experience qualifications and enclosing copies of three testimonials should reach me not later than June 11th at the following address

All Saints Hospital Vauxhall Bridge Road S W 1
49/55 Vauxhall Bridge Road S W 1

D H LADE Secretary

LONDON HOSPITAL E 1

There is a vacancy for the post of ASSISTANT SURGEON to the Ear Nose and Throat Department Candidates must be Fellows of the Royal College of Surgeons England

Applications should be sent to the House Governor from whom further particulars may be obtained and should arrive not later than on Saturday June 11th

ARTHUR G ELLIOTT
May 23rd 1932 House Governor

THE ROYAL INFIRMARY PRESTON

There is a vacancy for CASUALTY OFFICER with charge of beds for Assistant Surgeon Opportunities for transfer to other Resident posts as vacancies occur

Salary at the rate of £150 per annum with board residence and laundry

Applications with copy testimonials to be forwarded to Mr JOHN GIBSON Superintendent Royal Infirmary Preston

THE ROYAL EYE AND EAR HOSPITAL BRADFORD

Wanted JUNIOR HOUSE SURGEON (male) for July 1st Salary £150 with board residence and laundry

Applications stating qualification age etc with copies of recent testimonials to be forwarded to the undersigned on or before May 31st

F BRIGGS Secretary Supt

THE INFANTS HOSPITAL
Vincent Square Westminster

Applications are invited for the post of HOUSE PHYSICIAN (female) The appointment is for six months Salary at the rate of £75 per annum with board residence and laundry Applications and copies of testimonials should reach the undersigned by June 10th

ALFRED J SMALL
Secretary

THE STOCKPORT INFIRMARY

JUNIOR HOUSE SURGEON (male) required Salary £150 with board residence and laundry Applications with copies of three recent testimonials stating age University or Medical School and experience to be delivered to the undersigned not later than Monday June 6th next

EDWIN J PEARCE
Secretary Supt
May 1932

THE NEW LIVERPOOL AND SAMARITAN HOSPITAL FOR WOMEN
Catherine Street LIVERPOOL

Wanted a HOUSE SURGEON for six months commencing July 1st Salary at the rate of £100 per annum Applications to be sent to the Hon Secretary of the Medical Board at 57 Rodney Street by the day June 7th

ST JOHN OPHTHALMIC HOSPITAL
JERUSALEM

There will be a vacancy for a HOUSE SURGEON before the Autumn For particulars apply Honorary Secretary Ophthalmic Hospital St John's Gate Clerkenwell E C 1 (Preliminary notice)

WEST LONDON HOSPITAL
Hammersmith Road W 6 (250 Beds)

Required ONE HOUSE PHYSICIAN (General and Skin) ONE HOUSE SURGEON (General and Genito Urinary) for six months from July 1st next subject to one month's notice on either side Salary at the rate of £100 per annum with board lodging and laundry allowance

Candidates (males only) must be registered under the Medical Act

Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday June 16th Selected candidates will be required to call upon such member of the Medical Staff as directed to be in attendance at a Meeting of the Medical Council on Friday June 24th at 4 p m and the House Committee Meeting at 4 45 p m the same day when the appointments will be made

H A MADGE Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD
Gynaecological and Maternity Department
(146 Beds)

The Board of Management invite applications for the post of SENIOR RESIDENT OFFICER (male)

The appointment is for six months from July 1st Salary £120 per annum The board residence and laundry

Previous resident experience essential

The duties include charge of the Maternity Department

Applications stating age and experience with copies of recent testimonial should be forwarded immediately to the undersigned

H B SHIRSLIFF Secretary

BECKETT HOSPITAL AND DISPENSARY BARNSLEY (153 Beds)

Applications are invited for the post of RESIDENT SURGICAL OFFICER (male) at the above Hospital Fellowship degree of the Royal College of Surgeons England Edinburgh or Dublin will be deemed a recommendation

Salary attached to this appointment is at the rate of £300 per annum together with board residence and laundry

The successful candidate must be prepared to take up duty June 25th

Application stating age qualification and experience with copies of testimonials should be addressed to the undersigned immediately

ARTHUR L BOTTRELL
May 24th 1932 Secretary Supt

SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plaistow E 13

Applications are invited for TWO HONORARY ASSISTANT PHYSICIANS (Out patient) attendance Wednesday afternoons and a day to be arranged Candidates must be Graduates of a British University and Members of the Royal College of Physicians London

The Hospital is close to Plaistow Station (30 minutes from Charing Cross (Underground)

Applications with copies of three recent testimonials to be sent on or before June 14th to the undersigned

A ERNEST WILKES
Secretary

WESTMINSTER HOSPITAL

There will be a vacancy for a RESIDENT MEDICAL OFFICER at Westminster Hospital Annexe 66 Fitzjohn Avenue Hampstead on July 1st

Salary at the rate of £200 per annum plus board and accommodation

The post offers an opportunity for wide and unique Radium experience

Candidates who previously have held a Resident post preferred

Applications should be submitted to the undersigned at Westminster Hospital Broad Sanctuary S W 1 not later than June 10th

C M POWELL Secretary

LIVERPOOL HAHNEMANN HOSPITAL
Hope Street

Applications are invited for the post of STIPENDIARY MEDICAL OFFICER to the above Hospital Duties to commence at once Post is non resident tenable for six months renewable Mornings only Salary at the rate of £120 per annum

Candidates must be willing to undertake dispensary and apply homeopathy

Applications stating age experience and enclosing copies of recent testimonials to the Registrar

THE PRINCESS MARY MATERNITY HOSPITAL Jubilee Road NEWCASTLE UPON TYNE

RESIDENT MEDICAL OFFICER (male) required for six months from August 1st For particulars apply House Governor

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

A vacancy for an ASSISTANT HOUSE SURGEON (unmarried) exists Applicants must be duly registered and unmarried and the appointment will be for six months Salary £100 p a with board apartments and laundry free

Applications stating age accompanied by copies of not more than three testimonials should be forwarded to the undersigned without delay

By Order of the Committee
FRANK ROWE Secretary

SAMARITAN FREE HOSPITAL FOR WOMEN Marylebone Road London N W 1

VACANCY ON STAFF

The Committee of Management invite applications for the post of HONORARY SURGEON to Out patients for Monday afternoons Candidates must be Fellows of the Royal College of Surgeons of England

Applications stating age with twelve copies (not originals) of three recent testimonials should be sent to the undersigned at the Hospital on or before 10 a m Friday June 3rd

G H HAWKINS Secretary

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL
Spring Gardens Edinburgh
(60 Beds)

Applications are invited from fully qualified medical women for the post of JUNIOR HOUSE SURGEON at the above Hospital—rising to SENIOR HOUSE SURGEON at the end of three months Honorarium at rate of £25 per annum for first three months £50 per annum for second three months

The appointment is for six months from July 1st 1932 Board residence and laundry provided Applications with copies of testimonials to be sent to the Secretary of the Hospital on or before June 10th

NATIONAL HOSPITAL QUEEN SQUARE W C

ASSISTANT PATHOLOGIST Applications are invited for the post of Assistant Pathologist Candidates must be medically qualified and have had training in Clinical Pathology and Bio chemistry Attendance will be required for six half days a week and the appointed Officer will work under the Pathologist Salary £250 per annum The appointment is for one year and the holder is eligible for re election

Applications should be sent to the undersigned on or before Saturday June 4th

GODFREY H HAMILTON
Secretary

CUMBERLAND INFIRMARY CARLISLE
(160 Beds)
Resident Medical Staff—Four

Required at once a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON Previous experience desirable but not essential Appointment to September 30th Salary at the rate of £155 per annum board residence etc

Application stating age nationality qualifications etc with copies of not more than four testimonials should be sent immediately to the undersigned

J G HOWITT Secretary

ALTRINCHAM GENERAL HOSPITAL
(100 Beds)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS (male) Salaries at the rate of £150 and £120 per annum respectively with board residence and laundry The appointment is for six months in the first instance

Applications stating age and experience together with copies of recent testimonials to Secretary General Hospital Altrincham

BEDFORD COUNTY HOSPITAL
(124 Beds)

SECOND HOUSE SURGEON (male) fully qualified unmarried required for a term of not less than six months at once Salary £140 with board lodging and laundry

Application stating age nationality qualification together with three recent testimonials to be sent to the Hon Secretary Hon Medical Staff Committee as soon as possible

BIRMINGHAM & MIDLAND EYE HOSPITAL
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HOUSE SURGEON required at the above Hospital

Salary £110 per annum and £10 laundry allowance

Application together with copies of not more than three testimonials should be received not later than first post on Thursday June 9th

Further particulars can be obtained from the undersigned.

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Application are invited for the post of RESIDENT HOUSE SURGEON at this Hospital Salary at the rate of £150 per annum with board rooms and laundry Duties to commence July 1st next

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LESLIE J TURNBULL
Secretary

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HERTS — ASSISTANCY WITH VIEW TO Practice in about £800 scholar und r 30 with London Quain FRCS pref Scope for surgery Good Hospital—No 9028

WEST OF ENGLAND — TOWN PRACTICE. Share worth about £1 000 available owing to increase of Practice Non panel non dispensing better class Good appointments Good house 3 recep 5 bedrooms etc to rent London Oxford or Cambs d gree essential—No 9026

WEST RIDING—OLD ESTAB PRACTICE IN outskirts of industrial town Average £1 050 p a Panel 400 Two appointments Fees 3/6 to 10/6, some at 21/ Modern house 3 bed 2 recep large surgery etc Sell or let Alternative house with 6 bed 2 recep *Separate* surgery etc Rent £100 Very suitable Built for doctor Premium £1 550—No 9024

CHANNEL RESORT—RADIOLOGICAL PRACTICE About £500 p a scope for Electrotherapy No opposition Population of 40 000 covered by Practice Premises centrally situated at rental of 21/ per week Premium for good will and plant (cost £800) £700—No 9023

LONDON—HIGH-CLASS PRACTICE OVER £2 500 p a Largely Obstetrical and Children Successor must have had experience in these branches preferably Hospital appointments Ample scope for increase—No 9022

SOUTH MIDLANDS—COUNTRY PRACTICE. About £500 increasing Good opening for young man Opposition weak Fees 2/6 to 7/6 medicine extra Very little midwifery Good house 2 recep 7 bed bath surgery etc Electric light Price £800 Premium for practice £400—No 9021

RIVERSIDE SUBURB AND RESORT—HALF share of over £2 800 p a with possibility of succession Panel 1 300 and some good class Visiting fees 5/ to 21/ Good family house to rent at £100 p a Purchaser should be man of some experience in good class Practice—No 9020

LONDON W — INCREASING NUCLEUS residential about £300 with select panel of 100 Fees 7/6 to 21/ Lower maisonett with consulting and 2 bedrooms, bath kit chen Rent £100 p a incl Premium £450 —No 9018

SOUTH COAST — FASHIONABLE RESORT — Good class Practice non dispensing with select panel Income over £950 Scope and new housing estate developing Visits 5/ to 10/6 Good house 2 reception rooms 3 bed rooms 4 other rooms Premium for Practice and lease (43 years to run) £2 800 cash of which £950 can be raised on mortg—No 9014

SURREY HILLS — OLD ESTABLISHED Country PRACTICE unopposed £650 p a Panel 400 Premium 1½ years purchase Fees 3/6 to 10/6 Good house 6 bedrooms 2 reception rooms electric light good garden about 1 acre with tennis court £1 600 or rent £80—No 8992

MIDLANDS—£3 000 A YEAR OLD ESTAB Same hands over 30 years Partner 5 years One third share for sale now more later at 2 years purchase House available to rent Station close Fees 7/ to 21/ Extensive district very little opposition Panel 1 600 Personally known and recommended—No 9006

LONDON NORTH — £1 000 P A MIDDLE and working class panel 600 Visits 3/6—5/6 up Premium one years purchase Good house main road Leasehold £170 48 yrs to run—No 9005

NORTHERN TOWN — VERY OLD ESTAB— One fifth share of over £5 000 p a Panel of 4 000 Fees 5/ upward Choice of houses Scope for Midwifery Anæsthetics Eye and ENT work—No 9002

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LONDON (Outskirts)—Mixed G P in rapidly developing residential and industrial locality Receipts approx £1 200 Panel about 1 200 Fees 2/ upwards One appointment Excellent scope Premium £1 800 cash for Practice £1 500 leasehold house

LONDON N E—Mixed Suburban G P—Medium sized corner house Receipts nearly £800 Panel approx 1 000 increasing Scope Premium £1 340 for Practice leasehold house £900 or near offer

LONDON E—Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment Premium 2 years purchase or near offer

HOME COUNTIES—PARTNERSHIP in good class Practice Receipts over £6 000 p a Suitable house available Premium for 1/3 share 2 years purchase Highly suitable to young physician with good degree.

SUFFOLK—Old established Country PRACTICE situated in charming locality Good sized house with grounds to rent on lease Sport of all kinds Receipts average over £1 500 Panel 1 000 Appts worth £250 to £260 p a Premium 1½ years purchase

YORKSHIRE—Town PRACTICE in industrial locality Medium sized house (5 b d) Receipts approx £700 Panel 520 Fees 2/6 upward Premium for Practice and freehold house £2 000 each

LANCASHIRE — Industrial middle class PRACTICE with convenient house (4 bed) Receipts nearly £2 000 Panel 1 200 Fees 3/6 upwards Highly suitable for husband and wife Premium £3 000 to include book debts or 1/3 share Partnership with view to succession at £1 200 Suitable for lady Doctor

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LONDON E C—Mixed Cash and Panel Lock up PRACTICE with living accommodation if desired facing main thoroughfare held on lease at £95 p a Receipts nearly £700 Panel 450 (scope) Fees 1/6 to 10/6 Midwifery not undertaken Premium £1 000

YORKSHIRE — Near Coast — Agricultural locality — Attractive house separate entrance for surgery for sale freehold Receipts average approximately £800 p a Panel 620 Fees 3/6 upward Premium 1½ years purchase for Practice house £900

LONDON N W—PARTNERSHIP in well established mixed class Practice Receipts approx £2 500 Panel 1 800 Branch Surgery Premium for 1/3 or 1/2 share 2 years purchase Suitable accommodation available

LONDON S W—Old established mixed working class PRACTICE with scope for young and energetic man Receipts approx £1 000 p a Panel 1 780 Fees 1/6 upwards House to rent or for sale Premium £2 500

NORTHANTS — Well established mixed PRACTICE Suitable corner house available Receipts over £1 100 Panel 995 Fees 2 6 upward Prem £1 800

SOUTH AFRICA—Farming Locality—Mixed PRACTICE with Bungalow and 2 acres of ground Receipts £500 p a Premium 1 year purchase (Interview London)

MIDDLESEX W—PARTNERSHIP in Suburban Practice situated in rapidly growing residential locality Receipts (approx) £2 000 Panel (increasing) 650 Medium sized house available Premium for 1/3 or 2/5 share 2 years purchase

LONDON S W (Near West End)—Mixed better-class PRACTICE Main thoroughfare Suitable house to rent at exceptionally low rental Receipts approx £1 000 p a all cash Panel 730 increasing Fees 3/6 to 1 gn Premium to include Practice lease drugs furniture etc £3 500 or near offer

LONDON, S W—West End PRACTICE non panel non dispensing Attractive house on lease Receipts £1 400 Fees 1 gn upwards Premium £2 600 to include lease carpets fixtures fittings etc

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3. NORTH OF ENGLAND—Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 750 Appointments £350 Good house to rent Considerable scope for energetic man

4 LANCS—Old established and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent

5 BERKS—(Country Town)—PARTNERSHIP (⅛/5ths share) with short prelim Assistantship and ultimate succession Receipts over £1 200 Panel 550 and good scope Appts worth about £250 Good fees and house

6 LANCS (LARGE TOWN)—Non dispensing non panel large Surgical Practice Receipts over £1 179 p a and unlimited scope Good house etc

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1 S DEVON—ASSISTANTSHIP with view to Partnership and Succession Unopposed Practice over £1 100 p a Good house to rent In present hands 30 years

2 LONDON E—BRANCH SURGERY—Average takings last 3 years £765 Panel 375 increasing House on lease Great scope for man living on or near premises Prem £1 000

3 BEDFORDSHIRE — Country PRACTICE about £500 p a Good house to buy or rent Premium £400

4 COUNTRY PRACTICE — Old established in pleasant country Last year £1 750 accounts Panel 946 Appts £120 In present hands 23 years Good house garage large garden House & Practice £5 000 Borders of Monmouthshire

5 WESTERN CITY—PARTNERSHIP for young Practitioner Fifth share returning last year £530 net Increase to two-fifths with in four years Panel 3 120 increasing Good house to rent £45 p a Price £900 to include book debts No dispensing

6 CORNWALL—PRACTICE in small country town near sea. Averages £1 300 p a Panel about 637 Plenty of scope for a Surgeon Prem £2 000 Good house for sale

7 S DEVON—Small country PRACTICE returning £300 p a Panel over 200 increasing Scope Large house with grounds in charming locality to buy

8. MIDLAND CITY—Old established general and venereal PRACTICE Receipts last year £2 740 Panel 500 recently established increasing Excellent house to rent Premium £3 000

9 DEVON—Near Sea—PARTNERSHIP Half share of £1 200 p a increasing Panel 600 Good house with large garden for sale Item for Partnership £1 200

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(FOUNDED 1880)

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Telephone Mayfair { 1782 / 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending its members to consult Mr A V STOREY, the General Manager in all transactions requiring the services of a Medical Agent

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them

The business undertaken by the British Medical Bureau is divided under the following heads —

TRANSFER OF PRACTICES, PARTNERSHIPS, etc

Medical Practitioners wishing to dispose of Practices or desiring to take Partners are advised to negotiate the business through the British Medical Bureau Vendors may depend upon receiving introductions only to eligible and bona fide purchasers All information is treated in strictest confidence Full and trustworthy information regarding Practices, Partnerships etc, for disposal supplied gratis to Purchasers

ASSISTANTS AND LOCUM TENENS

Assistants and Locum Tenens can be secured at short notice It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out

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Medical Men wishing to receive Resident Patients should enrol their names on the books of the British Medical Bureau A large number of Patients are placed yearly through this medium

ACCOUNTANCY

The British Medical Bureau has its own staff of qualified Accountants wholly engaged on medical work—Practice Investigation of Practices for purchasers Income Tax Auditing Accounts etc

Practices and Partnerships for Disposal — **Full particulars sent free**

1 HOME COUNTIES —Partnership in exceptionally good and rapidly increasing Practice about £6 000 p a in delightfully situated Country Town easy distance of coast Attractive house (4 bedrooms) to rent Partner must hold the F R C S and be aged about 30 Appointment on Hospital Staff Premium for one sixth to one fourth share 2 years purchase Preliminary Assistantship

2 EAST ANGLIA —Partnership in Country Practice nearly £4 700 p a in beautiful agricultural district Panel 3 000 Country house (7 bedrooms) in own grounds with picturesque garden tennis and croquet lawns orchards and meadow for sale Considerable scope for increase Premium two thirds or four ninths share 2 years purchase

3 WORCESTERSHIRE — Partnership in Practice nearly £1 900 p a in beautifully situated Market Town Moderate panel Suitable house with garden to rent Premium one half share 1½ year purchase

4 LONDON S W —Partnership in Practice over £2 800 p a in pleasant residential Suburb Panel 1 750 Suitable Flat available After Preliminary Assistantship a share which later would be increased to seven fifteenths would be sold to suitable man at 2 years purchase

5 E COAST —Partnership in lucrative Practice over £5 200 p a in large Sea port Town Panel between 3 800—3 900 Partner must be young and energetic Good scope Premium one fourth share £2 500 Preliminary Assistantship

6 N OF ENGLAND —Season Practice doing about £150 p a in small Inland Spa No panel or midwifery Good house (6 bedrooms etc) with nice garden to rent on lease Good scope for increase Premium £100

7 S WALES — Sound compact and easily worked PRACTICE of £2 600 p a in small pleasant Seaport Town Panel 3 000 Beautiful house (7 bedrooms) with good garden to rent Premium £3 000

8 S COAST —Nucleus of Practice in developing Small House Agent to Popular Resort Semi detached house (3 bedrooms) facing sea with garage and garden for sale Option would suit semi retired Practitioner

9 EASTERN COUNTIES — Third Partner required for sound old established Practice of £4 500 p a in particularly pleasant Market Town within easy reach of Panel Suitable house Premium 2 years purchase for share of 1 600 about £1 000 p a Option much increased share within 3 years

10 LONDON, W C —Partnership in Practice about £1 000 p a Small panel Small flat to rent if desired One half share with succession in five years Premium 2 years purchase

11 S AFRICA —Practice of £2,000 p a in a Township in one of the richest Districts in the Union Charming Bungalow to rent Premium to include Book Debts Dressings Surgery and Household furniture £1 500

12 W MIDLANDS —Practice nearly £2 400 p a in small residential country town amid beautiful surroundings Panel about 1 100 Excellent house (6 bedrooms and attics) in own grounds with orchard for sale Sport of all kinds Premium 14 years purchase

13 N OF ENGLAND —Ophthalmic Practice of over £1 600 p a in an important town Excellent scope for one keen on clinical and operative Ophthalmology Large house in first class condition for sale Purchaser should be well qualified Premium £2 500

14 N E ENGLAND — Rapidly increasing PRACTICE in large town Receipts past year £1 700 including select panel of under 550 Well situated house (6 bedrooms) in good residential part for sale Ample scope for increase Premium £2 750

15 HOME COUNTIES — Country Practice averaging £1 120 p a in pleasant district easy distance of London Panel 900 Very nice detached bungalow residence (5 bedrooms) garage and well stocked garden to rent on lease Excellent scope Premium £1 600

16 NORTHUMBERLAND — Practice of £2 000 p a in small industrial town Panel 1 040 House for sale Premium—Practice—1½ years purchase

17 S AFRICA —Practice of about £2 000 p a in a famous Town Pleasantly situated detached bungalow (5 room) garage and small garden for sale (Hospital with private ward) Premium £1 100

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Practices and Partnerships for Disposal (continued)

18 N. WALES COAST.—Practice of upwards of £1,000 p.a. in a most beautiful district. Panel 760. Excellent house (5 bedrooms) with modern conveniences. Sport of all kind. Premium £1,350 to include drugs, fittings, etc.

19 S. COAST.—Practice averaging £1,100 p.a. in Residential Town and Health Resort. Panel 1,056. *Practically no dispensing and not much midwifery. Scope for* considerable increase. Premium £2,000.

20 KENT.—Partnership in middle and working class practice nearly £4,450 p.a. in an industrial town. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. One fifth share 2 years purchase.

21 LONDON, WEST END.—X-ray and Electro therapeutic Practice. Receipts 1931 nearly £620. Large house (8 bedrooms) to rent on lease. Premium £925.

22 MIDLANDS.—Partnership in sound non-dispensing Practice of over £5,700 p.a. in beautifully situated county town. Panel 2,000. Good well qualified Physician required aged 30/35. One fifth share at 2 years purchase with early increases. Good Hospital with prospect of appointment on Staff in near future.

23 S. COAST.—Fashionable Health Resort.—PARTNERSHIP in *steadily increasing Practice about £3,300 p.a.* Small elect panel. Share worth about £800 p.a. at 2 years purchase. Incoming Partner should be Oxford, Cambridge or London man.

24 OPHTHALMIC PRACTICE.—Exceptional opportunity for a PARTNERSHIP. Applicant should be aged about 30 and must have the D.O. Oxford or D.O.M.S. and must have held *Ophthalmic Hospital post preferably in London*. A share worth nearly £1,200 p.a. at first.

25 N. OF ENGLAND.—Inland Health Resort. Non dispensing PRACTICE averaging £1,130 p.a. Small select panel. *House* (7 bedrooms) *with* large garden for sale or rent. Premium for Practice 1½ years purchase.

26 LONDON, S.W.—Practice £580 p.a. in suburban district. Small panel. Considerable scope. House (5 bedrooms) on main road rent £70 p.a. Premium £750.

27 S. OF ENGLAND.—Practice £1,035 p.a., in flourishing and attractive town within 90 miles of London. Panel over 800. House (6 bed and dressing rooms) with half an acre of garden for sale. Scope. Premium 1½ years purchase.

28 LONDON, W.—Practice £550 p.a. in suburban district. Detached double *fronted house* (6 bed and dressing rooms) with small garden for sale. Premium 1½ years purchase.

29 W. OF ENGLAND.—Partnership in old-established Practice of £1,165 p.a. in first rate City. Panel 1,350. House (4 bed and dressing room) to rent. Share worth £550 p.a. at 2 years purchase.

30 MIDLANDS.—Steadily increasing PRACTICE of between £1,100—£1,200 p.a. in thriving town one and a half hours by rail from London. Excellent house (6 bedrooms) garage and garden for sale. Cottage Hospital. Premium 1½ yrs. purchase.

31 LONDON, S.W.—Cash Practice about £1,100 p.a. near Victoria. Panel about 1,200 which could be considerably increased. Valuable corner residence for sale. Premium for Practice £1,000.

32 LONDON, E.—Cash and Panel Practice of £840 p.a. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years purchase.

33 ESSEX.—Partnership in Practice of £5,400 p.a. in developing country district easy distance of coast. Panel 3,600. Detached house (6 bedrooms) garage and good garden for sale. *Scop for increase. One fourth share 2 years purchase.*

34 S. COAST.—Practice averaging £480 p.a., *in rural district on out skirts of popular holiday resort.* Panel 400. Part of Surgery premises 10/- weekly. Premium £600.

35 W. OF ENGLAND.—Partnership in Practice nearly £2,600 p.a. in country town. Panel about 1,000. Good house (5 bedrooms) garage and garden of about half acre to rent. Good educational facilities. Cottage Hospital. Premium one third share £1,550.

36 MIDLANDS.—Practice averaging £1,710 p.a. in growing town with nice surrounding. Panel 1,100. House available later. Good hospital and scope for surgery. Premium 1½ years purchase.

37 HOME COUNTIES.—Non dispensing Practice *averaging £1,150 p.a. in growing residential watering place.* No panel. Detached house (4 bedrooms) with every modern convenience and attractive garden to rent. Premium 1 years purchase.

38 MIDLANDS.—Practice £727 p.a. *in clean* flourishing manufacturing town. Panel 570. *House* (5 *bedrooms*) garage *to rent.* Premium 1½ year purchase.

39 SHROPSHIRE.—Practice £800 p.a. in Market Town. Panel 1,170. Suitable house to purchase. Premium 1½ years purchase.

40 S. WALES.—Mixed Practice in growing district of seaport town. Receipts last year over £800. Panel 760. *House* (5 *bedrooms*) garage and garden to rent. Good prospects for cope. Premium £1,200.

41 N. OF ENGLAND.—Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgery, anæsthetics and obstetrics. Premium one fifth share at 2 years purchase.

42 LONDON, N.W.—Non-dispensing Practice in good residential district. Receipts last year nearly £900. No panel. Ten roomed house with garage and large garden to rent. Premium £1,200.

43 N. MIDLANDS.—Partnership in Practice at out £5,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms etc.) available to rent. Great scope, district is growing rapid. Premium one-third share 2 years purchase.

44 S. WALES.—Increasing Practice of £900 p.a. in peaceful Market Town. Panel 1,150. Well situated house (3 bedroom) for sale. Cottage Hospital. Premium £1,000 part *by instalments.*

45 KENT.—Country Practice of over £800 p.a. in beautiful part. Panel nearly 400. Very attractive residence (5 bedroom) central heating ground of 2½ acres, orchard etc. for sale. Sport. Premium 1½ years purchase.

46 KENT.—Country Practice of about £850 p.a. Panel 500. Good house and garden for sale. Premium £1,100.

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All communications to be addressed to Mr. A. V. STOREY General Manager

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COUNTRY TOWN —Mixed pts list year £1 988 Panel Excellent house 2 reception Premium 1½ years purchase —No 331

MANCHESTER —Middle class PRACTICE in pleasant Suburb Cash receipts 1931 £1 327 Panel 459 Charming house 3 reception 6 bedrooms billiard room Large garden and garage Premium—Practice—1½ years purchase —No 322

LANCS TOWN —DEATH VACANCY —PARTNERSHIP in mixed general PRACTICE Cash receipts approx £3 000 p a Large panel *Good house to rent* Cottage Hospital One third or one half share for sale at 1½ years purchase —No 352

MANCHESTER —Residential Suburb —Middle class PRACTICE Suitable for two in Partnership Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses to rent with ample accommodation Premium 1½ years purchase part by arrangement —No 277

NORTH WALES COAST — Mixed PRACTICE in beautiful district Average gross cash receipts £1 200 p a Panel 750 Excellent house 2 reception 3 bedrooms electric light and modern conveniences low rental Premium for quick sale £1 350 (to include drugs and surgery fittings)—No 348

MANCHESTER — Old established PRACTICE Cash receipts last year £1 513 Panel 1 697 Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1½ years purchase —No 323

CHESHIRE COAST TOWN near LIVERPOOL —Middle class PRACTICE Average cash receipts £1 184 p a Appointment £80 p a Small select panel Excellent corner house 3 reception 5 bedrooms Premium—Practice—1½ years purchase —No 317

MANCHESTER —MIXED PRACTICE Cash receipts about £1 600 Panel 1 500 Good house (on lease) Garden and garage Urgent sale Premium £1 650 —No 303

WELSH BORDER —UNOPPOSED COUNTRY PRACTICE in beautiful district Average cash receipts £1 100 p a including transferable appointments £300 p a Panel 756 Cottage Hospital Excellent house 4 reception 4 bedrooms Garage and large garden Rent £70 p a or would sell for £1 250 Premium 1½ years purchase Wish not essential —No 337

MANCHESTER —MIXED PRACTICE (suitable for two in Partnership) Cash receipts last year £2 840 Panel 2 156 Good scope Two excellent houses with ample accommodation Premium—1½ years purchase —No 321

CHESHIRE TOWN near MANCHESTER —Pleasant Suburb —Middle class PRACTICE Cash receipts 1931 £728 last four months £532 Panel over 100 Excellent detached corner house to rent, 2 reception 5 bedrooms garage and large garden —No 349

EAST YORKS —Country Town near Coast —Unopposed mixed PRACTICE Cash receipts last year, £860 Panel 630 Excellent detached house 3 reception 4 bedrooms garage and large garden Premium 1½ years purchase —No 346

LARGE LANCS TOWN —MIXED PRACTICE Average cash receipts £1 288 p a Panel 1 089 Scope for increase Good house 3 reception 4 bedrooms garage and garden Premium 1½ years purchase —No 347

EAST COAST —SEASIDE TOWN —Old established mixed class PRACTICE Average cash receipts £1 701 p a Panel 686 Excellent living and professional accommodation 2 reception 6 bedrooms Garage and small garden Rent £100 p a on long lease Premium 1½ years purchase —No 332

SPECIAL NOTICE

For the convenience of Practitioners, Branch Offices have been opened as under —

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Phoenix Chambers, South Parade, Leeds
(Tel 26771)

NORTHERN IRELAND
72, High Street, Belfast
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LANCS — PLEASANT COUNTRY TOWN —Sound mixed PRACTICE Average cash receipts £1 374 p a Appointments mostly transferable approximately £60 p a Panel 1 037 Excellent house 3 reception 6 bedrooms garage and large garden Premium—Practice—1½ years purchase —No 326

NEAR MANCHESTER — Pleasant Town —Old established PRACTICE Average cash receipts £995 p a Panel 902 Excellent detached house (freehold) 3 reception 5 bedrooms Garage and garden Premium—Practice—1½ years purchase —No 234

DEATH VACANCY —LANCS TOWN —Mixed class PRACTICE Average cash receipts £1 634 p a Panel 829 *Scope for Surgery if desired* Good accommodation to rent Premium 1 years purchase —No 335

MEDICAL WOMAN'S PRACTICE — MANCHESTER — Old established Cash receipts 1931 £645 Panel 450 Good scope Excellent house 3 reception 6 bedrooms Garage Rent £80 p a on lease Premium 1½ years purchase —No 330

CHESHIRE TOWN near MANCHESTER —PART FINISH in old established Practice Average cash receipts £5 151 p a Panel 3 600 Excellent house 2 reception 3 bedrooms garage and garden —Premium—one fifth share—£1 700 —No 333

VENEREAL DISEASES PRACTICE — Northern City —Cash receipts last year £1 625 Convenient house to rent at £65 p a Premium—any reasonable offer —No 340

NEAR PRESTON —PRACTICE offering scope Cash receipts last year £700 Panel 300 Good house 2 reception 4 bedrooms to rent £70 p a Premium 1½ years purchase —No 254

NR LIVERPOOL —PARTNERSHIP in good class Practice Cash receipts approx £3 000 Good house available Premium—one third share—2 years purchase —No 309

NORTH WEST COAST — SEASIDE RESORT — Old established PRACTICE Cash receipts £874 Panel 250 Excellent freehold house, 2 reception 5 bedrooms Garage and garden —No 266

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1 DEATH VACANCY —BORDERS OF SALOP & STAFFS and within 7 miles of Coun Town Very old-established unopposed Country Practice situated in an extremely pretty district and worth last financial year to March 31st £1 682 including apt about £120 and panel about 1 170 Excellent house with every convenience and ample accommodation (bathroom h and c) Electric light and ga Garage Large productive garden Freehold will be sold for about £1 000 or rented at £75 pa Premium 14 years purchase Locum in charge

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3 WEST MIDLANDS —Very old-established mixed Practice in small town (largely residential) and at agricultural district of exceptional beauty Cash receipt average £2 278 pa with panel of 1 100 Opposition not strong Very fine house (3 reception room 6 bedroom bathroom etc) in nearly three acres of ground Beautiful garden tennis lawn and productive orchard Price for freehold £2 000 Premium 1½ year purchase

4 MIDLANDS —CATHEDRAL CITY —Old-established Letter class non panel PRACTICE producing for last twelve month £3 300 No appointment Fee from 5/ to 21/ Not much midwifery Commodious house with 2 reception 6 bedroom etc Price for freehold £2 000 part on mortgage Vendor on Staff of Hospital and good Surgical scope Premium £5 000

5 BELGRAVIA DISTRICT —Good class non panel non-dispensing PRACTICE worth over £1 400 pa Fees 1 to 2 guineas Very little midwifery Attractive house in excellent position (2 reception 4 bedroom 3 bathroom etc) on lease rent £250 pa Premium £2 600 to include lease carpets curtains fittings and fixtures Good introduction given

6. ESSEX —COAST TOWN —Very old-established non-panel (but good scope for this) middle class PRACTICE average £1 156 pa Visits 5/ to 10/6 medicine extra Very little midwifery Expensively detached house with reception 3 bedroom bathroom etc Garden Rent £100 pa on lease Premium 1½ years purchase

7 EASTERN COUNTIES —(Within one mile of the sea) —Very old-established and increasing country PRACTICE situated in pleasant open district Cash receipts for the three years ending March 31st last average £1 820 last year £1 940 including apt (transfers all) and panel producing about £750 Visits 5/ upward Midwifery 2 to 7 gns Nearest opposition 5½ miles Very good house (6 bedroom bathroom with h and c etc) built by Vendor and standing in 1½ acres of ground tennis court orchard garage Price for freehold £2 500 part on mortgage Premium £2 750

8 YORKS —EAST RIDING —Well established unopposed PRACTICE within reach of the coast and near large town Cash receipts for last 12 months £1 950 including panel of 650 Fees 3/6 to 10 6 House contains 3 reception 5 bedrooms etc and professional accommodation Garage One acre of garden Price for freehold £900 part on mortgage Hunting, hooting golf etc Premium £1 175

9 SOUTH COAST TOWN —Church middle class non-panel PRACTICE averaging over £500 pa but of rising type for increase 1/ 2 6 to 10/ Eight roomed house with kitchen etc and professional room Can be rented or purchased Premium £600 Vendor retiring

10 WILTS —Unopposed Country PRACTICE in very attractive district near good town Receipts for last year over £900 including panel of £483 and an apt worth £50 Fees 2 6 to 10 6 Suitable house in very good repair with 2 reception 4 bedroom etc Large garden with paddock etc Very good part Price for Practice and House £2 200

11 SOUTH WEST OF ENGLAND —COAST TOWN —Old-established middle and working-class PRACTICE producing about £1 000 pa Panel of 550 Fees from 3 6 No midwifery Eight roomed house can be rented at £90 pa Premium £500

12 LONDON SOUTH EAST —Old-established middle and working-class PRACTICE averaging approximately £2 000 pa Panel of about 1 300 Visits from 5 6 Accommodation suitable for bachelor or married man without family Premium £3 500

13 LONDON NORTH WEST —Very desirable old-established non panel and non-dispensing PRACTICE situated in a fine open residential suburb Cash receipts average nearly £2 400 pa Good house available Freehold for sale Premium 1½ years purchase with good introduction

14 PARTNERSHIP —EASTERN COUNTIES —A third Partner required in a good mixed-class Practice situated in very pleasant market town within reach of the sea Health of retiring partner will produce about £1 000 pa with increase eventually up to one half Practice is old established and producing about £4 500 pa Panel of 1 600 Choice of houses or ingoing Partner could reside in room Premium 2 years purchase

15 SOUTH WEST OF E — ird share is offered in a good uated in an attractive country t of 50 bed and good Surgical scope Average gross cash receipts over £3 000 pa Selected panel of 570 Fees 4/ to 21/ Choice of houses Premium 2 years purchase

16 YORKSHIRE —PROSPEROUS TOWN —PARTNERSHIP —A one third share (with increase later) is offered in a *good middle class* non panel Practice, averaging £3 300 pa Fees 3/ to 2 gns Nice house with 2 reception 4 bedroom etc Small garden Electric light Garage Price for leasehold £1 200 £800 on mortgage Good sport and excellent schools Very good Surgical prospect Premium for share £2 000

17 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA —PARTNERSHIP —A fourth share is offered owing to the retirement of one of four partners in an old-established Practice in very pleasant country district Income £5 400 pa with good panel Lacking Detached house with ample accommodation garden etc for sale Premium 2 years purchase

18 WITHIN 70 MILES NORTH OF LONDON —COUNTY TOWN —PARTNERSHIP —A one third or two fifths share is offered in a well-established middle and working class Practice having very good scope for increase Receipts average over £2 000 pa Panel of nearly 2 000 Fees 2/6 to 7/6 Choice of houses on rental or purchase Premium 2 years purchase

19 LONDON NORTH WEST — Old-established mainly better class non panel and non dispensing PRACTICE averaging about £1 100 pa Fees 7/6 to 21/ Only few cases of midwifery at 10 gns Corner house with 3 reception 6 bedroom etc Electric light Garden Garage Rent on lease £150 pa Premium £1 250

20 LONDON NORTH —Middle class PRACTICE producing about £1 000 pa *including panel of 660 Fees from 2 upwards* Very little midwifery 8 woman roomed house with professional accommodation Price £1 500 or could be rented Premium £1 500

21 LANCS — LARGE TOWN —PARTNERSHIP —A one third share is offered in an old established mixed class Practice averaging approximately £2 000 pa Panel of 2 250 Fees from 2/6 Suitable house with 2 reception 3 bedrooms etc Surgery and waiting room Lease on long lease £50 pa Premium £1 000 to include book debts etc

22 MANCHESTER —Old established PRACTICE averaging £640 pa Panel of 154 Offers good scope Fees 3/6 to 10 6 Midwifery 3 to 7 gns House contains 4 reception 5 bedrooms bathroom etc Rent or lease £70 pa Premium for immediate sale £450

23 SOUTH WEST OF ENGLAND —FAVOURITE TOWN —PARTNERSHIP —A share producing about £1 000 pa with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Midwifery 5 to 10 gns A suitable house can be rented at £90 pa Premium for share 2 years purchase Good Hospital with over 250 beds Ingoing Partner should be experienced and hold M D London

24 SOUTH T TOWN —Old established Pr about £1 800 pa Small selected much midwifery Good house with ample accommodation and garden Freehold for sale Premium £5 000

25 NORTH MIDLAND CITY — PARTNERSHIP —Two Partners are required to take over a three-fifths share each (with increase later) in a very sound old-established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained. Premium 2 years purchase Excellent sport and school

26 F ENGLAND — A share producing about well established Practice averaging over £5 000 later Panel of nearly 1 400 £1 400

27 MIDLANDS —PARTNERSHIP —A one third share in a very sound middle and working-class Practice held by the senior partner for 35 years A large gross cash receipts for the past three years nearly £5 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable house available early in April with 2 reception 5 bedrooms etc Small garden Garage Sporting all kind and very good schools Will introduce 2 year partnership

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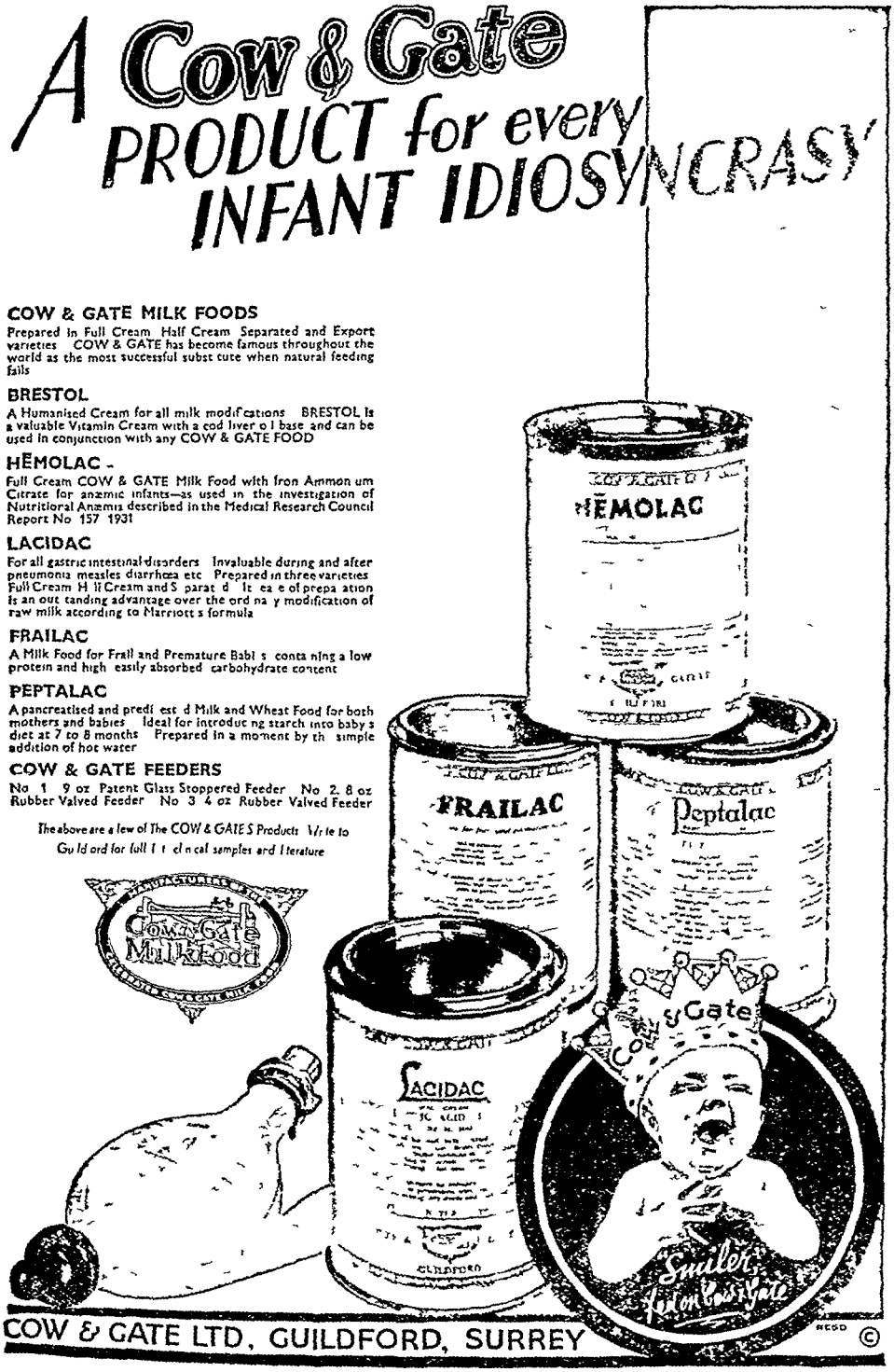
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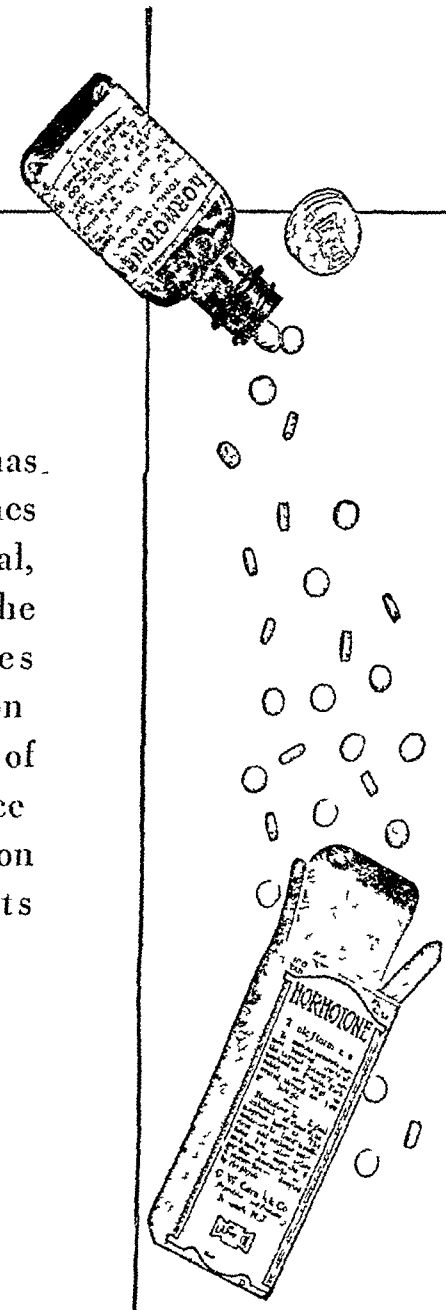
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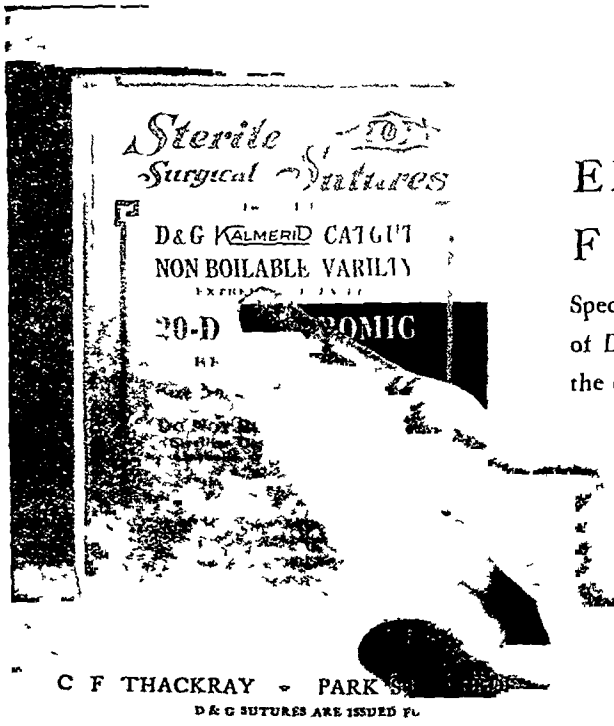
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CONTENTS

JUNE 4, 1932

ORIGINAL ARTICLES

Liver and Spleen Their Clinical and Pathological Associations By J W McNEE MD FRCP 1017

Clinical Comparison of Ergotoxine and Ergotamine By CHASSAR MOIR MD FRCS Ed 1022

The Menace of Obesity By ERNEST LAQUER MD MRCP 1024

The Symptomatic End Results of Operations for Cholecystitis By J COSBIE ROSS ChM FRCS 1026

A Case of Abortus Fever in Yorkshire By ALEXANDER FORBES MB 1028

A Case of Undulant Fever in Derbyshire By T H J TURTON MD and C F FLETCHER 1029

Incidence of Br abortus Infections By A J MESSER MB 1030

MEMORANDA

An Unusual Tumour of the Gluteal Region By GRAHAM W CHRISTIE FRCS Ed 1031

A Fatal Case of Vincent's Angina By F JAMES MD 1031

CLINICAL PROCEEDINGS

CALCUTTA BRANCH Pregnancy Anæmia in India 1031

REPORTS OF SOCIETIES

ROYAL SOCIETY OF MEDICINE
Acute Rheumatic Infection 1032

ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE Filariasis 1034

REVIEWS

Asthma and Hay Fever 1035
Treatment of Hare Lip 1036
The Abdominal Surgeon's Guide 1036
Whitewashing King Henry VIII 1036
Public Health and its Progress 1037
Merck Report 1037
Notes on Books 1038

OBITUARY

John Clough Thresh MD DSc 1057
Alfred Denson MB 1058

THE SERVICES

Honorary Surgeon to the King 1059
I M S Dinner 1059
(For Naval Military and Air Force Appointments see SUPPLEMENT)

LEADING ARTICLES

TOWN PLANNING 1039
INTESTINAL AUTO INTOXICATION 1040

THE WEEK

Tuberculous Pneumatism 1041
Operations on the Semilunar Cartilage 1042
Too Too Solid Flesh 1042
Smoke Abatement in France 1043
Alcoholism and Drug Addiction 1043
Measles from 1919 to 1931 1044
Social Training of the Doctor 1044
Preparation for Marriage 1044

GENERAL ARTICLES AND NEWS

Protection Against Electric Shocks Ministry of Health Memorandum 1045

Voluntary Sterilization Eugenics Society's Conference 1045

Medical Problems of Contraception Conference in London 1047

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN 1048

PREPARATIONS AND APPLIANCES (Illustrated) 1038

MEDICAL NOTES IN PARLIAMENT
Induced Abortion in Tuberculosis 1039
Income Tax on Induced Fee of Insurance Practitioner 1039
Treatment of Tuberculosis 1039
Nystagmus 1039
Maternal Mortality Report 1060
MEDICAL NEWS 1060

LOCAL NEWS

SCOTLAND—
Presentation to Sir Alexander Macintosh 1048
Medical Service in Scotland 1049

IRELAND—
Royal Academy of Medicine 1049
The Rotunda Hospital 1049
National Health Insurance Bill 1050
Medical Inspection and Treatment of School Children 1050
Hospital and Motor Accident 1050

ENGLAND AND WALES—
Mary Scharlieb Memorial 1051
Red Cross and St John 1051
Children's Hospital Pavilion 1051

INDIA—
Treatment of Leprosy 1052
Kashmir Mission Hospital 1052

MEDICO LEGAL

Full Use of the Title Physician and Surgeon 1060

UNIVERSITIES AND COLLEGES

University of Cambridge 1060
University of London 1060

CORRESPONDENCE

Lactic Acid in the Gastric Content By John F Wilkinson MD 1052
Bronchomoniliasis By David H Hider MB 1052
Vaginal Syncope By A E Blackburn MD 1053
Local Anæsthetic for Tonsillectomy By Hugh Whitelocke FRCS and H Lawson Whole FRCS 1053
Treatment of Varicose Veins By Rodney H Maingot FRCS and P Kennedy Murphy MD 1054
Treatment of Chronic Ulcer of the Leg By David Kade MB and S Silverman MB 1055
Aluminium and Health By P H Henderson Major General AMS 1056
Shock Following Blood Extravasation By Leslie B Burnett MB 1056
The Use of the Self Cavadini MD 1056
Post Operative Pays in Breast Cancer By C Richardson MD 1056
Osteo-arthritis of the Hip By H Warren Crowe MD 1056
Liver Therapy in Asthma By Bernard Sandler MB 1057
Failing of Footways by Dogs By E B Waggett MB 1057
Shuttleworth Samaritan Fund By C A Auden MD and Others 1057

LETTERS AND ANSWERS

Income Tax 1061
The Cost of Tuberculosis 1062
John Hewer Medicine and his Museum 1062
Herpes and Chicken-pox 1062
Book for Midwives 1062
Medical Golf 1062

VACANCIES 1062
(Special page 279 of SUPPLEMENT)

The SUPPLEMENT contains

General Medical Council Committee Report Disciplinary Inquiries

A National Maternity Service. By Dr F MURTO KERR MD

NATIONAL HEALTH INSURANCE

CORRESPONDENCE

Appointments Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Cambridge University Press
Parker G H—Humoral Agents in Nervous Activity 6

Churchill J & A
Books on—
Eye 5
Forensic Medicine 5
Massage 5
Medicine 5
Obstetric & Gynaecology 5
Pathology 5
Physiology & Biochemistry 5
Psychology & Neurology 5
Surgery 5

Lewis H K & Co Ltd
Bailey & Love—Surgery 4
Coates & Delicati—Rheum Arthrit s 4
Cope J—Osler etc 4
Crocket s Physical & Radiological Examination of the Lung 4
Fifield L R—
Infections of the Hand 4
Minor Surgery 4
Forsdike s Sterility in Women 4
Hamilton Sanitary Law 4
Mackenzie s Action of Digitalis 4
Stevens Heart & Spleen in Health & Disease 4
Stitt E R—
Practical Bacteriology etc 4
Tropical Diseases 4

Livingstone E & S
Conybeare J J—Medicine 6
Fine J—Filterable Virus Diseases in Man 6
6
6
Handbook of Nursing 6

Mattinson Publishing Co Ltd
Lole H A—Income Tax etc 6

Saunders W B Co Ltd
3
3
3
3
3

Wright & Sons Ltd
French H—Differential Diagnosis 6

ASSURANCE COMPANIES—
London Medical Protection Society 1
Medical Insurance Agency 36 59
Medical Sickness Annuity etc 38

BANKS—
Barclays Bank Cover iii
Westminster Bank 40

BOOTMAKERS &c—
Holland & Son—Foot Support 42

BRASS NAME PLATES &c—
Ford s Name Plate 41
Heyd S I & A—Name Plates 42
Osborne F & Co—Name Plates 42

DEBY COLLECTION—
British Medical Protection Society 6

FOOD PREPARATIONS—
14
15
32
22
0
19
Mellin's Food 17
Sumner s Typhoo Tea 12
Valentine s Meat Juice 23

HOSPITAL &c FURNITURE—
Furniture &c Depositories Ltd—
Second hand Furniture 40

HOUSE AGENTS—
Belford & Co 37
Elliott Son & Boyton

TAILORING & UNDERCLOTHING—
Gamage—Raincoats 39
40
41

CHEMISTS &c—
Allen & Hanburys Ltd—
Inhalin A B 15
Preparation 20
Andrews Liver Salt 20
Anglo French Drug Co Ltd—
Hypotensyl 30
Bell & Croyden—
Preparations 12
Boots Product 26 7
Bristol Myers Co—Sal Hepatica 10
British Drug Houses Ltd—
Inhalin A B 15
Medicinal Dextrose B D H 17
Radiostoleum 18
Burroughs Wellcome & Co—
Solosol Product 31
Clayton Aniline Co Ltd—
Libon Cibs Cover iii
Continental Lab Ltd—
Detensyl 29
Taxol 25
Duncan Flockhart & Co—
13
41
41
Epsom Printers—Fellows 16
Fry & Co—Pancreatic 17
Hough Hewetson & Co Ltd—
Tabellae Arthritone Cover ii
Kaylene Ltd—Kaylene oil 18
Martindale W—
41
41
Nicholas & Co—
13
Pankreasmellin Tablets 41
Newbery & Son Ltd—
Agarol 33
Cal Bis Nate 23
14
29
8
11
11
Sandor Chemical Works—
Felamine Cover ii
S P Chargers Co—Sulphaquin 37
Wander A Ltd—Ahasil 16

SURGICAL APPLIANCES—
7
Celluloid Posts Bandages 4
Norvic Crepe Bandage 4
Rose Madame—Corset Belt 42
Salt s Surgical Service 5
Short & Mason 40
39
9

MOTOR CARS TYPES &c—
Second hand Motor for Sale 53
Wolseley Cars 7

PRINTING & STATIONERY—
Barlock Co—Barlock Typewriters 7
Hamilton—Medical Stationery 42
Taylor Typewriters 43

TOBACCO & CIGARETTES—
Player Navy Cut 38

VACCINES & CULTURE MEDIA—
Cenato an Ltd—Vaccine 24
Heinemann W—Vaccine Lymph 10
Laboratories of Pathology & Public Health 10

WINES & SPIRITS—
Anderson Hob on & Co—
Ackermann Laurance 41
Gaymer s Cyder 23

X RAY & ELECTRO MEDICAL APPARATUS—
Cox S Ltd—Diathermy Apparatus 8
Newton & Wright Ltd—
Diathermy Apparatus 8
Portable X Rays Ltd—
X Ray Car Service 4

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
MEDICAL APPOINTMENTS 45

HOSPITAL &c VACANCIES—
1
1
1
Cardiff City 53
Carlisle Cumberland Infirmary 5
1
1
4
Lancaster Royal Infirmary 53
Newcastle Prin Mary Mat Hos 53
5
53
8
5
53
53
54
53
59
5
53
59
54
56

TRANSLATIONS TYPEWRITING—
Radford B—Typewriting etc 57

BATHS SPAS &c—
Bavarian Spas 47
Harrogate 45
Llandrindod Wells 47
Vichy 43

HOTELS & HEALTH RESORTS—
Clifton Hotel 47
Italian Health Resorts 45
Menton 47
Plymouth 47
Saint Ives Bay Hotel 43
Seaford

HOMES & ASYLUMS—
Bailbrook House Bath 47
Barrow [illegible] 45
44
47
4
47
Bethlem 44
Bethlem 45
Bethlem 45
Bethlem 47
Bethlem 47
Mount Hannah Kenton Exeter 45
Powick [illegible] 7
Powick 7
Powick 4
Powick 4

HYDROS & PRIVATE HOSPITALS—
47
43
43
47
4

INEBRIETY—
Bay Mount Paignton 47
Caldecote Hall near Nuneaton 47
Dalrymple House Rickmansworth 42
Old Hill House Chislehurst 43

SCHOOLS &c—
Epsom College 43
St Bees School Cumberland 43

MEDICAL SCHOOLS &c—
City of London Maternity Hospital 43
43
4
4
45
45
4
4
47
4
45
48
43
43
43
48
43
43

TRANSFER AGENTS—
Bovril Medical Agency Ltd 64
British Medical Bureau (1 62,63
Lee & Martin Ltd 63
Manchester Medical & School Agency 63
Peacock & Hadley Ltd 63
Reynolds & Branson Ltd 63
The Medical Agency 56 3
Turner J Ltd 63
Western Medical Agency Bristol 60

ASSISTANTS PRACTICES &c—
Assistantcies Wanted and Vacant 7
Dispenser Medical Practice &c 56
Locum Wanted and Vacant 56
Partnerships Wanted and Vacant 7
Practices Wanted and Vacant 7

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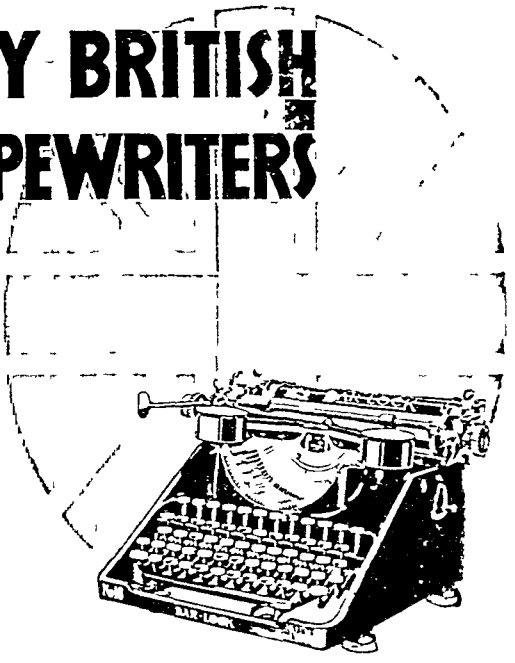
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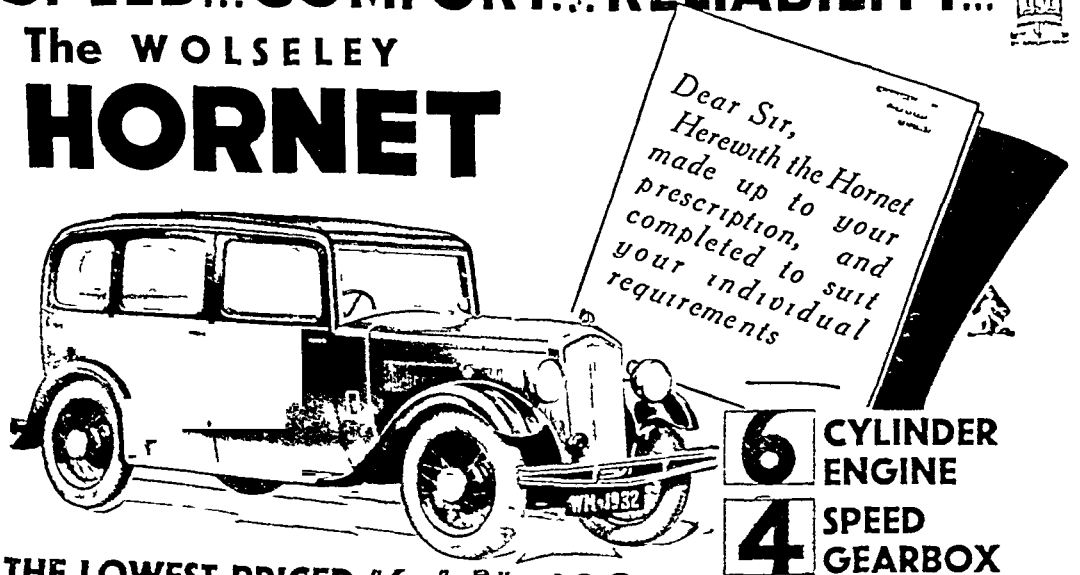
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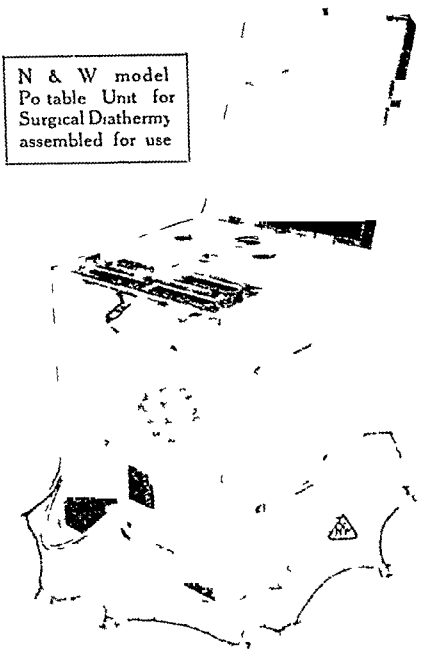
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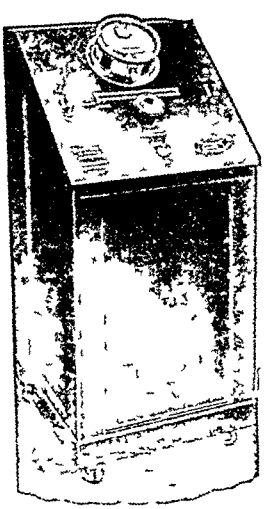
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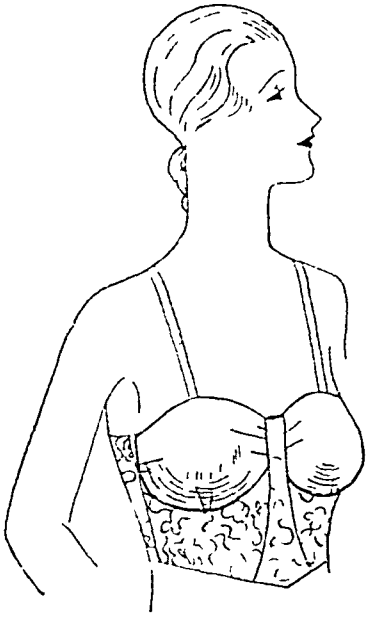
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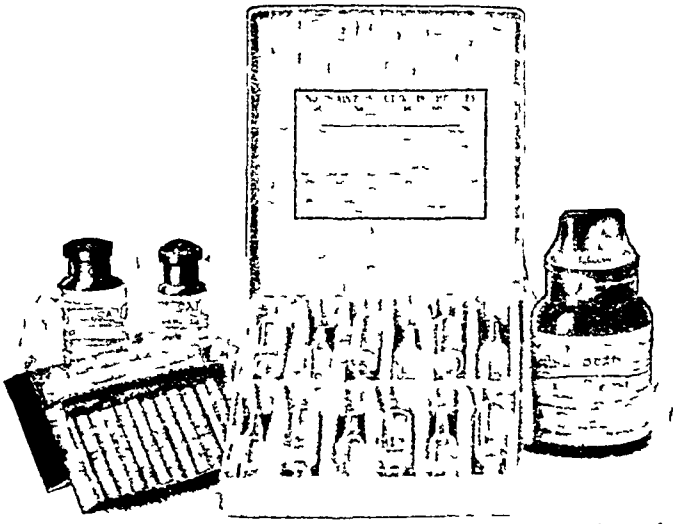
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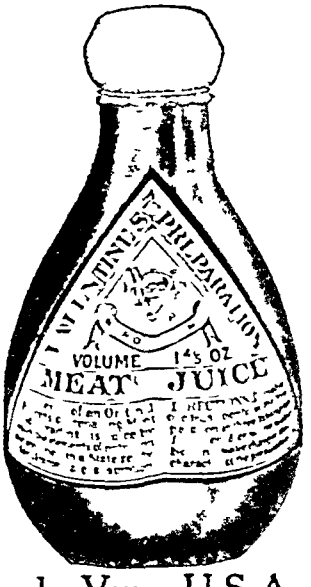
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WHEN hæmorrhoids bleed, there is generally relief from pain Alarmed by the change, the patient consults the doctor

ANUSOL BRAND HÆMORRHOIDAL SUPPOSITORIES control hæmorrhage not alone by a styptic action but by reducing the congestion that forces the blood to the surface

Without opiate or local anæsthetic to dull pain perception and obscure the symptoms, Anusol Brand Suppositories check bleeding and alleviate pain by relieving pressure caused by congestion

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RELIEVE PAIN REDUCE CONGESTION

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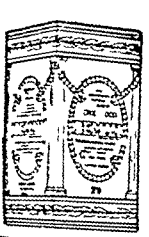
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Partial deficiency of Vitamin B is more common than was realised until conclusive researches demonstrated its wide incidence It may be suspected wherever there is a derangement of the Gastro-intestinal function, Nervous Debility, Neurasthenia, Rheumatism, and, especially in children, impairment of growth, Anorexia, and lowered resistance to infection

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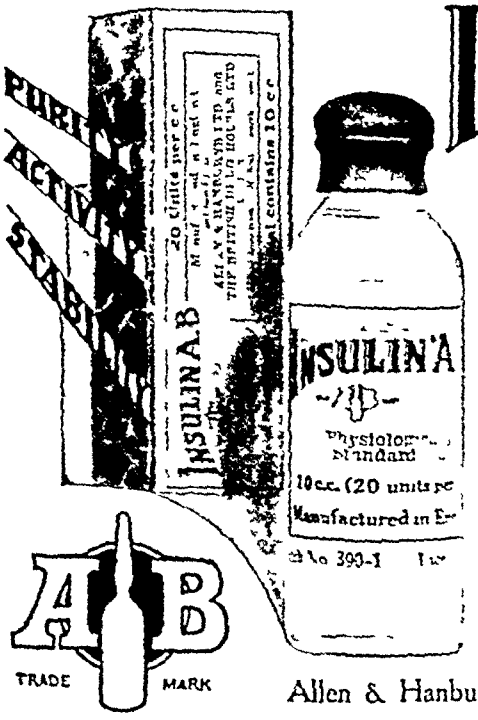
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Insulin A B contains the minimum quantity of phenolic preservative originally recommended by the Medical Research Council and still considered necessary by bacteriologists (*Lancet* Sept 12 1931 pp 582 584) is a complete safeguard against the development of bacteria that may be accidentally introduced during self administration

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Modern diets often lack minerals

To day, authorities are stressing the importance of the essential mineral salts In addition to building sturdy bones, and blood rich in hemoglobin, these mineral elements aid metabolism and contribute to nervous stability

Yet many modern diets cannot be depended upon to furnish the proper quota of minerals, and therefore millions of people suffer from the effects of demineralization Cooking destroys a variable amount of the mineral value of foods—in some instances as high as 76 per cent

To correct this loss and to remedy demineralization—with its attendant symptoms of nerve fag, neurasthenia, lowered vitality and loss of energy—a tonic rich in mineral salts is needed

Compound Syrup of Hypophosphites "Fellows" contains the mineral salts of sodium, calcium, potassium, manganese, iron and phosphorus, together with the added metabolic stimulants—strychnine and quinine Sixty years of clinical experience the world over testify to its value as a tonic

Suggested dosage A teaspoonful in half a glassful of water three or four times daily

Compound Syrup of Hypophosphites

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Acetyl salicylic acid possesses a notable disadvantage Physicians have proved that it cannot be tolerated by patients suffering with a delicate stomach Consequently, the value of this medicament in the wide field in which it is indicated is very seriously reduced

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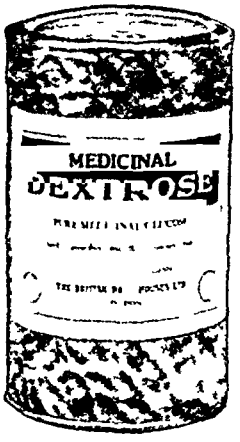
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In everyday routine of clinical practice



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Further, when dextrose is injected intravenously it produces beneficial effects in jaundice (*J.A.M.A.* 1931, 97, 743); whilst it has been stated (*B.M.J.* 1931, 2, 895) that in pernicious anæmia *the value of giving glucose as a general tonic in many grave conditions to tide over a critical period is as yet hardly sufficiently appreciated.*

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Medicinal Dextrose B.D.H. is a pure chemical substance, and it can be employed for intravenous injection without any fear of toxic sequelæ.

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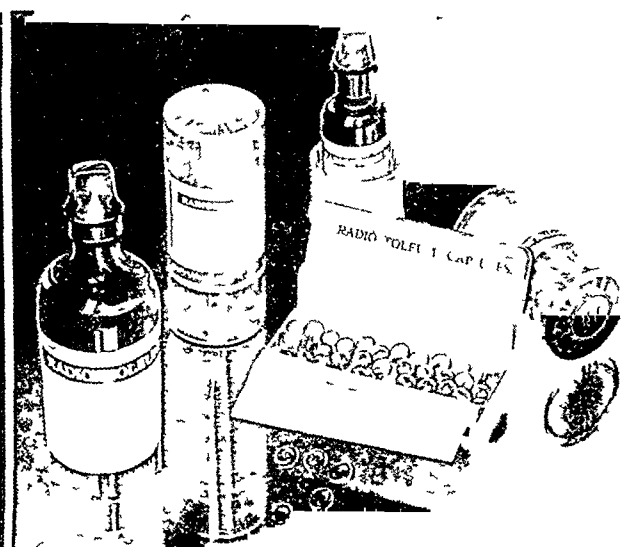
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10



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It has been stated (*J A M A* March 26th 1932 p 1088) that pregnancy is *essentially a problem in nutrition at a time when the dominant metabolic forces are such as favor growth*

Radiostoleum supplies Vitamins A and D to meet the need of both mother and child its daily ingestion builds up resistance and prevents mothers from *drawing on their own skeletons to meet the calcium demands of the growing foetus*

Thus Radiostoleum provides a solution to the vital problem of the provision of adequate nutrition in pregnancy

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(Vitamins A and D)

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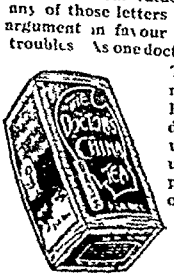
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Yours faithfully,
For and on behalf of
Harden Bros. & Lindsay Ltd.

Managing Director



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3/2 and 3/10 per lb. A super quality at 4/4

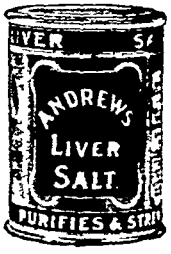
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First Prize winner of the News Chronicle Mother and Child Beauty Competition 1932

IN the past the choice of an artificial food, when for any reason an infant could not be breast-fed, *imposed a heavy responsibility* upon the physician In recent years, the increasing range of Cow & Gate Milk Foods designed to meet any aspect of infant feeding no matter how difficult, has done much to lighten this burden

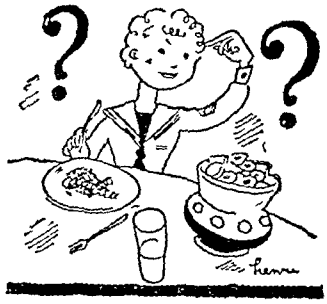
This picture of a happy mother and a healthy intelligent child is typical of the results which the profession are achieving all over the world with this remarkable substitute for natural milk

Clinical samples and literature of the whole range of Cow & Gate Products will gladly be sent on request

Cow & Gate Milk Food

"The Best Milk for Baby when Natural Feeding Fails"

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A famed psychological laboratory invites us to take one small boy and place before him two dishes one filled with spinach and the other with cakes such as grandmother used to make Leave the room and try to guess which of the dishes will be empty when you return Will the boy reach for a sweet or a vitamin?

Thereby hangs the tale Sweet desserts increase the secretion of gastric juice If Johnny had taken his spinach, the cakes would have helped him to digest it But he kept his taste in mind and forgot his stomach, until he was forcefully reminded of the error of his ways Until ripened experience can point the way to him CAL-BIS-NATE will have to stand by and relieve him of his stomach-ache caused by an excess of acid A *teaspoonful* in half a glass of water, and he'll be ready for another try You simply can't keep a brave boy down





Cal Bis Nate is a combination of calcium and magnesium carbonates sodium bicarbonate bismuth and colloidal kaolin, blended into a palatable powder It neutralizes excess gastric acidity quickly efficiently and with lasting effect.

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EXTRACT OF THE INTESTINAL GLANDS

which strengthens the glandular secretions of the organs

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which regulates the secretion of the bile

AGAR-AGAR

which rehydrates the contents of the intestines

LACTIC FERMENTS

which reduce bacterial action of the intestines

IN TABLET FORM

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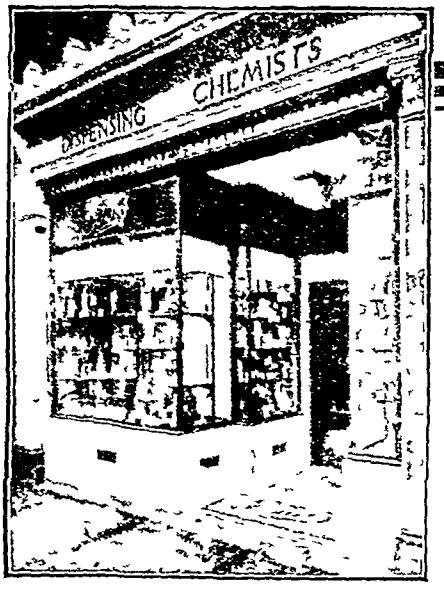
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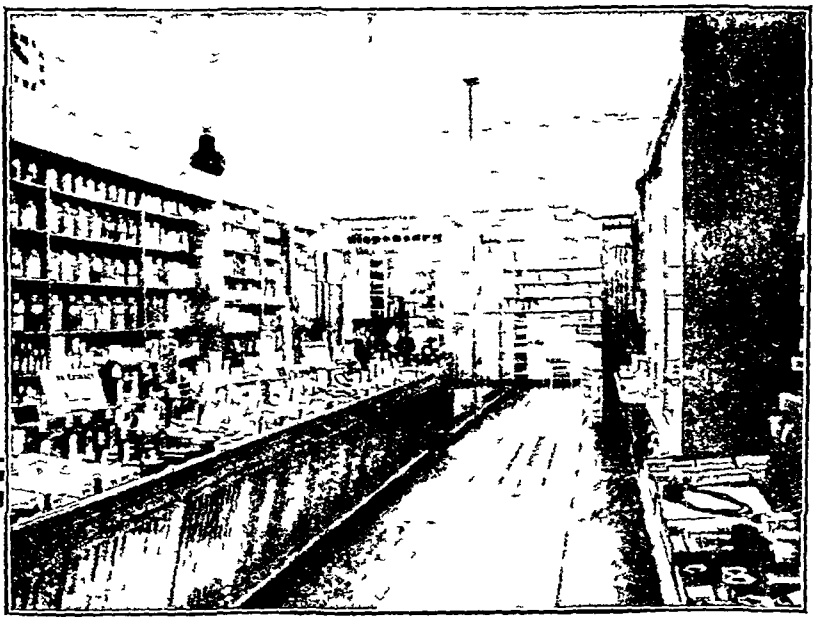
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"Petrolagar" Brand Paraffin Emulsion affords a valuable aid to diet and exercise in bringing about regular daily or normal bowel movement. The effect being purely mechanical

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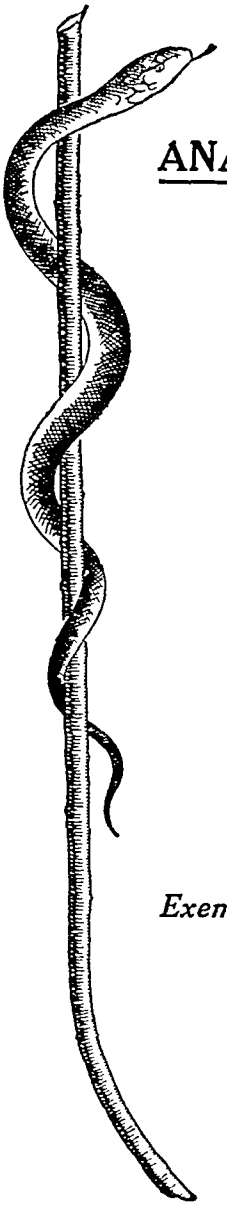


Speedy results according to use

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from

Oppenheimer Son & Co Ltd



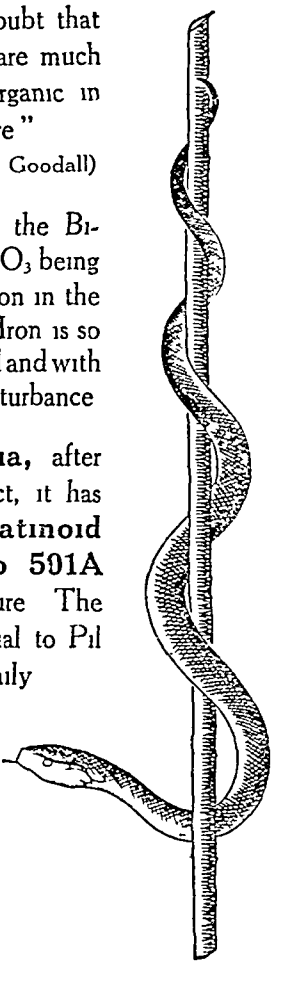
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Ferrous Carb, gr 1 = 1 Pil Blaud

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For other strengths and combinations see general catalogue

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In patent capped bottles

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A combination of biliary and intestinal secretions with agar agar and bacillus acidophilus enclosed in a special coating of activated charcoal

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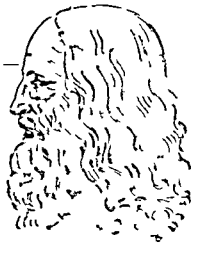
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Croonian Lectures

ON

LIVER AND SPLEEN: THEIR CLINICAL AND PATHOLOGICAL ASSOCIATIONS

BY

J. W. McNEE, D.S.O., M.D., D.Sc.GLAS.,
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PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, LONDON

LECTURE I

The early observers in clinical medicine must have recognized the frequent association of enlargement of the liver and spleen but there could be no real progress towards discovery of the reasons for this association until the development of the compound microscope made possible the study of cellular pathology. The enormous simultaneous enlargement of the two organs in the disease that we now recognize as leukaemia must have been a great puzzle. Hardening of the liver in cirrhosis was noted by Vesalius, Harvey and Morgagni but changes in the spleen in this disease did not at first attract attention.

When cellular pathology developed in the time of Virchow the main characters of the lesion in cirrhosis hepatis were soon made out but the nature of the frequently associated splenic enlargement has remained obscure even to the present day. The introduction of Ehrlich's methods of staining the cellular elements of the blood and blood-forming organs enabled rapid strides to be made in haematology and the different types of leukaemia were soon identified. It was later found that in some diseases resembling leukaemia on account of the hepatic and splenic enlargement the characteristic changes of leukaemia were absent from the blood. Such diseases at first known as pseudo-leukaemias have now been to some extent differentiated from one another and include for example the clinical conditions known as splenic anaemia and chronic haemolytic (acholuric) jaundice. Among the early investigators of this group was Banti of Florence who claimed to be able to distinguish both on clinical and on histological grounds a variety of pseudo-leukaemia or splenic anaemia which has since remained associated with his name.

It thus gradually became evident to clinicians and pathologists that there were at least two great groups of diseases in which the liver and spleen were commonly involved together. On the other hand were diseases of the blood and blood-forming organs (anaemias and leukaemias of different kinds) and on the other were diseases such as hepatic cirrhosis in which the association of a lesion in the two organs was evidently of an entirely different nature. Progress in our knowledge of the interrelations of the spleen and the liver in hepatic cirrhosis has been and still remains very slow.

DISEASES INVOLVING RETICULO-ENDOTHELIAL SYSTEM

The clue however to the second group of diseases was given by Aschoff and his pupils (1911 onwards) in their development of the conception of what is now universally known as the reticulo-endothelial system of cells. As soon as the physiological activities of these cells were recognized it at once became possible to link up a number of diseases some of great interest for our subject which previously had not appeared to bear any direct relation to one another. The three chief situations in the body in which reticulo-endothelial cells are numerous are the liver the spleen and the bone marrow but the relative abundance of the cells in these situations is not identical in all animals. This as will be seen has an important bearing on the interpretation of animal experiments. The first and up to now the only attempt at a reasoned correlation of the diseases involving the reticulo-endothelial cells in these three situations was made by Eppinger who in 1920 published a monograph entitled *Die hepato-lienalen Erkrankungen* with a subtitle *Pathologie der Wechselbeziehungen zwischen Milz, Leber und Knochenmark*. The manuscript of this monograph as Eppinger states was first sent to the publishers in July 1914 but delay due to the war ensued and the manuscript was revised and added to before publication more than five years later.

It is in a sense unfortunate that no concise title has been found in our language to describe adequately diseases involving the reticulo-endothelial cells in liver spleen and bone marrow. The term hepato-haemopoietic diseases has been suggested but is too cumbersome for ordinary usage. Liver-spleen diseases the exact translation of the chief title of Eppinger's book is ugly but for lack of something better has already come into fairly common use. It is inaccurate or rather incomplete in that it fails to include the important third organ which is involved—namely the bone marrow. Since 1920 when Eppinger's monograph appeared the activities of the reticulo-endothelial cells in many processes of normal and pathological metabolism have been extensively explored. This is particularly true in relation to the metabolism of haemoglobin and its derivatives such as bile pigment and also in relation to various lipoid substances. The group of diseases in which the liver spleen and bone marrow are intimately associated in virtue of the reticulo-endothelial cells which they contain is now fairly easy to define and good progress in their elucidation can be reported. In the light of much new work in some fields of which I have myself been interested for a number of years a reconsideration of the problems and associations of these diseases is now due.

DISEASES WITHOUT INVOLVEMENT OF RETICULO-ENDOTHELIAL SYSTEM

The other large group of diseases affecting liver and spleen in which so far as we know the reticulo-endothelial system of cells does not play any important part provides problems which are much more difficult to solve. Two main lines of thought occur in considering the possible explanations of this group.

The association of disease in the two organs might depend on (1) Some *anatomical* interrelationship which has been disturbed. The two organs concerned are in a particular and peculiar relation to one another in their vascular connexions. Both are organs on the portal venous system which is devoid of valves and the blood from the spleen must pass through the liver before reaching the vena cava and the heart. (2) Some *metabolic* interrelationship which has been disturbed. In order to deal fully with this possibility a complete knowledge of the *functions of the two organs* would be essential and that we do not possess as yet. The much discussed problems of the action on the liver of metabolic toxins or poisons using these terms in the widest sense are obviously included here. On general grounds it would be expected that the liver which is by far the more important organ of the two in metabolism would play the predominant part and be in most instances the primary seat of disease. But as will be seen although the order of involvement is not yet clear there are diseases in which the question of whether the liver or the spleen is implicated first is of great clinical and therapeutic importance. There is in fact no reason to exclude the possibility that some metabolic activity of the spleen known or as yet unknown may be the cause of a primary splenic disease which subsequently affects the liver.

Interrelations between Liver and Spleen

It is thus very evident that in approaching the very difficult problem of the interrelations between the liver and spleen in disease we must summarize and take stock of our knowledge or lack of knowledge of certain important fundamental points These include first details concerning the essential histological structure of the two organs involved including the reticulo endothelial elements contained within them secondly a knowledge of all the vascular connexions of the two organs which implies a thorough study of the whole mechanism of the portal circulation and of the factors controlling the blood flow through the liver and spleen and thirdly a consideration of some of the important physiological activities of the two organs

In these lectures it is proposed first of all to consider carefully the fundamental problems which I have just referred to and then to apply the existing knowledge so far as we are able to the clinical problems of diseases of the liver and spleen in man While doing so special attention will be paid to the condition generally known in the past as Banti's disease since there has been great controversy concerning the exact status of this affection

Where it might well be thought that the microscopical anatomy of all the important organs in the body was completely and exhaustively worked out it must be recognized that this is far from being so In the latter half of last century with the advent of the compound microscope and the consequent rapid development in knowledge of normal and pathological histology the chief facts concerning the structure of most organs were soon known but during the present century in consequence of the attention directed to the advances in biochemistry bacteriology and allied sciences as applied to medicine the study of disease from the purely morphological standpoint has tended to fall into the background Great strides have indeed been made in the study of pure physiology but it still remains as necessary as before to correlate disordered function with abnormal structure in order to understand the origin and natural history of disease Both in the liver and more particularly in the spleen there is still much room for improvement in our exact knowledge of structure

The Liver

In this country we are chiefly indebted for our knowledge of structure to two observers—Kiernan (1833) and Beale (1856 59) There are various discrepancies between the views of these two men particularly about the structure and importance of Glisson's capsule but in the main their writings have formed the basis of the descriptions given in all textbooks of histology for many years It has become necessary with the development of experimental work and new knowledge of hepatic physiology to re-examine the observations of these older writers with much more perfect technique than was available to them All the essential parts of hepatic structure require review In 1925 I reinvestigated the structure of the hepatic lobule in order to support hypotheses concerning the relations of the liver to bile pigment formation and published a schematic plan to illustrate as simply as possible the principle on which I believed the hepatic lobule to be built up One of the main alterations from the descriptions of Kiernan and Beale lay in the addition of the reticulo endothelial cells (first described by von Kupffer in 1876) to the essential lobular structure and their anatomical relations to the portal blood capillaries and the polygonal glandular cells

The peculiar double vascular supply of the liver by the portal vein and smaller hepatic artery naturally attracted attention long ago and the first attempts to solve the problem of how and where these two streams meet within the liver were made by Betz in 1863 and by Johannes Gad ten years later So important has the question of the interrelations of the portal vein and hepatic artery circulations proved in recent experimental work on hepatic disease and so impossible is it to separate the purely anatomical from the physiological problems that a separate section is devoted in these lectures to the vascular circulation through the liver in all its aspect

The supporting tissues of the liver also require consideration particularly in reference to their influence on the vascular supply of the organ in normal and pathological circumstances Cameron and Mayes (1930) give a most interesting account of the historical views concerning Glisson's capsule the chief supporting structure of the liver They state following Kiernan's work chiefly that the older writers seem to have had a singularly clear view of the importance of Glisson's capsule as the basis of the vascular architecture of the liver First referred to by Walaeus (1640) the true capsule of the liver received its classical description by Glisson (1654) who fully recognized it as a structure separate from the peritoneal coat of the liver and suggested that its intrahepatic prolongations might be concerned with supporting the weight of the heavy glandular organ Glisson it must be remembered was unaware of the lobular structure of the organ which was not pointed out until Malpighi (1699) described the shape of the lobules of different animals and at the same time indicated how they were separated from one another by prolongations of Glisson's capsule carrying the blood vessels Laennec (1802) the pioneer in the study of hepatic cirrhosis was naturally interested in Glisson's capsule and its ramifications within the liver and in trying to interpret the old views of the physiology of digestion he suggested that Glisson's capsule might yield to allow the portal blood vessels to carry an increased supply of blood during the course of digestion It is curious to notice how later physiological knowledge concerning the nervous control of the portal vessels subsequently referred to bears on this old hypothesis of Laennec

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THE SPLEEN

In my Lettsomian Lectures The spleen its structure functions and diseases delivered last year before the Medical Society of London I set forth my individual views concerning the minute anatomy of this organ Since these lectures have been published in the *Lancet* and in the Medical Society's *Transactions* it would be redundant to recapitulate them now It is universally agreed that the structure of the spleen is extraordinarily difficult to interpret and there is still wide divergence of opinion concerning some of the fundamental points of splenic structure The Malpighian bodies or follicles are universally accepted as potential lymphatic glands present in some animals but not in others present sometimes at one period of life and not at another The spleen pulp is composed so far as its fixed tissue elements are concerned of the meshwork of splenic reticulum on which lie vast numbers of reticulo endothelial cells There remain the pulp spaces between the reticular meshwork containing red and white blood corpuscles of all varieties The chief controversy has been and still is concerned with the peculiar vascular arrangements within the spleen but here again splenic structure and splenic function are so closely interwoven that this matter is considered separately for clearness

The liver and spleen contrast markedly in their vascular arrangements Blood is conveyed to the spleen by a relatively very large artery and returns through a very large and tortuous vein without valves to join the valveless portal vein All splenic blood must pass through the liver before reaching the heart The liver is unique in that much the greater part of the blood flowing into it in the arterial sense of other organs is already venous and comes by the portal vein The hepatic artery is very small in relation to the size of the liver and as Heyd Killian and MacNeal (1924) remind us almost two thirds of the blood of this small arterial trunk is deflected away from the liver through the gastro duodenal cystic and gastric branches of the hepatic artery The anatomy and physiological control of the blood supply of the two organs may now be considered separately and in detail

VASCULAR CIRCULATION THROUGH THE LIVER

The double blood supply of the liver has been aptly described by Herrick (1907) as a large volume circulation with a low pressure (the portal vein) and a small volume circulation with a high pressure (the hepatic artery) These two afferent vessels have a common channel of exit by the hepatic veins into the inferior vena cava

Normal Blood Pressure in the Two Circulations

The blood pressure in the hepatic artery is identical with the general arterial blood pressure is subject to the same variations and in man is presumably 120 mm Hg or more The portal venous pressure is subject to very great variations due to nervous control as recent physiological experiments to be described later have shown The pressure in the portal vein has never been directly estimated in man but in the dog varies on an average from 6 to 10 mm Hg As the arterial blood pressure in man and in the dog is not very different it seems probable that the normal pressure in the human portal vein is also of the same order as in the dog An important problem to be discussed subsequently is where and how the two very dissimilar blood pressures in the hepatic artery and portal vein are equalized before the efferent hepatic veins are reached

Amounts of Blood Carried to the Liver by Hepatic Artery and Portal Vein

In both vessels the inflow is subject to great variations due to nervous control but it is important to have a general view of the relative and absolute amount of blood flowing into the liver by the two circulations

Our earliest information on the quantitative relations of the portal flow and hepatic artery flow is due to Burton Opitz (1908–14) who in experiments carried out on dogs by a stromuhr method found that the hepatic artery contributes from 24 to 44 per cent of the blood entering the liver Macleod and Pearce (1914) confirmed these observations and stated that

> as a general rule we are probably safe in concluding that from 26 to 32 per cent of the blood which flows through the liver is derived from the hepatic artery

Barcroft and Shore (1912) in their experiments on cats estimated the hepatic artery inflow as 29 per cent of the total

Quite recently this problem has been reinvestigated by Grab Janssen and Rein (1929) who have used a new and very perfect thermo stromuhr method in which the blood vessels remain undamaged and unopened With the technique employed they were able to measure readily in dogs at one and the same time the amount of blood flowing through the thoracic vena cava the abdominal vena cava (between liver and kidneys) the portal vein and the hepatic artery In five experiments they were able to show that the inflow through the hepatic artery in the dog is from 12 to 22 per cent of the total inflow to the liver Dale Bauer Poulsson and Richards (1932) have very recently published an account of experiments in which the livers of various animals were artificially transfused outside of the animal body—these experiments are referred to later in connexion with the nervous control of the hepatic circulation They showed incidentally in transfusion experiments that the hepatic artery contributed in the dog about 25 to 30 per cent of the inflow to the liver in the cat about the same amount but in the goat only about 15 to 25 per cent

INTERRELATIONS BETWEEN LIVER AND SPLEEN

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The double blood supply of the liver has been aptly described by Herrick (1907) as a large volume circulation with a low pressure (the portal vein) and a small volume circulation with a high pressure (the hepatic artery) These two afferent vessels have a common channel of exit by the hepatic veins into the inferior vena cava

Normal Blood Pressure in the Two Circulations

The blood pressure in the hepatic artery is identical with the general arterial blood pressure is subject to the same variations and in man is presumably 120 mm H_g or more The portal venous pressure is subject to very great variations due to nervous control as recent physiological experiments to be described later have shown The pressure in the portal vein has never been directly estimated in man but in the dog varies on an average from 6 to 10 mm Hg As the arterial blood pressure in man and in the dog is not very different it seems probable that the normal pressure in the human portal vein is also of the same order as in the dog An important problem to be discussed subsequently is where and how the two very dissimilar blood pressures in the hepatic artery and portal vein are equalized before the efferent hepatic veins are reached

Amounts of Blood Carried to the Liver by Hepatic Artery and Portal Vein

In both vessels the inflow is subject to great variations due to nervous control but it is important to have a general view of the relative and absolute amount of blood flowing into the liver by the two circulations

Our earliest information on the quantitative relations of the portal flow and hepatic artery flow is due to Burton-Opitz (1905–14) who in experiments carried out on dogs by a stromuhr method found that the hepatic artery contributes from 24 to 44 per cent of the blood entering the liver Macleod and Pearce (1914) confirmed these observations and stated that

> as a general rule we are probably safe in concluding that from 26 to 32 per cent of the blood which flows through the liver is derived from the hepatic artery

Barcroft and Shore (1912) in their experiments on cats estimated the hepatic artery inflow as 39 per cent of the total

Quite recently this problem has been reinvestigated by Grab Janssen and Rein (1929) who have used a new and very perfect thermo-stromuhr method in which the blood vessels remain undamaged and unopened With the technique employed they were able to measure readily in dogs at one and the same time the amount of blood flowing through the thoracic vena cava the abdominal vena cava (between liver and kidneys) the portal vein and the hepatic artery In five experiments they were able to show that the inflow through the hepatic artery in the dog is from 12 to 22 per cent of the total inflow to the liver Dale Bauer Poulsson and Richards (1932) have very recently published an account of experiments in which the livers of various animals were artificially transfused outside of the animal body—these experiments are referred to later in connexion with the nervous control of the hepatic circulation They showed incidentally in transfusion experiments that the hepatic artery contributed in the dog about 25 to 30 per cent of the inflow to the liver in the cat about the same amount but in the goat only about 15 to 25 per cent

The actual amount of blood carried to the liver by the two circulations has also been estimated experimentally and results of considerable importance have been obtained The early work is again by Burton Opitz (1908–14) who used his stromuhr method in dogs We need not do more than take his average figures from a number of experiments the average total blood flow through a dog's liver of about 500 grams is according to his results about 420 c cm per minute This proportion is exceeded only by the brain the kidney and the thyroid this last organ receiving the most of all Grab Janssen and Rein (1929) using their very accurate thermo stromuhr method have also calculated the blood flow entering the liver of a dog Their figures are given in rather a different way and with a different end in view but in an experiment which is comparable with those of Burton Opitz they estimated the blood flowing into a dog's liver of 494 grams as 65 c cm per minute for the hepatic artery and 340 c cm for the portal vein or a total inflow of just over 400 c cm per minute

Amounts of Blood Coming from Abdominal Organs to Form Portal Venous Inflow

This is an important matter but the experimental difficulties are considerable Burton Opitz is again our chief source of information and in a series of experiments he obtained the following results in cubic centimetres per second the figures are total portal inflow to the liver 4 92 flow from intestines 2 74 flow from stomach, 1 23 and flow from spleen 0 95

It is thus evident that by far the greatest part of the portal blood comes from the intestines while the spleen according to these experimental results contributes less than one fifth of the total The experiments recorded were carried out in dogs in which animals the ratio of the weight of the spleen to that of the liver is about 1 to 5 or 1 to 6 In man the ratio of spleen weight to liver weight is *not* very different so that with all the reservation which must always apply in such circumstances it seems possible that the human spleen also contributes one fifth or less of the total portal blood which enters the liver

The two parts of the intrahepatic circulation having so far been dealt with separately it is now essential to consider in what ways the portal and hepatic streams of blood may influence one another This is obviously a most important problem involving as it does the whole dynamics of the intrahepatic circulation It is a matter which must directly affect our interpretations of disease in organs such as the liver and spleen which are situated at the upper end of the portal venous system

In the discussion of this problem anatomical and physiological considerations are frequently blended in a way which makes it impossible to separate them

How and Where within the Liver do the Widely Differing Pressures in Hepatic Artery and Portal Vein come to a Common Level?

This very obvious question has attracted attention for many years but even now its solution is not entirely complete The anatomical side of the problem has been approached directly by histological methods and indirectly in a variety of experiments Some of the latter have been simple transfusions either of human livers removed in the post mortem room or of livers freshly removed from animals Some of these transfusion experiments have also been applied to diseased as well as to normal livers (Herrick 1907) and the results are in consequence important Other experiments have quite recently been carried out with the primary object of investigating the nervous control of different parts of the hepatic circulation, and these are referred to in a separate section

It has been known for a long time (Herrick 1907) that when fluid is injected into a liver through the hepatic artery as much returns by the portal vein as passes on into the efferent hepatic vein Recently Cameron and Mayes (1930) have reinvestigated this matter by improved methods using as their injection fluid either milk or lipiodol The milk stains easily with Sudan III in formalin fixed frozen sections while the distribution of lipiodol is clearly seen by the use of x rays In these experiments it was found that during continuous perfusion of milk through the hepatic artery a considerable portion of the milk returns by the portal vein as well as flowing out by the hepatic vein Almost all the lipiodol injected returned by the portal vein, very little passing on to the hepatic vein From their observations Cameron and Mayes concluded that owing to some very close communication between the branches of the hepatic artery and portal vein within the portal canals it is easier for fluids to pass from one to the other than from the vessels in the portal canals through the intralobular sinusoids to the hepatic veins A search was made for anastomoses of a direct arterio venous kind between branches of the artery and vein in the portal canals but none were found It has been known since the work of Kiernan and Beale however that there is an enormously rich plexus of capillaries surrounding the bile ducts in the portal canals and this would seem to be the likeliest place for the joining together of the blood from the hepatic artery and portal vein before the actual hepatic lobule is entered at all The matter unfortunately cannot be taken as definitely settled and recent work by Olds and Stafford (1930) throws the problem again into the melting pot These writers claim that the greater part of the blood from the hepatic artery is emptied into the sinusoids within the lobule and that the free communication between the arterial and portal venous blood occurs in the plexus of sinusoids within the lobules

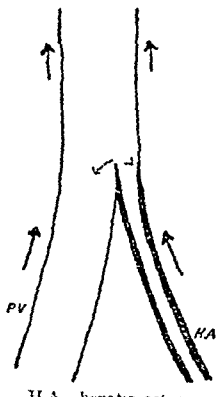
Herrick's perfusion experiments on cirrhosed livers obtained in the post mortem room gave results strongly in favour of a free communication between branches of the hepatic artery and portal vein in the portal canals He claimed that in portal cirrhosis this communication is far more extensive than in the normal liver and that through the dilated intercommunicating capillaries the arterial pressure can in portal cirrhosis be transferred to the venous side causing an increase of portal blood pressure

Gad's Hypothesis

Some of the very old work on this problem is worth referring to simply for its historical interest It was done long before vasomotor nerves or the possibility of nervous control of the circulation was thought of The problem as it presented itself to the old investigators was how and to what extent the one circulation through the liver might influence the other The first published work appears to be that of Betz (1863) who worked in Ludwig's laboratory on this question The next publication to which all writers in the past have devoted great attention but which few can have read because of its rarity is the inaugural dissertation of Johannes Gad published in Berlin in 1873 and entitled *Studien uber Beziehungen des Blutstroms in der Pfortader zum Blutstrom in der Leberarterie* Mr Powell the librarian of the Royal Society of Medicine has been fortunate in obtaining a copy of Gad's dissertation which is now available in the library of that society Gad was then a young physiologist with pronounced mathematical leanings and part of his dissertation deals with the theoretical laws governing the flowing together of two enclosed streams of fluid The part of his thesis which interests us although now chiefly

for historical reasons is the hypothesis he put forward that the arterial and portal venous communications in the portal canal probably meet at an acute angle leaving a wedge shaped valve between them at their junction

Gad's hypothesis is represented in the accompanying figure and it would explain on purely mechanical grounds a number of points which agree with the results of experiments From the figure it will be seen that any pressure in the portal vein sufficient to close the valve would shut off all fluid coming by the hepatic artery whereas if pressure be increased on the arterial side the wedge shaped valve is insufficient to close the wide portal vein This hypothesis as has been stated fits in well with the observations of Herrick and a number of other observers including Cameron and Mayes who have carried out perfusion experiments in livers cut off from nervous control



HA hepatic artery
PV portal vein

The conclusion may be stated that alterations of total inflow or blood pressure within the hepatic artery can quite apart from nervous control influence the flow and blood pressure in the portal vein

Nervous Control of Hepatic Circulation

This certainly must have fundamental effects on both liver and spleen and while this section deals with its influence on the liver its importance to the spleen will be considered subsequently It seems quite obvious that changes in the blood pressure in the amount of inflow of arterial and portal blood and in the outflow from the hepatic veins must be of notable importance in disease Moreover nervous influences or definite alterations in structure must possibly at different times and at different stages be the chief factors at work in the production of the increased portal blood pressure which I believe to be one of the most important aetiological factors in combined diseases of the liver and spleen

The earliest work on the nervous control of the hepatic circulation was done by von Basch (1875) and by Bayliss and Starling (1894) who showed that stimulation of the splanchnic nerves resulted in a rise of the portal venous pressure Bayliss and Starling concluded that this must be due to a constriction of the portal circulation at the liver and this view was also supported by François Franck and Hallion (1899) who made the additional observation that the volume of the liver diminishes after splanchnic stimulation even when the hepatic artery has been clamped The diminution in volume could therefore not be due to any changes in the hepatic artery inflow but only to constriction of the portal venous system within the liver Many experiments on this problem were also made by Burton Opitz (1911 onwards) using his stromuhr method but his results were on the whole inconclusive

A new method of approach to the problem had meantime developed by the introduction of adrenaline into physiology by Oliver and Schäfer (1894–5) and the demonstration by Elliott (1905) that this substance could be used as an accurate test of the activity of sympathetic nerves Edmunds (1915) investigated the effects of injections of adrenaline on the portal circulation but his results were at the time difficult to interpret Sometimes the liver volume diminished but at other times it increased—even in experiments on the same animal species Bainbridge and Trevan (1917) made similar experiments in dogs and found the liver volume always increased while Clark (1928) on the other hand declared that the volume of the liver was diminished by adrenaline injections These opposing results were to a considerable extent cleared up by Griffith and Emery (1931) who showed that in experiments in which the blood pressure of the animal remained high and the circulation good the effect of adrenaline or of splanchnic nerve stimulation was always a diminution in the volume of the liver On the contrary in animals in which the circulation was failing and the blood pressure low (that is in a condition closely resembling shock) the only effect following both procedures was an increase of liver volume McMichael (1932) working in Aberdeen and at University College Hospital has confirmed the results of Griffith and Emery and has further shown that in an animal in the state of experimental shock with low general blood pressure the splanchnic arterioles and portal venules in the liver are already fully constricted and cannot be influenced directly by adrenaline In an animal of this kind adrenaline injection causes a rise of arterial pressure almost entirely as a result of arterial constriction in the limbs but when this rise of arterial pressure is at its height the previously constricted splanchnic vessels suddenly dilate allowing a greater inflow to the liver and an increase in hepatic volume

The evidence now seems complete that stimulation of the splanchnic nerves or injection of adrenaline each cause constriction of the branches of the portal vein before they have entered the hepatic lobules The main effect of splanchnic stimulation is thus a damming back of blood in the portal vein which in turn leads to a temporary diminution of the volume of the liver Another factor influencing the intrahepatic circulation has also been engaging attention It has been shown by Mautner and Pick (1915 1922 1929) that there is a mechanism acted upon by histamine and its derivatives which controls the outflow of blood from the hepatic vein by a powerful constricting action This mechanism has recently been investigated very fully by Bauer Dale Poulsson and Richards (1932) whose paper was published in the *Journal of Physiology* only a few weeks ago In their work they demonstrate what they have termed a sluice mechanism controlling the outflow of blood from the liver closed or contracted by histamine and opened either by adrenaline or by sympathetic nerve impulses

It appears that this sluice mechanism is not present in the liver of all animals but only in those in which there is an adequate supply of plain muscle fibres in the walls of the hepatic veins A history of our knowledge of this anatomical point is given by Dale and his colleagues and it seems clear from the work of Arey and Simonds (1920) that in the hepatic veins of the dog (the animal used in most experiments of this kind) there is a large amount of unstriped muscle fibres in the vessel walls whereas in some other animals such as the cat muscle fibres are apparently absent In man according to Elias and Feller (1926) there appears to be a considerable development of plain muscle in the hepatic veins so that the existence of a sluice mechanism seems probable enough

This very complicated nervous control of the circulation within the liver has an important bearing on the so called blood-depot function of the organ referred to in a subsequent section It seems certain that so complicated a mechanism must also be deranged in a variety of circulatory and hepatic diseases but here physiological knowledge has gone far beyond the possibility of its immediate usefulness in clinical medicine

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CLINICAL COMPARISON OF ERGOTOXINE AND ERGOTAMINE

A REPORT TO THE THERAPEUTIC TRIALS COMMITTEE OF THE MEDICAL RESEARCH COUNCIL*

BY

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The subject of ergot the method of its preparation and the nature of its active principles has been the source of more discussion during recent years than probably any other matter in pharmacology Even now twenty six years after the discovery of the active alkaloid ergotoxine and fourteen years after the isolation of the closely related alkaloid ergotamine there remains an uncertainty not only with regard to the clinical action of these alkaloids but also with regard to the part played by other constituents present in the crude ergot or formed during its manufacture into medicinal preparations The matter is one which interests pharmacologists and clinicians alike for the urgent and sometimes desperate emergencies of obstetric practice demand the use of therapeutic agents whose mode of action is understood and whose reliability is thoroughly proved

CHOICE OF METHOD

Since ergot is now no longer used before delivery of the foetus it is difficult to get objective evidence of its action clinical observations such as the timing of the duration of the red lochia[1] or the measuring of the rate of involution of the uterus have been shown to be unreliable A more direct method is called for such as a recording of the actual uterine contractions In 1927 Bourne and Burn published the results of an investigation of the action of oxytocic drugs administered during labour By means of a bag passed between the foetal membranes and the uterine wall and connected with tubing to a manometer they were able to make tracings of the variations of intrauterine pressure the tracings thus obtained showed very clearly the effect of drugs on the uterine activity The work dealt chiefly with the action of pituitary extract and its dosage but included three experiments with ergotamine

The usefulness of this method of investigating the uterine action is limited by certain serious disadvantages It is sometimes difficult to introduce a bag above the foetal head and this usually requires an anaesthetic The patient is frequently very restless during labour which makes for obvious difficulties and causes false and erratic recordings Again the duration of the experiment is limited by the termination of labour Lastly many oxytocic drugs are used not during labour but in the puerperium This is the case with the ergot group and it is therefore of more interest to record their action at this time than it is during parturition For these reasons I resolved to modify the method and to try the effect of introducing a bag into the uterus in the late puerperium As in the previous experiments the bag was connected with tubing to a mercury manometer and this in turn was fitted with a float by means of which variations of intrauterine pressure were recorded on a slowly moving drum Before use the bag and tubing (previously sterilized by boiling) were filled with water to a pressure equivalent to 2·5 cm of mercury and introduced into the uterus with full antiseptic precautions The early trials were encouraging and showed that this apparatus could record the normal contractions of the uterus which take place every ten to twenty minutes and that the physiological variations such as occur with the act of suckling could also be clearly shown The seventh day of the puerperium proved to be the most satisfactory although the sixth and eighth days are almost as good

At the request of the Therapeutic Trials Committee of the Medical Research Council an investigation was made of the clinical effects of ergotoxine ethanesulphonate in the experiments to be recorded this alkaloid was contrasted with ergotamine tartrate (femergin or gynergen)

HISTORICAL CONSIDERATIONS

The history of these alkaloids is of interest for they have been the source of much dispute amongst pharmacologists A very fair statement of the position is given in a letter by Sir H H Dale[3] to the *Lancet* The history is briefly this In 1906 Carr and Barger isolated an active alkaloid ergotoxine the pharmacological effects of which were fully studied by them and by other British workers notably by Dale Unfortunately appeals to clinicians to test the action of this pure substance met with little response and to this day no adequate clinical trial has been reported In the meantime in 1918 Professor A Stoll working in the Sandoz laboratories isolated a new alkaloid—ergotamine —which was found to be very active This substance was eagerly tried out by German and Swiss clinicians and ample evidence was soon accumulated to prove its worth under the

The ergotoxine ethanesulphonate used in these tests was submitted by the Therapeutic Trials Committee by Messrs Burroughs Wellcome and Co

trade names of femergin and gynergen ergotamine has now come into wide use in this country and in America In 1923 the following statement appeared in the *British Pharmaceutical Codex* Ergotoxine has been used clinically for its action on the uterus but it is disappointing and gynæcologists are now generally agreed that it is not the active constituent they want Because of this statement and because of the scanty reports on ergotoxine the opinion was formed by many that ergotamine was *the* active constituent of ergot and that the other alkaloids were useless or at least less desirable in ingredients Previous to this the combined work of Dale and Spiro[1] had shown that from the pharmacological point of view the actions of the two drugs were indistinguishable A later investigation by Burn and Ellis[2] also proved that within the margin of experimental error the one alkaloid was as active as the other Nevertheless in 1930 Stoll wrote

I cannot agree with S Smith and C M Timmis[3] concerning their conclusions drawn from the pharmacological identity of ergotoxine and ergotamine regarding the clinical virtues of the two alkaloids The clinical comparison cannot be executed but by clinical investigation Practice has proved in numerous cases the occasionally big differences between pharmacological and clinical experience especially in actions on the nervous system

NATURE OF INVESTIGATION

Such a clinical investigation as recommended by Professor Stoll I have endeavoured to carry out on a series of puerperal patients by the method already described The drugs used were ergotoxine ethanesulphonate (supplied by Burroughs Wellcome and Co) and ergotamine tartrate (issued under the name of femergin by the Sandoz Company) A different patient was used for each test because the long duration of the action of these drugs prevents the recording of two experiments on one patient For this reason a slight difficulty arises No two patients give quite the same type of recording one uterus may be almost inert while another may be fairly active most uteri show moderate contractions every ten to twenty minutes but a few show frequent small contractions These objections however are of little practical importance because *the contractions engendered by the drugs* in question are widely different in their character frequency and duration from those of the spontaneous variety To reduce this error still further it was customary to take a normal recording for from half an hour to two hours before administering the drug

DETAILS AND RESULTS

Twenty five cases were given either ergotoxine or ergotamine in doses as follows

Ergotoxine —Intravenous
- 0·25 mg (3 cases)

Intramuscular
- 0·25 mg (2 cases)
- 0·5 mg (1 case)
- 1·0 mg (2 cases)

By mouth
- 1·0 mg (1 case)
- 2·0 mg (2 cases)
- 2·5 mg (1 case)
- 2·5 mg (with histamine and tyramine) 1 case

Ergotamine —Intravenous
- 0·25 mg (2 cases)
- 0·5 mg (2 cases)

Intramuscular
- 0·25 mg (1 case)
- 0·5 mg (2 cases)
- 1·0 mg (2 cases)

By mouth
- 1·5 mg (1 case)
- 2·0 mg (1 case)
- 3·0 mg (1 case)

These doses refer to the weight of the salt In the case of ergotoxine ethanesulphonate the base accounts for 83·6 per cent of this weight in the case of ergotamine tartrate it accounts for 84·5 per cent of the weight

It may be said at once that both alkaloids were found to be very active in stimulating uterine contractions A typical chart for each drug is shown in the accompanying illustrations

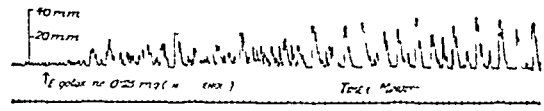


FIG 1—Ergotoxine 0·25 mg by intravenous injection

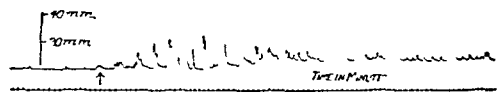


FIG 2—Ergotamine 0·25 mg by intravenous injection

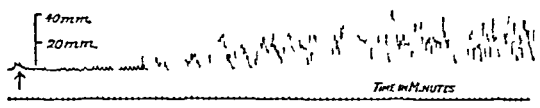


FIG 3—Ergotoxine 0·5 mg by intramuscular injection



FIG 4—Ergotamine 0·5 mg by intramuscular injection

The Nature of the Contractions —This was the same for both drugs In the larger doses (0·5 to 1 mg) the *contractions were almost always alike* They *came at* intervals of about one minute and there was a characteristic heaping up of smaller waves on top of the larger ones In the smaller doses (0·25 mg) the contractions although definitely stimulated in frequency and magnitude showed some variation in character in different cases It was found however that every variety of contraction with the one drug could be matched by a similar result obtained with the other drug

Rise in Base Line —This may be regarded as a measure of the tonicity of the uterus It may mean that the whole uterus has gone into a long sustained contraction or that waves of contraction pass through the muscle substance so frequently that they overlap and cause the organ as a whole to compress its cavity The tracings obtained with both ergotoxine and ergotamine showed that when these drugs were given in a dose of 0·5 mg or over the base line was usually raised during the time that the alkaloid was producing its greatest effect The amount of the rise was not as a rule of very marked degree

The Time of Onset —This varied with the method of administration but was always slow by comparison with other drugs such as pituitrin By intravenous injection four to ten minutes elapsed before an effect was seen by intramuscular injection fifteen to forty five minutes were required while by mouth the effect was erratic and not seen for thirty five minutes to one hour or longer

Duration —The nature of the experimental method made it impossible to determine the duration of the effect of the alkaloid It was certainly in excess of three hours

Side Effects—It was not part of this investigation to record effects such as changes in blood pressure pulse rate etc These may be studied more profitably and easily in circumstances other than the lying in wards of a maternity hospital, where patients are apprehensive and easily upset by any unusual investigation No serious symptoms were noted after the administration of either drug although three patients complained of a feeling of depression and weight in the head and one patient of nausea and head ache the effects were of short duration The doses received by these patients were 0 25 mg ergotamine (intra venous) 0 5 mg ergotamine (intramuscular) 1 5 mg ergotamine (by mouth) and 0 5 mg ergotoxine (intra muscular)

Dosage—It may safely be said that in the case of both ergotoxine and ergotamine the optimum dosage for intra muscular injection is 0 5 mg Doubling this dosage pro duced but slight increase of action on the other hand 0 25 mg did not produce the full effect of the drug Oral administration of ergotoxine and ergotamine even in doses of 2 mg did not yield consistent results The con tractions produced were much smaller and more erratic than those seen after the drugs had been given by injection In several instances the contractions ceased after about an hour to appear again about an hour later Doses of 2 5 mg produced a more definite result Burn[8] has made the observation that in the cat only about one third of a dose of ergotoxine is absorbed from the alimentary canal after forty eight hours My results suggest that only a very small fraction of a dose is absorbed by the human subject during the two or three hours following oral administration

These observations appear to justify a definite statement that ergotamine and ergotoxine are indistinguishable from each other in their clinical actions If further experiments should show that there is any difference in activity that difference must be of such a small order that it is of no practical importance

CONCLUSIONS

1 A method is described by which the response of the human puerperal uterus to oxytocic drugs may be directly recorded

2 Both ergotoxine and ergotamine bring about strong contractions in the puerperal uterus when they are admin istered by injection

3 Ergotoxine and ergotamine are indistinguishable from each other in their action on the puerperal uterus

4 The effect comes on slowly and takes fifteen to forty five minutes to appear after intramuscular injection

5 The most suitable dosage for intramuscular injection is 0 5 mg

6 Oral administration gives slow and erratic results even after comparatively large doses of the drug

It is a pleasure to express thanks to Sir H H Dale for useful advice and encouragement in this work

Note—A further communication by the same author dealing with the action of ergot preparations on the puerperal uterus with special reference to the activity of the liquid extracts will be published in a subsequent issue of the *Journal*

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THE MENACE OF OBESITY *

BY

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The experience of life assurance companies is that weight especially in relation to age is an important factor in longevity and the old tag *corpora sicca durant* has had statistical confirmation The medical profession has been slow to apply these actuarial lessons to practice and medical precept has lamentably lagged behind the dictates of fashion Our advice has too frequently been sought for aesthetic rather than for hygienic reasons An examination of some of the ascertained facts may be of interest Should the national overweight continue to grow unchecked the mortality from the degenerative non bacterial diseases will diminish the average expecta tion of life This has been increased during the last century by the control of infectious diseases and by the reduction in infant mortality but the scourge of degenera tive disease remains to be tackled

CAUSES OF OBESITY

The Controlling Mechanism—The body weight after childhood represents the balance of two factors—the quantity of food ingested on the one hand and the expenditure of energy in maintaining body heat and in glandular and muscular activity on the other Some con trolling mechanism must exist and Grafe and Grunthal[1] have as the result of experiment suggested its localiza tion in the hypothalamic region this may explain the gross obesity in such diseases as chronic epidemic encephalitis and hypothalamic tumours The controlling mechanism is so perfect that the adult weight tends to remain constant in spite of an ever varying *food intake* and energy *output* Silver and Bauer regard obesity as due to an upset in this mechanism but they stress the importance of the hereditary factor

The Endocrine Glands—The part played by these glands in obesity is most controversial The basal metabolic rate is usually within normal limits Bauer[2] found clinically recognizable disorders of the endocrine glands in 2 6 per cent of 276 cases whilst Dunlop and Murray Lyon[3] state that 62 8 per cent of 493 cases gave histories suggesting the possibility of glandular dis turbance being a factor little evidence of such disturbance was found on physical examination The endocrine factor if it exists must be a slight error operating over a long period

Hyperinsulinaemia—Nissl En Shui, and Gordon[4] in a study of 500 obese people found a normal intake of fat and protein but an immoderate consumption of carbo hydrate they suggest that this excessive carbohydrate causes pancreatic stimulation with hyperinsulinaemia which in its turn provokes a craving for carbohydrate to check the uncomfortable symptoms of hypoglycaemia during brief fasts There would appear to be much evidence and some theoretical considerations against this view

CLASSIFICATION OF OBESITY

To review all the theories of the causes of obesity is without the scope of this paper but the following classifi cation suggests itself

1 *Exogenous Group*—This is a small but important group due to gross and persistent immoderation in the intake of food and alcohol

* A paper given before the Nuneaton and Tamworth Division of the British Medical Association December 12th 1931

2 *Endocrine Group*—This is a small group and comprises cases of recognizable disorders of the thyroid pituitary suprarenal and sex glands

3 *Central Nervous System Lesions*—This includes the few cases in which obesity results from disease—inflammatory or neoplastic—in the neighbourhood of the supposed metabolic centre in the hypothalamic region

4 *Constitutional Group*—Into this group the majority of cases fall but little is known of the causative factors Presumably there is a failure in the weight regulating mechanism and the majority of patients come of an obese stock They maintain their weight without due regard to the usually accepted caloric balance Carbohydrate is perhaps too readily converted into fat There is much evidence that most cases are due to over indulgence in carbohydrate—practically a carbohydrate addiction

Taylor[5] sums up well

> We live in economic circumstances which permit of an easy functioning of the influences making for overweight Foodstuffs are available in extraordinary variety and profusion The per capita food requirement is declining Economic restraint on eating is lacking except in the poorest classes

PRINCIPLES OF TREATMENT

Treatment is simple if the patient will co operate impossible otherwise The more obese the patient the greater the rapidity of the weight reduction and of the likelihood of relapse No sudden and drastic reduction is advisable—five or six pounds a month is the optimum The object of treatment is cure of the carbohydrate addiction by a re education of the patient's dietetic habits so that he will be enabled to live permanently on a lower caloric intake

Diet—The scientific but rather impracticable method is to place the patient on an accurately measured diet calculated at about 20 per cent below his needs at his ideal weight Murray Lyon[6] has had excellent results on the simple plan of using standard 1 000–1 200 calorie diets Easily assimilable carbohydrates are replaced by bulky foods of low caloric but high satiety value The patient must be made to live on his fat

Stimulation of Energy Loss—This aspect must be approached with caution and in addition to exercise cold baths are a potent stimulus to metabolism

Endocrine Cases—These must receive their appropriate replacement therapy and although thyroid extract may be useful in constitutional obesity myxoedema and not obesity is its correct indication

SEX AND AGE DISTRIBUTION

Preble[7] found in a study of 1 000 overweights including in this category any person 10 lb or more above the ideal weight the following age and sex distribution

TABLE I—*Distribution by Age Group of 1 000 Overweight*

Age	0–20	21–30	31–40	41–50	51–60	61–70	71 and Over	Total
Men	1	11	53	85	68	18	8	244
Women	7	65	178	238	196	62	10	756
Total	8	76	231	323	264	80	18	1 000

HYPERPIESIA AND OBESITY

That there is a definite relation between hyperpiesia and obesity is a matter of daily clinical experience although many obese persons have a normal blood pressure I have been unable to find any extensive analysis of cases Terry[8] found in a series of sixty three obese women thirty seven with hypertension Preble in his series of 1 000 overweights found that sixty two had a systolic pressure of over 200 mm Hg the average blood pressure in his cases is given in Table II

TABLE II—*Average Blood Pressure by Age Groups in 1 000 Overweights*

Age	0–20	21–30	31–40	41–50	51–60	61–70	71 and Over
Systolic	111	110	119	132	139	139	163
Diastolic	77	84	89	93	100	103	103

DIABETES MELLITUS AND OBESITY

Diabetes is almost unknown in wasting diseases It is increasing more rapidly as a cause of death than cancer apoplexy and organic heart disease In Germany during the war its incidence as a cause of death was halved presumably from under nutrition and this experience is reflected to a less extent in the vital statistics of the other countries who suffered restriction in their food supply In 1 063 cases of diabetes Joslin[9] found marked obesity as a precursor in 40 per cent He states that diabetes unlike the other degenerative diseases does not increase in incidence with age except in the obese in the lean it remains fairly constant throughout life He regards the disease as a penalty of obesity although there are other factors in its causation Preble in 700 overweights found an incidence of diabetes of 7·5 per 1 000 against an estimated incidence in the general population of 10 to 20 per 1 000 Yet more striking is Joslin's analysis of 1 000 cases given in Table III This is most easily understood if comparison is made in turn of an underweight column with the corresponding overweight column it will be seen that 107 cases occurred in the underweights compared with 634 cases in the overweights

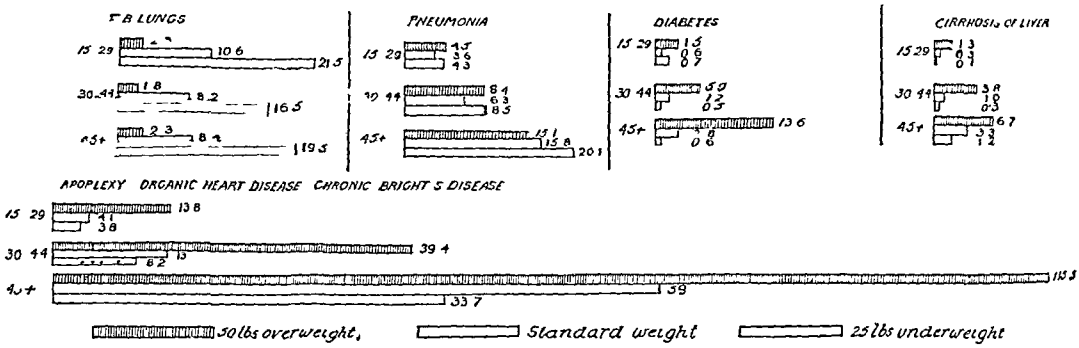
TABLE III—*Variations from Normal of the Maximum Weight at or Prior to the Onset of 1 000 Cases of Diabetes Calculated for Height Age and Sex*

Age	No. of Cases	Below Standard Weight per cent			Normal Average Zone ±5 to −5	Above Standard Weight per cent								Per cent of each Decade Group of Normal Weight
		30 to 21	20 to 11	10 to 6		6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	+ 71	
1–10	16	0	3	2	5	3	2	—	—	1	—	—	—	1
11–20	59	2	11	8	24	6	4	2	1	—	1	—	—	3·5
21–30	131	—	15	13	41	15	29	9	4	—	3	—	2	21
31–40	148	1	9	1	28	22	34	25	15	14	10	6	2	19
41–50	291	2	8	7	31	19	39	59	40	30	18	10	8	6
51–60	233	—	4	2	16	28	39	48	45	14	13	5	4	5
61–70	84	—	—	2	8	10	17	23	14	7	1	1	1	2
71–80	18	—	—	1	6	3	2	3	2	1	—	—	—	6
1–80	1 000	5	50	59	169	106	195	169	121	67	5	22	17	

MORTALITY IN THE OBESE

The chief source of information is the American Medico-Actuarial Mortality Investigation from life insurance figures this dealt with a group of 744 672 cases Table IV gives the percentage ratio of actual to expected deaths according to weight and age The ratio is easily ascertained from the standard mortality tables the expected number of deaths can be found and the actual number was given by the life insurance companies If fewer die than is expected the ratio is below 100 and if more die it is in excess of 100 The weight is known only at the age of entry—that is at the medical examination The lives were all accepted at standard rates and therefore the group except so far as weight is concerned is a selected one

Chart showing cause of death of 17 792 men (modified from the Medico Actuarial Tables)



The figures in the left hand column refer to the age at entry those on the right to the ratio of deaths per 10 000 at risk

TABLE IV.—*Medico Actuarial Mortality Investigation*[10]
Graduated Percentages—Actual Deaths of Expected Deaths According to the Number of Pounds Variation from the Average Weight

Age at Entry	Variation from Average Weight in Pounds												
	−35 to −45	−25 to −30	−15 to −20	−10	−5	Average	+5	+10	+15 to +20	+25 to +30	+35 to +45	+50 to +60	+65 to +80
20–24	135	127	115 5	107	105 5	104	102	99	97	102	104	110	195
25–29	127	116	108 5	102	101	100	99	97 5	96 5	104	108	116	132
30–34	112 5	103	102 5	98	97 5	97	96 5	96	97	109	118 5	131	149
3 – 9	105	101	97 5	94 5	95	95	96	96 5	101	112 5	133	151	172
40–44	99	95 5	93	91 5	93	94	96 5	97	108	115	141	157	181
45 49	93 5	91	89 5	89 5	91 5	93 5	97 5	100	112	116 5	139	155	178
50–53	88 5	88	87	88 5	90 5	94 5	99	102	112 5	116 5	132	150 5	172
54 56	86	86	86	88	90 5	95 5	99 5	102 5	112	116	129	142	162
57 59	86	86	86	88	90 5	95 5	99 5	102	111 5	114 5	117 5	134	153
60 62	86	86	86	88	90	95	98 5	101	110 5	112 5	114	130	148

The point of lowest mortality for age at entry 20–34 lies in the group 15 to 20 pounds above average weight and for age at entry 35–49 in the group 5 to 10 pounds under the average weight For age 50 and over the lowest mortality is in the underweight group

EFFECT OF OBESITY ON CAUSE OF DEATH

The chart has been constructed from figures given in the *Medico Actuarial Mortality Investigation*[10] The ratio of deaths per 10 000 at risk has been recorded for certain diseases in each case the ratio has been ascertained for three age groups at entry (that is at the initial medical examination) and comparison has been made of the standard weights with those 50 lb or more overweight and with those 25 lb or more underweight The overweight group shows an improvement in mortality only in pulmonary tuberculosis

CHOLECYSTITIS CHOLELITHIASIS AND OBESITY

The association of these conditions with obesity is a commonplace and I do not propose to put forward any statistical evidence

CONCLUSIONS

1 There is an increase in the average weight of certain sections of the community

2 Overweight after the age of 35 years increases the general mortality

3 The cause of obesity is usually increased carbohydrate diet

4 Treatment is simple and dietetic

5 Obesity and hyperpiesia are associated

6 Diabetes is probably a penalty of obesity in the majority of cases

7 Degenerative disease of a fatal nature in the heart arteries kidneys and liver are two and a quarter times commoner in the obese than in the standard weights and three and three fifths times commoner than in the under weights

8 Chronic cholecystitis and gall stones are much more frequent in the obese

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THE SYMPTOMATIC END-RESULTS OF OPERATIONS FOR CHOLECYSTITIS

A REVIEW OF 153 CASES

BY

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In recent years there has been a tendency to emphasize the radiographic and biochemical evidence of cholecystitis at the expense of the clinical history That the clinical history is of vital importance and must be used in conjunction with Graham's test if the best results are to be obtained is expressed by R L Sanders in reviewing the end results of 500 cases of cholecystectomy when he says Most of the surgeon's disappointments in the end results are related to cases in which there are cholecystographic evidence and surgical indications for operation but not a good clinical history

In this connexion I considered it might be of value to attempt to estimate the prospects of complete or partial cure of the symptoms particularly in some of the pathological subdivisions of the disease Especial attention was directed to cases where cholecystitis was present without stones

It has been pointed out that one fifth only of the total number of cases of cholecystitis have definite attacks of biliary colic whereas *all* appear to suffer with flatulent dyspepsia What happens to these milder symptoms after operation? Post operative adhesions between the duodenum and the liver said to be probably the commonest cause of disappointing results in gall bladder surgery might perpetuate those vague dyspeptic symptoms and render the result incomplete Judged by the

cases investigated in the present series however this does not occur to an appreciable extent In over 80 per cent these symptoms of flatulent dyspepsia disappeared completely

METHOD OF INVESTIGATION

One hundred and eighty six cases of cholecystitis were admitted to the surgical wards of the Liverpool Royal Infirmary during the period 1925–29 Of these thirty three were discharged without operation either because they were of a doubtful nature or on account of serious constitutional contraindications for operation A further nine cases died in hospital and to each of the remaining 144 a questionary was dispatched In the vast majority microscopical evidence on section of the gall bladder confirmed the diagnosis of cholecystitis Replies were received from 114 cases nearly 80 per cent of the total and it is largely from these replies that the end results were estimated

That these replies are of some value is substantiated by the following considerations

1 A certain proportion of the cases were personally interviewed and examined

2 In numerous instances the family doctor assisted the patient to fill in the questionary and added some clinical notes of his own

3 As the investigation is primarily directed to the symptomatic end results a patient of average intelligence should be in a position to make an accurate return

In view of the above I think we may regard these replies as reflecting in some measure the results of operations on the gall bladder at this hospital

Cases were divided into three groups cured relieved and those remaining *in statu quo* Criteria of cure included the patient's complete personal satisfaction with the operation together with absence of abdominal pain flatulent dyspepsia nausea and vomiting and subsequent attacks of jaundice We may put this more briefly by saying that resumption of a normal working life without abdominal discomfort or dyspepsia of any sort was the standard of cure In the *relieved group* were placed those with considerable improvement but with occasional or slight abdominal pain and rare attacks of flatulence and retching In all cases included in this group the patient expressed personal satisfaction with the results of his or her operation All the remaining cases were included in the unimproved group

The results in the present series were as follows

Cured	94 cases	82 4 per cent
Relieved	12 cases	10 5
Unimproved	8 cases	7 01

For purposes of comparison the following results may be mentioned

Davis	69 4 per cent cures in 160 cases
Sanders	84 per cent cures in 500 cases
Sanders	76 4 per cent cures in 2 2–2 cases (Various American surgeons)

Sanders attributes his 84 per cent cures largely to the fact that additional operations such as excision of a duodenal ulcer were performed in many of his cases at the same time as the cholecystectomy With this view I must differ emphatically as additional operative procedures were performed in a negligible number only of the present series Yet the percentage of cures was 82 4 per cent As an illustration of the completeness of cure may be mentioned the symptom of qualitative anorexia Over 80 per cent stated that they had good appetites and were able to consume fatty foods without discomfort

DETAILS OF RESULTS

Relieved Group—In this group cholecystectomy was performed in ten instances and cholecystostomy in two In one of the latter no stones were present and a subsequent cholecystectomy was necessary

The pathology appears to have been complicated in the majority of these twelve cases by

Stones in the common bile duct	2 cases
Mucocele	2 cases
Empyema	1 case
No stones present	2 cases

In another case acholuric jaundice was present so that the residual abdominal symptoms may be attributed to this disease

The most prominent persistent symptoms were the following

Acid eructations	9 cases	75 per cent
Flatulence	8 cases	66
Abdominal discomfort (Slight or occasional pain)	7 cases	58

Only two patients complained of a pain of a griping or spasmodic nature

Unrelieved Group—Three of these eight patients described themselves as satisfied with their respective operations but have been included in this group on account of residual symptoms of moderate severity Four cholecystostomies and four cholecystectomies were performed In two instances no stones were present A definite history of biliary colic associated with jaundice was obtained from one patient only but the majority complained of more or less severe abdominal pain

Symptoms were distributed as follows

Severe abdominal pain	50 per cent
Mild abdominal pain	50
Flatulence	75
Acid eructations	50
Vomiting and nausea	75

Cases without Stones—There were fifteen of these in the present series The relatively high proportion of cases of this group figuring in the relieved and unimproved series is significant Of these 73 3 per cent were cured but this is much below the 82 4 per cent cures of the whole series Further if the five cases of acute cholecystitis which occur in this group and all of which were cured are excluded the percentage cured falls to the low figure of 60 per cent

These findings closely follow the experience of Sanders but differ from that of Boyd in whose opinion such cases are usually cured by cholecystectomy

Other Features—Stones in the common bile duct occurred in fourteen cases of which 85 7 per cent were cured and 14 2 per cent were relieved Cholecystectomy was performed in ten cases with 80 per cent cured Cholecystostomy was performed on four occasions with all cases cured These satisfactory results are borne out by a more recent series of seventeen consecutive cases of stones in the common bile duct dealt with at this hospital This series revealed similarly satisfactory end result with only one post operative death which was due to pulmonary embolism

Ten cases of acute cholecystitis occurred with 90 per cent cured and 10 per cent unimproved In nine of them cholecystostomy and in the other cholecystectomy was performed In half of these cases no stones were present yet the percentage of cures was well above average

It is difficult or impossible to assess the complaint of weakness and bulging of the abdominal wound Seventeen cases complained of either a feeling of weakness or of a bulging sensation in the abdominal wound but not all of them could be examined

Only two patients reported a second operation but it seems possible that some of those who did not reply to the questionary would fall into the category of subsequent operations One patient had a cholecystectomy performed after a previous cholecystostomy had failed to relieve her symptoms while the other had a second operation for adhesions

Operative Mortality —Of the 153 operations performed there were nine deaths giving an operative mortality of 5 8 per cent for all cases This figure may appear somewhat high when compared with that quoted by Davis 3 75 per cent and 4 73 per cent in a series of 4 032 cases by various American surgeons quoted by Sanders but it must be remembered that the present series includes the most serious cases and that in the United States patients suffering from cholecystitis come for treatment at a much earlier stage than they do in this country This latter fact is emphasized by Rendle Short in the *Index to Prognosis* and appears to be confirmed by Sanders's statement that only 40 per cent of his 500 cases had stones whereas 87 per cent of the present series had the combined pathology of inflammation and stones

Further a series of fifty three consecutive operations performed more recently showed an operative mortality of less than 2 per cent which compares favourably with the best American figures

The causes of death were as follows paralytic ileus 1 case suppurative cholangitis 2 cases pneumonia 1 case associated with acute pancreatitis 1 case pneumonia 1 case chol aemia 1 case and post operative collapse and cardiac failure 3 cases From a perusal of similar series these causes appear to be the ones usually found Cholecystectomy was performed in 117 cases cholecystostomy in thirty six while in two cases removal of the mucosa only by cautery could be effected

These figures reflect the modern tendency to remove the gall bladder whenever possible I have avoided comparison of the relative mortality of these two operations as that of cholecystostomy performed as it is in the more serious cases must inevitably be the higher

CONCLUSIONS

1 Complete cure may be expected in 82 4 per cent Of the rest 10 5 per cent are relieved while 7 01 per cent remain *in statu quo*

2 The symptoms of flatulent dyspepsia including qualitative anorexia completely disappear in over 80 per cent of cases

3 It would appear that the absence of stones renders the prospect of cure perceptibly less However in cases of acute cholecystitis the absence of stones has no effect whatever on the prospect of cure

4 The operative mortality varies between 2 and 6 per cent depending to a large extent on the type of case dealt with In the present series dealing with every type of case the mortality was 5 8 per cent

5 The average period of convalescence before resuming full work is thirteen weeks I have not been able to find any reference to this feature in the literature for purposes of comparison

I wish to acknowledge my indebtedness to the surgeons and assistant surgeons of the Liverpool Royal Infirmary for permission to use their cases in this investigation and for their help

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A CASE OF ABORTUS FEVER IN YORKSHIRE

BY
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LATE PHYSICIAN TO OUT PATIENTS SHEFFIELD ROYAL INFIRMARY

If as the Americans tell us this fever—*B abortus* Bang—is to be the fever of the future it is important that cases should be recorded and the attention of practitioners called to this subject It is unlikely that while thousands of cases should have occurred in America during the past few years we in this country should have been exempt since contagious abortion in cows has been known to be of common occurrence for many years and particularly since B Bang in 1897 described the organism which caused the disease and which has since borne his name At a recent meeting of the Health Section of the League of Nations undulant fever was stated to be the most important problem facing public health workers at the present time

The following case which occurred in my practice last February is interesting owing to the fact of having had this disease connected up with the source which has not been possible so far as I am aware in the few previous cases recorded in England

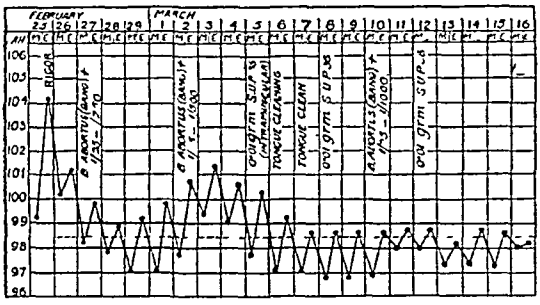
CASE REPORT

A master upholsterer aged 32 living in a small Yorkshire town in the West Riding gave the following history He was taken ill on January 24th 1932 with what was diagnosed as influenza which was prevalent in the district at that time He complained of severe headache of a boring character which lasted for ten days and his temperature was 103° At the end of the first week a blood test was made—presumably for the typhoid group—but this was negative At the end of a fortnight the temperature was normal and remained so for a week at the end of which time he motored accompanied by his wife to a seaside resort about ninety miles distant for a weeks convalescence On arrival there having in the meantime provided himself with a clinical thermometer he found that his evening temperature was 102 6° and each evening during his stay of eight days was between 102° and 103° while the morning temperature was normal

On his way home he visited some relatives in Sheffield and I was called in the following morning This was at the beginning of the fifth week of the disease (February 23rd) His temperature was normal heart and lungs negative liver freely palpable and somewhat tender especially over the left lobe spleen doubtful some flatulent distension with discomfort over abdomen and bowels stated to have been somewhat constipated The tongue was clean at tip and edges but posterior two thirds was covered by a thick yellowish fur From the history I suspected having to deal with one of the typhoid group and at once had a specimen of blood conveyed to the pathological department of Sheffield University where it was found to be negative for *B typhosus* and *B paratyphosus* A B and C

Two days later on the advice of Dr A E Barnes who saw him in consultation further samples of blood were taken A complete set of agglutination tests was done all of which were negative except the one against *B abortus* Bang which caused definite agglutination in a dilution of 1 in 25 to 1 in 250 Three days later another specimen of blood showed a positive reaction in a dilution of 1 in 25 to 1 in 500 (full titre) and a negative reaction for the typhoid group At this stage an attempt was made to isolate the organism but after cultivation at 37° C this was not successful and there was a similar result with a specimen of urine A week later a positive reaction was found in a dilution of 1 in 25 to 1 in 1 000 while six weeks later—a month after the patient had returned to work—the blood serum agglutinated *B abortus* Bang in a dilution of 1 in 25 to 1 in 250 the Widal reactions remaining negative

The diagnosis was now definitely established—a case of so called undulant fever Reference to the accompanying chart will show that the temperature was not of the typical undulating form The rise in temperature from March 2nd to 5th was due I think to active congestion of liver particularly the left lobe or possibly to a masked splenitis the pain from which gave the patient two bad nights and was completely relieved by a hypodermic injection of scopolamine morphine and did not recur There had been no treatment



beyond rest in bed nourishing light diet and for the first few days saline for the bowel condition

As there is no known treatment I decided to try intramuscular injections of S U P 36 This was done on March 5th 8th and 12th—that is at the end of the sixth week of the disease and the second week after I first saw him A glance at the chart will show a quite dramatic change considering that the average duration of this disease is fifteen and a half weeks Beyond that was the fact that the following morning for the first time since the beginning of his illness the patient enjoyed his food—he had previously had some anorexia—and enjoyed a cigarette His tongue which had remained thickly coated was cleaning and within forty eight hours was quite clean and from that time his temperature remained at or about normal

He returned home on March 16th three weeks after I had first seen him Six weeks later he telephoned to say he had been working full time for a month and except for slight anæmia he was quite well The sequel to the use of S U P 36 was possibly a coincidence but I should certainly try it again as I have found it very useful and even striking in somewhat analogous conditions and in any case it is harmless It is not suggested that this chemotherapeutic agent strikes at any particular micro organism but that it has a great influence on pyrexia and creates a general feeling of well being in the patient is certain

Through the activity of Dr J Rennie medical officer of health and the courtesy of the veterinary department of the West Riding vaginal swabs milk and blood were obtained from the herd of nine cows owned by the farmer by whom the suspected milk was supplied

All the swabs and milk were negative but in the case of two cows which were kept in different sheds the blood agglutination test was positive—in one in titre 1 in 1 000 and in the other 1 in 500

COMMENTS

The name abortus fever seems to me preferable to undulant fever as although there is a certain amount of undulancy it is nothing approaching that of a typical case of Mediterranean fever but bears a close resemblance to that found in tuberculosis with the regular evening rise and morning fall

The surprising thing is that the incidence of abortus fever is so low It may be that the bovine strain is of relatively low pathogenicity for human beings or that there are other factors of immunity responsible for the low incidence It is also difficult to understand why children under 5 years of age appear to be almost immune Is it possible that unrecognised cases in infancy account for the relatively high immunity in adults?

My thanks are due to Dr A F Burnes for suggesting further blood tests to Professor Edington and staff for their very great help and interest and to Dr Rennie for his help in linking up the disease with the source

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A CASE OF UNDULANT FEVER IN DERBYSHIRE

BY

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AND

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As undulant fever has not hitherto been reported as occurring in Derbyshire in any person indigenous to the county the following case of this disease is perhaps worthy of record

CLINICAL HISTORY

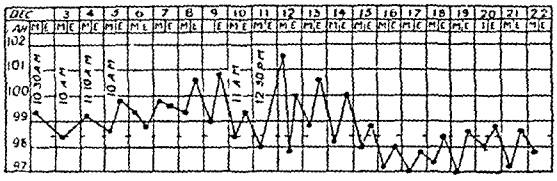
A farmer aged 44 was first seen by one of us on November 20th 1931 He complained that for a period of three or four weeks previously he had felt very unwell and run down and had not looked well from the end of September On October 27th he had a very bad headache when helping a friend to make some doors and had to go home The sensation of unwellness continued with bad headaches and tiredness His appetite was poor and he slept badly The headaches were over the vertex and frontal regions During this time he had no sweats

He has been a dairy farmer for many years and owns a herd of twenty cows He does not live on the farm which he rents the occupants of the house at the farm a maiden lady and her maid have not to our knowledge been ill He lives at a considerable distance from the farm and the occupants of this house—his wife two children and his father—have all been well His last illness was ten years ago He does not visit neighbouring farms and occasionally attends market at Derby He works very little on the farm himself as the milking is done by a man In late September 1931 a cow which he has had two years had difficulty in calving He assisted the vet but states that his only contact was to pull on the rope the calf survived only a short time after delivery as the mother was short of room Contagious or epidemic abortion among cattle is a very common disease in this county Round Heanor there is scarcely a farm which has not been affected during the past five years The patient states that his cows are healthy In the spring of 1931 he had two cows which cast at seven months while running on grass but he has had no other cases The patient never drinks raw milk or cream and only occasionally in summer time eats home made butter No goats are kept on the farm

On examination the patient had a temperature of 102° F There was nothing in the chest abdomen or throat to note and the heart sounds were normal He complained of severe headache and malaise On the previous evening he had had a rigor followed by profuse sweating This was repeated on the three following evenings He had very pain in legs thighs and back [illegible] and slight enlargement of the spleen The liver could not be felt but enlargement of the spleen was [illegible] During the time fever was [illegible] and troublesome On one occasion during the [illegible] following examination [illegible] to the back and [illegible] that [illegible] a farmer and [illegible] taken at this stage was [illegible] Brucella abortus and it was found to be the [illegible] organism which

gave agglutination The rash was of short duration it had disappeared the next morning During this time the stools were unhealthy looking offensive pultaceous and the colour of dark pea soup In a few days they became normal

The temperature was not charted until November 30th Between November 20th and that date it had fluctuated considerably and before November 30th had begun to remit



It finally settled down on December 16th Except for abortive attempts on December 19th 20th and 21st there has not been any recurrence The four hour chart showed considerable variations but briefly the morning temperature was low with evening rise The pulse rate throughout was slow and was never more than 90

BACTERIOLOGICAL EXAMINATION

A specimen of blood was examined on November 28th by macroscopical Widal method using standard agglutination cultures with the following results *B typhosus* *B paratyphosus* B *B paratyphosus* A and *B enteritidis* Gaertner were all negative in dilutions of 1 in 25 *Br abortus* was positive in 1 in 250 after four hours in water bath at 54° C On December 10th a second specimen gave a positive Widal reaction up to 1 in 500 Two specimens of blood one on December 12th and another on December 31st remained sterile after many days incubation

On January 27th 1932 plate cultures were made from the cream and sediment of two samples of milk and stroke cultures from a vaginal swab from the cow which the patient had assisted in calving The medium used was liver infusion agar of Huddleston Hinsley and Torrey [1] The plates were incubated anaerobically for twelve hours and then for several days in an atmosphere containing 10 per cent carbon dioxide at a temperature of 37° C No *Br abortus* developed The blood of the cow gave a Widal reaction with *Br abortus* up to 1 in 6 400 and with *Br melitensis* up to 1 in 1 600 Further specimens of milk and a vaginal swab also gave negative results for *Br abortus*

I wish to thank Dr W M Ash for his kindness in allowing me to publish the details of the above examinations

REFERENCE

[1] *Journ Infec Dis* February 1927

A NOTE ON THE INCIDENCE OF BR ABORTUS INFECTIONS

BY

A I MESSER M A M B D P H

NORTH MIDDLESEX COUNTY LABORATORY

For some time past an emulsion of *Br abortus* has been included in the routine agglutination test on serums sent to this laboratory for Widal reaction Of 186 serums examined sixteen have agglutinated *B typhosus* 'H' one *B typhosus* O thirty seven *B paratyphosus* B and twelve *Br abortus* Details of the latter are shown in the accompanying table

The final column in the table represents reduced titre formerly termed standard agglutinin units — that is the figure obtained by dividing the final dilution showing standard agglutination by the suspension factor The Dreyer technique was followed throughout and the suspensions used were those issued by the Oxford University pathology department under the aegis of the Medical Research Council Readings were recorded after the tubes had stood on the bench overnight following on four and a half hours in a water bath at 55° C

No	Age	Sex	Dilutions 1 in—								P T
			25	50	125	250	500	1 000	1 500	3 000	
I	30	F	—	+	+	+	+	+	+	—	750
II	42	M	—	+	+	+	+	+	+	—	500
III	57	F	—	+	+	+	0	0	0	0	125*
IV	15	F	—	—	+	+	+	+	+	—	750
V	56	F	—	+	+	+	0	0	0	0	83*
VI	15	M	—	+	+	+	+	+	+	tr	500
VIII†	40	F	—	+	+	+	+	+	+	tr	500
VIII	52	M	—	+	+	—	—	—	—	—	43
IX	74	M	—	—	tr	+	+	+	+	+	1 000
X	43	M	+	+	+	+	tr	—	—	—	80
XI	17	M	+	+	+	tr	—	—	—	—	40
XII	34	M	+	+	+	+	+	+	+	+	1 000

0 = Not tested * At least
† Repeated three weeks later Titre 1 in 500

In two cases the serum also agglutinated *B typhosus* and *B paratyphosus* B each at 1 in 25 but both these were explicable as residual agglutinins following on vaccination some years previously Apart from these co agglutination between the enteric and *abortus* groups has not been encountered The table shows the frequent occurrence of the zone phenomenon and it will be noticed that of the twelve cases five were females and seven males the age incidence ranging from 15 to 74

SOME CLINICAL CONSIDERATIONS

The clinical records of several of these cases were obtained but it has not been thought worth while to publish them, as they do not differ materially from those of numerous cases already published One case presented symptoms suggesting acute phthisis but without physical signs in the chest In two cases agglutination versus *Br abortus* was specifically requested by the practitioner in attendance while the remaining cases were diagnosed either as an enteric infection or as P U O

Apart from the 186 serums referred to above which presumably came from persons suffering from a febrile illness the serums of four apparently healthy farm workers were sent to the laboratory for Widal reaction in the course of an investigation for enteric carriers Three of these agglutinated *Br abortus* two at a dilution of 1 in 50 one at 1 in 125 On inquiry it was found that (*a*) the three workers all belonged to the same farm (*b*) at the time the inquiry was made a cow was recovering from picking calf (*c*) some years ago there was an epidemic of abortion amongst the herd in which a great number of cows aborted and (*d*) all three workers had been employed on the farm at and since that time None of them were ill at the time of the investigation nor was there anything in their recent medical history to suggest a condition which might have been undulant fever It seems reasonable to suppose that these three cases exemplify the now fairly well established group in which the presence of *abortus* agglutinins is to be explained as a result of subclinical infection acquired through living in close contact with an infective environment

Assuming the validity of the agglutination reaction in diagnosis the results recorded in this note suggest that Brucella infections are relatively common The numbers concerned are however much too small to form the basis of reliable conclusions and they are recorded simply as a contribution to the data which require to be assembled for an adequate study of the incidence of the disease

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

AN UNUSUAL TUMOUR OF THE GLUTEAL REGION

A married woman 28 years of age was sent to see me with a view to having a tumour in the buttock excised. The tumour had been first noticed twelve months ago since when it had gradually increased in size and latterly it had become very painful when she sat down. It was situated in the upper and inner quadrant of the left buttock towards the sacrum. It was deep seated about the size of a tangerine orange cystic but not freely movable. Firm pressure over the swelling was painful and a curious sensation suggestive of egg shell crackling could be felt.

On the evening of her admission to hospital the patient informed her sister that three years ago as she had missed two menstrual periods she had inserted a bone knitting needle into her vagina which needle she had never recovered.

At the operation after incising the deep fascia a tense swelling with glistening walls was exposed. The finger was easily passed round the tumour except on its deep surface where it was fixed. Here a sharp object like the blunt end of a pencil could be felt. This was held with a stout pair of artery forceps till the tumour was detached on its deep surface with scissors and excised. Gentle traction on the forceps eventually delivered the knitting needle which had been missing for three years.

The tumour itself proved to be a large adventitious bursa with thickened walls and containing broken down granulation tissue and a few melon seed bodies. Apparently the needle had made its exit from the pelvis through the upper part of the great sacro sciatic foramen. The bony needle was smooth in surface had retained its original colour and was 4½ inches long.

Fuller facts were elicited from the patient during her convalescence. She stated that after immersing the needle in lysol and smearing it with vaseline she inserted it as far as she could into her vagina while in the squatting position. The manipulation was painless and there was no bleeding. A week later she had fairly profuse haemorrhage and something came away. She did not lie up and was able to do her ordinary housework. She had had no trouble since except pain on sitting down for the last six months.

Ulverston GRAHAM W. CHRISTIE F.R.C.S.Ed.

A FATAL CASE OF VINCENT'S ANGINA

Vincent's angina is usually a relatively mild affection in this country. J. D. Rolleston[1] states that he has never seen a fatal case and the following example may therefore be worthy of record.

A man aged 32 was admitted to hospital on August 14th 1931 with a diagnosis of diphtheria. The illness was said to have begun eight days previously with headache sore throat and diarrhoea.

On admission the patient complained of severe headache sore throat and difficulty in swallowing. His temperature was 100·6° F. pulse 104 and respirations 22 per minute. Several of the lower teeth were carious and loose with pus oozing out of the margins of the gums. The right tonsil was ulcerated and almost covered by a dark grey slough spreading on to the anterior pillar a much smaller but similar patch was present on the left tonsil. The uvula was not affected but the gland at the angle of the jaw on the right side was slightly enlarged and tender. The characteristic feature of Vincent's angina was unpleasantly in evidence. There was no nasal discharge and examination of the chest and abdomen showed nothing abnormal except slight albuminuria. A throat smear showed the typical combination of spirilla and fusiform bacilli, a former predominating. Pus from the gum margins contained streptococci and staphylococci but no fusiform spirillar organisms. No Klebs-Loeffler bacilli were present in the smear or culture from the throat.

Ulceration of the right tonsil and surrounding tissue became slowly more extensive and involved the right side of the uvula. Diphtheria antitoxin had no effect on the local or general condition. Local treatment with tincture of iodin hydrogen peroxide and salvarsan did not appear to check the spread of the ulceration but considerably lessened the fetor which could often be distinguished at some distance from the patient's cubicle. On the fifteenth day of the illness numerous small blisters filled with blood tinged fluid appeared on the outer aspect of both hips. By this time the patient's general condition was deteriorating. The temperature remained between 102° and 103° the pulse became rapid and soft and delirium was rarely absent. Blood culture on the twenty second day yielded only *Staphylococcus albus*—probably a contamination—the patient gradually sank and died two days later the illness having lasted twenty four days. The condition of the throat did not alter materially during the later stages.

Post mortem examination showed that the pharynx and larynx were not involved in the ulcerative process. Multiple small abscesses were found in the cortex of both kidneys and there were signs of a commencing pericarditis and left interlobar pleurisy. Streptococci were the only organisms found in pus from the renal abscesses.

It seems reasonable to suppose that the ulceration produced by the fusispirillar organisms paved the way for an invasion of the blood stream by the pyogenic organisms from the gums and teeth and that given an otherwise healthy mouth the disease might have taken its usual favourable course.

Romford E. JAMES M.D. D.P.H.

[1] *The Diseases of the Throat*

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

CALCUTTA BRANCH

Pregnancy Anaemia in India

At a meeting of the Calcutta Branch held on December 11th 1931 at the Calcutta School of Tropical Medicine with Dr. KEDARNATH DAS president of the Branch Council in the chair Dr. N. GUPTA read a paper on anaemia in pregnancy.

Dr. Gupta said that ankylostomiasis and other helminthic infections malaria leishmaniasis dysentery tuberculosis syphilis and sprue were more or less responsible for tropical anaemia. The extent to which one or more of these diseases were involved in the aetiology of pregnancy anaemia was an important question. There was certainly a large group of cases where one did not find any cause. Pregnancy seemed to be essential and not a mere accident in the malady. The anaemia complex the blood picture the course of the disease the dramatic end the morbid anatomy and histopathology were invariably the same. The post-mortem series consisted of 203 cases admitted as in-door patients in the Lady Ho[illegible] Hospital in the previous three months at or near full term. It also included a few cases complicated with secondary infections.

The anaemia occurred in all communities—[illegible]s and towns—among Hindus Mohammedans and Christians. The urban districts of Bengal and the rural areas the condition being more common among the poorer classes of Bengal than in the [illegible]. Mohammedans suffered almost equally with Hindus although the number of cases admitted from the former was very much less than that of the latter. Among Indians and Jews suffering from pernicious anaemia [illegible] seventy to be [illegible] Europeans

were practically unaffected The incidence of the disease as found in two years hospital statistics was as follows Hindus 1 in 11 4 Mohammedans, 1 in 5 2 Indian Christians 1 in 4 4 Anglo Indians 1 in 127 8 Jews 1 in 22 6 The highest frequency was between 15 and 20 years with a steady decline after 25 years Primiparae were most affected and there followed a gradual decline more or less to the seventh gravida, and then a sudden rise at the eighth and the ninth gravida

Hygiene and dietetic studies showed that there was some relation between hygiene and pregnancy anaemia and the mode of living and dieting also influenced the disease The cases fell conveniently into three groups Group I included those in which the red cell count was 1 000 000 per c mm or less (36 cases) Group II those in which it was between 1 000 000 and 2 000,000 (114 cases) and Group III cases where the red cell count was between 2 000 000 and 3 000 000 (53 cases) The mean average red cell count was 1 530 000 per c mm and the mean colour index 1 1 The average leucocyte count was 7 485 per c mm Anisocytosis poikilocytosis and polychromatophilia were observed in 74 5 per cent of cases punctate basophilia in 20 per cent and normoblasts and pro normoblasts in 25 per cent of cases True megaloblasts were seen only in 0 4 per cent of cases Platelets showed a decrease in number The Wassermann reaction was positive only in 8 5 per cent of cases The average blood condition of pregnant women of the hospital class was studied in fifty five cases to find out its relative significance in connexion with anaemia in pregnancy The average red cell count was 3 000 000 per c mm the average percentage of haemoglobin was 50 and colour index 0 9 Average white cell count was 7 0[illegible] and the reticulocyte count 1 per cent Of [illegible] cases 10 6 per cent showed an enlarged liver a[illegible] cent an enlarged spleen Pyorrhoea was prese[illegible] per cent of cases

Colon bacteria were recovered from the post nat[illegible]e in 50 per cent of cases 5 per cent of which were haemolytic atypical strains of this group were also found in a few cases The strains of bacteria recovered from the intestinal flora did not differ from those found in healthy persons

From the pathological point of view the striking feature was the deposit of free iron in the internal organs of the body, with marked fatty degeneration in various organs Myeloid metaplasia and areas of haematopoietic cells were present in liver and spleen Haemosiderosis was demonstrated in the histological sections of various organs Bone marrow showed general increased activity of all varieties of cells After a full and detailed discussion the following conclusions were drawn (1) Pregnancy anaemia was not a disease in entity but a syndrome complex (2) The symptom complex of pregnancy anaemia was a manifestation of pathological changes in the different tissues as evidenced by haemosiderosis erythrophagocytosis and increase of cells of the reticulo endothelial system and foci of myeloid changes in spleen and liver (3) The defective haemopoiesis was due to the factor complex of inadequate nutrition to social and environmental conditions lack of ante natal care pre existing anaemia and possible defect in the blood forming organs following anaemia producing tropical diseases Most of the cases give a history of anaemia producing disease in some part of their lives In a condition like pregnancy one or other [illegible] group of these factors upset the balance of the [illegible] haemopoietic system and abnormal corpuscles were thrown into the circulation to be destroyed by the reticulo endothelial cells which were increased in this condition (4) Primiparae suffered most but the severity of the anaemia was not affected by age or parity (5) [illegible] tion the mode of living social and economic conditions and early ante natal care did influence the severity of the anaemia (6) There was an underlying sepsis probably from the intestines (by a quantitative increase of bacterial contents and their extension to unusual sites) No particular bacterium was responsible The general leucocytosis with relative increase of neutrophils was evidence of sepsis (7) Haematological and histo pathological findings in pregnancy anaemia were similar to those of pernicious anaemia of Combe Addisonian type Leucopenia was absent in the majority of cases examined Pregnancy anaemia was not due to primarily injured bone marrow but the haematopoietic system was perverted under the conditions mentioned

Reports of Societies

PREVENTION AND TREATMENT OF ACUTE RHEUMATIC INFECTION

At a meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine on May 24th with Dr E P POULTON in the chair the subject for discussion was Some problems concerning the prevention and treatment of acute rheumatic infection

Dr W R P COLLIS in an opening paper expressed his belief that the conception of rheumatic fever as a contagious disease was of real practical importance It was only since rheumatic fever had been studied epidemiologically that its association with acute naso pharyngeal infection had been explained The fundamental treatment of acute rheumatism was impossible [illegible] On [illegible] epidemiology of the disease was understood [illegible] the introduction of homes for rheumatic [illegible] its where the children might be kept for months and the disease studied, had opened up a new field of investigation The first important observation made by this means was that of the 'silent' or lag period No doubt the phenomenon had been observed before but Schlesinger, while in charge of such a home was the first to realize its aetiological importance A period of from seven to twenty days between the acute throat and the rheumatic relapse had been found very generally in such cases The second observation related to the agent causing the throat infection By using Griffith's blood medium the speaker and those working with him had been able to show that the organism causing the throat infection was the haemolytic streptococcus Other epidemics had been observed associated with different organisms but these had never been followed by rheumatic relapses Acute tonsillitis caused by the haemolytic streptococcus had been observed in non rheumatic communities Rheumatic fever had been observed to follow these throat infections in certain cases The patients showed a similar syndrome—for example tonsillitis a lag period and acute rheumatic fever Rheumatic patients had been shown to be very sensitive to haemolytic streptococcal extract (endotoxin) The facts taken together suggested that throat infections caused by the haemolytic streptococcus were an integral part of acute rheumatic disease Rheumatic fever could not be described as a contagious disease in the ordinary sense of the word inasmuch as more than one factor was responsible for its development The streptococcal throat infection was no doubt contagious in the epidemic sense but was followed by rheumatic fever only in certain patients The final interpretation of the facts elucidated appeared to show that once the principle was conceded that the haemolytic streptococcus was an integral factor in the actiology of acute rheumatism a new field of therapy was opened up At last there was [illegible]

definite to take hold of Here was an organism as easily defined as the organism of diphtheria and the detection and elimination of which was now only a matter of technique The methods to be followed consisted in the first place of the prevention of relapses in rheumatic homes (1) by proper bed spacing cross ventilation and the like (2) by the swabbing of the ward when epidemics occurred and the strict isolation of all patients—including nurses and wardmaids—whose throats were found to harbour the haemolytic streptococcus (3) by the administration of aspirin in sufficient quantities during the silent period and (4) by the desensitization of rheumatic patients There had also to be considered general hygiene to prevent haemolytic streptococcal infection in isolated communities chiefly by the elimination of overcrowding

Dr W H BRADLEY carried further Dr Collis's propositions saying that this new conception of the aetiology of rheumatic fever was suggested by both clinical and epidemiological observations The clinical observations consisted of the typical temperature chart of rheumatism the lag period the sensitizing or allergizing fever which preceded the lag period and the non specific character of such fever The epidemiological observations concerned the incidence and attack rates of acute rheumatism in the normal population in semi isolated communities of normal persons such as schools and in semi isolated communities of people who were susceptible and concerned also the undercurrent of streptococcal fever which coincided with epidemic rheumatism The epidemics observed by Haig Brown Glover and others and the more extensive investigations of Coburn had all suggested a widespread streptococcal parasitism coincident with rheumatism As a school medical officer he had had experience of three epidemics of acute rheumatism occurring in the presence of three distinct waves of a sore throat infection each with a typed haemolytic streptococcal cause Sore throats were observed passing in waves through the school and acute rheumatism turned up in certain boys after intervals of from one to three weeks from the onset of the sore throat Boys who had already shown signs of acute rheumatism relapsed when they came in contact with epidemics of sore throat Scarlet fever provided a more spectacular demonstration of the usual but less obvious *modus operandi* of streptococcal fever in the production of acute rheumatism The therapeutic attack of acute rheumatism should be directed towards the prevention of the original sensitizing fevers These fevers were heterogeneous and autogenous they had nothing to do with foci of chronic infection but were phenomena of a simple acute droplet He was quite convinced that the droplet was the means by which these infections spread The acute infective agent was a temporary resident on the surface of the nasopharynx It might be that in rheumatism its residence was more permanent but that had yet to be proved It often produced follicular tonsillitis but simple sore throat with or without coryza might mark the attack The problem was to reduce the spread of droplet infection In closed communities the isolation of acute catarrhs might be possible but was rarely effective while in the population at large it was impossible to have complete control of all carriers well or ill There was however one insulating material which recommended itself above all others—namely fresh air—and an abundance of this material must be used in the treatment of rheumatic cases These children must not if it could possibly be prevented be allowed to catch cold nor must they be exposed to new contacts carrying infection

Dr CARY COOMBS referred to the persistently high rate of rheumatic infection in Bristol and mentioned that control figures were now being collected from various other populous centres in the Kingdom In Bristol nearly 50 per cent of the cases of organic cardiovascular disease appeared to be rheumatic in origin A possibility was that the incidence in Bristol was due to the fact that Bristol had a predisposed population but to make an investigation from that point of view would be most difficult and the workers concerned would prefer not to come to that conclusion if it could be avoided There were other possible causes which had first of all to be excluded Was this an environmental or a bacteriological effect or both? He alluded to the contrast between Bristol and Bath towns only twelve miles apart both situated in river valleys having similar geological conditions and yet differing greatly in the incidence of rheumatic infection Recently on a fine spring afternoon being on a high hill which overlooked Bristol he noticed the film of smoke which extended over the whole city evidently resulting in a great deprivation of sunlight That same afternoon he drove over to Bath and from a similar eminence saw no smoke covering the city at all It might be that the smoke film by its interference with the sunlight had some influence on the prevalence of rheumatic conditions or it might be that the smoke film was no more than an index to defective ventilation Further inquiries were going to be made into the housing conditions of Bristol and at the same time bacteriological observations were being conducted to ascertain whether there was any marked difference in the streptococcal contents of the throats of the children concerned

Dr E P POULTON said that the most striking thing which had emerged so far in the discussion was the general agreement that acute rheumatism was associated with the haemolytic streptococcus There was almost general agreement that the rheumatic manifestations—the joint pains skin rashes and so on—might be allergic phenomena but that would not explain the carditis or the mitral stenosis One of the openers had suggested that the removal of tonsils was discredited but the speaker still had some idea that such removal was of value He desired to hear on what evidence it was considered that aspirin could ameliorate the condition He was rather suspicious of salicylates as being merely symptomatic treatment As for the difference between Bristol and Bath at Bath he had been impressed by the heat as well as by the humidity Perhaps warmth was a really important point in prevention

Dr T J POYNTON said that if any disease was specific rheumatism in children was a specific disease Therefore he thought it probable that the organism would prove in the end to have some specific characters about it Whether it acquired its specificity after it got into the body he could not say He thought it possible that the streptococcus after getting into the constitution set up specific poisons He hoped that a fear of the infectiousness of rheumatism would not get into the mind of the public before the workers concerned had carried on the investigation a little further He believed in [illegible] causes of rheumatism to be sudden changes of temperature and these not even the modern detector [illegible]

Dr KINGSTON BATTEN in noting that the [illegible] Registrar General's return he found [illegible] from acute rheumatism to be greater in the Northern counties in the Midland counties the [illegible] that found in the North [illegible] half the Midland figure This seemed to [illegible] proof that warmth had some bearing to do with [illegible]

Dr LEONARD [illegible] said that personally [illegible] experience of [illegible] Hospital [illegible] known that with a rheumatic subject and a case of [illegible] or scarlet fever was a very [illegible]

not sure that there was such a definite incubation period as had been mentioned It had been said that following scarlet fever rheumatic infection developed after fourteen days From his experience the interval was much longer and the infection might not occur until after the child had returned home It was rather remarkable that in all these epidemics no case appeared to be recorded as having developed one of the common manifestations of the disease —namely chorea

Dr E C WARNER mentioned that cases which he had seen in the way of dramatic relapses had all been associated with a haemolytic streptococcus in the throat although his cases were nothing like so numerous as those mentioned by the openers He referred to the development of nephritis with which rheumatism ran closely parallel having the same streptococcal throat to begin with the same silent period and then the infection

Dr C W J BRASHER quite agreed as to the pall of smoke over Bristol, but said that the same thing was found in Sheffield and in other cities of the North If one looked down on Liverpool from the plateau where the cathedral stood it was almost impossible to see the houses and streets on the banks of the Mersey This must interfere with the sunlight

Dr B E SCHLESINGER declared that environment was still one of the most baffling factors in this dire disease Dr Coombs had said that children returning from a convalescent home very often relapsed and he had seen the same thing not merely when the child returned to its old environment but even to some better environment such as the country It seemed that any change of environment for better or worse, might cause a new development of the disease If warmth was a preventive factor how was it that in some northern countries like Norway and Sweden rheumatism was practically unknown? As for aspirin and salicylates in general these had been used in an endeavour to stop the results of the preceding tonsillar infection The idea originated from some work done in America where Swift and others found that if on giving serum to patients aspirin was given at the same time and for ten twelve or fourteen days afterwards the serum reaction which might be expected did not take place nearly as severely Working on these lines he and his co workers had adopted the plan that when any child got acute pharyngitis aspirin should be given for a period of twenty one days Although it was not absolutely a safeguard in every case it had been found that the number of relapses occurring after the primary infection was not nearly so great as it was three or four years ago when this line of treatment was not followed With regard to tonsillitis they were all more cautious in recommending tonsillectomy against further attacks of rheumatism chiefly because they had seen just as virulent relapses in cases from which the tonsils had been removed and which later had had a pharyngitis Finally it had been assumed that the haemolytic streptococcus was the responsible organism He confessed that he still thought this streptococcus need not necessarily be incriminated He had several cases where a typical *viridans* infection produced a fatal relapse of carditis

Dr R P GARROW (M O H Hornsey) said that the same conditions referred to as pertaining to Bristol pertained also to London As medical officer of health for a borough in the north of London with a population of 100 000 his impression was that the incidence of rheumatism and rheumatic heart disease was lower on the northern heights than in the London area proper Any one who had climbed Highgate Hill knew that one could look down on London and see it under a smoke pall most of the time In the borough of Hornsey he knew of only two heart cases among children so bad that they had to go to special heart schools As for the effect of warmth the average temperature in Hornsey was 5° to 10° lower than in London

Dr N GRAY HILL had been struck by the slight extent to which acute rheumatism tended to spread in wards though influenza and other infectious illness spread rapidly He had also been impressed at Carshalton by the rarity with which rheumatic manifestations following sore throat occurred among ward maids His feeling was that very few people were able to take this disease which threw a very big responsibility on to the soil or condition of the patient

Dr COLLIS in a brief reply dealt with the effect of tonsillectomy In a group of thirteen fatal cases after attacks of acute rheumatic carditis prolonged over months during which the symptoms of active disease had never subsided he found on necropsy the centre of the tonsils to contain the haemolytic streptococcus in almost pure culture Although tonsillectomy would not prevent relapses the presence of infected tonsils might prolong an attack and lead to a fatal termination

FILARIASIS

At a meeting of the Royal Society of Tropical Medicine and Hygiene held at Manson House on May 19th with the president Dr CARMICHAEL LOW in the chair Professor F W O CONNOR of Columbia University, New York dealt with the aetiology of the disease syndrome in *Wuchereria bancrofti* infections The paper was preceded by an extensive demonstration of microscopical slides and charts

Professor O CONNOR said that following the discovery of *W bancrofti* the older tropical clinicians had come to regard the clinical phenomena associated with filariasis as due to the parasite *per se* Later Prout (1908) had definitely challenged the theory of parasitic responsibility and the view now generally held among members of the medical profession in the Tropics was that *Streptococcus haemolyticus* was a *sine qua non* in clinical filariasis, and the cause of both its inflammatory and its obstructive phenomena The role of the helminths was relegated to that of a foreign body which either provided a focus for the operation of bacteria or by its toxic action so impoverished the tissues that bacterial invasion followed Apart from filarial abscesses which were commonly infected by the fingernails of patients the speaker called into question the role of bacteria on aetiological bacteriological pathological and clinical grounds First, the striking correlation which had been found to exist between the presence of the insect vector of *W bancrofti* and the incidence of filariasis was shown as well as the close relation between the number of persons in a community with microfilariae in the blood and the amount of clinical filariasis present Secondly the lack of correlation between chronic filariasis and bacterial infection was pointed out In filarial lymphangitis, with an adequately sterilized skin McKinley had recently failed to isolate *Streptococcus haemolyticus* either by aspirating tissue juice and lymph from the subcutaneous tissues and the dermis or from pieces of skin removed at biopsy smeared and subsequently cultured Simultaneous blood cultures had invariably proved negative Thirdly while his own method of serial section had invariably failed to reveal streptococci *in situ* in the skin lymphatics and subcutaneous tissues it had consistently revealed a condition of hyperfilariation Buxton had first noted in the Pacific that filarial lymphangitis spread from above downward and in Porto Rico 50 per cent conformed to this finding in 25 per cent it remained stationary and in 25 per cent ascended In addition Professor O Connor had noted that the lymphangitis often originated in painful focal

spots biopsy of which invariably showed degenerating adult filariae The conclusion he had reached was that adult filariae and their embryos were entirely responsible both for the obstructive phenomena in filariasis as well as for the acute inflammatory changes like lymphangitis which originated from toxic substances liberated by disintegrating worms He believed the tissue reaction so induced to be allergic in character

The PRESIDENT pointed out that at the meeting of the society in 1908 when Dr Prout had first enunciated the bacterial theory he had opposed this holding that tropical elephantiasis was dependent on the number of filariae present in the individual lymphatics and quoting cases where masses of adult worms had been dissected out from there He would however not go so far as to say that bacteria never played a part in the clinical syndrome though undoubtedly Dr O Connor's important work on focal points showed that filarial lymphangitis could be produced by toxic action of the parasites in the absence of micro organisms Dr MANSON BAHR after reviewing the history of the various expeditions on filariasis sent out from the London School of Tropical Medicine dealt with clinical classification of elephantiasis of which he recognized seven acquired varieties and one of congenital type Colonel CLAYTON LANE discussed the possible role of the two larval stages in *W bancrofti* in the causation of the filarial syndrome the embryos might undergo local development at the site of inoculation spread up the lymphatics and lymph glands or go via the circulation to distal tissues in which maturity might be attained In Porto Rico Professor O Connor had pointed out that owing to the habits of the people a scrotal feed by a mosquito was highly improbable direct local or lymphatic spread to this region was unlikely and the blood route afforded the most probable explanation Professor O Connor had also found that in female worms parturition took place about midday and if filarial periodicity was to be explained on the theory of simultaneous cyclic parturition then that cryptic eight to twelve hour interval until midnight needed explanation It was difficult to see how embryos would be stimulated to penetrate the vessel walls without losing their sheaths and the latent period might be due to the time taken to traverse the varicose and possibly collateral lymphatics where obstruction existed

Dr HAMILTON FAIRLEY pointed out that the special value of Professor O Connor's work on filariasis was dependent on the fact that he was approaching its pathology from a new angle by the method of serial sections This permitted large areas of lymphatic glands and lymphatics being examined and had led to the demonstration of hyperfilariation of focal spots in lymphangitis and of the fact that filarial embryos could gain direct access to the venous blood by directly traversing the vessel walls distal to the lymph glands The anaphylactoid theory was reviewed in the light of the dermal reaction in filariasis and a case of elephantiasis was cited in which the injection of dirofilarial extract had given rise to quite atypical delayed extensive and persistent wheals Was it not possible that anaphylactoid reactions might undergo modification in a lymph obstructed limb Dr P A BUXTON said that most of the big riddles in filariasis centred round the life history of the worm how it lived how long it took to grow up and how it reproduced In most parts of the world the types of filarial disease due to *W bancrofti* differed clinically Thus in China the commonest condition was lymph scrotum whereas in the South Pacific the only record of such a case had occurred in an adult Chinese Small differences in the lymphatics might exist in different races of mankind and he believed that we ought now to embark upon a study of the normal population

Reviews

ASTHMA AND HAY FEVER

Asthma and Hay Fever in Theory and Practice[1] by ARTHUR COCA MATTHEW WALZER and AUGUST THOMMEN is divided into three parts Professor Coca has written the first which deals with the general principles of hypersensitiveness anaphylaxis and allergy and contains a full bibliography The differences which exist between anaphylaxis in animals and allergy in man are exhaustively considered The term atophy has been introduced by the author to indicate certain clinical forms of human hypersensitiveness which do not occur as far as is known in the lower animals and which are subject to hereditary influence Atophy is fully discussed in a separate chapter and its relation to reagins explained A good account of work done on sensitization to non antigens is included in a chapter on miscellaneous considerations Serum disease and its bearing on the therapeutic use of serum and the hypersensitiveness of infection are also considered and Part I ends with a very useful chapter on the preparation of extracts for the testing and treatment of human hypersensitiveness

Part II comprises a discussion of asthma by Dr Matthew Walzer The history and theories of asthma are discussed in detail and in a section on the pathology of bronchial asthma records of 33 complete necropsies are given These should be valuable for reference as necropsy findings are very scarce in the literature The aetiology and clinical course are well described but the account of laboratory findings is very incomplete for a work of this comprehensive nature The examination of the sputum and the urine receives some attention but chemical changes in the blood are dismissed as non existent Gastric analysis is considered to have little value in elucidating the aetiology of asthma Skin tests are described in detail in a discussion of specific diagnosis and treatment is fully reviewed Most satisfactory results are to be expected by avoidance of the offending atopen When this cannot be effected attempts at hypo sensitization (specific desensitization) do not appear to be strikingly successful in the author's experience Various forms of non specific therapy are described and vaccines are considered as a form of non specific therapy as is also the use of x rays Dietary treatment is thought to be of little value except in eliminating foods to which sensitization is present Methods of testing for hypersensitiveness are fully described by Drs Matthew Walzer and A A Thommen Drs Katherine Bowman and Matthew Walzer have contributed interesting pages on the nature of the common atopens A valuable feature of this section is an account of the different guises under which such skins as rabbit masquerade in modern conditions and of the relative frequency with which sensitization to a given atopen may be expected in a series of cases

Dr A A Thommen contributes the third part of the book The opening chapter on the history of hay fever is very interesting and the pioneer work of Blackley on the aetiology and of Noon on the treatment of this condition is fully recognized This is followed by several chapters which have less interest to readers in this country as they deal with the botany of plants that cause hay fever in America A very interesting chapter follows on the nature of the hay fever producing substance in pollen Non specific treatment is next discussed with but little encouragement to hay fever sufferers though by means of specific treatment some 80 per cent of patients

[1] *Asthma and Hay Fever in Theory and Practice* By Arthur Coca M D Matthew Walzer M D and August A Thommen M D London Baillière Tindall and Cox 1931 (Pp xxii + 851 97 figures 40s)

are stated to be benefited A good account of the method by which this is brought about is given in the chapter on that subject

The authors have collected in a convenient form much information though the general reader may be surprised at the amount of space devoted to discussion of nomenclature throughout the book The work of certain European workers may be of more value than might be gathered from these pages On the whole this will be found to be of greater use as a reference book for research workers than as a textbook on the subject

TREATMENT OF HARE LIP

M PAUL PLESSIER has had the good fortune to work as house surgeon to M Victor Veau of Paris and in a profusely illustrated monograph of 140 pages[3] he sets out the opinions and methods of his master It is a most interesting work showing that attention to detail and frank discussion of results have always marked the work of Veau This frankness is the more welcome as the subject of hare lip has probably been responsible for more disingenuousness both verbal and diagrammatic than any other deformity of the body The usual drawings of the textbooks in which a complicated arrangement of flaps, notches and angles finally subsides into a straight line intersecting a perfect Cupid's bow, have no place in this work Even more important, the cleft of the nostril instead of being ignored is treated with the respect that this most ugly and intractable deformity deserves There is a complete section devoted to reconstruction of the floor of the nose by an extension of the mucosal flaps which Veau uses in gaps of the hard palate In the actual joining of the lip these surgeons like most of the others who treat this extraordinarily complicated condition, are continually altering small details of their technique To this must be attributed the weakness of the book—a certain vagueness of description and diagram regarding the steps of the operation The lines of the incision in the lip run down the sides of the cleft in quite a simple way, and the strain of junction is taken by wire sutures through the muscles much like those used by Veau in the soft palate No mention is made of that excellent device Logan's bow

There is a most interesting series of photographs showing bad results of other methods and a commendably candid group of satisfactory ones resulting from the technique described We shall look forward with interest to an equally sincere and intelligent paper on the treatment of double hare lip So far there has been an easily understandable reluctance of surgeons to publish untouched photographs of the results they obtain in the treatment of that dreadful deformity

THE ABDOMINAL SURGEON'S GUIDE

In *A Clinical Study of the Abdominal Cavity and Peritoneum*[4] the first of Hoeber's Surgical Monographs Dr EDWARD MEAKIN LIVINGSTON of the Bellevue Hospital New York sets out the fundamental knowledge with which an operating surgeon should be equipped This invaluable source of reference generously supplied with illustrations and explanatory diagrams represents the author's accumulated notes derived from many sources as shown by the number of references The essential importance of embryology anatomy and physiology is well brought out and the practical bearings of the data thus collected are an attractive feature This volume is adapted for two groups of readers Students may with advantage work through the volume and thus derive an additional interest in their preclinical studies by correlating the scientific details of embryology anatomy, and physiology with the problems of clinical practice they are thus provided with a bridge from one stage of the curriculum to another and led to realize as they do not always do to the full that their labours are not in vain Clinicians on the other hand may as the author suggests, start later in this volume with the more clinical contents and then as occasion arises turn back to refresh their memories about the preclinical fundamentals It appears that another welcome volume will deal with the solid viscera in the abdomen and with the peritoneum

There are three main sections each with a number of chapters The first deals with the empty cavity of the abdomen, and includes descriptions of its typography the diaphragm the pelvic floor its fluids and the variations in intra abdominal pressure The second section on the gastro intestinal tract begins with ninety pages on the essentials of embryology in which references to biliary colic and int a abdominal new growths are made The anatomical and physiological divisions and the vascular system of the gastro intestinal canal then receive detailed attention and here, as elsewhere the normal is skilfully correlated with the morbid manifestations and their treatment The third section on visceral neurology is the last and is even more interesting than the previous divisions

The author who wisely takes *nothing for granted* has investigated the exact significance of even the most commonplace terms and has provided an extremely useful and instructive chapter on eponyms, this gives thumb nail sketches of the men whose observations are thus perpetuated and supplies photostats of their original publications such as those of G D Santorini François Poupart Henry Head L G Courvoisier and Christopher Addison

WHITEWASHING KING HENRY VIII

The Private Character of Henry the Eighth[4] is a brave and fairly successful attempt on the part of Mr FREDERICK CHAMBERLIN, who has already written a 'private character of Queen Elizabeth to clear the name of her father It is impossible to acquit the king of polygamy but there is much that is doubtful about his illnesses and the cause of the rapid change which took place after the year 1536 Mr Chamberlin begins the book with a lively attack on biographers who have written in imitation of Lytton Strachey and then gives a history of England from early times until the accession of the Tudors The history may be described as accurate potted and flavoured to suit the taste of the American palate Both these chapters could have been omitted with advantage Having thus vented his spleen Mr Chamberlin proceeds to a consideration of the private life of Henry VIII and reproduces a portrait of the king as an infant—healthy wide eyed and square headed His method has been to examine afresh contemporary statements from documents in the British Museum and the Public Record Office as well as the entries in the Calendar of State Papers in England Spain and Venice

The examination has been thorough and Mr Chamberlin has spared himself no trouble for he has travelled to see the original papers when there was doubt or difficulty in getting their true sense in the printed

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[3] *Traitement du Bec de Lièvre Unilateral Procédé du Dr Veau* Par Paul Plessier Paris Masson et Cie 1931 (Pp 146 106 figures 16 plates 30 fr)

[4] *Clinical Study of the Abdominal Cavity and Peritoneum* By Edward Meakin Livingston B Sc M D Hoeber's Surgical Monographs New York P B Hoeber Inc 1932 (Pp xvii + 566 37 figure 15 dollars)

[4] *The Private Character of Henry the Eighth* By Frederick Chamberlin LI B F R Hist S I R G S I S V London J Lane The Bodley Head 1932 (Pp 190 illustrated 18s)

versions From these sources he has extracted many personal items relating to the private life of King Henry VIII Edward VI and Queen Mary and has put them down without comment He afterwards made a précis of the medical details and submitted it to a surgeon and to three teachers of midwifery asking whether there was evidence to prove that Henry VIII suffered from syphilis as is generally stated Sir D Arcy Power on the surgical side exonerates the king stating that he believes him to have suffered from a callous ulcer which started in varicose veins The late Dr Whitridge Williams professor of obstetrics at Johns Hopkins University gave a verdict of not proven Mr Eardley Holland says there is nothing in the reproductive history of Elizabeth Blount of Anne Boleyn or of Jane Seymour to suggest syphilis whilst Professor Philip F Williams of the University of Pennsylvania thinks the medical evidence is insufficient to demonstrate that Henry ever had syphilis

The point still remains in doubt therefore but the careful examination of documents which Mr Chamberlin has made more than repays him for the trouble he has taken It reveals the king as a magnificent sportsman standing 6 ft 2 in measuring 42 in round the chest and 35 in round the waist a master in all the athletic contests of the time able to wear down every adversary in the tourney a good executive musician and a composer whose works as they have been rendered recently by the B B C still have power to please No doubt he was to some extent a showman—witness the Field of the Cloth of Gold and as everyone knows he was the devoted servant of all pretty ladies What happened? Why at the age of 44 when he was a giant in perfect health did he give up active exercise and continuing to eat and drink without restraint gradually become the gross individual who had to be taken about in a carrying chair and why is he always pictured in this later stage rather than in the full vigour of his age when he was beloved of all his subjects? Is the answer to be found in that fall from and with the great horse which rendered him without the power of speaking for two hours? Each must answer for himself on the evidence given The book is worth reading apart from its medical interest The portraits showing the progress of the king from youth to age are well reproduced from the originals and there is a good index

PUBLIC HEALTH AND ITS PROGRESS

In the preface to his book entitled *Towards National Health*[5] Dr J A DELMEGE writes

> A widespread effort is now being made to awaken general interest in the state of the public health but though the subject has been dealt with from various points of view yet its history to the educated public surely one of the most interesting aspects has hitherto been strangely neglected and so far as the writer knows no work at present exists which covers the same ground as the present volume

This is both true and astonishing and Dr Delmege is to be congratulated upon filling the vacant place and filling it so adequately The author and the publishers have together produced a volume which is almost entirely satisfactory It is true that the book must be read at a desk or table and that it cannot conveniently be held in the hand This is rather a pity but it is not because the book is bulky—the text runs to 219 pages only—but because the character and number of its excellent illustrations of which there are nearly a hundred necessitate a heavy paper and a relatively large page Apart from this the production of the volume is in every respect as pleasing as is the skill shown in its organization arrangement and writing The subtitle of the book is Health and Hygiene in England from Roman to Victorian Times and it is a very interesting short history of the subject so indicated In spite of compression the style remains clear and no essential point is missed The way in which national health and hygiene are kept in true perspective in their relation to the general advance of science and to other aspects of social life and the skill with which conditions in England are shown without any loss of proportion to arise from or to be dependent upon events or advancements elsewhere are remarkable features of this work The national importance and historic consequences of epidemic disease from century to century are well brought out and Dr Delmege traces the character of the diet of the various classes of society and the hygienic consequences which followed from alterations in this respect

The book necessarily contains brief accounts of the life and work of a number of eminent physicians and philanthropists such as Sydenham John Howard Chadwick the Earl of Shaftesbury Jenner and Florence Nightingale and many will appreciate particularly the fine series of portraits of eighteenth century and early nineteenth century pioneers The history ceases with the Public Health Act of 1875 It is to be hoped that the author will not be too rigid in his adherence to this Act as a final landmark but that he may soon include a chapter dealing with the last fifty years This is essential if we are in accordance with the motto of the title page to

> presage the leading lines of that which is before us

This book should be welcome to the general reader to the student and to the medical practitioner

MERCK'S REPORT

The third part of *Merck's Annual Report*[6] for 1931 contains references to a number of substances of considerable general interest and incidentally gives evidence of the increasing importance of drugs in radiology Several pages are devoted to cholecystography by the oral administration of tetraiodophenolphthalein and it appears that satisfactory results can be obtained by this method if careful attention is paid to detail In the case of pyelography it is stated that toxic side actions produced by the agents employed are still a source of trouble mention is also made of the use of iodized oils such as lipiodol Pitkin's method of spinal anaesthesia (spinocain) is evidently attracting general attention for references are given to numerous articles on this subject in America France and Germany as well as in Great Britain The drug stovarsol which was introduced as an oral prophylactic against syphilis is finding a steadily increasing range of use It has been known for some years to be efficacious in amoebic dysentery and would seem now to be a serviceable anthelmintic as well It has been used in Russia against *Trichocephalus dispar* The introduction of vitamin D in the form of irradiated ergosterol has led to this substance being tried on a very wide variety of diseases in addition to rickets Levaditi has shown that its use encourages the calcification of tuberculous foci in the lungs and clinical observers state that it has a favourable effect in several forms of tuberculosis The effects produced by overdosage are also mentioned and some twenty references are given to literature on the subject It is unfortunate that the publication of this useful report will have to be discontinued this year owing to the financial stringency

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[5] *Towards National Health* By J Anthony Delmege O B E M R C S L R C P D P H With a foreword by Sir Thomas Lewis C B E London W Heinemann (Medical Books) Ltd 1931 (Demy 8vo pp xv + 251 93 figures 21s net)

[6] *Merck's Annual Report 1931* Part III English edition Darmstadt E Merck Chem Fabrik 1932 (Pp 342-481 illustrated Sent free of charge on application to any medical man)

NOTES ON BOOKS

The fifth edition of the *Synopsis of Midwifery and Gynaecology* [7] by Mr ALECK W BOURNE includes a certain amount of new matter a set of new diagrams illustrating the development of the amnion and a detailed account of the Stockholm technique for the treatment of carcinoma of the cervix This is an excellent example of a book specially devised for facilitating revision before sitting for final examinations the whole of the matter being clearly tabulated and arranged to permit quick reference to any subject Although not a textbook in the ordinary sense it contains a good deal of well summarized general information and a further lease of popularity can be predicted

Professor Agrege A SÉZARY the editor of the Collection des Initiations Médicales has contributed to this series the volume *Dermatologie* [8] in which he writes with the authority of physician to the famous St Louis Hospital This concise guide to students beginning work in the skin department sets out the principles of the subject and is divided into three parts dealing with (*a*) diagnosis occupying more than half of the volume (*b*) the elements of nosology and (*c*) the affections of the cutaneous follicles glands hair and nails The admirable illustrations from photographs add much to the value of this convenient handbook and there is an exceptionally good index

In his work on eminent tropical doctors [9] Professor G OLPP lecturer in tropical medicine at Tubingen has compiled a valuable biological dictionary followed by seventy one portraits in alphabetical order of men and women who have won distinction in tropical medicine from the time of Imhotep down to the present day The editor's task has been facilitated in the case of living persons who have sent him an account of their life and achievements A bibliography of each authority's principal work is appended to his life Most of the living British workers in tropical medicine receive adequate notice while the deceased include Andrew Balfour Bassett Smith James Cantlie A J Chalmers J E Dutton Joseph Fayrer Leishman Lockhart James McGregor Patrick Manson Louis Sambon and Adrian Stokes Women are represented by Frau Antonie Brandeis of Hamburg Miss Alwyn Evans Dame Mary Scharlieb and Miss Clara Swann the American medical missionary who died in 1910 The work will prove a useful supplement to Hirsch's well known biographical lexicon

The dangers of too academic an approach are well illustrated in *The Psychology of a Primitive People* [10] by S D PORTEUS and it is not clear why the author should hesitate to give his predecessors their legitimate due when at the same time he uses and acknowledges the great mass of material for which he is indebted to them He surveys the field critically and it is of interest to note that he finds the case for an alleged ignorance of physiological paternity which has been attributed to some of the tribes not proven Knowledge and social belief are not identical and the question is one of metaphysics rather than of empirical fact The intelligence tests on which Professor Porteus has mainly relied for his psychological analysis are not convincing as not only do they lose their validity when applied to an alien medium but the subjects on which these laboratory experiments were made were themselves living outside their tribal environment and had been subjected to prolonged European influence His chapters on environmental handicaps and on the psychology of initiation are probably the most stimulating in a rather disappointing book

The fifty first volume of *The Transactions of the Edinburgh Obstetrical Society* [11] covers the session 1930–1 and resembles its predecessors in containing practical articles on various aspects of obstetrics and gynaecology It includes the papers read at the various meetings of the society together with the presidential address by Dr H S Davidson which has a special historical interest

Continuing their series of dictionaries of technical words and phrases in foreign languages Messrs E Marlborough and Co Ltd have now produced one relating to English and German [1] A fair number of the most commonly used medical terms are included as well as those of engineering architectural and various trade interests This volume does not pretend to compete with the special literary etymological or commercial dictionaries already on the market but it does provide professional men with a good many of the words they are likely to require in everyday business

[7] *Synopsis of Midwifery and Gynaecology* By Aleck W Bourne M B B Ch F R C S Fifth edition fully revised Bristol J Wright and Sons Ltd London Simpkin Marshall Ltd 1932 (Pp viii + 479 175 figures 10s net)

[8] *Dermatologie* Par A Sézary Collection des Initiations Médicales Paris Masson et Cie 1932 (Pp 237 84 figures 30 fr)

[9] *Hervorragende Tropenärzte in Wort und Bild* Von Univ Prof Dr Med G Olpp Munchen Otto Gmelin 1932 (Pp viii + 446 71 plates M 30)

[10] *The Psychology of a Primitive People* By Stanley D Porteus London E Arnold and Co 1931 (Pp xv + 438 48 plates 3 maps 30 net)

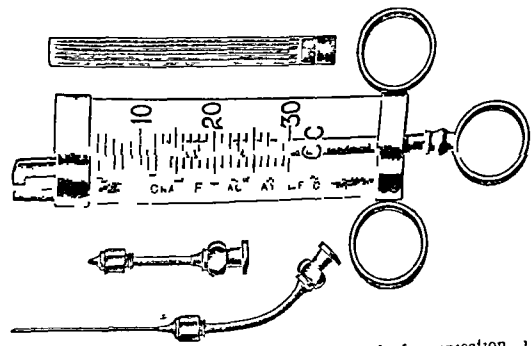
[11] *The Transactions of the Edinburgh Obstetrical Society* Volume li Edinburgh Oliver and Boyd Ltd 1931 (Pp xv + 171 illustrated)

[1] *Marlborough's German Technical Words and Phrases* Third edition enlarged and revised by E M Rolffs London E Marlborough and Co Ltd 1932 (Pp 188 7s 6d net)

PREPARATIONS AND APPLIANCES

LOCAL ANAESTHETIC SYRINGE

Mr C CELLAN JONES F R C S (Swansea) writes In view of the formidable number of local anaesthetic syringes which are already available to the practitioner I have hesitated for some years to describe yet another variety I do not claim any great originality for the apparatus illustrated herewith nor do I suggest that it presents strikingly novel features it is the product of my attempts to eliminate the disadvantages of the many other syringes which I have previously employed The syringe is permanently open at its upper end so that the piston can be instantly removed and the barrel replenished by pouring in fluid from above The barrel has a capacity of 30 c cm and is of specially hardened glass which is



preferable to metal in that the fluid for injection is fully visible thus avoiding the risk of air introduction into veins or tissues A correctly placed peripheral nozzle permits an unobstructed view of the injection field Both straight and curved mounts suitable for carrying out injections in all planes are supplied fitted with adaptors for Schimmel's needles of varying lengths and calibres The latter have been found to inflict the smallest degree of pain and trauma Most makes of so called Record needles can be fitted directly to the nozzle which will then serve for intravenous injections for the administration of anatoxins or for the performance of aspiration In order to maintain the price of the syringe at a moderate figure expensive attachments which are of doubtful practical value have been purposely avoided

I have used this syringe in anaesthetizing for conditions varying from the removal of sebaceous cysts and unerupted molar teeth to the performance of appendicectomies gastrostomies herniotomies and operations on the head and neck I have also recently employed it for all intravenous work which demanded the injection of fair quantities of fluid The instrument can be obtained from Messrs Chas F Thackray Leeds

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TOWN PLANNING

The growth of civic pride of love for one's own town and the countryside about it has of recent years become manifest The care of old buildings the preservation of beauty spots and the intense resentment felt at the spoiling of the amenities of the country by unsightly development are evidences of this growth Pride in one's city marked the burgesses of mediaeval times it is shown in the remains of great cities of long past eras But years of degradation have too often overbalanced the periods of great work The new spirit that is abroad is well shown in the fine work on *Recent Advances in Town Planning*[1] written by Thomas Adams in collaboration with Longstreth Thompson, Maxwell Fry and James W R Adams It is a book that will add to the enthusiasm and knowledge of all who are striving to make this fair land of ours show something of the spirit breathed in Blake's *Jerusalem*

Town planning is the art of shaping and guiding the physical growth of towns and also of rural communities in harmony with social and economic needs It is much more than street planning and also covers a wider field than is indicated by the contents of statutory town planning schemes The same principles of design that govern the art of building which we know as architecture govern the art which has come to be known as town planning In both the elements of truth proportion balance fitness to purpose and economy have to be expressed and realized Town planning is in fact a predominant form of architecture for it is architecture applied to town building which includes all the problems of design scale and arrangement of individual buildings and their reciprocal relations One might describe the chief purpose of a town plan as that of securing a well-balanced distribution and relation of the uses of land and buildings densities of building and means of locomotion The problems consist in securing convenience of locomotion in all its phases—including waterways railways highways and streets and their co-ordination adequate facilities for industry distribution of economic activities and places of residence and recreation for employees wholesome housing and good sanitation

England in the eighteenth century had attained what appeared to be the maximum development Pack horse and coach filled the need of locomotion towns and villages studded the main roads and a vigorous life was diffused all over the land Then almost suddenly came the railway boom Manufacturing towns sprang up in the Midlands and the North so rapidly that little thought was given to the future Old plans fell into disuse High Street was superseded by Station Road, the market place by the goods yard the old country inn by the railway hotel The roads were neglected In our day the motor car has brought a revival of the once decayed highway High Street has come into its own again bottlenecks and narrow streets are resented, and the old market squares have become car parks The changes in locomotion found our towns unready Railways remade old towns and new road traffic has found both old and new creations unsatisfactory Something has to be done to improve means of communication and this involves planning and replanning both towns and country areas

In the Renaissance period there was a very encouraging effort at town structure extension and adornment Inigo Jones designed Covent Garden Piazza and Christopher Wren, in the grandest way would have rebuilt the City after the Great Fire He had to be content with good architecture imposed on old fashioned planning For some two hundred years London developed extensively as a garden square town Its character was given to it by its open tree planted squares extending from Mecklenburgh Square in the east round a wide semicircle to Hammersmith In the garden square London hit on an element which was not quite the bare forum piazza place platz or market Spacially it was like these but functionally it was a garden—simple homely visible sunny and generally beautiful—attached to a group of buildings It made for community instead of individualistic privacy by replacing the back gardens of earlier and later days A great part of this development was carried out on the initiative of large landowners under the best architectural guidance The work of Nash in Regent Street and Regent's Park was a clear sighted development made possible by the Crown New Town planned by James Craig in 1767 in Edinburgh was another example though Ruskin severely criticized it Exeter had certain features derived from the grand manner and Bath was perhaps in miniature the best example in England of the Continental pattern These developments were a recognition by great landowners of the value of landscape architecture There was a sorrowful ebb early in the nineteenth century Even the parks were threatened Hyde Park was made barren and covered by debris after great fairs The parks are no longer in danger of buildings or fairs but possibly of locomotion and sports which may destroy them as beauty spots for quiet enjoyment

After the great landowners came the great employers of labour Saltaire in Yorkshire built by Sir Titus Salt Bournville by George Cadbury Port Sunlight by Lever Brothers Earswick by Joseph Rowntree and the model village at Hull built by Reckitt and Sons These places were villages developed around a single industry The founders wanted room to expand their factories and good living conditions for their workers These experiments led Ebenezer Howard to publish his book *Garden Cities of To-morrow* He maintained that

[1] London J and A Churchill 1932 (2s)

it would pay manufacturers to move from the crowded cities into the country and take their works and their workers with them Letchworth was born of that idea, Welwyn came later The social idea was advocated by Henrietta Barnett, and from that came Hampstead Garden Suburb There were similar developments on the Continent notably in Germany, and also in the United States Force of public opinion brought our Town Planning Act of 1909 Since the passing of that Act there has been a great development in town planning practice as well as in education This growth is well set out in the pages of Mr Adams's book In America a great impetus was given to the work by the design, grouping and landscape setting of the buildings of the World s Fair in Chicago in 1893 This gave rise to the vogue of the 'City Beautiful" At first the enthusiasts were all for beauty and were at loggerheads with utility Latterly there has been a broadening of the conception so that social and economic aspects have been properly recognized and found not to conflict with the beautiful

The British Town Planning Act of 1909 took a wide view of the problem The essential words were "A town planning scheme may be made in accordance with the provision of this Part of this Act as respects any land which is in course of development or appears likely to be used for building purposes, with the general object of securing proper sanitary conditions amenity and convenience in connexion with the laying out and use of the land and of any neighbouring lands' Up to 1915 as many as seventy four local authorities had prepared 105 schemes, covering 167 571 acres Part II of the Housing and Town Planning Act of 1919 gave a greater impetus to the work The power of initiating schemes was given to the local authority, and the Ministry of Health had power to act in default of the local authority One vital change was the insertion of the word shall instead of 'may in respect of a town planning scheme by a local authority with a population of more than 20 000 Certain authorities have obtained further powers In 1921 Liverpool obtained powers requiring designs of building elevations to be submitted for its approval Bath secured similar powers Surrey County Council in 1931 obtained powers to prevent ribbon development and to control the location and design of petrol filling stations What can be done by way of replanning old cities has been shown in Paris Haussmann s plan had behind it a dictatorship He cut his great roads with more or less respect for fine architectural features though his main object appears to have been to open up the dense formation of [illegible] haphazard building for the better circulation of traffic rather for the movement of troops and the alignment of [illegible] Paris fell from grace in the chaotic building [illegible] city walls which has blighted what might [illegible] delightful areas London has seen some [illegible] about the Law Courts, where [illegible] magnificent streets and ways [illegible] the huge [illegible] improvement of Milan and of Rome, the growth of whole new cities such as Delhi and Canberra, are examples of the highest interest

Mr Adams, in his summing-up, points out that the extent to which town planning will advance must depend in the final analysis, not on powers given by Acts of Parliament, but on how the work of planning is carried out in practice Its record of achievement will be commensurate in value, not with the extent to which it is done, but with the manner in which it is done The whole history of public health and planning legislation is a history of applying rules to prohibit one bad quality or another, this is good so far as it goes but we need a wider appreciation of how to secure and maintain good qualities in development that cannot be defined or enforced by rules Effectiveness of planning depends on the foresight and judgement used in design and practical application, which is largely outside the control of law We must not expect to obtain by law what can only be obtained by the work of sympathetic administrators and trained town planners, by adequate research and sound philosophy, and by education of the public and of the bodies it elects to represent it

INTESTINAL AUTO-INTOXICATION

Though there is a long standing and widespread belief that poisoning may follow the absorption from the gastro intestinal tract of substances formed in it by the action of digestive ferments or putrefactive bacteria positive evidence is difficult to obtain, and even after much discussion and research many problems remain to be solved The toxic effects from the products of the action of *B botulinus* and other bacteria on meat have long been recognized, and Brieger postulated by analogy a whole series of such toxic products from the ordinary intestinal bacteria and named them ptomaines Repeated attempts to isolate these substances have been made, but few of the known products of gastro-intestinal putrefaction are toxic to any considerable degree, and even these are probably produced in quantities too small to cause any appreciable effect especially in view of the detoxicating and eliminating powers of the liver and kidney Adami therefore set aside the idea of auto intoxication, and regarded the symptoms which arise as due to a mild latent infection or sub infection with bacteria which may penetrate the mucous lining of the gut and reach the second line of defence in the lymphatic glands of the bowel mesentery Bacteria may even be cultured from the systemic blood, though bacteriaemia usually occurs in the terminal stages and sources of infection elsewhere, such as the respiratory tract cannot be excluded Such a local or general bacteriaemia cannot be a common occurrence and research has returned to seeking toxic substances among the products of putrefaction of proteins and fermentation of carbohydrates and fats So far only a moderate degree of success has followed much painstaking work though some of the products of decomposition of lecithin especially choline, are found to be highly poisonous

[illegible] M B [illegible] J Wright [illegible] (Pp vii + [illegible] 30 fr)

[illegible] Dermatol[illegible] Medicales [illegible] opments notabl[illegible] 30 fr)

[illegible] Herz erragende[illegible] Dr Med G Olpp [illegible] 71 plates M 30)

[illegible] The Psychology of a[illegible] London J Arnold and 3 maps 30s net)

Obstruction in the upper part of the small intestine gives rise to symptoms of profound intoxication It is in regard to the possible symptoms of more chronic obstruction or delay in the colon that there has been more controversy The clinical view has been that constipation is the basic factor in the whole train of symptoms which are ascribed to intestinal auto-intoxication Bacteriological evidence points to bacteria flourishing more exuberantly in the watery stools of diarrhoea so that soluble poisons may be absorbed more readily from liquid bowel contents Another problem that of the permeability of the intestinal wall has been investigated by new and ingenious methods by Paffrath [1] He points out the difficulties of determining the permeability of the bowel wall from bacterial tests of the portal blood and from experiments with excised portions of bowel which can no longer be regarded as living or at any rate normal Paffrath therefore has devised methods of observing the permeability of the bowel wall in animals under anaesthesia but with normal blood supply to the bowel loops under observation For this purpose he uses choline as a test substance and the response of the bowel musculature as indicator Choline is the hormone of bowel movement and has a stimulating effect on Auerbach's plexus Paffrath then set up his experiments so that bowel movement was graphically recorded and choline was applied to the peritoneal surface thus producing a direct effect on the local nerve reflexes in the bowel wall and altering the movement Choline was then added to the contents of the bowel loop under observation and the amount of the similar effect on the intestinal movements was judged to be a measure of the permeability of the intestinal mucosa

Many experiments were carried out on laboratory animals and the results obtained were compared with those with portions of bowel from children dying of gastro enteritis and other diseases The intestinal mucous membrane of adult animals and healthy children appears to be extremely little permeable to substances which stimulate the bowel nervous system such as choline and other amines and pilocarpine Apparently the sensitivity of the nerves of the bowel wall to choline is about the same in all the species of laboratory animals tested as in human infants By Paffrath's method it can be shown that animals and infants with intestinal lesions show an increased permeability of the mucous membrane A fairly constant observation too was that prolonged contact with water or the sugar solutions used for perfusion lowered the permeability somewhat but it is not clear that this is not an effect produced by deterioration and partial death of the specimen The amount of choline in the intestinal contents of healthy infants is very small but is increased under conditions of dyspepsia and intoxication This increase together with the increased permeability will therefore produce a strong stimulus to the intestinal movements As well as choline and similar amines the lower fatty acids were shown to stimulate the bowel wall From his observations on animals and on the intestine of children premature and post-natal Paffrath concludes that the permeability diminishes as age advances From further work on similar lines results may follow which will be of interest and value to those dealing with children's complaints

[1] *Inaugural-Dissertation aus der Universitäts-Kinderklinik Marburg* Zugleich ein Beitrag zur Lehre von der Genese der Säuglingsintoxikation von Dozent Dr Hans Paffrath Leipzig S Hirzel 1931 (R M 8)

TUBERCULOUS RHEUMATISM

The suggestion that a proportion of cases of acute subacute and chronic rheumatism are tuberculous in origin was put forward by Poncet as long ago as 1896 In the succeeding years he and his pupils developed this idea which not unnaturally attracted a considerable amount of attention Instead of making haste slowly and founding his thesis on incontrovertible evidence Poncet suffered from the enthusiasm of a discoverer and saw tuberculosis in joints that were probably subject to no more than simple inflammation By overstating his case he alienated medical opinion and a reaction set in which has continued more or less up to the present day There are signs however that this is slowly giving way to a more rational outlook Two consecutive numbers of the *Journal de Medecine de Lyon* April 20th and May 5th are devoted to a review of this subject several authors dealing in turn with the clinical diagnostic and therapeutic aspects of tuberculous rheumatism The recognition of this disease is by no means simple Both tuberculosis and rheumatism are very prevalent and the mere existence of joint manifestations in a tuberculous patient does not justify the conclusion that they are caused by the tubercle bacillus *It is not enough to show that the patient has* a positive tuberculin reaction or that tubercle bacilli are present in the sputum or even in the blood all of these findings are compatible with perfect freedom from joint lesions The only satisfactory method of diagnosis is to demonstrate the presence of the bacilli either in the joint fluid withdrawn during life or in the inflamed synovial membrane excised after death And here again it is desirable not to be content with the mere microscopical demonstration of one or two isolated acid-fast bacilli in a stained preparation—a proceeding which is far from convincing—but to insist on the production of definite tuberculosis in an inoculated guinea-pig or on the isolation of acid fast bacilli having all the cultural and pathogenic characteristics of the tubercle bacillus Cases in which evidence of this nature has been produced are not common and it is of particular interest to study the account given by Bezançon Weil Delarue and Oumansky [1] of a patient under their care who was subjected both before and after death to an unusually complete examination Briefly this patient a woman 31 years of age suffered from polyarticular lesions affecting nearly every joint in the body particularly of the hands wrists elbows and feet The lesions were extremely painful and progressed in several of the joints to partial ankylosis There was no hydrarthrosis no white swelling no osteophytic formation and radiographically there was little but decalcification to be demonstrated During adolescence the patient had had two attacks of pleurisy and later an abundant haemoptysis At the time of examination she presented

[1] *Presse Médicale* April 27th 1932 641

signs in her lungs tubercle bacilli were found in small numbers in the sputum and her blood inoculated into a guinea-pig gave rise to tuberculosis Death occurred apparently as a result of pericarditis Necropsy revealed thickening of the capsule of the joints, histological examination showed cellular nodules, not only in the synovial membranes but in the spleen, liver, lungs, and myocardium Tubercle bacilli were demonstrated in the joint synovial membrane both microscopically and by guinea-pig inoculation The authors note that tuberculous rheumatism is not commonly found in patients with active pulmonary tuberculosis, and they hazard the opinion based on the marked sensitivity of these patients to tuberculin that it is essentially an allergic phenomenon The frequency of tuberculous rheumatism is difficult to assess, and it would probably be well worth while carrying out a careful bacteriological examination of rheumatic joints in post mortem subjects to provide an answer to this question

OPERATIONS ON THE SEMILUNAR CARTILAGE

With the object of investigating the "wide diversity of opinions and of methods in the treatment of operation of the injured or displaced cartilages of the knee-joint' the *Journal of Bone and Joint Surgery* has instituted an inquiry the results of which are published in its April issue Twenty-one surgeons contributed short statements of their opinions and practice, and these have been tabulated under nine headings in order to simplify a comparison of views concerning the removal of the meniscus We are not told on what principle or by what process the contributors were chosen, nor whether all those approached responded to the request for information but however the selection may have been made the resulting list of experienced surgeons is somewhat surprising France sends four replies, Austria Czechoslovakia, and the United States three each England and Italy two each, Switzerland Holland Canada, and Soviet Russia one each Germany is unrepresented and unmentioned and we are entirely at a loss to account for such an astonishing omission In Great Britain owing to the vast field of practice provided by collieries and the football fields, lesions of the menisci have been recognized and treated in very large numbers for many years Hence British surgeons have been able to draw certain conclusions from their accumulated experience, and the operative treatment employed by them has been to a great extent standardized In the United States we might reasonably expect a similar state of affairs There seems no doubt that the editor of the *Journal of Bone and Joint Surgery* has undertaken his inquiry in the hope of still further standardization of operative measures As British surgery has had so much to do with the development of this operation it might have seemed desirable to some to elicit the opinions of more than two British surgeons and the practice in more than one city However since one of the contributing surgeons is Sir Robert Jones it is probable that the editor rightly assumed that his colleagues would be well content to be represented by him on this question On the whole, the answers display remarkable agreement there being only one startling divergence of opinion There is practical unanimity among seventeen of the witnesses as to the importance of not interfering with the continuity of the lateral ligament All four French surgeons however, make little of such a limitation, and apparently do not hesitate to divide the ligament, trusting to suture to bring about functional efficiency afterwards We should expect the duration of complete recumbency after operation to be much increased by the time necessary for the healing of such an important structure but this does not come out very clearly in the table It is noteworthy however, that while Sir Robert Jones allows weight-bearing on the seventh day, Professor Tavernier of Lyons forbids it before the sixteenth to the eighteenth day The question of diagnosis is not included in this inquiry It forms, as Mr Naughton Dunn[1] and others have pointed out, one of the chief difficulties in treatment, and any light upon it would be welcome In many cases definite diagnosis is only possible when the knee-joint is opened

"TOO TOO SOLID FLESH"

It takes all sorts to make a world, and speaking selfishly, we should be sorry to lose the fat sort "Let me have men about me that are fat,' said Cæsar apprehending the disaster that befell him Who has not sympathized with that spontaneous appeal for comfort and security? Fatness spells more than prosperity It implies good humour, good fellowship, and a wide humanity And Mr Chesterton will surely agree that one does not have to be thin in order to think Yet obesity, according to the article by Dr E Bulmer in our present issue (p 1024) is a menace, and his conclusions compel attention Overweight is not looked upon favourably by life assurance companies, and it is a common experience that a fat patient does not stand up so well to an acute illness as does a spare one As Drs D M Lyon and D M Dunlop have pointed out lately - the normal healthy adult maintains almost constant body weight in the face of wide variations in activity and food intake It seems probable that the mechanism controlling metabolism exists in the hypothalamic region Classifying the causes of obesity, Dr Bulmer includes over eating and over drinking endocrine disorders lesions of the central nervous system, and some unknown constitutional factor The majority of cases are found in this last category Such patients often come of an obese stock and, in addition, usually indulge too much in carbohydrates An interesting observation by Drs Lyon and Dunlop is that the basal metabolism in these patients is either normal or in excess of normal which puts the thyroid above suspicion As some people can eat far beyond their normal requirements and yet remain shapely, there must be some other factor in obese patients in whom no obvious endocrine defect can be observed It is possible that the constitutional factor is nervous The placidity of the fat man may be not the result but the cause of his fatness However that may be there are certain methods of treatment that can be confidently applied The first is to put the patient on a subcaloric diet with definite restriction of the carbohydrates With restriction of carbohydrates must go restriction of fats for the fats burn in the fire of the

[1] *Lancet* i *Medical Journal* 1931 ii 639
Lyon D M and Dunlop D M *Quart Journ Med* April 1932 331

carbohydrates and a relative excess of fat may lead to ketosis Drs Lyon and Dunlop do not hesitate to give thyroid in conjunction with a subcaloric diet up to an average of 9 grains a day and they emphasize that it is not a pleasant substitute for dieting Dr Bulmer on the other hand holds that myxoedema and not obesity is the correct indication for thyroid He draws attention also to the association of obesity with hyperpiesia chronic cholecystitis and gall stones and diabetes In Germany during the war he points out the death rate due to diabetes was halved an effect probably of under-nutrition The attack on carbohydrates seems to be coming from all quarters

SMOKE ABATEMENT IN FRANCE

Last autumn the National Smoke Abatement Society issued *The Smoke Abatement Handbook* [1] in which it summed up the present position of the campaign in this country Dr Pierre Lamarque throws a valuable sidelight on the problem in a recent paper " which contains the substance of an official report on eighteen months research conducted at the instance of the mayor of Bordeaux He classifies atmospheric impurities into toxic vapour and smoke chiefly from chemical works and factories harmful smoke from the combustion of coal and repulsive or unpleasant odours arising from the manufacture of organic material or the combustion of organic refuse The commonest form of noxious vapour in Bordeaux consists of the nitrous products of the manufacture of sulphuric acid These are normally stopped by the Gay Lussac tower but inexpert or careless handling of the plant is apt to allow them to escape Dr Lamarque explains two methods by which they can be automatically arrested in one the tower is surrounded by two others 14 and 16 metres high respectively , in the second the escaping gas is bubbled through acetic acid or benzine In combination with the second of these compounds it forms nitro benzine a product of value in the manufacture of synthetic perfume Another class of chemical offenders consists of the makers of agricultural superphosphates The natural phosphates that form the raw material contain compounds of fluorine and the process of manufacture liberates hydrofluoric and fluorosilicic acids—the latter is extremely poisonous—which do especial harm to glass They damage all the shop fronts in the immediate neighbourhood and make themselves felt three miles away Their escape can be prevented Dr Lamarque says by the use of completely closed chambers for the mixing process surmounted by a filter of coke sprinkled with salt water or by suitable scrubbers His more detailed remarks on the treatment of chemical fumes in practice will probably be of great value to the industries concerned Coal smoke contains sulphuric acid which damages stone and other materials and carbon dioxide an excess of which is bad for the public health and especially for that of children The enormous quantity of soot produced which in Bordeaux amounts every year to about half a ton for every ten acres of surface fouls clothes and furniture and according to some authorities predisposes to pulmonary tuberculosis The shutting-off of the sun s rays also impairs health Industrial smoke is produced says Dr Lamarque by the use of an insufficiently large furnace by insufficient ventilation or by an inexpert stoker Smoke prevention is bound up with the provision of enough air to allow the hydrocarbons produced by the distillation of coal and all organic bodies in the fuel to burn up before the draught carries them up the chimney into a temperature so low that combustion is impossible Dr Lamarque points out that there are several effective means of realizing this theoretical aim and enumerates some of them The domestic smoke problem is harder to solve and equally insistent The measures he suggests comprise the supply to domestic consumers of half coke the provision of gas fired central heating apparatus on easy terms and cheap electric power current He has recommended the municipality of Bordeaux to establish an atmospheric police to control the output of industrial smoke and fumes This body would work on the lines of that which exists in Salt Lake City keeping watch from an elevated observation post and meting out instruction warning and punishment as necessary according to an ordinance for which he has submitted a draft The problem is obviously much worse in France than in this country Those who have been to France know how much more smoke there always seems to be above industrial areas and railways Though the necessary legislation exists France has never been able to suppress her locomotive smoke as we have In Paris coal smoke does appalling damage to stonework and the Commission of Historic Monuments has offered a prize of £200 for a device that will protect it Many of the statues outside Notre Dame and the Sainte Chapelle have been irretrievably spoiled and it may be very difficult to replace them all the memorials in the cemetery of Pere Lachaise that face south and west are damaged on that aspect It is encouraging to see that the question is being approached so thoroughly and scientifically in France Reformers in this country will do well to study the methods adopted to combat an evil even more intense than that which they encounter here

[1] *British Medical Journal* 1931 ii 1204 *Soc Méd Bordeaux* 1932 No 14 210

ALCOHOLISM AND DRUG ADDICTION

Few callings can claim to be exempt from contributing to the ranks of drug and alcoholic addicts and in a twenty five year survey of the work of a private institution where these conditions are treated[1] we find the usual list beginning with officers of the Services bankers civil servants and clergymen and passing through jockeys and journalists to wine merchants It is emphasized however that those who have little or no occupation some money and intellectual abilities of no mean order are especially liable to fall victims Of some 7 000 cases treated alcoholism accounted for over 6 000 while morphine and allied drugs uncomplicated by alcohol were responsible for 580 including 251 medical practitioners In roughly 32 per cent of the cases of alcoholism there was a history of parental indulgence Apart from the factor of heredity particular note is made of domestic and business worry insomnia financial losses overwork and menstrual troubles as reasons for taking to drink or drugs There

[1] Twenty fifth Report of the Pendlesham and Beckenham Branches of the Norwood Sanatorium Ltd

seems little doubt that inherited nervous instability is important as predisposing both to alcoholism and to other drug habits One third of the morphine addicts became so through the hypodermic use of the drug for relief of pain and in some instances the patient had only learned the nature of the drug used by seeing the label on an empty tube left at the house by the doctor The survey incidentally pays a tribute to the operation of the Dangerous Drugs Act in diminishing morphinism during the period under review Medinal (veronal-sodium) is now more frequent than veronal as a drug of addiction and the cases are found mainly among alcoholics with intractable insomnia These barbituric hypnotics help them to do with less drink and induce satisfaction by giving rise to a secondary effect—namely a sense of relief from daily irritations and pin pricks The barbitone products were transferred from Part II to Part I of the Schedule of Poisons in 1918 but apparently they are not hard to obtain in quantities large enough to encourage misuse It is interesting to note that there have been no cases of delirium tremens at the institution for many years owing probably to increased recognition of the danger of sudden withdrawal in cases of high acquired tolerance Peripheral neuritis on the other hand occurred in 350 cases some altered mental state being present in nearly all of them While the frequency of cirrhosis of the liver appears to have been overestimated in the past statistics do not bear out the prevalent idea that neuritis is commoner in women than in men Some practical hints on the treatment of alcoholic cases are given in the report

MEASLES FROM 1919 TO 1931

The current (February) issue of the Monthly Epidemiological report published by the Health Section of the League of Nations contains a survey of the incidence and mortality of measles throughout the world from 1919 to 1931 Looking first at the mortality figures which are much more reliable than those for morbidity we find considerable difference between the maximum and the minimum In England for example the maximum of 19 2 per 100 000 reached in 1920 was three and a half times higher than the minimum of 5 9 in 1921 while in Germany the proportion was more than five to one As regards the influence of seasons in most countries where measles is endemic the maximum incidence occurs at the end of the winter and in the spring In Europe for instance 92 per cent of the annual maxima of morbidity and 78 per cent of the maxima of mortality occurred between December and May It is noteworthy however that whereas in Central and Western Europe measles mortality reaches its height in the winter or spring months the peaks of the mortality curve in Spain and Portugal were found in the hot season In the countries of Eastern and Northern Europe such as Soviet Russia, Poland Bulgaria Rumania and Lithuania as well as in Canada where the winter is severe the rise in morbidity and mortality comes earlier than in more temperate climates Statistics as to the incidence of measles are however of only very relative value because even in countries where its notification is compulsory many practitioners disregard their obligation while in other countries such as Great Britain and the Irish Free State Austria Belgium Czechoslovakia, Germany Holland Rumania, Sweden Switzerland Soviet Russia the Union of South Africa and Argentina the disease is not now or never has been notifiable

SOCIAL TRAINING OF THE DOCTOR

At a recent staff meeting of the Mayo Clinic Dr W J Mayo contributed a paper on the social training of the surgeon and physician He suggested that the measure of success in medical practice depends more on the imponderables than on things which can be weighed and measured In the presence of anxiety and danger the emotional claim of the patient is for support and protection and these he must find in a sense of confidence which will dispel his sense of fear The practitioner will be successful in his personal relation to the patient in so far as he meets this need Having himself a disciplined mind, and being in good health he may be disposed to regard with some degree of contempt the emotional reactions of the patient but here for him also is the claim for self control and only if he exercises this and appreciates the emotional attitude of the patient will he be equal to the event The patient is not only anxious he is abnormally impressionable and unless his adviser inspires confidence an element essential to success is lacking Dr Mayo suggests that a year devoted to social education ought to be part of the pre-medical training of the physician in order to fit him to evaluate emotional reactions and their relation to society ' The successful charlatan quack or patent medicine vendor all in their several ways provide something which meets the patient's fear and gives him a feeling that something is being done to meet the danger The trained physician in his natural contempt for sham and make believe is perhaps apt to forget that he is dealing not with a cool logical self controlled individual but with one disturbed by uncertainties and doubts and fears part of the treatment is to banish these and the agency for the purpose is the attitude of the doctor If this attitude is not appropriate to the situation how can success be expected? A certain physician at the bedside of a patient whom he desired to reassure remarked in jocular fashion The doctor you know amuses the patient while Nature performs the cure and to this came the reply, But that is exactly my complaint—my doctor doesn't amuse me The lesson seems to be that suffering humanity calls not only for scientific skill but also for social and sympathetic helpfulness

PREPARATION FOR MARRIAGE

The executive of the British Social Hygiene Council announce that after further consultation with representatives of the British Medical Association they have decided to abandon their proposal to approve the opening by their secretary general of an economically self-supporting personal problems bureau under the auspices of the Council as to do this might be held to render it impossible for the British Medical Association to continue to be represented on the Council At the request of the committee Mrs Neville Rolfe has agreed in the circumstances not to proceed with this project

PROTECTION AGAINST ELECTRIC SHOCKS

MINISTRY OF HEALTH MEMORANDUM

The Ministry of Health has recently issued a memorandum[1] for distribution to responsible authorities at voluntary hospitals nursing and convalescent homes clinics and other establishments in which it draws attention to the danger of serious accidents occurring from the use of electro medical apparatus Though mishaps of this kind have so far been small in number the growing use of new medical appliances and the tendency for hospitals and institutions to change over from their own direct current supplies of low voltage to the standard alternating current of 230 volts are two factors which threaten to increase risk in the future The precautions recommended for the avoidance of accidents are clearly summarized under several heads

It goes without saying that old and improperly insulated apparatus is in itself a source of danger A fatality has however recently been reported as a result of a patient receiving electrical treatment whilst in bed The memorandum emphasizes that an iron bedstead should never be in such a position as to act as a means of earthing the patient owing to contact with radiator pipes or even an earthed wireless receiver Precautions are therefore necessary in view of the increased use of radiant heat baths resuscitation cradles thermal pads for eye and ear work and similar appliances receiving current in direct connexion with the main supply Where apparatus is of the non earth free type patients undergoing treatment in the same room should not be within reach of one another It is suggested that under conditions existing in many wards—wooden floors and small chance of contact with earthed metal—electrical safety is best secured by insulating apparatus instead of earthing it In other cases where there are conducting floors the metal work of the apparatus should be earthed and care taken to ensure the efficiency and maintenance of the connexions The source of supply for heat treatment by electro thermal compresses should it is stated always be at low voltage Where patients wearing wireless head phones may be undergoing electrical treatment or may handle electrical apparatus particular attention should be paid to the insulation of the output circuit to which the head phones are connected this can easily be effected by a double wound isolating transformer Radiant heat baths present another potential source of danger and three points should be kept in mind when constructing them (1) an internal mesh screen should be fitted to cover and protect the lamps and holders (2) the lamp holders should be of insulating material of heat resisting character (3) metal work should be earthed

In projectors for light treatment live conductors are exposed within the reflectors and this is also the case with arc lamps Though there is little likelihood of such live parts being touched while the apparatus is in use mesh guards would minimize risks to the operator The metal work of projectors should be earthed As regards sets for generating electricity these are usually energized from service mains and from the point of view of safety may be considered under two groups The first the earth free variety isolates the circuits with which the patient may be in contact from the main supply circuit here shock at mains pressure is possible only if a breakdown of insulation occurs between the two systems—a small risk if the design of the set is good In the second group electrical isolation from the main supply is not effected Potentiometer control is often incorporated in these sets and a breakage of the resistance winding might cause a patient to be exposed to mains pressure It is further advisable to ensure against interruption of the current when the patient is being treated While current up to considerable densities may flow without appreciable discomfort provided efficient contacts are made a sudden interruption—such as might be caused by a fuse blowing a bad contact in a plug fitting or a breakage in a flexible connexion—would certainly lead to shock under some conditions of a severe character Summing up the problem of generating sets the memorandum deprecates the use of those which are not isolated electrically from the source of main supply

Diathermy apparatus is divisible into two groups In one the patient is subjected to a low voltage high frequency current in the other to a minute current supply at very high pressure and frequency While in both cases the necessary transformation effects isolation of the patient from the mains there is an intermediate low frequency circuit operating at pressures ranging from 2 000 to 6 000 volts in which there may be sufficient electrical energy to cause severe shock Preference is accorded to designs in which the patient's circuit is electrically isolated from the intermediate circuit the spark gap is mounted inside the cabinet and the door of the cabinet is so interlocked with the source of the main supply as to ensure that the latter is disconnected as soon as the door opens

The memorandum concludes with a plea for the regular and systematic inspection by competent experts of all electro medical apparatus Efficient insulation should be maintained particularly at points such as plugs and holders where insulated wiring is liable to break down Certain manufacturers have already organized a maintenance service for electro medical apparatus in clinics and hospitals

[1] Memo 161 Med

VOLUNTARY STERILIZATION

EUGENICS SOCIETY'S CONFERENCE

A conference to discuss sterilization in its medical legal and social aspects was held under the auspices of the Eugenics Society at the Caxton Hall Westminster during the morning and afternoon of May 23rd and was followed in the evening by an informal public discussion

MEDICAL ASPECTS OF STERILIZATION

Dr R LANGDON DOWN in opening the discussion at the morning session over which Sir Allan Powell presided stressed the fact that present-day methods of producing sterilization left essential glands and tissues unaffected They aimed simply at rendering procreation impossible Widely different opinions were held on the extent to which carriers of defect might be willing to avail themselves of facilities for voluntary sterilization it was moreover far from easy to determine what proportion of defective persons owed their condition to heredity But these facts disturbed only those who imagined that sterilization was advocated as a sufficient means for eliminating defectiveness from the community If it could be shown that this measure could even to a slight degree reduce the incidence of defect there were sufficient grounds for asking that the legal obstacles to voluntary sterilization should be removed Medical opinion said Dr Langdon Down was almost unanimous that certain cases of mental deficiency were preventable by the means he had described and by no others

Sir THOMAS HORDER said that if control of procreation could be achieved with certainty by physical chemical or physiological means the surgical alternative would be unnecessary The point was important because sterilization differed from birth control only in its greater effectiveness and in the fact that surgical methods were necessary for its production In the present state of the law cutting the human body might be interpreted as mutilation but though there was little chance that a sterilizing operation performed in the interests of the patient's own health would provide sufficient grounds for a successful action against the surgeon the position was by no means so sure if the operation were undertaken in the absence of evidence that child bearing was dangerous to life or health In such circumstances not even the full consent or even request of the patient would necessarily protect the surgeon against a suit for damages Still less secure would be his position if the operation were undertaken at the request of the patient's guardian

Yet another problem arose from the fact that while in the female sterilization was a major operation requiring general anaesthesia in the male the procedure was altogether simpler and capable of being carried out under a local anaesthesic A husband might well decide to relieve his wife of the greater risk by accepting the smaller risk himself What would be the legal position in such a case? What would it be if a doctor performed vasectomy on himself? As long as the law left them with such perplexities medical practitioners were necessarily averse to producing sterilization except for unequivocal therapeutic reasons Sporadic sterilizations for eugenic purposes were carried out privately but not in hospital Yet in such a matter it was clearly undesirable that there should be any discrepancy between private and hospital practice What was asked for was not compulsory sterilization but power to undertake voluntary sterilization of persons who were suffering or mated to persons who were suffering from transmissible disease

THE PROSPECTS OF LEGISLATION

Wing Commander A W H JAMES M P denied that the advocates of voluntary sterilization were attempting to legislate in advance of public opinion He had received support for the Eugenics Society's proposals both in his own constituency where at the general election he had made a point of stating his views on the subject and in the present House of Commons In order to obtain a cross section of parliamentary opinion he had approached forty two members of whom sixteen had promised unqualified support to a permissive bill sixteen had expressed personal agreement without necessarily binding themselves to support the measure five were noncommittal and five in complete opposition So far the non party committee that had been formed in the House of Commons to forward the idea of sterilization had confined itself to focusing the attention of members of both Houses upon the general ideas underlying the proposed legislation but it was hoped when private members time became available that an opportunity might arise to introduce a Bill The present House said Commander James would pass such a measure by an overwhelming majority

Mr CECIL BINNEY in the course of an exposition of the law relating to sterilization pointed out that operations to this end had to be distinguished clearly from surgical operations undertaken for the benefit of the patient Although so far as normal adults were concerned there were circumstances in which the doctor could produce sterilization with impunity eugenic sterilization of mentally defective persons was almost certainly illegal The fact moreover that the legal position with respect to mentally normal carriers of defect was ambiguous meant that the sterilization of such persons had become a luxury of the well to do Surgeons in private practice could venture upon a course of action that was denied them as members of the staffs of State supported or charitable institutions

STERILIZATION IN OTHER COUNTRIES

Mrs C B S HODSON drew attention to the considerable body of experience that had been accumulated in some of the American States where sterilization of mentally defective persons had been carried on for about thirty years A critical survey of the results had shown that the higher grades of feeble minded persons—those in other words who were able to adapt themselves to social life after institutional training—could readily be taught to co operate voluntarily in sterilization schemes and to regard the operation as beneficial Not only moreover had the operation been conducive to the welfare of the patients themselves enabling many of them to marry without running the risk of producing defective offspring but it had in no way conflicted with State and voluntary work on behalf of defective persons It was noteworthy that in the States which had enacted voluntary sterilization the number of persons operated on each year was far greater than in the States that had adopted compulsory legislation

Miss HILDA POCOCK said that Alberta Canada was the only province in the British Empire that had authorized the sterilization of mentally defective persons Between 1928 when the law had been enacted and December 1931 the latest date for which figures were available 106 cases had been recommended for sterilization to the board administering the Act and the operation had been approved in 101 cases Of eighty patients in whom the operation had been completed thirty two had returned to the community and it was recorded that of these seventeen had been improved in body and mind thirteen were physically well with no mental change and two were in fair condition both physically and mentally The procedure provided ample safeguards against abuse Reports from the head of a mental defective training school and from a social worker who had investigated the patient's family history and home conditions were submitted to an independent doctor and it was only when he had satisfied himself that a case for sterilization had been made out that a written request for sterilization signed before witnesses was obtained from the patient or his guardians This document together with the three reports was sent to the board and then to the Minister of Health who had to secure the approval of the State legal authority before finally sanctioning the operation

SOCIAL AND MORAL ASPECTS

At the afternoon session over which Professor R RUGGLES GATES presided Professor A M CARR SAUNDERS opened a discussion on the social and moral aspects of sterilization Although he said it had long ago been agreed that society was morally bound to create an environment capable of securing the fullest development of its citizens it was only now being realized that it had an equal obligation to ensure that these citizens should have good innate potentialities Provided then that it was not otherwise objectionable sterilization could be morally approved in the cases of persons who were likely to have children lacking in those mental qualities that formed the indispensable basis of a full life Other methods for bringing about this desirable result were segregation and prohibition of the marriage of defective persons As for the former sterilization was not proposed to take its place but as a supplementary measure for persons who had no need to live an institutional life But prohibition upon marriage was open to criticism not only because it would in fact fail to prevent procreation by defective persons but because it denied them the opportunity of home life which for most people formed the best basis for the development of socially desirable characteristics It had been said that sterilization would increase promiscuity and thereby spread venereal disease All that could be held with certainty was that prohibition of marriage would have these results In concluding Professor Carr Saunders said there was no foundation for the suggestion that there existed some sort of close association between defect and genius or for the idea also prevalent that inheritance was subject to no law and that genius might spring up anywhere with equal probability The chance of genius arising in a mentally defective strain was in fact infinitely less than of its arising in a strain of super normal mental capacity

Mr C J BOND said that some understanding of the facts about the transmission of mental and bodily qualities was essential for individual and racial health and would form a normal part of the preventive medicine of the future Under the auspices of the Leicester Health Insurance Committee a bureau had been established from which panel doctors could obtain expert assistance when their patients asked for advice on matters relating to eugenic marriage Unfortunately it was impossible to meet the needs of patients who wished to be sterilized so long as the voluntary hospitals confronted with the uncertainties of the law were reluctant to admit patients for eugenic sterilization

Dr C P BLACKER said that only a small reduction in the incidence of mental defect could be attained by sterilizing manifestly defective persons The desired end could be adequately realized only by providing for the voluntary sterilization of all sufferers from and carriers

of hereditary diseases and disabilities Above all it was important that facilities for voluntary sterilization should be made available for the socially burdensome persons constituting the so called social problem group Whether this end could best be achieved by Act of Parliament or by trying to popularize the actual practice of voluntary sterilization disregarding in the process the uncertainties of the law was by no means sure In either case said Dr Blacker it was essential to carry on unremitting propaganda Even if permissive legislation were enacted defective persons would still have to be persuaded of the need to avail themselves of the opportunities at their disposal

MEDICAL PROBLEMS OF CONTRACEPTION

CONFERENCE IN LONDON

(Concluded from page 1000)

The final sessions of the conference on medical problems of contraception organized by the National Birth Control Association were concerned with surveying the actual results that might be hoped for from the existing methods and with considering the advantages and defects of the silver ring method that was introduced into this country by Dr Grafenberg in 1929

METHODS USED AT CLINICS

Dr C KILLICK MILLARD who presided over the discussion on methods used at birth control clinics mentioned in his opening speech that Leicester was one of the first cities to open a municipal birth control clinic and maintained that the maternity and child welfare centres were the places that were best adapted to such a purpose

Dr GLADYS COX medical officer to the Walworth and East London clinics described and discussed the merits and defects of the methods taught at the centres affiliated to the Society for the Provision of Birth Control Clinics In assessing results allowance had to be made for every source of statistical error It was for example important to bear in mind that methods which failed in women with high fertility might be successful in others whose fertility was low—indeed that women of the latter type might without using contraceptives have a natural spacing of three or more years between births The methods taught at the clinics involved the use of mechanical appliances (chief among which were condoms and rubber occlusive pessaries) in conjunction with chemical spermicides (commonly ointments jellies suppositories and foam tablets) Of the mechanical contrivances the most popular was the vaginal diaphragm pessary though at the Cambridge clinic the condom was being recommended in an increasing number of cases Each patient attending the clinics under survey was examined by a registered practitioner in every case a woman Methods were not chosen arbitrarily but were based on the medical history and the knowledge obtained as a result of the gynaecological examination In many cases the examination revealed pelvic disorders that required treatment in *all* cases patients were asked to return for re examination and renewal of appliances at least every six months That the methods used in the clinics did not cause sterility was shown by the fact elicited from an analysis of the Walworth records that of ninety seven patients who deliberately ceased to practise contraception ninety six became pregnant A similar fate overtook 158 patients who had on one occasion only neglected to use the method and the appliances Present day contraceptive practice said Dr Cox left much to be desired but on behalf of the procedures taught at the clinics it could be claimed that they were for all their defects harmless and fairly dependable In a large number of cases they served she felt sure as the only alternative to repeated attempts at procuring illegal abortion

Dr ENID CHARLES of the department of social biology London School of Economics presented her analyses of three sets of data relating to the efficacy of present day contraceptive practice Despite the fact that the birth control clinics had abundant data most of this she reminded the conference offered an inadequate basis for valid statistical studies The clinics after all were instituted for immediately practical ends not for scientific research and except when a special investigation was undertaken they could obtain dependable data only about those of their patients who voluntarily kept in touch with them Her own data were derived from three sources these were first and most important 432 answers to a questionary that had been sent out by the Birth Control Investigation Committee to women who applied for it secondly a set of replies that had been collected by a private clinic and finally a specially collated series of visitors reports on clients of the Birmingham welfare centre The total number of cases subjected to analysis was nearly a thousand Setting out the criteria adopted in her classification Dr Charles stressed the importance of finding an unequivocal definition of the term reliability In her own analyses a method was regarded as successful if it had not been attended by unwanted pregnancy after being used continuously for at least a year Adopting these standards she was able to make the following classification of methods in order of their reliability sheath with one or more adjuncts successful in 98 per cent of cases sheath alone in 82 per cent coitus interruptus in 66 per cent and quinine alone in 54 per cent

Dr C P BLACKER said that the present discussion would serve its best purpose if it stimulated the collection of further data and drew attention to the criteria of so called failure that had been advanced in the *report of the International Medical Group for the Investigation of Contraception* [1] If comparable data were to be assembled it was essential that these criteria or some modification of them should become universally adopted

Mrs IVENS KNOWLES Dr S M MORGAN (Pontypridd) Dr M JACKSON (Exeter) and Mrs BLUMBERG (Manchester) discussed the work that was being carried on in their own areas and the relation between voluntary clinics and those controlled by local authorities Perhaps the most interesting statement made at this stage was that when as had happened at Pontypridd the local authorities took over a clinic that hitherto had been conducted by a voluntary organization its status among the practitioners of the district was immediately enhanced In some areas the local authorities while not assuming actual control of the clinic referred patients to it and even paid *the fee in necessitous cases*

Dr E F GRIFFITH (Aldershot) made a plea in which he was supported by other speakers for introducing instruction on contraception into the curriculum of medical studies Dr MAITLAND RADFORD medical officer of health Shoreditch in dealing with the suggestion that municipal clinics should not give birth control advice except on strictly medical grounds questioned the right of any outside body to determine for the doctor the manner in which he should exercise his medical discretion Such a development he maintained would introduce a new and wholly undesirable element into the rules governing the relation of doctor and patient

THE GRÄFENBERG RING

The last session was devoted to a discussion of Gräfenberg s *method*

Sir HUMPHREY ROLLESTON who presided said that every new method in medicine passed through three stages first being new it was scoffed at then there

[1] Obtainable from the Birth Control Investigation Committee 26 Eccleston Street S W 1 (2s 6d)

followed a phase in which it received the passionate support of the suggestible elements in the community, who very naturally were disillusioned by the immediate results and finally there came the time when critical intelligences got to work and assessed the method at its true value There was reason to believe that Grafenberg's method was emerging from the second to the third stage

Dr HELENA WRIGHT medical officer to the North Kensington clinic who opened the discussion described in sequence the nature of the Gräfenberg ring the principles determining the selection of suitable patients the technique of the operation symptoms that might arise shortly after the ring had been inserted alleged advantages of the ring other than its contraceptive effect (for example as a cure in some cases of sterility and dysmenorrhoea) defects in the method and finally, her own procedure with new patients The method was definitely contraindicated in women with uterine fibroids menorrhagia and any unhealthy condition of the pelvis and it was essential to remind patients that the presence of the ring increased the liability to serious danger from vaginal and intrauterine infections Among the symptoms that followed insertion she had noted bleeding pain rise of temperature menstrual irregularity and the appearance of a colourless inodorous discharge None of the patients had all these symptoms but most had one or two The disadvantages of the ring were that conception could occur in spite of its presence that it was likely to break *in utero* and that sometimes it oozed through the cervix without the patient's knowledge In the course of a candid statistical analysis of her own results Dr Wright said that only eight of the thirty nine patients she had fitted still had the rings These few preferred the method to any other It gave them complete freedom from anxiety and in some cases seemed to bring about an improvement in general health

Dr H M CARLETON of the department of physiology University of Oxford outlined conclusions he had derived from over 100 experiments on rabbits in which Grafenberg rings had been inserted The device, he said was moderately satisfactory as a contraceptive but his work carried out in collaboration with Drs Florey and Phelps showed that it produced a localized argyria One effect of this change was that silver having been partly converted into the sulphide became brittle and might break in the uterine cavity Dr Carleton strongly advocated that rings if they were to be used at all should be made of gold instead of silver Ballance and Edmunds had shown in 1891 that silver sutures became in course of time pitted but up to date there was no evidence that gold was similarly affected

Dr BLACKER drew attention to the illuminating papers on Grafenberg's method that had recently been published in the report of the International Medical Group for the Investigation of Contraception He emphasized the need for further investigation in carefully selected cases In the course of subsequent discussion it was stated that Gräfenberg rings were not fitted in any of the clinics affiliated to the Society for the Provision of Birth Control Clinics The method had been applied extensively however by Dr Norman Haire at the Cromer Street welfare centre

The discussion was far from conclusive Discrepancies between the results reported at the conference and those claimed by Dr Grafenberg himself and by some of his more enthusiastic followers remained unaccounted for and it was evident that much careful work had yet to be done before a standardized technique with predictable results could be elaborated The conference can at least claim that in this discussion it succeeded in setting out clearly some of the questions to which an answer will have to be found

Mrs Pyke of the National Birth Control Association Dr C P Blacker of the Birth Control Investigation Committee and Mrs Evelyn Fuller of the Society for the Provision of Birth Control Clinics were responsible for arranging the conference

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN

The annual general meeting of the Society for Relief of Widows and Orphans of Medical Men was held at 11 Chandos Street W on May 11th when the president Mr V Warren Low C B was in the chair The death was reported of a vice president Dr Hazel who was elected a member in 1878

The annual report for 1931 referred to the loss sustained by the society through the death of the senior vice president Sir William Bennett The total membership was 282 of whom 160 were life members 121 ordinary members and one honorary two members had died eight had lapsed and seven new members had been elected On December 21st 1931 forty nine widows and six orphans were in receipt of grants During the year five widows died one of whom came on the fund in 1887 she had received £3 300 while others had received £925 £750 and £450 The annual grant to widows over 65 years of age was £75 those under 60 years received £60 and each orphan under 16 years of age received £50 In addition a Christmas present of £15 was made to widows over 75 while those under that age received £10 as did also each orphan The sum of £389 had also been paid to eight orphans who had reached the age of 16 to enable them to continue their education at school or to start on some professional or business career The old 'legacy boards' which used to hang in the office have been superseded by a legacy book illuminated and engrossed by Sir Frederick Hallett who refused any remuneration for the work The invested funds amounted to £140 700 Cordial votes of thanks were accorded to the editors of the medical journals for their help in making the society better known The meeting closed with a vote of thanks to Mr Warren Low for presiding

Membership is open to any registered practitioner who at the time of his election is resident within twenty miles of Charing Cross A member under 40 years of age pays an annual subscription of two guineas after payment of three annual subscriptions his dependants become eligible for benefits If under 30 years of age he may become a life member for a single payment of twenty guineas with immediate eligibility of his dependants for benefits Full particulars of membership will be sent on application to the secretary at the offices of the society 11 Chandos Street W 1

Scotland

Presentation to Sir Ashley Mackintosh

At a meeting held in the Aberdeen Art Gallery on May 21st Sir Ashley W Mackintosh emeritus professor of medicine at Aberdeen University was presented with his portrait and a cheque for £1 000 Dr Thomas Fraser who presided said that it was a striking tribute to Sir Ashley Mackintosh that 116 of his former students had met in London and started the movement for the recognition of his eminent services Dr Peterkin made the presentation and Principal Sir George Adam Smith accepted the portrait on behalf of the University a replica being given to Sir Ashley Mackintosh In returning thanks Sir Ashley said that his father had graduated at King's College 101 years ago in 1831 and he expressed the view that the arts curriculum of those days although fixed and stereotyped gave an excellent general training and he rejoiced that in recent years there had been a partial return to this plan In his student days there had been a galaxy of men in Aberdeen University and in the hospitals and four of the professors under whom he sat were still alive (Professors Cash Mac William Reid and Matthew Hay) Some ten or twelve years ago he had had the great honour of supporting Professor Matthew Hay in launching the Joint Hospitals Scheme and he was glad to say that the scheme was now materializing and that there was evidence of good will and loyal co operation between the voluntary and the city hospitals The portrait is the work of Mr John Souter an Aberdeen artist now resident in London

Medical Services in Scotland

A conference called by the Department of Health at the request of the British Medical Association and attended by representatives from the local authorities of Scotland by the members of the Scottish Committee of the Association and by representatives from the Department of Health for Scotland was held in the Goold Hall Edinburgh on May 27th Mr John Jeffrey secretary to the Department of Health who presided said that the conference had met to consider how the statutory duties imposed upon local authorities with regard to treatment of the persons for whom they were responsible and especially in regard to domiciliary treatment could best be carried out The Department of Health would be glad to help in any way that it could towards a solution of the difficulties which had arisen The discussion was opened by Dr Elliot Dickson chairman of the Scottish Committee of the British Medical Association who said that a large number of important medical services had already been arranged such as the treatment of infectious diseases the health of children ante natal care etc but with one exception—care of the destitute sick—they made no provision for domiciliary treatment He specially welcomed this meeting where all the interests concerned were represented It should be realized that the first essential of all treatment was not institutional but personal and in this the family doctor must of necessity play an important part any scheme therefore which was arranged without considering him was bound to be unsatisfactory The family doctor could carry out a great deal of preventive medicine for example he (Dr Dickson) had always encouraged his patients to send for him on the first manifestation of any illness especially where children were concerned and he believed that as a result he now saw less serious disease especially bronchopneumonia than he saw in his early days in practice It was true that in some departments of medicine the whole-time medical officer was better qualified to do the work—for example the medical examination of school children—but with regard to the medical services provided by public assistance committees there was no doubt that the family doctor ought to be employed

Sir Andrew Grierson (Edinburgh) said that he did not think the time opportune to start methods which might involve expenditure but admitted that his municipality had given very little consideration to the subject Mr Shaw (Ayr) considered that it was of paramount importance that there should be co operation between medical officers of health and medical practitioners he believed that the panel system had proved more expensive than a system of whole time medical officers working in co-operation with medical officers of health Mr Carmichael (Lanark) said that his local authority had considered the matter to some extent and had entered into arrangements with medical men for the purpose of domiciliary treatment He would consider it a misfortune if the family doctor were not employed as much as possible Dr Hume Paterson (Lanark) said that forty four salaried parish doctors were in charge of fifty two areas in Lanarkshire but this was so unequal a system that some practitioners received payment at the rate of 5½d per visit while others received 11s 4d He had recommended the panel system to the Lanarkshire County Council which would take in 250 practitioners in the county its advantages were the removal of the poverty stigma free choice of doctor—a competition which encouraged attention the retention of the family doctor when patients passed on to the public assistance roll and the fact that the expense would vary according to the number of persons on the roll at the time Dr Pratt Yule (Fife) expressed himself in favour of whole time salaried medical officers and believed that only by this means could the medical officer of health satisfy himself that practitioners were doing their duty

Dr Cameron (Glasgow) introduced the subject of the maternity services to be rendered by local authorities and pointed out that only by employing general practitioners to do the work for local authorities could the great advantage of continuity in treatment be secured Mr Fraser (Aberdeen) said that in his opinion the panel system would be very expensive Dr J B Muler (Lanark) expressed disapproval of the suggestion that the general practitioner could not be trusted to do his work properly unless under the supervision of a medical officer of health much of the work done at clinics under local authorities could best be done by family practitioners Dr A S M Macgregor (Glasgow) thought that some practical suggestions as to the work to be done by the local authorities should be put forward and he hoped that this would be done by the British Medical Association In Glasgow they were responsible for 90 000 persons on the poor roll and there were three possible schemes for dealing with them—by whole time officers by panel practitioners and by part-time officers The cardinal principle should be that whatever was done it should not prejudice the family practitioner system of the future upon which he believed the insurance principle would be based Dr G C Anderson Deputy Medical Secretary of the British Medical Association and Dr R C Buist Dundee also spoke It was agreed that the Department of Health should take steps to form a committee composed of members from representative organizations of local authorities and from the British Medical Association to prepare a draft of some scheme or schemes which might be submitted to local authorities for their guidance

Ireland

Royal Academy of Medicine

The President and Fellows of the Royal Academy of Medicine entertained a large company to tea on May 27th to celebrate the fiftieth anniversary of the foundation of the Academy In commemoration of the occasion the President Dr T G Moorhead presented to the Academy a handsome presidential badge representing in gold and enamel the seal of the Academy The badge was received on behalf of the Academy by the secretary Dr T P Kirkpatrick who subsequently read a paper on the life and work of Sir William Petty Fellow of the College of Physicians who in 1684 founded and was the first president of the Dublin Philosophical Society the first scientific society to be founded in modern Ireland

The Rotunda Hospital

In the annual report of the Rotunda Hospital Dublin for the twelve months ending October 31st 1931 the Master D[illegible] a trial was given to the [illegible] comparison with the [illegible] the results were unsatisfactory dangerous method the convalescence [illegible] control and in a few the admirable design of the [illegible] stillbirths which [illegible] upon the number of excellent friends The administration had enlisted in the Surrey Hills He begged radiostoleum to that the claims of the Great Ormond Street but beneficial which itself was on the eve of a great venture intravenous instruction might not be forgotten The Princess associated declared the pavilion open the Bishop of Kingston radiostoleum dedicatory prayers some further presentations review 2 made and the large company present were invited of the hospect the arrangements in detail

Induction of

Master expresses himself as directly opposed to puncture of the membranes except in cases of accidental haemorrhage and hydramnios and has reverted to Scheel's method A plugging forceps is passed up posteriorly by touch and the liquor amnii is evacuated If there is any difficulty a bullet forceps is placed on the cervix and the operation is performed by sight Castor oil and quinine was successful in twenty out of twenty nine cases and a bougie in four out of nine The stomach tube method nearly caused a fatal haemorrhage in one instance death being prevented only by a timely version The number of abnormal presentations was much diminished partly owing to pre natal care There were seven examples of face presentation all of which ended spontaneously as did a like number of persistent occipito posterior presentations In spite of a large increase in the number of potentially septic cases admitted the morbidity rate was satisfactory there were ninety five morbid cases with a percentage according to the B M A standard of 4 3 Two of the nineteen deaths in the Rotunda during the year appeared to have been due to insufficiently sterilized glove powder

National Health Insurance Bill

Viscount Charlemont moving the second reading of the National Health Insurance and Contributory Pensions Bill in the Northern Ireland Senate said that the recent valuation of the assets and liabilities of approved societies disclosed that during the five years covered by the valuation from 1924 to 1928 there had been on the one hand a steady drop in the contribution income of approved societies due to unemployment and on the other hand a steady increase in claims Both factors had altered since 1928 and the Government Actuary had advised that the scheme was no longer able to bear the strain imposed upon it It was therefore necessary to take immediate steps to restore financial stability to the scheme A careful analysis had revealed that the principal cause of loss was the very high rate of claims of insured women particularly married women It was estimated that the loss on the insurance of women had been higher in Northern Ireland than in Great Britain The Government Actuary had advised that it would be possible to restore stability by reducing the rates of benefit paid to women as follows disablement benefit for single women and widows from 7s 6d a week to 6s a week sickness benefit for married women from 7s 6d a week to 5s a week Unemployed members had been relieved of the necessity of making any payments but the actuary had advised that it would be necessary to revert to the old principle and to require members to make some payment themselves in respect of their arrears of contributions if they wished to retain their title to full benefits Societies would be called on to bear half the loss of income due to unemployment Steps were being taken to preserve for a further period the contributory pension rights of genuinely unemployed persons who satisfied certain insurance tests The Minister of Labour said that it became ob- the results last valuation that the Health Insur- -ained by Dr Grafenberg him- und foundation and that and it was evident that much car- made It was found that done before a standardized technique ing their way the results could be elaborated The confere were not Men clum that in this discussion it succeeded of the societies clearly some of the questions to which an 5s per head have to be found han £3 4s

Mrs Pyke of the National Birth Control Asscheme he Dr C P Blacker of the Birth Control Inve te married Committee and Mrs Evelyn Fuller of the Soc ficulty in the Provision of Birth Control Clinics were resp the one for arranging the conference ch and on the other hand that not sufficient money was being spent with the result that there was hardship among a great many of the people Northern Ireland was spending £9 630 000 on these social services a very large proportion of the total expenditure of the country of between £8 000 000 and £9 000 000 Personally he felt that this should be so and his colleagues in the Cabinet shared his view The Bill was read a second time

Medical Inspection and Treatment of School Children

Dr Mary O'Leary senior school medical officer in a lecture at the Irish Hospital Nursing and Midwifery Conference held recently in Dublin stated that in the last four years 60 000 children had been medically examined Septic tonsils had been removed in over 5 000 of these children and a similar number had been treated for defective vision those unable to pay for glasses having received them free of cost or at a reduced price 18 000 children had received dental treatment and 900 had been treated for skin defects and 300 for running ears In most places there was usually delay in arranging for treatment but in Dublin inspection and treatment went hand in hand because the latter was administered in hospitals In cities less well equipped the treatment was carried out at clinics scattered throughout the city and until these were built and staffed treatment was non existent The work of the public health officer was essentially preventive—prevention of such terrible ills as heart disease which often followed rheumatism and which in turn was often caused by neglected septic teeth and tonsils prevention of blindness which might result from ignorance and neglect of existing defective vision or other eye trouble and prevention of deafness which might result from neglected ear trouble But the cause of these defects was still unknown and not sufficiently sought research was not only possible but essential in the interests of public health Collective or co operative research—the joining of the resources and work of the school medical officer and of the pathologist hospital clinician and dentist—was advisable If the State was to get full value for the time and labour expended by public health officers on school medical inspection research which in itself was to a large extent State supported should take cognizance of the work which it was imperative it should undertake In conclusion Dr O'Leary spoke of the need for research into those defects mentioned which were found most commonly among the school population and which, if undetected and untreated caused much suffering and physical inefficiency to children in their school days and seriously interfered with their earning capacity in later life

Hospitals and Motor Accidents

In the Northern Ireland Senate Mr Hill Dickson urged that legislation should be introduced to enable hospitals supported by voluntary contributions to claim compensation for motor accident cases Viscount Charlemont (Leader of the House) said that the Government had no information as to the percentage of the cost of treating motor accident cases which the hospitals recovered The recovery of expenses was a matter primarily for the hospitals and the patients concerned and to interfere further than had been done under the existing law would involve a consideration of similar principles being applied to all other cases of accidents treated in the hospital thereby conflicting and interfering with the well recognized voluntary principle upon which most of the larger hospitals were organized and conducted Replying to further speakers Lord Charlemont said that he could only promise to draw the attention of the Government to the views of the House he could not promise any legislation in the immediate future

England and Wales

Mary Scharlieb Memorial

Old colleagues and students of the late Dame Mary Scharlieb assembled at the Royal Free Hospital on May 31st when a tablet was unveiled and a ward in the obstetrics and gynaecology unit dedicated to her memory The Bishop of London performed the dedication The tablet which was unveiled by Lord Riddell president of the hospital is in ebony with a figure of the Bambino copied from the Florentine frescoes and below it a record of the name and dignities of Mary Scharlieb and of the fact that as gynaecologist to the Royal Free she was the first woman to serve on the staff of any general hospital The sum of over £1 000 has been collected for the endowment of the ward At present the ward is temporarily accommodated in the older part of the building but it is hoped to transfer it in due course together with the tablet to the new wing Lady Barrett in a brief speech of reminiscence reminded the company that Dame Mary Scharlieb studied medicine and surgery at a time when no women were granted house surgeoncies or any post which afforded them practical experience When she came to the Royal Free Hospital she had already a great reputation though her appointment caused some trepidation even in that institution especially among the nursing staff who had never served under a medical woman Perhaps the most vivid memories cherished by her old students concerned her masterfulness in the theatre One characteristic was that she would never wait a moment if the anaesthetist was not present at the time appointed someone else must administer the anaesthetic If the instruments were not complete she must make use of such as were available While her busy fingers worked her tongue was not idle She was able to suffer fools if not gladly at any rate with self control No one would attribute to her the quality of meekness in the ordinary sense but if meekness was in the words of an old writer strength restrained then she had that quality also and no one could doubt that both her strength and her restraint she drew from invisible sources Miss Gladys Hill added a simple tribute from the point of view of the younger medical women students to whom Mary Scharlieb was a tradition Finally Lord Riddell spoke of a great Victorian lady who would have made her mark in almost any calling except perhaps that of the costumier Her work for the women of India in which she was associated with Lady Dufferin happily present at the ceremony was one of her greatest achievements One could not be in her presence said Lord Riddell without being agitated to do something Dame Louise McIlroy in thanking those who had participated in the ceremony spoke happily of the spirit of Mary Scharlieb being still affame in her old hospital and school

Red Cross and St John

The twelfth report of the Joint Council of the Order of St John of Jerusalem and the British Red Cross Society just published deals with the work of various committees during the past year The Auxiliary Hospitals Department whose main work consists in providing help to officers suffering from tuberculosis has given assistance in 280 cases The Central Bureau of Hospital Information formed in 1928 by the amalgamation of the hospital and medical services departments was responsible for the publication of the Hospitals Year Book in August 1931, this was very well received by the press and future editions will be published under a special editorial committee Other activities of the Bureau include the publication of memorandums on subjects of special interest to hospital administrators examples of which are artificial sunlight treatment in hospitals of varying size contributory schemes convalescent homes for colostomy patients surgical instruments etc Information has also been supplied with regard to building costs flooring materials laundry and kitchen equipment operating theatre lamps cold storage dietary scales and wireless installation The Comforts Committee has issued grants to forty two Ministry of Pensions hospitals and other institutions for the provision of gramophone records football and cricket equipment cigarettes tobacco etc To six Ministry of Pensions hospitals and four other institutions the Wards Industries Committee has provided materials and training for basket making leather work embroidery woodwork painting and other trades 500 men having received benefit The Emergency Help Committee has given advice concerning pensions Amongst its many other activities have been the allowing of grants for business purposes the settling of debts the granting of expenses for removals convalescence and dental treatment Despite various economies which have been effected there was a deficit for the past year on ordinary income of £845 and it is perhaps a matter for congratulation that resources have not been depleted to a greater extent

The Princess Royal Opens Children's Hospital Pavilion

The Princess Royal visited Tadworth on May 30th to open a pavilion in the grounds of the Recovery Branch Hospital which is attached to the Great Ormond Street Hospital for Sick Children Five years ago the Great Ormond Street Hospital obtained possession of a mansion and estate formerly the home of Lord Russell of Killowen in the heart of Surrey to which it proposed to transfer patients to complete their recovery in ideal surroundings The house itself accommodates thirty five beds or cots but the new pavilion (to which it is hoped others will be added) accommodates forty more twenty in each wing The most up to date principles of hospital planning have been followed The pavilion which is a one story building opens to the south the front being almost entirely removable so that all the beds can be wheeled out on to the concrete balcony The red tiling of the pavilion and of the long covered walk connecting it with the house strikes a pleasant note amid the abundant foliage and the whole construction is simple agreeable and perfectly adapted to its purpose Her Royal Highness was received by Lord Macmillan who is president of the hospital the members of the board of management and the matron of Great Ormond Street and proceeded at once to the pavilion where the medical officer (Dr Ritchie) and the sister in charge (Miss Wilson) were presented In a brief address Lord Macmillan said how heartily the Princess Royal was welcomed at her own hospital where as Princess Mary she served for some time as a nurse This was her first visit to the Recovery Branch at Tadworth and she came at a moment of very great importance in the long history of the Great Ormond Street institution—namely at the inauguration of what it was hoped would be a series of pavilions where as many children from the town as possible would be able to spend their convalescence He congratulated the architects upon the admirable design of the pavilion and also remarked upon the number of excellent friends which the hospital had enlisted in the Surrey Hills He begged however that the claims of the Great Ormond Street Hospital which itself was on the eve of a great venture of reconstruction might not be forgotten The Princess then declared the pavilion open the Bishop of Kingston offered dedicatory prayers some further presentations were made and the large company present were invited to inspect the arrangements in detail

India

Treatment of Leprosy

In the April issue of *Without the Camp* the quarterly magazine of the Mission to Lepers, there is an informative note on the recent developments in the treatment of leprosy at the Purulia Leper Home and Hospital one of the largest institutions of this kind in India While the injection of hydnocarpus oil with 2 per cent creosote was the main line of treatment as many cases as possible have been subjected to the newer method—namely intra dermal injections of 0 5 per cent iodized ethyl esters of *Hydnocarpus wightiana* The note embodies extracts from the annual report of the institution from which it appears that these injections are definitely more effective, but also much more painful than the intramuscular injec tions The advantages are that there is no need for a counter irritant such as trichloracetic acid severe reactions are comparatively less frequent the period of treatment can be shortened and an uninterrupted and intensive course of treatment can be conducted, neces sarily under expert medical supervision which does not seriously impair the general resistance of the patient The treatment cannot however, be employed without close supervision The results of treatment (both methods) at the institution during the year under review were as follows in patients treated 529 discharged free of symp toms 13 shortly to be discharged free of symptoms 7, on probation but free of symptoms 6 much improved 40 improved 223 slightly improved, 39 stationary 47 worse 31 relapsed 15 dead 30 not fully treated, 78 Although these figures give no ground for great optimism they do represent solid results which may well prove to be permanent It is the policy of the institution to be very cautious in declaring a patient symptom free in order that therapeutic research may not be retarded by fallacious or premature claims of success At the Dichpali Leprosy Hospital Hyderabad the use of hydnocarpus esters continues intradermal injections alternating with intramuscular injections in all types of leprous lesions At the Vadathorasalur Leper Home the esters are preferred to hydnocreol

The Kashmir Mission Hospital

In the report for 1931 of the Church Missionary Society s Hospital in Kashmir it is stated that at least one quarter of the patients are suffering from preventable conditions due to such factors as lack of sanitation faulty diet ignorance and poverty Bone diseases are very prevalent these are partly induced and aggravated by indifferent nutrition The tendency to use Kashmir as a sanatorium in the Punjab has done much to increase the incidence of tuberculous disease in the valley Although all persons coming into the State are medically examined, advanced cases of this infection are still encountered which have travelled to the valley from the south A large number of cases of nephritis are being admitted to this institution most of them complicated by morbus cordis This is attributed to the rigour of the Kashmir winter and the altitude of the neighbouring valleys The prevalence of goitre and anaemia testifies to deficiencies in the ordinary diet and water supplies of some districts and the wide spread occurrence of disorders caused by intestinal parasites to the necessity of reform in general hygiene The total number of attendances at the hospital in 1931 was 44 574 2 006 were admitted as in patients There were 7 150 surgical operations

Correspondence

LACTIC ACID IN THE GASTRIC CONTENTS

SIR —It is obvious from the correspondence under this heading that there must be profound differences in the technique of the clinical lactic acid tests employed by various workers or that different interpretations are put upon the results obtained In the last few years I have examined in the course of our research work the stomach contents from more than a thousand cases, but only about one half of these were particularly examined for lactic acid These included both normal and abnormal in dividuals—particularly cases of anaemia and gastro-intestinal diseases

The tests employed were Maclean s thiophene Uffel mann s and ferric chloride In nearly every case the first method was checked by one or both of the latter tests and only once did I obtain a positive test after a negative thiophene result The thiophene reaction readily gives a good immediate positive reaction with 0 02 per cent lactic acid in stomach contents—but it is always our practice to re examine the final reaction test mixture twenty-four hours later, I have never had cause to alter my interpretation of the result obtained immediately after completion of the test It is possible to get un reliable results with Maclean s test if care is not taken, and this may easily mislead the unwary Of course bile will interfere with any colour reaction unless specially removed From time to time it is my practice to check our technique and solution by blank tests and the use of gastric juice to which has been added small amounts (0 02 per cent) of lactic acid

Our results are in agreement with those previously ex pressed by Dr Craven Moore and Professor Davidson It is possible that lactic acid is present in small quantity in most stomach contents as in blood but in quantities not detectable by the ordinary tests described above On the other hand when present in relatively large quantities such that it can be identified by these clinical tests then there is apparently some pathological significance attached to it This has already been put forward by Dr Craven Moore Drs Murray and Robertson suggest that it is achlorhydria and not the carcinoma which favours the production of lactic acid This is not my experience, I have found the lactic acid reaction strongly positive in cases of carcinoma having almost normal amounts of hydrochloric acid in the stomach contents

I have been able to examine a large number of cases showing achylia and in a forthcoming paper for example I have described the frequency of lactic acid in the stomach contents of 200 cases of pernicious anaemia

Of all diseases this probably shows the longest indi vidual history of achylia so that in view of the remark able results of Drs Murray and Robertson one would expect to find large quantities of lactic acid produced by a flourishing gastric establishment of the lactic acid bacillus unchecked by the congenital (?) absence of free hydrochloric acid I was only able to find lactic acid twice in the 200 cases (involving about 500 separate test meals) In other non malignant diseases I have obtained similar results —I am etc JOHN F WILKINSO

Manchester Royal Infirmary May 26th

BRONCHOMONILIASIS

SIR —I have read Dr Gordon Oliver s letter of May 7th with great interest as during the past four years I too have been interested in moniliasis but in spite of exten sive experience with children and adults I have yet to meet with a genuine case of bronchomoniliasis During

the course of my investigations I have dealt with about ninety cases of paronychial monilíasis and approximately twenty of buccal infection in seventy of these the organism has been cultivated and fully investigated and at the moment of writing I have some twenty strains in culture

In spite of frequent attempts I have been unable to grow a true monilia from sputum—but the organisms are relatively frequent in the mouths of children even in the absence of clinical signs of infection So much is this the case that in a recent series at the Infants Hospital I was able to isolate monilia from 20 per cent of routine throat swabbings It is worthy of note that none of these children had any evidence of bronchial involvement of the type suggested in Dr F H Young's article (April 2nd) Again in a series of experimentally infected rabbits (work performed elsewhere) of twenty animals only one developed a pulmonary lesion—in all the others death resulted from renal damage If these results can be applied to human beings surely it would be more logical to search for evidence of monilial infection in the urine I have yet to grow monilia from urine wherein it has been truly pathogenic In my large series of human monilial paronychia I have been unable to demonstrate pulmonary infection by monilia

I submit that from these findings (*a*) Pulmonary monilíasis has not yet been definitely proven to exist as a clinical entity in the large number of cases Dr Oliver would have us believe (*b*) It is probable that monilia does exist in many otherwise normal mouths and as Dr Oliver and his co workers obtain specimens of sputum by the administration of emetic doses of ipecacuanha etc any monilia which they may cultivate from the sputum may very well emanate from the mouth (*c*) From my other published work[1] I am of opinion that monilia is an important pathogenic organism from the point of view of epithelial infections of the skin and mucous membranes only —I am etc

DAVID H HALER
Pathologist to the Infants Hospital

Vincent Square S W 1
May 23rd

VASOVAGAL SYNCOPE

SIR —Sir Thomas Lewis suggests as Nothnagel did that a careful record should be kept of cases of angina pectoris vasomotoria The condition as Osler says and Dr Ryle describes is not infrequent I have observed two cases during the paroxysms They commence with pallor of the face and hands and chilliness and numbness of the limbs With dramatic suddenness there quickly supervenes pain over the heart and down the left arm One patient describes it as a feeling as if you could not get something through your heart and as if your inside was frozen and as if the bowels were going to move The patient is afraid to move or talk There is a feeling of faintness and desire for air yet a fear of increasing the pain by taking a deep breath The pulse rate in each case was small—60 in one case and 50 in the other Blood pressure was 100/70 in one case To the touch the surface of the body was very cold There was no loss of consciousness but one patient describes an attack in which she fell (evidently due to this cause) and both patients as young girls had known what it was to faint if deprived of food beyond the normal time These cases do not look like faints but like angina pectoris gravior with pallor The paroxysms lasted half an hour leaving the patient exhausted for two days

Evidently Nothnagel and Gower in describing cases saw two facets of the same picture which is evidently a generalized vasomotor constriction But as the striking feature is the *angor animi* the term vasomotor angina seems preferable in order to differentiate the condition from the graver malady —I am etc

A E BLACKBURN

Beckenham May 21 t

[1] *Brit Journ Derm* July 1931 xliii 343

LOCAL ANAESTHESIA FOR TONSILLECTOMY

SIR —Speaking as a general surgeon I should like to support the views expressed by Mr Hamblen Thomas (May 21st) on the subject of dissection of tonsils under local anaesthesia It is not my experience that post operative haemorrhage is such a bugbear as Mr Vlasto (May 28th) would have us believe and I have not experienced a single case in over two hundred operations in the past six years In addition the loss of blood during the operation is minimal and usually the only articles soiled with blood are the basin into which the patient spits and the swabs used in the operation and by the patient to wipe his mouth The patient gargles for about ten minutes after the operation when the tonsil beds are inspected and found dry For this reason I consider it safe for a private patient to be brought by a car to a consulting room and returned home again by the same means within the space of an hour

In answer to Mr Vlasto's other reasons for preferring general anaesthesia (1) It is not claimed that all pain is excluded but all manipulations are definitely analgesic and the tongue and jaw are not held or gagged When a child of 9 or 10 years of age smiles spontaneously at the completion of the operation there can be no real pain but rather relief that what is admittedly a discomfort is over (2) When four out patients can be successively anaesthetized and operated on by the same surgeon within the space of one hour this disadvantage cannot hold (3) In the avoidance of mental pain patients must naturally be carefully selected (4) The same applies to local anaesthesia (5) The patient being conscious does not swallow blood And whereas no one would willingly deprive an anaesthetist of his well earned fee yet pecuniary relief to the patient by having neither this nor the nursing home fee to settle is a matter of some moment to many patients at the present time

In conclusion one point must carefully be borne in mind The effect of the local anaesthesia quickly wears off and pain may become severe unless the patient is instructed to gargle frequently with an aspirin gargle — I am etc

HUGH WHITELOCKE

Oxford May 28th

SIR —May I say that I agree entirely with Mr Vlasto? The diminished operative bleeding under local anaesthesia is often a danger disguised as a blessing for many of the small vessels temporarily constricted will bleed later And the argument sometimes used that under a local injection the patient can assist by expectorating blood is discounted by modern technique for with the head extended each bleeding vessel dealt with formally and a suction tube in the mouth the possibility of septic inhalation is quite negligible

An important factor not mentioned by Mr Vlasto is perfect surgical access When as commonly the Davis-Boyle gag is used the head is immovably extended and the tongue firmly pressed to the floor of the mouth which is held rigidly and widely open With this as with the use of any other position or gag consistent with perfect access the procedure even with the help of morphine must be intolerable for many minutes Whatever modern form of general anaesthesia is adopted the worst we need expect is vomiting which ceases within twenty four

hours Is not this preferable to an experience so alarming that at the time it may produce serious mental shock and later on may remain in the memory like a hideous nightmare for years?

Whenever asked to perform tonsillectomy or for instance submucous nasal septal resection under local anaesthesia I always reply that by this method even if I can kill pain I cannot kill trepidation—I am etc

London W 1 May 30th H LAWSON WHALE

TREATMENT OF VARICOSE VEINS

SIR,—In his article in the *Journal* of May 21st Mr Dickson Wright writes as follows

Some disappointment is caused in certain cases of very extensive varicose veins by the difficulty experienced in inducing large veins to react to the various sclerosing solutions It has been suggested that in these cases two solutions should be injected more or less simultaneously so as to produce a precipitate of insoluble quinine salicylate crystals in the interior of the vein I have always felt this to be a very dangerous procedure for obvious reasons Further it is fairly certain that a considerable number of these large veins will recanalize after a time even when they have been coaxed into thrombosing

Such statements cannot pass unchallenged It is undoubtedly true that any one sclerosing solution used singly may be unsuccessful in the treatment of certain large varices My experience with sodium morrhuate, which Mr Dickson evidently still favours, has been highly unsatisfactory with regard to end results Over 30 per cent of cases apparently successfully thrombosed with sodium morrhuate solution will show some degree of recanalization after a period of six months This drug has been so unreliable as a sclerosing agent that I have ceased to employ it The standard quinine urethane solution advocated by Genevrier and Douthwaite yields more gratifying results for the ordinary moderate sized varicose veins Lithium salicylate 30 per cent and tutocaine 1 per cent (lithocaine) is even more dependable and there has been less than a 2 per cent recurrence over a period of one year with the use of this solution Where very large veins are to be treated by sclerosing solutions contrary to Mr Dickson Wright's statement I have found the 'twin injection to be invariably effectual and lasting in its results The twin injection consists of injecting 4 c.cm of lithocaine and 2 c.cm of quinine urethane simultaneously from two separate syringes at a distance of three to four inches in the same vein The two salts are incompatible, and an insoluble quinine salicylate is formed as a sticky glutinous white compound I and many others have always found it to produce a painless extensive, and highly satisfactory thrombosis This treatment is simple safe and yields permanent results—a most desirable state of affairs In the last three years at the varicose vein clinic at the Royal Waterloo Hospital over 1 000 injections have been given by Dr R S Harvey and myself There has not been one single complication either local or general and no instance in which the veins could not be regarded as permanently obliterated by this simple method

I am therefore at a loss to understand Mr Dickson Wright's statement that he has always felt this to be a very dangerous procedure for obvious reasons I would like to know what these obvious reasons are and what are his grounds for saying that it is very dangerous Should he wish to see the treatment as carried out at this clinic and some examples of late results a visit from him will be most welcome—I am etc

[illegible] H MAYGOT [illegible] F.R.C.S
Operative Surgeon Royal Waterloo Hospital

London W 1 May

SIR,—As an admirer of Mr Dickson Wright's articles on the sclerosing treatment of varicose conditions especially on ulceration it is with reluctance that I cannot agree with the views in his recent article (May 21st) He advocates return to surgical methods To justify this controversial advice he unfortunately gives a dreary picture of alleged extensive failures with injection alone' which, if I may say so, seems incredible and not warranted by fact Many are of opinion (I share it) that all varices *of the limbs* can be cured simply and harmlessly by 'injection alone' provided one can enter the vein correctly I have long thought this was accepted Mr Wright's teaching is that there is a considerable field (he describes a hundred recent cases) where a combination of surgical and injection methods should be advised in preference to injection only In summary his evidence against injections alone' is a depressing tale of alleged difficulty and recurrence (30 per cent and 98 per cent recanalization)

My own opinion is that the sodium salicylate method ('alone') is the technique of choice which will solve all problems This statement is not a denial of the merits of other fluids In the *Journal* (January 26th 1929) I described the technique as learned from the originators failure is rare recanalization uncommon My numerical experience is probably exceeded by many, as I hold no hospital clinic appointment I have practised this method (and others) however for almost seven years with several periods at a well known clinic and have treated or assisted with many hundreds of cases Practically every *type* (the point mainly at issue) of case came under my care or observation Serious complications—such as the anaphylactoid symptoms—reported with other fluids are unknown or extremely rare I have never seen one nor in an extensive and successful experience (with this and other solutions) has my colleague Dr Alan Flynn

In the large numbers of cases treated at the late Professor Sicard's (the originator's) and Dr Gaugier's Paris clinic no serious mishap has occurred In my article published in your columns in 1929 I advised against using an analgesic since the good results reported by Gibson and Somerforde I now employ *1 per cent novocain* it makes injection almost painless

Methods involving a combination of surgery and injection were at one time employed extensively The late Mr Swan a former president of the Royal College of Surgeons in Ireland advocated them in pre-war days He used an iodotannic and another solution both for veins of the limbs and for prolapsed haemorrhoids I assisted him on some occasions My recollection of it is (I remember the details imperfectly) that it was painful and that complications were not infrequent Swan's method was a modification of the older *methodes mixtes medico chirurgicales* of Tuvel and Schiassi (1904–8)

The field for the surgical method if existent must be small—probably a small fraction of 1 per cent of cases For these rare cases Mr Wright's ingenious modification seems to be undoubtedly the method of choice It seems if I may say so a very great improvement on the older surgical methods for which he is to be warmly congratulated The disparagement of the larger field of usefulness (that is injections alone) to glorify the infinitely smaller (that is operation) can however, scarcely be a suitable way of commending operation

Mr Wright's articles are usually so accurate that his advice is fortunately becoming standard teaching Fair criticism should therefore be not only useful but essential, it can only reveal error and prove not damage truth—I am etc

P KENNEDY MURPHY

London W 1 May 26th

TREATMENT OF CHRONIC ULCERS OF THE LEG

SIR,—I am interested in Dr Umanski's article in your issue of May 14th because of the value he places upon glycerin From my own experience of glycerin extending now over twenty years Dr Umanski's treatment of chronic ulcers with balsam of Peru in glycerin commends itself to me

In a letter published in the *British Medical Journal* in January 1931 I gave an account of my use of glycerin and stated that I had found that a 25 per cent aqueous solution acts well in the healing of septic wounds and drew attention to the fact that it prevents the bleaching and maceration of the skin that follows inevitably on the use of ordinary wet dressings I believe that glycerin alone is sufficient for the ordinary cases of septic sores and wounds but I see the advantage of adding some substance to stimulate the processes of granulation and epidermization in chronic ulcers I had noticed that a 25 per cent solution was not inferior to the stronger solutions or even to pure glycerin in its healing power and it dawned on me that hygroscopic action could not be an essential factor Tested by cobalt chloride I found that the power of aqueous solutions of glycerin ranging from 25 to 95 per cent to hold water molecules became progressively less as the glycerin was reduced and that those below 50 per cent allowed a large number to escape

In the course of other experiments I had noticed that when the specific gravity of two solutions is equal the pressure of aqueous vapour at their surfaces is also equal and that the pressure of the aqueous vapour varies in inverse proportion to the specific gravity and it struck me that if one of the solutions was hygroscopic this relation between the specific gravity and the vapour pressure might become upset and would prove useful in determining whether or not one of the solutions was hygroscopic This proved to be the case and confirmed the cobalt finding that a 25 per cent aqueous solution of glycerin does not act hygroscopically that 50 per cent is only slightly hygroscopic and that the higher percentages are proportionately more hygroscopic

Most writers on glycerin and hypertonic solutions have stated that on account of hygroscopic action diffusion and osmosis they believe that the lymph is induced to flow in greater abundance from the tissues that the wound is thus washed out from the interior and that micro organisms and tissue debris are brought to the surface This belief or hypothesis is not well founded and the weakness of it is that *no* cognisance has been taken of the essential difference between molecular movement and molar movement It has not been recognized that it is one thing for the lymph to move *en masse* as when it is poured from one glass to another or in any other way under the influence of an extrinsic force because in these instances the movement is a mass or molar motion so that whatever substances are contained in the lymph in solution or in suspension micro-organisms included will go with the lymph wherever it goes but it is another thing when osmosis diffusion and hygroscopic action are at work because these are molecular processes

In accordance with the law of diffusion the water and other diffusible substances do not diffuse into the glycerin at equal rates the indiffusible are left to act in accordance with the law of gravity and either sink or float Molecular movement is independent of gravity but molar movement depends on gravity or on some other extrinsic force We must not forget that these molecular movements are reciprocal the glycerin molecules travel into the lymph and the lymph molecules travel into the glycerin So two streams of molecules are travelling in opposite directions In which direction will the microbes be forced? In neither because molecular motion does not produce motion in a mass and even if it did a microbe might not be transported because in all probability the momentum of the two molecular streams is balanced Examine a drop of motionless water containing a few dead bacteria the bacteria are not moved about by the motion of the water molecules they are moved only *when* molar movement is occasioned by disturbing the water by some extrinsic force

I have shown before[1] that the diffusion of water into glycerin is such a slow process that even if a flow of lymph *in toto* were induced the quantity would be so small as to be of no value I maintain that a flow of lymph which can be of service in carrying foreign bodies such as microbes and dissolved substances in normal proportion must have molar movement Lymph exuding from a wound in a natural manner or induced by irritants has molar movement If a flow of lymph with molar movement is induced by hygroscopic and hypertonic solutions it cannot be the result of diffusion osmosis or hygroscopic action but it must be due to the response of the tissues to the irritation produced by the presence of these solutions—I am etc

Glasgow May 20th DAVID KYLE M A M B Ch B

SIR,—On reading the interesting article on the existing methods of treating chronic ulcers of the leg and the method elaborated by Dr M Umanski in your issue of May 14th I cannot help but feel that a method which in recent years has been so rigorously tested—namely that of the application of regulated pressure combined with injection of the diseased veins when concomitant—and so universally practised now with such success cannot be discarded without unmistakable proof of the presence of a superior method

The principle of treatment now in vogue is to aid the return of venous blood from the pathological area by the use of sclerosing solutions to obliterate the superficial diseased veins in which the blood is stagnant This is combined with the use of pressure preferably applied by a rubber sponge kept in position by a wide elastic bandage The efficacy of the latter lies in its use as an ambulatory method whereby the alternate contraction and relaxation of the calf muscles in walking is transmitted to the ulcerated area ensuring a plentiful supply of arterial blood The disappointing results in the past were due as A Dickson Wright says in an article on the subject to the fact that

> All efforts seem to have been concentrated on finding a magical salve or powder which would stimulate waterlogged tissues into healing

The observations of Nobl and Lowenfeld that germs present have little to do with lack of healing are stated by H D McPheeters and Charles E Merkert (*Journ Surg Gynecol and Obstet* 1931) as accounting for

> The multiplicity of antiseptics and chemical tissue stimulants that have been used in the treatment of these ulcers in the past always with but slight or unsatisfactory results as far as the production and maintenance of healing is concerned

As the majority of leg ulcers are accompanied by a pathological venous circulation the removing of this is vital to success The other varieties—the malignant tuberculous syphilitic and actinomycotic and those associated with arterio-sclerosis glycosuria Buerger's and Raynaud's disease—cannot be combated by purely local treatment—I am etc

S SILVERMAN B Sc Ch B M B

Birmingham May 24th

[1] *Brit Med Journ* 1931 1 42

ALUMINIUM AND HEALTH

SIR —I have just read Dr Le Hunte Cooper s letter on page 862 of your issue of May 7th on aluminium and health and would like to say that the statement he attributes to me as Director of Hygiene War Office is quite unauthorized

Dr Cooper sent me his pamphlet on the subject of aluminium in health accompanied by a letter and in reply it is possible that I may have written *If* your findings are true the question of the use of alum in the clarification of drinking water will require careful consideration or words to that effect I however had his results as to the effect of cooking certain foods in aluminium cooking pots carefully checked in the hygiene department of the Royal Army Medical College, and failed to find any evidence in support of his findings as to the amounts of aluminium taken up by these foods and I duly informed him to this effect

I shall be obliged if you will publish this letter —I am etc

P H HENDERSON
Major General
Director of Hygiene War Office

War Office S W 1 May 29th

SHOCK FOLLOWING BLOOD EXTRAVASATION

SIR —In connexion with Dr O Donel Browne s article on shock following blood extravasation (December 19th, 1931 p 1124) I should like to suggest that the shock is probably due either to some alteration in the blood of these pregnant women before it is extravasated or else to increased susceptibility of these women to blood proteins *Investigation along these lines might lead* (1) to the recognition of patients who are liable to this variety of shock (2) to our being able to render them immune before the disaster happens or (3) to some simple and effective method of treating this variety of shock when it has occurred My reason for the above suggestions is that very extensive extravasations of blood are wellnigh everyday occurrences in general practice here in connexion with fractures and other injuries and we practically never find a degree of shock in these cases that is out of proportion to the extent of the injuries Primitive man could never have survived had shock followed the extravasation of blood —I am etc

LESLIE B BURNETT M B

Oxford Canterbury N Z April 1st

THE USE OF THE SELF '

SIR —I also have read *The Use of the Self* but I cannot find anything new in it Mr Alexander describes, in a popular form the medical principles of integration and of prevention introduced by Hippocrates twenty three centuries ago and applied in practice by all good physicians of the ages He does not however not being a physician realize that these principles cannot be applied except on the basis of a precise medical diagnosis To teach the use of the self to a diseased individual we must know what is the self of that individual and this knowledge cannot be obtained through metaphysical considerations but through a precise scientific medical exploration Without such an individual deep and precise diagnosis any attempt at treatment may be disastrous Mr Alexander like all non medical critics puts the cart before the horse and teaches treatment without diagnosis which of course is impossible

In his work Mr Alexander does not indicate any precise method of treatment He gives a general outline of principles well known in medical circles and indicates that he can on the basis of these principles cure I do not doubt that he can influence diseased individuals in whom there predominates an intense psychical factor but I do not see how the ' use of the self ' will help us to cure an individual infected with typhoid fever or with cholera or who is suffering from a perforated appendix Literature in all ages has been submerged by works of non medical healers teaching new methods and panaccas Nothing of all these speculations has survived, or can survive so long as the essential condition of cure is diagnosis Since the days of Aristophanes medicine has been subjected to violent criticisms on the part of non medical men Notwithstanding these criticisms it has survived and developed, and it is continuing its rapid development because, although an Art it stands on the firm ground of Science It is time for the medical profession to take a firm attitude against all the extra medical systems that are being proposed systems which lack the essential condition of treatment—diagnosis —I am etc ,

A P CAWADIAS

London W 1 May 30th

POST OPERATIVE X RAY TREATMENT IN BREAST CANCER

SIR —It was with considerable relief that I read the letters by Drs Douglas Webster and N S Finzi in the *Journal* of May 28th For some time past I have considered that the ideal method of dealing with breast cancer was removal by operation followed in a few weeks time by a course of deep x ray therapy I have been more than satisfied with the results of this treatment and it came therefore as a blow to my self esteem to read in the recent report that ' prophylactic treatment with x rays after operation is apparently useless

Unfortunately I have only a few cases to record far too few to be of any use for statistical purposes but then statistics are chancy things and I only wish I could repeat the *bon mot* of the late Sir William Thornburn with relation to statistics but I m afraid it cannot be put down in print My methods may be open to a lot of criticism for I do not believe in the necessity of the severe and mutilating operation which removal of the pectorals entails, but rather do I remove the breast with the fascia over the muscles and *then clear* the axilla thoroughly this being done as rapidly as possible Afterwards as I have said, as soon as the patient is fit she is sent to have a course of deep x ray therapy

It was the two letters already referred to which encouraged me to write about my own small experience for I felt that I would like to support their views that all cases of breast cancer should have the added chance of surviving which deep therapy may possibly (*pace* conclusion No 13) bestow upon them —*I am etc* ,

G RICHARDSON M D F R C S Ed

Sydenham S E May 29th

OSTEO ARTHRITIS OF THE HIP

SIR,—I wish I could feel Dr Douthwaite s confidence in manipulation and splinting or in fact in any form of physical treatment of osteo arthritis of the hip joint Although I do not deny *for a moment* that excellent results often do follow yet too many experiences of manipulations gone wrong prevent my believing that there is no risk attached Let us hope that with sufficient experience Dr Douthwaite will be able to indicate an exact type of case in which it is safe to apply force to the joint I think we should wait for end results before coming to any final conclusion Dr Douthwaite s experience with vaccine seems to have been as unfortunate as mine with manipulation and callipers —I am etc

H WARREN CROWE

London W 1 May 24th

LIVER THERAPY IN ASTHMA

SIR —Dr Moll (May 28th) brings forward an interesting aspect of the asthma problem in relation to liver therapy I should like to inquire however whether any of the cases cited had a fractional gastric analysis performed In view of the occasional association of achlorhydria and hypochlorhydria with asthma it would be of value to assess this factor in connexion with the liver therapy having in mind the already known connexion between achlorhydria and liver therapy in pernicious anaemia Should there be such an association some light might be thrown upon the mechanism of the treatment described Further I should like to know whether polycythaemia has been found in children suffering from asthma —I am etc

Salford May 29th BERNARD SANDLER M B

FOULING OF FOOTWAYS BY DOGS IN THE HARLEY STREET DISTRICT

SIR —As you have kindly given the hospitality of your columns to this unpleasant subject may I suggest that in view of the influx of Dominion and foreign doctors for the Centenary Meeting of the British Medical Association practical steps should be taken at once to render the professional quarter of Marylebone decent before their arrival

For three years I have fought this problem backed by the signatures of thirty leading doctors by the personal efforts of certain borough councillors and guided by counsel's opinion Up to date the outcome has been the repeated posting of notices a few prosecutions for nuisance and one or two short lived half hearted efforts on the part of the borough sweepers This last measure has for lack of successful supervision often made matters worse

The salient facts in the problem are as follows Dogs are fearful of motors at certain critical moments many owners exhibit more concern for the feelings of their dogs than for those of their neighbours or for the theory and practice of sanitation Efforts made by the borough council have in fact left the pavements as foul to-day as in the past Counsel's opinion is that both passive resistance—in the form of refusal to pay a portion of the rate—and the active policy of suit for breach of contract would entail heavy expenditure and probably fail of the object desired I have gained the impression that the majority in the borough council resent not unreasonably the idea of supplying special scavenging services to a quarter of the borough which chooses to foul its footways more thoroughly than any other quarter in London — I quote an eminent metropolitan medical officer of health

The last time I energized over this problem I proposed that some of us should furnish an unofficial cleansing service for the immediate neighbourhood but my friends fearing to endanger the borough council's sense of responsibility turned this down It would be officious in an individual householder to create such a service I now suggest that with the Centenary visitors upon us the hour has arrived for the cleansing of the pavements irrespective of the moral and legal aspects of the case

If any considerable number of occupiers in this neighbourhood share that view in the main and will kindly let me know by postcard that they are prepared to make an immediate move in the matter I will if they wish endeavour to arrange a meeting for the purpose of discussing practical measures I have a feasible and uncostly scheme to propose It will save time and postage if they will kindly indicate whether they are willing (1) to attend a meeting (2) to contribute half one or two guineas annually for one two or three years towards a scheme adopted by the meeting and including their vicinity and (3) to take some small personal share in making the thing a success by reporting negligence and suggesting improvements —I am etc

39 Wimpole Street W 1 May 28th E B WAGGETT

THE SHUTTLEWORTH SAMARITAN FUND

SIR —May we ask for the hospitality of your columns in order to make known to all who have the welfare of the mentally defective at heart that a fund is being raised to form a memorial to the work of the late Dr G E Shuttleworth? It is now nearly four years since Dr Shuttleworth passed away after a long life devoted to the welfare of the mentally defective in which cause he was a pioneer

It is proposed that the memorial should take the form of a Samaritan Fund named after Dr Shuttleworth which should be available to help better class people to place their children or relatives in appropriate homes for care or training Families of this class are prevented by many considerations from applying for aid to public assistance authorities nor in their case even when such help is sought is it easily obtainable No other such fund exists although in many cases under post war conditions such help as it would offer has become essential It is felt that this would be a particularly happy way in which to commemorate the work of one who was ever ready with a singular generosity to give his advice and aid to all who were in need

Donations of £115 have already been received and it is thought that many will be glad to have this opportunity to show their appreciation of Dr Shuttleworth's great and unselfish services Subscriptions should be sent to the Treasurer the Shuttleworth Samaritan Fund 72 Denison House 296 Vauxhall Bridge Road S W 1 or direct to the Shuttleworth Samaritan Fund Martin's Bank 68 Lombard Street E C 3 —We are etc

C A AUDEN
F G CROOKSHANK
T N KELYNACK
R LANGDON DOWN
W A POTTS

May 28th

Obituary

JOHN CLOUGH THRESH M D D Sc D P H

Late County Medical Officer of Health for Essex

Dr J C Thresh who died on May 23rd was one of the early pioneers who established the importance of environmental hygiene Through his efforts and those of the late George Reid of Staffordshire and Sidney Barwise of Derbyshire England has been cleansed and made healthy The fruits of their labours are to be seen in the vastly improved sanitary condition of English homes of to-day the low prevailing infant mortality and the practical absence of typhoid fever

John Clough Thresh was born at Wakefield Yorkshire in 1850 He was educated privately and at Owens College Manchester His early interests were centred in pharmacy and chemistry and he graduated D Sc at the University of London in 1884 He resolved on the study of medicine owing it is said to the fact that when appearing as an expert witness in a case involving a knowledge of chemistry and pharmacy his evidence was largely discounted by a medical witness with considerably less knowledge of these subjects It was accordingly at the relatively mature age of 39 that Dr Thresh graduated in medicine at the Victoria University of Manchester and in 1896 was awarded the gold medal for his M D thesis

In 1892 he obtained the Diploma of Public Health of the University of Cambridge In addition he was a Fellow of the Institute of Chemistry and a Diplomate in Public Health (*honoris causa*) of the Royal Colleges of Physicians and Surgeons of Ireland

Having decided to embark upon medicine it was natural that with his scientific training and knowledge of chemistry he should be particularly attracted to the application of that science to public health His published works though from time to time deviating into the discussion of such problems as excessive infantile mortality the value of isolation hospitals housing of the agricultural labourer and working classes the preservation of and preservatives in foods nevertheless for the main part are connected with the subject of water and water supplies In addition to other works he was the author of *The Examination of Water and Water Supplies* which is regarded as the standard work in Great Britain and indeed in all countries He also carried out much research into the purification of water and the effect of water upon health the action of water upon lead and copper and various sterilization processes and as a result of his experiments the excess lime process of water treatment was recently sanctioned by Parliament as an efficient method in the purification of river sources

Dr Thresh held many important appointments He was the first medical officer of health for the county of Essex and occupied that position for twenty two years when he was appointed consulting medical officer a post he held until nine years ago when ill health compelled him to resign He was lecturer in public health at the London Hospital Medical College and examiner in State Medicine for the University of London and in addition to his official appointments he carried out an extensive consultant practice His precision of mind and the great skill industry and resource with which he faced any problem could not fail to impress greatly his assistants and pupils and they have all tried to carry his example into their work These qualities of clear thought and capacity for hard work in addition to profound knowledge and experience made Dr Thresh in great demand as an expert witness in connexion principally with questions relating to water supply and his words were always listened to with close attention by any parliamentary committee or court before which he was required to appear At the Annual Meeting of the British Medical Association in 1895 Dr Thresh was vice president of the Section of Public Medicine and at the Annual Meeting in 1900 he was president of the Section of State Medicine He was a member of the old Parliamentary Bills Committee which existed before the new constitution and a member of the then newly appointed Public Health Committee

SIR ALEXANDER HOUSTON writes

There is no country in the world that will not mourn the death of Dr Thresh for his disciples and admirers were scattered all over the habitable globe He was a great administrator and a splendid teacher and the versatility of his knowledge combined with his endless patience and capacity for hard work rendered him one of the most striking figures in the public health service He will perhaps be chiefly remembered for his magnificent work on water supply His influence in this direction was profound and it embraced every aspect of the subject—epidemiological chemical bacteriological and physical He was equipped on all points with vast experience and personally gained knowledge Much of his work was original all of it was characterized by meticulous accuracy and attention to detail His mental gifts were of the highest order and he used them always in preaching the cause of purity Although his fetish was pure water he was extremely tolerant towards new ideas and was always in the van in connexion with the trial of any proposed novel departures from old established custom The splendid new water supply to Southend treated by the excess lime method of purification is a notable example of his prowess I shall miss him greatly a friend of forty years standing and his other disciples all over the world will mourn with me the loss of so distinguished a scientist so estimable a man and so irreplacable a figure in the world of water supply

DR A SALUSBURY MACNALTY writes

It is with deep regret that I have received the news of the death of my old friend and former chief Dr John C Thresh Public health owes him a great debt for he was one of that devoted band of pioneers who built up the organized system of public health services in Great Britain and his work and influence extended far beyond the borders of his own administrative area—the county of Essex A distinguished chemist and geologist—he had a European reputation as the foremost authority on water supplies and water purification—and no mean bacteriologist he was in addition a great county medical officer of health I had the privilege of being associated with him in the planning and early stages of the tuberculosis scheme in Essex and never knew what more to admire his comprehensive grasp of what was to him a new subject or his readiness to discuss points of medical administration and to accept suggestions on them from a junior colleague Thresh's high reputation influence and living interest in the work of young public health aspirants for many years gathered round him a school of keen disciples when they left him they were marked out for promotion and discerning local authorities considered themselves fortunate in securing one of Thresh's medical officers as their medical officer of health

In Whitehall his work was always appreciated He worked in close co operation with the Ministry of Health and was ever ready not only to share his expert knowledge with medical officers of the Ministry but also to seek help and criticism from them on new plans of public health endeavour which were constantly arising in His fertile brain Until the day came when he was stricken with illness he was never idle for a moment *Nunquam otiosus* was truly his motto Lecturer in public health at the London Hospital director of a large bacteriological and public health laboratory expert witness he did what would have been regarded as whole time occupations for four or five ordinary men in his spare time in addition to his duties as county medical officer of health And it could never be said that any one of these manifold avocations was scamped or neglected He had a fine head a tall figure a shaggy moustache and on first impressions an austere even brusque manner Under this outward aspect was a man of high ideals and generous impulses whole hearted in his service to his fellow men with a pleasant wit a nice sense of humour and a hand ever ready to help those who struggled beneath him on the uphills of life What Thresh has done for science and public health is written large for all to read his gifts of counsel and friendship are inscribed in the secret places of many hearts

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ALFRED BENSON M A M B B Ch of Maida Vale who died on May 22nd had been for upwards of forty years a well known and highly respected practitioner in that part of London He was born in Bradford Yorks in 1853 and from Giggleswick School went to Queen's College Oxford where he obtained first class honours in natural science and thence to St Mary's Hospital After graduating in medicine in 1880 he first practised at Sutton Surrey where judging from an illuminated address he received on his departure he was held in high regard and

some of the friendships arising there were lifelong For many years he was medical officer to the Paddington Provident Dispensary and assistant medical officer to the G P O He was long a member of the British Medical Association until his retirement from practice on account of increasing disability from age and sickness Dr Benson's death will be much regretted by the many former colleagues who had known and esteemed him

The late Lady TWEEDY widow of Sir John Tweedy President of the Royal College of Surgeons 1903–5 was chairman of the council of the Royal Medical Benevolent Fund Guild from the time of its inauguration until 1919 She was also president of the Father Christmas Branch from 1909 The Guild is now known as the Ladies Guild of the Royal Medical Benevolent Fund

The Services

HONORARY SURGEON TO THE KING

Lieut Colonel C A Gill I M S has been appointed Honorary Surgeon to the King and promoted Brevet Colonel vice Lieut Colonel and Brevet Colonel F P Mackie O B E I M S (ret)

I M S DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant London on Wednesday June 15th at 7 15 p m Major General J W D Megaw C I E has been invited to take the chair and the Right Hon Sir Samuel Hoare Secretary of State for India will be the guest of honour Tickets and all particulars may be obtained from the joint honorary secretary Major Sir Thomas Carey Evans M C Hammersmith Hospital Ducane Road W 12

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week read the Coal Mines Bill a second time and passed it through later stages The Town and Country Planning Bill was down for June 3rd on report

The Parliamentary Medical Committee has been summoned to meet on June 7th and will discuss the Patents and Designs Bill

The Annual Report of the Department of Health for Scotland for 1931 has been issued to Parliament (Cmd 4080 Price 3s)

The Public Health (Cleansing of Shellfish) Bill which was read the third time in the House of Commons on May 24th was given a first reading in the House of Lords on May 25th The Bill was read a second time in the House of Lords on May 31st

Induced Abortion in Cases of Tuberculosis

Sir HILTON YOUNG told Mr Logan on May 26th that he had no information as to the number of times pregnancy had been terminated operatively in cases of tuberculosis under the control of the health authority of the county of London during the last twelve months Inquiries would be prolonged and costly and the matter was one for the discretion of the local authorities Mr LOGAN asked whether the Minister would send out a circular saying he was not in agreement with such murders Sir HILTON YOUNG replied that he could not give their agreement to that implication He asked Mr Logan to furnish particulars of any case to which he thought attention should be called No answer was given to a further question in which Mr Logan asked whether the written consent of the parent had been sought and obtained for such operations

Income Tax on Reduced Fees of Insurance Practitioners

On May 26th when the House was again in committee on the Finance Bill Sir HENRY JACKSON moved a new clause to provide that income tax should not be payable in respect of the reductions in remuneration of local government employees in consequence of the national financial situation He said these reductions were made under a circular issued last September to local authorities which said Reductions are being made in the emoluments of classes of local officers and in the remuneration of doctors and chemists under the national health insurance scheme Local government officers in spite of their having responded to this circular of the Minister were now faced with the problem of paying full income tax on their gross salary before these deductions were taken off Dr W E ELLIOT said these were voluntary refunds or gifts Officers of local authorities had desired that these sums should be regarded as gifts and not as cuts so that their superannuation should be calculated on a higher scale The Minister of Health had stated that in general he raised no objection to the proposal that existing superannuation rights should not be prejudiced by arrangements due to the crisis of last autumn but that he could not contemplate any legislation this year The Inland Revenue was not concerned in this

Sir HENRY JACKSON withdrew the proposed new clause

Grants for Treatment of Tuberculosis

Replying to Mr West Russell on May 26th Sir HILTON YOUNG said his Department had made the following grants towards the expenditure incurred by local authorities on the treatment of tuberculosis 1923–4 £1 336 741 1924–5 £1 430 407 1925–6 £1 546 828 1926–7 £1 631 169 1927–8 £1 710 248 1928–9 £1 752 112 1929–30 £1 820 144 These grants included a fixed annual grant of £340 788 in lieu of the sums previously available for the treatment of insured persons out of funds provided under the National Health Insurance Acts and a grant equal to 50 per cent of the approved net expenditure of local authorities on the treatment of tuberculosis after deducting the fixed grant

Capital grants in aid of the erection or extension of institutions for the residential treatment of tuberculosis were 1923–4 £87 070 1924–5 £14 521 1925–6 £18 679 1926–7 £18 203 1927–8 £27 320 1928–9 £29 409 1929–30 £25 496 These grants were made at the rate of £180 per bed subject to a limit of three fifths of the total cost

Sir Hilton Young further promised to collect statistics showing the number of medical officers engaged in each of the seven years 1924–30 in the State organization to fight tuberculosis in England and Wales and the numbers concerned respectively with prevention and treatment

Nystagmus

In the House of Commons on May 31st Mr G HALL asked the Secretary for Mines if he was aware that a number of workmen employed in the collieries in the Aberdare and Rhymney Valleys had recently on leaving at the end of their day's work been subjected to a medical examination for miners nystagmus by a doctor who claimed to represent a research society Mr Isaac FOOT in reply said that the investigation was being conducted privately by a local doctor and he had therefore no responsibility or power to intervene but he was informed that in general the workmen's representatives were consulted and agreed before the workmen were examined and that it was only at one colliery by an oversight which the doctor regretted that this was not done Mr HALL asked if Mr Foot would meet him privately so that they might go into the matter Mr FOOT replied that he would be happy to do so as he understood that only in one instance had trouble arisen Mr C EDWARDS asked if the examination was made at the invitation of the coal company Mr Foot said that he could not say He thought there was no objection generally but that in each case a preliminary request from the miners representatives should have been made Mr MARTIN asked if Mr Foot could say whether it was necessary if a colliery company wished to employ a doctor on their behalf to examine their men that they must first receive permission from the men's representatives Mr FOOT asked for notice of that question

Maternal Mortality Report

Mr E BROWN on May 31st informed Mr Rhys Davies that the final report of the Departmental Committee on Maternal Mortality was expected to be ready for publication towards the end of the summer

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Trypanosomes of Nagana.—Sir P CUNLIFFE LISTER told Captain Peter Macdonald on May 25th that a theory had recently been advanced that the trypanosomes of Nagana transmitted by tsetse flies originated in plants and not in animals This theory was not borne out by the observations of expert investigators however and was not generally accepted by the highest authorities

Psittacosis.—Sir HILTON YOUNG informed Mr Temple Morris on May 26th that psittacosis was receiving continuous attention in his Department in the light of all the information available on the subject but he was not satisfied that the risk of the spread of the disease through the importation of parrots had so far diminished that the restrictions on their importation could safely be relaxed at present Mr Temple Morris in putting the question asserted that no case of psittacosis had been reported in Argentina for over a year

Cheap Disinfectants.—Replying to Mr Clossop on May 26th Sir HILTON YOUNG said he had no power under the existing law to warn the public of the danger of using lysol and other disinfectants sold at cheap stores in such a diluted form that when diluted in accordance with usual practice they were useless He proposed to await the final report of the Maternal Mortality Committee which would include observations on the subject of the use of lysol in midwifery His attention had been drawn to the result of a High Court appeal relating to the sale of disinfectants

Butter fat Content of Imported Cream.—Sir HILTON YOUNG told Sir C Cayzer on May 26th that he was aware of a report by Walsall borough analyst with regard to imported cream sold in tins which was stated to contain only 22 per cent of butter fat as against the usual 50 per cent in fresh cream He had no power to make regulations providing that all tinned cream should bear a label stating the precise butter fat content of the cream therein

Contagious Abortion in Cattle.—On May 30th Sir J GILMOUR replying to Lord Scone said that contagious abortion in cattle had not been made a notifiable disease as it did not lend itself to legislative control Veterinary research had however made available a reliable test by which affected animals could be detected and also an immunizing agent suitable for use in heavily infected herds The Government was undertaking an investigation into the means of securing a reduction of disease among dairy herds and contagious abortion was one of the diseases included in the inquiry

Driving Licence Test in Cases of Physical Disability.—Mr PYBUS replying to Mr Remer on May 30th said that the Road Traffic Act 1930 empowered him to prescribe a test for applicants for driving licences suffering from certain physical disabilities and a driving test for this purpose had been prescribed The question whether there should be a general driving test was discussed at considerable length during the passing of the Bill and he would not feel justified in introducing amending legislation on the point

First aid Equipment on Motor Vehicles.—On May 30th Mr LYONS told Mr Clarry that he had considered the question of requiring all motor vehicles to carry first aid outfits He did not propose for the moment to extend the scope of the existing regulations which required that these outfits should be carried on public service vehicles which were used as express or contract carriages

Vaccination Pads.—Mr NEIL MACLEAN gave notice that on June 2nd he would ask the Financial Secretary to the War Office for what reasons an Army order or instruction had been issued to Army medical officers instructing them to discontinue the use of boric lint and of vaccination pads and notifying them that when the present stocks were exhausted no further issue of vaccination pads etc would be made whether this order meant vaccination in the Army was to cease and if not what was the purpose of this order

Medico-Legal

FALSE USE OF THE TITLE PHYSICIAN AND SURGEON

At the Marylebone police court on May 25th Mr A E Shakesby bonesetter of Dorset Square Regent's Park was fined £5 with £5 5s costs on each of two summonses for falsely using the title physician and surgeon in contravention of the Medical Act 1858 This conviction followed proceedings in the High Court fully reported in the *Journal* of May 21st (p 965) In December last the Marylebone magistrate dismissed a summons taken out by the Medical Defence Union against Mr Shakesby for false use of the title on which occasion evidence was given that a doorplate at the defendant's residence bore the inscription Osteopathic physician and surgeon The magistrate however stated a case for the higher court which was heard on May 10th and 11th by the Lord Chief Justice Mr Justice Avory and Mr Justice Macnaghten who unanimously allowed the appeal and referred the case back to the magistrate with direction to convict

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on May 28th the following medical degrees were conferred

M D.—J R H Tower.
M B B Chir.—L P J Evans
B Chir.—I J Wright

UNIVERSITY OF LONDON

A course of two lectures on the physiology of the adrenal gland will be given by Dr A T Wilson at the Middlesex Hospital Medical School Mortimer Street W *on June 15th* and 16th at 5 p m Admission is free without ticket

Sir Ernest Graham Little M P has been appointed to represent the University at the Centenary Meeting of the British Medical Association in July next

The Dunn exhibitions in *anatomy and physiology* for 1932 have been awarded respectively to Mr J E Spalding and Mr W N Mann both of Guy's Hospital Medical School

Medical News

The Cavendish Lecture before the West London Medico Chirurgical Society will be delivered by Sir Thomas Horder at the Kensington Town Hall *on June 24th* at 8 15 p m The subject will be the present position of therapeusis in infective diseases The annual conversazione will follow

The Osler Oration before the Canadian Medical Association will be delivered *on June 24th* by Dr Francis R Packard editor of the *Annals of Medical History*

An open air lecture on the contribution of plants to the study of heredity will be given in the Chelsea Physic Garden Swan Walk Chelsea by Dame Helen Gwynne Vaughan D Sc on Thursday June 9th at 3 p m Sir William J Collins M D (chairman of the Chadwick Trustees) will preside *Gardens open at 4 o'clock*

The seventeenth Guthrie Lecture will be delivered before the Physical Society on June 17th at 5 p m at the Imperial College of Science and Technology South Kensington Dr Max Planck (formerly professor in Berlin) is this year's lecturer and his subject will be The concept of causality in physics

The Bakerian Lecture will be delivered before the Royal Society on Thursday June 9th at Burlington House by Professor W A Bone F R S *on the combustion of hydrocarbons* A portrait of Lord Rutherford painted by Mr Oswald Birley will be presented to the Society before the meeting

The next series of eight lectures and demonstrations on tropical hygiene intended for men and women outside the medical profession proceeding to the Tropics will be given by Lieut Colonel G E P Stammers from June 14th to 23rd The synopsis and other particulars can be obtained from the secretary London School of Hygiene and Tropical Medicine Keppel Street Gower Street W C 1

Part 3 of the post graduate courses for ship surgeons arranged by the Seamen s Hospital Society will be held at the Dreadnought Hospital Greenwich from July 11th to July 29th Full particulars can be obtained on application to the secretary Seamen s Hospital Society Greenwich S E 10

The Fellowship of Medicine reminds its members that Professor Arthur Hall will give the second of his series of lectures on epidemic encephalitis at Bush House Aldwych on June 9th at 8 30 p m Courses beginning on June 6th and lasting until June 18th include medicine surgery and specialties at the Prince of Wales s Hospital Tottenham diseases of the chest at the Victoria Park Hospital and gynaecology at the Chelsea Hospital for Women All these courses occupy the whole of each day An evening course of clinical instruction for the M R C P examination will take place on Mondays and Fridays June 6th to July 1st at the National Temperance Hospital at 8 p m the last two days will be devoted to pathology A course in diseases of childhood will be given at the Children s Clinic and other hospitals from June 27th to July 9th and a course in dermatology at the Blackfriars Skin Hospital in the afternoons during the same period The above courses and lectures are open only to members A system of clinics given by a panel of teachers is now in force whereby graduates can choose clinics throughout the week in various subjects Full details may be obtained from the Fellowship of Medicine 1 Wimpole Street W 1

Miss Helen Keller the famous American blind deaf writer is now on a visit to Europe to receive the degree of LL D at Glasgow University Her first public appearance in London will be on Monday July 4th when she will attend a complimentary luncheon at the headquarters of the National Institute for the Blind in Great Portland Street and open the institute s new school for blind masseurs

The congress of the International League against Rheumatism which was to have taken place in Rome in May will be held in Paris from October 13th to 15th

The issue of the *Zentralblatt fur innere Medizin* for April 30th is dedicated to Professor Volhard of Frankfort on the occasion of his sixtieth birthday

Dr Joseph Sillars who has retired after thirty years practice in Kirnemuir was the recipient on May 20th of a wallet containing notes to the value of £130 from patients and friends in the district Bailie John Barrie who made the presentation referred to the skill and devotion to duty which Dr Sillars had shown in his long connexion with the burgh and expressed the regret of his patients that he had felt compelled through failing health to retire to his native Arran

Dr Julius Grober professor of internal medicine at Jena has been invited to deliver addresses before the American Congress of Physical Therapy in New York and a number of other American universities

The Societe Nationale de Chirurgie has awarded its gold medal to Professor Leriche of Strasbourg The medal which is accompanied by a prize of 5 000 francs was instituted by Professor Lannelongue and has been successively awarded to Sir Victor Horsley Dr Henri Gaudier and Dr Crile of Cleveland

Professor Joseph Arce of Buenos Aires and Professor Charles Langdon Gibson of New York have been elected corresponding members of the Academie de Medecine in the Section of Surgery

Geh Rat Prof Dr Hermann Kirmmell of Hamburg who is best known for his work in renal and abdominal surgery celebrated his eightieth birthday on May 22nd

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 6250 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Treatment of Moles

Dr J CURTIS WEBB (Cheltenham) writes in reply to Miss ' query in the *Journal* of May 28th I have found indirect fulguration from a high frequency apparatus a certain cure for moles They are completely destroyed and a small white scar remains There is no possibility of the development of melanotic sarcoma I have not found *x* rays or radium so satisfactory as the above

Sunburn

Dr HERBERT CARDIN (London) writes in reply to Ships (May 7th p 872) The agonizing pain of a really severe sunburn or any other burn or cold cannot be realized by those who have not experienced it The shock is entirely due to the pain which can be almost immediately relieved by the application of ice or cold water I have had considerable experience of scalding from burst pipes of superheated steam and boiler gauges (glass) and I at once send the steward for ice to apply to the scalded man The area of blistering is much reduced and shock is eliminated I saw many soldiers who had come out from England during the war scalded by the sun when bathing in the Suez Canal Just dripping with ice water applied to their backs cured them all Carron oil is the very worst application to a scald Until all the pain has been got rid of it is useless to think of further treatment and then almost anything does

Wasp Stings and Bee Stings

Dr J PERCIVAL BROWN (Bacup) writes I have for a long time used and recommended to first aid classes weak acetic acid or vinegar as likely to be successful in most cases My belief is that the venom is largely alkaline The old use of the blue bag I found at times of no value An old country chemist and I once discussed it and he like I do considered the venom mostly alkaline but probably in certain seasons more acid (that is one gland may act more at such times) which explains Colonel Simman s remarks about two glands (March 5th p 455) I agree with Professor A P Boycott s experiments and what he says about the bees (p 455) but for even if there is another poison the vinegar or dilute acetic acid seems to give relief in many cases

Income Tax

Earnings Appointments

E R J qualified in January 1930 and between then and June 1931 held four medical appointments for short period Since June 1931 he has held the same appointment What should be the basis of his liability?

In strictness such earnings are chargeable to tax on the basis of the current year but now that he holds a semi permanent appointment his liability for the second years income from that post will be determined by the amount of the emoluments payable to him for his first year there

Firm Depreciation and Renewal of Cars

A explains that he is a member of the firm of A B and C This year A and B are claiming to deduct the cost of renewal of their cars and C (who did not replace his car in 1931) wishes to claim the 20 per cent allowance for depreciation The inspector of taxes declines to admit both claims

** The inspector is technically correct The firm is assessable as a distinct entity and it is settled law that in arriving at assessable profits depreciation and renewals cannot both be allowed as they are alternative forms of allowance In the circumstances and supposing that no renewals take place in 1932 the firm's best course is to accept the renewals basis as applied to the 1931 account and change over to the depreciation plus obsolescence basis next year

Depreciation and Expenses

J P submits several questions the nature of which will be seen from the following replies

** He can treat as a professional expense the cost of replacing the old car—that is £160 - £12 = £148 As however depreciation and replacement cost cannot be allowed for the same income tax year he cannot claim depreciation on the new car until the following year As regards the proportion of rent and rates chargeable to professional account this depends on circumstances—that is the size of the house and whether the rent is paid for a suitable professional as distinct from private site One half is common and if two thirds is allowed J P will be getting the maximum deduction Servants wages and keep where two servants are kept one is commonly allowed for but here again there is no definite rule the deduction of £92 in J P's case seems reasonable We consider that the payment to a locumtenent for the month of January until J P could take up his new work is reasonable and should be claimed accordingly

Dissolution of Partnership

Z puts the following query A dissolves partnership with B After prolonged legal argument A is released from the partnership article prohibiting practice in the same area but pays B an agreed sum for transfer of certain patients to his new address Can A deduct the legal costs of dissolution and the cost of replacing a car used in the old practice for a new car to be used in the new practice?

** The costs of dissolution cannot be deducted as they are incurred in connexion with the ownership of the practice rather than the carrying on of the actual work As regards the replacement of the car we consider that the expense is allowable in the period in which it was incurred

LETTERS NOTES ETC

The Cost of Tuberculosis

DR ANDREW TRIMBLE (chief tuberculosis officer Belfast) writes In the *Journal* of May 28th your correspondent quoting from my paper Tuberculosis in relation to national health read at the Irish Hospitals and Medical Services conference quotes me as saying that Ireland and Scotland between them spend not far short of £1 000 000 per annum In order to show the tremendous cost of tuberculosis in Great Britain and Ireland I said that the total for Great Britain and Ireland was £7 000 000 per annum

John Heaviside and his Museum

Those interested in the museums of the teaching hospitals in London may from time to time have come across specimens described as from Heaviside's Museum and have been disappointed to find the *Dictionary of National Biography* silent on John Heaviside of whom Dr G C Peachey now supplies a full and carefully documented account (London St Martin's Press 5s net) thus filling up once and for all a lacuna in medical history John Heaviside the elder (1718-87) practised at Hatfield with such success that he left his son John the subject of this memoir an ample fortune After contesting an assistant surgeoncy at St Bartholomew's Hospital unsuccessfully in 1784 and 1787 John Heaviside the younger settled down to practise in George Street Hanover Square and, besides having interesting patients such as Lord [illegible]'s Lady Hamilton became surgeon extraordinary to George III He was for a time surgeon to the Grenadier Guards and thus assisted at duels and had the unpleasant experience of being tried for aiding and abetting the murder of Lieut Colonel Montgomery who was shot by his opponent Captain Macnamara in April 1803 Ten years before this he bought the collection of Henry Watson surgeon to the Westminster Hospital added to it and threw it open to medical visitors on Friday evenings when

> With coffee tea and buttered rolls
> He found an easy way to people's souls

Though he never published anything he was elected a Fellow of the Royal Society succeeded John Hunter on the Court of Assistants at the College of Surgeons and was a member of the Lumelian Club which included Samuel Johnson Boswell and Sir Joshua Reynolds His death at the age of 80 took place on September 28th 1828 and the contents of his museum were sold by auction in July of the following year

Herpes and Chicken pox Occurring Together

DR M C ANDREWS (Harrow) writes A girl aged 6 who had been in contact with chicken pox at school was brought to me because an eruption had appeared on her left cheek that morning This was a patch of herpes about the size of half a crown On the following day her temperature was 100° but it fell to normal in five days Nine days after the first appearance of the herpes her temperature rose to 99° and she developed the first of a typical crop of chicken pox spots The attack was very mild with not more than thirty spots and a normal temperature on the second day

Books for Midwives

MISS D FRASER honorary librarian of the Incorporated Midwives Institute (12 Buckingham Street Strand W C 2) writes Could you spare me space in your columns to ask any medical man who is giving up practice or weeding out his library to be so kind as to bestow upon our institute medical works (especially textbooks on gynaecology obstetrics anatomy hygiene or public health) that he no longer requires? The institute would naturally defray the cost of packing and transit and I can assure him that our members will be heartily grateful for his generosity We have gradually acquired a small reference library (some 900 volumes) and this is made the utmost use of by our members both in town and country Unfortunately our funds available for the purchase of additional works are not large but we have been greatly helped by gifts of books from several good friends in the medical profession and I thought it possible that if our needs were broadcast by a letter in the *British Medical Journal* other kind friends might be moved to go and do likewise

Medical Golf

The Southport Division's local golf competition for the Treasurer's Cup was played over Hesketh Links on May 27th There were eight entries and the result was as follows Winner Dr T L de Courcy (gross 83 handicap 12 net 71) Runner up Dr H Bruce (gross 92 handicap 14 net 78)

The Sussex Medical (B M A) Golfing Society held its spring meeting at Cooden Beach on Sunday May 29th when twenty members were present The Rolls Hoare Challenge Cup was won by Dr Twiston Davies with a score of 73 (84 - 9) and the sweep in the four ball bogey competition was divided by Drs Dick and Kerr and Drs Butcher and Cuffey with a score of 1 up At the second annual general meeting Dr H R McAleenan was elected captain of the society for the ensuing year The honorary secretaries are Dr J H Twiston Davies 8 Second Avenue Hove and Mr Harold Downer 40 Wilbury Road Hove who will be pleased to receive the names of any medical men wishing to become members

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The Medical Supply Association Ltd 167-185 Gray's Inn Road W C 1 has issued an illustrated catalogue Medical Electricity in General Medical Practice Copies may be obtained free of charge by any readers who are interested

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 50 51 52 53 54 55 58 and 59 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 56 and 57

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 279

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

509 The Heart in Thyroid Insufficiency

J M L MORALES (*Anales de Medicina Interna* February 1932 p 21) who records fifteen illustrative cases in patients aged from 12 to 60 states that the hypothyroid heart is a frequent occurrence being met with not only in cases of intense myxoedema but also in slight hypothyroidism It is characterized clinically by its slow evolution the dissociation between the physical signs which are very marked and the subjective symptoms which are very slight the enormous uniform increase of the cardiac area and the slight amount of cardiac movement seen on the radioscopy screen The electrocardiographic signs are very important the principal being the diminution or disappearance of the P and T waves The basal metabolism in the presence of cardiac disease is not so low as in cases of myxoedema without cardiac disease The absence of relation therefore between an intense degree of clinical myxoedema and a not very low basal metabolism should suggest the existence of a cardiac complication Treatment by thyroid extract causes a rapid improvement in the symptoms and physical signs The myxoedematous heart may mask the presence of myocardial lesions which require the ordinary cardiac tonics but it frequently happens that these tonics do not exercise their therapeutic action until after thyroid treatment has been instituted

510 Chronic Typhoid Carriers

G W ANDERSON and C B MACK (*New England Journ Med* February 25th 1932 p 398) record the tracing of three series of cases of typhoid fever to three women known to have had the disease twenty two twenty one and twenty nine years previously respectively In each instance the woman had been employed in handling food in a public or semi public capacity since the original illness The nature of their employment had been such that the occurrence of cases at any previous time among persons who habitually or occasionally ate food prepared by them must inevitably have brought suspicion on them The three women were more than ordinarily clean and particular in their habits and in handling food but the authors draw attention to the dangers of infection from such persons who may be harmless for many years

511 Coronary Angina

M H NATHANSON (*Minnesota Med* March 1932 p 150) defines two distinct clinical pictures associated with coronary disease—namely the anginal syndrome consisting of attacks of pain or acute dyspnoea and the manifestations of congestive heart failure The diagnosis of the first type of case is often very difficult since the clinical picture is highly variable The pain is usually situated behind the sternum it may be referred to the epigastrium it is rarely confined to the right or left side of the chest Radiation to the left shoulder arm and forearm is not so prominent a constant feature as is often supposed and it may be though rarely conducted to the jaw and right side of the chest There is a painful sense of oppression which is more characteristic of this disease and may be so intense as to reach a sensation of being clamped and suffocated Lancinating pains are rare Factors predisposing to an attack are over exertion emotional strain and excess in eating the pain subsides with rest as a rule An important diagnostic point is the paroxysmal nature of the attacks the pain usually lasting from one to five minutes Occasionally it continues for much longer and then the patient presents the features characterizing occlusion of a coronary branch by a thrombus The paroxysm usually has an abrupt onset and a sudden termination It is frequently relieved by amyl nitrite or nitroglycerin During an attack examination of the chest reveals evidence of bronchial spasm in the form of wheezy rhonchi many fine moist crepitations in the lungs and an absence of other abnormal physical signs The electrocardiogram discloses some abnormality in 70 per cent of cases As regards treatment paroxysmal dyspnoea thus caused reacts less favourably to nitroglycerin than does the pain and usually requires morphine Many cases respond satisfactorily to ephedrine Preventive measures include readjustment of the patient's activities and habits the use of coronary artery dilating drugs (such as the xanthin derivatives diuretin and euphyllin) and cervical sympathectomy or injection of the dorsal root ganglia with alcohol

512 Peritonitis in Cirrhosis of the Liver

G PITSORIS (*Deut med Woch* February 19th 1932 p 296) refers to the well known fact that the ascites occurring in hepatic cirrhosis is sometimes the result of tuberculous infection and remarks that there are cases of a less common type in which an acute peritonitis of pneumococcal origin develops in association with cirrhosis This peritonitis cannot be distinguished from the usual form which results from perforation of the abdominal organs It is noteworthy that the cirrhosis has not usually been in an advanced stage where this complication has occurred the liver disease being diagnosed only during an operation or at the post mortem examination A simple ascites may appear in cirrhosis apart from any infection but these purulent cases are to be regarded as the result of a superadded bacterial invasion the route of infection being in some instances clearly haematogenous The inflammation starts in some localized area of the peritoneum and thence travels to other areas its transport being aided by the ascites which is often already present The author adds that one might be inclined to see in the cirrhosis a factor which predisposes to infection by lowering the resistance but the observation that the complication is very rare in advanced cases contradicts this view The cirrhosis in three cases described produced very few symptoms until the peritonitis suddenly appeared in similar cases the first sign may be a dangerous haemorrhage from the oesophagus

513 Fatal Bacillus Pyocyaneus Infection

B S KLINE and A S MASCHKE (*Journ Amer Med Assoc* February 13th 1932 p 526) record three illustrative cases in a woman aged 39 a man aged 58 and a boy aged 7 who all had gangrenous lesions in the anogenital region cultures from which contained *B pyocyaneus* In two instances there was also a *B pyocyaneus* septicaemia A toxic appearance with severe prostration was present in all the patients and all developed a terminal bronchopneumonia *B pyocyaneus* being recovered from the sputum

514 Bothriocephalus Anaemia

I W BIRKELAND (*Medicine* February 1932 p 1) reviews the present knowledge of bothriocephalus anaemia and its relation to cryptogenic pernicious anaemia It is found that the majority of persons carrying the worm do not suffer from anaemia In Finland about 750 000 are estimated to be harbouring this parasite but definite anaemia develops only in 1 in 5 000 to 10 000 there is a gradual transition from non anaemic carriers with normal blood pictures to those with definite anaemia the line being drawn arbitrarily at a red cell count of 4 000 000 per c.mm the anaemic blood picture is identical with that of pernicious anaemia In Helsingfors there has been a decline in the incidence of bothriocephalus anaemia from 1898 to 1927 whereas cryptogenic pernicious anaemia has increased rapidly since 1910 Systematic anthelmintic treatment since 1885 has reduced the mortality from nearly 100 per cent to about 12 per cent the cure is

remarkably permanent Achlorhydria is present in 84 per cent if present the acidity is below the normal level The patients may die from the anaemia after the removal of the worm or after recovery succumb to pernicious anaemia later That there is a causal relation between the *parasite and pernicious anaemia* is shown by the dramatic change in the clinical and haematological condition accompanied by a typical reticulocyte reaction and permanent cure that usually follows the expulsion of the worm The role of the tapeworm is probably to be regarded only as a trigger mechanism there is no evidence that the parasite produces any specific haemotoxin Other intestinal parasites can also usher in pernicious anaemia

515 Dementia in Epidemic Encephalitis

J G ROTTENBERG (*These de Paris* 1932 No 51) who records four cases in patients aged from 16 to 28 states that epidemic encephalitis (like other acute and chronic infectious diseases) may give rise to the clinical picture of simple dementia or the hebephreno katatonic form of dementia praecox Hebephreno katatonic dementia praecox should not therefore be regarded as a morbid entity but merely as a syndrome due to a variety of causes to which epidemic encephalitis should be added

516 Ventricular Fibrillation in Diphtheria

J CHALIER and R FROMENT (*Arch des Mal du Cœur* February 1932 p 102) remark that apart from the common sinus tachycardia of diphtheria arrhythmias in this disease appear usually between the tenth and twentieth days of the illness Hitherto it has been held that extrasystoles are not of serious import heart-block being the arrhythmia most to be feared The authors draw attention to the fact that the interruption of a dominant sinus rhythm by single or polymorphic premature beats coupled or in brief series may be the prelude to ventricular tachycardia This arrhythmia in its turn usually leads to ventricular fibrillation and death They have observed several instances of this sequence their records are supported by electrocardiograms published by Strecher and by the experimental work of Lutembacher on rabbits About 10 per cent of deaths in diphtheria are attributable to circulatory derangement Very few of these patients die from the intracardiac thrombosis described by Marvan heart block and ventricular fibrillation *accounting for the great majority* The transition in diphtheria from a simple sinus tachycardia to ventricular tachycardia fibrillation and death may occur very swiftly sometimes within four or five hours Since the pre fibrillatory changes of rhythm are essentially auscultatory phenomena these arrhythmias probably account for a number of instances of sudden death in diphtheria While ventricular fibrillation may be a purely terminal or agonal event in certain infectious diseases such as pneumonia and poliomyelitis these pre fibrillatory irregularities may appear in diphtheria some hours or days before death and thus may be the sole indication of a fatal outcome of the disease

517 Syphilitic Aortitis

DENIS and P VERGER (*Journ de Med de Bordeaux* January 29th 1932 p 162) have noted the surprising absence of physical signs in numerous cases of syphilitic disease of the thoracic aorta only functional signs revealing the existence of this condition Brief notes of cases are given to exemplify this statement Such lesions though frequent rarely take the form of an aneurysmal sac with its signs and symptoms of typical form shape they usually involve the entire circumference of the vessel for a distance of several centimetres The absence of physical signs is due to their deep situation in the posterior mediastinum Functional signs [illegible] of a complete or more rarely partial mediastinal syndrome—namely signs of irritation of the surrounding cellular tissue (periaortitis) and a sensation of constriction retrosternal or right or left hemithoracic pain is frequent in the younger cases of this [illegible] of the thoracic aorta the diagnosis is not [illegible] radiographs and laboratory tests

Surgery

518 Post operative Evisceration

M SIGALAS (*Rev de Chir* January 1932 p 32) states that post operative evisceration may occur at any age and following any type of abdominal operation It is much more common in women than in men and the sub umbilical median laparotomy provides the greatest number of cases It may occur immediately after the removal of the sutures or several days later and cannot therefore be said to be due to their premature removal In forty six cases of post operative evisceration occurring before the eighth day the sutures had been removed in only three cases The type of suture does not appear to have any influence but it has been found that thinness of the scar is present in the majority of cases The weak condition of the abdominal wall—due to suppuration severe infection of the wound small abscesses developing at the points of suture or haematomata—is an important factor in the disunion of the edges of the wound Post operative vomiting the rapid increasing of the abdominal contents painful motions violent straining or any condition which causes sudden contraction of the abdominal muscles may be responsible for post operative evisceration Any viscera with the exception of the pancreas and the spleen may protrude after the wound has broken down but as a rule it is the small intestine alone or with the omentum although the large intestine stomach uterus or bladder may appear between the edges of the wound Evisceration is seldom accompanied by pain but usually there is an oozing of slightly blood stained fluid from the wound Any general reaction is very slight and in some cases the patients experience greater comfort after the wound has broken down Treatment should consist of the washing of the visceral organs with hot saline the suturing of the abdominal walls with metal thread and the provision of drainage by aseptic gauze The administration of various stimulants and injections of physiological saline solution and camphorated oil are indispensable while an injection of anti gas serum is advisable The prognosis is good in a series of 161 cases 117 patients recovered and there were only thirty deaths directly due to post operative evisceration

519 Benign Tumours of the Pelvis

TAVERNIER and POUZET (*Lyon Chirurgical* January-February 1932 p 9) describe six cases of benign tumours of the pelvis a fibroma a giant celled tumour a growth of unknown origin a hydatid cyst and two chondromata With the exception of the last two cases the patients were between 15 and 33 years old the chondromata occurring in patients aged 45 and 52 years Benign tumours are usually of slow development and can grow to a considerable size without causing functional disorder or pain They are therefore frequently unrecognized until some mechanical defect such as fracture of the pelvis or of the iliac bone draws attention to the existing growth In the case of the chondroma of the sacrum this was discovered during a gynaecological examination There appear to be two distinct types of tumour that which grows from the iliac bone and that which is implanted on the side of the bone and develops either outwards or inwards The latter type of growth is typical of chondroma of the pelvis while most other forms of benign tumours tend to surround the iliac bone and may grow to the size of a child's head An x ray examination is of great assistance in diagnosis although it is sometimes difficult to distinguish between osteosarcomas hydatid cysts and tumours The chondroma appears as a cauliflower like mass growing from the bone The persistence of the cortex even though deformed is characteristic of a benign lesion Prognosis depends on the site of the tumour in the pelvis removal being sometimes dangerous In the case of a chondroma this may develop signs of local malignancy but this type of tumour is the most easily removed since it is localized on the bone and is usually in an accessible position It is however liable

to recurrence The removal of other forms of tumour often necessitates an extensive operation with considerable *shock* the *mortality from* this is so high that it is sometimes advisable not to operate unless a limited resection of the ala of the ilium is sufficient for extraction of the growth

520 Prostatic Resection

T M DAVIS (*Urol and Cut Rev* March 1932 p 141) state that prostatectomy with its potentially high mortality and morbidity rate has not attained the ideal in the removal of prostatic obstruction Resection on the other hand reduces the removal of the obstruction to a minor operation as compared with prostatectomy During 1931 Davis treated 158 cases of prostatic obstruction by resection and only twelve by prostatectomy The final results following resection were equal if not superior to those obtained by prostatectomy G R LEVERMORE (ibid p 154) also maintains that resection marks a distinct advance in the treatment and relief of hypertrophy of the prostate owing to its ease of performance the lack of shock and dangerous complications and the diminished suffering caused to the patient Although it may be necessary to repeat the operation two resections are far preferable to one prostatectomy Owing to its inferiority prostatectomy will probably soon be reserved for the very large intravesical and intraurethral hypertrophies the size of which renders their resection impossible

521 Tumours of the Kidney

V PAUCHET *et al* (*Bull et Mem Soc Chir de Paris* February 5th 1932 p 70) report four cases of large renal tumours of different varieties comprising a tumour with renal symptoms the size of a baby's head which was a hypernephroma another was mistaken for a splenic tumour originating from the superior pole and the convexity of the kidney but was histologically an atypical tumour with eosinophilic cells The third case was a tumour similar to a mesenteric tumour growing from the superior pole of the kidney it was found to be an epithelioma The fourth a tumour which was mistaken for an intestinal neoplasm adherent to the colon and the mesocolon was a sarcoma of a special type Renal symptoms were present in the first case only in the remaining three neither renal colic nor haematuria was evident although a palpable tumour could be felt which rendered operative treatment advisable Pre operative diagnosis might have been made by means of pyelography in the absence of characteristic symptoms Nephrectomy was performed in each case since a second kidney was present Convalescence was uneventful the patients all making a good recovery with the exception of the fourth who died at the end of three months from uraemia The anterior transperitoneal method of approach is advocated as giving the best field of vision and preventing the development of duodenal or colic fistula By this method haemostasis is easier to secure Spinal anaesthesia is considered to be greatly preferable to any other form These cases demonstrate the difficulty of diagnosis in large renal tumours and emphasize the value of pyelography in all doubtful cases

522 Rupture of Inflamed Popliteal Aneurysm

M JEANNENEY (*Journ de Med de Bordeaux* March 20th 1932 p 236) describes a case of infected popliteal aneurysm rupturing into the knee joint and surrounding parts A man aged 70 had had indefinite pain and swelling for three years in his right popliteal space aneurysm was diagnosed but operation was declined There was no history of syphilis rheumatism or alcoholism He remained at work until he had influenza and a cough ten days later acute abdominal symptoms supervened suggesting subacute appendicitis but all symptoms subsided in a few days Three weeks later he had increasing pain in the right knee with pyrexia The joint became tense and hot and a definite collateral circulation developed The joint was swollen semi flexed and slightly oedematous expansile pulsation was absent but the diffuse popliteal swelling pulsated with a rough systolic bruit On compression in Scarpa's triangle the pulsation ceased but the swelling did not diminish the tibial pulse was absent and in the dorsalis pedis the beat was feeble It was considered that the patient had had a pneumococcaemia with transient peritonitis before infection of the aneurysm Aspiration of the knee yielded a brick red fluid containing polynuclears and pneumococci indicating an infective haemarthrosis Intensive serotherapy caused a fall in the temperature but the local symptoms increased the pain extended from the knee to the ankle and the limb became swollen and livid with redness and oedema of the skin over the popliteal space The thigh was amputated in the lower third The aneurysm had ruptured into the popliteal space and communicated with the knee joints clots and chocolate coloured pus lay beneath the gastrocnemius The femoral condyles were found to be eroded and the joint was filled with brownish slightly fetid fluid The patient recovered The author remarks that any attempt at conservative treatment would have been highly dangerous infection of a ruptured aneurysm is rare

Therapeutics

523 Magnesium Hyposulphite in Maniacal Paroxysms

Cappelle and Combemale having reported good results in manic depressive psychosis following treatment with magnesium hyposulphite A MESTRALLET and E LARRIVE (*Lyon Med* March 6th 1932 p 281) tried this salt in the treatment of maniacal paroxysms Short notes on twenty cases are given to illustrate the effects of this therapy It was found to be beneficial only in simple maniacal paroxysms in cases of psychic disease or those in which the convulsive states were associated with confusional troubles it proved valueless In the first group a marked and sometimes rapid diminution in the duration of the attack was found to occur the symptoms of psycho motor excitation very frequently regressed in three to four weeks In these cases intravenous injections of magnesium hyposulphite (10 per cent solution) have alone been given the usual sedatives and hypnotics were not employed The authors advise that the daily doses should not be less than 10 c cm repeated as long as the psycho motor agitation continues In very intense and persistent cases 20 or even 30 c cm should be injected in one or two daily doses In recurrences a second series should be given No ill effects necessitating interruption of treatment were noted While the mechanism of the action of this salt is unknown the authors suggest that it acts by increasing the sympathetic tonus Recent work of various authorities is held to have substantiated this hypothesis

524 Treatment of Coronary Thrombosis

In a careful discussion of the aetiology and treatment of coronary thrombosis J A OILLE (*Canadian Med Assoc Journ* April 1932 p 405) insists that the first therapeutic essential is morphine In severe cases 0 5 gram should be injected at once hypodermically and be followed by injections of 0 25 grain every twenty or thirty minutes until the pain is relieved and the patient has fallen asleep If the pain is moderate the initial dose can be 0 25 gram Amyl nitrite and nitroglycerin are not merely useless they are actually harmful because they tend to produce tachycardia and to reduce still further a falling blood pressure In average cases no other medication is necessary In collapse however with disappearance of the pulse large intravenous infusions of saline injections of caffeine sodium benzoate and strophanthin should be given and 5 minims of adrenalin hydrochloride be injected intramuscularly Digitalis should not be used except to slow the heart rate should auricular fibrillation or flutter occur and in cases that later develop circulatory failure In early stages when there is oedema of the lungs dyspnoea and cyanosis an oxygen tent is valuable For attacks of angina due to coronary thrombosis or heart block intramuscular injections of adrenalin hydrochloride (0 5 c cm) should be given every four hours Should

paroxysmal tachycardia develop an intravenous injection of 1/75 to 1/100 grain of strophanthin is advised to gether with 15 grains of quinidine sulphate by the mouth every two hours up to eight doses in twenty four hours If the normal rhythm returns 5 grains of quinidine may be administered twice a day to prevent recurrence of the tachycardia Careful nursing is essential and no visitors should be admitted for two or three weeks The onset of pain in the legs or feet indicates the possibility of embolism Absolute rest in bed is imperative for several weeks eight to twelve at least For the following six months or year the patients should be recumbent for at least twelve out of each twenty four hours No operation on the cervical sympathetic system should be attempted in coronary thrombosis but foci of infection should be searched for and removed after the patient s recovery

525 Suspension of Atropine Administration

R FLINKER (*Munch med Woch* April 1st 1932 p 540) draws attention to the fact that atropine may be added to the list of drugs containing morphine cocaine alcohol and chloral hydrate the sudden withdrawal of which gives rise to a severe physical reaction He records observations on two patients in the same ward suffering from chronic encephalitis who were being treated with large daily doses of atropine sulphate Owing to some error the supply of the alkaloid ceased and the treatment had to be suspended Within seven hours in one case and thirteen hours in the other following the last dose of atropine both patients had a severe reaction the first symptom of which was the disappearance of the dryness of the throat and its replacement by excessive salivation Nausea vomiting and giddiness quickly set in and some hours later both patients were perspiring profusely Extract of belladonna was given twenty four hours after the onset of the symptoms the vomiting ceased but salivation and nausea persisted The new supply arrived forty eight hours after the last dose of atropine sulphate and on resuming the administration of the drug all symptoms disappeared within half an hour in one case and two hours in the other Flinker recommends that patients when being discharged from hospital should be warned that the sudden suspension of the intake of the drug is apt to cause a severe reaction

526 Suprarenal Cortex in Addison's Disease

F A HARTMAN *et al* (*Journ Amer Med Assoc* March 5th 1932 p 788) discuss the basis of suprarenal extract therapy in Addison s disease and review the progress that has been made They report seven cases treated with an extract (cortin) of the suprarenal cortex prepared by the ether alcohol extraction method they conclude that definite evidence has now been furnished that such a method of preparation is effective in producing a substance which can definitely alleviate the symptoms of this disease This extract is concentrated but has a low adrenaline content it has been shown to have the power of reviving suprarenalectomized cats in the last stages of insufficiency The authors use preparations of the cortical extract alone because they are not satisfied that the methods of separating cortin from the toxic substances of the medulla are entirely efficacious Their concentrations range from 15 to 50 grams of fresh cortex in each cubic centimetre the dosage being reckoned in terms of the fresh cortex No toxic or disagreeable effects resulted except for [illegible] ht local reaction which occurred in two instances[illegible] eparation can be injected intravenously [illegible]piform shape they one patient received injections for [illegible]ce of the vessel fdour times daily without untoward [illegible] the absence of ph reports are given of the seven cases on in the poste represented severe stages of Addison s dise[illegible]s of a complete, state that the first signs of relapse are ang[illegible]ion—namely epigastric discomfort and lethargy or irrita[illegible]ar tissue (peri[illegible]sibly pains in the legs back or abdomen [illegible]rther retrosternnia and mental depression The blood pressu[illegible] of this ne blood urea content rises and collapse and [illegible]s Lid[illegible]cy follow in a few hours Such signs indicate th[illegible] rapor larger doses o[illegible] cortin two patients in the authors series were thus brought out of coma and one was similarly resuscitated from three attacks of collapse The various other symptoms of these patients were also relieved The authors add that the daily total requirements of cortical extract seem to be less if the doses are given frequently , if the patients are losing ground therefore the intervals between the injections are shortened In one case the administration of 1 200 grams of cortin spaced out as four doses was more effective than 1 800 grams in three doses

Laryngology

527 Pneumococcal Pseudo membranous Pharyngitis

DE WAYNE G RICHEY (*Journ Amer Med Assoc* February 27th 1932 p 730) records five cases of pseudomembranous pharyngitis three of which occurred in women aged from 20 to 43 and two in men aged 24 to 80 In all a typical pneumococcus was found to be the dominant micro organism Local symptoms were constant consisting of severe sore throat salivation, dysphagia and cervical adenitis while the systemic reaction varied considerably A characteristic lesion was constantly found consisting of a white adherent odourless sheet of fibrin on a superficially eroded oral mucous membrane closely resembling that present in diphtheria The condition as a rule is not dangerous but the attacks tend to recur The disease resists most forms of local and general treatment but striking results are obtained by the local application of ethyl hydrocupreine hydrochloride

528 Angioma of the Middle Ear

J SVARTMAN (*Thèse de Paris* 1932 No 10) who records six illustrative cases in patients aged from 40 to 78 states that angioma of the middle ear which was first described by Moure in 1895 is an extremely rare occurrence It is frequently seated along the course of the branchial clefts and may be found in association with congenital malformations such as spina bifida or encephalocele Two varieties may be distinguished—namely a simple or capillary angioma and a cavernous form The symptoms differ according to the stage of development of the tumour In the first stage there is no characteristic otoscopic sign, but attention may be aroused by the arterial pulsations In the second stage in which spontaneous haemorrhages occur the tumour has attained a certain size as can be seen on otoscopic examination The third stage is characterized by more or less considerable interference with hearing Spontaneous recovery may take place by fibroid or fibromatous transformation of the angioma or a cirsoid aneurysm may form Lastly an ulcerative or cancerous degeneration may ensue In cases where an operation is contraindicated electro coagulation under a general anæsthetic should be undertaken

529 Meningoblastoma of the Petrous Portion of the Temporal Bone

At their onset meningoblastomas usually present a syndrome of intracranial hypertension or of cranial nerve paralysis R PHILIP (*Rev de Laryngol d Otol et de Rhinol* January 1932 p 94) records a case in which the initial symptoms were those of otitis media complicated by mastoiditis the existence of the neoplasm was discovered only at the operation when it had already attained such size largely infiltrating the petrous bone that its excision was impossible and radiotherapy was the only feasible treatment The tumour rapidly increased in size extending through the whole of the base of the brain from the petrous bone to the occipital foramen and the patient died about nine months after the initial symptoms had appeared Oberling believes in the neuro epithelial origin of these tumours He gives reasons for believing that they are of two morphological types—namely epithelial and connective tissue The present case supports this theory Philip tumour of the points out that these tumours remain benign enucleable

without metastases or adenopathies they are only dangerous when their increasing size involves the nerve centres

530 Treatment of Chronic Suppurations by X Rays

L RADU and S ACKERMAN (*Ann d Otolaryngol* January 1932 p 39) have obtained cures by x rays in many cases of chronic suppurations which have resisted medical and surgical measures This method was suggested by a review of the histopathology of chronic suppurative otitis media It was found in this study that in chronic suppuration there was marked proliferation of the cells of the mucous membrane that the epithelium was intact and formed of irregularly cuboidal cells and that the subepithelial tissue was fibrillated The treatment of these cases is thus that of a new formation and the application of x rays which have been demonstrated to be destructive to proliferating cellular elements and stimulating to connective tissue is a rational method of attack A short series of cases is recorded including chronic otitis media chronic accessory sinusitis and pleural fistulæ following the surgical treatment of empyema The authors add that in addition to its practical applications this study is of theoretical interest to students of the origin of new growths

Obstetrics and Gynaecology

531 Bone Fractures during Pregnancy

H NAUJOKS (*Zentralbl f Gynak* March 12th 1932 p 661) records the case of a girl aged 18 three months pregnant who fell from a third-story window and sustained a bad comminuted fracture of the tibia and fibula The pregnancy continued to term but it was not until twelve months after the accident that satisfactory bony union was secured Defective callus formation and the occurrence of pseudo-arthrosis after fractures during pregnancy have been noted by several observers and have been ascribed to the alterations of calcium metabolism which are associated with gestation In another case described by Naujoks a motor accident at the end of the fourth month of pregnancy in a 4-para aged 33 led to fracture of the eleventh thoracic vertebra with paraparesis retention of urine and rapid replacement of a sacral contusion by a large decubitus It was decided to terminate pregnancy which was impeding satisfactory treatment of the fracture since a vaginal operation might lead to further bony injury and in order to avoid the passage of the lochia over the bed-sore the uterus was removed by laparotomy There was a partial placenta prævia but no uterine bleeding had followed the trauma

532 Pregnancy and Labour Complicated by Fibroid Tumours

B P WATSON (*Amer Journ Obstet and Gynecol* March 1932 p 351) states that 30 per cent of women with fibroids are sterile and 50 to 60 per cent of multiparous women at the age of 50 have fibroids while large tumours are seldom found in women who have borne children He believes that if the main activity of the uterus—namely embedding nourishing and expelling of the fertilized ovum—is denied the organ tends to produce fibroids The incidence of significant fibroids in pregnancy is 1·1 per cent and the average age of the patients 33 years Abortion and premature labour occur in 20 per cent of pregnancies In the absence of complications pregnancy should be allowed to continue even though large fibroids are present Fœtal deformity and placenta prævia are rarely attributable to this cause Necrobiosis the most common complication of pregnancy and the puerperium is a vascular lesion resulting from interference with the blood supply of the tumour it is associated with extravasation of blood and deposit of blood pigment The symptoms are pain and tenderness at the site of the tumour with a slight temperature of 100 to 101° Torsion of the pedicle of the fibroid is a rare complication Watson regards fibroid as a major complication of pregnancy labour and the puerperium in a series of 157 cases 48 per cent required obstetric intervention with a resulting maternal mortality of 1·5 per cent and a fœtal mortality of 12·5 per cent He advocates myomectomy in preference to hysterectomy in women who have embraces causing sterility and repeated abortion since even large and multiple tumours can be enucleated leaving a functioning uterus Abortion frequently terminates the first pregnancy following myomectomy but the subsequent labours proceed naturally Operative treatment of fibroids is only infrequently required during pregnancy if possible it should be postponed until there is hope of obtaining a living child Myomectomy or hysterectomy should be performed when acute complications arise Both operations are best undertaken at the same time as Cæsarean section Subsequent myomectomy or hysterectomy may be required if the patient delivers herself per vaginam since necrobiosis is developing in pregnancy is liable to progress after delivery with acute symptoms Impairment of the myocardium is an indication for early hysterectomy

533 Decidual Metritis

BUTTARD and DOLAY (*Bull Soc d Obstet et de Gynecol de Paris* February 1932 p 88) discuss the part played by ovarian hormones in decidual metritis Since it has been shown that the physiological decidual transformation of the uterine mucosa is dependent on the corpus luteum they suggest that decidual metritis might be determined by hypersecretion of the lutein hormone This has been demonstrated by the injection of the patient's urine or serum into immature or castrated male and female mice The results revealed no important modification in the female but the young males showed a notable development of the genital tract but less intense than that observed when urine from a pregnant woman was employed Hence in decidual metritis there is a hormonal hypersecretion—namely that of lutein—but no increase of folliculin Decidual metritis is most frequently met with at puberty and before the menopause the two ages when ovarian equilibrium is unstable The symptoms comprise abundant loss at the menstrual periods which are gradually prolonged until they are almost continuous and resist all treatment Clinical examination reveals no important lesion Lipiodol injection indicates that the cavity is regular but the edges are sinuous and irregular Curettage discloses the presence of a thick mucosa and gives amelioration for a few months Histological examination alone indicates the true diagnosis decidual cells being apparent in the upper part of the mucosa The determining cause of this decidual metritis is the abnormal presence of one or more corpora lutea A modified form of the pregnant mucosa is produced and hypertrophied At the menses it is not completely shed but remains in the uterus it is thick and very vascular causing rebelling persistent hæmorrhage Treatment consists in removing the corpus luteum together with the ovary or causing atrophy of the corpus by small x ray doses which must early arrest the ovarian function

534 Evolution and Treatment of Vulval Epithelioma

P PETIT DUTAILLIS (*La Gynecol* February 1932 p 65) who records observations on seventeen personally treated cases of primary epithelioma of the vulva states that vulval cancer occurs in the ratio of 1 per cent of all cancers Most of these patients had passed their fifty-third and several their eighth decade The case in which the cancer was limited to the vulva was treated by total vulvectomy with sutures or by total vulvectomy with sutures and cauterization by the cautery Epithelioma which had passed the limits of the vulva were treated by vulvectomy x rays or diathermic puncture or palliative methods In four of seventeen cases there was no glandular involvement and the patients were seen sufficiently early for radical operation possible Only three patients responded to operation after a lapse of time and these had primary In five cases the malignant growth was superimposed on previous lesions such as pruritus leucoplakia and cauliflower growths Radiotherapy before vulvectomy is not advised

but it is strongly recommended after operation Radio puncture of a voluminous epithelioma may accelerate the condition A large growth should be removed by the diathermic cautery before radium treatment In addition to local treatment magnesium salts and splenic extract were given to these cases Specific protein therapy as advised by Rubens Duval was not tried on these cases but the author appends a note on a case of recurrent breast cancer in which the cure seemed to be attributable to this method of treatment Daily for eight days this patient took by mouth a globulin extract of the mammary gland epithelioma

535 Non Suppurative Mastitis in Typhoid Fever

J SABRAZES (*Bull Acad de Med* February 23rd 1932 p 270) who records an illustrative case, states that inflammation of the mammary gland is a rare complication of typhoid fever non suppurative mastitis being rarer than suppurative The complication is most frequent in females and between the ages of 20 and 45 It usually develops as the temperature is falling or at the beginning of convalescence It is as often confined to one side as it is bilateral in which case one gland is affected after the other and not both simultaneously Non suppurative mastitis is of comparatively short duration subsiding in from eight to twenty days Sabrazes's patient was a woman aged 45 who developed left non suppurative mastitis during defervescence from typhoid fever Her last pregnancy had occurred twenty three years previously and since then no mammary symptoms had occurred until the attack of typhoid mastitis when a lactescent discharge took place presenting the cytological appearances of colostrum The inflammation subsided in three weeks under treatment by warm compresses

Pathology

536 The Anti typhoid Bacteriophage

L GRÜNBERG (*These de Paris* 1932 No 22) made a search for the anti typhoid bacteriophage in six different cases—namely three times in natural objects and three times in the stools of patients suffering from diseases other than typhoid fever The natural objects were stagnant water garden earth and sewer water and the patients were suffering respectively from streptococcal endocarditis a non diagnosed infective condition and *B coli* septicaemia Since the anti typhoid bacteriophage was found in two of the six cases—namely in the sewer water and in the patient with streptococcal endocarditis—the bacteriophage appears to be more frequent than is generally supposed In the two cases in which the anti typhoid bacteriophage was found it was virulent for *B coli* as well The bacteriophage from the sewer water was as active against *B coli* as against *B typhosus* but that isolated from the case of streptococcal endocarditis was much less active against *B coli* than against *B typhosus*

537 Active Immunization against Tetanus

G RAMON and E LEMETAYER (*C R Soc de Biologie* March 23rd 1932 p 827) recall the advances that have been made in the active immunization of the domestic animals against tetanus Ramon and his co workers have previously shown that the subcutaneous injection of two doses of 10 c cm of anatoxin at a month's interval gives rise in horses to a certain degree of immunity the serum containing 0 005 to 0 02 unit of antitoxin per c cm Later it was found that the addition to the anatoxin of a small quantity of tapioca powder led to an antitoxic titre at least ten times as high as that following the injection of anatoxin alone It has now been established that the tapioca can be replaced by calcium chloride added to the anatoxin in the proportion of 0 5 per cent A further improvement has been introduced consisting in the replacement of the subcutaneous by the intramuscular route of injection which avoids the surface oedema and occasional abscess formation following the subcutaneous method Records are now furnished of a comparative series of horses injected intramuscularly, one set of fifteen horses was inoculated with two doses of 10 c cm of anatoxin (7 units) to which calcium chloride had been added the other set of five horses only received anatoxin to which tapioca powder had been added The antitoxic titre of the serum was measured twelve days after the second injection The antitoxic titre of the calcium chloride anatoxin horses ranged from 0 1 to 40 units per c cm the mean being 10 6 that of the tapioca anatoxin horses ranged from 0 2 to 8 units per c cm the mean being 4 4 These figures are very much higher than those obtained by the anatoxin alone as used in former years

538 Isolation of the Sonne Dysentery Bacillus

ELIZABETH M MYERS and S A KOSER (*Journ Prevent Med* March 1932 p 101) have carried out experiments to ascertain whether the use of brilliant green can be employed to the same advantage in the isolation of Sonne's dysentery bacillus as in that of the typhoid paratyphoid organisms In the first series of experiments brilliant green was added in varying concentrations to nutrient broth Tubes of the medium were inoculated each with one loopful of an eighteen hour broth culture of the organism to be tested they were incubated at 37 C and the amount of growth was noted The results showed that sixteen out of eighteen strains of Sonne failed to grow in a dilution of 1 in 800 000 brilliant green whereas *B typhosus B paratyphosus* B *B enteritidis* and *B aertrycke* grew freely in this dilution Sonne strains *B dispar* and Flexner dysentery strains all behaved much alike and proved just as susceptible to brilliant green as *B coli* In the second series of experiments 1 brilliant green was incorporated in an agar medium plates were streaked with a small amount of a twenty four hour broth culture of each organism The results were similar to those in the first series except that the brilliant green was not quite so active as in broth Only two out of the eighteen Sonne strains grew in a dilution of 1 in 400 000 of the dye while the typhoid paratyphoid and Salmonella organisms grew freely in this dilution There was practically no difference discernible between Sonne *B dispar* and *B coli* but the Flexner strains proved even more susceptible than these organisms The authors conclude that the brilliant green technique is of no value in the isolation of the Sonne dysentery bacillus

539 The Role of the Rat in the Spread of Endemic Typhus

A NETTER (*Bull Acad de Med*, March 22nd 1932, p 408) discusses the danger of rat borne typhus in Paris, where Brumpt has recently demonstrated the presence in the brains of rats of a virus apparently identical with that found in America at Toulon and in Greece in association with foci of endemic typhus It is established that in these areas cases of typhus result from the bites of fleas not of lice as in the usual epidemic form of typhus the same flea *Xenopsylla cheopis* being concerned as in the transmission of plague It has been found that the causative organism of typhus, *Rickettsia prowazeki* is able to multiply in the intestine of the flea and that it is excreted in the faeces but in the flea the organisms do not break through the epithelial cells of the stomach as they do in the louse and therefore do not bring about the death of the flea The rat apparently acts as a more or less healthy carrier of the typhus virus after inoculation with the virus it shows no rise of temperature and remains well The virus undergoes no diminution of virulence while in the body of the rat at least after one passage so far as can be ascertained by guinea pig inoculation Given the facts that the rat does not usually come into close contact with man in civilized countries that infected fleas remain well and do not readily leave their rat host which also remains well and that severe scratching leading to abrasions of the skin and consequent possibility of contamination with dejecta is much less common after the bites of fleas than of lice the author argues that no great danger is likely to be anticipated from rats and that the chief campaign against typhus must still be directed against the human body louse

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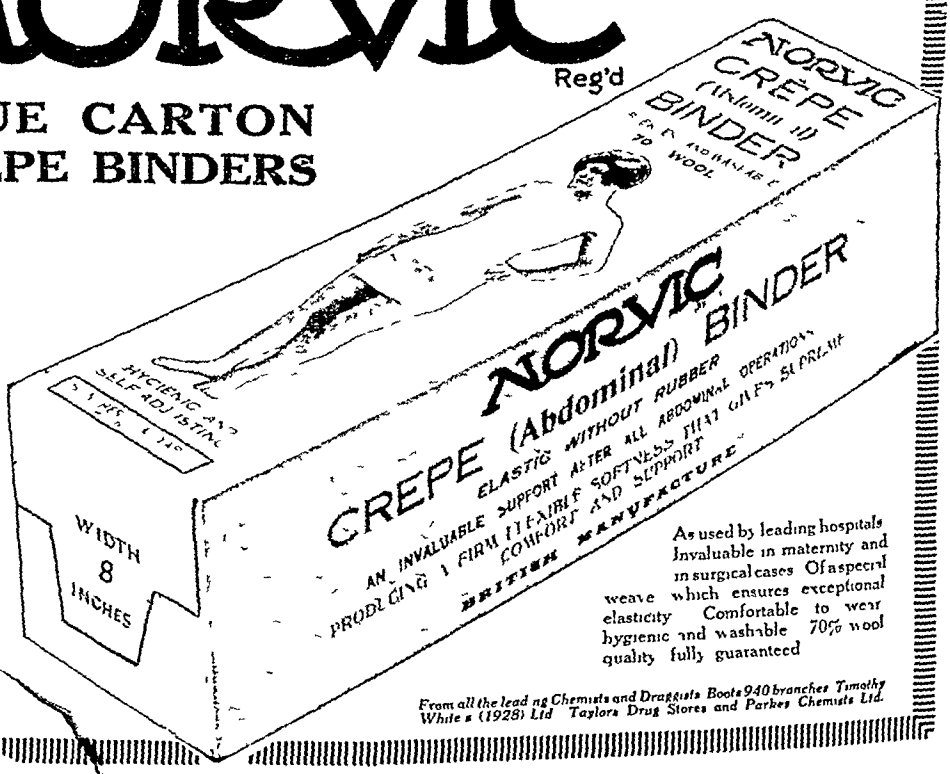
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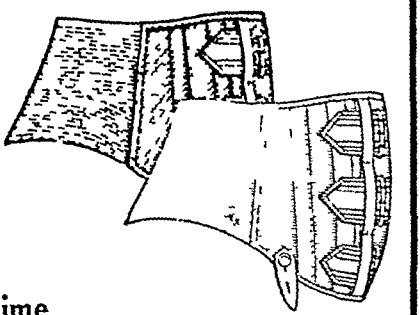
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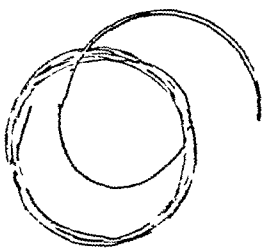
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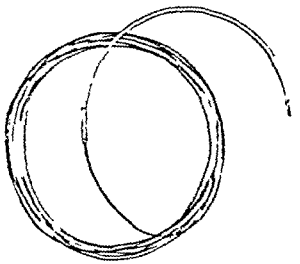
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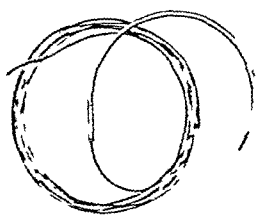
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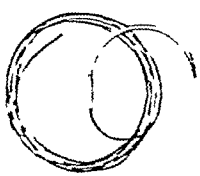
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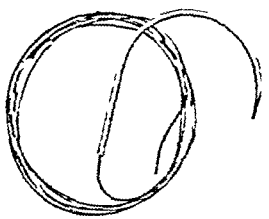
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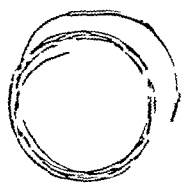
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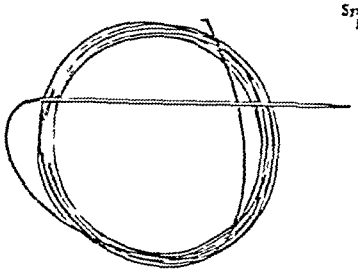
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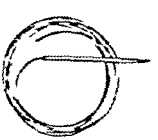
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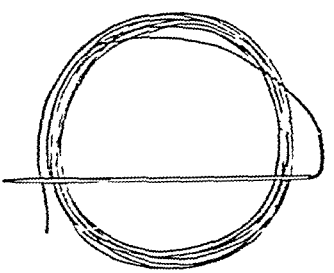
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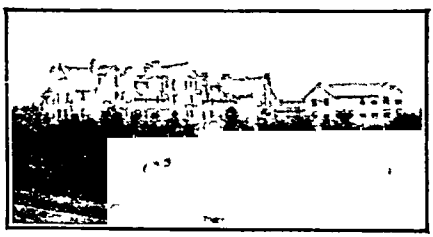
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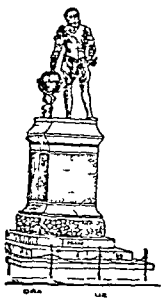


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Express Services by Great Western or Southern Railways from Paddington or Waterloo Cheap Holiday Tickets (6 to 17 days) Fridays Saturdays and Sundays Return Fares 1st 62/9 3rd 37/9 Enquire at Railway Stations Offices or Agencies for full details of express services cheap facilities etc from all parts

Illustrated Guide free from Hon Sec, Information Bureau (Dept 28), PLYMOUTH

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FOR OUTDOOR SPORTS AND HEALTH-GIVING HOLIDAYS

LONDON 1½ hours

Medical men will find the quiet atmosphere of Seaford gives them the rest they need The beautiful South Downs and the famous chalk cliffs, known as the Seven Sisters, afford innumerable opportunities for rambles Bracing air Two 18 hole golf links, hard and grass tennis courts, bathing and boating

Seaford was top of Great Britain's Sunshine Record for 1931

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HARROGATE

For the Treatment of

RHEUMATISM, ARTHRITIS, FIBROSITIS, NEURITIS, ARTERIO-SCLEROSIS and HYPERPIESIS,

DISEASES OF THE

LIVER and GALL BLADDER, GASTRIC CATARRH and COLITIS, SKIN DISEASES, ANAEMIA, and Convalescence from Acute Illness

Members of the Medical Profession are asked to write for particulars of Complimentary Facilities to I J C BROOME General Manager 3 The Royal Baths Harrogate

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Eminent medical opinion is agreed that Margate with its many natural health advantages is one of the best towns for convalescence in England.

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750 FEET ABOVE SEA LEVEL

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Specially built and licensed for the care and treatment of a limited number of Ladies and Gentlemen suffering from Nervous and Mental breakdown Voluntary and certified patients received Ladies also admitted as Temporary Patients without certification Terms moderate MEDICAL PRESIDENT PHYSICIAN Tel No 8 Formby

Doctor's widow in North London having large house garden car good staff would like some PAYING GUESTS Terms moderate — Apply No 371 B.M.A. House Tavistock Square W.C.1

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Indications —Heart and vascular diseases disturbances of the digestive organs chronic respiratory diseases women's diseases rheumatism *Therapeutics* —Potable springs rakoczy pandur and other brine and hot spring baths mineral mud baths fango chambers Zander Institute x ray treatment **Summer and winter cures** (closed in December and January) Prospectus from the Kurverein Mineral waters despatched by the Management

BAD REICHENHALL

Ideal Climatic Spa for diseases of the Respiratory Organs [illegible] 600 ft [illegible]

Indications —Bronchitis emphysema asthma diseases of the digestive organs liver and gall bladder diseases of metabolism Largest installation in the world for pneumatic chambers optical disease to the mountains (walking cure) Saline springs *contain* Stahlbrunnen Natural rich carbonic acid and graded **Open all the year round** Information and prospectus from the Kurverein sun steam and hot air baths inhalation pneumatic [illegible] women diseases 280 km long lead nd entertainments

BAD BRUCKENAU

The [illegible] for [illegible] of the Hall State [illegible] **984 3 ft above sea level** Highly successful in cases of uric acid diathesis sulphate spring proved successful for anaemia women's diseases and diseases Spa opens May 1 t 12 hur Jossa also via Bad Kissingen Fulda and Schluchtern can be reached by the Staatl Bayerischen Mineralbades Bruckenau in Unterfranken

BAD STEBEN

The Chalybeate and Mud Bath in the Frankenwald 1 906 ft above sea level Proved in cases of anaemia heart nerve and women's diseases *gout rheumatism sciatica Bathing* drinking and air cure Park rest hall for st environment *Information from the* Staatl Badeverwaltung and Travel Bureaux

Exceptional Curative Successes · Best Installed Spas

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Unrivalled suites of Baths for Ladies and Gentlemen including Turkish and Russian Baths Aix and Vichy Douche Massage and Plombières Treatment and Electric Installation for Baths and other Medical purposes Dowsing Radiant Heat D'Arsonval High Frequency Diathermy Nauheim Baths New Soapless Foam Baths etc Special provision for Invalids Milk from our farm of 300 acres Large Winter Garden Night Attendance Room well ventilated and all bedrooms warmed in Winter A large Staff (upwards of 60) of trained Male and Female Nurses Masseurs and Attendants

Grams Smedleys Matlock
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For Prospectus and full informat on please write MANAGER M J

GREAT BRITAIN'S GREATEST HYDRO

President Physicians
G C R HARBINSON M B B Ch B A O (R U I)
R MACFLELAND M D C M (Edin)

MATLOCK

EPILEPSY.

Owing to extensions there are at present a few Vacancies at the

DAVID LEWIS COLONY

for Ladies and Gentlemen who have Epilepsy but are of good intelligence and sound mind

Colony life gives to most people who have epilepsy the best chance of happiness and contentment

Apply to the *Medical Superintendent*,

The David Lewis Colony, Warford, Alderley Edge

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RHINE (GERMANY)

Special treatment for Rheumatism Gout Diabetes Heart and Nervous Complaints Each patient specially dieted Three Resident Doctors Open all the year round English spoken

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In the winter garden of Scotland facing the sun 600 feet up Tonic air beauty in every landscape from sheltered balconies Dancing winter garden swimming bath tennis badminton golf fishing Fully licensed Modern baths installation Physiotherapeutic massage electrical treatment ultra violet radiation Physician in attendance Write for prospectus

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PEEBLES HYDRO PEEBLES SCOTLAND

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Sunshine Health, Luxury, Quiet

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Every kind of Bath Plombiere Lavage
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Prospectus from Secretaries *Tele* 341
Resident J W JOHNSTON SMYTH M D
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For the treatment of Ladies and Gentlemen *mentally afflicted* Voluntary *Boarders* received Situated 1 200 ft above sea level facing S 14 acres of grounds —For terms apply to the Resident Medical Superintendent W W HORTON M D Nat Tel 130

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THE CLIFTON HOTEL,

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100 ROOMS

Running h & c water Two Lifts

THE GROVE HOUSE,

CHURCH STRETTON SHROPSHIRE

A Private Home for the care of and treatment of a limited number of ladies mentally afflicted Climate healthy and bracing
Medical Superintendent Dr McCLINTOCK

Bishopstone House, Bedford

PRIVATE HOME for MENTALLY AFFLICTED LADIES Patients only received Appl Medical Officer or Mr PEELE *Telephone* 2708

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Ladies and Gentlemen received for treatment under certificates and without certification as either VOLUNTARY or TEMPORARY PATIENTS at a weekly fee of TWO GUINEAS and upwards

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in North Hampton beautifully situated A FEW PATIENTS can be taken at the above Medical Nursing and Convalescent Fees from 8 gns —Address No 3219 B M A House Tavistock Square W C 1

Tel & Telegrams Haynes Brentwood 45

Littleton Hall, Brentwood, Essex

Large grounds 400 ft above sea HOME for ladies Mentally afflicted Voluntary Boarders received Station Brentwood and Shenfield 1 mile Liverpool St. 26 min —Apply Dr HAYNES

HAPPY, HEALTHY HOLIDAYS—IN ITALY

Italy's glorious climate and wonderfully bracing air make a stay at any time a pleasant experience In convalescence it is especially admirable Italy is blessed with a variety of splendid spas where various "cures" can be effected To Medical men their worth is well known These spas are set in the midst of most beautiful scenery, where sports, interests and pleasures to suit all tastes may be found at quite inexpensive rates

Travel to and in Italy is both reasonable and comfortable, and excellent hotel accommodation of various classes is available at surprisingly inexpensive rates

Full details may be obtained from the Italian State Tourist Dept, 16 Waterloo Place Regent Street, London, S W 1

SUNNY ITALY ENIT

VICHY FRANCE

The waters of Vichy belong to the sodium bicarbonate group They are generally gaseous clear and colourless They are nearly all similar in composition and contain approximately a total of 7 5 grammes of mineral matter which includes notably bicarbonates of sodium potassium calcium chloride sulphate of sodium free carbonic acid and the rare gases argon krypton xenon helium neon etc At their source the springs present differences in temperature which give a variety of physiological actions due to their peculiar vitality

The Thermal Establishment is justly considered as a model of its kind and every care is taken that the latest discoveries in physiotherapy may be utilised under the best possible conditions for allowing the specific action of the waters to give the most beneficial results

The cost of a stay at Vichy is surprisingly moderate Hotels are numerous and comfortable and range from the most luxurious to the modest pension

Detailed information concerning the treatment at Vichy may be had by addressing the Compagnie Fermiere de Vichy 24 Boulevard des Capucines Paris

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

The following arrangements have been made for POST GRADUATE TEACHING in Glasgow during the Summer of 1932

A A General Medical and Surgical Course from August 22nd to September 16th

Fee £10 10s or £6 6s for first or second fortnight

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary Post Graduate Medical Association The University Glasgow

INSTITUTE OF PATHOLOGY & RESEARCH

ST MARY'S HOSPITAL, LONDON, W 2

A Course of Lectures on PATHOLOGICAL RESEARCH IN ITS RELATION TO MEDICINE has been arranged for the SUMMER SESSION These Lectures will be given in the Lecture Room of the Bacteriological Department of the Institute on TUESDAY AFTERNOONS at 5 p m as under —

JUNE th	SUBJECT
Sir HENRY HALLETT DALE M D F R C P (Lond) Sec R S (Director National Institute for Medical Research)	Recent work on Hormones of the Circulation
JUNE 14th	
Prof R T LEIPER M D F R S (Prof Helminthology University of London)	Helminth Migrations"

These Lectures are open to all Members of the Medical Profession and to all Students in Medical Schools without fee

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admissions being primiparous cases) Over 2 400 patients are admitted to the Wards annually and in the Ante natal Department there are over 18 000 attendances per annum

Certificates awarded as required by the various Examining Bodies

For rules fees etc apply ARTHUR WATTS Secretary

F R C S (Edin)

Full PREP COURSE with Anatomical (Cadaver and Living Model) and Surg Path Demonstrations for next Exam will commence shortly POSTAL TUITION at any time—H C OLPIN F R C S Surgeons Hall Edinburgh

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received in charming country mansion Dumfries hire Resident doctor Poultry keeping (with carpentry) Card games Evening taught—Kirkconnel Hall Eccl fechan

Medical and Dental Students

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CHILD GUIDANCE COUNCIL

THE CHILD GUIDANCE COUNCIL offers TWO FELLOWSHIPS IN PSYCHIATRY, tenable at the London Child Guidance Clinic 1 Canonbury Place N 1, on the last of six months full time training commencing in October 1932 Candidates should be registered Medical Practitioners and should have the Diploma in Psychological Medicine or be able to produce evidence of Psychiatric experience The financial value of the Fellowships will be not less than £150 the actual financial value depending upon the qualifications and experience of the applicant Further particulars and forms of application may be obtained from the Secretary Child Guidance Council 7 Buckingham Palace Gardens S W 1

Applications must reach the Secretary not later than June 15th

LONDON SCHOOL OF DERMATOLOGY

St John's Hospital for Diseases of the Skin,

Leicester Square W C 2

Conducted by the Honorary Staff of the Hospital together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospitals Lectures and Demonstrations every Tuesday and Thursday at 5 p m from October to March and four times weekly during May Clinics daily at 2 p m and 6 p m Saturdays 2 p m only Pathological Laboratory for Instruction or Research work

For further particulars fees etc apply to J F M WIGLEY M B Dean

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 14th and October 3rd and for the Diploma in Tropical Hygiene on January 11th and May 16th (Candidates for the D T H must possess the D T M of this University)

Further particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pembroke Place Liverpool

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SIR,—*Please send me a copy of your Guide to Medical Examinations by return.*

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Address .....

Examination in which interested .....

SEAMEN'S HOSPITAL SOCIETY.

POST GRADUATE COURSES FOR SHIP SURGEONS

The Seamen's Hospital Society announce that Part 3 of these courses—i.e. Before her Course in Clinical Subjects will be held from July 11th to July 29th 1932 at the *Dreadnought* Hospital Greenwich S.E.10.

Further particulars may be obtained on application to the Secretary, Seamen's Hospital Society, Greenwich, S.E.10.

STAMMERING SPEECH DEFECTS

BEHNKE METHOD. Estab. 1882. Cases non-resident treated at 39, Earls Court Square, S.W.5, and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns.

STAMMERING CLEFT PALATE SPEECH LISPING 3/8 cf. Miss BEHNKE 39 Earls Court Sq. S.W.5

UNIVERSITY OF LONDON

EXTERNAL EXAMINERSHIPS, 1933

The Senate announce the following vacant Examinerships for the year 1933

For the Second Examination for Medical Degrees
ANATOMY

For Final and Higher Examinations for Medical Degrees
MENTAL DISEASES
LARYNGOLOGY
OPHTHALMOLOGY

Associate in Medicine

Pathology and Surgery. A separate application form must be used for Associate Examinerships and the word "Associate" must be written on it.

Application forms (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar.

Candidates must send in their names to the *External Registrar* GLO. F. GOODCHILD, M.A., B.Sc., with any attestation of their qualifications they may think desirable, on or before Monday, July 4th, 1932. (Envelopes should be marked "Examinership.")

The Senate desire that *no application of any kind be made to individual members.*

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership. The appointments will be made by the Senate in November. Applicants who *desire that the result should be communicated to them* are requested to enclose a stamped and addressed envelope with their applications.

University of London, South Kensington, S.W.7. June 1932.

EDWIN DELLER, Principal.

UNIVERSITY OF LONDON

A Course of Two Lectures on *The Physiology of the Adrenal Gland* will be given by Dr. A. T. WILSON at the MIDDLESEX HOSPITAL MEDICAL SCHOOL (Mortimer Street, W.1) on JUNE 15th and 16th at 5 p.m.

Admission free without ticket.

S. J. WORSLEY,
Acting Registrar.

EPSOM COLLEGE

Established in 1855 as a Public School with a Royal Medical Foundation.

Notice is hereby given that the ANNUAL GENERAL MEETING of the *Governors will be* held at the office, *49 Pelham Square*, W.C.1, on Friday, June 24th, 1932, at 4 o'clock in the afternoon, when the result of the voting for Pensioners and Foundation Scholars will be announced.

In accordance with the provisions of the Acts of Parliament ten members of the Council will retire at this meeting and the following will be proposed for re-election for a further period of three years:—*Dr. Hugh Wyndham Mead*, Mr. Douglas C. Bartlett, Sir John F. H. Broadbent, Bart., M.D., Sir Ernest Goodhart, Bart., Mr. W. C. C. Parkinson, C.M.G., O.B.E., M.A., Dr. Harold Spitta, M.V.O., Sir St. Clair Thomson, *M.D.*, Mr. W. *Cyril Tomlinson*, Mr. *T. Hollis* Walker, K.C., and Dr. W. Essex Wynter. It will also be proposed that Mr. Ronald Cove-Smith, M.V.O., M.B., be elected a member of the Council in the place of the late Dr. *Seymour Taylor*.

It will further be proposed that Colonel Norman C. King, and Mr. J. D. Leake, F.C.A., be reappointed Auditor for the ensuing year, and that Mr. H. H. Bew be appointed an Honorary Auditor in the place of Sir Frederic G. Hallett, retired.

The Council will propose two minor amendments to the existing By-laws. Particulars have been circulated to all Governors but can be obtained at the office if required.

All voting papers must be returned to reach the office by the night of Saturday, June 18th, at latest or the votes will be lost.

By Order of the Council,
W. L. CIFFARD (Major),
Secretary.

May 28th, 1932.

ST. BEES SCHOOL, CUMBERLAND

Fees £120 a year inclusive, having been reduced from £144 in the case of boys who enter the School before July 1933.

Scholarship Examinations begin July 7th. For Prospectus apply Head Master.

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17 RED LION SQ. LONDON W.C.1
(FOUNDED IN 1882.)

Principal Mr. E. S. WEYMOUTH, M.A. (Lond.)
POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS.

SOME SUCCESSES

M.D. (Lond.),	1901-31 (9 Gold Medallists during 1913-31)	355
M.S. (Lond.),	1901-31 (including 4 Gold Medallists)	22
M.B., B.S. (Lond.),	*Final* 1906-31 (Completed Exam.)	280
F.R.C.S. (Eng.),	*Primary* 1906-31	173
	Final	174
M.R.C.P. (Lond.),	1914-31	199
D.P.H.	(Various) 1906-31 (Completed Exam.)	308
F.R.C.S. (Edin.)	1918-31	50
M.R.C.S., L.R.C.P.	Final 1910-31 (Completed Exam.)	501
M.D.	Various. By Thesis. Numerous successes	

... above and also for all examinations L.R.C.P. or M.B. of for D.P.M., D.O.M.S., D.M.R.E., M.M.S.A. successes.

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MEDICAL PROSPECTUS (48pp.)

CONTENTS.—The method and the cost of entering the Medical Profession. *Particulars of all* ... Courses and Oral ... higher Medical ... higher Surgical ... for the Special ... Course. Opening ... ses.

Medical Prospectus *gratis* ... *along with list of Tutors* ... *etc. on application* to the Principal, Mr. E. S. WEYMOUTH, M.A., 17 Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

NAVAL DENTAL SERVICE

The Admiralty is prepared to receive applications from qualified Dental Surgeons for entry into the Royal Navy as DENTAL OFFICERS.

Three vacancies are to be filled. Candidates must be below 28 years of age at date of entry (unless granted an allowance for age not exceeding six months in respect of a period served in a recognised Civil Hospital appointment) and must be registered under the Dentists Act as qualified to practise as Dental Surgeon in Great Britain and Ireland. They will be required to appear before a Selection Committee and to pass a medical examination by a Board of Naval Medical Officers as to their physical fitness for entry.

The regulations for entry and *the forms to be* filled up by candidates may be obtained on application to the Medical Director-General of the Navy, Admiralty, London, S.W.1.

The form of application accompanied by the necessary *document* must reach the Medical Director-General not later than July 1st.

CITY OF LONDON MATERNITY HOSPITAL,

CITY ROAD, E.C.1

MIDWIFERY TRAINING SCHOOL.

MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complications. Monthly or Fortnightly Courses.

PUPILS TRAINED as Midwives and Monthly Nurses in accordance with C.M.B. regulations.

PRIVATE WARDS for paying patients.

MATERNITY NURSES sent out to private cases.

COUNTY BOROUGH OF BRIGHTON

PUBLIC ASSISTANCE COMMITTEE

POOR LAW INSTITUTION

The Public Assistance Committee require the service of the following officers at the Poor Law Institution viz —

(a) MEDICAL OFFICER (WHOLE TIME RESIDENT)

Candidates must be registered Medical Practitioners and preference will be given to those who have held the appointments of House Physician and House Surgeon in a general hospital and who have had experience in the administrative control of a general hospital or a Poor Law hospital The Medical Officer of the Poor Law Institution is also Medical Officer of the Warren Farm Poor Law Schools situated about 2 miles from the Poor Law Institution

Salary £850 per annum together with residential allowances valued for the purposes of the Poor Law Officers Superannuation Act 1896 at £150 per annum The cash salary and half the value of the emoluments are subject for the time being to a temporary reduction to October 31st 1932 of 5 per cent A residence is being erected for the accommodated

ASSISTANT

Candidates must be single men and preference will be given to those holding a M R C S degree and who have held the appointment of House Surgeon in a general hospital as the appointment is primarily for surgical work although not entirely so

The appointment is for one year only but the person appointed will be eligible for further appointment from year to year

Salary £400 per annum together with residential allowances valued for the purposes of the Poor Law Officers Superannuation Act 1896, at £150 per annum The cash salary and half the value of the emoluments are subject for the time being to a temporary deduction to October 31st 1932 of 5 per cent on the first £200 and 5 per cent on remainder Residential accommodation is provided

The Council of the County Borough of Brighton have adopted the Memorandum of Agreement as to the salaries of whole time Public Health Medical Officers

Unless the officers appointed are transferred officers under the Local Government Act 1929 the Poor Law Officers Superannuation Act, 1926 will not apply The Local Government and Other Officers Superannuation Act 1922 is not in force in the County Borough of Brighton

Forms of application conditions of appointment and lists of duties may be obtained from the Public Assistance Officer which forms duly filled up and accompanied by copies of testimonials and a description of the diplomas certificates of degrees licences and other instruments held by the candidate must be returned to the Public Assistance Officer not later than Tuesday June 21st, 1932 by twelve noon

Canvassing the Committee either per orally or by letter will be considered a disqualification for appointment

JAS H LOTHWELL
Public Assistance Officers Princes St Brighton
Town Clerk & Clerk to the Public Assistance Committee
June 4th 1932

CITY OF SHEFFIELD

KING EDWARD VII HOSPITAL RIVELIN VALLEY

RESIDENT HOUSE SURGEON required on July 1st for the above Hospital which is for the treatment of Surgical Tuberculosis and other Orthopaedic conditions (130 beds)

The officer appointed will be required to attend the Out patient Department for Surgical Tuberculosis cases and the Orthopaedic Clinic of the Maternity and Child Welfare Centre

Salary at the rate of £150 per annum with board and laundry

Appointment for six months with possible extension for a further six months

Application with testimonials should be sent to the Medical Superintendent

INVERNESS DISTRICT ASYLUM

SENIOR ASSISTANT MEDICAL OFFICER (unmarried) required Salary £400 per annum with board lodging washing etc The appointment is subject to the Asylum Officers Superannuation Act 1909 Previous Mental Hospital experience essential and candidates should also have held a House Surgeon's appointment

Applications stating age and previous experience with copies of recent testimonials to be lodged with the undersigned on or before June 10th

ROBERT CHEERT
Clerk to the Joint Committee
20 Church Street Inverness.

NOTTINGHAMSHIRE COUNTY COUNCIL

TUBERCULOSIS OFFICER

Applications are invited for the appointment of Tuberculosis Officer (male) at a commencing salary of £750 per annum rising subject to satisfactory service by biennial increments of £50 to a maximum of £938 per annum together with travelling expenses in accordance with the County Council's Scale The salary is subject to a temporary deduction of 5 per cent

Candidates must be fully qualified and registered Medical Practitioners who prior to April 1st 1930 have held the appointment of Tuberculosis Officer with the approval of the Minister of Health or who have subsequent to qualification

(1) had at least three years experience in the practice of their profession
(2) spent in general clinical work a period of not less than eighteen months of which not less than six months have been spent in a Hospital as Resident Officer in charge of beds occupied by general medical or surgical cases and
(3) received special training for a period of not less than six months in the diagnosis and treatment of Tuberculosis

The possession of a Diploma in Public Health will be an advantage

The person appointed will be required to take charge of several Dispensaries and to perform such other duties as may be prescribed from time to time He will be a member of the Staff and act under the control and direction of the County Medical Officer of Health and will be required to devote his whole time to the duties of the office and to reside in such part of the County as may be approved

The appointment will be terminable by three months notice on either side and will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 The selected candidate will be required to pass a medical examination

Forms of application may be obtained upon application at my office at the undermentioned address and applications with copies of not more than three recent testimonials must be addressed to the County Medical Officer Shire Hall Nottingham not later than Tuesday June 14th

K TWEEDALE MEARS
County House Nottingham
Clerk of the County Council
May 1932

BURY AND DISTRICT JOINT HOSPITAL BOARD

RESIDENT ASSISTANT TO THE MEDICAL SUPERINTENDENT

Wanted an Assistant to the Medical Superintendent of the Institutions of the Joint Board They consist of a Fever Hospital (100 beds) a Sanatorium (70 beds) and a Small pox Hospital Candidates must be registered Medical Practitioners They will be required to devote their whole time to their duties and will assist the Medical Superintendent generally and as he requires

Proficience will be given to candidates with Hospital experience and special experience in Pulmonary Tuberculosis

Commencing salary £400 per annum with £25 increase at the end of the first year and a further £25 increase at the end of the second year with board and lodging

Applications stating age qualifications and experience together with testimonials to be sent to me on or before June 16th

T A PEARLEY
Church Chambers Fleet Street Bury
Clerk to the Joint Board
May 27th 1932

COUNTY BOROUGH OF WOLVERHAMPTON

ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation invite applications for the post of Assistant Medical Officer of Health (male) The salary will be £650 per annum rising by annual increments of £25 to a maximum of £750 per annum to be subject to percentage deductions (1) occasioned by the reduction in the cost of living figure and (2) in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1922 The successful candidate will be required to pass a medical examination and to devote the whole of his time to the duties of the office

Candidates must hold a registrable qualification in Public Health and have special experience in Maternity and Child Welfare work and Infectious Diseases

Applications endorsed Assistant Medical Officer giving age degrees and qualifications and particulars of previous post graduate experience accompanied by copies of three recent testimonials must be received by me not later than June 8th

J BROCK ALLON
Town Hall Wolverhampton
Town Clerk.
May 1932

LANCASHIRE COUNTY COUNCIL

BIDDULPH GRANGE ORTHOPAEDIC HOSPITAL

Applications are invited for the post of JUNIOR HOUSE SURGEON (Woman) at the above Hospital which contains 87 beds Salary is at the rate of £150 a year (less 5 per cent temporary emergency deduction) together with board residence and laundry

Preference will be given to candidates who have held resident hospital appointments and who are competent anaesthetists The appointment will be for a period of six months in the first instance and for a further six months at the option of the Council but will not be renewable after that time

Applications with copies of two recent testimonials should be sent not later than June 18th to Dr I J BUTTERWORTH School Medical and Child Welfare Department County Offices Preston

Duties to commence August 1st

GEORGE FTHERTON
County Offices Preston
Clerk of the County Council
May 1932

LONDON COUNTY COUNCIL

Applications invited for appointment to the position of RESIDENT ASSISTANT MEDICAL OFFICER Grade I (men only) at ST GEORGE'S IN THE EAST HOSPITAL Raine Street Wapping E 1

The duties which are of a general nature are assigned by the Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

The salary is £350 rising annually by £25 to £425 a year together with board lodging and washing Cash remuneration subject to temporary reduction in respect of salary and emoluments

Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for six months

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 5a) County Hall Westminster Bridge S E 1 returnable by June 10th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the Hospital

COUNTY BOROUGH OF HALIFAX

ST LUKE'S HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER

The Health Committee of the Halifax Corporation invite applications for the post of Junior Resident Medical Officer (male unmarried) for St Luke's Hospital (containing 448 beds for Medical Surgical and Maternity cases) The salary will be £250 per annum together with board residence and laundry The appointment will be for a term of not exceeding one year and is not renewable

Applicants must be duly qualified registered Medical Practitioners

Forms of application and conditions of appointment may be obtained from the undersigned to whom they must be returned accompanied by copies of not more than three recent testimonials not later than Friday June 10th

By Order
Town Clerk's Office Halifax
PERCY SAUNDERS
Town Clerk
May 24th 1932

COUNTY BOROUGH OF SOUTH SHIELDS

HARTON HOSPITAL (340 Beds)

Applications are invited for the appointment of HOUSE SURGEON (Male) Salary £150 per annum together with board residence and laundry The appointment is for one year

Applicants must be registered medical practitioners and unmarried

Forms of application may be obtained from the undersigned and should be returned completed to him together with copies of not more than three testimonials on or before Saturday June 25th 1932 and endorsed House Surgeon

JAMES TAYLOR
Town Hall South Shields
Acting Town Clerk

CHELTENHAM DISTRICT NURSING ASSOCIATION

Affiliated to the Queen's Institute of District Nursing

ASSISTANT SUPERINTENDENT (Queen's Nurse) to take charge of Maternity Ward with midwifery pupils Facilities may be given later for studying for the Midwife Teacher's Certificate Salary £90 per annum rising by £8 uniform allowance £4 a year holiday allowance and all else as provided in the Home Federated Superannuation Scheme adopted—Apply to The Secretary Victoria Home St James's Square Cheltenham

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive, specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major General. An officer may apply after one year's Indian service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes (to specialist (for example public health and bacteriological) services, to research posts and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are being subjected under the authority of the Secretary of State in Council to a temporary reduction not exceeding 10 per cent.

Rank	Service in Rank	Basic Pay	Overseas Pay	Years of Total Service
		Rs.	Rs.	
Lieut.	—	400	100 150	1st to
Capt.	(i) During first 7 years service as Captain	600	100 150 £81	3rd 4th 5th
	(ii) With more than 7 and less than 9 yrs. service as Captain	700	£105 £ £	6th 7th 8th
	(iii) With more than 9 years service as Captain	800	£ £ £30	9th 10th 11th to
Major	(i) During first 3 years service as Major	900		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1250		
Lieut.-Col.	(i) Until completion of 7 years total service	1,000	£30	12th and over
	(ii) During 24th and 25th years service	1600		
	(iii) After completion of 25 years total service	1 00		
	(iv) When elected for increased pay	1800		

EXTRAS.—In addition to the above rates various allowances are available for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay, promotion, retirement and retired pay, but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to one year.

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature. During such leave study allowance at present fixed at the rate of 12s. a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s. a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pension are as follows:

	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. With effect from October 1st 1931 a reduction of 8½ per cent. has been made on this account from the amounts shown.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES

An officer on appointment is provided with free passage to India. The wives and families of officers who are married prior to the date of the officer's embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August 1932, prior to sailing for India early in 1933. Applications should be submitted as soon as possible.

VICTORIA HOSPITAL BLACKPOOL
(132 Beds)

HOUSE SURGEON (Male)

Applications are invited for the above post from duly qualified and registered Medical Practitioners The appointment is for six months from July 1st with salary at the rate of £250 per annum including board lodging and laundry

Applications stating age nationality qualifications and experience together with not more than three recent testimonials should be sent to the Hon Secretary on or before June 13th

May 28th 1932

VICTORIA HOSPITAL BLACKPOOL
(132 Beds)

HOUSE PHYSICIAN (Male)

Applications are invited for the above post from duly qualified and registered Medical Practitioners The appointment is for six months from July 1st with salary at the rate of £200 per annum including board lodging and laundry The duties will include the giving of a certain number of Anaesthetics

Applications stating age nationality qualifications and experience together with not more than three recent testimonials should be sent to the Hon Secretary on or before June 13th

May 28th 1932

WESTMINSTER HOSPITAL

There will be a vacancy for a RESIDENT MEDICAL OFFICER at Westminster Hospital Annexe 66 Fitzjohn's Avenue Hampstead on July 1st

Salary at the rate of £200 p a plus accommodation and board

The post offers an opportunity for wide and unique Radium experience

Candidates who previously have held a Resident post preferred

Applications should be submitted to the undersigned at Westminster Hospital Broad Sanctuary S W 1 *not later than June 10th*

C M TOWER Secretary

WESTMINSTER HOSPITAL
Broad Sanctuary S W 1

There will be a vacancy for a HOUSE SURGEON to the Eye and Ear Nose and Throat Departments on July 1st next The appointment is for six months (non resident) and the salary is at the rate of £102 per annum

Applications with copies of three recent testimonials should be submitted to the undersigned *not later than Saturday June 11th*

CHARLES M POWER Secretary

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL

Applications are invited for the following appointments

ONE *HOUSE* PHYSICIAN
TWO HOUSE SURGEONS
ONE CASUALTY OFFICER

for six months ending December 31st Salary £150 each p a annum with board lodging and laundry Applications accompanied by not more than three testimonials should be sent to the undersigned as soon as possible

HY TRUSSON Secretary

ROYAL SOUTH HANTS & SOUTHAMPTON HOSPITAL (247 Beds)

A RADIUM OFFICER (whole time) is required for a National Radium Regional Centre at Southampton (Royal South Hants & Southampton Hospital) Candidates must hold the qualification of D M R E and have had special experience of Radium Therapy Salary £600 per annum to commence Applications stating age and qualifications should be sent to the undersigned not later than *June 18th*

HY TRUSSON Secretary

GENERAL INFIRMARY SALISBURY
(General Hospital—161 Beds)

TWO HOUSE SURGEONS (male) required to commence duty on July 4th

Candidates must be unmarried fully qualified and registered Salary £150 with board etc

Applications with copies of testimonials to be sent to the House Governor and Secretary from whom a copy of the rules may be obtained on application

ESSEX COUNTY HOSPITAL
COLCHESTER (160 Beds)

Wanted immediately ASSISTANT HOUSE SURGEON (male) Salary £120 with board washing and residence Medical and Surgical qualifications required

Applications with three recent testimonials to be sent by Friday June 10th to—

ALFRED G BUCK Secretary

ALL SAINTS HOSPITAL (FOR GENITO URINARY DISEASES)
Austral Street West Square Southwark S E 11
(New Premises opening June 15th 1932)

RESIDENT HOUSE SURGEON (male) required on July 1st for six months being three months as Junior House Surgeon with salary at £100 per annum followed by three months as Senior House Surgeon with salary at £150 per annum

Applications giving particulars of age experience qualifications and enclosing copies of three testimonials should reach me not later than June 11th at the following address

D H LADE Secretary

All Saints Hospital
49/55 Vauxhall Bridge Road S W 1

MILLER GENERAL HOSPITAL
Greenwich Road S E 10

Applications are invited for the following posts

HOUSE SURGEONS (Two) Salary £100 per annum
HOUSE PHYSICIAN Salary £100 per annum
CASUALTY OFFICER Salary £150 per annum

Candidates (male) must be unmarried Board residence and laundry are provided The appointments are for six months from July 1st next Applications stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials to be sent to the Secretary as soon as possible

May 18th 1932

BURY INFIRMARY LANCS

Applications are invited for the post of *THIRD HOUSE SURGEON who must have both* Medical and Surgical qualifications The appointment is for six months at a salary at the rate of £150 per annum with board residence and laundry The successful applicant will be required to commence duties on July 1st

Applications stating age qualifications and nationality with copies of three recent testimonials to be sent to the undersigned not later than June 11th

Particulars of duties may be had on application

ALEX W MAITLAND
Hon Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD
Gynaecological and Maternity Departments
(146 Beds)

The Board of Management invite applications for the post of *HOUSE SURGEON (male)* to the Maternity Department (30 beds)

The appointment is for six months from July 1st Salary £120 per annum plus board residence and laundry

Previous experience as a Hospital Resident essential

Applications stating age and experience with copies of recent testimonials should be forwarded immediately to the undersigned

H B SHEFSWELL Secretary

NOTTINGHAM GENERAL HOSPITAL

RESIDENT CASUALTY OFFICER (male) is required at the above Institution The appointment is for six months with salary at the rate of £200 a year with board residence and laundry

Candidates are desired to send applications to the undersigned
and experience together with testimonials not later than
Duties to commence

House

NORTH ORMESBY HOSPITAL MIDDLESBROUGH

HOUSE PHYSICIAN required male and unmarried Salary £120 per annum with board residence and laundry There are three Residents and the successful candidate will be eligible for the post of House Surgeon in due course

Applications stating age qualifications previous experience (if any) with copies of three recent testimonials should be sent to the undersigned at once

GEORGE WATTS Secretary *Superintendent*

NATIONAL HOSPITAL QUEEN SQUARE W C

ASSISTANT PATHOLOGIST Applications are invited for the post of *Assistant* Pathologist Candidates must be medically qualified and have had training in Clinical Pathology and Biochemistry Attendance will be required for six half days a week and the appointed Officer will work under the Pathologist Salary £250 per annum The appointment is for one year and the holder is eligible for re election

Applications should be sent to the undersigned on or before Saturday June 4th

GODFREY H HAMILTON
Secretary

MILDMAY MISSION HOSPITAL,
Austin St Bethnal Green E 2

Applications are invited for the post of ASSISTANT CASUALTY OFFICER (female) which becomes vacant on July 1st The appointment is non resident and for six months *Salary £125 per annum* Dinner tea and supper when on duty

Candidates must be registered under the Medical Acts and the Mildmay Council is anxious that they should be fully in sympathy with the religious work of the Hospital

Applications with copies of recent testimonials should be sent to the Medical Superintendent before June 16th

ROYAL NORTHERN HOSPITAL
Holloway N

Applications are invited for the post of HOUSE SURGEON The appointment is for nine months (six months as House Surgeon and three months as Casualty Officer) from July 15th Salary at the rate of £70 per *annum with board residence and laundry*

Applications with copies of testimonials should be sent by June 10th to the undersigned from whom forms of application and rules can be obtained

GILBERT C PAINTER Secretary

WRENHAM & EAST DENBIGHSHIRE WAR MEMORIAL HOSPITAL (109 Beds)

TWO RESIDENT HOUSE SURGEONS (male or female) required by the above Hospital to commence on July 1st next *Appointments for a* period of not less than six months Salary £150 per annum with board and laundry

Applications stating age nationality experience and qualifications accompanied by copies of three recent testimonials to be sent to the *undersigned not later than Monday June 13th*

LESLIE SINCLAIR
May 20th 1932 Secretary

THE DEWSBURY AND DISTRICT GENERAL INFIRMARY (100 Beds)

Applications are invited for the post of *SECOND HOUSE SURGEON* Salary £150 with board residence and laundry

The duties mainly comprise work in the Casualty Department and the duties of House Physician

Applications stating age and experience (if any) together with copies of recent testimonials to be sent to the undersigned at once

The appointment *commences July 1st*

H C TRICE
Secretary Superintendent

STAMEN'S HOSPITAL SOCIETY
Greenwich

HOUSE PHYSICIAN and HOUSE SURGEON required at *DREADNOUGHT* HOSPITAL Greenwich for six months *from July 1st* Salary £110 per annum and a proportion of fee with board residence and washing Candidates must be male Application with *copies of three* testimonials to be sent in by June 8th to the undersigned

R E V BAX
Secretary

Greenwich
May 19th 1932

SOUTHAMPTON CHILDREN'S HOSPITAL & DISPENSARY FOR WOMEN
(45 Beds)

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER (lady) Six months appointment vacant June 15th Salary at the rate of £100 per annum with board residence and laundry Applications stating age and accompanied by *copies of testimonials* to be sent to the undersigned not later than June 9th

ETTA K MATTHEWS
Secretary

NORTH LONSDALE HOSPITAL
BARROW IN FURNESS

A [illegible] immediately qualified
HOU [illegible] minis
Applic [illegible] p r
male [illegible] dr
tratio [illegible] exp
annur [illegible] d by
App[illegible] and *nationality* [illegible] to be sent
copies of three recent testimonial[illegible] to be sent
to the Secretary as early as possible

ST MARY'S HOSPITAL W 2

The post of FIRST ASSISTANT PATHOLOGIST will shortly become vacant Salary £[illegible] per annum rising by annual increments of £25 to £[illegible] The Board of Management invite applications which with copies of testimonials not exceeding *three in number* should reach the undersigned on or before June 20th

The successful candidate will be expected to take up duties on October 1st

W PAPAES Secretary

ROYAL DEVON AND EXETER HOSPITAL EXETER

SENIOR HOUSE SURGEON AND JUNIOR HOUSE SURGEON (Male appointment)

Applications are invited for the above Resident appointment shortly becoming vacant at this Hospital

The Senior appointment is for 12 months the Junior appointment for six months. Candidates are eligible for re-election

The salaries are as follow

Senior House Surgeon £250 per annum

Junior House Surgeon £150 per annum board apartments and washing

Application stating age qualification together with certificate of registration and copies of three recent testimonials should be sent to the undersigned on or before Thursday June 16th

By Order of the Committee
S S COFF
Secretary & Manager

WEST LONDON HOSPITAL
Hammersmith Road W 6 (234 Beds)

Required ONE HOUSE PHYSICIAN (General and Skin) ONE HOUSE SURGEON (General and Genito Urinary) for six months from July 1st next subject to one month's notice on either side Salary at the rate of £100 per annum with board lodging and laundry allowance

Candidates (males only) must be registered under the Medical Act

Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday June 16th Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a Meeting of the Medical Council on Friday Jun 24th at 4 p m and the House Committee Meeting at 4 45 p m the same day when the appointments will be made

H A MADGE Secretary

ST PETER'S HOSPITAL FOR STONE ETC
Henrietta Street Covent Garden W C 2

CLINICAL ASSISTANTS *to the following* members of the Honorary Staff who attend the Out patient Department at the times indicated will be appointed at an early date for the six months commencing July 1st A fee of Five Guineas payable to the funds of the Hospital will become due on appointment

Mr John Sandres Monday 2 to 5 p m
Mr Alban Andrews Tuesdays 2 to 5 p m
Mr Ogier Ward Wednesdays 2 to 5 p m
Mr J H Harrington Thursdays 3 to 5 p m
Mr Ogier Ward Fridays 9 30 a m to 11 30 a m (Women & Children)
Mr Alban Andrews Fridays 3 to 6 p m (male out patients)
Mr John Sandres Saturdays 2 to 6 p m

Applications will be received by the undersigned up to and including Monday June 13th
BELCHEY ROGERS Secretary

FREEMASONS HOSPITAL AND NURSING HOME
237 Fulham Road Chelsea S W 3

The post of PRESIDENT MEDICAL OFFICER (male) will be vacant on July 1st Salary at the rate of £250 per annum with board residence and laundry The appointment is for six months Candidates must be registered and must have held Pre dent appointments at a General Hospital

The Institution (48 beds) is for paying patient of both sexes of moderate means unable to afford ordinary nursing home treatment etc

Application stating full particulars to be sent on or before June 18th next to the Honorary Secretaries from whom further information may be obtained The Medical Advisory Committee will meet on June 20th next

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS
Victoria Park E 2
(Bus Tram and Rail Cambridge Heath L & N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on 1st July 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Applications with copies of three testimonials should be sent to the undersigned on or before Friday June 17th

GEORGE WATTS Secretary

CORBETT HOSPITAL STOURBRIDGE

RESIDENT HOUSE SURGEON required to commence duties on July 1st Appointment will be for six months and will be determinable by six weeks notice on either side Salary at the rate of £200 per annum with board apartments and laundry

Application with copies of testimonial to be sent to the undersigned

W C H WESTON Secretary
The Corbett Hospital Stourbridge

MANCHESTER ROYAL INFIRMARY
ASSISTANT RESIDENT MEDICAL OFFICER and RESIDENT CLINICAL PATHOLOGIST

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment which will be vacant on July 1st

Applicants (men only) must be registered and hold a Medical and Surgical qualification preference being given to those who have held a resident appointment in the Manchester Royal Infirmary The appointment is for twelve months subject to the provisions of the Bye law as to notice etc

Salary £100 per annum with board residence and allowance for laundry

Application with testimonials and stating age to be sent to the Chairman of the Medical Board not later than June 18th

By Order
FRANK C HAZELL
May 24th 1932 Gen Supt & Secretary

MANCHESTER ROYAL INFIRMARY
MEDICAL REGISTRAR (Non Resident)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment which will be vacant on July 1st

Applicants must be registered and hold a Medical and Surgical qualification and are required to devote the hours of 10 a m to 1 p m daily (Sundays excepted) to the duties of the post The appointment is for one year renewable for a further period of a year subject to the provision of the By laws as to notice etc Salary £150 per annum

Application stating age with testimonials to be addressed to the Chairman of the Medical Board not later than June 16th

By Order
FRANK C HAZELL
May 26th 1932 Gen Supt & Secretary

MANCHESTER ROYAL INFIRMARY
SURGICAL OFFICER TO OUT PATIENTS

The Board of Management invite application from registered Medical Practitioners for the above appointment

The duties are to assist in the treatment of Surgical Out patients on two mornings per week The appointment (non resident) is for a period of one year but the holder of the office is eligible for re-election on two subsequent occasions for a similar period Salary £35 per annum

Candidates must state age and send twelve copies of their applications and testimonials to the undersigned on or before 9 a m on Thursday June 9th

By Order
FRANK C HAZELL
Gen Supt & Secretary

NORTHAMPTON GENERAL HOSPITAL

There will be a vacancy on July 1st next for ONE HOUSE SURGEON British nationality Salary £150 per annum with board residence and laundry

The successful candidate will be appointed for a period of three months and will be eligible for re-election for a further period of six months

Candidates must be duly qualified and registered

Application stating age sex qualification etc with copies of testimonials to reach the undersigned not later than first post on June 15th

H ST JOHN WOOD
May 30th 1932 Secretary Supt

HULL ROYAL INFIRMARY (360 Beds)

Application are invited for the post of THIRD HOUSE SURGEON (male) vacant June 24th

The appointment will be for six months in the first instance and will be determinable by one month's notice on either side

Salary at the rate of £150 per annum including board residence and laundry

Application giving particulars of age experience and nationality together with copies of testimonials should reach the undersigned on or before Tuesday June 14th

J J CARLESS
May 30th 1932 House Governor

GENERAL HOSPITAL NOTTINGHAM

A HOUSE SURGEON is required at the above Institution The appointment is for six months with salary at the rate of £150 a year with board residence and laundry

Application stating age qualification and experience together with copies of testimonials to be sent to the undersigned not later than Monday June 20th Duties to commence on Monday July 18th

I M MacCOLL
House Governor & Secretary

EVELINA HOSPITAL FOR SICK CHILDREN
Southwark S E 1

Applications are invited for the post of PHYSICIAN TO OUT PATIENTS (Honorary) Candidate must be Graduate in Medicine in a recognized University and be members of the Royal College of Physicians London or shall proceed to obtain that Diploma They must not be engaged in General Practice

Application with copies of not more than four testimonials should be sent as soon as possible to the Secretary

Candidates must call upon Members of the Honorary Medical Staff whose names together with the Standing Orders relating to the post will be forwarded by the undersigned The successful candidate will be required to attend the Out patient Department on Monday and Thursday afternoon at 2 p m

By Order of the Committee of Management
W H SIDNELL
May 28th 1932 Secretary Supt

EVELINA HOSPITAL FOR SICK CHILDREN
Southwark S E 1

Applications are invited for the post of HOUSE PHYSICIAN (Male) for six months from June 12th (first two months in Casualty and Out patient Department) Salary at the rate of £120 per annum with board and residence

Application stating age experience and qualification accompanied by copies of four testimonial to be sent at once to the undersigned from whom rules and other particulars can be obtained

By Order of the Committee of Management
W H SIDNELL
May 28th 1932 Secretary Supt

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL
Shooters Hill London S E 18

GENERAL HOSPITAL (112 Beds)

HOUSE PHYSICIAN also HOUSE SURGEON

The Board of Management invite application *from suitable qualified male candidates* for appointment as (a) House Physician and (b) House Surgeon for a period of six months from July 1st In addition to his surgical duties the House Surgeon will have the care of a Maternity Unit of 8 beds

An honorarium of £100 per annum will be paid in respect of each appointment plus board residence and laundry

Application accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him not later than first post on June 20th

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL
Haverstock Hill N W 3

APPOINTMENT OF A HOUSE SURGEON

Applications are invited from unmarried Medical men for an appointment of House Surgeon vacant on July 1st next The salary will be at the rate of £100 per annum, together with board residence etc and the term will be for six months

Application to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on June 18th next

VICTORIA HOSPITAL BURNLEY
(125 Beds)

HOUSE PHYSICIAN (Male)

Applications are invited for the above Post which will become vacant on June 1st next The duties include the visiting of a certain number of wards The appointment is for six months from June 1st and carries a salary of £150 per annum with board etc This Hospital is approved by the London University for the purposes of the M B and M S examinations

Application stating age nationality and qualification together with copy testimonials should be addressed to the undersigned forthwith

GEO W COOLING
Superintendent and Secretary

PADDINGTON GREEN CHILDREN'S HOSPITAL (Incorporated) London W 2

HOUSE PHYSICIAN HOUSE SURGEON

Application are invited for the above posts which will become vacant on July 1st Gentlemen (unmarried) are invited to send in their application with copies of three testimonials to the undersigned not later than first post Friday June 17th Salary of each at the rate of £150 per annum with board and residence Candidates who have held a recognized Resident Hospital appointment are preferred The appointments are for a period of six months

JAMES A HAMLIN Secretary

COUNTY COUNCIL OF DURHAM

EDUCATION DEPARTMENT

ASSISTANT OCULIST

Applications are invited for the post of Assistant School Oculist to the Education Committee Candidates must be skilled Refraction ists and must have also occupied the post of House Surgeon in an Eye Hospital or in the Eye Department of a General Hospital for a period of not less than six months Commencing salary £500 per annum (less a temporary deduction of £10 18s 9d) rising by annual increments of £25 to a maximum of £700 per annum with in accordance with the
The per established post under and Other Officers Superannuation Act 1922 and will be subject to the provisions of the Act He (she) will be required to devote his (her) whole time to the duties of the office and to reside at a place to be approved by the Education Committee The appointment will be subject to three calendar months notice on either side expiring on the last day of any calendar month Canvassing directly or indirectly is prohibited and will disqualify Forms of application to be returned not later than Saturday June 18th can be obtained from the Director of Education Shire Hall Durham on receipt of a stamped addressed envelope

Shire Hall THOS B TILLEY
Durham Director of Education
May 18th 1932 (No 50)

CITY OF SHEFFIELD

ASSISTANT TUBERCULOSIS OFFICER

Wanted a Male (unmarried) Assistant Tuberculosis Officer to reside at WINTER STREET HOSPITAL and to devote his whole time to the Municipal Tuberculosis Scheme
Salary £350 per annum rising to £550 per annum by annual increments of £25 with board residence and laundry (If the successful candidate has not been fully qualified for three years the salary will be at the rate of £250 per annum)
The office has been designated as an established post under the Local Government and Other Officers Superannuation Act 1922
The appointment is subject to a temporary salary reduction scheme approved by the City Council
Applications stating age qualifications and experience with copies of three testimonials to be sent on or before June 13th to the Medical Officer of Health Town Hall Sheffield

CITY OF CARDIFF

CITY LODGE INSTITUTION

ASSISTANT MEDICAL OFFICER

Applications for the above appointment are invited from duly qualified unmarried medical practitioners
The position will be tenable for one year only and the salary will be at the rate of £150 per annum with board lodging attendance and washing
Forms of application and conditions of appointment to be obtained from the Public Assistance Officer 11 Park Place Cardiff
Applications must reach me by 5 p m on Wednesday June 15th 1932
Direct and indirect canvassing is prohibited

CECIL C BROWN Town Clerk

BRADFORD ROYAL INFIRMARY

ONE HOUSE PHYSICIAN and ONE HOUSE SURGEON (male) wanted immediately for six months Candidate must be single and legally qualified Salary £135 per annum with board residence and washing There are 215 beds and six resident officers
Applications stating age qualifications and previous experience with copies of recent testimonials to be sent to the undersigned

J J BARLOW
Secretary Supt

HOPITAL AND DISPENSAIRE FRANÇAIS
17 Shaftsbury Avenue W C 2

JUNIOR RESIDENT MEDICAL OFFICER (Male) required Registered unmarried speaking French fluently Salary £100 per with full board and laundry Candidates should send in their applications with three copies of recent testimonials on or before June 25th to—

J KNECHT Secretary

KING GEORGE HOSPITAL ILFORD
(London)

Applications are invited for the appointment of additional HOUSE SURGEON (Male) Salary £100 per annum with board residence for Term six months with eligibility for a further period Applications should be sent immediately to the Secretary

LONDON COUNTY COUNCIL

Applications invited for appointment to the position of RESIDENT ASSISTANT MEDICAL OFFICER Grade I (men only) at the HAMMERSMITH HOSPITAL Ducane Road Shepherds Bush W 12
The duties which are mainly medical are assigned by the and include if necessary stabilishments under
The salary is £25 to £425 a year together with board lodging and washing Cash remuneration subject to temporary reduction in respect of the salary and emoluments Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for six months
Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable by June 17th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the Hospital

LONDON COUNTY COUNCIL

Applicatio
Practitioner
ASSISTANT
Dunstan's I
£100 a year
subject to
is for six months in the first instance but may be extended for a further period of six months Duties are assigned by the Medical Superintendent and include if necessary assistance at other establishments under the control of the Council
Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable by June 17th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the Hospital

WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS

KING EDWARD VII MEMORIAL SANATORIUM
Hertford Hill near WARWICK

Applications are invited for the post of JUNIOR MEDICAL OFFICER (male) at the above Institution of 195 beds The successful candidate will be appointed for six months and will have special opportunity of gaining experience in treatment by Artificial Pneumothorax by Ultra violet Light and in X ray work
The salary will be at the rate of £200 per annum with board lodging and laundry and months should Wednes

CITY OF SALFORD

ASSISTANT RESIDENT MEDICAL OFFICER
HOPE HOSPITAL (1 000 Beds)

Applications are invited for the post of Assistant Resident Medical Officer (male) at HOPE HOSPITAL Pendleton The appointment will be for six months Salary £250 per annum plus board residence and laundry Further information regarding the Hospital may be obtained from the Medical Superintendent Form of application may be obtained from the Medical Officer of Health 143 Regent Road Salford to whom it should be returned by June 18th

H H TOMSON Town Clerk

CITY AND COUNTY OF NEWCASTLE UPON TYNE

NEWCASTLE GENERAL HOSPITAL

HOUSE SURGEON (Male)

Applications are invited for the above post from duly qualified and registered Medical Practitioners The salary in respect of the appointment which is tenable for six months is at the rate of £150 per annum with board lodging etc
Application stating age and qualifications together with copies of not more than three recent testimonials to be addressed to the Medical Officer of Health Town Hall Newcastle upon Tyne
May 19th 1932

DARLINGTON GENERAL HOSPITAL
(120 Beds)

Wanted SENIOR HOUSE SURGEON fully qualified unmarried Salary £175 per annum with board residence and laundry Applications stating age and qualifications with copies of two recent testimonials to be sent to ARTHUR TIDDLE Secretary General Hospital Darlington

STAFFORDSHIRE COUNTY COUNCIL

ASSISTANT MEDICAL OFFICER

Applications are invited from medical practitioners holding the Diploma of Public Health for the above post Candidates should have at least three years experience in the practice of their profession subsequent to qualification Preference will be given to those who have held residential hospital appointments
The person appointed will work under the direction of the County Medical Officer and the duties of the office will include School Medical and Maternity and Child Welfare work in addition to such general public health work as may from time to time be prescribed
The salary will be at the rate of £600 per annum rising to £800 per annum by annual increments of £50 subject to a deduction of 5 per cent established under the Local Government and Other Officers Superannuation Act 1922 and to a temporary cut which amounts to £32 10/ on the basic salary of £600 Travelling expenses will be paid by the Council
The appointment will be subject to three months notice on either side
Forms of application may be obtained from the undersigned and should be returned by June 16th 1932 together with copies of not more than

County JOI
Staffor County
May 30th 1932 Coun

COUNTY BOROUGH OF ROCHDALE

ASSISTANT MEDICAL OFFICER OF HEALTH
(Female)

Applications are invited from registered Medical Practitioners (female) for the post of Assistant Medical Officer of Health
Salary £500 rising by annual increments of £25 to £700 per annum subject to a temporary economy cut
The successful candidate will act under the general direction of the Medical Officer of Health and the duties will be mainly in connection with Maternity and Child Welfare Ante Natal Clinics and Venereal Disease but other public health duties may also be assigned to her
The appointment will be subject to the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations 1930 and preference will be given to one possessing the Diploma of Public Health
Forms of application may be obtained from the Medical Officer of Health Public Health Offices Rochdale and must be returned to him accompanied by copies of three recent testimonials and endorsed Assistant Medical Officer of Health not later than Friday June 10th

Town Hall WM HENRY HICKSON
Rochdale Town Clerk
May 30th 1932

DERBYSHIRE COUNTY COUNCIL

LOCUM FOR ORTHOPAEDIC HOSPITAL

Applications are invited for the post of LOCUM RESIDENT ASSISTANT MEDICAL OFFICER at BRETBY HALL ORTHOPAEDIC HOSPITAL near Burton on Trent (147 bed 32 adult and 115 children) for a period of eight weeks commencing July 6th Salary at the rate of £350 per annum with board lodging etc Experience in Orthopaedic work essential
Applications together with copies of two recent testimonials to be sent to the undersigned on or before June 18th

W W ASH
New County Offices County Medical
St Mary's Gate Officer of Health
Derby
May 31st 1932

WARRINGTON INFIRMARY & DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried
Applicants who must be duly qualified Medical Practitioners must be duly qualified Medical Practitioners Salary £175 per annum with board apartments and laundry
Applications stating age with copies of three recent testimonials should be sent in at once to the undersigned

By Order
HENRY J FOOT
Superintendent & Secretary
May 9th 1932

THE PRINCESS BEATRICE HOSPITAL
Richmond Road Earls Court S W 5

Applications are invited for the appointment of RESIDENT MEDICAL SURGICAL OFFICER for six months commencing June 14th 1932 Experience will be given to holders of the F R C S Eng Salary at the rate of £150 per annum with board residence and laundry Application accompanied by copies of three recent testimonials should reach the Secretary not later than first post on Friday June 10th

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE MON *(Workmen's Medical Society)*	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE. *(Medical Practitioner)*	AYR COUNTY COUNCIL. *(Springvale Fever Hospital Saltcoats)* *(Visiting Physician)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme)*	AYR COUNTY COUNCIL *(Assistant Medical Officer)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	NEATH AND DISTRICT *(Medical Aid Association)*	FOLKESTONE BOROUGH *(Assistant Medical Officer of Health)*
LLWYNPIA CLYDACH VALE, PENYCRAIG GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE MON *(Medical Officer for Medical Aid Association)*	SOUTHAMPTON COUNTY BOROUGH *(H.D. Officer and Pathologist)*
MARDY GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Llynfi and Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	STAFFORDS AND DUDLI

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B M A House Tavistock Square W C 1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St. Sydney N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand
VICTORIA *(All Institute or Medical Dispensaries)*	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria			WESTERN AUSTRALIA *(Contract and Lodge Practices)*	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank of N.S.W. Chambers St. George's Terr. Perth Western Australia

June 1st, 1932 — By Order of the Council — ALFRED COX, Medical Secretary

CITY OF BIRMINGHAM MENTAL HOSPITAL

JUNIOR MALE ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole-time appointment from gentlemen under 35 years of age who are duly qualified and registered Medical Practitioners A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an

hould be a good quired to reside in

The commencing salary will be £350 per annum plus the usual residential emoluments of board lodging laundry and attendance Subject to twelve months' service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum An additional £50 per annum will be paid to the holder of the D P M qualification or to a person obtaining the D P M after appointment The salary and emoluments will be subject to a temporary deduction amounting to £9 6d per annum in accordance with

ements from uncil e required to mination and ubmit Officers will be re on h longing a ties may

from time to time direct The appointment is subject to one month's notice on either side

Application stating full particulars of qualification experience and appointments held accompanied by copies of three recent testimonials must be addressed to Dr T C Graves Chief Medical Officer City Mental Hospital Rubery Hill Birmingham not later than June 11th

F H C WHITSHIPP
Town Clerk's Office, Council House, Birmingham — Clerk to the Committee of Visitors.

SALFORD ROYAL HOSPITAL
(265 Beds)

Applications are invited for the following vacancies which will occur in the Resident Medical Staff (male) on June 30th

HOUSE PHYSICIAN Salary at the rate of £125 per annum

HOUSE SURGEON Duties mainly in the Salary at the

mainly in the Salary at the

The appointments are for a period of six months with board and residence

Candidates must be registered under the Medical Acts

The Hospital has the approval of the Royal College of Surgeons of England and appointments here are recognised for the English Fellowship (Final)

Forms of application which may be obtained from the undersigned must be delivered on or before June 8th

By Order of the Board
RICHARD NEWALL
Salford Royal Hospital, May 25rd 1932 — Assistant Secretary

BEDFORD COUNTY HOSPITAL
(124 Beds)

SECOND HOUSE SURGEON (male) fully qualified unmarried required for a term of not less than six months if once Salary £140 with board lodging and laundry

Applications stating age nationality qualification together with three recent testimonials to be sent to the Hon. Secretary Hon. Medical Staff Committee as soon as possible

ECCLES AND [illegible] HOSPITAL
[illegible] signed will be received without delay
By Order of the Board

HOUSE SURGEON Salford Royal General Hospital Salary £1[illegible] Salford Royal Hospital Apply with copies of [illegible] to Secretary Medical Board (Ap[illegible]

EAST HAM MEMORIAL HOSPITAL
Shrewsbury Road E.7
(100 Beds)

for the post of TICER Duties to e appointment t in tenure but the e eligible for re rate of £200 per annum with board residence and laundry Preference will be given to candidates who hold the Diploma of F.R.C.S. Application stating age, experience and full particulars together with copies of testimonials should reach the undersigned by June 11th

REGINALD PERRY, Secretary

CUMBERLAND INFIRMARY CARLISLE
(160 Beds)
Resident Medical Staff—Four

Required at once a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON Previous experience desirable but not essential Appointment to September 30th Salary at the rate of £155 per annum board residence etc

Application stating age nationality qualification etc with copies of not more than four testimonials should be sent immediately to the undersigned

J. G. HOWITT, Secretary

SALFORD ROYAL HOSPITAL
(265 Beds)

Applications are invited for the [illegible] MEDICAL REGISTRAR Candidates must be registered Medical Practitioners The appointment is for a period of one year Salary £[illegible] per annum commencing £250 per annum

Application accompanied by [illegible] testimonials stating age qualifications and [illegible] Government to be forwarded to the under

THE Coat Breeches Board
181 OXFORD ST[illegible] RICHARD NEWALL, Gerrard [illegible] Hospital, Assistant Secretary
Makers
Hurry
chest

Appointments continued on p 58

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
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ASSISTANCIES

WANTED AFTER JULY ASSISTANTSHIP view Partnership or Succession Scotch Graduate (33) ex H P M O R A Assist C O Sen H S knowledge of major surgery and C I 1 yr post grad clinics South Coast or Midlands preferred Excellent refs —Address No 3231 B M A House Tavistock Sq W C 1

WANTED — INDOOR MALE SINGLE ASSISTANT British some experience of private and panel Protestant for Country Practice in beautiful part of Yorkshire — Address with photograph pers refs essential particulars No 3221 B M A House Tavistock Square W C 1

WANTED — ASSISTANT FOR LONDON Practice no midwifery very little night work Some G P experience Good references Salary £275 Male single Begin immediately — Address No 3232 B M A House Tavistock Square W C 1

WANTED — ASSISTANT WITH VIEW TO Partnership near Newcastle on Tyne Young Scot with G I experience preferred Married or unmarried Salary (during assistantship) £26 monthly (indoor) —Address No 3211 B M A House Tavistock Square W C 1

WANTED — ASSISTANT MALE SINGLE British for Far Eastern Practice, British Colony Four years agreement first instance State age qualifications and experience — Address No 3205 B M A House Tavistock Square W C 1

WANTED — ASSISTANT WITH VIEW to Partnership in a mixed Practice ex H S single keen energetic Scot preferred abstainer Further particulars on application Interview Usual bond — Address No 3203 B M A House Tavistock Square W C 1

WANTED — LADY ASSISTANT FOR A Partnership Practice near London experience not essential State age height and other particulars Dispenser kept Usual bond —Address No 3230 B M A House Tavistock Square W C 1

WANTED — MALE OUTDOOR ASSISTANT single for Glamorgan Colliery Practice Cottage Hospital and opportunity for Anaesthetics Newly qualified would suit Salary £400 with rooms and attendance — Address No 3257 B M A House Tavistock Square W C 1

WANTED — PERMANENT ASSISTANT (lady) over 30 from July or August to run and live at Branch Surgery Midlands Work Light State experience and other essential particulars Small car advantage —Address No 3228 B M A House Tavistock Sq W C 1

WANTED-ASSISTANT OUTDOOR SINGLE male young graduate preferred for first year country Practice Salary £400 Give full particulars and photo —Address No 3229 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries —State full particulars —BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WOMAN DOCTOR (30) WANTED FOR ASSISTANTSHIP [illegible] the appointment in view Experienced general practice Maternity Salary £[illegible] Accustomed sole charge residence &c very well received and recommended a further year Aged 32 — Address No 3233 immediately House Tavistock Square W C 1

WANTED INDOOR ASSISTANT SINGLE good class private and panel Practice [illegible]

WANTED — OUTDOOR ASSISTANT (married) view to Partnership Salary £450 p a 1/4 share of £3 700 p a offered to suitable man in three months Large panel Good house available — BRITISH MEDICAL BUREAU 33 Cross Street Manchester

PARTNERSHIPS

WANTED — PARTNERSHIP IN OCTOBER in country Practice E or S W Counties by active and experienced Practitioner Married House to rent Income £1 400 upwards Capital available —Address No 2613 B M A House Tavistock Square W C 1

WANTED — PARTNERSHIP IN GOOD middle class Practice with substantial panel Married Edinburgh qualifications hos [illegible]

FOR SALE -SHARE WORTH £400 2 YEARS purchase South Coast Town Good scope No agents —Address No 3260 B M A House Tavistock Square W C 1

LIVERPOOL —PARTNER WANTED IMMEDIately (man or woman) to take over 2/3rd SHARE with early succession as desired of £750 p a with good panel £500 p a guaranteed Premium £750 payable £500 cash House to rent Expenses low —Address No 3251 B M A House Tavistock Sq W C 1

PARTNERSHIP, £550 P A AT 2 YRS IN Practice of £1 150 p a including panel 1 350 and appt (transferable) £350 Scope very good Mids not now done Ultimate succession to whole probable soon House £700 or lease £60 p a —Address No 2619 B M A House Tavistock Square W C 1

PARTNERSHIP IN GOOD PANEL AND private PRACTICE wanted by well qualified and experienced Medical Woman Must be scope Preliminary Assistantship considered Capital available preferably within 50 miles London — Address No 3215 B M A House Tavistock Square W C 1

PARTNERSHIP IN AN OLD ESTABLISHED Country Town Practice on the Welsh border Modern Hospital with Maternity wing Scope for surgery 1/5 SHARE for sale about £1 150 p a Good house with garden to rent Welsh not essential — Address No 3213 B M A House Tavistock Square W C 1

THIRD PARTNER REQUIRED IN HIGH class Practice non panel non dispensing Higher medical degrees desirable Share producing £1 250 p a —Address No 3017 B M A House Tavistock Square W C 1

LOCUMS

WANTED BY EXPERIENCED WOMAN, LOCUMS from June 14th to 28th and July 20th to August 8th Assistantship in September Own car — Address No 3209 B M A House Tavistock Square W C 1

WANTED —LOCUM AUGUST 20th FOR A fortnight South Cornish coast Rural Practice Own car —Address No 3212, B M A House Tavistock Square W C 1

FOR JULY —LOCUM TENANCY WANTED BY Woman M B M R C S 30 experienced good testimonials drive car £6 6s and hospitality for sister — Address No 3224 B M A House Tavistock Square W C 1

HOSPITALITY OFFERED DOCTOR AND wife own car in return for TAKING CHARGE of Practice last 3 weeks July work negligible Charming house and grounds fine scenery in mid Wales Petrol oil board etc provided —Address No 3237 B M A House Tavistock Square W C 1

LOCUM TENENS REQUIRED —MESSRS R SUMNER & Co Ltd Manufacturing Chemists 40 Hanover Street Liverpool will be pleased to hear from any gentlemen who are willing to act as LOCUM TENENS during the summer month

LOCUM REQUIRED BY M R C S L R C P 32 London preferred but would work in provinces photo if desired or interview — Address No 3252 B M A House Tavistock Square W C 1

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4 ADAM ST Strand London W C 2
Telegs Phone
Epsomian Lond Temple Bar 9011
After Office Hours Epsom 914?

LOCUM TENENS REQUIRES WORK—DAYS [illegible]

M D RETIRED ACTIVE WOULD UNDERTAKE Country LOCUM June July August Hospitality self and daughter and expenses — Address No 3202 B M A House Tavistock Square W C 1

M D D P H AGED 48 SEEKS LOCUM work public or institutional appointment Good references Can drive car Town or country Free any time — Address No 3254 B M A House Tavistock Square W C 1

SOUTHPORT — DOCTOR JUST DISPOSED own Practice resident in Southport for few months Willing to do LOCUMS week ends or part time work in or around district Own car In or outdoor Aged 31 —Tel Birkdale 66660 or No 3227 B M A House Tavistock Square W C 1

WOMAN HOSPITALITY LOCUM WANTED August 12th for four weeks South Coast Resort Very light work Cyclist or own car All expenses paid —Address No 3217 B M A House Tavistock Square W C 1

YOUNG PRACTITIONER PARTNER IN large suburban Practice would do LOCUM for three weeks July or first two weeks in August in return for hospitality for wife and baby girl (2 years) Seaside or near Work light Own car —Address No 3207 B M A House Tavistock Square W C 1

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Write wire or phone Central 3679
The Reliance Bureau for Dispensers, 12 Holborn Viaduct E C 1

WANTED BY M D D P H ETC EXPERIenced in Exp Mental Medicine and General Practice some LOST or as ASSIST ANT or LOCUM —Address No 3239 B M A [illegible]

[illegible] Bacteriological Laboratories of the [illegible] COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W C 2

M A M B CANTAB REQUIRES WORK during June July August Own car Would take highest reference experienced Also requires good class Practice £1 000 upwards [illegible] England — M A M B 21 Storeys Way Cambridge

NAVAL MEDICAL OFFICER RECENTLY retired requires EMPLOYMENT —Address No 3007 B M A House Tavistock Square W C 1

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION 85 Lockston Square, S W 1 (Telephone Victoria 2722) supplies qualified Dispensers Bookkeepers Laboratory Assistants Masseurs Mental Nurses Sanitary Assistants Male Nurses Hospital Clerks without [illegible]

[illegible] DISPENSERS Retail work required [illegible] charge [illegible] —THE BUREAU 18 21 Clerkenwell 65 2

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PRACTICES

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WANTED BY EXPERIENCED PRACTI tioner PRACTICE of £1 000—£1 500 p a with panel on or n ar South Co t Hou e to rent gard n g r e Capital available —Addre No 3214 B M A Hou e Tavi tock Square W C 1

WANTED —NUCLEUS OF MEDIUM SIZED PRACTICE in or near Southampton Bourn mouth or S E Eng Capital available —Addre No 3208 B M A Hou e Tavi tock Square W C 1

WANTED — GOOD PANEL AND PRIVATE PRACTICE in North or Midland with plenty scope for increase House if suitable to let Capital available —Addre No 3225 B M A Hou Tavi tock Sq W C 1

WANTED — PRACTICE WITH PANEL Streatham area Incom £800 to £1 600 Capital available Partn r hip con id r d— Addr No 3222 B M A Hou Tavi tock Square W C 1

WANTED URGENTLY — PRACTICE PRE ferably country S or S W England Addre No 3228 B M A Hou e Tavi tock Square W C 1

COUNTRY PRACTICE £370 P A PANEL and privat Lat Vac Med O Hous 5 l ed bath 2 reception profe room with parate entrance Good garden gar ge stable Hunting Trout fi hing Part mod rate 1½ ye r —Addre No 3131 B M A Hou e Tavi tock Square W C 1

DERBYSHIRE — PRACTICE FOR SALE Rec ipt Average £2 000 p a Panel 1 500 Small Hospital House and Garden to rent lease if d sired Premium 14 years pur cha e — Addre No 3234 B M A Hou e Tavi tock Square W C 1

FOR SALE — OPHTHALMIC PRACTICE IN Co tal Town Cape Province South Africa No a nt —Addres No 3259 B M A Hou Tavi t ck Square W 1

GOOD NUCLEUS WITH SCOPE FOR Gl ral with or without mall medical Lone Run by Medical Woman Near first cla to n We t En land Premium by rrangement — Addr No 3233 B M A Ho Tavistock Square W C 1

LANCS TOWN — OLD ESTABLISHED PRAC TICE Nice h u e gar ge good gard n r t £60 W ree r ce pt £700 gr at opp Panel 950 Inc r a e Price £1 150 part d f rred —MANCHESTER MEDICAL & SCIENTIFIC ASSOCIATION LTD 6 Bro n St

LONDON SOUTH WEST SUBURB — FOR Sale PRACTICE in rapidly growing dist r t p i al monopoly with exc l nt fr h l Hou Pr £4 000 Good r a n or al —Addr No 3216 B M A Hou e Tavi tock Sq ar W C 1

MANCHESTER —OLD ESTABLISHED PRAC TICE av rage r ceipts £950 with good p Hou o 6 room bath and gar r t £48 Land 1 250 inc r a e Price £1 250 part d f rr d —MANCHESTER MEDICAL SCIENTIFIC ASSOCIATION LTD 6 Brown St

MEDICAL MAN REQUIRED TO PURCHASE h l pan l and priv te PRACTICE in To n Sm ll initial capital r quir d the bal ce ll b r paid out f in m — Addr No 3200 B M A Hous Tavi tock Squar W C 1

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REQUIRED WITHIN 30 MILES OF LEEDS a PRACTICE f om £1 000 to £1 500 a year by a thoroughly married gentleman of exper ence with ample capital Comfortable house and gr unds e ential Prepared to entertain Partn r hip —Addre C H c/o IMPERIAL TUNNEL LTD 4/5 Adam St Strand W C 2

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QUEEN ANNE STREET — HANDSOME Ground Floor CONSULTING ROOM with waiting room attendance and every con venience Part time £40 per annum Delightful re ption suite also available Low rent —No 3218 B M A Hou e Tavistock Sq W C 1

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APPOINTMENTS—Contd

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST
Mount Pleasant Liverpool

The Committee of the Hospital invite applications for the ASSISTANT MEDICAL OFFICER at a salary of £150 per annum with private practice Duties—daily attendance to Out Patients Department and Wards 12 to 2 p m and other duties as may be assigned to him Candidates must be Graduates of a British or Irish University or Members of one of the Royal Colleges of Physician

Applications with copies of three recent testimonials to be sent in endorsed Assistant Medical Officer not later than June 11th 1932 to the Secretary Mount Pleasant

WEST END HOSPITAL FOR NERVOUS DISEASES
In Patient Department
Gloucester Gate Regents Park N W 1

The Committee of Management invite applications from British male candidates for the appointment of JUNIOR HOUSE PHYSICIAN Duties to commence Monday July 18th Salary at the rate of £100 *with board residence and* laundry Appointment in first instance for 6 months

Applications with testimonials must be received by the undersigned not later than Monday June 20th

J J WETENHALL Secretary
73 Welbeck St W 1

THE CHILDREN'S HOSPITAL BIRMINGHAM
(238 Beds)
RESIDENT SURGICAL OFFICER

Applications are invited for the above post Candidates must be qualified and registered The salary attaching to the post is at the rate of £175 per annum with board residence and laundry

The appointment is tenable for one year as from July 1st

Applications giving proof of registration and not more than three testimonial should be sent to the undersigned on or before June 20th

HAROLD L SHRIMPTON
May 1932 House Governor

KENT AND CANTERBURY HOSPITAL CANTERBURY
(Recognized by the University of London for the purposes of M S Examination)

HOUSE SURGEON (male) required to commence duties at or the middle of July Six months appointment Salary payable at the rate of £125 per annum plus board residence and laundry

Applications stating age and particulars of qualifications and enclosing copies of testimonials should be forwarded to the undersigned

W T SOUTHWOOD
Superintendent & Secretary

ALTRINCHAM GENERAL HOSPITAL
(100 Beds)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS (male) Salaries at the rate of £150 and £120 per annum respectively with board residence and laundry This appointment is for six months in the first instance

Applications stating age and experience together with copies of recent testimonials to Secretary General Hospital Altrincham

CITY OF BIRMINGHAM MENTAL HOSPITAL
JUNIOR MALE ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole time
Gentlemen under 35
Qualified and registered
A person who has been
a medical or surgical residential post in a *general* hospital will be regarded as having an additional qualification

The successful candidate should be a good Anaesthetist

He will be required to reside in the hospital

The commencing salary will be £350 per annum plus the usual residential emoluments of board lodging laundry and attendance Subject to twelve months service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum An additional £50 per annum will be paid to the holder of the D P M qualification or to a person obtaining the D P M after appointment The salary and emoluments will be subject to a temporary deduction amounting to £9 7s 6d per annum in accordance with the scale of Temporary Abatements from Salaries *approved* by the City Council

The successful candidate will be required to pass satisfactorily a medical examination and to join the Scheme under the Asylums Officers Superannuation Act 1909 He will be required to serve in such institution below ing to the Mental Hospitals Committee as they may from time to time direct The appointment is subject to one month's notice on either side

Applications stating full particulars of qualifications experience and appointments held accompanied by copies of three recent testimonials must be addressed to Dr T C Graves Chief Medical Officer City Mental Hospital Rubery Hill Birmingham so as to be received not later than June 11th 1932

J H C WILSHIRE
Town Clerk's Office Clerk to the
Council House Committee of Visitors
Birmingham

DONCASTER ROYAL INFIRMARY
(185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable

Applications accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Superintendent

EAST LONDON HOSPITAL FOR CHILDREN
Shadwell E 1

Applications are invited for the posts of HOUSE PHYSICIAN and HOUSE SURGEON The appointment will be for six months from July 1st Board residence and laundry provided Salary at the rate of £125 per annum Application with testimonial should reach the undersigned on or before Saturday June 18th

W M WILSON Secretary

CHESTER ROYAL INFIRMARY
(211 Beds)

HOUSE SURGEON (male) required to take up duties July 8th Salary £150 per annum with *board lodging and washing*
Application list closes June 20th
Application form may be obtained from the undersigned

W H GRACE M D M R C P
Hon Supt of the Resident Medical *Staff*

CHESTER ROYAL INFIRMARY
(211 Beds)

HOUSE PHYSICIAN (male) required Duties commence forthwith Salary £150 per annum with board lodging and washing
Application list closes June 15th
Application form may be obtained from the undersigned

W H GRACE M D M R C P
Hon Supt of the Resident Medical Staff

HOUNSLOW HOSPITAL STAFF

There are vacancies for an HONORARY SECOND EAR NOSE AND THROAT SURGEON and JUNIOR PHYSICIAN at the above *Hospital* Further particulars from and applications to the Secretary Hounslow Hospital Staines Road Hounslow

NUNEATON GENERAL HOSPITAL
(80 Beds)

HOUSE SURGEON male or female required immediately until December 31st next Salary £150 per annum plus certain emoluments and board lodging and laundry Apply to the Secretary Medical Board at the Hospital

PARK PREWETT MENTAL HOSPITAL BASINGSTOKE (1450 Beds)

Required SECOND ASSISTANT MEDICAL OFFICER (Male) Previous mental hospital experience and a good knowledge of Laboratory work essential Applicants should be single and under 40 years of age

Salary £450 per annum rising by £25 a year to £550 with board furnished apartments and laundry valued at £150 a year In addition £100 a year will be paid while acting as Pathologist Salary and emoluments subject to a temporary abatement

Also required JUNIOR ASSISTANT MEDICAL OFFICER (Male) Candidates should be single under 35 years and have held a resident post in a general hospital

Salary £350 per annum rising by £25 a year to £450 with board furnished apartments and laundry valued at £150 a year An additional £50 a year is payable for the possession of a Diploma in Psychological Medicine Salary and emoluments subject to a temporary abatement

The above appointments come under the provision of the Asylums Officers Superannuation Act 1909

Applications must be made on the prescribed form obtainable on request with a stamped addressed foolscap envelope from the Medical Superintendent to whom application must be sent accompanied by three recent testimonials on or before Saturday June 11th

LINCOLN COUNTY HOSPITAL

Wanted JUNIOR HOUSE SURGEON unmarried Salary at the rate of £150 per annum rising to £200 per annum at *the discretion* of Board residence and washing will also be provided

Every candidate for the appointment must be registered under the Medical Acts

Applications *stating* age and other particulars with copies of not more than three testimonials are to be *sent to the undersigned* from whom further particulars may be obtained

Lincoln ARTHUR MOORE
May 30th 1932 Secretary Supt

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

Applications are invited from duly registered and unmarried Practitioners for the following re

S	per annum
A	per annum
	free
M	with copies
	should be
of	out duties
forwar	

By Order of the Committee
IRENA BOWE Secretary

KING EDWARD VII HOSPITAL WINDSOR
(181 Beds)

TWO HOUSE SURGEONS required for six month from July 1st Applicants must be fully qualified women and registered (One to act as Casualty Officer)

Salary at the rate of £100 per annum together with board residence and laundry

Application stating age qualifications and experience accompanied by testimonial should be sent to the undersigned not later than June 13th 1932

ARTHUR E CHURCHER Secretary

WESTON SUPER MARE GENERAL HOSPITAL (80 Beds)
HOUSE SURGEON

Applications are *invited for* the post of RESIDENT HOUSE SURGEON at this Hospital Salary at the rate of £150 per annum with board rooms and laundry

Application stating age and qualifications and enclosing copies of testimonials should be addressed to the undersigned

LESLIE J TURNBAND Secretary

CENTRAL HOSPITAL PLYMOUTH (50 Beds)

Wanted a fully qualified RESIDENT HOUSE SURGEON to commence duties forthwith Salary £150 per annum with board residence and laundry Appointment for three months or twelve if mutually desired

Applications stating age together with not more *than three* recent testimonials to be sent to the undersigned

WM W UPPETT Secretary

THE PRINCESS MARY MATERNITY HOSPITAL Jubilee Road NEWCASTLE UPON TYNE

RESIDENT MEDICAL OFFICER (male) required for six months from August 1st for particulars apply House Governor

SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plaistow E.13

Applications are invited for TWO HONORARY ASSISTANT PHYSICIANS (Out patients) attendance Wednesday afternoons and a day to be arranged Candidates must be Graduates of a British University and Members of the Royal College of Physicians London

The Hospital is close to Plaistow Station (30 minutes from Charing Cross (Underground)

Applications with copies of three recent testimonial to be sent on or before June 14th to the undersigned

A ERNEST WILKES
Secretary

SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plaistow E.13

Applications are invited for the post of CLINICAL ASSISTANT in the Medical Out patient Department with access to the Ward The appointment is for six months Attendance on Monday afternoons at 2 o'clock Application with copies of three recent testimonials to be sent to the undersigned as soon as possible

A ERNEST WILKES
Secretary

BIRMINGHAM & MIDLAND EYE HOSPITAL Church Street BIRMINGHAM

HOUSE SURGEON required at the above Hospital

Salary £110 per annum and £10 laundry allowance

Applications together with copies of not more than three testimonials should be received not later than first post on Thursday June 9th

Further particular can be obtained from the *undersigned*

C A MASON Gen Supt

ROYAL FREE HOSPITAL Gray's Inn Road W.C.1

Applications are invited for the appointment of ASSISTANT PHYSICIAN Intending candidates (men or women) who must be Members of the Royal College of Physicians should submit application setting age and accompanied by copies of three recent testimonials to the undersigned on or before June 18th The elected candidate will be expected to assume the appointment during the Autumn

REGINALD R CARRATT Secretary

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DEATH VACANCY IN PROSPEROUS WEST Riding Town — Working expenses low Average receipts £1 000 Panel 900 Rent of house £28 p.a. Good locum in charge Premium £1 000 —Apply 2650

PARTNERSHIP IN WEST RIDING TOWN — Average receipts £3 300 One third share for sale which can be increased later Premium 2 year Non panel F R C S (Eng) would find scope for surgery Modern lease hold house price £1 200 —Apply 2646

SOUTH YORKSHIRE TOWN —LARGE PANEL PRACTICE THIRD PARTNER wanted Share offered one sixth which on present figures would bring in £600 p.a. Good opening for surgical work Prem £1 200 —Apply 2549

SOUTH YORKSHIRE MIXED RURAL AND Colliery PRACTICE Good detached house which can be rented Panel 820 Receipts £1 266 Premium 1½ year —Apply 2657

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EASTERN COUNTY IN ATTRACTIVE country unopposed Over £2 800 p.a. Panel 1 100 Half share for disposal Fees 3/6 to 21/ Med extra Appt over £100 Newly decorated house 7 bed 3 recep separate surgery Large garden and paddock over an acre Premium £2 800 —No 9031

LONDON S E (WOMAN'S PRACTICE) £350 p.a. Panel 145 Visits 3/6 Surg 2 6 Small flat at rent of £60 p.a. inclusive Prem £275 Also nucleus in Fulham Rd £60— £70 p.a. Panel 32 Lock up 2os p.w. Prem £50 inclusive —No 8991

WEST OF ENGLAND —TOWN PRACTICE. Share worth about £1 000 available owing to increase of Practice Non panel non-dispensing *better class Good* appointment Good house 3 recep 5 bedroom etc to rent London Oxford or Cambridge degree essential —No 9026

WEST RIDING —OLD ESTAB PRACTICE IN outskirts of industrial town Average £1 050 p.a. Panel 400 Two appointment Fees 3/6 to 10/6, some at 21/ Modern house 3 bed 2 recep large surgery etc Sell or let Alternative house with 6 bed 2 recep Separate surgery etc Rent £100 Very suitable Built for doctor Premium £1 550 —No 9024

CHANNEL RESORT —RADIOLOGICAL PRACTICE About £500 p.a. scope for Electro therapy No opposition Population of 40 000 covered by Practice Premises centrally situate at rental of 21/ per week Premium for good will and plant (cost £800) £700 —No 9023

LONDON —HIGH CLASS PRACTICE OVER £2 500 p.a. Largely Obstetrical and Children Successor must have had experience in these branches preferably Hospital appointments Ample scope for increase —No 9022

SOUTH MIDLANDS —COUNTRY PRACTICE. About £500 increasing Good opening for young man Opposition weak Fees 2/6 to 7/6 medicine extra Very little midwifery Good house 2 recep 7 bed bath surgery etc Electric light Price £800 Premium for practice £400 —No 9021

LONDON W — INCREASING NUCLEUS residential about £300 with select panel of 100 Fees 7/6 to 21/ Lower maisonette with consulting and 2 bedrooms bath kitchen Rent £100 p.a. incl Premium £450 —No 9018

SOUTH COAST — FASHIONABLE RESORT — Good class Practice non dispensing with select panel Income over £950 Scope and new housing estate developing Visits 5/ to 10 6 Good house facing sea 4 reception room 7 bedroom 2 bathroom &c Premium for Practice and lease (43 years to run) £2 800 cash of which £950 can be raised on *mortgage* —No 9014

SURREY HILLS — OLD ESTABLISHED Country PRACTICE unopposed £650 p.a. fees 3 6 to 10 6 Panel 400 Premium 1½ years purchase Good house 6 bedrooms 2 reception room electric light good garden about 1 acre with tennis court £1 600 or rent £80 —No 8992.

MIDLANDS —£3 000 A YEAR. OLD ESTAB Same hands over 30 years. Partner 5 years One third share for sale now more later at 2 years purchase House available to rent Station close Fees 7/ to 21/ Extensive district very little opposition Pan 1 1 600 Part *small* known and recommended —No 9005

LONDON NORTH — £1 000 P.A. MIDDLE and working-class panel 650 Visits 3 6— 5 6 up Premium one years purchase Good house main road Lease hold £1 750 48 yrs to run —No 9005

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NORTHANTS —Well established Town PRACTICE Corner house (5 beds) garden garage Receipts over £1 100 Panel 1 000 Fees 2/6 upwards Premium £1 800

LONDON E —PARTNERSHIP in mixed middle and working class locality conducted from main surgery Suitable commodious residence Receipts (aver) over £3 600 Panel nearly 4 900 Fees 2/ up Premium for 2/3rds share £4 800

EAST in good class mixed PRACTICE rent Receipts nearly £2 600 1/3 share (with view) 2 years purchase

HANTS —Middle class Country PRACTICE Practically unopposed Suitable for semi retired Practitioner Receipts over £400 Panel 94 Fees 2/6 upwards Premium £450

LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment. Premium 2 years purchase or near offer

SUFFOLK —Old established Country PRACTICE situated in charming locality Good sized house with grounds to rent on lease Sport of all kinds Receipts average over £1 500 Panel 1 000 Appts worth £250 to £260 p a Premium 1½ years purchase

LONDON S W (Near West End) —Mixed better class PRACTICE Main thoroughfare Suitable house to rent at exceptionally low rental Receipts approx £1 000 p a all cash Panel 730 *increasing* Fees 3/6 to 1 gn Premium to include Practice lease drugs furniture etc £3 500 or near offer

LANCASHIRE — Industrial middle class PRACTICE with convenient house (4 beds) Receipts nearly £2 000 Panel 1 200 Fees 3/6 upwards Highly suitable for husband and wife *Premium* £3 000 to include book debts or 1/3 share Partnership with view to succession at £1 200 Suitable for lady Doctor

LONDON E C —Mixed Cash and Panel Lock up PRACTICE with living accommodation if desired facing main thoroughfare held on lease at £95 p a Receipts nearly £700 Panel 450 (scope) Fees 1 6 to 10/6 Midwifery not undertaken Premium £1 000

YORKSHIRE — Near Coast — Agricultural locality — Attractive house separate entrance for surgery for sale freehold Receipts average approximately £800 p a Panel 620 Fees 3/6 upwards Premium 1½ year purchase for Practice house £900

LONDON N W —PARTNERSHIP in well established mixed class Practice Receipts approx £2 500 Panel 1 800 Branch Surgery Premium for 1/3 or 1/2 share 2 years purchase Suitable accommodation available

HOME COUNTIES —PARTNERSHIP in good class Practice Receipts over £6 000 p a Suitable house available Premium for 1/3 share 2 years purchase Highly suitable to young physician with good degrees

NEWCASTLE (Near) — Well established middle class and club PRACTICE Medium sized house to rent Receipts over £450 Panel 500 Fees 2/6 upwards Premium £775 to include drugs instruments surgery fittings etc

LONDON (Outskirts) — Mixed GP in rapidly developing residential and industrial locality Receipts approx £1 200 Panel about 1 200 Fees 2/ upward One appointment Excellent scope Premium £1 800 each for Practice £1 500 leasehold house

LONDON N E—Mixed Suburban GP—Medium sized corner house Receipts nearly £800 Panel approx 1 000 increasing Scope Premium £1 340 for Practice leasehold house £900 or near offer

YORKSHIRE—Town PRACTICE in industrial locality Medium sized house (5 beds) Receipts approx £700 Panel 520 Fees 2/6 upwards Premium for Practice and freehold house £2 000 each

LONDON, S W —West End PRACTICE non panel non dispensing Attractive house on lease Receipts £1 400 Fees 1 gn upwards Premium £2 600 to include lease carpets fixtures fittings etc

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1 LICENSED — Panel and Private PRACTICE Estab about 4 years Receipts av £727 p a and ample scope to quickly double Panel 570 Excellent opportunity Good house garage etc

2 BIRMINGHAM — NUCLEUS IN BETTER class growing suburb Nice modern corner house

3 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and private PRACTICE Receipts £874 Good house for sale Gar etc

4 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE *Receipts average £800* p a Panel 650 Appointments £350 Good house to rent Considerable scope for energetic man

5 LANCS —Old established and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent

6 *RELIABLE* —(Country Town) —PARTNERSHIP (2/5ths share) with short prelim Assistantship and ultimate succession Receipts over £1 200 Panel 530 and good scope Appts worth about £250 Good fees and house

7 LANCS (EARLY TO N non panel lar ceipts aver scope Good house etc

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1 LONDON S W (Suburb) — PARTNER wanted for old established mixed class Practice excellent scope for active man Share for sale worth £600 per annum large Panel House available Premium moderate Good opportunity

2 NEAR WATERLOO S E — Well established small PRACTICE good scope has done much more in past Receipts now £200 p a panel 145 Nice flat Offers invited Lady or gentleman

3 LARGE MIDLAND CITY —*Well established* PRACTICE Receipts average £1 600 p a panel 1 500 Nice house large garden rent 16 guineas per quarter Premium £1 650 or near offer

4 SCOTLAND — *Well established PRACTICE* Receipts last 12 months £950 panel 900 Large modern house to be sold Premium for Practice 1½ years purchase Nearest opposition 2½ miles.

5 LANCS —LARGE TOWN — *Old established* mixed class PRACTICE *Receipts average* over £2 000 a year *panel* 1 200 Nice house rent £60 Premium £3 000 including book debts worth £1 200 and drugs £100

6 LONDON N (10 mins. Finsbury Park) — Well established cash and Panel PRACTICE. Receipts £1 000 a year panel 650 Nice house on lease Premium for quick sale £1 000

7 LONDON E (Near Liverpool St) —Mixed Practice of average £550 *mises* 32/6 0 Country £042 p a grounds rent £65 p.a. Premium 1½ years Purchase

9 NEAR TOWER BRIDGE S E—Well established cash and panel PRACTICE Receipts average £400 p a panel 450 Rent of surgery £1 per week Premium £450 Good scop

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1 DEVON —Near Sea —PARTNERSHIP Half share of £1 200 p a increasing Panel 600 Good house with large garden for sale *Prem for* Partnership £1 200

2 INLAND SPA —NUCLEUS — About £1.0 p a with freehold house and Garden £1 250 together or would let house on lease

3 CORNWALL —PRACTICE in small country town near sea Averages £1 300 p.a. Panel about 637 Plenty of scope e p e for a Surgeon Prem £2 000 Good house for sale

4 S DEVON —Short ASSISTANTSHIP with view to Partnership and succession Under Practice over £1 100 p a Good opened Practice to rent In present hands 30 years Good house to rent Premium £1 650 or near offer

5 MIDLAND CITY —Old established Gen and venereal PRACTICE. Receipts last year £2 740 Panel 500 recently established increasing Excellent house to rent Prem £3 000

6 LONDON E —BRANCH SURGERY Average takings last 3 years £765 Panel 375 increasing House on lease Great scope for man living on or near premises Prem £1 000

7 COUNTRY PRACTICE — Old established in pleasant country Last year £1 750 accounts Panel 946 Appts £120 In present hands 23 years Good house garage large garden House & Practice £5 000 Board of Monmouthshire

8 WESTERN CITY —PARTNERSHIP for young Practitioner Fifth share returning 1st year £030 net Increase to two-fifths with increasing in four years Panel 3 120 Increasing Good house to rent £45 p a Price £900 to include book debt No dispensing

9 S DEVON —Small country PRACTICE returning £300 p a Panel over 200 increasing Scope Large house with grounds in charming locality to buy

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MANCHESTER —MIXED PRACTICE Cash receipts about £1 600 Panel 1 500 Good house (on lease) Garden and garage Urgent sale Premium £1 500 —No 303

CHESHIRE BORDER —LARGE TOWN —PARTNERSHIP in very old-estab MIDDLE CLASS PRACTICE Average cash receipt £2 000 p a Panel 900 Premium—half share—1½ years purchase —No 356

MANCHESTER —Old established PRACTICE Cash receipts last year £1 513 Panel Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1 years purchase —No 323

NORTH OF ENGLAND —OPHTHALMIC PRACTICE in an important City Cash receipts last year £1 255 Fees £1 1/ to £2 2/ Must be well qualified Reason for disposal—ill health —No 353

MANCHESTER —Middle class PRACTICE in pleasant Suburb Cash receipts 1931 £1 327 Panel 459 Charming house 3 reception 6 bedrooms billiard room Large garden and garage Premium—Practice—1½ years purchase —No 322

EAST COAST —SEASIDE TOWN — Old established mixed-class PRACTICE Average cash receipts £1 701 p a Panel 685 Excellent living and professional accommodation 2 reception 6 bedroom Garage and small garden Rent £100 p a on long lease Premium 1½ years purchase —No 332

LIVERPOOL —Small PRACTICE in growing Suburb Cash receipts approx £300 p a Panel 309 Tremendous scope Good house with Garden and Garage to rent —No 354

NORTHUMBERLAND —PLEASANT COUNTRY TOWN —Mixed General PRACTICE Cash receipts last year £1 988 Panel 1 040 Appointments £100 p a Excellent house 2 reception 5 bedroom Garage and garden Premium 1½ years purchase —No 351

CHESHIRE TOWN near MANCHESTER —PARTNERSHIP in old established Practice Average cash receipts £5 151 p a Panel 3 600 Excellent house 2 reception 3 bedroom garage and garden —Premium—one-fifth share—£1 700 —No 333

MANCHESTER —Residential Suburb —Middle-class PRACTICE Suitable for two in Partnership Cash receipts 1931 £4 5?8 Panel 1 400 Two excellent house to rent with ample accommodation Premium 1½ years purchase part by arrangement —No 277

NEAR LIVERPOOL —COAST TOWN —Mixed PRACTICE Cash receipts last year £?00 Panel 400 Good house (built 192?) 3 reception 4 bedroom Garage and garden Premium—1 years purchase —No 344

NEAR MANCHESTER —Pleasant Town —Old-established PRACTICE. Average cash receipt £995 p a Panel 902 Excellent detached house (freehold), 3 reception 5 bedroom Garage and garden Premium—Practice—1½ years purchase —No 234

EAST YORKS —Country Town near Coast —Unopposed mixed PRACTICE. Cash receipts last year £860 Panel 630 Excellent detached house 3 reception 4 bedrooms garage and large garden Premium 1½ years purchase —No 346

MEDICAL WOMAN'S PRACTICE —MANCHESTER —Old-established Cash receipts 1931 £645 Panel 450 Good corp Excellent house 3 reception 6 bedrooms Garage Rent £80 p a on lease Premium 1½ year purchase —No 330

NORTH WALES COAST —Mixed PRACTICE in beautiful district Average gross cash receipts £1 200 p a Panel ?50 Excellent house 2 reception 3 bedroom electric light and modern conveniences low rental Premium for quick sale £1 500 (to include drugs and Surgery fittings) —No 348

LANCS — PLEASANT COUNTRY TOWN —Sound mixed PRACTICE Average cash receipts £1 3?4 p a Appointments (transferable) £65 p a Panel 1 037 Excellent house 3 reception 6 bedroom garage and large garden Premium—Practice—1½ years purchase —No 326

WELSH BORDER — UNOPPOSED COUNTRY PRACTICE in beautiful district Average cash receipts £1 100 p a including transferable appointments £300 p a Panel ?56 Cottage Hospital Excellent house 4 reception 4 bedroom Garage and large garden Rent £?0 p a or would sell for £1 250 Premium 1½ years purchase. Well noticed —No 337

LARGE LANCS TOWN — MIXED PRACTICE Average cash receipts £1 288 p a Panel 1 089 Scope for increase Good house 3 reception 4 bedroom garage and garden Premium 1½ years purchase —No 347

CHESHIRE COAST TOWN near [illegible] PRACTICE Average cash receipts [illegible] p a Small select panel Excellent bedrooms Premium—Practice—1½

NORTH WEST COAST — — SEASIDE RESORT — Old-established PRACTICE Cash receipts £8?4 Panel 2?0 Excellent freehold house 2 reception 5 bedrooms Garage and garden —No 266

DURHAM —Near LARGE CITY — PARTNERSHIP in Industrial and Colliery PRACTICE Receipts £4 600 p a Large panel Suitable house for married man Premium—1/4 or 1/3 share —2 years purchase —No 357

DEATH VACANCY —LANCS TOWN — Mixed-class PRACTICE. Average cash receipts £1 634 p a Panel 829 Scope for surgery if desired Good accommodation to rent Premium 1 year purchase —No 335

VENEREAL DISEASES PRACTICE. — Northern City —Cash receipts last year £1 625 Convenient house to rent at £?5 p a Premium—any reasonable offer—No 340

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Practices and Partnerships for Disposal — **Full particulars sent free**

1 DEATH VACANCY — CORNWALL — PRACTICE in exceptionally beautiful district on coast Income about £600 p a (about £275 from appointments) Pleasant house (5 bed and dressing rooms) standing in quarter of an acre of ground to rent on lease

2 HOME COUNTIES —Partnership in Practice over £2 000 p a in growing and prosperous town about 10 miles from London Panel 850 Suitable house obtainable Scope for increase Premium two fifths share 2 years purchase

3 EAST ANGLIA —Good-class Practice over £1 900 p a in important town No panel Well situated house (7 bedrooms) to rent First class Hospital with good chance for well qualified man to get on staff Premium 1½ years purchase

4 LONDON, N W — Practice about £800 p a in residential suburb Panel nearly 700 Good class self contained Flat (4 bed and dressing rooms) with good garden for sale or rent Scope for increase Premium £1 300

5 MIDLANDS —Partnership in steadily increasing Practice over £1 800 p a in important city Panel 1 000 Excellent house (6 bedrooms) garage and good garden for sale Scope for increase especially in Eye work Premium one third or two fifths share 2 years purchase

6 MIDLANDS — Partnership in Practice over £2 700 p a in clean manufacturing town Panel between 1 700—1 800 House with 4 bedrooms garage and small garden to rent Good well equipped Hospital Share of one third to one half at 1½ years purchase

7 ESSEX —Practice averaging over £700 p a in satisfying suburban district Panel 350 Well situated house to rent on lease Abundant scope for increase Premium £1 000 or offer

8 HOME COUNTIES —Partnership in exceptionally good and rapidly increasing Practice about £6 000 p a in delightfully situated Country Town easy distance of coast Attractive house (4 bedrooms) to rent Partner must hold the F R C S and be aged about 30 Appointment on Hospital Staff Premium for one sixth to one fourth share 2 years purchase Preliminary Assistantship

9 EAST ANGLIA —Partnership in Country Practice nearly £4 700 p a in beautiful agricultural district Panel 3 000 Country house (7 bedrooms) in own grounds with picture pleasure garden tennis and croquet lawns orchards and paddock for sale Considerable scope for increase Premium one third or four fifths share 2 years purchase

10 WORCESTERSHIRE — Partnership in Practice nearly £1 900 p a in beautifully situated Market Town Moderate panel Suitable house with garden to rent Premium one half share 1½ years purchase

11 LONDON, S W —Partnership in Practice over £2 800 p a in pleasant residential Suburb Panel 1 750 Suitable Flat available After Preliminary Assistantship a share which later would be increased to seven fifteenths would be sold to suitable man at 2 years purchase

12 E COAST —Partnership in lucrative Practice over £5 200 p a in large Sea port Town Panel between 3 800—3 900 Partner must be young and energetic Good house Premium one fourth share £2 500 Preliminary Assistantship

13 N OF ENGLAND —Season Practice about £150 p a in small Inland Spa a panel or midwifery Good house (6 bedrooms etc) with nice garden to rent on lease Good scope for increase Premium £100

14 S COAST —Nucleus of Practice in developing Seaside Place close to Popular Resort Semi detached house (3 bedrooms) facing sea with garage and garden for sale Opening would suit semi retired Practitioner

15 EASTERN COUNTIES — Third Partner required for sound old established Practice of £4 500 p a in particularly pleasant Market Town within easy reach of sea Panel 1 600 Suitable house Premium 2 years purchase for share of about £1 000 p a Option much increased share within 3 years

16 LONDON, W C —Partnership in Practice about £1 000 p a Small panel Small flat to rent if desired One half share with succession in five years Premium 2 years purchase

17 S AFRICA —Practice of £2,000 p a in a Township in one of the richest Districts in the Union Charmingly Bungalow to rent Premium to include Pony Cart Dr Surgery and Household furniture £1 500

18 W MIDLANDS —Practice nearly £2,400 p a in small residential country town amidst beautiful surroundings Land about 1 100 Excellent house (6 bedrooms bath) in own ground with orchard fruit Sport of all kinds Premium 1½ years purcha

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Practices and Partnerships for Disposal (continued)

19 N. OF ENGLAND.—Ophthalmic Practice of over £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

20 N.E. ENGLAND.—Rapidly increasing PRACTICE in large town. Receipts past year £1,700 including select panel of under 550. Well situated house (6 bedrooms) in good residential part for sale. Ample scope for increase. Premium £2,750.

21 NORTHUMBERLAND.—Practice of £2,000 p.a. in small industrial town. Panel 1,040. House for sale. Premium—Practice—1½ years purchase.

22 S. AFRICA.—Practice of about £2,000 p.a. in a famous Town. Pleasantly situated detached bungalow (5 bedrooms) garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

23 N. WALES COAST.—Practice about £1,200 p.a. in a most beautiful district. Panel 760. Excellent house (3 bedrooms) with modern conveniences. Sport of all kinds. Premium £1,500 to include drug fittings etc.

24 S. COAST.—Practice averaging £1,160 p.a. in Residential Town and Health Resort. Panel 1,056. Practically no dispensing and not much midwifery. Scope for considerable increase.

25 KENT.—Partnership in middle and working class Practice nearly £4,450 p.a. in an industrial town. Panel about 2,600. Detached house (6 bedrooms) with garden to rent. Plenty of scope for increase. One fifth share 2 years purchase.

26 LONDON, W.1 END.—X-ray and Electro-therapeutic Practice. Receipts 1931 nearly £620. Large house (8 bedrooms) to rent on lease. Premium £925.

27 S. COAST.—Fashionable Health Resort.—PARTNERSHIP in steadily increasing Practice about £3,300 p.a. Small select panel. Share worth about £800 p.a. at 2 years purchase. Incoming Partner should be Oxford, Cambridge or London man.

28 OPHTHALMIC PRACTICE.—Exceptional opportunity for a PARTNERSHIP. Applicant should be aged about 30 and must have the D.O. Oxford or D.O.M.S. and must have held Ophthalmic Hospital post preferably in London. A share worth nearly £1,200 p.a. at first.

29 N. OF ENGLAND.—Inland Health Resort. Non-dispensing PRACTICE averaging £1,130 p.a. Small select panel. House (7 bedrooms) with large garden for sale or rent. Premium for Practice 1½ years purchase.

30 LONDON, S.W.—Practice £580 p.a. in suburban district. Small panel. Considerable scope. House (3 bedrooms) on main road rent £70 p.a. Premium £750.

31 S. OF ENGLAND.—Practice £1,035 p.a. in flourishing and attractive town within 90 miles of London. Panel over 800. House (6 bed and dressing rooms) with half an acre of garden for sale. Scope. Premium 1½ years purchase.

32 LONDON, W.—Practice £550 p.a. in suburban district. Detached double fronted house (6 bed and dressing rooms) with small garden for sale. Premium 1½ years purchase.

33 W. OF ENGLAND.—Partnership in old established Practice of £1,165 p.a. in first-rate City. Panel 1,350. House (4 bed and dressing rooms) to rent. Share worth £650 p.a. at 2 years' purchase.

34 MIDLANDS.—Steadily increasing Practice of between £1,100—£1,200 p.a. in thriving town one and a half hours by rail from London. Panel over 1,000. Excellent house (6 bedrooms) garage and garden to rent. Cottage Hospital. Premium 1½ years purchase.

35 LONDON, S.W.—Cash Practice about £1,100 p.a. near Victoria. Panel about 1,250 which could be considerably increased. Valuable corner residence for sale. Premium for Practice £1,000.

36 LONDON, E.—Cash and Panel Practice of £840 p.a. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years purchase.

37 ESSEX.—Partnership in Practice of £5,400 p.a. in developing country district, easy distance of coast. Panel 3,600. Detached house (6 bedrooms) garage and good garden for sale. Scope for increase. One fourth share 2 years purchase.

38 S. COAST.—Practice averaging £480 p.a., in rural district on outskirts of popular holiday resort. Panel 400. Rent of Surgery premises 10/- weekly. Premium £600.

39 W. OF ENGLAND.—Partnership in Practice nearly £2,600 p.a. in country town. Panel about 1,000. Good house (5 bedrooms) garage, and garden of about half acre to rent. Good educational facilities. Cottage Hospital. Premium one third share £1,550.

40 MIDLANDS.—Practice averaging £1,710 p.a. in growing town with nice surrounding. Panel 1,100. House available later. Good hospital and scope for surgery. Premium 1½ years purchase.

41 HOME COUNTIES.—Non-dispensing Practice averaging £1,150 p.a. in growing residential watering place. No panel. Detached house (4 bedrooms) with every modern convenience and attractive garden to rent. Premium 1½ years purchase.

42 MIDLANDS.—Practice £727 p.a. in clean flourishing manufacturing town. Panel 570. House (3 bedrooms) garage to rent. Premium 1½ years purchase.

43 SHROPSHIRE.—Practice £800 p.a. in Market Town. Panel 1,700. Suitable house to purchase. Premium 1½ years purchase.

44 S. WALES.—Mixed Practice in growing district of seaport town. Receipts last year over £800. Panel 760. House (3 bedrooms) garage and garden to rent. Good prospects for scope. Premium £1,200.

45 N. OF ENGLAND.—Partner required in increasing Practice in beautiful city. Receipts last year £5,000. Panel 4,000. Applicants should be proficient in minor surgical anaesthetics and obstetrics. Premium one fifth share at 2 years purchase.

46 LONDON, N.W.—Non-dispensing Practice in good residential district. Receipts last year nearly £900. No panel. Ten roomed house with garage and large garden to rent. Premium £1,200.

47 N. MIDLANDS.—Partnership in Practice about £5,000 p.a. in country district near two important towns. Panel over 1,600. Small house (3 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years purchase.

48 KENT.—Country Practice of over £800 p.a. in beautiful part. Panel nearly 500. Very attractive residence (10 bedrooms) central heating, grounds of 2 acres, orchard etc. for sale. Short Premium 1 years purchase.

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1 HOME COUNTIES.—(Within 15 miles of London).—PARTNERSHIP.—In a very pleasant residential district in the two-fifths share of a very old established mixed class Practice is for disposal. Cash receipts last financial year amounted to £1,900 including appts. and panel of 845. Remaining partner has been in the Practice 15 years. Nice house (surgery accommodation 2 reception 4 bedrooms etc.) with good garden and garage. Price for freehold £1,325. Premium for share £1,520.

2 EASTERN COUNTIES.—PARTNERSHIP.—Half share of very old established Practice situated in pleasant rich agricultural district within ten miles of county town. Cash receipts average £2,880 p.a. including appts. worth £100 and panel of 1,100 (good mileage). Very good house newly decorated with Garage. Main water supply. Electric light. Practice for sale. Premium £2,800.

3 OUTLYING RESIDENTIAL SUBURB.—A suitable Partner (experienced preferably married) 30 to 35 years of age and having the necessary capital) can acquire a share producing over £1,250 p.a. in an old established good mixed class Practice worth nearly £2,500 last year. Option of further additional shares at stated intervals up to one-third. Good house with ample accommodation to rent or purchase. Premium two years purchase.

4 WEST MIDLANDS.—Very old established mixed class PRACTICE in small town (largely residential) amidst agricultural district of exceptional beauty. Cash receipts average £2,278 p.a. with panel of 1,100. Opposition not strong. Very fine house (3 reception rooms, 6 bedrooms, bathroom etc.) in nearly three acres of ground. Beautiful garden, tennis lawn and productive orchard. Price for freehold £2,000. Premium 1½ years purchase.

5 MIDLANDS.—CATHEDRAL CITY.—Old-established better-class non-panel PRACTICE producing for last twelve months £3,300. No appointments. Fees from 5/- to 21/-. Not much midwifery. Commodious house with 2 reception, 6 bedrooms etc. Price for freehold £2,000 part on mortgage. Vendor on Staff of Hospital and good Surgical scope. Premium £5,000.

6 LONDON, EAST.—Outlying Suburb.—Old-established middle and working class PRACTICE producing last year nearly £600 including panel of 350. Capable of much increase as there is large scope. Visits from 3/- Suitable house with 2 reception, 4 bedrooms etc. Rent on lease £75 p.a. Premium £1,000 or near offer. Ill health reason for sale.

7 LONDON, SOUTH EAST.—DEATH VACANCY.—Old-established middle and working class PRACTICE producing nearly £600 p.a. of which £275 is from panel. Very nice house can be purchased or rooms rented.

8 BELGRAVIA DISTRICT.—Good class non-panel non-dispensing PRACTICE worth over £1,400 p.a. Fees 1 to 2 guineas. Very little midwifery. Attractive house in excellent position (2 reception, 4 bedrooms, 3 bathrooms etc.) on lease, rent £250 p.a. Premium £2,600 to include lease, carpets, curtains, fittings and fixtures. Good introduction given.

9 ESSEX.—COAST TOWN.—Very old-established non-panel (but good scope for this if worked) middle class PRACTICE averaging £1,156 p.a. Visit 5/- to 10/6, medicine extra. Very little midwifery. Expenses light. Detached house with 2 reception, 3 bedrooms, bathroom etc. Garden. Rent £100 p.a. or lease. Premium 1½ years purchase.

10 EASTERN COUNTIES.—(Within one mile of the sea).—Very old established and increasing country PRACTICE situated in pleasant open district. Cash receipts for the three years ending March 31st last average £1,820, last year £1,940, including appts. (transferable) and panel producing about £750. Visits 5/- upwards. Midwifery 2 to 7 gns. Nearest opposition 5½ miles. Very good house (6 bedrooms, bathroom with h. and c. etc.) built by Vendor and standing in 1½ acres of ground, tennis court, orchard, garage. Price for freehold £2,700 part on mortgage. Premium £2,750.

11 YORKS.—EAST RIDING.—Well established unopposed PRACTICE within reach of the coast and near large town. Cash receipts for last 12 months £930 including panel of 630. Fees 3/6 to 10/6. House contains 3 reception, 3 bedrooms etc. and professional accommodation. Garage. One acre of garden. Price for freehold £900 part on mortgage. Hunting, hockey, golf etc. Premium £1,175.

12 SOUTH COAST TOWN.—Choice middle-class non-panel PRACTICE averaging over £500 p.a. but all round scope for increase. Fees 2/6 to 10/-. Eight-room'd house with kitchen etc. and professional rooms. Can be rented or purchased. Premium £600. Vendor returning.

13 WILTS.—In the Country PRACTICE in very attractive district near good town. Receipts for last year over £900 including panel of £480 and an appt. worth £53. Fees 2/6 to 10/6. Suitable house in very good repair with 2 reception, 4 bedrooms etc. Large garden with paddock etc. Very good sport. Price for Practice and House £2,200.

14 SOUTH WEST OF ENGLAND.—COAST TOWN.—Old-established middle and working class PRACTICE producing about £500 p.a. Panel of 500. Fees from 5/- No midwifery. Eight-roomed house can be rented at £90 p.a. Premium £500.

15 LONDON, SOUTH EAST.—Old-established middle and working-class PRACTICE averaging approximately £2,000 p.a. Panel of about 1,300. Visits from 2/6. Accommodation suitable for bachelor or married man without family. Premium £3,500.

16 LONDON, NORTH WEST.—Very desirable old-established non-panel and non-dispensing PRACTICE situated in a good and open residential suburb. Cash receipts average nearly £2,400 p.a. (coal). House available. Freehold to sole Premium 1½ years purchase, with good introduction.

17 PARTNERSHIP.—EASTERN COUNTIES.—A third Partner required in a good mixed class Practice situated in very pleasant market town within reach of the sea. The share offered at first will produce about £1,000 p.a. with increase eventually up to one-half. Practice is old-established and producing about £4,500 p.a. Panel of 1,600. Choice of houses or ingoing Partner could reside in rooms. Premium 2 years purchase.

18 SOUTH WEST OF ENGLAND.—PARTNERSHIP.—A one-third share is offered in a good middle and better-class Practice situated in an attractive country town near coast. There is a Hospital of 50 beds and good Surgical scope. Average gross cash receipts over £5,000 p.a. Selected panel of 570. Fees 4/- to 21/-. Choice of houses. Premium 2 years purchase.

19 YORKSHIRE.—POSITIONS TOWN.—PARTNERSHIP.—A one-third share (with increase later) is offered in a good middle-class non-panel Practice averaging £3,300 p.a. Fees 3/- to 2 gns. Nice house with 2 reception, 4 bedrooms etc. Small garden. Electric light. Garage. Price for leasehold £1,200. £800 on mortgage. Good sport and excellent schools. Very good Surgical prospects. Premium for share £2,000.

20 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA.—PARTNERSHIP.—A fourth share is offered owing to the retirement of one of four partners in an old-established Practice in very pleasant country district. Income £5,400 p.a. with good panel. Backing. Detached house with ample accommodation, garden etc. for sale. Premium 2 years purchase.

21 WITHIN 70 MILES NORTH OF LONDON.—COAST TOWN.—PARTNERSHIP.—A one-third or two-fifths share is offered in a well-established middle and working class Practice having very good scope for increase. Receipts average over £2,000 p.a. Panel of nearly 2,000. Fees 2/6 to 7/6. Choice of houses on rental or purchase. Premium 2 years purchase.

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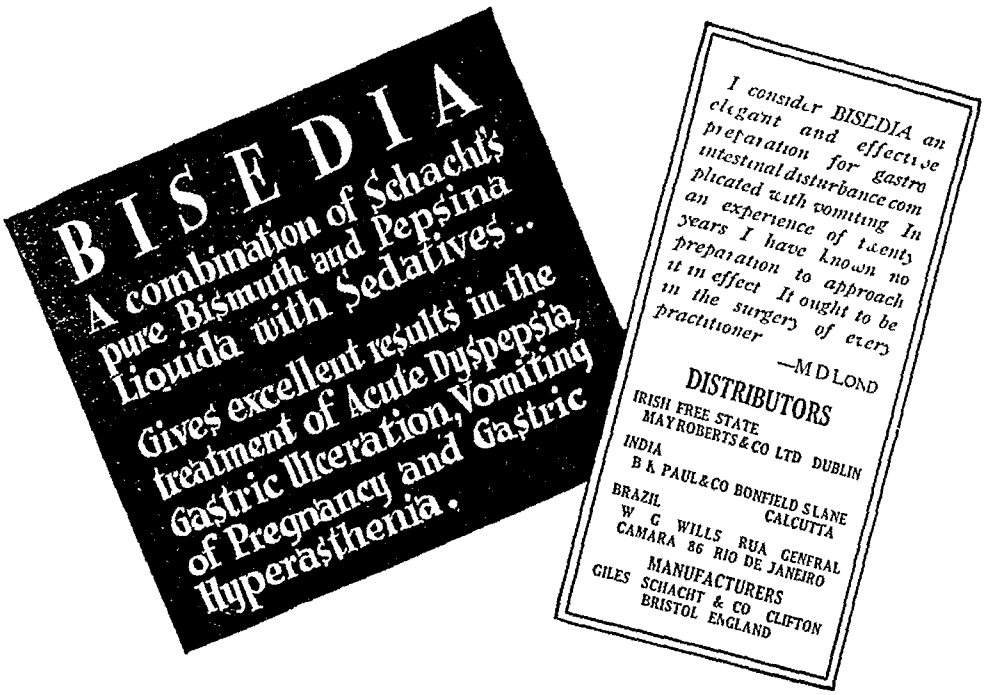
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CONTENTS

JUNE 11, 1932

ORIGINAL ARTICLES

Alteration of the Circulation of the Brain by Surgical Means in Diseases of the Central Nervous System By N D Royle M D F R A C S (With Plate) 1063

Liver and Spleen Their Clinical and Pathological Associations By J W McNee M D F R C I 1068

Recent Advances in the Treatment of Fractures By R Watson Jones F R C S (With Plate) 1073

Disruption of the Pelvis By I A H Snowball M B (With Plate) 1076

Spontaneous Cure of Spina Bifida with Congenital Dislocation of the Lumbar Spine By David Kyle M B (With Plate) 1076

Removal of an Ascaris from the Common Bile Duct By J B G Muir F R C S (With Plate) 1077

MEMORANDA

Right sided Artificial Pneumothorax with Left sided Spontaneous Pneumothorax By James D Macfie M B and Arthur J P Alexander M D (With Plate) 1079

Hydatid Cyst in Lung By U P Basu M B F I C P I (With Plate) 1079

An Unusual Foreign Body in the Finger By George S P Little M I C S (With Plate) 10 0

Diverticulum of Duodenum with Calculi Formation By V C J Harris M B 1080

REPORTS OF SOCIETIES

Society of Public Analysts
Physiological Effect of Aluminium 1080

Physical and Optical Societies
Problems of Vision 1081

Royal Academy of Medicine in Ireland Hepato splenography 1082

REVIEWS

Hutchinson's Jackson's Writings 1083
Microbiology 1083
Nutrition and Diet 1083
Irradiology 1084
A Survey of Science 1084
Notes on Books 1084

LEADING ARTICLES

Chronic Rheumatism 1086

The Cinematograph 1087

THE WEEK

The Birthday Honours 1088
Radium and X Rays in Treatment 1088
Helminthological Abstracts 1089
Interpretation of Skiagrams of the Antrum 1089
Early Ovariotomists 1090
Leverhulme Research Scholarships 1090

GENERAL ARTICLES AND NEWS

The Advance of Medicine Romanes Lecture by Lord Moynihan 1096

Birthday Honours 1097

The First Hundred Years Notes on the History of the Association 1091

The British Spas A Medical Appreciation 1095

London and Counties Medical Protection Society 1097

Preparations and Appliances (Illustrated) 1095

Medical Notes in Parliament
Patents and Designs Bill 1107
Grants for Cancer Research 1103

Medical News 1109

LOCAL NEWS

Scotland—
Lord High Commissioner and Edinburgh Hospitals 1093
Opening of the New Glasgow Dental Hospital 1093

Ireland—
Royal College of Surgeons 1093
Sir Patrick Dun's Hospital 1099
Stillorgan Sunshine Home 1099
Royal Victoria Hospital Belfast 1099

England and Wales—
Institute of Medical Psychology 1099
Hospital Almoners 1100
Medical Training for Missionaries 1100

THE SERVICES

Parkes Memorial Prize 1109
Dental Posts in the Services 1109
(For Naval Military and Air Force Appointments see Supplement)

LETTERS AND ANSWERS

Income Tax 1110
Testimonial to Sir Ashley Mackintosh 1110
Pain in Stomach or Colon? 1110
Local Anaesthesia for Tonsils 1110
Hospitals and Economy 1110
Disclaimers 1110

CORRESPONDENCE

The *British Pharmacopoeia* 1932 By the Registrar General Medical Council 1101
Ambulatory Treatment of Fracture By E Jobert F R C S 1101
Acute Appendicitis in Children By Wm W Shackleton M D 1101
Fallen Idols By Claude Wilson M D 1102
The Incidence of Eclampsia By I D Flew M B 1102
Fertility after Prostatectomy By Arthur Pickett, M D 1102
Preparation for Marriage By Th H van de Velde M D and H G Barnes M B 1102
The Origin of Tumour By A I Todd M B 1103
International Artificial Pneumothorax Society By S Vere Pearson M D 1104
The Milk Problem By John Campbell I h D 1104
The Student in Irons By Frederick Dillon M D 1105
Dome the Sanitation By Harold Singlton M D 1105
Aluminium and Health By P M Le Hunte Cooper M D 1105

OBITUARY

Pennington Hobb M D 1106
E Llewelyn Larry Edward M D 1107
James Middleton M D 1107

UNIVERSITIES AND COLLEGES

University of Oxford 1107
University of London 1107
University of Dublin 1107
University of Birmingham 1107
Royal College of Physicians of Ireland 1107

Vacancies 1110

(See also page 2s7 of Supplement)

The SUPPLEMENT contains

General Medical Council
Disciplinary Inquiries
Preventive Medicine and the Curriculum
Public Health Diploma
Dental Education and Examinations

National Health Insurance
London Insurance Committee
London Panel Committees

Current Notes
Insurance Commissioners
B M A Charities Trust Fund

Centenary Dinner

Appointments Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible. Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Churchill J & A.
Bill & Evan—D... of th Kidney 6
Clark A J—Pharmacology — 6
Hastie d & Garrod—Patholo... — 6
Hastie d & Dick—Patho... — 6
Illingworth & Dick—Motherc... — 6
Jewesbur... R C—Motherc... — 6
Piney & Wyard—Clinical Atlas — 6
Yellowlee... H.—
Psychological Medicin ——— 6

Kimpton H
Bertwi... A P.— — 3
A... to... Rad...graphs ——— 3
Dal... Lide W S—Ophth...logy 3
Fl...berr M—Pulmonary Tub...e 3
Granger A—Para...al Sinuses — 3
Harman M T—Embryology — 3
Sutton & Lu... h—Diseases of the Coronary Arteries ——— 3

Mailliason Publishing Co Ltd
Cole... h A—Income Tax, e...c. — 6

Oxford University Press
Hend...n & G...llespie—Psychiatry 5
Latte... L.— —
Indu...trial ...of the Blood 5
Gaard & Forsythe—Use... L...rodol 5
Wh...tall S. E.—The Anatomy of Th Human Orb ——— 5

Horewell A.h, E L—
Book... ——— 6

ASSURANCE COMPANIES—
Cen...ury Insurance Co Ltd. — 5
Medical In...rance Agency — 14

BOOTMAKERS &c—
Dowie & Mar...hall—Bootmak... — 32

BRASS NAME PLATES &c—
Cooke ...Name Pla...es — 6
Herd S J & A—Nam... Pla...es — 6
Lewi... & Co Ltd —Name Plates — 6
O'born F & Co—Name Pla...es — 6

DEBT COLLECTION—
Br...sh Medical Pr...ection Society 4

FOOD PREPARATIONS—
Bemax Labora...ory—Bemax 17
Cow & Gate L...d—Milk Food Cover iii
H...G Coffee 46
Nestle & Anglo-Swi... Con...M...k Co
Lac...en 19
Valen...e's Mea...Ju...e — 17
Wander A...L...d—Ovalti...e — 19

SURGICAL APPLIANCES—
Cr...chl...y F H L...d
Tibial Exten...n Apparatus
Curri... & Son—Supports
Flem...g & Co—Surgical Equipm...n
Hi...lard & Sw...Abdo...n Bare...
Ho...ham Surg...In...rum...n Co., Ltd. 13
Inhalan...Drug & Apparatus Co — 44
Inhala...n Apparatus
Ko...n Supply A...ociation, L...d.— 12
M...r & I...ver—
Instrument Or...ology e...c
Orthopa...Surgical Appliance — 13
Surgical Service ———
Sm...h & Ner...w Ltd.— 30
Fa...ic...e etc
Tr...E...L...d—Fl...ible 32
Th...ra Exerc...Pad

HOSPITAL &c FURNITURE—
Ja...s W H...ey...
Un...rsal Prem Furniture — 33

MINERAL WATERS—
Ingram & Ro...e L...d.— — 15
V...y C...

PRINTING & STATIONERY—
Ar...ow...n & Son—Accoun... Form... 5
Bu...lock C...—Ba... Ty...ew...ers 6
Le... H E & C Ltd.— 6
Sa...ory B...k...r... 6
Wa...ne B...k Ty...ew...ers — 5
Ta...r Ty...ew...ers

CHEMISTS &c.—
Allen & Hanburys L...d —
Castor Oi... Granule... ——— Cover iv
Chi...adelm Ba...ks — 2
Diabe...e Fa...es
American Apoth...caries Co — — 15
Salpitae
Anglo-French Drug Co Ltd.— 31
Elixir Bromo-Valerianate ——— 18,20
Foo... Product... Ltd.—
Br...sh Drug House Ltd.— 21
Acri...ine B D — — 22
Gl...e S...eats B D H ——— 22
Liver extract B D H. ——— 22
Brit...h Fe...ol Co., Ltd.—Fel-ol Core iii
Burroughs Wellcom & Co — 29
Alkaline Compound ———
Co...ial Labs. Ltd.— 31
Veinotrope ——— 19
Cr...bux, Ltd.—Odo ——— 31
Crooke Laboratorie — — 13
Collo-id Manganese
D...ol Labora...ories Ltd.— 22
Dimol Snuff ——— Cover i
Eno Fru... Salt ——— Cover i
Evan... Son Lec...er & Webb L...d.— 4
Purro... — —
Fa...rchild Bro... & Fo...er— 17
Pancreo...n & Pepsenca
Cle...bach & Co—Based a Cover ii
Herbett & Son, L...d.— 25
Preparation
Laboratory Na...relle Ltd.— 6
Ombaine Armand 4
Ma...ndale W...s & ...rules' ——— 4
Mar...& Baker L...d.— 23
Pharmocine ——— 16
Merl...y & James Ltd.—Pyrd...m —
Mon...l...ewood...hire Refining Co — 21
Neo Medic Co ——— 1a
Pankreamellin Tablets — 1a
Nerbery & Son L...d — 20
Alk...Zan... 27
Orr...heimer Product... 1a
Pea... Product. L...d.—Sphagnol
Sac...rum Corporation Ltd.— 24
Norocain & Clin...n
Wyley L...d —Nap...alin — 24

MOTOR CARS TYRES &c—
Jo...e Spara...g Plug ——— 6
R...r Cars 9
Secon...hand Motors fo... Sale — 54

TAILORING & UNDERCLOTHING—
Hall H—Medical Service Dres... — 54
In...r Linen Me...h Co., L...d —
Lin...n Me...h Underwear — 57

TOBACCO & CIGARETTES—
Player... No 3 ——— 34
Three Nun... ——— 8

WINES & SPIRITS—
Bo...inger Champagne ——— 4

X-RAY & ELECTRO-MEDICAL APPARATUS—
Dean & Co—Diath...my Apparatus 12
Hi...bulin T. L...d — —
Intra Nasal Ion...e ——— 35
Kodak L...d — —
Medical Supply Associa...on, L...d — 11
X Ray Reduct...n Cam...a — —
Physio-Therapy ——— 10

BATHS SPAS &c—
Bridge... Allan Spa ——— 43
Br...sh Spa Federation ——— 41
Harrogate ——— 43
Llandrindod Wells ——— 43
Pl...ant Spa, Czechoslovakia — 43
Wildbad ——— 43
Wiesbad... ———

HOTELS & HEALTH RESORTS—
Bournemouth ——— 41
Clifton Hotel ——— 42
Folkes...one ——— 35
Mar...e ——— 43
St. An...tell Bay Hote... ——— 43
Scarborough ———

HYDROS & PRIVATE HOSPITALS—
Fo...rnemouth Hydro ——— 47
Harro... & Ingersley...en Clinic — 48
Perl...e Hydro ——— 37
Pu...n Ca... North Wal...s ——— 37
Smedley's Hydro, Mat...ock ——— 36

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
PRACTICE APPOINTMENTS — 1

HOSPITAL &c., VACANCIES—
Aberdeen Royal Infirmary ——— 50
Ac...n Hospital, W.... — 50
Alum...ham General Hospital — 50
Bath, Royal Mineral Water Hosp— 50
Bedford County Hospital ——— 50
Belfast Queen's University ——— 46
Birkenhead County Borough ——— 43
Birmingham General Hospital — 43
Birmingham, Queen's Hospital — 43
Blackburn Royal Infirmary ——— 43
Bo...m...uth, Royal Victoria Hos... 43
Brigh...on County Borough ——— 43
Bri...ol City ——— 44
Burnley Victoria Hospital ——— 50
Bury Hospital Board ——— 50
Bury Infirmary ——— 50
Buxton, D...on...hire Hospital — 43
Cambr...ge Addenbrooke's Ho...s — 43
Cardiff City ——— 51
Carl...Cumberland Infirmary — 51
Carl...Cumberland Infirmary — 41
Ches...er Royal Infirmary ——— 50
Chor...ey Borough ——— 50
Chor...ey General Hospital ——— 50
Darlington Borough Council ——— 51
Derby...hire County Council ——— 51
Derby...hire County Asylums Ere Ho 51
Devonport Royal Infirmary ——— 50
Doncaster Royal Infirmary ——— 50
Dumfries Royal Infirmary ——— 43
Ealing & Edward Memorial Hom... 43
E...London Hospital for Children — 43
Ec...les & Patricroft Hospital ——— 51
Ex...er Royal Devon Hospital ——— 51
Freem...n Hospital, S.W.... — 43
Gla...gow Neuro-Psychiatric In... — 43
Glasgow Royal Infirmary ——— 50
Gloucester Royal Infirmary ——— 50
Greenock Royal Infirmary ——— 50
Halifax County Borough ——— 50
Hamp...stead General Hospital — 50
Hamp...stead, St. John's, e...c. — 50
Hosp...tal Royal Infirmary — — 50
Hud...sfield Royal Infirmary — — 50
Hull Royal Infirmary ——— 50
Indian Medical Service ——— 47
Islington Dispensary and Hosp... 43
Jerusalem, St. John Ophthalmic Hosp 43
Kidd...minster General Hospital — 50
Kimberley Hospital ——— 50
Lanca...hire County Council ——— 50
Lincoln County Hospital ——— 50
Liverpool City ——— 50
London County Council ——— 50
Middlesbrough ——— 41
Mille General Hospital ——— 43
Nerve...l Royal Victoria Infirm... 41
Norfolk & Norwich Hospital ——— 43
Northampton General Hospital — 43
Northampton General Hospital — 50
Oldham ——— 50
Oxford City ——— 45
Paddington Green Children Hosp... 45
Princess Beatrice Hospital, E.2. — 45
Queen's Hospital for Children — 50
Queen Mary's Hospital, Stratford 50
Reading, Royal Berkshire Hospital 43
Royal Naval Hospital, S.E.1 ——— 43
Royal Waterloo Hospital for Cross — 51
Rugby Hospital, W.2 — W.C.2 — 43
St. Mary's Hospital for Sick ——— 43
Peter... ——— 43
Salford City ——— 43
Southport General Infirmary ——— 43
Stockport County Borough ——— 45
Stafford...hire County Council ——— 45
Stockport Infirmary ——— 51
Stoke-on-Trent, Royal Infirmary — 51
Sudan Medical Service ——— 47
Sunderland, Corbett Hospital ——— 43
Tamworth Cottage Hospital ——— 43
Tunbridge Wells General Hospital — 43
Walls of Victoria Central Hosp... — 43
Warrington Infirmary ——— 43
West Bromwich County Borough — 50
West End Hospital for Nervous Diseases 50
West London Hospital, W.6 ——— 50
Wes... London Hospital, W.6 ——— 50
Winchester Royal Hants County Hosp 50
Wolver...ton Victoria Memorial Hosp... 41
Woolwich War Memorial Hospital — 41
Woolwich War Memorial Hospital — 43
Wrexham War Memorial Hospital — 43

MEDICAL SCHOOLS &c— 44
Cambridge University ——— 44
Cancer Hospital (Free) ——— 44
Cancer Research Campaign ——— 44
Clinical Research Association ——— 44
Colleges, Preceptories ——— 44
Dublin University ——— 44
Edinburgh University ——— 44
Edinburgh, Royal College of Physicians 44
Edinburgh School of Tropical Medicine 44
Liverpool School of Tropical Medicine 44
London School of Hygiene & Tropical 44
London School of Medicine for Women 44
London, Royal Free Hospital ——— 44
Royal Dental Hospital of London ——— 44
Royal College of Physicians, London 44
Royal College of Surgeons, England 44
Royal Colleges of Physicians, Edinburgh 44
Society of Apothecaries ——— 44
West London Hospital ——— 44

HOMES & ASYLUMS—
Barnwood House Gloucester ——— 38
Bethe... House, Bad... ———
Boreat...n Park, Salop ———
Bowd...n House, H...ath, Hull 37
Brooke House, Clay...n, E. ——— 38
Cambe...well House, S.E.5 ——— 38
Cheadle Royal Che...hire ——— 38
Chelsea House, Pimli... ——— 38
City of Lond...n Mental Hospital — 38
City of Lond...n Mental Hospital — 38
Clarence Lodge, Clapham Park — 38
Clarence Lodge, Regent House — 38
Cobham, Court House ——— 38
Corn...e, Newt...ham ——— 38
Cour...Hall, Ken...on, Exeter — 38
Cour...Hall, Ken...on, Exeter — 38
Cra...e, Sprea...ham Hill — 38
Fen...anton, Sprea...ham Hill — 38
Grange near Pe...be... Sand... — 38
Grove House, Chis...ick Lane — 38
Grove House Chis...ick Lane — 38
Hardwick Lodge Lancaster ——— 38
Hi...fie...d Hall, St. Albans ——— 38
Hi...fie...d Hall, St. Albans ——— 38
Lawn, Langley ——— 38
Lind...on Hall, Brentwood, Essex — 38
Lind...on Hall, Brentwood, Essex — 38
Mapperley Hospital, Nottingham — 38
Mea House, Tamworth ——— 38
Newcastle-on-Tyne, Northumberland House — 38
Northumberland House ——— 38
Old Manor, Salisbury ——— 38
Peckham House, S.E.15 ——— 38
Reeders, Pa...ers, L... ——— 38
Reeders, Pa...ers, L... ——— 38
Rookwood House, Inverness ——— 38
Royal Ex...wood Institution ——— 38
St. Andrew's Hospital, Bed... ——— 38
St. Andrew's Hospital, Northampton — 38
Shire...on House, Bed... ——— 38
Shire...on House, Worcestershire — 38
Tyrrell Abbey, Newport, Essex — 38
Tyrrell Abbey, Newport, Essex — 38
Wen...ld Abbey, Newport, Essex — 38
Wood...d Grove Hospital, Ville... — 42
Wood...d Grove Hospital, Ville... — 42
Wy...House, Burton ———

INEBRIETY—
Bay...Nurs...Pa...ers ———
Ca...ere Hall, Ne... ———
Dunraven House, Ro...ham, Norfolk 39
Oak Hill House, Co...ham ——— 39
Pond...ham Hall, Wood...ige ——— 39

SANATORIA—
Ce...ral Sana...rium ——— 43
Grampian Sana...rium ——— 43
Lond...don Sana...rium ——— 43
Mc...ans Hall, Swine... ——— 43
Mc...ans of Sana...rium ——— 43
Nordrach-on-Mendip Sana...rium — 43
Nordrach-on-Mendip Hall Sana...rium — 43
Pen...ylfa Hall Sana...rium ——— 43
Te...ra Dor...ana ——— 43
Thorn...ll Sana...rium, Dor...shire — 43

SCHOOLS &c— 44
Pa...e...e, Ber...s C... ——— 44
St. Ber...s School, Cambridge ——— 44

TUTORS & LECTURERS—
E. Lond...n Hosp... Ch... ten, E.1 — 45
Exam... Med. C...e — H. C. Orme — 45
F.R.C.S. Exam. Cases—H. C. Orme — 4
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Cla...on, P... Cr...d, Medical Assoc — 45
Lond...n Clinic... ——— 4
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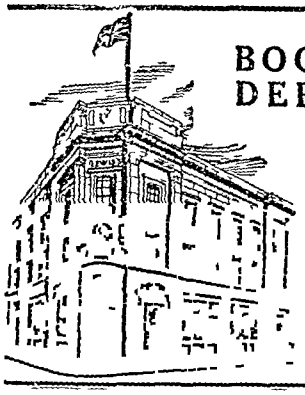
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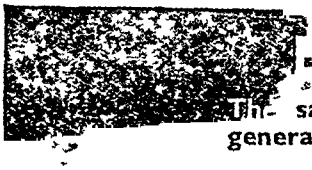
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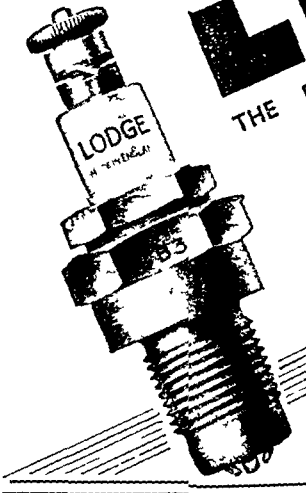
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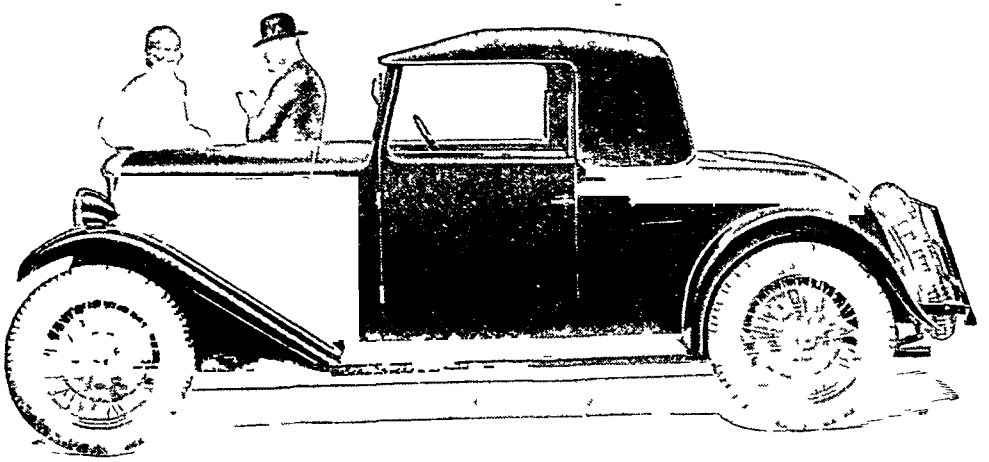
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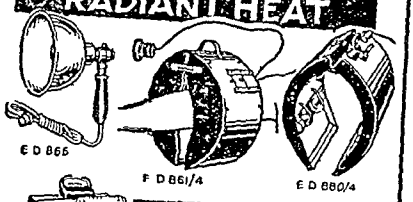
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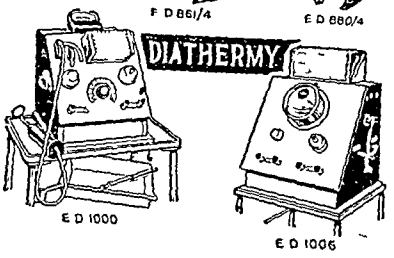
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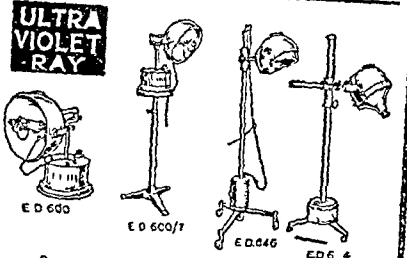
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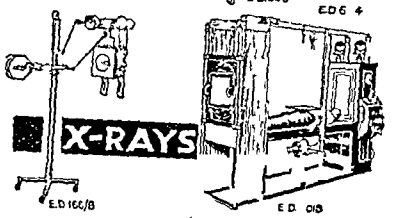
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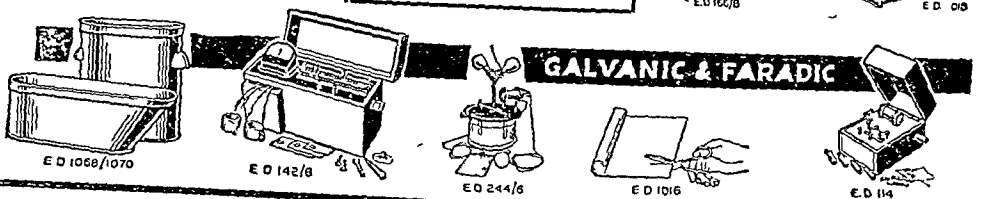
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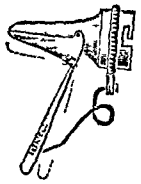
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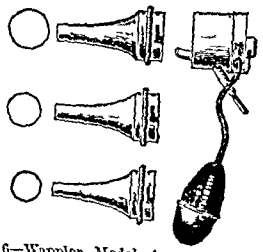
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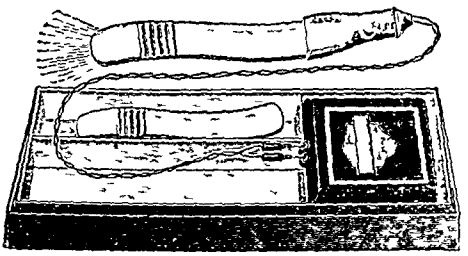
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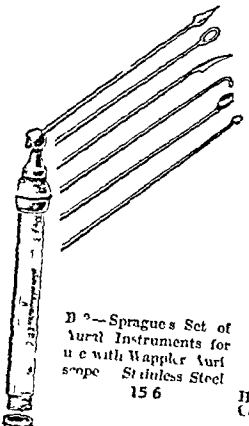
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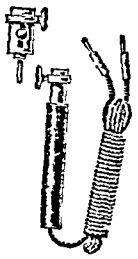
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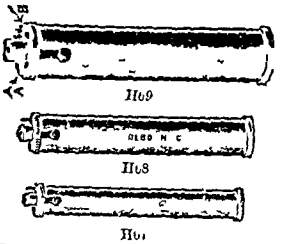
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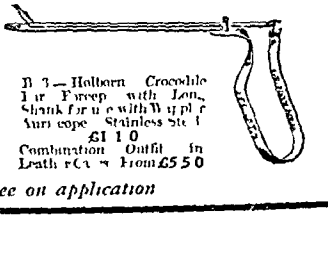
H08

H01

H 6—Nickel plated Handle with rheostat best quality 1912 L R Battery size 12 6
H08—Ditto E R 9012 battery size 16 6
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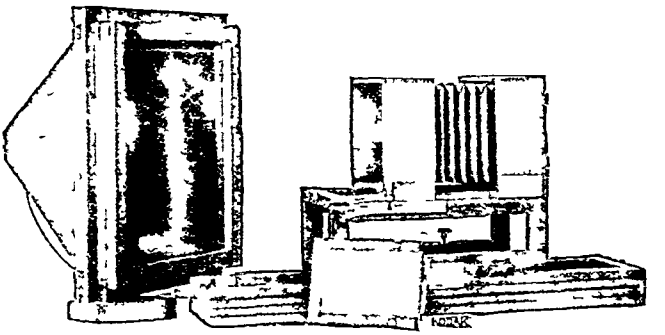
H10C—Seymour Jones Tongue Depressor and Electric Attachment with Standard fitting without battery handle 21
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H 3—Holborn Crocodile Ear Forceps with Long Shank for use with Wappler Auriscope Stainless Steel £1 1 0
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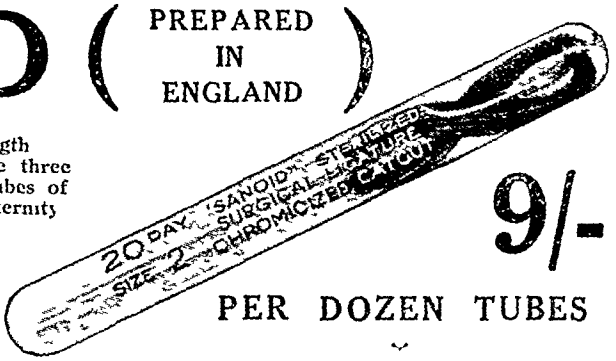
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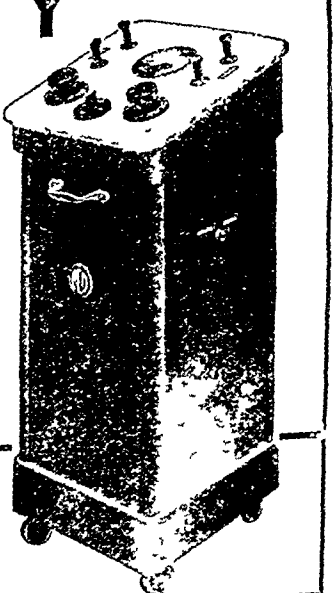
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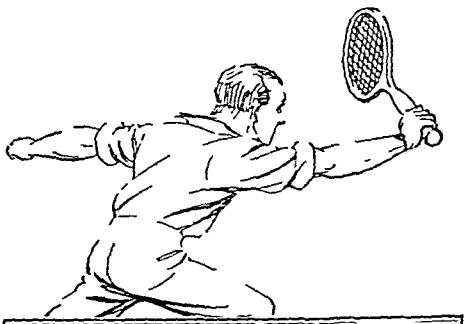
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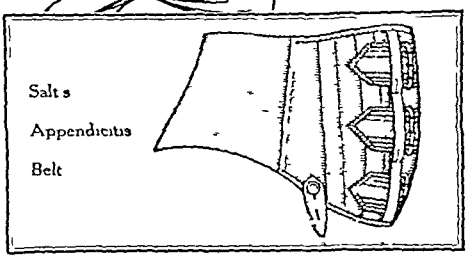
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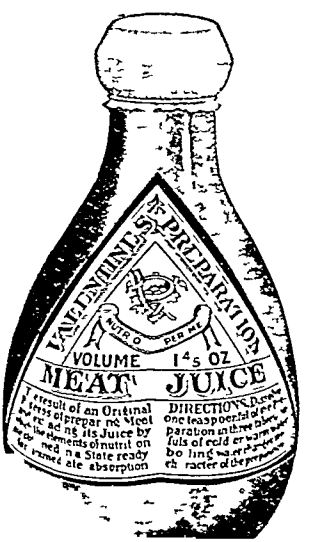
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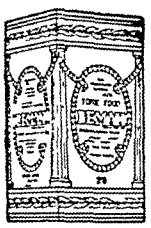
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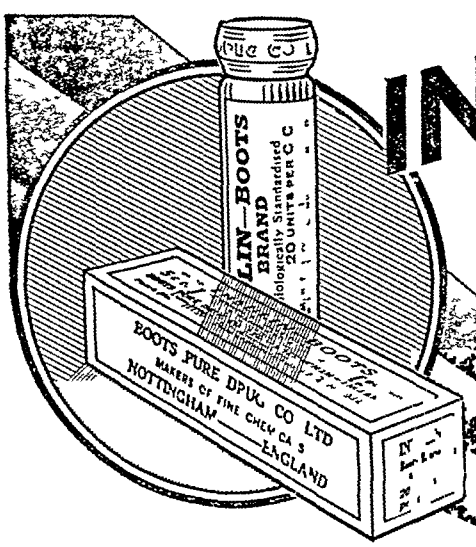


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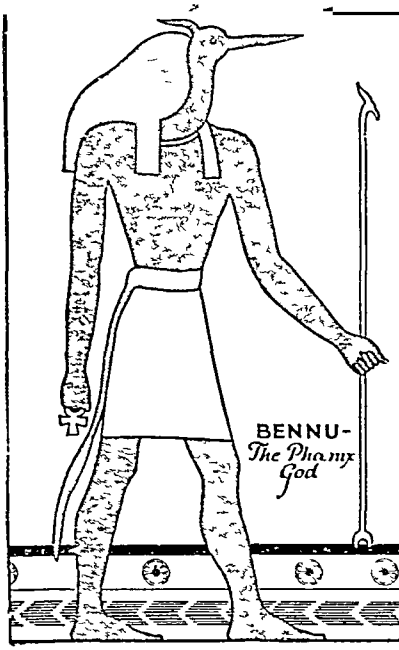
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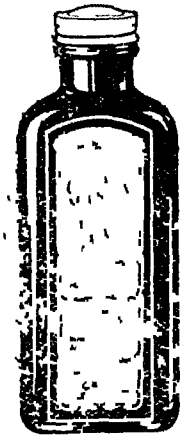
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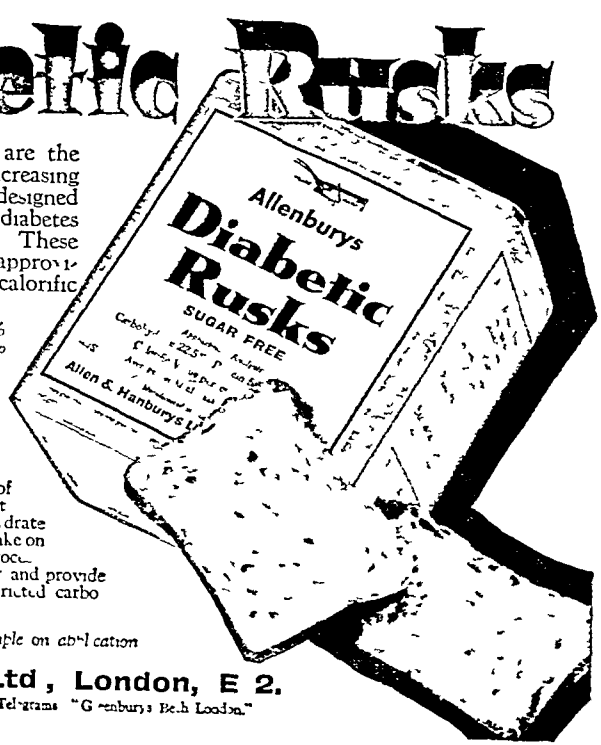
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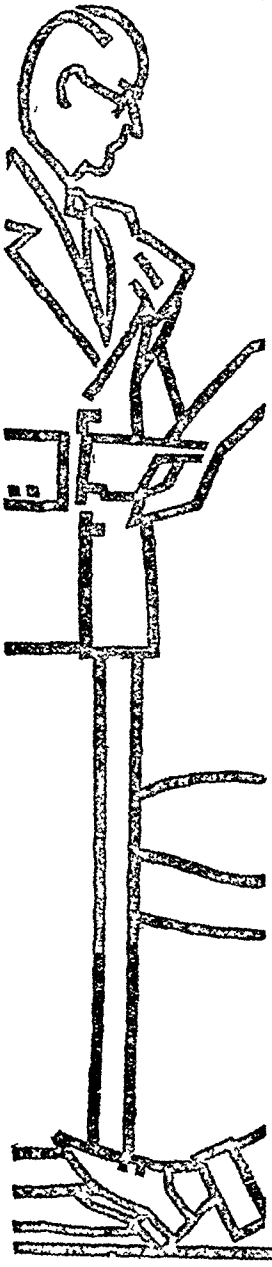
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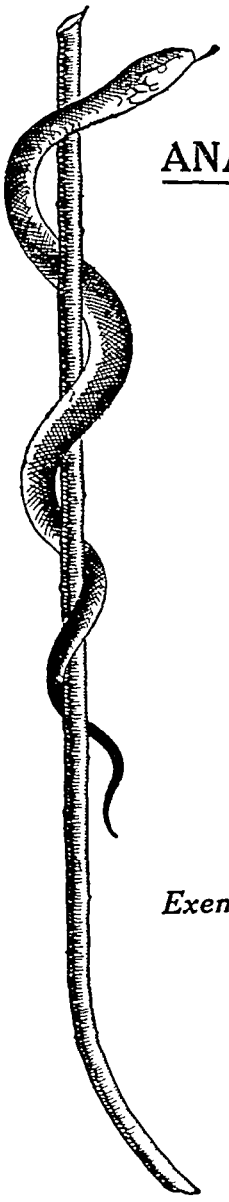
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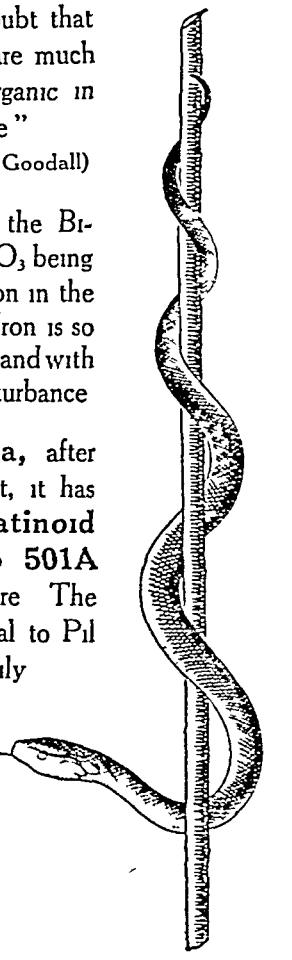
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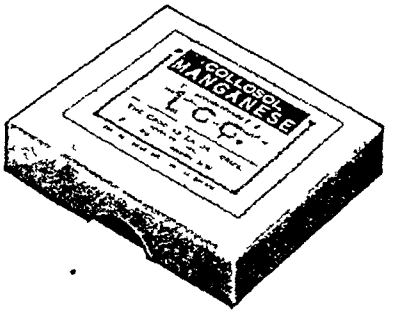
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PIONEER INVESTIGATIONS OF VESALIUS CHANGED THE OLD ORDER IN THE WORLD OF ANATOMY—Andreas Vesalius was born at Brussels, educated at Louvain and Paris and became professor at the far-famed University of Padua His training had been entirely Galenic and his first published work (completed at the age of 24) shows illustrations which, while much better drawn than the traditional ones, propagate the old errors, such as the doctrine that the venous system originated in the liver At Padua, however, where he lectured in anatomy he discarded the old text-books and superstitions He demonstrated at first hand refusing the services of demonstrators and ostensors dissecting the human body and animals and teaching his students to look with their own eyes At the age of 28 he published the famous volume *De Fabrica Humani Corporis* which was to supersede that part of the Galenic tradition which his researches had corrected.



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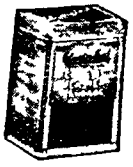
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Observations
ON THE
ALTERATION OF THE CIRCULATION OF THE BRAIN BY SURGICAL MEANS IN DISEASES OF THE CENTRAL NERVOUS SYSTEM

BY
N D ROYLE M D CH M F R A C S

(With Special Plate)

It is a well known principle underlying the physiology of the central nervous system that hyperactivity accompanies slight degrees of asphyxia or anoxaemia The operation of this principle suggested itself to me when I had observed the results following a sympathetic thoracic trunk section on a patient suffering with extensor spasm I was demonstrating the ipsilateral effects showing how the ipsilateral forearm fell when released from the perpendicular position when to my surprise the contralateral forearm fell much more rapidly The operation of sympathetic thoracic trunk section profoundly alters the cerebral circulation and the result I had observed was explained by the change in circulation in the opposite side of the brain It then occurred to me that in paralysis agitans spastic hemiplegia and other conditions I had been operating upon the side of the manifestation of the lesion instead of on the side of the lesion in the brain This reflection opened up a new aspect of the surgery of the sympathetic nervous system—that of changing the reflex activity of the central nervous system by altering the blood supply of the brain rather than attempting to change its peripheral manifestations by cutting peripherally directed rami of the sympathetic nervous system The following paper is an account of the technique and results of sympathetic thoracic trunk section in various surgical operations and laboratory experiments

EXPERIMENTAL EVIDENCE

The control of the cerebral blood vessels by the sympathetic nervous system has long been disputed Forbes and Wolff [1] as a result of carefully planned experiments conclude that It seems justifiable to state that evidence of a quantitative nature has been obtained that the circulation of the mammalian brain is controlled in part by cerebral vasomotor nerves I repeated this experiment and found on stimulating the cervical sympathetic trunk in the region of the stellate ganglion that there was a constriction of the vessels of the brain and that the brain visibly shrank away from its parietes Taking these observations into consideration I divided the thoraco cervical sympathetic trunk on the *left* side at its exit from the thorax in a goat This led to a rise in temperature on the left side of the face and ear partial collapse of the left nostril and movement of the whole lower jaw to the right side the left eyelid drooped These were ipsilateral effects but there were also contralateral effects Under the influence of ether anaesthesia changes in the behaviour of the limbs and head were noticed At a certain stage of anaesthesia the limbs of the goat become rigid as in decerebrate rigidity as a result of cutting the cervical sympathetic trunk a change in this behaviour occurs

The trunk was cut on the left side and when the animal was placed on its back with its head held in the middle line the contralateral limbs exhibited a loss of tone Extension did not appear in the limb and there was a complete loss of resistance to passive movements In other words the elastic contraction and plastic contraction of Sherrington were absent on the right side but present on the left When the hind limbs were stretched in a horizontal direction and were suddenly released the flexor muscles of the left hind limb underwent a myotatic contraction but the position of extension was more or less maintained The right hind limb on being released went straight back into the flexed position exhibiting the phasic but not the postural part of the myotatic reflex When both limbs were flexed the right hind limb was more abducted than the left The fore limbs also showed a contrast in behaviour in respect to passive movements and posture Extension at the shoulder in a perpendicular direction appeared on the left side while the right limb fell flaccid under the influence of gravity The muscles of the neck controlling the position of the head behaved peculiarly Instead of being flaccid on the right or contralateral side when the animal was lying on its ventral aspect the muscles of the right side of the neck and head pulled the head into rotation and lateral flexion to the right If this action were controlled from the cortex or midbrain or as low down as the medulla the head should have turned to the left as this was the side on which the limbs exhibited excessive tone This would have been consistent also with de Kleijn's observation in which tone was increased on the side to which the head turned

The centres for reflex lateral flexion and rotation of the neck are in the first second and third cervical segments Therefore in the case of this animal these centres were hyperactive on the right side and this was the side with the blood supply unaltered—that is a certain degree of vaso constriction was present When the skull was carefully opened and the dura cut away from the exposed brain a difference in the condition of the cerebral hemispheres was at once apparent On the ipsilateral side the blood vessels were smaller and anastomoses less frequently seen than on the contralateral side (Fig 1 on Plate) The whole of the contralateral side appeared congested and bluer than the ipsilateral This was not what I expected to find since the previously quoted experiments showed a vaso constriction on stimulating the sympathetic nerves but it must have been due to dilatation of the venules ensuring greater drainage The pulsations were greater on the ipsilateral side and after an interval of about fifteen minutes the ipsilateral cortex gradually shrank away from the skull The shrinkage could not have been due to pressure of the atmosphere alone since it did not affect the contralateral side which was also exposed Similar consistent phenomena have been observed in eight animals

The Decerebrate Animal

A left thoracic sympathetic trunk section was performed in a second goat ten days before decerebration a left *lumbar sympathectomy had been performed* about six months before which led to a loss of resistance to passive movements in the left hind limb When the skull was opened to carry out the operation of decerebration similar changes to those described in the first animal were noted although the common carotid arteries had been ligatured low down in the neck The whole of the right side vessels were larger and there were more numerous arteriovenous anastomoses on the right side of the brain than on the left This indicates again that there was better drainage in the left side as its principally veins which appear on the surface of the brain After decerebration the animal was placed on its back extension appeared in the left limb but the right limbs remained flexed This was in contrast to the difficulty in flexing the limbs of the left side The right sided limbs took up the position determined by

gravity while the limbs on the left side remained extended If both were simultaneously stretched in a perpendicular direction the left would remain extended while the right fell under the influence of gravity It will be noticed that extension appeared in the left hind limb in spite of the ramisection which had been previously performed Similar differences in behaviour were exhibited by the fore limbs

When the animal was placed in the ventral attitude the movement of the head was again peculiar and similar to that described in the previous experiment Instead of turning to the left as might be expected from the behaviour of the limbs, the head flexed laterally and rotated to the right—the side on which the limbs were flaccid Since the nerves controlling the limbs head and neck decussate in the pyramids this showed that the centre for this movement was below the decussation of the pyramids In the decerebrate animal the centre for extension is somewhere caudal to the superior colliculi In the movement of the head extension was not a dominant feature but the head was held in a semi extended position while the movements of rotation and

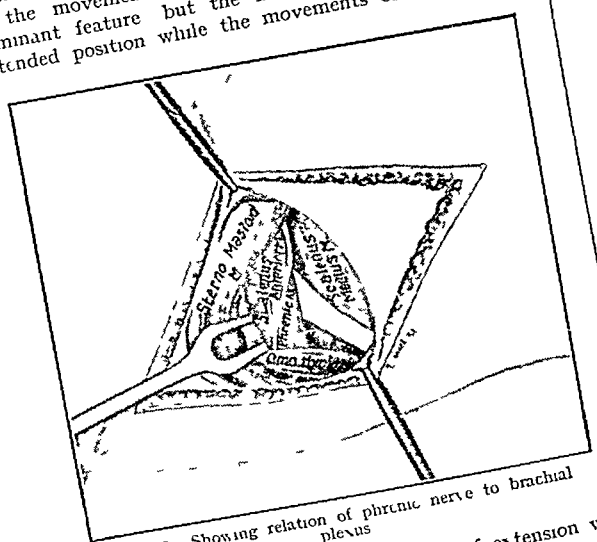


FIG 3—Showing relation of phrenic nerve to brachial plexus

lateral flexion with a moderate degree of extension were performed When elastic contraction was not present the left hind limb took up a position similar to that of the right hind limb while the fore limbs exhibited the differences that were previously noted This is in keeping with previous experiments

OPERATIVE PROCEDURE IN MAN

The actual and possible applications of the surgical alteration of the circulation of the brain by operations on the sympathetic nervous system in treatment of diseases of the central nervous system are many and varied A clear conception of the results and rationale can be grasped only by understanding the operative procedure

The sympathetic nerve supply of the upper limb and brain comes from the upper thoracic region of the spinal cord This supply reaches the upper limb through the post ganglionic fibres coming from the first and second thoracic ganglia and from the inferior and middle cervical ganglia The sympathetic nerve supply reaches the brain by the cervical sympathetic trunk and also by the sympathetic fibres supplied to the carotid and vertebral arteries from the superior thoracic ganglion and inferior cervical ganglion All of these are post ganglionic in their distribution—that is they go to some peripheral structure but have no connexion with the central nervous system directly There is an occasional branch from the second thoracic ganglion to the first thoracic nerve

Operation of Thoracic Sympathetic Trunk Section

The incision is made across the insertion of the sterno-mastoid in a slightly upward and lateral direction for about five centimetres the platysma is split longitudinally The external jugular vein may usually be avoided but if it crosses the wound it should be divided and ligated A dissection through the cervical fascia displays the sterno mastoid muscle, and on a slightly deeper plane is seen the omohyoid muscle Both these muscles are retracted medially though occasionally it is necessary to retract the omohyoid laterally The deep layer of the cervical fascia must then be opened to display the nerve roots of the brachial plexus and the scalenus anterior muscle (Fig 3) This muscle is then evulsed piecemeal with the strabismus hook The phrenic nerve should be avoided as it passes from above downwards and inwards on the anterior surface of the scalenus anterior After the scalenus anterior has been evulsed Sibson's fascia comes into view This must be broken

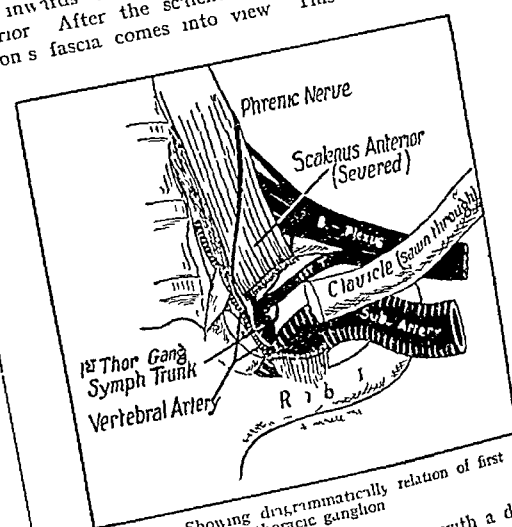


FIG 4—Showing diagrammatically relation of first thoracic ganglion

through with the point of the finger or with a dissector to display the parietal layer of the pleura covering the apex of the lung The thoracic sympathetic trunk must be sought on the medial and posterior wall of the space thus exposed The subclavian artery is drawn downwards and the sympathetic trunk may be found by displaying the vertebral artery The sympathetic trunk lies immediately posterior though sometimes it is placed laterally, to this vessel Dissection with a small swab of gauze or a pair of forceps along the postero medial side of the space will reveal the trunk as it crosses the space between the first and second ribs (Fig 4)

The trunk is then lifted with a blunt strabismus hook, and may be torn through with a sharp hook just above the second thoracic ganglion If it is desirable to take out the whole of the supply to the brain the branches of the first thoracic ganglion are divided and the ganglion removed This is easily done if the trunk on the strabismus hook is followed upwards This confers upon the patient a Horner's syndrome The occasional ramus from the second thoracic ganglion to the first thoracic nerve may be seen crossing the first intercostal space and may be divided if it is desired to divide the whole sympathetic supply to the ipsilateral upper limb If an alteration in the cerebral circulation only is desired this ramus may be left intact

IMMEDIATE CHANCES FOLLOWING THORACIC SYMPATHETIC TRUNK SECTION

These are

1 Diminution of tone on the same side of the face and muscles of the upper limb This is shown by the diminution in the size of the naso labial fold and by a collapse of the angle of the mouth and of the nostril of the same side It is also seen in the sacro spinalis and trapezius muscles at their attachments to the occiput On the side of the trunk section the muscles will be found to be slacker than on the opposite side

2 Sluggishness in the fall of the eyelid on the side of the division of the sympathetic trunk as compared with the rate of fall on the other side This is best seen in light anaesthesia

3 Contraction of the pupil This is not a constant sign if the sympathetic trunk alone is divided below the first thoracic ganglion It certainly follows removal of the first thoracic ganglion The whole eye is retracted following trunk section

4 Cessation of sweating on the same side of the face and forehead and upper limb This is a most valuable immediate sign of division of the thoracic trunk and a difference in sweating in the two sides of the face appears even when the patient has had a preliminary dose of atropine

5 Circulatory changes Immediately after the operation of thoracic sympathetic trunk section the colour of the same side of the face is paler than that of the other side This is particularly noticeable if the patient is cyanosed The ear on the same side appears pink and on the opposite side a bluish colour The colour of the ipsilateral limb will be pinker than the contralateral limb but in a few days becomes paler This indicates an increase in the circulation through dilatation of the arterioles and venules Changes in cerebral circulation remain constant after a few days The capillaries regain their tone but the arterioles remain dilated thus leading to a lowering of blood pressure with an increase in circulation As already described this is distinctly shown in the goat in which a venous congestion is present on the contralateral side after trunk section while the animal is under anaesthesia This appeared even at the end of fourteen days after sympathetic thoracic trunk section The whole brain is bluer compared with the paler colour on the ipsilateral side and the venous vessels appear to be more numerous on the contralateral side

6 The temperature of the ipsilateral limb and of the side of the face is higher than that of the contralateral limb and face

7 When the patient has recovered from anaesthesia the lid of the eye on the same side will be found to be drooped This is not always permanent but the lid takes up a less drooped position in about fourteen days

From the above ipsilateral results of trunk section it will be seen that the description of Horner's syndrome should be altered as it consists not only of retraction of the eye a contracted pupil and ptosis of the upper lid but there are changes in the facial musculature as well (Fig 2 on Plate) The changes in the ipsilateral facial musculature and in the ipsilateral muscles of the neck are due to increased blood supply of the reflex arc of the cervical cord and of the facial nucleus

CHANCES IN THE CONTRALATERAL SIDE

The chief contralateral effect following thoracic sympathetic trunk section is a change in tone in the whole side but this is not so noticeable in the face While the patient is under anaesthesia this change in tone is greater in the contralateral limbs This is shown by the rate of fall of the forearm from the perpendicular to the horizontal position If both forearms be flexed at the elbow and allowed to fall simultaneously the contralateral forearm will reach the horizontal before the ipsilateral Although tone is decreased in the ipsilateral limb the degree is not so great as in the contralateral limb due to the complete abolition of tone in this limb while the patient is under anaesthesia A similar effect is shown in the behaviour of the lower limbs When both are lifted off the bed while the patient is under light anaesthesia and in a condition similar to a decerebrate animal the contralateral limb falls first The clonus exhibited by spastic limbs also disappears or is modified after thoracic trunk section The same effect was noted in the conscious state in one patient suffering from post encephalitic rigidity He found that the contralateral great toe could be flexed more easily and at rest occupied a less dorsiflexed position than the ipsilateral great toe although both occupied similar positions before operation and that if both legs were dropped simultaneously when he was in the sitting position the contralateral reached the ground first In another case greater range of passive movement appeared in the ankle joint There was so great a diminution of rigidity that the patient was able to perform active movements of dorsiflexion with ease whereas these had been difficult previously There is also evidence of diminution of tone

The effect of increased tone is seen in the slow movements of those affected with Parkinsonian rigidity this is due to a failure of reciprocal innervation The intrinsic muscles of the hand are usually so affected that the movements are impeded or rendered impossible by an abnormal increase in tone The loss of balance is sometimes a manifestation of the same cause and effect The patient is unable to effect rapid changes in contraction of his muscles and so is unable to compensate for changes in the centre of gravity The actual practical result following bilateral trunk section in one patient suffering from the effects of encephalitis was resumption of walking and the ability to feed himself after three years of incapacity

A loss of rigidity on the contralateral side is the result of division of the thoracic sympathetic trunk and the effect becomes pronounced as time goes on This is less noticeable in Parkinsonian rigidity than in congenital spastic hemiplegia and congenital spastic paraplegia in which the initial changes are in the cerebral circulation

LOSS OF TREMOR

This effect is seen in Parkinsonism with tremor There is an immediate diminution of tremor which ceases altogether in a few days time With the recovery of capillary circulation (which takes about four days) the tremor reappears temporarily in a modified form and the patient has greater control over it than before operation When tremor is exaggerated diminution only may be expected from treatment

The tremor of Parkinsonism ceases with the onset of hemiplegia of vascular origin and returns as the latter condition clears up It is also abolished by the highest anaesthesia—only a few breaths of ether being necessary to obliterate it Its association with excitement together with the facts mentioned above lead me to suggest that the tremor of Parkinsonian rigidity is central in origin

DISCUSSION OF TONE

As a result of my observations I believe that tone is bound up in some way with the function of the sympathetic nervous system since there is a loss of resistance to passive movement and an alteration in posture after division of the rami communicantes or the thoracic sympathetic trunk Tone is reduced by cutting the peripheral sympathetic nerves supplying the blood supply of the spinal cord or by cutting the nerves subserving the blood supply of the brain Spasm such as

seen in extensor spasm is an aspect of the function of the midbrain It is not abolished by cutting the sympathetic nerves which alters the blood supply of the spinal cord and this is a point where inaccuracy of description and observation has led to a diversity of opinion The loss of resistance to passive movement which I have already described as and also described by Gilbert Phillips is an expression of loss of tone and this tone is distinct from extensor spasm or 'clastic contraction' Tone is thus a reflex function of the spinal centres The presence of shortening reactions indicates that a certain degree of 'clastic contraction' is present In the absence of clastic contraction as in the spinal animal, there is a resistance to passive movement in both flexors and extensors which is lost after section of the sympathetic nerves and this activity should in my opinion be called 'tone leaving the term postural tone" to be applied to that activity of the midbrain which subserves posture The frightened child will go into spasm under inspection and this spasm, if continued, will mask any alteration in tone The decerebrate animal shows both spasm and increased tone The extension imposed upon the animal by the reflex activity of the midbrain may be increased by depriving it of oxygen and decreased by insuring a good supply of fresh air This extension is often so forceful that it is impossible to flex the limb This is the clastic contraction of Sherrington, as opposed to his plastic contraction which appears when the extending element is not so strong and when lengthening and shortening reactions may be obtained with ease The alteration in the state of the muscles of the limb influenced by changes and position of the head as described by Magnus and de Kleijn are not changes in tone but are of the nature of clastic contractions or postural activity

Explanation of Effects

There are ipsilateral and contralateral effects The sympathetic fibres of the cervical sympathetic trunk and those going to the brain by the vertebral and carotid arteries are distributed to the arteries and veins of the brain Therefore the effect of cutting them must be sought in the blood vessels of the brain and of the head and neck The effect as seen on the skin of the face head and upper limbs is to produce a pale dry skin This indicates that the change is in the arterioles and venules but that the capillaries may remain contracted and respond to hormonal or chemical stimuli According to Lovatt Evans the blood vessels of the brain are usually in a state of dilatation

I have already described the changes in cerebral circulation following thoracic sympathetic trunk section in the goat Dr Brearley has found in human patients who have undergone the operation of sympathetic thoracic trunk section that there is an ipsilateral dilatation in the blood vessels of the retina The changes seen here are in the arterioles and venules since the capillaries could not be seen with an ordinary ophthalmoscope

The presence of a Horner's syndrome is not necessarily associated with dilatation of the vessels of the retina In one patient with a definite drooping of the lid and a contracted pupil Dr Cedric Cohen found no evidence of dilatation of the blood vessels of the retina on the side operated upon In this patient the ramus of the first thoracic nerve alone had been divided When there is a defective blood supply to the brain cells their nutrition suffers and the cells may undergo atrophy A definite train of symptoms seems to be associated with diminished blood supply before cell atrophy supervenes For example the lethargy of encephalitis lethargica may be due to defective blood supply of the brain

I have been able to show that the tremor and rigidity of paralysis agitans may be alleviated by a thoracic sympathetic trunk section on the contralateral side The tremor of paralysis agitans is diminished immediately after operation, and becomes progressively ameliorated In one instance it disappeared in six weeks and in others immediately after operation as long as the patient rested Exercise, such as walking was associated with a temporary return of slight tremor This would look as if the centres concerned in the production of rigidity and tremor are progressively improved, and that the rigidity and tremor are sometimes the result of a defective circulation and not always of sclerosis in these centres Tremor may arise from increased activity of the cortical cells and rigidity from hyperactivity of the corpus striatum in each instance due to relative anoxaemia It must be clearly understood that if the disease has been present for a long period, although the original changes have been been only circulatory organic cellular changes have been established the sequence of events being first diminish d blood supply, and secondly cell atrophy When cell atrophy is present the possibility of a restoration in function by altering the blood supply is remote as is shown by the results in retinitis pigmentosa

Application of Surgery of the Sympathetic Nervous System to Mental Aberration

My attention was first drawn to the psychic effect of cutting the sympathetic cervical trunk in a patient suffering from spastic hemiplegia There was an abnormal mental condition in this patient he was cranky and bad tempered and not amenable to discipline before operation and the sister in charge of him noticed that after operation on the opposite side to the lesion in the brain he was quite good tempered and obedient and became the most willing patient in the ward This result has been obtained consistently in a large number of instances it may be attributed to a change in the circulation of the brain These results, taken in conjunction with experimental evidence of change in circulation led me to try the effects of cutting the sympathetic nerves in other conditions including congenital mental deficiency and in lethargy associated with encephalitis lethargica

Application to Neurological Conditions

Congenital Spastic Hemiplegia

The signs of disease exhibited on one side of the body are due to hyperactivity of the opposite side of the brain The hyperactivity may be in the corpus striatum or in the midbrain or in the cortex of the cerebrum The accepted theory is that the signs of disease are release phenomena and that the hyperactivity of the lower centres is due to loss of control from the higher centres, my results show that the hypertonicity of the muscles is probably bound up with hyperactivity associated with alteration in the circulation of the brain After sympathetic thoracic trunk section the spasm and rigidity of the contralateral limb are very much reduced In several instances hands which had exhibited spasm lost this condition and in many others both clastic and plastic rigidity disappeared in the contralateral limbs

Congenital Spastic Paraplegia

Formerly I operated on the lumbar sympathetic trunk for spastic paraplegia affecting the lower limbs and of cerebral origin In this operation the peripherally directed sympathetic fibres were divided in the lumbar region This led to a definite result and in a questionary to my patients a good result was returned from 75 6 per cent (thirty five patients) but even so the 'clastic contraction' was only modified and a certain degree of rigidity remained Now I divide the thoracic sympathetic trunk to alter the blood supply of whole of the half of the brain,

with the result that there is a greater diminution of tone in the contralateral limbs

One instance may be quoted A girl aged 10 suffered from congenital spastic quadriplegia She had never walked or stood or been able to sit up properly Ten days after the second operation she was standing alone and is now learning to walk The important point is that her reflex activity returned to normal and the Babinski reaction was decreased in amplitude when the patient was last seen This result has been seen in every instance of spastic paraplegia in which the contralateral side has been comparable with the ipsilateral lower limb after a unilateral thoracic trunk section Before operation the patient's legs hung in an extended posture and shortening reactions were present when she was placed on a couch with the lower limbs extended beyond the supporting surface After operation the legs hung down with knees flexed in a perpendicular position and the shortening reactions were absent though a knee jerk was obtainable In this patient both the elastic and plastic contractions of Sherrington were modified although the patient still retained the active control of the limbs and normal phasic response to the knee jerk

There is no possibility in this procedure of ascribing the changes in reflex activity to injury of the medullated nerves since the site of operation is in the region of the brachial plexus and the changes I have described are in the activity of nerves of the lumbo sacral plexus supplying the opposite lower limb Nor can alteration in blood supply of muscles be held responsible since the vasomotor nerves of the limb are not cut and there is no interference with the peripheral circulation In my opinion the changes are due to an alteration of the blood supply of the brain leading to a depression of the hyper activity associated with poor blood supply of that organ

The effect of altering the cerebral circulation in this condition is illustrated by the effects of treatment in the following patient

A boy aged 12 had previously walked but very badly on account of the extensor spasm of his right lower limb His right upper limb had a continuous extensor spasm also with flexion of the hand The severity of the spasm of his right lower limb may be judged from the fact that he had had the tendo Achillis lengthened twice but unsuccessfully—in Liverpool in 1926 and in Gabowen in 1928 After this the extensor spasm gradually developed and when I saw him he was suffering spasms every five minutes which were present throughout the day They were so painful that they made him scream and were so violent that they would throw him out of bed he could not stand or walk and had to be fed The extensor spasm involved his head back and all limbs the condition resembled rigidity of a decerebrate animal Between the spasms shortening reactions of the knee jerk were not present but the spasm did not leave the right lower limb or right hand It was therefore not a continuous spasm but when present the patient exhibited opisthotony The cause of his condition is open to question but I have seen a similar condition in a child of 3 with spastic chorea

Extensor rigidity is not uncommon in children and is characterized by opisthotony and extension of all limbs It is usually a severe grade of so called spastic chorea It may be a congenital condition or it may be developed in early infancy I have observed it to commence at the age of 2 as irregular twitching movements which gradually developed into extensor spasm

In this instance the patient was born at full time and seemed well until about 10 months old when he had a fit Between the spasms he could control the left hand but all his life he had been unable to open the right hand The condition may be due to a tumour or haemorrhage or simply venous congestion in the region of the midbrain Whatever the cause the condition was relieved and the relief gave grounds for reflection The child underwent operation in September 1930 a sympathetic thoracic trunk section was performed on each side at interval of fourteen days This was followed by immediate relief and the child was able to walk about a fortnight after the second operation On December 15th the father wrote to me reporting that the child slept well that they were never disturbed by him at night and that he was able to walk about alone in the house On April 27th 1931 nearly eight months after operation his father reported that he could notice a great improvement he goes round about the house unaided and often trots off with other children to play he continues to be very jolly and good tempered giving us little trouble compared with the past it is a pleasure to be in his company There was thus a mental change in the patient also

Trigeminal Neuralgia

Trigeminal neuralgia is probably an expression of hyper activity of the trigeminal ganglion as a result of vaso constriction following toxaemia of some kind The results following thoracic sympathetic trunk section justify the procedure I have operated upon four patients one a child having all the signs of trigeminal neuralgia for two years with complete relief fourteen days after operation and the others adults with typical trigeminal neuralgia

Retinitis Pigmentosa

In this disease relief is obtained if the patient retains central vision Contracted fields of vision are enlarged and acuity of vision is increased But there is no relief obtained if sight has been absent for years as the atrophy in these patients is too far advanced to be recoverable

Raynaud's Disease

Some apology may be necessary for introducing the subject of Raynaud's disease into a neurological discussion but it is really relevant since it concerns the hyper activity of the sympathetic nervous system As I have said before the changes in blood supply produce a warm pale skin indicating a dilatation of the arterioles and not a pink warm skin which would indicate that the principal change was in the capillaries There is an immediate dilatation of capillaries as indicated by the pinkness and warmness of the skin but as the capillaries regain their tone independent of the nervous system the colour of the skin becomes paler while still retaining its warmth The hand takes on the temperature of the surroundings even after sympathetic trunk section

Lethargy of Encephalitis

Lethargy associated with encephalitis is a most distressing symptom The patient feels as if all his energy has been drained away in addition he is mentally fogged and feels as if there were a haze clouding his mental processes This condition is often accompanied by rigidity or tremor or both The following history illustrates the result of treatment by thoracic sympathetic trunk section

The patient complained of loss of energy of three years duration and his friends said that he had lost all power of initiative he would take three or four minutes to reply to a simple question He had become very shy and was always tired He had typical Parkinsonian facies with staring eyes and mask like expression more pronounced on one side He walked with more or less rigid limbs on the right side He had a limp and the right upper limb did not swing There was a slight exaggerated knee response in the knee jerk but relaxation time was quick and the jerk did not oscillate on the right side The reflex indicates were in tone The left side gave a normal response in both positions The patient was seated in a reclining chair the legs hanging freely over the end of the couch The Babinski reaction was negative and the cerebro spinal fluid did not react to the Wassermann test On account of the great rigidity and increased tone of the right side I decided to divide the left thoracic sympathetic trunk This was done

on February 4th 1931 Immediately after recovery from the anaesthetic the patient's own words were I feel more alive He answered questions immediately, and his stammering which had worried him before operation had disappeared His face had improved in appearance in that the mask like expression had more or less disappeared When he was able to walk two days after operation it was found that his right arm swung normally and there was no limp or rigidity apparent his reflexes had returned to normal On March 10th he was eating well—he had not cared for food before operation He had no hesitancy about speech he laughed spontaneously and could carry on an intelligent conversation He felt less depressed and had daily periods when he felt quite well He has not completely recovered but he is very much improved

Congenital Mental Deficiency

Congenital mental deficiency is usually gauged by physical accomplishment For example holding the head up sitting up walking and talking are usually considered expressions of intellectual development in children If that is accepted and taken into consideration with signs of lack of mental development the alteration of the circulation of the brain in a mentally defective infant patient as shown in the following history is important

The patient aged 2 years and 4 months was unable to sit up hold her head up or make any attempt to stand or walk She took no notice of her surroundings was inattentive and did not talk At the age of 2 years she had exhibited irregular jerky movements these were followed by fits mainly affecting the left side In the fits she bit her tongue breathed heavily and lost consciousness When seen on February 12th 1931 the patient had had ten fits within a few weeks She was chronically constipated perspired freely reflex activity was normal She underwent operation on March 24th when a right thoracic sympathetic trunk section was performed She sat up three days after operation and stood up after four weeks Excessive perspiration ceased seven days after operation For the first five weeks after operation the bowel motions were never solid and the patient did not need aperients now she has an occasional dose of aperient but never more than once a week and her bowel movements are normal I have had similar results following an operation on the right side and a like result following an operation on the left side

Deafness

Deafness was relieved in a patient suffering from retinitis pigmentosa He had been deaf since birth but had been partly relieved after the removal of adenoids The effect of sympathetic trunk section on the right side was a relief of deafness on the left side and vice versa After the first operation he could hear band music and now he can hear human speech A peculiarity of his hearing is that there are gaps in the scale he can hear a few notes then misses a few hears higher notes and so on

Headache

In another patient suffering from retinitis pigmentosa headaches were relieved Previous to operation they had been as frequent as three or four times a week now they have become rarer and occur about once in a fortnight Vertigo disappeared in another patient after operation

Epilepsy

In the treatment of epilepsy in adults thoracic sympathetic trunk section has not been successful I have operated upon five patients suffering from epilepsy and imbecility of varying degrees but in no instance was the operative treatment effective in diminishing the number of fits On the other hand in children treatment by thoracic sympathetic trunk section is sometimes successful I have had three instances in which fits of true epileptiform type have completely disappeared When fits are associated with spastic hemiplegia relief is almost invariable following thoracic trunk section

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Croonian Lectures

ON

LIVER AND SPLEEN THEIR CLINICAL AND PATHOLOGICAL ASSOCIATIONS

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LECTURE II

In my first lecture I dealt with the intricate vascular arrangements of the liver I shall now begin by discussing the circulation through the spleen

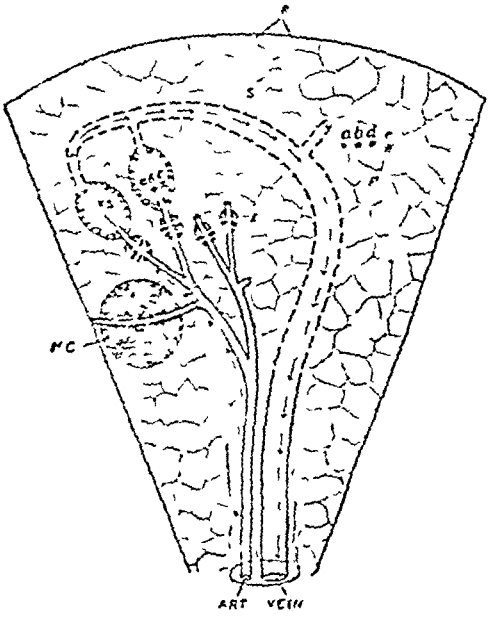
VASCULAR CIRCULATION THROUGH THE SPLEEN

I have already dealt very fully with this matter in my Lettsomian Lectures and can therefore be brief I must however draw attention to the most important points The splenic artery, remarkable for its large size in proportion to the bulk of the organ, subdivides until finally each branch bifurcates to form two slender arterioles named 'penicilli' by Ruysch (1696) These small arterioles, as was emphasized by Cohnheim (1867) are end arteries and do not anastomose On these penicillar branches lie the peculiar structures known as ellipsoids a full account of which I have already published elsewhere An important practical point having I believe a definite bearing on the mechanism of production of some of the splenomegalies was shown by Tait and Cashin (1925)—namely that the ellipsoids act as potential valves preventing all flow of blood backwards from the venous to the arterial side of the spleen Quite recently Nisimaru and Steggerda (1932) working in Barcroft's laboratory in Cambridge have thrown doubt on this valve like action of the ellipsoids but in their experiments pressures of 40 to 50 mm Hg or more were reached before the perfusion fluid passed back from the venous to the arterial side The splenic vein is even more remarkable than the artery for its large calibre Tait and Cashin (1925) were much impressed by its great contractility when stimulated electrically and suggested the possibility that contraction in disease might well be of importance for the development of some human splenomegalies

My views on the essential mechanism of the circulation through the spleen have already been published I follow ing the important observations of Barcroft and some simple experiments of my own with Cashin I have concluded that on the evidence at present available the best working hypothesis (agreeing with many observed facts) is to regard the circulation through the spleen as twofold The mechanism is suggested in the accompanying diagram The first or ordinary circulation going on continually is a direct one the blood being pumped through the splenic artery into venous sinuses and from thence passing directly into the veins The second circulation is intermittent brought about by contraction and enlargement of the whole spleen It consists of an emptying of

the pulp spaces through the wide stigmata or holes in the wall of the veins and is filling again through the lateral channels in the walls of the ellipsoids It seems probable that some minor alterations in the volume of the spleen are constantly taking place a small amount of blood is regularly being drawn out from the pulp into the veins so that direct flow through the spleen but the return of blood from the venous sinuses and from the pulp can at the most never be great unless the whole spleen has undergone definite contraction With this two fold circulation in mind it is evident that blood cells may return very rapidly to any part of the general circulation in the spleen pulp for a period which has been estimated by Barcroft as half an hour

The cell walls of the spleen are certainly one of the most remarkable structures belonging to the vascular system and there is nothing like them in any other organ They are the cells of the sinus structures in the spleen and it may be by means of their mechanical properties that the portal vein pressure is kept at a suitable value It is thus easy to



Diagrammatic Representation of a Spleen Lobule
Closed vascular circuit in the pulp
Open vascular circuit through the pulp
MC Malpighian corpuscle P Pulp R Reticular cells of sinus wall of ellipsoid a Artery b Branches of arteries c Capillaries d Network of blood sinuses e Endothelial cells of pulp

form how in conditions of increased portal blood pressure the first obstruction so far as the spleen is concerned is at the ellipsoids In my opinion this is the important factor involved in the aetiology of the so called "splenic nodules" which are such a remarkable feature in a variety of chronic splenic enlargements

Normal Blood Flow through Spleen

The total flow of blood from the spleen has been estimated by Burton Opitz in the dog as about 1 c.cm per second whereas the total portal inflow to the liver is about 4 to 5 c.cm per second *This figure must be taken* as representing the constant or continuous flow of blood through the spleen and not the amount delivered into the splenic vein when the organ undergoes contraction

Nervous Control of the Splenic Circulation

We have little information on the nervous control of individual parts of the circulatory system of the spleen *but following* the work of Barcroft and his colleagues in recent years, we have very full knowledge of the mechanism of general splenic contraction and relaxation In his early experiments on the effects of emotion or exercise on splenic contraction Barcroft's work naturally suggested that adrenaline is the chief agent concerned in bringing about active contraction of the spleen Quite recently Barcroft Nisimaru and Puri (1932) have approached the subject directly by investigating the *effects* on the spleen of splanchnic nerve stimulation Similar experiments have been carried out in the past by Schiff (1867) Roy (1881) and Schäfer and Moore (1896) but as Barcroft points out these experiments were all carried out before the discovery of adrenaline in the suprarenal glands moreover no distinction was drawn between the greater splanchnic and lesser splanchnic nerves It has now been shown that nerve fibres to the spleen and to the suprarenal bodies are carried chiefly in the greater splanchnic nerves Stimulation of these nerves (either on the right or left side of the body) causes immediate splenic contraction evidently in two ways—a direct nervous effect and an indirect effect through the secretion of adrenaline Stimulation of the greater splanchnic nerve after removal of the suprarenal bodies is immediate but less in degree than when these glands are left *in situ*

PHYSIOLOGICAL CONSIDERATIONS

SOME FUNCTIONS OF THE LIVER AND THE SPLEEN

Having considered the chief anatomical questions (including however as was essential for the reasons given the physiological problems of the control of the hepatic and splenic circulations) it is now opportune to discuss how far our knowledge of the functions of the liver and spleen may assist us in interpreting their relations in disease

So far as the liver is concerned we can as yet say very little We know nothing of any association between the numerous metabolic functions of the liver in respect of the proteins carbohydrates and fats and any functions of the spleen The two well recognized relations of the two organs are their peculiar vascular connexions and the presence of reticulo endothelial cells in each of them It seems obvious that acute circulatory changes in the spleen can have little effect on the liver although the chronic degenerative changes (endophlebitis) found in the splenic vein in some splenomegalies may extend to the portal vein and to the liver On the other hand all circulatory changes in the liver whether acute subacute or chronic can scarcely fail to influence the vascular arrangements of the spleen Metabolic activities *both of the liver and* of the spleen may certainly be upset by the vascular disturbances especially if these are long continued The common changes affecting the reticulo endothelial cells in liver and spleen and the diseases thus brought about are fully dealt with subsequently and need not detain us now The physiological problems in relation to the vascular connexions of the two organs are most suitably considered here

The spleen may be taken first as the simpler problem of the two The chief function of the spleen excluding that in which the reticulo endothelial system is concerned is its contractility The recognition of the spleen as a contractile organ is not new and was indeed suggested as long ago as 1722 by Stukely in his Goulstonian Lecture before this College The chief modern work on the subject is by Roy (1881) Schäfer and Moore (1896) Binet (1926 onwards) and particularly by Barcroft and his colleagues in Cambridge (1923 onwards) I have already dealt with

some of the earlier parts of Barcroft's work in my Lettsomian Lectures, but the problem is still in active evolution and new observations are still being published with great regularity

Liver and Spleen as Blood Depots

Recent work has all tended to centre round the potentialities of the spleen and liver as blood depots Barcroft has stated that in the dog approximately one fifth of the blood corpuscles of the body may be held in reserve in the spleen the blood of which is much richer in corpuscles than is the ordinary circulating blood He suggests that the spleen of a dog of about 18 kilos is capable of holding at least 300 c cm of blood Abderhalden and Roske (quoted by Ludwig) on the other hand estimated the blood content of the spleen of a dog of 10 kilos as about 40 c cm only

The amount of blood in the depot of the spleen compares very poorly with the amount which can be held in the liver but Barcroft has pointed out that there is a fundamental difference between the two organs in their depot function In the spleen there is experimental evidence that the blood may remain held up in the pulp and out of the ordinary circulation for at least half an hour In the liver on the contrary Barcroft Nisimaru, and Ray (1932) have proved that there is not any stagnant store of blood such as exists in the spleen and to a lesser extent in cyanosed skin They have calculated the time taken by red blood corpuscles to traverse the liver in the following way Samples of blood were taken from the femoral artery and from a tear on the surface of the liver (to obtain capillary blood) before and after a quantity of carbon monoxide gas had been introduced into the circulation No real lag in the percentage saturation of the gas was found between the two samples taken and the conclusion was reached that in the liver there are no side tracks from the general current in which blood can lie

The large amount of blood which may be contained in the liver has been accurately estimated by Grab Jannsen, and Rein After the injection of suitable doses of adrenaline it was found that different species of animals react rather differently but one reaction is common to all During the period of increased general blood pressure following the injection the outflow from the liver is greater than the inflow This means of course that blood has been pressed out of the liver but as the blood pressure falls the liver refills In forty four experiments it was found that after adrenaline injection blood can be extruded from the liver amounting to 59 per cent of the total weight of the organ or as Ludwig (1931) calculates about 250 c cm in an 11 kilo dog On an analogy with this although it cannot be more than a very rough analogy the liver of a man weighing 70 kilos should be able to express about one and a half litres of blood into the general circulation (Ludwig) which is far more than the spleen can possibly yield

Pick (1931) has recently been interesting himself in the blood depot function of the liver as it affects the filling of the right side of the heart—normally and in cardiac failure He quotes the observations of Grab Jannsen and Rein which show that the liver contributes at least one half and in some cases as much as three quarters of the blood which the inferior vena cava brings to the heart Thus sometimes more blood comes from the liver than from the kidneys and lower limbs Pick states that in cardiac failure the amount of blood in the liver may be as much as 68 per cent of the total weight of the organ since this blood must be actually within the circulation and does not stagnate (Barcroft) the actual amount of blood flowing slowly through the liver must at times be enormous

THE POSSIBLE FUNCTIONAL INDEPENDENCE OF THE LOBES OF THE LIVER

This is a question which has been considered intermittently for a number of years If certain suggestions could be proved to be true it would assume very definite importance in relating one half of the liver very closely to the spleen Two quite separate problems are really involved the anatomical and the physiological division of the liver into two parts It is easier to consider both together although different workers have generally according to their individual bent taken the matter up from one side only

For clearness it is necessary first of all to see how the commonly accepted anatomical division of the liver into its lobes has developed G Rolleston (1861) in a paper on the homologues of the lobes of the liver in mammalia divided it into three parts—the right left and suspensory lobes—taking the suspensory or falciform ligament as his dividing line Later, Flower (1872) following extensive investigations in comparative anatomy divided the liver into two lobes using as his division the falciform ligament, which contains on its free margin the ligamentum teres the remnant of the left umbilical vein Nearly all subsequent anatomists have followed Flower's description Charnock Bradley (1909) however chiefly as the result of studies on the embryo pig concluded that the division into two lobes separated by the falciform ligament was erroneous and that the fissures were not true anatomical divisions He claimed that embryologically, the liver develops as three masses or lobes—one central and two lateral

Anatomical Division of the Liver

The first real work suggesting at one and the same time that the accepted anatomical division of the liver was incorrect and that there might be some independence between what he regarded as the true right and left lobes of the liver was done by Cantlie (1898) The history of Cantlie's observations is well worth recording He noticed, at the necropsy on an apparently physically healthy Chinese man who had committed suicide that the right side of the liver was reduced to a small mass of fibrous tissue whereas the left side was so hypertrophied as to leave the total weight of the liver little below normal Cantlie made the important observation that the line of separation between the fibrotic part and the hypertrophied part lay along a line drawn from the fundus of the gall bladder to the inferior vena cava It occurred to Cantlie that this suggested the true dividing line of the liver into right and left lobes rather than the line of the falciform ligament accepted by Flower and subsequent anastomists Cantlie therefore proceeded to search for support of his hypothesis He first noted that if he cut across a normal human liver along a line drawn from the fundus of the gall bladder to the groove made by the inferior vena cava on the posterior surface of the liver the two segments were almost equal in weight This point has been confirmed many times since then the difference is rarely as much as 100 grams He also observed that the branches of the hepatic artery portal vein and bile duct supplying the two segments are identical in size He next applied some simple experimental methods injecting two differently coloured fluids into the main right and left divisions of the portal vein To his great interest the two colours met in a wavy line at his suggested line of partition In an attempt to complete as far as possible the proof of his views Cantlie quoted three clinical cases which seemed to support his hypothesis He also stated that in severe injury by violence the liver tends to rupture along the dividing line described by him and not at the falciform ligament

Subsequent work of different types and by many observers is entirely in favour of Cantlie's view that the true anatomical division of the liver is along the line which he indicates and not at the falciform ligament. But the books of anatomy up to the present at least retain the old and as I believe erroneous division made by Flower.

Evidence for Physiological Division

The evidence in favour of physiological or functional independence of the two lobes of the liver must now be considered and will be found to be much less capable of definite proof. It must be remembered however that a considerable part of this work has been done in the belief that the division of the liver into two lobes at the falciform ligament is correct. Glénard (1890) to whom Cantlie's observations were obviously unknown claimed that definite alterations in size firmness and tenderness could be recognized in different parts of the lower border of the liver in certain diseases. He found for instance enlargement of the right hepatic lobe in diabetes mellitus enlargement of the left lobe in alcoholic gastritis and enlargement of the central part of the lower border in biliary disease. From these observations Glénard was led to suggest that different parts of the liver drain different parts of the gastro-intestinal tract. Blood from different parts therefore some physiological and possibly pathological independence of different parts of the liver. Glénard's suggestion was taken up at once by Serge who was also unaware of Cantlie's work. Serge carried out experiments of two types injections of methylene blue into various vessels entering the liver and observations on the fate of small amounts of indian ink injected into the splenic and mesenteric veins. He was the first to make the very important claim that two more or less separate blood currents flow in the portal vein side by side—one from the mesenteric area to the right lobe of the liver and one from the splenic area to the left lobe. This suggestion of what has been called "streaming" in the portal blood has recently attracted renewed attention and is discussed in greater detail later on. Soon afterwards Serge also provided the first physiological evidence in support of the independence of the two hepatic lobes. His experiments consisted in estimating the urea content of the two hepatic lobes during the course of digestion.

Four Hypotheses Summarized

The work so far described details in chronological order the development of four hypotheses concerning the lobes of the liver.

1. That the true anatomical division of the liver is into two lobes the division being along a line drawn from the fundus of the gall-bladder to the groove made by the inferior vena cava (Cantlie 1898).
2. That the two lobes of the liver show definite physiological independence (Serge 1902).
3. That different parts of the liver drain blood from different parts of the gastro-intestinal tract (Glénard 1890).
4. That two currents of blood flow side by side in the portal vein—one from the mesenteric area to the right hepatic lobe and one from the splenic area to the left lobe. That is to say that there is "streaming" of the portal blood (Serge 1901).

Evidence for Anatomical Division of the Liver

The subsequent evidence for and against these four hypotheses may now be detailed. First the question of the true anatomical division of the liver at the line suggested by Cantlie. There is practically uniform support for the general correctness of Cantlie's view and among the important papers are those of Gilbert and Villaret (1906) Wertheimer and Le Page (1896) Looten (1905) Bartlett Corper and Long (1914) and McIndoe and Counseller (1927). The chief divergence of opinion is as to how far Cantlie's anatomical division is absolute. Wertheimer and Le Page using sodium sulphindigotate injections claimed that the bile ducts of the two lobes are absolutely independent and separate but that the vascular system is not so independent the same view is held by Looten. McIndoe and Counseller from their careful celloidin injection experiments followed by dissolving away of the liver tissues to leave a celloidin skeleton found that the independence of the two lobes is complete in respect of the bile ducts but not definitely clean cut in respect of the hepatic artery and portal vein although no great cross-anastomosis exists. Certain points more recently made out concerning the embryological development of the liver have a definite bearing on the anatomical side of this problem. Some argument still remains but it is now almost universally recognized by embryologists that the true plane of division of the liver lies between the two omphalo-mesenteric veins. The real division is thus not marked by any definite segmentation and it is necessary to explain the fissures of the liver on some other plan. Actually the adult human liver has very few deep fissures or lobulations when compared with that of the higher animals but the suggestion that this proceeds from man's erect posture is not proven. It is now generally agreed that the human liver undergoes very great changes in shape from early foetal life right up to adult life depending on changes in external pressure. Atrophy of some parts and hypertrophy of others ensue and even in the normal healthy liver as Toldt and Zuckerkandl (1876) pointed out long ago small areas of bile ducts arteries and veins may be found stranded in fibrous tissue near the surface of the liver. So it is not to be wondered at that occasionally very abnormally shaped livers or lobes of the liver are met with in otherwise healthy individuals. A very complete account of these abnormalities has been given by Cullen (1925).

If this anatomical division be true then some of the gross facts of morbid anatomy observed at necropsies or at operations should lend support to it. It is of course particularly lesions close up to the hilum of the liver primary growths and infective conditions within the liver itself which should yield important information since these lesions avoid all errors which could be due to the failure of "stream lining" in the portal vein if indeed this phenomenon exists. It is however frankly not easy to collect absolutely reliable information from clinical or pathological literature the fact being that few, if any clinicians or pathologists have recorded their cases of liver disease except in respect of the ordinary textbook division at the falciform ligament. A number of quite interesting cases are however on record the great frequency of tropical abscess in the right lobe of the liver not extending over to the left may simply be mentioned. The three observations recorded by Cantlie are quite apt and McIndoe and Counseller also quote three very important necropsy histories in which either the right or left main branch of the portal vein hepatic artery or bile duct were blocked by disease. Herringham (1905) in an account of various deformities of the liver was able from nearly 3 000 necropsies at St Bartholomew's Hospital found eleven cases in which one lobe of the liver was completely undeveloped. He gives details of ten of these. In nine the left lobe was undeveloped in one only the right. As a result of the maldevelopment the existing lobe was generally much hypertrophied and might even have formed a palpable hepatic tumour. It must be pointed out that in diseases which spread by the

lymphatics such as carcinoma there is certainly no particular predilection for one or other lobe of the liver since lymphatics pass from all parts of the liver to the glands in the portal fissure

The information bearing on the possible physiological independence of the liver which has accumulated since the experiments of Serege already referred to is neither abundant nor very convincing Loeb (1907) during experiments on the pharmacology of iodine compounds noted that in several experiments the left side of the liver contained less iodine than the right Gideon Wells and Hedenburg (1912) while carrying out experimental injections of iodine compounds for a purpose related to the possible treatment of tuberculosis say the statement of Loeb that the left lobe of the liver regularly contains less iodine than the right we can corroborate in part only Actually in nineteen experiments ten showed an increase in the right lobe compared with the left and two experiments exactly the opposite result

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The hypothesis first suggested by Glénard that different parts of the liver draw blood from different parts of the intestinal tract and the corollary that two or even more streams of blood run side by side without much admixture in the portal vein received severe criticism as well as some support in the early days following its publication One of the chief critics was Bauer (1909) who published an able paper entitled *L Independance des lobes du foie est hypothese* From his experiments Bauer insisted that *in the living animal* there is not any double current of blood—mesenteric and splenic—in the portal vein but that the whole mixed portal blood enters the liver He admits that his belief in the absence of a double current in the portal vein does not invalidate in the least the hypothesis of a complete anatomical separation of the liver into the halves suggested by Cunthe His final conclusion on the general question of the independence of the two halves of the liver is *une indepandance relative oui—mais sur ce point tout le mond est en accord Une indepandance absolue? Certes non*

In recent times the question of stream lining in the portal vein has been very fully investigated by Bartlett Corper and Long (1914) Copher and Dick (1928) and Dick (1928) It is in the first of these papers that the term stream lines is used and it is pointed out that the existence of these is well known to all hydraulic engineers Two practical examples are given (1) A muddy tributary joining a river—the river may remain half muddy and half clear for long distances (2) Contamination of one side of a river with pathogenic micro organisms from sewage—towns on one bank suffer from epidemics while those on the other bank escape Bartlett Corper and Long who point out that the portal circulation and distribution of portal blood to the liver in the dog differs considerably from the human arrangement carried out two series of experiments in dogs In one series fat globules were injected into radicles of the portal vein to produce hepatic emboli they were easily recognized histologically by the ordinary methods of staining fat In the second series copper salts were introduced into the lumen of various isolated segments of the intestine the amount of copper being subsequently estimated in the two lobes of the liver From all their experiments these authors concluded that physiological independence of the two halves of the liver exists but it is not sharp and overlaps They believed that the question of mixing of streams in the portal vein depends on a number of factors such as angle of inflow viscosity of fluids and distance of flow in the common trunk

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This is quite definitely a matter of consequence for the interpretation of the diseases which we are to consider The clinical aspects of occlusion of one or other of these vessels has been reviewed by Wintemitz (1911) in whose paper the important literature may be found Partial or complete obliteration of the portal vein is by no means uncommon in cases diagnosed clinically as splenic anaemia In my lectures on diseases of the spleen (1931) I placed these cases in a separate group under the heading "Thrombophlebitic splenomegaly" and referred to the important papers of Dock and Warthin (1904) Déve (1908) and Warthin (1910) on this part of our subject Obstruction of the hepatic artery is uncommon, and generally due to aneurysm of that vessel A complete blocking of the hepatic veins in man is excessively rare

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These experimental principles are of decided importance for the elucidation of some of the problems of hepatic cirrhosis in man but the experiments themselves also afford an excellent lesson in the difficulty of directly applying results obtained in animals to human disease A large number of cases of thrombosis of the portal vein are on record in which at necropsy the liver appeared to be normal in every respect In some of these the old thrombus had been canalized and the portal circulation to some extent restored In others in which this phenomenon had not occurred the hepatic artery had apparently been able to take over the complete blood supply of the liver cells If any atrophy of the human liver occurs following portal thrombosis as after the ligation experiments in animals the atrophic area must soon disappear without leaving a trace

Hepatic Artery

The effects of experimental ligation of the hepatic artery or its main branches in animals are entirely different from those obtained with the portal vein immediate necrosis of hepatic cells being the result and not gradual atrophy Cameron and Mayes (1930) who give a full historical account of the effects of occlusion of the hepatic artery in man and in animals point out (as was perhaps not sufficiently realized by Rous and Lanmore) that results depend to a considerable extent on the anatomical arrangement of the vessels which may vary greatly in different animal species and even in man Rapid occlusion of the hepatic artery in man may be associated with swift and fatal necrosis of the liver whereas with the slower obstruction due to aneurysm no changes may ensue after ligation of the artery

Hepatic Veins

The effects of obstruction of the efferent vessels of the liver have been studied by Bolton (1914) and by Bolton and Barnard (1931) Sudden total occlusion of the inferior vena cava between the liver and the heart as a rule causes death of the animal within a few hours at most By an ingenious experimental method Bolton has been able to obstruct partially the inferior vena cava with a constricting band between the liver and the heart thus inducing great venous congestion of the liver ascites and other signs of increased portal pressure In his first paper Bolton describes the course of events in a monkey which after being subjected to a partial obstruction of the inferior vena cava survived in good health for a year When the animal was then examined a complete obliteration of the lumen of the inferior vena cava was found, resulting in widespread degeneration of the liver parenchyma especially towards the centre of the lobules In these degenerated areas fibrosis was absent In Bolton's second paper (with Barnard) cats were used and killed at intervals of 4 to 113 days after partial obstruction of the inferior vena cava in the same situation It was found in these experiments of widely differing duration that the essential lesion consisted of necrosis of the liver cells in the central part of the lobules leaving islets of intact cells around the portal canals The necrotic cells soon disappear their place being taken by dilated sinusoids no trace of fibrosis is ever observed The absence of fibrosis in all of these experiments which involve obstruction to one or other part of the blood supply to the liver is a point of very great importance

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RECENT ADVANCES IN THE TREATMENT OF FRACTURES*

BY

R WATSON JONES B Sc F R C S M Ch Orth

LECTURER IN PATHOLOGY OF ORTHOPÆDIC CONDITIONS LIVERPOOL UNIVERSITY FORMERLY ASSISTANT SURGEON AT EPPOCH ROYAL NORTHERN HOSPITAL AND SHREWSBURY AND COUNTY HOSPITAL

(*With Special Plate*)

It is well recognized that in the treatment of fractures faulty alignment overriding and all forms of malunion give rise to serious disability But other equally serious and equally common causes of disability have not received the recognition they deserve Too commonly the surgeon's attention has been focused on the bones to the exclusion of other parts of the limb In the determination to avoid malunion joints have been unnecessarily immobilized and irrecoverable stiffness has been allowed to develop Colles's fractures may still be seen perfectly reduced and united in excellent position but associated with serious and frequently permanent stiffness of the metacarpophalangeal joints Very reduced these disabilities which are not due to any primary injury but appear during treatment and in consequence of it are even more serious than the disability which the treatment sets out to cure

Main Objects of Treatment

It is of course essential to obtain a fracture which can be perfectly reduced but once the fragments have been completely immobilized for a period of sufficient duration on

* Presented at a Meeting of the Section of Orthopædics on March 1932

to secure consolidation There is no more constant factor in the establishment of non union than inadequate fixation or fixation for too short a period But it is quite wrong to assume that the immobilization must of necessity give rise to muscle wasting decalcification of bone stiffness of joints and circulatory disturbances with recurring oedema These are the consequences of disuse and are to be avoided by instituting functional treatment from the very first days of the fracture There are therefore three aspects of the treatment of a fracture all of equal importance and the neglect of any of the three will give rise to permanent disability

1 Reduction of displacement
2 Complete immobilization of the fragments
3 Functional activity

In order to maintain functional activity it is important that fixation should involve no more of the limb than is necessary Joints which need not be fixed must be definitely moved and muscles even in the part of the limb which is immobilized should be in constant activity Carr's splint was long ago discarded in the treatment of Colles's fracture because the palmar bar prevented flexion movements of the fingers But even when gutter splints were used with the fingers and palm free the patient was still much too afraid to practise exercises unless he was actually stimulated into doing so Moreover unless he was instructed otherwise he would most carefully protect the limb in a sling and allow stiffness of the shoulder joint to appear Exercises can be secured with greatest certainty if the patient is able to follow some occupation which demands the use of his injured limb so that his exercise is constant and subconscious This object can be attained in Colles's fracture by using an unpadded plaster cast which leaves the fingers and palm entirely free allows the patient to dress normally with the injured limb through the coat sleeve and renders the support of a sling unnecessary

ACTIVE MODERN METHODS

In consequence of these advances the massage departments of hospitals will undergo a great transformation during the next few years A patient with a fractured limb can only be persuaded that it is safe to use it if he is taught occupational activity under supervision In my own physiotherapy department at the Liverpool Royal Infirmary the number of patients who are actually being massaged is reduced to a negligible minimum But every patient goes into the department as soon as x rays have shown that the fracture is perfectly reduced Visitors to the department still see a great hall filled with patients and masseuses But the patient is not lying on a couch being lulled to sleep he is being galvanized into activity The man whose Pott's fracture was reduced yesterday is to day being taught to walk The woman who sustained a Colles's fracture yesterday is to day learning to make beds and peel potatoes Men are sawing wood and hammering nails The man whose occupation involves the climbing of ladders climbs ladders in the department from the early days of his injury The painter paints the sweeper sweeps the window cleaner cleans windows and as far as possible individual occupational activity is maintained throughout the period of immobilization The patient with the fractured spine whose trunk is encased in plaster is taught exercises for the erector spinae which are far more effective than faradic stimulation even if such were possible Every patient whose knee joint is immobilized whether he walks or not is taught tonic exercises for the quadriceps and if a patient is due for admission to hospital for a knee operation he is first taught quadriceps drill until he is so expert in his exercise that he can practise it from the day of operation onwards

In short modern treatment anticipates the complications of muscle wasting joint stiffness and mental fear and instead of treatment being prescribed after these conditions have developed steps are taken to prevent them from appearing

FRACTURES OF CARPAL SCAPHOID

Although the principle of absolute immobilization with functional activity has been of importance in accelerating recovery in all fractures there is no injury in which its application has more profoundly influenced the prognosis than in fractures of the carpal scaphoid The blood supply of the scaphoid is such that a fracture through the waist of the bone renders the proximal half entirely avascular Union depends on the development between the two fragments of fine capillary vessels which will be ruptured with the slightest shearing movement Perfect immobilization is therefore necessary and must be maintained in recent fractures for two to four months and in old ununited fractures for six to twelve months But however perfect the immobilization without functional activity the fracture will still fail to unite because the decalcification of disuse prevents consolidation Bohler's dorsal plaster cast, applied directly to the skin has solved the problem With such a cast we have had patients at work not simply as university professors and company directors but as labourers railway stokers ship's riveters painters and decorators Since this work was first published two and a half years ago I have treated ninety seven recent fractures without a single non union and twenty two old ununited fractures of one to five years duration with only a single failure (Plate Fig 1) The one failure was a case in which I hoped to accelerate union by using a bone graft as well In many of the old cases it is necessary to freshen the fractured surfaces either by opening the joint or by subcutaneous drilling I also believe that the ununited fracture unites with greater certainty if the wrist is held in radial deviation and not in ulnar deviation as advised by Bohler

FRACTURES AND FRACTURE DISLOCATIONS OF SPINE

The method of manipulative reduction of crush fractures and fracture dislocations of the spine which I described in 1931 has enabled us to apply to these injuries the principles of treatment which have been enunciated—namely reduction of the fracture absolute immobilization and continued functional activity Hyperextension of the spine which is essential for reduction is effected in its simplest form by laying the patient prone between two tables one higher than the other A plaster jacket is applied and in uncomplicated cases ambulation is commenced within a few days Records are now available of fifty cases which have been treated in this way and it has been found that in all cases the patient's own body weight is sufficient to reduce even the most severe crushing injuries (Fig 2) No anaesthetic is necessary and in the only case in which I was tempted to use general anaesthesia—a severe fracture dislocation of the dorsal spine with scoliosis transpired at post mortem examination complete transection of the cord—the patient died before recovering consciousness In no other case has there been an operative mortality No ill effects have been observed from early ambulation and weight bearing and in no case has there been recurrence of deformity whilst the plaster jacket was worn—even in lumbar injuries It has however been observed that a completely crushed vertebral body consolidates slowly after reduction and in one such case involving the fourth lumbar vertebra though reduction was still complete after four months ambulation in a plaster jacket deformity recurred during the fifth month despite the wearing of a posterior spinal support In view of this the simple posterior spinal support is no longer

relied on and although four months is still regarded as an adequate immobilization period for the average crush fracture in severely comminuted fractures the plaster jacket is retained for six months Moreover the fact that consolidation is so slow would suggest that the deformity is at least capable of improvement if a hyperextension plaster is applied as late as three or four months after the injury Fracture dislocations with paraplegia are always reduced at once because although recovery is impossible if the cord is transected there can be no doubt that a recoverable lesion of the cord frequently becomes irrecoverable owing to continued compression and anaemia Immediate relief of pressure by hyperextension is the only measure which can be of value and has completely replaced laminectomy in the treatment of this complication Five cases of total paraplegia have fully recovered and in one case a fourth lumbar root paralysis completely recovered within twelve months of ambulation

FRACTURES OF NECK OF FEMUR

The Whitman plaster remains the method of choice for fractures of the base of the neck of the femur and bony union can always be secured here in perfect position But the trans-cervical and subcapital fracture is an entirely different problem and in at least 40 per cent of such cases the Whitman method fails to secure bony union Even when union is firm there is frequently shortening of the neck with coxa vara and it has been necessary to retain the complete plaster for a much longer period than was originally described Not only does a patient over 60 years of age strongly protest against three to six months immobilization in plaster but the knee joint is so frequently arthritic that it becomes stiff and painful and he rightly claims that although one disability may have been cured another has been produced Smith Petersen[3] has introduced a three flanged nail which is driven through the neck from the trochanter The length of the nail prevents angulatory displacement and overriding and the three flanges prevent rotational displacement The operation is somewhat difficult and is not to be undertaken lightly but a surprising degree of fixation is secured when the nail is in position No other immobilization is necessary a bandage is applied and the patient sits up in bed moving his knee and hip from the first day Provided that perfect asepsis is maintained and a stainless steel nail used no absorptive changes occur and the nail is still as tight in the bone four months later as it was on the first day of operation For the first time a method of treatment of fractures of the neck of the femur has been described which fulfils the necessary criteria of perfect reduction absolute immobilization and continued functional activity In my own series bony union was secured in seven out of eight* cases despite the fact that activity in bed was never restricted that there was no risk of hypostatic pneumonia no discomfort was suffered full knee movements were practised and normal muscle tone maintained (Fig. 3) The fact that it was not necessary several months after fracture to embark on a long course of physiotherapeutic treatment for the recovery of knee movement reduced the incapacity period by half One patient actually walked (without permission) from the third week onwards and suffered no ill effect There was no mortality although one patient was 80 and five were over 50 years of age The shock of the operation was never a serious factor and there can be little doubt that an old and fragile patient is better able to withstand a twenty five minute operation under spinal anaesthesia than three to six months fixation in a complete plaster spica

* In the case which failed a plated nail had been used—not one of stainless steel Four weeks after operation there was every evidence of absorptive changes round it and when explored it was found to be quite loose There was no infection and incases where a stainless nail is used it is impossible to extract it with ordinary surgical tools even several months after operation one must assume that the quality of the metal has accounted for local irritative effects with resulting hyperaemia and decalcification This difference in reaction between plated metal and stainless steel has been confirmed experimentally

OVER RIDING FRACTURES OF TIBIA AND FIBULA SHAFTS

Fractures of the shafts of both leg bones unaccompanied by over riding offer no difficulty whether in reduction fixation or early functional treatment with weight bearing But if there is over riding due either to total disengagement of the fragments or to the obliquity of the fracture line treatment is much more difficult It is possible by the gravity method to reduce recent fractures and if an expert assistant is available to put them up in plaster The assistant must be prepared however with a very insecure grip on the patient's heel to maintain heavy traction for ten or fifteen minutes to prevent antero posterior and lateral angulation to keep the foot in the same plane of rotation as the patella and to dorsiflex the ankle to a right angle Moreover assistants are not always available they are subject to fatigue and fractures are not always seen within a day or two of injury For these reasons a very simple piece of apparatus has been devised[4] which is portable can be clamped on to any table allows the operator to be entirely independent of assistants and will maintain heavy traction long enough to put the limb up in plaster (Fig. 4) An os calcis pin is used but is removed as soon as the plaster is dry so that there is no risk of infection along its tract The pull behind the ankle joint automatically dorsiflexes the foot to a right angle and at the same time the traction maintains full length and correct alignment The limb is absolutely rigid and the operator may apply whatever lateral pressure is necessary to impact the fragments With practice it is easy to secure just as perfect an anatomical reduction as could be effected by an open operation An unpadded plaster cast extending from the toes to the mid thigh is applied

Weight bearing may be commenced in three to four weeks if the fracture line is horizontal and if the plaster was applied before the onset of swelling so that it still grips firmly With oblique and spiral fractures weight bearing should be deferred for six weeks If the limb is severely swollen when the fracture is reduced the plaster will be very slack in four weeks time and weight bearing must be deferred until a new unpadded plaster has been applied When weight bearing is commenced a sorbo rubber heel is incorporated in the plaster and a cloth boot made to cover the whole foot The sorbo rubber adds spring to the gait and gives very considerable comfort by relieving the jar of weight bearing A patient who has once walked with a sorbo heel plaster will always insist on the rubber being incorporated in any later plaster which may be applied Moreover the fact that he may dress normally covering the plaster with stocking boot and trouser gives him a mental assurance and a protection from inclement weather which will enable him to carry out the stipulated minimum of five miles walking a day

As a rule in eight weeks the fracture is firm enough to allow the continuance of walking with a below knee plaster while at the same time knee movements are recovered No massage or physiotherapy is used The fracture should be firmly consolidated in ten weeks and although manipulation of the ankle for adhesions below the external malleolus is often indicated recovery should be complete in three to four months with a limb indistinguishable from normal

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DISRUPTION OF THE PELVIS

BY

L A H SNOWBALL M B B S M R C P

LATE HOUSE SURGEON HAMPSTEAD GENERAL HOSPITAL

(With Special Plate)

The above term has been used to describe the rare condition of separation of one side of the pelvis from the other usually as a result of separation of the pubic symphysis together with separation of the sacro iliac joint Peabody [1] who reports a series of eight cases in an extensive search of the literature only finds sixty five reported cases in a hundred years Since then one further case has been reported (Sir W Wheeler)

CASE RECORD

The following case would seem to present most of the usual features

The patient a man of 28 was admitted to hospital shortly after a fall of some forty feet down a lift shaft on to a concrete floor He was unconscious but very restless and somewhat cyanosed The pulse rate was 92 but the tension was very poor There was a fracture of the right tibia and fibula and measurement (anterior superior spine to internal malleolus) showed nearly half an inch of shortening on that side However there was also apparent shortening on the *left* side that foot being quite half an inch higher than the right This was confirmed by taking the umbilicus to internal malleolus measurement and palpation of the pelvis showed the whole left iliac crest and pubis to be higher than the right A soft rubber catheter was easily passed and the urine obtained was clear and contained no blood

The patient gradually regained consciousness and complained of great pain especially down the left thigh The pulse rate rose to 140 and he vomited considerable quantities of blood mixed with gastric contents No source of bleeding could be found in the nose or pharynx A swelling developed in the left loin by the next day and for a few days the urine contained a little blood but there was no difficulty or pain on micturition For several days the patient's general condition was extremely poor and investigation of his injuries had to be postponed Some days later x ray examination (see Figure on Plate) showed a disruption of the pelvis with separation of the symphysis pubis and a fracture dislocation of the left sacro iliac joint and the whole left innominate bone displaced upwards over half an inch There was also a fracture through both the pubic and ischial rami on the right side and a fracture of the tip of the fifth lumbar transverse process on the left side The right tibia and fibula were fractured

An attempt was made after some days to reduce the disruption by means of weight extension applied by strapping to the left leg and thigh This did not have any effect and so on the twelfth day after the injury the patient was given a general anaesthetic and the displacement reduced by manipulation A tight bandage was applied round the pelvis and a weight extension of 20 lb to the left thigh maintained to prevent recurrence of the displacement The fracture of the right leg was treated by weight extension by means of a Steinmann pin through the os calcis The patient was kept in bed for four months and at the end of five months with the aid of crutches he was able to get about without pain

COMMENTARY

The condition is generally considered to be due to a severe crushing injury but several reported cases have been caused by a fall from a height Separation of the symphysis pubis is not very uncommon and may occur during childbirth as well as in traumatic cases On the other hand the sacro iliac joint is exceptionally strong and dislocation very rare owing partly to the strength of the posterior sacro iliac ligaments and partly to the support posteriorly of the posterior part of the iliac crest Fracture dislocation may occur including this posterior portion of the iliac crest Wakeley [3] has drawn attention to a bar of thickening in the ilium in the shape of a three-sided pyramid which both by its thickness and by the arrangement of the bony lamellae adds great strength to the bone This three sided pyramid with its apex to the upper part of the auricular surface and its thickened base to the upper part of the acetabulum transmits the body weight from the sacrum to the head of the femur In the case of disruption produced by a fall from a height this thickening in the bone will transmit the force in the opposite direction and either separation of the sacro iliac joint or a fracture through its posterior part may occur

Fracture elsewhere in the pelvic rim is frequently present in this condition but usually shows little displacement Fracture of the transverse process of the fifth lumbar vertebra is also not uncommon and Peabody states that in his series sciatic pain was not a marked feature, except in the cases with this fracture in addition Two of the most prominent features in the condition are the severity of shock and the rarity of visceral complications Double dislocation with both innominate bones torn away from the sacrum as well as separation of the pubic symphysis has been described [4] as a result of a severe crushing injury but resulted in death in a few minutes

Treatment

Most of the reported cases have been treated by gradual reduction by means of weight extension This was attempted in the present case for a few days, but showed no effect Reduction by means of manipulation under an anaesthetic is usually successful, though often it has to be delayed for some days owing to the degree of shock Peabody after fixing the foot of the affected side tilts the table nearly to the vertical and then manipulates the pelvis into position under the fluorescent screen The position is maintained either by plaster or a tight belt, and a weight of 20 lb applied to the limb to prevent recurrence The eventual result in most of the reported cases is remarkably good

I am indebted to Mr W H Ogilvie for permission to publish this case and to Dr H Courtney Cage for the radiograph

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SPONTANEOUS CURE OF SPINA BIFIDA WITH CONGENITAL DISLOCATION OF THE LUMBAR SPINE

BY

DAVID KYLE M A M B Ch B

GLASGOW

(With Special Plate)

In this case a girl now 12 years of age was found at birth to have a soft swelling over the lumbar spine which was regarded and probably correctly as due to spina bifida In the course of time the soft swelling disappeared and is now replaced by a swelling of stony hardness without the slightest suggestion of any soft place at any part of its surface The neural canal is now closed completely but the roof appears to be broader than normal devoid of spinous processes and bounded laterally by two osseous ridges which meet at the upper border of the swelling but disappear at the lower border without approaching each other This bony prominence is roughly circular, with a diameter of about five inches and is raised fully one inch above the general surface of the body

X Ray Findings

About four months ago the girl was brought to me for an x ray examination The lateral view of the spine shows the relation of the parts and a skiagram of the feet demonstrates the associated trophoneurosis in the deformity of the terminal phalanx of the left great toe with premature union of its epiphysis and in the outline of the soft tissues (See figures on Plate)

The upper portion of the lumbar spine consists of poorly developed vertebrae and is directed downwards and backwards The fourth vertebra is better developed and is directed upwards and backwards so that its articular surface lies at right angles instead of being nearly parallel to the upper portion The laminae of the third and fourth vertebrae appear to have become united and thus give some security but in all probability the chief source of stability is ligamentous union together with an intervertebral disk on the superior surface of the fourth vertebra By that means the weight of the body is being transmitted to the pelvis but on account of the obliquity of the opposing surfaces the weight is borne by the spinal column at considerable mechanical disadvantage so that part of the weight is tending to increase the deformity

The antero posterior view of the spinal column shows a marked scoliosis of both the dorsal and lumbar regions As one would expect the lumbar spine shows a greater breadth than normal but it shows nothing to indicate that the lateral view would reveal such definite evidence of altered structure

General Clinical Features

Both lower limbs are remarkably well developed but the left foot is slightly smaller than the right There is neither paresis nor wasting of the muscles of the left leg as far as the ankle Flexion and extension of the left ankle can be performed in a normal fashion but dorsi flexion of the left toes can be carried out only to a very slight degree plantar flexion and abduction of these toes cannot be effected at all The movements of the right foot are normal and sensation also is normal There is anaesthesia of the left leg and foot from a line about two fingerbreadths below the knee This area of anaesthesia corresponds to the segmental cutaneous distribution of the fourth and fifth lumbar and the first sacral nerves Over this area the patient is unable to feel the prick of a needle or to distinguish between a test tube of cold water and one of hot water From time to time the skin on the plantar surface of the left great toe becomes black and gives rise to a painless ulcer but at present there is no ulcer and the only clinical evidence of trophoneurosis is the diminution of the pad of soft tissue on the plantar aspect of the terminal phalanx and the greatly thickened hardened and flattened epidermis The tip of the left second toe is somewhat reddened but the skin has never broken down

In general appearance the girl looks healthy and is well nourished but as the result of the scoliosis and the lumbar deformity she is only 4 ft 11 in in height She is above the average in intelligence and is a good scholar She is active on her legs walks well and can run about in the usual children's games She has not had any of the infectious diseases of childhood nor has she had nocturnal enuresis or any rectal trouble

Comments

Because of the condition of her back she was not encouraged to take to her feet early and did not begin to walk until she was 2½ years old At 5 she was fitted with a plaster jacket which she wore for three years and after that had a special form of corset not very stiff and laced with elastic This she continued to wear until as the result of the radiographic finding she was fitted with a new jacket of cage like pattern constructed with light bars of aluminium incorporating a crutch under both armpits and a band of aluminium round the upper part of the pelvis to avoid as far as possible any undue strain on the lumbar dislocation Dr John Reid of Forth Lanarkshire who had been present at the birth of this girl states that he remembers her and certainly thought that the swelling in the lumbar region when she was born was a spina bifida It was *quite soft*

It appears therefore that the nature of the swelling is beyond reasonable doubt and that it should be regarded as an example of spontaneous cure of a spina bifida associated with congenital dislocation of the lumbar spine Not all cases of spina bifida are associated with such great alteration in the bodies of the vertebrae In many if not in most the maldevelopment is confined to the neural arch which makes it all the more remarkable that this case showing such a gross disturbance of the vertebral bodies should have undergone a spontaneous cure That the child is healthy and intelligent and appears to have a very good prospect of completing the allotted span is also noteworthy

For the opportunity of examining and recording this interesting and rare case I am indebted to Dr J N Jamieson of Kelvinside Glasgow and I am grateful to Dr John Reid for his reply to my query

REMOVAL OF AN ASCARIS FROM THE COMMON BILE DUCT

BY

J B G MUIR MB BS FRCS

PRINCIPAL MEDICAL OFFICER THE JULIA NING AD INISTRATION TIENTSIN NORTH CHINA

(With Special Plate)

Invasion of the biliary tract by parasitic worms is by no means a rare occurrence A *complete Taenia saginata* ten feet long has been found in the gall bladder of an old man operated upon for acute cholecystitis (Benedict) It is more usual however for the invading worm to be an ascaris and Wyles has collected ninety reported cases where ascarides have invaded the common bile duct and in some instances reached the gall bladder a situation where they have been found forming the nuclei of gall stones Such invasion is usually complicated by impaction of the worms with obstruction of the common duct Superadded acute infection results leading eventually to the death of the host the cause being discovered post mortem Thus at a necropsy on a young girl six abscesses were found on the surface of the liver each containing a large coiled up ascaris (Sivasambandan) and at another on an infant of 11 months 300 ascarides were counted in the duodenum alone others being found in the bile ducts and in cavities in the liver (*Simicco*) It is rather unusual however to detect at actual operation an ascaris in the process of invading the gall bladder and for this reason I consider the following case worthy of publication

Case Report

A Chinese coolie aged 30 was admitted with severe pain in the upper abdomen at 10.30 a.m. on [illegible] 1931. He collapsed and was found lying doubled up on his bed [illegible] He was brought to the Tong Hsu Hospital at 3 p.m. On admission he was in great agony He had vomited [illegible] and his pain was localized over the gastric region [illegible] 100 temperature 97° F There was marked rigidity of the upper abdomen and tympanites was present but bowel sounds was unimpaired Slight icterus of the conjunctivae was

observed A white blood count showed a leucocytosis of 21 000 with 85 per cent polymorphs He resembled a case of severe biliary colic with associated acute cholecystitis or a localized duodenal perforation and as his pulse rate was increasing I decided that exploration was indicated

Operation

This was performed at 6 30 p m under open ether anaesthesia The abdomen was opened by a right paramedian incision and slight intestinal distension was observed but no signs of peritonitis The gall bladder was tensely distended and the adjacent peritoneum of the gastro hepatic omentum appeared congested and oedematous On palpating the neck of the gall bladder I felt something exactly resembling a piece of whipcord which could be traced in continuity into the cystic duct and even more plainly felt in the supra duodenal portion of the common duct On incising the cystic duct longitudinally this was found to be an ascaris completely filling the lumen I seized it with forceps and tried to extract it but it appeared to be impacted the forceps cutting through the body The common bile duct was then incised and the distal portion of the ascaris measuring 5½ inches long was easily removed with common duct forceps On removal it still exhibited movements There now remained the proximal portion of the worm impacted in the cystic duct and gall bladder and these were accordingly removed in the usual way this portion of the worm measuring 2¼ inches long

Progress

As infection of the common duct appeared probable a fine rubber drainage tube was inserted into it through the exploratory incision in the duct and retained in position by a fine catgut stitch being connected through the abdominal wound to a bile collecting bottle A large drain was then inserted down to the subhepatic region through a stab wound on the right of the laparotomy incision and the abdomen closed Free bile drainage occurred from the tube in the common duct until the eighth day when it became loose and was removed The stools which had been somewhat clay coloured now resumed their normal colour A little bile and serum continued to drain from the larger tube until the tenth day when it was removed the tract closing rapidly The patient made an uninterrupted recovery and left hospital twenty six days after operation Subsequent anthelmintic treatment with santonin resulted in his passing nine ascarides The accompanying photograph shows the actual operation findings The gall bladder which has shrunk considerably is cut open and pinned out to show the proximal portion of the worm protruding into it from the cystic duct which is ligatured the ligature including the worm The larger portion removed from the common duct is seen pinned out alongside it

COMMENTARY

The most striking clinical feature of this case was the extreme agony exhibited by the patient I have seldom seen a patient in such pain except perhaps in a few cases of acute pancreatitis

Surgical complications of ascariasis are generally caused by the migratory tendencies of the parasites Although their normal habitat is the small intestine they may enter the stomach and be vomited this occasionally happens during post anaesthetic vomiting Ascarides have been found in the nasopharynx appearing through the nose and may in exceptional cases enter the Eustachian tube and set up acute middle ear symptoms They have been known to find their way via the larynx and trachea to the bronchi and set up pneumonia their ova being found in the sputum In the abdomen ascarides may complicate or actually cause many surgical conditions Such complications however are generally met with in tropical rather than temperate climates and in countries where owing to lack of hygienic methods and cleanliness in the preparation of foodstuffs the individual infection rate of the population is very high The use of human excreta to fertilize vegetables is a prolific cause of infection as also is a contaminated water supply In China for example, where such conditions are widespread ascariasis is especially prevalent, the infection rate of the total population is estimated to be as high as 60 to 70 per cent (Jeffrey and Maxwell) Ascarides may occur in such numbers as actually to cause acute intestinal obstruction This usually arises through the impaction of a mass of worms in the terminal ileum and illustrative cases of this have been published by Hamid Landsborough and Ryrie Such mass infection may seem almost incredible but the celebrated case reported by Allbutt where a boy of 12 passed over 5 000 worms in three years and more than 600 in a single day illustrates in what quantities they may abound in one individual's intestine It is not uncommon for ascarides to enter the vermiform appendix and cause trouble by obstructing the lumen I have twice removed the appendix for acute symptoms, and divided the body of an impacted worm in so doing Villiger describes a case where at operation for suspected acute appendicitis in a child of 10 the symptoms were found to arise from a Meckel's diverticulum distended by ascarides

Unsuspected ascarides may cause troublesome post operative complications In April, 1929, I performed a posterior no loop gastro enterostomy on a man aged 40 for a large pyloric ulcer He made excellent progress until the tenth day following operation when persistent vomiting commenced, and it appeared as if some kink or obstruction to the efferent loop had occurred After gastric lavage however he vomited seven ascarides with complete relief of the symptoms They had presumably been blocking the efferent loop a complication which could have been avoided by preliminary anthelmintic treatment It does not seem likely that an ascaris can penetrate a normal healthy intestinal wall and its presence in the peritoneal cavity can only be explained by undue thinning perforation or ulceration of the intestine Thus in surgical practice in the industrial areas of North China where one has to deal with numerous cases of abdominal trauma it is quite common to remove ascarides from the peritoneal cavity when operating on cases of ruptured or perforated intestine Their presence however does not appear to increase the mortality of such cases unduly this depending largely as elsewhere on the time factor extending between the injury and the operation

During recent Chinese civil wars, in several cases of faecal fistula following gunshot wounds of the abdomen treated locally ascarides were occasionally found under the wound dressing, whence they had made their way from the intestine via the fistulous track Needless to say suitable anthelmintic treatment was necessary prior to surgical closure of the fistula

Consideration of these few surgical conditions and complications caused by ascaris emphasizes how necessary it is for surgeons, operating in a country where this parasitic infection is individually heavy to subject all casual abdominal operation cases to preliminary anthelmintic treatment prior to operation if there is the slightest evidence of ascaris infection—a fact easily ascertained on routine stool examination for the ova

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

RIGHT SIDED ARTIFICIAL PNEUMOTHORAX COMPLICATED BY ALMOST COMPLETE LEFT SIDED SPONTANEOUS PNEUMOTHORAX

(With Special Plate)

A girl aged 14 whose father died of pulmonary tuberculosis two years ago was admitted to Winsley Sanatorium on December 9th 1931 A history of whooping cough when she was 9 years old followed by small spasmodic haemoptyses which reacted to none of the usual measures was given by her mother

On admission no definite physical signs were found and a radiograph (Fig 1 on Plate) showed bilateral shadows if anything more pronounced on the right side These shadows were more marked than they should have been She had no clubbing and as the symptoms did not point to a bronchiectasis we did not inject lipiodol She was treated by routine sanatorium methods and her weight improved by 9 lb Temperature pulse respiration etc were all normal but the small haemoptyses still continued The sputum was examined seven times but no tubercle bacilli were ever found The haemoptyses bore no relationship to her sex as she has not menstruated while here The Mantoux test was done and gave a slight positive reaction

On March 15th 1932 it was decided to do a right sided artificial pneumothorax This was completely successful and uneventful The readings were

March 16th	−10	−2
	500 c cm	
	−5	±2
March 17th	−12	−6
	500 c cm	
	−8	−3
March 18th	−11	−4
	600 c cm	
	−6	−2

In five subsequent ones the final pressures were all negative

The haemoptyses lessened and stopped on April 5th She was up all day walking half an hour in the morning and in the afternoon On April 16th we thought we would increase the final pressures to a positive pressure and decided at the same time to take the pressures in the contralateral side for information The screen on this day showed that the right lung was collapsed to about one sixth of the normal size The readings were

Right (artificial pneumothorax) side	−2	+2
	700 c cm	
	−2	+4
Contralateral side	−7	−2

These contralateral readings remained constant during the refill and we obtained the reading absolutely at once

That night she complained of pain on the left side and of feeling her heart stop but this we put down to nervousness due to the pressures being taken on both sides and to the fact that patients receiving artificial pneumothorax with their pseudo intelligence are very knowledgeable about the whole matter On April 18th she was screened and nothing abnormal was found The extra pressures had apparently no marked effect on the collapse and the contralateral side was in its usual condition She was of course kept in bed and on April 22nd was screened when to our intense surprise we found an almost complete spontaneous pneumothorax on the contralateral side and the artificial pneumothorax side showed that the lung had come or had been pushed out to fill over one half of the normal space of the right chest (Fig 2) During this time the temperature pulse and respiration remained practically normal Some fluid was present in the left costo diaphragmatic angle

The astounding feature of this case is the fact that she survived the spontaneous pneumothorax Now the patient feels well and is anxious to get about Both lungs are expanding and we have decided to let them out now as we think it too dangerous to risk any further accident

JAMES D MACFIE M B Ch B
Senior Resident Medical Officer Winsley Sanatorium
ARTHUR J P ALEXANDER M D M R C P I

HYDATID CYST IN LUNG

(With Special Plate)

The following case of hydatid disease of the lung which was successfully operated upon was thought to be of sufficient interest to justify publication

HISTORY OF CASE

An Armenian woman aged 53 years was admitted into the Medical College Hospital on July 16th 1931 for the treatment of fever headache pains all over the body and a ticklish throat cough of three days duration

She had had an attack of typhoid fever when 3 years of age Ten years ago she hurt herself on the head and since then she has had headaches off and on Six years ago she sustained an injury and had haematuria owing to it only once She had all her teeth extracted on account of pyorrhoea six months back

Physical examination revealed that the patient was well built there was no anaemia no cyanosis no jaundice Temperature on admission was 99 4° F pulse 84 and respirations 22 There was a slight bulging of the right infraclavicular fossa and a little downward Vocal fremitus was markedly diminished in front on the right side in the upper three interspaces which were also dull on percussion and over which the breath sounds were absent No hydatid thrill could be elicited Breath sounds were also diminished on the right side on the back in the upper part Vocal resonance was markedly diminished in front over the right three upper interspaces no adventitious sounds were present over this area The remaining portion of the right lung and the whole of the left lung were normal Apex of the heart was in the normal position Spleen was palpable about four finger breadths below the costal margin lower border of the liver not palpable Upper border was in the sixth rib in the mid clavicular line and in the eighth rib in the mid axillary line There was no other abnormality in any of the organ

The blood was normal There were no parasites Napier's and Chopra's tests were negative Blood pressure 120 85 Wassermann reaction strongly positive Urine was normal The patient having recovered from her fever was subjected to a radiological examination of the chest on July 22nd This revealed a well defined circular opaque shadow on the right side extending from the level of the second rib downwards to the seventh rib and medially up to the right border of the sternum (see Plate)

An exploratory puncture was next made in the right third space in the mid clavicular line and 5 c cm of crystal fluid was withdrawn Microscopical and cultural examination of the fluid was negative A clinical diagnosis of hydatid cyst was given and as the cyst was of the size of a foetal head in the immediate vicinity of the heart a consultation was held with my surgical colleague Mr Pinchanon Cluttery whereupon it was decided that it should be removed It was therefore operated upon on August 1st by my surgical colleague in my presence A cyst about the size of a foetal head was found which occupied the interval between the middle and lower lobes of the right lung and was overhung on all sides by a thin layer of lung tissue The wall of the cyst was almost in contact with the heart Fluid removed from the cyst showed hydatid elements (see Plate)

COMMENTARY

Physical examination of the chest suggested a localized cyst but the correct diagnosis was only possible on the strength of the characteristic shadow and the nature of the fluid withdrawn by exploratory puncture in conjunction with the history of absence of symptoms and

a good general health The microscope failed to shed any light on this case before the operation It is curious that there were no eosinophilia in the blood The complement fixation test could not be performed as there was no hydatid antigen available in the pathological department

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AN UNUSUAL FOREIGN BODY IN THE FINGER

(With Special Plate)

The following case seems worthy of record on account of the unusual nature of the foreign body and also perhaps because of the ease with which it was removed

A girl aged 4 suffering from chicken pox had her temperature taken by her mother As the mother shook the thermometer down the child put out her right hand to seize it and struck the thermometer with the result that the bulbous end broke and penetrated the middle finger near its base The little punctured wound did not heal completely and a swelling developed at the side of the proximal phalanx

The child was first seen seven weeks after the accident The swelling was by then a well defined nodule under the skin (which was a little reddened over it) was mobile under the skin and over the bone and was not tender A radiograph (Fig 1 on Plate) showed mottling with very opaque dots in the area of the swelling quite obviously due to the presence of droplets of mercury from the thermometer An incision exposed a fibrous nodule which was easily excised entire Fig 2 is a radiograph of this nodule shrunk down after removal

I am indebted to Dr Ulysses Williams for the radiographs and to Mr Pearce Gould for permission to publish the case

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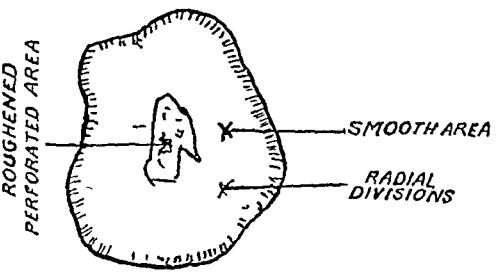
DIVERTICULUM OF DUODENUM ASSOCIATED WITH CALCULUS FORMATION

The following case appears to be sufficiently unusual to warrant report

The patient was a woman aged 49 An interesting point in her previous medical history is that she had a carcinoma of the cervix (confirmed histologically) treated six years ago by panhysterectomy by my father without any signs of recurrence either clinically or detectable on examination at operation She was extremely neurotic and introspective which made her symptoms difficult to assess but out of a variety of complaints emerged the following (1) For four years she had had flatulent dyspepsia She had never been jaundiced (2) She had a dull aching pain in the right hypochondrium (3) She had had attacks of acute pain starting in the above situation radiating to the back and accompanied by bilious vomiting Seen during an attack there was rigidity and tenderness in the right hypochondrium A straight x ray was negative and the gall bladder was not outlined after the administration (orally) of dye A diagnosis of gall stones was made and the patient eventually consented to operation

The abdomen was opened by a right upper paramedian incision The gall bladder and ducts were found to be free from gall stones and apparently normal The stomach pylorus and first part of the duodenum were normal as were both kidneys A small hard movable mass was detected in the base of the transverse mesocolon to the inner side of the second part of the duodenum This was exposed and was found to be formed by a diverticulum about the size of a normal gall bladder arising by a narrow neck from the posterior surface of the duodenum in the neighbourhood of Vater's ampulla The neck was crushed ligatured divided and infolded and the diverticulum removed The appendix was removed and a general examination of the pelvis made which as stated above disclosed no signs of recurrence of malignancy

The patient made an uninterrupted recovery and has been free from symptoms since The diverticulum was found to contain a large annular stone about one inch in diameter nearly perforated in the centre apparently consisting mainly of cholesterin and faintly divided radially into sections It appeared as though it might have been formed by the fusion of a series of smaller stones in a circle



DISCUSSION

Diverticulum of the small intestine is comparatively rare The causes are —(1) Mechanical (*a*) increase of pressure from within the cause of this in duodenal diverticula according to Keith being enteroptosis and partial obstruction of the duodeno jejunal junction (*b*) weakness of the wall the diverticula usually occurring at the line of entry of the vessels (2) Developmental (*a*) Meckel's diverticulum (*b*) pancreatic rests at the ampulla of Vater or the opening of the duct of Santorini or in the case of certain diverticula of the ileum resulting from accessory pancreatic tissue (3) Inflammatory (*a*) in appendicular diverticula, (*b*) in diverticula associated with duodenal ulcer

Duodenal diverticula occur most commonly in the neighbourhood of the ampulla of Vater after that in the first part and lastly in the third part of the duodenum It would appear that in this case the cause was mainly mechanical with a possibility of a pancreatic factor though unfortunately the diverticulum was not examined histologically The question arises as to where the stone originated It appears to consist of sections welded together into a ring Wherever it or its component parts first started to form—as for instance in the gall bladder—it is quite obvious that it could not have passed down the ducts in its final state Its ultimate development must therefore have taken place in the diverticulum in which it was found Which was the primary condition, diverticulum or stone is difficult to say

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Reports of Societies

PHYSIOLOGICAL EFFECTS OF ALUMINIUM

At the meeting of the Society of Public Analysts held at Burlington House on June 1st Dr L H LAMPITT Mr N D SYLVESTER and Mr P L BILHAM presented technical reports on the determination of aluminium in foods and Dr J H BURN read a paper on the physiological effects of aluminium

Dr Burn recalled that the first extensive investigation of the physiological effects of aluminium salts was made in 1886 by Siem working under H H Meyer Siem found that doses corresponding with 30 to 40 grains of alumina for a man had no effect whatever when administered by mouth to cats daily for four weeks When the aluminium salt was injected under the skin the fatal dose varied from 0 25 to 0 30 gram of alumina per kilogram

These results indicating that aluminium had some toxicity when injected but was harmless by mouth had in substance been confirmed by many subsequent workers Siebert and Wells examined the pathological changes produced by injecting alum and aluminium chloride they found that anaemia was manifested after nine or ten daily injections a fall in the haemoglobin percentage and in the red cell count being recorded In the spleen pigmentation thrombosis and fibrosis were observed The experiments of McCollum and his colleagues and those of Myers and Mull showed conclusively that the addition of aluminium salts to the diet of young rats had no ill effect on growth health and reproduction even when four successive generations were observed The experiments of Myers and Morrison and of Underhill and Peterman showed that when aluminium compounds were given by mouth to dogs only insignificant changes in the amounts of aluminium in different tissues were found it followed that aluminium salts were not absorbed from the alimentary tract except in traces As a result of a scare in the United States that the use of aluminium baking powders was dangerous to health the Department of Agriculture instituted a board of inquiry The report published in 1914 described experiments on twenty six university students carried out in three different universities who were given amounts of alum varying from 0 2 gram to 10 grams daily for about six months It was unanimously reported from the results of these experiments that the amounts of alum likely to be consumed as a result of alum in baking powder estimated as up to 1 16 grain of aluminium per person per day were much too small to have any ill effect The amounts of aluminium which arose from aluminium vessels were estimated from analyses carried out by Massatch to be about 0 1 grain per person daily Thus the dangers arising from aluminium utensils had been very thoroughly investigated by many workers on many species of animals they had also been investigated with equal thoroughness on man These dangers were non existent Clinical reports that symptoms of abdominal pain were relieved by discontinuing the use of aluminium must be ascribed to psychological effects which were very common in medical practice

PROBLEMS OF VISION

At a meeting of the Physical and Optical Societies at the Imperial College of Science and Technology South Kensington on June 3rd a discussion was held on problems of vision About thirty papers were presented including several from universities abroad the United States Canada Germany Italy and Finland

Anyone coming fresh to the subject would have been rather startled by the fact that more than a hundred years after the death of Thomas Young who has been called the founder of physiological optics there should still be so little agreement and so much confusion with regard to the fundamental principles of vision As Professor W Peddie of Dundee pointed out with the single exception of the theory of light itself there has been no example of so prolonged and intense divergence of view as that which has been exhibited in connexion with this subject Professor Peddie added that this was unavoidable a consequence of the complexity of the phenomena involved and of the fact that purely subjective impressions were in question The difficulties of explanation were so great that even Helmholtz confessed himself totally unable to find a clue to the simplicities underlying the complexities

Sir JOHN PARSONS in a short paper on the same theme said that for its proper understanding vision required a knowledge of physics physiology and psychology The visual apparatus was really to the physicist exasperating It was an analysing instrument similar to but far more complicated than the measuring instruments with which he was familiar It was never constant and its variations were protean It combined the functions of a telescope microscope photometer colorimeter and camera and in none of these functions was it constant except for infinitesimally short periods In each of its functions its sensitivity varied sometimes to a colossal extent not only according to the quantity and quality of the incident stimuli but also to the quantity and quality of previous and of contemporaneous stimulation of neighbouring areas In the eye there were two receptive systems—one acting at low intensities of light and the other at high—and their responses were quantitatively qualitatively and spatially different it was not known yet whether both were always in action at the same time or had reciprocal actions upon each other The exquisitely nice adjustment of these variables had adapted human vision in such a manner that the eye was the most perfect organ of sensory discrimination to be evolved Sir John Parsons contented himself with pointing out some of the problems to which this complexity gave rise All investigators psychologists as well as physicists he said seemed to agree that a visual sensation was adequately described in terms of hue saturation and brightness yet probably few scientific workers on the subject felt quite satisfied about it What was the relation between brightness and saturation? The problem troubled Helmholtz and had not yet been solved The trichomatic theory sufficed to explain colour mixture and the unsaturation of spectral hues on the basis of stimulus values but totally failed to explain the luminosity curve of the photopic spectrum The right measuring rod had not yet been discovered

THE MECHANISM OF COLOUR VISION

Professor L C MARTIN gave a preliminary report on some experiments on the sensitiveness of the eye to differences in the saturation of colours This work has been proceeding for two years in the colour vision laboratory at the College assisted by the Medical Research Council The object has been on the one hand to determine the accuracy of colorimetric measurements and on the other to help to elucidate the still unsolved problem of colour vision The experiments described were interesting but the conclusions so far reached did not lend themselves to useful summary Dr SELIG HECHT (America) contributed a paper in which he put forward another quantitative formulation of colour vision Some of his remarks about colour blindness were interesting There were probably he said at least two causes for colour blindness—namely changes in the nervous system and changes in the retina—and at present it was not known how to separate the two It seemed necessary to adopt the idea that in colour blindness the spectral characteristics of one of the receptors were changed so that it became identical with one of the others For example a photosensitive substance in the green cones might become changed so that its absorption spectrum (and probably its chemical constitution) became identical with that in the red cones In these circumstances the changed green cones and the red cones would be equally stimulated by light of any wavelength the rest of the mechanism remaining undisturbed Thus there were no means for such an eye to discriminate hues in the spectrum from the beginning of the yellow region onwards to the red all this region appearing predominantly yellow Nevertheless Dr Hecht was not convinced that colour blindness could be completely described in such comparatively simple terms

Professor J DREVER of the psychological laboratory Edinburgh University spoke on colour fundamentals One

of his points was that yellow must be given the status of a fundamental colour, in colour theory one was not warranted in looking on it merely as a mixture of red and green Another communication on colour vision was read by Mr H E ROAF of the department of physiology of London Hospital Medical College There were three sets of receptors in the retina he said one stimulated by all visible sensations a second by wave lengths from blue to extreme red and a third by wave-lengths from yellow to extreme red Thus red light would stimulate all three, green light would not stimulate the red perceiving mechanism and blue light would stimulate only one set of receptors The receptors stimulated by the whole spectrum probably gave rise, when weakly stimulated, to a bluish white sensation, and when stimulated more strongly to blue or violet

RETINAL STRUCTURE AND FUNCTION

The subject of visual acuity and retinal structure was discussed by Mr R S CREED Fellow of New College Oxford, As he admitted his communication chiefly showed how complicated an apparently simple subject may be A knowledge of the mosaic structure of the rod and cone layer of the retina coupled with construc tions derived from geometrical optics although an essen tial was not an adequate equipment for a discussion of visual acuity On the physical side regard must be paid to the intensity of the stimuli and to the imperfections of the retinal image The physiological and psychological factors included the properties of the receptors and of the complicated paths by which excitation was conveyed from them to the sensorium the possibility that absence as well as presence of luminous flux might stimulate the retina the sharpening of contours in the percept by simultaneous contrast with interaction at physiological and psychical levels and the steadiness with which fixation could be obtained by the muscles With so many factors at work simple answers to the problems must not be expected Professor RAGNAR GRANIT of Helsingfors dis cussed the physiological significance of the retinal synapses defining the retina as a nervous centre projected on to the surface of the body with as in other nervous centres confluent paths There were two principal direc tions of retinal conduction with three crossing points and at each of these the two principal reactions of summation and inhibition might take place Dr W D WRIGHT spoke on fatigue and depression of sensitivity and Mr H BANISTER of Cambridge discussed retinal reaction time Every car driver and ball player knew that the time taken in reacting to a visual stimulus was much greater in poor than in good light The difficulty in driving a car at twilight was largely due to longer retinal reaction time The pedestrian or other object was observed a fraction of a second later than usual which fraction of a second might if the car was travelling fast represent a consider able distance on the road In some individuals retinal reaction times in the two eyes markedly differed in which cases the individual was severely handicapped in all operations with a rapidly moving object and was probably a dangerous driver in a fast car

HEPATO SPLENOGRAPHY

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland held on April 29th with the president Mr R ATKINSON STONEY in the chair Mr F J MORRIN reported a case of abdominal tumour

Mr Morrin said that the patient a woman aged 33 had had a painless tumour in the left hypochondrium with all the clinical characteristics of an enlarged spleen The blood picture excluded splenic anaemia and a pyelo gram showed a normal renal pelvis Thorotrast was em ployed to demonstrate the liver and spleen radiographic ally Lantern slides, taken two five and ten days after the injection were shown Thorotrast, the speaker said, was a 25 per cent colloidal solution of thorium dioxide which was stable and non toxic Following intravenous injection it was deposited in the reticulo endothelial cells of the body Owing to the fact that the liver and spleen were especially rich in these cells the drug was deposited in sufficient concentration to render the organs opaque Concentration of the salt was slow and its excretion even slower Radiograms taken forty eight hours and ten days after the injection of the full dose showed the liver and spleen clearly outlined In describing the technique of administration Mr Morrin said that a small dose of 10 c cm should be given in the morning and if no reaction—shown by nausea or vomit ing—appeared a further dose of 15 c cm might be given the same evening The necessary dose was from 50 to 75 c cm given intravenously during three to five days Contraindications to its employment were advanced liver cirrhosis, definite fibrosis and advanced parenchymatous involvement of the liver and spleen advanced jaundice and renal deficiency The method had its limitations but might be useful in the differential diagnosis of obscure abdominal tumours Hepato splenography in this case showed a normal liver and spleen A bismuth enema was arrested at a point just distal to the splenic flexure Operation revealed a large tuberculoma of the transverse colon involving the splenic flexure A resection of the tumour was performed and the operation completed by a lateral anastomosis of the bowel The post operative course was uneventful

The PRESIDENT congratulated Mr Morrin on being the first person in Dublin to try this method and show his results This case was very interesting because although tuberculoma of the caecum was fairly common—in some cases the diagnosis between it and carcinoma was ex tremely difficult—cases of tuberculoma in other parts of the intestine were very rare In this case he thought that the difficulties in making a diagnosis must have been very great The method made the fact clear that one was not dealing with an abnormal spleen The use of the method was somewhat limited and until more expe rience had been gained he personally would be slightly diffident about using it in all cases Dr G C DOCKERAY said that it was supposed that antibodies were formed by the reticulo endothelial system Having regard to this fact he wondered whether there would be any objection to blocking the reticulo endothelial system with thorium in patients who were very ill Dr BOUCHIER HAYES asked if thorium had been tried in cases of subphrenic abscess and if anything was known about the work which had been done with thorium in cases of glandular en largement in malignant disease

Mr MORRIN in reply said he thought that in patients who were very ill the method was contraindicated It would probably help in the diagnosis of subphrenic abscess but he had never tried it in such a case He had had no experience of it in malignant disease

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The eighth annual report of the Ella Sachs Plotz Foundation for the Advancement of Scientific Investiga tion shows that this institution has made grants amounting to $11 400 to research workers in seventeen different countries during the current year Preference has been given as before to expenditure concerned with the elucidation of a single problem or closely allied problems and eight of the sixty four investigations have been devoted to nephritis Endocrinology neuro logy and pathology also figure in the list while two grants have been made in respect of the study of adrenal cortex extract

Reviews

HUGHLINGS JACKSON'S WRITINGS

The second volume of *Selected Writings of John Hughlings Jackson*[1] which has recently been published maintains the high standard of the first and the two volumes constitute a most important contribution to the literature of neurology. The second volume deals with those aspects of the functions of the nervous system in the consideration of which Jackson's philosophical insight found its greatest scope. It contains lectures and addresses *on the evolution and dissolution of the nervous system* including his Croonian Lectures on this subject on affections of speech as well as on various other subjects. Jackson's teaching upon these questions is too well known to need restatement in a review. Those who are familiar with it only as a kind of traditional background of neurological thought will find on reading his original papers that a merely superficial acquaintance with his ideas conveys a very inadequate impression of his contribution to neurology. Although it is his broad generalizations which have become most widely known one is constantly *astonished at his intuition of the significance of details upon which in fact his generalizations are based*. For example his conclusions concerning the representation re representation and re re representation of the heart in the lowest middle and highest centres of the nervous system published in 1887 are a striking anticipation of recent discoveries of sympathetic centres in the hypothalamus and cerebral cortex and his observations upon our estimation of time may be commended to philosophers who perhaps prematurely are convinced of the universal validity of the conceptions of modern mathematical physics.

MICROBIOLOGY

Précis de Bacteriologie Médicale by A. PHILIBERT follows the usual practice deals with the pathogenic protozoa and fungi as well as the bacteria. This has its origin in the fact that in the medical curriculum all these things are grouped together under the one heading bacteriology but it is none the less illogical and tends to give the impression that bacteriology is a collection of odds and ends and not a science. If it is expedient to group together these different pathogens then surely the term microbiology would cover them.

The book is divided into three portions the first of which is devoted to bacteriological technique and the wise course is followed of giving a single method for each operation thus avoiding that bewildering choice which is so confusing to the student. The directions are clear and concise and the author has included a useful chapter on hydrogen ion concentration. Here also are chapters devoted to the examination of blood cerebro spinal fluid serous exudates faeces urine etc. the main object being to indicate the part which the laboratory can play in aiding the clinician. Part II concerns itself with the study of the different pathogenic microbes. So far as the facts are concerned the way they are set out in this part of the book is quite good. Points still under dispute are presented impartially for instance the question of the tubercle bacillus having a filtrable phase and the preventive inoculation with B C G are both treated in an eminently reasonable manner. What we feel inclined to criticize is the method of classification adopted by the author. The bacilli of tubercle leprosy and glanders for instance are classed as fungi but they are not grouped with the other parasitic fungi which appear together at the end of the book under the heading champignons parasites. Trypanosomes and leishmania are separated from the protozoa and grouped with spirochaetes as flagellates the remaining protozoa appearing under a separate heading of autres protozoaires. Then when we come to filterable viruses we find these divided into three groups virus cytotropes microbes inclasses and 'virus in certainement connus. The last group contains scarlet fever measles typhus yellow fever psittacosis varicella zoster and one or two others while the first group includes vaccinia rabies distemper encephalitis lethargica herpes mumps trachoma Rous sarcoma and the bacteriophage the outstanding characteristic of this group being given as their inability to produce inflammation caseation or necrosis as do the ordinary bacteria and the fact that they can only be inoculated by the *intracellular* route. This classification does not stand the most superficial examination and we feel that in the present state of knowledge any attempt to sort out the filterable viruses is quite unwarranted. In Part III a very brief account is given of the origin of pathogenic microbes the mechanism of their action in producing disease and immunity.

The author evidently has a wide knowledge of the literature and it is a pleasure to find due credit being given to work done outside France. But our satisfaction on this account would be even greater if the authors' names were not so often misspelt or even given incorrectly in some cases. The book is profusely illustrated much of the reproduction being in colour and though sometimes rather crude these figures should be helpful to the student. There is an index—short but noteworthy because indexes are very rare in French textbooks.

NUTRITION AND DIET

We are glad to welcome a new edition of McLESTER'S *Nutrition and Diet*[2]. While conforming in general plan to the first edition the second has been brought up to date and several sections have been rewritten. In his preface the author shows that he is fully alive to the rapidity with which this subject changes and the necessity for constant revision. His work is full of accurate and serviceable information and it would make a most useful textbook for a post graduate course in nutritional therapeutics should such a thing ever exist in this country. Not least among the attractive features of the book is the number of practical instructions it contains. The treatment of various diseases—in so far as they come within the scope of the work—is dealt with in full and not only diet sheets but also the meal times are often given. In this connexion it is amusing to note that during an intensive rest cure (pp. 744-747) it is thought necessary to rouse the patient at 6 or 6.30 a.m. to give him orange juice and that during a day of fifteen hours four only are devoted to rest the remainder being taken up by meals massage etc. There is nothing incredible about the observance of such a routine of a hospital or nursing home but who can wonder that the lay public sometimes indulges in a smile at the expense of doctors and nurses. We have one serious criticism to make. A quite disproportion of the book is devoted to the subject of [illegible]

[1] *Selected Writings of John Hughlings Jackson*. Vol. II. Evolution and Dissolution of the Nervous System. Speech Various Other Addresses and Lectures. Edited for the Government by James Taylor M.D. F.R.C.P. with the assistance of Gordon Holmes M.D. F.R.C.P. and W. Ruffin M.D. F.R.C.P. London: Hodder and Stoughton Ltd. 1932. (Demy 8vo. pp. xii + 810. 1 plate. 25s. net.)

[2] *Nutrition and Diet in Health and Disease*. By Russell Henry Chittenden Ph.D. Sheffield. Fourth edition. Revised. Philadelphia and London: W. B. Saunders Company. 1931. (Demy 8vo. pp. xi + 821. 21 plates. Paper covers 30s. Cloth bound 35s. net.)

and the experimental facts are clearly presented yet we cannot find any reference to the original experiments of Hopkins (which have since been recognized by the award of the Nobel Prize) though other authors are freely quoted It is hardly conceivable that this omission can be ascribed to ignorance on the part of the author the only other explanation appears to be that it is due to distorted national prejudice

PROCTOLOGY

It is worth while reading such a comprehensive work on *Modern Proctology*[4] as that by Dr MARION C PRUITT of Atlanta Georgia Detailed and accurate accounts of the anatomy and physiology of the region are followed by a description of modern methods of examination Not only are all the usual proctological conditions well dealt with but separate chapters are devoted to constipation and megacolon and four chapters to colitis and dysentery The work extends beyond pure proctology and some attention is given to malignant disease of the large intestine above the rectum This is not as well handled as the rest of the subject matter of the book Aseptic intestinal anastomosis we could not find referred to and diverticulosis is dismissed in less than two pages The author is especially interested in fistulae of which he gives a full account too frequently we feel pointing out the difficulties which may attend operations upon them without describing in sufficient detail how these difficulties may be overcome He appears to have included both obsolete and modern methods in the treatment of both haemorrhoids and cancer of the rectum in a work labelled modern some obsolete matter might be dismissed with advantage Evidence of the author's English training is obvious throughout the book and we anticipate that a work of such merit will be warmly welcomed by readers in this country

A SURVEY OF SCIENCE

The lectures delivered last year by a number of distinguished persons at the Morley College for Working Men and Women in a course on Science to day and to morrow have now been published in a book with that title[5] They are nine in number and from that by the Astronomer Royal to that by the Professor of Geology at King's College London they are all interesting and more or less effective for their purpose This purpose as the title indicates concerns the present and the future rather than the past yet at least one of them—that by Professor H Levy on Mechanism the foundation of scientific rationalization gives in the main and in a fascinating manner a survey of some of the most important landmarks in scientific history This is done however with a view to producing a picture of science evolving rather than science completed and it leads up to a provocative and suggestive final question

> A scientific system uncovers truths that are objective in the sense that they are independent of individual human preferences and aesthetic desires But while the truths are accepted as they are found and fitted in tentatively into a rational and logical description of the universe we cannot avoid inquiring to what extent the order and relation in which they are placed depends in any way on the human make up and how far on a physical structure of the universe

It is perhaps a significant comment upon this statement that in each of the four lectures most intimately related to the work of the medical profession the author finds it necessary to call attention to the fact that his branch of science is more backward and less exact than that of others for the reason that in any study of mankind we find the ever present influence of personal bias and acquired prejudice' or other "obstinate human facts' These four lectures are those by Dr Joseph Needham on biology by Professor Elliot Smith on anthropology by Dr Emanuel Miller on psychology, and by Dr Jane Walker on medicine The first of these four sets out a number of important facts not yet widely known, and illustrates them by some very effective diagrams Dr Miller's lecture deals clearly with the relation of physiology to psychology with the numerical assessment of intelligence and other mental qualities, and with psychotherapy in its various forms

Dr Jane Walker's lecture on 'Medicine its present development and possibilities' must be noted a little more in detail, for though it is difficult to point to any sentence which is entirely without some foundation in fact yet the whole picture of present day medicine displayed therein seems to us essentially false The audience of working men and women who heard it must surely have gathered the impression that the modern medical practitioner was a poor thing ignorant of what he ought to know trained on lines which will not even permit of his learning by experience unless he first unlearns what he has been taught and pursuing an object which is of entirely secondary importance It is undeniable that there are still many imperfections in medical education and that some of the requirements of the General Medical Council are not as stringent as one wishes they could be but even at the present time in most medical schools the preventive aspects of medicine are being stressed throughout the curriculum opportunity is taken in the out-patient departments and in clinics attended by undergraduates to give instruction in the beginnings of disease and in those ailments which Dr Walker calls small and trifling It would surely have served a more useful purpose if she had used her opportunity to give the much truer impression of the modern medical practitioner as a man or woman relatively highly trained and reasonably skilful, capable of profiting and growing in wisdom by his or her daily experience and devoting a large proportion of time and ability not merely to the cure of existing ills but also to the prevention and elimination of the conditions which may cause them

NOTES ON BOOKS

Dr FRANK J ALLEN who contributed the historical and descriptive articles on Cambridge published in these columns before the Annual Meeting of the British Medical Association in 1920 is the author of a beautiful work—*The Great Church Towers of England*—published by the Cambridge University Press[6] This is a photographic study of all the principal towers with critical notes record of architectural details and exposition of the principles of tower design

An attempt has been made to collect in a small hand book the simpler details of the technique of modern microscopy and Mr L C MARTIN and Mr B K JOHNSON joint authors of *Practical Microscopy*[7] have certainly succeeded in producing a well illustrated interesting and useful introduction to the subject While it is particularly designed for students the outlook is sufficiently wide and advanced to render it acceptable to medical practitioners interested in the more recent developments in this branch of science

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[4] *Modern Proctology* By MARION C PRUITT M.D. F.R.C.S.Ed. F.A.C.S. London H. Kimpton 1931 (Pp. 404 233 figures 18s. net)

[5] *Science To-day and To-morrow* Compiled from a series of lectures delivered at Morley College London Williams and Norgate Ltd. 1932 (Pp. 196 12 figures 3s. 6d. net)

[6] (Pp. xiv + 206 53 collotype plates and 200 half tones £2 2s. net Postage 1 abroad 1 6d.)

[7] *Practical Microscopy* By L. C. Martin F.R.A.S. D.Sc. and B. K. Johnson F.R.M.S. London and Glasgow Blackie and Son Ltd. 1931 (Pp. 116 88 figures 3s. 6d. net)

The first issue of a Biographical Dictionary of the Eminent Doctors of the Last Fifty Years[1] by Dr I FISCHER of Vienna has just been published in two parts—Aaser-Bauer (Julius) and Bauer (Karl Heinrich)-Bricht. As its subtitle states it also forms a *continuation of the* well known Bibliographical Dictionary of Eminent Doctors of all Times and Countries founded by Gurlt and Wernich of which the second edition is also in course of publication. The lives of zoologists biologists and chemists whose work is of medical importance are also included. Dr Fischer's work is to appear in monthly issues each containing about 160 pages and 16 selected portraits and when complete will consist of two volumes each containing 800 pages and 80 portraits. The price of the complete work will be RM 75 paper and RM 84 bound.

Although several large and encyclopaedic volumes on tropical medicine exist in English there has been an almost complete absence of compact textbooks on the pathology of tropical diseases. The little work entitled *An Introduction to Tropical Pathology*[2] by the acting professor of pathology in Vizagapatam Medical College is intended to fill that gap. It is written on the M'Callum plan and is intended for undergraduate students in the Tropics mainly but not exclusively in the Indian Tropics but it should be of value to post-graduate students in other countries studying for the various diplomas in tropical medicine. It is adequately illustrated and has appendices on laboratory methods and post-mortem technique. Unfortunately it does not possess an index.

It is not difficult to realize that there is some degree of public interest in books written by doctors and relating personal impressions of medical work and medical practitioners. Indeed doctors and their ways proverbially provide a topic for all the tea-tables. Dr CHRISTOPHER HOWARD'S *Bedside Manners*[10] comes into this category and although to the hardened reviewer it may seem neither very bright nor very profound it provides pleasant and easy reading for the uninitiated. *Your Servant the Doctor*[11] by Dr W. B. COSENS also gives us the thoughts and recollections of an author who has had a large experience of medical practice and who has recorded some of his triumphs failures consolations and disappointments. He has much to complain of both within and without the world of medicine and he is frank in his criticism. In specialists and professors he finds no delight and to him women are very tiresome with their perpetual chatter about dress; yet his sympathy is all for the doctor's wife on whom is imposed no life for any woman. On the whole we do not think the world is quite so widely out of joint as Dr Cosens presents it.

Dr V. E. GILES in *A Fantasy of the Seasons and Other Verses*[12] shows himself a man of wide interests. Apart from professional eminence his school song for Thomas Howell's School under the trustees of the Drapers' Company (which is also saluted here with a song) reminds the reader that Dr Giles was quite recently the Master of that City Company. His love of the country is pleasantly confessed in a series of verses on Devon and the New Forest.

The seventh edition of the *Oxford University Press General Catalogue* is a handier volume than previous issues. The change in format has been achieved by omitting certain classes of books among them medical and technical works for which special catalogues are now available. It contains however an alphabetical list of every Oxford book in print at July 31st 1931 this supplies essential information so that recourse to special catalogues for all ordinary purposes is not necessary. The *General Catalogue* will continue to be the fullest available guide to the general and learned publications of the Oxford Press other than those of American origin.

Volume i of the records of the Conference for the Limitation of the Manufacture of Narcotic Drugs held at Geneva last summer is published in this country by Messrs. Allen and Unwin 40 Museum Street W.C.1 at the price of 16s. It includes the text of the debates at the plenary meetings.

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[1] *Lexikon hervorragender Ärzte der letzten fünfzig Jahre.* Herausgegeben unter Mitarbeit von I. Fischer. Lieferung 1 und 2 Hälfte. Berlin und Wien: Urban und Schwarzenberg. 1932.

[2] *An Introduction to Tropical Pathology.* By T. Bhaskara Menon M.D. M.R.C.P. With a Foreword by Major-General C. A. Sherwood M.D. F.R.C.P. Calcutta: Bhaskara Press and Publishing House Ltd. 1931. (Pp. xvi + 210. Illustrations. Rs. 10.)

[10] *Bedside Manners.* By Christopher Howard M.R.C.S. L.R.C.P. London: J. Bale Sons and Danielsson Ltd. 1932. (8s. 6d. net.)

[11] *Your Servant the Doctor.* By W. B. Cosens. London: John Bale Sons and Danielsson Ltd. 1931. (Pp. 192. 5s. net.)

[12] *A Fantasy of the Seasons and Other Verses.* By Arthur Giles. London: J. and L. Bale Sons Ltd. 1931. (Pp. 72. 3s. 6d. net.)

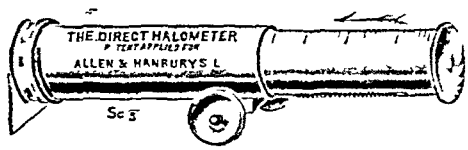
PREPARATIONS AND APPLIANCES

A DIRECT HALOMETER

Dr J. FINE (Edinburgh) writes: The value of evidence offered by the size of the red cell in the early diagnosis of pernicious anæmia and subacute combined degeneration of the cord is generally acknowledged to be of the highest. The findings of Dyke as of other haematologists confirm the parallelism between clinical improvement in pernicious anæmia and return of the red cell diameter to normal.

Nevertheless of the methods hitherto used for determining the red cell diameter none have succeeded in reaching the general practitioner to the extent that this important observation deserves. The Price-Jones method is unlikely to attain universality as a routine so long as simpler methods are available.

The halometric method is much superior from the point of view of simplicity of apparatus and rapidity of determination. Objections to its use such as those raised by J. J. Vonk[1] are best answered by the experience of pathologists and clinicians who have given it a trial. My own experience of it based on routine use for over eighteen months is most favourable particularly in following a case through treatment. Theoretical objections to its use do not carry much weight. Whereas the Price-Jones curve is based on the measurements of 500 cells the halometer registers in effect



produced by millions of cells and therefore gives a more accurate average result. Actually the halometer is designed to give readings within about 0·1 range of error—an approximation quite sufficient for clinical purposes. The halometer of the Eve type has however certain disadvantages which as the cost and the graduations which it gives in the diameter of the cells give the angles about 11° [illegible] haloes.

A much simpler type of halometer has recently been put on the market by Allen and Hanburys Ltd. [illegible] direct halometer [illegible] a graticule [illegible] of the red cells in microns. Other advantages [illegible] outlay greater portability [illegible] to use [illegible] of light whether daylight or artificial [illegible] of the instrument depends [illegible] film and full instructions [illegible] in a pamphlet accompanying [illegible].

The direct halometer [illegible] had with Mr. H. C. Dyson of [illegible] Pathology and Bacteriology [illegible] county these estimations [illegible] the method [illegible] strongly [illegible] Warrender-Hall Edinburgh.

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[1] [illegible] Journal.

British Medical Journal

SATURDAY, JUNE 11th, 1932

CHRONIC RHEUMATISM

Under the stress of financial considerations in relation to social disability, increasing heed is being paid in every country of the world to the subject of chronic rheumatism The shouldering by the State of responsibility for providing treatment and benefit for sick persons has brought to light the astonishingly large number of work days which are lost by reason of these disabilities As a result a variety of enterprises have been launched in various parts of the world to discover what can be done to ameliorate this state of affairs Perhaps the most recent of these was undertaken by the Council of the British Medical Association when it appointed last year a committee, under the chairmanship of Sir Humphry Rolleston to consider the whole question One of the chief difficulties presented to such an inquiry is the confusion that has existed in the past as to aetiology and classification Opinion now seems to be hardening into a belief that we must consider the chronic rheumatic diseases as grouping themselves along a scale, with infection at one end and degeneration at the other Admittedly mixed cases occur, for infection may be superimposed on degeneration and degeneration may supervene on infection Thus while the curve of incidence is doubtless highest at the two ends of the scale it can never be expected to descend to zero in the middle Another difficulty which is only now reaching solution is the differentiation between the arthritis due to true rheumatic fever and that due to acute and sub acute atrophic arthritis (the rheumatoid arthritis of the older nomenclatures) It is generally agreed that the two conditions are pathologically and clinically distinct but in the earlier stages of onset a differential diagnosis may be very difficult and undoubtedly the former is sometimes complicated by the latter in the same patient

With regard to the infective group, controversy still rages as to whether we are dealing with a generalized infection with a toxaemia from a localized focus of infection or with a toxaemia based on a derangement of the general metabolic processes of the body Probably all these factors are responsible in different cases, or even in the same case A recent symposium in the French periodical *Nutrition* on 'Rheumatismes chroniques et appareil digestif' has brought this out in a striking manner Thus Weissenbach Glenard and Françon declare that among the factors capable of producing chronic rheumatism functional affections and disturbances of the hepato-biliary apparatus by no means occupy the important position that should be assigned to them These conditions constitute three major causes of rheumatism as follows (1) Angiocholecystitis with or without calculus may produce an infectious type of chronic rheumatism (2) Insufficiency of the proteopexic function of the liver may give rise to colloidoclastic rheumatism (3) Disturbances of the endocrine and metabolic function of the liver may be responsible for gouty rheumatism Others draw attention to the infected appendix or gall bladder, or the oesophageal or bowel diverticulum, as foci of infection in relation to the chronic rheumatic diseases, but it is as well to recognize the limitation of the causal efficiency of such foci, and more particularly is it desirable to avoid the pitfall of the too facile attribution of responsibility to intestinal toxaemia—whatever that expression may mean

This uncertainty about aetiology means an equal uncertainty about treatment for some advocate desensitization against toxins producing an allergic effect, others pin their faith to vaccines while most demand early and complete removal of all sources of focal infection if they can be found Unfortunately, it too often happens that in the worst cases such foci cannot be found, and to subject an already debilitated patient to major or even minor operations on the ground that if the focus is not infective it ought to be is not good practice In these chronic arthritic cases the physician must specially regret that the human body is not constructed on the lines of a motor car from which a damaged part can so easily be removed and replaced by a new one, for it often happens that a promising method of treatment is rendered inapplicable because the patient cannot stand it This applies with especial force to surgical measures, both in the infective and in the degenerative groups Surgeons have worked out many ingenious devices for the relief of deformed and damaged joints which are so 'obviously the thing to do' that impatience must be expressed that they are not employed more generally Such devices are without doubt applicable to certain carefully chosen cases but increasing experience shows that all too often this method of therapy has to be abandoned on account of general debility or local degeneration

It is obvious from all these considerations that this subject is so large and important, and at the same time so difficult, that it can no longer be left to individual effort and there are many who consider that the time has come for national and even international schemes to be put into practice whereby these diseases may be recognized in their early stages and subjected to thorough treatment throughout their course In this way research may be undertaken which will result in such an increase of knowledge that we may look to the time when this industrial scourge may be prevented altogether or at least nipped in the bud so as to prevent the crippling which is so often a tragic interruption of a useful and active life In accordance with a recent decision that our *Epitome* should from time to time be devoted to one subject or group of subjects in medicine or surgery a collection of abstracts of recent articles dealing with some of the most important aspects of chronic rheumatic diseases, will be found at the end of this number

THE CINEMATOGRAPH

There can be few who have arrived at the mature age of 60 who did not see in their youth a wonderful new toy, fitted with some mirrors and a few pictures, that suddenly made these pictures come to life when the toy was made to spin on its pivot But there can be scarcely one of these who thought for a moment that out of that toy would arise such a powerful instrument for amusement and instruction We have only to walk round any town or indeed many villages, to see what that toy has become So potent a force must needs command the attention of those who are keenly interested in the welfare of the race In 1929 there was a great conference of some hundred educational and scientific bodies among them the British Medical Association which felt that the film had become for good or for evil a significant influence in national life, which should be used constructively in the interests of education in its widest sense The conference was aware that other countries were taking the film seriously as a form of visual and aural instruction as a means of entertainment and as an art It realized that in spite of the enlightened policy of one or two producing firms, and the missionary work of a few sectional bodies, there had been no concerted attempts in Great Britain on the part of a representative body to see the problem as a whole and to work out a solution which would cover all the factors The conference appointed a commission of inquiry with the intent among others of considering whether it was desirable and practicable to establish a permanent central organization to advise on the production selection distribution and use of films The commission has been working for two years, mainly through the munificence of the Carnegie Trust It has taken a considerable volume of evidence and now issues this week a report of its conclusions, entitled *The Film in National Life* [1]

There have been a number of inquiries set on foot in the past fifteen years The earliest was made at the request of the film trade by the National Council of Public Morals Its report was issued in 1917 and dealt with the moral and social aspects of the cinema its relation to the education of children to lighting and eye strain and to the censorship The evidence relating to its effect upon eyesight was a paper the first of its kind by Mr Bishop Harman and published in the *British Medical Journal* of February 17th 1917 There followed investigations by the London County Council in 1921 and by the Imperial Education Conference in 1923 and 1927 while the results of a psychological research—*The Cinema in Education*—were issued by Spearman Burt and Philpot in 1925 The new commission agrees with these earlier findings It states that the ground has been surveyed and that the urgent need now is not for further inquiry but for action and for a responsible body whose duty it is to take action The cinema has acquired prestige Formerly it was looked upon as the bastard of the arts now educated people delight in it The weekly reviews have their columns of film criticism indeed wherever books pictures and music are discussed the film is discussed also The dominance of the printed book is challenged by new inventions—the cinema the wireless and perhaps in the future television

Broadcasting has in England grown under responsible guidance, yet in England alone the film industry continues to develop without effective contact with the culture of the country Other nations have taken practical steps to control the film by the creation of film institutes some of these however have powers that no one would wish to see wielded in England Again owing possibly to these conditions, some countries have produced films with a national personality that can be identified as essentially belonging to their country of origin Such for example are the German *Kameradschaft* the Russian *Storm over Asia* the French *Sous les Toits de Paris* and the American *The Covered Waggon* Great Britain, except in the limited field of nature study and photomicrography has produced few films of this character though there are signs of growth in the British film industry which offers high promise for the future Advance can only be obtained by constructive criticism It is all too easy to draw up a generalized and uncritical indictment of the cinema An appraisement of what is good and what is bad is more difficult because it implies knowledge Educational opinion (with honourable exceptions) has been more ready to condemn than to investigate and if resolutions could kill the cinema industry would long ago have been dead

The report is at pains to make clear the end in view There is a desire not to spoil good entertainment but by adding a new ingredient to give richness to the mixture We all regard it as a duty to teach children reading grammar and composition not as ends in themselves but that the child may grow up equipped to discern the true from the false and to appreciate the literature of his own and other countries Culture will not make him a prig or prevent him from enjoying a good detective story So also it is our duty to train his taste in films and not leave it to chance It has been said by some that the film is a sedative The evidence of the report is that it is a stimulant There is sustained concentration because both senses of seeing and hearing are directed and irresistibly held by the sound picture An acute concentration of this kind precludes mental laziness It quotes the report of the Historical Association The use of the film forces children to find their own words to express opinions and to describe scenes not merely to borrow those of the teacher or the textbook Thus the film instead of helping to form 'mass-mind'—another criticism laid against it—encourages originality' Members of the medical profession have had in recent years ample opportunity for judging what the film is capable of in good hands The amazing film produced by Dr R G Canti of St

[1] *The Film in National Life* Being a report of an inquiry conducted by the Commission on Educational and Cultural Films into the service which the cinematograph may render to education and social progress London G Allen and Unwin Ltd (1s net.)

Bartholomew s Hospital showing the growth of living tissues, can never be forgotten by those who have seen it Another of equal impressiveness in a different field was that shown at our Eastbourne Annual Meeting last year, the sound film, by Dr de Lee of Chicago, of the operation of Caesarean section On the historical side the film made by Sir Thomas Lewis and Sir Henry Dale for the Royal College of Physicians, in connexion with the Harvey Tercentenary on the circulation of the blood was another complete success and a work of high value

The report considers the means of influencing public taste Legislation has been tried In Germany the tax is remitted on films issued by the Film Institute In Italy films issued by its Luce Institute have to be displayed for at least ten minutes in every performance But it is believed that more could be achieved by securing the good will of the audience Bureaucratic control of entertainment is abhorrent to our minds The functions of a British film institute would be to suggest Its interest in the entertainment film would be to ensure that informed opinion was able to express itself and to exercise an influence on production An influential and representative body could approach the trade and could advise its readers on films through specialized weekly and monthly papers The report recommends that a national film institute should be set up in Great Britain financed in part by public funds and incorporated under Royal Charter, and that there should be a board appointed by the Government—an advisory council including representatives of learned and scientific societies, educational associations and authorities, and of the film industry with representatives of Government departments of the self-governing Dominions, and of India The main duty of the institute should be to act as a national clearing-house for information on all matters affecting the production and distribution of educational and cultural films including information about research undertaken abroad It would seek to influence public opinion by publications and lectures to advise teachers on educational films and to act as a liaison between the trade producers distributors, exhibitors cultural interests and educators It would act as an advisory body to all Government Departments concerned with the use and control of films In conclusion the report repeats that the conception of the work to be undertaken by the proposed institute would be constructive and not restrictive

THE BIRTHDAY HONOURS

The list of honours conferred by the King on the occasion of His Majesty s sixty-seventh birthday includes the names of a number of medical men whose work in varied fields is well known to the profession One name in particular will be noted with pleasure and approval by members of the British Medical Association throughout the Empire and by all the insurance practitioners of this country Dr Henry Brackenbury's distinguished record of public service would have been remarkable enough even if most of it had not been fitted into the day s work of a busy general practitioner He entered the inner circle of the Association with long experience in municipal and educational matters In the course of eighteen years' membership of the Council he has held office as Chairman of the Insurance Acts Committee Chairman of the Representative Body, and, since 1927, Chairman of Council Among the many important positions he has held outside the Association are those of vice president and chairman of the Central Association for Mental Welfare, chairman of council of the Institute of Medical Psychology, and president of the Association of Education Committees of England and Wales It is peculiarly fitting that in this Centenary year Dr Brackenbury s work and worth should be recognized by the honour of knighthood Dr Francis Fremantle s political and public services have earned for him the same honour and we would like to pay tribute here to his championship of professional ideals in the House of Commons and to his work on the Parliamentary Medical Committee Dr A S Woodwark's knighthood also is bestowed for political and public services Dr Albert Cook s for long and devoted medical work among the natives of Uganda while Colonel Richard Needham s is an appropriate acknowledgement of six difficult years as inspector of medical education in India on behalf of the General Medical Council Sir John Goodwin formerly Director-General, A M S , and since 1927 Governor of Queensland, receives the further honour of K C M G , and Wing Commander Louis Greig is created K B E for the work he has done in social and welfare organization To these and to all the other medical men and women whose names appear in the list printed at page 1097 we offer congratulations

RADIUM AND X RAYS IN TREATMENT

The Royal Commission appointed in June 1931 by the State of Ontario to report upon the medical uses of *x* rays and radium is to be congratulated upon the promptitude and comprehensiveness with which the duties entrusted to its care have been carried out In a report of just over 170 pages[1] the Commissioners have summarized their investigations, which cover first the conditions under which radiotherapeutic treatments are given in Canada and, secondly a review of the various centres devoted to radium and x ray work in Great Britain and on the Continent The aetiology and treatment of different forms of cancer are discussed, as well as the limitations and uses of radiotherapy Satisfactory conditions of cancer research the comparative values of different forms of treatment, and a review of the present state of cancer research in the countries visited are made the subject of a series of careful investigations The education both of the medical profession and of the public generally with regard to the cancer problem receives very careful and well balanced consideration while the conclusions and recommendations of the Commission form a suitable close to its labours A series of appendices follows wherein are given statistics of cancer mortality an account of industrial or occupational cancer a description of cancer organization, and a brief account of x rays and radium as applied to cancer treatment In the appendix dealing with occupational cancer we do not find any reference

[1] Printed by order of the Legislative Assembly of Ontario



FIG. 1.—(a) Dislocation of carpal semilunar and fracture of the caphoid. (b) X-ray four months after manipulative reduction. The patient had returned home and the plaster cast had unfortunately been removed two months after injury, with the result that the caphoid has failed to unite. (c) After six months further immobilization the caphoid has firmly united by bone. This case illustrates the futility of immobilization for too short a period.

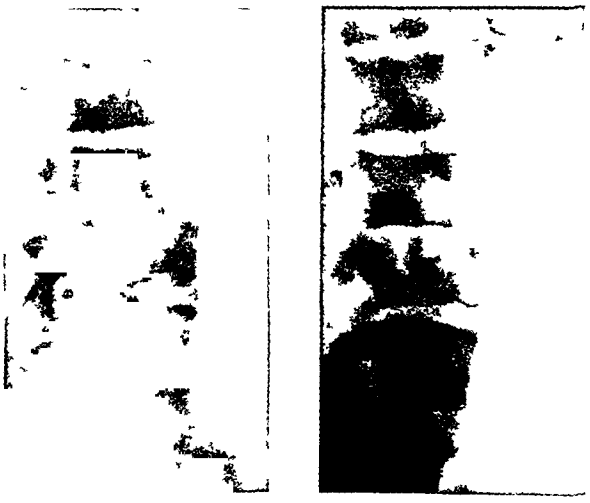


FIG. 2.—(a) Crush fracture of fourth vertebra with total paraplegia and fourth lumbar root palsy. (b) After reduction by hyperextension and plaster. The paraplegia recovered in a few weeks and the root palsy recovered completely in twelve months.

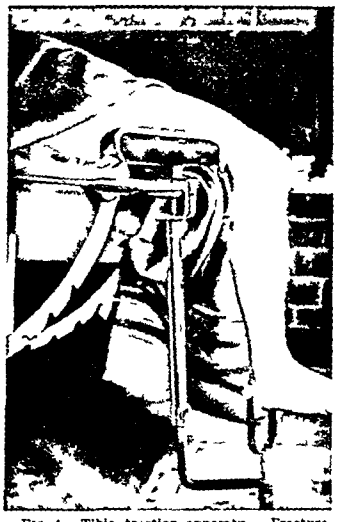


FIG. 4.—Tibia traction apparatus. Fracture of both leg bones fully reduced and held ready for application of plaster. No assistant is necessary. The apparatus can be applied to any table. (Made by F. H. Critchley, Liverpool.)



FIG. 3.—(a) Fracture neck of femur in a patient of 8. (b) After Smith Paterson nailing operation. (c) Six months after operation. Firm bony union in perfect position with normal movements of knee joint and normal muscular development.

N. D. ROYLE. ALTERATION OF CIRCULATION OF BRAIN BY SURGICAL MEANS.

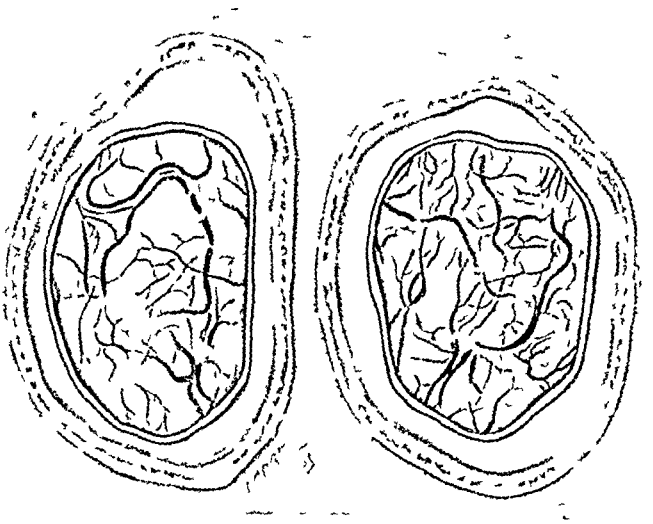


FIG. 1.—Side from which sympathetic control was removed. Showing changes in circulation.



FIG. 2.—Showing changes in facial musculature on left side after sympathetic thoracic trunk section. Note the difference in amplitude of smile.

L. A. H. SNOWBALL. DISRUPTION OF PELVIS.



FIG. 1.—X-ray showing separation of symphysis, fracture dislocation of left sacro-iliac joint with upward displacement of left innominate bone, and fracture of right pubic ramus.

D. KYLE. SPINA BIFIDA WITH DISLOCATION OF SPINE



FIG. 1.—Lateral view of lumbar spine (reduced).

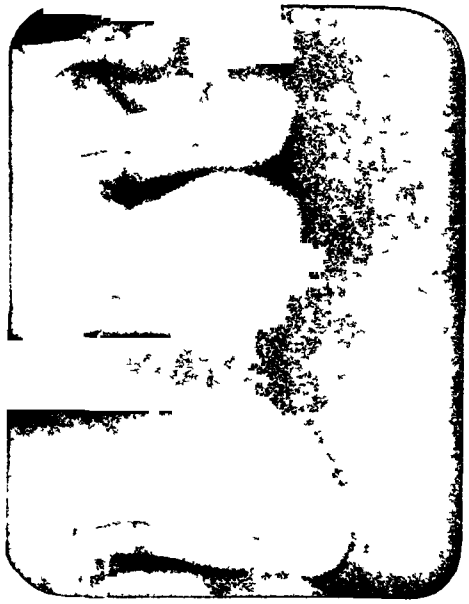


FIG. 2.—Associated trophoneurosis of terminal phalanx of left great toe (antero-posterior view—actual size).

J. B. G. MUIR. REMOVAL OF ASCARIS FROM COMMON BILE DUCT



FIG. 1.—Gall bladder cut open to show proximal portion of worm protruding into lumen. Distal portion from common duct at right side.

G. S. R. LITTLE. UNUSUAL FOREIGN BODY IN FINGER.

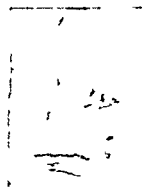


FIG. 1.—Radiograph showing tropilet of mercury in area of swelling.



FIG. 2.—Radiograph of fibrous nodule shrunk down after removal.

JAMES D MACFIE AND A J P ALEXANDER RIGHT SIDED ARTIFICIAL PNEUMOTHORAX COMPLICATED BY ALMOST COMPLETE LEFT SIDED SPONTANEOUS PNEUMOTHORAX



FIG 1.—Radiograph taken January 12th 1932



FIG 2.—Radiograph taken April 2nd 1932

U P BASU HYDATID CYST IN LUNG



FIG 1.—Showing well defined circular opaque shadow of hydatid cyst originating in the visceral pleura of the right side

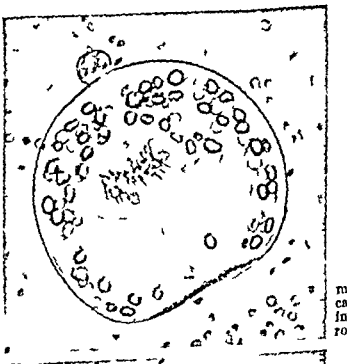


FIG 2.—Photomicrograph of brood capsule with scolex invaginated and double row of hooklets



FIG 3.—Photomicrograph of scolex (low power)

to the remarkable disclosures of Dr Martland in the *American Journal of Cancer* for October 1931 where the occurrence of sarcoma as a sequel to poisoning by radio active materials is given This is a matter of importance The cases occurred among a series of women occupied in the manufacture of luminous watch-dials in New Jersey U S A and of eighteen deaths recorded as being due to poisoning by radio active material no fewer than five were due to sarcomata occurring in bone The facts are at any rate significant and all the more so since various quack preparations are advertised both in this country and in the U S A which owe their efficacy to the presence of radio active materials Dr Martland records two cases of patients who have taken these pernicious nostrums with the result that they developed extensive necrosis of the bones of the jaw It is gratifying to notice that the chairman of the Royal Commission was himself a medical man and probably the efficiency of the Commission is in part at any rate due to this However eminent a man may be in other departments of life it must inevitably be a great handicap to the efficiency of a Commission when its head has yet to learn the very rudiments of the subject upon which he is called to adjudicate For a simple and comprehensive summary of the matters dealt with this report is strongly to be recommended

HELMINTHOLOGICAL ABSTRACTS

Nearly ten years ago the *Journal of Helminthology* was launched by Professor R T Leiper F R S, as a quarterly periodical for the publication of original communications on the parasitic worms This journal has become one of the most important factors in the development of helminthology in its various branches and now occupies a well defined niche in the library of scientific periodicals as the only journal exclusively devoted to this subject One of the most significant developments of recent years has been the increased interest in parasitic diseases human and animal and the subject of parasitology the oldest of the recognized causes of disease has now become in a sense the youngest Its literature is scattered and papers are found in about 350 different periodicals it is extensive also and over 900 titles appear in the year The individual research worker in helminthology who wishes to keep abreast of the subject has unaided a formidable if not impossible task In recent years summaries have appeared in a number of abstracting journals—the admirable summaries for example in the *Tropical Diseases Bulletin* are well known and appreciated by medical men Helminthology however must remain a branch of comparative pathology human helmintho logy is so intimately connected with veterinary helminthology that no separation is possible Many of the helmintns of economic animals as well as of man occur in wild animals or can be studied comparatively in these hosts Moreover fishes and plants also have their parasites The modern helminthologist cannot afford to neglect the study of these groups and so the *Journal of Helminthology* has issued a supplement which aims at providing a solution to all these varied problems *Helminthological Abstracts* as it is called will be issued five times yearly—the first issue is dated April 1932—and will summarize every paper published during the year of issue The fifth number to be issued at the beginning of next year will complete the previous year s publications so that the volume, when bound will contain a complete record of the entire year The summaries are written on a new plan They are classified by journals and each has the first few lines *double spaced the double spaced matter being virtually* an extended title so that the reader may quickly decide whether the subject-matter is of sufficient personal interest to read further The remainder consists of a succinct abstract of the chief results obtained by the various authors The object of this novel arrangement is to give the reader an early list of the current helminthological articles and their scope so that he may know what periodicals to consult at the library The field worker at home and abroad is provided with a complete current bibliography and time is saved by everyone To increase the value of the abstracts cross-indexing to journals and subjects will be provided This will be made the easier by still another publication to be issued yearly by Professor Leiper under the auspices of the Bureau of Agricultural Parasitology This is called the *Bibliography of Helminthology* and contains by journals a complete list of every paper of the year It will be issued some time in the succeeding year at a cost of about 6s *Helminthological Abstracts* is published at 16s 6d per annum (post free) and should find a place in every library—medical veterinary or agricultural—as well as on the table of every research worker in the subject Professor Leiper is to be congratulated on the enterprise he has shown in its production and we would commend it to all interested in this important branch of medical and agricultural science

INTERPRETATION OF SKIAGRAMS OF THE ANTRUM

Dr R Graham Brown of Brisbane has published a study of a large number of skiagrams of the maxillary antrum [1] By comparing the appearances seen in films or specially prepared prints with the pathological conditions found at operation he has arrived at some important conclusions Although infection of the antrum is a common enough malady in this climate it seems to be even more so in that of Queensland where the alternating humidity and dryness are predisposing factors At all events the experience of Dr Graham Brown if not unique is certainly far beyond the ordinary and has enabled him to study the question of skiagraphy in relation to pathology even more closely than has been done in this country and in Vienna where it has by no means been neglected The extent of the mischief is indicated by the widespread occurrence of bronchiectasis in children secondary to infection of the accessory sinuses a condition which is certainly not commonly recognized in European countries Dr Graham Brown is opposed to any such aids as the use of lipiodol in taking these skiagrams and finds that the most helpful results are obtained by the simplest means provided certain positions of the head are employed by which overlapping shadows from dense bone are avoided Rays of a suitable density must be employed for a skiagram which shows the bony outline sharply may fail to disclose changes in the mucous membrane while an apparently indifferent skiagram taken with softer rays may reveal such changes although the bony

[1] *Skiagrams in Diseases of the Maxillary Sinus their Surgical and Pathological Significance* By R Graham Brown Reprinted from the *Journal of Laryngology and Otology* 1931

outlines are blurred The manner in which the skiagrams are viewed is also important If a box is used the intensity of the light should be capable of variation, for every shadow in a skiagram has its optimum light intensity, and there is also an optimum viewing distance Whatever form of illumination is employed Finer details may be displayed by using prints on different kinds of hard and soft printing papers instead of negatives The various forms of osteitis and types of polypi the varieties of cyst formation, the appearance of fluid the changes produced by foreign bodies, and the effects of new growths as they are seen in skiagrams all come under review The interpretation of all these can only be learnt with certainty by comparing the skiagrams with clinical and operative observations, a method which Dr Brown has followed patiently in co operation with his radiological colleague The paper, which is lavishly illustrated, provides convincing evidence that much pathological detail is to be learnt from skiagrams of the antrum, and he argues from this that investigation of the accessory sinuses in patients who are merely suspected of suffering from sinusitis is even more desirable than in those who are known to have it if early diagnosis and the prevention of secondary disorders in other regions is to be achieved

EARLY OVARIOTOMISTS

Professor Paolo Galli has undertaken the publication of a posthumous article by Professor Testi of Faenza, whose death occurred last year The article, entitled "Gaetano Emiliani of Faenza, the First Ovariotomist in Europe,"[1] contains a short biography of Emiliani, but is concerned more especially with his claim as an ovariotomist and the case on which the claim rests Rosalia Ghetti of Faenza baker aged 25, the mother of three children, was seized with sudden pain in the left iliac region A few hours before she had been washing her baby, making use of a board with one end resting on the floor and the other on the lower part of her abdomen The next day her doctor detected a tender tumour and began treatment on general lines Four months later abortion occurred, and a bloody discharge continued intermittently for twenty-five days, when fever set in and Emiliani was called in consultation He made the diagnosis of scirrhous carcinoma of the ovary and advised its removal A mid-abdominal incision of two and a half thumb lengths followed by careful division of the peritoneum revealed the tumour which from its position form, and connexions Emiliani concluded was the enlarged left ovary, it was hard had small cysts containing fetid liquid on its upper surface and was adherent below to the colon Mesial to it were some varicose veins Emiliani separated the adhesions ligatured the vessels as they were divided removed the tumour, and closed the wound The loss of blood was estimated at less than half a pound Cloth smeared with ointment was placed on the wound above this a dry compress and over all pieces of cloth and a firm bandage Examined on the third day the wound had nearly healed, there were a few points of suppuration the pus being small in amount and laudable Rosalia made a good recovery and subsequently had several children Professor Peruzzi interested in the history of ovariotomy accepted this as a genuine case, the first in Europe, but doubt were expressed by others, and, being desirous of obtaining an independent opinion he applied to Spencer Wells The specimen was brought to P and there examined by Spencer Wells, Marion Sims, an Ranvier, it measured 9 cm by 5 cm and was found by Ranvier to consist of fibrous tissue only, w any traces of Graafian follicles which, however, considered might not improbably have disappeared Sir Spencer Wells commented on the case in his work on the *Diagnosis and Treatment of Abdominal Tumours*, 1885 (p 66), in the following terms

"I do not think this case can be cited as a case of ovariotomy in the sense in which this operation has been regarded from its first performance by McDowell to the present time Emiliani no doubt believed he had removed a 'scirrhous ovary and it is certain that he removed a fibrous tumour which is much more like a uterine than an ovarian tumour"

It is not stated in what particular the resemblance to a uterine tumour consisted but it may be said that a pure fibroma in the neighbourhood of the uterine appendages is not likely to have been a uterine tumour Emiliani's case was apparently one of ovarian fibroma, complicated with chronic parametritis following abortion McDowell performed the first ovariotomy in America in 1809, and published his first three cases in 1816 Emiliani's ovariotomy was performed in 1815, without knowledge of McDowell's cases

[1] *Il Primo Ovariotomista in Europa Gaetano Emiliani Faentino* Per Professor Dott Alberico Testi Faenza I Lega

LEVERHULME RESEARCH SCHOLARSHIPS

Two Leverhulme research scholarships each of the annual value of £500, will shortly be awarded by the Royal College of Physicians of London The scholarships are restricted to British subjects of either sex, not less than 25 years of age, and preference will be given to persons holding a medical qualification Scholars must devote themselves to the investigation of some clinical problem of disease as it occurs in man The work must have as its base some established institution, preferably in the United Kingdom in which full facilities for the research are available A scholar will be at liberty to publish the results of his research, provided he makes it known that the work has been done in his appointment as a Leverhulme Research Scholar He will be allowed to hold another appointment or to commence private practice but must satisfy the College that the major part of his time is suitably devoted to the work of his research Applications must be sent before July 4th 1932, to the Registrar Royal College of Physicians Pall Mall East, S W 1 from whom all details may be obtained

At the meeting of the Royal Society on Thursday next, June 16th at Burlington House the President Sir F G Hopkins will open a discussion on recent advances in the study of enzymes and their action

We regret to announce the death of Dr Marcus Paterson formerly medical director King Edward VII Welsh National Memorial and for seven years medical superintendent of the Brompton Hospital Sanatorium at Frimley

We regret to announce also the death of Dr Cuthbert Christy the well-known explorer and naturalist who had done valuable work on trypanosomiasis

The First Hundred Years

NOTES ON THE HISTORY OF THE ASSOCIATION

THE British Medical Association which was founded at Worcester in July 1832 by Sir Charles Hastings celebrates its centenary next July under the Presidency of Lord Dawson of Penn We publish below the seventh of a series of advance extracts from the History of the Association which Mr E Muirhead Little F R C S at the invitation of the Council has prepared for publication at the time of the commemorative proceedings in Worcester and London The first article appeared on December 5th 1931 the second on January 2nd 1932 the third on January 30th the fourth on March 26th the fifth on April 9th and the sixth on May 21st

PUBLIC HEALTH AND STATE MEDICINE

When the Association was founded such a science as that of public health was non existent and could not exist for at that time there were no correctly ascertained facts on which it could be based For the City of London and its immediate suburbs the Bills of Mortality supplied some information as to the causes of death on which in 1662 John Graunt F R S wrote the first book on vital statistics entitled *Natural and Political Observations upon the Bills of Mortality*[1] In 1832 the sanitary condition of the country as a whole and especially of the larger towns was deplorable Hardly any place had a water supply except from local wells There were no sewers and the cesspools in the basements of houses too often communicated more or less directly with shallow wells

In 1831 under the threat of cholera a Consultative Board of Health consisting of a number of physicians had been formed but its advice was hardly more useful than that of the College of Physicians at the time of the Great Plague and it was soon superseded by a Central Board of Health which in its turn could do little more than make recommendations and rules for quarantine and isolation

In 1840 a Select Committee of the House of Commons reported on the health of the inhabitants of large towns and in the same year an Act was passed authorizing gratuitous vaccination against small pox under the control of the Poor Law Commissioners The year 1842 was notable as that in which Mr (afterwards Sir Edwin) Chadwick then secretary to the Poor Law Commissioners made his classical *General Report on the Sanitary Condition of the Labouring Population of Great Britain* This was circulated extensively and succeeded in arousing national attention to the evils existing so that in 1843 a Royal Commission with very wide terms of reference was appointed to inquire into public health generally Legislation followed on the Commissioners reports in 1844 and 1845 culminating in 1848 in the establishment of the General Board of Health for a period of five years The Board was unpopular and at the end of that time the Government was defeated on a Bill intended to prolong its existence The very qualities which distinguished Chadwick had rendered him obnoxious to a great many persons whose interests and prejudices were interfered with The Board was reconstituted without Chadwick and in 1858 and 1859 a new Public Health Act was passed and a Medical Department under the Privy Council established which continued to act under the skilled guidance of Sir John Simon in 1871 In that year the Local Government Board was created replacing the Poor Law Board and the Medical Department of the Privy Council This Board whose president was always a member of the Government of the day continued in control until 1919 when the Ministry of Health took over its functions together with the administration of the Insurance Acts and other duties Meanwhile the first appointment of a medical officer of health had been made by the city of Liverpool under a private Act in 1846 and the city of London had followed suit in 1848 with the appointment of Sir John Simon

The foregoing is a brief outline of the chief events in the history of public health legislation It is little wonder that one of the main concerns of the Provincial Medical and Surgical Association in its earliest days was the study of topographical medicine which included what are known as epidemiology and vital statistics At its first anniversary meeting in 1833 the secretaries of the Association were directed to address the House of Commons Committee on parochial registers submitting that great benefit might be expected to accrue to medical science and consequently to the community at large if arrangements could be made for recording *causes of death* in the provincial registers of mortality Three years later the Act of 1836 for the Registration of Births Deaths and Marriages supplemented the decennial census inaugurated in 1801 and laid the foundation for the first serious efforts in the study of public health In 1837 influenza claimed attention the epidemic had been at its worst in January complicated by pneumonia and in some cases by gastro intestinal symptoms In 1838 vital statistics were promised as the subject of the Retrospective Address The *Transactions* of the Association for 1839 contained contributions on the medical topography of Copenhagen Swansea and Exeter an elaborate paper on variola by Dr Ceely and a report of a Vaccination Section of the Association recommending the practice of inoculation for small pox for the poor which paved the way for the Vaccination Act of 1840

REGISTRATION OF DISEASE

Meanwhile the most urgent need was a sound system of recording vital statistics The Registration Act of 1836 had satisfied some but not all of the demands of the Association At the Annual Meeting in 1865 a committee was appointed to encourage the registration of disease and to devise the best means of obtaining the evidence of members upon medical questions having a practical bearing[2] This committee reported in the following year and recommended that the members of the Association should themselves undertake the registration of disease and of deaths coming under their notice in public practice In October of that year the committee passed the following resolutions

1 That this committee recognizing the importance of Dr Farr's proposition for the appointment of a registration medical officer in every superintendent registrar's district strongly urges him to press it to a successful issue and assure him of their hearty co operation

2 That in the opinion of this committee such a medical officer would be the suitable authority for collecting and publishing periodical returns of disease obtained by local associations

3 That the districts for the registration of disease should be based on the division of the country for the registration of births deaths and marriages

4 That it is desirable that voluntary associations should be formed in each of the above districts to carry out the scheme of registration of disease adopted by the Association

[1] *British Medical Journal* 1926 ii 645

[2] *British Medical Journal* 1866 ii 229

In the following year at Dublin—the first Annual Meeting to be held in Ireland—the Association recorded its decided approval of the proposal for the appointment of a registration medical officer in every registration district or group of districts with medico legal and sanitary functions and pledged itself to support the measure as the first step to a national organization for purposes of State medicine

In 1872 the support of the Social Science Association was secured for the Association s policy which was pressed upon the Government at every available opportunity In 1873 a memorial was addressed to the Local Government Board and a petition to Parliament embodying the case for comprehensive registration of diseases and pointing out that the Association s scheme had already been successful during ten years in Manchester Salford and St Marylebone five years in Birmingham four years in Newcastle on Tyne and for a shorter time in Preston and that the appointment of registration medical officers would not only facilitate the registration of disease but would greatly improve the services of State medicine

The question of notification of infectious diseases was necessarily connected with that of the observation and registration of disease in general and was frequently discussed by the Association It was decided in 1876 that compulsory notification was essential that the medical attendant should be required to declare the nature of the disease and that the duty of notification should be imposed on the householder himself in order to avoid the appearance of any breach of confidence on the part of the medical attendant In 1879 the Registration of Diseases Committee made its last report which was not in favour of notification by the medical attendant In the same year various local Bills legalizing notification were introduced in Parliament In 1881 at the Annual Meeting at Ryde considerable opposition to compulsory notification by attending practitioners was apparent but ultimately it was decided to support a Bill introduced into the House of Commons by Mr G W Hastings and then under discussion The subject continued to engage the attention of the Association until the passing of an Act in 1889 which provided for compulsory notification of certain infectious diseases and laid the responsibility on the householder as well as on the practitioner

The Association had not neglected other aspects of public health policy In 1867 the Committee of Council were instructed

> to direct their early and special attention to the amendment of the sanitary laws to invite the co operation to this end of the council of the National Association for the Promotion of Social Science and to urge the Branches of the Association to promote the same object by local efforts by representation to individual Members of Parliament and if need be by deputation to Her Majesty s Government

A committee was also appointed to collect information In 1868 the report of the joint committee of the British Medical Association and the National Association for the Promotion of Social Science which had made a critical examination of the report of the Royal Sanitary Commission was adopted and a Public Health Committee appointed

Meanwhile the qualifications and conditions of service of the personnel of the public health services had become a matter of increasing importance and at the Annual Meeting in 1873 a committee was appointed to consider the best means of providing for the adequate qualification in State medicine of all public medical officers This committee recommended that the General Medical Council should be empowered and required to prepare a scheme for examination The Council was slow to act and while it hesitated the licensing bodies led by Trinity College Dublin instituted examinations and diplomas of their own Regulations for examination in State medicine were not issued by the General Medical Council until 1896 The gradual improvement in the powers and status of medical officers has been watched and fostered by the Association from the first when a medical officer of health might be and sometimes was dismissed because his recommendations affected the pockets of influential members of municipalities until security of tenure in a right to superannuation allowances were established by law The Association has also established minimum scales of salary, which are generally accepted

WORK OF THE PARLIAMENTARY BILLS COMMITTEE

Much useful work was done by the special committees of the Association but for many years their activities were overshadowed by those of the Parliamentary Bills Committee which first appointed in 1863 did not finally discharge its reference until its work was merged in that of the Medico Political Committee in 1903 From 1872 to 1897 under the chairmanship of Ernest Hart Editor of the *British Medical Journal* it took a leading part in influencing legislation on public health matters and in making known the opinion of the profession The period of Hart s chairmanship was one of considerable legislative activity the agitation for notification of infectious diseases and for medical reform the movement for registration of midwives and the perennial struggle (which is still in progress) for more adequate protection of the public against the activities of quacks and charlatans and more especially the vendors of secret remedies deserve special mention

When necessary the committee collaborated not only with other committees of the Association but with outside bodies For example in 1888–9 it supplemented the efforts of the Inebriates Legislation Committee and the Society for the Study of Inebriety to secure more effective provision for the treatment of inebriates The committee s activities were not limited to the United Kingdom for in 1892 we find it dealing with a Medical Ordinance for Sierra Leone and another for regulating the sale of drugs and poisons on the Gold Coast For the rest a mere catalogue of some of the matters which fell within the committee s sphere must suffice to illustrate the range and vigour of its activities They included various public health and local government Bills (including local sanitary Bills which required careful watching) for England Scotland and Ireland lunacy legislation in both England and Ireland pharmacy and poisons legislation , status of ship surgeons housing of the working classes railway servants eyesight administration of anaesthetics Alkali Works Regulation Act Plumbers Registration Bill Oaths Act , coroner s law and death certification and factory legislation

Enough has been said to indicate the breadth and variety of the Association s activities in those early days the value of its practical contribution to the development and application of the new science of State medicine and to rebut the charge (sometimes made) that prior to the reorganization of 1902 its interests were exclusively scientific Other aspects of the Association s work may be found in a more detailed study of the development of some particular branch of the Association s policy which may be taken as typical of its general aims and methods No better example can be chosen than its contribution to the development of national provision for the care of maternity infancy and childhood Since a prerequisite of this as of all other branches of State medicine is the existence of a sound system of recording vital statistics the Association s advocacy of registration in 1893 may be taken as the starting point of the story It was active in promoting the Act of 1871 for the regulation of baby farming and in 1873 took up the important question of the certification of stillbirths Later it secured effective action for the elimination of ophthalmia neonatorum in a manner which supplies an apt illustration of the connexion between its scientific and medico political activities In 1906 ophthalmia neonatorum was chosen by the Council for the Middlemore Prize and in 1907 it was discussed in the Section of Ophthalmology which recommended the appointment of a committee to consider steps for the prevention of the disease The committee reported two years later urging the necessity of notification and largely owing to the publicity obtained by its report a considerable number of authorities had adopted notification by 1910 when the Council of the Association

issued a model scheme for administration in areas where notification was in force The Central Midwives Board altered its rules to conform with the committee s recommendation that purulent vaginal discharge requires medical assistance and the Association s policy was fully endorsed in 1914 when notification was made compulsory by statutory order A still more recent inquiry into cardiac disease in children carried out between 1923 and 1927 has already had its effect in promoting the adoption of notification of this disease by a number of local authorities An extensive inquiry into the incidence of rheumatic heart disease in childhood carried on from 1927 to 1930 in Gloucestershire Somerset and Wiltshire led to the provision of special treatment centres To the work of some of these the Association has made direct financial contribution

REGULATION OF MIDWIFERY

These activities however were by the way The first step was to secure the supply of qualified midwives Clearly the profession was in a particularly advantageous position for estimating the effects of incompetent midwifery and in 1873 it urged upon the President of the Local Government Board the necessity for the education and control of midwives and later at his request co operated with the Obstetrical Society in drawing up a scheme For the next thirty years the subject was frequently before the Association and the public In 1879 a Medical Acts Amendment Bill touched incidentally upon the regulation of midwifery and this led to the preparation of the first of a series of Midwives Bills drafted by the Association itself The Bill provided for the training examination and registration of midwives under the control of a Board which was to include at least three general practitioners and limited the sphere of independent action of the registered midwife to cases of normal labour it contained no prohibition of unqualified practice By 1883 the Association had secured the approval of the Privy Council and the General Medical Council for a revised edition of this Bill which was adopted in that year as a Government measure but it ultimately lapsed through pressure of parliamentary business Later the attitude of the Government seemed to change for Lord Carlingford considered the Association s Bill too complicated and too compulsory for acceptance and a number of efforts to promote legislation were unsuccessful

In 1890 another Midwives Bill was introduced which was shorter and less complete than the Association's but directed to the same end Its history constitutes a curious interlude in the development of the Association s policy for its withdrawal was directly occasioned by the attitude of the Association at the Annual Meeting that year although according to the *British Medical Journal* the whole profession was by this time in favour of its basic principle For the next ten years the Association never ceased to press the general principle of control of midwives and it had considerable success in securing the amendment of a number of measures introduced during this period None of these however reached the Statute Book

In 1899 an important advance was made when the Association in opposition to an inadequate Bill framed by a committee of nurses and a few specialists interested in midwifery put forward a new Bill of its own which embodied for the first time an absolute prohibition of unqualified practice in midwifery In 1902 the Government introduced a Bill so defective from the point of view of the Association as to be characterized by the *Journal* as

> the worst yet submitted to Parliament It was no small tribute to the growing strength of the Association that its work in and outside Parliament was successful in securing such amendments that when this measure became law it embodied the main essentials of the Association s policy more particularly the prohibition under penalty of unqualified practice

Even so the Act was by no means perfect and the next few years indicated the need for adjustment In 1909 the Association gave evidence before a Departmental Committee which accepted its more important suggestions and recommended a number of amendments Legislation however lagged and it was not until 1918 that a new Midwives Act imposed on local authorities the duty of paying the fee of medical practitioners called in by midwives

Effective supervision of maternity homes long demanded by the Association, and now required by the Nursing Homes Registration Act of 1927 was first provided for by the Midwives and Maternity Homes Act of 1926 This last Act also strengthened the original prohibition of unqualified practice which had applied only to women who habitually and for gain attended in childbirth otherwise than under the direction of a qualified medical practitioner The unqualified male accoucheur not altogether unknown was not affected by the clause and a conviction of practising habitually and for gain was necessarily a matter of some difficulty The Act of 1926 placed upon the accused person the onus of proving that attendance in any given case was rendered as a matter of sudden or urgent necessity and extended the prohibition of unqualified practice to men

MATERNITY AND CHILD WELFARE

The influence exerted by the Association upon the development of the existing system of maternity and infant welfare clinics is hardly comparable with that described in connexion with the Midwives Acts or with the development of the school medical service This may be accounted for in part by the fact that the period of most rapid development of this service coincided with the great war and in part by the predominantly educational character of the service During the later years of the nineteenth century a number of philanthropic agencies for the amelioration of conditions of maternity and infancy among the poor came into being and the humanitarian movement which they represented received a considerable impetus at the opening of the twentieth century from the general interest aroused by the falling birth rate and the light thrown upon public health conditions by the experiences of the Boer war To this interest the findings of the first school medical inspections contributed and the adoption of a system of notification of births permissive under the Act of 1907 and compulsory under the Act of 1915 laid the foundations for a national scheme of maternity and infant welfare work The incorporation of what had been primarily a voluntary movement in the national system of health services was marked by the first Exchequer grant for maternity and child welfare work in 1914 and provision for orderly development followed with the Maternity and Child Welfare Act of 1918 In these earlier years of the movement there was a real danger that it would fail to secure the co operation of the private practitioner so essential to its full fruition In 1916 the Representative Body called attention to this danger and emphasized the need for the fullest possible utilization of the services of local practitioners in connexion with the new centres but the drain of the war upon the profession hindered the desired development

In 1921 however the Association was free to devote its energies to the work of reconstruction and development and a review of the value of maternity and child welfare work in the reduction of infant mortality was carried out by a Medico-Sociological Committee appointed experimentally in 1920

> to consider social and economic questions affecting the public welfare as to which the medical profession has special knowledge and to take such steps as may be found necessary in order to create or develop public opinion thereon

The committee s co option of representatives of a number of bodies interested in the work but not exclusively medical and its association with these bodies in the report published in 1921 tended to establish closer and more cordial co operation in the work than had before obtained while the report itself served a useful purpose both in directing the attention of private practitioners to the urgent necessity of taking a fair share in the work of the centres and in checking the tendency of the day to divert the activities of those centres from the legitimate task of education to that of treatment

Meanwhile public attention had been attracted by the contrast between the stationary figures of maternal mortality and the decreased infant mortality rates In 1924 a report on maternal mortality, published by the Ministry of Health, conveyed the impression that the persistence of high puerperal mortality rates might be attributed in the main to imperfect attention at childbirth and more especially to the default of general practitioners as a body This suggestion gave rise to considerable resentment among general practitioners and occasioned the appointment of a special committee of the Association to consider and report and to recommend the administrative action if any which should be taken in connexion therewith The survey made by the committee was comprehensive The main feature of its reports was the emphasis laid on the need for further experimental research in specified directions the supreme importance of ante natal work as a factor in reducing puerperal mortality, and the need for further institutional provision for maternity cases and increased facilities for training both medical students and midwives more especially in ante natal work One of the committee s recommendations the compulsory notification of puerperal pyrexia has already been adopted Apart from this the immediate outcome was the creation of a special committee to formulate practical measures for the reduction of puerperal mortality and morbidity rates to keep in touch with research work and to assist Divisions and Branches of the Association in educational work in connexion with ante natal services the conduct of confinements and the post partum care of mothers and infants This important work and the extensive collection of records of midwifery is now entrusted to the Maternity and Child Welfare Subcommittee of the Association s Public Health Committee

The work of the Association from the early days of the campaign for the registration of midwives to the publication of the reports on puerperal morbidity and mortality had its logical issue in 1929 in the publication of a memorandum outlining a comprehensive scheme for a national maternity service for England and Wales The three principles underlying the scheme are that the normal case can be safely treated at home that maternal mortality and morbidity can be greatly reduced if proper ante natal care and supervision during confinement is provided in all cases together with institutional accommodation for cases of complicated labour and that maternal morbidity can be greatly reduced by proper post natal care and treatment

School Medical Service

While the Association can fairly claim to have made a substantial contribution to the development of the maternity and child welfare services its connexion with the creation of the school medical service was even more intimate In 1888 a committee was appointed to investigate the average development and condition of brain power among children in elementary schools From that time the Association took a leading part in the numerous inquiries which resulted in the establishment of special schools for physical and mental defectives and later in the creation of the school medical service itself The first report of the committee on the examination of 5 440 children by some of its members published in 1889 attracted considerable attention and stimulated further inquiries in which the Association collaborated with a number of scientific and philanthropic bodies Among these inquiries an examination of 100 000 school children by a committee appointed in 1891 by the International Congress on Hygiene to investigate the requirements of child life and the recommendations based on that examination deserve special mention The *Journal* was active in urging the necessity both for the creation of special schools and for the regular medical inspection of schools In 1896 the Council of the Association considered that the establishment of the Society for the Scientific Study of the Mental and Physical Condition of Children relieved the Association of further responsibility for investigation and the reference of the Association's committee was therefore terminated

Interest in public health due to the falling birth rate and the South African war was greatly stimulated by the report of the Inter Departmental Committee on Physical Deterioration, which recommended that school authorities should be required to institute "a systematized medical inspection of school children The recommendation fell short of the policy of the Association in that it proposed to limit inspection to that class of school in which the presence of ill health might reasonably be expected" The Association therefore continued to urge its views upon the Government by memorandum and deputation and ultimately succeeded in securing the insertion in the Education (Administrative Provisions) Act of 1907 of a clause making provision for the medical inspection of elementary school children obligatory and permitting arrangements for "attending to their health and physical condition

The principle having been conceded, the Association turned to administration and the Medico Political Committee drew up a form for the record of medical inspection which was published in the *Journal* in December 1907 and adopted without any significant modification by the Board of Education thereafter The Association was represented on the special subcommittee appointed by the London Education Committee to consider the treatment to be provided under the Act This subcommittee recommended the establishment of school clinics a scheme rejected by the county council in favour of arrangements with voluntary hospitals in which the Association found grave defects In 1911 the Association presented a complete scheme for school clinics in the metropolitan area to be staffed with the co operation of the Metropolitan Counties Branch of the Association

From the very outset the Association was alive to the danger that the school medical service if carried out through whole time officers might be run in competition with private practice rather than as supplementary to private practice when the services of a family doctor were not available It was therefore primarily concerned to ensure that the service should be conducted as far as possible through the agency of private practitioners and in all cases with their full co operation It did not however neglect to urge that whole time officers of the service should be suitably qualified for their work and obtain adequate status and remuneration The Association also held conferences with the Society of Medical Officers of Health and the National Union of Teachers and repeatedly circularized the Divisions calling attention to the need for adequate co ordination and the fullest possible measure of co operation between all branches of the educational service The work of obtaining general agreement in principle was slow and it was not until 1916 that a detailed policy covering both inspection and treatment the terms of employment of members of the service and the machinery as well as the principles of co operation between the service and private practitioners was approved

In 1918 the Fisher Act extended the obligation of education authorities to cover treatment as well as inspection of children in elementary schools and inspection of children in a number of other educational institutions and gave power to provide treatment in these latter cases The Association however secured a valuable safeguard by the inclusion in the Act of a proviso that in the exercise of the powers indicated a local education authority shall not establish a general domiciliary service of treatment by medical practitioners for children or young persons and that in arrangements for medical treatment they shall consider how far they can avail themselves of the services of private medical practitioners

With the development and expansion of the service the Association has always kept closely in touch The position at the present time is indicated in the Proposals for a General Medical Service for the Nation published by the Association in 1930 These proposals afford an invaluable commentary upon the whole history of the Association s contribution to State medicine

THE BRITISH SPAS

A MEDICAL APPRECIATION

The Medical Advisory Committee of the British Health Resorts Association has drawn up a statement briefly summarizing the advantages and therapeutic indications of the British spas The signatories are Dr R Fortescue Fox (chairman) Lieut Colonel R H Elliot Sir Thomas Horder Dr Robert Hutchison Dr E P Poulton Sir Humphry Rolleston Sir William Willcox Dr R A Young and Dr W S C Copeman (honorary secretary)

Although there are many waters in the British Islands there are at present only twelve actual spas—that is to say places where natural medicinal springs are installed in establishments for medical use One of them is very hot another warm the remainder cold In numbers our country cannot compete with most of its Continental neighbours But it is not sufficiently recognized that our small group contains four or five springs that are quite remarkable and that England and Scotland possess waters and bath establishments as valuable as any to be found abroad for most of the ailments commonly treated at such places

The British spas are distinguished from those of the Continent by their invigorating and tonic quality imparted by the northern island climate The summer is considerably cooler than at most Continental resorts excepting only those in the Alps With this temperature quality and the long northern days is combined a freshness and almost incessant movement of the air The medical value of the northern moorlands of moderate altitude is comparable to that of the Swiss mountains The influence of the British climate and of latitude profoundly modifies the action of water drinking and baths and the reaction of invalids under treatment in fresh and tonic airs is different from that observed in enclosed and sultry valleys In England there will always be cases—for example certain forms of arthritis—which require a thermal treatment both in climate and baths and which can be better treated at a Continental spa but British spas are as definitely to be preferred for those who need a cooler and more stimulating treatment

TYPES OF SPA TREATMENT

Two main types of spa treatment are practised in England

1 The katabolic type which aims at increasing elimination from the body by the bowels kidneys and skin aided by appropriate diet and exercise This is especially suitable for patients whatever the form of their particular disorder who are sedentary of good appetite well nourished and florid often showing signs of congestion and high blood pressure

2 The anabolic type which aims at increasing and improving the nutrition of the body by tonic waters baths and regimen This again is especially desirable for chilly and ailing or convalescent persons usually of poor appetite thin and ill nourished pale with cold and inactive skin and poor circulation

The therapeutic indications of the British spas are naturally not so highly differentiated as in countries where there are many varieties of waters Fortunately both these great categories of chronic maladies—the congestive and the subnormal—are well treated at all the British spas In the North Strathpeffer Buxton and Harrogate offer a frankly tonic summer treatment Woodhall Spa to the east is more sheltered At the Welsh spas and at Leamington Cheltenham and Droitwich in the Midlands the tonic and sedative influences are combined Bath is the warmest and most sedative of British spas and eminently suited for treatment in winter

THE TWELVE BRITISH SPAS

Bath—The hot springs rising at 120° F were used by the Celts and Romans and there was a Bath hospital in the sixth century Their diuretic and solvent effects are enhanced by baths of various kinds *Deep pools of thermal water* besides douches and whirlpools are used for the relief of pain and stiffness in many chronic rheumatic affections and for the treatment of wasted and paralysed limbs as well as injuries The warm winter climate reinforces the effect of the baths

Bridge of Allan in the Lowlands of Scotland has been recently rediscovered as a spa The calcium salt waters are used for rheumatism and by inhalations for catarrh and the mild and equable climate makes it a resort for all seasons

Buxton in Derbyshire stands 1 000 feet above sea level and like Bath was known to the Romans The warm blue waters from which the name of The Blue Spa is derived have been used for the rheumatic poor since the sixteenth century and the fine hospital is a lasting monument to their value Buxton is a natural centre of convalescence

Cheltenham and *Leamington* with Tunbridge Wells (no longer a spa) were fashionable centres for water drinking one hundred years ago The first with its uncommon alkaline waters is especially useful in intestinal and liver disorders Both are useful salines in sheltered localities suitable for spa treatment at all seasons and for delicate and elderly persons and those returned from tropical countries

Droitwich—The brines—Salinae of the Romans—are ten times as strong as sea water and are used externally for many forms of rheumatism re educational movements in the bath now forming part of the cure

Harrogate on a bracing Yorkshire moor has a remarkable outcrop of sulphur saline and iron springs first described in 1626 and has had its excellent spa hospital for more than a century The spa claims with some justice to counteract the effects of a sedentary life and especially the disorders of the digestion and liver

Llandrindod Wells in central Wales has also a pleasant moorland climate and its anti catarrhal salt waters are of curative value for catarrhs of the stomach and bowels as well as a tonic in anaemia and debility The neighbouring *Llanwrtyd* too little known possesses an abundant source of sulphuretted water

Trefnw in Carnarvonshire is a little known spa possessed of a nearly unique acid iron water Given in spoonfuls and externally in compresses and baths it is a powerful stimulant in certain forms of arthritis and anaemia

Strathpeffer Spa in the Highlands is the northernmost of the British stations and has some of the strongest sulphur waters in Europe as well as an iron spring The tonic sedative air is very favourable for repose and recuperation

Woodhall Spa in Lincolnshire has a dry and bracing air The salt waters with a little bromine and iodine are diluted for drinking and are used externally for rheumatism and diseases of women and by inhalation for respiratory catarrh

Altogether the British spas comprise most of the waters which should be of service in preventing ill health and in relieving the disorders associated with a northern climate No one country contains every natural provision for health There are no arsenical waters in England and children and others for whom such waters are considered desirable must be directed elsewhere Alkaline waters which are greatly resorted to in other countries are little used in England The British spas have not specialized to the same extent as those on the Continent For instance treatment by diuresis (flushing of the kidneys) has not been differentiated and systematized though there are many available waters which have diuretic properties such as those of Malvern Ilkley Matlock and Braceborough Spa There is no health resort that is mainly or exclusively concerned with cardiovascular cases with the various procedures recommended for these too prevalent conditions Treatment in the home country is especially desirable for cases of that kind Again there is no spa chiefly devoted to asthma and respiratory affections although useful methods are now employed at more than one of the British spas In other countries a spa technique has been developed for these ailments in which varied modes of treatment are combined—a system of inhalations being used simultaneously with waters and general and local baths

Many classes of health seekers may confidently expect to benefit by British waters and baths These include sufferers from chronic rheumatic disorders gouty manifestations arterial hypertension dyspepsia and indigestion in their various forms congestive or catarrhal whether in sedentary or convalescent persons and from nerve exhaustion and anxiety states In addition to these are the many overtired people showing signs of strain and failing health who need more than a holiday every summer Adequate and complete treatment is available for all these conditions at the British health resorts

THE ADVANCE OF MEDICINE

ROMANES LECTURE BY LORD MOYNIHAN

The Romanes Lecture was delivered in the Sheldonian Theatre Oxford on June 1st by Lord MOYNIHAN P R C S On the same occasion he received the honorary degree of D C L of the University

Taking as his subject The advance of medicine, the lecturer began with a historical sketch in which he attributed to Hippocrates the method of induction whereby a general law is formulated after observation of a number of singular examples and to Galen the method of deduction by which one passes down the scale rather than up to exposure of those isolated facts from which generalizations are at last constructed Armed with these two indispensable methods the practitioners of medicine were nevertheless for more than a thousand years almost impotent That millenium was given over to the reign of *incorrigible authority* No Holy Writ was ever so indisputable as the *writings* of Hippocrates In that *sterile period* no new thought was found no new method no new experiment The first gleam of light was seen in the University of Bologna where Vesalius revived the *experimental* method and became forerunner and inspirer of the great Italians including Fabricius who was the lodestone attracting our own William Harvey to Padua with the result that through his discovery of the circulation of the blood physiology received new birth and the scientific foundation of medicine was truly laid The foundation was strengthened by John Hunter and Morgagni with the creation of the science of pathological anatomy Hunter changed surgery from crude barbarism to science and his accurate and searching generalizations were among the greatest contributions to medical literature Lord Moynihan also touched on Darwin s hypothesis thrown with a resounding detonation into the calm scientific atmosphere of the middle nineteenth century Pasteur s discovery of the invisible world of microbes and the early realization of their significance in medicine by Lister the greatest benefactor of mankind the world had ever known

THE NEED FOR CLINICAL RESEARCH

The full fruits of Lister s work had now been garnered Operations were constantly performed by the great masters with a success that left little hope of betterment New methods of treatment might no doubt appear but so long as cutting operations of the kind now practised had to be applied for relief or cure of disease it was hardly possible that their success could be improved except by increasing the patient s resistance Was it possible by following Lister s example to do anything to forestall or prevent disease? Hitherto the task had been to discover methods of dealing with structural diseases by mechanical device now the concern must be with the recognition and correlation of those manifold bodily ailments which resulted from changes in the functions of the organs This necessitated inquiry into all relevant physiology into the physiology of early disease rather than that of normal animals or normal man A science of pathophysiology needed to be created and the most critical investigation made of man s functional aberrations at the earliest period of their development Those engaged in medicine were engrossed by terminal events What would advance knowledge and perhaps lead on a large scale to the prevention of disease was hospital research on those suffering from slighter ailments Such a hospital staff would consist of physiologists or men trained in laboratory methods who would be not only therapeutists but chiefly researchers not coerced by the problem immanent in all the work of the medical profession of bringing relief or cure to a patient perhaps fighting against time to do so They should be afforded facilities for conducting experimental work suggested by their clinical inquiries side by side with their clinical observations

THE TRUANCY OF PHYSIOLOGY

Lord Moynihan went on to point out the differences between the results of investigations on animals and of investigations upon man, and the reservations which were necessary before the conclusions of animal experiment were applied to the human being Experimental collateral inquiry of course remained of extreme importance second in accuracy and relevance only to direct hominal research itself with which, whenever possible *it should be* combined Much of the experimental observation in laboratories would have a far higher value in respect to immediate application to human *needs if closer* brotherhood were established between physiologist and physician The advance of medicine was impeded by the truancy of physiology and its (as he thought) illicit devotion to problems which however interesting and important were largely irrelevant *to medicine*

MEDICINE THE MISTRESS

It would be an advantage to all (Lord Moynihan continued) if a closer alliance were inaugurated each science trying to appreciate its communal no less than its individual value Although the aid given by physics chemistry and physiology was indispensable these sciences were not medicine but ancillary to it They nourished and sustained medicine but medicine was far more than the application to human afflictions of the knowledge of biological or natural sciences It might claim to be a science in itself different from other sciences only in its greater complexity The material furnished by laboratory workers was not the whole of the material the clinician must consider The aid of the laboratory was sometimes decisive sometimes helpful not seldom negligible The clinician must take heed of all things the synthesis of the answers from all sides was his work and his alone and he must not surrender his sovereignty

The concluding passage of the lecture was an appreciation of the humanism of medicine Compassion ruled the hearts of those who daily practised it, they sought to assuage pain restore health turn the hand of death aside The greatest of all discoveries in medicine—those of Harvey Hunter Hillman (who introduced anaesthesia) Lister—were made by those directly concerned with clinical problems and it seemed clear that their contact with patients had both inspired and directed their efforts

A DEFENCE OF EXPERIMENT

Three appendices are attached to the lecture as published [1] In the first Lord Moynihan discusses the ideal training for the surgeon in the second he answers criticisms of animal research and in the third deals with the relation of physics and chemistry to medicine With out experiments on living animals he says the advance of medicine cannot continue He recognizes the motives that animate powerful bodies of noble and highly gifted men and women to oppose animal research but the opposition is based upon lack of appreciation and understanding as it is supported by grievous and unpardonable mis statements It is not true that pain is wantonly inflicted The experimenter who excites suffering defeats his own aims for pain changes the issues he seeks to discover The whole anti vivisection campaign though a great testimony to the tenderness of heart of its supporters has no slightest foundation in truth and is a witness to their short mindedness and credulity

[1] Oxford Clarendon Press 1 32 (2s 6d net)

THE BIRTHDAY HONOURS

The Honours List issued on June 3rd on the occasion of His Majesty's birthday includes the names of the following members of the medical profession

K C M G

Lieut General Sir JOHN GOODWIN K C B C M G D S O F R C S Governor State of Queensland

K B E

Wing Commander LOUIS GREIG C V O M B Ch B For public services to many social and welfare organizations

Knights Bachelor

HENRY BRITTEN BRACKENBURY LL D M R C S L R C P Chairman of Council of the British Medical Association

ALBERT RUSKIN COOK C M G O B E M D For long and devoted medical work among natives in Uganda Protectorate

FRANCIS EDWARD FREMANTLE O B E T D M D F R C P F R C S J P D L M P for St Albans since December 1919 For political and public services

RICHARD ARTHUR NEEDHAM C I E D S O Colonel I M S (ret) M D F R C P Ed Inspector of Medical Education in India 1924–30

ARTHUR STANLEY WOODWARK C M G C B E M D F R C P D L lately Medical Arbitrator for Trade Union and Friendly Societies Insurance Funds For political and public services

C B (Military)

HENRY EDWARD MANNING DOUGLAS V C C M G D S O (late Major General R A M C) D D M S Southern Command India

Air Vice-Marshal JOHN MCINTYRE A I C M B B Ch K H S Director of Medical Services R A F

C B (Civil)

HAMILTON CLELLAND MARR M D C M F R F P S Senior Medical Commissioner General Board of Control for Scotland

C S I

Brevet Colonel FREDERIC PERCIVAL MACKIE O B E M D I R C S F R C P K H S I M S late Director of the Haffkine Institute Bombay and Senior Member Medical Research Department Government of India

C I E

Colonel HARRY MALCOLM MACKENZIE M B Ch B Ed D P H Cantab I M S Inspector General of Civil Hospitals Punjab

C V O

MORTON SMART D S O M D Commander R N V R

C B E (Civil)

RUSSELL JOHN REYNOLDS M B B S D M R E Honorary Adviser in Radiology to Ministry of Pensions

PERCY JAMES KELLY M B Surgeon General British Guiana

O B E (Military)

Temporary Major ERNEST KENNETH CAMPBELL M B F R C S R A M C

Temporary Major HUGH DAVIES COLLEY F R C S R A M C

O B E (Civil)

M R Ry RAO BAHADUR MANGALORE KESAVA PAI AVARGAL Director Tuberculosis Institute and Superintendent Tuberculosis Hospital Madras

SEEVAMPILLAI FRANCIS CHELLAIYAH Senior Medical Officer Cyprus

ANDREW CONNAL M D late W A M S For services as Deputy Director Laboratory Services Nigeria

RALPH STRANSHAM OLDHAM M D B Ch P M O Ministry of Pensions

HUGH BRINDLEY OWEN D S O M B East African Medical Staff Medical Superintendent and Principal Medical College Mulago Uganda Protectorate

HARRY CHAPMAN SINDERSON M D Dean Royal College of Medicine and Physician Royal Hospital Ministry of the Interior Iraq

Major DAVID REES THOMAS M B Ch B Ed I M S Chemical Examiner to Government of Punjab

M B E

ZACHARIUS CONSTANTINOU ZARDIS District Medical Officer Second Grade Cyprus For services during the disturbances in Cyprus in October 1931

Kaisar i Hind Medal (Bar)

RAI BAHADUR LALA MATHRA DASS Honorary Assistant Surgeon to H E the Viceroy

ERNEST MUIR LL D M D F R C S Ed Mission to Lepers and Research Worker in Leprosy School of Tropical Medicine Calcutta

Kaisar i Hind Medal (First Class)

Mrs MARY O BRIEN BEADON M B B S L S A Principal Lady Hardinge Medical College Delhi

Miss HELEN MARION FRANKLIN M B B S Superintendent Lady Reading Hospital Simla

ALBERT HAILEY HENDERSON M D Medical Missionary American Baptist Mission Taunggyi Burma

CHARLES EDWARD VAIL M D F C A S Surgeon and Physician American Presbyterian Mission Hospital Miraj Bombay

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A Viscountcy has been conferred upon Lord BUCKMASTER chairman of the governing body of the Imperial College of Science and Technology Lord STANMORE treasurer of St Bartholomew's Hospital since 1921 has been created a Privy Councillor

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

The annual meeting of the London and Counties Medical Protection Society was held at Victory House Leicester Square London on June 1st with Sir JOHN ROSE BRADFORD in the chair

In submitting the annual report the PRESIDENT said that the work of the Society was steadily increasing and many grave cases had come within its purview During the year 808 new members had joined the Society and it was interesting to note that of this number 344 joined within the first year after qualification The finances were in a very satisfactory condition with a credit balance on the year's working of £3 640 and accumulated funds amounting to over £50 000 Several serious losses by death had been sustained by the Society during the year including that of Mr T E L Oakley of Messrs Le Brasseur and Oakley who had been its solicitors for nearly forty years Following the death in the previous year of Mr A G R Foulerton the financial secretary it was decided to reorganize the secretaryship of the Society and instead of having two secretaries to concentrate the responsibility in one individual No one had so intimate a connexion with the Society's work as Dr C M Fegen who had served as chairman of council and it was felt that if he could be persuaded to take up the secretaryship it would be a very fortunate thing for the Society Dr Fegen had consented to be nominated and he (the president) proposed his name with much satisfaction for that office The resolution was unanimously carried and Dr FEGEN in returning thanks mentioned that the Society was actually started in his own house forty years ago in Suffolk The PRESIDENT then went on to say that the Society had been served with singular devotion over a long period of years by Dr Hugh Woods When the reorganization scheme was proposed Dr Woods placed himself in the hands of the council and said that he was willing to retire if that would facilitate matters His resignation was accepted and it was proposed to make him a vice president and to award him a pension of £600 annually A resolution to this effect was also unanimously adopted and Dr WOODS in response spoke of the forbearance shown to him by the members and the absence of all unpleasantness during his forty years of secretaryship He wished every happiness to his successor

Sir John Rose Bradford was re elected president to the list of vice-presidents two new names were added those of Sir Thomas Wright Parkinson and Dr Hugh Woods and

Dr R I Guthrie was appointed treasurer The meeting concluded with various votes of thanks

In a report by the solicitors to the society it was stated that during the past year there had been very few cases indeed arising out of neglect or ignorance on the part of the members with regard to statutory provisions and regulations thus showing that members had benefited by attention being drawn to the burdensome necessity of being up to date in their knowledge of legislation affecting professional conduct The solicitors drew attention to the need for certain improvements in the judicial system At present all common law actions are treated in the same manner—that is trial by judge alone or with a common or special jury It is difficult enough for the judge let alone the jury to appreciate the extraordinary problems which from time to time confront a physician or surgeon The very terminology may be difficult to understand and cases may be lost because the scientific evidence has not been fully appreciated The solicitors urged that in all cases involving allegations against a doctor a medical referee should sit as medical assessor with the judge and trial by judge alone or with jury in such cases should be abolished

Scotland

Lord High Commissioner and Edinburgh Hospitals

His Grace the Lord High Commissioner Sir Iain Colquhoun of Luss and Lady Colquhoun paid the usual round of visits to the Edinburgh hospitals while he was present as the King's representative at the General Assembly of the Church of Scotland At the Deaconess Hospital which is managed by the Church of Scotland they were received in the absence of Lord Sands by the vice chairman the Rev Dr Fiddes Dr Fiddes claimed that this hospital held a unique position in Great Britain as the only hospital founded and carried on by a Protestant Church and he explained that its special object was to give training in nursing to women who intended to serve the Church At the Royal Infirmary the Commissioner's party paid a visit to a surgical and medical ward and afterwards presented prizes to nurses who had been successful in examinations A note on the history of the Longmore Hospital for Incurables was presented to the Commissioner during his visit This recalled that the hospital had come into existence in 1875 as a villa with 22 beds that five years later a hospital of 56 beds had been erected while an addition, opened in 1893 by the King and Queen, then Duke and Duchess of York increased the accommodation to 100 beds in 1899 the addition of another wing had brought the number of beds up to 154 and in 1906 an auxiliary hospital with 60 beds had been opened at Liberton At Southfield Sanatorium of the Royal Victoria Hospital Tuberculosis Trust at Liberton the Commissioner formally opened a new children's pavilion Sir Ralph Anstruther who presided said that in fighting tuberculosis a beginning should be made if possible with the young and the wing to be opened was specially intended for this purpose In declaring the pavilion open the Commissioner said that no country had so splendid a record of voluntary service as Great Britain He hoped he would not live to see the day when the hospitals would be eventually taken over by the State since the difference between the State hospital and the voluntary organization was very marked the give and take to be found in the voluntary hospital was entirely lacking in the State institution The new pavilion affords accommodation for some thirty children It is a one storied building the wards opening directly on to a raised terrace with a solarium providing facilities for more intensive treatment by sunshine At the Edinburgh Foot Clinic the Commissioner unveiled a memorial tablet to the la Mr Charles W Cathcart who was one of the or of the clinic Other visits included the Leith Hos the Royal Edinburgh Hospital for Sick Children and t Elsie Inglis Memorial Hospital

Opening of the New Glasgow Dental Hospital

For the first time in three hundred years the Lord Hig Commissioner paid a visit to Glasgow the object of t visit being to open the new Dental Hospital The Lo Provost who presided said that Sir Iain Colquhoun h devoted an enormous amount of time and personal atter tion to raising the building fund of the institution an the building as now completed was one of the be equipped and highly specialized institutions of its kin in the country Sir Iain Colquhoun said that it was matter for sincere gratification to him to perform t opening ceremony during his tenure of office as H Majesty's High Commissioner He could think of r more clamant need in Glasgow to-day than a dent hospital In two generations there had been so grave a decline in the standard of the nation's teeth that it was essential everyone should fully realize the necessity of combating this danger The dentist should be regarded as in a similar position to the doctor and his work should be looked upon as of equal moment Mr Matthew Robin chairman of the Board of Governors recalled that the hospital had been founded in 1885 for the gratuitous treatment of dental diseases and for the establishment of a dental school In the following fourteen years a series of removals had been necessary and buildings of different kinds were adapted and occupied until in 1913 it became imperative that a new building should be put in hand During the war nothing could be done and it was only in 1924 that it became possible to take definite steps The West of Scotland had responded generously to the appeal for funds but the governors still required £27 000 to meet the cost of the building and they hoped that the citizens of Glasgow would soon raise the necessary funds

Ireland

Royal College of Surgeons

The first meeting of the recently formed Association of Past Students of the Royal College of Surgeons in Ireland was held in Dublin on June 3rd with the President of the College Mr R A Stoney in the chair When the draft rules had been adopted Sir William Taylor was elected president and took the chair Mr R A Stoney was elected vice president Dr P J Brennan and Mr James Smith honorary secretaries Dr Cecil Robinson and Mr M P Burke honorary treasurers The following committee was elected Dr Martin Colonel Prescott Mr T J Henry Mr A W Mooney Mr A B Clery Mr J Owens Dr Spencer Sheil Mr J L Hogan Mr Alfred Miller Dr T S Bourke Mr S J Reeves and Dr T L O'Mahony The report of the honorary secretaries stated that the foundation of the association was due to the wisdom energy and organization of Mr Alfred Miller registrar of the College For years he had devoted the best part of his life to promoting the interests of the Royal College of Surgeons in Ireland and they met that evening to do honour to him for the great work he had done in launching the association Nearly 500 past students had been notified of their election as members A badge designed by Dr T S Bourke to be worn by the president of the association and bearing

the motto *Floreat sodalitas ruat res* had been purchased The committee had recommended dark green and gold as the colours of the association The president Sir William Taylor had offered a cup for competition at Baltray golf course

Sir Patrick Dun's Hospital and the Sweepstakes

The report for the year 1931 of Sir Patrick Dun's Hospital Dublin stated that in patients treated numbered 1 772 and out patients 27 495 Many were treated free while a large number contributed 10s a week or less During the year the hospital received £37 387 from the Grand National sweepstake and £41 907 from the Derby sweepstake These sums added to £29 288 obtained from the sweepstake on the Manchester November Handicap in 1930 brought the total amount received under the terms of the Public Charitable Hospitals (Temporary Provisions) Act 1930 to £108 578 This sum however fell short of the requirements of the hospital if the plans for converting the building into a modern and well equipped structure were to be carried out and an adequate endowment fund provided There was a reduction in the contributions from annual subscribers a serious falling off in the pound day collections and the withdrawal of the sum annually received from the Dublin Hospital Sunday Fund The annual expenditure of the hospital had for a number of years exceeded the annual income by nearly £1 500 The annual expenses had greatly increased in the last two years this was in part due to advances in medicine requiring more and more expensive appliances and remedies and in part to the revision of the scales of salaries of the nursing staff and officials which had now been made comparable with those of other institutions A special report from the auditors made at the request of the Board suggested that not less than £100 000 ought to be invested in order to place the hospital in a sound financial position In consequence it was hoped that large sums would still be forthcoming from the sweepstakes If the hospital were to be converted into a modern institution £200 000 at least should be expended in construction

Stillorgan Sunshine Home

The report to the seventh annual meeting of the Children's Sunshine Home Stillorgan stated that 73 children were admitted during the year 37 of whom were discharged cured two greatly improved and three showed no improvement Thirty five children remained in the home on February 29th Dr Kerry Reddin moving the appointment of the Committee of Management said that the work which was being done in the home was a revelation to him He saw the children before they were admitted and again when they were discharged The only thing he regretted was that the home was not ten times larger it was up to the citizens of Dublin to see that the accommodation was increased to that extent The Governor General said that he was very glad to associate himself with the wonderful work which the committee and staff were doing He had seen the home grow and increase its accommodation and maintain in difficult circumstances the very high quality of its work It provided relief from a grave hardship which affected nine tenths of their poor people whose children owing to many causes did not have a fair chance to grow in strength and health Sir Nevile Wilkinson said he had visited similar hospitals in two hemispheres If those who had been gifted with the *mens sana in corpore sano* did their duty as their brothers keeper and were determined that every child should have a fair chance the number of crippled and surgically defective children would be negligible Institutions such as the Sunshine Home were perhaps the most valuable of all for they attacked the enemy while he was still digging himself in Sir Nevile hoped that he might live to see the number of beds at least doubled and the number of subscribers multiplied by ten

Royal Victoria Hospital Belfast

At the last bi monthly meeting of the Board of Management of the Royal Victoria Hospital the superintendent Colonel J W Langstaff reported that collection returns had been received from forty four out of the fifty districts into which the city was divided the amount being £2 410 This was a decrease of £100 compared with the same districts last year When returns were received from the remaining six districts and the country towns the total should not be far short of £4 000 The honorary treasurer reported the receipt of £200 from Queen's University students day collection £111 from Belfast Presbytery £50 of which was to qualify Mr J Carlisle Carryduff a life governor £100 from Anonymous for the use of the Rosemary Bed and several other contributions

England and Wales

The Institute of Medical Psychology

The annual meeting of the Institute of Medical Psychology (formerly the Tavistock Square Clinic) was held at the Wharncliffe Rooms on May 31st Sir Henry Bracken bury Chairman of the Council presided over the business meeting which preceded the annual luncheon He said that the Institute had been under the necessity of finding increased accommodation for its work and all was ready for moving to a new site a few hundred yards from the present quarters The premises which it was expected to occupy and which were on two sides of the road would bring the Institute under two ground landlords, and while one of the ground landlords the authorities of the University of London had been exceedingly kind and welcoming the ground landlords on the other side were now raising considerable perhaps insuperable difficulties The alternative might be to develop the accommodation on the University's property without entering the premises on the other side of the road but if this were done an additional £700 for immediate capital expenditure would be required Mr Walter F Roche the honorary treasurer said that the maintenance of the Institute on its present lines required a sum of £5 000 a year of which nearly one half was earned in fees The amount spent represented nothing like the economic value of the work done because a great amount of the work was voluntary and the salaries paid were not on an economic level The report of the Honorary Director (Dr H Crichton Miller) which was presented stated that last year the Council had attempted to limit the work of the clinic with the object of safeguarding the quality of the treatment but this attempt had not been too successful During the last twelve months there had been an actual increase in the total interviews from 10 569 to 10 825 though both the numbers of new patients (722 as against 922) and the total number of patients (1 242 as against 1 342) showed a slight decrease The waiting list which had been closed since May had been reduced from about 300 to approximately 100 nearly all these were patients who could not go for treatment by day They were waiting their turn for evening treatment and yet the Institute was working at almost full capacity every evening The Director added

that an analysis of the methods employed at the Institute revealed the fact that the largest number of cases had been treated by modified analysis and re education deep analysis came next and suggestion last The important point for an organization like the Institute was not to attempt to standardize one psychotherapeutic method whether on the grounds of efficiency rapidity or theoretical validity but to have physicians at work who employed different methods and who were supplied with the cases most likely to benefit by those methods The annual report embodied reports on the children's department the speech therapy department the hostel (in which forty eight patients had been resident since the last annual report) and the social workers department

At the luncheon the principal guest was Sir E Hilton Young the Minister of Health In a brief address he said that he as Minister had many and varied responsibilities but in the region under consideration that day his responsibilities were strictly limited by statute which did not extend to cover the Institute's activities Nevertheless he had a most deep interest in all the agencies working in the field of mental health The work of the Institute must result in the accumulation of a wealth of comparative experience which was bound to enhance enormously its value as a teaching centre The Mental Treatment Act had very greatly enlarged the scope of out-patient treatment by enabling local authorities to provide such treatment for persons suffering from early mental illness If the service succeeded out patient treatment might be expected to cure a proportion of cases which would otherwise deteriorate and ultimately require prolonged treatment in a mental institution But while this was a new and significant development so far as local authorities were concerned something of the kind had for years been followed by non statutory agencies In his view there were three kinds of clinics which were needed One was the out patient clinics established by local authorities which might be expected to receive the larger proportion of the early insanities the second was the out patient clinics at the voluntary hospitals which would probably receive a larger proportion of those cases of mental illness which were associated with physical illness and in the third category for which there was a distinct need came clinics like that of the Institute of Medical Psychology where neurosis and psychoneurosis and other borderline cases might be treated There was an immense demand Sir Hilton Young concluded for the treatment of mental and nervous functional trouble This might seem almost to be the characteristic evil of the time due no doubt to factors in modern conditions affecting the life of the spirit Lady Erleigh also gave a brief address in which she pleaded that every school should have a visiting or consultant psychologist and Dr Crichton-Miller wound up the proceedings with a picturesque account of a day's work at the Institute

Hospital Almoners

In a foreword to the annual report for 1931 of the Institute of Hospital Almoners the president Lord Moynihan writes

> The doctor who has worked with a trained almoner knows that his work benefits in many ways He has more complete information about his patients he is sure that his recommendations will be carried into effect and that he will have the patient's full co operation in his cure

This excellently epitomizes the work of hospital almoners and the report now issued shows there has been a large increase during the past two years in the number of those applying to the Institute for training Hospital social service as a profession makes a strong appeal to educated women While the present economic situation has to a certain extent held up the normal development of the work in that fewer new departments have been established it has at the same time intensified the need for social service on behalf of the patient and the need for economy and the prevention of waste in hospital administration The policy of the Institute has always been to develop schemes in close co operation with the university schools of social study and a notable feature of the year under review has been the increasing share taken by local committees in university centres in the work of the Institute In England there are now committees in Leeds Liverpool Birmingham and Newcastle there is also a committee in Edinburgh and one in process of formation in Glasgow Nor is the good work of the Institute confined to Great Britain It is noteworthy that an almoner trained by the Institute has been appointed at the Hertford British Hospital in Paris and in Australia there has been a great increase in the development of the hospital social service following the visit of Miss McIntyre of St Thomas's Hospital to Melbourne where she worked for two years as almoner to the Melbourne Hospital It is hoped that as time goes on the connexion between this country and Australia will be strengthened by an interchange of almoners in much the same way as interchange of teachers now takes place The main work of the Institute lies in the selection and training of suitable candidates for almoners's work At the close of the year under review there were 150 students in training partly at the London School of Economics or other university schools and the rest at hospitals or working with the Charity Organization Society It should be noted that the Institute has always required a high standard of its students A sound education a background of general culture combined with character and personality are considered essential While the training provided varies according to the academic qualifications of the student the minimum period of work demanded is fifteen months before a certificate will be granted A new development in 1931 was the opening of a central library at Tavistock House and this feature should prove valuable for the students Good social service work in hospitals means efficiency and prevention of waste The work of the Institute of Hospital Almoners is an assurance that the standard will be kept high

Medical Training for Missionaries

Commemoration Day at Livingstone College Leyton, was held on June 2nd when a large company was presided over by Mrs C F Harford wife of the founder of the college and one of the first white women to go up the Niger She gave an account of the reason for founding the college and the work of the early days Dr T B Adam briefly described the medical services of Nigeria and the way in which the Government authorities were using trained lay help for spreading the knowledge of hygiene and the care and treatment of disease under medical supervision Before Government permits to do this work were issued six months training at least must be undertaken and Livingstone College had been recognized as a centre for such preparation Mr J D Spencer an old student of the College from N Nigeria gave an interesting account of his work in which he showed the worth of the training to himself and his fellow missionaries when qualified medical aid was not available and also in the treatment of the people for various diseases including leprosy The Principal Dr Tom Jays reported that the students had been fewer this year on account of the financial stress and the college needed about £800 to meet expenditure at the end of the financial year in September

Correspondence

THE *BRITISH PHARMACOPOEIA* 1932

SIR,—The new issue of the *British Pharmacopoeia* 1932 will be published on September 30th I am instructed on behalf of the General Medical Council to say that the Council wholly reserve their copyright in the new work and that nothing in the nature of substantial extracts from it must be published without the Council's express sanction A memorandum relating to this matter in detail can be supplied on application At the same time no objection will be taken to such reasonable reference to the facts and figures therein set forth as may be properly made for purposes of criticism review and summary or of study and research but no information of any kind derived from the new issue may be published in book form before September 30th

Advance copies of the text of the *British Pharmacopoeia* 1932 will be accessible on July 4th at this office and at 12 Queen Street Edinburgh, and 35 Dawson Street Dublin for the inspection of the public from 10 a m to 1 p m and from 2 p m to 4 p m daily excluding Saturdays in order to give to manufacturers pharmacists and others interested an opportunity of ascertaining the changes that are about to be made in official requirements and of making the necessary arrangements to meet them

Every person who takes advantage of this opportunity will be expected to observe the conditions above indicated and will be required to sign an undertaking to that effect Inquiries by letter or telephone as to details of the contents of the new *Pharmacopoeia* or the changes about to be made in official requirements by its issue cannot be answered The advance copies themselves must be consulted

I shall be obliged if you will insert this letter in your next issue—I am etc

NORMAN C KING
Registrar General Medical Council

44 Hallam Street Portland Place W 1 June 4th

AMBULATORY TREATMENT OF FRACTURES

SIR,—It is gratifying to note that the ambulatory treatment of fractures is arousing the general interest that it deserves Although time consuming distance makes this communication somewhat late I would like to contribute a few remarks in reply to a letter on the subject by Mr Bryan McFarland in your issue of March 19th

Your correspondent implies that financial reasons should determine whether or not a patient be fitted with an ambulatory splint in the early days of his treatment Also he appears to confuse the chief benefit of early ambulatory treatment with the question of adhesions Surely the adhesions upon which the surgeon should concentrate his attention in treating a fractured leg are psychological rather than anatomical Most patients with a broken leg are afflicted with a powerful psychological inhibition of physical activity and the longer this mental attitude is fostered by passive treatment the more difficult will it be to eradicate even a matter of two or three weeks will make a difference in the period of full recovery

Mr McFarland observes truly that each case should be treated not as a bone nor as a limb but as a whole person and I maintain that the correct way in which to treat the whole patient is to get him back to normal life and activity in the shortest possible time consistent with full function I do not happen to number a dock labourer among my fracture cases but I have had a chair mender with a fracture of both bones of the leg resume his work and walk four miles in one day in the Delbet ambulatory plaster splint six weeks after breaking his leg (this splint was described in the *British Journal of Surgery* April 1928) Also I have had a Chinese coolie with fracture of both bones of the leg who began walking five days after the accident and who resumed work at the end of all treatment in eight to nine weeks after receiving his injury

That early walking does prevent the formation of adhesions is a reasonable supposition when one considers that there is usually extensive laceration of muscles vessels and fascia in a case of fractured bones also the pumping action of the limb muscles on the circulation is probably an important factor in dissipating the oedema The earlier the patient walks on his broken leg the sooner will his bones unite and what often concerns the patient most the sooner will his pain and swelling disappear

—I am etc,

E ROBERT F R C S,
Surgeon General Hospital
Johore Bahru

Malaya April 28th

ACUTE APPENDICITIS IN CHILDREN

SIR,—I read with interest Sir James Berry's Oration Fallen Idols and in a later number of the *Journal* Sir Charles Gordon Watson's comments thereon As medical officer to a school of 400 boys since 1903 with another 400 added to the school in 1929 it may be of interest to record my experience in cases of acute appendicitis in children

The boys are aged from 8 years to 18 The statistics which I give are perfectly honestly made although in the earlier years the particulars of the condition of the appendices are not so well given as in the records of later years In these twenty nine years there have been fifty seven cases of operation for appendicitis in the school In the earlier years there were four cases of abscess but since 1919 there have been no abscesses except some cases of abscess in the wound A large number of the cases have been obstructive at least twelve have been gangrenous—the exact number I am unable to say as the earlier notes do not contain sufficient particulars

My experience is that it is impossible in the case of a child with an acute appendix to be able to say what is the exact condition of the appendix Many of the gangrenous cases have not led one to expect to find this condition present after the onset in a few hours the pulse may be normal or a little raised the temperature normal or not above 100° and the pain less acute I remember one case particularly in which the boy's temperature was normal his pulse rate normal and the pain and tenderness had almost disappeared The surgeon was at first inclined to wait for a day or two but owing to my very definite report of the conditions an hour or two before he decided to operate He found a gangrenous appendix full of pus which in our opinion would have burst in a few hours

In these fifty seven cases operated on there has been one death and that was in the case of a boy whom I regret I did not treat as I have always done since by immediate operation Although his temperature was almost normal and his pulse rate not going up on the third day he perforated and got general peritonitis

I expect that a good many of the cases operated on if left without operation would have made a good recovery but personally I find it impossible to be certain of the condition of the appendix in acute appendicitis especially in children and so I always get the operation done as soon as possible after the diagnosis is made I am quite sure that had I followed a waiting treatment instead of one death we should have had more—I am etc

WM W SHACKLETON M D

Bushey Herts May 30th

'FALLEN IDOLS

SIR —In the mid eighties when Sir James Berry was house physician in a medical ward at St Bartholomew's I occupied a similar position in the Edinburgh Royal Infirmary We too had cases of 'perityphlitis' but I wonder how many death certificates I signed as resulting from peritonitis —I am etc

Tunbridge Wells May 21st CLAUDE WILSON M D

THE INCIDENCE OF ECLAMPSIA

SIR —During the discussion on the teaching of obstetrics held by the Section of Obstetrics and Gynaecology of the Royal Society of Medicine I was unfortunately called away and therefore did not hear Dr J M Wyatt's contribution

It is reported in the *Journal* of May 28th that Dr Wyatt took exception to my remark that there had been no decline in the mortality of eclampsia My statement was however that the incidence of eclampsia had not decreased during the last ten years As most people will agree that our treatment of this disease has improved during this time then if Dr Wyatt's statement that the mortality from eclampsia has decreased can be disproved mine concerning the incidence will be proven In the Registrar General's statistical review of England and Wales for the year 1930 the following figures will be found (1) the total deaths from albuminuria and puerperal convulsions in the years 1921–30 and (2) the number of births in these years In 1921 the number of deaths from eclampsia was 604 in the following years up to and including 1930 they numbered 556 518 524 499 524 537 557 524 and 467 respectively At first sight this would seem to indicate that the mortality had fallen but on looking at the birth table we find that the number of births in 1921 was 848 814 and in 1930 648 811 Had the mortality rate remained the same in 1930 as in 1921 the figure for the former date would be 461 but it is 467 therefore there has been no decrease in the mortality rate from eclampsia but rather a slight increase

My objects in writing this letter are (1) To show that our optimism in believing that eclampsia is becoming a disease of the past is unjustified (2) That either ante natal treatment is not the essential factor in reducing the maternal mortality rate or what is more probable that as a general rule throughout England and Wales ante natal treatment is inefficiently carried out at least from the point of view of the toxaemias —I am etc

London W C June 2nd J D FLEW

FERTILITY AFTER PROSTATECTOMY

SIR —In reply to my inquiry in the *Journal* of May 7th (p 871) for an authentic case of a man becoming the father of a child after the operation of prostatectomy a well known doctor in Harrogate has very kindly supplied me with details of a case with permission to publish the notes

The man was an old friend and patient of his aged 48 at the time of operation and now aged 57 He was operated upon in July 1923 when a total and complete enucleation of the prostate was done This was followed by an uneventful recovery

Three months after he left the nursing home his wife became pregnant The pregnancy was terminated for various reasons A year later in 1924 she became pregnant for the second time and this occurred again in the following year There is no doubt that he was the father of the pregnancies

When he returned home from the nursing home after his operation he had the semen examined microscopically and the report given him was that no spermatozoa were to be seen or at most only a few half baked ones He was assured by the surgeon that he would be sterile and therefore took no precautions He was thus greatly surprised and needless to say annoyed at subsequent events Since then adequate precautions have been taken and nothing has occurred

This subject is of very great medico legal interest A case came on recently at the Clerkenwell police court in which a young girl was applying for an order against a man whom she positively declared was the father of her child He denied the possibility as he had had a prostatectomy done and held a certificate from a surgeon stating that he had had an enlarged prostate removed and was therefore sterile A well known London surgeon on cross examination stated that it was not impossible to be fertile after the operation but he had only known of one authentic case Other evidence was brought forth and the magistrate decided against the defendant and an order was given

I have it on the authority of others however that the possibility of fertilization following prostatectomy depends entirely upon whether the operation was complete or incomplete If the part of the prostate containing the openings of the common ejaculatory duct is left behind it is possible for the man to be fertile but where the *operation is complete and* the whole of the prostate is removed the mucous membrane of the bladder gradually grows down and across the bed of the prostate and becomes continuous with that of the urethra in which case there are no openings left in it and the patient is necessarily sterile

No spermatozoa have ever been found in the bladder after the complete operation I am sending this letter as the information I have elicited may be of interest to your readers —I am etc

London W 1 May 29th ARTHUR RICKETTS M D Lond

PREPARATION FOR MARRIAGE

SIR —Allow me to express my satisfaction that Dr Leonard P Lockhart has emphasized in the *British Medical Journal* of May 28th the necessity for the help of the medical profession regarding preparation for and education in marriage How strange it may seem that a great many married people have not the knowledge of sex life needed for making marriage satisfactory Far more husbands than is generally thought fail by lack of knowledge in giving their wives the orgastic relief they need for the sake of psychical and bodily health The effects are nervous disorders gynaecological disturbances, and endangering of marriage itself On the other hand only comparatively very few wives are in possession of enough sex efficiency to make their husbands as happy in union as they could be to perform the act of giving birth with as little difficulty and as little harm as possible and to restore their sexual faculties after childbed *ad integrum* Here too the consequences are often damaging to the health of body and soul and fatal to the happiness of marriage

The mentioned lack of knowledge and of physiological and psychological technique could and should be remedied by the teaching of doctors for it belongs to their task to help men in avoiding damage to their psychical and physical well being As far as I can see by the large number of letters I have received from your countrymen since the English editions of my books on these topics were published things in England are not better than in Holland Germany and Switzerland and so I believe that Dr Lockhart is quite right in trying to convince practitioners of the necessity for study and action in this direction —I am etc

TH H VAN DE VELDE, M D

Minusio Locarno May 31st

SIR,—I have been watching this correspondence with interest and it was with a sense of relief that I read Dr Lockhart's letter in which the real issue begins to be stated. It is really an amazing error to assume that the whole realm of instinct is outside the need of cultivation on the ground that it is adequately taken care of by Nature. Observe the man of intellect or the specialized musician attempting to adapt to the simple requirements of a garden or regard the sophisticated civilized woman in her behaviour towards her infant. Is it true that natural instinct can be relied upon even in those instinctive functions which have not been singled out for generations—as has been the case with sexuality—for repressive treatment? It is surely self evident that just because sexuality has been for two thousand years or more the psychological scapegoat in our Western civilization its full acceptance again requires not only the dissemination of sound hygienic principles but a thorough going individual cultivation—in other words a deep change of attitude.

That this change is gradually coming about is largely due to the psychological investigation of the causes of neurosis and to the extension of science into the hitherto proscribed territory of the soul but unfortunately there still exists a strong tendency in medical circles to regard this extension as a regrettable monomania of perverted minds. The truth of the matter is that sexuality, being that function which has been so signally repressed was naturally the first to occupy the foreground of the morbid picture to the pathologist's eye. It was this fact that gave rise to Freud's sexual theory of the neurosis. Psychological investigation has advanced far beyond this first account and it is now realized by all psychologists who are not irretrievably committed to the sexual theory that as soon as the sexual motivation is given its full value in a practical life philosophy the insistence dies away and a co-ordinated functional development of the whole instinctive life does actually take place.

What is true of the neurotic in a high degree is true of the average man or woman in a lesser degree since the incidence of repression does not fall only upon the neurotics. The historian of the future looking back upon the phase we are now passing through will surely find unmistakable evidence of a widespread sexual hysteria and he will also record the fact that the first attempts to understand this condition and to create a new view of life in which a man could view himself again as a totality came from the extension of medical science into the darker realms of the soul. Every effort to undertake this vital aspect of adult education should therefore be given our fullest support and appreciation.—I am, etc.

West Byfleet, June 1st. H. G. BARNES.

THE ORIGIN OF TUMOURS

SIR,—It is apparent that Mr. Lockhart Mummery has misunderstood my letter criticizing his exposition of the somatic mutation theory of neoplasms. My first paragraph hardly admits the interpretation that since a gene is invisible therefore it cannot exist. I have never seen my own brain, but though some I am told are sceptical as to its existence I am not. I have not yet to my knowledge seen the infective agent of neoplasms, but I become more and more convinced of its reality. I think that he is more in this error than I am, for he gives as evidence against an infective agent the fact that it has been sought and not seen. My first paragraph simply compliments the mutation theorists that they have at last a theory which does not permit ocular disproof.

I instanced a few symptoms and signs occurring in malignant neoplasms as evidence against a growth mutation. Mr. Lockhart Mummery makes no attempt to explain them, but says he has no experience of one of them, though I admit that he has probably seen many more new growths than I. Several other symptoms equally difficult to reconcile with this theory could be brought forward. He points out that such toxic symptoms are not found in the benign neoplasm, and here I am in complete agreement, for to me a benign neoplasm is benign because it is kept static—except perhaps in regard to growth—by the cellular and humoral barriers. If his theory were restricted to benign neoplasms I should not trouble to raise criticism, for this problem is not urgent.

I pointed out that the first of his postulates of new growth had no real meaning when critically considered; he admits this. I took the first because it was first. What of the remainder? The second postulate runs: "The tumour cell is specific to its original character, etc." I referred to this in my last letter: the cells of the metastases mentioned also retain their specific character. Third postulate: "Tumour cells are species specific, etc." Are not all cells species specific? A fragment of a human tuberculoma is often devoid of the tubercle bacillus which is only the visible phase of the tubercle virus; if this fragment is implanted into a guinea-pig the human cells will die, but a tuberculoma will occur at the site and may produce metastases elsewhere. If the nature of tuberculosis were not known this could be interpreted as a successful implantation. One could, space permitting, go through the remaining postulates and show analogies with diseases accepted as infective.

Then Mr. Lockhart Mummery side-tracks what I consider to be crucial—that medical methods of treatment if successful should be followed by the death of the patient. He says that he was privileged to see my method; this is an unfortunate word, for there are no restrictions for qualified observers. But he could only have seen the few cases demonstrated at the meeting of the British Association of Surgeons in 1930; on that occasion I showed only eight cases, not all of regressions but calculated to demonstrate various phases of cancer chemotherapy. I do not think that he should judge the frequency of regression from this small series. The present methods give a higher incidence of success than in 1928–9, although it must be remembered that no case is accepted unless guaranteed untreatable by any other method, and that about half the cases can be described as moribund when treatment commences. Of such material a high incidence of complete regression is not to be expected, and it does not occur. But more than half of these cases show more or less marked improvement; partial regression is frequent and complete regression less frequent. Mr. Lockhart Mummery counters this by saying that

> The fact that tumours occasionally regress as a result of toxic substances in the blood is neither a good argument in favour of the infection theory of tumours nor one against the somatic mutation theory.

Yet the somatic mutation theory as presented states that neoplasms are neoplasms because a mutation of the gene or genes responsible for cell growth has taken place; then any agent which checks neoplasia must also check normal growth inclusive of regeneration.

Then I do not consider that there is any evidence for substances especially toxic for the cancer cell—radiation in some types excepted. I have shown in man unfortunately as well as in animals that the larger the dose of selenide injected the quicker is the growth of the neoplasm. If the selenide were especially toxic to the cancer cell this result would not follow. I have shown that these colloids occasion certain cellular and humoral changes which can be regarded as increasing the normal defences against the neoplastic process, for these changes are similar to those which occur in the body's defence

against disease processes known to be infective This I think can be accepted as evidence somewhat in favour of an infective aetiology and definitely against a growth-gene mutation hypothesis

In conclusion I consider that Mr Lockhart Mummery has not brought forward any unimpeachable evidence in favour of gene mutation in malignant neoplasms that this concept is simply a speculative hypothesis of about equal value to that which has resulted from the degradation of the tomato from a purely artistic to a more utilitarian role that this hypothesis is likely to harm rather than help cancer therapeutics as it leaves us with no weapon except radiation therapy which is impotent against many types and stages of malignant neoplasms — I am etc

Bristol May 30th A T TODD

INTERNATIONAL ARTIFICIAL PNEUMOTHORAX SOCIETY

SIR —I have recently heard from Professor U Carpi of Milan the general secretary of the International Society of Pneumothorax Artificialis He desires that it should be made public in this country that the objects of the society have been altered and that one of them is the raising of a monument in Rome to the memory of Carlo Forlanini

The International Society of Pneumothorax Artificialis was founded in 1912 and strove to diffuse knowledge and facilities about collapse therapy among the physicians of the world It also aimed at providing periodically for the sick a list of doctors who practised pneumothorax Since this method of treatment is now so widely acknowledged and followed in all countries of the world it was decided to reconstitute the society One present aim is to get all interested physicians to write periodically to the general secretary so that he may be able to publish in the society's periodical *Bulletin* an up to date bibliography of books and articles on collapse therapy He also wants for similar publication communications about pneumothorax instruments and methods of technique notes from the inventors of these and brief reports of congresses devoted to collapse therapy

Professor Carpi appeals for subscriptions from this and other countries for the monument to Forlanini not only from interested doctors but also from any patient who has gained health by the method of artificial pneumothorax which method was systematically advocated by Forlanini from about 1890 Professor Carpi's address is Via Alberto da Guissano 18 Milan or Swiss francs can be sent to his secretary at Lugano (Postcheque N XI/1658 —I am etc

June 2nd S VERE PEARSON

THE MILK PROBLEM

SIR —In the editorial on the milk problem in the *Journal* of May 21st it is stated that there are two main methods of achieving safety in our public milk supply—the eradication of tuberculosis in cattle and pasteurization The matter is of such vital importance that every system claiming to achieve safety should be considered and I therefore draw attention to a third method which secures a higher degree of safety on all counts—namely the powdering of milk more especially by the roller process When properly carried out the bacteriological purity achieved is very high counts of less than 150 colonies per c cm being the average it is generally conceded that the remaining flora are non pathogenic

The transference of bovine tuberculosis to man was fully discussed by many eminent authorities at the British Medical Association's Meeting at Manchester in 1929, and in this relation Dr F H Morrison then medical officer of health for Cumberland said that he had found even certified milk infected with tubercle bacilli that graded milks were a failure and that pasteurized milk was only doubtfully safe He believed that dried milk was the best solution and visualized milk drying factories throughout the country Dr J B Orr the head of the Rowett Institute Aberdeen who has done so much practical work on milk in infant and child nutrition has also drawn public attention to the safety and value of roller milk powders and looks forward to a period when the public will buy milk from the grocers in that safe form (eliminating the costly business of delivery) at a figure bringing it easily within the reach of the poor[1]

While such a revolution in the method of our milk supply is hardly within the range of present practicability, yet the advantages of this form of milk has already been widely recognized especially for infant feeding This is shown by the fact that milk powder is used by the ton in hundreds of infant welfare centres and hospitals as the basis of artificial feeding and its use for this purpose is fully endorsed in most of the modern works on paediatrics In Newcastle on Tyne for example during 1930 the consumption of milk powder under council control by 4 936 babies and expectant mothers amounted to forty two and a half tons representing 73 392 gallons of reconstituted liquid milk In relation to this Dr Harold Kerr the medical officer of health states

> While it is not contended that milk powder is superior or even as good as the very best and purest milk this latter is of such exceptional occurrence that milk powder is an infinitely purer and cleaner article for the use of the average family than the ordinary retail milk That it is deficient in antirachitic vitamin is a mischievous assertion founded on insufficient knowledge Very particular attention was paid to this point before it was ever decided to use milk powder in Newcastle the very highest scientific assurances being first obtained[2]

A vital point aptly stressed in your editorial is that any system of treatment designed to render milk safer for public consumption should not vitiate the nutritive qualities especially in relation to vitamin value and the solubility of the calcium salts With regard to the former essential there is an impressive weight of biochemical evidence that the roller process (scientifically carried out) fulfils the necessary optimum conditions of thermal treatment without at any rate measurable reduction of vitamin value—that is rapid heating and cooling and the protection of the drying film of milk from the oxidative action of air with the surface temperature of the liquid never rising above 100° C —and produces a powder having equal vitaminic efficiency to that of the liquid milk from which it is prepared These biochemical conclusions have been confirmed by the experience of paediatricians at infant welfare centres and in the infant departments of our hospitals

There is no doubt as you say that Grade A (TT) certified milk is as safe as is needed for everyday life but the cost puts its use beyond the means of the bulk of our industrial population Milk powder on the other hand can be packed and is sold in infant welfare centre and school clinics at such a price that when reconstituted to standard gravity—one of powder to seven of water by weight—it is on a parity with ordinary milk as regards cost but with a bacteriological standard of purity much higher than Grade A (TT) certified milk at double the cost This is an economic consideration of the utmost importance in the present depressed industrial position while at the same time it supports an important home industry —I am etc

East Dulwich May 2nd JOHN CAMPBELL Ph D

[1] *Observer* October 27th 1929
[2] *Medical Officer* April 9th 1932

THE STUDENT IN IRONS

SIR —Dr Sanguinetti's letter (May 28th) has performed a very useful function in reviving this correspondence as it is obviously a subject of pressing importance concerning which measures of relief will require to be taken in the not too distant future Differences of opinion on the necessities of the situation had become evident as the correspondence developed and it is all to the good that these should be ventilated before any important changes are put into effect

The two problems that formed the burden of the original discussion were first the overloading of the curriculum due to the advance in knowledge and secondly the allegation that the student was uncultured and incapable of thinking for himself In regard to the first point is it not evident that as the accumulation of knowledge is bound to continue a return to the practice of the ancient Egyptians and Sumerians will sooner or later become necessary? Every doctor will then be a specialist in the sense that he will deal only with a limited aspect of medical science and every student will require to specialize before qualification If this is inevitable—and it seems to be—it is a waste of time deploring the fact Our efforts should be directed instead to preparing for the change and in trying to work out its medical and social consequences

Before this need come about however, it would be worth while to give serious consideration to one or two of the more obvious possibilities of reform in the curriculum There is for instance the desirability of a judicious pruning of a considerable number of the theoretical subjects There will of course be great diversity of opinion as to which subjects could be or should be curtailed Most of them could in my opinion with advantage be curtailed and the justification for this view lies first in the saving of time that would be effected (which could be devoted to the more important practical aspects of the curriculum) secondly in the fact that most medical men have in any case forgotten the greater part of these subjects and get on quite well in everyday practice without them and thirdly in the principle that those whose specialties demand a detailed knowledge of particular subjects should be expected to acquire that knowledge on their own responsibility The theoretical questions that arise in the course of daily work can be settled by reference to textbooks the habit of which should be inculcated in the student from the beginning of his academic career

Another sphere in which scope for improvement could well be investigated concerns the value of lectures as a method of tuition The monologue method of teaching has in my opinion little to commend it I have met few doctors who admit having learned much from listening to lectures Considered merely as a method of exposition of a subject they are unnecessary Ordinary subjects can with equal or greater facility be studied from books What could with the greatest advantage be substituted are classes conducted according to the Socratic or dialogue method These could be developed into discussion classes arranged on the most suitable lines The technique of discussion of this type has not to the best of my knowledge been worked out as yet likely to present any exceptional difficulty and the classes could be made to perform the double function of imparting knowledge and of conveying an understanding of scientific method It is I believe true to say that not only is discussion the best method of teaching after a certain age but it is indispensable for the proper appreciation of difficult and debatable problems and in the avoidance of a biased and narrow attitude of mind

This brings me to the student In a previous letter I indicated that we could hardly expect an individual trained in an attitude of continual acquiescence in dogmatic teaching to develop to any extent the power of thinking for himself and suggested that the subject of scientific method properly taught would go far to help in this respect I doubt if many students appreciate at first that it is not merely necessary to pass examinations and obtain a qualification to carry on medical practice Sooner or later they come to realize that they must remain students all their lives that they must in short be prepared not only to carry on their daily avocations but to spend a portion of their leisure time in making themselves acquainted with new advances For this the intelligent use of books of reference is a necessity A knowledge of scientific method is the most dependable means of avoiding the intellectual pitfalls into which credulity and suggestibility tend to lead the student and is the most direct aid towards the thinking out of problems for himself It may happen of course that when the student has been taught early enough to think for himself and when in consequence he allows himself to consider the labours of his studious days the conditions of life he may expect as a medical man the responsibilities he is compelled to assume—as illustrated by recent law cases—and lastly the standard of living he may reasonably look forward to he may come to the conclusion that his capital—his capacity for work and his power of thought—may be more effectively applied in some other direction Those who survive these considerations are likely to be students with a genuine feeling for the profession whose way it is the duty of teachers to see should not be made unnecessarily onerous and burdensome —I am etc

London W 1 May 27th FREDERICK DILLON

DOMESTIC SANITATION

SIR —It is reported that the London County Council is drafting new by laws and has circulated a printed paper for the information of members of local sanitary authorities in London In that paper it is actually proposed (page 10 No 10) that the owner of any occupied building shall provide in connexion with such building one water closet earth closet or privy for every *twelve inmates* of such dwelling It seems to me that this accommodation is so lamentably insufficient that attention should be drawn to this menace to public health and it is with this object in view that I write to the *Journal* in the hope that the authorities may modify this scheme which seems as disgusting as it must be disease creating —I am etc,

London W 2 May 30th HAROLD SIGTON

ALUMINIUM AND HEALTH

SIR —I had no idea that I could cause Major General Henderson any possible offence by quoting him as having expressed an opinion as to the desirability of further investigation into the question of using alum for clarifying water and I am greatly distressed to see by his letter in your issue of June 4th that I did so I offer him a most sincere apology at the same time hoping that I have not thereby lost his valued and greatly appreciated co operation in these investigations which are fraught with such grave consequences to future generations The question as to the relative amount of metal any particular laboratory finds given off by any one particular aluminium cooking vessel is of *comparatively* small importance compared to whether any at all is given off and whether this is liable to cause injury to any human being —I am etc

London W 1 June 6th R M LE HUNTE COOPER

Obituary

REMINGTON HOBBS M.D.

Medical Superintendent St. Mary Abbots Hospital Kensington

We regret to announce that Dr. Remington Hobbs died on May 30th after a short illness and a serious operation at the age of 58. He was at work less than a fortnight before his death.

Albert Remington Hobbs was trained at St. Mary's Hospital and qualified in 1901. He obtained his M.D. in 1908. He held four house appointments at St. Mary's Hospital after qualifying and was then appointed assistant medical superintendent of Paddington Infirmary where he remained until 1907 when he entered general practice. On the outbreak of the war he left his practice at short notice to serve his country and was subsequently invalided out of the army. On his return to civil life he secured the post of medical superintendent at Bethnal Green Infirmary and towards the end of the war he was appointed medical superintendent of St. Mary Abbots Hospital, Kensington, where he remained to perform brilliant work right up to the time of his last illness.

Thirteen years ago Remington Hobbs became interested in puerperal sepsis and eventually worked out a line of treatment which proved extremely successful. This was based on his conviction that puerperal sepsis is for the most part an autogenous infection superadded to imperfect drainage. He showed that latent bacilluria is common in pregnant women; that puerperal sepsis can exist without pyrexia; that after pains are abnormal and significant of sepsis; and finally that with perfect drainage brought about by intrauterine injections of glycerin most cases are cured. And he had every reason to hold that in many of the more serious streptococcal infections early uterine drainage would prevent the spread of infection and a general septicaemia. So enthusiastic was he in this special work that he organized a clinic for teaching purposes in connexion with the treatment of puerperal sepsis and during the course of the past ten years medical men from almost every country in the world have attended his demonstrations.

His methods were not at first generally accepted but so convinced was he that he had discovered the right treatment that he sought for and seized every opportunity of giving lectures and addresses both in London and in the provinces. It was pleasing to him in recent years to find that gynaecologists generally were beginning to adopt his methods and to advocate them in textbooks and addresses. Eventually the leaders of the profession recognized the value of his work, and in 1930 he was elected to Membership of the Royal College of Physicians. He was appointed Hunterian Professor of the Royal College of Surgeons for 1932. Three days after his fatal illness commenced he was awarded the Triennial Gold Medal of the West London Medico-Chirurgical Society for distinguished work, and the news of this honour greatly comforted him during his last few days of life. In addition to his official appointment at St. Mary Abbots Hospital he was consulting gynaecologist to the Royal Borough of Kensington. This appointment was extremely popular with the medical profession in the district by whom he was highly respected and admired. He was a member of the Kensington Division of the British Medical Association and contributed a number of papers on puerperal sepsis to the *British Medical Journal*. In 1928 the Council of the Royal Society of Medicine awarded the Nichols Prize of £250 in equal shares to Dr. Peter L. McKinlay and Dr. Remington Hobbs for their contributions towards the discovery of the causes and the prevention of death in childbirth from septicaemia.

When the name of Remington Hobbs was mentioned in recent years the first thought was of a medical man keenly interested in the specialty he had made his own, but the next thought was of him as a splendid sportsman. He and his brother were for some time the first wicket batsmen for St. Mary's Hospital and Remington made a fine century against St. Thomas's when St. Mary's won the hospital cup in 1899. With his brother he put on 104 runs for the first wicket when playing for St. Mary's against Dr. W. G. Grace's London County Eleven in 1900. Afterwards he played for the Middlesex second eleven and for some years for Buckinghamshire and he was playing in London club cricket and making good scores up to within two years of his death. St. Mary's men through out the country will long remember his big first wicket partnerships with his brother.

Perhaps his most distinguishing feature was his charm and lovable nature. It is commonplace to speak of a departed friend as having been a delightful companion but those who had the privilege of knowing him personally will agree that he was so good natured, so kindly towards his colleagues and patients that it was difficult or nearly impossible to differ from him. In fact his kindness and thoughtfulness for others almost amounted to a fault. His home life was particularly happy and much sympathy goes to his widow and his two sons, one at St. Paul's School and the other at Westminster.

J. F.

Dame LOUISE MCILROY, M.D., writes:

The world of medicine has suffered a great loss by the death of Dr. Remington Hobbs as he was a man of outstanding attainments. In his position as medical superintendent of the Hospital of St. Mary Abbots under the Board of Guardians, Kensington, and latterly under the London County Council he came in contact with an unusual number of cases of pelvic sepsis. It was to this branch of medicine that he specially directed his attention and instituted the method of uterine drainage by means of glycerin. This method is now widely known and practised in the world of obstetrics and gynaecology. By employing this rational and conservative method of treatment Dr. Remington Hobbs was the means not only of saving a great number of lives but also of restoring natural reproductive function in women who would otherwise have had to undergo severe and radical operations. His method of uterine drainage is one of the most important which has been introduced in the last ten years in obstetrical and gynaecological practice. When Dr. Remington Hobbs first published his method of treatment as in the case of other pioneers it was received with a certain amount of adverse criticism or indifference. As time went on and specialists were induced to give it a trial confirmation of its value and success was soon forthcoming. In many hospitals it is now the routine method of treatment in acute and chronic pelvic sepsis.

Some years ago I was invited by Dr. Hobbs to see the work in his hospital and to try the treatment in the obstetrical and gynaecological unit of the Royal Free Hospital. The method was accordingly adopted in the treatment of a large number of cases and was found to be attended by unqualified success. It has been continuously used ever since in cases of pelvic sepsis. Dr. Hobbs extended his lines of investigation to the successful treatment of uterine haemorrhage especially after parturition and abandoned the method of hot water douching. He always conveyed the impression that he thought only of the welfare and safeguarding of the lives of his patients and not of any credit which might accrue to himself. When he advocated his method with enthusiasm he did so because he was convinced of its genuine merit.

Dr. Remington Hobbs was a most lucid teacher and demonstrated his technique with great acceptance to the

numbers who came to learn from him His passing from us has caused a great blank but the legacy he has left by his research is exceeding great

We regret to announce that Dr E LLEWELYN PARRY EDWARDS medical officer of health for Carnarvonshire died on May 19th He took the B A at Trinity College Dublin in 1894 graduated M B B Ch B A O in 1895 and proceeded to the M D in 1899 during which year he also obtained the Cambridge D P H After holding various posts in South Africa Dr Parry Edwards returned to Carnarvon where for the past twenty five years he had been county medical officer of health He was also responsible for the organization of the school medical service Dr Parry Edwards is survived by his wife and three daughters

The death took place on May 30th of Dr JAMES MIDDLETON of Stow Midlothian one of the oldest practitioners in the country Middleton was born in Edinburgh in 1839 and after being educated at the Royal High School he took up the study of medicine at Edinburgh University and the Royal College of Surgeons He graduated M D in 1860 with a thesis on *The medical* jurisprudence of muriatic acid having begun the study of medicine prior to the passing of the Universities Act which introduced the qualification of M B C M Entering the Royal Navy as an assistant surgeon he served in H M S *Marlborough* and was an assistant surgeon at the Royal Hospital at Greenwich from 1866 to 1868 about which time he retired from the Navy and took up practice at Stow To commemorate his fifty years practice at Stow he was presented by his patients with a motor car in 1918 but did not then retire and was still doing a certain amount of work with mental and physical alertness at the age of 92 Dr Middleton was a prominent Freemason having been initiated in January 1860 and was for twenty five years Provincial Grand Master of Roxburgh Peebles and Selkirk On the seventieth anniversary of his initiation he was presented with an illuminated address Dr Middleton was predeceased by his wife nine years ago and is survived by five daughters of whom one is married to Professor D P D Wilkie Edinburgh and by one son Sir John Middleton Governor of Newfoundland

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on June 4th the degree of Doctor of Medicine (D M) was conferred on the Hon Olive B Buckley (Somerville College)

UNIVERSITY OF LONDON

LONDON HOSPITAL MEDICAL COLLEGE

The Hon Sir William H Goschen chairman of the House Committee will distribute the prizes to successful students at the London Hospital on Friday June 24th at 3 p m

The following candidates have been approved at the examination indicated

THIRD M B B S—‖T V L Davies (University Medal) *‖K H C Hester †P M G Russell L F Scowen ‡Eileen M Whapham *S L Wright J Apley H B Barker W S Baxter C R Birnie J B Blinkley V E Bowling Winifred M Burbury A Burkhardt J Carlton R C Cohen Margaret J Cooper Iris M Cullum J Dawson Mary T Day Gwyneth N Ellis V C Fraser B Gilbert G P Gladstone F J S Gowar Hilary S M Hadaway Kathleen M Hart D N Jardine I G Jones K D Keele A Kennedy S Knight R Knox S Leff H G McCormack F Madigan I M Mallinson Esther M Martin L C Norman H J C Pace D D Payne M Phillip C R D Porter S R C Price R D Reid V C Riley L K Robson H W Salmon A G Sanders R W Scarff S A Scorer V G Sigsworth D V Smith G L Talwar Marghenta V Walden Doris I C Walker I M Ward S J Wheeler S Elisabeth Whitaker A L Wingfield

* Distinguished in Medicine ‡ Distinguished in Surgery
† Distinguished in Forensic Medicine ‖ Distinguished in Obstetrics and Gynaecology

UNIVERSITY OF DUBLIN

TRINITY COLLEGE

The second John Mallet Purser Lecture will be delivered by Sir Frederick Gowland Hopkins P R S professor of biochemistry University of Cambridge on Some aspects of modern biochemistry on Tuesday June 14th at 5 p m in the Department of Physiology (Medical School) Trinity College Medical practitioners and medical students are invited tea will be served at 4 30 p m in the Reading Room

UNIVERSITY OF BIRMINGHAM

Mr William Gemmill M A M B Ch B F R C S honorary surgeon to the Queen's Hospital has been appointed joint professor of surgery to fill the vacancy caused by the death of Professor William Billington

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

The following have been admitted Members of the College A Halperny J Lewis F N Chenhall F I Kane M S Ullah

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons has this week passed the Finance Bill and the Town and Country Planning Bill through report and third reading The Patents and Designs Bill was read a second time Mr Ramsay MacDonald and Mr Neville Chamberlain returned to the House after absence through illness

The Epsom College Scheme Confirmation Bill was read the third time and passed in the House of Lords on June 7th The Public Health (Cleansing of Shellfish) Bill also passed

Mr Baldwin announced on June 2nd that before the Summer Recess the Government hoped to pass into law the Finance Bill Coal Mines Bill National Health Insurance and Contributory Pensions Bill Town and Country Planning Bill and other measures which might include the Patents and Designs Bill It might be necessary to consider the Lords amendments to the Children and Young Persons Bill which had already passed the Commons Legislation to amend the Rent Restrictions Act could not be passed before the House rose in July

On the same day Sir Herbert Samuel said there was no possibility this session of a Bill consolidating and amending the laws relating to factories Sir Donald Maclean said there could be no question this session of giving effect to the recommendations of the Departmental Committee on Private Schools

Patents and Designs Bill

A meeting of the Parliamentary Medical Committee at the House of Commons on June 7th was attended by Sir Walter Fletcher and Sir Henry Dale of the Medical Research Council and by Dr G C Anderson of the British Medical Association These joined in a discussion on the patent laws with particular regard to patents controlling the manufacture of medicines foods vaccines insulin vitamin D and other therapeutic substances The opinion of the committee was that the present law was unsatisfactory and hampered research It was pointed out that the Patents and Designs Bill now before the House of Commons was concerned with foods and medicines

Later on the same day during the discussion on the motion for the second reading of the Bill Sir T DEVONSHIRE called attention to a point of great and growing import nce which was omitted from the Bill A large number of the most important drugs and medicines recently discovered were subject to a patent law which had unfortunately put our research work at the mercy of certain foreign countries The position was extraordinary Most people would know the vital difference to the foods of the country between fresh butter and margarine Margarine was coming more and more into use yet it had been discovered recently that what really lacked was vitamin D The discovery of vitamin D

was made only a few years ago and was due to research in this country It was discovered that by the use of ultra violet rays vitamin D could be produced out of a certain material called ergosterol Unfortunately the patent for the manufacture of this vital material was taken out by Professor Steenbock a worker in an American university This was known as the Steenbock patent and gave patent rights over not only America but all other countries for all forms of manufacture of vitamin D Professor Steenbock gave the patent rights to the university and the patent was run for the benefit of that university The patent rights were made out with definite conditions in this country which were hampering research The patent ought not to cover the more modern processes which had not been discovered in America but here A licence as was the custom in this country should be given to the research workers for their free use The American university was wealthy and no one cared to challenge its rights It was extracting large royalties from all who used this process of treatment of food A considerable amount of the best work was done by big manufacturing houses who found it more worth while to pay the royalty than fight a university or corporation They paid the royalty and passed it on to the consumer

When insulin was discovered in Canada the patent right was given over to a Canadian university which nobly gave it to the British Government and our Government passed it on to the Medical Research Council who were able to prevent any commercialization which would have been fatal to a large number of people and to see that insulin was properly used and produced Dr and Mrs Schick working together in Chicago discovered the toxin and antitoxin for scarlet fever They took out patent rights and give them to the University of Chicago These were used commercially and probably mercilessly by the committee running the trust and the result had been to hinder and very largely to stop research work in this country These matters were put before the Board of Trade by the Medical Research Council three years ago with a view to giving evidence before the Departmental Committee upon whose report the present Bill was founded yet no action had been taken officially to incorporate the representations in the measure If the Board of Trade was able to give good reasons for not including this most important principle in the measure he hoped that it would give some undertaking that it was seriously considering the matter

A conference called by the British Medical Association which was also attended by representatives of the Royal College of Surgeons and Royal College of Physicians and members of the Medical Research Council, had come to the conclusion that they would first of all see the Board of Trade Having seen the Board it was asked to consider whether it was not advisable to move an amendment to the measure The medical profession had been asked not to move any amendment at the present time but it could only accede to that request if it was given some pledge from the Board of Trade that they recognized the seriousness of the position The medical profession maintained that the results of research should be open to everybody and that there should be no patent rights whatever as regards what are called animal medicines and products vitamins serums antitoxins etc and that no patents should be allowed whatever which were a disadvantage to other countries Medical men should not be allowed to take out patents to make a profit by them It would be compulsory as the conference suggested that patents for such articles for medical use should be dedicated to universities or some public trust or body We required legislation to deal with all these matters Sir STAFFORD CRIPPS said that there was one way in which the difficulty referred to by Sir I Fremantle could be overcome and that was by giving the Government power to expropriate patents At present the Government had power to take patents only for war purposes He did not see why a useful article such as some medical or food product should not be subject to acquisition by the Government in the same way There was no reason why an invention should not be capable of being put into safe custody to be used under the disposition of the Medical Research Council or other such body for the benefit of the whole country

Sir P SIDNEY MERRIMAN after giving an assurance that any representation with regard to amendments to the Bill would be carefully considered by the Government in committee said that there was already power to compel people to make anything which was the subject of a patent available for public service That involved payment of royalties to the inventor and there was no reason why a person who had spent his life in research and inventing in connexion with health should be deprived of the fruits of his labours The Government was not prepared as at present advised to consider expropriation without compensation of any form of invention Sir I FREMANTLE had said that anything which affected health or medical research should be made open to the public and not be subject to a patent at all

The Bill was read a second time

Grants for Cancer Research

In answer to Dr Morris Jones on June 2nd Sir HILTON YOUNG said no special allocation of any part of the inclusive grant in aid received by the Medical Research Council from the Exchequer was made to cancer research as such He was advised that in the present state of knowledge it was in fact neither possible nor desirable to decide the present or future relevance of particular new lines of inquiry to the special problems of cancer To work expressly directed to cancer the Council assigned at present about £6 000 a year exclusive of expenditure upon radiology and radiotherapy The work supported by the Council was described in the annual reports which were presented to Parliament but it was not the practice of the Council to give details of the amount of the grants paid to individual research workers The manner in which the grant was allocated by the Medical Research Council was in no way under his control but a useful purpose might be served if Dr Morris Jones would place at the Minister of Health's disposal any information concerning research workers who received no encouragement from the Council Dr MORRIS JONES asserted that one research worker who was not called upon had spent almost his entire fortune in this research

Narcotics Intelligence Bureau Cairo—Sir JOHN SIMON told Mr Hannon on June 1st that the Narcotics Intelligence Bureau in Cairo was a Department of the Egyptian Government and he could not therefore make a statement on the progress of the work undertaken by its director for the suppression of opium and other drug traffic in Egypt and the Near East

Milk for Children in Elementary Schools—In reply to Captain Heilgers on June 2nd Sir D MACLEAN said he was anxious to see a further extension of the arrangements for the supply of milk to children in public elementary schools and was co operating with the National Milk Publicity Council to that end In approving arrangements for the provision of milk by local education authorities the Board of Education called attention to the importance of purity and quality and recommended the use of pasteurized or tuberculin tested milk

Sickness from Petrol Fumes and Exhausts—Replying on June 2nd to Mr Daggar Sir HERBERT SAMUEL said every omnibus was given a running test before being licensed special care being taken to see that no excessive or obnoxious fumes were emitted and if any vehicle after being licensed was seen to be offending in this respect the licence was suspended and it was removed from service until the defect had been remedied He had no reason to doubt the general effectiveness of these arrangements and so far this year only two cases of sickness among conductors and drivers of such vehicles had resulted from petrol emanations

Floods—Sir HILTON YOUNG told Mr T Williams on June 2nd that from the reports of his inspectors who since the floods in the Doncaster area began had been and still were upon the spot for the assistance of the local authorities he understood that the local medical officers of health had been engaged in inquiries into the possibility of danger to health with special reference to the question of pollution of the water supplies and such dangers as fever spreading when the floods subside The resources of his Department were available for their assistance advice and support but there were no funds at his disposal

Amalgamation of Medical Services in the Forces—Replying to Sir B Falle on June 2nd Captain WALLACE said that the question of amalgamation of services common to the Navy Army and Air Force had already received much attention

The policy of the amalgamation of hospitals had been accepted for many years and had been carried to the utmost extent possible

Vaccination Pads.—Mr A DUFF COOPER told Mr N Maclean on June 2nd that the decision not to issue further supplies of boric lint and vaccination pads to Army medical officers was made in the interests of economy Boric powder and plain lint would be issued instead The order did not imply that vaccination in the Army was to cease

Naval Invaliding.—On June 6th Lord STANLEY replying to Sir B Falle said that the number of boy ratings of all branches of the Royal Navy and Royal Marines invalided during 1931 was 54 The numbers in the same period invalided with pulmonary tuberculosis heart complaints and kidney trouble were 3 12 and 2 respectively The number of naval ratings (including Royal Marines) invalided during 1931 was 888 and the number whose disability was considered to be attributable to the service was 193 The number invalided during that period with pulmonary tuberculosis was 156 In 117 of these cases pensions were granted on the attributable scale

The Services

PARKES MEMORIAL PRIZE

The prize of 75 guineas in money and the Gold Medal of the Parkes Memorial Prize for 1931 have been awarded to Captain D C Ettles M B R A M C

DEATHS IN THE SERVICES

Lieut Colonel Hugh MacCalman Bombay Medical Service (ret) died at the Chaplain's House Welbeck Notts on May 18th aged 82 He was born on November 5th 1849 the son of the Rev Hugh MacCalman of Latheron Caithness and was educated at Aberdeen where he graduated M B and C M in 1871 and M D in 1874 Entering the I M S as surgeon on September 30th 1876 he reached the rank of surgeon lieutenant colonel after twenty years was placed on temporary half pay on account of ill health on February 13th 1898 and retired with an extra compensation pension on April 7th 1901

Medical News

At the meeting of the St John's Hospital Dermatological Society to be held at 49 Leicester Square W C on Wednesday June 22nd at 5 30 p m Sir Thomas Lewis will deliver the annual oration on Recent observations on the cause of Raynaud's disease The annual dinner will take place at the Criterion Restaurant in the evening at 7 15

The annual provincial meeting of the Section of Disease in Children of the Royal Society of Medicine will be held at Alton on Saturday June 25th During the afternoon a visit will be paid to the Lord Mayor Treloar Cripples Hospital where Sir Henry Gauvain will give his presidential address on special open air country hospitals for children

The annual general meeting of the governors of Epsom College will be held at the office 49 Bedford Square W C on Friday June 24th at 4 p m when the result of the voting for pensioners and foundation scholars will be announced

At the annual general meeting of the Research Defence Society to be held at the London School of Hygiene and Tropical Medicine Keppel Street W C on Wednesday next June 15th at 3 o'clock the chair will be taken by the president Lord Lamington supported by Sir Arthur Stanley chairman of committee The sixth Stephen Paget Memorial Lecture will be delivered by Sir Arthur Keith on Some aspects of the modern conflict between reason and sentiment Tea and coffee will be served after the meeting

On June 4th His Royal Highness the Prince of Wales paid a visit to Preston Hall Aylesford near Maidstone the institution which he himself opened in 1921 and which is now the centre of the British Legion's village settlement for tuberculous ex Service men After his reception by members of the council of management he inspected the sanatorium

The annual general meeting of the Illuminating Engineering Society will be held at 15 John Street Adelphi W C on Friday June 17th at 6 30 p m when Sir Francis Goodenough will deliver his presidential address

The next meeting of the Biochemical Society will be held at the Agricultural Research Station of Imperial Chemical Industries Jealott's Hill Bracknell Bucks on Saturday June 11th at 3 p m

Sir F G Hopkins P R S as chairman of the General Board of the National Physical Laboratory Teddington will receive guests at the Laboratory on the afternoon of Tuesday June 28th

The sixty fifth session of the French Association for the Advancement of Science will be held in Brussels from July 25th to 30th The subscription of 50 Belgian francs should be sent to the general secretary Dr E Daubresse Morelle 154 Rue de la Loi Brussels before June 15th

The following medical tours are being organized this year *in France under the patronage of the Faculties of* Medicine of Bordeaux Lyons Marseilles and Montpellier From June 26th to July 6th there will be a tour of the Alps based on Grenoble during the course of which visits will be paid to the monastery of the Chartreuse Aix les Bains Annecy Saint Gervais Chamonix and Mont Blanc Evian and Lake Geneva From August 30th to September 12th there will be a tour in Languedoc the Cevennes and the Pyrenees associated more particularly with the Faculty of Medicine at Montpellier Other places to be visited include Nimes Argues Mortes the gorges of the Tarn Carcassonne and Lourdes This tour will be arranged in three separate sections the first from Montpellier to Carcassonne the second from Carcassonne to Luchon and the third from Luchon to Pau any one of the three can be taken separately These tours are specially designed for practitioners and their families but medical students may take part For information about the cost and other details of the tours application should be made to the Secrétariat des Voyages Médicaux du Midi de la France La Malou (Herault)

A number of doctors in the Paris district have recently formed an Automobil Club Medicale to protect the rights of medical men and to seek certain concessions in their favour in connexion with the motor regulations An endeavour is to be made to render doctors not liable to the regulations which limit the time cars can be left unattended outside a house or building

The last number of the *Journal of Neurology and Psychopathology* dated April 1932 completes the twelfth volume of this periodical which since 1920 has been published by the British Medical Association under the editorship of Dr S A Kinnier Wilson Its contents include papers by Louis Minski on familial bilateral acoustic tumours by W G Scott Brown on three fatal cases of the bulbar type of poliomyelitis by Frank J Curran on pseudo sclerosis of Strumpell Westphal in five members of one family and short clinical notes by Francis of current literature and an editorial on the menopause and mental disorder

The cancer mortality in Holland according to the Dutch Central Office for Statistics has increased from 1923 to 1930 as regards cancer of the lung for men and women by more than double in the case of the breast by 35 per cent and to a lesser degree in regard of cancer of the rectum in men and the [illegible] in women No increase has been found in fatal from cancer of other organs

The German expenditure on alcohol for the financial year 1930 1 amounted to 4 292 million marks including 3 650 millions for beer 356 millions for brandy and 279 millions for wine as compared with 4 797 millions in the previous year and 4 978 millions in 1928–9 The expenditure on tobacco in 1930–1 was 2 720 million marks

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are *MUSEUM* 9861 9862 9863 and 9864 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are

EDITOR OF THE *BRITISH MEDICAL JOURNAL* *Aitiology Westcent London*

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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Income Tax

Car Depreciation and Replacement

A B bought his first car in 1926 for £298 depreciation has been allowed at 20 per cent on written down value for the three years 1929–30 to 1931–2 amounting in the aggregate to £92 the written down value for the 1931–2 allowance was £97 He bought a second car in 1931 for £339 and contemplates exchanging that car for a 1932 model of similar make which will cost him the car plus £100 Can the £100 be charged as an expense?

*** The cost of renewal cannot be charged for the same income tax year as that for which depreciation is claimed A B might claim the £100 as an obsolescence allowance and treat it as a charge in calculating the 1932 profits but that claim might be rejected on the ground that a car does not become obsolete in a year An alternative would be to aggregate all depreciation claims thus

	£
Value of car as at December 31st 1930	97
Add expenditure on second car in 1931	339
Written down value as at December 31st 1931	436
Allowance for 1932–3 at 20 per cent	87
	349
Add further net expenditure in 1932	100
Written down value as at December 31st 1932	449
Allowance for 1933–4	89
	£360

This method will ultimately give the full allowance due but not so quickly as the obsolescence allowance

Employment Expenses

T H is an assistant M O H to a county council He has claimed £3 for the expense of travelling from his home in Ireland to take up the appointment and £10 for the cost of midday meals when unable to return home owing to professional duty Both claims have been refused

*** The expenses to be allowable have to come within the description of being incurred wholly exclusively and necessarily in the performance of the duties of the office Neither of the two classes of expenditure fall strictly within that description the first because the expense was incurred prior to and not in the performance of the duties and the second because the expenditure is by its nature personal and therefore not incurred exclusively in the performance of the duties On the other hand we have met cases where some allowance was made under the second head where the expenditure on meals etc was obviously considerably swollen by professional duties as for instance where it entailed absence at night or the entertainment of professional clients etc

LETTERS, NOTES, ETC

Testimonial to Sir Ashley Mackintosh

Dr H EDGAR SMITH (Aberdeen) writes I should be glad if you would correct a statement in the *Journal* of June 4th On page 1048 in the account of the presentation to Sir Ashley Mackintosh it is stated that Sir Ashley was presented with his portrait and a cheque for £1 000 What actually happened was that the subscribers to the testimonial presented (1) a portrait of Sir Ashley to the University of Aberdeen (2) a replica to Sir Ashley himself and (3) a sum of £1 000 to the University of Aberdeen to be known as the Sir Ashley Mackintosh Fund for the benefit of necessitous students

Pain in Stomach or Colon?

Dr J M MACPHAIL (Middlesbrough) writes It has often struck me as strange that in dealing with disease of the stomach and intestines the time factor and the relation of the pain to the last meal should be the chief and sometimes the only diagnostic sign to the exclusion of other considerations Yet if we believe that visceral pain can be caused by intense muscular contraction the direction of the pain should have some significance It is difficult to differentiate between pain in the stomach and colon yet in a number of cases the patient will point from left to right in stomach pain and from right to left in pain in the colon This is not always easy to elicit though some patients are quite definite Many patients have been operated on for duodenal ulcer and no such condition found but they have indicated the seat of the trouble by pointing from right to left along the colon the site of maximum pain being usually at the splenic flexure An irritable colon is much commoner than is usually supposed and it may be due to the taking of aperient pills quite often the nervous stomach is in reality the nervous colon

Local Anaesthesia for Tonsils

Dr W S THICKER NEVILLE (Harrogate) writes Dr Costello's article in the *British Medical Journal* of May 7th is timely as it emphasizes some of the advantages of local anaesthesia I do most of my tonsil operations under local anaesthesia Dr Costello advocates spraying the fauces with cocaine This I believe is a mistake as it abolishes the pharyngeal reflex and allows blood and debris to fall into the trachea The insertion of the needle into the loose tissue of the anterior pillar of the fauces is not so painful as to necessitate a previous surface anaesthesia with cocaine Percaine 1 in 1 000 with adrenaline gives perfect anaesthesia if it is injected as advised by Dr Costello Lung abscess is reported to occur after operations under local anaesthesia To prevent lung abscess one must maintain the swallowing reflex and the only way to do this is to prevent any anaesthetic reaching the posterior wall of the pharynx

Hospitals and Economy

W M writes I feel that far too much money is spent by hospitals on the printing of annual reports and in sending out broadcast invitation cards for meetings to those who have given financial support Obviously proper accounts have to be kept at the hospitals and they should be available to anyone desirous of consulting them but there the matter ought to end Very few contributors to hospital funds want to attend functions and meetings So far as the annual reports go some of them are positively amazing running into perhaps some 200 pages—I refer to the big London hospitals In these difficult times the money certainly could be better spent

Disclaimers

Dr W HOWARD JONES (London W) writes A letter in the *Daily Telegraph* of June 2nd commenting upon the rewards of hospital consultants over a name identical with mine has in some quarters wrongly been attributed to me I shall be very grateful if you will enable me to disclaim all responsibility for this letter

Dr S M COHEN (Treorchy Glam) writes A paragraph in the *Rhondda Gazette* of June 4th in which my name was mentioned was published without my knowledge and I was in no way responsible for it

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 45 46 47 48 49 50 51 and 55 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 52 and 53

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 287

EPITOME OF CURRENT MEDICAL LITERATURE

Rheumatic Diseases

CLASSIFICATION

540 The Two Types of Chronic Rheumatic Arthritis

A review of the present status of the classification pathology and aetiology of chronic rheumatic joint disease has led J L MILLER (*Amer Journ Med Sci* August 1931 p 157) to endorse the view that two types can be differentiated—namely the infective and the degenerative—although the not infrequent presence of mixed forms in the same patient has given rise to considerable confusion Rheumatoid arthritis seems to be definitely of the infective type for as Nichols and Richardson (confirmed by Fisher) have shown there is an initial round celled proliferation at the junction of the synovium with the articular cartilage which slowly spreads over the articular surface until the entire cartilage is covered by patches of a highly vascular membrane resembling granulation tissue invading and destroying the superficial layers of cartilage This pannus is replaced gradually by connective and later by fibrous tissue Connective tissue cells appear in the subarticular cancellous spaces which become larger owing to bony absorption the subarticular bone increases in density fibrous ankylosis (more rarely bony ankylosis) ensues and there is secondary bone atrophy In children this condition is acute (Still's disease) being signalized by pyrexia leucocytosis articular inflammation and enlargement of the spleen and lymphatic glands In adults the course is more insidious *the changes appearing most frequently in a* phalangeal articulation and with only moderate signs of infection though in the earlier stages there is always *some evidence of inflammation Remissions and exacerbations* occur and the evidence of infection disappears leaving the characteristic spindle shaped deformity but according to Miller there is no justification for the designation of this condition as atrophic arthritis The author cites the bacteriological and serological evidence in favour of the infective origin of this disease and calls attention to the prevalence of local ischaemia which may be an important aetiological factor and is relieved by ganglionectomy In osteo arthritis on the contrary the changes in the joint (as described by Nichols Richardson and Fisher) are degenerative and not inflammatory the earliest lesions found being fibrillation of the cartilage the development of fibrous tissue in the striae so formed and ridging of the cartilage towards the centre of the joint (possibly due to poor vascularity) with vertical cracking and the appearance of pitting In contradistinction to the rheumatoid type synovial alterations ensue only after lipping is evident and are limited to proliferation of the villi in which chondromata may be developed, and later be detached as loose bodies Bony or fibrous ankylosis is almost unknown and muscle atrophy is absent or slight Miller discusses the various aetiological explanations which have been advanced for this osteo arthritis there appear to be several varieties one of the best known being the so called senile type Trauma is the chief if not the sole factor in osteo arthritis of the extremities and probably the most frequent cause of osteo arthritis of the spine Here however the pathological changes are quite different from those in the extremities and in some types an infectious causation cannot be ruled out The author prefers to distinguish the definitely non infective type as osteo arthrosis The presence of mixed forms is attributable in his opinion to the action of acute trauma long continued mild trauma old age and strain Such coexistence of rheumatoid arthritis and osteo arthritis does not indicate that the development of osteophytes is directly due to infection the causative factor may be strain or pressure consequent on the deformity arising from muscular atrophy Thus a deformity of the foot due to rheumatoid arthritis might result in strain on the knee hip or spine with subsequent osteo-arthritis in those situations The patient over the age of 50 who develops rheumatoid arthritis has already probably an osteo arthritis of the spine and possibly also Heberden's nodes In any case Miller concludes the contrasting pathology of the two types of arthritis is strongly against there being a common aetiology

541 The Two Types of Chronic Rheumatism

A GOVAERTS (*Bruxelles Médical* February 21st 1932 p 475) reviews the literature on the classification and pathogenesis of chronic forms of rheumatism and distinguishes two main groups—namely arthritis an inflammatory process and arthrosis The latter may be (1) degenerative due to a lesion of bony or cartilaginous tissues and periarticular ligaments (rheumatoid arthritis deformans Heberden's nodes osteophytes traumatic arthritis) (2) dystrophic due to nervous or endocrino humoral disturbances or (3) dyscrasic originating from disturbances of the general nutrition such as gouty rheumatism and obesity Such a classification excludes the notion of primary rheumatism and envisages chronic rheumatism as a syndrome which is limited to the joints but is capable of presenting itself under forms varying according to the nature of the pathological process

542 Rheumatoid Arthritis and Acute Rheumatic Fever

A M MISTER and H JAFFE (*Journ Amer Med Assoc* March 12th 1932 p 881) emphasize the fact that owing to a similar symptomatology rheumatoid (infectious) *arthritis and acute rheumatic fever are often indistinguish*able especially at the onset Each may start acutely with an infection of the upper respiratory tract or epistaxis *In both* a moderate pyrexia chilliness perspiration prostration spreading and transitory articular involvement acutely inflamed joints leucocytosis and anaemia are seen The spleen and lymph nodes may be enlarged in each and even the subcutaneous nodule hitherto considered most characteristic of acute rheumatic fever has been definitely observed in rheumatoid arthritis Moreover an increased erythrocyte sedimentation rate has been found in each condition As an aid to their differential diagnosis the authors report investigations revealing that in rheumatoid arthritis the heart is minimally and in acute rheumatic fever maximally involved Electrocardiographic studies were made daily of seventeen patients with rheumatoid arthritis and of sixty three with acute rheumatic fever from the day of their admission to hospital to that of their discharge The changes detected in the first group were slight Tachycardia with a rate not above 100 per minute was noted in six cases bradycardia (rate below 60 per minute) in four and a sinus arrhythmia in five an increased auriculo ventricular conduction time (PR interval) was found in three Contrasted with the slight changes noted in all except three patients of this group definite electrocardiographic evidence of myocardial involvement appeared in every one of the acute rheumatic fever cases The signs were sino auricular block nodal rhythm interference of the sinus and auriculo ventricular nodes auricular fibrillation and flutter increased PR intervals heart block with dropped beats definite RST abnormalities T wave inversions and transient widening notching and slurring of the QRS group The incidence of each change is given Tachycardia of 140 to 150 a minute was observed in forty three patients and bradycardia in three In the second the authors conclude that rheumatoid arthritis is not a cardiac disease and that acute rheumatic fever is preeminently a carditis When no electrocardiographic evidences of myocardial involvement are found the former condition should be suspected when they are definitely noted a diagnosis of acute rheumatic fever should be made

1110 s

INCIDENCE

543 Rheumatism in Denmark

H JANSEN (*Ugeskrift for Laeger* November 12th 1931, p 1140) states that at the end of 1929 in Denmark there were about 3 000 persons drawing sickness insurance benefit on account of chronic articular rheumatism This represents about 12 per cent of all the persons drawing sickness insurance benefit at a given time in Denmark and since the expectation of life of the subjects of rheumatism is often long notably in comparison with the expectation of life of the tuberculous the invalidity inflicted by rheumatism amounts in days and in years to high figures About two million kroner are paid out each year by reason of this type of invalidism Discussing the campaign against rheumatic ailments in various countries including Great Britain the author comes to the conclusion that it is necessary to provide special rheumatism clinics and sanatoriums at which it must be possible for patients to stay for half a year at a time if need be This is a task which the community must take up as a whole for the individual will very rarely be in a position to defray his own expenses In other words institutional treatment must be provided for the rheumatic on the same principle as that on which the tuberculous receive treatment but at the present time Jansen adds neither the State nor the local authorities have bestirred themselves in this important matter

544 Incidence of Rheumatic Heart Disease

D DAVIS and S WEISS (*Amer Heart Journ* December 1931 p 146) have made a study of 5 215 consecutive necropsies at the Boston City Hospital in order to determine the incidence of rheumatic heart disease and the part it plays as a cause of death Cardiac enlargement pericarditis Aschoff bodies in sections of the myocardium acute and chronic valvular damage and shortening of the chordae tendineae and papillary muscles were regarded as evidence of rheumatic heart disease and such findings were correlated with the corresponding clinical data such as age and a history of chorea arthritis and repeated tonsillitis with fever Of the total group studied rheumatic heart disease occurred in 474 or 9 1 per cent It was slightly more prevalent among females and affected negroes only half as commonly as the white race Rheumatic heart disease was the direct cause of death in about a third of the patients In 62 of the 474 cases acute or subacute bacterial endocarditis was superimposed on the earlier rheumatic lesion while in 41 of the same group rheumatic heart disease coexisted with such additional entities as long standing hypertension coronary artery disease or severe anaemia In 205 of the 474 subjects of rheumatic heart disease the character of the cardiac involvement was such that the lesions did not contribute to death The changes found in these instances were chiefly slight or moderate thickenings of the margins of the valve cusps considered to be rheumatic in origin as opposed to the thickenings not of rheumatic type found commonly at necropsy The authors suggest that mild rheumatic affections are more frequent than is usually supposed and may produce few or no clinical signs

545 Meteorological Factors

M ORY (*Acta Rheumatologica* November–December 1931 p 2) believes that atmospheric changes of certain kinds play a more important part as regards the incidence and aggravation of rheumatic manifestations than is generally recognized He cites various reported facts in this connexion and suggests two lines of investigation which might well be pursued simultaneously all over the world On the meteorological side the following should be recorded (1) the barometric pressure and its daily fluctuations (2) temperature changes (3) the clearness of the sky by day and night (4) the amount of rainfall the degree of humidity of the air and the force and direction of the wind (5) the atmospheric electric potentials (6) the presence duration and extent of sunspots and (7) the lunar phases On the clinical side Ory insists that it is essential to note down at least once each day and preferably more often the following symptoms and signs the fluctuations in the intensity and character of rheumatic pains and the effects thus produced on (1) the muscles and tendons (2) on the cutaneous tissues with special reference to the appearance of the skin and cicatrices or thickened areas, and on the local circulation (3) on such associated pathological phenomena as asthma and eczema , (4) on the state of the functioning of the vagus and sympathetic nervous system and (5) on such possible biochemical factors as the blood *p*H, the erythrocytic resistance signs of allergy and alterations in the basal metabolism and electroscopic reactions He tests the oculo cardiac and epigastric reflexes also together with the vasomotor reaction the circulatory efficiency as evidenced by oedema or resorption and the sedimentation rate The author's work is being carried on at Liege and he pleads for the institution of similar investigations in other parts of the world so that his results may be controlled and the present generally held views with regard to the association of rheumatism and certain climatic occurrences be tested more scientifically Practical prophylactic and therapeutic suggestions might also eventuate

TREATMENT AND PROGNOSIS

546 Focal Treatment in Rheumatism

H BJORN HANSEN (*Acta Med Scand* December 23rd 1931 p 242) refers to Gording's researches and records observations which indicate definitely that infective foci may be found in the gall bladder the intestines or the genito urinary system as well as in the tonsils and dental apparatus Leucocyte counts sedimentation tests and dental skiagrams are very important steps in reaching a diagnosis although all may give negative results and make it difficult to arrive at a decision regarding the nature of the cause and the treatment of many cases of rheumatic myositis and arthritis The author emphasizes the fact that many patients suffering from acute rheumatism are not relieved until the focal infection has been treated in his experience tonsillar and dental infections are the most frequent Even radical focal treatment will not always prevent relapses but it may assist in reducing the liability to the occurrence of secondary polyarthritis In the acute stage of rheumatic fever focal treatment is inadvisable it may aggravate the disease The author emphasizes the danger of autogenous (streptococcal) vaccines in inexperienced hands subcutaneous or intracutaneous injections may cause hypersensitization Tonsillar infective foci favour the resorption of bacteria and toxins by reason of the epithelial denudation and by mechanical pressure in deglutition Dental infective foci occur frequently in the form of multiple granulomas these may be found in the absence of root fillings when pyorrhoea or ordinary fillings (especially amalgam fillings) are present

547 Amidopyrin in Rheumatic Fever

M P SCHULTZ (*Arch Int Med* December 1931 p 1138) strongly commends pyramidon (amidopyrin) as an effective antipyretic and analgesic in rheumatic fever Instances of idiosyncrasy are more rare than in other drugs of this type and there is a wide margin between the therapeutic and the toxic doses In its preparation antipyrine (a condensation product of methyl phenyl hydrazine and aceto acetic ester) is converted by the substitution of a dimethyl group in the fourth position Isomeric forms have been described The yellowish white almost tasteless crystalline powder is readily soluble in water (1 in 10) the solution being faintly alkaline Total daily doses of less than 2 grams have been found to be effective even in patients who have proved resistant to other anti rheumatic drugs The usual single dose was 0 3 gram and the largest daily dose was 2 4 grams One patient received 0 9 gram daily for six months another 1 5 grams daily for one month and a third was given

1 2 grams daily for one and a half months without any gastro intestinal disturbance sensations of dizziness or tinnitus or indications of renal damage Schultz finds pyramidon particularly useful in treating patients with cardiac decompensation developing during cycles of active rheumatism and in conjunction with digitalis In acute rheumatism the symptoms were quickly relieved by daily doses of 0 6 to 1 2 grams but there were some relapses and the treatment had to be repeated In chronic or subacute rheumatism larger doses are usually required and have to be continued for some months The analgesic effect is believed to be due to direct action on the thalamus The antipyrexial effect is associated with a great increase in heat loss due to peripheral vaso dilatation and increased perspiration brought about possibly by central action of the drug In the series of patients recorded by Schultz who were treated with pyramidon the effects were definitely restricted to reduction in the pyrexia analgesia the lessening of exudation and possibly some reduction of toxicity

548 Surgical Treatment of Chronic Arthritis

H W MEYERDING (*Journ Amer Med Assoc* September 12th 1931 p 791) emphasizes the importance of early co operation between the physician and the surgeon in all cases of chronic arthritis While the chief concern of the physician is to relieve pain and prevent the extension of the disease yet certain disabling deformities such as stiffness contracture subluxation or ankylosis may result if no surgical attention is given The early application of *traction and corrective splints the instituting of motion* the maintenance of the position of greatest usefulness and the aspiration of distended joints will do much to prevent further disability If corrective measures are postponed until pain and swelling have ceased irreparable injury may be done Atrophy of bone and muscle impairment of circulation and adhesions in or about the joint may occur and make movement difficult Although the removal of foci may prevent further secondary infection and is indicated as a prophylactic measure yet the structural changes destructive or proliferative and the debris left in the joint even after the arthritis has ceased will permanently impair function Contractures are prevented in the early painful period of arthritis by means of splints and extension As soon as possible active motion should be encouraged but great force must be avoided since painful manipulation is harmful When contractures have not been present for long forceful manipulation under anæsthesia followed by the application of traction splints or casts may be employed Apparatus for fixation should be removed at the end of a week to prevent ankylosis and should be reapplied during the night to maintain the improved position Daily massage heat and active movements are beneficial and for several months braces crutches or a walker should be used when the patient is upright In cases of joint distension aspiration is indicated to relieve pressure to reduce stretching of the capsule to avoid destruction by pressure and to lessen pain Synovectomy has given good results in selected cases of monarticular arthritis and polyarthritis arising from trauma or infection but is contraindicated in all cases of acute infection Severe contractures of long standing with osteoporosis may be corrected by manipulation Capsuloplasty capsulotomy and tenotomy yield very satisfactory results while *osteotomy is useful in the correction of deformities* due to ankylosis when arthroplasty is inadvisable Painful monarticular deformities and certain intractable deformities in polyarthritis may require arthrodesis and resection fusion of tuberculous knees extracapsular arthrodesis of hips fusion of spines and sacro iliac joints have given good results Arthroplasty when marked osteoporosis and extreme muscular atrophy are present gives the best results at the elbow and hip while excision of the head of the humerus may be preferable at the shoulder Reconstructive operations though presenting many difficulties may relieve the residual deformities of the hands and feet Talipes equinus responds to manipulation tenotomy or subastragalar operations leading to arthrodesis The Mayo operation is successful in cases of painful hallux valgus Hammer toes may be amputated or tenotomized or arthrodesis may be brought about by joint excision or the Hoffman operation be carried out Large painful calcaneal spurs must be excised The wrist should be treated by arthrodesis in extension of 30 degrees while for the fingers arthroplasty capsulotomy and the use of the banjo traction splint have brought about much improvement in otherwise useless hands Sympathetic ganglionotomy and trunk resection may ultimately prove of value in the relief of certain cases of periarticular rheumatoid or infectious arthritis Seven cases are reported which illustrate the beneficial results of surgical treatment for varying degrees of chronic arthritis

549 Prognosis in Rheumatoid Arthritis

J SCHNEYER (*Wien Arch f innere Med* December 1st 1931 p 43) summarizes his observations on 140 patients with rheumatoid arthritis as follows 30 were men and 110 were women The ages ranged from 22 to 78 the average being 54 The duration of the disease before the patients came under Schneyer's care had been between three and forty two years the average being fourteen years There was swelling of the regional lymphatic glands in 46 patients and in 22 enlargement of the spleen was found Ten patients stated that their temperature had been raised but never above 100 4° Only six gave a history of acute polyarthritis and in one of these the acute attack first developed eleven years after the onset of the chronic disease thus indicating that the two diseases are distinct This view is supported by the fact that Schneyer found only seven cases of valvular disease among his 140 cases In eighteen of the patients tonsillectomy had been performed but without any benefit and in eighteen cases the disease was familial The results of treatment (radium inhalations electrotherapy and massage) were as follows 18 were cured—5 with and 13 without residues 10 showed some improvement 21 remained in the same condition and the remainder showed an extension of the disease Of the progressive cases however 35 patients were still able to do work and 28 could walk while only 28 were quite helpless Schneyer concludes that the outlook in rheumatoid arthritis is not so hopeless as is generally supposed

550 Vaccine Therapy in Chronic Arthritis

While regretting that there is still considerable uncertainty as regards the aetiology and correct classification of chronic arthritis M WETHERBY and B J CLAYSON (*Arch Int Med* February 1932 p 303) are convinced that intravenous injections of streptococci are often highly effective in decreasing the pain increasing the motility of the joints enabling patients to return to their occupations and preventing recurrence for a period at present undefined They employed a strain of *Streptococcus viridans* which had been isolated from the blood of a patient with acute rheumatic fever The initial dose of a vaccine prepared from this was *100 millions the second* 300 millions and the third from 500 to 500 millions After a fourth dose of 500 to 1 000 millions depending on the patient's previous reactions the subsequent doses were either no larger or were increased to 2 000 or 2 500 millions but the reactions tended to become more severe with these larger doses and the authors consider it advisable not to go beyond 1 000 million Their patients were treated in the out patient department of the University of Minnesota Hospital and went home immediately after the injections A series of 100 cases of chronic arthritis was so treated with definite benefit resulting in 75 no ill effects occurred The types of disease varied widely and did not fit into any of the current forms of classification The agglutination titre of the blood rose from an average of 1 in 1 [illegible] before treatment to an average maximum titre of 1 in 11 [illegible] by the end of the first injection there was an improvement in 42 per cent after the second in 57 per cent [illegible] the third in 70 per cent and after the fourth in 71 per cent Those benefited in the earlier injections were similarly to later ones some who were reported finally as clinically unimproved had had as many as fifteen to twenty injections

jections The authors attribute this benefit to the induction of desensitization and the conferment of antibody protection Protein shock as a possible factor seemed to be negatived since many of those who did well under this specific treatment had previously failed to react to injections of typhoid vaccine injections of *Streptococcus haemolyticus* were found by experiments to protect against *Streptococcus viridans* The authors add that since subcutaneous injections of streptococci in animals tend to increase hypersensitiveness and only produce a low agglutinating titre in the serum this method would appear to be definitely inferior to intravenous specific streptococcal vaccine therapy if not contraindicated

INDUSTRIAL ASPECTS

551 National Control of Industrial Rheumatism

A series of lectures on rheumatism and arthritis as a public health problem was arranged early this year by the Royal Institute of Public Health In an abstract of the final one by W S C COPEMAN (*Lancet* April 30th 1932 p 967) the present position as regards the control of industrial rheumatism is considered and arguments are submitted in favour of dealing with this disease on a systematic national basis Here Copeman maintains is a proper field for specialized medical diagnosis and treatment including the precise use of physical methods and the co operation of interested lay bodies (such as approved insurance societies) should be secured He suggests that such a scheme should envisage (1) prevention (predominantly a social problem) (2) detection (a mixed social and medical question) and (3) treatment (a predominantly medical matter) Those responsible for prevention are primarily factory owners and managers welfare workers and nurses shop stewards and trade unions factory inspectors and the workers themselves and secondarily medical practitioners As regards detection Copeman defines first the position in factories where the works medical officer would not only deal at stated times with possible cases (treating them or referring them to a specialist clinic in the area) but would also deliver addresses to the factory staff from time to time on the early signs and the necessity for prompt treatment Such an organization which would be desirable in every community of workers numbering 2 000 or more might be termed a prophylactic centre In cities for the general population outside factories the suggested normal provision would be (1) an insurance practitioner who could refer his patient either to (2) a rheumatic advisory centre in the area or direct to (3) a central treatment clinic where the patient could receive physical treatment without stopping work If further treatment appeared advisable the patient could go on to (4) the spa hospital where he might remain for two or three months One week's holiday at least would be desirable after treatment at either of the last two named places after which the patient would report to the insurance practitioner Three therapeutic agencies are defined in Copeland's scheme (1) insurance practitioners (2) the town treatment clinics and (3) the spa hospitals The clinics would be on hospital lines and preferably not administered by municipal or purely local bodies They would provide forms of treatment not otherwise available in the area—such as general bath treatments hot air and vapour rooms general and local electrical therapy ultra violet rays and massage local mud and paraffin wax treatment colonic lavage vaccine and other injection therapy and a dispensary If there is a general hospital in the area suitable and full co operation should be arranged The clinics would be staffed by two or more specialist physicians and provision be made for pathological laboratory work—either in it or in an outside laboratory on contract terms Such clinics would be centralized so far as possible in big towns and post graduate teaching be fostered as well as research The spa hospitals would have their utility increased by being more closely linked than they are at present with the other diagnostic and therapeutic agencies already in existence The patients would be retained for longer periods and more freedom as well as facilities for education and occupation would be afforded them Copeman adds that re education and amelioration for patients in the later stages of disease (too advanced to return to their previous occupations but able to do light work) would be worth undertaking

552 Prevention and Treatment of Industrial Rheumatism

Adopting the classification of rheumatism followed by the Ministry of Health into (1) acute and subacute rheumatism or rheumatic fever (2) non articular rheumatism affecting the fibrous tissue of the muscle and nerve sheaths and (3) articular rheumatism or chronic joint disease M B RAY (*Journ of State Medicine* May 1932 p 285) discusses the second and third groups which are more definitely occupational diseases He emphasizes the importance of detecting in factory workers such early signs of rheumatoid arthritis as feelings of numbness tingling and sensations of heat and cold in the hands and arms, particularly in women since they indicate vasomotor instability which should receive prompt treatment Another suggestive sign of the 'pre rheumatic state' is the association of a definite history of rheumatism or fibrositis in childhood with such manifestations of sympathetic endocrine imbalance as dryness and harshness of the skin and liability to asthma and catarrhal attacks Ray adds that there seems to be a definite connexion between rheumatoid arthritis and anxiety states consequent on domestic worry the pressure of business responsibilities or sudden mental shocks Among predisposing 'environmental factors must be included unsuitable and undigested food and the presence of a new growth both of which interfere as much with the proper functioning of the body as do damp buildings The first essential in treatment is a thorough investigation of the patient to discover if possible the immediate cause of the condition foci of infection may be present in the teeth tonsils gall bladder intestinal tract or genito urinary system In most cases the removal of the focus of infection is quite sufficient to initiate the cure of the rheumatic condition Ray reviews briefly the various lines of treatment applicable to *different* types of patient and insists on the necessity of providing therapeutic facilities at times in the day which will not interfere with the daily occupation

553 The Organization of Treatment for Industrial Rheumatism

A R NELIGAN (*Journ of State Medicine* May 1932 p 274) cites examples of the active work as regards the treatment of industrial rheumatism in the United States and certain European countries and urges the establishment in Great Britain of more institutions specially devised to provide physical methods of treatment He discusses the arguments for and against the creation of special clinics for rheumatism in large centres and pleads for the multiplication of hospitals for chronic cases and for better facilities for diagnosis and allotment for suitable treatment The setting up of rheumatism boards in industrial areas would improve the situation in that they would be able to investigate early serious cases and patients who were not improving under treatment Neligan's suggested scheme of organized treatment of rheumatism for industrial workers comprises (1) an arthritis unit (2) a hospital rheumatism department (3) special clinics and (4) hospitals for chronic disease and industrial rheumatism boards Details are given of the organization construction and equipment of such special clinics Local authorities might be enabled to provide treatment centres as part of their public health service and as regards the approved societies the treatment of rheumatism should become a medical benefit as is already the case in some societies Neligan adds that some financial assistance might also be expected from the industries themselves in view of the great economic saving that more adequate preventive and curative facilities would ensure

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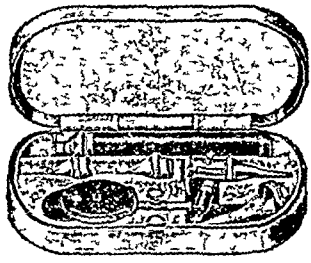
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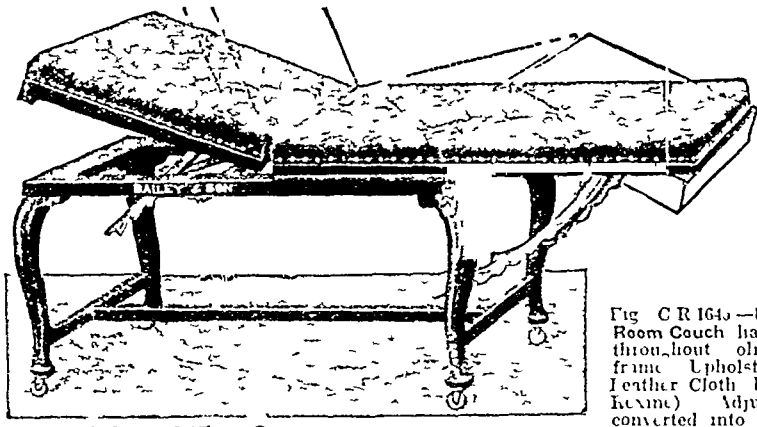
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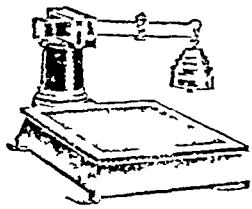
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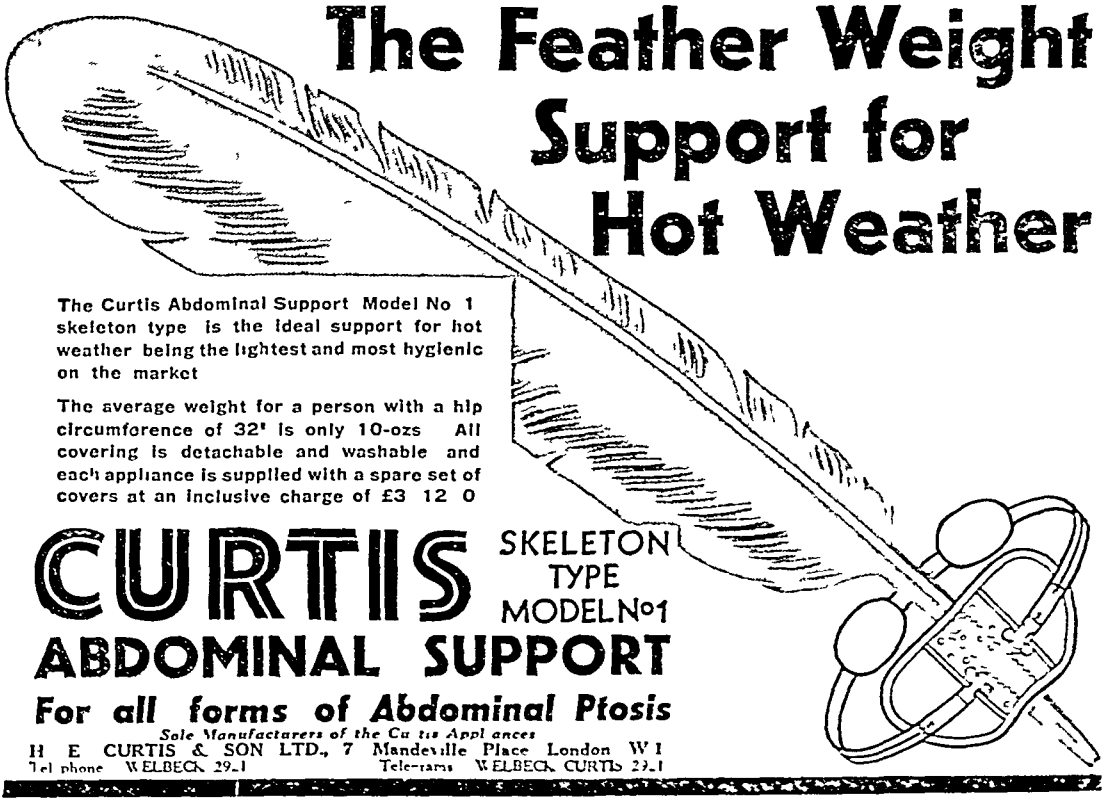
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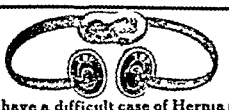
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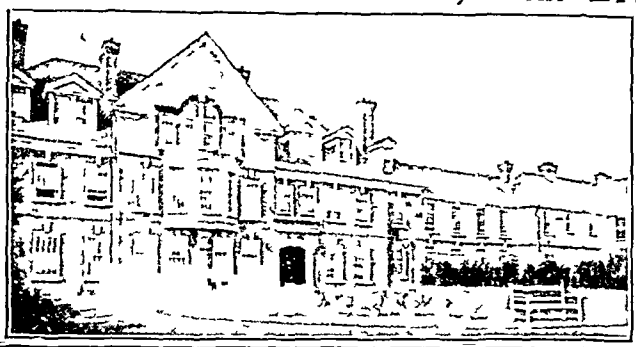
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Scholars must devote themselves to the investigation of some clinical problem of disease in man The work must have as its base some established institution practically in the United Kingdom in which full facilities for the research are available

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For regulations apply to the Registrar of the Society Water Lane E C 4

UNIVERSITY OF LONDON

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For the Second Examination for Medical Degrees

ANATOMY

For Final and Higher Examinations for Medical Degrees

BACTERIOLOGY MEDICINE MENTAL DISEASES AND PSYCHOLOGY NEUROLOGY OBSTETRIC MEDICINE OTO RHINO LARYNGOLOGY PATHOLOGY STATE MEDICINE

Associate Examiners

Application will also be invited for Associate Examiners in Medicine Obstetric Medicine Pathology and Surgery A separate application form must be used for Associate Examinerships and the word Associate must be written on it

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar

Candidates must send in their names to the External Registrar GEO F GOODCHILD M A B Sc with any attestation of their qualifications they may think desirable on or before Monday July 4th 1932 (Envelopes should be marked Examinership)

The Senate desire that no application of any kind be made to individual members

If testimonials are submitted one copy only of each is required In no case should original testimonials be submitted If more than one Examinership is applied for a separate and complete application should be forwarded in respect of each Examinership Appointments will be made in November the results of which will be announced as soon as possible thereafter

Applications should be addressed to the Registrar University of London South Kensington S W 7 and should reach him not later than June 15th 1932

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The third three months may be spent in recognized Hospitals in London or elsewhere the student acting as clinical assistant or in similar capacity

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Further information as to the Courses together with application forms for admission may be obtained from

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UNIVERSITY OF LONDON

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(2) A GENERAL SURGICAL COURSE from August 15th to September 10th

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Full PREPARATORY COURSE with Anatomical (Cadaver and Living Models) and Surgical Pathological Demonstrations for Part I Exam will commence shortly POSTAL TUITION at any time—H C O'BRIEN F R C S Surgeon Hall Edinburgh

THE QUEEN'S UNIVERSITY OF BELFAST

Applications are invited for the post of OBSTETRIC TUTOR in the Queen's University Belfast The Tutor resides in the Students' Hostel adjacent to the Maternity Hospital and acts as Senior Resident Medical Officer in the Hospital Salary £200 per annum all found The appointment is for one year and the holder is eligible for reelection for a second year Applicants must have had the usual resident medical and surgical post-graduate appointments Preference will be given to a candidate who has held a post in a Resident Out-door Officer's Application with three testimonials should reach the undersigned not later than Wednesday June 22nd

ANDREW PICKEN Secretary

SUDAN MEDICAL SERVICE

THREE MEDICAL OFFICERS are required for the Sudan Medical Service One of them will be required to commence duty in the Sudan on September 1st The other two will be required to take a course at the London School of Tropical Medicine starting in October 3rd Fee and a subsistence allowance provided by the Sudan Government

Candidates must be single and must be under 30 years of age and have held a resident appointment in a large General Hospital

Salary Sudan commences at £E*20 a year, subject to a 7½ per cent abatement rising to £E1 200 after thirteen years rising on confirmation of his appointment the selected candidate will be eligible for pensionable service

Applications (in writing only) with copies of recent testimonials should be made to Dr Hoffman 69 Harley Street W 1 *from whom* general information and Conditions of the principal Medical School further particulars can be obtained No special application form is required

LONDON COUNTY COUNCIL

Applications are invited for appointment to the position of RESIDENT ASSISTANT MEDICAL OFFICER Grade I (men only) at the HAMMERSMITH HOSPITAL Ducane Road Shepherds Bush W 12

The duties which are mainly medical are assigned by the Medical Superintendent and include such necessary assistance at other established under the control of the Council

The salary is £350 rising annually by £25 to £425 a year together with Board Residence and Washing Other remuneration subject to temporary reduction in respect of the salary and emolument Candidates must be registered Medical Practitioners of at least one year's *standing and must have held a resident appointment* in a general hospital for six months

Forms (stamped addressed foolscap envelope necessary) from Medical (Division 3a) County Hall Applications disqualified

Further inquiries should be addressed to Medical Superintendent at the Hospital

LONDON COUNTY COUNCIL

Applications invited from registered Medical Practitioners for appointment as CLINICAL ASSISTANT at FULHAM HOSPITAL St Dunstan's Road Hammersmith W 6 Salary £100 a year together with meals when on duty subject to temporary reduction Appointment is for six months in the first instance but may be extended for a further period of six months Duties are assigned by the Medical Superintendent and include such necessary assistance at other establishments under the control of the Council

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returned by June 17th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the Hospital

COUNTY BOROUGH OF WEST BROMWICH

HALLAM HOSPITAL

SENIOR RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified male registered practitioners for the above appointment

The appointment may be terminated by either party giving two months' notice

The Hospital has 274 beds and is equipped *with up-to-date special departments* There is a visiting staff of 8 consultant physicians and surgeons

Preference will be given to applicant with previous experience of Surgery and Hospital Administration

Salary £350 per annum rising by annual increment of £25

Canvassing either directly or indirectly is strictly prohibited *and will be deemed a disqualification*

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the Medical Officer of Health 2 Lodge Road West Bromwich so as to arrive not later than by first post on Tuesday June 21st

ALFRED WICKHAM
Town Hall West Bromwich Town Clerk
June 3rd 1932

COUNTY BOROUGH OF WEST BROMWICH

HALLAM HOSPITAL

APPOINTMENT OF TWO RESIDENT HOUSE PHYSICIANS

Applications are invited from fully qualified *male registered practitioners for the above*

[illegible] months but [illegible] notice to terminate has 474 beds [illegible] hospital department [illegible] eight consultants

[illegible] applicants with

Salary £200 per annum

Canvassing either directly or indirectly is strictly prohibited and will be deemed a disqualification

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the Medical Officer of Health 2 Lodge Road West Bromwich so as to arrive not later than by first post on Tuesday June 21st

ALFRED WICKHAM
Town Hall West Bromwich Town Clerk
June 3rd 1932

DERBYSHIRE COUNTY COUNCIL

LOCUM FOR ORTHOPAEDIC HOSPITAL

Applications are invited for the post of LOCUM RESIDENT ASSISTANT MEDICAL OFFICER at BRETBY HALL ORTHOPAEDIC HOSPITAL near Burton-on-Trent (147 beds 32 adult and 115 children) for a period of eight weeks commencing July 6th Salary at the rate of £350 per annum with board lodging etc Experience in Orthopaedic work essential

Application together with copies of two recent testimonials to be sent to the undersigned on or before June 18th

W M ASH
County Medical Officer of Health

County Offices St Mary's Gate Derby
May 31st 1932

CITY AND COUNTY OF BRISTOL

HAM GREEN HOSPITAL & SANATORIUM

JUNIOR ASSISTANT MEDICAL OFFICER (MALE)

Applications are invited for the above appointment which is tenable for six months at a salary of £250 per annum subject to a temporary *reduction of £6 10s per annum*

The Institution consists of 256 fever beds and 136 beds for all forms of tuberculosis Candidates should have held a resident appointment in a general hospital for at least six months Applications accompanied by copies of three recent testimonials to be sent to the Medical Officer of Health 40 Prince Street Bristol not later than June 17th

THE PRINCESS BEATRICE HOSPITAL

Richmond Road Earl's Court S W 5

Applications are invited from fully qualified Medical Practitioners for the post of CASUALTY OFFICER AND HOUSE PHYSICIAN (combined appointment) Salary £100 per annum with board residence and laundry Previous resident experience essential Duties to commence July 1st Application accompanied by three recent testimonials should reach the Secretary not later than June 20th

VICTORIA CENTRAL HOSPITAL WALLASEY

Applications are invited for the position of JUNIOR HOUSE SURGEON (male) Salary at the rate of £120 per annum with board residence and laundry with prospects of appointment to Senior House Surgeon in six months time at a salary of £150

Candidates chosen would be appointed for six month Application with copies of testimonials to be sent to the Secretary

ROYAL MINERAL WATER HOSPITAL BATH

It is proposed to ELECT a FOURTH HONORARY SURGEON to the above Hospital Under the rules of the Hospital candidates must be Fellows of one of the Royal Colleges of Surgeons of Great Britain or Ireland Candidates should send copies of not more than three testimonials to the Registrar by Monday June 20th stating

SHADWELL E 1

There will be a demonstration of Clinical Cases on Wednesday June 15th at 3 30 p.m. to which you are cordially invited Tea at 5 p.m.

COUNTY BOROUGH OF BRIGHTON

PUBLIC ASSISTANCE COMMITTEE

POOR LAW INSTITUTION

The Public Assistance Committee require the services of the following officers at the Poor Law Institution viz —

(a) MEDICAL OFFICER (WHOLE TIME RESIDENT)

Candidates must be registered Medical Practitioners and preference will be given to those who have held the appointments of House Physician and House Surgeon in a general hospital and who have had experience in the administrative control of a general hospital or a Poor Law hospital The Medical Officer of the Poor Law Institution is also Medical Officer of the Warren Farm Poor Law Schools situated about 2 miles from the Poor Law Institution

Salary £850 per annum together with residential allowances valued for the purposes of the Poor Law Officers Superannuation Act 1896 at £150 per annum The cash salary and half the value of the emoluments are subject for the time being to a temporary reduction to October 31st 1932 of 5 per cent A residence is being erected for the accommodated

ASSISTANT

Candidates must be single men and preference will be given to those holding a M R C S degree and who have held the appointment of House Surgeon in a general hospital as the appointment is primarily for surgical work although not entirely so

The appointment is for one year only but the person appointed will be eligible for further appointment from year to year

Salary £400 per annum together with residential allowances valued for the purposes of the Poor Law Officers Superannuation Act 1896, at £150 per annum The cash salary and half the value of the emoluments are subject for the time being to a temporary deduction to October 31st 1932 of 2½ per cent on the first £200 and 5 per cent on remainder Residential accommodation is provided

The Council of the County Borough of Brighton have adopted the Memorandum of Agreement as to the salaries of whole time Public Health Medical Officers

Unless the officers appointed are transferred officers under the Local Government Act 1929 the Poor Law Officers Superannuation Act 1926 will not apply The Local Government and Other Officers Superannuation Act 1922 is not in force in the County Borough of Brighton

Forms of application may be obtained from the undersigned and should be returned completed to him together with copies of not more than three testimonials on or before Saturday June 25th 1932 and endorsed House Surgeon

Town Hall JAMES TAYLOR
South Shields *Acting Town Clerk*

CITY OF SALFORD

ASSISTANT RESIDENT MEDICAL OFFICER HOPE HOSPITAL (1,000 Beds)

Applications are invited for the post of Assistant Resident Medical Officer (male) at HOPE HOSPITAL Pendleton The appointment will be for six months Salary £200 per annum plus board residence and laundry Further information regarding the Hospital may be obtained from the Medical Superintendent Form of application may be obtained from the Medical Officer of Health 143 Regent Road Salford to whom it should be returned by June 18th

H H TOMSON Town Clerk.

LANCASHIRE COUNTY COUNCIL

PUBLIC ASSISTANCE COMMITTEE

PARK HOSPITAL DAVYHULME NEAR MANCHESTER

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Hospital Candidates must be unmarried

Preference will be given to applicants having experience in Midwifery Gynaecology and Diseases of Children

The appointment will in the first instance be for a period of six months the successful applicant being eligible for reappointment for a further period of six months at the end of that period

The salary is at the rate of £200 per annum subject to an emergency deduction of 5 per cent together with the usual residential allowances

The Hospital comprises 500 beds

Applications accompanied by copies of not more than two recent testimonials should be addressed to the County Medical Officer Public Assistance (Hospital and Medical) Department County Offices Preston not later than June 24th 1932 Envelopes should be endorsed Junior Resident Medical Officer

County Offices GEORGE ETHERTON
Preston Clerk of the County Council
June 1st 1932

LANCASHIRE COUNTY COUNCIL

BIDDULPH GRANGE ORTHOPAEDIC HOSPITAL

Applications are invited for the post of JUNIOR HOUSE SURGEON (Woman) at the above Hospital which contains 87 beds Salary is at the rate of £150 a year (less 5 per cent temporary emergency deduction) together with board residence and laundry

Preference will be given to candidates who have held resident hospital appointments and who are competent anaesthetists The appointment will be for a period of six months in the first instance and for a further six months at the option of the Council but will not be renewable after that time

Applications with copies of two recent testimonials should be sent not later than June 18th to Dr I J RUTTERWORTH School Medical and Child Welfare Department County Offices Preston

Duties to commence August 1st

GEORGE ETHERTON
County Offices Clerk of the County
Preston Council
May 1932

BURY AND DISTRICT JOINT HOSPITAL BOARD

RESIDENT ASSISTANT TO THE MEDICAL SUPERINTENDENT

Wanted an Assistant to the Medical Superintendent of the Institutions of the Joint Board They consist of a Fever Hospital (100 beds) a Sanatorium (70 beds) and a Small-pox Hospital Candidates must be registered *Medical Practitioners* They will be required to devote their whole time to their duties and will assist the Medical Superintendent generally and as he requires

Preference will be given to candidates with Hospital experience and special experience in Pulmonary Tuberculosis

Commencing salary £400 per annum with £25 increase at the end of the first year and a further £25 increase at the end of the second year with board and lodging

Applications stating age qualifications and experience together with testimonials to be sent to me on or before June 16th

Church Chambers F A BRADLEY
Fleet Street Clerk to the Joint
Bury Board
May 27th 1932

CITY OF CARDIFF

CITY LODGE INSTITUTION

ASSISTANT MEDICAL OFFICER

Applications for the above appointment are invited from duly qualified unmarried medical practitioner

The position will be tenable for one year only and the salary will be at the rate of £150 per annum with board lodging attendance and washing

Forms of application and conditions of appointment to be obtained from the Public Assistance Officer 11 Park Place Cardiff

Application must reach me by 5 p.m. on Wednesday June 15th 1932

Direct and indirect canvassing is prohibited

CECIL G BROWN Town Clerk

COUNTY BOROUGH OF BIRKENHEAD

MEDICAL OFFICER'S DEPARTMENT

ASSISTANT MEDICAL OFFICER (RESIDENT

Applications are invited for the above appointment from duly qualified men (unmarried) holding a Diploma in Public Health who have had special experience in hospitals for infectious diseases

The appointment carries with it a salary £350 per annum rising by annual increments of £25 to a maximum of £550 per annum with emoluments (residence at the Infectious Diseases Hospital board and laundry) valued at £115 per annum

The successful candidate will be required to pass a medical examination and a deduction of 5 per cent will be made from salary to the Council's scheme under the Local Government and Other Officers Superannuation Act 1922 (The salary is also subject to a temporary deduction for emergency purposes this on the commencing salary amounts to £10 12s 6d)

Canvassing members of the Town Council either directly or indirectly will disqualify

Particulars of the appointment and form of application may be obtained from D Morley Matheson Esq M A M D Medical Officer of Health 9 Hamilton Square Birkenhead

Applications must be received by me not later than June 21st endorsed Assistant Medical Officer

Town Hall E W TAME
Birkenhead Town Clerk

STAFFORDSHIRE COUNTY COUNCIL

ASSISTANT MEDICAL OFFICER

Applications are invited from medical practitioners holding the Diploma of Public Health for the above post Candidates should have at least three years experience in the practice of their profession [illegible] tion held

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residential ho [illegible] the
The person [illegible] the
direction of th [illegible] tical
duties of the [illegible] in
and Maternit [illegible] k as
addition to su [illegible]
may from time to time [illegible]

The salary will be at the rate of £600 per annum rising to £800 per annum by annual increments of £50 subject to a deduction of 5 per cent established under the Local Government and Other Officers Superannuation Act 1922 and to a temporary cut which amounts to £32 10/ on the basic salary of £600 Travelling expenses will be paid by the Council

The appointment will be subject to three months notice on either side

Forms of application may be obtained from the undersigned and should be returned by June 16th 1932 *to other with copies of not* more than three testimonial

County Buildings LUSTACE JOY
Stafford Clerk of the County
May 30th 1932 Council

COUNTY BOROUGH OF HALIFAX

ST LUKE'S HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER.

The Health Committee of the Halifax Corporation invite applications for the post of Junior Resident Medical Officer (male unmarried) for St Luke's Hospital (containing 448 beds for Medical Surgical and Maternity cases) The salary will be £250 per annum together with board residence and laundry The appointment will be for a term of not exceeding one year and is not renewable

Applicants must be duly qualified registered Medical Practitioners

Forms of application and conditions of appointment may be obtained from the undersigned to whom they must be returned and accompanied by copies of not more than three recent testimonials not later than Friday June 24th.

By Order

Town Clerk's Office PERCY SAUNDBY
Halifax Town Clerk
May 24th 1932

WEST OF SCOTLAND NEUROPSYCHIATRIC RESEARCH INSTITUTE GLASGOW

Applications are invited for the post of DIRECTOR Salary commencing £800 Candidates must be skilled in modern clinical and laboratory methods and technique and be capable of undertaking and directing research work in mental and nervous affections Applications stating qualifications and experience to be sent not later than June 15th to the Secretary Dr J H MACDONALD Mental Asylum Crookston Glasgow from whom all further particulars may be obtained

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H M's Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service In other respects the terms will be as detailed below

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army Promotion is on a time scale up to the rank of Lieutenant Colonel and by selection to the ranks of Colonel and Major General An officer may apply after one year s Indian service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools

NOTE.—It is not possible to state at present what if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India

PAY

Owing to the state of financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are being subjected under the authority of the Secretary of State in Council to a temporary reduction not exceeding 10 per cent

Rank	Service in Rank	Basic Pay	Overseas Pay	Years of Total Service
		Rs	Rs	
Lieut	—	400	100	1st
			150	2nd
			150	3rd
Capt	(i) During first 3 years service as Captain	600	150	4th
			£1	5th
	(ii) With more than 3 and less than 6 yrs service as Captain	800	£15	6th
			£2	7th
			£2	8th
	(iii) With more than 6 years service as Captain	850	£2	9th
			£2	10th
			£2	11th
			£30	12th
Major	(i) During first 3 years service as Major	950		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1250		
Lieut.-Col	(i) Until completion of 23 years total service	1,000	£30	17th and over
	(ii) During 24th and 25th years service	1600		
	(iii) After completion of 25 years total service	1 00		
	(iv) When selected for increased pay	1850		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only

Candidates possessing certain higher medical qualifications may be granted in antedate of one year in their commissions Past service in certain hospital appointments may also render candidates eligible for an antedate of one year Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to one year

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £50 towards the cost of outfit

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided Extra leave (known as study leave) which may not exceed 12 months in all during an officer s service may be granted to officers desirous of pursuing special courses of study of a post graduate nature During such leave study allowance at present fixed at the rate of 12 a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay

PENSIONS

The rates of pension are as follows	Per annum
	£
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent in all With effect from October 1st 1931 a reduction of 8½ per cent has been made on this account from the amounts shown

There are additional pensions ranging from £60 to £350 per annum for officers who have held administrative appointments

PASSAGES

An officer on appointment is provided with free passage to India The wives and families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under Secretary of State for India Military Department India Office London S W 1 The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August 1932 prior to sailing for India early in 1933 Applications should be submitted as soon as possible

ROYAL VICTORIA INFIRMARY NEW CASTLE UPON TYNE
(672 Beds)

RESIDENT APPOINTMENTS

The following Resident Appointments will become vacant as from Monday August 1st 1932

The appointments are tenable for six months except the Skin and Venereal Departments and the Out patient Dressing Department which will alternate for three months in each Department

FOUR HOUSE PHYSICIANS
SIX HOUSE SURGEONS
ONE HOUSE SURGEON TO THROAT ETC AND EYE DEPARTMENTS
ONE HOUSE SURGEON TO GYNAECOLOGICAL DEPARTMENT
TWO HOUSE SURGEONS TO ACCIDENT DEPARTMENT
TWO HOUSE SURGEONS TO SKIN AND VENEREAL DEPARTMENTS AND OUT PATIENT DEPARTMENT (Three months in each Department

Victoria Hospital (Lay Bed Section)
TWO HOUSE SURGEONS (may be eligible for re appointment)

Candidates must be registered in medicine and surgery and must produce evidence of being able to administer anaesthetics

Candidates must be prepared to take any appointment

As regards applications for the appointments of (a) House Surgeons to Accident Room (b) House Surgeon to Out patient Department and (c) House Surgeon to Special Departments preference will be given to candidates who have previously held two resident appointments

Residents are remunerated at the rate of £50 per annum

Before making application intending candidates are asked to apply to the undermentioned for a copy of the regulations governing the appointments and form of application

Applications stating age experience and qualifications and accompanied by copies of two testimonials should be sent to the under mentioned not later than first post on Monday June 27th

S DUNSTAN FCIS
June 3rd 1932 House Governor and Secretary

ROYAL VICTORIA INFIRMARY NEW CASTLE UPON TYNE
(672 Beds)

WHOLE TIME JUNIOR SURGICAL REGISTRAR (OPEN APPOINTMENT)

Applications are invited for the post of Whole time Junior Surgical Registrar (open appointment)

This appointment is intended for graduates who desire to gain surgical experience and who have already held a post as House Surgeon Certain duties in the allied Department of the College of Medicine will offer opportunities of Post Graduate Study

The appointment will in no case extend beyond three years and will be for one year in the first instance renewable for two further periods

The rate of remuneration is £150 per annum

Applications with copies of not more than three recent testimonials must be lodged on or before Saturday July 2nd with the House Governor and Secretary Royal Victoria Infirmary Newcastle upon Tyne from whom further particulars may be obtained

S DUNSTAN FCIS
June 3rd 1932 House Governor and Secretary

ROYAL VICTORIA INFIRMARY NEW CASTLE UPON TYNE
(672 Beds)

Applications are invited for a RESIDENT ANAESTHETIST at a salary of £300 per annum with board and residence

The term of appointment is for three months and may be renewed for further periods

Candidates must be registered in medicine and in surgery

Applications stating age experience and *accompanied by two recent testimonials should* be addressed to the undersigned not later than Saturday July 2nd

S DUNSTAN FCIS
June 3rd 1932 House Governor and Secretary

EAST LONDON HOSPITAL FOR CHILDREN
Shadwell E 1

Applications are invited for the posts of HOUSE PHYSICIAN and HOUSE SURGEON The appointments are for six months from July 1st Board residence and laundry provided Salary at the rate of £125 per annum Applications with testimonials should reach the undersigned on or before Saturday June 18th

W M WILCOX Secretary

QUEEN'S HOSPITAL BIRMINGHAM
(MEDICAL SCHOOL)

Applications are invited for the following appointments

1 RESIDENT SURGICAL OFFICER
Candidates must be Fellows of the Royal College of Surgeons of England Edinburgh or Ireland and must have held a resident appointment in a teaching hospital
Salary £150 per annum
The appointment is for one year with eligibility for re-election

2 RESIDENT SURGICAL REGISTRAR
Qualifications as above or Primary Fellowship of the Royal College of Surgeons of England
Salary £100 per annum
The appointment is for one year with eligibility for re-election

Full board apartments and laundry will be provided in each case

Applications, accompanied by three recent testimonials should be sent to the undersigned from whom further particulars may be obtained not later than Monday June 20th

Birmingham G HURFORD
May 31st 1932 House Governor

HUDDERSFIELD ROYAL INFIRMARY

Applications are invited for the following posts —

MALE CASUALTY OFFICER (with senior rank over remainder of Resident Medical Staff)
TWO MALE HOUSE SURGEONS

All three officers to commence duty early in July

Salary at the rate of £225 and £150 per annum respectively with board residence and laundry

The Hospital is officially recognized for the surgical practice required of non Members before admission to final Fellowship Examination of the Royal College of Surgeons of England

Applications with copies of three recent testimonials to be addressed to the undersigned not later than June 20th 1932

H L G HALL Secretary

HULL ROYAL INFIRMARY
(367 Beds)

Applications are invited for the post of HOUSE PHYSICIAN (male) at the SUTTON BRANCH HOSPITAL vacant June 26th

The Branch Hospital contains 100 beds 45 of which are for acute medical cases

The appointment will be for six months in the first instance and will be determinable by one month's notice on either side

Salary at the rate of £160 per annum plus board residence and laundry

Applications, giving particulars of age experience and nationality together with copies of testimonials should reach the undersigned on or before Tuesday June 21st

R J CARNESS
June 6th 1932 House Governor

MILLER GENERAL HOSPITAL
Greenwich Road SE 10

Applications are invited for the following posts

HOUSE SURGEONS (Two) Salary £100 per annum
HOUSE PHYSICIAN Salary £100 per annum
CASUALTY OFFICER Salary £150 per annum

Candidates (male) must be unmarried Board residence and laundry are provided The appointments are for six months from July 1st next Applications stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials to be sent to the Secretary as soon as possible

May 18th 1932

MILLER GENERAL HOSPITAL
Greenwich Road SE 10

OUT PATIENT OFFICER (male and unmarried) required to see Medical and Surgical cases Attendance daily (except Sunday) from 9 to 1 Tuesdays 9 to 5 Salary £150 per annum and lunch The appointment is for six months Application stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials to be sent to the Secretary as soon as possible

June 6th 1932

ST JOHN OPHTHALMIC HOSPITAL JERUSALEM

There will be a vacancy for a HOUSE SURGEON before the Autumn For particulars apply Honorary Secretary Ophthalmic Hospital St John's Gate Clerkenwell E C 1 (Preliminary notice)

HOSPITAL OF ST CROSS ROCH

Applications are invited for the post of MAIN RESIDENT MEDICAL OFFICER Qualified (Three RMO's)

Salary to commence at the rate of £100 per annum rising to £150 per annum with board etc

Six months appointment and eligible on completion of service for further extension of six months

Candidates must be prepared to take duties as soon as possible

The practice of the Hospital offers excellent opportunities for wide experience

Certificates and other fees shared by RMO's

Applications stating age nationality and full details with copies of three recent testimonials to be sent to the undersigned

W COCKBURN
Superintendent and Secretary

SOUTHPORT GENERAL INFIRMARY
(150 Beds)

Special Departments for Ear Nose and Throat X Rays Massage Skin Pathology etc

Wanted to take up duties at once or not later than July 1st 1932 a SENIOR HOUSE SURGEON fully qualified and registered unmarried

Salary at the rate of £200 per annum with residence board and laundry

Applications stating age nationality and experience with copies of testimonials to be sent in by June 16th 1932 to the SECRETARY Infirmary Office Pilkington Road Southport

THE GENERAL HOSPITAL BIRMINGHAM

Applications are invited for the following Resident appointment

Vacant July 15th HOUSE SURGEON salary £70 per annum
Vacant August 15th HOUSE PHYSICIAN salary £70 per annum ANAESTHETIST salary £120 per annum

Applications giving full details of qualifications and accompanied by testimonials (if desired) should reach the undersigned by June 18th

A H JENNEY
June 6th 1932 House Governor

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKE ON TRENT

ORTHOPAEDIC HOUSE SURGEON

The Committee invite applications for the post of Orthopaedic House Surgeon Salary £150 per annum with board residence and laundry Previous orthopaedic experience not essential Previous orthopaedic experience not essential Fractures constitute 80 per cent of cases

Applications with two copies of recent testimonials to be sent to the undersigned immediately

W STEVENSON
Secretary and *House Governor*

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKE ON TRENT

ASSISTANT HOUSE PHYSICIAN

The Committee invite applications for the post of Assistant House Physician Salary £125 per annum with board residence and laundry Previous hospital experience desirable

Applications with two copies of recent testimonials to be sent to the undersigned immediately

W STEVENSON
Secretary and House Governor

PADDINGTON CREFY CHILDREN'S HOSPITAL (Incorporated) London W

HOUSE PHYSICIAN HOUSE SURGEON

Applications are invited for the above posts which will become vacant on July 1st to either men (unmarried) are invited to send in their applications with copies of three testimonials to the undersigned not later than first post on Friday June 17th Salary of each at the rate of £150 per annum with board and residence Candidates who have held a responsible Resident Hospital appointment are preferred The appointments are for a period of four months

JAMES V HAMLIN Secretary

ECCLES AND PATRICROFT HOSPITAL MANCHESTER

HOUSE SURGEON required General Hospital Salary £150 p a plus usual Apply with copies of testimonials to Secretary Medical Board

ST PETER'S HOSPITAL FOR STONE ETC Henrietta Street Covent Garden W C 2

CLINICAL ASSISTANTS to the following members of the Honorary Staff who attend the Out-patient Department at the times indicated will be appointed as soon as early date for the six months commencing July 1st A fee of Five Guineas payable to the Fund of the Hospital will become due on appointment

Mr John Sandrey Monday 2 to 5 p m
Mr Alban Andrews Tuesdays 2 to 5 p m
Mr Ogier Ward Wednesday 2 to 5 p m
Mr C J F Barrington Thursdays 3 to 5 p m
Mr Ogier Ward Fridays 9 30 a m to 11 30 a m (Women and Children)
Mr Alban Andrews Fridays 3 to 6 p m (Male out-patient)
Mr John Sandrey Saturdays 2 to 6 p m

Applications will be received by the undersigned up to and including Monday June 13th

BEECHEY ROGERS Secretary

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill London S E 18

GENERAL HOSPITAL (112 Beds)

HOUSE PHYSICIAN and HOUSE SURGEON

The Board of Management invites applications from suitably qualified male candidates for appointment as (1) House Physician and (2) House Surgeon for a period of six months from July 1st In addition to his surgical duties the House Surgeon will have the care of a Maternity Unit of 8 beds

An honorarium of £100 per annum will be paid in respect of each appointment plus board residence and laundry

Application accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him not later than first post on June 20th

FREEMASONS HOSPITAL AND NURSING HOME 23 Fulham Road Chelsea S W 3

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st Salary at the rate of £250 per annum with board residence and laundry The appointment is for six months Candidates must be registered and must have held Resident appointments at a General Hospital

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment etc

Application stating full particulars to be sent on or before June 18th next to the Honorary Secretaries from whom further information may be obtained The Medical Visitors Committee will meet on June 20th next

NORTHAMPTON GENERAL HOSPITAL

There will be a vacancy on July 1st next for ONE HOUSE SURGEON British nationality Salary £150 per annum with board residence and laundry

The successful candidate will be appointed for a period of three months and will be eligible for re-election for a further period of six months

Candidates must be duly qualified and registered

Applications stating age sex qualifications etc with copies of testimonials to reach the undersigned not later than first post on June 15th

H ST JOHN WOOD
May 30th 1932 Secretary Supt

HULL ROYAL INFIRMARY (367 Beds)

Applications are invited for the post of THIRD HOUSE SURGEON (male) vacant June 24th

The appointment will be for six months in the first instance and will be determinable by one month's notice on either side

Salary at the rate of £150 per annum including board residence and laundry

Applications stating particulars of age experience and nationality together with copies of testimonials should reach the undersigned not later than June 14th

R J CARLESS
May 30th 1932 House Governor

GENERAL HOSPITAL NOTTINGHAM

A HOUSE SURGEON is required at the above Institution The appointment is for six months the salary at the rate of £150 a year with board residence and laundry

Applications stating age qualifications and experience together with copies of testimonials to be sent to the undersigned not later than Monday June 20th Duties to commence on Monday July 18th

P M MACCOLL
Hon Governor & Secretary

THE TUNBRIDGE WELLS AND COUNTIES GENERAL HOSPITAL

Wanted HOUSE SURGEON (male) Candidate must be unmarried and duly qualified in medicine and surgery Must be required to lecture to nursing staff (Two resident)

In patients number over 1 400 yearly Out patients 6 000 with 50 000 attendance

Salary £160 per annum with board residence and laundry in the Hospital

This Hospital is approved by the University of London for the purpose of the M D and M S examinations

Applications stating qualification with certificate of registration and copies of testimonial should be sent immediately to the undersigned Vacancy occurs June 30th

TOM B HARPISON
Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E 2

OPHTHALMIC SURGEON

The Committee invite applications for the post of Ophthalmic Surgeon with charge of bed One attendance required weekly An honorarium to cover travelling expenses will be paid Candidates must be Fellows by examination of the Royal College of Surgeons (England)

Applications with copies of three recent testimonials which may be printed or typewritten should be sent on or before July 9th to the undersigned from whom further particulars may be obtained

CHARLES H BESSELL
Junction 1932 Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E 2

HOUSE PHYSICIAN required July 1st
CASUALTY OFFICER (with some Dermatology) required July 6th

Six months appointments Salary at the rate of £100 per year with board residence and laundry

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials on or before June 18th

CHARLES H BESSELL
May 11th 1932 Secretary

WARRINGTON INFIRMARY & DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried

Applicant who must be of British nationality must be duly qualified Medical Practitioner Salary £175 per annum with board apartment and laundry

Applications stating age with copies of three recent testimonials should be sent in at once to the undersigned

By Order
HENRY L ROOT
Superintendent & Secretary
June 8th 1932

ROYAL INFIRMARY BLACKBURN (240 Beds—5 Residents)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum rising to £250 with board residence laundry etc To commence duties July 1st if possible

Applications with copies of testimonials stating age nationality experience etc to be sent at once to the undersigned

Royal Infirmary NATHAN A SMITH
Blackburn General Supt and Secretary

This Institution is recognized for the surgical practice required for the F P C S Final Examination

ADDENBROOKE'S HOSPITAL CAMBRIDGE

for the post of AND EMERGENCY intment will be for t 1932 Salary at the rate of £130 per annum with board residence and laundry Candidates who must be unmarried and duly registered are requested to forward their applications stating age qualifications etc together with copies of not more than four recent testimonials to the undersigned on or before Tuesday June 21st 1932

W H HEAD
Secretary Superintendent

ACTON HOSPITAL W 3

JUNIOR RESIDENT MEDICAL OFFICER (male unmarried) required Salary £150 per annum with board residence and laundry Candidates must be fully qualified and registered Application stating age nationality and qualifications together with copies of three recent testimonials should reach the Secretary Acton Hospital Gunnersbury Lane W 3 by Saturday June 18th

DONALD C D SWORD
June 6th 1932 Secretary

THE INFIRMARY

(105 Beds)

Applications are invited for the post of SECOND HOUSE SURGEON Salary £120 per annum with board residence and laundry

The appointment is for six months which may be extended for similar periods by re-election from time to time

Application stating age qualifications and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than June 21st

The elected candidate will be required to enter upon his duties on July 1st

F J SIMONS
June 2nd 1932 Secretary

ROYAL VICTORIA AND WEST HANTS HOSPITAL BOURNEMOUTH (Bo combe Branch 170 Beds)

HOUSE SURGEON AND CASUALTY OFFICER (male British nationality) required to commence duties at the end of June Salary £100 per annum with board lodging and washing The appointment is ten for six months and candidate must be registered according to the provisions of the Medical Act Applications stating place of birth and age with copies of three testimonials to be sent immediately to the undersigned

Women and married men are ineligible
GORDON M SAUL
June 6th 1932 Secretary

ROYAL VICTORIA AND WEST HANTS HOSPITAL BOURNEMOUTH (Poole Road Branch 65 Beds)

HOUSE SURGEON (male British nationality) required to commence duties at the end of June Salary £150 per annum with board lodging and washing The appointment is tenable for six months and candidate must be registered according to the provisions of the Medical Act Application stating place of birth and age with copies of three testimonials to be sent immediately to the undersigned

Women and married men are ineligible
GORDON M SAUL
June 6th 1932 Secretary

NORFOLK AND NORWICH HOSPITAL, NORWICH

Applications are invited for the post of HOUSE SURGEON to the Special Departments (Ear Nose and Throat and Ophthalmic) which will be vacant on July 20th Salary £120 per annum with board residence and laundry

Candidates (male) who must possess registered qualification should forward application stating age nationality etc together with copies of testimonials to the undersigned not later than June 21st

FRANK INCH
Hon Governor and Secretary
June 10th 1932

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL

Application are invited for the post of HOUSE SURGEON (male) at this Hospital's Country Branch at HOOKLEY HILL STANMORE MIDDLESEX (270 Beds 150 for Surgical Tuberculosis) Salary £150 per annum with board quarters and laundry The appointment is for six months renewable for a further period of six months on the recommendation of the Medical Board Application with copies of testimonials should be sent to the Secretary 234 Great Portland Street W 1 as soon as possible

BURY INFIRMARY LANCS

Applications are invited for the post of THIRD HOUSE SURGEON who must have both Medical and Surgical qualification The appointment is for six months at a salary at the rate of £150 per annum with board residence and laundry The successful applicant will be required to commence duties on July 1st

Applications stating age qualifications and nationality with copies of three recent testimonials to be sent to the undersigned not later than June 18th

Particulars of duties may be had on application

ALEX W MAITLAND
Hon Secretary

CHESTER ROYAL INFIRMARY (211 Beds)

HOUSE SURGEON (male) required to take up duties July 8th Salary £120 per annum with board residence and washing

Application to be sent by June 20th

Application forms may be obtained from the undersigned

W H CRACE M D M R C P
Hon Supt of the Resident Medical Staff.

CITY OF LIVERPOOL

MEDICAL SUPERINTENDENT

ALDER HEY CHILDREN'S HOSPITAL

Applications are invited from fully qualified Medical practitioners with necessary knowledge and experience of hospital administration for the appointment of full time Medical Superintendent at the above Hospital at a salary of £1 000 per annum together with an allowance of £150 per annum in lieu of residence subject to a temporary deduction as authorised by the Council All fees received in connection with the appointment to be handed over to the City Council

The gentleman appointed will assume control of the Hospital under the direction of the Medical Officer of Health and be responsible for the work of the Medical Nursing and Administrative Staffs in accordance with the instruction of the Council from time to time

The Hospital which has been appropriated under the Public Health Acts as from April 1st has accommodation for approximately 950 patients with a Resident Staff of Assistant Medical Officers and Visiting Specialists and a Nursing Staff of 250 In addition is made for the treatment on modern lines of all classes of acute children's diseases medical surgical and orthopædic including surgical tuberculosis and considerable experience of children's ailments is essential The Hospital is recognized by the General Nursing Council as a Training School for Sick Children's Nurses and the Medical Superintendent with the Matron will be required to organise the necessary lectures in connection with the training

The appointment will be made subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council and is determinable by three calender months notice on either side Further information concerning the terms of appointment may be obtained upon application to the Medical Officer of Health

Applications upon forms to be obtained from the Medical Officer of Health Municipal Annexe Liverpool giving full particulars as to age qualifications experience etc together with copies of testimonials should reach the undersigned not later than Saturday June 25th

Canvassing of Members of the City Council either directly or indirectly will be regarded as a disqualification

Municipal Offices WALTER MOON
Liverpool Town Clerk
June 8th 1932

LONDON COUNTY COUNCIL

Applications invited from registered Medical Practitioners for appointment as HOUSE PHYSICIAN at LEWISHAM HOSPITAL High Street Lewisham S E 13 Salary subject to temporary reduction £80 a year together with board lodging and laundry Appointment is for six months in the first instance but may be extended for a further period of six months Duties are assigned by the Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3A) County Hall Westminster Bridge S E 1 returnable by June 24th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the hospital

WOKING AND DISTRICT VICTORIA HOSPITAL

(General Hospital—50 Beds)

FEMALE RESIDENT MEDICAL OFFICER (unmarried) required for July 1st Applicants must be doubly qualified and registered Salary £100 per annum with board residence and laundry

Appointment for six months and renewable for further six months

Applications stating age etc and accompanied by copies of recent testimonials to be addressed to the Hon Secretary from whom all particulars may be obtained They must be received on or before June 24th Personal canvassing not allowed

R MANNING DRIVER
Hon Sec

ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER (158 Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post to take up duties at an early date Six months appointment Salary £125 per annum with board residence and laundry Candidates who must be of British nationality to make application at once to the undersigned enclosing copies of three testimonials HERBERT MASLEN
Secretary

DEVONSHIRE HOSPITAL, BUXTON DERBYSHIRE (300 Beds)

(A National Hospital for Rheumatism and Allied Diseases)

Applications are invited for the post of ASSISTANT HOUSE PHYSICIAN (male) to commence duties on July 1st Candidates must be fully qualified and registered The appointment is for a minimum period of six months and may be extended for a further period of six months Salary commencing £150 per annum and rising to £175 after three months' service with board residence and laundry

Applications endorsed Assistant House Physician stating age experience and qualifications together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained

This appointment offers special facilities for any gentleman preparing a thesis or wishing to undertake research work and the Hospital contains a Pathological Laboratory and Biochemical and X ray Departments

Canvassing will disqualify

By Order of the Committee of Management
A IRESON TURNER
General Supt and Secretary

BOROUGH OF CHORLEY

APPOINTMENT OF MEDICAL OFFICER OF HEALTH

Applications are invited for the position of whole time male Medical Officer of Health and School Medical Officer Candidates must have had previous experience in the various duties attaching to the position of Medical Officer of Health and in addition to the qualifications prescribed by statute must possess the Diploma of Public Health Salary £800 per annum less a temporary emergency deduction of £42 5 per annum The appointment will be subject to the provisions of the Sanitary Officers Order 1926 and to the approval of the Ministry of Health Further particulars form of application etc may be obtained on application to the undersigned Applications endorsed Medical Officer must be received by the undersigned not later than the 27th instant

GEORGE JACKSON
Chorley June 7th 1932 Town Clerk

QUEEN MARY'S HOSPITAL FOR THE EAST END E 15

(Telephone—Maryland 2616)

HOUSE SURGEON

Applications are invited from fully qualified and registered Medical Men for the above post The Hospital contains 217 Beds including 50 Maternity Beds and other special department

Candidates who should previously have held Hospital appointment must send applications accompanied by testimonials to the undersigned not later than Wednesday June 22nd

The appointment will date from July 1st and will be for six months and the salary is £120 p a

PAPHAEL JACKSON Major
Secretary

CITY OF OXFORD

APPOINTMENT OF DEPUTY MEDICAL OFFICER OF HEALTH

The City Council invite applications for this appointment Salary £600 per annum (subject to a temporary deduction of £37 10s) with a car allowance of £75 per annum Application form and full particulars can be obtained from the Medical Officer of Health Greyfriars Pembroke Street Oxford to whom applications for the appointment must be sent not later than June 24th

ARTHUR HOLT Town Clerk

HOSPITAL OF ST JOHN AND ST ELIZABETH

60 Grove End Road London N W 8

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (male) The appointment will be for six months from August 1st Salary at the rate of £100 per annum with full board the copies of three under signed on or

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ASSISTANT RESIDENT MEDICAL OFFICER

(lady unmarried) required for the ISLINGTON DISPENSARY 303 Upper Street N 1 Applicants must be registered medical practitioners Salary £250 per annum Furnished apartments provided but not board with a grant to cover cost of attendance fuel etc Applications on printed form to be obtained (by postcard) from the Hon Secretary at the Dispensary

APPLICATIONS ARE INVITED FOR POST of RADIOLOGIST and PHYSICIAN in charge X Ray Massage and Electrical Department KIMBERLEY HOSPITAL SOUTH AFRICA Salary £900 per annum without board and quarters whole time appointment for two years and successful candidate may not enter into private practice within Kimberley Divisional Area for a further period of two years First class passage money to South Africa will be refunded on completion one years service The commencement date of service reckoned as from assumption of duties at Kimberley Applications stating age experience and qualifications accompanied by copies of recent testimonials should be sent to H CHAPLIN & Co 101 Leadenhall Street London E C 3 Successful applicant must be prepared to assume duty in Kimberley middle August

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL

Haverstock Hill N W 3

APPOINTMENT OF A HOUSE SURGEON

Applications are invited from unmarried Medical men for an appointment of House Surgeon vacant on July 1st next The salary will be at the rate of £100 per annum together with board residence etc and the term will be for six months

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on June 18th next

ABERDEEN ROYAL INFIRMARY

WANTED FOR THE RADIUM DEPARTMENT at the Aberdeen Royal Infirmary a wholetime ASSISTANT MEDICAL OFFICER (male or female) Candidates with previous experience as House Surgeon or House Physician preferred No previous knowledge of Radium technique required

Further particulars as to duties etc may be had from the undersigned with whom applications and testimonials (six copies) should be lodged on or before June 25th

JOHN A McCONACHIE
230 Union Street Clerk and Treasurer
Aberdeen

APPLICATIONS ARE INVITED FOR THE post of RESIDENT MEDICAL OFFICER (male) at the DUMFRIES AND CALLOWAY ROYAL INFIRMARY The Institution which contains over 100 beds is one of the premier provincial hospitals in Scotland and offers exceptional opportunities of gaining experience in all branches of the profession Salary at the rate of £100 rising to £150 per annum

Applications with testimonials to be forwarded to the TREASURER Dumfries and Galloway Royal Infirmary 3 King Street Dumfries at once

ALTRINCHAM GENERAL HOSPITAL

(100 Beds)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS Salaries at the rate of £150 and £120 per annum respectively with board residence and laundry The appointment is for six months in the first instance

Applications stating age and experience together with copies of recent testimonials to Secretary General Hospital Altrincham

COLBETT HOSPITAL STOURBRIDGE

RESIDENT HOUSE SURGEON required to commence duties on July 1st Appointment will be for six months and will be determinable by six weeks notice on either side Salary at the rate of £200 per annum with board apartments and laundry

Application with copies of testimonials to be sent to the undersigned

W C H WESTON Secretary
The Corbett Hospital Stourbridge

DARLINGTON GENERAL HOSPITAL

(120 Beds)

Wanted SENIOR HOUSE SURGEON fully qualified unmarried salary £175 per annum with board residence and laundry Applications stating age and qualifications with copies of two recent testimonials to be sent to ARTHUR RIDDLE Secretary General Hospital Darlington

GREENOCK ROYAL INFIRMARY

Wanted a HOUSE PHYSICIAN (lady) to enter towards the end of July or beginning of August Salary £100 per annum including board residence and laundry Other two residents (ladies) on staff 150 Beds Good experience Applications invited with testimonials to be sent to the Secretary 2 Hamilton Street Greenock

JAS A LOVE Secretary

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** (*cont'd*)	**PUBLIC HEALTH**
EBBW VALE MON (*Workmen's Medical Society*)	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE (*Medical Practitioner*)	AYR COUNTY COUNCIL (*Springvale Fever Hospital Saltcoats*) (*Visiting Physician*)
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE (*Workmen's Medical Scheme*)	AYR COUNTY COUNCIL (*Assistant Medical Officer*)
LLWYNPIA CLYDACH VALE TENYCRAIC GLAMORGAN (*Workmen's Medical Scheme*)	NEATH AND DISTRICT (*Medical Aid Association*)	FOLKESTONE BOROUGH (*Assistant Medical Officer of Health*)
LOWESTOFT MEDICAL INSTITUTE (*Medical Officer*)	OAKDALE MON (*Medical Officer for Medical Aid Association*)	COUNTY OF KENT EDUCATION COMMITTEE (*Assistant School Medical Officer*)
MARDY GLAMORGAN (*Workmen's Medical Scheme*)	OGMORE VALLEY GLAMORGAN (*Windsor Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)	SOUTHAMPTON COUNTY BOROUGH (*V D Officer and Pathologist*)
		STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS (*Tuberculosis Officer*)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (*All Practically Society Appointments*)	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	QUEENSLAND (*Brisbane Associated Friendly Societies Institute*) (*Toowoomba Associated Friendly Societies Medical Institute Toowoomba*)	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	WELLINGTON NEW ZEALAND (*Contract Practice Appointments*)	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington N Z Zealand
VICTORIA (*All Institute or Medical Districts*)	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria			WESTERN AUSTRALIA (*Contract and Lodge Practices*)	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St George's Terr Perth Western Australia

June 8th, 1932 By Order of the Council ALFRED COX Medical Secretary

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ROYAL DEVON AND EXETER HOSPITAL EXETER

SENIOR HOUSE SURGEON AND JUNIOR HOUSE SURGEON (Male appointment)

Applications are invited for the above Resident appointments shortly becoming vacant at this Hospital

The Senior appointment is for 12 months the Junior appointment for six month

Candidates are eligible for re election

The salaries are as follow

Senior House Surgeon £250 per annum

Junior House Surgeon £150 per annum board apartments and washing

Application stating age qualifications together with certificate of registration and copies of three recent testimonials should be sent to the undersigned on or before Thursday June 16th

By Order of the Committee
S S COLE
Secretary & Manager

DONCASTER ROYAL INFIRMARY (185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Salary at the rate of £150 per annum with residence board and laundry The appointment is for six months and renewable

Application accompanied by not more than three recent testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Superintendent

BEDFORD COUNTY HOSPITAL (124 Beds)

SECOND HOUSE SURGEON (male) fully qualified unmarried required for a term of not less than six month at once Salary £140 with board lodging and laundry

Application stating age nationality qualifications etc with three recent testimonials to be sent to the Hon Secretary Hon Medical Staff Committee as soon as possible

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WEST LONDON HOSPITAL Hammersmith Road W 6 (234 Beds)

Required ONE HOUSE PHYSICIAN (General and Skin) ONE HOUSE SURGEON (General and Genito Urinary) for six months from July 1 next subject to one month's notice on either side Salary at the rate of £100 per annum with board lodgings and laundry allowance

Candidates (males only) must be registered under the Medical Act

Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday June 16th Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a Meeting of the Medical Council on Friday June 24th at 4 p m and the House Committee Meeting at 4 45 p m the same day when the appointments will be made

H A MADGE Secretary

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH

HOUSE PHYSICIAN required male and unmarried Salary £120 per annum with board residence and laundry There are three Residents and the successful candidate will be eligible for the post of House Surgeon in due course

Applications stating age qualifications previous experience (if any) with copies of three recent testimonials should be sent to the undersigned at once

GEORGE WATTS Secretary Superintendent

ST MARY'S HOSPITAL W 2

The post of FIRST ASSISTANT PATHOLOGIST will shortly become vacant Salary £500 per annum rising by annual increments of £25 to £600 The Board of Management invite application which with copies of testimonials not exceeding three in number should reach the undersigned on or before June 20th

The successful candidate will be expected to take up duties on October 1st

W PARKES Secretary

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

Applications are invited from duly registered and unmarried Practitioners for the following resident appointment

HOUSE SURGEON

ASSISTANT HOUSE SURGEON

Salary House Surgeon £150 per annum Assistant House Surgeon £100 per annum apartments board and laundry free

Application stating age together with copies of not more than three testimonials should be forwarded to the undersigned without delay

By Order of the Committee
FRANK ROWE Secretary

LINCOLN COUNTY HOSPITAL

Wanted JUNIOR HOUSE SURGEON male unmarried Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six month approved service Board residence and washing will also be provided

Every candidate for the appointment must be registered under the Medical Act

Application stating age and other particulars with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained

Lincoln ARTHUR MOORE
May 30th 1932 Secretary Supt

CUMBERLAND INFIRMARY CARLISLE (160 Beds)

Resident Medical Staff—Four

Required at once a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON Previous experience desirable but not essential Appointment to September 30th Salary at the rate of £100 per annum Board residence etc

Applications stating age nationality qualifications etc with three testimonials not more than four should be sent immediately to the undersigned

J C HOWITT Secretary

(*Appointments continued on p 54*)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
T/A ARTICULATE WESTCENT LONDON
Tel MUSEUM 9861 (4 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) **9s**
Each Additional Line, 1s 6d

(a line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

WANTED INDOOR MALE ASSISTANT experienced British Partnership entertained Mixed Practice in pretty district Midlands £300 and motor expenses Full particulars with photo—Address No 3308 BMA House Tavistock Square W C 1

WANTED LADY ASSISTANT S WALES for some months light work no evening surgery distance or diphtheria Suit person convalescing or unable to undertake full normal work—Address No 3302 BMA House Tavistock Square W C 1

WANTED ASSISTANTSHIP OR LOCUM work by Indian doctor M B B S L M etc 3 yrs experience hospital private and panel Well recommended Ref and photo available —Address No 3332 BMA House Tavistock Square W C 1

WANTED OUTDOOR ASSISTANT FOR Practice in Monmouthshire 2nd week July £500 per annum and unfurnished house Motorist essential Usual bond—Apply with full particulars No 3438 BMA House Tavistock Square W C 1

WANTED YOUNG MALE INDOOR ASSISTANT £300 per annum Motorist preferred Private Panel Practice in Monmouthshire Apply stating age and experience particulars Usual bond—Address No 3437 BMA House Tavistock Square W C 1

WANTED ASSISTANT END OF JUNE outdoor or indoor Salary £300 to £450 according to experience and conditions Good prospects for suitable man—Address No 3424 BMA House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries—State full particular—BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WANTED SINGLE OUTDOOR ASSISTANT compact colliery practice Rooms light and attendance provided Usual bond dispenser kept Send particular—Address No 3321 BMA House Tavistock Square W C 1

WANTED AN OUTDOOR ASSISTANT FOR non panel Practice within 35 mile of London Salary £400 per annum—Address No 3316 BMA House Tavistock Square W C 1

ASSISTANT MALE SINGLE PREFERABLY Scotsman wanted for panel and private practice Chadwell Heath district for July 1st 15th at latest Hospital experience essential £300 indoor car allowance—Apply enclosing testimonials and photo No 3432 BMA House Tavistock Square W C 1

ASSISTANTSHIP REQUIRED WITH OR without view Married man aged 33 Eight years exp hosp and GP Experienced refractions midwifery and anaesthetic Drive car—Address No 3317 BMA House Tavistock Square W C 1

ASSISTANTSHIP WITH VIEW TO PARTNERship or early succession wanted by experienced medical woman Good panel and private essential Must be cope London area Preferred Capital available—Address No 3301 BMA House Tavistock Square W C 1

ASSISTANT WANTED AT ONCE OUTDOOR Male panel and working class practice in Liverpool Salary £275 with rooms and attendance and half midwifery fee—Address No 3314 BMA House Tavistock Square W C 1

OUTDOOR ASSISTANT WANTED YOUNG male £350 p a to start with Good prospects Northern industrial town (mall)—Address No 3426, BMA House Tavistock Square W C 1

PATHOLOGICAL AND BACTERIOLOGICAL LABORATORY ASSISTANTS ASSOCIATION—Pathologists and Bacteriologists requiring SKILLED CERTIFICATED LABORATORY ASSISTANTS are invited to communicate with H Gooding Hon Sec Moelfre 10 Holbeck Grove Victoria Park Manchester No fees

PARTNERSHIPS

WANTED BY LADY DOCTOR PARTNERship following short preliminary assistantship Country seaside or pleasant residential district 2 years hospital experience including obstetrics—Address No 3306 BMA House Tavistock Square W C 1

WANTED PARTNER IN RAPIDLY INcreasing middle-class Practice London Suburb doing £2 500 £1 000 share to commence 2 years purchase House for sale—Address No 3329 BMA House Tavistock Square W C 1

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DERBYSHIRE COUNTY COUNCIL

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Applications are invited for the post of LOCUM RESIDENT ASSISTANT MEDICAL OFFICER at WALTON SANATORIUM near Chesterfield (130 beds) for a period of eight weeks commencing July 23rd Salary at the rate of £350 per annum with board lodging etc Experience in artificial pneumothorax desirable

Applications together with copies of two recent testimonials to be sent to the undersigned on or before June 30th

New County Offices W M ASH
St Mary's Gate County Medical Officer
Derby
June 7th 1932

WEST END HOSPITAL FOR NERVOUS DISEASES

In Patient Department
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The Committee of Management invite applications from British medical candidates for the appointment of JUNIOR HOUSE PHYSICIAN Duties to commence Monday July 18th Salary at the rate of £100 with board residence and laundry Appointment in first instance for 6 months Applications with testimonials must be received by the undersigned not later than Monday June 20th

J P WETENHALL Secretary
73 Welbeck St W 1

KING EDWARD MEMORIAL HOSPITAL, EALING (109 Beds)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER vacant on July 1st Applicants must have had good experience (at least two years) in house appointments Salary £200 per annum with usual residential allowances

Applications stating age experience and qualifications together with copies of two testimonials to be sent to the undersigned immediately

P J MICKLEWRIGHT
Secretary Superintendent

WREXHAM EAST DENBIGHSHIRE WAR MEMORIAL HOSPITAL (109 Beds)

TWO RESIDENT HOUSE SURGEONS (male or female) required by the above Hospital to commence on July 1st next Appointments for a period of not less than six months Salary £150 per annum with board and laundry

Application stating age nationality experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned not later than Monday June 20th

LESLIE SILENCER
Secretary
May 20th 1932

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN
Waterloo Road S E 1

There will be a vacancy on July 1st for a HOUSE PHYSICIAN (male) at the above Hospital The appointment is in the first instance for a period of six months Salary at the rate of £100 per annum with board and residence Application with copies of testimonials should be forwarded not later than Tuesday morning June 21st to the Secretary at the above address from whom further particulars can be obtained

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (120 Beds)

HOUSE SURGEON REQUIRED (MALE)

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THE STOCKPORT INFIRMARY

JUNIOR HOUSE SURGEON (male) required Salary £150 with board residence and laundry Applications with copies of three recent testimonials stating age nationality Medical School and experience to be addressed to the undersigned by June 15th

EDWIN J LAPCE
Secretary
May 1932

ROYAL BERKSHIRE HOSPITAL, READING

HOUSE SURGEON required as from July 1st The candidates must be fully qualified and registered Remuneration at the rate of £100 per annum with board residence and laundry Applications with copies of testimonials to be sent to the undersigned on or before June 25th

F J LLOYD Secretary

VICTORIA HOSPITAL BURNLEY
(125 Beds)

HOUSE PHYSICIAN (Male)

Applications are invited for the above Post which will become vacant on June 1st next. The duties include the giving of a certain number of anæsthetics. The appointment is for six months from June 1st and carries a salary of £150 per annum with board etc. This Hospital is approved by the London University for the purpose of the M.B. and M.S. examination.

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LONDON S.W. — ABOUT £900 P.A. ON MAIN road. 700 panel increasing. M.O. to Ins. Co. £50. 40 mdls. each p.a. fees 3 to 5 gns. Visiting fees 5/6 to 10/6. Surgery 2/6. Good corner house. Surg. and waiting room with separate entrance. Would sell leasehold or might rent. Premium £1,400. Also nucleus about £2 per week plus panel of 50 —No. 9034.

YORKSHIRE — NEAR LEEDS — £700 P.A. Panel over 500 increasing. Visiting fees 4/-, 5/6. Surgery 2 to 4. About 12 mdls. p.a. fees 2 to 4 gns. Semi-detached. Hall, front. house, surgery and waiting room, dining room, 3 bedrooms, bath etc. Garage with room over. Freehold £850. Premium or Tract. 1½ years purch.

SOUTH WALES — PLEASANT COLLIERY VILLAGE near beautiful country. £925 p.a. (panel and contract £849). Old estd. about 20 mdls. cases p.a. fees 2 or 3 gns. Convenient house 3 recep. 5 bed. bath. Hall, surgery. Rent £45. Premium £800 —No. 9032.

EASTERN COUNTIES IN ATTRACTIVE country unopposed. £700 or £1,800 p.a. Panel 1,100. Half share for disposal. Fees 3/6 to £1. Med. extra. Appt. over £100. Newly decorated house 7 bed. 3 recep. Surgery. Large garden and paddock over an acre. Premium £2,800 —No. 9051.

LONDON S.E. (WOMAN'S PRACTICE) £350 p.a. Panel 145. Visits 3/6. Surg. 2/6. Small flat at rent of £60 p.a. inclusive. Premium £275. Also nucleus in Bulkington £60—£70. Panel 52. Half p.a. Prem. £50 inclusive —No. 8931.

WEST OF ENGLAND — TOWN PRACTICE. Share worth about £1,000 p.a. available owing to increase of Practice. Non-panel. Non-dispensing. Best class. Good appointment. Good House 3 recep. 5 bed. Garage to rent. London, Oxford or Cambs. degrees essential —No. 9026.

WEST RIDING — OLD ESTAB. PRACTICE IN out skirts of industrial town. Average £1,050 p.a. Panel 430. Two appointments. Fees 5/6 to 10/6. Income £2,000. Modern house 3 bed. 2 recep. large surgery etc. Sell or let. Alternative house with 6 bed. 2 recep. Separate surgery etc. Rent £100. Very suitable. Built for doctor. Premium £1,550 —No. 9024.

CHANNEL RESORT — RADIOLOGICAL PRACTICE. About £500 p.a. scope for Electrotherapy. No opposition. Population of 40,000 covered by Private Remissive Contracts. Situated at rental of 21/- per week. Premium for goodwill and plant (cost £5 0) £700 —No. 9025.

LONDON — HIGH CLASS PRACTICE OVER £2,500 p.a. Largely Obstetric and Children. Successor must have had experience in these branches preferably Hospital appointments. Ample scope for increase —No. 9022.

SOUTH COAST — FASHIONABLE RESORT — Good class Practice, non-dispensing with select panel. Income over £950. Scope and easy house-to-state. Excepting Visits 5/- to 10/6. Good house facing east. Reception room, 3 bedrooms, 2 bathrooms etc. Premium for Practice and lease (45 years to run) £2,800, of which £950 can be raised on mortgage —No. 9014.

SURREY HILLS — OLD ESTABLISHED Country PRACTICE unopposed. £650 p.a. Fees 5/6 to 10/6. Panel 400. Premium 1½ years purchase. Good house 6 bedrooms 2 reception rooms, electric light, good garden about 1 acre with tennis court. £1,600 or rent £80 —No. 8992.

MIDLANDS — £3,000 A YEAR OLD ESTAB. Same hand over 30 years. Partner 5 years. One third share for sale now, more later or 5 years purchase. House available to rent. Station close. Fees 7/- to £1. Extensive district, very little opposition. Panel 1,600. Personally known and recommended —No. 9006.

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YORKSHIRE —Mixed C P in large town Suitable house available Receipts £600—£700 Panel 512 increasing Premium 1½ years *purchase*

WEST END —ELECTRO THERAPEUTIC AND MECHANO PRACTICE — Situated in the Harley Street locality Room rented on agreement Fees 10 6 upward Trained staff Premium to include equipment and goodwill £1 200

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LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/- up Excellent scope one appointment *Premium 2 years purchase or near offer*

SUFFOLK —Old established Country PRACTICE situated in charming locality Good sized *house with grounds to rent* on lease Sport of all kinds Receipts average over £1 500 Panel 1 000 Appts worth £250 to £260 p a Premium 1½ years purchase

NORTHANTS —Well established Town PRACTICE Corner house (5 beds) garden garage Receipts over £1 100 Panel 1 000 Fees 2/6 upwards Premium £1 800

LONDON E — PARTNERSHIP in mixed middle and working class locality conducted from main surgery Suitable corner residence Receipts (over) over £3 600 Panel nearly 4 900 Fees 2/- up Premium for 2/3rds share £4 800

EASTERN COUNTIES —PARTNERSHIP in good class mixed PRACTICE Medium sized house available to rent Receipts nearly £2 600 Panel nearly 1 700 Good fees 1/3 share (with view) 2 years purchase

LONDON S W (Near West End) —Mixed better-class PRACTICE Main thoroughfare Suitable house to rent at exceptionally low rental Receipts approx £1 000 p a all cash Panel 750 increasing Fees 3/6 to 1 gn Premium to include Practice lease drugs furniture etc £3 500 or near offer

LANCASHIRE — Industrial middle class PRACTICE with convenient house (4 beds) Receipts nearly £2 000 Panel 1 200 Fees 3/6 upwards Highly suitable for husband and wife Premium £3 000 to include book debts or 1/3 share Partnership with view to succession at £1 200 Suitable for lady Doctor

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LONDON N L —Mixed Suburban C P —Medium sized corner house Receipts nearly £800 Panel approx 1 000 increasing Scope Premium £1,340 for Practice leasehold house £900 or near *offer*

LONDON E C —Mixed Cash and Panel Lock up PRACTICE with living accommodation if desired Facing main thoroughfare held on lease at £95 p a Receipts nearly £700 Panel 450 (cope) Fee 1 6 to 10/6 Midwifery not undertaken Premium £1 000

YORKSHIRE — Near Coast — Agricultural locality — Attractive house separate entrance for surgery for sale freehold Receipts average *approximately* £800 p a Panel 620 Fees 5/6 upwards Premium 1½ years purchase for Practice house £900

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1 WEST RIDING CITY —Industrial and Mixed PRACTICE Receipts av £656 p a Panel 512 and both steadily increasing Nice house garage etc

2 LEICESTER — Panel and Private PRACTICE Established about 4 years Receipts av £727 p a and ample scope to quickly double Panel 570 Excellent opportunity Good house garage etc

3 BIRMINGHAM — NUCLEUS IN BETTER class growing suburb Nice modern *corner* house

4 FENCES — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and Private PRACTICE Receipts £874 Good house for sale Garage etc.

5 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE Receipts average £800 p a Panel 650 *Appointments £350 Good* house to rent Considerable scope for energetic man

6 FENCES —Old established and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good house to rent

7 FENCES (LARGE TOWN) —Non dispensing panel largely Surgical PRACTICE Receipts over £1 179 p a and unlimited scope Good house etc

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1 LONDON S E —Mixed PRACTICE Can be run as lock up Panel 177 Last year £285 part time only Scope Prem £275 Flat with surgery and waiting room To rent £60 p a inclusive

2 S DEVON —Short ASSISTANTSHIP with view to *Partnership* and succession In opposed Practice over £1 100 p a Good house to rent In present hands 30 years

3 COUNTRY PRACTICE — Old established In pleasant country Last year £1 700 accounts Panel 946 Appts £120 In present hands 23 years Good house garage large garden House and Practice £5 000 Border of Monmouthshire

4 MIDLAND CITY — *Old established* general and general PRACTICE Receipts last year £2 740 Panel 500 recently established increasing Excellent opportunity

5 DEVON —Near Sea —PARTNERSHIP Half share of £1 200 p a increasing Panel 600 Good house with large garden for sale Prem for Partnership £2 200

6 CORNWALL —PRACTICE in small seaside town near sea Averages £1 300 p a Panel about 63% Plenty of scope for a Surgeon Prem £2 000 Old house for sale

7 WESTERN CITY —PARTNERSHIP Practitioner Fifth share receivable Last year £950 net *Increase to two-fifths* within four years Panel 3 320 increasing Good house to *rent* £45 p a Price £950 to include book debts No dispensing

8 —LONDON S —*Branch surgery* to be taken over 3 years £765 Panel 1 500 increasing Good house Scope for man with [illegible] near premises Premium £1 000

9 DENTAL DEATH VACANCY —LONDON S W —Old established Practice for last three years £1 600 Good [illegible]

NORTH OF IRELAND BRANCH
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LANCS TOWN —Sound oldestablished MIXED PRACTICE Cash receipts last year £1 300 Panel 1 604 Excellent house 2 reception room 4 bedroom garage and garden Can be rented or purchased Premium 1½ year purchase —No 359

DURHAM —Near LARGE CITY —PARTNERSHIP in sound industrial and colliery PRACTICE Receipts £4 900 p a Panel 4 500 Suitable house for married man Premium 1/4 or 1/5 share—2 years purchase —No 357

LEEDS —MIXED PRACTICE in good district Cash receipts last year £700 Panel 512 Scope for increase —Semi detached house 3 bedroom garage Premium 1½ years purchase —No 358

MANCHESTER —MIXED PRACTICE Cash receipts about £1 600 Panel 1 500 Good house to rent (on lease) Garden and garage Urgent sale —Premium £1 500 —No 303

WELSH BORDER — UNOPPOSED COUNTRY PRACTICE in beautiful district Average cash receipts £1 100 p a including transferable appointments £300 p a Panel 706 Cottage Hospital Excellent house 4 reception 4 bedroom Garage and large garden Rent £70 p a or would sell for £1 200 Premium 1½ year purchase Welsh not essential —No 337

MANCHESTER — Old established PRACTICE Cash receipts last year £1 515 Panel Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1½ year purchase —No 325

EAST YORKS —Country Town near Coast —Unopposed mixed PRACTICE Cash receipts last year £860 Panel 650 Excellent detached house 3 reception 4 bedrooms garage and large garden Premium 1½ years purchase —No 346

LANCS —PLEASANT COUNTRY TOWN —Sound Mixed PRACTICE Average cash receipt £1 374 p a Appointments (transferable) £65 p a Panel 1 037 Excellent house 3 reception 6 bedrooms garage and large garden Premium—Practice—1½ years purchase —No 326

EAST COAST —SEASIDE TOWN —Old established mixed PRACTICE Average cash receipt £1 701 p a Panel 686 Excellent living and professional accommodation 2 reception 6 bedroom Garage and small garden Rent £100 p a on long lease Premium 1 year purchase —No 332

DEATH VACANCY —LANCS TOWN — Mixed-class PRACTICE Average cash receipt £1 634 p a Panel 829 Scope for Surgery If desired Good accommodation to rent Premium 1 year purchase —No 335

SOUTH WALES COAST —Mixed PRACTICE in beautiful district Average gross cash receipts £1 200 p a Panel 750 Excellent house 2 reception 3 bedroom electric light and modern conveniences low rental *Premium for quick sale* £1 500 (to include drug and Surgery fittings) —No 348

MANCHESTER —Middle-class PRACTICE in pleasant suburb Cash receipts 1931 £1 327 Panel 459 Charming house 3 reception 6 bedroom billiard room Large garden and garage *Premium* —Practice—1½ years purchase —No 322

CHESHIRE BORDER —LARGE TOWN —PARTNERSHIP in very old-established MIDDLE CLASS PRACTICE Average cash receipts £2 000 p a Panel 900 Premium—half share—1½ years purchase —No 356

NORTH OF ENGLAND —OPHTHALMIC PRACTICE in an important City Cash receipts last year £1 255 Fees £1 1/ to £2 2 Must be well qualified Reason for disposal—ill health —No 353

NORTH WEST COAST — — SEASIDE RESORT — Old established PRACTICE Cash receipt £874 Panel 250 Excellent freehold house 2 reception 5 bedrooms Garage and garden —No 266

NORTHUMBERLAND —PLEASANT COUNTRY TOWN —Mixed General PRACTICE Cash receipts last year £1 988 Panel 1 040 *Appointment* £100 p a *Excellent house 2 reception 5 bedrooms* Garage and garden Premium 1 years purchase —No 351

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MANCHESTER —*Residential Suburb* —Middle class PRACTICE Suitable for two in partnership Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses to rent with ample accommodation Premium 1½ years purchase part by arrangement —No 277

VENEREAL DISEASES PRACTICE —Northern city —Cash receipts last year £1 625 Convenient house to rent at £65 p a Premium—any reasonable offer—No 340

NEAR LIVERPOOL —COAST TOWN —Mixed PRACTICE Cash receipts last year £700 Panel 1 400 Good house (*built 1927*) 3 *reception* 4 bedroom Garage and garden Premium 1 years purchase —No 344

LARGE LANCS TOWN — MIXED PRACTICE Average cash receipts £1 288 p a Panel 1 089 Scope for increase Good house 3 reception 4 bedroom garage and garden Premium 1½ years purchase —No 347

MEDICAL WOMAN'S PRACTICE —MANCHESTER —Old-established Cash receipts 1931 £645 Panel 450 Good scope Excellent house 3 reception 6 bedroom Garage Rent £80 p a on lease Premium 1½ year purchase —No 330

CHESHIRE COAST TOWN near LIVERPOOL — Middle-class PRACTICE Average cash receipts £1 184 p a Appointment £80 p a Small select panel Excellent corner house 3 reception 5 bedrooms *Premium—Practice—1½ years purchase* —No 317

CHIPSHIFF TOWN near MANCHESTER —PARTNERSHIP in old-established *Practice* Average cash receipts £5 151 p a *Panel* 3 600 Excellent house 2 reception 3 bedroom garage and garden —Premium—one fifth share—£1 700 —No 333

LIVERPOOL —Small PRACTICE in growing suburb Cash receipts approx £300 p a Panel 309 Tremendous scope Good house with Garden and Garage to rent —No 354

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(FOUNDED 1880)

12, Stratford Place,

Oxford Street, W.1

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business, and the BRITISH MEDICAL ASSOCIATION have every confidence in recommending its members to consult Mr. A. V. STOREY, the General Manager, in all transactions requiring the services of a Medical Agent.

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1. LONDON, S.W. — PRACTICE £580 P.A. IN SUBURBAN district. Small panel. Considerable scope. House (3 bedrooms) on main road, rent £70 p.a. Premium £750.

2. HOME COUNTIES.—PARTNERSHIP IN PRACTICE AVERAGING over £8,200 p.a. in country town under 30 miles from London. Panel about 1,400. Partner required to assist in the Surgical work, must hold the F.F.C.S. and have held H.S. appointment and preferably experienced in Ear, Nose and Throat work. One-eighth share for disposal at 2 years' purchase with further share later. Cottage Hospital.

3. [illegible] IN UNOPPOSED COUNTRY [illegible] Good house (7 bedrooms) Electric light. Main drain. Premium—one-half share—[illegible] £2,800.

[illegible] PRACTICE AVERAGING £620 P.A. [illegible] town. Panel 500. Corner house. Premium £775.

[illegible] CORNWALL — PRACTICE IN EXCEPTIONALLY coast. Income about £600 p.a. Pleasant house (5 bed and [illegible] rter of an acre of ground to [illegible]

[illegible] London [illegible] ANTIES — PARTNERSHIP IN PRACTICE OVER [illegible] Manchester growing and prosperous town, about 10 miles [illegible] Panel 850. Suitable house obtainable. Scope for [illegible] two-fifths share 2 years' purchase.

[illegible] CK & H.— GOOD CLASS PRACTICE OVER £1,900 [illegible] No panel. Well situated house (7 bed [illegible] class Hospital with good chance for well [illegible] staff. Premium 1½ years' purchase.

[illegible] TRANSFER [illegible] Street [illegible] Herbaria [illegible] Whitcha[illegible]ACTICE ABOUT £800 P.A. IN RESIDENTIAL [illegible] established Agency [illegible] 700. Good class self-contained Flat [illegible] FILES and [illegible]s) with good garden for sale or rent [illegible] which can [illegible] hem £1,300.

[illegible] Panel nea[illegible]S and [illegible] TAN[illegible] dressing roo[illegible] charge [illegible] sale [illegible] rea[illegible] to princip[illegible]

9. BIRMINGHAM.—PARTNERSHIP IN STEADILY INCREASING Practice over £1,800 p.a. Panel 1,000. Excellent house (6 bedrooms) garage and good garden for sale. Scope for increase, especially in Eye work. Premium one-third or two-fifths share, 2 years' purchase.

10. MIDLANDS — PARTNERSHIP IN PRACTICE OVER £2,700 p.a. in clean manufacturing town. Panel between 1,700—1,800. House with 4 bedrooms, garage and small garden to rent. Good well-equipped Hospital. Share of one-third to one-half at 1½ years' purchase.

11. HOME COUNTIES — PARTNERSHIP IN EXCEPTIONALLY good and rapidly increasing Practice about £6,000 p.a. in delightfully situated country town, easy distance of coast. Attractive house (4 bedrooms) to rent. Partner must hold the F.R.C.S. and be aged about 30. Appointment on Hospital Staff. Premium for one-sixth to one-fourth share, 2 years' purchase. Preliminary Assistantship.

12. EAST ANGLIA — PARTNERSHIP IN COUNTRY PRACTICE nearly £4,700 p.a. in beautiful agricultural district. Panel 3,000. Country house (7 bedrooms) in own grounds with picturesque garden, tennis and croquet lawns, orchards and meadow for sale. Considerable scope for increase. Premium two-thirds or four-ninths share, 2 years' purchase.

13. WORCESTERSHIRE — PARTNERSHIP IN PRACTICE nearly £1,900 p.a. in beautifully situated Market Town. Moderate panel. Suitable house with garden to rent. Premium one-half share, 1½ years' purchase.

14. LONDON, S.W.—PARTNERSHIP IN PRACTICE OVER £2,800 p.a. in pleasant residential suburb. Panel 1,750. Suitable Flat available. After Preliminary Assistantship a share which later would be increased to seven-fifteenths would be sold to suitable man at 2 years' purchase.

15. E. COAST — PARTNERSHIP IN LUCRATIVE PRACTICE over £5,200 p.a. in large Seaport Town. Panel 11,000. Cost [illegible] —3,900. Partner must be young and energetic. Good opening. Premium one-fourth share £2,500. Preliminary Assistantship.

British Medical Bureau

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Practices and Partnerships for Disposal (continued)

16 N. OF ENGLAND—SEASON PRACTICE ABOUT £150 P.A. in small Inland Spa. No panel or midwifery. Good house (6 bedrooms etc.) with nice garden to rent on lease. Good scope for increase. Premium £100.

17 S. COAST — NUCLEUS OF PRACTICE IN DEVELOPING Seaside Place close to Popular Resort. Semi-detached house (3 bedrooms) facing sea, with garage and garden for sale. Opening would suit semi-retired Practitioner.

18 EASTERN COUNTIES — THIRD PARTNER REQUIRED for sound old-established Practice of £4,500 p.a. in particularly pleasant Market Town within easy reach of sea. Panel 1,600. Suitable house. Premium 2 years purchase for share of about £1,000 p.a. Option much increased share within 3 years.

19 LONDON W.C. — PARTNERSHIP IN PRACTICE ABOUT £1,000 p.a. Small panel. Small flat to rent if desired. One half share with succession in five years. Premium 2 years purchase.

20 S. AFRICA—PRACTICE OF £2,000 P.A. IN A TOWNSHIP *in one of the richest districts in the Union. Charming Bungalow* to rent. Premium to include Book Debts, Dressings, Surgery and Household furniture. £1,500.

21 N. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first class condition for sale. Purchaser should be well qualified. Premium £2,500.

22 N.E. ENGLAND — RAPIDLY INCREASING PRACTICE IN large town. Receipts past year £1,700, including select panel of under 550. Well situated house (6 bedrooms) in good residential part for sale. Ample scope for increase. Premium £2,750.

23 NORTHUMBERLAND — PRACTICE OF £2,000 P.A. IN small industrial town. Panel 1,040. House for sale. Premium —Practice—1½ years purchase.

24 S. AFRICA—PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms) garage and small garden for sale. Good hospital (with *private wards). Premium £1,100.*

25 N. WALES COAST — PRACTICE ABOUT £1,200 P.A. IN a most beautiful district. Panel 760. Excellent house (3 bedrooms) with modern conveniences. Sport of all kinds. Premium £1,500 to include drugs, fittings, etc.

26 S. COAST — PRACTICE AVERAGING £1,160 P.A. IN *residential town and health resort.* Panel 1,056. Practically no dispensing and not much midwifery. Scope for considerable increase. Premium £1,750.

27 KENT—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice nearly £4,450 p.a. in an industrial town. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. One-fifth share 2 years purchase.

28 LONDON WEST END — X-RAY AND ELECTRO-THERAPEUTIC Practice. Receipts 1931 nearly £620. Large house (8 bedrooms) to rent on lease. Premium £925.

29 S. COAST — FASHIONABLE HEALTH RESORT — PARTNERSHIP in steadily increasing non-dispensing Practice about £3,400 p.a. Small select panel. One-fourth share at 2 years purchase. Incoming Partner should be Oxford, Cambridge or London man.

30 N. OF ENGLAND — INLAND HEALTH RESORT—NON-dispensing PRACTICE averaging £1,130 p.a. Small select panel. House (7 bedrooms) with large garden for sale or rent. Premium for Practice 1½ years purchase.

31 S. OF ENGLAND—PRACTICE £1,035 P.A. IN FLOURISHing and attractive town within 90 miles of London. Panel over 800. House (6 bed and dressing rooms) with half an acre of garden for sale. Scope. Premium 1½ years purchase.

32 LONDON W. — PRACTICE £550 P.A. IN SUBURBAN district. Detached double-fronted house (6 bed and dressing rooms) with small garden for sale. Premium 1½ years purchase.

33 W. OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of £1,165 p.a. in first-rate City. Panel 1,350. House (4 bed and dressing rooms) to rent. Share worth £550 p.a. at 2 years purchase.

34 MIDLANDS — STEADILY INCREASING PRACTICE OF BEtween £1,100—£1,200 p.a. in thriving town one and a half hours by rail from London. Panel over 1,000. Excellent house (6 bedrooms) garage and garden to rent. Cottage Hospital. Premium 1½ years purchase.

35 LONDON S.W. — CASH PRACTICE ABOUT £1,100 P.A. near Victoria. Panel about 1,250 which could be considerably increased. Valuable corner residence for sale. Premium for Practice £1,000.

36 LONDON E.—CASH AND PANEL PRACTICE OF £840 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years purchase.

37 ESSEX—PARTNERSHIP IN PRACTICE OF £5,400 P.A. IN developing country district, easy distance of coast. Panel 3,600. Detached house (6 bedrooms) garage and good garden for sale. Scope for increase. One-fourth share 2 years purchase.

38 S. COAST — PRACTICE AVERAGING £480 P.A. IN RURAL district on outskirts of popular holiday resort. Panel 400. Rent of surgery premises 10/- weekly. Premium £600.

39 W. OF ENGLAND — PARTNERSHIP IN PRACTICE NEARLY £2,600 p.a. in country town. Panel almost 1,000. Good house (5 bedrooms) garage and garden of about half acre to rent. *Good educational facilities. Cottage Hospital.* Premium one-third share £1,500.

40 MIDLANDS — PRACTICE AVERAGING £1,710 P.A. IN growing town with nice surrounding. Panel 1,100. House available later. Good hospital and scope for surgery. Premium 1½ years purchase.

41 HOME COUNTIES — NON-DISPENSING PRACTICE AVERaging £1,150 p.a. in growing residential watering-place. No panel. Detached house (4 bedroom) with every modern convenience and attractive garden to rent. Premium 1½ years purchase.

42 MIDLANDS — PRACTICE £750 P.A. IN CLEAN FLOURishing manufacturing town. Panel 570. House (3 bedroom) garage to rent. Premium 1½ years purchase.

43 SHROPSHIRE. — PRACTICE £800 P.A. IN MARKET Town. Panel 1,170. Suitable house to purchase. Premium 1½ years purchase.

44 S. WALES — MIXED PRACTICE IN GROWING DISTRICT of a sport town. Receipts last year over £800. Panel 760. House (3 bedrooms) garage and garden to rent. Good prospects for coming. Premium £1,200.

45 LONDON N.W. — NON-DISPENSING PRACTICE IN GOOD residential district. Receipts last year nearly £900. No panel. Ten-roomed house with garage and large garden to rent. Premium £800.

46 N. MIDLANDS — PARTNERSHIP IN PRACTICE ABOUT £3,000 p.a. in country district near two important towns. Panel over 1,600. Small house (5 bedrooms etc.) available to rent. Great scope as district is growing rapidly. Premium one-third share 2 years purchase.

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2 PARTNERSHIP —SOUTHERN COUNTY —Within 35 miles of London A HALF SHARE is offered in an increasing country practice situated in delightful residential district Gro s cash receipts average over £3 000 p a Panel of 1 500 and appts worth about £200 p a Commodious house in good position with large hall 2 reception 9 bedrooms Garden and garage for two cars Freehold for sale Premium 2 years purchase

3 YORKS —LARGE TOWN —Steadily increasing middle and working class PRACTICE producing nearly £700 p a including panel of over 500 Fees 2/6 to 7/6 Suitable house with surgery and waiting room dining room three bedrooms and boxroom Garden Garage Price for freehold £850 Premium 1½ years purchase

4 PARTNERSHIP —YORKS —(Within easy reach of coast) —A ONE THIRD SHARE is offered in a very old established good mixed cla s practice situated in an attractive town having an up to date Hospital Gro s cash receipts for the last three years average over £6 000 Panel of about 2 400 Fees 3/6 to 2 gns Midwifery 2 to 15 gns House in pleasant residential part of town contains 3 reception 5 bedrooms etc Good garden Garage Price £2 000 or might be rented Premium for share £3 250 In oing partner should be married and accustomed to good cla s work

5 HOME COUNTIES —(Within 15 miles of London) —PARTNERSHIP —In a very pleasant residential district the two fifths share of a very old established mixed class Practice is for disposal Cash receipts last financial year amounted to £1 900 including appts and panel of 845 Remaining partner has been in the Practice 13 years Nice house (surgery accommodation 2 reception 4 bedrooms etc) with good garden and garage Price for freehold £1 325 Premium for share £1 520

6 EASTERN COUNTIES —PARTNERSHIP —Half share of very old established Practice situated in pleasant rich agricultural district within ten miles of county town Cash receipts average £2 880 p a including appts worth £100 and panel of 1 100 (good mileage) Nearest opposition 7 miles Very good house newly decorated with tennis lawn paddock etc Garage Main water supply Electric light Price for freehold £2 000 Premium £2 800

7 PARTNERSHIP —DESIRABLE OUTLYING RESIDENTIAL SUBURB —A suitable Partner (experienced preferably married 30 to 35 years of age and having the necessary capital) can acquire a share producing over £1 250 p a in an old established good mixed-cla s Practice worth nearly £8 500 last year Option of further additional shares at stated intervals up to one third Good house with ample accommodation to rent or purchase Premium two years purchase

8 WEST MIDLANDS —Very old established mixed class PRACTICE in small town (largely residential) amidst agricultural district of exceptional beauty Cash receipts average £2 278 p a with panel of 1 100 Opposition not strong Very fine house (3 reception rooms 6 bedrooms bathroom etc) in nearly three acres of ground Beautiful garden tennis lawn and productive orchard Price for freehold £2 000 Premium 1½ years purchase

9 MIDLANDS —CATHEDRAL CITY —Old established better class non panel PRACTICE producing for last twelve months £3 300 No appointments Fees from 5/ to 21/ Not much midwifery Commodious house with 2 reception 6 bedrooms etc Price for freehold £2 000 part on mortgage Good Surgical scope if required Premium £5 000

10 LONDON SOUTH EAST —DEATH VACANCY —Old established middle and working class PRACTICE producing nearly £600 p a of which £275 is from panel Very nice house can be purchased or rooms rented

11 BELGRAVIA DISTRICT —Good class non panel non dispensing PRACTICE worth over £1 400 p a Fees 1 to 2 guineas Very little midwifery Attractive house in excellent position (2 reception 4 bed rooms 3 bathrooms etc) on lease rent £250 p a Premium £2 600 to include lease carpets curtains fittings and fixtures Good introduction given

12 ESSEX —COAST TOWN —Very old established non panel (but good scope for this if worked) middle class PRACTICE averaging £1 156 p a Visits 5/ to 10 6 medicine extra Very little midwifery Expenses light Detached house with 2 reception 3 bed rooms bathroom etc Garden Rent £100 p a on lease Premium 1½ years purchase

13 EASTERN COUNTIES —(Within one mile of the sea) —Very old established and increasing country PRACTICE situated in pleasant open district Cash receipts for the three years ending March 31st last average £1 820 last year £1 940 including appts (transferable) and panel producing about £750 Visits 5/ upwards Midwifery 2 to 7 gns Nearest opposition 5½ miles Very good house (6 bedrooms bathroom with h and c etc) built by Vendor and standing in 1½ acres of ground tennis court orchard garage Price for freehold £2 700 part on mortgage Premium £2 750

14 YORKS —EAST RIDING —Well established unopposed PRACTICE within reach of the coast and near large town Cash receipts for last 12 months £950 including panel of 630 Fees 3/6 to 10/6 House contains 3 reception 3 bedrooms etc and professional accommodation Garage One acre of garden Price for freehold £900 part on mortgage Hunting shooting golf etc Premium £1 175

15 SOUTH COAST TOWN —Chiefly middle class non panel PRACTICE averaging over £500 p a but offering scope for increase Fees 7/6 to 10/ Eight roomed house with kitchen etc and professional rooms Can be rented or purchased Premium £600 Vendor retiring

16 LONDON SOUTH EAST —Old established middle and working class PRACTICE averaging approximately £2 000 p a Panel of about 1 300 Visits from 2/6 Accommodation suitable for bachelor or married man without family Premium £3 500

17 PARTNERSHIP —EASTERN COUNTIES —A third Partner is required in a good mixed class Practice situated in very pleasant market town within reach of the sea The share offered at first will produce about £1 000 p a with increase eventually up to one half Practice is old established and producing about £4 500 p a Panel of 1 600 Choice of houses or ingoing Partner could reside in rooms Premium 2 years purchase

18 SOUTH WEST OF ENGLAND —PARTNERSHIP —A one third share is offered in a good middle and better class Practice situated in an attractive country town near coast There is a Hospital of 50 beds and good Surgical scope Average gross cash receipts over £5 000 p a Selected panel of 570 Fees 4/ to 21/ Choice of houses Premium 2 years purchase

19 YORKSHIRE —PROSPEROUS TOWN —PARTNERSHIP —A one third share (with increase later) is offered in a good middle class non panel Practice averaging £3 300 p a Fees 3/ to 2 gns Nice house with 2 reception 4 bedrooms etc Small garden Electric light Garage Price for leasehold £1 500 £800 on mortgage Good sport and excellent schools Very good Surgical prospects Premium for share £2 000

20 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA —PARTNERSHIP —A fourth share is offered owing to the retirement of one of four partners in an old established Practice in very pleasant country district Income £5 400 p a with good panel backing Detached house with ample accommodation garden etc for sale Premium 2 years purchase

21 WITHIN 70 MILES NORTH OF LONDON —COUNTY TOWN —PARTNERSHIP —A one third or two fifths share is offered in a well established middle and working class Practice having very good scope for increase Receipts average over £2 000 p a Panel of nearly 2 000 Fees 2/6 to 7/6 Choice of houses on rental or purchase Premium only 1½ years purchase

22 LONDON NORTH WEST — Old established mainly better-class non panel and non dispensing PRACTICE averaging about £1 100 p a Fees 7/6 to 21/ Only few cases of midwifery at present Charming house with 3 reception 6 bedrooms etc Electric light Garage Rent on lease £200 p a Premium for quick sale £8 0

23 [illegible] with further increase later panel and non dispensing Practice Fees from 3/6 to 21/ Mid ise can be rented at £90 p a Good Hospital with over 2 0 erienced and hold M D London

24 COAST TOWN —Old established cing about £1 800 p a Small Not much midwifery Good selected panel Fees 5/6 house with ample accommodation and garden Freehold for sale Premium £3 000

25 NORTH MIDLAND CITY — PARTNERSHIP —Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing Practice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained Premium 2 years purchase Excellent sport and schools

26 PARTNERSHIP — WEST OF ENGLAND — A share producing about £700 p a is offered in a well established Practice averaging over £1 500 p a Ultimate succession Panel of nearly 1 400 house of houses Premium £1 400

27 one third share is off red in a very Practic held by the vendor for the years sh receipts for the past three years for 50 [illegible] Fees 3/6 to 21/ Midwifery nearly £3 000 Panel of over 1 600 Fees 3/6 to 21/ Midwifery from 3 gns (about 60 cases) Suitable hou available e c ver al with 2 reception 3 bedrooms etc Small gard n Garage Sport of all kinds and very good schools within reach Prem 2 ears p r

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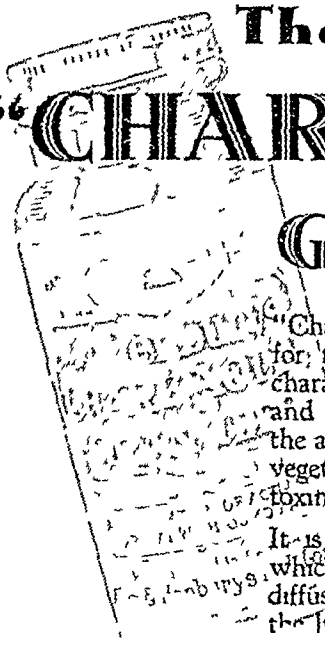
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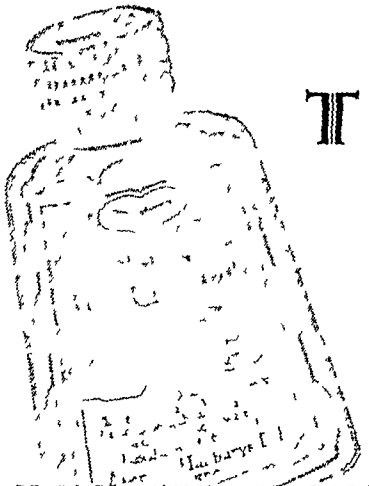


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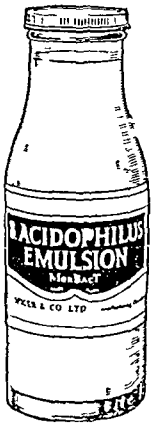
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CONTENTS

JUNE 18 1932

ORIGINAL ARTICLES

Liver and Spleen Their Clinical and Pathological Associations By J W McNEE MD FRCP 1111

Spinal Anaesthesia in Vasospastic Diseases of the Lower Limbs By F D TELFORD FRCS and J S B STOPFORD MD FRS 1116

Artificial Pneumothorax Adhesion Cutting and Oleothorax By F G CHANDLER MD FRCP (Illustrated) 1118

The Action of Ergot Preparations on the Puerperal Uterus By CHASSAR MOIR MD FRCS Ed with Note by Sir H H DALE MD FRS (With Charts) 1119

The Use of Avertin in the Presence of Damaged Liver Function By H K ASHWORTH MB MRCS 1123

Four Cases of Erysipelas Treated by Milk Injections By A C MCFACHERN FRCS Ed (With Charts) 1124

MEMORANDA

A Case of Perforated Diverticulitis By V J MORCOM TAYLOR FPCS Ed 1124

REPORTS OF SOCIETIES

ROYAL SOCIETY OF MEDICINE
Oto-rhino-laryngology 1125

MANCHESTER DIVISION OF THE BRITISH MEDICAL ASSOCIATION The Problem of Hearing Aids (With Charts) 1126

EDINBURGH OBSTETRICAL SOCIETY Treatment of Salpingitis 1129

REVIEWS

Practical Surgery 1130
Inheritance of Mental Qualities 1130
An Atlas of Electrocardiography 1131
Diseases of the Scalp 1131
Clinical Neurology 1132
Annals of Medical History 1132
Notes on Books 1132

OBITUARY

W W Keen MD LL D (With Portrait) 1150
Marcus Paterson MD 1151
Paul M Chapman MD FFCP 1151
Andrew Boutflower MI C S 1152

LEADING ARTICLES

COMBINED HEPATIC AND SPLENIC DISEASES 1134

INQUIRIES INTO MENTAL ABNORMALITY 1134

THE WEEK

Persistent Offenders 1135
Insulin Hypoglycaemia 1136
Leprosy in the British Empire 1136
Regurgitation Penal Colic 1137
Family Dietaries 1137
The Nutritive Value of Margarine 1137
Testimonial to Dr Cox 1137

GENERAL ARTICLES AND NEWS

Parasitology in the Medical Curriculum By D B BLACKLOCK MD 1138

Correction of Hearing Defects A Survey of Two Years Research 1139

The King's Fund. Redistribution of Radium 1140

The Hospital and the Paying Patient Provident Association Meeting 1142

PREPARATIONS AND APPLIANCES (Illustrated) 1133

MEDICAL NOTES IN PARLIAMENT
National Health Insurance 1153

MEDICAL NEWS 1155

LOCAL NEWS

SCOTLAND—
Department of Health 1143
Voluntary Hospitals and the State 1144
Charges in Edinburgh Municipal Hospitals 1144

ENGLAND AND WALES—
Harveian Society 1145
Royal Sanitary Institute Congress 1145
Central Midwives Board 1145
Post Graduate Teaching at L C C Hospitals 1145

MEDICO LEGAL

Charge of Negligence Surgeon Vindicated .. 1152

UNIVERSITIES AND COLLEGES

University of Oxford 1153
University of Cambridge 1153
Royal College of Surgeons of England 1153

THE SERVICES

Army Medical Service 1154

(For Naval Military and Air Force Appointments see SUPPLEMENT)

CORRESPONDENCE

Dr Alfred Cox Testimonial Fund By Sir Humphry Rolleston M D and Sir Ewen Maclean M D 1145

Undulant Fever in England By Sir Weldon Dalrymple Champney M D 1146

The Normal Temperature By Andrew Morland M D 1146

Preparation for Marriage By F G Crookshank M D 1146

Training in Massage and Medical Gymnastics By R C Elmslie F F P C S 1147

Alumminum and Health By F E Lowy M D 1147

Local Anaesthesia for Tonsillectomy By V M Zanoni F F P C S 1147

Tuberculous Pneumatism By W Carnac Wilkinson M D 1147

Shock Following Blood Extravasation By O Donel Browne M B 1148

Fertility after Prostatectomy By Kenneth Walker F F P C S and Terence Millin F R C S 1148

The Use of the Self By Peter Macdonald M D F M Alexander and W W Shrubsall D I H 1150

LETTERS AND ANSWERS

Sunburn 1156
Income Tax 1156
Ether Convulsions 1156
Medical Golf 1156
Disclaimer 1156

VACANCIES 1156

(See also page 311 of SUPPLEMENT)

The SUPPLEMENT contains

BRITISH MEDICAL ASSOCIATION
Proceedings of Council
Centenary Meeting London July 1932
Provisional Programme.
GENERAL MEDICAL COUNCIL
Executive Committee
LONDON PUBLIC MEDICAL SERVICE
The Out Patient Problem
NATIONAL HEALTH INSURANCE
Divisions of Regional Medical Staff
CORRESPONDENCE
Medical Research and the Patent Law
Future of Public Medical Service
BOOKS ADDED TO THE LIBRARY
Association Notices Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the follo classes will for the most part be found on the pages indicated

PUBLISHERS

Baillière Tindall & Cox
Bl ers Bacteriology 3
Bi ions H —The Localization of Di e e in the Body 3
3
3
of the Lung 3
Cruturie A C —Pneumococci 3
Irwin W I —Urinary Surgery 4
Matthews A P —
Phy iological Chemistry 3
Strumpell Practice of Medicine 3

Bell G & Son
Batty R T —Hearing in Man and Animals 4

Churchill J & A
Recent Advances Series 4

Mailinson Publishing Co Ltd
Cole K A —Income Tax etc 4

Wright & Sons Ltd
Hutchison R —Treatment 4
Short A R —Prognosis 4

ASSURANCE COMPANIES—
London Medical Protection Society 1
Medical Insurance Agency 57

BRASS NAME PLATES &c —
Lord s Name Plate 57
Herd & Co A —Name Plates 7
Lewis & Co Ltd —Name Plate 57
Osborne P & Co —Name Plates 57

DEBT COLLECTION—
British Medical Protection Society 6

DISPENSING BOTTLES &c —
United Glass Bottle Manufrs Ltd —
Dispensing Bottle 21

FOOD PREPARATIONS—
Benax Laboratories—Benax 33
Benger s Food 11
Cow & Gate Ltd —Milk Food Cover iii
Harlen Bros & Lindsay Ltd —
Doctor s China Tea 38
Horlick s Malted Milk 17
Keen Robinson & Co Ltd —
Almata 12
Nestlé & Anglo Swiss Con Milk Co
Lactogen 28
Valentine s Meat Juice 8

SURGICAL APPLIANCES—
Cellular Clothing Co Ltd —

HOUSE AGENTS—
Bedford & Co 5
Elliott Son & Boyton 55

MOTOR CARS TYRES &c —
Second Hand Motor for Sale 56

PRINTING & STATIONERY—
[illegible] 6
7
4
37
4

TOBACCO & CIGARETTES—
Player s Navy Cut 37

CHEMISTS &c —
Allen & Hanbury Ltd —
Bynogen Haemoglobin 12
Clarksolin Granules 7
Insulin A B 27
Armour & Co Ltd —Liver Extract 24
Bayer Products Ltd —Luminal 23
Boots Products 10 15
British Drug Houses Ltd —
Bioxyl 13
Insulin A B 27
Radio Malt 17
Burroughs Wellcome & Co —
Diguanin 31
Clinton T & Co —Epsom Salt 15
Clayton Aniline Co Ltd —
Preparations Cover ii
Continental Lab Ltd —
Urmyol 10
Craigmax Ltd —Odol 33
30
22
8
23
15
Preparations 33
Hough Hopeson & Co Ltd —
Tablet Arthritone 9
Laylene Ltd —Laylene 20
Marshall Ltd 14
Martindale W —Sterule 19
Matthews Lab Ltd —Sterilla 37
May & Baker Ltd —
Planocaine 11
Neo Medica Co —
Panbasmellin Tablets 37
Newbold & Son Ltd —
Acarol 32
29
Novatox 14
Reed & Carnrick—Neo Britin 26
Saccharin Corporation Ltd —
Novocain 19
Santal Midy 38
Savory & Moore Ltd —
Preparation 15
Silcer & Co Ltd —
Preparation Cover ii
Wander A Ltd —Alkasal & Alocol 18
Wright Layman & Umney Ltd —
Coal Tar Preparation 9

HOSPITAL &c FURNITURE—
Carriages—Kitchen Equipment 7
Furniture, &c Depositories Ltd —
Second hand Furniture 36

TAILORING & UNDERCLOTHING—
[illegible] 55
6
6
37

VACCINES & CULTURE MEDIA—
Evans Sons Lescher & Webb Ltd —
Diphtheria Antitoxin 29
Laboratories of Pathology & Public Health 39

X RAY & ELECTRO MEDICAL APPARATUS—
Hamblin T Ltd —
Intra Nasal Ionizer 36
Portable X Rays Ltd —
X Ray Carts rvice 4

HOTELS & HEALTH RESORTS—
[illegible] 45
5
45
45
45
43
Margate
St Austell Bay Hotel 45

HYDROS & PRIVATE HOSPITALS—
[illegible] 33
45
45
45
39

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
THE APPOINTMENTS 53

HOSPITAL &c VACANCIES—
Aberdeen Royal Infirmary 47
[illegible] 53
[illegible]
[illegible]
[illegible]

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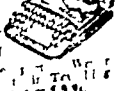
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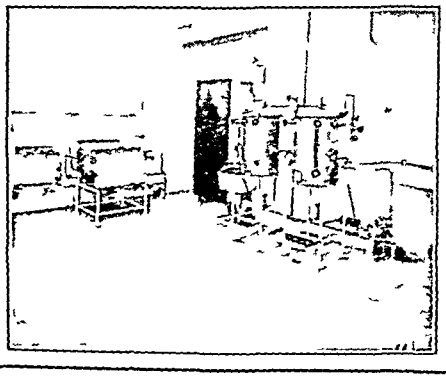
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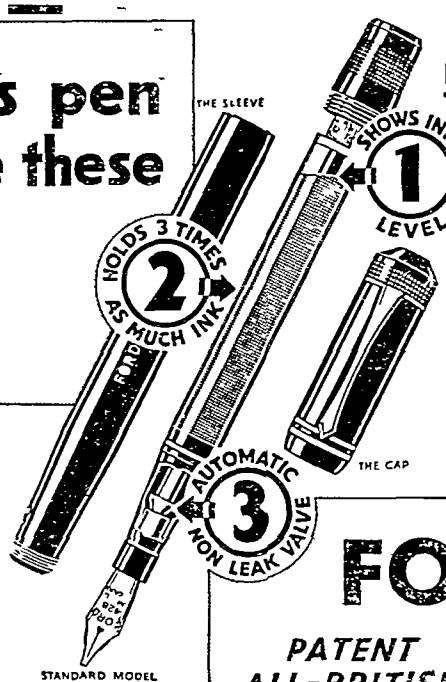
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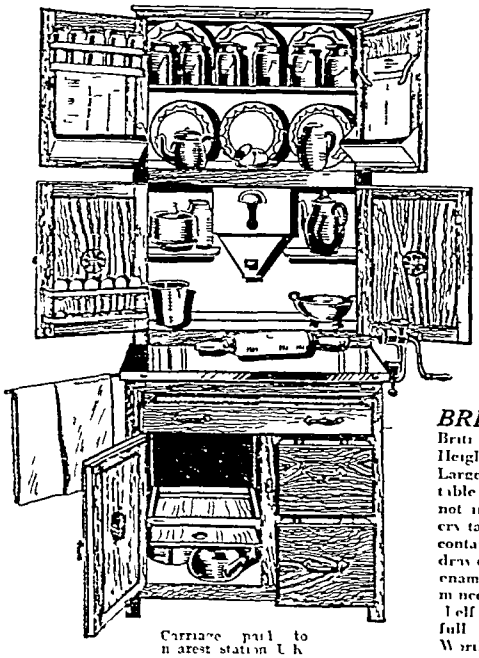
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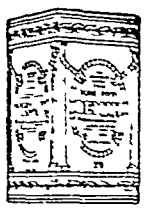
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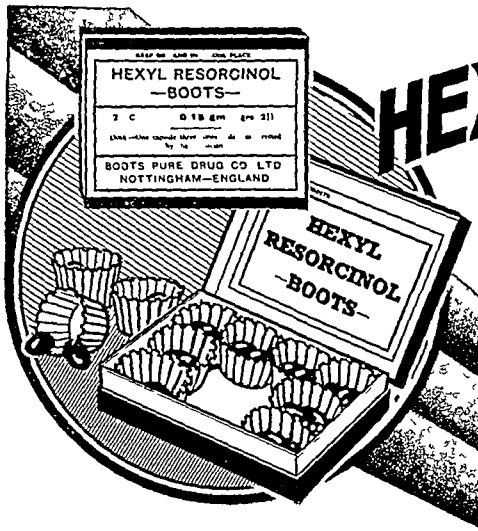
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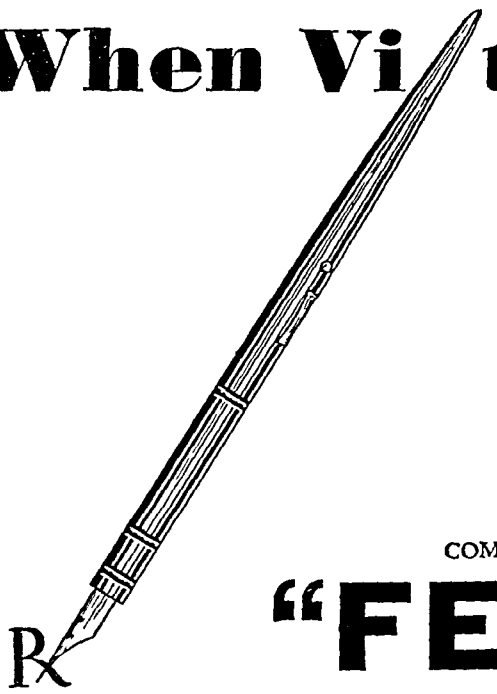
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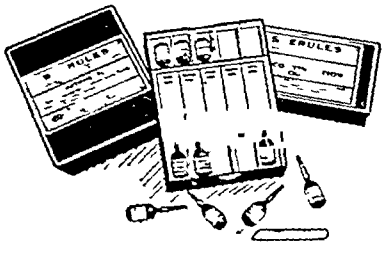
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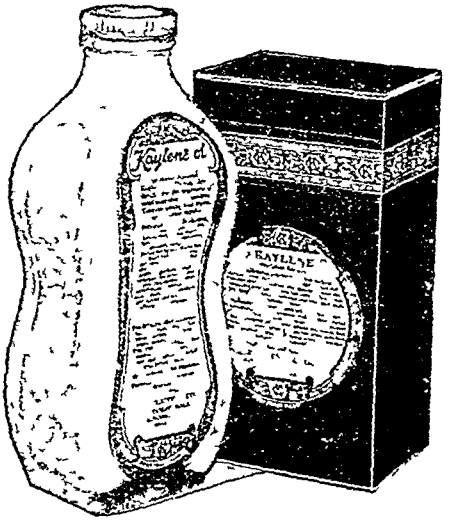
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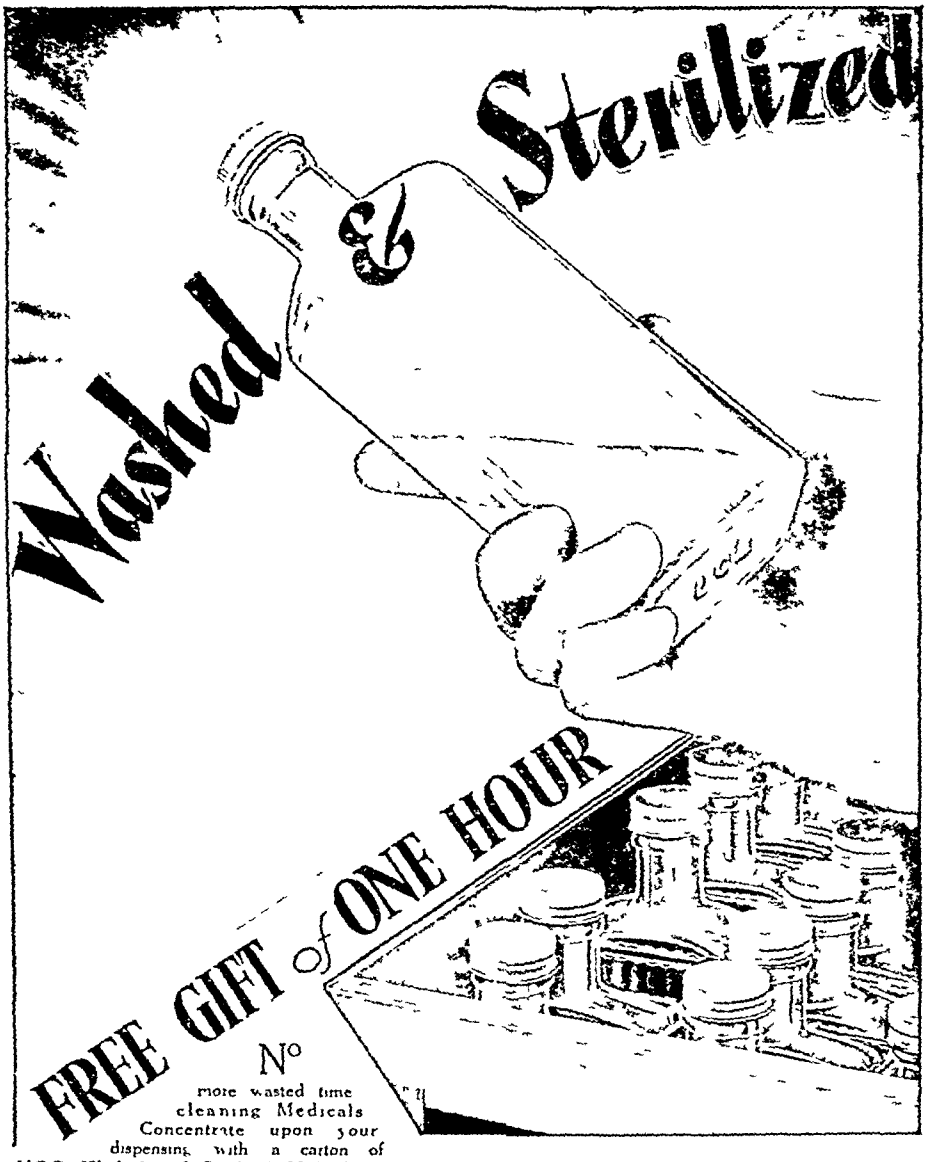
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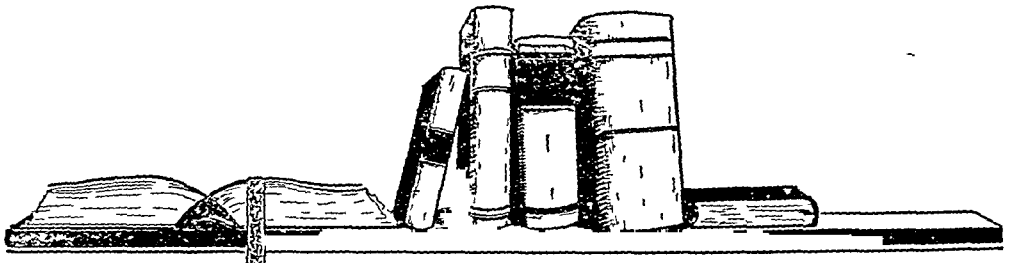
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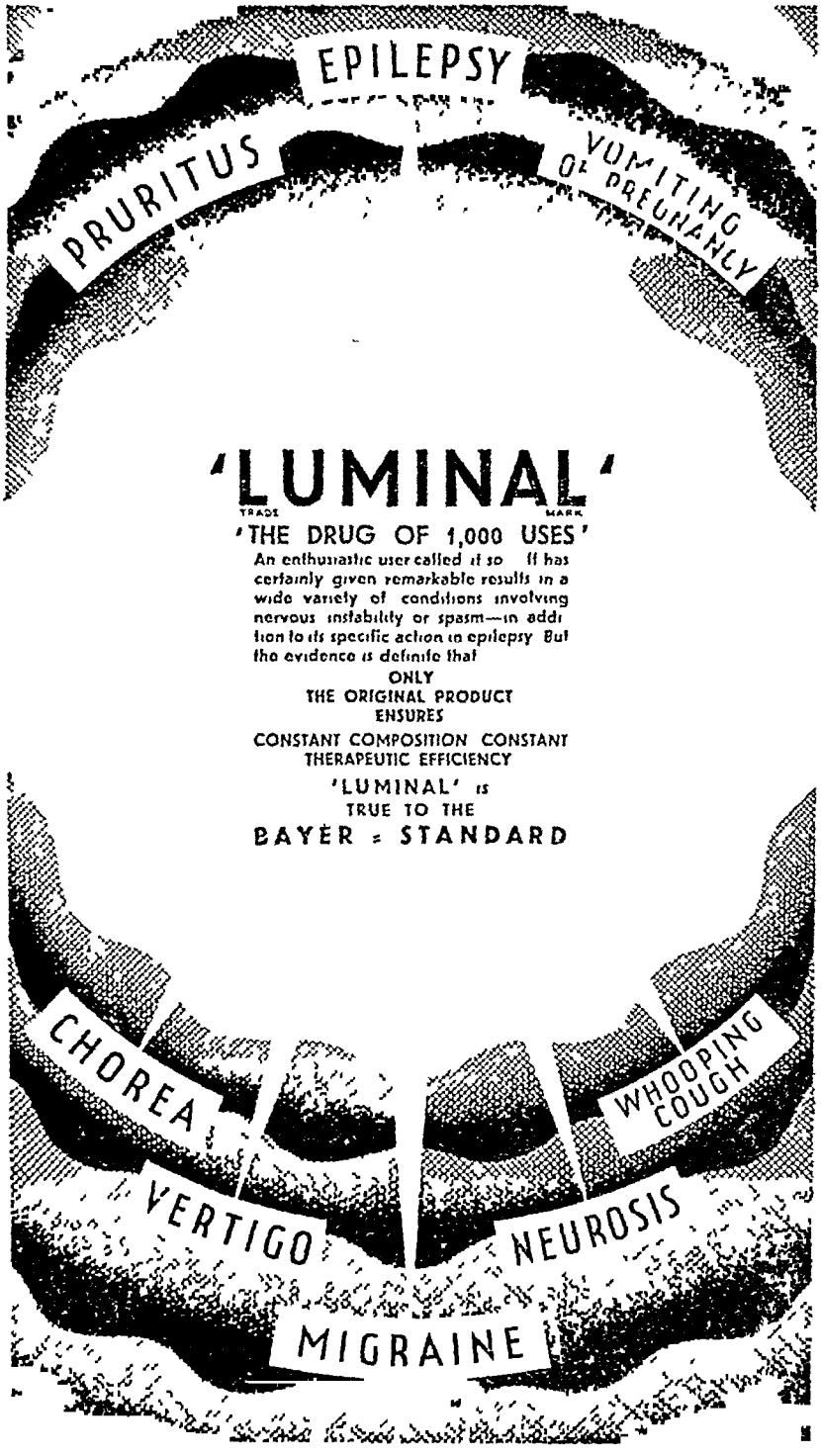
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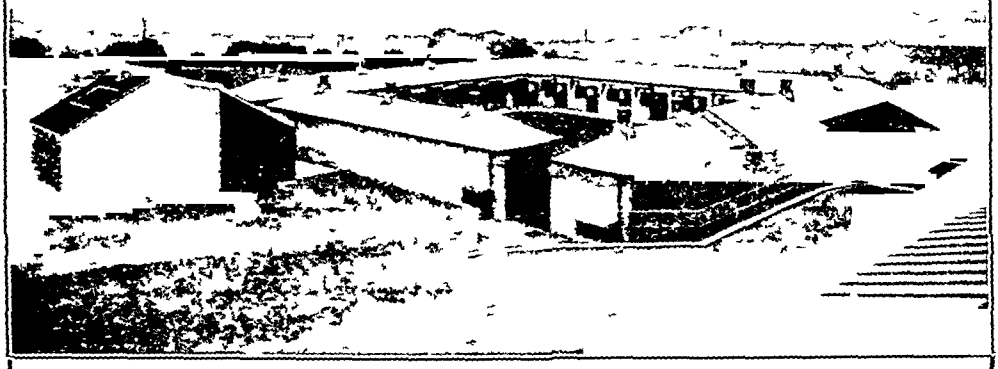
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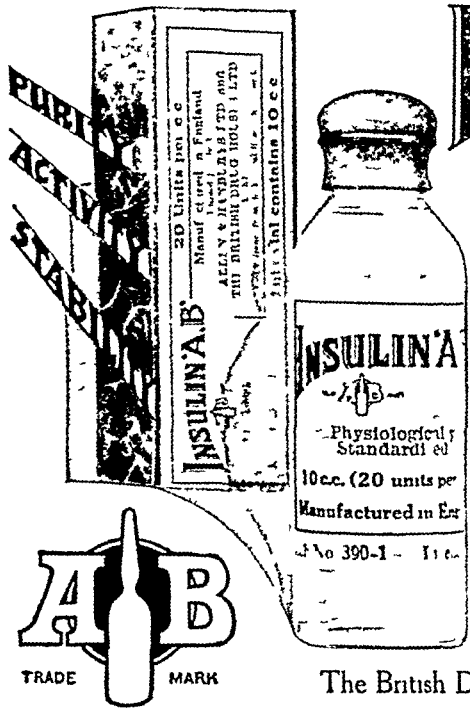
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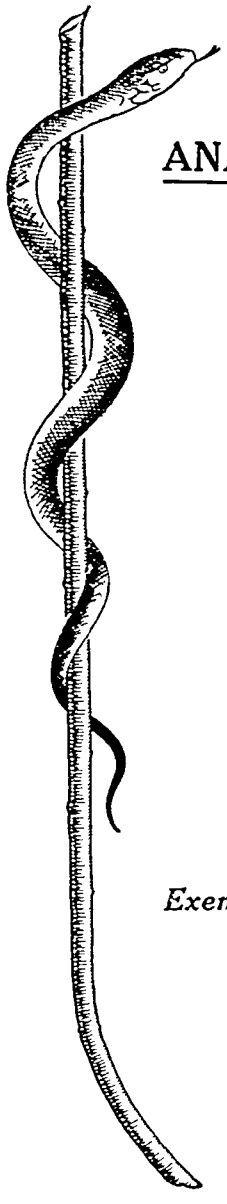
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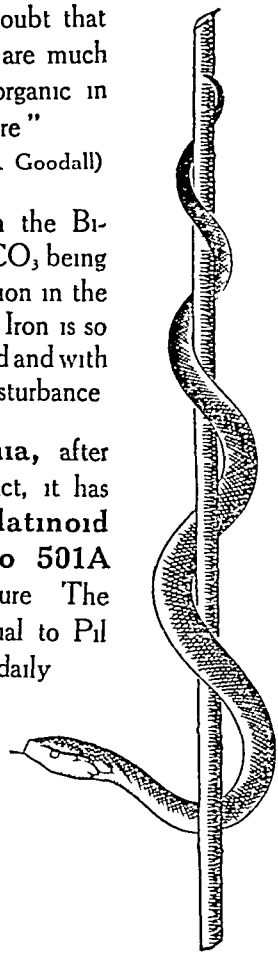
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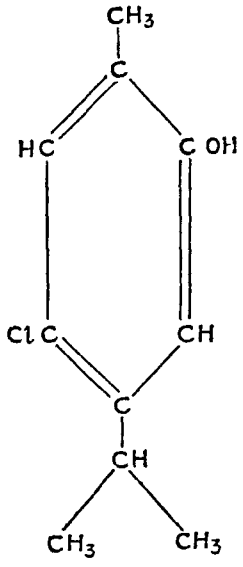
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Croonian Lectures

ON

LIVER AND SPLEEN THEIR CLINICAL AND PATHOLOGICAL ASSOCIATIONS

BY

J W McNEE M D D Sc F R C P

PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL LONDON

LECTURE III

I turn now to actual diseases affecting both liver and spleen It is manifestly impossible to deal with all of them here and I cite merely as examples such conditions as bacterial infections leukaemias Hodgkin s disease syphilis malaria kala azar and the portal back pressure of cardiac failure

There are three important conditions about which I especially wish to speak—namely hepatic cirrhosis Banti s disease (so called) and reticulo endothelial diseases of the liver and spleen

HEPATIC CIRRHOSIS AND SPLENOMEGALY

The relation of an enlarged spleen to the fibrotic liver in portal cirrhosis has raised endless discussion and has been the subject of many hypotheses In the book on *Diseases of the Liver* by Sir Humphry Rolleston and myself the views which have been most commonly accepted or discussed are set forth in detail as is necessary in a textbook In the present lectures however I wish to attempt something further and to put forward other suggestions which may or may not stand the test of time They are founded on a somewhat different outlook on the structure and functions of the two organs and their relations in disease It is naturally a study of the commencement and gradual evolution of the pathological changes in the two organs which alone can help us and not the end result as seen in the post mortem room Before I begin however to discuss my views on the development of the lesion I wish to make acknowledgement of a paper by Epplen published in 1922 but which until recently was unknown to me Epplen s views of ten years ago agree very closely with a number of those which I have arrived at independently and I shall quote from his work on a number of occasions

THE LIVER

If we consider first of all the gradual evolution or development of the hepatic lesion in portal cirrhosis leaving aside for the moment the whole question of aetiology the first point which requires discussion is the nature of the fibrosis Is the fibrosis as has been strongly held in the past a primary disease of the supporting connective tissue? In other words is the lesion a true chronic interstitial hepatitis with secondary changes in the glandular cells or is the lesion just the reverse -a primary atrophy or degeneration of the hepatic glandular cells followed by a replacement fibrosis? I would submit that neither of these two old views is adequate as it stands and I agree almost completely with Epplen that in cirrhosis hepatis the essential points in the evolution of the hepatic lesion are as follows

The Primary Lesion

I believe that the primary lesion in cirrhosis is one which depends on slow progression but frequent repetition It consists first in degeneration or destruction of liver cells followed by regeneration and replacement by new liver cells but with some overgrowth of fibrous tissue in the areas which are destroyed The essence of this view is the conception that the damage in the liver is one which is focal but frequently repeated Areas of liver cells die and are replaced by new areas built up from surviving cells these new areas are again destroyed and again rebuilt but increase of fibrous tissue gradually supervenes as the process of death and repair is repeatedly carried out Finally on this view an entirely new liver parenchyma containing perhaps not a trace of the old and original liver is built up on a plan which has the appearance we describe as cirrhosis Not only has the entire parenchyma been repeatedly destroyed and renewed but as is well known from the work of many pathologists (Milne Muir) new bile ducts are made and joined up in functional relation with the new glandular cells Even the blood vessels and their branches—both of the hepatic artery and of the portal vein—are involved and the whole circulatory plan in the liver is markedly altered

Alterations in Hepatic Circulation

The changes in the circulatory system of the cirrhosed liver deserve special attention particularly in relation to what has been said in the previous lectures regarding its special anatomical and physiological features Reference may be made first to Herrick (1907) who perfused with saline a small number of normal and cirrhotic livers obtained at necropsy He found on perfusing through the hepatic artery that a larger proportion of the fluid passed out by the portal vein in the cirrhotic than in the normal liver Guided by Gad s hypothesis he concluded that there is freer communication between the hepatic artery and the portal vein in the cirrhotic liver and that this must heighten the pressure in the portal vein but these findings are equally well explained by assuming that in the cirrhotic liver there is greater obstruction to the passage of fluid through the hepatic lobule to the hepatic vein This would be more in accord with the conclusions of subsequent workers

It was first insisted upon by Kretz (1905) that in portal cirrhosis the hepatic artery is enlarged and hypertrophied and there is now almost universal agreement on this fact The hepatic artery inflow of blood is consequently increased in this disease Some very important work on this subject has been done by McIndoe (1928) who injected the vascular system of cirrhotic livers by means of his well known celloidin method thereafter digesting away the tissues to leave the vascular skeleton only By this method he was able to prove that in advanced or atrophic hepatic cirrhosis the total vascularity of the interior of the liver is much diminished especially the portal venous tree Many of the portal trunks are attenuated and stenosed and the smallest portal vessels are distorted beyond belief McIndoe who is also a supporter of the view that in cirrhosis the essential lesion is repeated destruction of cells followed by regeneration states that the regenerated nodules of liver cells become almost side tracked from the portal blood and are finally left with a very poor portal venous supply

It is evident indeed that as cirrhosis advances the liver parenchyma becomes more and more dependent on the hypertrophied hepatic artery for its supply of blood The condition eventually but gradually produced is very similar to what is brought about suddenly by an experimental Eck fistula in which the portal blood is diverted into the inferior vena cava and avoids the liver altogether The work of Rous and Larimore (1920) referred to in Lecture II on the effects of occlusion of part of the blood supply to the liver is of interest here It was shown that rapid atrophy ensued in the portion of liver from which the portal blood supply had been cut off but that this atrophy was conditional to hypertrophic proliferation of

the portion of liver with an intact portal venous supply Rous and Larimore describe the final stages of the experimental atrophy and state

> As the parenchyma grows less so do its attendant capillaries disappear and they never survive when the liver cords [of glandular cells] are gone Soon there remain only scattered islands consisting of a few small but healthy looking liver cords with the characteristic capillaries set in a matrix of fibrous tissue

In the liver in portal cirrhosis atrophy and proliferation of liver cells are occurring again and again

It seems clear that the hypertrophy of the hepatic artery present in cirrhosis is a direct consequence of the defective portal circulation and through the artery is carried not only the oxygen but all the metabolic products essential for hepatic function which should normally arrive by the portal vein This seems a far more likely view than the older hypothesis that the artery was hypertrophied to bring an increased blood supply to the new fibrous tissue in the liver The interference with the portal inflow in cases of cirrhosis hepatis may be enormous and McIndoe states that in such livers perfused after death 86 up to nearly 100 per cent of the fluid perfused into the portal vein may be run off by collateral channels instead of escaping by the normal route of the hepatic veins

The conclusion is therefore that in portal cirrhosis there is such dissociation of hepatic structure in consequence of the repeated death and regeneration of islands of liver tissue that a corresponding dissociation of the portal and hepatic blood also ensues The portal blood supply is the one most severely obstructed and the blood being unable to flow through the liver must be diverted through collateral channels

THE SPLEEN

We may now turn to the splenic side of the problem There have been two main hypotheses advanced to account for splenic enlargement in portal cirrhosis

(*a*) *That the cause is passive congestion due to the increased portal blood pressure* That there is an increased portal blood pressure is certain and since there are no valves on the portal or splenic veins until the ellipsoids are reached the back pressure must quickly reach the spleen This hypothesis is however inadequate for a variety of reasons First there are cases in which the spleen is enlarged before cirrhosis in the liver is at all advanced—and certainly the spleen is usually enlarged before any ascites or other definite signs of portal back pressure supervene Secondly it is only in about 80 per cent of well marked cases of cirrhosis that the spleen is enlarged at all

(*b*) *That the spleen enlarges as a result of toxins circulating in the blood and reaching the spleen by its arterial supply* Hitherto no very adequate reasons have been offered in support of this view the chief suggestions in its favour being the claim that in so-called Banti's disease the splenic enlargement occurs before the hepatic cirrhosis I am of opinion that this second hypothesis of the cause of the splenic enlargement is the more important one but in a sense not previously considered

If the view just put forward of the evolution of portal cirrhosis with the accompanying distortion and obstruction of the portal venules is correct then two conditions must result which could affect the spleen First the increased portal pressure must be thrown back to the spleen and obstruct its venous outflow Secondly since the portal blood flow is obstructed and diminished the metabolic products coming from the intestine which should be arrested by the liver and detoxicated are instead carried past the liver into the general circulation and reach the liver and spleen simultaneously in the arterial blood

ANGIOSTOMIE

Are there any *metabolic products which normally go to* the liver but in which the spleen might be considered interested and might even hypertrophy to deal with them? We know little about this matter at present but we should certainly quickly aim at knowing far more It seems to me that the *so-called method of* angiostomie elaborated by E S London and his colleagues in Russia from 1919 onwards should give us one of the best possible opportunities of studying experimentally the metabolic substances which are normally carried from the intestine or from the spleen to the liver By his method London is able to bring up closer to the surface and to fix permanently in position deeply seated veins such as the portal hepatic and splenic Silver cannulæ of an ingenious type are placed in position with one end over the vein and the other at the surface of the body The animals survive in perfect health for many weeks or months and repeated samples of blood may be taken without trouble and without pain to the animals from any or all of these veins simultaneously A fair amount of metabolic research has already been carried out by London and his colleagues in Russia and by Haberland (1926) and Gyorgy and Kleinschmidt (1927) in Germany By this or other methods we may discover much that is unknown at present of the various metabolic substances carried to the liver many obviously necessary for the body but some almost certainly toxic

HÆMOCHROMATOSIS HEPATIC AND BILIARY CIRRHOSIS

One fact on which we have already a considerable amount of information is that both liver and spleen are certainly much interested in the metabolism of iron and of haemoglobin Here a number of important but in many ways as yet unconnected points arise some of which may suggest the clue to the problem we are attempting to solve I give them now in sequence in the hope that they may excite interest and encourage future work

1 The histological structure of the *enlarged spleen* in hepatic cirrhosis is interesting There are few actual degenerative changes and the cells of the reticulo-endothelial system are active Deposits of iron pigment or hæmosiderin are constantly found in both liver and spleen in hepatic cirrhosis Blood destruction is in excess in advanced cirrhosis and both anæmia and latent jaundice may be present

2 The extraordinary type of cirrhosis hepatis known as bronzed diabetes or haemochromatosis must be remembered In this disease there are enormous deposits of organic iron in the liver spleen and lymph glands and a cirrhosis of both liver and pancreas Mallory's suggestion that this disease is in some way related to copper poisoning comes to mind as does also the recently described close association of copper and iron in the treatment of anæmia

3 Certain points concerning biliary cirrhosis and the so-called hypertrophic biliary cirrhosis of Hanot are of much interest *There are grave and growing doubts* whether this condition ought to be described as a separate disease at all but this point need not detain us Here however we have at any rate a type of cirrhosis occurring in young people with great enlargement of liver and spleen little portal obstruction and early and persistent jaundice The resemblances to some forms of chronic hæmolytic or acholuric jaundice are striking and are also enhanced by the fact that both diseases have a pronounced familial incidence Finlayson (1899) has reported three cases of biliary cirrhosis in one family and Pons (1893) and Boinet (1898) have described splenic enlargement without symptoms in other members of a family in which a case of biliary cirrhosis occurred Moreover in biliary

cirrhosis crises occur (just as in acholuric jaundice and Addisonian anaemia) with increase of the hepatic and splenic enlargement and deepening of the jaundice Chronic pancreatitis is said to be a constant feature of biliary cirrhosis a point of resemblance to haemochromatosis

It is curious that manganese salts bring about biliary cirrhosis in animals (Findlay 1924 Hurst and Hurst 1928) Casamajor (1916) has also reported biliary cirrhosis in a fatal case of manganese poisoning It is still more curious (Rolleston and McNee 1931) that the symptoms of manganese poisoning are very similar to those of progressive lenticular degeneration a remarkable nervous disease associated with cirrhosis hepatis and which moreover is commonly familial but not hereditary All these facts are merely set down as parts of a jig saw puzzle still to be solved They all touch at various points and by future work we may find the key to fit them together

In concluding this section I feel I must do justice to Epplen s earlier work (1922) by a direct quotation from him

> In closing I cannot resist the temptation to give expression to a thought growing into a conviction that we must regard cirrho is of the liver as a disease closely allied to diseases of the blood

If this be true we can see how liver and spleen must be intimately associated in cirrhosis of the liver

BANTI S DISEASE

I have previously touched on this problem in papers dealing with diseases of the spleen in one of which (1929) I wrote

> The actual account of Banti s own cases is far from clear and various alterations in description were made by him in his subsequent papers It would require much space to give an adequate and comprehensive account of Banti s disease as he described it and to contrast it with other forms of splenomegaly It is hoped that this question may be dealt with in a later paper

The disease being one affecting both liver and spleen now seems a suitable occasion to deal with it in some detail Banti as must again be emphasized did not adhere rigidly to his opinions in all the papers written by him in several languages from 1894 onwards Two of his most important contributions were published in German in Ziegler s *Beitrage* (1898) and in *I olia Haematologica* (1910) The latter which is his final communication is the most detailed of all and at the end of it he attempts to answer the many criticisms which had been levelled at his preceding papers There is actually as I have gradually realized very great confusion and indefiniteness among British physicians as to what Banti himself claimed as the essential clinical and pathological features of this disease This is no doubt in part due to Banti s own variations in description and I feel that a short time spent here in describing his observations will not be out of place

Banti admits that the term primary or cryptogenic is a collective name for a genus of diseases including many species but he always holds strongly that the disease described by him has such definite clinical and histological characters as to separate itself clearly from the others His own observations began in 1882 but it was not until 1894 that he was able to pick out from the group of primary splenomegalies the type soon to be associated with his name In his final paper (1910) he summarizes the main characters of this affection basing his conclusions chiefly on fifty cases observed by himself

AETIOLOGICAL FACTORS

Sex Thirty two females eighteen males *Age* Two 10 to 15 years old seventeen 15 to 25 fifteen 25 to 35 eleven 35 to 45 and five 45 to 55 The youngest was 12 years and the oldest 55 years old *Previous diseases* Nothing characteristic Malaria syphilis hepatic and gastric disease alcohol dietary factors and locality—all could be excluded or were without influence *Heredity* No two cases occurred in one family *Locality* No difference between the mountains and the plains

SYMPTOMATOLOGY

The disease always follows a chronic course extending over several years at least For clearness of description Banti divides the clinical course into three phases or stages but he notes that this division cannot be held too rigidly

Phase I

Onset gradual A feeling of weight or pain in the left hypochondrium finally leads to the discovery of an enlarged spleen In other instances the signs and symptoms of anaemia lead to investigation and discovery of the splenomegaly Splenic enlargement slowly but gradually increases until in some instances the organ may reach the pelvic brim The spleen is smooth and painless (except when perisplenitis occurs) and the shape with the characteristic notch is retained The symptoms associated with the splenomegaly during this phase are anaemia weakness and dyspnoea

The anaemia is important and of three types (*a*) of slow development and progress with remissions and exacerbations (haemoglobin may be down to between 30 and 50 per cent) (*b*) appearing very late only with haemoglobin never below 60 to 70 per cent) (*c*) no real anaemia present but only weakness and dyspnoea The liver during this phase is unchanged and gastro intestinal symptoms are absent The common duration of this first phase is three to five years but may be as long as twelve years

Phase II

The onset of this period is shown by changes in the urine which is diminished in amount of high specific gravity and contains urobilin The liver begins to enlarge is smooth and painless and soon extends to two to three fingerbreadths beyond the costal margin No jaundice or ascites Anaemia often increased The size of the spleen remains as in the first phase *The duration of this phase is inconstant* At first Banti believed its average length was twelve to eighteen months but from experience he recognized that this was often an underestimate

Phase III

This period is marked out by the onset of ascites unassociated with pain or fever The liver decreases in size and recedes behind the costal margin The size of the spleen remains unaltered Urine scanty and contains urobilin or rarely bilirubin Skin often lemon yellow but never deep jaundice During this stage haemorrhages from the stomach or bowel are frequent Death ensues in this phase from haemorrhage or hepatic insufficiency Banti freely admits that patients in this third phase cannot be distinguished from those suffering from advanced atrophic alcoholic cirrhosis

HAEMATOLOGY

Banti made very complete observations on the blood but admits that there is not any characteristic blood picture The red corpuscles are diminished but not below three millions per c mm The haemoglobin percentage is reduced more definitely and the lowest figure recorded is 35 per cent The colour index is always less than 1 Morphological changes in the red blood cells are rare but at times anisocytosis and poikilocytosis are found The leucocytes are generally diminished (leucopenia) to between 1 500 and 3 500 per c mm with a relative lymphocytosis Nothing was found to suggest active blood destruction and this was confirmed according to his observations by the absence of haemosiderin in the liver or spleen

PATHOLOGICAL ANATOMY

The characteristic lesions are in the spleen liver and almost always in the splenic vein and portal vein It is often forgotten that a lesion in the wall of these veins was well recognized by Banti The changes in the spleen are distinctive The organ is enlarged smooth and of normal shape The capsule is often unchanged or may be thickened The weight is seldom below 1 000 grams but may be up to 3 kilos In section the parenchyma is firm and red and

the Malpighian bodies are well seen The histological appearances are identical in all the three clinical stages of the disease

Fibroadenie —The chief change affects the splenic reticulum the fibres of which become thickened so as to form a distinct meshwork As the fibres become thicker the meshes are narrowed until finally only tiny holes are left This is the change named by Banti fibroadenie because as he states (1910) das lymphatische Stroma sein reticulares und adenoides Aussehen behalt This term as used by Banti and quoted without explanation by all subsequent writers requires some consideration Adenia (Gr *adeneia*) is an old word to express enlargement of lymphatic glands but we are now more familiar with the terms adenitis (inflammation of lymphatic glands) and adenoid (gland like) In Banti's time the spleen was still considered as one of the lymphatic organs of the body so that by fibroadenie he presumably meant a fibroid enlargement of the spleen the fibroid change affecting the reticulum It will be noted that the term fibroadenie is retained even when Banti is writing in a language other than French He makes a strong point that the change in the spleen is not an adenitis or inflammation and that the adenoid or gland like structure of the organ is perfectly retained There is not any formation of granulation tissue and there is an absence of all cellular reaction The lesion appears to be the result of einer chronischen Reizung [irritation] der lymphatischen Organe The characteristic change of fibroadenie thus affects the splenic reticulum and occurs in two situations—namely in some of the Malpighian corpuscles only and scattered irregularly throughout the whole pulp In any affected spleen the process is always seen at different stages of development and this is especially true in the Malpighian follicles Banti is of opinion that the lesion begins just outside the follicles in the pencillar arterioles and spreads into the follicles gradually The arteriole may be normal but is often the seat of hyaline change It is however just surrounding the arterioles that the reticular fibres are thickest and the meshes smallest The last stage of the process which is rarely seen shows the whole follicle converted into a sclerotic nodule The only other changes noted in the spleen consist of swelling and degeneration of scattered cells in the pulp and in the follicles

The Liver

The liver in the first stage of the disease is unaltered In the second stage it is definitely enlarged and the intrahepatic branches of the portal vein are thickened and sclerosed At this period also the connective tissue in the portal canals begins to increase greatly In the third stage the organ is markedly diminished in size and its surface is uneven and nodular Banti simply describes the changes of this stage as identical with those of an ordinary portal cirrhosis of the Laennec type Siderosis is absent in both liver and spleen

Splenic and Portal Veins

Very often but by no means constantly patches of chronic sclerotic endophlebitis are found in the splenic vein and even in the portal vein These changes have been found even in the first clinical stage of the disease and in the third stage slight changes of similar type have been discovered in the mesenteric veins No mention is made of complete thrombosis of the splenic or portal veins in any of his cases

BANTI'S CONCLUSIONS

In concluding his description of the pathology Banti affirms that the fibroadenie of the spleen (1) precedes the onset of hepatic cirrhosis (2) is not proportional in severity to the hepatic cirrhosis and (3) is not influenced in any way by the cirrhosis Attempts by bacteriological and other investigations to elucidate the cause of the disease were negative and he finally states his hypothesis of the pathogenesis as follows An unknown infective agent localizes itself in the spleen In the reticulum it produces a fibroadenie while in the cells of the pulp and of the lymph follicles purely degenerative changes ensue Since the changes in the reticulum are more severe and more intense than the cell degeneration and since they are most marked around the pencillar arterial branches it may well be considered that the lesion begins in this last situation The causative agent on the basis of this hypothesis would be one brought to the spleen by the arterial blood Whatever the agent be it induces neither cellular exudation nor granulomatous tissue formation

It will be noticed that this hypothesis does not quite agree with his previous view that the lesion results from some poison actually produced in the spleen itself

CRITICISMS OF BANTI'S DESCRIPTION

Since Banti's various descriptions of his disease as a clinical and especially a pathological entity were published criticism in many forms has arisen Epplen rather amusingly divides the literature into two groups (1) those who accept Banti's views—generally clinicians—and (2) those who reject them—generally pathologists

To this suggested generalization there must be many exceptions and one of the earliest and best known among the clinicians was the late Sir William Osler who wrote

> Banti's disease is simply chronic splenic anaemia plus features of cirrhosis of the liver which represent a terminal stage of the disease Banti's merit consists in calling attention to this important aspect but after all these secondary changes in the liver are somewhat rare and as my records show the haemorrhages ascites and even the jaundice may be present without existing cirrhosis

Why do pathologists reject Banti's disease as an entity? The reason is because the changes in the spleen which Banti described in his last paper as pathognomonic of his disease occur in many different types of enlarged spleen even in the spleens of patients suffering from ordinary alcoholic cirrhosis Banti himself writes that similar changes may occur in leukaemia and polylymphomatosis The spleen changes are thus not peculiar although in the spleens studied by Banti they were evidently well marked I have personally never seen a case which agrees really closely with Banti's clinical and pathological description and Continental authors such as Eppinger (1920) have also emphasized its extreme rarity

Banti's clinical description and his criteria for diagnosis are far too rigid and it seems certain that Banti's disease should be classified simply as the late stage of splenic anaemia or what is perhaps even more apt as an unusual type of ordinary portal cirrhosis in which high portal blood pressure and changes in the spleen precede the onset of marked fibrotic changes in the liver

The writer wishes to suggest again as he has already done elsewhere that the term Banti's disease should be deleted from our nomenclature and all suitable cases classified in the category either of splenic anaemia or of hepatic cirrhosis

RETICULO ENDOTHELIAL DISEASES OF THE LIVER AND SPLEEN

This group of diseases which affects the liver and spleen and in addition the bone marrow has already been referred to at the beginning of these lectures as that in which the greatest progress in elucidation has been made during the twenty years which have elapsed since the description of the reticulo endothelial system It was to this group especially that Eppinger devoted his monograph in 1920 but great advances in our knowledge have taken place since he wrote We are still far from possessing a complete insight into the functions and metabolic activities of this system of cells but one function which is very striking is their power to ingest various substances especially pigments and lipoids which are formed within the body during the activities which we call metabolism These cells act as phagocytes and possibly in other ways in the defensive mechanism of the body they are also concerned in the establishment of immunity to infections whether by ordinary pathogenic bacteria or by protozoa

As a result of overactivity in any of these functions the reticulo endothelial cells proliferate and increase enormously in number The hyperplasia in the bone marrow

is seen only by the pathologist but indirectly may show itself to the clinician by changes in the blood picture as seen in stained films Proliferation of these cells in the spleen which in man is their chief situation in the body results in splenomegaly and this group of splenic enlargements is of great importance because of its frequency In the human liver the reticulo endothelial system is represented by the cells of von Kupffer which form a very incomplete lining to the portal venous sinusoids or capillaries Proliferation of these cells cannot be expected as a rule to lead to great hepatic enlargement but nevertheless the liver may sometimes be considerably increased in size in this group of diseases The conditions are different in the livers of some experimental animals—especially in birds in which the spleen is relatively very small and the liver large It was in the liver of birds that I was first able to demonstrate the enormous proliferation of reticulo endothelial cells that may occur in an experimental haemolytic anaemia (McNee 1914)

In man as has been stated reticulo endothelial hyperplasia in the spleen is recognized clinically by splenomegaly and in my Lettsomian Lectures on diseases of the spleen (1931) I made an attempt to describe and differentiate histologically the main types and the characteristic lesions of the splenomegalies associated with reticulo endothelial disturbances I have not as will be ultimately essential investigated the bone marrow systematically in this group of diseases For this purpose it is evident that a large number of complete necropsies in such cases would be required In the liver proliferation of the reticulo endothelial cells only rarely causes hepatic enlargement and the changes which usually ensue are brought about through the transference by the Kupffer cells of the material which they have ingested to the contiguous polygonal glandular cells In this way the glandular cells may be damaged in varying degrees of acuteness and severity leading to marked pathological changes in the liver

There are three chief divisions of the human diseases which affect the reticulo endothelial system in liver and spleen

Haemolytic Anaemias

Pernicious (Addisonian) anaemia and chronic haemolytic (acholuric) jaundice may be taken as examples of diseases in which an excessive destruction of red blood corpuscles occurs within the body but we have no reason for suggesting that the cause of the haemolysis is in any way the same in the two conditions At the present time our position with regard to both of these diseases can fairly be described as exciting I need not refer to the recent great advances in the treatment of pernicious anaemia while the clinical cure of chronic haemolytic jaundice by splenectomy has been emphasized recently by our President (Dawson 1931) in a most important contribution to the literature of this disease

It is instructive to contrast some of the points illustrated by these two diseases Both are obviously haemolytic anaemias and both are therefore instances of haemolytic jaundice—in the one the disease generally latent in the other commonly overt In both diseases red blood corpuscles are destroyed in the body chiefly we believe by ingestion within cells of the reticulo endothelial system In Addisonian anaemia the cells which are destroyed are defective in size and shape but not in any other way which we recognize at present In acholuric jaundice the cells destroyed are apparently normal in shape and size but to us appear defective only in respect of a purely artificial test of fragility applied to them outside the body and then separated from the plasma I refer of course to their undue fragility in descending dilutions of solutions of sodium chloride when compared with the red cells of a normal individual It is interesting to remember that in both of these diseases the periods of haemolysis seem to be intermittent and there must be some good reason for this if we could only find it The main difference which we know at present in the pathology of the two diseases is that in untreated Addisonian anaemia the bone marrow is very abnormal whereas in acholuric jaundice there is simply a moderate erythroblastic reaction

The pathological histology of the liver and spleen in these two diseases shows an interesting contrast In acholuric jaundice the liver is unaltered in size and the only abnormality found is an increase in the number and size of the Kupffer cells which contain the pigment and debris of broken down red blood corpuscles within them In Addisonian anaemia identical changes are seen in the Kupffer cells and the only additional point often noted in the liver in this disease is the presence and multiplication of erythroblasts in the sinusoids (myeloid metaplasia)

In the spleen from a patient suffering from acholuric jaundice the histological appearances are remarkably constant and unmistakable The pulp spaces are engorged with red blood corpuscles so numerous that the actual structure can only be made out satisfactorily when the spleen has been removed by operation and allowed to empty itself of blood before fixation The blood sinuses are then seen to be relatively empty while the pulp is absolutely stuffed with red blood cells of normal size and shape Many of the reticulo endothelial cells contain red blood corpuscles whole or broken up or the haemosiderin pigment derived from them In Addisonian anaemia the filling of the pulp spaces with erythrocytes even in cases in which the spleen is considerably enlarged is less marked but phagocytosis by reticulo endothelial cells is abundant and haemosiderin can always be demonstrated by the prussian blue reaction Here again the main contrast is the presence of islets of active blood regeneration (myeloid metaplasia) the amount of which however varies considerably in different cases of the disease

In both of these diseases therefore the liver and spleen are involved in one way which we know—namely through the activities of the reticulo endothelial system in the destruction of red blood corpuscles and the metabolism of haemoglobin So far as we are aware the glandular cells of the liver are not damaged in either disease The two diseases are both well known and are therefore taken as contrasting types but it is evident that there are many other haemolytic anaemias affecting mankind in which the reticulo endothelial cells are also involved

Diseases Characterized by Lipoid Changes in Reticulo endothelial Cells

This group of diseases is of very great interest and includes such conditions as Gaucher's disease Pick's disease Niemann's disease and the hypercholesterolaemic splenomegaly sometimes found in diabetes mellitus

The fact that the cells of the reticulo endothelial system readily take up cholesterol esters was first shown in animals by Anitschkow (1914) but it had been noted as early as 1889 by Coats of Glasgow that in some cases of diabetes associated with lipaemia the spleen pulp was full of large foamy cells Since these observations a number of spleens from cases of diabetes mellitus have been found to contain abundant cholesterol esters in their reticulo endothelial cells and an excellent account of hypercholesterolaemic splenomegaly with a full bibliography has been given by Dyke (1928) A particularly interesting point for us is the frequent association of this splenic change with biliary cirrhosis of the liver In Dyke's case this was well marked but the polygonal cells of the liver appeared undamaged and the Kupffer cells did not contain any fatty or lipoid material This last fact is in a way contrary to expectation and the cause of the biliary cirrhosis with hepatic enlargement remains a

puzzle A further point of interest in these cases is Dyke's claim that in his case the hypercholesterolaemia or lipaemia was due to the existence of a chronic interstitial pancreatitis This at once recalls to us the clinical and pathological features of bronzed diabetes or haemochromatosis—pancreatitis hepatic cirrhosis and enormous deposition of haemosiderin Here again are remarkable points of contact but the puzzle remains to intrigue us

In Gaucher's Pick's and Niemann's diseases the reticulo endothelial system is involved in the metabolism of lipoid substances which are apparently different although closely related compounds in each disease The splenic enlargement is due to enormous hyperplasia of the reticulo endothelial cells which are filled with the special lipoid characteristic of the disease Here again we are dealing with diseases involving both liver and spleen for in the liver the Kupffer cells proliferate enormously and unlike Dyke's description of the changes in hypercholesterolaemic splenomegaly contain the lipoid material In all of this group of diseases the liver cells may be extensively damaged and hepatic cirrhosis may result I have referred elsewhere to an unpublished case of A R Rich of Baltimore in which not only the liver and spleen were extensively involved but the bone marrow was so infiltrated with lipoid containing reticulo endothelial cells that the ivory bone was invaded and a pathological fracture resulted

Diseases associated with Chronic Splenomegaly with Marked Reticulo endothelial Hyperplasia and Giant cell Formation

This group has interested me very greatly since included in it are some of the largest splenomegalies in my own extensive collection No one so far as I am aware has been able to make a complete examination of such cases My own observations so far are confined to spleens removed by operation and I am unable to give any histological account of the changes in the liver It is certain however that in several instances the liver was cirrhosed at the time of the operation The histological changes in the spleen are almost characteristic There is enormous proliferation of the reticulo endothelial cells associated with increase in the reticulum so that as I have described it the spleen becomes a large heavy solid organ In association with these changes giant cells appear which may be very numerous and may almost suggest the appearance of a myeloid sarcoma The causation of this condition affecting both liver and spleen is quite unknown and I have only been able to suggest that the changes might be due to some chronic inflammation of unknown actiology and of very long standing

Conclusions

In these lectures I have tried to interest physicians in a somewhat difficult problem of clinical medicine It will be observed that my whole thesis centres around the portal circulation and some of the organs connected therewith I have confined myself here to a consideration of two organs—the liver and the spleen—on which I have carried out personal observations and about which I therefore have something to say But the scope could obviously be extended to include diseases of the whole intestinal tract

We know a good deal about the dynamics of the systemic and pulmonary circulations but far less about the portal We are familiar with the clinical results of alterations in the systemic and pulmonary blood pressures but so far we know only the very gross and late effects of increased portal pressure The metabolic problems with which the systemic and pulmonary circulations are concerned are on the whole simple and clear cut and have been very fully investigated In the portal circulation in which all the substances derived from the intestine are carried to the liver the problems of metabolism are much more intricate and difficult to investigate So far as the liver and spleen are concerned the liver is obviously dominant in all ordinary metabolic functions but the spleen on the other hand surpasses the liver in its reticulo endothelial activities

Much experimental work has been carried out on different aspects of our subject but as usual the results have gone far ahead of their immediate and direct application in clinical medicine Isolated researches have however already given us valuable clues which we must follow I have collected some of the most important experimental results in my first two lectures and in my last lecture have attempted to show how some of them may be applied I am convinced from my study of diseases of the liver and spleen that a new chapter in medicine will ultimately have to be written concerning derangements of the portal circulation and their causes

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THE PROGNOSTIC VALUE OF SPINAL ANAESTHESIA IN VASOSPASTIC DISEASES OF THE LOWER LIMBS

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In any study of the circulatory disturbances of the limbs there arises at once the difficulty of estimating with sufficient exactness the degree to which the circulation has progressed and the functional value of the circulation in the affected limb

Viability and function of a limb are possible within a wide range of variations in the amount and pressure of the blood which flows through it Although colour changes and claudication may indicate roughly that all is not well with the circulation it is essential to have more exact knowledge as to what extent the dilated vessels are still pervious and remunerable to react to the vaso-

pulses Many vascular diseases exhibit evidence of spasm of unoccluded collateral channels and the clinical signs may consequently suggest a considerably greater degree of organic arterial obstruction than is actually present Therefore it is necessary in the investigation of all cases of vascular disease to determine if possible the extent of the vasospasm which is superimposed on the completely or partially occluded vessels Palpation of the main vessels by the finger is of little use excepting for showing that the pulse in the larger arteries is absent or grossly reduced neither do the various sphygmographs or the oscillometer of Pachon give sufficiently exact findings particularly with regard to the important element of vaso spasm More exact results might no doubt be afforded by plethysmography but such a method although used with success in small animals is not easy of application to an adult limb and may introduce error since some degree of constriction is necessary to produce a water tight seal

Method of Assessing Circulatory Value in a Limb

In the present state of our knowledge the most exact information as to what one may call the circulatory value of a limb is afforded by the use of a very delicate electrical surface thermometer This has a special application as a guide to the merits of cord sympathectomy in certain vascular diseases of the extremities Any rise in skin temperature however induced indicates an increased flow of blood to the part The extent of the rise of temperature signifies the degree of increased blood flow and so may be used as a measure of the improvement in circulation which may be induced by permanent vaso dilatation

In the disease at present known as thrombo angiitis obliterans there is a combination of vasospasm with arterial thrombosis Though many writers appear to regard the spasm and the thrombosis as unrelated conditions we believe from our investigations into the vascular complications of cervical rib that the two are essentially one Vasospasm is the initial lesion and prolonged severe vasospasm induces thrombosis by interference with the blood supply to the vessel wall As the disease progresses the area of vessels affected by thrombosis tends to increase at the expense of the area of vasospasm It is obvious that in any given patient the area of vasospasm can be favourably affected by *deprivation of its constrictor fibres* —that is by sympathectomy—whilst on the other hand it is inconceivable that any operative treatment can influence a vessel the lumen of which is completely plugged by fibrous tissue

In approaching any case from the point of view of suitability for treatment by sympathectomy it is therefore essential to know just how much of the trouble is due to spasm for this is the part which is curable Since as we believe the spasm is the initial change and the thrombosis consequent upon it it is possible that removal of the vasospastic state may also prevent further spread of the disease Adson has definitely expressed the opinion that the improvement in circulation succeeding sympathectomy checks the progress of thrombo angiitis If therefore a limb gives a distinct reaction as shown by rise of skin temperature to any agent producing vaso dilatation then sympathectomy is indicated as likely to improve materially the condition of the limb

A method which has been used to induce the dilatation of vessels in vasospastic disease is the injection of foreign substances of which typhoid vaccine acetylcholine and muscle extracts are examples The injection of these materials into the circulation causes some degree of vaso dilatation and hence has been much employed in treatment Its effects are however not lasting and it has the disadvantage of making the patient ill—in fact most patients decline further treatment after a few experiences of the injection As a prognostic test of the value of cord sympathectomy in the lower limb injection is far inferior to spinal anaesthesia If a spinal anaesthetic is given so that it takes effect as high as the sixth dorsal segment it will temporarily put out of action the whole sympathetic supply to the lower limbs It will do for an hour exactly what a lumbar sympathectomy will do permanently Hence if spinal anaesthesia induces a definitely increased blood flow to the diseased limb as evidenced by improvement in colour and rise of skin temperature it shows that a considerable number of vessels are still capable of becoming dilated and it indicates that the operation of sympathectomy is justifiable

Experimental Results

In order to arrive at a correct estimate of its action it is necessary to know what is the effect of spinal anaesthesia in a normal limb To this end we have taken for study a large series of operations carried out under spinal anaesthesia These cases include all ordinary types of operation (appendicectomy radical cure of hernia excision of haemorrhoids etc) such as occur in the routine practice of a surgical unit They include patients of all ages from 11 to 66 years The skin temperatures were recorded by an electrical surface thermometer applied to the thin skin on the arch of the instep Readings were taken before administration of the spinal anaesthetic and at intervals of five minutes until the effect of the anaesthetic had passed off At the same time the room temperature and blood pressure of the patient were recorded A survey of the material so obtained brings out the following points

In all cases where the anaesthesia is up to or above the sixth dorsal segment a marked rise of skin temperature is apparent This rise is usually about 8° C but may reach as much as 10° C It is as one would expect more evident in young healthy patients than in older subjects for example a strong healthy woman of 22 operated upon for hernia showed a rise of 10° C in the right and of 9 2° C in the left foot whereas a woman of 61 with some arterial degeneration operated upon for haemorrhoids showed a rise of only 3 5° C on the right side and 6° C on the left The nature of the anaesthetic drug used made no appreciable difference—stovaine heavy durocaine and percaine gave similar results It is interesting to note the extreme rapidity with which the drug is fixed not only does the rise of temperature come on almost at once but if the anaesthetic be injected with the patient on the left side the left limb will consistently show the higher temperature even if the patient is at once placed on his back after withdrawal of the needle Similarly an injection given with the patient lying on the right side will result in a higher temperature in the right foot throughout the observation On the whole our observations show that in a normal patient spinal anaesthesia will induce a rise of temperature which may be expected to reach round about 8° C as measured on the foot

In contrast to the above we have made a series of observations in several cases of thrombo angiitis obliterans on which we have performed lumbar sympathectomy We find that the rise of temperature in the feet under the anaesthetic supplies not only a guide as to whether the operation should be done but affords a very useful indication to prognosis after operation These cases will form the basis of a separate report but for the present we may instance the following results in which the subsequent progress of the case is in very close accord with the skin temperatures observed at the time of operation

Male aged 59 years Rise of temperature under spinal anaesthesia 1 6° C in the right foot and 0 9° C in the left

foot The result of cord sympathectomy was poor The right lower extremity shows some improvement but the left was amputated two months afterwards for gangrene

Male aged 45 years Rise of temperature under spinal anaesthesia 3° C in the right foot and 1 6° C in the left foot The result of cord sympathectomy is fairly satisfactory and a gangrenous ulcer on the inner side of the left ankle healed rapidly

Male aged 41 years Rise of temperature under spinal anaesthesia 6 4° C in the right foot and 5 8° C in the left foot The result of cord sympathectomy is entirely satisfactory and the patient is in active work

These results correspond closely with those of Adson who has found after the injection of a foreign protein that unless the rise in skin temperature is two or more times greater than the rise of mouth temperature sympathectomy is inadvisable

CONCLUSION

In any case of thrombo angiitis obliterans there is the element of vasospasm which can be relieved by cord sympathectomy and there is the element of thrombosis on which operation is useless The propriety of operating can be decided only by an endeavour to estimate the relative amounts of spasm and thrombosis We feel that this can best be done in the lower limbs by a spinal anaesthetic The method need involve no trouble for the patient as the spinal injection is given on the operating table and the operation can be undertaken or abandoned on the findings given by the thermometer within five minutes of the injection These advantages render this method much more attractive safer and quicker than those involving the intravenous injection of substances which commonly cause the patient considerable discomfort for some time Furthermore the response to a spinal anaesthetic gives an accurate record of what can be expected from sympathectomy whilst Adson states that the rise in surface temperature induced by fever only approximates roughly to that following excision of the sympathetic supply

A CASE ILLUSTRATING ARTIFICIAL PNEUMOTHORAX, ADHESION CUTTING, AND OLEOTHORAX

BY

F G CHANDLER M A M D F R C P

PHYSICIAN WITH CHARGE OF OUT PATIENTS ST BARTHOLOMEW'S HOSPITAL PHYSICIAN CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS VICTORIA PARK

The publication of a solitary case if it concerns treatment is justly viewed with critical suspicion My apology therefore for thus transgressing is not entirely that the case described is perhaps in some respects unique but that it illustrates the potentialities of methods of treatment the value of which are still unrecognized by large numbers if not the majority of our profession I must add that I am not advocating what follows as a routine procedure as the opportunities for its applications may be few but the indication is fairly definite—that action is compulsory when the patient is obviously declining—unless one is content to adopt an expectant attitude to the fatal end There is little validity in the criticism of those who say that they have known similar cases recover without special treatment when the indication as I maintain is the failure to recover by means of other treatment Particularly is this so in tuberculosis of the lungs where far too often the patient is allowed gradually steadily insidiously to decline with no effective effort being made to stem this decline in the hope that something will turn up or because of the hopeless attitude that there is nothing to do or owing to failure to observe that things are going badly

CASE RECORD

The patient was a child aged 7 whom I saw in consultation with Dr C T Neve in December 1930 Her father was dying of phthisis and silicosis She presented the symptoms and signs of bilateral bronchitis Sputum was copious and tubercle bacilli were constantly present She lived at home

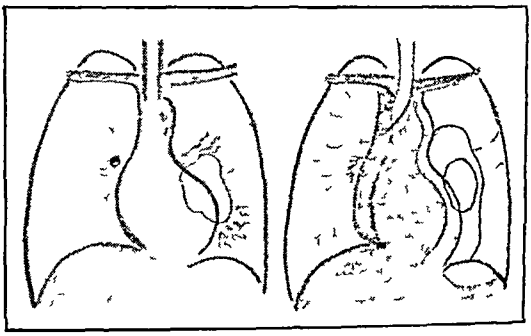


FIG 1 FIG 2

FIG 1—Appearance February 19th 1931 Showing cavity in left lower lobe with infiltration around it Doubtful shadows radiating from right hilum

FIG 2—March 9th 1931 Showing artificial pneumothorax Left lung partially collapsed Cavity held open by adhesions

on sanatorium lines but rapidly became worse the temperature remaining in the region of 101° F for some weeks She wasted In February 1931 there was bronchopneumonic consolidation of the left lower lobe and a few crepitations were heard on the right side X ray examination revealed a very large cavity in the left lower lobe and the appearances about the right hilum were very suspicious

As a forlorn hope it was decided to attempt artificial pneumothorax treatment on the left side This was done but the cavity would not close owing to adhesions It was decided to try to sever them The child was extremely

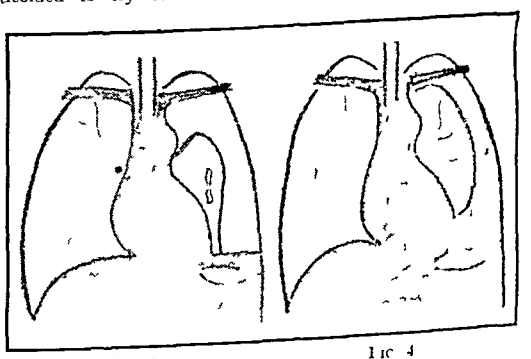


FIG 3 FIG 4

FIG 3—March 18th 1931 The adhesions have been cut The cavity is almost collapsed A small amount of olive oil has been injected into the pleural cavity

FIG 4—July 27th 1931 The cavity is closed The lung is sufficiently collapsed by oil The appearance was the same in February 1932

highly strung and nervous—so much so that the usual local anaesthesia was thought to be unsuitable She was given avertin Unfortunately not enough was given and gas and oxygen had to be administered as well This considerably increased the difficulty of the procedure as the respiratory excursions were consequently exaggerated and the chest wall was in violent movement throughout the operation Thoracoscopy revealed a complicated maze of wide adhesions In the belief that it was a question of completely collapsing the lung or leaving the child to die it was decided to risk the

division this being justified by the issues at stake The whole operation was done through one cannula A direct vision telescope was used and alongside this were passed the diathermy electrode and the electro cautery Both were used As general anæsthesia was being employed I did not infiltrate the insertion of the adhesion with novocain with the object of saving time This I believe was a mistake as every time the diathermy cutting wire was used the spasm phenomenon in the muscles of the chest wall occurred which greatly increased the difficulty of the operation When the resistance of the tissues became great or where they were thin the electro cautery was used Thus just when the adhesion became most difficult to deal with by diathermy it became most easy with the electro cautery All adhesions were divided and the child returned to bed in good condition

Respirations had been so deep that much air was expelled from the pleural cavity and the lung almost re expanded but subsequent refills produced an excellent collapse The child so dreaded the refills that it was decided to substitute an oleothorax for the pneumothorax This was done gradually A year later the child was in good health plump bonny and free from symptoms and had gained over a stone in weight At the time of writing she is still in good health and I believe she will continue to remain so Diagrams of the x ray pictures show the appearances at different stages

THE ACTION OF ERGOT PREPARATIONS ON THE PUERPERAL UTERUS

A Clinical Investigation with Special Reference to an Active Constituent of Ergot as yet Unidentified*

BY

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With a Note by

SIR H H DALE M D F R S

DIRECTOR NATIONAL INSTITUTE FOR MEDICAL RESEARCH HAMPSTEAD

In a previous paper[1] a method was described by which the contractions of the puerperal uterus could be recorded in graphic form The apparatus is a modification of that used by Bourne and Burn to study the effect of oxytocic drugs administered during labour it consists of a sterilized rubber bag passed into the uterus with full antiseptic precautions and connected by water filled tubing to a mercury manometer A light float on the manometer carries an ink point which records variations of intrauterine pressure on a slowly revolving drum This apparatus registers the spontaneous contractions of the puerperal uterus and shows very clearly the variations of activity brought about by suckling or by the administration of drugs

The previous work† dealt with the action of the ergot alkaloids ergotoxine and ergotamine and the conclusions reached were these

1 That both ergotoxine and ergotamine were very active in stimulating contractions in the puerperal uterus

2 That while the precise action varied in different cases every effect produced by the one drug could be matched by a similar effect from the other

3 That the drugs were comparatively slow in taking effect by intravenous injection four to ten minutes by intramuscular injection fifteen to forty five minutes and by mouth thirty five minutes to one hour or longer When the drugs were given by the mouth the action was erratic and in most cases not nearly so well marked as when given by injection

4 That the rise in the base line of the tracings (which may be taken as a measure of the tonicity of the uterus) was of moderate degree and was seen only during the time that the drug was exerting its maximum effect it was produced by doses of 0 5 mg or more given by injection

Aim of Present Investigation

Having found that the method used to study the clinical action of the ergot alkaloids was capable of yielding very clear results I decided to extend the scope of the inquiry and to investigate the effect of other constituents of ergot and of the various pharmaceutical preparations of the crude drug

In 1913 Carr and Dale[2] assuming as then seemed justifiable that the activity of ergot was due to ergotoxine pointed out that worse methods of preparing the extractum ergotae and the extractum ergotae liquidum could scarcely be devised than those recommended by the *British Pharmacopoeia* of 1898 (which was then current) In the case of the first preparation the ergotoxine was precipitated during manufacture in the case of the second the ergotoxine was not soluble in the watery solution used for extraction Since that date it has frequently been said that the extracts in question are inert and useless preparations although the statement has sometimes been qualified by a somewhat vague suggestion that the putrefactive bases (particularly histamine) which are also present in the extract might possibly stimulate the uterus to contract An unsatisfactory state of affairs was thus created for it was obviously absurd to start with an expensive drug to eliminate the active alkaloid and then to allow non specific putrefactive amines to form when these same substances might be much more easily and accurately produced in other ways Such was the position when the present Pharmacopoeial Committee was formed and it was therefore natural that one of its first acts was to constitute a special subcommittee to advise on a new and better method of preparing the ergot extracts

Ergot has been of the nature of a treasure chest to pharmacologists and the immense amount of work which has been done on this drug is evidenced by the number and variety of the chemical bodies which have been isolated Some of these substances such as histamine are known to owe their presence in great measure to bacterial or enzyme decomposition during manufacture and this leads to much uncertainty in the composition of the finished product since but little control can be held over these processes Of the various bodies isolated only two (other than the alkaloids) are believed to have an appreciable effect on the uterus These are histamine and tyramine

Histamine and Tyramine

Histamine (ergamine) is stated by Burn to be present in the British pharmacopoeial liquid extract of ergot to the extent of 0 01 per cent Two drachms of the extract (which is the dose commonly used for single administration) thus contains less than one milligram Bourne and Burn have studied the effect of histamine given subcutaneously during labour They found that doses of less than 2 mg of the base were ineffective A dose of 2 mg produced vigorous contractions for fifty minutes followed by a period of inertia No details were given of the effect when administered by mouth In the puerperal patients I have given histamine acid phosphate by the mouth in doses equivalent to 2 mg 6 mg and 8 mg of the base In no case were any contractions seen which could be attributed to the drug The effect when given by intramuscular injection was different a patient receiving a dose equivalent to 1 mg of the base showed in less than one minute a very marked flush of the skin which persisted for about

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† The work on ergotoxine and ergotamine was carried out at the request of the Therapeutic Trials Committee of the Medical Research Council

an hour and caused much discomfort The pulse rate was considerably increased The effect on the uterus was almost immediate but was slight after the lapse of one minute the contractions were augmented but were very irregular and the rise of base line was negligible

Barger[1] states The amount of tyramine in liquid extracts of ergot is much too small to be of practical importance Bourne and Burn found that tyramine had only a very fleeting effect when injected in a dose of 10 mg intravenously This method of administration was presumably chosen because tyramine is known to be very rapidly destroyed by the liver Two puerperal patients were given tyramine by the mouth in doses of 60 mg and 80 mg respectively In the first case no change was noted in the uterine action In the second case the uterus remained inert for ten minutes then showed some irregular contractions over a period of half an hour The contractions resembled those of the spontaneous variety and were quite unlike those produced by ergot preparations After a further half hour the uterus again became inert There is thus good reason to believe that tyramine like histamine is without importance in the action of ergot preparations intended for oral administration

It is possible that although these drugs when given separately produce (or do not produce) certain effects they might when given together modify each other's action To eliminate this possibility a proprietary preparation containing histamine tyramine and ergotoxine ethanesulphonate (0 033 per cent) was given to a patient in a dose of 2 drachms by the mouth This is roughly equivalent to 2 5 mg of the alkaloid and is twice the maximum recommended dose of the preparation No effect was seen for forty minutes after which fairly strong contractions began to appear characteristic of the ergotoxine type

These experiments show that of the active constituents hitherto identified in ergot only the alkaloids ergotoxine and ergotamine are of clinical importance

Liquid and Solid Extracts of Ergot

To contrast the effect of the active with the inactive ergot preparations a watery extract of ergot was specially prepared in strict accordance with the regulations of the 1914 *British Pharmacopoeia* Judged by all previous work this preparation ought to have been inert for analysis showed that it contained only a trace of alkaloid the extract was used in three cases in doses of 4 drachms

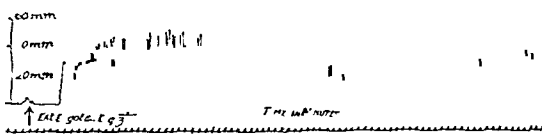


Fig 1.—Extractum ergotae liquidum (*B P* 1914) 4 drachms by mouth

3 drachms and 2 drachms respectively It was with the greatest surprise I found that far from being inert this preparation surpassed by great measure the activity of any drug which I had previously used in the same manner An equally surprising fact was that the effect appeared in a remarkably short time In one case only four minutes elapsed between the swallowing of the extract and the onset of powerful uterine contractions (Fig 1) In character the contractions were notably different from those due to ergotoxine or ergotamine They were frequent (two or three to the minute) regular of fairly great excursion and there was a rise in the base line to an extent much greater than observed with any other drug

Several other samples of *B P* Ext ergotae liq were then used in doses of 2 drachms The following are details of these preparations —

1 Sample freshly made from a second supply of ergot

2 Sample purchased in the open market known to have been in stock in chemist's shop for more than four months

3 Sample purchased in open market known to have been in partly used stock bottle with cork stopper for more than fifteen months

4 Sample purchased in open market known to have been in stock for more than six months

5 Sample kindly supplied by Messrs Allen and Hanburys prepared six months before

6 Sample supplied by Messrs Allen and Hanburys prepared seven months before

All these samples showed an energetic action of the type just described

In view of the pending change in the pharmacopoeial regulations it was of interest and importance to test the liquid extract which will shortly become official Such an extract was specially prepared and was tested on two patients in doses of 3 drachms and 2 drachms respectively The results showed that this extract has an activity of the type described to an extent as great as and probably greater than that of the 1914 liquid extract

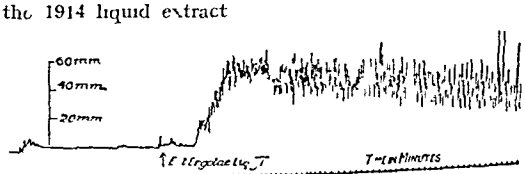


Fig 2.—Extractum ergotae liquidum (new *Pharmacopoeia*) 2 drachms by mouth

Bourne and Burn have made a clinical test of the liquid extracts of the *United States Pharmacopoeia* and of the *British Pharmacopoeia* using as a control a solution of yeast extract (marmite) Three series of normal puerperal patients were observed by a ward sister and each patient was given a drachm dose three times a day from one of three bottles containing the extracts in question The bottles were labelled 1 2 and 3 and the identity of the contents was purposely

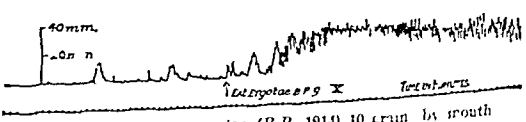


Fig 3.—Extractum ergotae (*B P* 1914) 10 grain by mouth

withheld from the observer No difference could be detected in the character of the lochia or the rate of involution of the uterus in the three different groups of patients One of the possible inferences which can be drawn from this experiment is that marmite is as effective as ergot extracts in its action on the uterus In the present investigation a puerperal patient was therefore given a teaspoonful of marmite solution The uterus remained quite inert after the administration

Solid preparations of ergot were next tested The extractum ergotae of the 1914 *British Pharmacopoeia* was given to a patient in a dose of 10 grains dissolved in water Strong contractions similar to those previously described appeared in seven minutes and there was a marked rise in the base line (Fig 3) The preparation

was 2 years and 11 months old A defatted ergot powder (ergbolin) given in a dose of 10 grains produced an almost identical tracing the effect appearing fourteen minutes after administration

UNIFORMITY OF ACTION AND KEEPING QUALITIES OF ERGOT EXTRACTS

Two questions of practical importance arise out of this work Do all extracts of ergot show the same characteristic activity and does storage cause any deterioration?

The fact that nine preparations from different sources all showed decided activity gives a partial answer to the first question There was however some reason to believe that the different liquid extracts varied in their activity and this suspicion has been strengthened by a later experience with a new supply of ergot This sample was used on four occasions in form of 20 grains of the crude powder as a decoction from 20 grains of the powder as a defatted powder in dose of 10 grains and as a liquid extract in dose of 2 drachms There was probably some activity in this ergot but the activity was of very small order compared with that of the samples previously used The second question on the keeping properties cannot be definitely answered without much further experiment As far as the present work goes it can be said that the keeping properties of the prepared extract appear to be good the most active of the liquid extracts used was one which was at least six months old another sample more than 15 months old showed a good activity while a solid extract 2 years and 11 months old was also found to be very active

As already pointed out the uterine contractions caused by liquid and solid preparations of ergot were with regard to time on onset nature and frequency in most striking contrast to those produced by ergotoxine and ergotamine and it can only be supposed that they were caused by an entirely different constituent of ergot Now since histamine and tyramine were found to be inactive when given by the mouth either singly or in combination it must be assumed that the oxytocic power of the liquid and solid extracts is due to a substance whose importance has hitherto been overlooked in the investigation of ergot

It is of interest to read the early accounts of the use of ergot

A letter appeared in the *Medical Repository* of New York of 1808 in which Dr John Stearns[6] exhorts a friend to try a sample of *pulvis parturiens* Boil half a drachm of the powder in half a pint of water and give one third every twenty minutes till the pain commences in most cases you will be surprised with the suddenness of its operation it is therefore necessary to be completely ready before you give the medicine In 1813 the following was written by Dr Oliver Prescott The frequency and violence of the uterine efforts induced by ergot are not more extraordinary than its almost instantaneous operation In twenty cases I carefully noticed the precise time it required to produce its customary effects In two of them the increased strength of the pains and the continued action commenced in seven minutes from the time the decoction was taken in one case it was eight minutes in seven it was ten in three eleven and in three others it was fifteen In the four remaining cases there was no apparent operation until twenty minutes had expired Elsewhere[8] I have found reference to a case in which about five minutes elapsed between the administering of 20 grains of powdered ergot and the onset of uterine activity In more recent times (1911) Sharp[9] reporting twenty cases in which he had used liquid extract or infusion of ergot stated that the effect came on after an average of ten minutes in one case only four minutes were required for the drug to exert its characteristic action

These extracts from early writings make it clear that the effect to which ergot owed its reputation was an immediate and powerful one and due to a substance such as might produce the tracings shown in Figs 1 and 2 Moreover it is difficult to believe that ergot would ever have found a use in obstetrics had its administration been followed by a prolonged latent period for contraction occurring after that interval would probably not have been attributed to the drug

TABULATED RESULTS

In order to offer a comparison with the figures just quoted it may be of value to record in tabular form the actions of the various preparations given by the mouth in the present investigation

Details of Time Required for Oral Preparations of Ergot to Take Effect

Drug	Dose	Time of Onset of Doubtful Response	Time of Onset of Definite Response	Remarks
		min	min	
Ergotoxine	1 mg	120	—	No definite results in 4½ hours
Ditto	2 mg	40	0	Contraction lasted for 1 hour only
Ditto	2 mg	90	—	Contractions poor for 1 hour only
Ditto	2·5 mg	2	5·6	Early contractions probably systolic tonic
Ditto with histamine and tyramine	2·5 mg	31	40	Good contractions (ernutin 5 c)
Ergotamine	1·5 mg	0	40	Contractions poor for 1 hour only but reappeared an hour later
Ditto	2 mg	40	50	Contractions for 35 minutes only but reappeared later
Ditto	3 mg	35	110	Very inactive uterus
Ext ergotae liq (1914)	5ii	—	4	Immediate powerful contractions
Ditto	5iii	—	7	Immediate powerful contractions
Ditto	5ii	—	8	Immediate strong contractions
Ditto Sample 2	5ii	—	6	Immediate powerful contractions
Ditto Sample 3	5i ss	—	11	Strong contractions
Ditto Sample 4	5i	22	28	Fairly strong contractions
Ditto Sample 5	5ii	—	14	Strong contractions
Ditto Sample 6	5ii	—	9	Immediate powerful contractions
Ditto Sample 7	5ii	—	15	Very strong contractions
New B P Ext ergot liq	5iii	—	11	Immediate strong contractions
Ditto	5ii	—	6	Immediate powerful contractions
Ext ergotae B P 1914	gr x in water	—	7	Immediate strong contractions
Defatted ergot (Ergbolin)	gr x	—	14	Immediate strong contractions

A study of the tracings from which the above figures were obtained clearly shows that the action of the ergot alkaloids when given by the mouth is slow and uncertain

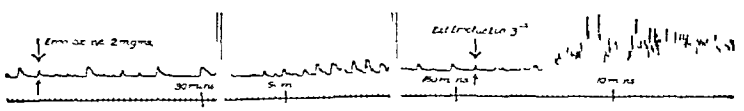


FIG 4—Comparison of the effect of ergotoxine 2 mg by mouth and ext ergot liq 2 drachms by mouth The tracing was continuous and only sections of it are shown

yet for many years the specific effect of ergot has been attributed to them

Bourne and Burn state The specific alkaloid of ergot used in the form of ergotamine tartrate has been found to exert in the most striking way the action which has always been thought to characterize the drug The usually held view is reflected in the following extract from the *Handbook* issued to the medical profession by a well known manufacturing

firm The characteristic pharmacological therapeutic action of ergot is due to the alkaloid ergotoxine The specific physiological effect and therapeutic efficiency of any preparation of ergot depends on the presence of this active principle Many preparations of ergot are highly unsatisfactory and some are without any therapeutic action whatever because they contain no ergotoxine

The experimental observations detailed in this paper stand in direct opposition to both these views and it can be stated with reasonable certainty that the characteristic action of ergot known to the old obstetricians is due to a substance which has a prompt and energetic action and which is not ergotoxine ergotamine tyramine or histamine From this it follows that the ergot alkaloids hitherto supposed to be all important play in reality but a subsidiary part in the clinical action of the drug

CONCLUSIONS

1 The liquid extract and the solid extract of ergot of the 1914 *British Pharmacopoeia* both show great activity in stimulating contractions in the puerperal uterus

2 Defatted ergot powder has a similar action

3 The keeping properties of the extracts appear to be good

4 Different samples of ergot vary in their activity

5 The effect of the drug comes on with remarkable suddenness and may appear within four minutes of oral administration of the liquid extract

6 There is an increased tone of the uterus to an extent much greater than that seen with other oxytocic drugs

7 In these and other respects the ergot extracts act in a very different manner from the purified alkaloids ergotoxine and ergotamine

8 Histamine and tyramine given in reasonable dosage by the mouth have no effect on the puerperal uterus

9 Histamine given by intramuscular injection has a slight effect on the uterus but may produce undesirable symptoms

10 There is reason to believe that the characteristic and traditional effect of ergot is due to a substance as yet unidentified

It is a pleasure to express my thanks to Sir Henry Dale for encouragement and useful advice to Mr Davis the Hospital pharmacist for preparing and analysing the special extracts and to Messrs Allen and Hanburys for supplying the ergot preparations

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NOTE BY SIR H H DALE, M.D., F.R.S.

Dr Chassar Moir has kindly kept me in touch with the progress of the observations which he now presents and which appear to open another chapter and probably one of great importance in the already complicated story of ergot and its active principles It seems to me likely that Dr Moir will be able to make good his claim that in the active substance now shown to be present in the ordinary liquid extracts of ergot and differing from any of those yet identified in its rapid action when given by the mouth he has come at last on the track of the principle which led to the introduction of ergot into therapeutics

Those acquainted with the present position and its development during a quarter of a century may be inclined to regard Dr Moir's observations as a rebuke to the presumption of laboratory pharmacologists They do indeed emphasize the danger of basing therapeutic conclusions on laboratory data without direct clinical evidence It is only fair to state however that the present position has arisen not in spite of such evidence as Dr Moir now supplies but for lack of it The need has been recognized and urged by some of us throughout the period in question but without such direct experimental guidance from the clinic we could only search for the principles in ergot producing certain well defined effects in the laboratory and hope for the proper clinical trial of the substances so identified In this way the alkaloids ergotoxine and later ergotamine were found and the bases tyramine and histamine The only clinical evidence hitherto available appeared to strengthen the presumption in favour of the alkaloids as the essential therapeutic agents as being the only known active substances peculiar to ergot There was always the doubt however whether preparations such as the watery liquid extract might not contain some other active principle overlooked or obscured in the laboratory test but acting with oral administration of the extract I have indeed on more than one occasion endeavoured to get a proper experimental comparison made in the clinic between a watery and an alcoholic ergot extract when both were given by the mouth More than one eminent gynaecologist was willing to carry out a test but only by handing the extracts to a resident officer or ward sister with an instruction to administer them to alternate patients as a routine and to record impressions of their respective values It can safely be stated that so far from affording data for a quantitative comparison such a method would not even give trustworthy information as to whether either extract was active at all Mr Bourne and Dr Burn having made an experimental comparison of the activities of the known principles on the parturient uterus with mechanical records of contractions were content in the case of the watery liquid extract of ergot to show that the ward sister could not distinguish its action from that of a marmite solution when both were given to alternate patients in the puerperium The inference was that the liquid extract had no action but Dr Moir's experimental records show it to contain what may well prove to be the most important substance in ergot from the point of view of practical therapeutics

It is important to note that according to Dr Moir the extract made with acid alcohol is at least as active when given by the mouth as the old watery extract so that the gain in alkaloids is not obtained at the expense of the unknown principle As to the nature of the latter Dr H W Dudley of this Institute has already made some progress with Dr Moir's co operation towards identifying the type of the substance in ergot responsible for the prompt action with oral administration If a laboratory pharmacological test specifically recognizing and measuring it can be found progress will be accelerated Meanwhile it is legitimate to hope that yet another substance from this extraordinary drug will prove to have as much general interest as its predecessors

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THE USE OF AVERTIN IN THE PRESENCE OF DAMAGED LIVER FUNCTION

WITH REPORT OF THREE ILLUSTRATIVE CASES

BY

H. K. ASHWORTH, M.B., CH.B., M.R.C.S.

VISITING ANÆSTHETIST, MANCHESTER ROYAL INFIRMARY, ANCOATS HOSPITAL, ETC.

A study of the literature reveals the fact that there are two conflicting views as to the deleterious effect of avertin on the liver. In his Lumleian Lecture on toxic jaundice delivered in June 1931 [1] Sir W. Willcox uttered a warning based on theoretical pharmacological grounds as to the possibility of liver damage by the use of avertin and cited experimental work by Parsons on rabbits. Parsons himself is of the opinion that avertin is harmful to the liver and has demonstrated slight fatty degeneration in rabbits after doses of 0.5 gram per kilo body weight.

These statements have been persistently challenged by Sir Francis Shipway [2] who bases his opposition on his extensive clinical experience with avertin and in America where the trend of experimental and clinical experience during the last two years has been towards freeing avertin from an undeserved stigma of toxicity. Thus Bourne, Bruger and Drever [4] after experimental and clinical observation on dogs and human beings conclude that relatively to chloroform or ether the harm done by sodium amytal or avertin to the liver would seem to be negligible. As a result of their experiments on dogs Raginsky and Bourne have arrived at the following conclusions: (1) avertin has by no means the same damaging effect on liver as chloroform; (2) avertin can probably be used quite safely in individuals with moderate liver damage although it is advisable to use smaller doses than usual to produce the desired effect.

Anæsthetists may have hesitated owing to these conflicting views to use avertin in cases of certain or suspected pre-operative liver damage, and the following cases are recorded in which avertin was used in the pre-operative presence of known or suspected liver damage with no apparent harmful effects.

CASE I

Mrs. W., aged 55, had a typical history of severe recurrent attacks of cholecystitis since June 1931. She was first seen on December 2nd 1931, a fortnight after the onset of an attack. She had vomited everything taken during the previous five or six days, and the bowels had not been opened for three days. Her temperature was 100° F., and her pulse 108; she was slightly jaundiced and looked very ill. After a few days of pre-operative treatment she was operated upon on December 11th.

Avertin 0.1 gram per kilo body weight in a 3 per cent. solution in distilled water was administered, ten minutes being occupied in the administration. Ten minutes later the patient was quite unconscious and was brought to the operating theatre. Nitrous oxide and oxygen were then administered through an ordinary face-piece, and the operation of cholecystectomy performed. Muscular relaxation was good, and no ether was necessary at any time throughout the operation. The appearance of the liver was markedly cirrhotic. Recovery from the anæsthetic and subsequent convalescence were uneventful except for some slight vomiting on the evening of the operation.

CASE II

Miss G., aged 55, had a history of recurrent attacks of abdominal pain, accompanied by flatulence and vomiting, since 1929. She had lost weight and her appetite was poor. She was first seen on January 29th 1932. There was marked tenderness in the right hypochondrium, and it was thought that the gall-bladder was just palpable. She was faintly jaundiced, and the urine contained bile. During the next few days the jaundice increased greatly in depth, but the patient insisted on immediate operation to obtain relief from her symptoms.

On February 5th at 10.10 a.m. avertin 0.1 gram per kilo body weight was administered in a 3 per cent. solution in distilled water. At 10.30 the patient was quite unconscious. Nitrous oxide and oxygen were then administered through an ordinary face-piece, and the operation of cholecystectomy and choledochotomy and drainage performed. The operation and the anæsthetic were both difficult, a large amount of ether being required to obtain adequate access, and in addition some chloroform was necessary to facilitate the peritoneal closure. By 2.30 p.m. the patient was very restless, and 1/6 grain of morphine was administered. For the first forty-eight hours nausea was very marked, accompanied occasionally by slight bilious vomiting. The subsequent progress of the patient was slow but steady, in particular her jaundice was slow in disappearing although she felt greatly benefited by the operation. She returned home on February 29th. A faint tinge of jaundice was still visible in the conjunctivæ, but the stools were normal and the urine was free from bile. The patient herself said that she was feeling well and eating well.

CASE III

Mrs. H., aged 57, had had recurrent attacks of pain in the right hypochondrium accompanied by vomiting and constipation since December 1931. She was first seen on February 3rd 1932. There was tenderness in the right hypochondrium, and it was thought that an indefinite mass was present on deep palpation in that area. Slight jaundice was present which had been first noticed during the last week in January. For a few days after she was first seen the jaundice increased markedly; the patient was deeply jaundiced on the day of operation (February 9th).

At 9.40 a.m. avertin 0.1 gram per kilo body weight was administered in a 3 per cent. solution in distilled water. At 10 o'clock the patient was unconscious. An intratracheal catheter was introduced by direct vision, and nitrous oxide and oxygen were administered. An exploratory laparotomy was then performed which revealed a large carcinoma of the head of the pancreas and the liver studded with secondary deposits. Owing to the advanced state of the disease it was impossible to undertake any operative treatment, and the abdomen was closed. A small amount of ether was administered to facilitate the peritoneal suture. This patient had no post-operative vomiting, and returned home on February 23rd her general condition being unaltered by the operation. During the few days preceding her return home the jaundice became increasingly deeper.

It will be noticed that two of the patients were deeply jaundiced before operation, that each received a normal dose of avertin of 0.1 gram per kilo of body weight, and that induction of depth of, and recovery from, narcosis were all within such normal limits as to occasion no remark.

CONCLUSIONS

1. Conflicting views exist on the possibility of production of liver damage by administration of avertin. The weight of evidence suggests that such damage is slight or negligible.

2. The three cases described prove that avertin can be used without apparent harm in cases in which there is pre-operative liver damage, and also afford strong presumptive evidence that Bourne, Bruger and Drever are correct in their conclusion that avertin is less damaging to the liver than chloroform and ether.

3. Avertin plus nitrous oxide and oxygen with minimal ether if necessary is a very suitable anæsthetic for gall-bladder surgery even in the presence of liver damage.

My thanks are due to Mr. A. H. Southam, honorary assistant surgeon to Manchester Royal Infirmary, for his permission to publish the details of these three cases all of which were operated upon by him, and for his kindness in supplying his private notes on the pre-operative history and condition.

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FOUR CASES OF ERYSIPELAS TREATED BY MILK INJECTIONS

BY

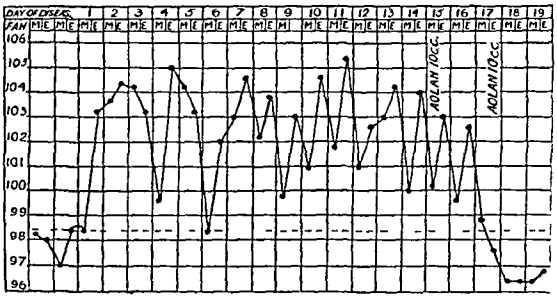
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RESIDENT MEDICAL OFFICER KING GEORGE HOSPITAL ILFORD

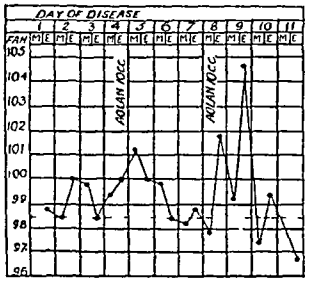
Following upon Dr Saved's article in the *British Medical Journal* of February 13th and Dr Semon's letter in the following number it may be of interest to record four consecutive recent cases of erysipelas which were treated by the intramuscular injection of aolan the detoxicated milk protein prepared by Beiersdorf

CASE I

H M aged 15 suffering from osteomyelitis of the lower end of the left femur of six months duration developed

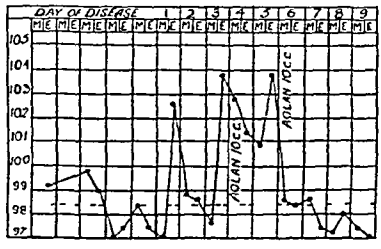


erysipelas which commenced in the vicinity of a discharging sinus This was accompanied by high fever up to 105° F which persisted for a fortnight in spite of various local applications An intramuscular injection of aolan 10 c cm was given on the fifteenth day and again on the seventeenth and coinciding with the second injection the temperature fell from 102 6° to 96 4° and remained subnormal



CASE II

Mrs M K aged 76 suffering from a large sebaceous adenoma of the scalp developed facial erysipelas associated with trigeminal neuralgia and irregular fever Following an intramuscular injection of aolan 10 c cm on the fourth day the temperature became normal but the local spread continued A further injection of 10 c cm on the eighth day was followed by two sharp rises in temperature to 101 8° and 104 6° F after which the pyrexia ceased and the local condition subsided

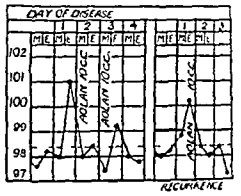


CASE III

Miss X a nurse aged 23 was admitted on January 11th 1932 for incision of an acute mammary abscess Two days later the onset of erysipelas was heralded by a sudden rise in temperature to 102 6° F An intramuscular injection of aolan 10 c cm on the fourth day of the fever produced only a slight fall in temperature while a second injection on the sixth day was associated with a fall from 103 8° to 98 6° after which she remained afebrile

CASE IV

Miss B B aged 17 was run over by a bus on July 29th 1931 sustaining a fractured femur and severe contusion of the muscles and skin of the thigh On January 14th 1932 erysipelas commenced in the vicinity of an unhealed area with a temperature of 101° F and spread up to the groin and down to below the knee Aolan 10 c cm was injected on the second day and again on the third day after which the temperature became normal and the rash ceased to spread



On February 4th there was a recurrence with a rise in temperature to 100° An injection of aolan 10 c cm on the same day apparently determined the cessation of the attack

The results in this small number of cases would appear to indicate that this form of non specific therapy has a beneficial effect in erysipelas At any rate, they are sufficiently encouraging to justify its use in further cases

I have to thank Mr A J Couzens and Mr R S Corbett for permission to publish Cases I and III and Cases II and IV respectively and I wish to acknowledge our indebtedness to Dr Henry Semon who drew our attention to the value of this form of treatment

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

A CASE OF PERFORATED DIVERTICULITIS

The following case presents some unusual features and may I think be of interest

An indoor labourer aged 69 years was admitted to hospital on the evening of December 7th 1931 suffering from severe abdominal pain He had always been a perfectly healthy man except for an attack of indigestion fifteen years ago which at the time was thought to be due to a duodenal ulcer

His history was that after tea on the day before admission he had been seized with sudden abdominal pain most marked in the lower half of the abdomen and had sent to his doctor who had prescribed Dover's powder x grains At 10 p m the doctor called to see him and found him in bed and asleep his family saying that he was better On the following morning the doctor visited him and saw him in bed His temperature was then 98 2° pulse 76 he had no pain and the abdomen was quite soft on palpation As a precautionary measure he was kept in bed but at 5 p m the same day the doctor was again called and found that the pain had returned and was general over the abdomen which was rigid all over The patient was flushed temperature was then 99 6° and pulse 86 He had vomited mucus and gastric juice He was at once removed to hospital where I saw him and advised immediate operation Temperature 100 6° pulse 132 liver dullness absent

A diagnosis of rupture of a hollow viscus was made the history of indigestion fifteen years previously suggesting that the duodenum might be the site of the lesion though the age of the patient the temperature pulse and the original low distribution of the pain were against it and the possibility of perforated diverticulitis was borne in mind

In view of these facts a small right paramedian incision was made three inches long and centred on a point half an inch above the level of the umbilicus A small opening was made in the peritoneum a little gas escaped and a milky peritoneal exudate in no great quantity was seen There was absolutely no odour No stomach contents were seen but as the patient had had no solid food for over twenty four hours this fact was considered to be without significance since the peritoneal exudate appeared to be typical of that found in cases of duodenal perforation the incision was extended upward Upon the stomach and duodenum as well as upon the small intestine were numerous flakes of fibrinous lymph but there was no ulcer or perforation or lesion of any kind Appendix gall bladder and pancreas were examined

and found to be normal The small intestine was then systematically examined for perforation and was found to be normal but on withdrawing the terminal coil of ileum from the pelvis there was a gush of thin brown faecal smelling fluid The sigmoid colon was palpated and the terminal six inches was found to be the site of advanced diverticulitis The original incision was extended downward now and finally a perforation which admitted the tip of the index finger was found in the terminal inch of the colon upon its right side The edges of the perforation were black and gangrenous With the aid of a long needle holder the perforation was loosely closed by mattress sutures and a tag of fat which happened to be lying conveniently to hand was stitched over it A rapid toilet of the peritoneum was then performed and four or five lumps of hard faeces the size of a pea were picked out of the general peritoneal cavity Colostomy was considered but in view of the almost hopeless prognosis it was thought inadvisable to prolong the operation any further A large drainage tube was placed within the pelvis and the wound sutured in three layers with in addition four through and through sutures

For eight days the patient very slowly improved On the fourth day faecal matter appeared through the drainage tube and on the eighth and tenth days the bowels moved normally The abdomen was not distended there was no vomiting nor did the temperature rise above normal after the operation On the eighth day however he developed a bronchopneumonia and died eleven days after operation

The points of particular interest in this case are I think (1) that the perforation of the colon must have occurred on the Sunday afternoon but that the infection was confined at first to the pelvis and the general peritoneal cavity was not infected until 5 p m on Monday (2) the misleading character of the peritoneal exudate in the upper abdomen and the complete absence of any odour (3) that the patient lived for so long after operation and died not (as one would expect) of peritonitis of which there was no sign but of bronchopneumonia

I am indebted to Dr Boucher of Donacloney for the patient's history prior to admission to hospital

Surgeon V J MORCOM TAYLOR F R C S Ed

Reports of Societies

OTO RHINO-LARYNGOLOGY

At the annual summer meeting of the Sections of Laryngology and Otology of the Royal Society of Medicine held at the Eye and Ear Hospital Southsea on June 10th and 11th the chair on the first day was taken by the president of the Laryngological Section Mr W G HOWARTH and on the second day by Mr W M MOLLISON past president of the Section of Otology

THE EAR AND REFERRED PAIN

On the first day Mr LIONEL COLLEDGE opened with a discussion on pain referred to the ear He said that as long ago as 1835 John Hunter noted that suppuration in the antrum caused pain in the frontal sinus In such cases the area was that covered by the trigeminal nerve Sometimes pain was referred to an ear which was neither deaf nor the seat of inflammation The common source of such referred pain was the pharynx It might be caused by calculus in the tonsil an epithelioma of the pharynx or defective teeth An unerupted or partially erupted wisdom tooth was an excellent example of a cause of pain referred to the ear but even a bicuspid tooth might be responsible It could be said in a general way that a lesion in the area of the distribution of the trigeminal nerve of the glosso pharyngeal or the superior laryngeal branch of the vagus was capable of causing a reference of pain to the ear

A boy 14 years of age complained of feeling severe pain in an ear but examination failed to reveal anything amiss with the ear At a much later stage when the patient was in fact dying of meningitis he was seen in consultation by two other medical men and at the post mortem examination pus was found surrounding the sphenoidal sinus In another case that of a man with an epithelioma low down in the pharyngeal wall an aural surgeon had been treating him for six months on account of pain in the ear though inspection showed that ear the left to be in every way normal Owing to the time which had elapsed the operation for removal of the growth had to be an extensive one but though that was three years ago the man still remained well

Mr Colledge asked why the nervous system should make this error in the allocation of the seat of the pain Henry Head contended that pain was felt in the thalamus and was analysed by the cerebral cortex The explanation of the erroneous interpretation which he himself submitted was that owing to lack of perceptive education some situations did not appreciate pain and response was felt in a region accustomed to such appreciation

Mr E WATSON WILLIAMS remarked that when earache was complained of and yet the ear was normal it was necessary to search until the cause was found The real trap was when an ear the one complained of was really defective but turned out not to be the cause of the pain which might be due to temporo mandibular arthritis or to mumps Herpes oticus was very apt to simulate otitis media

One patient a boy of 14 had severe pain in an ear for three days He had just had a cold and when the speaker saw him he was worse with a temperature of 104 4° F was giddy and was vomiting There was a slight sanious discharge from the ear and great tenderness of the mastoid tip The patient was in the theatre preparatory to a mastoid operation and looked like a case of pneumonia to Mr Watson Williams there were crepitations at the lung base The operation was not undertaken and thirty six hours later typical pneumonia had developed

Mouth nose pharynx and larynx should all be examined when ear pain was associated with a healthy ear Sphenoidal sinusitis could well be mistaken for otitis media especially in the young Meningitis might cause pain in the ear indeed it might be not only the first but the only localizing sign

Dr P WATSON WILLIAMS said it was important when a sinus was infected to aspirate its contents and so lessen that tension which was such a potent factor in spreading infection When nothing was detected in the ear to account for the ear pain endo rhinoscopy should be done On no account should examination of teeth and nose be omitted even when an ear condition was discovered as that might not be the only lesion Mr SCOTT RIDOUT urged the taking of skiagrams to try to discover impacted teeth or defective molars when ear pain was complained of and there was nothing in the ear to show for it Infection of the antrum was a frequent cause of the kind of cases under discussion Dr D R PATERSON spoke of the value of the work done on the question of referred pain in various parts by Francis Dixon professor of anatomy at Cardiff years ago especially in respect of the anastomosis between the glosso pharyngeal and the facial From his embryological work Dixon showed that the nerve grew out from the petrous ganglion and that it accompanied a branch of the facial to supply the tympanum and the other parts of the middle ear The kind of mistakes made by the cortex in localizing the lesion were not uncommon Sometimes tonsils were enucleated because irritat on had been caused in them from a lesion elsewhere Mr J F O MALLEY related a case in which extraction of a tooth was immediately followed by bleeding from the nose and succeeded in a day or two by pus coming from it Later there was pain in the roof of the nose and the typical pain of frontal sinus trouble Recently a considerable quantity of pus was washed out from the antrum and this cured the pain

POLYPI

Mr G SCOTT WILLIAMSON contributed a paper on the genesis of polypi He said that there were two areas of the body in which the mucous membrane showed an inordinate tendency to the development of polypi—the nose and the cervix uteri There was some underlying condition in those areas which caused what would be ordinary inflammatory swellings in other regions to take on a polypoid form in these The chief of the causes seemed to be that the main blood supply was far removed from its ultimate distribution the main blood vessels and lymphatic vessels must distribute themselves between the membrane and the solid structures beneath It must be remembered that hypertrophy occurred in the various active glands in the nose and throat as in other regions and some hypertrophies were transient while others persisted When the hypertrophy of a structure had to take place in a limited area as in the nose and throat there was a polypoid form of manifestation In 40 per cent of the cases of polypus he had examined he found at the root of the polyp an adenoma or an adenoid hypertrophy the primary lesion being apparently an overgrowth of the superficial glands of the mucous membrane The polyp was a large myxoid mass on an adenomatous formation It was found experimentally that it was only necessary to reduce the supply of any hypertrophying gland in order to see produced a change from hypertrophy to hyperplasia The latter was on the high road to malignancy In many cases polypoid growths represented diseases—something more than a local state of infection To explain the polypoid growths arising as a result of infection was more difficult He had been able in eleven years to follow up many cases of polypus over a course of years with the help of the surgeons and in twenty eight he had seen chronic inflammation with numerous polypi change to hyperplasia and malignancy

Mr W M MOLLISON recognized clinically two types of polypi a small kind quite rare occurring in patients who had hay fever—these polypi occurring high up in the nose—and the common type whose origin he regarded as some infection though after hearing Mr Scott Williamson's paper he did not feel so certain of that One type that associated with a good deal of pus he looked upon as a severe infection His experience differed from Mr Williamson's in the frequency with which polypi became malignant He had considered that such a transformation practically never took place

Mr CAPPS agreed with Mr Mollison as to the rarity of a malignant transformation of polypi as he had never seen a case of the kind In recent years he considered there were fewer cases of adults who came to hospital to have successive crops of polypi removed perhaps because the nose was now better attended to in childhood than formerly for in a large number of cases in middle age the trouble seemed to have started in early life But cases of spasmodic rhinorrhoea with a watery secretion irrespective of season he regarded as more common now than years ago Perhaps dusty occupations and surroundings were the cause Dr P WATSON WILLIAMS was in agreement with those who considered that the clue to the causation of polypi was the anatomical difficulty of maintaining the lymph circulation His view of the cause was that an infecting agent penetrated the submucosa He had been able to demonstrate the presence of cocci in the lymph spaces He thought that an endolymphangitis was set up by the cocci invading the lymph spaces causing obstruction The cause need not be microbial it could be chemical or mechanical Dr LOWNDES YATES drew attention to the importance of the factor of mucous membrane hypertrophy in these cases and the need therefore in operating to give room for the hypertrophy to take place

INFECTIONS AND EAR INFLAMMATION

Mr HAROLD BARWELL introducing a discussion on types of nasal infection causing inflammations of the ear said that if it were known what nasal conditions were liable to cause aural inflammation patients might often be protected from a serious complication Spread of inflammation from one region to another by lymphatics or blood was so rare that it was practically negligible in this connexion Usually the inflammation reached the ear by continuity along the mucous membrane to and along the Eustachian tube or by discharges from a septic focus in the nose being blown through the Eustachian tube into the tympanum The latter was he thought by far the commoner method There were three factors which might influence the extension of inflammation from the nose to the ear—namely (1) the situation of the lesion in the nose (2) the previous condition of ear and Eustachian tube (3) the virulence of the infecting organisms The latter was the most potent factor and apart from the intensity of the infection in a general way some strains showed a special tendency to attack the ears The blowing of infecting material through the Eustachian tube seemed to be largely a question of violent nose toilet

Mr T H JUST spoke especially on the bacteriology and remarked that a clear cut nasal infection without any disease or abnormality in the nasopharynx scarcely ever caused aural suppuration In ear cases the organism most frequently responsible was *Streptococcus pyogenes* next in order came pneumococcus and then staphylococcus and *B influenzae* Chronic infection of the antrum and of the ethmoid were *per se* rare causes and frontal sinusitis was a still rarer origin of this trouble An otitis media taking place at the same time as a *homolateral* antrum infection always developed into an acute mastoid infection

Mr T B LAYTON gave a classification of infections of or through the upper respiratory tract and drew attention to the gravity of ear cases associated with influenza especially when this complication supervened on an attack of measles Mr MUSGRAVE WOODMAN agreed that many cases of acute infection of the ear were *caused by faulty nose blowing or by heavy douching of the nose* and spoke of a severe case of asthma with blockage of the nose in a lady on whom he declined to operate and advised a stay in a sunny climate for a time In three weeks she returned *in a much improved* state and he was able to deal locally with the slight discharge

On June 11th with Mr W M MOLLISON in the chair Dr J R B HERN demonstrated a cinematographic presentation of a case in which a large thoracic growth produced a gross deflection of the trachea The record also showed the operation for the removal of the tumour The bulk of the second day's session was devoted to the examination and discussion of a large number of cases and specimens both otological and laryngological

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THE PROBLEM OF HEARING AIDS

In a lecture demonstration given to the Manchester Division of the British Medical Association on February 26th Mr A W G EWING M A Ph D *honorary special* lecturer in the education *of the deaf* in the University of Manchester expressed the hope that not only the Division but also the medical profession as a whole would take immediate and practical steps towards putting the supply of *mechanical aids to hearing* on a scientific basis The lecturer continued as follows

It is an amazing fact that a man with defective sight can often—not always of course—have the defect corrected in a thoroughly scientific way by the use of spectacles but that knowledge about partial deafness has

lagged far behind that degree of efficiency Efficiency in the supply of visual aids—that is of spectacles—is dependent on (1) accurate knowledge of the defect to be remedied—measurement of the individual patient's visual capacity and (2) accurate calibration of the visual aid—precise knowledge of the character and power of various types of optical lens so that the right spectacles may be supplied to the right patient

By contrast the present position as regards the supply of hearing aids is deplorable The partially deaf patient who wishes to obtain a hearing aid if he can afford it sometimes goes from one commercial firm to another trying one aid after another and if he succeeds in obtaining a suitable aid it may be largely a matter of chance There is so far as I know no co operation in this matter between otologists and the commercial firms who supply these aids In the whole of Great Britain there is apparently only one firm and that recently established which makes any claim to measure by scientific means the hearing capacity of its clients before prescribing a hearing aid or to supply hearing aids accurately constructed and adapted to remedy particular defects of hearing Further more when the United States Bureau of Standards in 1927 made an attempt to investigate the character of the various hearing aids on sale in America it was clearly proved that though many of the aids might be very valuable to certain patients there were some aids on sale which would actually make it more difficult for the patient to hear than if he used no aid at all

Remedies for Present Problem

We believe that we can show you that it is now possible to initiate a remedy for this state of confusion to establish a common standard of measurement of hearing capacity for speech (which involves hearing tests not necessarily identical with those used for clinical purposes) to identify as the result of recent research types of auditory defect which require totally different types of hearing aids and lastly by applying to this special field the vast body of accurate technical knowledge and apparatus which has been accumulated in the recent development of telephone engineering wireless broadcasting and the gramophone to make a beginning with fitting accurately adapted hearing aids to particular patients We submit that the provision of hearing aids on a scientific basis will require team work on the part of the doctor the physicist the psychologist and as I shall presently explain the trained teacher of the deaf but that it will never be brought about unless the initial steps are taken and the closest co operation is afforded by the medical profession

I would suggest that the first step should be the adoption of a standardized method of measuring auditory acuity especially hearing for speech To day we possess minute information about the physical nature of speech sounds such as the great earlier investigators like Bezold never dreamed of We have used many methods of measuring hearing but we have found the 2A Western Electric audiometer the most efficient and reliable single means of making hearing tests With it detailed and accurate charts of the hearing capacity for speech of individual patients can be made It enables us to test the hearing of young children as well as adults with precise results There are both a telephone receiver and a bone conduction receiver

Different Types of Hearing Defects

The main part of this demonstration falls naturally under two heads First the nature of different types of hearing defects considered with regard to their effect in diminishing the patient's capacity for hearing and understanding speech Secondly I shall try to demonstrate the fact that though we ourselves have only recently been driven to study the construction of suitable hearing aids we have reached a stage when we can say that the rectification of each type of defect is possible in a considerable proportion of instances

The first point I need to demonstrate with the help of the gramophone amplifier and loud speaker is that deafness which only reduces the loudness of speech interferes less with intelligibility than deafness which causes distortion To illustrate this I will put on a gramophone record of ordinary speech then gradually reduce the loudness to approximately that of a whisper You will find that almost so long as you can hear the speech at all it is perfectly intelligible

[A gramophone record of normal speech was played loudly then repeated the loudness being gradually reduced to a level at which the sounds were only just audible]

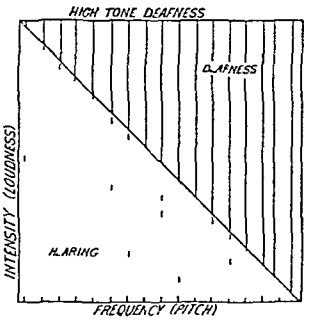


Diagram 1

The patient who suffers from deafness of this type which does not distort speech but only reduces its loudness and the distance at which it can be heard with the unaided ear can already be helped very efficiently by the use of some type of amplifier The mechanical means exist to a large extent the technical problem being chiefly that of reducing the size weight and number of components

By contrast with hearing loss of this kind the results of the principal types of distortion involved in deafness are strikingly different The early gramophones and loud speakers produced speech which was so distorted that it sounded nasal As you will recognize in a few moments distortions due to deafness may be far worse than that Distorted speech is difficult to follow not necessarily because it is not loud enough—it may be very loud but quite unintelligible—but because the apparatus used for reproducing or registering the sounds in the case of the deaf patient the ear and auditory mechanism as a whole is making either the lower tones or the upper tones or the tones at the middle of the scale too loud in proportion to the rest of the pitch range

High Note Deafness

The most common type of distortion due to deafness appears to be that which we have described as high

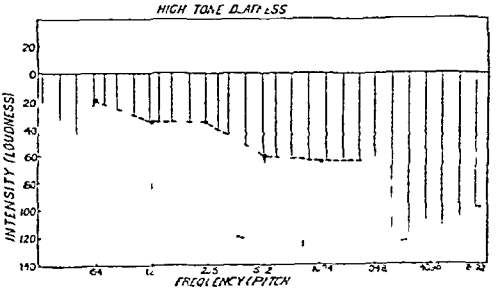


Diagram 2

note deafness Judging from otologists reports on patients whose hearing we have tested this seems to be associated usually with cochlear or auditory nerve trouble The patient hears low notes much better than high notes He may hear low notes normally or almost normally but be completely deaf to important upper tones no matter how loud they are made Here are (*a*) an illustrative diagram (Diagram 1) and (*b*) an actual hearing chart (Diagram 2) of the hearing of such a patient

What does ordinary speech sound like to such a patient? *By the help of this gramophone record* which was made to our specification by using filters to reduce the loudness of high notes under the supervision of Captain A G D West at the works of the Gramophone Company Hayes Middlesex we can show you A comparison of the hearing capacity of the high note deaf patient and of the distortion curve of the filter used in making the gramophone record is given in Diagram 3

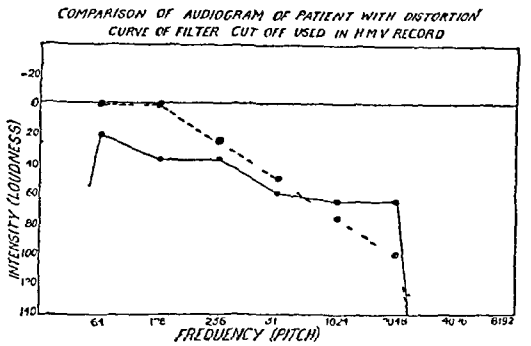


DIAGRAM 3

[The first section of the record consisted of three English vowels spoken in irregular order as heard by the high note deaf patient It demonstrated that the vowels ah oo and ee were heard as ah oo oo by a patient considerably deaf to high tones The difference in sound between oo and ee was eliminated by distortion due to the deafness The next section gave ah oo and ee normally reproduced A third section showed that the effect of high note deafness on connected speech was to make it almost completely unintelligible to an unpractised listener]

The use of an ordinary hearing aid or a loud voice will often actually diminish a high note deaf patient s ability to hear and understand speech The distortion is intensified by making the total volume of sound louder

[The vowel section of the record was replayed with greatly increased volume the result being that not only were oo and ee indistinguishable but ah and oo were almost alike]

If the human voice is used these high note patients can hear speech best if it is uttered quietly as closely as possible to the ear

[The distorted sections of the gramophone were played again this time very quietly illustrating the fact that this type of distortion interferes far less with the intelligibility of quiet than of loud speech]

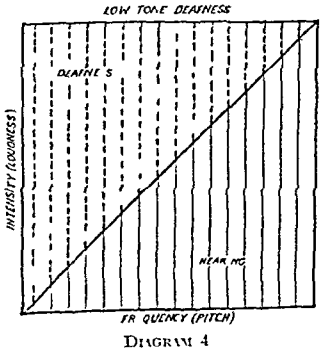


DIAGRAM 4

As I will show presently there is a strong probability that a hearing aid can be constructed to rectify to a considerable extent such distortions I can also show you music as heard by high note deaf patients

[A gramophone record of music played by a military band was reproduced with the high notes above 400~ cut out by the employment of filters in the amplifying circuit The record was next reproduced normally]

If the condition of high note deafness be very severe music sounds to the patient as follows but not so loud

[The gramophone record of music was reproduced with all notes above 130~ cut out by a filter]

LOW NOTE DEAFNESS

The opposite type of distortion due to deafness is illustrated by Diagram 4 the chart attached (Diagram 5) being the actual audiogram of a patient who appears to be typical As the textbooks would lead one to expect low note deafness appears to be usually associated with middle ear trouble In this instance as you will see hearing by air conduction is severely reduced on the low notes but hearing by bone conduction indicated by the xxxxxx line is approximately normal for these same low notes though on higher tones hearing by bone conduction is so decreased as to be apparently non existent To such a patient who is much deafer to low than to high notes speech will sound like this

[In H M V gramophone record of speech with low tones eliminated was played Then a normal reproduction of the same passage of speech was put on]

Speech therefore is intelligible to the low note deaf patient as you would find with further practice in listening to the distorted version which you have just heard but deficient in laryngeal tones and high pitched in total effect We have found a strong probability that this type of distortion can be rectified I will put on a similarly distorted section of a gramophone record and use filters to make it more normal We have not yet had sufficient time to obtain as much amplification as we want, so the

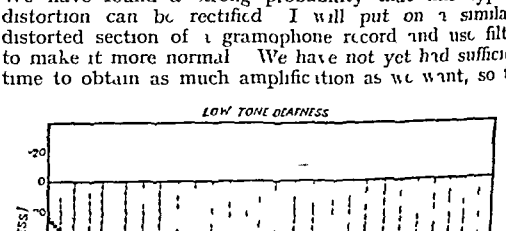


DIAGRAM 5

result is quiet speech You remember the chirrupy character of the distorted speech

[An H M V gramophone record of connected speech with the low tones greatly reduced in intensity was reproduced then repeated with a powerful amplifier and filters in the circuit in order to make it normal]

The low note deaf patient hears music as if it had the same chirrupy *high pitched* quality

[A Bell Telephone Laboratory record of music with the low tones eliminated was played]

This also can be rectified by the use of filters

[The same section of the same record was repeated the amplifier and filters being used to normalize it]

You will recognize that this corrected version approaches tolerably close to the normal reproduction

[The normal section of the Bell Telephone Laboratory record giving a normal version of the same passage of music was reproduced for purposes of comparison]

DEAFNESS IN RELATION TO LIP READING AND SPEECH

I should like to add a few brief words in relation to two problems with which the problem of hearing aids is closely connected First we have proved during the last six or seven years that the deaf patient who uses a hearing aid and has also learned to lip read invariably has a great advantage over the patient who uses a hearing aid only Apart from the fact that a deaf patient may be temporarily deprived of the use of his aid or become too deaf to be able to use one at all we have the fact that nothing

can ever compensate for the loss of perfect hearing and that no matter how efficient the aid lip reading is needed to help where the aid is least effective The aid and lip reading together are not equal in efficiency to perfectly normal hearing

The second point relates to the effect of deafness on the speech uttered by the patient It has long been recognized that total deafness at birth is the most common cause of total dumbness but the effect of chronic deafness of incidence after the patient has learned to speak normally has received very little attention The development and continued maintenance throughout life of normal speech is dependent on the principle of matching We are used to the term matching as applied to colours It appears that when we speak our nervous systems carry out the same principle of matching We hear others speak and we hear ourselves speak Both processes are equally essential We make our utterance—that is what we hear ourselves say—correspond in detail to the type of speech which we hear most often around us We instinctively adapt the language pronunciation and intonation of our environment It would be possible to show—and I hope that I shall be given the opportunity to show it at some later date—that patients suffering from congenital or chronic deafness speak as they hear If they are low note deaf they speak in a high pitched voice but distinctly if they are high note deaf they speak with good voice but indistinctly Their speech is just like the distorted speech of the gramophone record The possibilities of this combination of scientific use of partial hearing with lip reading are very great

May I conclude with a very strong appeal to you as medical men to use your influence which is so strong and which is so vitally needed to promote the development of scientific hearing aids As I have said we are finding in our experience that two steps are absolutely essential (1) a standardizing means of measuring hearing capacity for speech and (2) the supply of hearing aids of known and measured capacity and efficiency

Dr Ewing also expressed thanks to Mr T S Littler for invaluable technical assistance to Dr Crichton Brimwell for the loan of the Western Electric Stethoscope and to the Gramophone Company (H M V) and Bell Telephone Laboratories for the loan of records

TREATMENT OF SALPINGITIS

At the last meeting of the Edinburgh Obstetrical Society a paper was read by Dr JAMES YOUNG (the president) and Dr T N MACGREGOR on the palliative treatment of salpingitis based upon an analysis of fifty five consecutive hospital cases

They stated that it was now generally recognized that immediate operation in cases of salpingitis exhibiting acute symptoms was attended with grave risk to life At the British Congress of Obstetrics and Gynaecology at Manchester in 1927 at which this question had been the main topic of discussion Hendry reported twenty four operations on acute and subacute cases (gonorrhoeal and septic) with nine deaths and Beckwith Whitehouse stated he had lost three consecutive cases when he removed the tubes for acute pyosalpinx The last occasion on which Drs Young and MacGregor had removed an acute tube was in 1924 and this patient died two days after operation since then all their cases had been treated palliatively with no hospital mortality In the present series of fifty five cases fifty one had been admitted with acute or subacute symptoms In three cases the abdomen had been opened to eliminate the possibility of acute appendicitis or tubal pregnancy and inflamed tubes having been found the abdomen had been closed without interference with the inflamed area In four other cases a pelvic abscess had been evacuated by posterior colpotomy Otherwise the treatment had been palliative consisting of rest in bed hot fomentations to the abdomen and morphine In ten out of the fifty one cases re admission for recrudescence of the symptoms had been necessary and in two of these extirpation of chronically diseased organs was later carried out Of those patients treated palliatively who had been followed up 90 per cent were found to have made a complete or adequate spontaneous clinical recovery These findings the speakers said confirmed the observations of Curtis and Hendry who in cases of acute salpingitis treating entirely on palliative lines obtained a clinical recovery in 90 and 91 per cent respectively Expectant treatment besides safeguarding life gave generally the best chances of functional recovery as operation during the acute phase usually revealed such extensive involvement of the pelvis that eradication was possible only by drastic excision of the organs With expectant methods the organs were conserved and on these if necessary plastic surgery could at a later date exercise its ingenuity if pregnancy was desired In this connexion it was important to find that functional recovery took place spontaneously in a number of cases In 5 or 12 8 per cent of their series pregnancy occurred subsequent to discharge from hospital

Dr FARQUHAR MURRAY (Newcastle) read a paper on the investigation and treatment of tubal conditions He discussed the insufflation test and considered that it should be made in every case of sterility especially if there was an antecedent history of pelvic inflammation He considered it was important to insufflate while performing a salpingostomy not only to prove patency but by dilating the tube to facilitate the incision Proof of patency of one tube made a laparotomy unnecessary The test was reliable but not infallible The occasional fallacies were shown by *x* ray examination after injection of lipiodol There was a definite risk of peritoneal shock and air embolism but little if any of lighting up a septic process in the tubes or peritoneum The test gave no clue as to the site of blockage in cases with sealed tubes Both the insufflation test and the injection with lipiodol were performed under anaesthesia *X* ray examination after lipiodol showed exactly the site of blockage in cases with sealed tubes If this was at the abdominal end of the tube or even intermediate in position it was ideal for salpingostomy but if it was at the interstitial or isthmic portions then operation was inadvisable Injections of lipiodol were of diagnostic prognostic and therapeutic value in cases of chronic pelvic pain This applied especially to those cases with no palpable evidence of tubal mischief The injection frequently made the pain worse for a period and in a certain number of cases the *x* ray examination showed that the injection did not enter the tube or having entered failed to reach the peritoneal cavity A second photograph taken twenty four hours later demonstrated that lipiodol was held up in a loculus in the tube In a normal case there was no definition of shadow but merely a diffuse pelvic blurring at the second examination The prognostic value consisted in the proof that there was a tubal pathology in cases which were being treated symptomatically for chronic pelvic pain and in deciding which of those cases should or should not be operated upon If proof was obtained by *x* ray examination that there was drainage both into the uterus and into the peritoneum then operation should be postponed evidence of defective drainage would hasten operative treatment The therapeutic value of lipiodol was shown by the relief of pain in several cases which clinically by *x* ray examination or later at operation were clearly cases of chronic inflammatory mischief In one of the speaker's cases the lipiodol injection caused an acute inflammatory attack with pus formation but the operative findings showed pre existing chronic trouble He considered that all cases requiring active disinfection under anaesthesia for cervicitis and vaginitis should be injected with lipiodol and *x* rayed

Reviews

PRACTICAL SURGERY

It is difficult to judge of a book from the first only of its two volumes, but this is the task set for us by Messrs HAMILTON BAILEY and R J MCNEILL LOVE in volume I of their *Short Practice of Surgery* [1] which has been published while the second is yet in preparation In their brief preface the authors do not precisely state what readers they desire to secure but we presume that the work is intended principally for students who are about to undergo the examination in surgery of the Conjoint Board or its equivalent The style is clear and as didactic as is required for definite instruction The authors aim has been to include only such material as is recent or which has been generally accepted The adoption of two sizes of type one for the descriptions of comparatively advanced surgery and the rarer conditions and the other and larger for what we may call everyday surgery will enable readers the more readily to pick out the information they want The twenty one chapters of this volume are devoted to the surgery of the blood vessels septic conditions the limbs head face and neck and the kidneys bladder genito urinary apparatus and the heart Injuries and diseases of the bones and joints and deformities are dealt with in the last five chapters Judging from the allocation of space we should infer that surgical disease has more interest for the authors than surgical casualties although any opinion of this sort must be provisional so long as only one volume is available for inspection

Somewhat oddly affections of muscles tendons and bursae find themselves wedged between lymphatics and glands far apart from injuries of bones and joints with which they are more associated Here the recommendation of *flexion* in the treatment of mallet finger calls for protest It must surely be the result of a *lapsus calami* Rupture of the tendo Achillis seems to have escaped the authors notice altogether The chapters on the face and jaws and surrounding regions including the thyroid and breast are some of the fullest and are illustrated by many figures five of which are coloured This is the more noteworthy because such subjects as stomatitis are not often fully dealt with in general surgical works Justice is also done to the kidneys bladder and prostate and these and the genital organs are illuminated by a number of coloured and plain figures In the chapters on injuries to bones and joints we should have liked to see more emphasis placed on the paramount necessity of a demand on the part of the practitioner for a radiographic examination not only as a help to diagnosis and treatment but as a means of self defence against possible legal actions We do not overlook the author's apt quotation Bones are not filled with red marrow but with black ingratitude but there are some cautions which can hardly too often be repeated The same remark applies to Volkmann's ischæmia which is cursorily referred to as *myositis fibrosa but without* sufficient indication of its gravity from the practitioner's point of view

We have nothing but commendation for the way in which this work is produced and for the excellent illustrations 269 in number 17 of which are coloured We can strongly recommend the volume to all senior students and junior practitioners who are in need of a guide in their studies and of direction in the consultation of larger works

[1] *Short Practice of Surgery* By Hamilton Bailey FRCS and R J McNeill Love MS FRCS Vol I London H K Lewis and Co Ltd 1932 (Pp xiii + 816 270 figures 20s net)

INHERITANCE OF MENTAL QUALITIES

During the past few years many investigations have been carried out on the inheritance of mental qualities as determined by intelligence tests Miss EVELYN LAWRENCE'S monograph on *An Investigation into the Relation between Intelligence and Inheritance* [1] is the record of a most useful addition to previous work This is not because of the abundance of the material analysed for the work has not been conducted on a large scale but because of the unique interest of her data and the possibility of using it for critical tests

Miss Lawrence has had access to a very special type of institution whose anonymity is preserved under the title of Dr Smith's Home This home only accepts illegitimate children under 1 year old the average age of admission being 6 months Records of the occupation of both father and mother are taken All the cases are cases of desertion by the father so that it will be appreciated that the only connexion between the child and its father is that due to organic inheritance while the connexion with the mother is limited to its ante natal life and an average post natal period of six months The *material is ideal for the estimation of parent offspring* correlations in which the effects of environment are eliminated The children at another institution were also studied any child in need of a home being admitted there The fictitious name British Homes is used Two London Poor Law homes were also included as were the children at half a dozen schools in a poor part of the metropolis Finally a typical London elementary school was selected In the case of Dr Smith's Home a definite though small correlation was found between the intelligence quotient and the social class both of the father and of the mother It is noteworthy that the correlation was no lower in respect of the father The results therefore provide a demonstration that on the average the children of parents of the high social classes are of superior intelligence to those of parents of the lower social classes even if they have never seen their fathers and have been removed from their mothers at an early age It must be emphasized however that the correlations are small and that notable exceptions are of frequent occurrence

The author has used her material for diverse types of analysis and has arrived at a number of interesting conclusions It was found that children who were removed from their parents at a later age showed a higher correlation of intelligence with their parents social class than did those removed earlier On the other hand children from bad homes did not show any difference in intelligence when grouped according to the proportion of their life spent with their parents and at the institution respectively It would be natural to expect that if intelligence could be radically altered by environment children in the uniform environment of Dr Smith's Home should show less variability than would children in an elementary school living with their parents Actually the elementary school children do show a greater variability but the difference is barely significant and much smaller than might have been anticipated An important question is whether long residence at an institution tends to improve or to hinder the development of intelligence Previous workers notably Professor Carr Saunders and Mr Caradoc Jones had noted a drop in the case and assumed that this was due to a deleterious effect of institutional life Miss Lawrence finds the same reduction but

[1] *An Investigation into the Relation between Intelligence and Inheritance* By Evelyn M Lawrence BSc MD *British Journal of Psychology* Monograph Supplement Cambridge University Press 1931 (Pp vi + 89 9 figures 5s 6d net)

also finds it in the case of non institutional children She therefore concludes that the result is due to faulty standardization of the tests and considers that no deleterious effect due to institutional life has been demonstrated

No connexion was discovered between intelligence and legitimacy An interesting group was one of twenty children in Dr Smith's Home whose mothers were all under 17 years of age It might be imagined that children of such very young mothers would be at a disadvantage as contrasted with other children Actually the average score of this group was rather higher than the rest and it included one with an intelligence quotient of 145 than which only one higher score was obtained in all Miss Lawrence's observations An attempt was made to relate intelligence to health but owing to the small size of the group it is doubtful if these results are of much value A small positive correlation was found but the lack of consistency in the results which is in marked contrast to the uniformity of the correlations with social class of parents makes it unlikely that they mean much The author refers to subsequent studies on the same data by the National Institute of Industrial Psychology and states that using slightly modified methods no significant correlations were found

The author's general conclusion from her investigation is that the current opinion that intelligence is to some extent hereditary and that it is more abundant in the upper classes is on the whole correct She points out however that the average differences are not great and that the overlap is substantial She stresses also the large number of low intelligences in Group A (parents of higher social class) and of high intelligences in Group E In fact social class though correlated with intelligence is not a satisfactory grouping As a method of selecting for superior intelligence the efficiency of a scheme based on social class would be rather low and far inferior to one based on the study of the individual With these moderate and fair conclusions we imagine that most readers will be in agreement We have purposely refrained from quoting actual figures As the author states merely to give correlation coefficients without the full tables would convey little The tables themselves should be studied We are confident that all who are interested in the subject will find Miss Lawrence's monograph of great value not only as a record of fact but as a study in method A useful selected bibliography is appended

AN ATLAS OF ELECTROCARDIOGRAPHY

The beautiful atlas of practical electrocardiography[3] by WALSER and DEGLAUDE is a worthy tribute to the value of electrical methods in the diagnosis of cardiac irregularities It is published with the hope of interesting as wide a circle as possible and of showing that if the key to the curve is understood then departure from the normal can be recognized and classified As the authors point out to read an electrocardiogram one is required to know not the mysteries of action currents but a simple alphabet composed of three principal letters and two accessory letters which are employed to describe waves upwards or downwards easily recognizable from the first glance at a graph In other words the clinician may use the method as he would any other fool proof electrical apparatus such as his telephone

The authors pass from a simple description of the three usual leads to a representation of the normal electrocardiogram in a series of tracings Next the conducting system is introduced diagrammatically and theoretical deductions of possible disorders of rhythm—a term which includes changes of conduction rate—are made and explained Then follows a number of neat reproductions of curves illustrating these disorders The interpretation of tracings of paroxysmal tachycardia is always difficult and it would not be hazardous to forecast that the amateur is more likely to stumble over this problem than over any other except perhaps auricular flutter It is remarkable that direct leads off the chest are so seldom mentioned in these expositions addressed to the more general reader for they often furnish tracings in these two conditions which are much simpler to analyse than those from the usual leads Less sure ground for the beginner is entered upon when myocardial disorders are related to certain changes in the curve The authors give no theoretical schema on which deductions can be based and whatever justification for such a use of the galvanometer the future may unfold it would seem that the instrumental method might in some cases tempt the inexperienced to attach a pathological label to what is in fact normal

[3] *Atlas d'Electrocardiographie Pratique* Par J Walser et L Deglaude Preface de Ch Laubry Paris G Doin et Cie (Pp 97 38 plates 90 fr)

DISEASES OF THE SCALP

For the last thirty years ROBERT SABOURAUD has consecrated his life to the study of diseases of the scalp and it is difficult to exaggerate the importance of the contributions he has made to our knowledge of them and the help he has given to their successful treatment To mention one point alone it was he who inaugurated the treatment of ringworm of the scalp by means of x rays a method which has been so successful that this disease formerly almost universal has now become comparatively infrequent and may even ultimately vanish In his latest book[4] on the Diagnosis and Treatment of Affections of the Scalp Sabouraud has crystallized for the benefit of the profession the results of his long experience and research which have been made known to the scientific world in the five successive volumes of his treatise *Les maladies du Cuir Chevelu* The first of these was published in 1902 the last in 1930 The present volume though not strictly comparable with those of the great series recently concluded is a worthy successor It possesses all the characteristics we are accustomed to associate with the master's writing We can enjoy that graphic clinical description and penetrating analysis of the histopathological appearances followed by a skilful marshalling of the facts to support a train of argument which leads inevitably to a triumphant conclusion The enthusiasm of the author for his subject infects the reader and makes some of the chapters more exciting than a novel After all the elucidation and solution of an aetiological problem resembles in principle the detection of a criminal and there is really no reason why the presentment of a good piece of pathological research should not be just as exciting as a detective story but almost alone among medical writers Sabouraud realizes the dramatic possibilities of his material

The arrangement of the present volume reminds us a little of the manual of topographical dermatology which Sabouraud published in 1905 In this it will be remembered he considered successively each separate area of the cutaneous surface beginning with the face then going on to the neck shoulder arm etc and detailed the different affections to which each part was typically liable There was a certain amount of overlapping but the result gave a very fair picture of the pathological susceptibilities of the skin Here he has divided the subject into five parts according to divisions of age—namely infancy adolescence adult life middle age and old age This arrange

[4] *Diagnostic et Traitement des Affections du Cuir Chevelu* Par R Sabouraud Paris Masson et Cie 1931 (Pp 589 290 figures 80 fr)

ment also involves a certain amount of overlapping but is intended to help the practitioner who if in doubt as to the nature of a patient's complaint can at once refer to the list enumerating those diseases which may appear at such a period of life as his patient may happen to be in In consequence the author expresses the hope that his work gains in clarity what it may lose in logic

The publishers deserve praise for the general get up of this volume It is much the same as that of the members of the series of which it is the real conclusion It is printed in the same clear type on the same good paper and is illustrated with the same kind of good clinical photographs and clear drawings of typical microscopical slides Moreover it is provided with a feature very rare in French medical works—namely a good index We commend it unreservedly to the medical public in general and to dermatologists in particular

CLINICAL NEUROLOGY

The second edition of Dr WECHSLER'S *Text Book of Clinical Neurology*[1] differs little in form from the previous edition Several recently defined clinical syndromes have been well described and in this respect the book is thoroughly complete and up to date The other changes which have been made are not all equally advantageous The classification of the cerebral with the other peripheral nerves meets one of the chief criticisms expressed in our review of the first edition but the removal of tabes and meningomyelitis from the section of the spinal cord and their inclusion in the middle of the section on diseases of the brain under the general heading of syphilitic diseases is not to be commended unless a purely aetiological classification were consistently adopted—a course which no one would advise The book has serious disadvantages in its lack of system and of continuity of development The section on diseases of the brain is particularly at fault in this respect for topographical diagnosis vascular diseases encephalitis meningitis all varieties of cerebral and spinal syphilis cerebral tumours and later hydrocephalus the results of injury and the cerebellar syndrome are here found in considerable disorder Elsewhere the same seemingly purposeless separation of intimately related clinical conditions is seen—for example progressive muscular atrophy and amyotrophic lateral sclerosis The former condition receives as in the first edition very scant mention and the description is not strictly accurate (the tendon reflexes are usually exaggerated not lost in the paretic limb although lost in the ultimately paralysed limb see page 192) The constriction is often involved and the meaning obscure Thus the consecutive statements that the outlook is quite hopeless Spontaneous cures are rare although there may be recovery (p 431) are irritatingly contradictory Similarly the definition of an irritative process as one ' which causes spontaneous activity of a group of cells (p 301) gives unequivocal evidence of confusion of thought a state which is suggested in many other places

ANNALS OF MEDICAL HISTORY

The May number of the *Annals of Medical History*[2] opens with the editor's Weir Mitchell Oration before the College of Physicians of Philadelphia on the influence of London and Edinburgh on medicine in Philadelphia during the eighteenth century It is illustrated by portraits of Alexander Monro primus and secundus and of Robert Whytt of Edinburgh and mentions how firmly Weir Mitchell who was of Scottish descent believed in the influence of the Edinburgh school on Philadelphia The history of Dr Lydia Folger Fowler the wife of a practical phrenologist who in June 1850 was the second woman to receive the degree of Doctor of Medicine in the United States Elizabeth Blackwell having preceded her in January 1849 is related by Dr F G Waite The medical care of the poor in colonial times as carried out at St Philip's Hospital at Charlestown in Carolina is described by Dr J J Waring of Charleston South Carolina Dr F O Lewis discusses the nature of George Washington's fatal illness and concludes that it was acute oedema of the larynx secondary to a probably streptococcal sore throat in the subject of high blood pressure and cardio renal disease In his article on the pharmacology of the ancient Mexicans Dr D Cerna of St Antonio Texas points out that arsenic was then extensively used for skin diseases on modern lines but that most of the drugs used were vegetable in origin Dr J J Walsh a very faithful contributor draws a picture of mediaeval medicine from Bartholomeus Anglicus's popular encyclopaedia *De Proprietatibus Rerum* the *editio princeps* of which was printed by Caxton at Cologne in 1742 The second instalment of Sir Wilmot Herringham's detailed account of the life and times of William Harvey contains much interesting material In an editorial on Washington and the medical officers of the Revolution reference is made to Dr James Craik chief physician and surgeon to the army and in attendance in Washington's last illness whose portrait appears on the cover Among the reviews are notices of Sir D'Arcy Power's *Foundations of Medical History* and Dr Maude Abbott's *History of Medicine in the Province of Quebec*

NOTES ON BOOKS

Tabulae Biologicae Periodicae[3] has now entered on its second volume of which we have received the first number This contains tables showing the pathological effects produced by all the well known poisons (fifty five pages) and an article of about equal length containing an account of results obtained between 1925 and 1930 in general nerve physiology Among other subjects the latter article includes references to much of the recent work done on the chronaxie of nerves

The physiologist will find in Professor HESS's monograph on the regulation of the circulation[4] a very full account of those mechanisms which have so far been discovered for preserving the balance between what the author calls the nutrition reflex which ensures the supply of sufficient blood to active tissue and the depressor reflex which protects the circulatory mechanism from overstrain An enormous mass of experimental results is cited and analysed with great skill and the bibliography is most extensive If any criticism of such a carefully written work is justified it is that the theme might have been more fully developed by including the recent English work on reactive hyperaemia which receives but scanty mention Human physiology our particular *forte* is not however taken by the author at its full value for that reason this book will appeal less to the clinician engaged in research than to the academic physiologist The whole tone of the monograph is most stimulating and all students of the circulation will fall under its spell Those whose time for such works of recapitulation is limited should begin at Chapter VI and read the remaining forty pages which are an able development of the author's biological thought

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[1] *A Text Book of Clinical Neurology.* By Israel S Wechsler M D Second edition revised Philadelphia and London W B Saunders Company 1931 (Pp 789 142 figures 35s net)

[2] *Annals of Medical History.* New Series vol iv No 3 May 1932 Edited by Francis R Packard M D New York P B Hoeber Inc London Bailliere Tindall and Cox (Pp 219–320 illustrated Subscription in Great Britain £3 3s 6d per volume of six numbers)

[3] *Tabulae Biologicae Periodicae.* Herausgegeben von [illegible] Band II No 1 (*Tabulae Biologicae* Band VIII No 1) Berlin W Junk 1932 (11 × 8½ Pp 344 RM 25 subscription price RM 48)

[4] *Die Regulierung des Blutkreislaufs.* Von Prof W R Hess Leipzig G Thieme (Pp 162 21 figures M 12/

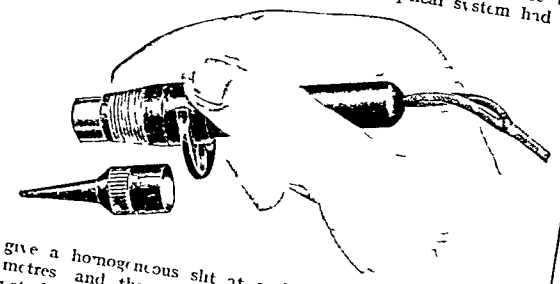
The extent of the field included in the study of respira tion can easily be appreciated from Professor HESS s book on its regulation ' for it is at once apparent that although one aspect of the subject has been treated in considerable detail yet several others are barely if at all mentioned The author s interests evidently lie in the nervous mechanism which underlies the rhythmic action of breath ing and we doubt if a more comprehensive account of it has appeared in recent years But to many of us this is a relatively small part of the numerous forms of respira tory activity and it is not unlikely that disappointment rather than satisfaction will be felt by the reader Although the title of the book indicates the restricted subject matter it is surprising that in the general account of the mechanism of respiration such an important detail as the physical principles upon which are based the bellows action of the thorax is not referred to nor is anoxaemia arising from imperfect lung expansion more than once casually mentioned the author successfully resisting the natural temptation to write something about it after approaching very closely in his description of Warmepolypnoe the panting of dogs in hot weather On the other hand his treatment of the interaction of the protective reflexes of the respiratory tract with the true respiratory reflexes is neatly developed

' *Die Regulierung der Atmung* Von Dr W R HESS Leipzig G Thieme (Pp 137 15 figures M 10 50)

PREPARATIONS AND APPLIANCES

A HAND SLIT AND INSPECTION LAMP

Mr JOHN FOSTER F R C S (West Hartlepool) writes Following an unsuccessful search for an instrument that would fulfil my requirements as a truly portable slit lamp for examination of the cornea and lens I designed the instrument illustrated It had to be small especially at the objective end so that it would not interfere with the simul taneous use of a corneal loupe At the same time the front end had to be fairly heavy in order to balance the length of flex at the other end The optical system had to



give a homogeneous slit at a distance of about two centi metres and the instrument would have to be held easily yet firmly between the index finger and thumb the other fingers being upon the patient s face to maintain it steadily While the instrument was under construction Mr C Schurr of Hove approached the makers independently with a very similar design that comprised in addition an opha thalmic transilluminator

The instrument as finally produced is a tube 4½ inches long and rather torpedo shaped The front end containing the projection lens is half an inch in diameter and is followed by a wide deeply grooved conical band comfortable to hold In the centre of the instrument there is a rotary disk which allows a rapid change from a sharply focused circular patch 7 mm in diameter with or without a daylight filter to a tiny pencil of light for the detection of aqueous flare or the slit itself 6 mm × 0·4 mm in size Immediately behind the disk is a condensing system followed by the lamp bulb which can be adjusted and the current leads which are protected by a vulcanite cap The transilluminator forms a cap fitted over the objective easily sterilized and attached for use

The lamp bulb is made for use with a two cell dry battery and there is an adapter at the other end of the lead so that I can remove the lamp from my ophthalmoscope fit the adapter in its place and so light the inspection lamp from the ophthalmoscope battery

A similar fitting could be made for most ophthalmoscopes A simular fitting could be made for most ophthalmoscopes When using a three cell dry battery a beam equivalent to that of the large slit lamps can be obtained during the two minutes that the bulb then lasts In use it gives a good corneal prism a view of A P by reflected light and optical section of the lens Even the posterior ½ and folds of the vitreous may be seen with a ×10 loupe The bands of the lens are seen to a variable extent in different cases and their and the lens nucleus are rendered extremely distinct by any abnormality

The instrument is a most effective substitute for the larger slit lamp when this cannot be used and it adds greatly to the efficiency of observers who have used the loupe and focal illumination only and have not yet adopted the slit lamp technique It is made by Rayner 100 New Bond Street W 1

A BONE CLAMP FOR FRACTURES

Mr A SIMPSON SMITH M Ch F R C S (London S E) writes The majority of bone clamps overlook the very obvious fact that throughout the long bones of the human skeleton no opposing surfaces are strictly parallel Only for a few inches in the mid shaft of the femur is there an exception to this rule Such an excellent bone clamp as Lowman s has its gripping power considerably lessened by the lack of adaptation of this principle (Figs 1 and 1a)

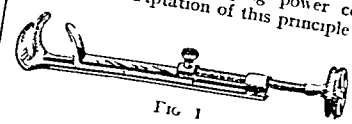


FIG 1

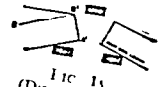


FIG 1a (Diagrammatic)

Even a double levered jaw (Figs 2 and 2a) failed to procure a really effective clasp

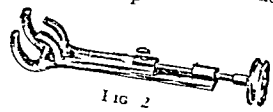


FIG 2

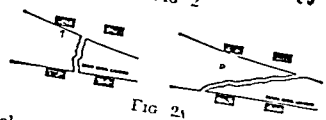


FIG 2a

The new clamp (Figs 3 and 3a) has this universal gripping mechanism grafted upon a Lowman s clamp and gives a more vice like grip

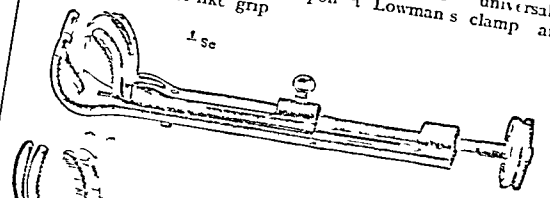


FIG 3

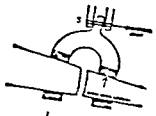


FIG 3a

The features of Lowman s clamp are retained with the exception of the jaws Both lower and upper jaws have two flanges The lower jaw is rigid and incorporated in the frame as in the parent pattern but the upper jaw is fixed to a universal joint so that it can accommodate its self to any curve or shape On screwing home the power is evenly distributed between the two flanges via the central pin and effective rigidity assured

My thanks are due to the surgeons of the West London Hospital for allowing me to use this clamp on cases under their care The instrument is made by Messrs Down Bros

British Medical Journal

SATURDAY, JUNE 18th, 1932

COMBINED HEPATIC AND SPLENIC DISEASES

Among the various lectures at the Royal College of Physicians of London several have, partly from the terms of the original endowment and partly also from suitability been allotted to lecturers at more or less definite stages in their professional careers Thus the Goulstonian Lectures are delivered by one of the four junior Fellows the Harveian Oration by a senior the Lumleian by one with mature clinical experience and the Croonian by one in a position to speak of experimental work in relation to clinical medicine Dr J W McNee the last of whose three Croonian Lectures on the clinical and pathological associations of the liver and spleen we present to our readers this week is especially qualified to carry on and maintain the tradition of the Croonian lecturer a post which must be recognized as honourable but somewhat difficult to fill His work on the liver and spleen on jaundice and on the reticulo-endothelial system has put him in a position to speak with authority on these subjects

The liver and spleen occupy key positions in the portal system and it is obvious that the more accurately their important and varied functions are known the clearer will be the understanding of the physiology and pathology of the portal circulation In the first and second Croonian Lectures published on June 4th and 11th new knowledge on the anatomy and physiology of these organs especially as regards the circulation is summarized and readers who have not carefully followed the recent literature may well be surprised at the new conceptions that have arisen and at the difficult problems that as a consequence have to be faced There are two main groups of diseases in which the liver and spleen are both prone to be involved In the first place there are the disorders of the blood forming organs such as the leukaemias and anaemias and secondly there is the group of diseases involving the reticulo endothelial system to the elucidation of which Aschoff (1911) and Eppinger (1920) have made important contributions The cells of the reticulo endothelial system are mainly concentrated in the spleen liver and bone marrow and as they are much concerned with the metabolism of haemoglobin and its derivatives such as bile and also of certain lipoid substances the problems of jaundice of haemochromatosis and of derangements of lipoid metabolism are clearly dependent in great measure on their activities

In his concluding lecture Dr McNee deals with the problems connected with hepatic cirrhosis Banti's syndrome and the reticulo endothelial diseases of the liver and the spleen In portal cirrhosis the repeated focal destruction of the liver cells is followed not only by fibrosis but by the formation of an entirely new hepatic parenchyma and a corresponding dissociation of the blood supply from the portal vein and hepatic artery the former being severely obstructed Although this must induce stasis in the spleen, a further and probably more prominent factor in the splenic enlargement of portal cirrhosis is that metabolic products of intestinal origin normally dealt with by the liver now escape into the general circulation and so reach the spleen and liver by their arterial blood supply The method of 'angiostomie' invented by E S London, by which metabolic changes in the blood of the portal splenic and hepatic veins can be investigated should provide much needed information on this subject The real existence of Hanot's hypertrophic biliary cirrhosis has been seriously questioned and, indeed much less jaundice has been generally recognized But these conditions approach the cirrhosis produced by manganese that associated with progressive lenticular degeneration and that of haemochromatosis The last has been ascribed by Mallory to the action of copper salts and gives support to Epplen's suggestion that hepatic cirrhosis is closely allied to disorders of the blood

After a full account of 'Banti's syndrome' a term to be abandoned in favour of splenic anaemia complicated by hepatic cirrhosis Dr McNee discusses the reticulo endothelial diseases of the liver and spleen and draws an interesting contrast between pernicious (Addisonian) anaemia and chronic haemolytic jaundice In hyper cholesterolaemia the reticulo endothelial cells in the liver spleen and bone marrow become distended with lipoids The allied and eponymic diseases of Gaucher and Niemann are also connected with some unknown disturbance of lipoid metabolism Finally Dr McNee refers to the existence of a form of chronic splenomegaly characterized by well marked hyperplasia of the reticulo endothelial cells and by giant cell formation, resulting in an appearance similar to that of a myeloid sarcoma These lectures full of stimulating suggestions for further work are a happy illustration of the kind of advance which can be made in modern medicine by a close correlation of physiological pathological and clinical knowledge in the unravelling of obscure diseases

INQUIRIES INTO MENTAL ABNORMALITY

The Minister of Health recently stated in the House of Commons that he had decided that a committee should be appointed to consider certain issues arising in connexion with the sterilization of the mentally unfit The Board of Control with the approval of the Minister has now appointed a committee with the following terms of reference To examine and report on the information already available regarding the hereditary transmission and other causes of mental disorder and deficiency to consider the value of sterilization as a preventive measure having regard to its physical psychological and social effects and to the experience

of legislation in other countries permitting it and to suggest what further inquiries might usefully be undertaken in this connexion

Several points are noteworthy in this carefully worded reference In the first place the task of the committee is not primarily to undertake an inquiry but to collect and collate all the evidence on the subject which is already available though it may report as to the nature of any further inquiry that it thinks might usefully be pursued Its work is therefore of a purely scientific and statistical character In the next place, it is concerned not merely with hereditary transmission, but also with any other causes which may produce abnormal mentality and *this abnormality is not merely mental deficiency* but all forms of mental disorder Sterilization can of course act as a preventive measure only in so far as hereditary transmission is a factor in causation and it is unfortunate that this measure is usually considered or discussed only in connexion with mental deficiency whereas there are a number of well defined physical conditions of a disabling character in which the influence of heredity is much more dominant and the effect of sterilization much more pronounced and certain than in the case of mental defect These conditions do not come within the purview of the committee except perhaps by way of analogy In the third place the committee is to consider not merely the physical and psychological but also the social effects of sterilization as a preventive measure There is probably more misunderstanding and exaggeration in the public mind as to the social needs of the feeble-minded and the social results to be gained by sterilization than with regard to the other two aspects referred to The personnel of the committee is however, admirably chosen to maintain a proper perspective and to set out accurate facts The members are Mr L G Brock (chairman) Mr Wilfred Trotter Dr A F Tredgold Dr R A Fisher, Dr E W Adams Dr R H Crowley Dr E O Lewis and Miss Ruth Darwin

We may recall here that more than a year ago the Council of the British Medical Association appointed a very strong committee under the chairmanship of Professor R J A Berry to report upon the subject of mental deficiency mainly in its medical aspects By a fortunate coincidence this committee has now just finished its labours Its report was received by the Council at last week's meeting and will be published in the *Supplement* to our issue of June 25th The report will then be submitted to the Representative Body and published later as an Association pamphlet Though intended primarily for the medical profession and especially for general practitioners this document will be found full of interest for many others and it has a very definite bearing on the work of the Ministry of Health's committee It deals with the subject under three headings (1) mental deficiency as a medical problem (2) mental deficiency as a biological problem and (3) some social considerations It should be found to clarify thought and to influence the attitude of the profession and the public particularly with regard to the range of sterilization as a preventive agent and to the social aspects of mental deficiency

PERSISTENT OFFENDERS

A recent article[1] drew attention to the disquieting increase in criminal tendencies among juveniles and young adults and offered various explanations to account for it As the persistent offender forms a closely related problem suggestions contained in a memorandum presented to a Home Office committee on behalf of the National Council for Mental Hygiene are of interest[2] Dr H Freize Stephens who prepared the memorandum believes that research work would still further reduce the number of these criminals He advocates a panel of psychological advisers available for local prisons who would assist in collecting data on which new statutes directed to this end could be based Although the Mental Deficiency Acts have proved of great value in depopulating the prisons there still exists a shortage of institutional accommodation for mental defectives—a ready explanation for the ease with which that heterogeneous collection of weak-minded persons (the persistent petty offenders) fall into crime As to the second class of persistent offender —the habitual criminal—means already exist for the supervision of potential criminals from an early age It is thought however that in many cases perhaps owing to false sentiment the courts have failed to make early enough use of these facilities with the result that valuable institutional treatment has been delayed and the chances of effective reform impaired In dealing with this problem the aim should be not so much that *offenders should serve sentences* as that they *should be trained as individuals* The fixed sentence carries with it Little or no influence on the character or disposition of the criminal while even preventive detention as at present applied in this country has little reformative value because it tends to become available only for the middle-aged whose habits are already formed and whose predatory instincts are difficult to eradicate A better method is seen in an indeterminate sentence which would include supervision and control of the individual until he is reformed moral and physical training to maintain this and the subsequent granting of parole and licence to test the reformative value of this measure The adoption of such an ideal system for offenders under the age of 30 would militate against the development of the hardened criminal It would however require a post Borstal establishment in the form of a training colony where offenders above the age of 21 could be dealt with There would thus be three stages on the road to reform the Home Office school for the youngest offenders the Borstal institution for the intermediate and the adult training colony for older offenders Such a complete system of training should be under a board of control assisted by an advisory committee of medico-psychological and educational experts There should be a periodical review of the progress of each offender with a view to parole licence or discharge and also the establishment of after-care

[1] *British Medical Journal* April 30th 1932 p 771

[2] Fifth Report of the National Council for Mental Hygiene London 78 Charles House Palmer Street S W 1

committees Co operation between courts and early treatment centres is advised, while the services of specially trained social workers, psychiatrists, and physicians should be at hand to enable the courts to make correct commitments in the first instance The conclusions arrived at by the Departmental Committee on Persistent Offenders, published in a recent report [1] show a remarkable agreement with many of Dr Stephen s findings It is recommended that Part II of the Prevention of Crime Act 1908 which provides for a combination of detention and penal servitude sentences should be repealed Detention should be alternative instead of supplementary to any other sentence and the court should be empowered to make use of it in two forms—ordinary detention for a period of two to four years and prolonged detention for a period of five to ten years Bail should be allowed pending sentence and, where practicable, medical examination Before a sentence of detention is passed the prison medical officer should report on the mental and physical condition of the offender and on his suitability for detention Various establishments to suit different types of persistent offenders should be available for either type of detention There should be positive and progressive systems of training licence and parole are also advocated Finally, attention is drawn to the possible expediency of psychological treatment—even to the extent of allowing a certain number of offenders to attend approved mental hospitals or out-patient clinics on probation It is recommended that a medical psychologist should be attached to one or more penal establishments in order to carry out treatment in selected cases

INSULIN HYPOGLYCAEMIA

The train of symptoms accompanying the subnormal blood sugar produced by an overdose of insulin have now been recognized for ten years and in most instances they follow a definite course In the early stages tremors sweats tachycardia or mental disturbance are usually present, and later, in the less frequent and more severe hypoglycaemias twitchings convulsions hemi- and para-plegias and even complete coma These symptoms usually disappear rapidly when the hypoglycaemia is removed by the administration of sugar Occasionally some symptoms persist for an hour or two Feigenbaum [2] however reports a case which must be a 'record' in that the mental symptoms did not disappear completely until three weeks after the hypoglycaemia had been overcome The patient a male of 21 had definite hypoglycaemia for only four and a half hours (blood sugars 41 to 60 mg per 100 c cm) but could not be roused for two days afterwards This was followed by two days of mental excitability Later a long period of flaccid paralysis of the lower limbs set in and the knee-jerks remained absent for three weeks On their return the patient became mentally normal as well The author remarks that the prognosis for complete recovery is always good and that death even in complete and prolonged insulin coma if uncomplicated is almost unheard of Another interesting aspect of insulin overdosage is mentioned by the French authors Chabanier and Lobo Onell [3] They have found in their practice that whereas insulin reactions are very frequent with the pure British or American brands of insulin they have never experienced them with an impure preparation which they first made in 1923 and still continue to use Even with very large doses of insulin—up to 200 units a day—their patients have never had hypoglycaemia although they manage to keep their urine free from sugar Naturally their impure preparations are weaker and do not contain so many units of insulin as do the pure brands but they do not think that this is the explanation of the absence of overdoses and suggest that the insulin is more slowly absorbed and is slower and more prolonged in its action They therefore claim that reactions are avoided and that the patient is kept more continuously under insulin action by the impure preparations Unfortunately these have two disadvantages (1) anaphylactic reactions such as urticaria may occur, and (2) the injections are much more painful than with purer brands *These are two very serious drawbacks, especially as* insulin reactions can usually be avoided or minimized—in the experience of clinicians in this country—by a careful balance of diet and insulin, even when the purest brands are used

[1] Report of Departmental Committee on Persistent Offenders Cmd 4090 H M Stationery Office (1s 6d net.)
[2] *Canadian M A Assoc Journ* April 1932.
[3] *Presse Méd* April 16th 1932

LEPROSY IN THE BRITISH EMPIRE

The annual report for 1931 of the British Empire Leprosy Relief Association under the title of 'The Empire s Open Sore' gives an opportunity to survey the progress made in treating this disease It is difficult to estimate the incidence of leprosy partly because concealment is inevitable so long as the infection is dreaded as incurable and condemned as "unclean"—the general view in most native communities The present report states that the British Empire may contain as many as 1¼ million cases perhaps even 2½ million and that there are probably between 5 and 10 million cases in the whole world Besides the difficulty in affording treatment thus implied there is the added hindrance that the drugs employed act slowly and uncertainly such terms as 'disease arrested' and 'symptom free' reveal the impossibility of classing any great number of cases as cured even in the most favourable conditions Rigid compulsory segregation never satisfactory as a preventive method, has been largely abandoned and the cost of anti leprosy schemes has been thereby reduced Voluntary leper settlements on a more or less self supporting financial basis are growing in favour In addition to granting subsidies to such work distributing educational literature and promoting investigations the British Empire Leprosy Relief Association plays a valuable part as a clearing house for information so that forms of treatment which hold out promise in one country can be quickly tried in others The Indian branch through the Calcutta School of Tropical Medicine is already distinguished for its research activities it is now at work on the problem of the varying rates of incidence of leprosy in different geographical areas and social classes Surveys are in progress also in Nigeria and the Gold Coast in British Guiana the situation has improved in consequence of such efforts and the institution of dispensary treatment, coupled with voluntary admission to the leprosy settlement A new island colony has been established in South West Uganda and another on the coast of Kenya In the latter

quarterly issue of the *Leprosy Review* one article describes the work and prospects of country dispensaries in Korea while the other embodies the second annual report of the Garkida (Nigeria) Leprosy Colony The conclusion is reached that an anti leprosy scheme appropriate for one country seldom suits another Central Africa may even differ from South Africa in its requirements Moreover leprosy itself varies in different places in its clinical signs response to treatment and liability to relapse a fact rendering more intensive and long-continued surveys an essential preliminary to eradication

REGURGITATION RENAL COLIC

Dr Bransford Lewis professor of urology of St Louis University writing in the *Cutaneous Review* for June draws attention to the fact that there are many cases of renal colic for which no adequate cause can be found The pain may be sudden and severe and yet an x-ray examination and abdominal palpation fail to reveal anything abnormal The author is convinced that he has found the explanation for many of these cases occurring in his own practice—namely that the cause is a regurgitation of urine from the bladder into the ureter This is the result of increased intravesical pressure consequent on some obstruction in the urethra He quotes some cases in which the obstruction was caused by undilated urethral stricture and others in which it was the result of a fibrosed obstructing prostate with residual urine It is of course known that even a moderate increase of intravesical pressure is capable of overcoming the resistance of the ureteral valvular orifices permitting the regurgitation of urine up into the ureter and the kidney pelvis Complete relief was brought about by treatment of the cause underlying the obstruction and in some cases the colic returned when the patient failed to continue his treatment Dr Bransford Lewis quotes a paper by Dr P McCown of Indianapolis who published two intravenous pyelograms showing actual regurgitation into the ureters while the attacks of pain were on Both of these cases were relieved of their recurrent attacks of renal colic by a removal of the cause of urinary obstruction in one case prostatectomy was performed in the other produced by urethral stricture complete relief followed the passage of sounds and dilators Dr Bransford Lewis's article gives notes of some seven illustrative cases

FAMILY DIETARIES

Studies in Nutrition by Professor E P Cathcart Dr A M T Murray and Miss M Shanks[1] contains an account of an analysis made of the diets of working class families in Reading and in Cardiff The need for accurate knowledge regarding the actual dietetic habits of the community has led the Medical Research Council to organize a series of investigations of which this is the latest Similar studies have been undertaken in Glasgow and Dundee (1926) and in St Andrews (1931) The last mentioned investigation was made on a mixed population for the families investigated belonged to all sections of society and one point of interest is that the general averages show that the diet of working class families in Reading and Cardiff differs little from that of the mixed population at St Andrews In Reading and Cardiff the average caloric intake was approximately 3 000 calories of which 10 per cent was derived from protein 32 per cent from fat and 58 per cent from carbohydrate In the St Andrews families the value was about 3 100 calories whilst the amount derived from fat and protein was slightly greater The adequacy of the Reading and Cardiff diets was tested by measuring the weights and heights of the children there was no evidence of serious malnutrition in the families studied The general conclusion is that there is a somewhat remarkable similarity in the diets of the different classes in different parts of Great Britain The chief effect of a rise in income is an increase in the intake of fat and there is a smaller increase in the consumption of protein

[1] Medical Research Council Special Report Series No 165 H M Stationery Office 1931 (6d)

THE NUTRITIVE VALUE OF MARGARINE

The Institute of Hygiene recently organized an inquiry into the nutritive value of margarine and appointed a committee which heard evidence from various leading authorities Professor J C Drummond stated that the discovery of ergosterol had made it easy for margarine manufacturers to incorporate vitamin D in margarine and that research was proceeding with a view to the discovery of a concentrate of vitamin A suitable for similar incorporation Professor E C Dodds pointed out that vitamin concentrates can safely be added to anything not of a strongly reducing or oxidizing nature and he also considered that bacteriological decomposition was not likely to occur in vitamins incorporated in margarine Witnesses agreed that since carotene is a suitable colouring matter for margarine and is also the precursor of vitamin A it is therefore much the most suitable form of colouring to employ and that the use of aniline dyes for this purpose should be discontinued The committee studied the desirable limits for the amounts of butter-fat and of water in margarine and drew up a series of working definitions for the composition of what it regards as a satisfactory margarine The composition of margarine is a question of no small public importance because animal fats are dear and hence there is a marked tendency for the diet of the poorest classes to be deficient in vitamins A and D It is therefore very desirable to encourage the production of a margarine which is an efficient substitute for butter in respect of its vitamin content

TESTIMONIAL TO DR. COX

We publish at page 1146 a letter signed by Sir Humphry Rolleston and Sir Ewen Maclean reminding our readers that the Dr Alfred Cox Testimonial Fund will be closed on June 30th Those who have not already subscribed but wish to take part in this recognition of Dr Cox's great services to the medical profession should therefore send their contributions accompanied by their names and addresses without delay to the honorary treasurer of the Fund B M A House Tavistock Square W C 1 The portrait is now at the Royal Academy Exhibition and the Book of Names will be presented to Dr Cox during the Centenary celebrations in London at the close of next month

We much regret to announce the sudden death on June 11th of Dr H Leith Murray professor of obstetrics and gynaecology in the University of Liverpool and past president of the North of England Obstetrical and Gynaecological Society

PARASITOLOGY IN THE MEDICAL CURRICULUM

BY

D B BLACKLOCK M D D P H D T M

PROFESSOR OF PARASITOLOGY UNIVERSITY OF LIVERPOOL

The medical student of to day suffers as his predecessors did and as his successors probably will from mental surfeit Although a certain amount of pruning has been done in some of the older branches of his studies in others —the more modern—the tendency is always to enlarge and amplify The aim of those responsible for his education must appear to be to turn him out an expert in all subjects many of which are destined to benefit him but little as a general practitioner If the whole medical curriculum is to be regarded as a cultural exercise then the vast accumulation of facts—jettisoned as no longer useful the moment the examinations are over—may be considered to have some effect in training the mind It may also be upheld by some that the idea of immediate utility as an aim in training debases true educational values In view however of the remarkable assortment of I now ledge which medical students are called upon to incorpor ate and if possible to digest it is debatable whether intelligence is not stultified and interest numbed by the process of memorizing on such a large scale quite super fluous facts Past sufferers and present inflictors of suffering in this direction are in duty bound to consider these matters

Having made these preliminary observations it may seem temerity to propose as I am going to do that the subject of human parasitology should receive attention early in the student's career The temerity is however more apparent than real because the proposal is not for an additional subject with an additional examination but merely for the earlier introduction of human parasitology—that is as a constituent part of the subject of zoology—without additional examination

Parasitology includes the study of the agents of many diseases which will play an important part in the post graduate experience of every medical student and the sooner in his career as a student he obtains an insight into the realities of their existence the better for him as a medical practitioner and for the public which he will be called upon to attend The animal parasites which are pathogenic to man are by no means neglected in the zoology stage of the curriculum in some of the more up to date schools of medicine and I am simply advancing here arguments which may perhaps contribute to an extension of what appears to be a very sound modern tendency

In the first place consider briefly the impacts which the subjects of parasitology will make on the ordinary career of the medical man in practice and it will be possible to estimate whether it is not well worth his while to have an early acquaintance with the subject

PARASITES PATHOGENIC TO MAN

The animal parasites which are pathogenic to man are included in the phyla Protozoa Platyhelminthes and Nemathelminthes Of the phylum Protozoa the four classes Rhizopoda Mastigophora Sporozoa and Ciliata each contains one or more species of pathogenic parasites of human importance Thus in the Rhizopoda there is one such parasite *Endamoeba histolytica* the cause of amoebic dysentery in the Mastigophora there are three *Trypanosoma gambiense* the cause of human trypanosomiasis or sleeping sickness in Africa *Trypanosoma cruzi* the cause of trypanosomiasis in South America and *Leishmania donovani* which gives rise to kala azar in the Sporozoa we have the three species of malaria parasite of man *Plasmodium falciparum Plasmodium vivax* and *Plasmodium malariae* finally in the Ciliata there is *Balantidium coli* which though rare in man when present produces balantidial dysentery

Of the worm parasites which affect man we find in the phylum Platyhelminthes two main groups—the tapeworms and the flukes To the tapeworms belong the species *Dibothriocephalus latus Taenia solium Taenia sagimata Taenia granulosa Hymenolepis nana* and *Dipylidium caninum* The adult of each of these species with the exception of *T granulosa* occurs as a parasite in the intestine of man (the adult of *T granulosa* occurs in dogs) In addition man is infected by the larval stages of three of these worms—namely *T solium* and *T granulosa* which give rise respectively to Cysticercus cellulosae and hydatid cysticercoid develops in the villi of his small intestine and *Hymenolepis nana* of which the larval form the The trematodes or flukes contain the Bilharzia worms *B haematobia B mansoni* and *B japonica Clonorchis sinensis* and several other parasites

The phylum Nemathelminthes is remarkable for the number of human pathogenic parasites it embraces *Ascaris lumbricoides* the round worm *Enterobius vermicularis* the threadworm *Trichuris trichiura* the whipworm *Trichinella spiralis* the larva of which produces trichinosis *Ancylostoma duodenale* and *Necator americanus* the hook worms and *Strongyloides stercoralis* are all pathogenic species which inhabit the intestine of man Besides these there are the tissue parasites belonging to the Filarioidea which have complicated life histories involving an insect vector in the case of *Wuchereria bancrofti Loa loa Onchocerca volvulus* and *Dipetalonema perstans* or a crustacean vector in the case of *Dracunculus medinensis* the guinea worm

From the foregoing it can be seen that no medical practitioner can avoid at some time in his experience having to deal with the diagnosis and treatment of disease due to one or other of the animal parasites It has long been accepted that for anyone proposing to practise in the tropics and subtropics a very considerable knowledge of parasitology is essential The naval and military services—especially the latter—have from necessity been very progressive in the study of parasitology the liaison service between this country and the Empire—that is the merchant service—is beginning somewhat belatedly to try to attain an equal standard of efficiency but a great deal remains to be done It is not yet sufficiently appreciated however that large numbers of cases of serious disease produced by such animal parasites are constantly coming under the observation of medical practitioners in temperate climates A knowledge of the morphology and life history of these parasitic organisms is thus essential for all medical men and the elementary tuition in their structure and habits could usefully be imparted to the student quite early in his career

THE PLACE OF PARASITOLOGY IN THE CURRICULUM

It may appear unkind to introduce a student in his first year to a subject which bristles with such names as those mentioned above but it should be borne in mind that names like *Taenia solium* and *Bilharzia mansoni* are not a whit more difficult for him to master than are such names as *Amphiorus lanceolatus* or *Petromyzon fluviatilis* names which the student may be required to learn by the dozen Further it is not going to be a difficult matter for the student to grasp the main points of the life history of the dysentery parasites or of the parasitic worms and he will value this knowledge increasingly towards the end of his curriculum When he reaches his final year the amphistylic arrangement in the Lismobranchs may well have faded from his consciousness but if its place has been taken by a definite and less ephemeral knowledge of parasites and parasitic worms which is of practical value to him he as a medical graduate will be the last to complain The essential methods required for the examination of the pathogenic parasites are not complicated and the young medical student will find no difficulty in acquiring the technique of preparing films of blood and faeces and the use of Leishman's stain and iodine The parasites which are found in the blood intestinal contents and tissues of the wild rat would serve as a very useful introduction to the pathogenic parasites of man

Reverting to the subject of utility as an end in education I would submit that while utility may be condemned

in the pre medical career from the first moment when the career of medicine has been chosen utility should be the chief and almost the sole criterion of the value of the education given The real question a teacher of medical students in any branch should ask himself would appear to be How much of my subject will prove of real practical value to the student at any time? not How much of my particular subject can I cram into this fellow in a given time? Regarded from this point of view I believe that the introduction of elementary parasitology at an early stage in the student's curriculum would prove of the greatest ultimate service to him the knowledge that he was studying something useful for his after life would be a distinct attraction while the diverse life histories of the human parasites would stimulate his imagination and develop his powers of observation and reasoning in such a way as to give him a vital interest in his studies in the subject of zoology

CORRECTION OF HEARING DEFECTS

A SURVEY OF TWO YEARS RESEARCH

We have received the following brief survey of two years of research by the National Institute for the Deaf and the Department of Industrial Physiology of the London School of Hygiene and Tropical Medicine

The problem of deafness is one which has two aspects —namely the diagnosis and treatment of the pathological conditions which may be the underlying cause of impaired hearing function and the correction of the defects in hearing themselves

While otological science has achieved notable success in dealing with certain diseased conditions of the auditory apparatus the same cannot be said of the progress made in the correction of functional defects which persist after the signs and symptoms of active disease have disappeared Deafness following disease whether it be obstructive deafness or what is known as nerve deafness is a very real hardship to a patient and the proper assessment and correction of such defects deserves far more attention from medical men and scientists than has as yet been given The magnitude and seriousness of the problem facing the medical profession is apparent if we pause and consider the widespread incidence of deafness According to estimates made by the National Institute for the Deaf based upon available statistics there are approximately 3 000 000 people in Great Britain who suffer from some hearing defect in one or both ears This figure however gives an exaggerated idea of how many are incapacitated by deafness to such a degree that they are unable to follow their occupations or partake of the usual amenities of life Suffice it to say that the number of these is very great and that most are in need of artificial aids to hearing

INSTITUTION OF RESEARCH

Early in 1930 a meeting of the medical committee of the National Institute for the Deaf appointed a small subcommittee to inquire into the existing types of electric hearing aids and ascertain the possibilities of improving them This subcommittee soon found that nothing could be done without some technical and mechanical methods of assessing the reproducing powers of these instruments and accordingly appealed to the Ministry of Health who put the subcommittee in touch with Dr G P Crowden of the Department of Applied Physiology of the London School of Hygiene and Tropical Medicine who was already conducting research in the detection of deafness in school children

A research team was formed as a result of this introduction and care was taken to ensure that due consideration would be given to the teachings of physiology phonetics clinical otology and modern telephone and radio engineering It was realized from the outset that only by the combined efforts of individuals possessing these special interests could a satisfactory solution of the problem of the correction of defects of hearing be hoped for The technical part of the research was carried out to a large extent in the Department of Industrial Physiology at the London School of Hygiene and Tropical Medicine

PROBLEMS INVOLVED

The problems which had to be faced were in brief the magnification of sound waves in such a way as to enable deaf or partially deaf persons to hear (*a*) ordinary sounds and (*b*) human speech The magnification of ordinary sounds has never presented any special difficulties and need not be considered in a very special way in this short summary On the other hand the magnification of human speech is a problem which presents special difficulties when it has to be brought within the hearing capacity of the hard of hearing Deaf patients desire most of all to hear the speech of others so as to enter into communication with them and avoid the isolation which deafness brings

It was therefore necessary to investigate the following questions

1 *The Analysis of Speech Sounds* —In this inquiry the committee owes a debt of gratitude to Harvey Fletcher of the Bell Telephone Research Laboratories of New York whose book *Speech and Hearing* is a recognized standard work on this subject The committee also received the expert advice of one of its own members Mr Stephen Jones B Sc of the Phonetics Department of University College

2 *A Satisfactory Means of Standardizing Speech Sounds* —In this field of the work expert help was received from the Western Electric Company and also from the scientific departments of the Columbia and His Master's Voice Companies After exploring all avenues on this side of the question the committee decided to use the 4A audiometer of the Western Electric Company a decision which was endorsed by all who were called in consultation By means of this audiometer gramophone records of speech could be delivered to the microphone of an electric hearing aid—a method first used by Dr Crowden

3 *The Reproduction of Notes of Known Frequency and Constant Intensity* —The necessity for this arises because the analysis of speech sounds by Harvey Fletcher and others shows that fundamental vowel sounds are of low frequency and high intensity while the overtones which distinguish one vowel sound from another and the different combinations of frequencies and intensities which distinguish the consonant sounds are of higher frequency but lower intensity than fundamental vowel sounds so that it is necessary to know in what way a specified hearing aid magnifies the different frequencies involved or whether a hearing aid even picks up such frequencies This investigation was carried out using the constant note scientific records of the Parlophone and His Master's Voice Companies played on the Western Electric 4A audiometer the results being occasionally checked by comparison with the notes and intensities of the Western Electric 2B audiometer

4 *The Reproduction of Speech Sounds of Various Measured Intensities* —This was done by using specially graduated records made by the Western Electric and Columbia Companies for use with the 4A audiometer These had already been used in this country for detecting early deafness in school children by Dr Crowden The work was described in the *Medical Officer* (September 13th 1930)

5 *The Manner in which Various Electric Hearing Aids Respond to and Magnify Constant Notes and Speech Sounds*—For this purpose a large selection of electric hearing aids was supplied by Captain Leslie Kahn Rein of Messrs F C Rein and Sons who afterwards gave valuable help in making special apparatus to order The way in which these varying instruments reproduced and magnified speech sounds and constant notes was investigated by Mr H Mortimer Wharry F R C S , in thirty groups of experiments the results of which may be very briefly summarized in the following sections

Acoustic Properties of Hard and Soft Carbon Microphone Diaphragms

Hard Carbon Diaphragms—These magnify frequencies from 200 cycles up to approximately 3 000 cycles but are not so good as the soft carbon diaphragms between 1 000 and 2 000 cycles It is apparent to the ear that these diaphragms fail to reproduce the fundamental vowel sounds well and also those overtones between 1 000 and 2 000 cycles These carbons are hard and brittle and give a staccato rendering of speech In fact, their qualities are such that they are placed in cone reflector housings or containers to make good their deficiencies, by those proprietary commercial firms which employ them The cone reflector housing however has the disadvantage of producing echoes

Soft Carbon Diaphragms—These are more pliable and resilient than the hard carbons and magnify well from 100 cycles to approximately 2 200 cycles They are employed in housings in which the sound waves are not reflected but impinge directly upon the diaphragm through grids in the housing They give a somewhat drawling reproduction of speech and lack the sharp definition of consonant sounds which is given by the hard carbon microphone diaphragm These soft carbon diaphragms are of little use for sounds above a frequency of 2 200 cycles or double vibrations per sound

Combined Carbon Diaphragms—In order to combine the advantages of both these types of carbon diaphragm Mr Wharry fitted the two side by side in double or triple microphone instruments and found that the results exceeded his expectations especially when the hard carbon bore a ratio of between 2 to 1 and 3 to 2 to the soft carbon

Binaural Hearing Aids

In order to enable patients to localize the direction and estimate the distance of sounds binaural hearing aids involving only one battery and circuit have been invented the ear piece of each ear being adjustable according to the difference of hearing in the two ears

Prescription of Hearing Aids for Patients

By the courtesy of the chairman Mr Geoffrey Duveen and the honorary staff of the Royal Ear Hospital University College Hospital London a research clinic in the sound proof room was inaugurated in order to supply incurably deaf patients with hearing aids according to the degree of deafness in each case Here each patient s hearing loss for speech is accurately measured using the 4A audiometer and the sensation unit scale based on the decibel scale The patient is then fitted with an instrument of a suitable degree of power a prescription for which is then written

Results

In all cases of obstructive deafness with the exception of one or two extreme cases patients have been able to hear conversation with certainty and ease In cases of nerve deafness the sensation of sound as at present produced by hearing aids appears to irritate the auditory nerve in particular and the whole nervous system in general and while a few patients have made headway with an instrument the majority have refused one although they can hear quite well with it It is hoped that further research will show how these difficulties can be overcome

Conclusions

The investigations outlined above have already shown

1 That the accurate measurement of a patient s hearing can be made by means of audiometers and that the degree of deafness detected can be used as a basis on which to prescribe an appropriate electric hearing aid for the correction of the defect

2 That patients suffering from obstructive deafness can make good use of electric hearing aids while patients suffering from nerve deafness tend to be intolerant of speech sounds delivered by such aids as are yet available

3 That certain immediate improvements in electric aids are possible if due regard is paid to the properties of hard and soft carbon diaphragms and that further improvements are likely to result from further research

4 That instruments giving the best performance can be manufactured and sold at prices well within the means of rich and poor alike

5 That the vast majority of all patients who are deaf can be enabled to hear accurately and well by means of properly prescribed electric hearing aids

KING EDWARD'S HOSPITAL FUND

The annual meeting of the President and General Council of King Edward s Hospital Fund for London was held at St James s Palace on June 7th with the Prince of Wales in the chair

PRESIDENT S SPEECH

The Prince opened his address by reading the following message from the King patron of the Fund The King feels that the fact that the finances of the hospitals have been so well maintained despite the stringency of 1931 is very significant of the widespread public interest in their welfare His Majesty earnestly trusts that this support will not fail during the present year His Majesty considers it a notable achievement on the part of the King s Fund that it should have been able at this time not only to increase the amount distributed to the hospitals but to add substantially to reserve

Turning to matters of finance the Prince expressed personal thanks to all subscribers and donors The Nizam of Hyderabad had made a gift of £2 000 an anonymous friend another £9 000—the eighth large donation from the same source the League of Mercy £17 000 and the British Charities Association £10 000 He also paid a tribute to the generous bequest of Sir Otto Beit A further anonymous gift of £10 000 had been received and allowed the Fund a certain amount of discretion in its disposal Accounts showed an actual increase in net income of £12 000 making a total of £315 000 Part of this had been used to increase the ordinary distribution part had been devoted towards expenditure on the pensions scheme and part kept in reserve The total amount distributed in 1931 was £294 313 As regards hospital finance it was remarkable that though some hospitals had had serious deficits the aggregate income had kept ahead of expenditure In 1931 the total of the surpluses exceeded the total of the deficits by £60 000 and the Voluntary Hospitals Service taken as a whole had once more balanced its budget This was a hopeful sign The present difficulties of the hospitals were not due to any gradual decline in the voluntary system on

the contrary the income of the London hospitals had steadily increased from 3¼ million pounds in 1927 to 3¾ million pounds in 1931 The voluntary hospitals were suffering like everything else from the world crisis but it seemed evident that many of those who could still afford to contribute were feeling that it was their duty to give more just because so many other people were obliged to give less

REDISTRIBUTION OF RADIUM

The Prince then referred to the report of the Distribution Committee on the reallocation of radium of which the following is a summary

The position as last reported to the council in December 1930 was that the 10 grams of radium acquired by the Fund had been allocated among twenty four hospitals and that 9 grams had been delivered In the course of 1931 the last gram was delivered and the 10 grams were in use

In the course of the year the authorities of St Mark's Hospital who had received a loan of 100 mg found that the number of their cases suitable for treatment with radium had decreased They therefore returned the amount allocated by the Fund Pending reallocation by the Distribution Committee this radium has been in temporary use at other hospitals

In June the Westminster Hospital submitted a report by its radium staff which described the results obtained by the use of the 4 gram bomb as being so discouraging as not to justify the hospital in financing the undertaking further This bomb had been acquired by the Fund in exchange for an equal quantity of radium to be used by the National Radium Commission outside London It was part of the arrangement with the Commission that the hospital should continue the scheme of radium therapy agreed between the hospital and the Commission The King's Fund accordingly having first had an interview with representatives of the hospital asked the Commission for its observations upon the hospital's report of the results of the use of the bomb The Commission replied that they were unanimous that the use of the bomb in its present form should be discontinued and recommended to the Fund that the radium in the bomb should be divided into four units of 1 gram each to be used for the development of surface therapy in malignant diseases—these units to be allocated to separate hospitals

While these recommendations were under consideration representations were made to the Fund on the subject of the use of bombs of larger size than 1 gram and the Distribution Committee proposed to the Commission a conference between representatives of the two bodies to discuss the problem At the conference the Fund's representatives stated that the information received by the Fund suggested the question whether a 3 gram bomb could be used successfully in certain forms and for certain sites of the body and they asked therefore whether the Commission had any information to the contrary or whether they would recommend a loan of a 3 gram bomb to some suitable hospital for further experiment The Commission's representatives stated in reply the view taken by the Commission of the available evidence and the reasons which had led them to their conclusion that in present circumstances three or four bombs of 1 gram capacity would be the best method of using the radium though this would not prevent the concentration of these units to form a larger bomb in the future if as a result of experience it was found to be desirable

Following on the meeting the Commission after careful consideration of the points raised by the King's Fund confirmed by letter their recommendation that the use of the bomb in its present form should be discontinued and that units of 1 gram each should be loaned for use in surface therapy to selected hospitals The recommendation of the Commission was then accepted in principle by the Distribution Committee and 3 grams out of the 4 were allocated by the Fund for the purpose The hospitals originally selected to receive these 3 grams were the Cancer (Free) the Middlesex and St Bartholomew's The last named hospital having subsequently withdrawn its acceptance University College Hospital was substituted It was arranged that the Fund should ask these hospitals to co operate with the Commission in regard to the work to be done with these 1 gram units

Plans of the apparatus to make these 1 gram units available for use and the scheme of work to be undertaken with them have been approved by the Commission and by the Distribution Committee The allocation of these three 1 gram units left 1 gram of the bomb available for loan together with 100 mg returned by St Mark's After careful consideration of all applications for radium that had been received by the Fund the Distribution Committee allocated 1 gram to Westminster Hospital and 100 mg to Guy's Hospital

The total allocations of the King's Fund radium amount therefore to 10 grams among twenty four hospitals as follows

	Amount of Radium allotted by King's Fund	Amount held including King's Fund allotment (approx.)
HOSPITALS WITH MEDICAL SCHOOLS	Mg.	Mg.
Charing Cross	250	250
Guy's	600	600
London	250	2 550
Middlesex	1 870	3 050
Royal Free	200	650
St Bartholomew's	450	2 000
St George's	150	350
St Mary's	150	300
St Thomas's	150	500
University College	1 500	1 700
Westminster	1 250	2 900
OTHER GENERAL HOSPITALS		
Prince of Wales's	150	150
Queen Mary's	150	150
Royal Northern	150	250
West London	150	150
SPECIAL HOSPITALS		
Cancer (Free)	1 000	2 100
Central London Throat	100	100
Chelsea	200	350
Elizabeth Garrett Anderson	150	150
Golden Square Throat	150	150
Hospital for Women	100	250
Marie Curie	500	700
Samaritan Free	100	350
South London	150	150
	9 870	19 850
Margin required for excess filling	130	

Although the radium hitherto contained in the 4 gram bomb now belonged to the King's Fund as the result of an exchange this bomb was originally lent to the Westminster Hospital by the National Radium Commission for a scheme of work arranged between the hospital and the Commission When the Commission became convinced that in present circumstances the use of the bomb should be discontinued the Distribution Committee accepted its recommendation after having first discussed with it certain alternatives that had been suggested I am sure continued the Prince that you will approve of their action and you will all have seen that the conference suggested by Lord Dawson and Lord Moynihan has since reported and has agreed that the decision of the Commission was justified When the reallocation is completed the King's Fund will have 10 grams of radium out on loan amongst twenty four London hospitals As regards the report of the Distribution Committee published twelve months ago on patients waking hours (which suggested that the hour should not be earlier than 6 o'clock in the absence of any special reason to the contrary) it was satisfactory to learn that out of sixty two hospitals where patients used to be awakened before 6 o'clock thirty seven had already found it possible to advance the hour twenty two of them to 6 o'clock

PAYING PATIENTS OUT PATIENTS AND PROPAGANDA

The Prince stated that the annual list of the pay beds provided in the London voluntary hospitals for those of moderate means had again been issued The number had now increased to 1 577 beds at 104 hospitals For large

numbers of people there still remained the problem how to meet the cost of an illness or operation even when a pay bed was available at a moderate weekly charge. Hence, the launching of the scheme drawn up by the British Provident Association (whereby those who joined the association could make provision in advance by means of small premiums towards the cost of a bed) was welcomed. Clearly the soundest way to meet the cost of illness was by applying the principle of provision in advance. Every one who could afford to do so should co-operate to make this provision. Those who joined would do two things: they would, when the time came, be better able to pay for accommodation appropriate to their normal standard of living and they would not themselves be obliged to occupy ordinary beds which were intended for those who could not be expected to provide the full cost of them.

The Out-patient Committee was actively engaged on its inquiry and the hospitals themselves had been giving increased attention to the subject. A number had been studying their own methods with a view to reducing the time of waiting and were thus in a position to give useful evidence on the question of what was practical and what was not.

The propaganda work of the King's Fund was more important than usual at the present time owing to the exceptional difficulties of the hospitals but the public should realize two facts. The first was that the present difficulties were exceptional and that there had been no gradual decline in voluntary hospital finance. A steady increase in income from ¾ millions to ¾ millions in five years was progress not decline. The second fact was that the hospitals had a just claim to a regular income from voluntary sources since they provided a regular public service some of the most valuable features of which were the result of voluntary support. The Propaganda Committee still continued to keep the name of the King's Fund prominently before the public in various ways.

In conclusion the Prince expressed thanks to the treasurer and members of the Finance Committee for their care of investments and to the honorary secretaries and members of other committees who carried on the day-to-day work of the Fund. He then asked Mr. Peacock to present the accounts.

THE HOSPITAL AND THE PAYING PATIENT

BRITISH PROVIDENT ASSOCIATION MEETING

A meeting to further the objects of the British Provident Association for hospital and additional services was held at the Mansion House, London, under the presidency of the Lord Mayor on June 8th when the Prince of Wales was present. The association aims at providing hospital and nursing home beds at reasonable charges together with means whereby the cost of maintenance during serious illness and surgical fees can be substantially if not wholly covered through co-operative effort on the part of the people who are to benefit. The immediate need was announced to be 100 000 contributors of £10 each, the money to be utilized in obtaining 1 000 beds in or near the existing voluntary hospitals or in new and separate buildings to be known as the association's home hospitals.

Lord LLOYD, the chairman of the association, explained that the class which the association specially desired to benefit was that which in the social scale was midway between the working class and the richer members of the community. The working class had open to it excellent hospitals the well-to-do had nursing homes but to those in the intermediate class no such facilities were available. These people possessed little or no surplus money and when overtaken by serious illness the calamity came as a possibly irretrievable disaster. The provision of a hospital bed cost roughly £1 000 and provided for the sickness needs of 100 families in a year. If therefore each head of a family made one payment of £10 he provided his share of the capital cost of the accommodation for himself and his wife for life and for his children until they reached the age of 21. In addition of course the cost of maintenance would have to be provided by the patient but this could be brought down to a reasonable figure. The many thousands of inquiries since the extended scheme was published a few weeks ago testified to the great interest in this effort and the fact that it met a situation of real need. In Greater London alone it was estimated that there were 600 000 families (2½ million persons) belonging to the middle and professional classes any of whom might at any time be in need of hospital accommodation for serious illness. In the voluntary hospitals of London at present there were 1 500 beds available for such a purpose but many more were needed and the provision of this great extra accommodation was a matter for concerted effort—with 100 000 £10 contributions. He added that it had been decided to enrol single persons who might have difficulty in putting up £10 as founders on a payment of £5. The council hoped that large employers would be willing to help the members of their staffs in this respect by granting an advance of money to be repaid in small amounts.

The PRINCE OF WALES, speaking as President of the King Edward's Hospital Fund for London, said how warmly he approved the co-operative method of the British Provident Association whose progress he would watch with great sympathy and interest. The council was doing some public work which was badly needed—namely that of helping people possessing only moderate means to meet the grave difficulties and expense of a serious illness. The schemes now projected had not been hastily conceived they had gradually matured from 1927 and had received the approval of an expert committee set up by the King Edward's Fund. The motive force of the association was co-operation in the solution of their own problem by the people concerned.

Lord MOYNIHAN in supporting the scheme gave a graphic description of the advance of medical science repeating in part some of the statements he had recently made in his Romanes Lecture at Oxford (*British Medical Journal* June 11th, p. 1096). He said that surgery had now been made safe for the patient but it remained to make the patient safe for surgery. For an operation the patient must be in the best possible condition: days or weeks of preparation might be necessary and many measures might have to be taken to increase his resistance. Such a procedure as transfusion of blood was now a commonplace in every hospital in the country and this and other methods were only possible if the patient had institutional care and treatment. Lord Moynihan mentioned that only twice in the last twenty years had he performed an operation in a private house. Nursing homes gave to the richer people fairly adequate facilities but the people who got the best in this country from the surgical side of the profession were the poor who partook of the benefits of the voluntary hospital system one of the greatest glories of the country to-day. In between the poor who went to hospital and the rich who went to nursing homes were the great body of middle class people whom the provident scheme was designed to benefit. It had been one of the miseries of his professional life to feel that owing to the inadequate preparation possible to such people they had either to be recipient of charity which they generally detested to strain their purses unduly to meet the necessary expense, or to ask the surgeon to forego part of his fee. He himself was able to say that two-thirds of the work he had done in surgery had been for no fee and he was not distinguished from other surgeons in the country in that respect. That was not however the right principle from the point of view of the patients themselves for it made them reluctant to go to the surgeon again. The greatest of all necessities in the profession of medicine to-day was that adequate facilities should be afforded for the treatment of the great mass of these people when their time of distress was upon them.

Lord DAWSON OF PENN said that the kernel of the difficulty was that side by side with decreased capacity to pay owing largely to the financial situation there had grown up an increased cost of treatment due to the growth of medical knowledge This growth of knowledge had placed at the disposal of the profession very much enlarged methods of investigation all of them to the great advantage of the patient for they led to a much more accurate diagnosis and ensured a safer restoration But the expenses involved might be beyond the capacity of the individual to meet He gave as an illustration the case of persistent indigestion A few years ago such diagnosis as was possible was simple and quickly completed to-day however it might require the help of chemical analysis or x-ray examination or both These new methods provided much better service for the patient but they brought an increase of cost Kidney disease again might necessitate extremely refined methods of examination each of which called for a skilled worker in his special department and for special equipment The tendency to-day was to investigate disease in its early stages and there was a growing interest on the part of the public in health and fitness hence the needs of families were concerned and keen in the health and nurture of their children He did not think that any scheme of insurance should confine its attention to serious illness it should include methods of prevention Lord Dawson gave an interesting comparison In the case of a hospital with nearly 400 beds the x-ray department in 1911 cost £150 in 1921 the cost had risen to £750 and in 1931 to £2 800 In a case of complete investigation by a barium meal the out of pocket expenses would be from £5 to £8 There was only one way of meeting the needs of the nation—except for the fortunate few—and that was by mass production The last thing that anybody who knew the value of medicine would wish was that institutional treatment should replace the care of the patient in his own home by his family doctor but there must be insurance which was becoming more and more a part of the fabric of the daily life of the people

Scotland

DEPARTMENT OF HEALTH

The activities of the Department of Health for Scotland during the year 1931 as evidenced by the third annual report[1] have been considerably hampered by the continued widespread unemployment and by the need for economy in national and in local expenditure It was necessary for the Department to secure that expenditure on relief should contribute if possible to some permanently useful purpose and that necessary economies should be effected without damage to the health of the people The latter appears to have been achieved since the general death rate and the infant and maternal mortality rates were lower than they were in 1930 the death rate from tuberculosis continued to fall and the rates of expenditure on sickness and disablement benefits to insured persons were also less The need for economy however held up major developments and local authorities are still occupied with the work of co-ordinating the services brought under unified control by the Local Government (Scotland) Act 1929 Special attention has been paid to hospital organization and the report holds that much of the existing organization is expensive to maintain and is not adapted to take full advantage of modern advances in medicine Accordingly a review of the hospital services in Scotland is in progress and there is reason to believe that these services will develop on more economical and efficient lines than in the past It is suggested that a similar review on a more comprehensive scale of other health services would be profitable for disabilities among children and invalidism among the insured population which are eminently preventable are revealed year after year The housing programmes of previous years have generally been slowed up so that the number of State-aided houses completed during 1931 was disappointing The incidence of infectious diseases except scarlet fever whooping-cough and dysentery was lower in 1931 than in 1930

[1] Cmd 4080 H.M. Stationery Office (3 net)

Housing and General Sanitation

While the number of State-aided houses completed during the year was 10 654 the number for which tenders were approved was higher than the corresponding numbers for the previous three years so that an increase may be expected in 1932 The number of working class houses provided without State subsidy was estimated at 14 262 Returns received at the end of the year showed that the number of houses required to meet the needs of families displaced by the demolition or closing of houses to abate overcrowding and to meet the normal growth of population etc was 79 699 while the number of houses contemplated in the three years 1931–3 was 54 986 As only 10 654 houses have been completed a very special effort will need to be made in 1932 and 1933 The activities of local authorities during 1930 in providing work for the relief of unemployment by acceleration of water supply and drainage schemes were continued during 1931 At the close of the year the Advisory Committee on Unemployment had received reports on 143 schemes dealing with water supply ninety-eight with drainage and sewage purification and 120 with miscellaneous works including refuse disposal alterations to slaughter-houses new cemeteries and similar projects The probable cost of the proposed schemes is £2 841 243 and of these 255 schemes at an estimated cost of £2 438 038 have been approved for grant purposes by the Department The question of dustless removal of refuse has engaged the attention of local authorities during the year and it is generally recognized that something must be done to prevent dissemination of dust and litter during the emptying of ashbins in public thoroughfares The feeling is general that a satisfactory solution of the problem will not be reached until power is given to local authorities to provide and maintain standard ash bins in place of the boxes pails etc at present in common use

Food Supply

Throughout the year special attention has been directed towards ascertaining the household consumption of milk Although the amount of graded milk produced under licence was a small percentage of the total supply a considerable proportion of the ordinary milk approximated very closely to the standards of graded milk both in butter-fat content and in bacterial count The problem of eradicating bovine tuberculosis from dairy herds is receiving increasing attention from farmers and experience during the past nine years has shown that tubercle-free herds can be successfully formed and maintained in Scotland The number of cases of tuberculosis discovered by veterinary inspectors at their periodical inspections was 810 or 0·31 of the 259 637 cows examined There are now sixty-seven certified herds and seventy-seven Grade A (T T) herds licensed by local authorities With regard to meat it is stated that there are now 153 public and 515 private slaughter-houses licensed by local authorities in Scotland The Department takes the view that it is no longer necessary for each small centre of population to have its own public slaughter-house and that the abattoirs of large burghs will in general accommodate the slaughtering business of the surrounding district During the year the Department gave consent to twelve prosecutions in respect of mince and sausages which contained preservatives either prohibited or in excess

Maternity and Child Welfare Services

The outstanding facts in connexion with these services are the low birth rate the decline in infant mortality to a rate which is the lowest but one recorded in Scotland, and the reduction in maternal deaths from 6 9 per 1 000 in 1930 to 5 9 in 1931 During the year there were 544 deaths from diseases of pregnancy and parturition—113 fewer than in 1930—while deaths from puerperal sepsis which is one of the principal causes of maternal mortality, were 207 or fourteen fewer than in the previous year The number of deaths of children under 1 year was 7 545 representing an infant mortality rate of 82 per 1 000 births as compared with 83 per 1 000 for 1930 Deaths of children between 1 and 5 years of age numbered 3 306 representing a rate of 10 per 1 000 as in 1930 The schemes of local authorities for maternity and child welfare services which have now been submitted to the Department include all but a very small percentage of the population of Scotland it is expected that services will be in operation in all areas in Scotland in the course of 1932 The returns of medical officers for the year 1930 showed that the number of expectant mothers who attended ante natal centres was 19 081 of whom 3 296 were referred to ante natal wards for treatment 7 190 were treated at the centre and 201 were referred to the family doctor Home visitation by health visitors was made to 14 335 expectant mothers It is estimated that approximately one half of the births during 1930 (94 549) were attended by doctors one third by midwives and one sixth in maternity institutions These proportions however varied considerably throughout Scotland for example in Edinburgh midwives attended only 5 per cent of the births while in Glasgow they attended approximately 40 per cent With regard to maternity institutions in 1930 there were twelve local authority institutions with 191 beds and eighteen voluntary institutions with 614 beds in addition there were twelve mother and baby homes providing for 176 mothers and 198 babies The number of practising midwives in Scotland at March 31st 1931 was approximately 5 000 as against 4 900 at the same date in the previous year During 1931 1 398 cases of ophthalmia neonatorum were notified as compared with 1 431 in 1930 and an average of 1 389 in the ten years 1921 30 In six cases there was appreciable loss of vision The number of schools under inspection during the year ending July 31st 1931 was 3 989 with a total of 819 537 children on the register and an average attendance of 750 460 Children medically examined during the year numbered 248 835 136 684 were referred to medical officers for special examination and 99 971 were re examined

Infectious Diseases

Deaths from pulmonary tuberculosis which fell from 970 to 3 024 in the decennial period 1921-30 showed a further though less marked fall to 3 002 in 1931 deaths from other forms of tuberculosis which fell from 1 767 to 1 262 in the decennial period fell to 1 201 in 1931 There are now fifty two treatment centres for venereal disease in Scotland At these fifty two centres 29 360 patients were examined during the year of whom 23 856 or 81 per cent were infected new patients numbered 15 729 of whom 10 725 or 68 per cent were infected The total attendances were 494 901 of which 94 per cent were of infected persons In 1929 30 new syphilis cases numbered 4 564 in 1930-1 3 755 After final tests 4 526 patients were discharged from the centres as cured this is practically the same figure as for the previous year Local authorities are encouraging the general practitioner to treat venereal disease on modern lines by supplying him free of charge with arsenobenzol compounds Diphtheria was again prevalent in 1931 but the number of notifications fell from 10 946 in 1930 to 9 376 or about 180 cases per week in 1931 Scarlet fever was notified in 18 755 instances as against 16 016 in 1930 There were only 404 notifications of enteric fever a decrease on those of the previous year Measles in those areas where the disease is notifiable showed 21 63o notifications as against 34 590 in 1930 and whooping cough 13 740 cases as against 10 565 in 1930 Acute primary and influenzal pneumonia showed only 13 795 notifications as against 14 931 in 1930 this is the lowest figure recorded in the last five years

Hospital Services

Much preliminary work in planning new hospital services has been done, officers of the Department have surveyed and reported on the services of nearly half the local health authorities in Scotland The Department has declined to consider hospital proposals by councils unless they are related to the needs and proposals of adjacent local authority areas The report urges that the possibility of future developments towards a concentration of hospital activities in comprehensive units must be kept in mind and in selecting the existing hospitals which are suitable for development the following factors are important site in centres of population accessibility climate ground available for expansion and condition of buildings It is suggested that small hospitals unsuitable for further development might be used for chronic patients convalescents, or as children s homes and that the poorhouse hospital should cease to exist except for provision for persons suffering from transitory illness the acutely sick being removed to another hospital and the chronic sick housed in hospitals for infectious diseases that have been vacated As regards voluntary hospitals and the provision of treatment for sick persons by local authorities the Department has insisted that in every case the formal consultation with voluntary hospitals even when it is not required by statute should be observed and in all local surveys of institutions has included in the reports to local authorities suggestions for co operation with the voluntary hospitals The Department is satisfied that such co operation holds out the best prospect of adequate hospital service

Voluntary Hospitals and the State

The Secretary of State for Scotland has reconstituted the Central Liaison Committee for Voluntary Hospitals in Scotland for the period to March 31st 1935 The purpose of the Committee is to act in liaison between the Department of Health for Scotland and the Regional Committees of Voluntary Hospitals in Scotland to assist in keeping the Department in touch with voluntary hospital opinion and, in the development of hospital services in Scotland to foster co operation between the voluntary hospitals and the local authorities in each region The members of the committee are as follows Lord Mackenzie (chairman) Sir David Wallace F R C S Ed Edinburgh Mr Charles F Henderson Dundee Mr Alexander M MacEwen Inverness James Macfarlane LL D Glasgow Colonel D J Mackintosh LL D M B Glasgow Major General James Thomson Aberdeen The secretary is Mr N F McNicoll

Charges in Edinburgh Municipal Hospitals

At a meeting of Edinburgh Town Council on June 2nd, at which the Lord Provost presided it was agreed to take advantage of Section 28 of the Local Government Act of 1929 whereby powers were given to local authorities to make a reasonable charge in respect of the expenses incurred by the council in maintenance and treatment of sick persons in municipal hospitals The charges will be as follows patients belonging to Edinburgh up to 25s per week according to circumstances patients belonging to other local authorities £2 12s 6d per week, and private patients £3 3s per week

England and Wales

Harveian Society

The Harveian Society of London's annual dinner given by Sir George Buckston Browne was held on the evening of June 9th at the Connaught Rooms, Great Queen Street with the president Mr Cecil P G Wakeley in the chair The company included the medical heads of the three fighting services the Presidents of the Royal Society of Medicine the Medical Society of London and other kindred professional bodies the Harveian lecturer (Sir Percy Sargent) and the president of the British College of Obstetricians and Gynaecologists After the loyal toasts had been honoured Lord Riddell president of the Medico Legal Society proposed the health of the Harveian Society and as he recounted a series of amusing anecdotes it gradually became clear that Lord Riddell was offering a silver gilt loving cup to the society with Harvey's name on one side and Sir George Buckston Browne's on the other Mr Wakeley replying to the toast made an appreciative reference to the knighthood bestowed on Sir George Buckston Browne who he said was the grand old man of the society In a brief but apt speech he graciously alluded to some of the guests and members present and expressed the thanks of the society for Lord Riddell's generous gift The health of the visitors was proposed by Dr A H Douthwaite in a speech as elegant as it was witty his story about the desert island being quite the best we have heard on a subject which has been exhaustively explored by anecdotists Professor William Wright president of the Anatomical Society responding for the visitors ably sustained the witty level set by previous speakers in his references to the Encyclopaedia Americana and the mutual obligations of guest and host He was followed by Dr Allen Mawer Provost of University College London who illustrated the trials of a provost by reading two anonymous letters which proved once more that truth is not only stranger than fiction but vastly more amusing The organizers of the dinner must be congratulated on a successful evening, in which good fare and good fellowship were commingled

Congress of the Royal Sanitary Institute

The forty third Congress of the Royal Sanitary Institute which will be held at Brighton from July 9th to 16th will be addressed by Professor C E A Winslow of Yale University on the subject of current tendencies in American public health Seven Sections have been organized for discussions—namely preventive medicine architecture town planning and engineering maternity and child welfare and school hygiene food and nutrition hygiene and industry veterinary hygiene and national health insurance Conferences are being arranged for representatives of sanitary authorities medical officers of health engineers and surveyors sanitary inspectors and health visitors Among the topics to be dealt with are the work of local authorities relative to cancer illumination and visual fatigue in industry the advantages of houses with electrical adaptations for light and other purposes mental hygiene health conditions in underground offices sea outfalls for sewage and the municipal activities in Brighton A large health exhibition in the Dome and Corn Exchange will be stocked with household and kitchen appliances sewage disposal apparatus refrigerators disinfecting apparatus drainage appliances and infant and invalid foods Congress tickets will be available for others than Fellows Members and Associates of the Institute at the price of £1 11s 6d and this will include the supply of a printed record of the proceedings Further information may be obtained from the secretary of the Royal Sanitary Institute 90 Buckingham Palace Road S W 1

Central Midwives Board

At the meeting of the Central Midwives Board for England and Wales on June 9th the Standing Committee reported a letter from the clerk of the Stratford Urban District Council stating that investigation had recently been made by the local supervising authority into a case in which a midwife acting as a maternity nurse had broken certain of the rules in Section E which a midwife when acting as maternity nurse does not have to observe—which rules however appear to be of vital importance in view of the duties a maternity nurse has to perform The Board agreed to reply as follows

That there are practical difficulties in the way of compelling midwives who act as maternity nurses under the direction and personal supervision of a duly qualified medical practitioner to comply with all the rules in Section E and that if a midwife when acting as a maternity nurse does not (apart from the observance of those rules which midwives when acting as maternity nurses have to observe) perform her duties satisfactorily the proper course would appear to be for the patient or the doctor in charge of the case to dismiss the midwife or take such other action as is open to them Such a course would be perfectly proper in view of the fact that the doctor (not the maternity nurse) is responsible for the case and that he is also responsible for the proper performance by the nurse of her ordinary duties or of any of his duties which he may have delegated to her

The secretary reported the death of Dr John Abernethy Willett one of the Board's examiners at the London Centre and the Board recorded its deep sympathy with the relatives and its appreciation of the valuable services rendered by him as an examiner at the London Centre The draft new rules in Section E were further considered and approved as amended and the secretary was instructed to send a copy to the Minister of Health for his approval

Post Graduate Teaching at L.C.C. Hospitals

The question of medical education in the hospitals under the management of the Central Public Health Committee of the London County Council has been the subject of discussion with representatives of the London Voluntary Hospitals Committee The arrangements are being continued which were already in force at certain of the hospitals under the Metropolitan Asylums Board and at seven of the general hospitals under the management of the late boards of guardians Application has been made on behalf of the Fellowship of Medicine for co operation in affording facilities for post graduate teaching at Lambeth Hospital where it is suggested there should be held fortnightly demonstrations on selected cases and the attachment to the hospital of two post graduates each month The fortnightly demonstrations would be given by members of the whole time staff of the hospital but the Fellowship is willing to provide a special demonstrator if at any time the medical superintendent should consider this desirable In the first instance the work would be specially in connexion with the radium clinic It is proposed by the Central Public Health Committee to grant the facilities requested

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The Trustees of the Dr Jessie Macgregor Prize for Medical Science announce that the prize for the present triennial period is awarded equally between Miss Elsie Porter M D Ed for her work on the therapeutic uses of drugs of the digitalis group and Miss Helen May Russell M D Ed F R C P Ed for her work on human and experimental relapsing fever

Correspondence

DR ALFRED COX TESTIMONIAL FUND

SIR —We feel sure that many of your readers would like to be reminded that the end of the current month closes the term of contribution to the above Fund which is being raised as a token of recognition of the devoted services of Dr Alfred Cox to the interests of the medical profession

The response has been good the excellent portrait by Sir Arthur Cope is in the Royal Academy and the committee are now especially concerned that a larger number of names may be inscribed in the Presentation Book, which we know Dr Cox will particularly value

We would urge those who have not already subscribed to send in their names and addresses together with a small contribution (in no case to exceed ten shillings and the amount does not appear in the list) to the honorary treasurer of the British Medical Association Tavistock Square W C 1 —We are etc

HUMPHRY ROLLESTON
Chairman General Committee
EWEN J MACLEAN
Chairman Executive Committee

June 6th

UNDULANT FEVER IN ENGLAND

SIR —I have read with great interest the three articles on undulant fever in your issue of June 4th which form a valuable contribution to the literature of the subject I should like however to make a few comments on Dr Forbes's account of his case as certain remarks which he makes may give rise to some misunderstanding

In the second paragraph of his account he says so far as he is aware in the few previous cases recorded in England the disease has not been connected up with the source So far as I know thirty one cases of this disease (originating in this country) have been previously reported in the medical press and in four of these cases good evidence was obtained of the origin of the infection These cases were reported by Box and Bamforth [1] Charles and Warren Todd [3] and Davies and Anderson [4] In the last case evidence as to the origin of the infection is not given in the published account but was obtained later and consisted in the discovery of agglutinins for *Br abortus* in some of the milk furnished to the patient's dairyman and the isolation of the organism in pure culture from the mixed milk of several cows on one of the farms concerned

With regard to the quite dramatic change following the administration of S U P 36 whilst I am far from denying the possibility of benefit resulting from this treatment (I have seen such apparent benefit in another case) it is well known that a sudden cessation of fever after a period considerably shorter than the fifteen and a half weeks mentioned by Dr Forbes often occurs in this disease so that one should be very cautious in attributing such a happy result to any treatment employed

Finally with regard to Dr Forbes's recommendation that the name abortus fever should be substituted for the now usual name of undulant fever I think that such a change would be most undesirable in view of the many different strains of the Brucella group which have been shown to produce a disease with essentially the same clinical characters The term undulant fever is admittedly not ideal but the undulant type of temperature chart of which Dr Forbes's case gives a by no means bad example is in my experience the commonest type found in this country —I am etc

W DALRYMPLE CHAMPNEYS

Ministry of Health S W 1 Jun 8th

[1] *Lancet* November 28th 1925 p 1115
[2] Ibid February 23rd 1929 p 386
[3] Ibid February 23rd 1929 p 388
[4] *British Medical Journal* July 6th 1929 p 12

THE NORMAL TEMPERATURE

SIR —I am glad that Professor Lyon and Dr Wallace have drawn attention in your issue of May 28th to the mean temperature of non febrile hospital patients and I trust that the article which attacks several widespread misconceptions will receive the recognition it deserves

It is a surprising fact that although the taking of temperature is the most common clinical observation we make use of many essential facts about normal temperatures do not appear to be generally known to the profession or adequately taught in our medical schools For instance how far is it recognized that a patient whose temperature before he gets up in the morning is 98 4° is probably febrile whereas another who walks fast to the doctor's consulting room on a hot day wearing too many clothes may have a temperature of over 100° and yet be afebrile? Strenuous exercise or a very hot bath may send the temperature of a healthy person up to 102° or higher The pre menstrual rise in women is another not infrequent cause of false deductions

For many years sanatorium physicians have found accurate temperature readings to be the most valuable single test for finding out whether any lesion is in an active or quiescent state In an article entitled The temperature as a guide to the treatment and prognosis in phthisis [1] Vere Pearson described in some detail the best methods of recording temperatures and the conclusions which may legitimately be drawn from them A wider appreciation of the technique of temperature taking and the physiological limits of the observations recorded would much enhance the value of this simple test and would avoid a considerable number of false conclusions —I am etc

ANDREW MORLAND

Mundesley June 6th

[1] *Lancet* September 18th 1909

PREPARATION FOR MARRIAGE

SIR —Whilst in profound agreement with the spirit of the letter from Dr H G Baynes in your issue of June 11th (p 1103) I would beg to offer, in no controversial manner one or two observations Dr Baynes allies himself I understand with the movement in favour of individual cultivation of the sexual instinct by didactic or consultative instruction But who is to instruct the instructors and what exactly are the sound principles to be inculcated? Let us agree that for nearly two thousand years the overriding preoccupation of the Western Churches has been not the avoidance of human misery but the repression of the normal and healthy sexual instinct of men and women Should not the first objective be the propagation of healthy biological teachings and preparation for marriage a later concern? Is there not a real danger lest preparation for marriage should be controlled by the very forces and organizations which as Dr Baynes says for two thousand years have made sexuality the psychological scapegoat in our Western civilization? As a matter of fact the signs are patent that the Churches are already claiming the right to be the lawful preparators for marriage under the new dispensation It seems well that the issue should be frankly faced Their scarcely disguised desire to interfere with and control the private exercise of the sexual function is doubtless as Nietzsche would have declared itself evidence of sickliness and impotence under whatever guise of benevolence it masquerades —I am etc

F G CROOKSHANK

London W 1 June 13th

TRAINING IN MASSAGE AND MEDICAL GYMNASTICS

SIR —It has come to the knowledge of the Chartered Society of Massage and Medical Gymnastics that there are a number of organizations in London and in provincial towns which profess to give a training in massage and medical gymnastics by correspondence and which issue certificates and diplomas These subjects necessitate a considerable knowledge of anatomy physiology patho logy medicine and surgery as well as technical ability and clinical experience This knowledge and experience can only be obtained by personal teaching and by the actual treatment of patients It is to be hoped that members of the medical profession will inquire critically into the qualification and experience of masseurs and masseuses who offer to assist them in treating their patients and that they will not be deceived by diplomas granted after a correspondence course or some other totally inadequate system of training —I am etc

London W June 9th R C ELMSLIE

ALUMINIUM AND HEALTH

SIR —We are told that patients who have suffered for months from abdominal discomfort eczema pruritus urticaria etc were speedily cured after stopping the use of aluminium in the kitchen (and leaving off tap water) After hearing the personal testimony of several medical men at the meeting of the Hampstead Division of the British Medical Association on June 9th I cannot refuse to believe that these cases occur On the other hand careful scientific investigations have failed to reveal any thing harmful in aluminium vessels which are indeed ex tensively used without apparent ill effects

How are we to account for the clinical reports? To ascribe these with Dr J H Burn (reported in your issue of June 11th p 1080) simply to psychological effects is unsatisfactory in the case of eczema in young children and impossible where relapses are promptly caused by the use of aluminium without the patient's knowledge The explanation is that one man's meat may be another man's poison The alleged signs of aluminium poisoning '— irritability of the bowel (spastic colon) eczema urticaria etc —are all well established signs of allergy just as for example asthma they are also frequently observed in asthmatics and their relatives It is not surprising that there should be cases of idiosyncrasy towards aluminium or other substances present in aluminium vessels and tap water These patients belong to the numerous class of sufferers from food allergy the impor tance of which is still insufficiently recognized it is often labelled intestinal auto intoxication

It is therefore quite unnecessary to assume the presence of an irritant poison in aluminium vessels and London tap water (Dr Leo Spira in your issue of May 28th p 1010) and it is a mistake to frighten the public by asking us to take every possible measure to save humanity from the extreme danger of aluminium (Dr Cooper in your issue of May 7th p 863) Eggs straw berries iodides and innumerable other substances which can cause indigestion eczema urticaria etc in a few hypersensitive persons are not suspected as irritant poisons It would be more important to examine cases of alu minium poisoning carefully for other signs of allergy (family history skin tests eosinophilia etc) and to attempt treatment by desensitization I have a patient a lady of about 30 who used to get marked dysidrosis (cheiropompholyx) regularly after drinking tap water in London and in many Continental places The complaint is now much better in spite of leaving off precautions —I am etc

London W 1 June 13th F E LOEWY

LOCAL ANAESTHESIA FOR TONSILLECTOMY

SIR —I have performed tonsillectomy under novocain anaesthesia in selected cases for twelve years and find the controversy which has lately appeared in your columns interesting On more than one occasion I have chosen two cases as similar as possible for comparison and sub jected them to operation one after the other on the same day one under local and the other under general anaes thesia On each occasion the comparison both subjectively and objectively has been so strikingly in favour of the local anaesthetic that I have wondered why this method is not more generally used in this country

Admittedly it has its limitations I do not think that anyone would claim that it is a suitable method for young children or that it should be indiscriminately used for adults but in selected cases it has a very wide applica tion and is I submit an essential part of the equipment of a throat surgeon who deals with the type of case that is met with at a chest hospital in which inhalation of ether is very definitely contraindicated There are many debatable points but I do not think the question of haemorrhage is one of these The amount of bleeding which takes place under local anaesthesia is not com parable with that under ether and the control of bleeding vessels is perfectly possible with both methods

The mental pain so stressed by your correspondents can be completely avoided by considerate technique and a wise choice of patients and it must be remembered in this comparison that there are many patients who after a general anaesthetic are left with a serious phobia of ever having to have another —I am etc,

London W 1 June 6th A M ZAMORA

TUBERCULOUS RHEUMATISM

SIR —I cannot suppose that the writer on tuberculous rheumatism in your issue of June 4th can have read my article entitled The affinities between rheumatism and tuberculosis [1] In 1908 I wrote in my book much about the symptoms of tuberculosis simulating severe and especially chronic forms of rheumatism even in joints Those who have used tuberculin systematically for forty years must be familiar with the pains that in certain individuals appear regularly after injections of tuberculin in various joints and structures even in the eyes time after time in the same joint or part I hold now that these troubles are associated with definite tuberculous lesions in agreement with Liebermeister These are lesions about which the intracutaneous test leaves us in the dark Even in 1908 I wrote of a rheumatic type of tuberculosis and reported several cases of so called rheumatism which were proved by the tuberculin test and subsequent tuberculin treatment to be tuberculosis and nothing else These were concrete instances in which proper doses of tuberculin revealed the truth In none of these cases did I think of using the methods your writer considers necessary to establish a diagnosis

For many years I have been on the watch for poly-arthritis in some way associated with tuberculosis in two cases the victims were crippled with polyarthritis suggesting the diagnosis of rheumatoid arthritis of olden days In these cases also I trusted to the tuberculin test and finding the test positive I treated with tuberculin up to very large doses with extraordinary success My latest case which I have described to various physicians as a typical case of Poncet's disease is very interesting

He had been at Brompton Hospital as an in patient for some time but was discharged with query tuberculosis yet no tuberculin test had been given Then he was sent to St Mary's for some months and returned home a hopeless cripple —severe lesions and pains in the lower limbs much deformity in both knees rigidity in both submaxillary joints and also pain and rigidity in the cervical vertebrae He could hardly

turn his head more than 15 to 20 degrees I found signs suggesting an old attack of pleurisy I tested him and he reacted I treated him for a year up to large doses and now he has returned to work His movements are far freer and he has lost the distressing pains

I venture to say that in all such cases tuberculin used for diagnosis and treatment may greatly benefit the patient although the *superfine methods of science* suggested by your writer that could not benefit the patient at all were not adopted and were not necessary to establish the diagnosis Therefore it may be most helpful in the treatment to learn that the patient has a positive tuberculin reaction —I am etc

W CAMAC WILKINSON M D F R C P

London W June 7th

SHOCK FOLLOWING BLOOD EXTRAVASATION

SIR —I am entirely in agreement with the suggestion of Dr Leslie Burnett (June 4th p 1056) in which he refers to my paper in the *Journal* of December 19th 1931 (p 1124) In all probability immunity to the form of shock dealt with in my original communication may in the future be possible to establish The increased susceptibility to this accident during pregnancy is evident and as Dr Burnett suggests offers an excellent field for research I *cannot agree with Dr Burnett's remarks* when he states that primitive man was immune to shock This is a supposition which is too sweeping to receive unquestioned acceptance It is evident from my original article that shock does not follow every extravasation *Such shock depends on (1)* the liberation of some definite toxin or (2) increased susceptibility of the individual to a toxin and both of these are secondary to the fact that *reabsorption* must be possible —I am etc

Dublin June 8th O DOVEL BROWNE F R C P I

FERTILITY AFTER PROSTATECTOMY

SIR —I am interested in Dr Arthur Ricketts's letter on this subject published in your last issue more especially as I was the surgeon who gave evidence at the trial at the Clerkenwell Police Court *which turned on the question* of whether a prostatectomized man could be the father of an illegitimate child I gave evidence to the effect that a so called complete prostatectomy sterilized a man, but admitted under cross examination that rare cases occurred *in which fertility appeared to have been retained* Formerly I have been content to assume that a prostatectomized man was sterile but after the experience of this case in which collateral evidence was strongly in favour of the defendant being fertile I feel that however remote *the chances of fertility may be some sort of test will have* to be undertaken

In going over my records I can find only one other instance of paternity after prostatectomy In this instance however the patient was a comparatively young man—namely 48 He was admitted to St Bartholomew's Hospital with one and a half pints of residual urine and a two stage prostactectomy was carried out by Mr Harold Wilson His sexual vigour was not impaired by the operation and eighteen months later the patient's wife became pregnant Dr Ricketts publishes in his letter yet another case from Harrogate and if my memory serves me right Mr Swift Joly has told me of another example at St Peter's Hospital in which some corroborative evidence of paternity seems to have been supplied *by a likeness between the reputed father and the child*

Dr Ricketts states that the possibility of fertilization following prostatectomy depends entirely upon whether the operation was complete or incomplete If the part of the prostate containing the openings of the common ejaculatory duct is left behind it is possible for the man to be fertile but where the operation is complete and the whole of the prostate is removed the mucous membrane of the bladder gradually grows down and across the bed of the prostate so that the patient is necessarily sterile However this distinction between complete and incomplete is in my opinion misleading Sir John Thomson-Walker pointed out many years ago that it is only the prostate lying above the level of the ejaculatory ducts that is removed by the operation Many authorities have even *gone so far as to state* that we do not enucleate the prostate at all but merely enlarged submucous glands lying between the prostate and the mucous membrane of the bladder and of the posterior urethra Whichever explanation be correct it must necessarily mean that in certain cases the ejaculatory ducts may altogether escape damage This may explain the occurrence of these cases of fertility after prostatectomy Usually when a prostatectomized man has coitus the semen passes back into the bladder and is voided at the next micturition *It might however happen that a small amount is ejaculated* containing sufficient healthy and active spermatozoa to effect fertilization

A further investigation of this interesting subject may reveal the fact that fertility after prostatectomy is of *commoner occurrence than is usually supposed but that* because the wives of these patients have generally passed the child bearing period paternity is exceedingly uncommon —I am etc

London W 1 June 11th KENNETH WALKER

SIR —The letter under this heading in to day's *Journal* calls for some comment raising as it does a matter of no little medico legal importance

Much confusion apparently still exists as to the tissue removed at suprapubic prostatectomy The term prostatectomy is of course a misnomer in that it implies *a removal of the prostate gland* whereas the commonly performed operation is but an enucleation of the hyperplastic portion of the gland proper or associated periurethral glands Total and complete *enucleation* of the prostate alleged to have been accomplished in the case recorded is not possible—the plane of cleavage lies between the hyperplastic masses or 'adenomata' and the peripheral portion of the prostate flattened out to form a false capsule Complete removal *of all the* prostatic tissue requires difficult scissor dissection and is seldom if ever indicated The usual regeneration or reappearance of the prostate within a very few months of prostatectomy can be verified with the cysto urethroscope

As the hyperplastic process involves only *the supra* montane portion of the gland it is theoretically feasible to enucleate the pathological lobes without violating the integrity of the ejaculatory ducts In practice however post operative scarring due probably to a combination of operative trauma and *low grade* infection leads to obstruction of the ducts in many cases Investigations appear to show that this occurs in but a minority and that the wellnigh inevitable sterility after prostatectomy is due to functionally imperfect spermatozoa and faulty ejaculation *the greater part of the fluid passing* not along the urethra but backwards into the bladder

The only two cases in which I recovered actively motile spermatozoa following suprapubic prostatic intervention had been subjected to a very incomplete prostatectomy Each was under 45 years of age and in each a pedunculated subcervical hyperplastic lobe had been avulsed

Per urethral resection of the obstructing prostate skilfully carried out leaves the *ejaculatory ducts* intact The verumontanal region is scrupulously avoided and so *fertility* after this operation is the rule and not the exception as is the case after suprapubic extirpation *This is* but one of the many advantages of this excellent procedure which year by year is *becoming* applicable to an increasing number of cases of prostatic obstruction —I am etc

London W 1 June 11th TERENCE MILLIN M Ch

THE USE OF THE SELF

SIR,—You published in your issue of June 4th a letter by Dr. A. P. Cawadias. He has so succeeded in cramming the maximum of error into the minimum of space that it would not be worth answering did it not afford a fresh opportunity of directing the attention of the profession to the importance to medicine of Alexander's work. This importance to medicine is incidental for Alexander is primarily concerned with education. Never despite what Dr. Cawadias says has Alexander indicated that he can on the basis of certain principles cure. He has never attempted any treatment of any disease nor does he teach treatment and accordingly Dr. Cawadias has written one sentence which is free from error when he says: "In his work Mr. Alexander does not indicate any precise method of treatment."

The most startling of Dr. Cawadias's statements is contained in the sentence where he says: "Literature has been submerged by works of non-medical healers teaching new methods. Nothing of all these speculations has survived." It is quite startling not to say refreshing to find a medical man or any other educated man who has apparently not heard of Pasteur.

I should think that we might all agree with Dr. Cawadias in his plea for a precise medical diagnosis. It is partly because Alexander has widened the conception of diagnosis that the medical aspect of his work is so important. Take the example of flat-foot. Unless it is recognized that the relation of the head to the neck, the neck to the torso, the torso to the limbs, in short the whole use of the self, has its part in the diagnosis of flat-foot, then that diagnosis may be defective. That education in how to manage the head in relation to the neck, *the neck in relation to the torso, in how to use* the self generally, may have the specific effect of causing sunken arches to rise—that is to say, curing flat-foot in process—a distinguished Harley Street consultant will, I am sure, testify to Dr. Cawadias should he care to seek the truth.

You will not, I know, give me space to elaborate the importance of the investigation of *function in relation* to diagnosis, indeed Alexander has not exhausted it in his chapter on Diagnosis. The importance of Alexander is his recognition that in a changing environment conscious must be substituted for instinctive control in the use of the body, as well as in the use of the mind, in man's physical acts as well as in his civic and social and international relations; that man's command over things—*steam and explosives and atoms and space*—has outrun his powers over himself to use that command wisely. No proof of this is needed beyond the tragic condition of the world to-day, and it is because Alexander will in *time be recognized as the pioneer worker* in establishing the conscious control of the use of the self that he will be given his place in history as the seer he is, on the condition—a quite uncertain one—that civilization lasts so long.—I am, etc.,

York, June 9th. PETER MACDONALD.

SIR,—My attention has been drawn to the letter by Dr. Cawadias in your issue of June 4th, and as Dr. Cawadias in this letter makes certain assertions which seriously misrepresent both my attitude towards medical diagnosis and treatment and the principles I have outlined both in this and in my earlier books, I am asking you to be good enough to grant me space in your valuable columns for my reply.

First Dr. Cawadias writes: "He [Alexander] gives a general outline of principles well known in medical circles and indicates that he can on the basis of these principles cure." Later he says: "I do not see how the use of the self will help us to cure an individual infected with typhoid fever or with cholera or who is suffering from a perforated appendix." And again: "Alexander like all non-medical critics puts the cart before the horse and teaches treatment without diagnosis."

In answer I can only refer your readers to *The Use of the Self* and to my other books, in all of which I have expressly dissociated myself from any idea of producing cures or giving treatment. For instance I began my chapter on diagnosis and medical training with the following paragraph:

> For many years medical men have been sending their patients to me because they know that I am experienced in examining conditions of use and in estimating the influence of these conditions upon functioning. I would say at once that I do not receive these cases as patients but as pupils inasmuch as I am not interested in disease or defects apart from their association with harmful conditions of use and functioning.

I herewith forward the names of many of the medical men referred to, all of whom can endorse this, and also the following statement, namely, that the whole of my experimentation as set down in Chapter I. from which my technique has been evolved is concerned not with medical treatment or cures, nor with the self or the use of the self as such, but with the conscious direction of use (a fact indicated by the subtitle of the book). Through the employment of this conscious direction of use I found that it is impossible to dissociate use from functioning, for the improvement in the direction of control of use brings about a corresponding improvement in functioning, the whole process tending to eradicate or prevent those symptoms which come about as the result of imperfect or inadequate functioning. This the foundation of all my work Dr. Cawadias passes over entirely, but anyone who is interested enough to read Chapter I. in *The Use of the Self* and also the chapter on Diagnosis can verify my statement and form his or her judgement as to the value of Dr. Cawadias's *ipse dixit* statement that Mr. Alexander teaches treatment without diagnosis and indicates that he can cure.

All I have aimed at in my book, and indeed in all my writings, has been to draw attention to the fact, unrecognized up till now in medical and other remedial and educational practice, (1) that man's sensory appreciation of the use of the psycho-physical *mechanisms* of his organism has become more or less untrustworthy, this growing untrustworthiness being associated with a misdirection of the use of himself; (2) that in my experience this *misdirection of use has an unsatisfactory influence* upon the general functioning of the organism, leading in many cases to the development of symptoms of defect or disease, and therefore (3) that it is not sufficient to deal with these difficulties by such direct means as are employed in orthodox medical and educational methods of specific training and treatment of defects and ailments, since in these methods no account is taken of the fact that the use of the mechanisms by means of which a pupil or patient must carry out any prescribed form of treatment or training is in most cases misdirected on account of untrustworthiness of sensory appreciation. I therefore make it plain to all who apply to me for lessons that I do not wish them to come to me as pupils unless they are prepared to work with me not for the purpose of treatment or cure but on the basis of correcting the misdirection of their use generally, which through my experience in this new field I am able to diagnose.

This is my approach to the question of diagnosis and by ignoring it throughout his letter I claim Dr. Cawadias has seriously misrepresented me. More than this, by his statement that I, in my book, describe, in popular form

medical principles of integration and prevention but that I fail to realize that these principles cannot be applied except on the basis of a precise medical diagnosis he shows that he has completely missed the point of my chapter on Diagnosis and *medical training* to which for lack of space I must refer my reader There I wrote on page 101

> No person who has not been trained firstly to detect the wrong use which is associated with wrong functioning and secondly to employ a technique evolved to the end of correcting this wrong use can diagnose what is wrong with the body as a whole or treat the body as a working unity and that since the study of medicine does not include any such training and no such training has been employed in the treatment of disease methods of medical training of to-day cannot give students the help they need to enable them to diagnose what is wrong with the body as a whole

Without the aid of such a technique it is not possible for what Dr Cawadias calls medical exploration to be individual deep and precise or for the medical principles of integration and prevention to be applied in practice On the other hand with the aid of such a technique as Dr R G McGowan pointed out in his *letter to the British Medical Journal* on October 23rd 1928 the idea of treating the human organism as an indivisible whole would become an actual fact and not merely a pious hope

Lastly when Dr Cawadias says that in my work I do not indicate any precise method of treatment I must point out in reply that since the experiments I there describe are concerned with sensory experiences this is inevitable for unfortunately as we all know knowledge concerned with sensory experiences cannot be described by the written or spoken word in any way that will enable those who have not had these experiences to know them precisely I would like to add that anyone who will give the time to the task of applying my technique to their own needs whilst adhering strictly to the principles I have outlined can repeat for himself experiences such as I have indicated but it will not be possible for him or anyone else to describe precisely the sensory experiences resulting from such individual experiments I am prepared however to demonstrate the scientific principle on which my technique is based before any authorized body of medical men and women as I have done to individual members of the profession for over twenty five years —I am etc

London S W June 6th F MATTHIAS ALEXANDER

SIR —The letter of Dr Cawadias (June 4th) is exceedingly appropriate in its reference to the book *The Use of the Self* and the same fundamental error he exposes pertains also to the prevalent use of quack advertised medicines The reader of such advertisements possibly asserts mentally if not audibly that is just how I feel and with none other than such self made diagnosis often proceeds to follow the suggested treatment During many years practice it is not often that I have seen actual *physical harm* as the result of taking such remedies but the loss of valuable time say in cases of pulmonary tuberculosis during which lung tonics elixirs etc have been self administered has been observed not infrequently

The opinion of Dr Cawadias that it is time for the medical profession to take a firm attitude against all the extra medical systems that are being proposed is one of great importance while in the interest of the health of the community and the successful work of the medical practitioner —I am etc

Burgess Hill June 6th W W SHRUBSHALL D P H

Obituary

W W KEEN M D LL D F R C S (Hon)

Emeritus Professor of Surgery Jefferson Medical College Philadelphia

Dr W W Keen the doyen of American surgery died on June 7th in Philadelphia at the age of 95 He had been a member of the British Medical Association for forty years and took an active part in the Annual Meeting at Montreal in 1897 He often visited this country renewing old friendships and corresponded from time to time in the most cordial spirit with successive Editors of this *Journal*

William Williams Keen was born on January 19th 1837 His ancestor Joran Kyn (George Keen) left Sweden and reaching the Delaware River in 1643 founded the town of Chester Dr Keen graduated in arts in 1859 and obtained the M D of Jefferson Medical College in 1862 He served his country in the Civil war the war with Spain and the great war when he moved about in his khaki uniform like a young man of 20



At the very outset of his career he fell under the spell of S Weir Mitchell who gave him his first scientific impulse and set congenial tasks for his mind and pen For over fifty-three years they worked together in many professional activities Returning from study in Europe in 1866 Dr Keen took over the Philadelphia School of Anatomy and taught surgical pathology in the Jefferson Medical College which he served later as professor of surgery from 1889 to 1907 On the occasion of his eighty fifth birthday Professor William H Welch said *Born nine years before* the introduction of surgical anæsthesia his professional life well under way before the introduction and establishment of antiseptic surgery Dr Keen has witnessed a development of medicine and particularly of surgery surpassing in accomplishment all that had gone before Not only has he seen it but he has been a large part of it, for the principles and the art of this new surgery owe much to his own contributions and to the influence of his teachings and example Keen's *American Textbook of Surgery* first published in 1892 achieved a world wide reputation and passed through four large editions His *Principles and Practice of Surgery* in eight volumes appeared between 1906 and 1921

Dr Keen's honours and distinctions were too many for enumeration here but we may recall that he had been president of the American Medical Association of the College of Physicians of Philadelphia of the American Surgical Association and of the International Congress of Surgery held in Paris in 1920 He was an honorary Fellow of the Royal Colleges of Surgeons of England Edinburgh and Ireland LL D of Edinburgh and St Andrews and a foreign corresponding member or foreign associate of many Continental academies and surgical societies The remarkable story of his operation on President Cleveland performed on a yacht off New York was briefly referred to in our issue of May 25th 1929 (p 949)

Short in stature with silver hair and twinkling blue eyes Dr Keen retained almost to the end his vivid interest in life and science On his ninetieth birthday he said My only regret is that the days are so short when there is so much to be done

MARCUS PATERSON M D

Formerly Medical Director Welsh National Memorial

Dr Marcus Sinclair Paterson who died on June 1st came of a Scottish family other members of whom had adopted the medical profession in particular his elder brother Mr H J Paterson On leaving school he was apprenticed for three years in a Clyde shipyard He then became a medical student at St Mary's Hospital qualified as M R C S L R C P in 1894 and went to Newcastle on Tyne graduating M B B S Durh in the following year After three years service as a ship's doctor he became house physician at the East London Hospital for Children He was then appointed house physician and later R M O at the Brompton Hospital and in 1905 was asked to inaugurate the new sanatorium at Frimley Surrey His practical ability and engineering experience were valuable in finally preparing the institution for the admission of patients He has described how his observations on out patients led him to the idea of introducing manual work as well as walking into the sanatorium regime with the hope of fitting his patients for immediate return to their work and of successfully meeting the charge that sanatoriums turned out work shy loafers This hope was not new but Paterson by prolonged and detailed trial worked out a system of which it could be said that every step had been considered and strictly tested The case had to be proved and the method established to the satisfaction of the severely critical opinion of the senior medical staff Paterson made good because he maintained the dual principles of rest and of exercise practised strict control by temperature and symptoms and gave real personal supervision always the essence of sanatorium treatment The methods of Dr Otto Walther at Nordrach were used by him as a foundation on which to build Paterson would have been a good superintendent had he had a medical training only but his previous experiences were of inestimable value He was in himself the doctor the engineer and the captain of his ship

In 1907 the late Dr A C Inman collaborated with him using Sir Almroth Wright's method of determining the opsonic index and thus it was clearly demonstrated (1) that physical exercise induced auto inoculation (2) that systematic graduations of exercise regulated and controlled their extent This auto inoculation theory henceforward dominated Paterson's thought and led him to reflect further in his practical way on the application of bed rest Complete immobilization or typhoid bed rest proved successful in the rapid reduction of fever particularly in limiting the influenza like attacks which may result from over exertion The method involves a serious strain on the patient and very close nursing hence it has not taken its due place in tuberculosis therapy Absolute rest is more often spoken of than carried out it is a precursor of modern collapse therapy and of great value when that is impracticable Paterson considered this a more important innovation than graduated labour He reduced the application of the principle of rest to a clear cut practical form and has not had sufficient credit for it His *Auto inoculation in Pulmonary Tuberculosis* gives a clear precise and simple account of his work

The Brompton Hospital Sanatorium under Paterson's direction obtained a world wide reputation In 1908 at the International Tuberculosis Congress in Washington he won the first prize for the best essays on sanatorium and on hospital organization and treatment He was a member of the Astor Departmental Committee on Tuberculosis 1911 In 1912 on the inception of the scheme of the King Edward VII Welsh National Memorial Association for the prevention treatment and abolition of tuberculosis he was invited to become medical director While he was on his own ground in the selection of sites for institutions and an unequalled constructive critic of the plans for hospitals and sanatoriums the preparation of a general scheme for the whole national organization was a new field Paterson's first care was the personnel of his medical staff From them he demanded and obtained hard work As regards institutions the sanatoriums were designed for graduated labour not as homes for consumptives the hospitals were after the model of the Brompton Hospital and not homes for advanced cases In fact Paterson gave Wales true sanatoriums while the counterparts of average English sanatoriums were called tuberculosis hospitals Time has shown however that the great proportion of patients seen are not fit to go to sanatorium until sifted by prolonged rest in hospital this and the large provision needed for non pulmonary cases could not be recognized clearly until after the war The impress of his work and personal influence still remain in Wales Unfortunately a severe accident in the early months of his service and an attack of Mediterranean fever in 1914 accounted for some permanent lessening of Paterson's previously untiring energy and remarkable decisiveness He terminated his appointment in Wales in the autumn of 1917 still suffering from the effects of the *Micrococcus melitensis* After a prolonged rest he became medical superintendent of the Colindale Hospital for Pulmonary Tuberculosis Hendon which appointment he held until the abolition of the Metropolitan Asylums Board some three years ago Here Paterson made valuable innovations in the symptomatic treatment of advanced cases He suffered from illness after his retirement but appeared to recover a fair measure of health again and the news of his death came as a great shock to his friends and former colleagues

Like all successful sanatorium superintendents Paterson was an autocrat and undoubtedly at his best when least fettered His mode of thinking was very direct but the current of his thought often ran underground He might meet argument with disconcerting silence or some brusque irrelevance and meantime his order was carry on but his mind was at work and a decision would come sooner or later—if he had been able to reduce the problem to a practical form if otherwise there would never be a decision In sanatorium no detail was too small for his personal attention He delighted in the technique of all the practical work of the institution and perhaps particularly in the preparation of food Something of a gourmet himself he agreed with Dettweiler My kitchen that is my pharmacy Paterson's disregard of convention and accepted tradition was offensive to some who did not know him well He had little patience with professional pundits who dealt in generalizations and were at home amid the accepted views of the moment His ready wit could scarify pretentiousness On the other hand his single mindedness his wide human sympathies and rare displays of tenderness brought with them a power of earning affection and devotion from both colleagues and patients

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PAUL M CHAPMAN M D F R C P

Consulting Physician Hereford Infirmary General Hospital

Dr Paul Morgan Chapman formerly of Hereford died suddenly on May 31st in his eightieth year We have received the following memoir from a friend of forty five years

Dr Chapman was a man endowed with so many accomplishments that he deserves more than a passing mention Educated at Shrewsbury in due course he entered University College Hospital as a medical student In 1877 he took the M B Lond and it was there that a friendship began which remained unbroken to the last—indeed he had proposed visiting me on June 1st just forty-

eight hours before the fatal attack That he did not take an honours degree was due to no lack of ability nor to wasted opportunities in the ordinary way but to his love for Elizabethan literature and music In the pursuit of the former much time was spent in the British Museum over old plays which might have been given to his medical studies but it was not in a nature of his kind to keep his nose to the grindstone for any length of time His tastes from boyhood took him to the poets and as early as 10 he was accustomed to take a volume of Shelley to bed to be read in the early morning Shelley remained to the end his favourite poet long passages from whom he quoted with the greatest ease even in his last years and so with Shakespeare s sonnets and plays

Having taken the M D Chapman started practice, but no attempt was made seriously to work up a connexion (his interests lying in other directions) Soon after graduation he repeated at the request of Burdon Sanderson a series of observations on the heart which confirmed that great physiologist s conclusions This gave him a taste for experimental physiology especially in its application to cardiac disease Partly I think as an outcome of this work he suggested to Bristow of St Thomas s the author of the recently issued textbook of medicine that a part of the article on heart disease might be improved a criticism accepted by the author and followed by a request that Chapman should write a substitute which he accordingly did It looked at this time as if a career were opening to him in London and had he been able to pursue his opportunities he would I have little doubt have taken a position of prominence especially in cardiac maladies Unfortunately all such hopes had to be abandoned for a recurring conjunctivitis owing largely to the dust in London led Mr Tweedy (Sir John) to advise his seeking some place in the country This for one who was leaning towards a consulting practice and who enjoyed the contact with others like situated was a serious blow It happened that the senior physician to the Herefordshire General Hospital had just died and his widow suggested that Chapman should go down canvass the governors and endeavour to obtain the appointment This he did and was successful and so started in Hereford as a consultant in 1886 It was a bold move in the face of local medical interests and there he practised until his retirement in 1919 He continued to keep himself informed of the literature of cardiology in this country and abroad and his ability was recognized by appointment as Goulstonian lecturer on his election to the F R C P in 1894 his subject being the Physics of the circulation During the war—his three sons were serving—he was physician to the V A D Hospital at Hereford and consulting physician to another and for these services received the M B E For many years he was senior physician to the Herefordshire General Hospital At the Annual Meeting of the British Medical Association in 1911 he held office as vice president of the Section of Therapeutics

Dr Chapman possessed notable literary attainments and was at one time a frequent contributor to the *Nineteenth Century* During the past two or three years he contributed articles to the *Yorkshire Post* in which he displayed a remarkable knowledge of ancient and modern literature and far removed from any library could quote references and passages from memory After his retirement he lived in part of the Old Rectory at Cascob on the borders of Radnor Forest Here he wrote a *Foot Guide to Radnor Forest* which was notable not only for its practical information but for the historical allusion and its wealth of description of the beauties of the Forest. He was a keen fly fisherman and up till recently would spend a week on one of the Welsh rivers He was good at most games also and an active tennis player His skill in guiding a boat through the Upper Wye and his powers as oarsman and swimmer were among his other skilful performances Chapman was above the average as an amateur actor and in support of the hospital compiled organized, and directed plays taking himself a leading part He played the cello in a musical society which he established in Hereford and in other ways was the creator of many intellectual activities

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MR ANDREW BOUTFLOWER M R C S who died on June 1st at the age of 87 was the son and grandson of medical men of Northumbrian descent His great grandfather John Boutflower—Lieutenant R N and afterwards in holy orders—was the fourth of five sons of whom three were surgeons and one a physician The eldest son John Johnson Boutflower, was trained at St Bartholomew s Hospital He became an assistant to Dr David Crewe of Wrexham whose daughter he subsequently married and settled in Salford in 1795 There his children were born and brought up, and there he closed his long and useful career at the age of 86 in 1852 His younger son John adopted his father s profession He was intended for work in the Army but the peace of 1816 led him to change his plans He studied first at Edinburgh afterwards at Paris before joining his father at Salford Here he proved himself an assiduous worker devoting his powers mainly to the relief of a poor district To him beyond question belongs the honour of the foundation of the Salford Royal Hospital His home was in Strange ways throughout his long career which terminated in his ninety second year in 1899 Andrew Boutflower his second son will be chiefly remembered as a skilful surgeon and a whole hearted churchman He would probably have been a clergyman had not his attachment to his father prevailed over other considerations His choice however was wisely made but this did not lessen his interest in ecclesiastical matters He was a steady worshipper in Manchester Cathedral and the intimate friend of its clergy and officers of every description from the Bishop down to the youngest chorister In boys of every sort he had a warm interest most of all perhaps in those at Chetham Hospital His constant cheerfulness and kindness won for him the affection of friends of every age and condition

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Medico-Legal

CHARGE OF NEGLIGENCE SURGEONS VINDICATED

In the King s Bench Division on June 9th and 10th before the Lord Chief Justice (Lord Hewart) and a special jury Mr L G V Russell of Teddington claimed damages from Mr Ernest W Hey Groves senior honorary surgeon to the Bristol General Hospital and Dr Leonard Lancaster senior resident officer at that hospital for alleged negligent treatment of him as a patient On May 20th 1930 Mr Russell sustained a motor cycle accident and was admitted to the hospital where it was found that his leg was fractured It was alleged that Dr Lancaster had the leg encased in plaster on the instruction of Mr Hey Groves and because no window was left in the plaster it was not known until too late that the leg had become septic from an unnoticed wound in the heel The plaintiff was sent home from the Bristol Hospital on May 26th after which the septic condition was discovered as a result of which the leg had to be amputated first at the knee and later in the middle of the thigh Both defendants denied negligence

The plaintiff gave evidence bearing out his allegations and mentioned that the dressing of the wound after his discharge from the Bristol Hospital was so intensely painful that he had to have chloroform on many occasions Mr Maurice Fitzgerald honorary surgeon to the Teddington and Hampton Wick Cottage Hospital said that he attended the plaintiff on his return home from Bristol The plaintiff complained of pain in his heel and two days later the witness cut a window in the plaster and discovered a very septic wound at the back of the heel In spite of drainage the poison spread and amputation became necessary Mr J E H Roberts of

Harley Street said that he amputated the limb There was gross infection apparently streptococcal and there was nothing inconsistent with such infection having started on the day of the accident In cross examination the witness agreed that some eminent surgeons did not leave an aperture in the plaster in which a fractured limb was encased and he would not regard it as negligence if such an aperture were not left

For the defence Mr Hey Groves who stated that he had been on the surgical staff of the Bristol General Hospital for twenty nine years and had been senior honorary surgeon for eight years testified that he saw the plaintiff on the day of the accident after his broken leg had been placed in four splints in the casualty ward The leg had been properly set He had no idea there was a cut at the back of the heel but if he had been told of it he would not have had the patient moved to examine it He saw the plaintiff again two days later the splints were not removed on that occasion He told his colleague Dr Lancaster to carry on for a simple fracture and if after x ray examination the conditions were satisfactory to encase the leg in plaster It was quite proper treatment to encase without a window and he would have encased even if he had known that there was a superficial skin wound at the heel One disadvantage of leaving an aperture in the plaster was that the unprotected part of the limb tended to bulge through and thereby set up conditions which might lead to sepsis For twenty years he had adopted the plan of encasing the whole limb with satisfactory results

Sir Robert Jones appeared as a witness for the defendants and gave it as his opinion that it was proper practice to encase the whole of a fractured limb To have left a window might have caused bulging with discharge He agreed that before a limb was encased it ought to be closely examined for wounds but if an unhealed wound were covered up with plaster casing it was very rare for anything untoward to happen Very occasionally a wound that appeared to be clean and healthy turned out not to be so but the fact that this might happen was not a reason in cases of fracture for not covering with plaster Evidence in accord with that given by Sir Robert Jones was also given by Mr C Max Page surgeon to St Thomas's Hospital and by Mr Russell Howard consulting surgeon to the London Hospital Both said that it was safer even to cover up a wound with plaster than to leave an aperture which might itself lead to infection

Lord Hewart at this point suggested to the plaintiff's counsel (Mr Cartwright Sharp) that it was a little difficult to invite the jury to say that what these eminent surgeons had declared to be the proper practice was negligent and Mr Sharp replied that he appreciated the difficulty he was in On the following morning after Dr Lancaster the other defendant had given evidence Mr Sharp for the plaintiff said that it was clear from the evidence of the defendants and from their eminent witnesses that there was no negligence on the part of either defendant and he had accordingly advised Mr Russell not to proceed with the action and to submit to judgement

The Lord Chief Justice said that in his opinion Mr Sharp had taken a very proper course and that it was idle to expect that any verdict could be found against either of the defendants On his direction the jury found a verdict for the defendants and judgement was duly entered with costs against the plaintiff

Universities and Colleges

UNIVERSITY OF OXFORD

The Board of the Faculty of Medicine has elected C R Green Pembroke College to the Schorstein Research Fellowship in Medical Science for two years

UNIVERSITY OF CAMBRIDGE

At a congregation held on June 10th it was decided to re-establish the Diploma in Medical Radiology and Electrology

The degree of B Chir was conferred on G H W Cruetz (by proxy)

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons of England was held on June 9th when the President Lord Moynihan was in the chair

Fellowship

The Right Hon Lord Dawson of Penn President of the Royal College of Physicians was introduced and admitted an Honorary Fellow of the College

Diplomas of Fellowship were granted to the following forty-one successful candidates at the recent examination

G J Sophian F J Hector R Keene J White J Mintzen G O Tippett R A Fitzsimons A H Richardson Enid H Rocktro W H Tandy R S de Bruyn R F Phillips C M Phudke C C Sinclair F K S Lyle A C Thompson I A d'Abren O A Lloyd Davies M D Sheppard W J Ferguson M I Ellis B M Jonsdottir F Chinn F A Hirschfeld H A Khwaja M Lee J G Reid W M Krasnick A H Radley D J R Steel P K Allison I H Bentley C L S Dulé C S Kelkar M B Lavery D Lurie A H McIndoe J H North J S Robertson M A Siddiqi J M Yoffey

Membership

Diplomas of Membership were granted to H Bircroft and A Rashid

Licence

The Licence in Dental Surgery was granted to A B Bateman

Examiners

The following examiners were elected for the ensuing year

Dental Surgery (Surgical Section)—H S Clegg L B Rawlins R J Howard C E O Wilkin C L Sherlock C I G Wakeley

Public Health—(Anatomy) P A P Oduor W Wright J F S Fraser J B Hume *(Physiology)* J McInnes G A Buchanan D H de Souza S Wright

Under the Conjoint Board—(Elementary Biology) T J Evans C I Mudge C C Hentsch A J Grove *(Anatomy)* R B Green W F Le G Clark H A Harris *(Physiology)* F J Varney H Hartridge [illegible] C H Fagge R C Canti C F [illegible] A W Bourne S Forsdike L C Rivett [illegible] *(Public Health)* *(Part I)* T W H [illegible]nton *(Diploma in Tropical Medicine)* [illegible]ves C C Lew *(Diploma in Ophthalmic Medicine and Surgery)* *(Part I)* W S Duke Elder C B Goulden *(Part II)* R A Greeves *(Diploma in Psychological Medicine)* J G Greenfield *(Diploma in Laryngology and Otology)* *(Part I)* A Patterson I M Wechsler *(Part II)* W C Howarth *(Diploma in Medical Radiology and Electrology)* J D Barnard *(Diploma in Medical Radiology)* *(Part I)* J M Woodburn Morison *(Part II)* J H Douglas-Webster

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Lords this week read the Finance Bill a second time The Commons went into committee on the National Health Insurance and Contributory Pensions Bill and also discussed agricultural administration and British policy at the Ottawa Economic Conference

National Health Insurance

In the House of Commons on June 13th the National Health Insurance and Contributory Pensions Bill was considered in committee Sir HILTON YOUNG said there was no forfeiture of rights under the Bill It recognized that there would be hardship in the abrupt termination of insurance rights and that some extension of insurance rights should be given even beyond what was strictly legitimate on the actuarial and financial basis of the insurance scheme The extension that was actually given was an extension of twenty-one months of free insurance with full benefit and then an extended year with reduced benefits Anyone who got back to work could immediately start the period of extension again

Mr BUCHANAN moved an amendment to provide that the date when a person could be automatically passed out of insurance should be 1940 and not 1936 as in the Bill After debate Sir HILTON YOUNG said that he had to find what was the utmost limit to which he could go in regard to relief in order to help to prolong the insurance of the unemployed consistent with two fundamental principles first that the fund should be financially solvent and secondly that it should be a contributory fund A deficit was mounting against the health insurance fund at the rate of £2 850 000 a year There was no margin of revenue that he could find with which to continue such things as maternity benefit but actuaries had discovered that without harm they could for a single occasion sweat the reserve values of the scheme which were in the

nature of the capital of the scheme to the extent of £50 000 That £50 000 was used to give one more year of medical benefit to the unemployed The amendment was negatived

Mr RHYS DAVIES moved an amendment to provide that the cost of medical benefit for the unemployed should be provided for three years instead of one This was also defeated

The committee stage was continued on June 14th

Economy on Army Dressings

On June 7th Mr MCGOVERN asked the Financial Secretary to the War Office if he was aware that as a result of the recent economy proposals of the Government the military authorities had ordered all bandages to be reused after boiling and all lint dressings worn by patients which were not unduly soiled to be used a second time that the purchase of antiseptic boric lint was forbidden and plain white lint was to serve for the same purpose and whether in the interests of the health of the troops he would have those instructions withdrawn Mr DUFF COOPER said that he was aware that the notice of all concerned had been drawn to the substantial economy which could be effected by the washing of bandages and the further use of unstained dressings and that in the interests of economy boric powder and plain lint would in future be issued in place of boric lint The Army medical authorities were satisfied that these economies would in no way affect the health of the troops

Replying to a supplementary question Mr DUFF COOPER said that he had consulted the medical authorities on the matter Their answer was quite definite and their views plain he saw no reason to consult them again Mr MAXTON asked how much the Government hoped to save by this disgusting economy No reply was given

Anthracosis.—Mr BALDWIN replying to Sir W Jenkins on June 7th said that the question of the effect of coal dust on underground workers who were suffering from anthracosis continued to receive the attention of the Industrial Pulmonary Diseases Committee of the Medical Research Council He was advised that serious difficulties were still met in finding trustworthy methods of investigation There was at present no question of a report being issued

School Dental Service.—On June 7th Sir D MACLEAN replying to Captain Heilgers said that the number of dentists employed by local education authorities under the school medical service was equivalent to one dentist for approximately 9 000 children in average attendance He was aware that in many areas there was not a complete dental service

Mentally Defective Children in Special Schools.—Sir DONALD MACLEAN told Wing Commander James on June 9th that the average numbers on the registers of special schools for mentally defective children were as follows 1914 13 563 1929 15 479 1930 15 308 1931 15 269 1932 figure not yet available No information was available as to the expenditure incurred on these schools as distinct from special schools for defective children of other types

Unemployable Blind Persons.—In reply to Mr Edward Williams on June 9th Sir HILTON YOUNG stated that up to April 1st 1932 11 county councils and 37 county borough councils had made declarations under Section 5 of the Local Government Act 1929 with regard to the domiciliary assistance of blind persons A considerable number of local authorities in addition had undertaken to bring the income of unemployable blind persons up to a specified amount The expenditure for this purpose was not debited to public assistance

Cleansing of Shellfish.—On June 13th Sir J CILMOUR replying to Mr Remer said that mussels had been cleansed successfully on a commercial scale at the experimental station at Conway for about fifteen years The Ministry of Agriculture and Fisheries took every opportunity of bringing the advantages of purification to the notice of those interested in shellfish beds which had been closed owing to pollution and acted in close consultation with the Ministry of Health in these matters A Bill to enable local authorities to provide or contribute towards the provision of means for cleansing shellfish had recently been approved by Parliament

Vaccination.—Mr E BROWN replying to Mr Groves on June 13th said that the Minister of Health had no information to show whether compensation for injury to health arising from vaccination was now being paid in Germany The Vaccination Acts in this country did not provide for the payment of compensation for cases of post vaccinal encephalitis or other injuries by vaccination and the Minister had no power to vary their provisions

Cerebro spinal Meningitis.—Lord STANLEY replying to Mr Groves on June 13th said that ten cases of cerebro spinal meningitis had been reported in the Navy since January 1st last four of which had proved fatal According to available records three of the total number had been subjected to vaccination none to revaccination and one to inoculation within six months of the attack Information concerning vaccination was not obtainable in two of the cases All were of epidemic cerebro spinal meningitis (spotted fever) and none was of the post vaccinal type

Notes in Brief

Mr Foot on June 7th stated that of the balance of £2 650 467 of the Miners Welfare Fund on May 31st £1 433 722 had been definitely allocated for pithead baths and other purposes

The work of the Food Committee appointed on May 14th 1931 by the Minister of Health has been suspended as a measure of economy

Houses built with State assistance in England and Wales in 1930 numbered 52 295 and in 1931 64 728 not including houses in replacement of those demolished under improvement and reconstruction schemes confirmed prior to the passing of the Housing Act 1930 The number of houses built without State assistance having a rateable value not exceeding £78 (or £105 in the metropolitan area) in the year ended March 1931 was 128 728 and in the year ended March 1932 130 903

The Services

ARMY MEDICAL SERVICES

REVISION OF DEPARTMENTS

An official statement issued by the War Office on June 14th announces that an important step has been taken in the reorganization of the Medical Services of the Army which should have far reaching effects in consolidating and extending the teaching research work and the professional opportunities of officers of the R A M C throughout the Army and in enhancing the status of the Royal Army Medical College and the professional side of the Corps The statement continues

In the period immediately succeeding the great war a great advance was made in co ordinating the professional activities of the Royal Army Medical Corps by the creation of the Directorates of Hygiene and Pathology with their Advisory Committees composed of eminent members of the civilian medical profession and the appointment of a consulting physician and a consulting surgeon to the Army from among the serving officers of the Corps Owing to the large size of the Army at that time these directorates and appointments were located at the War Office as part of the staff of the Director General Army Medical Service

Now that the size of the Army has been reduced and more largely concentrated in the principal military stations the organization of the medical directorate has permitted of some decentralization and the opportunity has been taken to concentrate at the Royal Army Medical College the heads of all the specialist branches of medicine and surgery The revision of departments involved has been secured by transferring the Director of Pathology the Consulting Physician to the Army and the Consulting Surgeon to the Army from the War Office to the Royal Army Medical College and absorbing the appointments of Professors of Pathology Tropical Medicine and Military Surgery respectively Each of these officers will as at present have an assistant professor under him and in the case of medicine and surgery these officers will form the visiting medical and surgical staff of the Queen Alexandra Military Hospital Millbank The Director of Pathology will still control the pathological work in commands as well as carry on his professional work The teaching staff of the College will now become the consultants and advisers of the Director General A M S at the War Office and will be available for consultation in

commands when required The composition and location of the Directorate of Hygiene has not been changed

It has also been decided that the consultant and professor in each case though normally of colonel's rank may be promoted to major general should he come up for promotion in the ordinary course while holding the appointment The appointment of Commandant and Director of Studies at the College will in future carry with it the rank of major general but on the other hand the Deputy Director A M S at the War Office will when the next appointment is made be a colonel instead of a major general Thus of the possible eleven major generals appointments open to R A M C officers five are now of a professional nature and six administrative

The reorganization constitutes a definite step forward and marks the great advance in the professional work of the Royal Army Medical Corps which has been evident since the war It should do much to remove the erroneous impression that adequate professional work is unobtainable in the Army In consequence also of the elaboration of motor transport in recent years many of the smaller hospitals in commands have been closed and the patients concentrated in central hospitals fully equipped with all the special departments made necessary by modern methods of diagnosis and treatment This has resulted in specialization in all branches of medical surgical and pathological work being now the rule rather than the exception

The Secretary of State for War has also approved the recommendation made recently by the Army Medical Advisory Board that in order to maintain uniformity in the teaching and examination of R A M C officers with that in civil life a civilian inspector of the teaching and civilian examiners should be appointed by the Director General A M S after consultation with the Presidents of the Royal College of Physicians and the Royal College of Surgeons

Medical News

Founders Day will be celebrated at the Lord Mayor Treloar Cripples Hospital and College at Alton on Monday June 20th At 1 45 p m Lord Burnham will preside at a meeting in the College Hall attended by the Lord Mayor of London and Sheriffs after which the wards and workshops etc will be open for inspection

The annual general meeting of the Medico Legal Society will be held at 11 Chandos Street W 1 on Thursday June 23rd at 8 15 p m at the conclusion of which an ordinary meeting of the society will take place Mr Alexander Paterson one of the Commissioners of Prisons will read a paper entitled Should the criminologist be encouraged? a discussion will follow

The annual meeting of the Incorporated Lancashire and Cheshire Society for the Permanent Care of the Feeble minded will be held at the Sandlebridge Institution Alderley Edge on Friday June 24th The Lord Mayor of Manchester will take the chair at 3 15 p m The Thomasson and Sam Gamble Day School will be open for inspection at 2 30 p m and tea will be served at Warford Hall at 4 o clock

The next monthly clinical meeting for medical practitioners at the Hospital for Epilepsy and Paralysis Maida Vale W 9 will be given on Thursday June 30th at 3 o clock when Dr W Russell Brain will give a demonstration on Headache Tea will be provided and it will be a convenience if those intending to be present will send a card to the secretary

The Poole Sanatorium at Grey Towers Nunthorpe presented to the Corporation of Middlesbrough by Lieut-Colonel T Gibson Poole and Mrs Poole will be formally opened on the afternoon of Wednesday June 22nd

H R H the Duke of Connaught will distribute the prizes to students of St Thomas's Hospital Medical School in the Governors Hall on Tuesday June 28th at 3 p m The whole hospital will be open for inspection during the afternoon

A course of six lectures on the structure of molecules in relation to biology and medicine by Dr J R Marrack commenced on June 14th The remaining four lectures which deal with complex molecular structure adsorption and catalysis enzymes and radiations and mitogenetic rays will be delivered at the Bearsted Clinical Theatre London Hospital E 1 on June 21st 23rd 28th and 30th at 5 15 p m The course is open to students of London University but members of the medical profession are also cordially invited to attend

The Savill prize value £15 open to post graduate students only is offered biennially by the West End Hospital for Nervous Diseases Candidates are required to write a thesis on a neurological subject of their choice which subject must be submitted by them to the examiners for approval not later than July 31st Candidates must have attended the practice of the hospital on at least ten occasions Theses must be received not later than November 30th they may not be published except with the written consent of the examiners All communications should be addressed to the secretary of the hospital 75 Welbeck Street W 1

The Fellowship of Medicine announces that a demonstration on the fundus oculi will be given by Mr Lindsay Rea at the West End Hospital for Nervous Diseases on June 28th at 8 30 p m This demonstration is specially suitable for M R C P candidates the names of those wishing to attend should be sent in in advance to the Fellowship A course in diseases of children from June 27th to July 8th will be given at the Children's Clinic and other hospitals A course in cardiology will be given at the National Hospital for Diseases of the Heart from June 27th to July 8th and will occupy the whole of each day Instruction in dermatology will be given every afternoon at the Blackfriars Skin Hospital from June 27th to July 8th with demonstrations of cases on June 28th and July 5th A course in proctology will be given at St Mark's Hospital occupying the whole of each day from July 4th to 8th Detailed syllabuses of all courses and copies of the rota system of daily clinics can be obtained from the Fellowship of Medicine 1 Wimpole Street W 1 These courses and clinics are open only to members of the Fellowship

The second Dutch Congress on Infant Welfare will be held at The Hague on June 24th and 25th

The fifth Congress of the International Society of Logopaedia and Phoniatrics will be held at the Physiological Institute of Vienna University from July 14th to 16th Further information can be obtained from Professor Dr Froschels Tersteig 6 Vienna

On June 8th Dr P T Jones of Coleford Somerset was presented with a cheque and an illuminated address in recognition of his valuable work in the neighbourhood during the past thirty five years At Dr Jones's wish the money will go to the Royal United Hospital Bath

Dr J E S Lloyd of the Inner Temple was called to the Bar on Call Day of Trinity Term June 8th

At the last meeting of the Joint Tuberculosis Council held on May 21st a report was presented by the Artificial Pneumothorax Refills Committee and this it was decided to circulate to those interested A committee composed of Dr R Trail (convener) Drs S Vere Pearson G Jessel W Brand D P Sutherland James Watt C O Hawthorne and Peter Edwards was appointed to investigate and report upon *results* of artificial pneumothorax treatment It was felt that there would now be sufficient material available to afford a useful scope for such an inquiry The best means of prevention of tuberculosis of human origin was discussed and in this connexion the excellent figures of Papworth Colony were considered It appeared to members that some investigation into the incidence of tuberculosis among contacts at Papworth Preston Hall and Barrowmore Hall would be fruitful

Dr Henry E Sigerist director of the Institute of Medical History at the University of Leipzig will succeed Professor William Welch in the chair of the History of Medicine in Johns Hopkins University Medical School on July 1st

Professor Ramon y Cayal the well known Madrid histologist celebrated his eightieth birthday on May 1st and Professor Theodor Koelliker the Leipzig orthopaedic surgeon on May 28th

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

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QUERIES AND ANSWERS

Treatment of Fibrinous Bronchitis

G O writes Information is required on the treatment of chronic fibrinous bronchitis of two years duration accompanied by bronchial spasm Bronchial casts are dislodged with great difficulty and much coughing Iodides and inhalations do not have much effect on the freeing of these casts Vaccines also have been tried

Removal of Tartar

S Dorset writes Can anything be recommended that applied locally will loosen a deposit of tartar about the teeth in cases where the sufferer objects to having them scaled?

Naevi and Heredity

DR SAMUEL SYNGE (Co Wicklow) would be interested to know if a young woman suffering from a large port wine stain on the face is likely to have children similarly afflicted The patient's parents sister and brothers are unaffected

Treatment of Typhoid Carrier

R L B would be pleased to know of suitable treatment for a typhoid carrier with occasional attacks of cholecystitis no stones shown by Graham's test

Sunburn

DR J W S MCCULLOUGH (Toronto) writes in answer to Ships May 7th One of the best treatments for acute sunburn is the application of a saturated solution of magnesium sulphate A preventive of sunburn particularly in cases where the skin pigment is deficient is a watery and alcoholic lotion containing tannic acid In the use of either remedy the lotion is freely applied and allowed to dry on the parts

Income Tax

Free Furnished Quarters

R M O has free furnished quarters which form part of the sanatorium to which he is attached The secretary has been asked by the income tax authorities to state the letting value of the quarters presumably so that an assessment on R M O may be made to include that value as income Is R M O personally liable to pay income tax on the amount?

* The Rules applicable to assessments on properties provide for the exemption of hospitals so far as not occupied by any individual officer whose total income amounts to £150 or more Presumably the sanatorium is exempt from income tax (Schedule A) as a hospital and the authorities are seeking to know the letting value of R M O's quarters to apply the above restriction of the main exemption It seems clear that income tax will have to be paid on the letting value of the free quarters but whether that tax should be borne by R M O or by the hospital is open to dispute On the one hand it does represent tax on what is an income equivalent to R M O —on the other it arises out of a restriction of an exemption due to and claimed by the sanatorium authorities

Motor Car Replacement

M B M R C S bought a second hand car in 1926 for £120 and has not claimed depreciation thereon He has now sold it for £10 and bought a new car (of a different make) for £273 What should he claim for income tax purposes?

** He should claim as an expense of the year in which the old car was sold £120 − £10 = £110 the further net expenditure which he incurred—namely £153 represents the cost of an improvement and cannot be allowed Assuming that the transaction took place in 1932 the deduction will reduce the professional profits for that year and affect the assessment for 1932–3 Accordingly the 20 per cent depreciation allowance cannot be claimed until 1933–4

LETTERS, NOTES ETC

Ether Convulsions

DR JAMES HAWORTH senior anaesthetist Victoria Hospital Burnley writes A woman aged 32 was operated upon on May 11th for double tubo ovarian abscess She was given 1/6 grain morph sulph and 1/75 grain atropine sulph in the ward before operation An anesthesia was induced by C E mixture followed by open ether and continued with ether and oxygen by Shipway's apparatus About seventy minutes from the commencement as the surgeon was beginning to close the peritoneum clonic movements were noticed in the lower jaw and became generalized The convulsions were intermittent and not violent so that the operator was able to complete his task without much inconvenience The condition subsided in about twelve minutes without any treatment except protection of the tongue There was no cyanosis The pupils were about midway but insensitive to light The pulse failed and did not satisfactorily recover for about forty five minutes The convalescence was normal There was no history of epilepsy In this case many of the factors suggested as responsible for this condition were present—a highly strung patient marked toxaemia a rather large dose of atropine possible cerebral congestion from being in the Trendelenburg position for a considerable time and the passage of ether through oxygen Two points struck me in connexion with the case First the convulsions occurred just as the surgeon was beginning to close the peritoneum they occurred at this stage in the only other case I have seen and have previously reported Secondly the character of the convulsions was very similar to that seen in Stokes Adams's disease Could they have been produced by a transitory cerebral anaemia caused by the change to the level from a low Trendelenburg position? Certainly the circulation was restored after the foot of the bed was well raised and there were no more convulsions

Medical Golf

The members of the Medical Golfing Society were entertained at Walton Heath by Lord Riddell on June 9th when a most successful and enjoyable meeting was held There were over one hundred entries with the following results *Lancet* Challenge Cup (scratch) first Dr W H Lamplough all square second Dr E T Wright 1 down Henry Morris Cup (handicap) first Dr J C Lee (5) 1 up second Mr L R Broster (16) 1 up (Decided on last nine holes) Handicap Class I first Dr J C Lee (5) 1 up second Dr W H Lamplough (1) 1 up (Decided on last nine holes) Class II first Mr I R Broster (16) 2 up second Dr I B Hartley (16) all square Handicap Class I (best last nine holes) first prize Dr J C Lee (5) 2 up Class II first prize Mr P Lamplugh (12) 2 up Foursomes (handicap) first prize Drs Lamplough and Jackson (5) all square second prize Drs Hughes and Dick (16) 1 down

Disclaimer

DRS N F TIDEHURST D J MARTIN P LAZARUS LAYTON and L R P B CHAMBERLAIN write from the Royal East Sussex Hospital Hastings We have had brought to our notice the fact that our names appeared in the *Hastings Evening Argus* of June 7th 1932 We wish to state that the was done entirely without our knowledge and that we strongly disapprove

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 47 48 49 50 51 52 53 56 and 57 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 54 and 55

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 311

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

554 Seasonal Changes in the Mortality from Diphtheria

P H ANDRESEN (*Ugeskrift for Laeger* March 31st 1932 p 335) refers to a recent study by T Madsen of seasonal oscillations of infectious diseases revealing that the mortality from whooping cough was greatest in the spring Andresen has studied the same problem in connexion with diphtheria comparing the death rates from this disease in Copenhagen during the past thirty years month by month Since the figures for each year were too small to give reliable statistical information he classified his material in six five year groups and also in two fifteen year groups Each year began with August and ended with July instead of being a calendar year After publishing various graphs and tables and discussing the numerous statistical pitfalls inherent in such a study as this the author comes to the conclusion that in the period under review the mortality from diphtheria was considerably higher in March April and May than in other seasons of the year This finding was confirmed by a study of 2 years records of the cases of diphtheria treated at the Blegdam fever hospital Here in the above mentioned months there was a comparatively high proportion of very severe cases and of patients dying within twenty four hours of admission to hospital

555 Typhoid Hepatocholangitis

B B VINCENT LYON (*Journ Amer Med Assoc* March 12th 1932 p 885) records the case of a man aged 52 who had been a typhoid carrier for twenty six years during which he was operated on for several monthly attacks of pain in the upper right quadrant of the abdomen and recurrent jaundice Dense adhesions were found as well as marked cholecystitis and a small contracted gall bladder containing multiple stones and some pus Cholecystectomy was performed but the abdominal pain persisted and an abscess cavity in the right rectus muscle containing *B typhosus* was evacuated Subsequently biliary drainage was effected on fifteen occasions and complete recovery ensued the typhoid bacilli diminishing in number and finally completely disappearing from the bile

556 Spontaneous Subarachnoid Haemorrhage

G H ROBERTSON (*New Zealand Med Journ* February 1932 p 1) discusses briefly the general question of spontaneous subarachnoid haemorrhages and describes two cases which came under his care The first patient a woman aged 50 complained for a few weeks of pain behind the eyes This was later followed by the sudden onset of faintness limpness collapse and lastly loss of consciousness but no paresis There were involuntary arm movements Cheyne Stokes respiration a slow pulse and a rather rigid neck Lumbar puncture produced pure blood from two sources and the symptoms were temporarily relieved but about three and a half hours later after sudden cyanosis the patient died The second patient a woman aged 37 had suffered from epileptiform attacks for many years One morning she was found on the floor crying out with violent headache This was at first thought to be partly hysterical but after an hour she was found to be becoming unconscious with paresis of the right side of the face arm trunk and leg Lumbar puncture revealed a small admixture of blood in a sterile fluid The Wassermann reaction was weakly positive but no other evidence of syphilis could be discovered The patient made a partial recovery but was still rather aphasic and confused two and a half years later Robertson concludes that in the first case there was an aneurysm of the anterior part of the circle of Willis which ruptured after a period of leakage and in the second case an aneurysm which had ruptured chiefly into the brain substance with some leakage into the cerebrospinal fluid He states that the publication of these two cases is intended to be complimentary to Collier's article in the *British Medical Journal* (September 9th 1931 p 519)

557 Encephalomyelitis following Measles

D PAULIAN and C ARICESCO (*Bull et Mem Soc Med des Hop de Paris* February 29th 1932 p 241) record the case of a girl aged 5 who during the eruptive stage of measles developed symptoms resembling acute disseminated sclerosis they included dysarthria intention tremor dysmetria difficulty in walking spastic gait and Babinski's sign There were no ocular symptoms and the fundus oculi was normal Considerable improvement took place under treatment with deep radiotherapy of the vertebral column and cerebellar region

558 Agenesis of the Spleen

E BEHR (*Nederl Tijdschr v Geneesk* March 26th 1932 p 1490) who records an illustrative case states that only thirty cases of agenesis of the spleen are on record and none have previously been described in Dutch literature His patient was a girl aged 2½ years who had been kept under observation for a long time for congenital dextrocardia and pulmonary stenosis The girl was born at full term the tenth child of healthy parents she had always been cyanosed and short of breath At the necropsy no trace of a spleen or splenic artery could be found In view of the existence of the cardiovascular abnormalities Behr suggests that a disturbance of the blood supply of the mesogastrium was the cause of the agenesis of the spleen

Surgery

559 Albee's Operation for Pott's Disease

F LANGENSKIOLD (*Finska Lakaresallskapets Handlingar* February 1932 p 128) notes that of late the pendulum has tended to swing away from Albee's operation in favour of the conservative treatment of Pott's disease Thus in 1930 Albee's operation was subject to much unfavourable criticism at the German Surgical Congress and one of the chief speakers Schmieden summed up his review of this subject by declaring that Albee's operation hitherto recommended as a routine measure should only be occasionally employed as an auxiliary remedy in specially selected cases The author challenges this disparaging attitude and supports his advocacy of Albee's operation as a routine measure in a goodly proportion of adult cases of Pott's disease by an analysis of eighty five cases most of which were operated on at his hospital in Helsingfors The study of this material gave prominence to two observations One was that nearly all these patients had had to run the gauntlet of a host of therapeutic measures before the correct diagnosis was made The other observation was that a surprisingly high percentage of the adult patients had previously suffered from pleurisy with effusion which in many cases had developed just before the outbreak of the disease of the spine Among the fifty patients over the age of 15 there were twenty one who suffered from no complications before the operation who spent an average of fifty eight days in hospital after the operation and who were definitely cured and rendered fit for work Among the same fifty patients there was another group of ten whose recovery was complete although it was delayed by relapses or complications such as abscesses and fistulae Three other patients were recovering though not yet fit for work The deaths and comparative failures in the rest of this group were

largely due to tuberculosis in other parts of the body Even if as good results could have been achieved by conservative treatment—a possibility which the author is inclined to question—the fact remains that in more than two fifths of these adult cases the patients were cured by hospital treatment lasting on the average barely two months But while the operation entails little risk and offers very good chances for the rapid and complete recovery of the adult patient and is therefore to be recommended as a routine measure from which only exceptional cases should be excluded the problem is quite different for children under 15 because the operation risk is greater and the prospects of success are less sure For children therefore the operation should be reserved for those special cases in which the disease has weakened the spine to such an extent that there is little prospect of recovery without deformity under conservative treatment

560 Fractures of the Lower Radial Epiphysis

W L WATSON (*Arch of Surg* March 1932, p 492) describes a fracture of the lower radial epiphysis as a solution of continuity in the radius at its lower extremity with all or part of the line of separation passing through the cartilaginous plate of the epiphysis In the common posterior displacement noted in this type of fracture the periosteum is torn through on the anterior aspect at the level of the conjugal cartilage and stripped up on the dorsal aspect The line of separation is smooth and a few fibres of the pronator quadratus muscle are lacerated The cells of the cartilaginous plate are more or less damaged the periosteal and nutrient artery blood supplies are interrupted and cases of radial or median nerve involvement have been reported Fracture of the lower radial epiphysis is the most common of all the epiphyseal fractures, the majority of cases being seen in the second decade of life A back thrust from a fall on the out stretched hand or from hyperextension is the most common cause The displacement of the lower radial epiphysis is usually upward and backward, and is diagnosed by the resulting dinner fork deformity together with the increased antero-posterior diameter limitation of flexion and extension and radial deviation Pain and point tenderness on pressure are also present over the epiphyseal line *X* ray photographs of both wrists should be taken in the antero posterior and lateral directions When there is no displacement or after reduction of a slight displacement the hand and forearm are put up in a small retentive splint for about eighteen days Complete displacements should be reduced under an anaesthetic by hyperextension traction and flexion manipulation In complicated cases an open operation may be necessary Conjugal chondrectomy or excision of the conjugal cartilage of the ulna may be performed when premature ossification occurs This is a simple procedure which ensures a well functioning wrist Two cases are reported in one of them an operation was performed with good result

561 Prolonged Staphylococcal Septicaemia

S I NEDELKOFF (*Thèse de Paris* 1932 No 42) who records nine illustrative cases in patients aged from 16 to 67 states that of all the pyogenic organisms the staphylococcus is most likely to give rise to a prolonged condition of combined septicaemia and pyaemia which may last for several months or even years and sometimes end in recovery Two forms may be distinguished—namely one which is the more frequent characterized by an initial stage of septicaemia followed by a long period marked by a succession of secondary localizations and a rarer form in which a first stage of common staphylococcal manifestations is succeeded by a stage of combined septicaemia and pyaemia The prolonged course is perhaps due to the relatively benign character of the organism which is usually *Staphylococcus aureus* It seems to be impossible to determine the number time of appearance or localization of metastases on which the prognosis depends Recovery takes place in about 50 per cent Various forms of medical treatment including vaccines and the bacteriophage usually give no appreciable results but rapid and permanent cure often follows operation

Therapeutics

562 Hypersensitiveness following Toxin antitoxin Immunization

A I GOLDSCHLAGER (*Med Journ and Record* March 16th, 1932 p 265) who reports three illustrative cases in patients aged 7 10 and 23 years respectively, emphasizes the marked sensitivity following the use of toxin antitoxin for the prevention of diphtheria The reaction following the injection of horse serum in persons who have previously had toxin antitoxin varies directly with the amount of horse serum injected and the glandular involvement varies directly with the depth of the intramuscular injection A primary urticarial rash on or about the fifth day is followed by a secondary deep red maculo papular rash accompanied by marked constitutional reaction reaching a maximum intensity on the tenth day Persons therefore who have already had toxin antitoxin should not be treated by tetanus or diphtheria antitoxin unless they have been previously desensitized

563 Vaccine Therapy in Whooping cough

In view of the difficulty in the preparation and preservation of Bordet Gengou vaccine and the good results obtained by protein therapy M MAKAGHVILI (*Le Nourrisson* March 1932 p 91) has recently made use of Zavriew's method which consists in the intramuscular injection of a combined streptococcal vaccine so called because it contains 1 000 million bacteria per c cm and 2 000 skin test doses The vaccine is prepared from ten to twelve strains of haemolytic streptococci obtained from the throat of an equal number of fever patients and grown on ordinary broth to which 5 per cent of normal horse serum has been added The treatment is commenced in the catarrhal and paroxysmal stage and one to four injections are given in doses ranging from 0 2 to 2 c cm according to age A series of 418 children aged from 3 weeks to 10 years was treated by this method with the following results Sometimes after the first injection but more frequently after the second or third the cough loses its spasmodic character and the vomiting stop If first used in the catarrhal stage the vaccine often aborts the disease Lastly complications are prevented as shown by the fact that only 3 per cent of the cases treated by the vaccine developed complications as compared with 37 per cent among controls None of the 418 cases were fatal Similarly good results were obtained by Hekkel in the treatment of 120 cases, and by Moltchanof and Korchoun in sixty cases in children aged from 8 months to 10 years none of which were fatal The author adds that the results are all the more likely to be successful the earlier the treatment is started

564 Treatment of Bronchial Asthma

M PEHU and J VALIN (*Journ de Med de Lyon* April 5th 1932 p 207) remark that the usual therapeutic agents administered during an attack of bronchial asthma—for example adrenaline ephedrine and atropine—act on the vago sympathetic system They review the methods of prophylactic treatment used between attacks Medicinal measures include the administration of potassium or sodium iodide in water at meal times for ten days then sodium arsenate similarly for the next ten days and finally cessation of treatment for a third ten day period Children should be kept on a salt free diet for some days before this treatment Alternatively arsenic iodide may be given As regards nerve sedatives ephedrine or ephetonine may be employed in daily doses of 0 5 cg or belladonna nasal tracheal or bronchial insufflations of atropine cocaine and adrenaline may be useful as also is jaborandi in 8 to 10 grm doses of a total water alcohol ether extract three times a day after meals Other drugs commended are gardenal in 0 15 cg daily doses and calcium chloride Thyroid extract in daily doses of 0 001 mg to 0 15 cg is advisable if there is evidence of thyroid insufficiency and the authors mention ovarian extract and orchitic extract as being worthy of consideration Suprarenal extract 4 grams daily by the

mouth for ten consecutive days may be combined with pituitary extract Anti arthritic drugs such as atophan piperazine and lithia salts may be beneficial Alimentary detoxication should be secured and sensitization to any specific toxins be determined by cutaneous tests and receive the appropriate treatment Among the varieties of non specific desensitization the author prefers the method of scarification of a square centimetre of skin with an emulsion of killed and defatted tubercle bacilli at intervals of three or four days for three weeks then at intervals of eight days for one month Irradiation of the lungs spleen thyroid and suprarenals has given some good results in adults ultra violet rays have proved more effective in children than in adults Diathermy has also been of value the electrodes being placed over the liver and the roots of the lungs Physical exercises for the development of the chest have done good in some cases As regards surgical treatment bronchoscopy permits aspiration of the excess of secretion from the bronchial mucosa and the direct application of nitrate of silver Removal of polypi and cauterization of the inferior turbinates have given excellent results in some cases The author concludes by emphasizing the importance of persevering with treatment directed to the pathological manifestations in each case

Neurology and Psychology

565 Acute General Paralysis

P SCHMIERER (*Thèse de Paris* 1932 No 52) who records ten illustrative cases in patients aged from 36 to 58 states that in some cases of general paralysis the disease runs a fulminating course death taking place a few days or weeks after admission to a mental hospital without any intercurrent complication to explain it The clinical syndrome is that of acute delirium The neurological signs of general paralysis are usually present refusal of food is very frequent as well as retention of urine and the temperature may be slightly raised or there may be apyrexia with terminal hypothermia The duration of the disease ranges from seven to eighteen days The date of syphilitic infection previous specific treatment psychopathic history the patients profession or occupation and the intoxication to which they have been exposed do not throw any light on the occurrence of the disease Its frequency may be estimated as 1 per cent of all cases of general paralysis The changes in the urea content of the blood and cerebro spinal fluid are of great prognostic value In fatal cases the azotaemia shows a rapid rise while in those which recover it rapidly returns to the normal after a transient rise The lesions of meningo encephalitis discoverable by post mortem examination are the same as in ordinary general paralysis but the cell changes are very intense and show a necrotic character

566 Neuro muscular Cardiac Disorders

I J FARNELL (*Journ Nerv and Ment Dis* March 1932 p 217) reports laboratory and clinical investigations relating to the interreaction between the central and sympathetic nervous systems and the cardiovascular system He believes that a physiological effect is produced on the heart and blood vessels by a wave of encircling pressure applied periodically to the body in the direction of the venous blood flow There follows a relaxation of the voluntary and involuntary musculature which is associated with a diminished state of conductivity of the entire nervous system This produces a form of sleep which is quite different from normal sleep or that induced by drugs There is also a diminution in the pulse rate and in the systolic and diastolic pressures Biochemical researches in relation to the blood appear to show that these variations in pressure operate concurrently with tissue interchange and exchange in the capillary areas bringing about definite metabolic alterations The author attaches particular interest to the remarkable effect which relaxation and lowering of the pulse rate and the blood pressure have on the heart mechanism manifested in electrocardiographic tracings he records various illustrative cases In one instance psychotherapy without the aid of medication permanently relieved nocturnal polyuria and polydipsia constipation and a scanty menstrual flow The author asks how such effects can be explained other than by some action being exerted on the vasomotor system and its involuntary musculature both arterial and visceral He doubts whether the relatively simple conceptions of the peripheral nervous system on the basis of a neurone theory are adequate to explain these phenomena He thinks it is possible that the new conceptions of fibrillar nerve nets of long path axon reflexes and of sympathetic innervations of sensory end organs even though imperfect and possibly erroneous may be indicating the way to a deeper insight into the nervous regulation of bodily functions which will be gained by histological investigation and clinical study as well as by psychological experiments

567 Psychotic Azotaemic Encephalitis

LEPINE LAPRIVE and CHAILLET (*Lyon Med* January 17th 1932 p 73) record six cases of psychosis which presented interesting peculiarities and seemed to form a distinct homogeneous group These psychoses occur almost solely in women rarely in the isolated state and in most cases evolve in four stages The first stage of varying duration and afebrile is marked by the appearance of polymorphous mental troubles maniacal excitement simple or delirious confusion or less frequently melancholia In the second stage fever appears and the temperature remains high with occasional oscillations The mental symptoms become those of acute delirium Then follows a period of calm in which the temperature falls to about normal for two or three days The terminal stage is marked by a return of high fever with progressive torpor followed by coma This affection is very grave and usually fatal five of the six patients died The somatic and cerebro spinal fluid examinations are always negative but a constant symptom is azotaemia The blood urea is always very high and follows a regularly ascending curve increasing by 1 gram or more daily In the surviving case the blood urea first increased and then dropped progressively to normal it is therefore apparently of both prognostic and diagnostic value Its cause is unknown The authors add that Toulouse Marchand Courtois and Schiff who have encountered similar cases conclude from their researches that this is an infectious disease of unknown cause which attacks the entire organism they have found a diffuse inflammation of the encephalon predominating in the frontal lobes and bulb the central grey nuclei and peduncles are generally unaffected Certain authorities consider this disease to be a form of epidemic encephalitis the present authors do not concur in this

568 Cutaneous Allergy of Emotional Origin

J H BLAISDELL (*Arch Derm and Syph* February 1932 p 205) discusses a condition termed mental allergy or the cutaneous reaction to emotional disturbances He defines two groups in the first the mental disturbance acts on the skin through the intervention of other organs in the second the action is direct and there is no other organic dysfunction The coincidence of cutaneous disorders and mental stress has often been noted but proof that this is due to a sensitization reaction to what may be termed mental proteins is impossible A case is fully described by Blaisdell in which two distinct pathological conditions were found The patient had a typical seborrhoeic eczema severe persistent extensive and recurrent with a history of cutaneous sensitiveness and an allied allergic reaction of hay fever Owing to continued exposure to criticisms and degrading embarrassing circumstances the patient's emotional outlook became profoundly depressed with a resulting marked inferiority complex and cutaneous troubles The case is recorded to emphasize the importance of evaluating the patient's psychological condition in considering the disease picture cutaneous or otherwise

Obstetrics and Gynaecology

569 Sarcoma of the Uterus

S W LEE (*Chinese Med Journ* February 1932 p 175) records five cases of uterine sarcoma which he has encountered in the last ten years Although usually regarded as a rare tumour there have been about 500 cases reported in medical literature and the author believes that this form of malignant disease of the uterus is more common than is generally supposed In two of his cases the cervix was involved a most unusual site In the first of these the growth which was detected six months after the menopause gave rise to no symptoms other than dysuria and constipation and was removed in the belief that it was a fibroid Pathological examination revealed however very cellular areas with hyaline degeneration and marked nuclear mitosis Recurrence followed seven months later but the tumour was then inoperable Lee remarks that had radium treatment been available for this case the outcome might have been more satisfactory In the other cervical case a very extensive cauliflower growth at the vault of the vagina in a woman aged 60 was found to consist of irregularly arranged spindle cells varying considerably in size shape and staining properties but with fairly numerous mitotic nuclei and giant cells The uterus was not enlarged In the first of the cases of sarcoma of the body of the uterus there had been a slowly growing tumour for ten years the patient was aged 51 when admitted for treatment Sarcomatous degeneration of an old fibroid was revealed The second patient aged 33 had a short history of abdominal swelling with sterility for nine years An apparently adenomatous growth adherent to the left cornu was removed but this was shown in the laboratory to be sarcomatous Radical excision was contemplated but prevented by the occurrence of post operative broncho pneumonia However radium tubes were inserted into the uterus and the patient was later discharged well One year later she was re examined but no evidence of recurrence was discovered The remaining patient of the series aged 49 had a slowly growing leiomyosarcoma of the uterus with necrosis and subacute inflammation endometrial hyperplasia chronic endometritis and myometritis The diagnosis at the operation was that the growth was a degenerating fibroid The patient died from post operative shock precluding further treatment

570 Renal Tuberculosis and Pregnancy

J NAESLUND (*Upsala Lakaref or Forhand* March 30th 1932 p 243) reviews the literature and records twelve personal cases of renal tuberculosis associated with pregnancy His conclusions are as follows Pregnancy has a detrimental effect on renal tuberculosis when both kidneys are affected This applies to cases in which only one kidney is tuberculous but the other kidney for some reason or other is not functioning Even when the renal tuberculosis is unilateral and after the affected kidney has been removed the renal function appears to be unfavourably affected during pregnancy and still more so after its termination In such cases therefore the renal function must be carefully examined by renal tests during pregnancy in order to induce abortion before this function has been too severely damaged

571 Syphilis and Cancer of the Cervix

A TOURAINE (*Paris Med* March 5th 1932 p 207) emphasizes the importance of the part that syphilis plays in the development of cervical cancer Audry in 1926 came to the conclusion that one half of these cases of cancer had a syphilitic beginning Suquet found 68 per cent of them syphilitic Bertrand obtained positive Wassermann reactions in 68 5 per cent of these cases The present author believes that there has been syphilitic infection in at least two thirds of these cancers the specific lesions forming a pre cancerous site as may occur at other mucous orifices These lesions may be in the form of a gumma a leucoplasia or a chronic metritis with hyperplasia or metaplasia of the mucosa

Pathology

572 Creatinuria in the Puerperium

N J EASTMAN and S W LEE (*Chinese Med Journ* February 1932 p 143) have made a comparative study of the excretion of creatine by a series of lactating and non lactating mothers the latter being (with one exception) patients who had been delivered of mature but stillborn infants Folin's micro method was used to determine the amount of creatine and preformed creatinine in daily total twenty four hour urine specimens and the results were recorded in terms of the creatine creatinine ratio since the daily excretion of creatinine is constant this method of recording obviated any possible inaccuracy due to failure to collect all the urine passed in the twenty four hours Evidence was obtained that lactating puerperal women excrete little urinary creatine during the first two or three days of the puerperium but immediately thereafter a rapid increase in the creatine-creatinine ratio occurs so that on the sixth day it reaches an average level of 0 6 Non lactating puerperal women show a very high creatine creatinine ratio on the second day after delivery this is followed by a rapid decrease in the amount excreted so that by the seventh or eighth day the urinary creatine in this group is usually reduced to a trace Lugol's solution in doses of 1 to 2 5 c cm daily had no effect on this puerperal creatine excretion The authors deduce therefore that the basic mechanism of puerperal creatinuria differs from the type present in exophthalmic goitre which is reducible by the administration of Lugol's solution They add that creatinuria in the puerperium is closely parallel with mammary engorgement and seems to be related in some way at present undetermined with the excessive distension of the mammary ducts with milk Moreover this creatinuria is an additional process superimposed upon the normal excretion of creatinine differing thus from the creatinuria of starvation in which proportional decreases are indistinguishable in the creatinine content of the urine

573 Staphylococcus albus Septicaemia

H E ROEHM (*Arch of Ped* March 1932 p 165) who records two illustrative cases states that *Staphylococcus albus* septicaemia is not frequently reported he could find only fifty seven cases of staphylococcal septicaemia on record Of these forty three were due to *Staphylococcus aureus* seven to *Staphylococcus albus* and four to *Staphylococcus albus* and *aureus* combined in three the variety was not stated The mortality is 90 per cent in staphylococcal septicaemia due to carbuncle from other local infections of the skin 65 to 75 per cent and from osteomyelitis 40 per cent Roehm's first patient was a boy aged 5½ years in whom recovery took place after four transfusions of whole blood The second case which occurred in a female infant aged 4 weeks after infection of the skin terminated fatally

574 Food Poisoning due to Pigeon Paratyphoid Infection

A CLARENBURG and C G J DORNICKX (*Nederl Tijdschr v Geneesk* April 2nd 1932 p 1579) describe an outbreak of twenty cases of gastro enteritis which occurred in the military hospital at The Hague after consumption of a pudding in which pigeons eggs had been used All the patients recovered In only two cases in which the disease lasted about four weeks was the attack severe in the others recovery took place in three to eight days Paratyphoid bacilli of the Aertrycke type were found in the pudding and also in the patients faeces blood and urine The agglutination test of the patients serum was positive in from 1 in 200 to 1 in 800 On further examination cases of paratyphoid were found among the pigeons from which the eggs had been obtained and bacilli identical with those obtained from the pudding and from the patients were found in the eggs The author add that this appears to be the first case on record of pigeon paratyphoid bacilli affecting man

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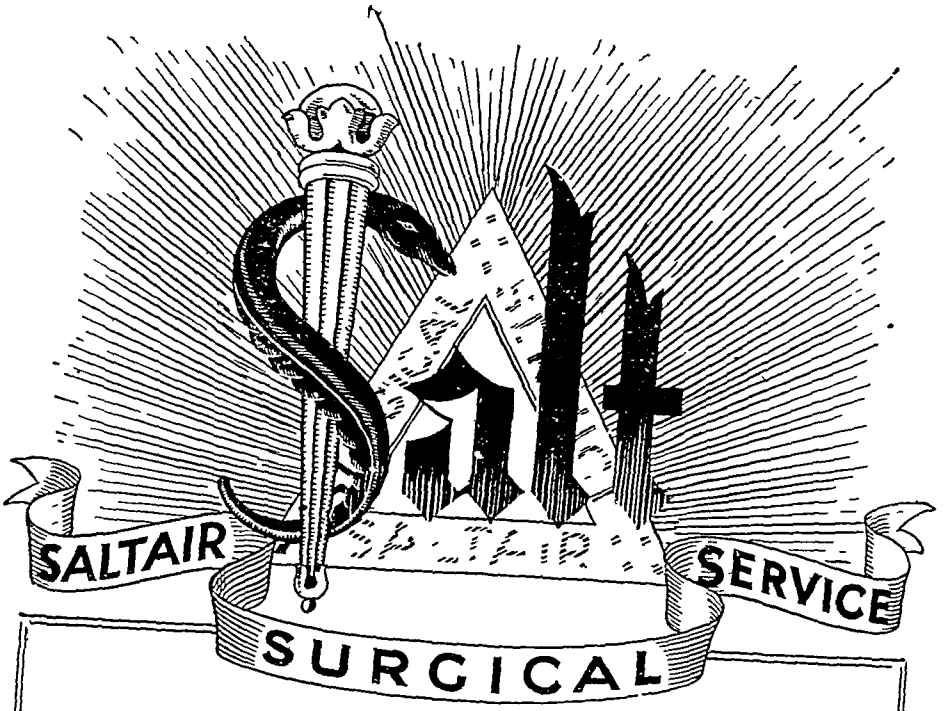
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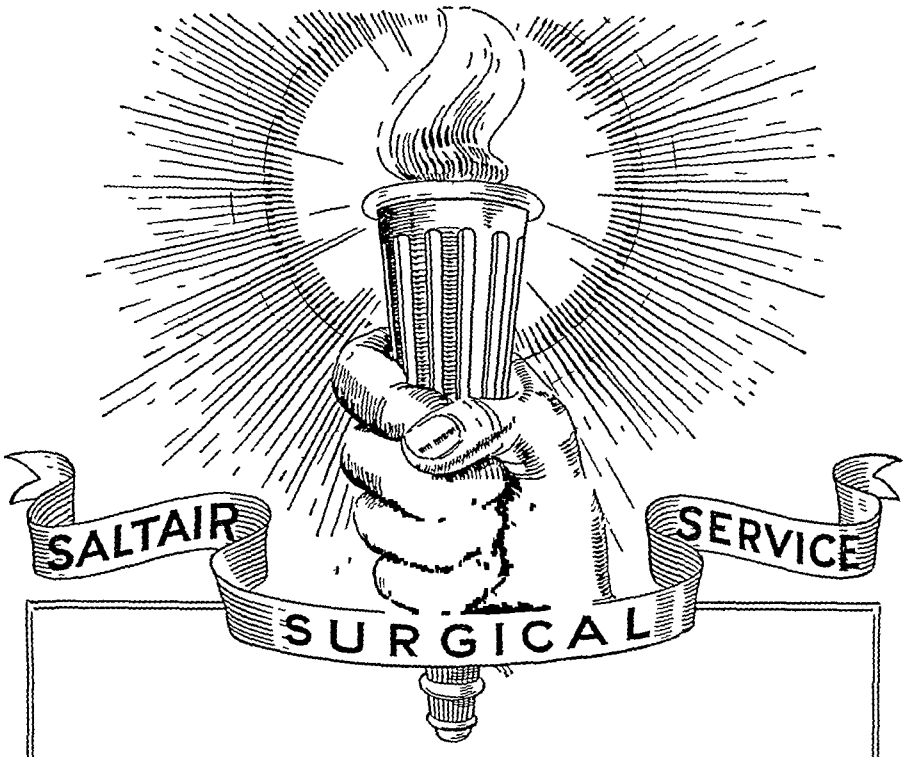
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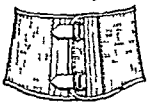
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A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness including the alcoholic disorders of Alcoholism and the Drug Habit All types of early Mental and Nervous cases are received without certificates A Voluntary Patient under the provisions of the Mental Treatment Act, 1930 Bracing Hill country See *Medical Directory* p 2138—Apply to Medical Superintendent Phone 10 P O Church Stretton

THE MOAT HOUSE,

TAMWORTH STAFFS

Established 1816 For the TREATMENT of a few LADIES suffering from NERVOUS and MENTAL DISORDERS Voluntary patients received For terms apply to the Resident Medical Attendant Tamworth 107

WYE HOUSE, BUXTON

For the treatment of Ladies and Gentlemen mentally afflicted Voluntary Boarders received Situated 1200 ft above sea level facing S 14 acres of grounds—For terms apply to the Resident Medical Superintendent W W HOPTON M D Nat Tel 120

THE GROVE HOUSE,

CHURCH STRETTON SHROPSHIRE.

A Private Home for the care and treatment of a limited number of Ladies suffering from Mental Disorder Climate healthful and bracing
Medical Superintendent H D WILLCOCK

HOME FOR DELICATE CHILDREN

"THE LOG HOUSE," KLOSTERS

GRISONS SWITZERLAND 5000 ft above sea level
Inclusive terms from £3 3s per week
No Infectious cases taken Apply for further particulars from Mrs or Dr B HUTCHISON
Telegrams Lochalsh

Littleton Hall, Brentwood, Essex.

For the proper care of aged and INFIRM ladies Mental affection Voluntary Patients received Situated amidst beautiful and shady grounds Liverpool St 25 minutes—Apply Dr HAYNES.

ST. ANDREW'S HOSPITAL
FOR MENTAL DISORDERS,
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON THE MARQUESS OF EXETER C M G A D C.

Medical Superintendent DANIEL F RAMBAUT M A M D

This registered Hospital is situated in 120 acres of park and pleasure grounds Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble temporary patients and certified patients of both sexes are received for treatment Careful clinical biochemical bacteriological and pathological examinations Private rooms with special nurses male or female in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided

WANTAGE HOUSE

This is a Reception Hospital in detached grounds with a separate entrance to which patients can be admitted It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders It contains special department - ous methods including Turkish and Russian baths the prolonged immc otch Douche Electrical bath Plombieres treatment etc There is an Surgery an X ray Room an Ultra violet Apparatus and a Departn h Frequency treatment It also contains Laboratories for biochemical bacteriological and pathological research

MOULTON PARK

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 600 acres Milk meat fruit and vegetables are supplied to the Hospital from the farm gardens and orchards of Moulton Park Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming gardening and fruit growing

BRYN-Y-NEUADD HALL

The seaside house of St Andrew's Hospital is beautifully situated in a park of 330 acres at Llanfairfechan amidst the finest scenery in North Wales On the North West side of the Estate a mile of sea coast forms the boundary Patients may visit this branch for a short seaside change or for longer periods The Hospital has its own private bathing house on the seashore There is trout fishing in the park

At all the branches of the Hospital there are cricket grounds football and hockey grounds lawn tennis courts (grass and hard courts) croquet grounds golf courses and bowling greens Ladies and gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry etc

For terms and further particulars apply to the Medical Superintendent (Telephone No 2356 and 2357 Northampton) who can be seen in London by appointment

COURT HALL, KENTON, EXETER,
SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Diseases Limited to eight patients Telephone Starcross 19

CLIFFDEN TEIGNMOUTH in connection with Court Hall for early and convalescent cases Cliffden is a large well appointed house with lovely views of the South Devon Coast It is beautifully situated in grounds of 19 acres The gardens are very attractive and there is a private road to the beach

Resident Physicians BERTHA M MULES M D B S ANNIE S MULES M R C S, L R C P
Telephone Teignmouth 289

THE COPPICE, NOTTINGHAM
HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted Voluntary and Temporary Patients received

Tel 64117 *For terms etc apply to the Medical Superintendent*

TYKEFORD ABBEY, NEWPORT PAGNELL,
BUCKS
FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical interest standing in 9 acres of garden and grounds and is situated 14 miles from Northampton and 12 miles from Bedford on the main London to Northampton Road fifty miles from London Both sexes are accommodated Psycho Therapeutic treatment is used extensively in suitable cases Radiant Heat X Ray and Ultra violet Light Diathermy and Foam Baths Billiards tennis etc Fees from five gns per week

Apply Dr D E M DOUGLAS MORRIS Telephone Newport Pagnell 121

HAYDOCK LODGE,
NEWTON-LE-WILLOWS, LANCASHIRE.

Phone 11 Ashton in Makerfield

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition

Situated in park and ground of 400 acres Self supported by its own farm and gardens in which patients are encouraged to occupy themselves Every facility for indoor and out door recreation *For terms prospectus etc* apply MEDICAL SUPERINTENDENT

CHISWICK HOUSE

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both Sexes

Now Removed to
CHISWICK HOUSE, PINNER MIDDLESEX

Telephone PINNER 234

A modern country house 12 miles from Marble Arch in beautiful secluded grounds Fees from 10 guineas per week inclusive Cases under certificate and Voluntary Patients received for treatment Special provision for Temporary patients under the New Mental Treatment Act

DOUGLAS MACAULAY M D D P M

WONFORD HOUSE
EXETER, DEVON

Registered Hospital for Nervous and Mental Diseases for the Upper and Middle Classes

Telephone Exeter 2642

A hospital which provides modern investigation and treatment for Voluntary Temporary and Certified Patients of both sexes Special attention is paid to occupation

Accommodation provides for the separate treatment of early recoverable and of convalescent patients

Fees from 4 guineas

There is a seaside branch at Dawlish

A prospectus and full particulars may be obtained from the Medical Superintendent

BARNWOOD HOUSE,
GLOUCESTER

A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS Within two miles of the G W Railway and L M & S Railway Station s and Gloucester the Hospital is easily accessible by rail from London and all parts of the United Kingdom It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 280 acres Voluntary board re of both sexes are also received for treatment Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE which has its own private grounds and is entirely separate from the main Hospital

For particulars as to terms etc apply to— ARTHUR TOWNSEND M D Medical Supt. Telephone No 7 Barnwood

CHEADLE ROYAL,
CHEADLE CHESHIRE

This Registered Hospital for MENTAL DISEASES with the seaside branch Colwyn Bay is for the treatment and care of PRIVATE PATIENTS of the UPPER and MIDDLE CLASSES Voluntary Temporary and Certified Patients received

For terms etc apply to the Medical Superintendent J A C Hor M B who may also be seen in Manchester by appointment

Telephone 2231 CHELT

SPRINGFIELD HOUSE,
Near BEDFORD (Phone 3417)

For Mental Disorders with or without certificates.

Resident Physician CECIL H Dowse

Ordinary Terms Five Guineas per week.

(Including Separate Bedrooms with private Interviews in London by appointment

CITY OF LONDON MENTAL HOSPITAL DARTFORD KENT

Ladies and Gentlemen received for treatment under certificates and without certification as either VOLUNTARY or TEMPORARY PATIENTS at a weekly fee of TWO GUINEAS and upwards

WELLWOOD NURSING HOME,
CULTS, ABERDEENSHIRE.

Physician Superintendent R DODS BROWN MD FRCPLd — *Matron* MISS BERIRAM (late of The Retreat York)

This Home which has been recently established is equipped for the treatment of those suffering from early mental and nervous disorders and is under the charge of the Physician Superintendent Aberdeen Royal Mental Hospital

The Home is situated on Deeside three miles from Aberdeen, amidst delightful surroundings of garden park and woodland attractively laid out for the occupation and recreation of those resident It is beautifully decorated and comfortably furnished Rest and privacy are assured and all forms of treatment are available

The patients may be attended by their own physician or by the Physician Superintendent

The minimum charge is £4 4s a week

For further particulars application should be made to the PHYSICIAN SUPERINTENDENT Royal Mental Hospital Aberdeen or to the MATRON Wellwood Nursing Home Cults Aberdeenshire (Telephone No 31 Cults)

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,
Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Reg Tel Address Bethlem Beckenham — *Telephone* Springpark 1180—1181

Station Eden Park (Southern Railway)

President LORD WAKEFIELD OF HYTHE CBE LLD
Treasurer SIR LIONEL LAUDEL PHILLIPS Bart
Physician Supt J G PORTER PHILLIPS MD FRCP

This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm ground
Applications can be considered on behalf of patients of the educated classes in a presumably curable condition
With a view to early treatment voluntary or uncertified patients are admitted
Patients who can contribute 3 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise The Committee will also consider applications for admission at lower rates and in certain cases will be prepared to admit patients free of charge
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this Unit is found the X ray and Dental Departments and the Bio-Chemical Pathological and Psychological Laboratories
Furthermore provision is made for Electro-Therapy and Hydro Therapy to be carried out in all their forms
In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms
For forms and further particulars apply to the Physician Superintendent at the Hospital

CAMBERWELL HOUSE, 33, Peckham Road, London, S E 5

Telegrams PSYCHOTIA LONDON — FOR THE TREATMENT OF MENTAL DISORDERS — *Telephone* RODNEY 4031—4032

Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Bowls Croquet Squash Racquets and all indoor amusements including Wireless and other Concerts Occupational Therapy and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr HUBERT JAMES NORMAN assisted by three Medical Officers also resident and visiting Consultants
An illustrated Prospectus giving fees which are strictly moderate may be obtained upon application to the Secretary
The Convalescent Branch is HOVE VILLA BRIGHTON and is 200 feet above sea-level

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive ground — Detached Villas — Chapel — Garden and dairy produce from own farm — Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH — standing in 12 acres of own mental grounds with tennis courts etc Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods

Illustrated Brochure on application to the Medical Superintendent The Old Manor Salisbury — Telephone 51

NORTHUMBERLAND HOUSE,
GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON — *Telephone* NORTH 88

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illness
Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated from Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification

Convalescent Home Kearsney Court Dover — For further particulars apply to the Medical Superintendent

PECKHAM HOUSE, 112, Peckham Road, London, S E 15

Telegrams Alleviated London — **Telephone Rodney 4741-4742**

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Both certified patients and voluntary boarders are received Separate provision for treatment and accommodation of special cases adjoins the Institution There is a seaside branch at Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis Courts Entertainments and indoor amusements held throughout the year
Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT

RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological cultures the ordinary x-ray examinations and electrocardiograph readings all treatment that may be prescribed such as special diets insulin artificial sunlight electrical treatment baths massage nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x-ray examination or for x-ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30·5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales Telegrams CASTLE RUTHIN Telephone RUTHIN 66

DARTMOOR CONVALESCENT HOME. 750 FEET ABOVE SEA LEVEL

Established 1903 for Treatment of Pulmonary and other forms of Tuberculosis Sheltered Situation on the slopes of the Tracing moorland Radiograph light Central Heating Separate Bedrooms Efficient Treatment combined with individual comfort and minimum pectus on request to the Resident Physician C H BERRY M.R.C.S. L.R.C.P. Forr Hous Chagford Devonshire Telegram TORR CHAGFORD



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CALDECOTE HALL Nr NUNEATON (FOR MEN)

At this beautifully situated country mansion residential Treatment of the above afflictions is carried out on the most modern scientific principles both physical and psychological under the supervision of the Pres Med Supt Dr A E CARVER M.D. D.P.H. D.P.M.

Particulars may also be obtained from the Secretary 40 Marlham Street London S.W.1

ALCOHOLISM, DRUG HABIT, NEURASTHENIA, etc

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The treatment is the outcome of many years experience and besides removing all craving for drink and drugs it has a tonic action on the system and the general health is improved Alcohol and drugs reduced gradually without suffering

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Exceptionally good climate and ample and varied amusement Moderate inclusive terms Prospectus etc from STANLEY HART M.B. Ch.B. Res. Med. Supt. Bay Mount Paignton

ALCOHOLISM & DRUG HABIT

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For the treatment of GENTLEMEN Estab 1883 by an Association of prominent medical men and *others for the study and treatment of alcohol and drug abuse Large secluded grounds on the* bank of the River Colne Voluntary Patient can be received under the Inebriates Act Full sized billiards tennis croquet bowls Golf (Moor Park Sandy Lodge) close by For parties apply to—F. S. D. Hoare M.R.C.S. &c Resident Medical Supt Telephone 16 RICKMANSWORTH

SHAFTESBURY HOUSE,

FORMBY BY THE SEA Nr LIVERPOOL

Specially built and licensed for the care and treatment of a limited number of Ladies and Gentlemen suffering from Nervous and Mental breakdown Voluntary and certified patient received Ladies also admitted as Temporary Patients without certification Terms moderate Apply RESIDENT PHYSICIAN Tel No 8 Formby

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As founded and established by the late Dr FRANCIS HARE for 20 years Med Supt of the Norwood Sanatorium and author of Alcoholism etc for the treatment of ALCOHOLISM *other Drug Habit* Insomnia Neurasthenia Functional Nervous Disorders

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Fees 5—10 guineas Ample amusements 25 bedrooms Annexe for mild cases Quiet and pleasant situation

Ladies and gentlemen admitted for treatment

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having large house garden car good staff would like some PAYING GUESTS Terms moderate — Address No 371 B.M.A. House Tavistock Square W.C.1.

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A first class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted

Large gardens deer park private golf links fishing Grounds extend to over 200 acres Voluntary Patients accepted

Apply for particulars to Dr SANKEY

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In North London beautifully situated A FEW PATIENTS can be taken at the above Medical Nerve and Convalescent Fees from 8 gns —Address No 3219 B.M.A. House Tavistock Square W.C.1

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PRIVATE HOME for MENTALLY AFFLICTED LADIES Ten only received Apply Medical Officer or Mrs PEELE. *Telephone* 2708

BAILBROOK HOUSE, BATH

A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders

Voluntary Boarders received in the Villa Large Mansion on outskirts of Bath with 20 acres of grounds (see *Medical Directory* page 1534)

For terms apply S. I. GILCHRIST O.B.E. M.B. C.M.Edin. Resident Physician Telephone No Bathaston 8189

FENSTANTON,

CHRISTCHURCH ROAD

STREATHAM HILL S.W.2

A Private HOME for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients Large *Mansion* with 12 acres of ground (See *Medical Directory* p. 2234) Apply J. H. EVANS M.D. Resident Physician Telephone Streatham 8430

THE LAWN, LINCOLN.

This Registered Hospital situated in large grounds near the Cathedral receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders including Post Encephalitic conditions In adults Special facilities for Psychotherapy in co-operative cases

All particulars may be obtained from the Resident Medical Superintendent &c

Dr MARY R. BARNARD D.P.M.

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(20 miles from London)

Ladies suffering from MENTAL ILLNESS received for treatment at the Herts County Mental Hospital Hill End Convalescent and mild cases can be treated in a delightful country mansion with extensive grounds known as "HIGHFIELD HALL" situate about a mile away from the Hospital Fees 3 guineas weekly

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CLARENCE LODGE,

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Situated in 3½ acres of secluded gardens

HOME FOR TWELVE MENTAL PATIENTS (LADIES)

Well appointed private house Expert care and trained Nursing Staff Eminent Mental Specialist Visiting Physician

Station Telephone Brixton 0434

Clapham Common Tube Apply MISS THWAITES.

The MUNDESLEY SANATORIUM

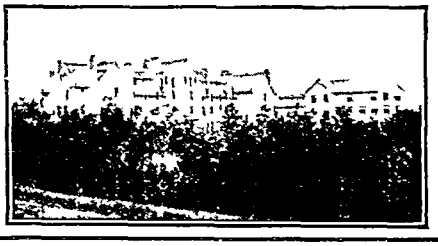
The newly opened central building makes the Mundesley Sanatorium the best equipped building in England for the cure of Tuberculosis All the bedrooms have hot and cold running water electric light and wireless head phones The new public rooms are spacious and comfortable

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The buildings face S S W and are sheltered from the sea by a pine clad ridge The sunshine record and dry air complete a perfect site The medical equipment is of the latest kind and there is a day and night nursing staff

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MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson M.D F.R.S.E

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent J M JOHNSTON M B D P H e

Full particulars and Prospectus on application to the Secretary

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Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine clad hills with sea and mountain views Modern treatment including ARTIFICIAL PNEUMOTHORAX SANOCRYSIN etc X ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L M S Main Line to Holyhead 4½ hours from London Resident Physicians DENNISON PICKERING M D (Cantab) J A HENNESEY M B Ch B Matron Miss S A EDDY S R N Late Sister in Charge Royal Hospital Annexe Sheffield

For particulars apply to the SECRETARY Pendyffryn Hall Penmaenmawr N Wales (Phone 20)

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This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES It is situated in the midst of a large area of park land at a height of 450 feet above sea level on the south west slopes of mountains rising to over 1 800 feet which protect it from north and east winds and provide many miles of graduated walks with magnificent views Average rainfall 29 57 per annum Full day and night nursing staff X ray plant Every facility for Artificial Pneumothorax and for operations on the chest Electric lighting Central heating Home farm Clean milk from T T Herd For particulars apply to Medical Superintendent H MORRISTON DAVIES M D M Ch Cantab F R C S Llanbedr Hall Ruthin N Wales

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Full day and night Nursing Staff

Resident Physician CECIL F V HOFFMAN B A M B T C Dub and J MAPLETOFT A HARRISON M B B S Lond
All The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 21 WITCOMBE *Telegrams* HOFFMAN CRANHAM



KINGUSSIE, N B
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MEDICAL SUPT HELIX SAVY M D For particulars apply to the Secretary

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for the Treatment of RHEUMATISM, ARTHRITIS, FIBROSITIS, NEURITIS, ARTERIO-SCLEROSIS and HYPERPIESIS, *Diseases of the* LIVER and GALL BLADDER, GASTRIC CATARRH and COLITIS, SKIN DISEASES, ANAEMIA and Convalescence from Acute Illness

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The French Tourist Office 56 Haymarket London S W 1

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Detailed information concerning the treatment at Vichy may be had by addressing the Compagnie Fermiere de Vichy 4 Boulevard des Capucines Paris

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For Convalescence Select MARGATE CLIFTONVILLE or WESTBROOK

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YE WELLS HOTEL

100 ROOMS.

Running hot & cold water Two Lifts.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

LEVERHULME RESEARCH SCHOLARSHIPS

Two Leverhulme Research Scholarships will shortly be awarded by the Royal College of Physicians of London

Each scholarship will be of the annual value of £300 and will be for one year in the first instance but renewable for a further year at the discretion of the College

Scholars must be British subjects not more than 25 years of age and must possess such other qualifications as may be given to persons holding medical qualifications

Scholars must devote themselves to the investigation of some clinical problem of human interest in man. The work must have as its basis medical observation preferably in the Hospital Wards of the College

Applications should be sent before July 1 to the Registrar at the College of Physicians Pall Mall East S.W.1 from whom all particulars may be obtained

F R C S (Edin)

Full PREPARATION COLLINSON'S Anatomical Cadaver and Living Model Boards Private Pupils Tuition or Part Time with Correspondence Hostel INSTAL TUITION Part Time—H. C. COLLINSON F.R.C.S. Surgeon Hall Edinburgh

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17 RED LION SQ LONDON W C 1

(FOUNDED IN 1887)

Principal Mr F S WEYMOUTH M.A. (Lond.)

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

M D (Lond.),	1901-31 (9 Gold Medallists during 19 years)	355
M S (Lond.)	1901-31 (including 4 Gold Medallists)	22
M B B S (Lond.)	*First* 1900-31 (Completed Exam.)	280
F R C S (Eng.),	*Primary* 1906-31	173
	Final	173
M R C P (Lond.)	1914-31	199
D P H	(Various) 1906-31 (Completed Exam.)	308
F R C S (Edin.)	1918-31	50
M R C S L R C P	Final 1910-31 (Complete Exam.)	501
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Preparation for the above and also for Medical Preliminary and final examinations leading up to M.R.C.S. L.R.C.P. or M.B. various Universities also for D.P.H. D.C.H. D.T.M. & H. D.I.O. D.O.M.S. D.L.O. R.C.S. L.M.S.S.A. etc Numerous successes

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MEDICAL PROSPECTUS (48pp.)

CONTENTS —The Medical Profession The Medical Preliminary Examination The Final Examinations Subjects for the Final Examinations Final Examination Subjects Diploma Examinations Higher Degrees Medical Appointments Medical Interest Groups Medical Appointments Medical Interest Groups Medical Appointments Medical Interest Groups

MIDDLESEX HOSPITAL MEDICAL SCHOOL

LONDON, W 1

(University of London)

The WINTER SESSION will open on OCTOBER 4th and new students should apply for admission at an early date

The Medical School and Hospital occupy a central position within a few minutes walk of Oxford Circus They are fully equipped for teaching the entire Medical curriculum both for University Degrees and the Conjoint Course

ENTRANCE SCHOLARSHIP examinations in Arts and Science will be held in July

The new West Wing of the Hospital is fully occupied the rebuilding of the remainder is proceeding without the loss of a single bed the remodelled Out Patient Department continues to expand the newly built Residents Block affords greatly improved facilities the Nurses Home is the finest in London These with other new buildings including magnificent Laboratories give to the Middlesex Hospital and its Medical School the most modern facilities obtainable in Great Britain There is no accommodation for women students.

THIRTY ONE RESIDENT APPOINTMENTS are offered annually to students recently qualified NINE REGISTRARS are also appointed annually SCHOLARSHIPS AND PRIZES of a value exceeding £1 000 are awarded each year Large Athletic Grounds Common Rooms Squash Racquets Court and a well equipped Restaurant are provided

The Students Amalgamated Clubs include Rugby and Association Football Golf Hockey, Cricket Sailing, Fencing, etc

For further particulars and Prospectus apply to the Dean T IZOD BENNETT, M D, F R C P or to the School Secretary, Middlesex Hospital Mortimer Street London, W 1

POST-GRADUATE COURSES:

Open only to Members of the Fellowship of Medicine

DISEASES OF CHILDREN (Children's Clinic and other Hospitals, June 27th to July 8th all day) DERMATOLOGY (Blackfriars Skin Hospital June 27th to July 8th, afternoons) PROCTOLOGY (St Mark's Hospital, July 4th to 9th, all day) CARDIOLOGY (National Heart Hospital June 27th to July 8th, all day)

Apply— *Instruction by Panel of Teachers daily at definite clinics*

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, London, W 1 (Langham 4266)

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

The following arrangements have been made for POST GRADUATE TEACHING in Glasgow during the Summer of 1932

A A General Medical and Surgical Course from August 22nd to September 16th

Fee £10 10s or £6 6s for first or second fortnight

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary Post Graduate Medical Association The University Glasgow

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admissions being primiparous cases) Over 2 400 patients are admitted to the Wards annually and in the Ante natal Department there are over 18 000 attendances per annum

Certificates awarded as required by the various Examining Bodies

For rules fees etc apply ARTHUR WATTS Secretary

ST MARY'S HOSPITAL MEDICAL SCHOOL,

PADDINGTON, W 2

(University of London)

The WINTER SESSION will begin on Monday *October 3rd 1932*

The Medical School provides courses in Preliminary Intermediate and Final Subjects and Students can join at once after matriculation

SITUATION.—Between a large population providing clinical material and one of the best residential districts thus enabling students to live in close proximity to their work

CLINICAL UNITS IN MEDICINE AND SURGERY.—Certain members of the Medical and Surgical staff devote their whole time to teaching and research

NEARLY 1 000 beds available for teaching additional clinical material being provided by affiliation to an Infirmary and other Institutions

ENTRANCE and RESEARCH SCHOLARSHIPS to the value of £1 400 are awarded annually

APPOINTMENTS varying in value up to £750 per annum open to students after qualification

For further particulars and illustrated prospectus apply to the School Secretary

C M WILSON (*M C*) M D F R C P *Dean.*

NORTH-EAST LONDON POST-GRADUATE COLLEGE,

PRINCE OF WALES'S GENERAL HOSPITAL N 15

The Practice of the Hospital is limited to Medical Practitioners Particulars from J BROWNING ALEXANDER M D Dean

CITY OF LONDON MATERNITY HOSPITAL,

CITY ROAD E C 1

MIDWIFERY TRAINING SCHOOL

MEDICAL STUDENTS admitted to Hospital practice with operative Midwifery and Obstetrical complication Monthly or Fortnightly Courses

PUPILS TRAINED as Midwives and Monthly Nurses in accordance with C M B regulation

PRIVATE WARDS for paying patients

MATERNITY NURSES sent out to private case

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVER
COURSES OF
three months) f
Medicine comme
October 3rd and
Hygiene on Jar
(Candidates for
D T M of this University)

For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pembroke Place Liverpool

ST BEES SCHOOL,

CUMBERLAND

Fees £120 a year inclusive having been reduced from £144 in the case of boys who enter the School *before* July 1933

Scholarship Examinations begin July 7th. For Prospectus apply Head Master

POST GRADUATE STUDY

The Medical Correspondence College provides ample facilities under highly qualified tutors for oral practical and clinical instruction in preparation for the various *higher qualifications* and for Post Graduate Study irrespective of any examination

Diploma in Psychological Medicine
Diploma in Ophthalmology
Diploma in Radiology
Diploma in Laryngology, Otology, and Rhinology
Diploma in Public Health
Diploma in Tropical Medicine
F R C S Eng, and all higher Surgical Examinations
M R C P Lond, and all higher Medical Examinations
M D Thesis of all Universities

You can qualify for any of the above by our Courses of Combined Postal and Practical Courses

Write at once stating your requirements to the Secretary, MEDICAL CORRESPONDENCE COLLEGE, *19, Welbeck Street, W 1*

WE SPECIALIZE IN POST-GRADUATE COACHING FOR ALL EXAMINATIONS

UNIVERSITY OF LONDON

EXTERNAL EXAMINERSHIPS 1933

The Senate announce the following vacant Examinerships for the year 1933

For the Second Examination for Medical Degrees

ANATOMY

For Final and Higher Examinations for Medical Degrees

BACTERIOLOGY MEDICINE MENTAL DISEASES AND PSYCHOLOGY NEUROLOGY OBSTETRIC MEDICINE OTO RHINO LARYNGOLOGY PATHOLOGY STATE MEDICINE

Associate Examiners

Applications will also be invited for Associate Examiners in Medicine Obstetric Medicine Pathology and Surgery A separate application form must be used for Associate Examinerships and the word Associate must be written on it

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar

Candidates must send in their names to the External Registrar GEO F GOODCHILD M A B Sc with any attestation of their qualifications they may think desirable on or before Monday July 4th 1932 (Envelopes should be marked Examinership)

The Senate desire that no application of any kind be made to individual members

If testimonials are submitted one copy only of each is required In no case should original testimonials be submitted If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership The appointments will be made by the Senate in November Applicants who desire that the result should be communicated to them are requested *to enclose a stamped and addressed envelope* with their applications

University of London — EDWIN DELLER Principal

South Kensington S W 7

June 1932

DEFECTIVE SPEECH

Remedial Tuition on modern lines for Stammer Aphonia Cleft Palate Tracheotomy and Disturbed Co-ordination, by ERIC MIALL A L C M Speech Instructor at Middlesex Hospital

Short courses in elocution accent clarity and public speaking.

17, CAVENDISH SQ , LONDON, W 1

Telephone Langham 1830

STAMMERING SPEECH DEFECTS

BEHNKE METHOD Estab 1882 Cases non resident treated at 39 Earls Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE S house on the Chilterns

STAMMERING CLEFT PALATE SPEECH LISPING 3/9

of Miss BEHNKE 39 Earls Court Sq S W 5

A COURSE OF EIGHT LECTURES ON *Some Problems of Childhood* by Dr M E LOWENFELD Dr E M EDWARDS and Mr A T ALCOCK at Friends House Euston Road N W 1 on Mondays June 27th July 4th 11th and 18th 1932 at 6 15 and 8 15 p m

Fee for the Course £1 1 Day Tickets 6s Single Ticket 3 6d

Application for Syllabus and Ticket should be made to The Lecture Secretary The National Institute of Child Psychology 20 Warwick Crescent W 2

Medical and Dental Students

Special Classes for Pre Medical and Dental Exam Matric and Prelims

Chemistry Physics and Biology Lab

MANCHESTER TUTORIAL COLLEGE

327 Oxford Road Manchester

CUMBERLAND INFIRMARY CARLISLE (160 B) Resident Medical Staff—Four

Required at once a fully qualified Resident Medical Officer (male) to act as SECOND HOUSE SURGEON Previous experience desirable but not essential Appointment to September 30th Salary at the rate of £100 per annum board residence &c

Application stating age nationality qualifications and experience together with copies of not more than four testimonials should be sent immediately to the undersigned

J G HOWITT Secretary

THE WILLIAM MORRIS RESEARCH FELLOWSHIP IN RADIOLOGY

Applications are invited for the above post and should reach the Secretary of the British Empire Cancer Campaign 12 Grosvenor Crescent S W 1 not later than July 2nd 1932

The post is a whole time one tenable at Mount Vernon Hospital and the remuneration offered is from £500—£1 000 per annum according to the status qualification etc of the selected candidate

Further particulars can be obtained on application to the Secretary at the above address

GUY'S HOSPITAL

THE SIR ALFRED FRIPP MEMORIAL FELLOWSHIP IN CHILD PSYCHOLOGY

Applications are invited for the above Fellowship which is of the value of £300 per annum and is tenable for a period of two years

The Fellowship has been established with the object of promoting the advancement of knowledge and research in Psychology more particularly through the study of children in health and/or in disease Each candidate must submit with his or her application a definite scheme of advanced study or research work to be carried out during the tenure of the Fellowship together with particulars of his or her previous career The investigation undertaken by the Fellow shall be carried out in the Children Department of Guy's Hospital

Men and women are eligible for the Fellowship Candidates must be unmarried and not more than 30 years of age and must possess a recognised qualification to practise medicine

Canvassing will be regarded as a disqualification

Further particulars as to the regulations governing the Fellowship may be obtained from the DEAN Guy's Hospital Medical School S E 1 with whom applications (10 copies) together with the names of three referees should be lodged not later than July 8th 1932

EAST LANCASHIRE TUBERCULOSIS COLONY Barrowmore Hall Chorley Barrow Chorley

Under the Direction of the British Red Cross Society and the Order of St John of Jerusalem

HOUSE PHYSICIAN (male) required This appointment is for six months and is renewable Salary £100 per annum with board residence and laundry The appointment is terminable by one month's notice

The Institution deals with all stages of Pulmonary Tuberculosis and comprises hospital accommodation anatorium accommodation extensive workers for graduated work and a settlement

Applications marked House Physician with copies of three recent testimonials to be sent to the Medical Superintendent at the above address

KENT COUNTY COUNCIL

Wanted LOCUM TENENS with Surgical or Hospital experience for eight weeks commencing August 1st to act as Clerk Medical Officer and County Sanatorium Lenham 160 beds Salary £30 guineas per week in addition to board lodging and washing

Applications stating age and experience to be sent to the undersigned

ALFRED CLIFFENWOOD M D

County Medical Officer

Springfield House Maidstone

June 10th 1932

ABERDEEN ROYAL INFIRMARY

WANTED FOR THE RADIUM DEPARTMENT at the Aberdeen Royal Infirmary a full time ASSISTANT MEDICAL OFFICER (Female) Candidate with experience as House Surgeon or House Physician preferred No previous knowledge of Radium necessary

Further particulars may be had from the undersigned with whom applications (10 copies) should be lodged on or before June 25th

JOHN A MACONACHIE,

250 Union Street Clerk and Treasurer

Aberdeen

LONDON COUNTY COUNCIL

Applications invited from registered Medical Practitioners for appointment as HOUSE PHYSICIAN at LEWISHAM HOSPITAL High Street Lewisham S E 13 Salary £150 per annum with board lodging and laundry Appointment is for six months in the first instance but may be extended for a further period of six months Duties are assigned by the Medical Superintendent and are chiefly of a routine character at the Establishment under the control of the Council

Forms of application obtainable (stamped and addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 340) County Hall Westminster Bridge S E 1 to be returned by June 24th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent of the Hospital

THE ROYAL ALEXANDRA AND ALBERT SCHOOL OF MEDICINE UNIVERSITY OF LIVERPOOL

(Under Mental Deficiency Act 1913 and 1927)

JUNIOR ASSISTANT MEDICAL OFFICER required

Applicants must be fully registered practitioners (British Birth) unmarried and willing to reside in the Institution

The appointment is temporary for six months in the first instance at the rate of £250 per annum with board residence and washing Other facilities for graduate study may be available

Applications stating age and qualifications with copies of three testimonials of recent date and to whom reference can be made should be sent to the Medical Superintendent not later than July 29th and endorsed "Assistant Medical Officer"

H STEPHENS

June 8th 1932 Secretary

WEST SUFFOLK COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified practitioners (men or women) for the appointment of Assistant County Medical Officer and Assistant School Medical Officer including duties in School Medical Inspection Maternity and Child Welfare Tuberculosis Venereal Diseases Work Applicants must be registered medical practitioners and not more than 35 years of age on the 1st day of July 1932 Salary £500 per annum rising by annual increments of £25 to a maximum of £700 plus travelling allowance Particulars of appointment and form of application may be obtained from the undersigned to whom the completed application accompanied by copies only of three testimonials must be sent not later than July 2nd Canvassing in any form will disqualify

Shire Hall Bury St Edmunds — L C H MUNNEY Clerk of the County Council

June 17th 1932

THE GLOUCESTERSHIRE ROYAL EYE INFIRMARY AND EYE INSTITUTION GLOUCESTER (150 B)

Applications are invited for the post of SECOND HOUSE SURGEON Salary £120 per annum with board and lodging

The appointment is for one year but may be extended for another period of six months if found to be satisfactory at the end of the first year

Applications stating age qualifications and any previous hospital appointments together with the names of three recent testimonials should be sent to the undersigned not later than June 21st

The successful candidate will be required to enter upon his duties on July 1st

F J SYMONS

Secretary

June 2nd 1932

ROYAL INFIRMARY BLACKBURN (240 B)

SOUTH HOUSE SURGEON (male) required at a salary of £120 per annum with board residence and washing

Applications with full particulars as to age and experience together with the names of two referees should be sent to the undersigned not later than June 25th

ARTHUR A SMITH

Chairman of Committee of Management

The Infirmary Blackburn

June 1932

ST MARY'S HOSPITAL FOR WOMEN AND CHILDREN PADDINGTON W 2

Applications are invited for the post of CLINICAL ASSISTANT in the Department of Obstetrics and Gynæcology

The Assistant will be required to devote his whole time to the duties of the post and will receive a salary at the rate of £250 per annum

Applications should be addressed to THE DEAN OF THE MEDICAL SCHOOL

ROYAL ARMY MEDICAL CORPS.

TWENTY FIVE permanent COMMISSIONS in the ROYAL ARMY MEDICAL CORPS will be offered on July 26th, 1932. Applications should reach the War Office not later than July 18th, 1932.

Candidates will be selected for Commissions without competitive examination and will be required to present themselves in London for interview and medical examination on July 26th, 1932. They must be under 28 years of age on August 1st 1932 and registered under the Medical Acts.

Officers of the R.A.M.C. are liable to serve in any part of the world where British troops are quartered.

Ample opportunities exist in the Army for clinical professional work both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology and all the special branches.

The cost of Post Graduate study, which is compulsory is met from Army Funds.

Emoluments Pay—From £356 to £1 542 a year according to rank. **Allowances**—Free quarters fuel and light servant and rations, or a cash allowance in lieu, totalling from 6/5d to 23/3d a day according to rank (£117 to £424 a year).

The above rates apply to Home Commands only. At certain stations abroad the rates are considerably higher.

Candidates who have held a full time house appointment in a recognized civil hospital before appointment to a permanent Commission in the R.A.M.C. may, subject to certain conditions be allowed to count the period of service in such an appointment up to a maximum of 12 months as Army service for promotion and increase of pay.

Gratuities on Retirement—*After* 7 years service £1 000
, 15 , , £2 800
, 18 , , £3,500

Current rates of retired pay range from £352 10s per annum normally earned by a Major after 20 years service to £890 per annum, the maximum for which a Major General is eligible. The rates of pay and retired pay are subject to periodical variation consequent on fluctuations in the cost of living.

Outfit Grant—An officer on joining receives £50 as outfit allowance.

Marriage Allowance—Officers of 30 years of age and over who are married are entitled to draw special rates of allowances.

A Voluntary Widows' and Orphans' Fund exists for officers of the Corps.

All particulars may be obtained by application in writing or personally to the Assistant Director General Army Medical Services, The War Office, Whitehall, London, S.W.1.

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

BOOTH HALL HOSPITAL

APPOINTMENT OF ASSISTANT MEDICAL OFFICERS

The Public Health Committee invite applications from qualified Medical Practitioners (men and women) for the positions of Assistant Medical Officers at the Booth Hall Hospital for Children (750 beds), Charlestown Road, Blackley, Manchester.

Every applicant must be a registered Medical Practitioner and unmarried.

Preference will be given to applicants with previous Hospital experience.

The Hospital is a recognized Training School for Nurses and is equipped with all modern Hospital requirements.

Salary £250 per annum subject to a temporary deduction of £6 10 per annum. The amount payable is therefore £243 10s with board, residence and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme. No bonus.

The appointments will be made in the first instance for a period of six months. The successful candidates however will be eligible for reappointment for a further period of six months at the end of that period.

Applications stating fully the age, training, qualification and experience of the candidate with copies of three recent testimonials and endorsed on the envelope "Assistant Medical Officer, Booth Hall Hospital" must be addressed to the Medical Officer of Health, Civic Buildings, 1 Mount Street, Manchester only and not to members of the Committee or Council and must be received by him not later than Saturday, *June 25th*.

The candidates appointed will be required to commence duty as soon as possible after appointment to devote the whole of their time to the duties of the position to pass a medical examination, to contribute to the Corporation Superannuation Fund and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

F. E. WARBRECK HOWELL,
Town Clerk.

Town Hall, Manchester.
June 13th, 1932.

COUNTY BOROUGH OF BIRKENHEAD

MEDICAL OFFICER'S DEPARTMENT

ASSISTANT MEDICAL OFFICER (RESIDENT).

Applications are invited for the above appointment from duly qualified men (unmarried) holding a Diploma in Public Health who have had special experience in hospitals for infectious diseases.

The appointment carries with it a salary of £350 per annum rising by annual increments of £25 to a maximum of £450 per annum with emoluments (residence at the Infectious Diseases Hospital, board and laundry) valued at £150 per annum.

The successful candidate will be required to pass a medical examination and a deduction of 5 per cent will be made from salary towards the Council's scheme under the Local Government and Other Officers' Superannuation Act 1922 (The salary is also subject to a temporary deduction for emergency purposes; this on the commencing salary amounts to £10 12s 6d.)

Canvassing members of the Town Council either directly or indirectly will disqualify.

Particulars of the appointment and form of application may be obtained from D. Morley Matheson, Esq., M.A., M.D., Medical Officer of Health, 9 *Hamilton Square, Birkenhead*.

Application must be received by me not later than June 21st, endorsed "Assistant Medical Officer".

Town Hall, Birkenhead.
E. W. TAME,
Town Clerk.

DERBYSHIRE COUNTY COUNCIL

LOCUM FOR SANATORIUM

Applications are invited for the post of *LOCUM RESIDENT ASSISTANT MEDICAL OFFICER* at WALTON SANATORIUM, near Chesterfield (130 beds) for a period of eight weeks commencing *July 23rd*. Salary at the rate of £350 per annum with board, lodging, etc. Experience in artificial pneumothorax desirable.

Application, together with copies of two recent testimonials, to be sent to the undersigned on or before June 30th.

New County Offices, St. Mary's Gate, Derby.
W. M. ASH,
County Medical Officer.

June 7th, 1932.

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE

SCHOOL MEDICAL INSPECTOR

The County Council of the West Riding of Yorkshire invite applications for the appointment of School Medical Inspector to act under the supervision of the County Medical Officer.

Applicants may be of either sex.

Salary £500 per annum, rising by annual increments of £25 to £700 per annum. The above salary is subject to a temporary deduction of 7½ per cent.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Further particulars and form of application may be had from the undersigned, with whom all applications with copies of not more than three recent testimonials must be received not later than July 4th.

County Hall, Wakefield.
J. CHARLES McGRATH,
Clerk of the County Council.

June 1932.

LLANELLY & DISTRICT WOLLMENS MEDICAL COMMITTEE

Applications are invited for the appointment of EAR NOSE AND THROAT SURGEON at Llanelly, Carmarthenshire.

Candidates must be Fellows of the Royal College of Surgeons of England, Edinburgh or Ireland or have had special experience in this branch of Surgery.

Payment will be made per session of fortnights for operation and minor operations and per case for major operations at British Medical Association rate.

The population of the town and district is approximately 75 000. Fees at this rate are allowed.

The successful candidate will be required to reside in Llanelly. The appointment will be in the hands of a subsequent management committee of will be in the hands of a joint Committee of local medical men and members of the above Committee.

Applications to be sent not later than July 20th stating age, qualifications and experience with copies of not more than three recent testimonials to the undersigned from whom further information can be obtained.

W. J. MORGAN MORGAN, J.P.,
Secretary.

Albert Street, Llanelly.

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical, preventive, specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes; to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what, if any, prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are being subjected under the authority of the Secretary of State in Council to a temporary reduction not exceeding 10 per cent.

Rank	Service in Rank	Rate of Pay	Overseas Pay	Years of Total Service
		Rs.	Rs.	
Lieut.	—	400	150	1st
			150	2nd
			150	3rd
Capt.	(i) During first 3 years service as Captain	500	150	4th
			£15	5th
	(ii) With more than 3 and less than 6 years service as Captain	700	£15	6th
			£15	7th
			£15	8th
			£15	9th
	(iii) With more than 6 years service as Captain	850	£20	10th
			£20	11th
			£20	12th
Major	(i) During first 3 years service as Major	900		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1300		
Lieut.-Col.	(i) Until completion of 13 years total service	1400	£30	13th and over
	(ii) During 13th and 15th years service	1600		
	(iii) After completion of 15 years total service	1700		
	(iv) When selected for increased pay	1900		

LAMAS.—In addition to the above rates various allowances are admissible for a large number of personal appointments both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay, promotion, retirement and retired pay, but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to one year.

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post-graduate nature. During such leave study allowance at present fixed at the rate of Rs. 400 a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s. a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pension are as follows:

	Per annum
After 17 years' service for pension	£400
18 "	£430
19 "	£460
20	£500
21	£540
22	£580
23	£620
24	£660
25	£700
26	£750
27	£800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. With effect from October 1st 1931 a reduction of 8½ per cent. has been made on this account from the amounts shown.

There are additional pensions ranging from £60 to £350 per annum for officers who have held administrative appointments.

PASSAGES

An officer on appointment is provided with free passage to India. The wife and families of officers who are married prior to the date of the officer's embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction *at the Royal Army Medical College and at Aldershot* lasting approximately six months prior to their embarkation for India on first appointment. Information as to rate of pay admissible during the period of this course up to arrival in India is contained in the paragraph referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August 1932, prior to sailing for India early in 1933. Applications should be submitted as soon as possible.

MANCHESTER ROYAL INFIRMARY

HONORARY ASSISTANT PHYSICIAN

The Board of Management invite applications for the above appointment

Candidates must hold the qualifications of a Fellow or Member of the Royal College of Physicians in London and shall have a diploma from some University requiring examination for its degree Candidates are required to forward diplomas original testimonials (not exceeding eight in number) and certificate of age with their applications addressed to the Secretary on or before 9 a m on July 11th from whom also a copy of the rules can be obtained Candidates are required to furnish 45 copies of their applications and dated testimonial addressed to the Secretary for distribution prior to the meeting of the Committee

Canvassing directly or indirectly is forbidden and the Committee reserve to themselves the right on proceeding to election to take into consideration any complaint that canvassing on behalf of any candidate has taken place

By Order
FRANK C HAZELL
Gen Supt and Secretary

MANCHESTER ROYAL INFIRMARY

HONORARY ORTHOPAEDIC SURGEON

The Board of Management invite applications for the above appointment Candidates must be Fellows of the Royal College of Surgeons of England and are required to forward diplomas original testimonials (not exceeding eight in number and dated) and a certificate of age with their applications by 9 a m on July 11th addressed to the undersigned

Candidates are required to furnish the Secretary with 45 copies of their application and testimonials for distribution prior to the meeting of the Committee of Election Canvassing directly or indirectly is forbidden and the Committee reserve to themselves the right on proceeding to election to take into consideration any complaint that canvassing on behalf of any candidate has taken place

By Order
FRANK C HAZELL
Gen Supt and Secretary

OLDHAM ROYAL INFIRMARY

Applications are invited for the following posts —

HOUSE SURGEON required immediately for a period of six months Salary at the rate of £175 per annum with board residence and laundry

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the undersigned not later than June 24th

CASUALTY OFFICER and HOUSE PHYSICIAN required for a period of six months from July 1st

Salary at the rate of £175 per annum with board residence and laundry

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the undersigned not later than June 30th

H J CLOUT Gen Superintendent

THE TUNBRIDGE WELLS & COUNTIES GENERAL HOSPITAL

Wanted HOUSE SURGEON (male) Candidates must be unmarried and duly qualified in Medicine and Surgery May be required to lecture to Nursing Staff (Two Resident)

In patients number over 1 400 yearly Out patients 6 000 with 50 000 attendances

Salary £160 per annum with board residence and laundry in the Hospital

This Hospital is approved by the University of London for the purposes of the M D and M S examinations

Application stating qualifications with certificates of registration and copies of testimonials should be sent immediately to the undersigned Vacancy occurs June 30th

TOM B HARRISON Secretary

MANCHESTER ROYAL INFIRMARY

SURGICAL OFFICER TO OUT PATIENTS

The Board of Management invite applications from registered Medical Practitioners for the above appointment

The duties are to assist in the treatment of Surgical Out patients on two mornings a week The appointment (non resident) is for a period of one year, but the holder of the office is eligible for re election on two subsequent occasions for a similar period Salary £30 per annum

Candidates must state age and send twelve copies of their applications and testimonial to the undersigned on or before 9 a m on Thursday June 30th

By Order
FRANK C HAZELL
General Superintendent and Secretary

HUDDERSFIELD ROYAL INFIRMARY

Applications are invited for the following posts —

MALE CASUALTY OFFICER (with senior rank over remainder of Resident Medical Staff)

TWO MALE HOUSE SURGEONS

All three officers to commence duty early in July

Salary at the rate of £225 and £150 per annum respectively with board residence and laundry

The Hospital is officially recognized for the surgical practice required of non Members before admission to final Fellowship Examination of the Royal College of Surgeons of England

Applications with copies of three recent testimonial to be addressed to the undersigned not later than June 25th 1932

H F C HALL Secretary

HULL ROYAL INFIRMARY
(367 Beds)

Applications are invited for the post of HOUSE PHYSICIAN (male) at the SUTTON BRANCH HOSPITAL vacant June 26th

The Branch Hospital contains 100 beds 45 of which are for acute medical cases

The appointment will be for six months in the first instance and will be determinable by one month's notice on either side

Salary at the rate of £160 per annum plus board residence and laundry

Applications giving particulars of age experience and nationality together with copies of testimonials should reach the undersigned on or before Tuesday June 21st

R J CARIESS
June 6th 1932 House Governor

FREEMASONS HOSPITAL AND NURSING HOME
237 Fulham Road Chelsea S W 3

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st Salary at the rate of £250 per annum with board residence and laundry The appointment is for six months Candidates must be registered and must have held Resident appointments at a General Hospital

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment etc

Applications stating full particulars to be sent on or before June 18th next to the Honorary Secretaries from whom further information may be obtained The Medical Advisory Committee will meet on June 20th next

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BRISTOL GENERAL HOSPITAL

SENIOR RESIDENT MEDICAL OFFICER
(MALE)

The Committee invite applications for this appointment Salary at the rate of £200 per annum with board residence etc provided in the Hospital Candidates must be registered under the Medical Acts and produce testimonials of good personal character and ability The duties attaching to the post are chiefly surgical but being also in part administrative experience in this direction is therefore essential

Applications accompanied by copies of testimonials three of which must preferably be given in support of the application to be forwarded to the undersigned on or before Monday July 4th next from whom forms of application and copies of the duties may be obtained The Hospital contains 274 beds and is a School of Medicine attached to the University of Bristol

THOMAS W GREGG Secretary

COUNTY MENTAL HOSPITAL LANCASTER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER Candidates must be single and under 35 years of age Commencing salary £500 rising by annual increments of £25 to £600 with further increase on promotion subject to a deduction of 3 per cent under the Asylum Officers Superannuation Act There are no emoluments The selected candidate will be required to live in the hospital and will be provided with board lodging etc for which a charge of £150 a year is made

A temporary abatement from the gross salary will be made the amount of the abatement on £500 being £18 15s

The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum

Applications giving full particulars with testimonials (copies only) should be forwarded to the Medical Superintendent before June 29th

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BIRMINGHAM MATERNITY HOSPITAL

HOUSE SURGEON (man or woman) wanted for six months from August 1st (three months on District and three months in Hospital) Salary to be at the rate of £75 per annum) Application with full particulars and copies of testimonial to be sent not later than June 25th to HUGH C ANTON 45 New Hall Street Birmingham

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THE LONDON LOCK HOSPITAL
91 Dean Street London W

The Board of Management invite applications for the appointment of SURGICAL REGISTRAR Honorarium £100 per annum The appointment is for one year Candidates who must be doubly qualified and duly registered are invited to send in their application together with three copies of testimonials to the Secretary at 280 Harrow Road W 9 not later than first post on June 23th selected candidates will be required to attend a meeting of the Medical Committee on July 7th Copies of the Laws and By laws relating to this appointment can be obtained on application to the Secretary Candidates must be Fellows (or Members) of the R C S England or Surgical Graduates of a University of the United Kingdom Duties to commence July 20th

By Order of the Board
H J FYSON
Secretary

June 10th 1932

THE LONDON LOCK HOSPITAL
91 Dean Street London W

The Board of Management invite applications for the post of HOUSE SURGEON at the Male Lock Hospital Candidates must be doubly qualified and duly registered The appointment is at the rate of £175 per annum with furnished rooms full board and laundry The appointment is for six months duties to commence on July 10th Applications enclosing copies (only) of three recent testimonials to be sent to the undersigned on or before 10 a m on Wednesday June 29th

By Order of the Board
H J FYSON
Secretary

June 9th 1932

BLACKBRIDGE MENTAL HOSPITAL
near LINCOLN

SECOND ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole time appointment from gentlemen under 40 years of age who are duly qualified and registered medical practitioners A person who has held a previous post in a Mental Hospital will be regarded as having an additional qualification

The commencing salary will be £425 per annum plus the usual residential emolument of board lodging laundry and attendance valued for superannuation purposes at £125 per annum Subject to twelve months service satisfactory to the Committee an increase of £25 will be granted and thereafter increases of £25 per annum up to a maximum salary of £525 per annum An additional £50 per annum will be paid to the holder of the D P M qualification or to a post obtaining the D P M after appointment

The successful candidate will be required to pass satisfactorily a medical examination and to join the scheme under the Asylum Officers Superannuation Act 1909 The appointment is subject to one month's notice on either side

Application forms, full particulars of qualifications experience and appointments held accompanied by copies of three recent testimonials must be addressed to the Medical Superintendent Brackebridge Mental Hospital near Lincoln so as to be received not later than June 30th

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ANCOATS HOSPITAL MANCHESTER

HOUSE PHYSICIAN required to commence duty on July 1st next for a period of six months Salary at the rate of £100 per annum with board apartments etc Candidates must be registered under the Medical Acts

Applications stating age qualifications experience if any to be forwarded to the undersigned on or before June 27th next to either with copies of three recent testimonial

By Order of the Board
HERBERT J DAFFORNE
Gen Supt & Secretary

Forthcoming Vacancies
House Surgeon (Orthopaedic) September 1st
House Surgeon (General) September 1st 1932

SOUTH LONDON HOSPITAL FOR WOMEN
Clapham Common S W 4
(120 Beds)

A General Hospital for Women and Children including Medical Surgical Ear Nose and Throat Orthopaedic Skin Urological and other Special Departments

Applications are invited from fully qualified Medical Women for the post of HOUSE SURGEON for six months dating from August 1st

Salary at the rate of £ 00 per annum with board residence and laundry Candidates are only invited to call on the Hon Surgeon (Saturdays 10 to 2) on July 2nd by which date lists of duties and copies of testimonials must reach the Secretary at the Hospital

EVELINA HOSPITAL FOR SICK CHILDREN Southwark S.E.1

Applications are invited for the post of PHYSICIAN TO OUT-PATIENTS (Honorary). Candidates must be Graduates in Medicine in a recognized University and Members of the Royal Colleges of Physicians London or shall have passed examination to become qualified for General Practice.

Applications with copies of testimonials to be sent to the Secretary, Hospital for Sick Children, Great Ormond Street, W.C.1, not later than 10th July 1932.

Canvassing will disqualify.

By Order of the Committee of Management,
W. H. SIDNELL,
June 10th 1932. Secretary-Superintendent.

EVELINA HOSPITAL FOR SICK CHILDREN Southwark S.E.1

Applications are invited for the post of HOUSE PHYSICIAN (resident) for six months from July 1st (first or third in Casualty and Out-Patients Departments). Salary at the rate of £120 per annum, with board, residence and laundry.

Applications, stating age, qualifications and previous appointments, should be sent to the Secretary, Hospital for Sick Children, Great Ormond Street, W.C.1, not later than June 20th.

By Order of the Committee of Management,
W. H. SIDNELL,
June 10th 1932. Secretary-Superintendent.

ST. PAUL'S HOSPITAL, ENDELL STREET, Hunter's Bar, W.C.2

CLINICAL ASSISTANTS FOR ELECTRICAL WORK.

Vacancies will arise on July 1 next for Clinical Assistants to the Out-patient Department of the Hospital.

Surgery—
Mr. C. H. Mills.
Mr. H. J. Wilkinson-Riddle.
Mr. W. K. Hall.

Applications, stating age, qualifications, previous experience, and salary required, should be addressed to the Secretary, St. Paul's Hospital, Endell Street, W.C.2, not later than June 20th.

By Order of the Committee of Management,
W. H. SIDNELL,
June 10th 1932. Secretary-Superintendent.

ROYAL FREE HOSPITAL Gray's Inn Road, W.C.1

Applications are invited from duly qualified practitioners for the appointment of RESIDENT ANÆSTHETIST at the rate of £150 per annum. Duties to begin on 1st October next. Candidates must submit applications, stating age, qualifications, experience, and names of three referees, to—

REGINALD E. CARRATT,
Secretary.

HOLTON GENERAL HOSPITAL, BANBURY, OXON (OPEN).

Applications are invited for the post of RESIDENT MEDICAL OFFICER (House Surgical). Vacant July 12th. The appointment is for six months. Salary £150 per annum, with board, residence, and laundry. Applications, with copies of three recent testimonials, to be sent to—

RICHARD H. ELLISCOTT,
Secretary.
Hon. Governors.

ROYAL FREE HOSPITAL Gray's Inn Road, W.C.1

Applications are invited from duly qualified practitioners for CLINICAL ASSISTANTSHIPS in the Medical, Surgical, and all Special Departments. Intending candidates should submit applications, stating age and qualifications, to the undersigned (by letter only) by July 9th.

REGINALD E. CARRATT,
Secretary.

ESSEX COUNTY HOSPITAL, COLCHESTER. (160 BEDS.)

Wanted immediately, ASSISTANT HOUSE SURGEON (male). Salary £120 per annum, with board, washing, and uniform. Medical and surgical qualifications required.

Applications, with three recent testimonials, to be sent to W. Isaac, Esq., June 22nd, to—

ALFRED C. BUCK, Secretary.

ESSEX COUNTY HOSPITAL, COLCHESTER. (160 BEDS.)

Wanted, on July 1, a HOUSE PHYSICIAN (male). Salary £100 per annum, with board, washing, and uniform. Medical and surgical qualifications required.

Applications, with three recent testimonials, to be sent to W. Isaac, Esq., June 22nd, to—

ALFRED C. BUCK, Secretary.

WALSALL GENERAL HOSPITAL.

The Committee invite application from men or women for the post of HOUSE SURGEON. Salary at the rate of £150 per annum.

Candidates must be registered under the Medical Act, must produce three recent testimonials.

The appointment will be for six months.

The Hospital contains 100 beds, and is equipped in all departments.

Application, stating age, qualifications, and previous appointments, must be received by the undersigned not later than the first post on Tuesday, June 21st.

WALTER BLANCOMBE,
June 11th 1932. Hon. Governor.

THE ROYAL LIVERPOOL CHILDREN'S HOSPITAL

APPOINTMENT OF HONORARY PHYSICIAN.

The Council invites applications for the position of Honorary Physician to the Hospital, vacant by Aug. 1st.

Applications (with copies of testimonials) must be sent to Charles Lea, Esq., the Chairman, Royal Liverpool Children's Hospital, Myrtle Street, Liverpool, by Saturday, July 2nd.

Any canvassing of the Election Committee, but personal canvassing will disqualify.

R. B. ARMSTRONG, Chairman.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

HOUSE PHYSICIAN required July 1st.

CASUALTY OFFICER (with the Dresser) required July 6th.

Six months' appointment. Salary at the rate of £100 per year with board, residence, and laundry.

Applications must be forwarded to obtain from the undersigned, and must be in his hands not later than four o'clock p.m. on Friday, June 24th.

CHARLES H. BENNETT, Secretary.
June 10th, 1932.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

HOUSE SURGEON required August 1st. Six months' appointment. Salary at the rate of £100 per year with board, residence, and washing.

Applications must be made on forms to be obtained from the undersigned, and must be in his hands not later than four o'clock p.m. on Friday, July 8th.

CHARLES H. BENNETT, Secretary.
June 10th, 1932.

KING EDWARD MEMORIAL HOSPITAL, EALING. (100 BEDS.)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER, vacant on July 1st. Applicant must have had experience (at least two years) in House Appointment. Salary £250 per annum, with usual residential allowances.

Application, stating age, qualifications, experience, and names of three referees, to be sent to the undersigned immediately.

R. A. MACKELWORTH,
Secretary-Superintendent.

ATRINCHAM GENERAL HOSPITAL. (100 BEDS.)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS. Salaries at the rate of £150 and £120 per annum respectively, with board, residence, and laundry. The appointment is for six months in the first instance.

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to

BEDFORD COUNTY HOSPITAL. (124 Beds.)

SECOND HOUSE SURGEON (male) fully qualified, unmarried, required for a term of not less than six months at once. Salary £140 with board, lodging, and laundry.

Application, stating age, nationality, qualification, together with three recent testimonials, to be sent to the Hon. Secretary, Hon. Medical Staff Committee, as soon as possible.

CENTRAL HOSPITAL, TEIGNMOUTH. (50 Beds.)

Wanted a fully qualified RESIDENT HOUSE SURGEON to commence duty forthwith. Salary £150 per annum, with board, residence, and laundry. Appointment for six months, or twelve if mutually desired.

Application, stating age, together with not more than three recent testimonials, to be sent to the undersigned.

W. W. TURPIN, Secretary.

NORFOLK AND NORWICH HOSPITAL, NORWICH.

Applications are invited for the post of HOUSE SURGEON to the Special Departments (Ear, Nose, and Throat, and Ophthalmic), which will be vacant on July 20th. Salary £120 per annum, with board, residence, and laundry.

Candidate (male) who must possess registered qualifications, should forward application, stating age, nationality, etc., together with copies of testimonials, to the undersigned not later than June 21st.

EPAM INCH,
Hon. Governor and Secretary.
June 10th, 1932.

VICTORIA HOSPITAL, ACCRINGTON.

The Governors of the Hospital invite applications for the post of HOUSE SURGEON. Candidates must be duly qualified and registered. Number of beds 50. Salary £150 per annum, with board and lodging.

Conditions of appointment and particulars of duties may be obtained from the undersigned, to whom application, with copies only of testimonials, should be sent on or before July 4th next.

T. N. Hall,
Accrington.
Jun. 1932.

W. H. WARHURST,
Hon. Secretary.

THE SOUTHAMPTON CHILDREN'S HOSPITAL AND DISPENSARY FOR WOMEN, Winkle Street and SOUTHAMPTON (85 BEDS.)

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER (duties). Applications must be received by the 4th month. Salary at the rate of £100 per annum, with board, residence, and laundry. Applications, stating age, qualifications, and previous appointments, if any, to be sent to the undersigned not later than June 20th, to the undersigned, from whom further particulars may be obtained.

ELIAS J. MATTHEWS, Secretary.

NORTH STAFFORDSHIRE ROYAL INFIRMARY, STOKE-ON-TRENT.

ORTHOPÆDIC HOUSE SURGEON.

The Committee invite applications for the post of Orthopædic House Surgeon. Salary £150 per annum, with board, residence, and laundry. Duties to begin on 1st July, or not later than 1st August next.

Applications, with two copies of recent testimonials, to be sent to the undersigned immediately.

W. STEVENSON,
Secretary and House Governor.

NORTH STAFFORDSHIRE ROYAL INFIRMARY, STOKE-ON-TRENT.

ASSISTANT HOUSE PHYSICIAN.

The Committee invite application for the post of Assistant House Physician. Salary £125 per annum, with board, residence, and laundry. Duties to begin on 1st July next.

Applications, with two copies of recent testimonials, to be sent to the undersigned immediately.

W. STEVENSON,
Secretary and House Governor.

KENT AND CANTERBURY HOSPITAL, CANTERBURY.

(Recognized by the University of London for the purposes of M.S. Examination.)

HOUSE SURGEON (male) required to commence duties about the middle of July. Six months' appointment. Salary payable at the rate of £125 per annum, with board and residence and laundry.

Applications, with copies of testimonials, should be sent to the undersigned.

W. T. SOUTHWOOD,
Superintendent & Secretary.

CORBETT HOSPITAL, STOURBRIDGE.

RESIDENT HOUSE SURGEON required to commence duties on 1st July. Appointment will be for six months, and will be determinable by six weeks' notice on either side. Salary at the rate of £200 per annum, with board, apartments, and laundry.

Applications, with copies of testimonials to be sent to the undersigned,

W. C. H. WESTON, Secretary.

The Corbett Hospital, Stourbridge.

DARLINGTON GENERAL HOSPITAL. (120 BEDS.)

Wanted SENIOR HOUSE SURGEON, fully qualified, unmarried. Salary £175 per annum, with board, residence, and laundry. Application, stating age and qualifications, with copies of two recent testimonials, to be sent to ARTHUR RIDDLE, Secretary, General Hospital, Darlington.

CITY OF BIRMINGHAM

PUBLIC ASSISTANCE COMMITTEE ERDINGTON HOUSE

ADDITIONAL ASSISTANT MEDICAL OFFICER (MALE)

The Public Assistance Committee invite applications from duly qualified medical practitioners who also hold
Medicine for the
ton House The
inmates of wh
mental patients of varying types and 227 are sick the remainder being aged and infirm cases etc Parts of the Institution are certified under provisions of the Mental Deficiency Acts 1913 to 1927

The Officer appointed will be required to assist in the general medical work of the Institution and should occasion arise to assist at other Institutions under the control of the Committee

The salary will be at the rate of £650 per annum (including an amount in respect of the D I M) *rising on approved service by £25* annually to a maximum of £750 There are no other emoluments and all fees or other payments received by the Officer must be paid into the Corporation Funds The Officer appointed will be required to reside at a house (three bedroom bathroom and garage—property of the Corporation) *in close proximity to the Institution* and to pay a rental of £45 per annum and all rates The house will be put in a proper state of repair ready for occupation after which any internal redecorations required will be the liability of the Officer

subject (1) to the Superannuation ary voluntary abatement of salary as may be in force at the time being (at present £21 2s per annum upon a salary of £650) (3) to the candidate passing a medical examination and (4) to one months notice on either side

Applications stating age experience and qualifications accompanied by copies of recent testimonials should be forwarded so as to reach me not later than Wednesday June 29th and be endorsed As istant Medical Officer Erdington House

Canvassing in any form oral or written direct or indirect will be *regarded as a disqualification* Applications and testimonials or copies thereof may be sent to the undersigned but are not to be sent to Members of the Public Assistance Committee or of the Council

The Council House F H C WILTSHIRE
Birmingham Town Clerk
June 8th 1932

THE WELSH NATIONAL SCHOOL OF MEDICINE CARDIFF ROYAL INFIRMARY AND CARDIFF CITY COUNCIL

PART TIME LECTURER AND VISITING PHYSICIAN IN CHILDREN'S DISEASES

Applications are invited from specially qualified *registered medical practitioners* for a joint appointment by the Welsh National School of Medicine the Cardiff Royal Infirmary and the Cardiff City Council

The person appointed will be responsible to

1 The Welsh National *School of Medicine* as Part time Lecturer in Children s Diseases at a salary at the rate of £50 per annum

2 The Cardiff Royal Infirmary as Honorary Physician to the Department of Children s Diseases (Medical)

3 The Cardiff City Council as Visiting *Physician for Children s Diseases* to the Corporation Hospitals at a salary at the rate of £100 per annum

The person selected must devote such time to the duties of the appointment as shall be deemed sufficient by each of *the three bodies concerned*

Subject to the foregoing private practice as a *Consultant* is permitted

Applications which must be received by 10 a m on July 4th 1932 should be addressed to the Secretary Welsh National School of Medicine The Parade Cardiff from whom further *particulars of the appointment* can be obtained

S C EDWARDS

NORFOLK COUNTY COUNCIL

TEMPORARY ASSISTANT MEDICAL OFFICER

A LOCUM TENENS is required at once for a few weeks mainly in connection with school medical inspection (including refraction) work Previous experience is desirable

Salary will be at the *rate of £10 10s* per week subject to the temporary reduction at present *in force* together with travelling expenses in accordance with the county scale

Applications stating age experience date able to commence and whether possessing *a motor* car or motor cycle accompanied by copies of *recent testimonials* to be sent as soon as possible to the County Medical Officer Public Health Department 39 Thorpe Road Norwich

COUNTY BOROUGH OF WEST BROMWICH

HALLAM HOSPITAL

SENIOR RESIDENT MEDICAL OFFICER

Applications are *invited from* fully qualified male registered practitioners for the above appointment

The appointment may be terminated by either party giving two months notice

The Hospital has 474 beds and is equipped with up to date special departments There is a *visiting staff of 8 consultant* Physicians and Surgeons

Preference will be given to *applicants with* previous experience of Surgery and Hospital Administration

Salary £350 per annum rising by annual increments of £25

Canvassing *either directly or indirectly* is strictly prohibited and will be deemed a disqualification

Applications stating age experience and qualifications together with copies of three *recent testimonials* must be forwarded to the Medical Officer of Health 2 Lodge Road West Bromwich so as to arrive *not later than by first* post on Tuesday June 21st

ALFRED WICKHAM
Town Hall West Bromwich Town Clerk
June 3rd 1932

COUNTY BOROUGH OF WEST BROMWICH

HALLAM HOSPITAL

APPOINTMENT OF TWO RESIDENT HOUSE PHYSICIANS

Applications are invited from fully qualified male registered practitioners for the above appointments

The appointments are for twelve months but either party may give six weeks notice terminating the has 474 beds and is special departments of eight consultant

Preference applicants with previou

Salary £200 per annum

Canvassing either directly or indirectly is strictly prohibited and will be deemed a disqualification

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the *Medical Officer of Health 2 Lodge Road West* Bromwich so as to arrive not later than by first post on Tuesday June 21st

ALFRED WICKHAM
Town Hall West Bromwich Town Clerk
June 3rd 1932

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered lot of AREA *PHYSICIAN* by annual incre im (subject to a which on £500 with travelling away *from base* have had at least in tuberculosis nce in general ths should have confined to the wledge of Welsh

The post is subject to the provisions of the Associations Superannuation Scheme for which purpose it will be necessary for the successful candidate to pass a medical examination

Application stating age qualifications and previous experience together with copies of *three recent* testimonial should reach the undersigned not later than June 24th

Memorial Offices D A POWELL
Westgate Street Principal Medical Officer
Cardiff

THE CHILDREN'S HOSPITAL SHEFFIELD (110 Beds)

Applications are invited for the post of RESIDENT *MEDICAL OFFICER* (male) who will have charge of all medical and surgical *beds* in the Hospital Salary commencing at £175 per annum with board residence and laundry Previous resident experience essential

Duties to commence August 1st

Applications are also invited for the following post *vacant August 1st*

HOUSE PHYSICIAN (male or female) Salary £100 per annum with board residence and laundry Six month *appointment*

HOUSE SURGEON (male or female) Salary £100 per *annum* with board residence and laundry Six months appointment

Application stating age qualification and experience with copies of three recent testimonial to be forwarded immediately to the undersigned

T H G GARTLAND Secretary

LONDON COUNTY COUNCIL

Applications are invited for appointment as *RESIDENT MEDICAL SUPERINTENDENT* ST MARY ABBOTS HOSPITAL Marloes Road W 8 and MEDICAL *OFFICER AND ACTING* MASTER OF KENSINGTON INSTITUTION which adjoins Hospital Person appointed will be under the direction of the Medical Officer of Health and must assist at other establish*ments of Council if required* Salary £1 100 by £50 to £1 350 a year plus £100 a year as Medical Officer and Acting Master of Kensington Institution Unfurnished house or quarters provided free of rates etc valued provisionally at £100 a year Salaries etc are subject to temporary reduction

Candidates must have been duly qualified medical practitioners for at least five years house physician or house surgeon in public general hospital and have experience of hospital administration

Application forms obtainable (stamped addressed foolscap envelope necessary) from Clerk of the Council County Hall S E 1 returnable by June 30th Canvassing disqualifie

LONDON COUNTY COUNCIL

Applications are invited from registered Medical Practitioners for appointment as HOUSE PHYSICIAN (two *positions men only*) at NORTH WESTERN FEVER HOSPITAL Lawn Road Hampstead N W 3 Salary £80 a year together with board lodging and laundry subject to a temporary reduction Appointment is for six month in the first instance but may be extended for a further period of six months Duties are assigned by the Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

Forms o t stamped addressed Medical Officer of County Hall We tr able by June 24th The Medical Off didates any further information in his power

LANCASHIRE COUNTY COUNCIL

PUBLIC ASSISTANCE COMMITTEE

LAKE HOSPITAL AND DARNTON HOUSE ASHTON UNDER LYNE nr MANCHESTER

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER

Applications are invited from *registered* Medical Practitioners for the appointment of *Junior Resident* Medical Officer at the above Hospital and Institution comprising 300 and 600 beds respectively

Candidates must be unmarried

Salary subject at the present time to an emergency abatement of 5 per cent at the rate of £175 per annum together with the usual residential emoluments

The appointment will in the first instance be for a period of six months the successful applicant being *eligible* for reappointment for a further period of six months at the end of that period

Applications accompanied by copies of not more than two recent testimonials should be addressed to County Medical Officer Public Assistance (Hospital and Medical) Department County Offices Preston not later than July 9th Envelope should be endorsed Junior Resident Medical Officer

GEOFFREY FFRENCH
County Office Preston Clerk of the County
June 14th 1932 Council

NORTH ORMESBY HOSPITAL MIDDLESBROUGH

Applications are *invited* for the following vacancies in the Resident Medical Staff

HOUSE PHYSICIAN salary at the rate of £120 per annum

HOUSE SURGEON salary at the rate of £135 per annum

With board residence and laundry Candidates must be unmarried

Application stating age qualifications previous experience (if any) with copies of three recent testimonials should be sent to the undersigned at once

GEORGE WATTS
June 14th 1932 Secretary Superintendent

MILLER GENERAL HOSPITAL Greenwich Road S E 10

OUT PATIENT OFFICER (male and unmarried) required to be Medical and Surgical extern Attendance daily (except Sundays) from 9 to 1 Tuesdays 9 to 5 Salary £150 per annum and lunch The appointment is for six months Applications stating age nationality qualifications and experience accompanied by copies of three recent testimonials to be not more than sent to the Secretary as soon as possible

June 6th 1932

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District.	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** (cont'd)	**PUBLIC HEALTH**
EBBW VALE MON (*Workmen's Medical Society*)	MALTHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE (*Medical Practitioner*)	AYR COUNTY COUNCIL (*Springvale Fever Hospital Saltcoats*) (*Visiting Physician*)
CILFACH COCH CLAMORGAN (*Workmen's Medical Scheme*)	MEITHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE (*Workmen's Medical Scheme*)	AYR COUNTY COUNCIL (*Assistant Medical Officer*)
LLWYNYPIA CLYDACH VALE PENYCRAIC CLAMORGAN (*Workmen's Medical Scheme*)	NEATH AND DISTRICT (*Medical Aid Association*)	FOLKESTONE BOROUGH (*Assistant Medical Officer of Health*)
LOWESTOFT MEDICAL INSTITUTE (*Medical Officer*)	OAKDALE MON (*Medical Officer for Medical Aid Association*)	COUNTY OF LANARK EDUCATION COMMITTEE (*Assistant School Medical Officer*)
MAERDY CLAMORGAN (*Workmen's Medical Scheme*)	OCMORE VALLEY CLAMORGAN (*Williams Cherry Medical Aid Society*) (*Workmen's Medical Scheme*)	SOUTHAMPTON COUNTY BOROUGH (*D Officer and Pathologist*)
		STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS (*Tuberculosis Officer*)

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B M A House Tavistock Square W C 1

Town or District.	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (*All Practitioners*)	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N.S.W	QUEENSLAND (*Intending Practitioners*)	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	WELLINGTON NEW ZEALAND (*Contract Practice All interests*)	Dr G F V ANSON (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
VICTORIA. (*All Institutions or Medical Dispensaries*)	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall Last Melbourne Victoria	(*Proximate Appointed Friendly Societies Medical Institutes Toowoomba*)		WESTERN AUSTRALIA (*Contract and Judge Practices*)	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St Georges Terr Perth Western Australia

June 15th 1932 By Order of the Council ALFRED COX Medical Secretary

QUEEN MARY'S HOSPITAL FOR THE EAST END E 15
(Telephone—Maryland 2616)

HOUSE SURGEON

Applications are invited from fully qualified and registered Medical Men for the above post The Hospital contains 217 Beds including 50 Maternity Beds and other special departments

Candidates who should previously have held Hospital appointments must send applications accompanied by testimonials to the undersigned not later than Wednesday June 22nd

The appointment will date from July 1st and will be for six months and the salary is £120 p a

PAPHAM JACKSON Major
Secretary

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL

Applications are invited for the post of HOUSE SURGEON (male) at the Hospital's Country Branch at BROCKLEY HILL STANMORE MIDDLESEX (2701 Stanmore) 150 Surgical Beds (male) Salary £150 per annum with board quarters and laundry *The appointment* is for six months renewable for a further period or six months on the recommendation of the Medical Board Application with copies of testimonials should be sent to the Secretary 234 Great Portland Street W 1 as soon as possible

HOSPITAL OF ST JOHN AND ST ELIZABETH
60 Grove End Road London N W 8

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (male) The appointment will be for six months from August 1st next at the rate of £100 per annum with full board Applications together with copies of three testimonials should reach the undersigned on or before June 29th

F DUDLEY HOBBS B A
Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN
Hackney Road London E 2

OPHTHALMIC SURGEON

The Committee invite applications for the post of Ophthalmic Surgeon with charge of 15 Beds One attendance required weekly An honorarium to cover travelling expenses will be paid Candidates must be F R C S and have passed the examination of the Royal College of Surgeons (England)

Applications with copies of three recent testimonials which must be printed or typewritten should be sent on or before July 9th to the undersigned from whom further particulars may be obtained

CHARLES H BESSELL
June 14 1932 Secretary

ADDENBROOKE'S HOSPITAL, CAMBRIDGE

Applications are invited for the post of RESIDENT ANAESTHETIST AND EMERGENCY OFFICER (male) The appointment will be for three months from July 1st 1932 Salary at the rate of £130 per annum with board residence and laundry Candidates who must be unmarried and duly registered are requested to forward their application stating age qualifications together with copies of not more than four recent testimonials to the undersigned on or before Tuesday June 21st 1932

W H HEAD
Secretary Superintendent

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

Applications are invited from duly registered and unmarried Practitioners for the following resident appointments

HOUSE SURGEON
ASSISTANT HOUSE SURGEON

Salary House Surgeon £150 per annum Assistant House Surgeon £100 per annum apartments board and laundry free

Application stating age together with copies of not more than be forwarded to the

By Order

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL
Shooters Hill London S E 18

GENERAL HOSPITAL (112 Beds)

HOUSE PHYSICIAN also HOUSE SURGEON

The Board of Management invites applications from suitably qualified male candidates for appointments as (a) House Physician and (b) House Surgeon for a period of six months from July 1st In addition to his surgical duties the House Surgeon will have the care of a Maternity Unit of 8 beds

An honorarium of £100 per annum will be paid in respect of each appointment plus board residence and laundry

Applications accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him not later than first post on June 20th

GENERAL HOSPITAL NOTTINGHAM

A HOUSE SURGEON is required for the above Institution The appointment is for six months with salary at the rate of £150 a year with board residence and laundry

Application stating age qualifications and experience together with copies of testimonials to be sent to the undersigned not later than Monday *June 20th Duties* to commence on Monday July 18th

P W MacCOLL
House Governor & Secretary

GENERAL INFIRMARY SALISBURY
(General Hospital 161 Beds)

TWO HOUSE SURGEONS (male) required to commence duties on 1st July

Candidates must be unmarried fully qualified and registered Salary £150 per annum with board etc

Applications with copies of testimonials to be sent to the House Governor and Secretary from whom a form of the full may be obtained on application

(Appointments continued on p 56)

British Medical Journal,

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TAVISTOCK SQ LONDON W C 1
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WANTED OUTDOOR ASSISTANT Bachelor for mixed Practice Midlands Salary £300 all found If suitable share up to half will be offered —Address No 3586 B M A House Tavistock Square W C 1

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WANTED SINGLE OUTDOOR ASSISTANT *compact colliery practice* Rooms light and attendance provided Usual bond dis

WANTED OUTDOOR ASSISTANT COLLIERY District Glamorgan Salary £400 p a with rooms and attendance —Address No 3580 Tavistock Square W C 1

No 3588 B M A House Tavistock

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WANTED LOCUMS OR ASSISTANTSHIP by Medical Woman experienced in general practice Accustomed to sole charge Anæsthetics Cyclist or can drive car —Address No 3581 B M A House Tavistock Sq W C 1

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APPOINTMENTS—Contd

SALFORD ROYAL HOSPITAL (263 Beds)

Applications are invited for the post of CASUALTY HOUSE SURGEON (male)
The appointment is for a period of six months with board and residence
Candidates must be registered under the Medical Act
Forms of application which may be obtained from the undersigned must be delivered without delay

By Order of the Board
H B SHEILSWELL
General Superintendent & Secretary
Salford Royal Hospital
June 13th 1932

THE DEWSBURY AND DISTRICT GENERAL INFIRMARY (100 Beds)

the post of
Salary £150 per
work in the
duties of House
Pathological Department of the
Physician
Applications stating age and experience (if any) together with copies of recent testi

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN

Applications are invited from fully qualified medical women for the post of ANAESTHETIST to above Hospital Attendance is required on two or three days per week Honorarium to be arranged
Application with copies of testimonials to be sent to the Secretary of the Hospital 1 Brunstfield Crescent from whom further particulars can be obtained on or before June 30th

NEW SUSSEX HOSPITAL FOR WOMEN & CHILDREN
Windlesham Road BRIGHTON

Applications are invited from fully qualified Medical Women for the post of CLINICAL ASSISTANT to Out patient on Thursday afternoon
Applications to be sent to the Secretary of the Hospital on or before Thursday June 23rd
PERCY F SPOONER Secretary
June 10th 1932

ROYAL CI

HOUSE SURGEON (male) required Salary at the rate of £100 per annum with board lodging and laundry No canvassing allowed To commence duties on July 1st
Application in writing accompanied by testimonials should be sent immediately to
PERCY F SPOONER Secretary
June 11th 1932

ALL SAINTS HOSPITAL (FOR GENITO URINARY DISEASES)
Central Street West Square S E 11

Two vacancies exist for HONORARY ANAESTHETISTS at the Hospital one for duties on Monday mornings and one on Wednesday mornings
Application with full particulars and copies of testimonial should reach me not later than June 25th
D H EADE Secretary

KING GEORGE HOSPITAL ILFORD (London)

Applications are invited for the appointment of additional HOUSE SURGEON (male) from July 1st next Salary £100 per annum with board residence etc Term six months with eligibility for a further period Applications to the Secretary

ROYAL BERKSHIRE HOSPITAL READING

HOUSE SURGEON required as from July 9th The candidate must be fully qualified and registered Remuneration at the rate of £150 per annum with board residence and laundry
Applications with copies of testimonial to be sent to the undersigned on or before June 22nd
F V LYON Secretary

LEICESTER ROYAL INFIRMARY

ORTHOPAEDIC SURGEON

Applications are invited for the post of *Honorary Orthopaedic Surgeon*
Candidates must be Fellows of one of the Royal College of Surgeons of Great Britain or Ireland or Masters in Surgery of one of the Universities of Great Britain or Ireland The successful candidate will be required to confine his Hospital and Private *Practice to Orthopaedic Surgery* He will take charge of the surgical out patients orthopaedic clinic and be allotted 8 in patient beds He will take up his duties as soon as convenient after appointment
Applications with 100 copies of testimonials to be sent to the undersigned on or before July 2nd
An honorarium of 100 guineas will be paid
HARRY JOHNSON
House Governor & Secretary
June 13th 1932

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN
Waterloo Road S E 1

There will be a vacancy on July 1st for a HOUSE PHYSICIAN (male) at the above Hospital The appointment is in the first instance for a period of six months Salary at the rate of £100 per annum with board and residence Application with copies of testimonial should be forwarded not later than Tuesday morning June 21st to the Secretary at the above address from whom further particulars can be obtained

STIRLING DISTRICT MENTAL HOSPITAL FARBERT

THIRD ASSISTANT MEDICAL OFFICER required (lady) with some previous experience of modern Laboratory methods and Pathological work Well equipped Laboratory and facilities given for Research work Salary commencing at £250 per annum with board lodging and laundry Appointment subject to provisions of the Asylums Officers Superannuation Act Applications stating age with particulars as to experience in laboratory work and testimonials to the Medical Superintendent

LIVERPOOL STANLEY HOSPITAL STANLEY ROAD LIVERPOOL

There will be a vacancy for a GYNAECOLOGICAL HOUSE SURGEON (male) on July 1st next The appointment will be for *three or six months as arranged* Salary at rate of £100 per annum with board laundry *etc* Candidates must be fully qualified and application with copies of three recent testimonial must be received by June 23rd
F W OSBORN Secretary

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL

Applications are invited for the following appointments
1 HOUSE PHYSICIAN
2 HOUSE SURGEONS
1 CASUALTY OFFICER
for six months ending December 31st Salary £150 per annum with board lodging and laundry Application accompanied by not more than three testimonials should be sent to the undersigned as soon as possible
HY TUDSON Secretary

WORTHING HOSPITAL

Applications are invited for the post of HOUSE SURGEON vacant now
The appointment is for six months renewable (determinable by three months notice on either side)
Salary at the rate of £150 per annum with board lodging and laundry
Candidates (male) should forward applications stating nationality to Chairman with copies of testimonial to the Secretary at once

THE PRINCESS BEATRICE HOSPITAL, Richmond Road Earls Court S W

Applications are invited from fully qualified Medical Practitioners for the post (CASUALTY OFFICER AND HOUSE PHYSICIAN (*to combine* appointment) Salary £100 per annum with board residence and laundry Previous resident experience essential Duties to commence July 1st Applications are urgently desired recent testimonials should reach the Secretary *not later than June 20th*

THE STOCKPORT INFIRMARY

JUNIOR RESIDENT SURGEON (male) required Salary £ 50 per annum with board residence and laundry Applications with copies of three recent testimonials or Medical School and experience should be addressed to the undersigned not later than Wednesday June 22nd
EDWIN J SPENCE
Secretary Superintendent

VICTORIA HOSPITAL BURNLEY
(125 Beds)

HOUSE PHYSICIAN (Male)

Applications are invited for the above Post which will become vacant on June 1st next. The duties include the giving of a certain number of anæsthetics. The appointment is for six months from June 1st and carries a salary of £150 per annum with board etc. This Hospital is approved by the London University for the purposes of the MB and MS examination.

Application stating age nationality and qualifications together with copies of testimonials should be addressed to the undersigned forthwith.

GEO. W. COOLING
Superintendent and Secretary.

VICTORIA HOSPITAL, BURNLEY
(125 Beds)

HOUSE SURGEON (MALE)

Applications are invited for the above Post which will become vacant on July 1st next. The appointment is for six months in the first instance and carries a salary of £150 per annum with board etc. This Hospital is approved by the London University for the purposes of the MB and MS Examination.

Application giving full details of qualifications and experience and accompanied by copies of testimonials should be addressed to the undersigned forthwith.

GEO. W. COOLING
Secretary Superintendent

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RESIDENT MEDICAL OFFICER is required immediately. Candidate must be fully qualified registered and have completed usual hospital appointment.

The appointment is for six months renewable for a further period of six months.

The honorarium will be at the rate of £200 per annum. Applications with copies of testimonials to be sent to the undersigned not later than Tuesday June 21st.

H. KINGSLEY PEARCE
June 15th 1932 Hon. Secretary

ST. PAUL'S EYE HOSPITAL
Old Hall Street LIVERPOOL.

HOUSE SURGEON required. Six months appointment. Salary £145 per annum. Board residence etc. Applications with copies of testimonials should be sent to the Secretary on or before July 2nd.

THE LONDON LIGHT AND ELECTRICAL CLINIC

The Committee of Management will shortly proceed to appoint TWO HONORARY VISITING PHYSICIANS each of whom will be required to attend the Clinic twice weekly. Each candidate must be a registered medical practitioner and a Graduate of a British University or a Fellow or Member of the College of Physicians of London or of Edinburgh. One candidate should have had some local experience.

Applications with copies of not more than three testimonials should be addressed on or before July 1st to the Secretary London Light and Electrical Clinic 42 Ranelagh Road S.W.1 who will furnish information as to the duties of the office.

THE LONDON LIGHT AND ELECTRICAL CLINIC

The Committee of Management will shortly proceed to appoint one HONORARY VISITING ANÆSTHETIST who will be required to attend the Clinic once weekly. He must be a registered medical practitioner. Applications with copies of not more than three testimonials should be addressed on or before July 1st to the Secretary London Light and Electrical Clinic 42 Ranelagh Road S.W.1 who will furnish information as to the duties of the office.

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LANCASHIRE—HALF SHARE IN PRACTICE of about £1 600 with panel worth £480. Mostly middle and working class with some gentry. Visiting fees 2/6 to £1/. About 6 midwifery cases p.a. fees 3 to 10 gns. No night but possibility of one worth nearly £800 p.a. Double fronted house facing park 2 reception rooms library 4 bedrooms attics etc. Good surgery accommodation with separate entrance. Vendor open to arrangement re house. Half share 1½ years purchase.—No 9039.

NORTH RIDING NEAR COAST.—OVER £1 400 p.a. increasing. Panel 1 275. Several appts. About 30 midwifery cases p.a. fees 30/ to 42/. Visits 3 6. Modern house in garden village with open aspect 2 reception 3 bedrooms etc. Rent 16/8 per week including rates. Surgery near rent free. Premium £2 200.—No 9035.

LONDON S.W.—ABOUT £900 P.A. ON MAIN road. 700 panel increasing. M.O. to Inst. £50. 40 midwifery cases p.a. fees 3 to 5 gns. Visiting fees 3/6 to 10/6. Surgery 2/6. Good corner house. Surgery and wait room with splendid 9 other rooms and bathroom etc. Would allow child or might rent. Premium £1 400. Also nucleus about £2 per week plus panel of 50.—No 9034.

YORKSHIRE—NEAR LEEDS.—£700 P.A. Panel over 500 increasing. Visiting fees 4/ to 7/6. Surgery 2/6. About 12 midwifery cases p.a. fees 2 to 4 gns. Semi-detached double fronted house. Surgery and wait room dining room 3 bedrooms bath etc. Garage with room over. Price £850. Premium for Practice 1½ years purchase.—No 9033.

SOUTH WALES—PLEASANT COLLIERY VILLAGE in beautiful country. £915 p.a. (panel and contract £849). Old estd. about 20 midwifery cases p.a. fees 2 or 3 gns. Convenient house 3 reception 3 bed bath and separate surgery. Rent £45. Premium £800.—No 9032.

EASTERN COUNTY IN ATTRACTIVE country unopposed. Over £2 800 p.a. Panel 1 100. Half share for disposal. Fees 3 6 to 21/. Med. extra. Appt. over £100. Newly decorated house 7 bed 3 reception 2 surgery. Large garden and paddock over an acre. Premium £2 800.—No 9031.

LONDON S.E. (WOMAN'S PRACTICE) £350 p.a. Panel 145. Visit 3 6. Surg. 2/6. Small flat at rent of £50 p.a. inclusive. Prem. £275. Also nucleus on Fulham Rd. £60—£70 p.a. Panel 32. Lock up 25/ p.w. Prem. £50 in lump.—No 8991.

WEST RIDING.—OLD ESTAB. PRACTICE IN outskirts of industrial town. Average £1 050 p.a. Panel 400. Two appointments. 3/6 to 10/6 one at 21/. Modern house 3 bed 2 recep. large surgery etc. Sell or let. Alternative house with 6 bed 2 recep. Separate surgery etc. Rent £100. Very suitable. Built for doctor. Premium £1 550.—No 9024.

CHANNEL RESORT.—RADIOLOGICAL PRACTICE. About £500 p.a. capable of Electrotherapy. No opposition. Population of 40 000 covered by Practice. Premises centrally situated at rental of 21/ per week. Premium for good will and plant (cost £800) £700.—No 9023.

LONDON.—HIGH CLASS PRACTICE OVER £2 500 p.a. Largely Obstetrical and Children. Successor must have had experience in these branches preferably Hospital appointments. Ample scope for increase.—No 9022.

SOUTH COAST.—FASHIONABLE RESORT.—Good class Practice non dispensing with select panel. Income over £950. Specially new housing estate developing. Visits 5/ to 10 6. Good house facilities 4 reception rooms 7 bedrooms bathroom &c. Premium for Practice and lease (43 years to run) £2 800 cash of which £950 can be raised on mortgage.—No 9014.

SURREY HILLS. OLD ESTABLISHED Country PRACTICE unopposed. £650 p.a. Fees 3 6 to 10 6. Panel 300. Premium 1½ years purchase. Good house 6 bedrooms 2 reception room electric light good garden about 1 acre with tennis court. £1 600 or rent £80.—No 8992.

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LONDON S W —NUCLEUS mixed C P In thickly populated locality Flat to rent on lease Receipts £400 to £450 Panel nearly 600 Fees 2 6 up Premium £500 cash

LONDON S W —West End PRACTICE non panel non dispensing *Attractive house on lease* Receipts £1 400 Fees 1 gn upwards Premium £2 600 to include lease carpet fixtures fittings etc

YORKSHIRE —Town PRACTICE in industrial locality Medium sized house (5 beds) Receipts approx £700 Panel 520 Fees 2/6 up Premium for Practice and freehold house £2 000 cash

DURHAM —Middle class and industrial PRACTICE Average receipts approx £500 Panel 370 Medium sized house Branch surgery Fees 2/6 up No appointments Prem £725 or offer Excellent scope

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known country town Receipts approx £6 000 Select locality run panel Medium sized house to rent Premium for 1/4 share 3 years purchase *This Practice has been known to the Agency for many years and is highly recommended It is essen that the incomin Partner shall hold the F R C S and be aged about 30 Appointment to Hospital Staff*

LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment Premium 2 years purchase or near offer

LONDON S W —Working class PRACTICE in thickly populated locality Very compact low expenses easily run Small house available Branch Surgery Receipts over £2 100 Panel nearly 2 300 Fees 1/6 upwards Premium £4 360 cash

YORKSHIRE —Mixed C P in large town Suitable house available Receipts £600—£700 Panel 512 increasing Premium 1½ years purchase

— n PRACTICE Corner house (5 over £1 100 Panel 1 000 Fees

LONDON S W (Near West End) —Mixed better class PRACTICE Main thoroughfare Suitable house to rent at exceptionally low rental Receipts approx £1 000 p a all cash Panel 730 increasing Fees 3/6 to 1 gn Premium to include Practice, lease drugs furniture etc £3 500 or near offer

LANCASHIRE — Industrial middle class PRACTICE with convenient house (4 bed) Receipts nearly £2 000 Panel 1 200 Fees 3/6 upwards Highly suitable for husband and wife Premium £3 000 to include book debts or 1/3 share Partnership with view to succession at £1 200 Suitable for lady Doctor

HANTS —Middle class Country PRACTICE *Practically* unopposed Suitable for *semi* retired Practitioner Receipts over £400 Panel 94 Fees 2/6 upwards Premium £450

NEWCASTLE (Near) — *Well established* middle class and club PRACTICE Medium sized house to rent Receipts over £450 Panel 500 Fees 2/6 upwards Premium £775 to include drugs instruments surgery fittings etc

LONDON (Outskirts) — Mixed C P in rapidly developing residential and industrial locality Receipts approx £1 200 Panel about 1 200 Fees 2/ upward One appointment Excellent scope *Premium £1 800 cash for Practice £1 500 less held house*

WEST — — A D MECHANO PRACTICE— Situ *Rooms* rented on agreement Fees *remium* to include equipment and goodwill £1 200

LONDON E C —Mixed Cash and Panel Lock up PRACTICE with living accommodation if desired *facing main thoroughfare* held on lease at £95 p a Receipts nearly £700 Panel 450 (scope) Fees 1/6 to 10/6 Midwifery not undertaken Premium £1 000

YORKSHIRE — Near Coast — Agricultural locality — Attractive house separate entrance for surgery for sale freehold Receipts at present approximately £800 p a Panel 620 Fees 3/6 upwards Premium 1½ years purchase for Practice house £900

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1 LONDON E (Inner Suburb) —Well established cash and panel PRACTICE Very moderate premium accepted for quick sale Receipts £900 p a including panel Good

2 Country ea e by a ts average 20 Nice purcha e

3 Well estab hed small cash PRACTICE densely populated part Receipts now £200 including 240 on panel Has done more Good surgery accommodation Premium £200 or near offer

4 NICE SEASIDE TOWN 60 miles from London — Old established PRACTICE Receipts average nearly £1 000 p a includ panel Nice house to be sold with Practice Combined price £2 900

5 NEAR KENNINGTON S E —Old established mixed class PRACTICE Receipts average £1 000 a year panel 750 Large house on lease £8 a month Premium £1 800 or near offer

6 NEAR WATERLOO S E — Well-established small PRACTICE good scope has done much more in past *Receipts now* £200 p a panel 145 Nice flat Offers invited Lady or gentleman

7 HERTFORDSHIRE — Old established Country PRACTICE Receipts averag £1 042 p a net on fly 600 Nice house in grounds rent £ p a Premium 1½ years purcha

8 LONDON (7 mins Kennington) —Old Unused S W PRACTICE Rec pts average £80 cluding panel 650 Nice large hou e rent £3 per week Free TRANSF Practice steadily increasing

9 SUR compl BRIDGE S E —Well-established £1 panel PRACTICE Receipts DEAN & panel 450 Rent of suf f week Premium £450

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FOR DISPOSAL

1 WEST RIDING CITY —Industrial and Mixed PRACTICE Receipts av £656 p a Panel 512 and both steadily increasing Nice house garage etc

2 BIRMINGHAM — NUCLEUS IN BETTER class growing suburb Nice modern corner house

3 LANC — — RESIDENTIAL and non dis pensi FICE Re ceipt Gar etc

4 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE Receipts average £800 p a Pan Appointments £350 Good house to rent Considerable scope for energetic man

5 LANCS —Old established and Industrial PRACTICE Receipts £2 2 2 and increasing Panel 1 450 Appointments worth about £9 Good house to rent

6 LANCS (Large Town) — Need passing non panel largely Surgical *PRACTICE* Receipts aver £1 1 p a and unlimited scope Good house etc

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1 WESTERN CITY —PARTNERSHIP for young Practitioner Fifth share returning last year £530 net Increase to two fifths within four years Panel 3 120 increasing Good house to rent £45 p a Price £900 to include book debts No dispensing

2 CORNWALL —PRACTICE in small country town near sea Averages £1 300 p a Panel about 637 Plenty of scope for for a Surgeon Rent £2 000 C I lease for

3 DENTAL DEATH VACANCY —LONDON S W 7 —Good middle-class Average receipts for last three years £1 650 Price £1 500 House good 8 rooms freehold £1 50

4 BEDFORDSHIRE — Country PRACTICE about £500 a Good house to buy or rent Premium £400

5 LONDON S E —Mixed PRACTICE Can be run as lock up Panel 177 Last year £260 part time only Scope from £275 Has with surgery *and waiting room* To rent £50 a inclusive

6 COUNTRY PRACTICE —Old established pleasant country Last year £1 500 a Panel 946 Appts £120 In Ireland 23 years Good house garage large garden Hunts Practice £5 000 Borders of Monmouthshire

7 S DEVON —Short ASSISTANTSHIP With view to Partnership and succession Opposed Practice over £1 100 p a Good house to rent In Trees Hands 30 miles

8 LANCASHIRE —Good Locality PRACTICE for Assistant seeking Partnership Jan £2 0 Scope Present net income £870 p a Price £1 000 Good House

9 DEVON —Near Sea —PARTNERSHIP Half share of £1 200 p a increasing Large 600 Good house with large garden Price for Partnership £1 200

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MANCHESTER —MIXED PRACTICE Cash receipts about £1 600 Panel 1 500 Good house to rent (on lease) Garden and garage Freehold for sale —Premium £1 500 —No 303

LANCS TOWN —Small old-established MIXED PRACTICE Cash receipts last year £1 300 Panel 1 604 Excellent house 2 reception room 4 bedrooms garage and garden Can be rented or purchased Premium 1½ years purchase —No 329

MANCHESTER —Old-established PRACTICE Cash receipts last year £1 513 Panel Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1½ years purchase —No 323

NORTHUMBERLAND —PLEASANT COUNTRY TOWN —Mixed General PRACTICE Cash receipts last year £1 988 Panel 1 040 Assistant £100 p a Excellent house 2 reception 5 bedrooms Garage and garden Premium 1 year purchase —No 351

WELSH BORDER — UNOPPOSED COUNTRY PRACTICE in beautiful district Average cash receipts £1 100 p a including transferable appointment £300 p a Panel 756 Cottage Hospital Excellent house 4 reception 4 bedrooms Garage and large garden Rent £70 p a or will sell for £1 250 Premium 2 years purchase With notes in detail —No 337

LANCS — PLEASANT COUNTRY [illegible] and Mixed PRACTICE [illegible] receipts £1 374 p a [illegible] (transferable) £65 p a [illegible] Excellent house 3 reception 6 bedrooms Garage and garden Premium—Practice—¼ year purchase —No 326

DURHAM —Near LARGE CITY —PARTNERSHIP in sound industrial and colliery PRACTICE Receipts £4 900 p a Panel 4 500 Suitable house for married man Premium 1 4 or 1/3 share—2 years purchase —No 357

LARGE LANCS TOWN —MIXED PRACTICE Average cash receipts £1 288 p a Panel 1 089 Scope for increase Good house 3 reception 4 bedrooms garage and garden Premium 1½ years purchase —No 347

LEEDS —MIXED PRACTICE in good district Cash receipts last year £700 Panel 512 Scope for increase —Semi-detached house 3 bedrooms garage Premium 1½ years purchase —No 358

LIVERPOOL —Small PRACTICE in growing suburb Cash receipts approx £300 p a Panel 309 Tremendous scope Good house with Card in and Garage to rent —No 354

EAST YORKS —Country Town near Coast —Unopposed mixed PRACTICE Cash receipts last year £860 Panel 630 Excellent detached house 3 reception 4 bedrooms garage and large garden Premium 1½ year purchase —No 346

MANCHESTER —Residential Suburb —Middle-class PRACTICE Small first in Partnership Cash receipts 1931 £4 578 Panel 1 400 Two excellent houses to rent with ample accommodation Premium 1½ years purchase part by arrangement —No 277

EAST COAST —SEASIDE TOWN —Old-established mixed PRACTICE Cash receipts last year £1 556 Panel 686 Excellent living and professional accommodation 2 reception 6 bedrooms Garage and small garden Rent £100 p a on long lease Premium 1½ years purchase —No 332

CHESHIRE BORDER —LARGE TOWN —PARTNERSHIP in very old-established MIDDLE CLASS PRACTICE Average cash receipts £2 000 p a Panel 900 Premium—half share—14 years purchase —No 356

DEATH VACANCY —LANCS TOWN — Mixed PRACTICE Average cash receipts £1 634 p a Panel 829 Scope for Surgery if desired Good accommodation to rent Premium 1 year purchase —No 339

VENEREAL DISEASES PRACTICE —Northern city —Cash receipts last year £1 625 Convenient house to rent at £65 p a Premium—any reasonable offer —No 340

MANCHESTER —Middle-class PRACTICE in pleasant suburb Cash receipts 1931 £1 227 Panel 459 Charming house 3 reception 6 bedroom Billiard room Large garden and garage Premium—Practice—1½ years purchase —No 322

NEAR LIVERPOOL —COAST TOWN —Mixed PRACTICE Cash receipts last year £700 Panel 400 Good house (built 1927) 3 reception 4 bedrooms Garage and garden Premium 1 year purchase —No 344

NORTH OF ENGLAND — OPHTHALMIC PRACTICE in an important City Cash receipts last year £1 255 Fee £1 1 to £2 2 Mutual well qualified Practice for disposal—ill health —No 353

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NORTH WALES COAST —Mixed PRACTICE in beautiful district Average gross cash receipts £1 200 p a Panel 50 Excellent house 2 reception 3 bedroom electric light and modern conveniences low rental Premium for quick sale £1 500 (to include drug and Surgery fitting) —No 348

MEDICAL WOMAN'S PRACTICE —MANCHESTER —Old-established Cash receipts 1931 £645 Panel 450 Good sporting Excellent house 3 reception 6 bedrooms Garage Rent £80 p a on lease Premium 1½ years purchase —No 330

CHESHIRE TOWN near MANCHESTER —PARTNERSHIP in old established Practice Average cash receipts £5 151 p a Panel 3 600 Excellent house 2 reception 3 bedrooms garage and garden —Premium—one fifth share —£1 700 —No 305

CHESHIRE COAST TOWN near LIVERPOOL — Middle-class PRACTICE Average cash receipts £1 184 p a Appointment £60 p a Small elect panel Excellent corner house to rent 3 reception 5 bedroom Irem—Practice—1½ years purchase —No 317

NORTH WEST COAST — — SEASIDE RESORT — Old-established PRACTICE Cash receipts £874 Panel 290 Excellent freehold house 2 reception 5 bedrooms Garage and garden —No 266

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2 LONDON N W —GOOD CLASS NON DISPENSING PRACTICE about £2 200 p a in residential suburb No panel Semi detached house (8 bed and dressing room) with nice garden and lawn for sale or rent Premium 2 years purchase

3 LONDON W —CASH AND PANEL PRACTICE OF £1 570 p a in well populated area Panel over 2 150 Surgery premises can be rented on lease Premium £3 500

4 LONDON S W — PRACTICE £580 P A IN SUBURBAN district Small panel Considerable scope House (3 b droom) on main road rent £70 p a Premium £750

5 HOME COUNTIES —PARTNERSHIP IN PRACTICE AVERAGING over £8 200 p a in country town under 30 miles from London Panel about 1 400 Partner required to assist in the Surgical work must hold the F R C S and have held H S appointment and preferably experienced in Ear Nose and Throat work One eighth share for disposal at 2 years purchase with further share later Cottage Hospital

6 MIDLANDS —BRANCH PRACTICE AVERAGING £620 P A in small clean manufacturing town Panel 500 Corner house (4 bedroom) for sale Scope Premium £775

7 DEATH VACANCY — CORNWALL — PRACTICE IN EXceptionally beautiful district on coast Income about £600 p a (about £275 from appointments) Pleasant house (5 bed and dressing rooms) standing in quarter of an acre of ground to rent on lease

8 HOME COUNTIES — PARTNERSHIP IN PRACTICE OVER £2 000 p a in growing and prosperous town about 10 miles from London Panel 850 Suitable house obtainable Scope for increase Premium two fifths share 2 years purchase

9 EAST ANGLIA — GOOD CLASS PRACTICE OVER £1 900 p a in important town No panel Well situated house (7 b d rooms) to rent First-class Hospital with good chance for well qualified man to get on staff Premium 1½ years purchase

10 BIRMINGHAM —PARTNERSHIP IN STEADILY INCREASING Practice over £1 800 p a Panel 1 000 Excellent house (6 bedrooms) garage and good garden for sale Scope for increase especially in Eye work Premium one third or two fifths share 2 years purchase

11 MIDLANDS — PARTNERSHIP IN PRACTICE OVER £2 700 p a in clean manufacturing town Panel b ts 1 700—1 800 Hous with 4 bedroom gara e and small garden to rent Good well equipped Hospital Share of one third to one half at 1½ years purchase

12 HOME COUNTIES — PARTNERSHIP IN EXCEPTIONALLY good and rapidly increasing Practice about £6 000 p a in delightfully situated country town easy distance of coast Attractive house (4 bedroom) to rent Partner must hold the F R C S and be aged about 30 Appointment on Hospital Staff Premium for one sixth to one fourth share 2 years purchase Preliminary Assistant hip

13 EAST ANGLIA — PARTNERSHIP IN COUNTRY PRACTICE nearly £4 700 p a in beautiful agricultural district Panel 3 000 Country house (7 bedroom) in own grounds with picturesque garden tennis and croquet lawns orchards and meadow for sale Considerable scope for increa Premium two third or four ninths share 2 years purchase

14 WORCESTERSHIRE — PARTNERSHIP IN PRACTICE nearly £1 900 p a in beautifully situated Market Town Mod rate panel Suitable house with garden to rent Premium one half share 1½ years purchase

15 LONDON S W —PARTNERSHIP IN PRACTICE OVER £2 800 p a in pleasant residential suburb Panel 1 700 Suitable flat available After Preliminary Assistant hip a share which later would be increased to seven fifteenths would be sold to suitable man at 2 years purchase

16 S OF ENGLAND—SEASON PRACTICE ABOUT £150 IN small Inland Spa No panel or midwifery Comfortable house (6 bedroom etc) with nice garden to rent on lease Good scope for increase Premium £100

17 S COAST — NUCLEUS OF PRACTICE IN DEVELOPING Seaside Place close to Popular Resort Semi detached house (6 bedroom) facing sea with garage and garden for sale Opening would suit semi retired Practitioner

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18 EASTERN COUNTIES — THIRD PARTNER REQUIRED for sound old-established Practice of £4 500 p a in particularly pleasant Market Town within easy reach of ca Panel 1 600 Suitable house Premium 2 years purcha for half of about £1 000 p a Option much increased shar within 3 year

19 SOUTH AFRICA—PRACTICE OF £2 000 P A IN A TOWNSHIP in centre of the richest district in the Union Charming Bungalow to rent Premium to include Book Debts Dressing Surgery and Household furniture £1 500

20 N W ENGLAND — OPHTHALMIC PRACTICE OF OVER £1 600 p a in an important town Excellent opportunity for one keen on clinical and operative Ophthalmology Large house in first class condition for sale Purchaser should be well qualified Premium £2 500

21 N E ENGLAND — RAPIDLY INCREASING PRACTICE IN large town Receipts past year £1 700 including select panel of under 550 Well situated house (6 bedrooms) in good residential part for sale Ample scope for increase Premium £2 750

22 NORTHUMBERLAND — PRACTICE OF £2 000 P A IN small industrial town Panel 1 040 House for sale Premium —Practice—1 years purcha

23 SOUTH AFRICA—PRACTICE OF ABOUT £2 000 P A IN A famous town Pleasantly situated detached bungalow (5 bedroom) garage and small garden for sale Good hospital (with private ward) Premium £1 100

24 N WALES COAST — PRACTICE ABOUT £1 200 P A IN a most beautiful district Panel 760 Excellent house (3 bedroom) with modern conveniences Sport of all kinds Premium £1 500 to include drugs fittings etc Good scope

25 S COAST — PRACTICE AVERAGING £1 160 P A IN residential town and health resort Panel 1 056 Practically no dispensing and not much midwifery Scope for considerable increase Premium £1 750

26 KENT—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice nearly £4 450 p a in an industrial town Panel about 2 600 Detached house (4 bedroom) with garden to rent Plenty of scope for increase One fifth share 2 years purchase

27 LONDON WEST END — X-RAY AND ELECTROTHERAPEUTIC Practice Receipts 1931 nearly £620 Large house (8 bedroom) to rent on lease Premium £925

28 S COAST — FASHIONABLE HEALTH RESORT — PARTNERSHIP in steadily increasing non-dispensing Practice about £3 400 p a Small select panel One fourth share at 2 years purcha Incoming Partner should be Oxford Cambridge or London man

29 N W ENGLAND — INLAND HEALTH RESORT—NON-dispensing PRACTICE averaging £1 130 p a Small select panel House (7 bedroom) with large garden for sale or rent Premium for Practice 1½ years purcha

30 LONDON W — PRACTICE £550 P A IN SUBURBAN district Detached double fronted house (6 bed and dressing rooms) with small garden for sale *Premium* 1½ years purchase

31 W MIDLANDS — PARTNERSHIP IN OLD ESTABLISHED Practice of £1 165 p a in first rate City Panel 1 250 House (4 bed and drawing room) to rent Share worth £950 p a at 2 years purchase

32 MIDLANDS — STEADILY INCREASING PRACTICE OF BOROUGH £1 100—£1 200 p a in thriving town one and a half hour by rail from London Panel over 1 000 Excellent house (6 bedrooms) garage and grounds to rent Cottage Hospital *Premium* 1½ years purchase

33 LONDON S W — CASH PRACTICE ABOUT £1 100 P A near Victoria Land about 1 250 which could be considerably increased Valuable corner residence for sale Premium for Practice £1 000

34 LONDON E—CASH AND PANEL PRACTICE OF £840 P A in populous district Panel 570 Small house to rent on lease Premium 1½ years purchase

35 ESSEX—PARTNERSHIP IN PRACTICE OF £2 400 P A IN developing country district seven miles of coast Panel 3 600 Detached house (6 bedroom) garage and good garden for sale Scope for increase One fourth share 2 years purchas

36 S COAST — PRACTICE AVERAGING £480 P A IN RURAL district on outskirts of popular holiday resort Panel 300 Rent of surgery premises 10/ weekly Premium £600

37 W MIDLANDS — PARTNERSHIP IN PRACTICE NEARLY £2 600 p a in country town Panel about 1 000 Good house (5 bedroom) garage and garden of about half acre to rent Good educational facilities Cottage Hospital Premium one third share £1 550

38 MIDLANDS — PRACTICE AVERAGING £1 710 P A IN growing town with nice surroundings Panel 1 100 House available later Good hospital scope for surgery Premium 1½ years purchase

39 HOME COUNTIES — NON DISPENSING PRACTICE AVERaging £1 150 p a in growing residential watering place No panel Detached house (4 bedroom) with every modern convenience and attractive garden to rent Premium 1 ears purchase

40 SHROPSHIRE — PRACTICE £800 P A IN MARKET Town Panel 170 Suitable house to purchase Premium 1½ years purchas

41 S WALES — MIXED PRACTICE IN GROWING DISTRICT of seaport town Receipts last year over £800 Panel 760 House (3 bedrooms) garage and garden to rent Good prospect for scope Premium £1 200

42 LONDON N W —NON DISPENSING PRACTICE IN GOOD residential district Receipts last year nearly £9 0 No panel Ten roomed house with garage and large garden to rent Premium £800

43 KENT—COUNTRY PRACTICE OF OVER £800 P A IN beautiful part Panel nearly 400 Very attractive residence (5 bedroom) central heating ground of 2½ acres orchard etc for sale Sport Premium 1½ ears purchase

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1 PARTNERSHIP—WITHIN THREE MILES OF CHARING CROSS—A one half share is offered in a well established middle and working class practice producing about £2 000 p a Panel of approximately 1 300 Visits 2/6 upwards Purchaser can choose his own residence Premium 2 years purchase

2 PARTNERSHIP—SIX MILES NORTH EAST OF LONDON—Owing to the retirement of the senior Partner (through advancing age) a third partner is required in a very old established mixed class Practice in populous but pleasant open district Receipts last year nearly £3 800 including £100 and panel over 3 700 Very little midwifery Good house with ample accommodation at moderate rental Fourth share to commence with Prem 2 years purchase

3 PARTNERSHIP—SOUTHERN COUNTIES—Within 35 miles of London A HALF SHARE is offered in an increasing country practice situated in delightful residential district Cross cash receipts average over £3 000 p a Panel of 1 500 and appts worth about £200 p a Commodious house in good position with large hall 2 reception 9 bedrooms Garden and garage for two cars Freehold for sale Premium 2 years purchase

4 YORKS—LARGE TOWN—St adth increasing riddle and working over 500 Fees 2/6 to 7/6 producing nearly £7 00 p a including panel of Suitable hous with surgery and waiting room dining room three bedrooms and boxroom Garden Garage Price for freehold £850 Premium 1½ years purcha e

5 PARTNERSHIP—YORKS—(Within easy reach of coast)—A ONE THIRD SHARE is offered in a very old established good mixed class practice situated in an attractive town having an up to date Hospital Cross cash receipts for the last three years average over £6 000 panel of about 2 400 Fees 3/6 to 2 gns Midwifery 2 to 15 gns House in pleasant residential part of town contains 3 reception 5 bedrooms etc Good Garden Garage Price £2 000 or might be rented Premium for share £3 250 Income partner should be married and accustomed to good class work

6 HOME COUNTIES—(Within 15 miles of London)—PARTNERSHIP—In a very pleasant residential district the two fifths share of a very old established mixed class Practice is for disposal Cash receipts last financial year amounted to £1 900 including appts and panel of 845 Remaining partner has been in the Practice 13 years Nice house (surgery accommodation 2 reception 4 bedrooms etc) with good garden and garage Price for freehold £1 325 Premium for share £1 520

7 EASTERN COUNTIES—PARTNERSHIP—Half share of very old established Practice situated in pleasant rich agricultural district within ten miles of county town Cash receipts average £2 880 p a including appts worth £100 and panel of 1 100 (good mileage) Nearest opposition 7 miles Very good house newly decorated with light Price for freehold £2 000 Premium £2 800 Electric tennis lawn paddock etc Garage Main water supply Electric light

8 PARTNERSHIP—DESIRABLE OUTLYING RESIDENTIAL SUBURB—A suitable Partner (experienced preferably married 30 to 35 years of age and having the necessary capital) can acquire a share producing over £1 250 p a in an old established good mixed class Practice worth nearly £8 500 last year Option of further additional shares at stated intervals up to one third Good house with ample accommodation to rent or purchase Premium two years purchase

9 WEST MIDLANDS—Very old established mixed class PRACTICE in small town (largely residential) amid t agricultural district of exceptional beauty Cash receipts average £ 278 p a with panel of 1 100 Opposition not strong Very fine house (3 reception rooms 6 bedrooms bathroom etc) in nearly three acres of ground Beautiful garden tennis lawn and productive orchard Price for freehold £ 000 Premium £2 600

10 MIDLANDS—CATHEDRAL CITY—Old established better class non panel PRACTICE producing for last twelve months £3 300 No appointments Fees from 5/ to 21/ Not much midwifery Com modious house with 2 reception 6 bedrooms etc Price for free hold £2 000 part on mortgage Good Surgical scope if required Premium £5 000

11 LONDON SOUTH EAST—DEATH VACANCY—Old establ hed middle and working class PRACTICE producing nearly £600 p a of which £275 is from panel Very nice house can be purcha ed or rooms rented

12 BELGRAVIA DISTRICT—Good-class non panel non dispensing PRACTICE worth over £1 400 p a Fees 1 to 2 guineas Very little mid wifery Attractive house in excellent position (2 reception 4 bed rooms 3 bathrooms etc) on lease rent £250 p a Premium to include lease carpets curtains fittings and fixtures Good intro duction given

13 ESSEX—COAST TOWN—Very old e tablished non panel (but good cope for this if wished) middle class PRACTICE averaging £1 156 p a Visits 5/ to 10/6 medicine extra Very little mid wifery Expenses light Detached house with 2 reception 3 bed rooms bathroom etc Garden Rent £100 p a on lease Premium 1 years purcha e

14 EASTERN COUNTIES—(Within one mile of the sea)—Very old established and increasing country PRACTICE situated in pleasant open district Cash receipts for the three years ending March 31st last average £1 820 last year £1 940 including appts (transfer able) and panel producing about £750 Visits 5/ upwards Mid wifery 2 to 7 gns Nearest opposition 5½ miles Very good house (6 bedrooms bathroom with h and c etc) built by Vendor and standing in 1½ acres of ground tennis court orchard garage Price for freehold £2 00 part on mortgage Premium £2 750

15 YORKS—EAST RIDING—Well established unopposed PRACTICE within reach of the coast and near large town Cash receipts for last 12 months £950 including panel of 630 Fees 3/6 to 10/6 House contains 3 reception 3 bedrooms etc and professional accom modation Garage One acre of garden Price for freehold £900 part on mortgage Hunting shooting golf etc Premium £1 175

16 SOUTH COAST TOWN—Chiefly middle class non panel PRACTICE averaging over £500 p a but offering scope for increase Fees 2/6 to 10/ Eight roomed house with kitchen etc and professional rooms Can be rented or purchased Premium £600 Vendor retiring

17 PARTNERSHIP—EASTERN COUNTIES—A third Partner is required in a good mixed class Practice situated in very pleasant market town within reach of th sea The share offered at first will produce about £1 000 p a with increase eventually up to one half Practice is old established and producing about £4 500 p a Panel of 1 600 Choice of hous s or ingoing Partner could reside in rooms I re mium 2 years purchase

18 SOUTH WEST OF ENGLAND—PARTNERSHIP—A one third share is offered in a good middle and better class Practice situated in an attractive country town near coast There is a Hospital of 50 bed and good Surgical scope Average cross cash receipts over £5 000 Selected panel of 570 Fees 4/ to 21/ Choice of houses Premium 2 years purchase

19 YORKSHIRE—PI OSPEROUS TOWN—PARTNERSHIP—A one third share (with increase later) is offered in a good middle class non panel Practice averaging £3 300 p a Fees 3/ to 2 gns Nice light Garage Price for leasehold £1 200 Small garden Electric Good sport and excellent schools Very good Surgical prospects Premium for shares £2 000 £800 on mortgage

20 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA—PARTNERSHIP—A fourth share is offered owing to the retirement of one of four partners in an old established Practice in very pleasant country district Income £5 400 p a with good panel backing Detached house with ample accommodation Garden etc for sale Premium 2 years purchase

21 WITHIN 70 MILES NORTH OF LONDON—COUNTY TOWN—PARTNERSHIP—A one third or two fifths share is offered in a well established middle and working class Practice having very good scope for increase Receipts average over £2 000 p a Panel of nearly 2 000 Fees 2/6 to 7/6 Choice of houses on rental or purchase Premium only 1½ years purchase

22 LONDON NORTH WEST—Old-establ hed mainly letter-class non panel and non dispensing PRACTICE averaging about £1 100 p a Fees 7/6 to 21/ Only few cases of midwifery at 10 gns Corner house with 3 reception 6 bedrooms etc Electric light Garden Garage Rent on lease £200 Premium for quick sale £800

23 SOUTH WEST OF ENGLAND—FAVOURITE TOWN—PARTNERSHIP—A share producing about £1 000 p a with further increase at is offered in an old-establish d non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ Mid wifery 5 to 10 gns A suitable house can be rented at £90 p a Premium for share 2 years purchase Good Hospital with over 200 beds Ingoing Partner should be experienced and hold M D London

24 SOUTH OF ENGLAND—FAVOURITE COAST TOWN—Old-established chiefly better class PRACTICE producing about £1 800 p a Small selected panel Fees 3/6 to 10/6 not much midwifery Good house with ample accommodation and garden Freehold for sale Premium £3 000

25 NORTH MIDLAND CITY—PARTNERSHIP—Two Partn rs ar r quired to take over a three fifteenths share each (with increase at r) in a very sound old estal lished and increa ing Practice in desirable town Average gross cash receipts for the past three years £ 0 0 Panel of about 4 000 No clubs and very little night work Fe s from 5/ Suitable accommodation can le obtained Premium 2 years purchase Excellent sport and schools

26 PARTNERSHIP—WEST OF ENGLAND—A share produ ing about £700 p a is offered in a well established Practice averaging over £1 500 p a Ultimate succession later Panel of nearly 1 400 Choice of hous s Premium £1 400

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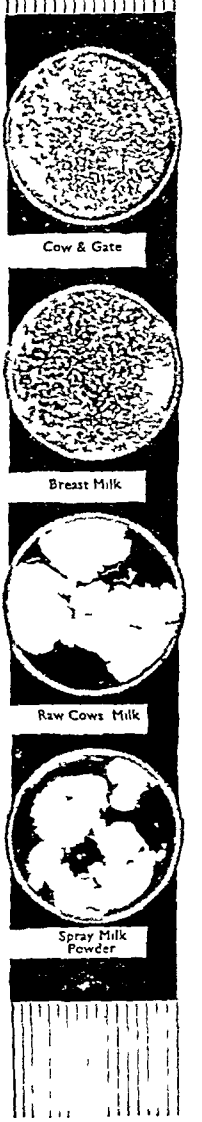
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CONTENTS

JUNE 25 1932

ORIGINAL ARTICLES

Total Abdominal Hysterectomy for Myoma of the Uterus By Hilbert R Spencer M D F R C I 1157

Some Causes of Failure in Vaccine Therapy By E Cronin Lowe M B 1160

The Modern Treatment of Gastro Enteroptosis By A P Cawadias M D M R C I 1163

A Note on Food Allergy By A M Kennedy M D M R C P 1167

Nomenclature and Functional Nervous Disorder By Doris M Odlum M R C S L R C P 1169

MEMORANDA

Two Rare Types of Hernia Occurring in the Same Patient By A John Corkhill M B B S F R C S 1171

Meningo-Encephalitis of Measles By A L Crockford M B B Ch 1171

REPORTS OF SOCIETIES

Royal Society of Medicine
Analgesia in Childbirth 1172

Fourth of England Obstetrical and Gynaecological Society Puerperal Sepsis and Toxaemia of Pregnancy 1174

REVIEWS

Disorders of Metabolism 1175

Radiation in Medicine and Surgery 1175

Dental Surgery and Pathology 1176

An American System of Medicine and Surgery 1176

Theory of Consciousness 1176

Notes on Books 1177

OBITUARY

H Leith Murray M D 1193

Hugh Richard Phillip M D 1194

John Campbell Graham F P C S Ed 1194

THE SERVICES

I M S Annual Dinner 1194

MEDICO LEGAL

Trespass to the Person Negligence and Breach of Contract 1195

Bogus Doctor Sentenced 1196

Charge of Negligence Surgeon Vindicated 1197

LEADING ARTICLES

Treatment of Pernicious Anaemia 1179

Comparative Study of Tumours 1180

THE WEEK

Treatment of Lung Abscess 1181

World Movement for Mental Hygiene 1181

Ozone in Industry and Public Health 1182

Blood Condition of X Ray and Radium Workers 1182

Collection of Pathological Specimens 1183

Education in Divided Doctor 1183

GENERAL ARTICLES AND NEWS

Centenary Meeting Museum and Cinema 1183

Research Defence Society Sir Arthur Keith on the Conflict between Sentiment and Reason 1184

London Water in 1931 Sir Alexander Houston's Report 1178

Port Sanitary Authorities Guildhall Banquet 1184

Preparations and Appliances (Illustrated) 1177

Medical Notes in Parliament
National Health Insurance 1198

Medical News 1199

LOCAL NEWS

Scotland—
Aberdeen Chair of Surgery 1185
Glasgow Mental Hospital 1185
Mental Welfare in Scotland 1185
Highlands and Islands Fund 1186
National Health Insurance 1186

Ireland—

Board of Control 1187
Vital Statistics for 1930 1187
Housing in Paddington 1188
Gas Fires and Ventilation 1188

UNIVERSITIES AND COLLEGES

University of London 1197
University of Bristol 1197
University of Glasgow 1197
National University of Ireland 1198
Royal College of Surgeons of England 1198
Royal Faculty of Physicians and Surgeons of Glasgow 1198
Royal College of Surgeons in Ireland 1198

CORRESPONDENCE

The Action of Ergot Preparations By J H Burn M D 1189

Correction of Hearing Defect By H Mortimer Wharry F P C S and G P Crowden M P C S 1189

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Vacancies 1200

(See also page 34* of Supplement)

The SUPPLEMENT contains

British Medical Association
Supplementary Report of Council 1931 32
Report of Mental Deficiency Committee.

Notices of Motion for the Annual Representative Meeting London 1932

Current Notes
The Centenary Dinner
Academic Dress for Centenary Meeting
Potarian Luncheon
Prizes for Essays
Archive of Diseases in Childhood

Association Notices Correspondence Vacancies and Appointments Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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INDEX TO ADVERTISEMENTS.

Advertisements are classified so far as date of receipt and printing conditions make possible Advertisements of the following classes will for the most part be found on the pages indicated

PUBLISHERS

Appleton D & Co
Cance l ... cal ... Ob tetrical Mono ... 5
... aph ... 5
Kolmer ... Boerner Pract tioner Library ... 5

Churchill J & A
Bill ... Eran —Di of the Kidney
Bourne ... William Cancel 45
Hadfield ... Garrod—Pathology 3
Hun worth ... Dick—Pathology 3
Ilme bury R C —Mother craft 3
Piner ... Wyard—Clinical Atla 3
Present Advances Serie 3
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Treatise on Glaucoma 4
Tropical Ophthalmology 4

Oxford University Press
Price ... W —D of the Heart 3
Horsenell Ash ... L — Book 4

ASSURANCE COMPANIES—
Century In urance Co Ltd 51

BOOTMAKERS &c—
Ho land & Son—Foot Support 3

BRASS NAME PLATES &c—
Cooke ... Name Plates 4
Herd ... J ... A —Name Plates 4
Lewis & Co Ltd —Name Plate 3
Osborne F & Co —Name Plate 4

DEBT COLLECTION—
Briti h Medical Protection Society 5

FOOD PREPARATIONS—
Bemax ... al oratories—Bemax 17
Cow & Gate Ltd —Milk Food Cover
Hart en Bro ... Limi ... Ltd —Hart en's China Tea 3
Doctor's China Tea Cor
Robl ... Nurses Biscuit 3
Trufood Ltd —Humanized Trufood 17
Valentine Meat-Juice 17
Wander A Ltd —Ovaltine 15

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Ledge Sparking Plugs 4
Riles Car 7
Second hand Motor for Sale 6

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Anderson & Son—Account Forms 60
Bru lock Co—Barlett Typewriters 50
Taylor's Typewriters 3

TOBACCO & CIGARETTES—
Player No 3 6

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Iri h Linen Mi h Co Ltd — Linen Me h Underwear 2

CHEMISTS &c —
Allen ... Hanburys Ltd — Preparation 24
American Apothecarie Co — Salvitae 10
Boots Products 13 14
Briti h Drug Hou es Ltd — Caprokol 11
Pituitary Extract B D H 20
Burroughs Wellcome ... Co — Hyproloid Prod cts 7
Continental Labs Ltd — Detol 31
Lactobyl 7
Cranbux Ltd —Odou 15
Dimol Laboratories Ltd — Dimol Snuff 18 28
Fox's Glacier Mints 16
Gibbs Dentifrice 32
Glaxo Laboratories— Preparations 12
Hewlett ... Son Ltd — Preparations 23
Hoffmann ... Roche Chem Work — Allonal Tablets 11
Martindale W —Preparation 7
Mas ... Baler Ltd — Somnos 10
Midgley Ltd —Medicinal Therapy 13
Mon l Stafford Inst. Refining Co — Mon ol 15
Neo Medics Co — Inkrea melhin Tab ets 14
Oi penhemer Products Ltd —Sy hagnol 32
Peat Products Ltd —Sy hagnol 32
Roberts & Co —Di menol 19
Saccharin Corporation Ltd — Novocaine & Chinco an 11
Sandoz Chemical Works— Calcipan Sandoz 22
Sharp & Dohme Ltd — Caprokol Cover ii
Tapactic Pill 11
S P Charge Co —Sulphaqua 12
Wyleys Ltd —Nasithin 4 22

SURGICAL APPLIANCES—
Allen ... Hanburys Ltd — London Ho pital Cabinet 90 6
Bailey W H & Son— Surgical Belts, etc 1
Beiersdorf Ltd —Hansaplast 1
Curtis ... Son—Surgical Equipment 30
Fleming & Co —Surgical Bag 6
Hulland's New Aluminium Bag 6
London Ho pital Cabinet 19
Medical Supply Asso iation Ltd — Cellani and Gauze Bandages 30
Millikin & Lawley — Instrument Oleolene etc 30
Salmon Gray—Surgical Alliance 32
Salt Surgical Service 33
Smith ... Nephew Ltd — Elastoplast etc 33
Taylor L Ltd —Flexolast Cover ii 6

VACCINES & CULTURE MEDIA—
Allen ... Hanburys Ltd — Vaccine etc 23

WINES & SPIRITS—
Bollinger's Champagne 5

X RAY & ELECTRO MEDICAL APPARATUS—
Briti h Hanovia Quartz Lamp Co — Actinotherapy 9
Hamblin T Ltd — Intra Nasal Ionizer 4
Kodak Ltd — Medical X Ray Cabinet 4
Medical Supply Association Ltd — Phy io-Therapy 31

BATHS SPAS &c—
Bridge of Allan Spa 40
Briti h Spa Federation 3
Harrogate — 33
Llandrindod Wells 40
Vittel France 41
Wildbad 41

HOTELS & HEALTH RESORTS—
Clifton Hotel 2
Holland Court Hotel W 11 40
Margate 39
St Aubyn Bay Hotel 39
Scarborough 40 53

CONTRACT PRACTICE & OTHER APPOINTMENTS—
IMPORTANT NOTICE—
RE APPOINTMENTS 41

HOSPITAL &c VACANCIES—
Accrington Victoria Ho pital 4
Altrincham General Ho pital 6
Ashton under Lyne Dist Infirmary 47
Aylesbury Royal Bucks Ho pital 45
Barrow ... Furness Ho pital 46
Bedford County Ho pital 46
Blackburn Royal Infirmary 46
Bournemouth Royal Infirmary 47
Bradford Royal Infirmary 45
Bradford Royal Victoria Hos 50
Bri tol Eye Dispensary 50
Bri tol Eye Di pensary 45
Bri tol General Ho pital 45
Bri tol Royal Cro ... Society 45 50
Britannia Victoria Hospital 44
Burnley Victoria Memorial Ho pital 51
Burton Deron hire Ho pital 53
Buxton Infirmary 45
Cardiff Royal Infirmary — 45
Cardiff Royal Infirmary — 50
Central London Ophthalmic Ho pital 46
Coventry Ho pital 50
Darlington General Hospital 46
Devonport Royal Albert Eye Ho 48
Dorches ter Royal Infirmary 1
Dumfries Royal Infirmary 50
East Lancs Tuberculosis Colony 53
Frelms Ho pital for Sick Children 45
Exeter Royal Devon Ho pital 45
Fareham Knowle Mental Ho pital 46
Hahfax Royal Infirmary 46
Harrow & Weald tone Ho pital 42
Horton General Ho pital 45
Ho pital for Consumption S W 3 46
Ho p of St John, etc W 8 51
Hull Royal Infirmary 51
Indian Medical Service 51
Lancashire County Mental Ho pital 47
Leicester Royal Infirmary 4
Leicester Victoria Ho pital 41
Lincoln County Ho pital 45
Liverpool Eye & Ear Infirmary 45
Llanelly Workmen's Committee 46
London County Council 53
London Lock Ho pital, W 44
Lowestoft Borough 44
Manchester Ancoat Ho pital 51
Manchester Royal Infirmary 44
Manchester St Mary's Hospital 4
Mexborough Montagu Hospital 51
Middlesbrough Ormesby Ho pital 46
Middlesex County Council 46
Newcastle Babies' Ho pital 42
Northampton Creaton Sanatorium 53
Plymouth City 46
Queen Victoria Hosp for Children 46 47
Reading Royal Berkshire Ho pital 50
Redhill Royal Earlswood Ho pital 50
Royal Free Ho pital 44
Salford Royal Ho pital 44
Salisbury General Infirmary 46
Scunthorpe War Memorial Hosp 50
Sheffield Children's Hospital 50
Sheffield Royal Infirmary 47
South African Railways etc Sea Fund 41
South London Ho pital for Children 50
Stirling Mental Ho pital 46
Stockport Infirmary 50
Stoke on Trent City 50
Stoke, ... Staff Royal Infirmary 53
Stroud General Ho pital 4
Sussex Throat & Ear Ho pital 50
Wallasey Victoria Central Hospital 4
Walsall General Ho pital 45
Welsh National School of Medicine 46
West Ham County Borough Council 41
West Suffolk General Hospital 44
Whitling Street Ho pital 44
Wimbledon Ho pital 47
Winchester Royal Hart Co Ho p 53
Worthing Ho pital 50 41

HYDROS & PRIVATE HOSPITALS—
Bennett's Hydro 43
Hart gate Inebriates Clinic 43
Peel Hydro 35
Portland Castle North Wales 35
Smedley's Hydro Matlock — 34

INEBRIETY—
Bay Mount Paignton 2
Calcot Hall near Reading 43
Dalrymple House Pinner 39
Old Hill Hou e Chesh ... 43
Read Lam Hill, Woodford 39

HOMES & ASYLUMS—
Bailbrook Hou e Bath 34
Barnwood Hou e Glou ester 34
Bi hop tone House, Bedford 34
Boreatton Park Salop 34
Brooke Hou e Clat ... 34
Camberwell House S E 5 34
Cheadle Royal Ches ... 34
Chi wick Hou e Lunacy 34
City of London Mental Ho pital 34
Clarence Lodge Clapham Park 34
Coppice Nottingham 34
Court Hall Kenton Exeter 34
Fen tanton, Kimbolton Hall 34
Grange near Rotherham 34
Grove Hou e, Dunmow, Essex 34
Haydock Lodge, Newton-le-Willows 34
Highfield Hall St Albans 34
Lawn Lincoln 34
Littleton Hall, Brentwood Essex 34
Lynwood, Bucks 34
Mapleton Hall, Uttoxeter 34
Moat House Tamworth Staffs 34
Norman field Tamworth Staffs 34
Northumberland House N 4 34
Northwood Bristol 34
Old Manor Salisbury 34
Oxhey Grove Mid ... 34
Peckham House S E 15 34
Resident Patients 34
St Andrew ... 34
... 34
Wood side Private Asylum Darnell 6
Wye House Buxton 37

MEDICAL SCHOOLS &c—
City of London Maternity Ho pital 41
College of Preceptors 41
Glasgow Po ... ral Medical 41
Liverpool School of Tropical Medicine 41
Royal College of Physicians Edinburgh 41
Society of Apothecaries 41
West London Ho pital 41

SANATORIA—
Bromley & Frimley Sanatorium 33
Cotswold Sanatorium 33
Grampian Sanatorium 33
Linford Sanatorium 33
Mundesley Sanatorium 33
Montana Hall Sanatorium 34
Northwich Moss Hall Sanatorium 33
Pendyffryn Hall Sanatorium 33
Torquay Bee Sanatorium 34
Victoria Sanatorium Barrow-in-Furness 49

SCHOOLS &c—
Colthurst House School Warfield 34
Matron—School for Boys and Girls 41
St Bees School Cumberland 41

TUTORS & LECTURERS—
Exam —Med Coll ... 41
Fellowship Exam —H C Orthop 41
London University —Hons ... 41
Manchester Tutorial College 41
Manchester—Miss ... Blake 41
Mathematics—Miss ... Lake 41
University Exam Law Tutor 41
Wm. Morris Hackett Limited 41

TRANSFER AGENTS—
Borrill ... Medical Agency Ltd 41
Briti h Medical Bureau 5 41
Lee & Martin Ltd 5 41
Manchester Medical & Scientific Agency 41
Peacock & Hall ... Ltd 5 41
The Medical Agency 41
Turner ... Ltd 41
Western Medical Agency Bristol 43 41

ASSISTANTS PRACTICES &c—
Assistant Wanted 43
Dispensary Medical Officer 43
Locum Wanted 43
Partnership Wanted 43
Practices Wanted and Available 43 44

NURSING INSTITUTES—
Catered by Nurses 1
Nurses Medical Agency Ltd 1
Nurse Associations 1

MISCELLANEOUS—
Corre ... ing Pe ... & ... 43
Income Tax Pe ... 43
Medical Di ... 1
Miscellaneous 5

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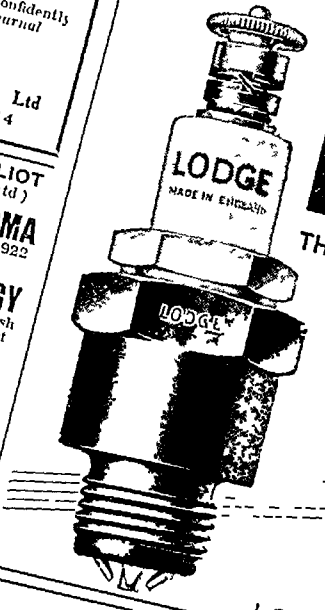
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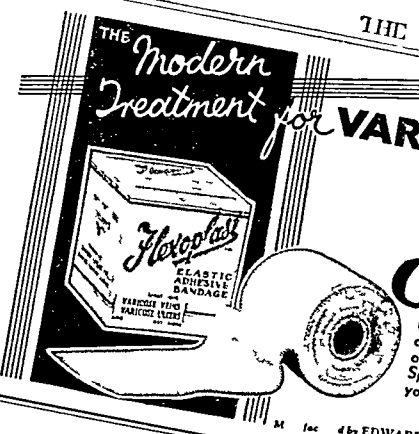
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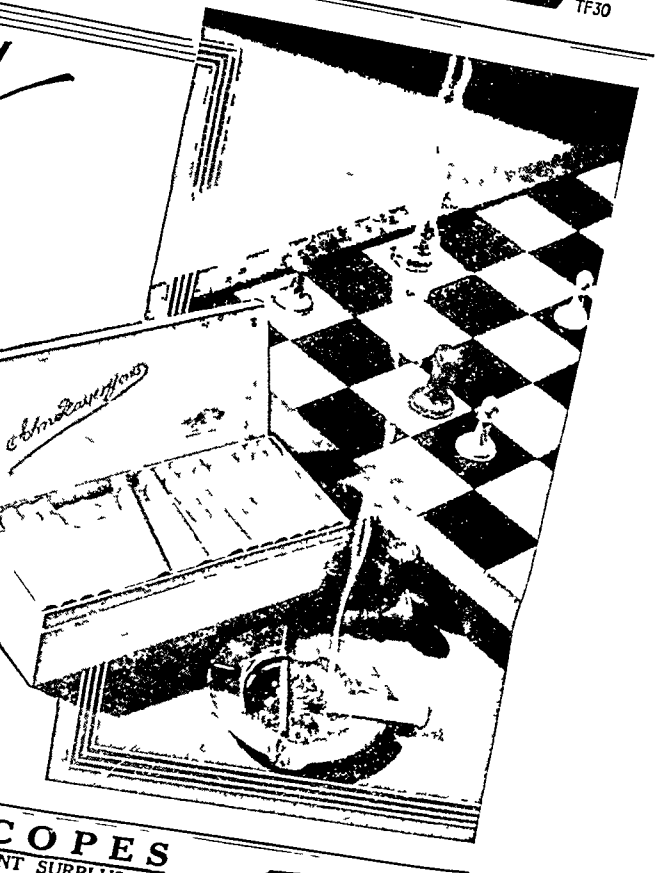
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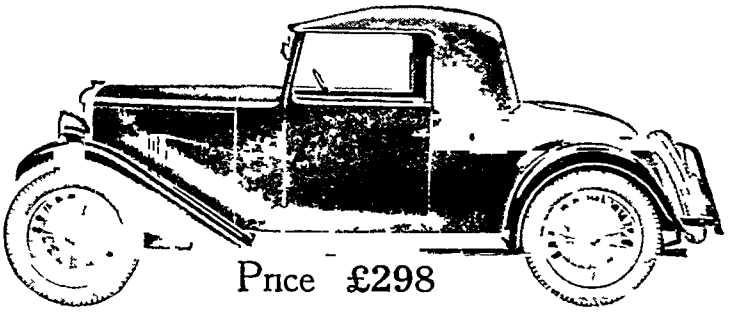
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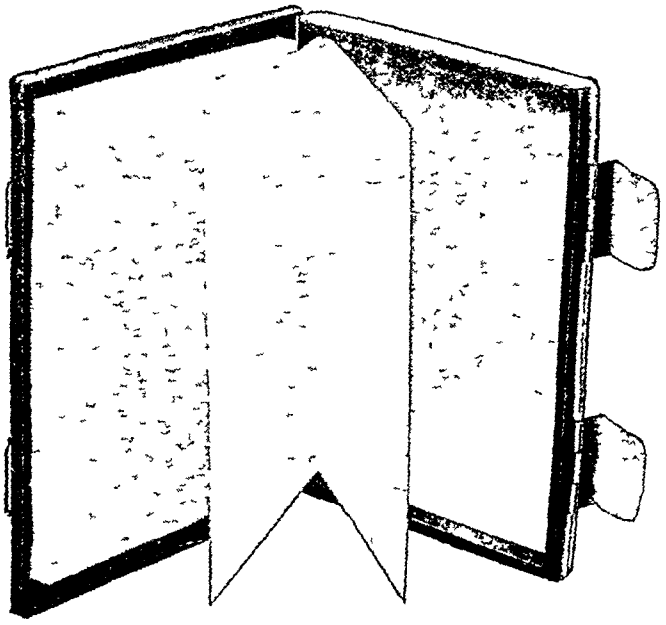


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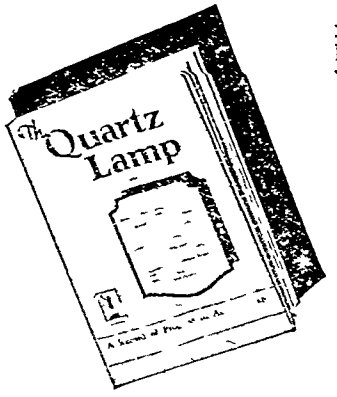
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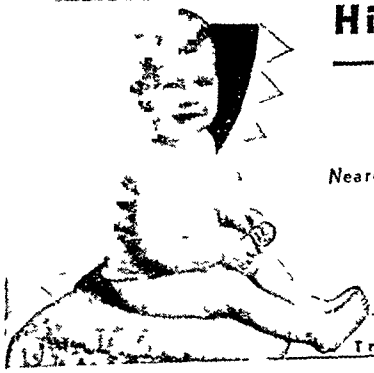
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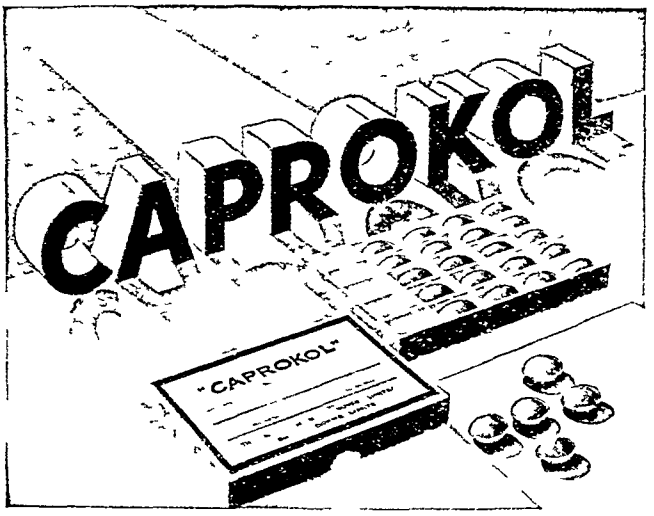
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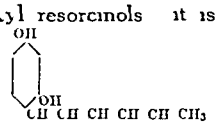
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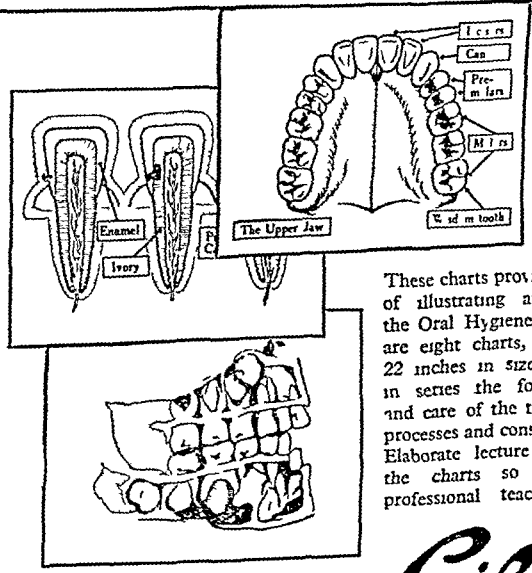
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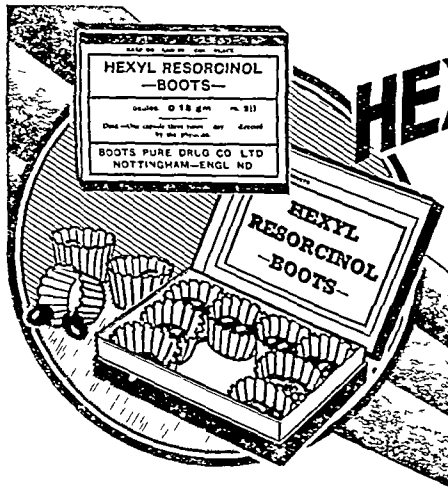
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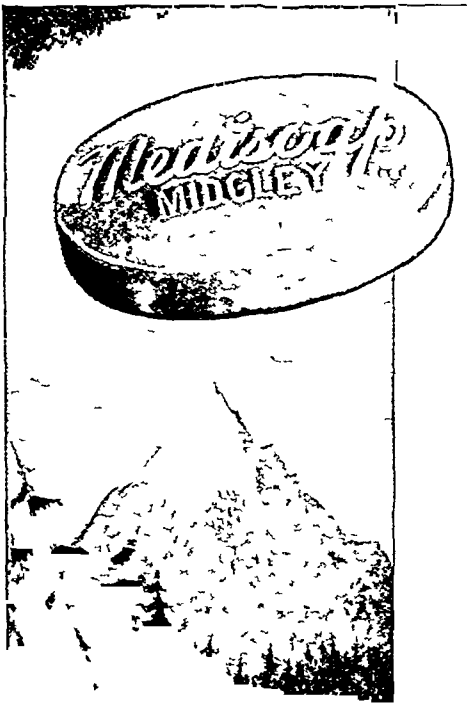
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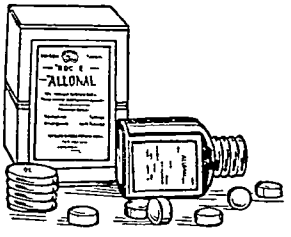
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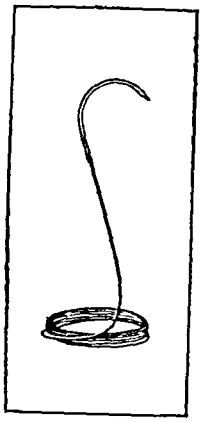
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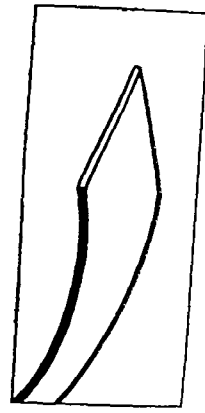
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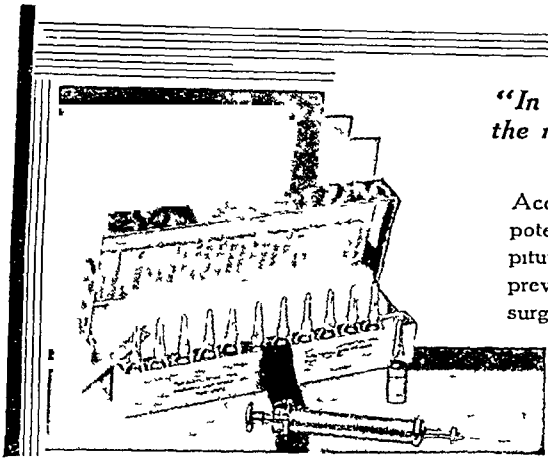
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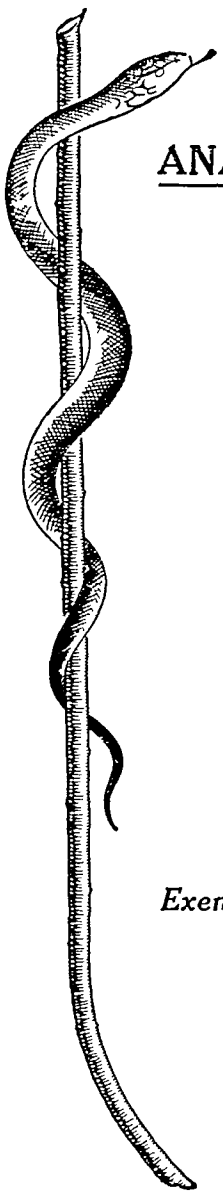
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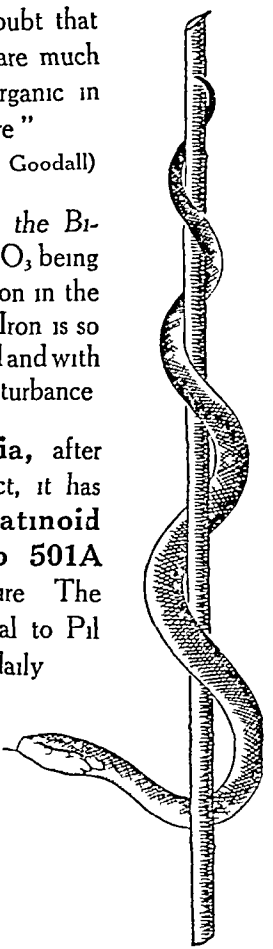
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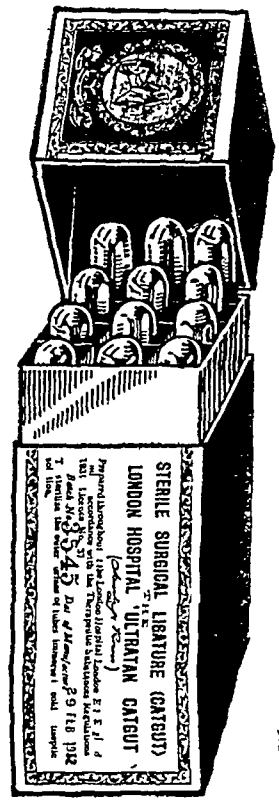
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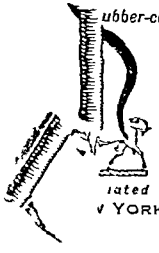
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Remarks
ON
TOTAL ABDOMINAL HYSTERECTOMY FOR MYOMA OF THE UTERUS
WITH SPECIAL REFERENCE TO CANCER OF THE CERVIX AFTER THE SUBTOTAL OPERATION

BY
HERBERT R SPENCER M D B S F R C P
EMERITUS PROFESSOR OF OBSTETRIC MEDICINE IN UNIVERSITY COLLEGE LONDON CONSULTING OBSTETRIC PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL

Thirty years ago I published in the *British Medical Journal*[1] a paper on the first fourteen cases in which I had performed total abdominal hysterectomy for myoma of the uterus my first operation being dated December 19th 1899 Since that time—that is since the end of last century—I have always performed the total operation and not once the subtotal for cases requiring hysterectomy I was led to substitute the total for the partial operation by studying the drawbacks of the latter (post operative haemorrhage exudates discharges sloughs) and especially by recognizing its liability to be followed by malignant disease of the remaining stump as evidenced by many observers since Chrobak called attention to it in 1896[2] and by my own experience (in 1896 and 1899) of sarcoma developing in two out of thirty cases of amputation for myoma (6 6 per cent) Besides those two cases I have observed four cases of cancer of the stump after amputation by other operators one of which occurred twelve years after the amputation and treated by radium remains well after five years the other five cases of malignant disease following amputation all succumbed In the paper mentioned above I gave reasons for the opinion which I still hold that the total operation is in all respects except that it takes a few more minutes to perform a better and safer operation than amputation the so called subtotal operation

HISTORICAL CONSIDERATIONS

In 1906 in an article on hysterectomy[3] I published a list of twenty eight cases of cancer or sarcoma developing in the cervix after supravaginal amputation of the uterus and expressed the opinion that the operation of the removal of the whole uterus is destined to replace the supravaginal amputation as the intraperitoneal treatment of the stump replaced the extraperitoneal In March 1917 before the Royal Society of Medicine[4] I read and published with illustrations the two cases of sarcoma already mentioned and in the same volume[5] Four cases of undiagnosed cancer of the cervix occurring in 200 total hysterectomies for myoma In my advocacy of the total operation at that meeting I met with no support from any of the six gynaecologists who discussed it except Mr Malcolm

In the same *Proceedings*[6] I published two cases of undiagnosed cancer of the body of the uterus complicating myoma which occurred among 200 cases of total hysterectomy One of these a very advanced case had a recurrence seven months later which was removed together with half the bladder and the lower end of the ureter and afterwards the kidney The patient survived the hysterectomy for two years and two months The second patient whose uterus weighed 2½ lb and contained a very extensive columnar celled carcinoma (see illustration loc cit) remained well when last heard from thirteen years later In that paper I invited my colleagues to publish *their* cases of undiagnosed cancer of the body complicating myoma and in order to encourage them cited the published cases of Giles and Kelly and Cullen who amputated the uterus in no less than 77 per cent of these complicated cases (fourteen in number of which one died of sepsis due in the opinion of the authors to their not removing the cervix no five year after history was given) In the discussion of my paper I again had only Mr Malcolm as a supporter I also stated that while I had never amputated a uterus containing cancer of the body whether complicated with myoma or not Cullen had performed the incomplete operation in 25 per cent of twelve cases of uncomplicated cancer of the body

I have since found that other advocates of the subtotal operation have performed this operation with even greater frequency for simple cancer of the body Thus Smith and Grinnell[7] did this in twenty five out of forty one cases (*over 60 per cent*) and Norris and Vogt[8] in seventeen out of fifty seven cases (over 29 per cent) Of the latter series of fifty seven cases in forty treated by total hysterectomy 43 3 per cent and in seventeen treated by amputation only 24 2 per cent were alive after three years The increased final mortality in the amputated cases must be taken into account in considering the relative mortality of the two operations and the same remark applies to cases of inflammatory disease treated by amputation

At the Gynaecological Congress held at Liege in 1930 in discussing a most valuable paper by R Monod[9] on cancer of the cervix following subtotal hysterectomy after congratulating my Belgian colleagues on their century of liberty I remarked that there was one liberty which should be proscribed—namely the liberty of women to have cancer of the cervix after subtotal hysterectomy I advocated the abandonment of this operation I myself having given it up during the last century I then gave the whole of my experience of total abdominal hysterectomy for myoma extending over a period of twenty seven years no patient being discharged before the twenty fourth day after operation The total number is 325 Of these two died from embolism (on the tenth and twenty third day respectively) one from syncope (old heart disease) one (whose tumour weighing 16 lb caused pressure dilatation of the ureters and kidneys) from uraemia one from septic peritonitis (apparently from ulceration of the intestine) one from shock The total was six deaths or 1 8 per cent only one death occurring in the last 127 cases In no case was the bladder injured in two cases the ureter was accidentally cut in one the severed ends were reunited the other requiring nephrectomy both remain well after many years In six of the 325 cases the uterus was removed after Caesarean section for myoma and in one of these and in several of the non pregnant cases the tumours were found to be infected

TOTAL VERSUS SUBTOTAL OPERATION

Spread over the last thirty five years and especially the later years there is an enormous amount of literature dealing with the subject of total *versus* subtotal hysterectomy for myoma I believe I have read and annotated nearly every important paper on the subject written in the English French German and Italian languages In all that literature however I have found no record except my own which gives complete personal statistics with the elucidations necessary to estimate their value extending over the period since last century As a consistent advocate of the total operation I ask those who wish to know what I have written on the subject to read the papers already cited together with the criticism upon them[1 2 4 5 6] *Litera scripta manet*

But why do I an old fellow of 72 who retired from practice five years ago and who would find it

> Suave mari magno turbantibus aequora ventis
> E terra magnum alterius spectare laborem—

why do I put out again on this troubled sea? It is because the total operation has recently lost by death an advocate in the person of my American friend Dr Polak and because however applicable the words of Lucretius and La Rochefoucauld to our feelings on the misfortunes of our friends there remains the sad thought that certainly many hundreds and probably many thousands of women have died of cancer of the cervix left by the incomplete operation—a dreadful and unnecessary eventuality the prevention of which I feel it my duty to urge

My pathological specimens removed by hysterectomy were hardened in salt formalin solution for from two to three weeks and then bisected between long straight needles introduced before hardening the mucosa and cut surface of the tumour examined for abnormalities microscopical sections cut and the tumours traced on glass and drawn the drawings being bound with the notes and the sections preserved and indexed

Only in hardened tumours can one detect early malignant disease and evidence of this fact is given in my papers It is to the non-examination or the superficial examination of specimens in the fresh state that the erroneous statements as to the frequency of malignant changes in myomata are due Thus Pfannenstiel[10] said that he had never met with sarcoma among 1 000 myomata—a statement which in the words of Veit's *Handbuch* is hochst auffallig —yet careful examination of uteri requiring operation shows that it occurs in from 2 to 12 per cent of these cases (in my own cases in 6 6 per cent) and in addition as Bumm has shown supported by my own experience cases diagnosed by the microscope as myomata are found to recur as sarcomata (in a further 2 per cent according to Bumm's experience) Undiagnosed cancer of the cervix was found to be present in 2 per cent of 900 myomatous uteri removed by total hysterectomy and examined by Noble[11] Schottlander and myself and undiagnosed cancer of the body in 1 per cent of myomatous uteri No gynaecologist will deny that cases of cancer whether complicating myoma or not call for the total operation yet skilful and experienced gynaecologists have employed the subtotal operation in 26 60 and even 77 per cent of these cases

Again many gynaecologists say that as they men of great experience have never or rarely seen a case of cancer of the stump it must be very rare The important question is Has the patient *had* it? not Has the operator *seen* it? To give an example, Olshausen the distinguished professor in Berlin for a period of twenty-three years states that he had only seen one case of cancer of the stump among 433 supravaginal hysterectomies which he had performed His successor Professor Bumm in a period of seven years saw seven cases two of which had had amputation performed by Olshausen The truth is that the advocates of the subtotal operation cannot state the number of cases in which carcinoma occurs in the stump without an inquiry into the after history of every one of their cases for a period of at least thirty years subsequent to the operation

FREQUENCY OF NEOPLASM FOLLOWING SUBTOTAL OPERATION

The frequency of the occurrence of malignant disease in the cervix after subtotal hysterectomy is difficult to estimate exactly though some idea may be obtained from the records of individuals and institutions

I have met with six cases (two personal and four after operations by others) Lockyer[12] has met with it three times and many other gynaecologists have encountered it in several up to ten or twelve cases[14] In the records of the Howard Kelly Hospital L Branscombe[15] found forty six cases six being observed in one fortnight In the Mayo Clinic[16] at Rochester ninety nine cases occurred in a period of twenty and a half years Gagey[17] Labarde and Roques[18] found thirty eight cases following supravaginal hysterectomy among 1 108 cases of cervical cancer applying at radiation centres for treatment (3 21 per cent) Polak[19] collected 256 cases in America although excluding cases in which the cancer made its appearance within a year of the original operation In the discussion on his paper twenty more cases were mentioned giving a total of 276 cases in America alone Lately R Monod[9] has collected 138 cases in ten years from six centres for radiotherapy in Paris and with cases from other sources brings his total up to 300 cases from French sources alone Dr V Graff of Iowa informs me that among 215 cases of cancer of the cervix seen he found no fewer than 17 cases of cancer of the stump (nearly 8 per cent) From these records the conclusion may be drawn that cancer of the cervical stump is far from being a rare occurrence

With regard to the question of its cure Monod[9] states that more than half the cases succumb notwithstanding operative and radiation treatment and I think his estimate is higher than the general rate of cure since of my six cases only one and of Sencque's and Oppert's thirty one cases only one remained well after five years while of Lincoln Davis's eight cases not one was known to be cured Peham and Amreich[4] have obtained good results by extirpating the cancerous stump by the extended vaginal operation Of thirteen cases six survived for a period of five years and a seventh for four years In two cases treated by radium vesico-vaginal fistulae occurred From what has been already stated it appears that cancer of the cervical stump occurs in at least 3 per cent of subtotal hysterectomies of which at least half succumb Consequently at least 1 5 per cent must be added to its immediate mortality rate on account of the development of cancer in the remaining cervix from which the total operation is free

There is an interesting question which till recently no one has attempted to answer—namely Does cancer of the cervix after amputation occur more often than in the ordinary unmutilated uterus? Peham and Amreich who are advocates of the subtotal operation found that it occurred much more frequently (in 0 6835 per cent as against 0 025 per cent) or twenty seven times more frequently in the amputated uteri Those authors utilizing, for comparison the general statistics of uterine cancer in Hamburg, base their computation on eight cases of cancer of the stump *observed* in the course of twelve years among 1 253 amputations But the records of the centres for radium treatment show that it occurs in at least 3 per cent of cases applying for treatment which renders it probable that at least thirty six cases of cancer of the stump occurred among those 1 253 cases On this assumption cancer of the cervix following amputation occurs over one hundred times more often than it does in women not thus operated on My advocacy of the total operation has always been quite independent of whether the amputation is a cause as it certainly is a sequel of the operation but *fas est et ab hoste doceri*

The gynaecological treatises of all countries contain an enormous and bewildering mass of statistics on abdominal hysterectomy To mention only the most colossal of these Halban and Seitz[5] where Albrecht gives a tabulated list of forty six authors who have performed total abdominal hysterectomy for myoma only two had had over 300 cases The mortality rate varied from 0 to 25 7 per cent more than half the authors having a death rate of more

than 5 per cent Does anyone suppose that any of these figures represents the real mortality rate at the present time? If not why publish them especially since on the very next page Albrecht states that in the last ten or twelve years the mortality rate of subtotal hysterectomy is 1 9 per cent that of total hysterectomy 3 6 The supposed higher *immediate* mortality of total operation based on incomplete general statistics instead of individual statistics (where the technique is known) has been the chief reason why the total operation has not been more generally adopted The truth is that performed by a good technique the *immediate* mortality of total is not greater (in some cases less) than that of subtotal hysterectomy although it is performed in the more serious cases but the *final* mortality of the total operation is considerably less It is the final mortality which matters and which can only be fully estimated when gynaecologists publish all their cases examine their tumours carefully give the results of their mistaken diagnoses after five years publish those further elucidations to which I have alluded and replace biased impressions by observed facts

Doyen's Experiences with Total Operation

Meanwhile the total operation is being performed more and more frequently by serious gynaecologists though few of them have entirely given up doing the subtotal operation I abandoned the operation during the last century Ten years later (1910) Professor Bumm [7] abandoned it as a result of careful researches to which I have alluded In 1923 Weibel [8] reported that he had completely given it up In 1920 Dr Masson of the Mayo Clinic Rochester showed that the total is a safer operation though he still continued to do the subtotal in 10 per cent of cases of myoma In 1927 [9] he showed that total had (in one year 1926) a lower mortality than the subtotal (1 3 per cent against 1 8 per cent) In 1920 W J Mayo[10] stated that the total operation was a wise procedure In 1931 C H Mayo and C Mayo [11] reporting ninety nine cases of cancer of the cervical stump advised the cupping or coring out of the cervix—an operation by which the routine examination of hardened uteri shows it is sometimes impossible to remove the whole of the mucosa and one the inefficacy of which as a preventive of cancer has been pointed out by W J Mayo L Davis [3] and others In 1924 C Lockyer[12] showed that the total operation had proved on examination of all his cases to have a smaller mortality rate than the subtotal and regretted that he had not performed it more frequently Lockyer's mortality rate for total abdominal hysterectomy (1 54 per cent) has so far as I know not been surpassed in any series (195 cases) so large and complete and if we add the similar series of Miles Phillips (199 cases with five deaths or 2 54 per cent) and my own (325 cases with six deaths or 1 8 per cent) we get a total of 719 cases with fourteen deaths or 1 9 per cent

In order to estimate the value of statistics of hysterectomy for myoma it is necessary to have an idea of the frequency with which it is employed In my opinion the great bulk of myomatous uteri require no operation The ideal operation is myomectomy abdominal or vaginal the former mainly limited to pedunculated large sessile or submucous tumours which are not easily removable by the vaginal route the latter to pedunculated submucous or sessile or partly intramural tumours not usually larger than a child's head It is remarkable how safely and advantageously these tumours can be removed per vaginam after dilatation of the cervix by morcellement even when the tumours are infected [4] or have produced inversion of the uterus [13] The removal of small myomatous uteri by vaginal hysterectomy which with many operators forms the major part of their myoma operations is in my opinion rarely required although it is almost free from immediate danger which renders it a valuable means of treating myoma in old fat feeble patients and certain cases complicated with cancer or where the uterus is fixed by inflammation Small myomatous uteri can however usually be satisfactorily treated by vaginal myomectomy curetting or radium In the treatment of large tumours radiation treatment should in my opinion never be employed With the object of forming some idea of the frequency with which abdominal hysterectomy is resorted to I have suggested the ratio of that operation to ovariotomy for tumours My own ratio is 355 to 658—that is 30 subtotal 325 total hysterectomies and 658 ovariotomies In order to estimate the *final* mortality rate it is necessary to know how many times cancer or sarcoma has been overlooked in body or cervix the results to the patients after five years how many cases of cancer of the stump have occurred and whether patients have died from haemorrhage or even long after the operation from ileus of which the subtotal operation is according to the researches of Corner the most frequent of all causes Of each of these sequels (haemorrhage and ileus) I have met with an instance after subtotal hysterectomy

Having given my experience I again ask the critics of total hysterectomy to give theirs to publish a series of two or three hundred cases in which a careful pathological examination has been made of the uterus and an examination of the patients five years afterwards although the patient may still have a malignant growth develop in the stump even as long as thirty years [6] after the amputation

Technique and Conclusions

One word as to technique All except the first of my cases have been done by Doyen's method which I consider the best The vessels are tied with fine silk the peritoneum closed by lacing together the ligaments with a silk purse string suture the oozing surface of the bases of the broad ligaments picked up with tooth forceps and then seized with small Wertheim forceps and circumligated no mass suture or perforating suture being employed and the vagina left open and lightly packed with gauze to be removed on the second or third day Doyen's operation ensures against any injury to the bladder and I think injury to the ureter should be avoidable by dissection or catheterization of the ureters in cases where this is specially liable to occur The two deaths from embolism which occurred among my earlier cases may perhaps be avoided by employing no perforating sutures as in my late cases It remains at present too frequent a cause of death after abdominal hysterectomy though it rarely occurs before the tenth day and so does not appear in the statistics of those operators who dismiss their patients on or before that day No doubt the younger gynaecologists will lower the rate of mortality if they will study and practise Doyen's technique After all hysterectomy has only just passed its centenary I had the pleasure of introducing Wertheim who published in the *British Medical Journal* his great work on hysterectomy for cancer He was a great advocate of total abdominal hysterectomy for myoma a measure which his pupil Weibel has strenuously advocated since 1925 without I regret to say receiving from his colleagues more support than I have done from mine But *magna est veritas et praevalebit* It is a comfort to an old teacher to know that pupils and strangers have profited by the advice given in these columns thirty years ago The subtotal operation is a nineteenth century operation May there disappear with the first century of the British Medical Association that opprobrium to gynaecology—namely cancer of the cervix left behind by the subtotal operation!

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SOME CAUSES OF FAILURE IN VACCINE THERAPY

BY

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Vaccine therapy is estimated by various observers[1] to give approximately 80 per cent satisfactory results My own experience in over 1 000 cases indicates similar findings In examining the cases of failure in vaccine treatment the causes can be grouped under the following headings

UNSATISFACTORY ANTIGENS AND PERSISTENCE OF INFECTIVE FOCI

A successful vaccine depends upon the isolation of the *infective organisms* in the patient concerned and a common cause of failure is the employment of unsatisfactory specimens which may prevent the isolation of the essential pathogenic organisms and therefore render impossible the production of a suitable antigen In cases of chronic infection particularly specimens should be examined from all possible sources of *infection* in the patient It is not sufficient to presume that the source of infection in such cases is necessarily confined to the condition of which the patient particularly complains Therefore it is not enough to assume that all or any of the organisms so isolated are pathogenic to the patient and it is essential that as far as possible the antigen employed shall include at least in the greater proportion the organisms which can be shown to be pathogenic The only practical method so far available for obtaining such evidence is the employment of the pathogen selective culture method introduced by Solis Cohen in 1927[2] and described as used by myself in other publications[3] There is still no universal standardization of vaccine dosage and this variability is frequently a cause of confusion which difficult to avoid as the susceptibility of individuals to vaccine dosage may be as real as in the case of a therapeutic drug

Persistence of infective foci is another frequent cause of failure in vaccine treatment There are many conditions where a closed focus is present such as may be found in cases of accessory sinuses gall bladder pelvic renal or prostatic infection If these are allowed to remain closed vaccine treatment may not only be a failure, but may be definitely harmful and therefore contraindicated It is essential that a path of exit for discharge of pathological material from any such focus must be ensured otherwise a focal reaction may result and develop into a generalized spread of infection Apart from closed foci, the pathogen selective method frequently demonstrates the presence of an active infection in areas such as those detailed above and these findings will call for local treatment without which vaccine therapy can at best be of only temporary value or may be entirely unsuccessful on account of the persistent reinfection

IMPROPER SELECTION OF THE PATIENT

Every case of infection is not necessarily suitable for vaccine therapy There are several conditions which may contraindicate or render such treatment of no avail and therefore it is essential that some knowledge of the clinical condition present be obtained before prescribing a vaccine

Prophylaxis

Preventive treatment by vaccine against the risk of *infection from catarrhal intestinal or septic infections in* persons of normal health is usually successful and uneventful Failure however occasionally occurs and the presence of an unsuspected focus of infection is usually the reason This may have rendered the patient sensitive to the usual and comparatively large dose of prophylactic vaccine and such findings may require that *subsequent* immunization should be carried out with small doses of the appropriate autogenous vaccine while at the same time the infected foci if found must be efficiently dealt with by operative or local treatment

Therapeutic Treatment

In acute cases of infection failure of vaccine therapy is frequently caused by the indicated vaccine not being administered early enough to ensure any chance of success In cases of pneumococcal staphylococcal streptococcal or gonococcal infection large doses given in the earliest stages will usually either abort the infection or rapidly raise the patient's specific resistance so that the condition is brought to a satisfactory termination more speedily There is comparatively little risk of reaction in acute cases as the patient is not sensitized to the infection as is apt to be the case in subacute and chronic conditions In acute purulent conditions if adequate drainage is not present vaccine therapy should be withheld until such is established Indeed disturbing or even disastrous results may follow the administration of vaccines in cases of antral ethmoidal and mastoid infections or abscesses empyemata etc when inefficient drainage exists

In subacute infections vaccine therapy may fail not by its being unduly postponed but through the patient's inability to respond owing to temporary exhaustion of the normal antibody This indicates the need for reinforcing the general tissue response before vaccine therapy can be effective

In chronic infections such as catarrhs of long standing asthma of bacterial origin infective arthritis and gastro intestinal and cutaneous infections the need for a general

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blood and biochemical examination is frequently of even greater importance and through the neglect of this precaution some haemopoietic metabolic or endocrine defect may well be overlooked the correction of which is essential either to the recovery of the case or to its ability to respond to specific immunization For example the finding of a leucocytosis may indicate the presence of an unsuspected focus of infection requiring special surgical treatment The presence of a leucopenia may suggest the inability of the patient exhausted by a prolonged infection to respond to active immunization A marked eosinophilia may suggest that the patient is hypersensitive and as is frequently found in the asthmatic and allergic conditions requires special attention Lymphocytosis may indicate the presence of an unsuspected leukaemia while an agranulocytosis will contraindicate any attempt at vaccine therapy until a normal leucocyte content of the blood has been redeveloped

Secondary anaemia of a more or less severe degree which exists in cases of chronic infection more frequently than is realized may according to its type demand arsenic iron or liver treatment etc before satisfactory response to vaccine therapy can be obtained The finding of an increased non protein nitrogen and uric acid content of the blood may disclose an unexpected nephritis while in other cases a glucose tolerance test may show a defective pancreatic or hepatic metabolism requiring suitable dietary regulations or endocrine reinforcement Observations upon the calcium content of the blood are of value in chronic catarrhal and other infections particularly of young persons and when present the general response of the patient to vaccine treatment may be enhanced by endocrine treatment and by suitably increasing the vitamin content of the diet These and other blood examinations should form a routine part of the pathological examination associated with the essential bacteriological investigation of a large proportion of cases of chronic infection before a course of vaccine treatment is decided upon Less would be heard of the failure of vaccine therapy in such conditions were it more frequently recognized that when there are underlying pathological lesions or metabolic derangements vaccine treatment of the infective condition cannot do more than maintain an improved antibacterial defence although in doing so it will probably prevent further damage if adequately used along with whatever other general therapeutic measures are indicated

Defective Selection of Type of Vaccine

As mentioned above infective conditions of acute subacut or chronic nature may be present in patients in which very variable states of physiological efficiency exist and if vaccine therapy is to be scientifically prescribed it would be possible to differentiate these conditions and determine the most appropriate treatment for each There is often need of careful consideration in choosing the right type of vaccine for an individual case if failure is to be avoided

Several varieties of vaccine are available which allow of a considerable range and while none of them has a special application to any particular disease or infection each has a fairly definite place in the treatment of infective conditions generally Any of these may be used as stock or autogenous preparations The former are usually employed for prophylactic treatment but also for general therapeutic purposes and are essentially valuable for the immediate treatment of acute cases for which there is not time to prepare an autogenous vaccine and for the initiation of treatment in subacute cases while an autogenous vaccine is being prepared Autogenous vaccines are more frequently essential in the treatment of subacute and chronic infections and failure of vaccine treatment in such conditions may be prevented by replacing a stock vaccine by an autogenous preparation

1 *Ordinary vaccines* which are simply killed bacterial suspensions are the most useful for prophylaxis and also whenever possible in suitably graduated doses for general therapeutic purposes They produce a better and more lasting immunizing effect than the other types of vaccine to be mentioned later but demand a response on the part of the patient which may not be possible in a debilitated case Further in chronic infections a sensitiveness may develop which makes the patient exceptionally reactive to the most minute doses In such cases therefore it is necessary to commence with one of the preparations described below which will stimulate immunity without making undue demands upon the patient's exhausted economy

2 *Sensitized Vaccines*—These are ordinary vaccines which have been treated with homologous antibacterial serums so that the antigenic bacteria are combined with antibody and the antigen is ready for immediate phagocytosis without further elaboration on the part of the patient's tissues These are of special service in acute infections where the question of time and rapid immunizing effect is of the greatest importance They may be given in large doses repeated at twenty four hour intervals and if employed at the earliest stage of infection are particularly successful

3 *Detoxicated vaccines* are ordinary bacterial emulsions so treated by chemical reagents that the bacteria no longer exist as such the vaccine containing a suspension of the stroma of the bacteria with their endotoxins removed These are of undoubted value and are available for similar cases to those for which sensitized vaccines are applicable They have the advantage of not requiring specific antibacterial serums in their preparation but the disadvantage of being not so devoid of reactive effects upon a sensitive patient They have a valuable place in the commencement of vaccine therapy of chronic cases of the less sensitive type The dosage interval is usually shorter than is the case with ordinary vaccines and makes possible a rapid initiation of specific immunization—to be followed later with an ordinary autogenous vaccine

4 *Reinforced Vaccines*—As mentioned above many failures result not from any fault in the vaccine but from the patient's lowered vitality preventing the tissues from responding to the specific stimulus of an autogenous vaccine In these conditions some leucocytic stimulation is required before such response is adequate It is frequently obtained by using a 5 per cent solution of sodium nucleinate as the diluent in the vaccine preparation This can be used with any of the three types of vaccine mentioned Such reinforcement is by no means new but if more often used it would avoid failure in the type of case indicated

5 *Oral Vaccines*—The four types of vaccines already mentioned are usually employed by hypodermic injection It has however been shown by many workers that the oral administration of vaccine both stock and autogenous will produce immunity responses In cases of young children and hypersensitive adults to whom the procedure of a hypodermic injection is so great a horror as to preclude therapy by such means and in whom failure is a foregone conclusion merely because treatment cannot be carried on sufficiently long or regularly to produce any lasting result the possibility of raising a specific immunity by oral administration has a special advantage Either ordinary or detoxicated vaccines may be given orally The doses are usually larger than would be employed if injected The intervals between doses may be less In sensitive patients reactions may occur as during

with an injected vaccine and curative response has been completely satisfactory in many cases The oral method has this advantage that owing to the simplicity of administration treatment will be continued for a sufficient length of time to obtain a successful and lasting result

FAULTY DOSAGE AND DOSE INTERVAL

This is probably a frequent cause of failure in vaccine therapy Apart from routine prophylactic treatment it is irrational to fix a dosage standard for vaccine administration for not only do patients vary widely in their individual susceptibility to bacterial stimulation but the infection from which they suffer may vary from a local to a generalized one and each such variation may require some graduation of dose to meet the individual requirements

In the usual series of prophylactic vaccine doses a standardization has to be adopted Instances may however be encountered in which a normal person is unduly reactive to and disturbed by doses quite suitable to the majority of cases and in such a case the doses must be reduced The result of immunization will be just as effective as that in patients who receive considerably larger amounts of the same vaccine On the other hand there are others for whom the usual prophylactic doses may prove insufficient to obtain the desired immunizing response and for these doses considerably larger than those usually prescribed should be given if failure is to be avoided As regards repetition of prophylactic doses a longer interval than usual should be arranged Too rapid repetition is more likely to prove unsatisfactory than is the use of an interval longer than the usual one

Acute Infections—In the treatment of these cases where there is a good leucocytic response and the patient has not become sensitized as in a chronic infection success of vaccine therapy depends upon the early administration of a sufficiently large dose The adoption of this procedure in pneumococcal streptococcal, staphylococcal and gonococcal infections will result in the abortion of a threatened attack in the large majority of cases while failure follows all too often the tardy and timid attitude which only calls for the help of vaccine treatment when the patient is toxic and overwhelmed by a massive infection—a time when the opportunity of success from such a method of treatment has passed Although ordinary vaccines are frequently used in acute cases the more rational and safest treatment is to employ those specific vaccine preparations which will make least demand upon the patient's immunizing responses and as far as possible present the antigen ready for defensive stimulation For this purpose sensitized or detoxicated vaccines are preferable and may be used in comparatively large doses at a twenty four hour interval An attempt is thereby made to rush forward a specific active immunity to the infection present before the patient's tissue responses are exhausted and the result of this mode of vaccine treatment is frequently successful

Subacute Conditions—The infection has been present here for some time and there is not the same urgency for rapid or large doses The initial leucocytic reaction has often been followed by a leucopenia of lymphocytic type and in such cases although good response is frequently obtained with small doses of the appropriate ordinary vaccine (autogenous or stock) a more satisfactory result may be obtained from the use of either sensitized or detoxicated vaccine which allows of a more rapid repetition of dose and the quicker initiation of a defensive immunity besides being less likely to give rise to reactionary flares that may dishearten both patient and doctor and attribute failure to the vaccine employed As the immunizing response to these vaccines is not so lasting and relapses of infection may occur they should as soon as sufficient improvement is obtained be followed up by a carefully graded series of doses of ordinary vaccine at longer intervals with the object of establishing a more lasting bacterial resistance

Chronic Infections—The greatest difficulty experienced here is in adjusting the appropriate vaccine dose to an individual case Irrational dosage may in certain cases completely negative any chance of success from such treatment As many have emphasized, each dose of vaccine in these cases must be considered as a test dose and although for convenience a vaccine may be supplied in a series of graded doses these must always be considered as liable to alteration by the practitioner responsible for the administration The patient's satisfactory response or unsatisfactory reaction to a dose of vaccine is the best criterion of its being correct or otherwise As a rule it is best in cases of chronic infection to commence with small doses repeated at moderate intervals of three to five days and carefully increased until some slight sign of reaction is detected The dosage interval should then be lengthened and the subsequent dose reduced to one half or less of the previous one very slight increments being made to the amount being given so as to keep below the reactive dose Any dose of vaccine however small which produces improvement in the condition under treatment is sufficiently large for that case and should be increased only when such improvement ceases Any sign of overdosage should be followed by a temporary lengthening of interval and reduction of the next and subsequent doses

In the chronic case the initial course of vaccine treatment is frequently the most important but often the most troublesome and the necessary manipulations of dosage may demand much patience and thought This type of case is apt to be sluggish in response but once the initial process has been satisfactorily started more normal and satisfactory responses will follow subsequent doses and it may ultimately need larger doses before a satisfactory conclusion is reached

Hypersensitive Type of Case—This is apt to be found among those suffering from long standing infections—often when a latent focus of infection exists These cases may be so intolerant of even the smallest dose of vaccine as to contraindicate such treatment Under such conditions a detoxicated preparation may be successful in desensitizing the patient or the removal of an active focus of infection may result in a loss of the sensitiveness These hypersensitive cases are often found to have an eosinophilia and its presence should suggest the possibility of the patient being sensitive and indicate the need for special precautions in commencing vaccine treatment Certain cases are sensitive to their own particular infective organism and as they may be more disturbed by autogenous vaccines than by a stock preparation of similar composition the use of the latter may be more effective In cases of marked sensitiveness oral administration may be successful when hypodermic administration has proved impossible

Insensitive Type of Case—Instances occur especially in the chronic and subacute group of infective conditions where the patient's economy is unable to respond to a vaccine stimulus The infective process has lowered the general tissue vitality and this is shown in such cases by the presence of a more or less marked leucopenia a relative deficiency in the polymorph leucocyte content of the blood and the presence of a preponderance of lymphocytes Under such conditions it is necessary either to employ all possible means to obtain a regeneration of the blood forming centres before commencing vaccine treatment or to combine such treatment with small and very carefully graduated doses of the appropriate vaccine

In the more severe type of non responsive case an even more elaborate form of vaccine treatment may be required as a preliminary measure—namely the employment of a donor to provide an autogenous immune serum A whole blood immune transfusion may be used as an alternative in specially debilitated cases with good immediate though temporary results and may be followed up by the sensitized vaccine similarly obtained

The other and commoner group of non reactive and non responsive cases does not show these grave signs of debility but is apparently impervious to any effect whatever of ordinary full doses of vaccine Such a condition is often found in cases with marked furunculosis and other conditions of local infection less frequently in chronic catarrhal and rheumatic conditions The usual vaccine doses are inadequate and will be written down as a failure unless doses of much greater amount than usual are employed For instance in certain cases of furunculosis which have been abandoned as failures completely satisfactory results have been obtained when the dosage has been increased to three or four times the usual maximum amount

Insufficient Duration of Treatment

This is a further cause of failure and applies especially to the chronic type of infections It is irrational to expect a few small doses of vaccine however carefully they are prepared and arranged for to arrest an infective process that has been present in the system for months or years and much less to reduce or replace pathological processes which have been established Good results are usually obtained by persistent careful treatment But vaccine therapy is not a simple and easy matter It frequently demands much patience and thought and gives scope for considerable nicety in the successful management of a difficult case Without such care failures are more often due to the lack of proper administration than to any fault in the vaccine or therapy itself

Although many may do well after a single course of ten to twelve inoculations most cases of chronic infection such as the rheumatic group will require many more and it is quite usual to have to continue a systematic treatment with vaccine for at least a year Nor should it be considered extravagant to suggest that in the severe cases treatment may have to be carried on perhaps with intervals for two or even three years before ultimate success is obtained when it is considered how extensive the tissue damage may be how long the infection has been present and how debilitated the patient's general condition has become If vaccine treatment in cases of rheumatic infection for instance was commenced earlier and persisted with efficiently a large percentage of the permanent disabilities from this cause would be prevented

The first aim of vaccine therapy is to arrest the infective process by raising an efficient bacterial resistance When this has been accomplished further treatment must still be directed to the maintenance of an active immunity and to the recovery so far as is possible of pathological tissues These later courses of vaccine will usually allow of a considerable increase of interval between doses which are themselves only increased in amount when further improvement is absent In some cases the natural power of maintaining an adequate resistance to a particular infection appears to be deficient and in such the best method of maintaining their freedom from reinfection is by the persistent continuation of vaccine treatment at perhaps monthly intervals Numerous sufferers from chronic respiratory intestinal and rheumatic infection have been changed from a life of invalidism to comparative normal activity by the employment of this method of continuous vaccine treatment which if omitted for too long an interval results in the gradual reappearance of some well recognized symptoms of relapse

Irrational Expectations from Results

This is the last cause of failure to be mentioned Too much in certain cases is expected of a mode of treatment *the action of which must necessarily have definite limitations* Vaccine therapy is not in any sense a cure all and even if there are conditions in which it may be more or less successfully employed as a non specific agent in protein shock therapy its essential sphere is that of a specific immunizing agent against specific infections

If a presumed infective condition proves on investigation to be one of *metabolic derangement* and the infector is only one of secondary although perhaps contributory importance vaccine treatment of this must not be blamed if failure to correct the primary non infective condition results In most chronic infections it is at times more important to treat the associated and resultant derangements of tissue metabolism than to concentrate solely upon the infection itself and unless vaccine treatment is combined with other remedial measures it can not be expected to produce the result or improvement which is anticipated clinically Vaccine treatment is an invaluable therapeutic measure and all too frequently advantage is not taken of its help in the scope of clinical practice It is either not employed early enough to be of real service or too much is expected of its exhibition under conditions which preclude its success

There are therefore several causes of failure in vaccine treatment some of which may be avoided by a proper appreciation of the underlying difficulties which are apt to exist others which depend upon the presence of pathological conditions beyond the scope of clinical control Nevertheless when all details are considered failures occur in not more than 20 per cent. of cases and as pointed out above may with proper care be definitely less

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THE MODERN TREATMENT OF GASTRO-ENTEROPTOSIS

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Inefficacy in the treatment of gastro enteroptosis is due to our erroneous conception of the unity of this morbid condition Gastro enteroptosis is not one disease There are four distinct forms of it and we could in fact from the nosographical point of view speak of four different diseases These are (*a*) the constitutional gastro enteroptosis or Stiller's syndrome (*b*) the neurotic gastro enteroptosis or Adler's syndrome (*c*) the organic gastro enteroptosis or Glenard's syndrome and (*d*) the gastro enteroptosis complicated by perivisceritis For a perfect individualization of our therapeutic handling—the only safe way to success—we must consider this division which is based not on a static but on a dynamic clinical observation of gastro-enteroptosis and also on the observation of the action of various therapeutical agents

Stiller's Syndrome

The term Stiller's syndrome is applied to this form of gastro enteroptosis because it was Stiller (of Budapest) who first pointed out the relation of gastro-enteroptosis to a type of constitution—that is to a particular morphological construction of the individual

This form of gastro enteroptosis is not a morbid condition but a special type of constitution—one of those special types into which men have been grouped according to their morphological features It coincides and is synonymous with what is known as asthenic constitution (Stiller and Kretchmer) linear type (Stockard) microsplanchnic hypovegetative constitution (Pende) Individuals who possess the features of this biotype have usually a stature below the average Their thorax is bigger than the abdomen and is narrow and long The abdomen is restricted both in the transverse and in the antero posterior diameter and has flaccid and thin muscular walls The limbs are long the muscles thin showing scarcely any outline There is a very great scarcity of fat Clinical and radiological examination of the internal organs shows a small and dropped heart gastroptosis—meaning elongation of the stomach which brings the inferior pole of this organ into the pelvis—coloptosis and nephroptosis These persons have a low blood pressure Psychologically—as has been emphasized by the work of Kretchmer—they have a tendency towards introversion They do not show any symptoms and it is in fact remarkable how an intensely ptosed stomach may function perfectly It must not be forgotten however that on account of their endocrine vegetative and psychical inadequacies they are predisposed to certain diseases in other words they resist certain external aetiological factors less well than do others Thus defects of diet will produce in them various dyspeptic disturbances infections will easily localize in the digestive tube while psychical trauma will readily develop neurotic conditions of the introvert (schizoid type) Certain infections like tuberculosis or scarlet fever will develop more intensely than is the case with other people

It is important to bear in mind the physiopathology of this condition Such individuals are born with certain inadequacies of their endocrines and of their vegetative nervous system—vegetative imbalance and thyroid and gonad dysfunction On account of this there occurs a maldevelopment of the stature of the viscera and also of the central nervous system, particularly of the psycho associational cortex the seat of the mental processes The maldevelopment of the viscera consists in viscero ptosis which can be explained as follows The stomach and the other abdominal viscera are maintained in position (*a*) by the tonus of the vegetative nervous system (*b*) by the intra abdominal fat which constitutes a sort of cushion (*c*) by the tonus of the muscular retention apparatus—diaphragm abdominal muscles and diaphragma pelvis As in the individuals we are describing there occurs a constitutional disturbance of the vegetative nervous system and of the storage of fat the production of this gastro enteroptosis is easily understood

From a therapeutic standpoint one may say regarding constitutional gastro enteroptosis what Osler said of hypertension The greatest complication of this form of gastro enteroptosis is that a physician may discover it and communicate his discovery to the patient Constitutional gastro enteroptotics show no symptoms and although the patients cannot lead a very strenuous life they can maintain perfect health up to a very old age When however they are told by their physician that they have a dropped stomach the clinical picture changes completely From that day onwards their life becomes terrible Their attention being drawn to the dropped stomach their mental balance—which as we have seen is not perfect—is upset On the strength of their tendency to introspection they develop a syndrome of anxiety neurosis centred on their digestive functions As on account of their special mental make up they have the tendency to shirk the difficulties of life by the flight into disease—in other words to express their difficulties by what Adler has called organ jargon—a dyspeptic syndrome develop Thanks to their physician they have been furnished with a convenient form of organic expression of their difficulties The first rule therefore in handling constitutional gastro enteroptosis consists in the avoidance of drawing attention to the visceral condition but this rule does not summarize the whole attitude of the internist Something more positive must be done The life of the patient must be adapted so as to make him avoid great physical and mental strain His diet particularly must be adjusted so as to be of easy digestion substantial quantitatively and complete from a qualitative point of view

ADLER'S SYNDROME

The term 'Adler's syndrome' must be applied to this form of gastro enteroptosis because it is owing to Adler that we understand the mechanism of the expression of the mental difficulties of an individual through symptoms related to an organ in a condition of inferiority in other words through organ jargon

From a clinical descriptive point of view sufferers from Adler's syndrome have the morphological features described with the preceding form—the gastro enteroptotic habitus They are not however free from symptoms and even as children they give evidence of psychical imbalance being nervous sensitive and difficult The real and complete morbid condition occurs later and begins at certain periods of life corresponding to situations of mental difficulty as for example in puberty marriage menopausis or following great emotional stress When the morbid condition is completed symptoms may be grouped into two symptom complexes—digestive and nervous—which are added to the morphological symptom complex or gastro enteroptotic habitus Morphological, digestive and nervous symptom complexes can thus be described as constituting the gastro enteroptotic tripod The digestive symptom complex is of the irregular type Patients complain of lack of appetite They feel a great weight on the abdomen immediately after meals—even while they are taking their meals Gas is expelled from the mouth following aerophagy or from the anus In testinal symptoms such as constipation often occur All these symptoms are not relieved in the reclining position nor are they relieved through Glenard's test to be described later Their essential feature is that they are erratic The nervous symptom complex comprises headaches insomnia depression a tendency towards brooding upon themselves (Kretchmer's schizoid syndrome) and principally anxiety as to their condition These patients often think that they have a severe abdominal disease They restrict their social activities They restrict in particular their diet and thus a vicious circle occurs because the inanition to which they condemn themselves accentuates their gastro enteroptosis This inanition causes in fact the disappearance of the scanty intra abdominal fat that remains the atrophy of the muscular wall of the abdomen and of the viscera and the dysfunction of the badly nourished endocrines and vegetative nervous system

They thus differ clinically from those patients showing the pure Stiller's syndrome—a difference which can be explained by the study of their physiopathology In this case also patients are born with the same psychical endocrine and nervous vegetative inadequacies which in conjunction with certain external factors help in the development of the constitutional gastro enteroptosis of Stiller's syndrome There is however a certain peculiarity in the aetiological constellation of Adler's syndrome in that the psychical constitutional inadequacy is more marked Further another mechanism interferes Such

individuals remain for a certain time without any symptoms as in the pure Stiller's syndrome until they find themselves in a difficulty—in a position of psychical conflict By the well known psychical mechanism emphasized by Adler this psychical conflict will express itself in organic language To get out of his difficulty the patient grasps his inferior organ the ptosed stomach and concentrates his mind on it He becomes aware of the slight disturbance of digestion due to gastro enteroptosis and he cultivates this disagreeable symptom as an escape from the conflict A vicious circle is established because the concentration of the mind on the stomach accentuates the disturbances of the organ As I have already pointed out this introduction of the psychical element into the gastroptosis is often initiated by the physician who speaks to the patient about a dropped stomach

Value of Psychotherapy

The physiopathology of this syndrome being different from that of Stiller's syndrome treatment will also follow different lines Psychotherapy is the basic but not the exclusive therapeutical procedure The first thing that must be done is to find out the difficulty of the patient—his conflict—and endeavour to remove it This does not demand those long psycho analytical explorations which have been the fashion for a certain time The careful study of the personality of the patient will be made while the physician is treating him with other methods It is much safer not to concentrate on a pure psychotherapeutic handling but to permeate with psychotherapy our whole procedure

The next element of the psychotherapeutical handling of the neurotic gastro enteroptotic patient consists in diverting attention from his digestive disturbances This is a very delicate part of treatment because such patients often hold *fast to their morbid condition* as it is for them the means through which they satisfy their will to power Thus we must endeavour to change the attitude of the patient to his disease This will not be secured with rough optimism the famous pull yourself together principle but with a careful psychology the success of which does not depend on this or that method but on the tact and personality of the physician While we are changing the attitude of the patient to his disease we have to encourage him and of course this encouragement will be more easily accomplished through a distinct amelioration of the physical condition Such patients are not purely mental They have an organ inferiority of the stomach and intestines which must be dealt with They have an abnormal condition of their vegetative nervous system and endocrines which also must be considered Pure psychotherapy has never been a good method of treatment

Other Forms of Treatment

Dietotherapy is also a star of first magnitude of the therapeutical constellation to be applied to these patients Abundant substantial and easily digested food must be given after taking into consideration the individual reactions Many of these patients eat too little not only because their digestive capacity is diminished but also on account of a certain mental element of anxiety This voluntary inanition accentuates as we have seen their morbid condition by the mechanism of a vicious circle which must be broken through dietotherapy As with all therapeutic methods dietotherapy must not be applied exclusively but in combination with other means of treatment The high caloric and substantial diet which is advised in gastro enteroptosis may not be supported without the help of certain pharmaceutical procedures The patient will be advised at the beginning of the cure to take his meals lying down or at all events to rest on a couch during the digestive period

Next to psychotherapy and dietotherapy it is a combination of physiotherapeutical procedures that is of the greatest importance in this type of patient The best physiotherapeutical method in my experience is the continuous galvanic current—one electrode on the back and another slightly smaller on the abdomen Small doses 10 to 20 milliamperes are sufficient but often patients cannot stand more than 5 A series of fourteen treatments one every two or three days brings great amelioration of the condition Gymnastics in the form of the various Swedish movements respiratory exercises and general massage are of great help The focusing of the attention on the gymnastics of the abdominal muscles is not here so important as it will be for the next form of gastro enteroptosis *Climatotherapy* is also valuable A short sojourn in a mountain climatic station or in the Highlands of Scotland or at a height of over 3 000 feet on the Continent is of great benefit If during this sojourn a careful dietotherapy is applied and the psychological environment is cultivated a very beneficient physiotherapeutical synergy is obtained

Further Methods

The therapeutical constellation will be completed by the following adjuvant methods (*a*) actinotherapy under the form of carbon arc irradiation with carbons rich in short ultra violet (*b*) pharmacotherapy in the form of alkalis (*c*) biological therapy in the form of pancreatic or gonad preparations Crenotherapeutical orthopaedic and surgical procedures are not indicated It is useless to waste time with a sojourn at a spa when a stay in a climatic mountain health resort is far more beneficial The wearing of an abdominal belt makes these patients feel uncomfortable and rather helps them to cultivate their disease by concentrating their attention on their dropped viscera

As for surgery it is when this procedure is applied to such a form of gastroptosis that the term vandalism used by Stiller becomes adequate In most cases patients suffer after the operation as much or even more than before In exceptional cases some relief may be obtained but I think that on these occasions we have to do with an intense form of psychotherapy A few years ago I myself advised an operation in a case of visceroptosis which did not yield to any treatment because I considered erroneously that the patient had organic gastro-enteroptosis On opening the abdomen the surgeon found that the visceral condition was not such as to justify radical fixation and he closed the abdomen without any special interference with the viscera Notwithstanding that the patient got rid of her symptoms

Unfortunately many errors are committed in this direction because by a singular coincidence patients attacked with this affliction clamour loudly for a surgical intervention When struck with what Tenon called the mania operativa passiva they may fulfil the wishes in the presence of surgeons afflicted with a mania operativa activa and the most fanta[illegible] result from such an [illegible]

GLENARD'S SYNDROME

The organic gastro enter[illegible] named thus from [illegible] gastro enteropto[illegible] —is not a pure constitutional [illegible] nor a nervous disease [illegible] organic disease of the digestive organs In fact although there is in such patients a certain psychical element it is [illegible]

digestive organs that dominates the clinical picture and directs the therapeutic handling

Here also is found the same basic morphological symptom complex the gastro enteroptotic habitus which characterizes the three forms of gastro enteroptosis but this morphological symptom complex is more accentuated Here also we meet with nervous and digestive symptoms as in the neurotic gastro enteroptoses but they differ from those of the neurotic gastro enteroptoses and depend on the anatomical condition of the organs involved The common feature of these symptoms is the orthostatic accentuation Symptoms are more intense when the patients pass from the horizontal to the vertical position and in general rest in a horizontal position brings great relief Symptoms are also relieved when Glenard s test is applied—that is, when the physician placing himself behind the patient makes a sort of belt with his arms and tries either to raise with his two hands the hypogastrium or to press the whole abdominal surface from the front backwards This relief through horizontal position and through Glenard s belt test is not met with in any other form of gastro enteroptosis

Features According to Localization

The anatomical condition of the digestive organs causes some variation in symptoms

(*a*) In the total gastro pyloro duodenoptosis—that is in cases in which the inferior pole of the stomach pylorus and duodenum are all lower than normal—the gastric evacuation is disturbed in general and symptoms take the form of hyposthenic dyspepsia with aerophagy Patients complain of weight in the stomach immediately after meals (and even while they are taking them), of flatulence nausea, and constipation The general condition is much impaired There is a general feeling of depression and slight headaches The pulse rate is usually accelerated this acceleration also diminishing when the patient lies down (Leven s orthostatic tachycardia)

(*b*) In the vertical dislocation of the stomach its lower pole is ptosed but the pylorus and the duodenal bulb remain fixed There thus occurs a sort of obstruction in the pyloro duodenal passage and the clinical picture is that of the pyloric syndrome At a certain interval after meals patients suffer from pains acidity and sometimes vomiting These symptoms are grouped into periods of suffering—weeks or even months—and there are intervals of calm as in the case of duodenal ulcer Relief is marked in the horizontal position or during Glenard s test The depression and the headaches are more accentuated

(*c*) In gastro pyloro proto duodenoptosis the lower pole of the stomach the pylorus and the duodenal bulb are ptosed but the second portion of the duodenum remains fixed The pylorus and the protoduodenum drag downwards the second portion of the duodenum and so make it describe a sort of horseshoe The evacuation of this portion is thus disturbed an occurrence which is accentuated by the closing of the duodeno jejunal angle on account of that dragging down of the second portion of the duodenum It is the disturbance of evacuation of the duodenum that explains the severity of the clinical picture which takes the form of the duodenal stasic syndrome Pains are late as in the preceding group and are accompanied by vomiting An attack of diarrhoea often marks the end of the painful attack There often occurs a slight jaundice this hepatic involvement being due to the disturbance of the evacuation of the bile from the abnormal position of the duodenum The general condition is much disturbed and the nervous symptoms are much more accentuated It is in this form that we meet with the greatest cachexia a condition which diminishes so much the resistance of the body that tuberculosis can easily develop It is here also that we meet with intense headaches the so called duodenal migraines

(*d*) In gastro coloptosis the colon as well is ptosed and in many cases the colon involvement predominates being often limited to the right colon (mobile caecum) Intestinal symptoms particularly constipation and attacks of diarrhoea, constitute the essential symptom complex in the latter type

The physiopathology of this condition explains these clinical peculiarities Such patients are born with the same inadequacies of endocrines and nervous system as those belonging to the preceding forms There is, however a more localized maldevelopment of the viscera and particularly anomalies of the development of the peritoneum Later in life external aetiological factors act with greater intensity than in the case of the neurotic gastro enteroptosis, and act particularly on the static condition of the viscera These factors consist in faults in diet in malnutrition in various cachetic diseases repeated pregnancies and sudden diminution of intra abdominal pressure such as for example, occurs in evacuation of ascites or in removal of large abdominal tumours Thus this localized constitutional maldevelopment of the viscera and this intense action of external aetiological factors on intra abdominal conditions explain the preponderance of the organic visceral element

Visceral Orthopaedy and Other Treatment

The preponderance of this visceral element indicates a line of treatment different from that of the preceding forms The basic therapeutical procedure here is visceral orthopaedy This consists in the application of various belts or bandages Such belts are of two kinds the Glenard type which is a simple bandage and the Enriquez type which has a pneumatic cushion that can be filled with air As far as possible the first application of these belts must be made with the help of a radiological examination at all events, the action of these belts must be followed closely for a time Often patients feel a great relief but in certain cases this does not occur, and there may even be an accentuation of the symptoms This means either that the suspension of the viscera has not been well made and on this point an x ray examination will give certain information or that there is a superadded nervous vegetative disturbance, in which case the belt must be discarded

Visceral orthopaedy will be completed by a combination of special electrotherapeutical and kinesitherapeutical procedures consisting of massage of the abdominal muscles special gymnastics of the abdominal muscles aided by the application to the latter of galvanic interrupted current This form of physical treatment cannot however yield any results unless it is applied by the gastro enterologist himself As we have seen conditions in gastro enteroptosis are so complicated that an unqualified masseur or a simple technician electrotherapeutist can do more harm than good The evolution of gastro enterology towards the application of physical methods by the specialist himself finds in such cases an ample justification

Dietetic treatment cannot follow in this form the lines indicated for the two preceding forms because there is a great incapacity of the digestive function We must however try to give patients substantial feeding following the individual reactions of each individual case and help the digestion with various pharmaceutical preparations Among these the best are alkalis in small doses taken immediately after meals mixed with sodium sulphate (half a drachm of each in a tumblerful of Vichy water taken in the morning on awakening) This last preparation has the property of stimulating the function

of the liver and Glenard himself showed the importance of the hepatic element in such conditions Insulin treatment combined with glucose feeding also constitutes an important element in the treatment of such patients but is not successful with all of them It is better applied in a nursing home Crenotherapy must be applied to such patients when their condition is not far advanced The Vichy type of spa is essentially indicated because it acts as Glenard has shown through the modification of the functions of the liver Carlsbad and Chatel Guyon are indicated in forms with distinct constipation Harrogate Bridge of Allan Spa Cheltenham Spa Leamington Spa Vittel Kissingen and Wiesbaden for a milder treatment

Surgery must be considered only as an adjuvant method and is indicated exclusively in my opinion when the duodenum is involved Even in this case everything must be done to treat the patient medically before there is any surgical intervention and also to continue internistic treatment after surgical operation I have seen so many patients after a more or less short temporary relief following operation relapse into their previous condition that I am becoming more and more sceptical about the success of these procedures I am asking myself if that temporary relief has not been determined by the enforced rest and severe treatment in a nursing home necessitated by the operation Such nursing home treatment incidentally is much indicated in these cases

GASTRO ENTEROPTOSIS WITH PERIVISCERITIS

This is the fourth form of gastro enteroptosis and differs from a clinical physiopathological and therapeutical point of view from the others Clinically it is characterized principally by the fact that pains are more intense more permanent and are not relieved in the horizontal position nor by Glenard's test Digestive disturbances gastric or intestinal are also more marked more permanent and also persist in the horizontal position or in the eliciting of the Glenard's test The general impairment of nutrition is great Pain is elicited on pressure in various parts of the abdomen and radiological exploration shows the immobilization of the viscera These patients are *organic gastro enteroptotics* in whom periviscerits has determined adhesions This periviscerits is most frequently the effect of abdominal operations The soil is very important and it has been noted that there are individuals in whom post operative adhesions are produced more easily than others Periviscerits may however be the sequel of a simple colitis

Treatment differs from that of the other forms The basic therapeutical method is abdominal diathermy which —as all the physical methods relating to digestive diseases —*must* be applied under the direct supervision of the gastro enterologist The diathermy is helped in its action by certain protein shock preparations Visceral orthopaedy in this form does more harm than good and patients feel very uncomfortable with abdominal belts Massage is contraindicated Surgical intervention may bring a temporary relief but it is well known that adhesions separated surgically are easily reformed Care must be taken to prescribe for these patients a diet as complete from a qualitative and quantitative point of view as possible Psychotherapy is important but is not the predominant method as in the case of neurotic gastro enteroptosis Treatment in a nursing home is strongly advisable Crenotherapeutical procedures are useless

GENERAL CONCLUSIONS

Enough has been said to show that within the frame of the textbook gastro enteroptosis modern clinical observation—the basis of the science of treatment—allows us to distinguish four essentially different conditions each one susceptible to different therapeutic procedures The constitutional gastro enteroptosis or Stiller's syndrome is a constitutional type and not a disease The neurotic gastro enteroptosis or Adler's syndrome is a nervous disease Glenard's syndrome and the gastro enteroptosis with periviscerits are both organic diseases

This division is of course important only from a nosographical point of view we treat individuals and not diseases In order to treat individuals however and to be able to detect the individual peculiarities of each patient precise clinical descriptions of groups are necessary and the justification of the description I have given is that it serves as a better introduction to individual treatment than does the usual textbook conception

A NOTE ON FOOD ALLERGY

BY

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Hypersensitiveness to the proteins of certain kinds of food is more common than is generally realized and may show itself by various forms of reaction The appearance of an urticarial rash and occasionally vomiting and diarrhoea in some people following the ingestion of shell fish (for example oysters) has been recognized for a long time But proteins from many other foods may produce allergic reactions in susceptible individuals and moreover it would appear that the exciting agent need not necessarily be a protein but that non nitrogenous substances may possibly be responsible in some cases

SYMPTOMATOLOGY OF FOOD ALLERGY

Acute Cases.—Symptoms may be gastric or intestinal or both and come on promptly after eating the particular food to which the patient is sensitive In many cases sickness and vomiting abdominal pain colic diarrhoea constipation and sometimes diarrhoea are the most frequent symptoms They are probably due to spasm of the smooth muscle with congestion and oedema of the mucous membrane and resulting hypersecretion Some of the severe cases may simulate an acute surgical abdomen and symptoms of obstruction—due to muscular spasm and localized angioneurotic oedema—may lead to an unnecessary laparotomy being performed

In other cases the colon reacts and a mucous colitis occurs An attack of urticaria or angioneurotic oedema may accompany the gastro intestinal disturbances but this is by no means a constant feature An acute oedematous swelling of the lips mouth and pharynx associated with a burning sensation in the mucous membranes occasionally arises and may be accompanied by mucous colitis Urticaria and angioneurotic oedema may occur independently of other manifestations and may affect any part of the body Sometimes a attack of migraine or other cerebral disturbance sets up [illegible] there may be an attack of diplopia or hemiplegia In a few instances fortunately very rare alarming symptoms resembling acute anaphylaxis [illegible] at once Here there is severe vomiting and diarrhoea accompanied by sickness vomiting and diarrhoea bloody—urticarial rash [illegible] a few hours

Subacut and Chronic Cases.—[illegible] with abdominal discomfort [illegible] a feeling of sickness and [illegible]

simulate those of chronic gastric or duodenal ulcer chronic appendicitis or cholecystitis Pain in the lower abdomen accompanied by painful micturition may simulate bladder trouble and rectal spasm and tenesmus may suggest a local lesion or possibly a tabetic crisis Symptoms of *mucous colitis* are frequently the chief feature of chronic cases and hyperperistalsis with diarrhoea or constipation may be present The symptoms generally persist over a *long period unless the nature of the condition* be recognized and dealt with accordingly

In acute cases the close and constant relationship between the symptoms and the ingestion of a particular food is frequently discovered by the patient himself and he knows that unless he avoids this food he will be ill In subacute and chronic cases however the symptoms are more insidious and while they always bear a relationship to food this may not be so obvious as the interval may be longer than that in the acute cases and the symptoms may vary in severity Further symptoms often simulate those of other subacute or chronic abdominal conditions

Eczema in young children is not uncommonly allergic and due to sensitization to food such as egg cow's milk oats wheat barley (barley water) The allergic agent *may even be conveyed to the infant from the mother's* food through her milk Cases of infants being seriously ill at weaning time [1] [2] when given their first feeds of *cow's milk* are also known and the symptoms recorded have included pallor redness and oedema of lips severe asthma and violent vomiting The severe symptoms pass off in an hour or two leaving the child prostrated and on the following day it is quite well until the next feed is given

Influence of Heredity

There is much to be said for a hereditary factor in allergic disease It is often familial in distribution and allergic manifestations of one form or another tend to be prevalent among closely related persons The specific sensitivity is possibly *not inherited but the ability* to become sensitive is transmitted from one generation to another and anyone with such an inheritance may become sensitive to any allergic agent with which he may come into adequate contact Thus it does not necessarily follow that descendants will suffer from the same type of allergic manifestation as their antecedents

The following case is a good example of chronic food allergy in which the patient was sensitive to eggs

A healthy man at the age of 25 years had an attack of abdominal pain which confined him to bed for a week and was considered to be due to appendicitis Four months later he had a similar attack and this time his appendix was removed Eight months after the appendicectomy he began to suffer from vague abdominal pain sometimes fairly severe and generally more marked in the epigastrium Lasting about half an hour or perhaps an hour the discomfort or pain generally came on about two hours after breakfast or in the evening two hours after the main meal of the day but seldom after the light midday lunch He would suffer in this way for several days and then perhaps for a week or more he would feel quite well He never vomited and never had any melaena From the onset of the symptoms he dieted himself taking no meat vegetables or fruit but restricting himself to milk foods eggs tea and bread and butter He found however that such dietary made no difference to his symptoms and after about seven months suffering he came under my care as a possible case of gastric or duodenal ulcer He was found to be a well nourished and healthy looking man whose bowels moved regularly without aperients and whose only complaint on examination was some general abdominal pain and more marked local pain and tenderness in the epigastrium (at the upper end of the old operation scar) Nothing abnormal could be made out in any of the systems Fractional gastric analysis and *x* ray examination of the gastro intestinal tract revealed no abnormality and the Wassermann reaction of the blood was negative

Pending investigations he was put on a milk diet (including eggs) but as the symptoms were in no way relieved at the end of five days he was given some tinct belladonnae before meals and an alkali powder after The pain and discomfort *got worse* however and three days later the belladonna and alkali were stopped and he was given a dietary of fish bread and butter and tea The milk foods and eggs were continued but in smaller quantities for two days more As there was no improvement in his symptoms the possibility of *an idiosyncrasy* was thought of and it was decided to omit the eggs from the dietary Immediately this was done the pain and discomfort disappeared and the patient felt better Six days later he was given the ordinary hospital light diet but *without eggs* and allowed out of bed Symptoms did not recur He was sent home with instructions to eat all ordinary foods but scrupulously to avoid eggs and any puddings cakes etc containing eggs He has since remained perfectly well and taking care to avoid eggs in any shape or form he can eat everything else including roast pork

On inquiring into his history it was found that he had *previously enjoyed good health although he had been subject* to nasal and bronchial catarrh but not to hay fever or asthma His father who was still alive at the age of 79 had suffered from asthma since he was 70 His maternal grandmother had suffered from asthma *and his only child was also an asthmatic*

Diagnosis and Treatment

In the diagnosis of a case of food allergy the history is of the greatest importance Careful inquiry into each attack is essential and all varieties of food taken at every meal must be reviewed and their relation to attacks or the absence of attacks noted A previous history in the patient or his family and antecedents of asthma hay fever urticaria angioneurotic oedema migraine eczema or even gastro intestinal symptoms is suggestive Sometimes the patient himself will suspect certain foods which seem to disagree with him or he may have definite dislikes in regard to certain articles

In those cases the effect of the elimination of such foods from the diet should be tried It is often necessary to get the patient to keep for a time a diary of all the articles of food he eats and to note the occurrence or exacerbation of symptoms It may then appear that symptoms are always present on the day when some particular kind or combination of food has been taken or *on the following* day Another method recommended by Rowe [3] is to draw up a series of trial diets (Rowe suggests five) each differing from the other as far as possible and containing foods which only rarely produce allergic effects Each diet is tried in turn for one to two weeks until one is found which does not produce symptoms This is then used as a basic diet and to it new foods are added every three or four days beginning with those least likely to produce allergy Any food that gives rise to symptoms is then permanently excluded and eventually the patient will know exactly what foods he must avoid

Rowe has found that the foods most frequently giving rise to allergic reactions are wheat eggs and milk Next in frequency come chocolate cabbage tomatoes orange potatoes cauliflower strawberries bananas walnut carrots and pork Among those least likely to cause trouble are poultry turnips peas beans prunes honey beetroot radishes asparagus mushrooms plums pepper vinegar and tea Intermediate in frequency are salmon oysters lobsters crabs shrimps rice lettuce celery peaches grapes cherries raisins figs lemons almonds beef lamb mustard and coffee There are many others

If the patient is not sensitive to milk then a basic diet of milk only may be used and other foods added from time to time the effect of each addition being watched *In some cases* minute quantities of a food may be sufficient to produce symptoms hence the necessity of identifying all the constituents of any article of food Sometimes

a patient may be very mildly sensitive to more foods than one and a combination of them will produce symptoms whereas one alone is insufficient for any appreciable effect to result I have seen a patient who would develop severe symptoms—abdominal pain sickness and vomiting—following the ingestion of coffee and cheese at one meal whilst he could take either of these at separate meals without effect

Skin tests similar to those with pollens in hay fever have been tried in the recognition of allergic foods but they are by no means infallible At present a careful history a scrutiny of the diet and the use of trial diets constitute the principle lines to be followed in the recognition of the offending food

Treatment resolves itself mainly into careful exclusion of the particular food responsible for the symptoms In some cases prolonged exclusion of the food from the dietary results in desensitization and the patient eventually can resume taking the food beginning with small quantities This is always worth trying I can recall one young man who as a boy suffered severely from recurring attacks of sickness vomiting and diarrhoea for about three years it was then discovered that the attacks always followed the ingestion of fish On excluding fish from his diet the attacks ceased After an interval of four years he started taking fish again and has had no recurrence of the trouble It is interesting to note that his father suffered from the same form of allergy to fish With the important foods such as milk and eggs an attempt may be made to desensitize the patient by feeding with slowly increasing quantities—beginning with minute traces of the diluted article—over a period of several months Less important foods may be simply *omitted without further ado* Adrenaline often relieves the urticaria angioneurotic oedema serum rash and asthma of allergy Five to ten minims of the 1 in 1 000 adrenaline chloride solution may be given hypodermically or intramuscularly at once and repeated every three or four hours if necessary Another method is to give two or three minims hypodermically at half hourly intervals Sometimes the other allergic manifestations may be relieved by full doses of adrenaline hypodermically or intramuscularly and in some cases this may relieve the pain better than morphine

Needless to say in the diagnosis of food allergy other pathological conditions must be ruled out and this may entail laboratory and radiological examinations and a detailed investigation of the case from all aspects The possible coexistence of food allergy and some other pathological lesion must also be kept in mind

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NOMENCLATURE AND FUNCTIONAL NERVOUS DISORDER

BY

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The progress of any branch of science is largely dependent upon the possession of a sound nomenclature and terminology Scientific terminology should ideally be such as to convey the meaning or as much of it as possible by the terms used or where that is not possible should be descriptive An example of the first kind is unfortunately all too rare but is approached at least by such a term as appendicitis here the name conveys in itself the information that the condition is an inflammatory condition of the appendix The second class of term is that which is a purely arbitrary word symbol in itself conveying nothing and acquiring significance by convention only—for example influenza and rheumatism Here the name is comparable with an empty vessel which we fill with meaning The third and worst class of term is that which expresses something other than we wish to convey and is therefore definitely *misleading* It is like a vessel which is already filled with *something* that we do not require and which has to be emptied before it can be replenished with that which is needed The risk that its final contents will be somewhat mixed is obvious

Nearly all the terminology relating to so called functional nervous disorder falls into this undesirable third category The result at the present moment is chaotic Imagine a young medical student asking this very pertinent question Is the relation between a nephritis and a nephrosis the same sort of thing as the relation between a neuritis and a neurosis and if not what is neurosis and why is it so called? How many people could answer clearly and succinctly

It is now generally accepted that all so called functional nervous disorder is the outward and visible *manifestation* of an inward and invisible conflict taking place within the personality of the individual and represents an unsatisfactory adjustment a maladjustment to life on the part of the individual We know so little about psychological processes that we do not at present possess any words to describe exactly what is taking place in the conflict nor indeed have we any clear cut concept of the matter We can only grope in what might be termed the twilight of the mind towards a half conceived idea used in the Aristotelean sense of the word In the words of the poet

> I would seek until I found
> Something I can *never find*
> Something lying on the ground
> On the bottom of my mind

This much however appears to be *emerging* from the mists—namely that the disorder produced is a disorder of the effective aspect of mind and that changes of affect are transmitted and *translated throughout* the human organism as what we call emotion or feeling tone or even more popularly feelings

As man advanced in the course of evolution but long before he became possessed of a thinking mind and intellect his reactions to stimuli were determined by the affect which such stimuli set up The nociceptive stimulus (that which was dangerous to the organism) set up a negative—that is to say a definitely unpleasant feeling tone or affect The vegetative nervous system (sympathetic and parasympathetic) in association with the hormonic and other regulative chemical factors which together form the vegetative neurochemical system have ever been the handmaidens of affect and their reactions are immediately modified by any change in this realm Thus all variations of affect set up incalculable changes in the whole organism and profoundly and instantaneously vary the neurochemical balance which presides over all the vital processes The importance of this mechanism for the preservation of the individual is obvious If it had not acted with great efficiency in past ages man would not have long enough survived the rigours of his environment to develop the higher mental faculties of judgement and reason

These higher mental faculties under ordinary conditions not only have no place in the regulation of the vegetative

processes of the organism but are a potential danger to it They are adapted to deal with situations which present a choice of action whereas the integrity of the essential vital processes absolutely requires a stereotyped response The *higher mental processes* usually keep their place and only exercise a watching brief over the lower centres ready to step in and exert a controlling influence if necessity arises In the same way affect usually keeps its place—which is that of foreman of the neuro chemical vegetative system—with a good deal of influence over the higher centres but normally under their control

What occurs when a conflict arises within the personality? Obviously all this excellent organization and interplay of control is to some extent thrown out of balance Affect instead of being in a state of what might be termed neutral equilibrium either swings wildly from *pole to pole or if the condition persists* takes up a new equilibrium less favourable to the organism as a whole For it must be always borne in mind that the vegetative neurochemical mechanism regulating all the essential vital *processes faithfully follows* every deflection of affect as the waves follow the moon

We may more easily arrive at some conception of what is occurring in these conditions now spoken of as nervous *breakdown neuroses psychoneuroses* and neurasthenia by using the analogy of music The normal key of C *major* may be compared with the normal reaction pattern of the human organism a stable and yet labile *emotionally neutral condition Any stimulus producing* a highly charged feeling tone or 'affect has already been described as setting up great disturbances in the more primitive neurochemical levels of the organism which *are under the direct influence of 'affect Such a dis*turbance may be compared with the introduction of accidentals into the scale When the need for them has passed the normal scale is at once restored Imagine however that owing to prolonged or *profound stimuli* influencing the feeling tone or affect the whole reactions of the organism are transposed into a different key one which is less favourable to the organism than the normal C major It is easy to appreciate the fact that a state of tension soon results which is ultimately going to lead to exhaustion or in extreme cases to the break up of the integrity of the organism as a whole We already use this musical analogy in everyday speech to describe such a state of emotional stress when we say that we feel keyed up or strung up to concert pitch Our feeling tone or *affect may be* considered as the factor which determines the 'key' and so sets the pattern for our whole emotional reaction

The key that is usually set in these conditions is one of anxiety since the underlying cause is a conflict This will readily suggest sharps *As the anxiety* state gets more and more acute the key changes into more and more sharps until we reach the limit—seven sharps Now we are at the *trope or turning point* What is on the other side? The key of seven flats in other words an exhaustion state The organism is giving up *the struggle* it cannot cope with the situation any more on those lines and what is commonly termed neurasthenia may supervene

In some cases exhaustion states seem to occur without the intermediate anxiety state or after only a very *brief* period of anxiety especially in *people of poor physique* and deficient vitality which is very much what one would expect In extreme cases in which *the emotional system* is very unstable or unadjustable a complete dissociation of the personality may arise The situation cannot be brought into assimilation with the individual's personality and so a separate stream of consciousness arises and flows alongside of the main stream or it may be disintegrates its channel When this occurs we are dealing with established mental breakdown some form of what is commonly termed 'insanity in which the throne of reason is threatened or overturned

Such states however do not commonly follow on the so called neuroses but seem usually to appear *de novo* though it is probable that a prolonged conflict within the personality has been occurring without showing symptoms that have been recognized as such either by the sufferer or by those around him

It would seem that some types of individual tend towards obtaining an adjustment of their psychological difficulties within the normal confines of the personality and that others tend to a splitting off or splitting up of the *personality* Such an hypothesis may explain those cases termed borderline which are neither quite sane nor quite insane and some of which appear to show from time to time evidences of a typical anxiety state

This brief summary illustrates how inaccurate and indeed acutally misleading are all these terms beginning with neu which have been pressed into a service they were never meant to perform They are based on an entire misconception and now that we *no longer* have that misconception it is absolutely undesirable and even indefensible to continue using a wrong terminology

With what terminology shall we replace the discarded one since a terminology we assuredly must have? *There* is no word in any language which exactly conveys that which is connoted by the word affect used in the *special sense in which it is employed* here and in modern psychology generally But to name those states where *there is a marked and recurrent swing of the emotional* pendulum with the transient or more or less persistent *establishment of an emotional equilibrium that is either* above or below the individual norm the Greek word thyme was introduced Because they are recurrent and possibly also with a view to expressing their polarity the term cyclothymia was coined Although thyme does not quite correspond either with affect or with emotion it is sufficiently near to them to convey something of the underlying meaning *and has the added* merit that to the modern world it does not suggest anything else

Everyone resents having *to learn new words for old* but it *would seem both logical* and necessary to invent a word for these states of conflict and maladjustment with their *protean physical* and mental concomitants at present wrongly spoken of as neuroses psychoneuroses neurasthenia and nervous breakdown *These terms in so* far as they have any scientific meaning mean something quite other than the truth and in popular parlance are regarded as a euphemism for insanity on the one hand and malingering on the other

The word which appears the best adapted to fulfil the role of a generic term for *all so called functional* nervous disorders is dysthymia composed of the Greek prefix *dys —widely used* to connote disordered functioning as in dyspituitarism dysmenorrhoea—and the Greek word *thyme already* accepted as a synonym for affect and *emotion* It has the added merits of brevity and euphony

Armed with this word the position of the doctor in relation to both patients and relatives is immeasurably strengthened and simplified

Who has not suffered from the lack of the *mot juste* when asked by a patient suffering from a *form of* dysthymia—an anxiety state for example manifesting itself by such symptoms as sleeplessness *fatigability* impaired concentration sensations of pressure on the top of the head dyspepsia *or even functional paraly e* and anorexia— What really is the matter with me Doctor? It is even worse when we are pinned down to a diagnosis by the relatives Any of the terms now in

use have obvious disadvantages in that they are all suspect by the laity and however we may insist that the patient is neither malingering nor mental nothing will ever quite eradicate that belief from the minds of both patient and relatives Furthermore *l'orresco referens* they convey a similar implication to not a few of the medical profession

Even psychiatrists themselves are not agreed as to the exact connotation of the terms they use and therefore often find themselves at cross purposes On the day when all the neus are unreservedly and irrevocably handed over to the neurologist psychopathology and psychiatry will have made a forward step of incalculable importance

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

TWO RARE TYPES OF HERNIA OCCURRING IN THE SAME PATIENT

A hernia of the linea semilunaris is in itself a distinctly rare occurrence an umbilical hernia containing nothing but the dilated distal portion of a complete Meckel's diverticulum is rarer still The following case recently under my care in the surgical unit at St Mary's Hospital in which both conditions were present in addition to a large omental hernia in the scrotum must be almost unique

A man of 42 was admitted to hospital on January 14th 1932 for a strangulated hernia of the right linea semilunaris

History.—Eight years ago the patient started work which entailed lifting heavy baskets of linen and carrying them on his shoulder Within a few months he developed a right inguinal hernia for which he was ordered a truss Shortly after this a small hernia developed at the umbilicus and then a third hernia at the right linea semilunaris immediately below the costal margin (parirectal) The parirectal hernia increased to the size of a hen's egg but gave rise to no symptoms On the evening before admission the patient tripped while at work and to save himself from falling caught hold of an overhead bar violently contracting his abdominal muscles The parirectal hernia immediately swelled and became painful Next morning the patient had an attack of vomiting

On admission his general condition was good although suffering from slight shock There was a large scrotal hernia on the right side and an umbilical hernia both giving an impulse on coughing The skin over the umbilical hernia was intact There was a large swelling the shape and size of a human kidney over the right costal margin and lower ribs this was tense and tender had a slight impulse and was irreducible

Operation (two hours after admission under general anæsthesia).—A six inch incision was made parallel to the subcostal margin and over the hernia The sac was identified and opened It contained a large quantity of blood stained fluid and a strangulated loop of small intestine about six inches in length The intestine was very congested but recovered its colour after the constriction of the neck of the sac had been stretched More intestine was pulled out and inspected and it was decided that the gut was viable and could be returned The neck of the sac was dissected clean transfixed and ligatured and the sac excised The hole in the abdominal wall was three quarters of an inch in diameter and was situated exactly where the right linea semilunaris meets the costal margin This was repaired by overlapping and suturing

Second Operation (January 29th).—(1) For inguinal hernia radical cure performed the sac contained a very large piece of omentum but no intestine (2) For umbilical hernia a two inch transverse oval incision was made circumventing the hernia and umbilicus the neck of the sac was identified cleaned and opened The hernia contained the distal third or more of a complete Meckel's diverticulum The diverticulum was six and a half inches long and was completely canalized Its proximal end opened into the ileum more than a foot from the ileo-cæcal junction from here it stretched as a cord to the umbilicus while the distal third of it was convoluted and was dilated to three or four times the diameter of the proximal part This distal and dilated portion was lying coiled up in the sac of the umbilical hernia which contained nothing else The blind end of the diverticulum was adherent to the sac There was no stricture of the ileum The proximal end of the diverticulum was surrounded by a purse-string suture crushed and ligatured The stump was pushed into the ileum and buried by tying the purse-string while the diverticulum and sac were removed in one piece The Mayo technique resulted in a radical cure The patient made an uninterrupted recovery and left hospital on February 14th

Comments

1 It is interesting to observe that all three hernias appeared within a year of the patient taking up heavy work

2 The situation of the swelling of the subcostal hernia and the way in which the distended sac overlapped the costal margin and lay largely on the chest wall, might have obscured the diagnosis had not the patient insisted that before its recent and sudden enlargement the swelling was entirely below the ribs

3 The Meckel's diverticulum was canalized from its intestinal end to its distal blind end Its attachment to the parieties represented by the anterior wall of the hernial sac is of obvious embryological significance The distension of the distal third, lying in the umbilical hernial sac was of the nature of an open mucocele

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Assistant Director Surgical Unit St Mary's Hospital

MENINGO-ENCEPHALITIS OF MEASLES

Meningo-encephalitis of measles is a rare complication In a summary of the literature Ford[1] describes only 113 reported cases and adds another twelve of which eight occurred in a series of 55 000 cases of measles

Case Record

B C aged 23 a healthy youth showed a typical early rash on March 9th 1932 In the following two days the rash developed into a very severe one but the patient was not unduly ill On March 12th he surprised the rest of his family at lunch by suddenly appearing in a half-clad condition His speech was rambling and he signalized his arrival by an almost immediate convulsion He was carried back to his bed returning consciousness found him restless and extremely irritable He vomited once and complained of headache Next day he was violent at times incoherent in his speech resisted any form of interference and lapsed for periods into semi-stupor Physical examination showed no localizing signs in his central nervous system Kernig's sign was negative neck rigidity indefinite and the eyes showed no evidence of disease Temperature 101·4° pulse 84 respirations 24 A few scattered rales were present in his chest and he had a considerable difficulty in micturition On March 14th he was already more rational temperature 100·4° pulse 80 Lumbar puncture was performed the cerebro-spinal fluid being under obvious increase of pressure

A pathological report of the cerebro-spinal fluid gave the following findings Faintly opalescent fluid—no clot Leucocytes 224 per c mm lymphocytes 96 per cent red blood cells 64 per c mm proteins 70 mg per cent globulin (Nonne-Apelt) positive (+) chlorides 720 mg per cent No organisms seen Culture negative

On the following day the patient was mentally normal temperature 97·8° pulse 76 He appears to have completely recovered and at no time has had any localizing sign in his central nervous system

COMMENTARY

Ford[1] classifies these cases as follows (1) diffuse cerebral symptoms of brief duration (2) multiple focal cerebral symptoms (3) hemiplegia and aphasia (4) cerebellar syndromes (5) paraplegias and spinal symptoms (6) various

This case is typical of the first group The attack which commenced with a sudden onset at the height of a very severe eruption on the third day was characterized by excessive irritability following an initial convulsion Retention of urine was present as in three out of eight of Ford's collected cases all of which completely recovered This complication can occur in any degree of severity Benn[2] reports two cases in which death occurred in twenty four and twenty five hours respectively after the first cerebral symptom

The pathology is considered to be a toxic degeneration though the cell count of the cerebro spinal fluid indicates a partial inflammatory process Jenkins[3] has reported a case in which the blood count showed a leucocytosis of 17 200 (72 per cent polymorphs) on the third day of the rash when normally there should be a leucopenia (Rolleston[4]) It has been suggested that this condition and post vaccinal encephalitis are due to the same virus If so the latter is a far more potent predisposing cause as its mortality is quite five times that of the former There is no specific form of treatment though intrathecal injection of convalescent measles serum has been used with some success by Lowenberg and McLendon[5] The prognosis for life is good Ford gives a mortality of only 10 per cent but 35 per cent of those who survive are left with some stigmata mental defect being present in 17 per cent

My thanks are due to my partner Dr Langran for permitting me to publish this case and to Dr Robb of Exeter for the report on the cerebro spinal fluid

REFERENCES

[1] Ford *Bull Johns Hopkins Hosp* 1928 xlii 140
[2] Benn *Brit Journ Child Dis* xxviii No 325–327 22.
[3] Jenkins *Arch Pediat* 1929 xlvi 257
[4] Rolleston *Acute Infectious Fevers* p 274
[5] Lowenberg *Arch Pediat* February 1926 xlii 73
[6] McLendon Ibid August 1926 xlii 544

Axminster A L CROCKFORD *M C* M B B CH

Reports of Societies

ANALGESIA IN CHILDBIRTH

At a meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on June 17th with Mr VICTOR BONNEY the president in the chair a discussion on modern methods of alleviating pain in childbirth was opened by Mr L CARNAC RIVETT

With the armoury of anaesthetics and analgesics now at the disposal of the medical profession Mr Rivett said it was a disgrace that any woman should still be able to say of childbirth The pains of hell gat hold upon me He would confine himself to the methods of alleviating pain in normal labour The use of oxygen with nitrous oxide had provided a safe anaesthetic for use during labour which could be given over a prolonged period and under which fatalities were rare It induced complete unconsciousness and could be reinforced with ether during the birth of the head It did not inhibit the uterine contractions Among its disadvantages were the fact that a tight mask had to be used which became uncomfortable if intermittent anaesthesia was being given the apparatus was cumbersome and expensive and experience was necessary for administration of the gas More than half the confinements in this country were conducted by midwives and though gas and oxygen anaesthesia was excellent for wealthy patients it did lend itself to general use by midwives Twilight sleep or morphine and scopolamine analgesia had certain advantages it occasionally caused cessation of uterine contractions possibly through being started too early in labour it also tended to prolong labour and the baby might be born apnoeic Occasionally twilight sleep caused the patient to become maniacal and though this passed off without ill effects it made the method unsuitable for use in a private house In a modified form the method was useful for dulling pain Spinal and sacral anaesthesia he had found to be unsatisfactory—the duration of anaesthesia was too short and the drug tended to inhibit the action of the longitudinal fibres of the uterus so that the circular fibres contracted on giving a hard uterus with little expulsive power Rectal ether was difficult to control during labour and was generally expelled while the use of avertin and other barbiturates needed further investigation Ether by inhalation was unsuitable because it gave rise to a long excitement stage and surgical anaesthesia was necessary if pain was to be effective moreover if administration was prolonged for several hours there was danger of bronchitis afterwards Chloroform was still the best anaesthetic for labour in his opinion The danger was that death might occur either immediately from an overdose or later from delayed chloroform poisoning The dose required to abolish pain however was extremely small Anaesthesia was unnecessary—little more than the smell of chloroform reduced pain the patient remained conscious of the contraction and was able to bear down but the pain was abolished The administration of chloroform in the small doses could be begun early in labour—at the beginning of the second or near the end of the first stage Towards the end of the second stage it should be given almost continuously When administered in this way chloroform did not appear to retard labour on the contrary the second stage seemed to be shortened The average duration of the second stage among his series of hospital patients treated in this way had been forty five minutes for primiparae and half an hour for multipara There had been no untoward results except that occasionally pain was not abolished and excitement was produced usually when administration had been begun too late in labour Six years ago the suggestion had been sanctioned at the Middlesex Hospital that the sister midwife should be allowed to give whiffs of chloroform to patients practising as normal in the out patient department and for five years the Junker apparatus had been used for this purpose with success It was increasingly clear that if anaesthetists were to be given universally in labour midwives must be taught to administer them He had set out to evolve a foolproof method of giving anaesthetics which might be taught to midwives The Junker apparatus had been first considered but there was a danger that if the mask were made a wrong connexion chloroform would be sprayed on the patient's face and if she worked the bellows vigorously she might induce dangerously deep anaesthesia Mr Rivett said that he had since arranged to have 10 minims of chloroform put up in capsules enclosed in rolls of gauze The midwife could crush a capsule in the gauze roll container into the edge of an ordinary mask The patient was allowed to sniff the mask at the onset of a pain and the dose was sufficient to give analgesia for seven to ten minutes Any midwife was capable of using this method which was perfectly safe Among 200 cases at the Middlesex Hospital the results in terms of abolition of pain had been good in 146 cases (73 per cent) and fair in forty one cases (20 5 per cent) The method had failed to give relief in four cases (2 per cent) Perineal lacerations occurred in six cases

patient became hysterical and post partum haemorrhage occurred in one case in the series An analysis carried out by Dr F M Parsons from the hopelessly incomplete records at Somerset House had shown that although the total number of deaths due to anaesthetics had increased during the past twelve years the numbers occurring in patients anaesthetized during childbirth had maintained a constant relation to the total number He hoped that the meeting would pass a resolution advising that midwives should be allowed to give chloroform by the capsule method after proper training in its use

Dr I W MAGILL said that Mr Rivett's method only gave analgesia and the demand of women nowadays was that they should remember nothing of childbirth To obtain this with any drug was hazardous unless an anaesthetist was present He was averse to the use of barbiturate preparations given by mouth because their action was erratic and the dose was therefore difficult to estimate He used them only where intravenous administration was possible He had not found nembutal reliable as an analgesic and preferred to give one of the longer acting barbiturates He thought gas and oxygen the best method of inducing anaesthesia during childbirth As there was sometimes difficulty in getting the child to breathe after the use of this method during Cæsarean section he made it a practice to circulate the mother with oxygen just before the cord was cut Mr Rivett had objected that spinal anaesthesia lasted too short a time but percaine would give complete analgesia for twelve hours he had no experience of its use in labour however Chloroform was one of the most valuable methods of obtaining anaesthesia at the present time and its dangers lay only in faulty administration

Dr R H PARAMORE said that the method adopted for conducting labour should aim not only at alleviating pain but at preventing crippling He had used spinal anaesthesia in three cases performing episiotomy according to his practice in all three and delivering with forceps The spinal anaesthetic was given in the second stage and pain was banished The child cried as soon as it was born which was not always the case after chloroform The uterine contractions were considerably augmented and the bleeding in two cases out of the three was reduced The method had the advantages that the patient remained still and relaxed and that no other assistant was necessary Any tear of the perineum or an episiotomy wound could be stitched without difficulty During delivery under spinal anaesthesia the levator ani muscle was completely paralysed with chloroform anaesthesia this muscle often pulled reflexly against the forceps and any tearing of its fibres had a crippling effect on the woman when she got up

Mrs J M OLDAKER described the results of giving sedatives and anaesthetics to a series of 450 normal patients at the Royal Free Hospital In 170 no sedative was given in 60 repeated doses of potassium bromide and chloral hydrate were used In 90 cases apomine was given and magnesium sulphate solution intravenously As a result of sedatives the mother became less distressed and slept between the pains the child never suffered any ill effect In 289 cases gas and oxygen were given throughout the second stage during each pain and for a few breaths after it In a long second stage an increasing amount of oxygen became necessary The anæsthesia induced was so light that the mother could understand and obey any order ether was added for the actual delivery

Mr H J C BOYLE thought gas and oxygen the ideal anæsthetic for midwifery He considered it would be unwise to teach midwives to give chloroform which was a dangerous drug If they must give an anaesthetic he advised the use of ether with which they would be unable to kill anyone He made it a practice to give carbon dioxide and oxygen to the mother just before the cord was cut

Dr J S FAIRBAIRN said that it was important that the midwife should have some method of giving an anaesthetic The use of capsules appeared to be safe unless the midwife took it into her head to use several at a time It would be a difficult problem to arrange for certification the Central Midwives Board had no power to license people to give anaesthetics and the British Medical Association would probably resent it if they attempted to do so Nevertheless some means must be found to make it possible for midwives to give anaesthetics otherwise their patients would go to doctors who had not as much time to give to these cases as the midwife and who was in any case too expensive an instrument to employ for normal labour

Dr HERBERT CHAPPLES said that chloroform was said to be dangerous but all anaesthetics were dangerous Much depended on how they were used Chloroform gave a longer period in each stage of anaesthesia than any other anaesthetic and this reduced the danger of its administration With small doses of chloroform the patient would go on talking intelligently after the pain was abolished He was convinced there was no danger in administration by Mr Rivett's method Dr R A GIBBONS also thought Mr Rivett's capsules safe for use by midwives Mr EARDLEY HOLLAND said that, apart from gas and oxygen there was no doubt that chloroform was the best anaesthetic for the second stage He doubted whether the capsules were suitable for administration over prolonged periods Much of the discomfort in the early stages of labour was due to fear and lack of confidence He believed that chloroform administered during the first stage diminished the force of the pains and took the intensive contractility out of the uterus with a consequent increase in the danger of post partum haemorrhage Forty grains of chloral in the first stage formed an excellent basis for the use of morphine and scopolamine later Some women had to have pains relieved for twenty four hours and though they clung so much to the idea of chloroform that they believed the pain was gone as soon as they smelt it he did not favour such prolonged administration Mr A J COPELAND thought their use by midwives would be safe provided that conspicuous warnings were printed on the box against using more than one capsule at a time against placing it nearer the face than two inches and against using any covering other than or in addition to a mask He had used nembutal in conjunction with chloral following Dr Sullivan's technique Some patients had become slightly cyanosed and apnoeic but had recovered well In one case the uterus went into tonic contraction and in another the patient became violently excited in a few there were headaches and transient ocular palsies Further research was needed into the action of the barbiturates they could not be given a fair trial in the excitement of the labour ward and separate rooms should be set aside where the patient could be treated and delivered in silence When gas and oxygen was given the patient should be switched on to oxygen and carbon dioxide as soon as the shoulders were born Even if no anaesthetic was used a few breaths of oxygen were useful at the end of labour to stimulate the uterus

Mr J P HEDLEY agreed that the use of chloroform was undesirable during the first stage An anxious woman was liable to become more excited and the contractions of the uterus might be reduced He preferred to use chloral scopolamine or morphine in the first stage Chloroform was useful later Dr R KERSON FORD said that supposing a certificate were to be given to midwives proficient in the use of anaesthetics he failed to see how

the chemist selling chloroform was to distinguish between the midwife skilled to give anaesthetics and the one who was not It would be better to arrange that the midwife could only obtain chloroform on the authority of a medical practitioner the doctor would then have to select the midwives whom he thought capable of using chloroform safely It would be very dangerous if chloroform were to get into the hands of unqualified women practising midwifery He had obtained good results in reducing pain by the use of hyoscine and magnesium sulphate The injection was given early in the second stage not only had it appeared to shorten that stage but he had found there were fewer lacerations and fewer calls for forceps

Mr RIVETT in replying said that when chloral and potassium bromide were given during the first stage though the patient became rather drowsy she none the less experienced the pains in full He thought ether unsuitable for use by midwives because in order to get past the excitement stage the patient had to be put under at least light surgical anaesthesia The idea of the capsules had been suggested to him by Miss Edith Pye president of the Midwives Institute He had given chloroform by this method for hours on end to private as well as hospital patients They did not lose consciousness talked readily all the time felt no pain and were well and comfortable afterwards He agreed there was a psychological element in the abolition of pain by this method If really small amounts were used the contractility of the uterus was not affected and there was no increased danger of post partum haemorrhage Chloroform was not included under the Dangerous Drugs Act so that the midwife could already buy chloroform if she wished He thought it would be a good idea to arrange that the midwife should only give anaesthetics when authorized by a doctor

PUERPERAL SEPSIS AND TOXAEMIA OF PREGNANCY

At a meeting of the North of England Obstetrical and Gynaecological Society held in Leeds on May 6th Dr J G PAINE (Sheffield) read a paper on colony variation in haemolytic streptococci and its importance in puerperal sepsis immunity

Introducing his subject he reviewed Todd's work on matt and glossy variants and showed how the matt variants produced peroxide how peroxide caused change from matt to glossy type and how the matt type could be maintained and its virulence exalted by a liberal supply of oxygen during growth provided that catalase was present in the growth medium to prevent an accumulation of peroxide The virulence of haemolytic streptococci was judged by the size of the minimum lethal dose for mice and by their ability to survive and multiply in normal defibrinated blood He then referred to the work of Hare of Queen Charlotte's Research Laboratory who showed how young matt virulent strains were resistant to phagocytosis and how phagocytosis could be secured by the addition of patient's serum containing bacteriotropins He next described bactericidal stimulation tests performed by adding patient's serum rich in bacteriotropins to suitable mixtures of normal defibrinated blood and the homologous strain of haemolytic streptococci and demonstrated that bacteriotropic serums could be divided into two groups according to whether they could or could not initiate a bactericidal effect in normal defibrinated blood Experiments were described illustrating that bacteriotropic serums could be obtained from rabbits by immunizing them with heat killed matt virulent haemolytic streptococci that serums thus obtained were able to stimulate the bactericidal power of normal defibrinated blood and that they were also able to protect mice against doses of haemolytic streptococci far in excess of the minimum lethal dose Dr Paine said that if rabbits were immunized with living streptococci of increasing virulence (although bacteriotropic serums could thus be obtained) the serums were unable to initiate a bactericidal effect *in vitro* nor were they able to protect mice against lethal doses of haemolytic streptococci Discussing this point he suggested that the immune serums contained two particles—an opsonizing particle and a bactericidal stimulation particle the latter acting only after phagocytosis and which probably existed in far smaller concentration than did the opsonizing particle This second particle was probably entirely absorbed by the living cocci in rabbits immunized with living cocci

Professor M J STEWART (Leeds) and Mr CARLTON OLDFIELD (Leeds) showed a specimen of diffuse endometriosis of the body of the uterus secondary tuberculous infection and old bilateral tuberculous salpingitis They also exhibited a specimen of liposarcoma of the broad ligament associated with spindle celled sarcoma of the uterus Dr S B HERD (Liverpool) described a case of chorion epithelioma of the broad ligament, and demonstrated a specimen of epithelioma of the vulva removed from a patient aged 25 Mr A GOUGH (Leeds) reported a case of carcinoma of the Fallopian tube

Mr CARLTON OLDFIELD described three unusual cases of toxaemia associated with pregnancy The first case resembled milk fever or bovine eclampsia The patient was a primigravida who after a low forceps delivery of a healthy child began to vomit on the third day This continued the temperature rose to 101° on the following day and there was epigastric pain and jaundice with development of coma On the fourth day routine treatment having failed to produce any improvement in the condition inflation of both breasts with air was carried out and two hours later the patient began to improve The other two cases were similar in that persistent vomiting ended fatally and that both were in the first pregnancy Also anorexia was a marked symptom and was a contributory cause of the exhaustion One of these patients gave a history of neurosis and had severe vomiting until the sixteenth week when this ceased Twelve days later drowsiness followed by coma developed The urine was negative for evidence of toxaemia in each case and in spite of treatment both patients died Necropsy revealed signs of mild toxaemia with some liver damage in both cases but this was hardly sufficient to account for death Mr Oldfield considered that these three cases suggested that the conception of toxaemia of pregnancy originating in the ovum was probably erroneous

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The second annual report of the Institute of Radiotherapy in the Camden Road London N W records good progress in the work done in 1931 During this year 1 535 patients were treated as against 1 450 in 1930 the average number of new patients a month being 127 9—the 9 probably refers to the elephant keeper who we notice was treated at the Institute No patient is accepted for treatment unless accompanied by a letter from his general practitioner who is kept fully informed of his patient's progress by a monthly report Provision for treatment with diathermy and medical electricity has now been made and it is hoped that there will soon be further additions to the equipment already purchased Like all institutions recently founded the Institute for Radiotherapy has felt the strain of the financial crisis and funds are urgently needed for work which has in a very short time proved its worth

Reviews

DISORDERS OF METABOLISM

The third volume of *Therapeutique Medicale* [1] by Professor LOEPER and Dr LEMAIRE deals with the liver the endocrine glands and nutrition Hepatic insufficiency and duodenal intubation in diseases of the gall bladder are treated fully and the pathology and treatment of gout is discussed A particularly interesting chapter is the one on oxalaemia and oxaluria because of the comparison drawn between oxalic gout and uric acid gout The authors appear to be puzzled by the fact that oxaluria may be associated either with acid or with alkaline states We should regard hyperchlorhydria as a factor in promoting the absorption of oxalates while achlorhydria allows of intestinal fermentation—this promotes the formation of oxalic acid from carbohydrates In this connexion they attribute considerable importance to the intestinal disturbances which may accompany oxalaemia Lakin has recently shown that the acute abdominal distension which may occur in oxaluria is sometimes due to a reflex inhibition of intestinal tone through irritation of the kidney by oxalate crystals and the authors quote a saying that oxalate of lime may scrape the kidney like sandpaper The analysis showing the oxalic acid content of various foods is helpful At the top of the list come cocoa chocolate tea sorrel pepper spinach and rhubarb The amounts contained in other foods are almost negligible and certainly unlikely to cause symptoms We note however the omission of strawberries which in this country often appear to induce attacks of oxaluria in sensitive persons But apart from these few articles of diet we should agree that oxalaemia is more often of endogenous than exogenous origin Its association with nervous crises is recognized both in France and in this country We do not think that oxalaemia is recognized here as a factor in demineralization of bone it is certainly not comparable with the effects of hyperparathyroidism to which curiously enough we find no reference in the sections on endocrines

In the section on diabetes treatment by diet and by drugs is gone into so elaborately that we are relieved to find this followed by an enthusiastic appreciation of the value of insulin We doubt very much whether it is worth while to attempt the lowering of blood sugar by any drug other than insulin the authors share the general distrust of synthalin If a balanced diet does not control the situation it is surely far better to resort to a remedy of proved value—insulin—rather than to other measures of doubtful efficacy The caution about insulin dosage for nephritics is worth remembering such patients seem to require smaller doses because they eliminate insulin more slowly We are glad to note the advocacy of insulin in the treatment of diseases other than diabetes together with the administration of dextrose it is decidedly helpful in Graves's disease wasting conditions (including anorexia nervosa) myocardial weakness and hepatic toxaemias To our surprise Rothera's valuable and sensitive test for diacetic acid and acetone is not mentioned

The section on endocrines contains a discussion on the possibility of opotherapy having a directly stimulating effect on the formation of new cells in the deficient endocrine gland If this could be proved it would be a valuable aid in treatment Experiments are described in which a renal extract led to multiplication of the renal cells But the proof that the kidney forms a true internal secretion is still to seek and cases of myxoedema which have been treated by thyroid extract for many years do not appear to show any regeneration in the thyroid gland We note by the way that although Harington's work is referred to thyroxine is described as iodotryptophane this is now generally recognized as incorrect The term synergones for hormones which co operate strikes us a useful innovation Altogether an interesting work but one which will on certain points arouse differences of opinion

[1] *Therapeutique Medicale*. Par Maurice Loeper avec la collaboration du Dr André Lemaire. Paris: Masson et Cie. 1931. (Pp. 375; 88 figures. 50 fr.)

RADIATION IN MEDICINE AND SURGERY

We have received the fifth volume of the *Ergebnisse der medizinischen Strahlenforschung* [2] Previous volumes were noted in the *Journals* of December 25th 1926 (p. 1231) August 25th 1928 (p. 345) and August 9th 1930 (p. 216) As a summary of the title perhaps Radiological and actinotherapeutic reviews may be permissible though not literal for the publication is in many ways analogous to the American publication *Physiological Reviews* This volume consists as did its predecessors of a series of ten detached monographs well illustrated by leading authorities upon subjects of current interest Each article has a good bibliography a matter of no small importance when radiological literature is becoming so extensive The authors deserve our cordial thanks for their excellent and comprehensive summaries

The subjects which are varied range from the radiographic appearances of the hour glass stomach to the selective action of monochromatic radiation—mostly of the ultra violet region The first paper by Dr Regelsberger deals with the diagnosis of certain forms of hour glass stomach and illustrates the relations between pathological conditions and the appearances presented upon radiological examination with special reference to the concurrent anatomical lesions and clinical findings The second article by Dr Pansdorf deals with radiological research on the small intestine and discusses the action of atropine and pilocarpine and the absorption of fat As opaque material for his investigations the author uses iodipin (Merck) which is an iodine addition product of sesame oil The third communication (Professor Risse) is upon the physical foundations of the chemical changes produced by visible light ultra violet radiation and *x* rays The main chemical reactions observed as the result of irradiation are carefully summarized in a series of tables In the fourth Dr Nikolaj Wladimirowitsch Timofeeff Ressovsky of Berlin deals with a subject which is of increasing importance to those whose work leads them to the study of the radiation of the genital glands This indeed is a matter of supreme practical importance since changes are produced in that carefully adjusted scheme of hereditary character bearing units (genes) which may lead to developmental alterations not only in the offspring of irradiated individuals but in subsequent generations The matter is necessarily dealt with in a somewhat academic manner but it will give material for thought when radiation (*x* rays and radium) is used so as not to produce sterility The fifth (Dr Baensch) is a note upon pituitary tumours The question of radiological diagnosis and *x* ray therapy is dealt with exhaustively The general results of this form of treatment are discussed in particular the alleviation of headache and the improvement in the visual field where this has been impaired and the author emphasizes the need for a careful radiological examination in all such patients The sixth article (Dr Hildebrandt) treats of malignant tumours of the thyroid The results obtained by pure surgical methods are compared with those of

[2] *Ergebnisse der medizinischen Strahlenforschung (Rontgendiagnostik, Rontgen, Radium und Lichttherapie)*. Herausgegeben von H. Holfelder, H. Holthusen, O. Jungling, H. Martius, H. R. Schinz. Band 1. Leipzig: G. Thieme. 1931. (Pp. 675; 396 figures. M. 72.)

surgery combined with subsequent *x* radiation of radium inserted surgically and of intensive superficial radium radiation In contrast to the disappointing results ob tained by purely surgical methods which the author describes as a very sad picture he holds out a hopeful view of radiation therapy either alone or combined with operation Radium treatment as hitherto practised he does not find of so much service as treatment by *x* rays Statistical notes add to the value of this paper

The radiation treatment of skin carcinomata (Drs Halberstraedter and Simons) forms a comprehensive article of sixty pages and the questions of the choice of *x* rays or radium are carefully discussed Diagnosis prognosis and therapy of primary bone tumours and cysts form the subject of a very complete and interesting article by Drs Schinz and Uehlinger The sites of election of the various lesions are carefully and methodically shown as well as the results to be expected from various therapeutic measures Dr Zwerg contributes a succinct epitome of the latest results in the field of radium surgery The volume closes with an article by Drs Friedrich and Schreiber which deals with the action of radiations of definite wave lengths Those considered in most detail lie in the ultra violet region but consideration of other regions of the spectrum is not excluded There is a table extending to eight pages wherein the various characteristic lines given by different elements are set forth These range from 200 to 1 000 microns (2 000 to 10 000 Angstrom units)

In conclusion it should be noted that there is an excellent general index of authors and subjects This is a book which we think should be on the shelves of every well equipped general medical library and we await with interest further publications in the same series

DENTAL SURGERY AND PATHOLOGY

The sixth edition of Sir FRANK COLYER'S well known *Dental Surgery and Pathology*[1] is marked by the appearance of a new name on the title page Mr EVELYN SPRAWSON lecturer on dental surgery and pathology at the London Hospital now shares responsibility with Sir Frank Colyer and the preface to the new edition shows that he has done a large part of the work of revision necessitated by a new issue The dental world we are sure will give Mr Sprawson a hearty welcome to which judging by the work before us we think he is fully entitled

In this edition all description of the technical details of fillings and of the normal processes of eruption have been omitted the one being left to textbooks dealing solely with the subject the other to the physiologist (In passing we may note that the very first chapter Disorders Associated with the Process of Teething seems to question the wisdom of the second omission) The objective has been more space for pathology and there can be no doubt that the extra pages have been well utilized Throughout the book there is evidence of a judicious pruning of letterpress but never to the exclusion of salient points and the chapter on dental caries may here be specially noted Turning as ever to dental sepsis we find a note of restraint in dealing with no accession from the position that dental sepsis is a widespread and preventable cause of disease We observe indeed that the note by Dr Strickland Goodall on the cardiovascular system definitely incriminates dental sepsis in aortic regurgitation arteriosclerosis phlebitis and thrombosis In places brevity seems to have been carried to excess At the top of page 711 where one or two points on the extraction of tem porary teeth are promised only the first is mentioned In the chapter on salivary calculus the term is used both for stone in a salivary duct and for tartar as commonly understood and the reader is also left wondering whether tartar contains any carbonates There are few statements to which one would oppose a direct negative but perhaps the remark that in the treatment of chronic antri there is general consensus of opinion that the mo t satisfactory results are obtained by curetting the diseased mucous membrane is one even though nasal drainage be established

The book will certainly maintain its well deserved reputation

[1] *Dental Surgery and Pathology*. By J. F. Colyer, M.B.I., F.R.C.S., L.D.S., and Evelyn Sprawson, M.C., M.R.C.S., L.R.C.P., L.D.S. Sixth edition. London and New York: Longman, Green and Co. 1931. (Pp. xiv + 908; 860 figures. 25s. net.)

AN AMERICAN SYSTEM OF MEDICINE AND SURGERY

The Practitioner's Library of Medicine and Surgery, edited by Professor G. BLUMER of Yale, is to consist of twelve volumes and an index, and the first two volumes have now been issued. These are stoutly bound attractive looking books each of well over a thousand pages. The paper is of good quality, the printing and general get up satisfactory, and the illustrations well chosen and beautifully reproduced. There are apparently fourteen associate editors for the complete work, and twenty eight contributors to each volume. It is the intention of the editor in chief to direct the whole production, and to survey of the present two volumes indicates that he must be possessed of great courage as well as unbounded energy. Vol. i. deals with anatomy and physiology, and the emphasis throughout is laid upon the practical application of the subject under discussion to the actual practice of medicine rather than upon theoretical aspects. The editor points out that each contributor has been cho en because of special knowledge and experience in his subject, and the names of J. B. Collip, C. H. Best, and Yandell Henderson in the section on physiology indicate that this principle has been thoroughly carried out. Vol. ii. is entirely given up to the technique of physical and laboratory examination in clinical medicine, and how'd prove a popular member of the series. A section on history taking by Professor Blumer introduces the volume, and each of the special departments of medicine and surgery has a section to itself. A critical review of such a vast amount of material would be impossible here, but in introducing these volumes to the medical public it is fair to say that so far as sample references go they have not failed the reviewer, that the style of selected passages was clear, and that the matter contained seemed up to date and thoroughly practical.

A THEORY OF CONSCIOUSNESS

Dr. JOHN BOSTOCK has written a monograph entitled *The Neural Energy Constant*[2] in which he develops a theory of the anatomical and physiological basis of con sciousness. It is the essence of this thesis that consciousness is distributed in a closed circuit and is subdivided between three centres—namely, those of awareness and emotion in the region of the optic thalamus, and that for fin adjustment in the cerebral cortex. On the basis of this theory Dr. Bostock makes it his aim to explain the phenomenon of sleep and dreams, instinct, and certain

[2] *The Neural Energy Constant*. By John Bostock, M.B., D.P.M. With a foreword by Sir John Macpherson, K.B.E., C.M.G., F.R.C.P.I. London: [illegible]. 1931. (Pp. [illegible]; illustrations.) [illegible]

forms of mental disease It is suggested that complete consciousness occurs only when the three centres of awareness emotion and fine adjustment are in complete functional apposition The theory outlined in this monograph is explained throughout by diagrams representing the distribution of consciousness in such conditions as sleep anxiety states and schizophrenia Thus in sleep there is dissociation of the centres of awareness emotion and fine adjustment and in katatonic states dissociation of the major part of consciousness leaving intact a centre of awareness The thesis here outlined is interesting and it has the merit of emphasizing the unity of mind and body for it the outset the writer assumes the existence of the germ of psychic activity even in the unicellular organism It may perhaps be described as a neurological conception of normal and abnormal behaviour somewhat comparable to the psychological conception of mental levels and fatigue elaborated by Janet in his works on psychasthenia Naturally a monograph of this kind can only give a fragmentary impression of the infinite complexity of the factors which determine normal or abnormal behaviour

NOTES ON BOOKS

In the series of Pocket Monographs on Practical Medicine Mr C H FAGGE has written a small volume on *The Acute Abdomen* After a short consideration of the essential symptoms signs and methods of examination upon which diagnosis must be based the book deals very concisely with the differential diagnosis of the commoner acute abdominal lesions and then passes to a very brief survey of the appropriate treatment of each As is proper in a series of this character the matter is condensed and extremely practical the author's experience of the subject has enabled him to include many novel points of real importance and his opinions as to the relative value of particular signs or symptoms is always of interest Although so small the book contains a surprising amount of information and for this reason should prove a true handbook for the student and house surgeon in their work in the wards

Health Resorts Seaside and Watering Places in Italy is an eighty page illustrated pamphlet issued by the Italian State Railways (16 Waterloo Place S W 1) which gives a short account of the principal spas and holiday resorts from the Alps to Sicily and will prove useful to those wishing to choose the right spot for a stay in that lovely country With the possible exception of a photograph of the Lido each picture and most of the printed items exercise such a strong attraction upon the jaded worker that the choice of a resort seems to call rather for blind folded eyes and a pin than considered and balanced judgement The chief spas include Acqui (hot springs and mud treatment) Montecatini (radio active saline waters) Abano (radio active mud and waters) Agnano (mud bromo iodurated sulphur springs) Fiuggi (cold radio active waters) Levico (arsenical ferruginous springs) San Pellegrino (alkaline hot and radio active springs) and Salsomaggiore (mud and mud baths containing bicarbonate sulphate and chloride with CO) Saint Vincent cold waters and Chatelguyon

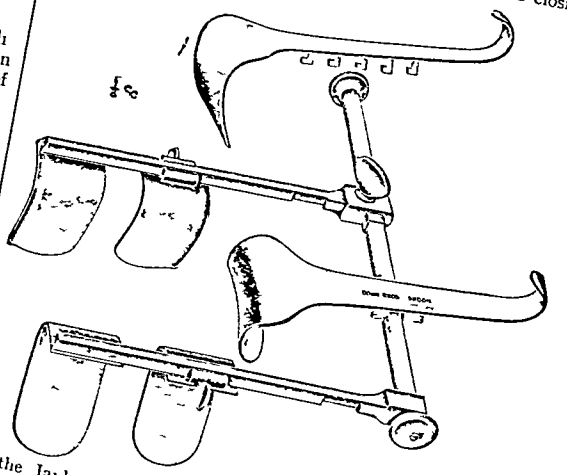
Professor OVIO of Rome has established himself as one of those whose writings are interesting and valuable not only for the matter which they contain but also for the philosophical way in which the subject of which he treats is invariably expounded He has done valuable original work on many subjects and has written extensively on several of them into both these categories comes his textbook on colour vision and the second edition of his work on the subject—*La Visione dei Colori*—keeps up the high standard we have been led to expect from

Manual of Practical Medicine By C H Fagge M S F R C S Pocket Medicine Series London J Bale Sons and Danielsson Ltd (Demy 16mo pp 129 figures 19 plates 6d net)

Le Alterazioni della Visione dei Colori Giuseppe Ovio Duma re edition (Pp 145 Rome Istituto Poligrafico dello Stato 1931)

PREPARATIONS AND APPLIANCES

A MODIFICATION OF BERKELEY'S ABDOMINAL RETRACTOR Miss M V WEBB L R C P L R C S (New Delhi) writes I have had a special modification of Berkeley's abdominal retractor made for me which should I think prove excellent The most important point is the smooth opening and closing



by the Jayle's rack entirely doing away with the jerking motion It is fitted with plain solid lateral blades as I find the movable second blade of the Berkeley model is liable to get broken This is the best abdominal retractor for gynæcological surgery which I have used The instrument is made by Messrs Down Bros

MULTIBRAL We have received from Messrs Napp Ltd (3 and 4 Clements Inn W C 2) a compound named multibral or sodium monobromoleate This is an organic bromide compound which was discovered by Hermann and Freund of Prague Experiments by them on rabbits showed that multibral was about thirty times more powerful in its lethal effects than sodium bromide As regards clinical applications the authors conclude Preliminary clinical investigations made with the new bromide combination showed a superior bromide action in all cases where bromide therapy appeared to be indicated with the exception of epilepsy in which case the amount of bromide as well as the form of bromide combination appeared to be of decisive importance The evidence indicates that multibral is a powerful sedative compound

STIPOLAC The introduction of sodium tetraiodophenolphthalein (stipp) has proved to be a very important advance in the diagnosis of gall bladder diseases The administration of this salt has however been attended with certain difficulties Great care is needed with intravenous administration to prevent leakage into subcutaneous tissues and oral administration only produces satisfactory results when special precautions are taken Stipolac (Messrs Burroughs Wellcome and Co) is a preparation intended to facilitate the oral method of administration The salt is dissolved and mixed with acid just before administration and is given on an empty stomach

Hermann S and Freund W *Klin Woch* 1931 x 250

LONDON WATER IN 1931

SIR ALEXANDER HOUSTON'S REPORT

The report on metropolitan water for 1931[1] the twenty sixth of the annual series drawn up by Sir Alexander Houston amply maintains the high standard of interest set by its predecessors notwithstanding that owing to financial considerations it has suffered some curtailment The character and quality of the water purveyed to London continued to be scrutinized throughout the year with the same unrelaxing care as in the past Of 17 366 routine samples 4 622 were chemically tested and 12,744 bacteriologically tested and many other specimens were examined for special purposes The average daily water consumption *281 300 000* gallons conveys an impression of the magnitude of the task of furnishing London with water and of the responsibilities involved In London generally chlorine is now applied to the filtered waters only producing an absence of *B coli* in from 94 8 to 100 per cent of samples The dosage ranges between 0 2 and 0 3 part per million The storage of water as a method of purification received its initial impetus from London and Sir Alexander Houston as in previous reports directs attention to its value He shows that by comparison with raw water judged by the agar count water stored at Walton was 91 5 per cent at Kempton 98 5 per cent and at Chelsea 93 4 per cent better

The Barn Elms filtration experiments are now completed and the method there devised of rapid primary filtration followed by secondary filtration is in operation on the large scale as part of the fourfold system at Walton and Kempton Park The four stages are storage primary filtration secondary filtration and chlorination and the progressive improvements effected by each in transforming the raw Thames water into a safely potable beverage are well brought out by the following data which show the percentage of samples in which *B coli* was absent from 100 c.cm Of the raw Thames samples only 0 4 per cent reached this standard Storage at Walton raised the figure to 16 1 per cent primary filtration to 36 1 per cent secondary filtration to 66 7 per cent and chlorination to 96 8 per cent The corresponding final figure for the Kempton Park works was 100 per cent The lack of a means to distinguish faecal pollutions of human origin from those derived from animal sources has long been recognized as a serious gap in the water bacteriologist's armamentarium *B coli* alone will not serve as an indicator for its characters show too little variation in such cases The author initiated an inquiry last year into a *B coli cum streptococco* test for pollution in water the purpose of which was to determine the comparative frequency of faecal streptococci and *B coli* He now reports that in crude sewage the streptococci per gram were found to be from 1 000 to 10 000 and the colon bacilli from 10 000 to 100 000 For the sea gull, a notorious but probably non infective polluter of reservoirs the proportion was 10 streptococci to 1 000 000 *B coli* For the sheep an innocuous contributor of *B coli* to upland waters, the proportion was 1 000 streptococci to 10 000 000 *B coli* It emerges therefore that in the case of the harmless pollutions by casual birds and grazing flocks the disproportion between the two classes of bacteria was far wider than in sewage of human origin contamination by which is dangerous These results though tentative are notable and we trust that the author will see his way to carry his interesting inquiry further

The Barn Elms works though their original filtration experiments [illegible] began to recede into the background of histo[illegible] were not inactive during the year They were the [illegible] car[illegible] a series of tests on the purification of water by [illegible] ozone substance to the uses of which we refer elsewhere at p 1182 Raw Thames water after rapid filtration without coagulant that is to say after very partial clearing exhibited on ozonization a reduction in the agar count of 95 2 per cent Before the treatment *B coli* was present in 1 c.cm of water after ozonization there were no *B coli* in 100 c.cm At the same time, the colour of the water was strikingly improved No taste appears to have been produced and the view is expressed that the dose might be increased without taste occurring Further experiments demonstrated that not only did ozone fail to react with phenolic compounds in water so as to produce the obnoxious iodoform flavours to which chlorine under certain conditions gives rise but that when added to chlorinated water, even after the unpleasant iodoform taste had developed it removed the taste completely Another section of the report relates to activated carbon which is recommended for de chlorination or for the extraction of tastes cause by algae where permanganate treatment fails Another section refers briefly to catadyn a kind which the author considers owing to its cost unsuitable for employment on the large scale agreeing in this particular with the view we expressed on the subject lately

Section XI of the report one of the most considerable—which the shears of the economist have happily spared—after a pleasing review of the county of Essex deals with an outbreak of milk borne paratyphoid fever a Epping which began at the end of January 1931 and lasted for six weeks Part of the sewage of the town after treatment by irrigation on land, was discharged into Cobbin's Brook which enters the River Lea at Waltham Abbey above all the intakes of the metropolitan supply The effluent from the irrigation works showed 73 paratyphoid B bacilli per c.cm and paratyphoid B bacilli were also recovered from the brook which contained 10 000 *B coli* per c.cm The brook was immediately chlorinated at a point below the sewage outfall with the result *B paratyphosus* B disappeared from 500 c.cm of brook water and *B coli* from 100 c.cm Additional safety was assured by the existing storage of the Lea water in the Walthamstow reservoirs but as a still further precaution the whole river was excluded from supply for ten days and the filtered waters at Lea Bridge and Ferry Lane were subjected to chlorination Thanks to the measures adopted the East of London to which Lea water is issued remained free of water borne paratyphoid despite the fact that the paratyphoid count of the Epping sewage effluent increased steadily during the year rising as high as 355 per c.cm long after the original outbreak had terminated probably owing to the presence in the town of persons in the carrier state

The author's bacteriological investigations made in connexion with the Epping menace are as usual, most instructive and of more than local interest Last year examining London sewage and scrutinizing 1 800 colonies, he had failed to demonstrate *B paratyphosus* This year examining samples of sewage from Luton Hertford Welwyn and elsewhere he obtained a single paratyphoid B colony and concludes that unless in the presence of an epidemic it would be fair to say that *B paratyphosus* B is usually absent from 0 1 c.cm of raw sewage and from 1 to 2 5 c.cm of treated effluent To these concentrations his Epping figures present an arresting contrast In the Epping sewage before treatment the paratyphoid count rose to 1 400 per c.cm with an average of 729 per c.cm in thirty three samples In the effluent the maximum number was the 355 per c.cm already quoted and the average 38 per c.cm in forty samples The *B coli* content reached 1 000 000 per c.cm in the raw sewage and 100 000 in the effluent The *B coli* averages were 225 454 for raw sewage and 6 499 for effluent Dividing these numbers by 729 and 38 the corresponding average numbers for *B paratyphosus* B we derive the quotients 309 and 171 which represent the number of *B coli* present per paratyphoid bacillus and suggest in a convincing manner so far at least as *B paratyphosus* B is concerned how wide on a rough the margin of safety allowed by adopting the absence of *B coli* from 100 c.cm of water as a criterion of good quality

[1] Metropolitan Water Board Twenty-sixth Annual Report on the Results of the Chemical and Bacteriological Examination of the London Waters for the Twelve Months ended December 31st 1931 By Sir Alexander Houston Director of Water Examination Metropolitan Water Board London P S King and Son Ltd (10s 6d)

British Medical Journal April 2 1932 p 654

British Medical Journal

SATURDAY, JUNE 25th, 1932

TREATMENT OF PERNICIOUS ANAEMIA

Minot and Murphy's discovery in 1926 of the efficacy of liver therapy in Addisonian anaemia introduced a new era in the treatment of this disease. Before that date although remissions extending over months or years were sometimes seen, the general course of the complaint treated only by arsenic and iron was such as to earn the description of a progressive pernicious anaemia. Blood transfusion was an emergency measure its effect was temporary and its use often attended by considerable risk. Liver treatment has brought a new hope to physicians and patients. It has also brought its problems. On the laboratory side there has been the incitement to pursue the matter by determining what factor or substance in the liver is active and what other organs if any, possess similar properties. Castle's experiments pointed to there being some substance formed by the digestion of beef protein in a healthy stomach which is necessary for blood formation and that this is normally stored chiefly in the liver and to some extent in the kidneys. Preparations of hog's stomach are those most in use and these are put up in the form of a dried powder easily soluble and palatable. In reviewing a series of twenty cases of pernicious anaemia seen at Bristol G. L. Ormerod[1] shows what an immense advance liver treatment was on anything that had been tried in the treatment of the complaint. From half to a quarter of a pound of liver is needed daily having its maximum effect when taken raw though it may be lightly cooked in any way desired. The increase in the reticulocytes which occurs reaches a maximum—usually 10 to 15 per cent.—about the end of the first week. The rise in red blood cells begins on the fifth or sixth day numbering eventually 4 to 4·5 millions with full doses of liver. Ormerod is of opinion that even better results are achieved by the use of hog's stomach. The remissions that take place are of the same nature as those caused by liver but appear more rapidly. After large doses of stomach tissue the reticulocytes often go up to from 20 to 40 per cent. Further several patients who have failed to respond to liver in adequate amounts have improved at once on taking hog's stomach either raw or as a desiccated preparation. Professor Davidson[2] whose work on this subject is well known says that while elaborate dieting is unnecessary there must be—in addition to liver lightly cooked or as raw pulp—an adequate daily intake of red meats green vegetables and fruit. Liver extract derived from whole liver or desiccated hog's stomach—10 grams for every million red cells deficient—is of especial service during relapses and may be used also during the stage of remission. The maintenance dose of the effective principle must be taken for life its amount is determined by the blood level which must be brought up to and kept normal.

One of the chief clinical problems is that of making the liver dishes palatable enough so that the patient does not become tired or even nauseated by them. Although many patients have no great difficulty in consuming enough liver to maintain an essentially normal state of health the introduction of an extract (or of stomach substance as a substitute for liver) has made the task easier for some of them. There are, however patients who cannot take liver or liver extract without vomiting and there are the severely ill, in whom treatment is a matter of urgency. In these circumstances as Murphy[1] points out, it may be of distinct importance to have available an actively potent substance which may be given parenterally. The extract first used in the series of cases he reports was a simple aqueous solution of liver fraction G. isolated by Cohn. This preparation, which was sterilized by boiling for four or five minutes often caused severe pain at the site of injection. More recently a purified extract of great potency has been prepared. 100 grams of liver being represented by 5 c.cm. of the extract. Intramuscular or subcutaneous injection of this is painless. A small group of patients have received treatment during a relapse by intravenous administration of the same extract. The injections were given slowly at the rate of approximately 1 c.cm. per minute. The first of Murphy's patients to be treated in this way was one who had responded well to liver by mouth but had then disappeared for six months to return with severe relapse and signs of affection of the spinal cord. He was given four intravenous injections on successive days each dose being equivalent to 100 grams of liver. This was followed by the production of a larger number of reticulocytes in a similar period of time than had been produced by means of the daily ingestion of 300 grams of liver. There was also a greater increase in red blood cells after the intravenous use of liver extract during a slightly shorter time in hospital and at the end of a month after discharge from hospital the highest blood level attained by this patient was reached. The improvement continued though no liver was taken during the next three months.

Murphy further reports on seventeen patients who received liver extract intramuscularly and on six who had daily small subcutaneous injections all showed improvement. The latter injections were often accompanied by erythematous reddening of the skin which persisted for a day or two. The intramuscular injections were rarely painful but in three cases there was a generalized reaction with feeling of faintness, palpitation of the heart, and nausea. A rise of temperature above the normal also occurred at times. After intravenous administration of the extract there was often a chill of moderate severity with rise of temperature and nausea. In only one patient was it severe enough to be alarming when the reaction was characterized by

[1] Murphy, W. P. *Journ. Amer. Med. Assoc.* March 26th 1932.

distressed breathing flushing of the face, and severe pain in the lumbar region There was also a temporary drop in the systolic and diastolic blood pressures, and a temporary depression in the leucocytes later the leucocytes rose to normal or above, tending to remain at a higher level than was observed at the beginning of treatment Intramuscular injections were followed by a prompt increase of the leucocytes without the preceding drop and within five to fourteen days from the beginning of treatment the number of leucocytes had become normal Murphy's experience so far would lead him to conclude that the most satisfactory use of parenteral treatment is in the intramuscular injection of large or optimal amounts of the liver extract used (extract prepared from 300 to 400 grams or more of liver) during the commencement of the treatment of a patient in relapse Subsequent and maintenance therapy may perhaps best be carried out by similar smaller injections at intervals varying from five to seven days or even much less often in uncomplicated cases The exact interval must be determined by the condition of the blood and of the patient Murphy claims that the cost of treatment is reduced when liver is given intramuscularly As Professor Davidson points out all possible septic foci should be dealt with once the blood has improved enough to allow operative or other procedures to be carried out

Cohn's preparation of liver extracts which are capable of parenteral use has led to their trial by many workers Connery and Goldwater[1] report success with intramuscular injection in a series of fourteen cases, no severe reaction was observed In this *Journal* experiences with two preparations have been recorded An extract prepared by a method similar to Cohn's but freed from proteins (hepatex) has been successful when used intravenously in two cases[2] An extract prepared by pressure from raw liver by Gansslen (campolon) has been used in six cases[3 4] with success A wave of enthusiasm has followed the introduction of this method of parenteral administration of liver extract, and physicians are hastening to record their early successes Failures, too, have been recorded and discussed lately in our columns The results of further work will be awaited with interest

COMPARATIVE STUDY OF TUMOURS

Although written and primarily intended for veterinarians Dr W H Feldman's monograph on neoplasms of domesticated animals is destined to occupy an important place on the bookshelves of those occupied with or interested in, the study of cancer The absence of such a connected account in one volume bringing together what has been published on the occurrence of new growths in lower animals has led in the past to the spread and acceptance of loose and erroneous statements on the freedom of this or that species from cancer It should now be impossible for anyone claiming serious consideration to invent statistics on this subject in the any way familiar to all in the writings of those who love to incriminate various articles of diet as responsible for the prevalence of the disease Dr Feldman has adopted the histogenetic classification of Mallory as a framework in which to marshal the observations of himself and others on the occurrence, histological appearances, diagnosis and clinical characteristics of benign and malignant tumours Under each form the known facts of its occurrence in the different domestic animals are succinctly summarized Where information is available the known occurrences in wild animals in captivity are also added The illustrations accompanying the text are from photomicrographs of specimens in Dr Feldman's own collection, and they are a remarkable series both for their aptness and for the high standard of reproduction maintained throughout In fact the illustrations may be recommended as a model of what can be achieved by expert choice of field and magnification from well preserved and stained histological preparations

The short essay on the comparative study of cancer by Dr W Cramer which appears in this month's *Cancer Review*[1] may be regarded as complementary to Dr Feldman's detailed monograph The method of arrangement adopted by Dr Feldman tends to obscure certain remarkable peculiarities in the zoological distribution of cancer to which the other paper draws attention Of these the most striking are the predilection which the disease exhibits for one or other organ in the several animal species Thus in the cow the liver and stomach are eminently the seat of malignant disease while in the horse primary carcinoma of the kidney is much more common The cat shares with man the dread burden of carcinoma of the tongue, and the frequency of cancer of the breast and lung in the mouse contrasts strongly with the relative freedom of the rat from disease in these organs while the liver and subcutaneous tissues of rats show a formidable contingent of sarcomata

The other aspect of the natural history of cancer to which Dr Cramer draws attention is the curious one of its age incidence Measured in absolute units of time the new growths of the different animal species seem to arise after intervals which cannot be significantly correlated with any types of histological structure or clinical behaviour When, however, the age incidence is plotted in equivalent fractions of the span of life of the several animal species at once a complete and satisfactory correspondence emerges The simplest and most demonstrative example is that provided by tar cancer in mice and the corresponding occupational disease in man The earliest cases appear in the mouse after tarring for three to six months in man after ten to fifteen years exposure The shorter

[1] Connery J J and Goldwater L J *Journ Amer Med Assoc* March 26th 1932 1000
Bills, I Wetherson W N and Young C J *British Medical Journal* February 13th 1932 273
[2] Davidson L S P Ibid February 13th 1932 269
[3] Lyon R M Murray *Edin Med Journ* May 1932 328
[4] *Neoplasms of Domesticated Animals* By William H Feldman D V M M S With a foreword by Charles H Mayo M D Mayo Clinic Monograph Philadelphia and London W B Saunder Company 1932 (25s net)

[1] *Cancer Rev* June 1932

period equals one tenth to one sixth of the average (2½ to 3 years) life span of the mouse and the longer period is practically the same fraction of the 70 to 80 years of the life of man The discussion of the significance of these features of cancer and of the related phenomena of susceptibility should be read in the original

TREATMENT OF LUNG ABSCESS

The discussion on lung abscess at the Royal Society of Medicine last February[1] left many with an uncomfortable feeling that their increasing ability to diagnose the condition had outpaced their knowledge of how to prevent it and still more of the exact time and method to choose in treating the individual case This state of mind was not entirely dispersed by Dr R A Young's happy rejoinder (to the now famous simile propounded by Dr Burrell) that there were still the bronchoscopist with his hose and the surgeon with his axe ' to be called on by the rescue party The case for the bronchoscopist has been once more put by MM Bloch and Soulas[2] in a paper dealing with various types of pulmonary suppuration among which are some twenty-four examples of abscess It is to be noted that their encouraging results were obtained on comparatively unpromising material for the incidence of the fairly benign type following tonsillectomy—so common in the United States—is lower in France where the most frequent causes are the pneumonias as well as operations on teeth sinuses and the abdomen all of these are admittedly less amenable to therapy Their main contribution relates not so much to details—such as the use of adrenaline in clearing the field of view and of various antiseptic instillations—as to an estimate of the times at which the bronchoscope should be employed In an acute abscess a preliminary investigation should be made even as early as the third week provided it is performed as briefly as possible (to accustom the patient to the manœuvres) and it is to be followed by a second session at which suction drainage or instillations can be thoroughly employed Further treatments are now to be deferred until the second period of attack — from the seventh to the tenth week During this time a more varied list of measures—swabbing cauterization of granulations catheterization and instillation of iodine solutions gomenol oil argyrol etc —are available These last should be carefully limited to the site of suppuration Thereafter the bronchoscope ought to be put on one side for either the abscess has by now resolved or the patient has been rendered fit for operation which should be no longer delayed In chronic abscess there are the authors maintain two indications for broncho-scopy first when the patient is suffering an exacerbation at the common time (after four to six months from onset) for then it should be given a month's trial before thoracotomy and secondly as a palliative in the really chronic abscess when it is often the only treatment available Bloch and Soulas confirm the general impression that about 15 to 20 per cent of abscesses recover without surgical operation and claim for broncho-scopy a 20 to 50 per cent cure with marked improvement in another 30 per cent Since these figures are still obtained largely from the more chronic types they hint that with all cases thus drained after ten weeks the proportion of cures would be still more satisfactory Anatomically considered the hilar and the central types are the most amenable to this form of therapy the parietal site demands surgery and the upper lobe abscess is very difficult for endoscopy though the new retrograde telescopic feature of Pinchin and Morlock's instrument[3] has it seems done much to meet this difficulty As a surgeon with his axe Mr Wallace Frank[4] gives a very full account of the evidence for and against the aspiration and embolic theories of aetiology (he joins the majority in voting for the former) and proceeds to discuss seriatim and in conservative fashion the methods available for treatment He avers that where drainage is not free phrenicectomy may by further obstruction do more harm than good he never performs thoracotomy (two-stage) until two months after diagnosis to avoid intercurrent pulmonitis He does not use tube drainage the cavity being opened widely and packed with gauze In his opinion 25 to 35 per cent of cases require operation the most promising alternatives being bronchoscopy and postural drainage Dr Homer Cherry another exponent of postural drainage, writes

> Apical and root abscesses drain best in a sitting position and they are more apt to heal than basal or peripheral cavities Basal cavities may require the patient to be partly inverted by hanging the chest over the side of the bed (Von Quincke position) Occasionally drainage may best be secured by a lateral position with the diseased lung up Hourly or every two hours during the severe stage is not too frequent then as improvement is made the interval can be lengthened

This treatment is difficult of fulfilment mainly because of its demands on the powers of co operation of the patient and of his attendants but in many respiratory affections we are becoming more sensible of the value of posture in drainage Absolute rest however is his main tenet and in acute abscess this is effective if instituted early and if continued for periods of time comparable with those used in the treatment of tuberculosis The average period for the cases recorded in this paper was about 120 days Uncomplicated abscess yields to this treatment in 69 to 70 per cent of cases and at the worst it will render the patient fit for operation but perhaps the optimum time for operation may have already passed From small collections of clinical impressions such as these it may become possible in time to obtain an individual experience which will bring to bear at the right moment all the weapons available for use in this distressing condition

WORLD MOVEMENT FOR MENTAL HYGIENE

The world movement for mental hygiene which was inaugurated at the first International Mental Hygiene Conference at Washington in May 1930 took its second step forward when Mr Clifford Beers the founder and secretary general met some fifty European representatives at the Union Interalliee in Paris on May 29th to report on the progress made so far to initiate preparations for the second World Mental Hygiene Congress to be held in Paris in 1935 and to assist in constituting the European Committee for Mental Hygiene The delegates from England were Mr L G Brock the chairman of the Board of Control and Sir Hubert Bond

[1] *Lancet* March 26th 1932 671
[2] *Ann. de Méd.* May 1932 xxv 675
[3] *Ann. Otol. Laryn.* March 1932 63.

senior commissioner Dr R D Gillespie and Dr Doris Odlum joint honorary secretaries of the British National Council for Mental Hygiene, and Dr J R Rees deputy director of the Institute for Medical Psychology (Tavistock Square Clinic for Functional Nervous Diseases). The business meetings were followed by scientific sessions held at the psychopathic hospital Henri Rousselle at the invitation of Professor Toulouse. The subjects for discussion included (1) a report by Professor Rudin of Munich on the place of eugenics in preventive mental hygiene dealing with the question of hereditary transmission of mental disease and defect and emotional instability (2) a valuable report presented by Professor Toulouse Dr Dupouy, and Dr Courtois based on an international questionary dealing with the facilities in various European countries for the treatment of incipient and established mental disorder without legal formalities and (3) a report by Dr Bersot of Switzerland dealing with the international unification of statistics in relation to mental disease. The reports and discussions were of great importance and interest. It was generally felt however that at future meetings the subjects discussed ought not to be exclusively medical since the mental hygiene movement is essentially sociological and aims at bringing together non medical and medical opinion on questions of great significance for humanity. It was decided to hold the second European reunion in Rome in September 1933 on the invitation of the Italian representatives. Sir Hubert Bond was appointed the British representative on the European Executive Committee and Dr R D Gillespie the British corresponding secretary and member of the European Council.

OZONE IN INDUSTRY AND PUBLIC HEALTH

Ozone that allotropic variant of oxygen which appears in traces over the sea or in the air of the open country and which has lately been surmised by meteorologists to exist in the high atmosphere in sufficient amount to affect the temperature of its limiting layers possesses a strong oxidizing action in virtue of which it attacks metallic silver and may given suitable conditions inhibit or destroy bacteria. The facility with which it can be formed from air by means of the silent electric discharge has made it available in workable quantities to industry and hygiene and its practical uses in these fields have recently been set forth in an interesting article by Dr L Hugounenq.[1] Ozone he says is a potent agent in the vulcanization of rubber and it is of value for the bleaching of textiles. Since it spares yeast and at the same time acts vigorously against the germs which impair the qualities of beer it has been employed with advantage in brewing. It is of service too in the maturation of odorous essences and in the preparation of drying oils. In the practice of hygiene ozone has been turned to account for its germicidal properties. It is claimed that treatment with ozonized sea water disinfects oysters and other shell-fish exposed to bacterial contamination without weakening their vitality or damaging their taste and that ozone when applied to perishable foodstuffs saves their market value intact and leaves in the food no trace of material foreign to the tissues of consumers differing in this from some other preservatives. The use of ozone in the purification of drinking water was first commended by Van Ermengem as a result of experiments carried o in Holland on the water of the Old Rhine. A fe years later Roux Calmette and others confirmed V Ermengem's views. In France to-day water supplie are ozonized at Avignon Chartres Lorient Bic Bergerac Boulogne sur Mer Châtelleraut Nice an other communities as well as in Monte Carlo th arsenal at Toulon and many schools and privat houses. At Boulogne *B coli* present in 1 c.cm. the raw water is absent from one litre after ozoniza tion. Sir A C Houston in 1931 applied ozone to th metropolitan water at Barn Elms obtaining result which he describes as bacteriologically perfect. Although the method has hitherto been little used in Britain w may acquiesce in our author's encomium of wat ozonization in France but when he applauds in th same cordial terms the use of ozone for the purificat of air we cannot but feel that the analogy is force and confidence in such a procedure ill founded. H speaks of rotary ozonizers for supplying ozone chie to habitations and describes an appliance of th kind as of service wherever it is necessary to purify a vitiated atmosphere as in sick rooms or crowded factories. But ozone however effective in water has shown itself a reluctant germicide under dry conditions. It takes some thirteen parts of ozone per million of air to affect bacteria but one part per million causes respiratory discomfort to man lowers his oxygen intake produces headache and depression and may even lead to coma. Thus a concentration which would damage bacteria in the air of a room would be more than ten times stronger than could be borne by the human occupants. Conversely a dose of ozone which could be tolerated by the human subject would be germicidally inert. In any event there would appear to be no occasion to call in the resources of chemical science in order to purify air when the air of a sick room can be speedily changed by the simple act of opening a window and when the ills of crowded work shops can be remedied by reducing the aggregation of people or by driving fresh air in from the outside. Ozone however, is clearly useful inasmuch as it succeeds in the wet although like gaseous disinfectants as a class it is apt to fail in the dry. *Corpora non agunt nisi soluta* was said by wise men of old. When we praise ozone as a sterilizing agent as we quite properly may, we must at the same time recognize the limita tions to which it is undoubtedly subject through the working of this law.

BLOOD CONDITION OF X RAY AND RADIUM WORKERS

The X ray and Radium Protection Committee (of which Sir Humphry Rolleston is chairman and Professor Sidney Russ and Dr Stanley Melville are honorary secretaries) is desirous of collecting further evidence on the question of blood changes occurring in workers in radiological departments. For this purpose the com mittee has drawn up a questionary which is now being circulated to the various hospitals for completion so that a review of the matter may be made early in October next. The questions are as follows. (1) How many x ray and radium workers have you whose blood is periodically examined? (2) Have any alterations of the blood occurred among the workers in your x ray and radium departments? (3) If alterations have been

[1] Presse Médicale 5 April 15th 1 32 291

found please state in how many cases (4) Can you supply typical blood counts and the pathological reports upon such cases? (5) Can you give some details of the workers occupation and duration of service in each case cited? (6) How have the affected workers been treated and with what results? (7) Have you formulated any reasons why some of your workers showed blood changes and if so what were they? Replies should be forwarded to the honorary secretaries of the committee, 32, Welbeck Street W 1

COLLECTION OF PATHOLOGICAL SPECIMENS

In a useful pamphlet entitled *When and How to Collect Pathological Specimens for Laboratory Examination* the Association of Clinical Pathologists has endeavoured to solve what for some doctors is a very common problem This practical guide—the work of Drs S C Dyke J G Greenfield and A Renshaw—aims at forming a liaison between the pathologist and the practitioner The latter will find in it some indications as to the most profitable use of laboratory assistance and advice as to the best methods of collecting and transmitting pathological specimens The various kinds of specimens that may require examination are dealt with seriatim and indications for their use in diagnosis are given in each case Thus blood counts cultures specimens of pleural effusion urine faeces and sputum all find a place Valuable instructions are given for the collection of cerebro spinal fluid and for the procedure to be adopted with swabs from nose pharynx and trachea venereal disease specimens fractional test meals etc We understand that copies of the pamphlet may be had from Dr Dyke Pathological Laboratories Royal Hospital, Wolverhampton

RADIATION IN DIVIDED DOSES

In a paper on the effect of spaced radiation on tissue cultures *in vitro*[1] Dr F G Spear deals with the question of the action of divided doses of radiation as contrasted with a single massive dose of the same total intensity It is another contribution to that excellent series of researches carried out in the Strangeways Laboratory at Cambridge, in which the action of radiations is studied in relation to their action upon tissue cultures It is of course a very technical piece of work which cannot be described adequately in a brief note The author's experiments prove that in tissue cultures as well as in experiments on ordinary tissues division of the dose produces alterations in its effects when contrasted with the single dose of the same total amount The experiments were conducted upon material derived from the choroid and sclerotic of the chick embryo cultivated in fowl plasma and embryonic extract and refer to the viability of explants as well as to mitosis

The title of Lord Dawson's Presidential Address at the Centenary Meeting of the British Medical Association is 'A Hundred Years and After' It will be delivered in the Queen's Hall Langham Place W on Tuesday, July 26th at 4 o'clock

[1] *Proc Roy Soc* B 1932 cx 24

CENTENARY MEETING MUSEUM AND CINEMA

The following notice is issued by Mr Philip H Mitchiner and Dr John O Oliver honorary secretaries of the Museum Committee

In view of the kindness of the Business Committee in reconsidering their original decision to grant only £250 for the carrying on of a Museum and Cinema in connexion with the Centenary Meeting and the subsequent raising of this figure to £425 the secretaries have prepared a scheme whereby the Museum and Cinema can be run efficiently in a somewhat modified form for the sum now allotted The expenses of the scheme are still so great as to allow of little or no margin and the Museum Committee has decided that no insurance of specimens will be possible this year all exhibitors must therefore understand that whilst every reasonable care will be taken with all specimens and material submitted no financial responsibility whatsoever will rest with the committee or its secretaries and that all specimens or exhibits must be offered and are accepted on this understanding It will be understood that this statement is made of necessity and it is believed and hoped that there will in consequence of it be no diminution in the material offered for exhibition It is the wish of the committee that the Museum for the Centenary Meeting shall be worthy of the exceptional occasion The Museum will be arranged in four very large rooms at the Royal School of Mines Prince Consort Road South Kensington S W 7

The present scheme allows for the use of the large examination hall as the Museum proper This will house all the pathological specimens in jars and in addition the Picture Gallery to be provided by the Tropical Section The Mineralogy Laboratory is being given over entirely to the X ray Section as this room can be fairly conveniently darkened or semi-darkened It is proposed that the Judd Laboratory should house the exhibit of Dr Maude Abbott and in addition the display of instruments of restraint to be shown by the Section of Mental Diseases The Ramsey Drawing Office will be available for the Section of Pathology for its microscopes and other specimens This room will also be used for any other microscopical specimens which may be shown by other Sections The Sections in general will be able to have an average of seventy five specimens each and these will be arranged on triple shelving in the large examination hall Secretaries of Sections desiring special arrangements should notify the secretaries of the Museum Committee (Tavistock House North Tavistock Square W C 1) as otherwise ordinary shelving arrangements will be provided

The Cinema—Arrangements have been made for the exhibition of films of medical and surgical interest on the three afternoons of July 27th 28th and 29th in the lecture theatre of the Science Museum, Exhibition Road South Kensington (by kind permission of Sir Henry Lyons F R S Director) The films will be shown between the hours of say 2 and 5 p m daily This will allow of the showing of a comparatively large number of films and the secretaries will be glad to be informed of any interesting films which may be available The cinematograph machine fitted in the theatre is of standard size and only films of standard width can therefore be exhibited

Individual members of the Association having interesting specimens to show should as far as possible arrange with the gentlemen responsible for the appropriate Section

SECTIONS OF THE MUSEUM

Medicine (including Diseases of Children and Orthopaedics) Dr DONALD HUNTER
Surgery Mr WAKELEY and Mr MITCHINER
Obstetrics and Gynaecology Mr STEVENS
Neurology (and Mental Disorders) Dr GREENFIELD
Pathology and Bacteriology Dr BRATTON
Radiology Dr GRAHAM HODGSON
Tropical Medicine Dr S H DALRYS
Oto Rhino Laryngology Mr E D D DAVIS and Mr CAWTHORNE
Tuberculosis Dr E KNAPP

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The principal toast was proposed by Mr VICTOR ALLCARD chairman of the London Port Authority Sanitary Committee He said that the Association of Port Sanitary Authorities was founded thirty four years ago at Hull and Goole Within twelve months of its foundation fifteen authorities had found it expedient to join and at the present time it included thirty The chief object of the association was to protect the health of the community by endeavouring to stop the importation of disease It sought also to secure uniformity of administration so that shipowners and merchants in ports should not be embarrassed with different sets of regulations The proper hygienic housing of the crews was also a matter of concern In the Port of London the jurisdiction of the authority extended over seventy miles of waterway He paid a tribute to the succession of medical officers of the Port of London—Dr Collingridge Dr Williams Dr W M Willoughby and at the present time Dr C F White It was with special gratification that the Port of London Sanitary Committee saw one of its own members this year fill the position of president of the association

Mr CYRIL GAMON in response said that but little was heard of those heroes of peace time the medical officers at the ports who always watchful and unrelaxing kept away unwelcome invaders It was a continual miracle which was performed in the Thames Estuary by the medical officers in stamping out the flood of disease The work of the association he said extended from the ports of Southern Ireland to the Outer Hebrides and all round the coast its members had played an important part in the development of sanitary administration As far back as 1905 the association had urged the necessity for the inspection of cargoes of foreign meat entering ports and in 1923 it recommended the marking of preserved food stuffs—measures which were given governmental sanction shortly afterwards In 1900 the association requested the Local Government Board to circulate information regarding the prevalence of cholera yellow fever plague and small pox and to day the Ministry of Health issued a weekly record of infectious disease in ports abroad which was sent to all the authorities Important communications had been made at the meetings of the association with regard to the prevention of the spread of bubonic plague by rats the control of small pox the disposal of refuse from ships and the control of shellfish layings The Government had at last officially recognized the justice of the claim that grants should be made from the Exchequer towards the cost of port sanitary administration on the ground that passengers and cargoes from ships did not remain in the ports of arrival but were distributed all over the country and 50 per cent of the cost of such administration was now granted from the Exchequer During the past year the association had dealt with the hygiene of crew spaces in ships the discharge of sewage from ships into docks and enclosed harbours the scale of charges for certificates granted in accordance with the requirements of the International Sanitary Convention smoke abatement the prevention of importation of sterilized meat the ownership of unsound food particularly in regard to the liability for the cost of its destruction and the transportation of live fish for human consumption

The toast of The Lord Mayor and Corporation was proposed by the president elect of the association Mr R J HALL of Liverpool and the LORD MAYOR in response said that as Admiral of the Port of London he had great satisfaction in welcoming the visitors for he regarded as one of the greatest of the responsibilities of the Corporation its work as port sanitary authority The toast of The Guests was proposed by Mr FREDERICK WILTINGHAM chairman of the City Lands Committee to which there were three responses—namely from the BURGOMEISTER OF ANTWERP who dwelt upon the traditional association of the ports of Antwerp and London, Sir DAVID OWEN General Manager of the Port of London Authority and Sir ARTHUR ROBINSON Secretary to the Ministry of Health The last named said that it was not long since each port was an isolated unit going its own way issuing its own declarations of health and providing its own Devil's Island or lazaret for its sick persons By slow steps there had come about a close relation of port authorities and a recognition of the vital part they played in the health machinery of the country He instanced the work done recently at the ports to check the importation of parrots and so prevent the spread of psittacosis He had hoped to be able to announce that psittacosis was now a thing of the past but he was afraid that the authorities must carry on the prohibition for some time longer He mentioned the uniqueness of the weekly summary of intelligence issued by the Ministry of Health to port sanitary authorities There was nothing like it in the world and it represented an enormous amount of co operation with ports and consular services It was devised to enable the authorities to know what they had to look out for when a ship came from a particular port Sir Arthur Robinson also expressed the hope that the thicket of orders and regulations affecting port sanitation would presently be cleared and that a code would be reached which even a layman like himself could understand Something of the kind had already been done in other branches of the public service notably in respect to public assistance and although the legal department had doubtings without and fears within he believed that gradually a code would be achieved which would help the port sanitary authorities and the central administration alike

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Lord LAMINGTON who presided referred in terms of deep regret to the death of Lord Knutsford the chairman of the society and reminded the gathering of the great work he had done on behalf of the hospitals and of all who suffered He announced that the Hon Sir Arthur Stanley had consented to serve as chairman in Lord Knutsford's stead No man was better known especially for his activities on behalf of the British Red Cross Society and his acceptance of the post was in itself a testimony to the work being done by the Research Defence Society He pointed out that the society was engaged in defence of discoveries which would result not only in the prevention or mitigation of human pain, but of animal pain also and the true criterion to apply in connexion with that terrible word vivisection was whether or not the activities engaged in brutalized the nature

Sir ARTHUR KEITH began his lecture with a reminder that in other fields of scientific research—in physics, chemistry geology and botany—experimental work was not impeded by considerations of sentiment The conflict between sentiment and reason was felt acutely by medical students when they had to spend sessions in the post mortem room some were indeed so upset by the experience and the dread of such intimate contact with the dead that they forsook the study of medicine for something less harrowing The judge on the bench had in a measure to divest himself of his natural instincts if he was to administer the law to the criminal while the crowd bemoaning the end which awaited the man at the

condemned cell forgot the justice due to the woman whom the criminal had widowed and the children he had made fatherless Among teachers again there was a growing feeling that the physical punishment of scholars was an unjustifiable form of cruelty In fact sentiment asserted itself more and more as a ruling force The repugnance to eugenic measures of surgery sprang from sentiment rather than from reason and the domination of sentiment was seen in a growing degree among highly civilized peoples But if sentiment was completely to subjugate reason the ultimate result for civilization would be disaster and not progress Man's powers of sympathy primarily intended for the succour of his fellows had been extended in recent times beyond the confines of the family or the tribe to include all animals which entered into friendly relations with him Four thousand years ago when failure to hunt involved starvation the animals pursued had a sporting chance of escape but under present conditions the animal grazing within enclosures had no chance of avoiding slaughter when time was ripe In some of the civilizations of the East sentimentalism had been enthroned to such an extent that animal life in every form was accounted sacred and the more vermin a devotee harboured between his garments and his skin the greater was his merit To place animal life on an equality with human life meant that the proper religion was Buddhism It was better honestly to recognize the conditions of existence and that there was no alternative to living on the products of life

If to nature was ascribed the endowment of man with the godlike qualities of mercy and sympathy to what source was the vice of cruelty to be traced? Civilized man could certainly be cruel By his spoken and written words he could outdo the worst wounds caused by the poisoned darts of savages The power of being cruel might be latent or suppressed but it was never missing from the gamut of human nature What purpose could cruelty have served in the survival of the people? In the creation of man it could be assumed that nature had done nothing in vain In the late war frightfulness was deliberately practised to terrorize the opposing people Cruelty had been given to man for the same reason as the sting to the wasp and the thorn to the rose bush—for protection and to make his enemies fear Everyone wished to see thoughtless cruelty eliminated none more so than the members of the Research Defence Society but there seemed to exist beings in human shape who caused cruelty for the sake of the pleasure they experienced by it

Sir Arthur Keith went on to say that it had been his privilege to know many of those who had advanced the resources of medicine by operations on anæsthetized animals and all had been tender hearted men who were convinced that by a present sacrifice of animal life they would make the world better for both man and beast To watch a surgeon operating would convince anyone that if the patient had been his own child he could not have been more tender and careful Yet he had heard such men branded as malefactors and criminals Of all forms of cruelty there were none more diabolical than those which depended upon a wilful misinterpretation of motive If there was need for a society to save animals from unnecessary suffering there was also need for an organization to save scientific men from the cruelty of misrepresentation and injustice If reason were the sole arbiter in deciding whether or not vivisection was justifiable the public jury of England would long ago have returned a verdict in favour of that society and if reason could convince its opponents backed by masses of evidence they would long ago have been reduced to silence But reason did not hold the sceptre of public opinion and it was necessary to continue to produce evidence and so enlighten the public The Research Defence Society also had to do more than defend those who sought to relieve suffering by research but on occasion it had to take the offensive when it saw the charitable heart of the public being misdirected In conclusion he made an allusion to St Philip Pusey the founder of the society who in his *Confessio Medici* revealed some of the mental conflicts he had endured before he found his real mission in life in the defence of research as the true handmaid of medical progress In the pursuit of the society's aims no labour was too arduous for Paget for the great cause of the relief of suffering through research carried him triumphantly onwards Sir Arthur also paid a generous tribute to the late Lord Knutsford

Sir ARTHUR STANLEY in proposing a vote of thanks to Sir Arthur Keith said that he felt more than ever sure after Sir Arthur's eloquent words that the society was right in its aims

Lord MOYNIHAN in seconding said that Sir Arthur concealed under a very distinguished Scottish name and the remnants of a Scottish accent both a Hibernian mind and a Hibernian personality He traced the steps in their lecturer's career from the time he was anatomist at the London Hospital to his present position remarking that he had created the Department of Anthropology in the Royal College of Surgeons and had made it one of the College's greatest achievements

Scotland

Aberdeen Chair of Surgery

At a meeting of Aberdeen University Court on June 14th the resignation of Sir John Marnoch K C V O from the chair of surgery in the University of Aberdeen on account of ill health was intimated The resignation is to take effect as from September 30th next and appointment to the chair is in the hands of the Secretary of State for Scotland Sir John Marnoch is honorary surgeon to His Majesty's Household in Scotland and succeeded the late Sir Alexander Ogston in the chair of surgery After graduating M B C M at Aberdeen in 1891 he acted for a time as assistant to the professor of physiology in the University of Aberdeen and afterwards became surgeon and lecturer on clinical surgery in Aberdeen Royal Infirmary

Glasgow Mental Hospital

The Board of Directors of Glasgow Royal Mental Hospital at a meeting on June 14th appointed Dr Angus MacNiven to be physician superintendent of this institution in succession to Dr David K Henderson recently appointed to the Royal Mental Hospital Edinburgh Dr MacNiven after graduating M B Ch B at Glasgow in 1923 took up the study of mental disease and became resident assistant physician in the institution of which he has just been made physician superintendent He also spent a period in the study of mental disease in the United States acting as assistant psychiatrist in the Henry Phipps Clinic of the Johns Hopkins Hospital at Baltimore After holding office as senior assistant medical officer in the Cardiff City Mental Hospital he became assistant in the Edinburgh Royal Asylum under the late Professor G M Robertson and in this capacity acted as psychiatrist in the Jordanburn Nerve Hospital of the latter institution and as tutor in psychiatry in the University of Edinburgh

Mental Welfare in Scotland

At the annual conference on June 10th of the Scottish Association for Mental Welfare which has established twenty two local care committees throughout Scotland Dr Hamilton C Marr who presided said that he wished to impress on local authorities the desirability of supporting this association as yet only one half of the local authorities in Scotland sent contributions to what he regarded an essential organization Mental defectives were visited and regularly supervised by the local care committees several of which had also established occupation and employment centres for training and supervision thus enabling defectives to earn at least part of their livelihood A paper entitled Modern methods of research in mental deficiency was read by Dr Lionel Penrose who described the research work carried on at Colchester and empha

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condemned cell forgot the justice due to the woman whom the criminal had widowed and the children he had made fatherless. Among teachers again there was a growing feeling that the physical punishment of scholars was an unjustifiable form of cruelty. In fact sentiment asserted itself more and more as a ruling force. The repugnance to eugenic measures of surgery sprang from sentiment rather than from reason, and the domination of sentiment was seen in a growing degree among highly civilized peoples. But if sentiment was completely to subjugate reason the ultimate result for civilization would be disaster and not progress. Man's powers of sympathy, primarily intended for the succour of his fellows, had been extended in recent times beyond the confines of the family or the tribe to include all animals which entered into friendly relations with him. Four thousand years ago when failure to hunt involved starvation the animals pursued had a sporting chance of escape, but under present conditions the animal grazing within enclosures had no chance of avoiding slaughter when time was ripe. In some of the civilizations of the Last sentimentalism had been enthroned to such an extent that animal life in every form was accounted sacred, and the more vermin a devotee harboured between his garments and his skin the greater was his merit. To place animal life on an equality with human life meant that the proper religion was Buddhism. It was better honestly to recognize the conditions of existence and that there was no alternative to living on the products of life.

If to nature was ascribed the endowment of *man* with the godlike qualities of mercy and sympathy, to what source was the vice of cruelty to be traced? Civilized man could certainly be cruel. By his spoken and written words he could outdo the worst wounds caused by the poisoned darts of savages. The power of being cruel might be latent or suppressed, but it was never missing from the gamut of human nature. What purpose could cruelty have served in the survival of the people? In the creation of man it could be assumed that nature had done nothing in vain. In the late war *frightfulness* was deliberately practised to terrorize the opposing people. Cruelty had been given to man for the same reason as the sting to the wasp and the thorn to the rose bush—for protection and to make his enemies fear. Everyone wished to see thoughtless cruelty eliminated, none more so than the members of the Research Defence Society, but there seemed to exist beings in human shape who caused cruelty for the sake of the pleasure they experienced by it.

Sir Arthur Keith went on to say that it had been his privilege to know many of those who had advanced the resources of medicine by operations on anaesthetized animals, and all had been tender-hearted men who were convinced that by a present sacrifice of animal life they would make the world better for both man and beast. To watch a surgeon *operating would* convince anyone that if the patient had been his own child he could not have been more tender and careful. Yet he had heard such men branded as malefactors and *criminals*. Of all forms of cruelty there were none *more diabolical* than those which depended upon a wilful misinterpretation of motive. If there was need for a society to save animals from unnecessary suffering there was also need for *an organization* to save scientific men from the cruelty of misrepresentation and injustice. If reason were the sole arbiter in deciding whether or not vivisection was justifiable the public jury of England would long ago have returned a verdict in favour of that society, and if reason could convince its opponents backed by masses of evidence they would long ago have been *reduced* to silence. But reason did not hold the *sceptre of public opinion* and it was necessary to continue to produce evidence and so enlighten the public. The Research Defence Society also had to do more than defend those who sought to relieve suffering by research, but on occasion it had to take the offensive when it saw the charitable heart of the public being misdirected. In conclusion he made an allusion to Stephen Paget the founder of the society, who in his *Confessio Medici* revealed some of the mental conflicts he had endured before he found his real mission in life in the defence of research as the true handmaid of medical progress. In the pursuit of the society's aims no labour was too arduous for Paget for the great cause of the relief of suffering through research carried him triumphantly onwards. Sir Arthur also paid a generous tribute to the late Lord Knutsford.

Sir ARTHUR STANLEY, in proposing a vote of thanks to Sir Arthur Keith, said that he felt more than ever sure after Sir Arthur's eloquent words that the society was right in its aims.

Lord MOYNIHAN, in seconding, said that Sir Arthur concealed under a very distinguished Scottish name and the remnants of a Scottish accent both a Hibernian mind and a Hiberman personality. He traced the steps in their lecturer's career from the time he was anatomist at the London Hospital to his present position, remarking that he had created the Department of Anthropology in the Royal College of Surgeons and had made it one of the College's greatest achievements.

Scotland

Aberdeen Chair of Surgery

At a meeting of Aberdeen University Court on June 14th the resignation of Sir John Marnoch, K.C.V.O., from the chair of surgery in the University of Aberdeen on account of ill health was intimated. The resignation is to take effect as from September 30th next, and appointment to the chair is in the hands of the Secretary of State for Scotland. Sir John Marnoch is honorary surgeon to His Majesty's Household in Scotland, and succeeded the late Sir Alexander Ogston in the chair of surgery. After graduating M.B., C.M. at Aberdeen in 1891 he acted for a time as assistant to the professor of physiology in the University of Aberdeen, and afterwards became surgeon and lecturer on clinical surgery in Aberdeen Royal Infirmary.

Glasgow Mental Hospital

The Board of Directors of Glasgow Royal Mental Hospital at a meeting on June 14th appointed Dr. Angus MacNiven to be physician superintendent of this institution in succession to Dr. David K. Henderson, recently appointed to the Royal Mental Hospital, Edinburgh. Dr. MacNiven after graduating M.B., Ch.B. at Glasgow in 1923 took up the study of mental disease and became resident assistant physician in the institution of which he has just been made physician superintendent. He also spent a period in the study of mental disease in the United States, acting as assistant psychiatrist in the Henry Phipps Clinic of the Johns Hopkins Hospital at Baltimore. After holding office as senior assistant medical officer in the Cardiff City Mental Hospital he became assistant in the Edinburgh Royal Asylum under the late Professor G. M. Robertson, and in this capacity acted as psychiatrist in the Jordanburn Nerve Hospital of the latter institution and as tutor in psychiatry in the University of Edinburgh.

Mental Welfare in Scotland

At the annual conference on June 10th of the Scottish *Association for* Mental Welfare, which has established twenty-two local care committees throughout Scotland, Dr. Hamilton C. Marr, who presided, said that he wished to impress on local authorities the desirability of supporting this association; as yet only one-half of the local authorities in Scotland sent contributions to what he regarded an essential organization. Mental defectives were visited and regularly supervised by the local care committees, several of which had also established occupation and employment centres for training and supervision, thus enabling defectives to earn at least part of their livelihood. A paper entitled Modern methods of research in mental deficiency was read by Dr. Lionel Penrose, who described the research work carried on at Colchester and empha-

sized the necessity for recognizing many factors before diagnosing mental deficiency Referring to the propaganda at the present time for sterilization of mental defectives he said that such propaganda was premature and based largely on the erroneous view that mental deficiency was a simple entity We did not yet know how much of this defect was due to environment and until this was understood the mechanism of hereditary disposition could not be explained Dr R B Clarkson of the Royal Scottish National Institution at Larbert said he hoped that before long funds would be available for research because they were only beginning to understand what mental deficiency was and how the amount of social waste and expense caused by defectives could be cut down Dr John Jardine of the Scottish Education Department said that the Act of 1913 had imposed on education authorities the duty of caring for mentally defective children up to the age of 16 but the whole problem was still in its infancy To day in Scotland some 4 000 children were getting a chance through special schools that such children never had before but this number should be at least doubled Although the results obtained in these special schools and classes were inconsiderable judged by purely pedagogic standards they were of immense importance when judged by the standards of cleanliness and self control inculcated Dr Angus MacNiven deputy medical superintendent of Edinburgh Royal Hospital for Mental Disorders showed how mental hygiene had been established since 1909 in almost every civilized country Dr Walter Chambers medical superintendent of Murray Royal Asylum Perth protested against the loose way in which the term mental defective was employed to include psychopathic states as well as intellectual defects

Highlands and Islands Fund

One of the most important results following the transfer of functions to county councils in the Highlands and Islands has been to transfer the local governing unit for nursing and other medical services from the parish to the county Federations of voluntary nursing associations have been formed in the different counties with great benefit The Highlands and Islands (Medical Service) Fund has encouraged the co operation of voluntary and statutory agencies in providing adequate health services Thus the surgeon employed under a financial guarantee by the county council of Caithness actually carries out most of his duties in the two voluntary hospitals of the county The county council of Inverness appoints local practitioners for the clinical care of persons for whose medical treatment the council is responsible and the council now proposes that in Skye the inspection of school children should be taken over by the practitioners This arrangement is regarded as an experiment and if successful may be adopted by councils in other parts of the county A new principle has been introduced by the same county council in appointing to a vacancy a doctor from a less remunerative practice in the same county thus effecting a system of promotion among part time medical practitioners who have given approved service in poorer practices

National Health Insurance

According to the third annual report of the Department of Health for Scotland[1] the number of members of approved societies during 1931 was 1 191 000 men and 613 000 women the number of deposit contributors was 18 400 Insured persons estimated to be entitled to medical benefit for the full year numbered 1 874 000 To meet the cost of medical benefit and its administration approved societies were charged 12s 1d per insured person as in the previous year In view of the financial crisis an Order in Council was made with the object of effecting certain reductions in the expenditure on national health insurance representatives of insurance practitioners and chemists agreed to the curtailment of their remuneration which was accordingly reduced by 10 per cent as from October 1st 1931 During the year only thirty three complaints of alleged failure on the part of practitioners to carry out their obligations were reported In four the charge was not substantiated, in six no action was thought to be necessary warning or censure was imposed in a further six and in the remaining seventeen cases penalties aggregating £252 were imposed Charges of wrongful certification were brought against fourteen practitioners of whom six had a monetary penalty imposed averaging £8 the principal cause of complaint was the issue of a certificate without examination The range of medical services rendered was claimed to be outside the scope of medical benefit in twenty seven cases referred to the Department these included operations for removal of the appendix removal of tonsils and radical cure of hernia, and also ultra violet light treatment In all cases the Department concurred in the claim Sickness benefit absorbed £1 060 000 in 1931 as against £1 095 000 in 1930 and disablement benefit £606 000 as against £629 000 in 1930 The average cost per member per week of both benefits was 4 262d as compared with 4 438d in 1930 and 4 941d in 1929 Out of 53 039 cases referred to regional medical officers the practitioners certification was upheld in 20 467 and reversed in 9 523

[1] Cmd 4080 H M Stationery Office (3s net)

Ireland

Irish Medical Association

At the annual meeting of the Irish Medical Association on June 8th the new president Dr R J Rowlette referring to the proposed cuts in salaries of those engaged in medical administrative work said that the existing emoluments were not high considering the quality of men required for such work and the proposal to reduce them seemed to him to be thoroughly immoral and prejudicial to the public welfare It was prejudicial to the public welfare in that if the threat were carried out confidence in contracts made by the Government would disappear and it would be difficult in future to induce men of high standing and of ability to accept administrative posts under the Government The threat was not limited to officers in Government services it was rumoured that local authorities throughout the country were to be empowered to break their contracts of service with employees Dispensary and other local medical officers would then be in the same position as their lay colleagues A resolution was unanimously adopted declaring that the proposed reduction in the salaries of medical civil servants was unjust in itself and likely to lead to a lower standard of candidates in future as the main attraction for professional men to accept administrative posts in the Government services had been its supposed security

The Coombe Lying in Hospital

The clinical report for 1931 of the Coombe Lying in Hospital Dublin states that 1 296 cases were admitted to the maternity department 1 172 patients being delivered in the hospital This indicates an increase of thirty four deliveries upon those of the previous year about one third of these patients had received pre natal care On the extern maternity district 1 500 patients were delivered as compared with 1 460 last year Between the months of April and June 1931 at a time when the hospital was overcrowded there was an outbreak of puerperal fever in the hospital ten cases were serious, and eight of these patients died An investigation led to

no certain conclusions as to the origin of the outbreak The cases in April were apparently sporadic but system atic throat examinations revealed that eleven members of the medical and nursing staff had haemolytic strepto cocci in the upper respiratory tract One or more of these carriers had assisted at the delivery of four out of eight patients from whom this organism was recovered and also at the delivery of two cases in which staphylo cocci were found Masks are now being worn by all who assist in deliveries and at the washing of patients during the puerperium Panflavine tablets have proved to be effective in curing the throat condition It is urged in the report that such epidemics might well be prevented or cut short in the future by the provision of proper isolation accommodation and also by the institution of the small ward system in hospital planning The per centage of Caesarean sections increased in the year under review possibly owing to the fact that a greater number of cases of disproportion are now being recognized early and sent to hospital for treatment Induction of labour has also been employed more often in cases where diffi culty and delay were anticipated

A Dispensary Medical Officer's Deputy

At a recent meeting of the Tyrone Branch of the British Medical Association the members pledged themselves not to accept any position for the temporary discharge of the duties of dispensary medical officers in opposition to the wishes of the medical officer going on leave The resolu tion was forwarded to the Omagh Board of Guardians but the board reserved to itself the right of appointing the substitute irrespective of the wishes of the dispensary doctor (Dr Gillespie) who applied for leave of absence The matter was also brought to the notice of the Ministry of Home Affairs and the Assistant Secretary in a letter to Dr Gillespie stated that while the Ministry agreed that the board of guardians should as far as possible con sult the wishes of the dispensary medical officer when nominating his substitute it would be impossible to accept the suggestion that the board of guardians in all cases be bound to appoint the person so nominated The Ministry noted that Dr Gillespie objected to being compelled to leave his practice in the hands of anyone the board of guardians chose to nominate and that he considered the medical officer should have the opportunity either of giving up his holiday or providing a resident locum It appeared to the Ministry that in these remarks there was a failure to distinguish between the medical officer's private practice and his dispensary work It was of course open to the medical officer to employ any person he pleased to look after his private practice while he was away but the final choice of the substitute to discharge the duties of the dispensary district must remain with the board of guardians

Proposed Appointment of Radiologist

The appointment of a radiologist in the Central Hospital Galway to succeed Dr C O O Malley was dis cussed at a recent meeting of the County Galway Hospitals Committee The secretary said that Dr O Malley inti mated some time ago that he wished to resign the position of radiologist in the hospital but promised to carry on until such time as the committee appointed a successor he was now anxious to be relieved of the duties as soon as possible The position carried a salary of £250 per annum The annual fees paid by patients for treatment by the radiologist amounted to nearly as much—namely £237 Dr Walter Fallon visiting physician in the Central Hos pital said radiology was the key note of medicine and was absolutely indispensable in any up to date hospital In order to attract the right candidate he thought the Ministry should give a reasonably good salary and suggested that the doctor should be allowed to collect fees from those patients who could afford to pay It was decided to ask the Minister to sanction a salary for the new radiologist at £250 plus fees collected annually which amount on an average to £237 the doctor appointed not to act outside the hospital other than as a radiologist and as an electro therapy specialist

England and Wales

Board of Control

The King on the recommendation of the Minister of Health has approved the appointment of Miss Ruth Darwin as a Senior Commissioner of the Board of Control in succession to Mrs Lilen F Pinsent Mrs Pinsent who will retire on July 31st has had a long and distinguished career of public service She served for many years on the Birmingham Education Committee and on the City Council and was a member of the Royal Commission on the Care and Control of the Feeble minded 1904 to 1909 She was an Honorary Commissioner of the Board of Control from 1913 to 1920 and a Commissioner from 1921 to 1930 and has been a Senior Commissioner since January 1st 1931 when the Board was recognized under the Mental Treatment Act 1930 She represented the Board on the Joint Committee on Mental Deficiency 1924 to 1929 She is an honorary M A of Birmingham University and was created C B E in 1925 Miss Darwin who is a daughter of the late Sir Horace Darwin was an Honorary Commissioner from 1920 to 1930 and has been a Commissioner since January 1st 1931 She is a member of the committee recently appointed to consider certain issues arising in connexion with the sterilization of the mentally unfit

Vital Statistics for 1930

The Registrar General's Statistical Review of England and Wales for 1930 (Text Volume)[1] is the last of the three volumes for that year It contains the official commentary on the vital statistics in Part I Medical Tables and Part II Civil Tables already issued There are special sections on deaths marriages births stillbirths estimated popula tion vital statistics for Great Britain and Ireland Legitimacy Act (re registrations) Adoption of Children Act (registration) and electors (Parliamentary and Local Government) The population at the middle of the year was estimated at 39 806 000 persons This estimate was largely confirmed by the result of the census in April of the following year the provisional figure of the census at that later date being 39 947 931 The estimated figure of 39 806 000 was made up of 19 075 000 males and 20 731 000 females This excess in the number of females is not distributed evenly over the various ages being most marked in the age groups between 30 and 55 The birth rate was 16 3 thus equalling the rate for the previous year which was the lowest recorded in this country since the establishment of civil registration The marriage rate was 15 8 persons married per 1 000 of the population remaining the same as for the previous year which was the highest recorded since 1921 The death rate was 11 4 compared with 13 4 for 1929 which had a high rate owing to the severe weather of the spring period The rate of 11 4 was the lowest death rate on record The death rate under 1 year of age was 60 per 1 000 live births which is the lowest figure recorded and 5 per 1 000 below the previous record of 65 for 1928 The rate for deaths of mothers from childbirth for 1930 was 4 40 per 1 000 live births against 4 33 for the previous

[1] H M Stationery Office (2s 6d net)

year The higher figure is owing to a rise in the rate for puerperal sepsis the figure for 'other puerperal causes showing a slight decrease It is suggested that this may be associated with the lower birth rate giving a greater proportion of cases of first born children with its consequent slight increase of risk thus masking any reduction achieved as a result of maternal welfare schemes The deaths ascribed to cancer during 1930 number 57,883 (26 916 males and 30 967 females) These numbers are the highest yet recorded but when standardized the rates are 103 for males and 99 for females per 100 000 living compared with 103 and 100 respectively for the preceding year The death rate for diabetes for each sex is slightly lower than in 1929 but except for 1929 is higher than for several years past Following on an examination of the figures in the 1924 volume for crushing by motor vehicles statistics are given of the differences in 1930 which was the last year before the new Road Traffic Act (1930) came into force The rate of mortality was more than twice that for 1924 and almost eight times the rate for 1911 Tables which relate to the six years 1925–30 exhibit the increasing mortality especially associated with motor cycle accidents and give the number of deaths with the age groups of the persons and the types of motor vehicles concerned

Housing in Paddington

An influential meeting under the auspices of the Paddington Housing Council was held on June 20th when the principal speakers were Mr Brendan Bracken M P Lady Tomlin and Dr Reginald Miller The council is a body which was formed two years ago with a view to helping to remedy the unhealthy and overcrowded conditions which prevail in certain parts of the borough Its work is to 'ginger up' the local authorities to deal with certain insanitary areas and to secure support for a policy of rehousing Although Paddington is regarded as part of the 'West End' its infant mortality rate as Sir Edgar Bonham Carter pointed out to the meeting is very high among London boroughs and not long since was the highest of all In 1930 the rate was 78 per 1 000 births as compared with 59 for the county of London as a whole but for one particular area of Paddington to which the Housing Council is devoting special attention the rate was 153 in 1930 and 170 the year before

Dr Reginald Miller said that the slum areas in this district as in some others did not consist of badly built houses It was true that the houses were dilapidated and on that account unhealthy but when originally built they were quite respectable dwellings unlike many of the modern erections from which cold and damp could never be banished Dr Miller proceeded to speak of the incidence of rheumatism among young children of Paddington and its connexion with one aspect of the housing problem The tragedy of this disease he said was that when the victims arrived at the age of 35 or 40 and were parents of small children they were very liable to succumb to valvular disease of the heart a legacy of the environment of their own early childhood He had recently shown a German doctor his cases at the Paddington Green Children's Hospital and the visitor had declared that the state of affairs had no parallel in Germany The actual frequency of valvular disease of the heart due to rheumatism among children of elementary school leaving age in Paddington was 3 per cent There was evidence to show a big environmental or house element in the production of this disease In a Poor Law boarding school away from the houses where the children had been born and bred the disease was practically unknown as rare as it was at Eton It was also a disease affecting the aristocracy of the labour population—the children of people in fairly good employment but living in small cold, damp houses He added that Paddington had the distinction of being the first borough to make rheumatism a notifiable disease and five years ago, the first to set up a special clinic for dealing with these children and there were now fourteen such clinics in London

The meeting adopted a resolution expressing its deep concern at the overcrowded and unhealthy conditions prevailing in certain parts of Paddington and urging the London County Council and the Paddington Borough Council to take all necessary action to remedy such conditions It also requested the Minister of Health (himself a Paddington resident) to summon a conference of the authorities concerned together with the Ecclesiastical Commissioners (who are the largest landowners in Paddington) with the object of preparing a practical scheme

Gas Fires and Ventilation

At the annual general meeting of the Institution of Gas Engineers held recently in London, a paper on gas fire flues and ventilation was presented by Messrs C A Masterman and T G Noble chemists to the Gas Light and Coke Company In the course of this they said that when a room was occupied in cold weather there was a tendency for the windows to be shut and the natural air change through the room was thereby considerably decreased The presence of a flue especially with a source of heat at the base would accelerate movement of air through the room and so go far to prevent conditions becoming uncomfortable or unhealthy owing to air stagnation While there could be no sound hygienic reason for demanding the complete removal from a room of the products of combustion such removal was so easily accomplished with modern gas fires that a 100 per cent standard had become accepted. The inset type of gas fire was as easily capable of directing its products up the flue as the independent type provided the flue itself was capable of inducing physiologically tolerable ventilation If a gas fire led to contamination of the air of the room a positive and preventable cause must be responsible The three chief factors affecting the additional ventilation induced by a flue were cross sectional area of flue, heat input to flue and height of flue in this order of importance shape apart from area having small effect The advantage of nominally adequate area was easily prejudiced by careless finish of the inside surface of the flue leading to reduction of effective area or by the presence of restrictions such as obstructions or abrupt bends in the flue or high resistance at the flue terminal If the fire was of the independent type and sealed to the flue the flue spigot of the fire itself often restricted the degree of ventilation to an appreciable extent Increase in flue height would usually be the most effective method of compensating for restrictions in the flue or offsetting the effects of adverse winds Results obtained in connexion with the incidence of condensation in gas fire flues were discussed and the authors showed that unless the flues were of metal having a considerable area of exposed surface condensation troubles were not normally to be anticipated Curves showing various aspects of the ventilation effect were embodied in the paper to demonstrate the essential facts relating to gas fire flues and the dimensions of flue pipes were dealt with in a more general way leading to a mathematical expression in terms of CO concentration gas rate and temperature rise of flue gases From this was derived a series of curves by which the correct diameter of circular flue could easily be determined for any normal gas appliance under any operating conditions

Correspondence

THE ACTION OF ERGOT PREPARATIONS

SIR,—The paper by Dr Chassar Moir in this week's *Journal* records a new fact of great interest—that there is an active principle in ergot hitherto undescribed which acts on the uterus promptly when given by the mouth. Moir implies that this discovery is in direct opposition to the view that ergotoxine is the important constituent and says that the ergot alkaloids hitherto supposed to be all important play in reality but a subsidiary part in the clinical action of the drug.

I do not think that the evidence in any way warrants this conclusion. Undoubtedly Moir has discovered the principle which was responsible for the introduction of ergot into medicine. Ergot was introduced as a *pulvis parturiens* as an agent to hasten delivery, but ergot is never used for this purpose to-day. Ergot is used for maintaining a prolonged and persistent contraction of the uterus during the puerperium. Now I submit that it is clear from his published tracings that Moir's new principle has *not this kind of action*. The effect is an effect similar to that of injected histamine, strongest at first and steadily diminishing, so that it has disappeared after one to two hours. In this important respect the new principle differs entirely from ergotoxine or ergotamine. As Bourne and I showed, the effect of ergotamine lasts for hours on end; we described in detail one case in which the effect of 1 mg. was directly observed for sixteen hours. I see no reason therefore to modify the view that for the purpose for which ergot is almost exclusively used to-day the most important therapeutic constituent is ergotoxine or ergotamine.

Moir's evidence of the action of the new principle suggests two new uses for liquid extract of ergot. First an extract like that of *B.P.* 1914, containing no ergotoxine, can be used before delivery, but so can pituitary extract under suitable conditions. Secondly a dose of liquid extract can be used for treating post-partum haemorrhage; again it is doubtful if it will replace pituitary extract for this purpose. Apart however from these two uses the discovery of the new principle to my mind does not alter the therapeutics of ergot nor does it modify the requirements for a pharmacopoeial extract.—I am, etc.

Uphill, Hampton, June 18th. J. H. BURN.

CORRECTION OF HEARING DEFECTS

SIR,—In reference to the report on the correction of hearing defects in your issue of June 18th (p. 1139) we beg to say that recently, owing to the courtesy of the engineer-in-chief of the Post Office, the National Institute for the Deaf has been able to have certain electric hearing aids tested by the staff of the Post Office Engineering Research Station at Dollis Hill. Charts have been made of the responses of hard and soft carbon microphones to notes of varying frequency, and similar charts have been made of the responses of certain ear-pieces to such frequencies.

It has been a matter of some encouragement to us to find that the physical measurement of the intensities of sounds emitted from the ear-pieces of hard and soft carbon instruments fully confirm the previous findings of auditory tests in which the 4s. gramophone audiometer and constant note records were used as the source of sound delivered to the microphone.

It appears that by assembling a suitable combination of hard and soft carbon microphones and selecting an ear-piece according to its response curve it will be possible to make small electric hearing aids to amplify speech in such a way that the naturally loud phonetic sounds are not made much louder while the soft (weak) sounds—for example vowel overtones and consonants which are essential for intelligibility—are raised above the threshold of hearing of the deaf patient. During the past nine months a number of patients have been fitted according to prescription with hard and soft carbon instruments which achieve this purpose to a large extent but further improvements can no doubt be made.

We are particularly grateful for the help which has kindly been given us by the staff of the Post Office Engineering Research Station and feel confident that a very promising field of future work is opening up along the lines already embarked upon.—We are, etc.

H. M. WHARRY
G. P. CROWDEN

Department of Industrial Physiology, London School of Hygiene and Tropical Medicine, June 18th.

SPINAL ANAESTHESIA IN VASOSPASTIC DISEASES

SIR,—While expressing appreciation of the interesting contribution of Professor Telford and Professor Stopford on the prognostic value of spinal anaesthesia in vasospastic diseases of the lower limbs in the *Journal* of June 18th (p. 1116) I would observe that they have inadvertently omitted reference to the original work done on this subject.

In May 1930 James C. White of Boston published a paper entitled "Diagnostic blocking of sympathetic nerves to extremities with procaine, a test to evaluate the benefit of sympathetic ganglionectomy." He used three methods: (1) spinal anaesthesia to the level of the sixth dorsal segment; (2) paravertebral injection of lumbar sympathetic ganglions; and (3) injection of the sciatic nerve. He concludes that:

> Diagnostic nerve blocking causes little more discomfort to the patient than foreign protein shock, and is a quantitative rather than a qualitative test. This procedure is reasonably safe and simple.

About the same time J. J. Morton and W. J. Merle Scott of Rochester, New York, made a similar and independent communication on this use of spinal anaesthesia to the American Society for Clinical Investigation; this was published later in *Journ. Clin. Investigation* (October 20th, 1930, ix). They refer to an independent paper of S. Brill and L. B. Lawrence (*Proc. Soc. Exper. Biol. and Med.* May, 1930, xxvii, 729).

In a later paper (*Journ. Amer. Med. Assoc.* October 27th, 1931, xcvii, 1212) Morton and Scott simplified the test by limiting the anaesthesia to the posterior tibial nerve just below the internal malleolus. This test can be used on ambulatory patients. G. E. Brown of the Mayo Clinic first suggested the use of intravenous typhoid vaccine as a means of detecting the degree of spasm of the peripheral vessels and of predicting the results of sympathetic ganglionectomy (*Journ. Amer. Med. Assoc.* August 7th, 1926, lxxxvii, 379). I have used both intravenous T.A.B. vaccine and spinal anaesthesia. In a study of peripheral vascular disease I concluded that the prognostic value of vaccine fever is sound and the vasomotor index seems to be the best single method of expressing it (*Amer. Heart Journ.* February, 1931, vi, No. 3, 309). From a limited experience of spinal anaesthesia as a prognostic test I can subscribe to its accuracy and utility. Where both methods have been used on the same patient I have obtained similar results. Neither spinal anaesthesia nor intravenous vaccine is a procedure free from discomfort or danger.—I am, etc.

S. LEVY SIMPSON, M.D.

London, W.1, June 20th.

BRONCHOMONILIASIS

SIR —In the *Journal* of June 4th Dr David H Haler states that he has still to meet with a genuine case of bronchomoniliasis and ends up Pulmonary moniliasis has not yet been definitely proven to exist as a clinical entity in the large number of cases Dr Oliver would have us believe The following writers may be quoted as having written on bronchomoniliasis due to true monilia A Castellani Robert Craik Chevalier Jackson N Fairley P Ellman, Joekes and Simpson and many others

One does not like to criticize another man s work when his methods are unknown but it would seem that the animal experiments quoted were at least the result of too big a dosage with a resultant septicaemia Dr Haler is satisfied that his work is good and that he is dealing with pathogenic monilia infections of epithelial surfaces and of mucous membranes It is possible that some of his paronychial infections were due to thumb sucking if so it would seem as if non pathogenic monilia of the mouth had become pathogenic

With reference to monilias recovered from the mouth I would like to point out that I have never found them to occur in breast fed infants whilst infants fed on cow s milk may be found to be carriers and even sufferers from monilia The work which A Castellani originally carried out was on tropical monilias—tea tasters disease Both tea and tobacco can be found to harbour monilias and workers in tea and tobacco factories are liable to infection

In conclusion I would state that I am responsible for the bacteriological findings which Dr Haler queries Last year sputa from 579 individuals were examined with due precautions Of these 579 90 were due to a mixed infection of tubercle and blastomycetes 326 were due to blastomycete infection chiefly monilia and 163 were negative to tubercle and to blastomycetes This work has been carried on for the last eleven years and during this period the deaths from pulmonary tuberculosis have fallen from 69 in 1922 to 34 in 1931 The keynote to this work is the cultural examination of sputum for blastomycetes and the use of KI for these fungus infections—and this in spite of the fact that *Squire s Companion to the British Pharmacopoeia* 1916 edition states Potassium iodide should never be given in phthisis —I am etc

P JAUVRIN MARETT Lieut Colonel

St Helier June 15th

TREATMENT OF VARICOSE VEINS

SIR —I was very glad to accept the invitation contained in Mr Rodney Maingot s letter of your issue of June 4th I saw the twin injection carried out and to me it seemed plain that all the quinine salicylate precipitated did not remain in the injected vein I was also sure that the two solutions did not mingle completely in the vein injected but that they must have done so in the deep veins or even in more remote parts of the circulation This confirmed in my mind the opinion that I had formed previously that by this type of injection is produced what one might term chemical embolism My solitary experience of this type of injection had borne this out the patient collapsing after the injection with severe pain in the region of the heart but without any other signs or symptoms suggestive of embolism either at the time or subsequently I might add that this patient had previously received many single injections of salicylate and quinine solutions so there was no question of idiosyncrasy I felt that the patient a healthy young man of 34 had nearly lost his life as a result of the twin injection and the impression made upon my mind by this case has always remained

However it was plain to see that at the clinic at the Royal Waterloo Hospital Mr Maingot and his colleagues have not the slightest hesitation in dispatching emboli of quinine salicylate into the circulation and I am certain that they would not continue to do so if they did not feel that it was absolutely safe and that it was a sclerosing procedure which succeeded when others failed It is greatly to the credit of Mr Maingot to show that this the greatest liberty so far taken with the circulating blood can be taken with impunity

I read with much interest Mr Kennedy Murphy s letter and would like to emphasize that the main object in combining injection and ligation is to cut short the duration of treatment and to reduce the incidence of ineffectual injections which I know occur with all injection solutions—even with the combined injections referred to above In hospital work I have found the method of great value in all cases that hang fire and once the step has been taken of ligating a vein the treatment goes ahead with gratifying rapidity The prevention of recanalization is a minor advantage as I find that the adoption of some form of firm bandaging during the absorption of the venous indurations not only stops the veins from becoming patent again but contributes considerably to the patient s comfort in lessening pain and in checking the oedema which in certain cases seems to be a marked feature after a course of injections —I am etc

London W 1 June 16th A DICKSON WRIGHT

SIR —In his letter in the *Journal* of June 4th Mr R H Maingot states that over 30 per cent of his cases of varicose veins treated with sodium morrhuate have some recanalization after six months and that the drug has been so unreliable as a sclerosing agent that he has ceased to employ it My experience is entirely different from his I have given practically all the drugs recommended in extensive trial and in my opinion none is better than sodium morrhuate The injection is painless the resulting sclerosis is as good as with any of the others and there is very little risk of sloughing Recanalization in my experience is the rarest occurrence in fact much less than I have noticed after various other drugs

For moderately sized veins the dose I give for each injection (except the first) is 2 c cm sometimes 3 c cm if necessary more can be given I think that the doses of 0 5 to 1 c cm originally advocated were too small While those of us who are constantly doing this work may favour one drug or the other I think the one who only does it occasionally would be wise to use sodium morrhuate

For large veins that have proved resistant to ordinary methods the following procedure is useful With the patient standing a rubber band is tied fairly tightly round the limb proximally and distally to the part of the vein to be treated The patient then lies down with the leg elevated The needle is introduced into the vein and the proximal band is lifted off the vein by hooking a finger under it When the vein has emptied itself of blood the proximal band is allowed to fall into position again The solution is then injected and can be kept in contact with the vein as long as desired Its effects can be increased by gentle massage along the vein — I am etc

London W 1 June 6th J D P MCLATCHIE M D

SIR —May I be permitted to enter into the discussion on the treatment of varicose veins started in the *Journal* of June 4th by saying that all workers on this subject have found a small percentage of cases in which the veins never block satisfactorily? No matter what injection is used they recanalize sooner or later Is this not

due to the type of vein rather than to the drug used for the injection? The same drug and amount can and often does, in certain cases or in another group of veins in the same patient, cause an immediate reaction (endo and peri venitis) involving the whole length of a vein and its branches followed later by complete obliteration of the vessels, which never of course can recanalize. When recanalization occurs no previous history of any acute infection (phlebitis) is generally obtainable whereas when complete obliteration follows injections some mention is made by the patient of symptoms suggestive of inflammation—maybe years ago. If a vessel is obliterated only by a thrombus without sufficient after reaction in the vessel itself recanalization may be expected sooner or later, or the vasa vasorum of the immune vein will develop subsequently and form fresh varices. This is to be looked for in all purely thrombosed veins obtained by present-day solutions. Permanent cure can only be expected when thrombosis is followed by sclerosis of the vein its branches and the vasa vasorum.

According to Mr Mumford with the "twin injections" of lithocaine and quinine urethane an insoluble quinine salicylate stop is formed which acts as a foreign body thrombus. Segmentation resection of varicose veins was practised by Schwartz of Paris in 1888 and is still known in France as his method but it was shown that sometimes after operation the varices re-formed from the vasa vasorum of the affected veins (Delore 1894). It is probable that even with the injection and removal of segments as advocated by Mr Dickson Wright (these veins having proved already immune to sclerosing injections) some of the end results will probably be similar to those done by Schwartz's method. As already mentioned above unless the vein is destroyed by induced inflammation either the parent vein or its branches will sooner or later furnish fresh varices. In a certain percentage of all cases with either large or small veins failure of the injection treatment with or without operation is to be expected for these cases belong chiefly to the symptomatic type of veins. The dilated veins and the dilated varicosities form because they are not diseased veins as such—unless one calls functional hypertrophy a disease. They are immune to the same degree as healthy vessels are to all intravenous injections.

The statement that 98 per cent. of veins tend to recanalize when using NaCl solutions will not be endorsed by those using these solutions in routine practice. In the last twenty years Professor Linser of Tubingen has treated over 15,000 cases using only NaCl solutions and giving over 45,000 injections. If the results in his hands yielded 98 per cent. of failures it is to be presumed that he and others would long since have discarded sodium chloride for any other safe solutions which would give more lasting and better all-round results.—I am, etc.,

T. HENRY TEEVES BARBER, M.D., B.Sc.

London, S.W.1, June 10th.

PRE- AND POST-OPERATIVE X-RAY THERAPY IN BREAST CANCER

SIR,—As there were no further letters on this subject in your issue of June 11th I presume that the correspondence in connexion with it is coming to an end. I do not think it should terminate without someone bringing to the notice of your readers a set of statistics which have the double merit of being vouched for by a surgeon (not a radiologist) and of not being foreign. I refer to a paper by Miss Louisa Martindale in the *Lancet* of January 31st 1931. As opposed to the report published in your issue of May 14th this paper goes into detail as to the stage of the disease in the 120 cases dealt with and much space is taken up with discussion as to time at which x-ray treatment was commenced after operation whether pre-operative treatment was given, etc.

Some there may be who admiring the simplicity and directness of Dr Luff's report may consider that it has shattered the pretensions of those who believe that an agent which admittedly has a restraining action upon visible cancer could possibly be of any value as a prophylactic. But to those who like your correspondent Mr Richardson remain unconvinced I commend the following extracts from Miss Martindale's paper:

> Pre-operative radiation is based on the theory that such treatment devitalizes the cancer cells and therefore makes them less liable to grow if re-implantation or transference occurs during the operation. Gye has shown that incision is one of the surest means of disseminating carcinomatous cells and such a course of therapy as is assumed will reduce mitosis of such malignant cells sufficiently to render them innocuous.

Miss Martindale's conclusions were that adequate x-ray therapy had improved the five-year end-results (as compared with surgery alone) by 23 per cent. in the case of patients whose axillary glands were not involved and by 40 per cent. where those glands were affected at the time of operation. The ten-year end-results in the latter class were improved by 69 per cent. This is surely unquestionable evidence of the efficacy of such treatment.

Pfahler's statistics dealing with 977 cases (*Ann. Surg.* January 1931) in which he claims that pre- and post-operative radiation doubles the number of five-year survivals as opposed to operation alone may also be of interest to those who are prepared to overlook the fact that Dr Pfahler is professor of radiology at Philadelphia.—I am, etc.,

London, W.1, June 12th. F. HERVAMAN JOHNSON.

LOCAL ANAESTHESIA FOR TONSILLECTOMY

SIR,—Having read the letters in your recent issue on the subject of enucleation of the tonsils under local anaesthesia I should like to mention a case where the procedure seemed specially valuable.

The patient was a woman of 30 with symmetrical enlargement of the thyroid gland tachycardia and tremor. She had had frequent and severe attacks of tonsillitis. The tonsils were considerably enlarged. Her state of thyrotoxicosis in my mind contraindicated general anaesthesia. She sat upright in a chair; no gag was used and an assistant depressed the tongue. The throat was sprayed with a solution of 10 per cent. cocaine and then novutox (1 per cent.) was injected between each tonsil and its bed in the usual way. The tonsils were grasped by Brownes tonsil-holding forceps and Waugh's tonsil-dissecting forceps were used. The lingual prolongations were then divided by scissors. Hæmorrhage was inappreciable. The whole removal did not take more than ten minutes. The patient returned home by car in the afternoon and subsequently could not be persuaded to stay in bed longer than three days.

By the use of local anaesthesia in this instance an operation was performed that would not have been done otherwise and as it has resulted with benefit to the patient. Perhaps the best proof of the slightness of mental distress produced is given by the fact that this patient persuaded a hesitating neighbour to be operated on in the same way.—I am, etc.,

Bourne, June 11th. W. B. R. MONTEITH.

SEROTHERAPY IN SEPTICÆMIA

SIR,—I have recently treated a few cases of septicæmia with small intravenous and intramuscular injections of fresh human serum when antisera have apparently had no effect: this has been done on the assumption that the cases may lack complement. The effect at times is striking. When sufficient cases have been collected

they will be published but in the meantime I think that the method is worth a trial by others Serum alone has been used solely to exclude any result being due to the cells in the blood, but 20 c cm injections of whole blood would be equally efficient This could be used where neither the means of separating the serum nor the apparatus required for a blood transfusion are at hand In addition for intramuscular injections blood grouping is not necessary and either method is far simpler than a blood transfusion both to the patient and to the operator —I am etc

Royal East Sussex Hospital Hastings June 9th P LAZARUS BARLOW

THE USE OF THE SELF

SIR —Dr Cawadias and Mr Alexander are for the moment at cross purposes but I think their views can be reconciled After all they are both really supporters of the Hippocratic tradition which would subordinate all specialists to the general practitioner

Mr Alexander as I understand him does not claim to heal diseases He is probably much less of a meta physician than the majority of medical scientists and hence worries less about diseases than about sick people In any case his job he tells us is the correction of imperfect or inadequate functioning Apparently he aims at teaching his pupils to make a better use of themselves and this by an energetic scheme of exercises which trains not only the powers of the body but the attention as well In a word the whole man is so far engaged and Mr Alexander obviously finds that of those who practise the exercises with determination a large number have not time to fall ill while others who are already ill forget their troubles in the enthusiasm of the game

Consider the case of flat foot for example as this disease has been mentioned by Dr Peter Macdonald Flat foot appears to be a not infrequent symptom of a general lack of tone (often also manifested by various visceroptoses and the like) and it is just this general lack of tone which a well thought out and well directed scheme of general psycho physical gymnastics will often put right

But Dr Cawadias has also justice on his side In the name of the Father of Medicine he properly protests against any suggestion that the competent general practi tioner throughout the ages has not always been cognizant of the fact now being rubbed in by Mr Alexander— namely that the individual is in essence a psycho physical unity and a functioning unity at that and that hence he is never so well as when functioning fully as a unit and not merely partially as a bit of a unit True we are not taught this in the schools but every practi tioner with a modicum of intelligence soon learns it from experience

I would remind Dr Cawadias that we can make too much of this blessed word diagnosis More important after all than the name of a man's disease is—What is to be done about it? If Dr Cawadias thinks my caution unnecessary I refer him to William of Ockham whose teaching is summed up in the apothegm *Entia non sunt multiplicanda praeter necessitatem* I refer him too to a present day iconoclast or slayer of metaphysical entities in medicine—Dr F G Crookshank Finally I would beg him to cast his eyes once more over the Hippocratic writings themselves I doubt if he will find there the noun διαγνωσις mentioned everywhere however he will see how the importance attached to the process expressed by the verb διαγινωσκειν —that is the process of getting to know your patient thoroughly himself and his surroundings the organism and its environment before setting to work to cure him

And a last word to Dr Cawadias as regards medical versus non medical pioneers in health matters There is a dangerous theory being fostered just now that nobody can keep well or when ill can return to health save by medical advice This is pernicious nonsense natural forces (the *vis medicatrix naturae*) keep us well or cure us in 90 per cent of cases the best that the physician can do is to stand by where necessary and to aid Nature (if he can) where it is failing —I am etc

North Queensferry Fife June 19th A J BROCK

ALUMINIUM AND HEALTH

SIR —I have been extremely interested in the corre spondence on the question of aluminium and health and endorse some of the remarks made by Dr Loewy in the *Journal* of June 18th I firmly believe that some people possess an idiosyncrasy towards aluminium which is in some ways analogous to that observed in the many manifestations of the allergic syndrome

I am of the opinion that the symptoms which arise as a result of eating food previously cooked in aluminium vessels and of drinking tap water cannot be attributed to actual aluminium poisoning but depend upon the patient's hypersensitiveness towards that particular metal Thus whilst some patients cannot tolerate iron and its salts so others cannot tolerate aluminium—this fact becomes more noteworthy when we consider that iron and aluminium possess analogous chemical properties One cannot seriously regard this hypersensitive condition as that of a strict allergic reaction where the allergen (protein) produces an allergism But is it not conceivable that the presence of aluminium or of any particular metal is a source of some chemical reaction in the sensi tive system whereby the metal acts as a catalyst with the production of some degradation products which are the cause of the symptoms?

I have seen three cases of 'aluminium poisoning' in a family The condition which lasted for about three months was caused by eating food previously cooked in aluminium utensils When these utensils were replaced by those made of enamel the symptoms which were chiefly nausea after food and diarrhoea, completely dis appeared Whilst I had these cases under observation the urine and faeces of each patient were examined qualitatively for aluminium but not even a trace was detected

Although my opinion is a purely hypothetical one and will meet with opposition I believe that aluminium acts not by producing direct toxic effects but as an inter mediary in some chemical reaction hitherto unexplained —probably as a catalyst—this accounting for the minute quantity necessary to produce the results Finally it would be interesting to note the effects produced by the administration of the aluminates to hypersensitive persons in order to determine whether they would experience any idiosyncrasy towards aluminium when combined in a non ionizable form —I am etc

M H FRIDJHON B A B Sc, M B

Stratford E 15 June 20th

SIR —The short time at my disposal at the meeting of the Hampstead Division of the British Medical Asso ciation prevented me from discussing the differential diagnosis of aluminium poisoning Besides allergy men tioned by Dr I E Loewy in your issue of June 18th there is a question of at least two well defined disease pictures—namely pellagra and foot and mouth disease In both these diseases three distinct group of symptom are present—that is gastro intestinal cutaneous and nervous—exactly as in aluminium poisoning

If I adhere with my late teacher von Pirquet to his conception of allergy as an abnormal response to foreign protein and at the same time accept with Dr F L Loewy the personal testimony of several medical men present at the mentioned meeting to the effect that cases of a speedy cure after stopping the use of aluminium in the kitchen do occur then I fail to see how any specific article of food protein or non protein can in the cases under discussion be accused of being an allergic agent Such food does not produce symptoms when not prepared in aluminium utensils and tap water whereas in many cases it does when this precaution is omitted

At the meeting I had just time to add that several poisons must be considered as the causal agents of the symptom complex—namely salts of aluminium arsenic lead tin and fluorine—and these obviously cannot be included under the much abused name of allergic drugs They are definite poisons to which few people taking them regularly even in minute quantities over a long period are not sensitive In the extensive literature published in different countries on the subject it will be found that many careful scientific investigations have arrived at conclusions diametrically opposed to those mentioned in Dr Loewy's letter—I am etc

London N W 6 June 20th LEO SPIRA M D

THE NORMAL TEMPERATURE

SIR—When I was nursing in the Tropics I was puzzled to find that the temperatures of patients—fractures and other afebrile conditions—taken between 3 p m and 4 p m were almost always 99° F or over By way of control I took my own temperature daily at 3 p m over a period of three weeks It was very seldom below 99 (not once was it as low as 98 4) and not infrequently up to 100 2 This was in a non malarial country and I was in good health An interesting point was that where the temperature in the wards was anything between 104° and 110° F one had to be exceedingly quick in reading the thermometer as it left the patient's mouth or it would soar upwards to alarming heights

A European lady resident in the country with some experience of illness brought a girl to hospital one day saying she had taken the child's temperature and it was over 105° I accordingly took it twice and found it 99° each time The doctor ordered the child to be admitted for observation he certainly seemed a little unwell We took her temperature at intervals that evening and next morning but it was never above 98 6° so she was discharged I have no doubt that the lady had the thermometer down while she searched for her glasses to read it with and it registered the temperature of her room—I am etc

D D LAVY

Wattal June 20th Member of the College of Nursing

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

SIR—It has been suggested to me that as the only person now alive who can do so of his own knowledge I ought to put on record the facts as to the foundation of the London and Counties Medical Protection Society

The decision to form the company was arrived at by Dr Mead of Newmarket and myself at a conference between us in the Library of the British Medical Association then in Agar Street With the help of my solicitors we prepared and registered the society as a company limited by guarantee and the first (statutory) meeting was held at the house of Dr Heron in Harley Street Dr Mead acted as organising secretary and I acted as general secretary from the beginning and up to June 1st last a period of forty years The Medical Defence Union was under the presidency of Sir Lawson Tait in 1892 and Dr Mead and I were London representatives on the council of the Medical Defence Union An application came before the council of the Union from a doctor who was sued by a shopkeeper into whose shop window the doctor's horse had bolted Mr Lawson Tait said the doctor was a personal friend of his and urged that the Union should defend the case and pay for the doctor any damages and costs awarded against him Some of the council objected as the accident did not arise out of medical practice As a compromise it was agreed to defend the doctor against what seemed an excessive claim but not to pay any damages Mr Lawson Tait was very angry and took steps to alter the Articles of Association At a meeting at Birmingham to confirm alterations in the Articles Mr Lawson Tait put forward a new alteration quite illegally and I called the attention of the meeting to the illegality of what he was doing He replied that he would go on with it and that we could take legal proceedings if we chose and added that he wished a few hundred of the London members would leave the Union To this I replied Very well sir we will Subsequently I met Dr Mead as already stated and so the new society began The subsequent history is in the records of the society

It may be thought that this split in the Medical Defence Union was unfortunate and that it would have been better not to have two societies for the same work Forty years experience has convinced me that little but good has resulted from the healthy rivalry which has existed between the two defence societies and that dangers have been avoided which would have beset a single society without any rival—I am etc

Blindley Heath June 18th HUGH WOODS

Obituary

H LEITH MURRAY M D F C O G

Professor of Obstetrics and Gynaecology University of Liverpool

We had to announce last week with much regret the death on June 11th of Dr Herbert Leith Murray, professor of obstetrics and gynaecology in the University of Liverpool honorary surgeon to the Hospital for Women and the Maternity Hospital Liverpool and honorary gynaecological surgeon to the David Lewis Northern Hospital He was born at Aberdeen on April 21st 1880 and was educated at the Dundee High School and the Universities of Aberdeen St Andrews and Paris He graduated M B Ch B Aberd with honours in 1901 and proceeded M D in 1905 For the following appreciation we are indebted to a colleague who was closely associated with him in his hospital work

The tragic and sudden death of Professor Leith Murray is a grievous loss to the city and University of Liverpool as well as to a very wide circle of friends Leith Murray was full of energy and had an *unlimited capacity for work* while never sparing himself socially He had a very genial disposition and a genius for friendship consequently he was surrounded by friends and endeared himself to the many medical men with whom he came in contact and with his students He had served throughout the war as a surgeon in the Royal Navy and was wrecked in the hospital ship *Rohilla* off Whitby in 1914 when suffering from an attack of influenza His loyalty and consistency to all his colleagues and his juniors in particular especially endeared him to those who were privileged to be closely associated with him His untiring use of his own knowledge and gifts the generous with

which he placed them at the disposal of others and his magnetic personality were a powerful stimulus and inspiration to all who worked with him He had a very large practice as a gynaecological surgeon and his opinion was sought over a very wide area

His professional attainments were considerable he was an able diagnostician his operative methods were neat and very simple producing excellent results His writings are well known among gynaecologists the most outstanding ones being *The Immunology of Pregnancy* and *Degenerative Changes in Fibroids* He was a strong advocate of conservative surgery, as his views on myomectomy showed whilst his detailed observation and careful case recording were well illustrated by a paper he read in April of this year on ectopic pregnancy He was a foundation Fellow of the British College of Obstetricians and Gynaecologists a member of its council and a strong supporter of its aims and objects He had been a vice president of the Liverpool Medical Institution and president of the North of England Obstetrical and Gynaecological Society

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DR HUGH RICHARD PHILLIPS died on June 14th in a London nursing home thirty six hours after an operation at the age of 58 He was the only son of the late Dr G R T Phillips who had a large London practice in the latter part of the last century H R Phillips was educated at Cheltenham where he gained an entrance scholarship In 1892 he went to Edinburgh where he had a distinguished career as a medical student gaining the University medals in pathology and anatomy and obtained his M D in 1902 He served as a civil surgeon in the South African war and then settled down with his father in his London practice His activities however were not limited to this as he very early became anaesthetist to the Italian Hospital where he had been senior for many years past Also for ten years he was anaesthetist to the Hospital for Sick Children Great Ormond Street as well as to the Freemasons Hospital and the Hospital of St John and St Elizabeth During the last decade his keenness on the subject of anaesthesia made him an active member of this Section of the Royal Society of Medicine of which he had been secretary At the beginning of the war he joined the Royal Navy as temporary surgeon and in the autumn of 1914 was in the R N hospital ship *Rohilla* which went down off the East Coast but he had to resign his commission owing to the death of his partner Later on he was given a commission in the R A M C as a captain for the last two years of the war In 1919 he was awarded the Cavalier Order of the Crown of Italy He was made justice of the peace of Haverfordwest twenty five years ago Phillips was ever a cheerful fellow and an incorrigible optimist his capacity for true friendship was characteristic of the man and he had an immense number of truly intimate friends in whose memory hospitality and cheerful converse will long linger He was a very keen Freemason—a Past Master of his Old School Lodge the University of Edinburgh Lodge and others and was a Grand Deacon of England three years ago He was a very keen bridge player and will long be remembered with affection in the cardroom at the Garrick Club —H S

We have to announce the death of DR JOHN CAMPBELL GRAHAM of Bishopstoke Hants in his seventy-seventh year Born in Bonn the youngest son of the Rev William Graham of Clough Co Antrim Dr Graham qualified L R C P and L R C S Ed in 1880 obtained the M D Bonn in 1881 and the F R C S Ed in 1889 He was a Fellow of the Royal Society of Tropical Medicine and of the Royal Institute of Public Health He acted as surgeon to the Deli Batavia Maatschappij Hospital Timbang Langkat Plantation Company Deli Sumatra and was for some years acting senior medical officer to the Catharina Hospital Kisaran Sumatra

The Services

INDIAN MEDICAL SERVICE

ANNUAL DINNER

The annual dinner of the Indian Medical Service took place at the Trocadero on June 15th when Major General J W D Megaw Director General I M S presided over a large and distinguished gathering The official guests were Sir Samuel Hoare M P Secretary of State for India Dr N G Horner Dr E C Morland, Mr F H Brown and the nine officers on probation

The Chairman in proposing the joint toast of The Service and the Guests began by conveying a message from the officers of the I M S now serving in India who sent cordial greetings to their brother officers at the annual reunion in London He wished especially to thank the chief guest Sir Samuel Hoare for sacrificing his scanty leisure in order to be present on that occasion to cheer and encourage them It was always said that gratitude was a lively anticipation of benefits to come Even if they were human enough to think mostly of their own troubles they could assure the Secretary of State of their sincere sympathy in the very difficult and responsible task he had undertaken as the representative of India in the Government a position which he had eminent qualifications to fill They recognized Sir Samuel as a fellow sportsman and this made a special appeal to members of the I M S who instinctively trusted sportsmen and that trust was responsible for the rising stock of the Service when a slump might have been expected On the contrary they were getting excellent recruits the last batch carried off all the prizes open to them at Millbank which was a good omen for the future and all the members in India were in good heart and good faith Excellent relations between the European and Indian officers of the I M S continued and this was a credit to the young Indians and also to the European senior officers who treated them as their younger brothers The suggestion of some Indian politicians that the European members strove to maintain a medical monopoly in India was entirely unfounded But it was creditable to all that the Indianization of the I M S had progressed so smoothly hitherto It was right that it should continue to do so but it would be dangerous to force it unduly He was also glad to remind them of the cordial relations which still continued with the R A M C and he desired to pay a tribute to the Director of Medical Services in India Major General Nicolson V C who had secured the love and esteem of the members of the I M S as if he were a member himself They would desire to offer congratulations to their brother officers who had received honours during the year—in particular Sir Leonard Rogers and Sir Richard Needham

The chairman went on to say that something more important even than the preservation of the I M S was at stake There was no hope for India unless it had an efficient medical and public health organization That was a sweeping statement but he made it with a full sense of responsibility Let them consider the nature of the problem—a huge population well over three hundred millions and rapidly increasing engaged in a constant struggle for a precarious subsistence Their task was to give these teeming millions for whom we had made ourselves responsible a chance of securing a fair rational and satisfactory existence Sir Samuel Hoare would be the first to agree that none of the proposals of party politicians in India could influence to any appreciable extent the great elemental forces now ruthlessly at work The problem of India was essentially biological and not political He claimed that the medical research workers first duty was to make a clear statement of the real nature of the problem and of the proper method of providing a solution He recognized that the medical and public health worker could not however deal with the situation themselves alone they needed the co operation of experts in agriculture industry economics and education It was as clear as noonday to all observers who were able to detach themselves from political ebullitions that India was rapidly reaching to a condition which would demand the united efforts of Indians and Europeans to deal with When that time came it would be

a matter of vital importance to India to have a supply of men of the kind that can only be provided by a strong All India Medical Service And every member of the I M S had been greatly encouraged by the promise that the British Government was going to keep in the letter and in the spirit the long contract that has been made with all the Indian Services There were signs of a desire to throw up the sponge and regard the work of Britain in India as coming to an end I do not take that view I am convinced that whatever constitution is established in India the great forces to which I have referred will continue in their remorseless march so that even if we desire to leave India to her fate we shall be compelled to continue the work Only the foundations of a prosperous India have been laid the structure is far from being completed and is only now beginning to take shape We older ones can envy the younger men who are at the beginning of their careers in India they are embarking on a great adventure in which the I M S will in the future play a greater part than it has ever done in the past

Sir Samuel Hoare in replying to the toast said he was proud to have had his name associated with such a toast and to have it coupled with the name of the officers at work and with the officers on probation So far as he was concerned and so far as the Government of which he was a member was concerned no constitutional changes which had been made would affect the pledges entered into whatever form the constitution of India might take nothing would be done to disturb the great services which an organization like the I M S had been able to give General Megaw had a reputation of being disinterested and very unselfish his speech had started two trains of thought The first was how hollow were the charges that they took more out of India than they gave back to it and secondly how great were the benefits which medical science was conferring upon the East It was a complete answer to the hostile critics who said that they were treating the I M S as a monopoly of Europeans What better answer could they give to India and the world than to point out the immense benefits the I M S had conferred upon that country and other Eastern nations The I M S was an outward and visible sign of the falsity of these charges They might have made such arrangements as would have kept that Service in their own hands but the presence of many Indian officers on that occasion showed how baseless such a charge would be They were delighted to have with them those Indians who shared with their British colleagues concentration upon the common effort to improve the standard of health in India The I M S had been the pioneer of scientific work in the East since the days of Gabriel Boughton and John Howell and their work was not confined to medical science alone It had extended to botany zoology geology veterinary science forestry philology and other departments of human investigation He was sure that when the history of the British connexion in India was written it would prove beyond a possibility of doubt that the benefits Britain had been enabled to confer upon India had far outweighed any material advantages she might have gained from the existence of the Indian Empire What a romantic history was theirs He thought of the work of Sir Ronald Ross now living dangerously ill and whom they all hoped might soon be restored to health Every soldier behind his mosquito net might think of how the dangers of malaria and yellow fever had been minimized if not altogether abolished through his discoveries Then there was the work of Sir Leonard Rogers for the first time in history it had been possible to cure leprosy in its early stages if the detection was made soon enough Lastly there were cholera the death roll of which had been reduced from 60 per cent to 20 per cent and the successful campaigns against liver abscess and kala azar What other Empire can claim a record of this kind? Upon the one hand we have taken with us justice and peace and on the other we have carried health victoriously into the jungle of disease The achievements of the I M S are written not only in history from the pen of Colonel Crawford but also in the lives of the men women and children which they have saved To night I am here as Secretary of State for India to bear a tribute to this great record and to ask you not to be discouraged by the uncertainty of the future After all the whole world at this moment is filled with uncertainty which surrounds us on every hand but I hold to the firm conviction that work will still come to the top Your work so far from being finished is only now beginning to enter upon a new and greater advance These scientific and biological questions are going to be of much more importance in the future than ordinary political questions I ask you not to throw in your hand I ask you to go on constantly in the belief that inestimable as were the benefits your Service has conferred upon India in the past it will bestow even greater benefits in the future'

Colonel Sir R A Needham in proposing the health of the chairman said that General Megaw was returning to India in a few days to resume his work there and they would extend him their loyal and unswerving support in the battle which he was fighting in India against disease

The officers present at the dinner were

Major Generals—Sir Charles Haviock Bt G C V O K C S I H Boulton C B C B E Sir Leonard Rogers K C S I C I E F R S G Fate C I E

Colonels—H Ainsworth J Anderson C I E R F Baird A B Fry C B C I E D S O J Fullergood V H S F A Granger C R M Green J P Mackie C S I O B E Sir Richard Needham C I I D S O W H Leonard R H P, F L Perry D S O J J Pratt J Norman Walker

Lieut-Colonels—W G P Alpin O B E C H Barber D S O G I Birdwood R H Bott C I E L W C Lr-field C I I O B E C I Brierley C I E H F Cook D C Crawford V J M Crawford J B Dalzell Hunter O B E M C Fleming C B E, H R Dutton C I E S C Evans J A S Fleming C B E, P Gow Fleming D S O G F Graham W G Hamilton W L Harnett T A Hughes L V Hugo C M G M L C Irvine S P James H Kirkpatrick W B Lane C I E O B E R F D MacGregor M C I M Macrae C I E C B E R F D Mc Cowen F O N Mell C I E R V Maddock I O'Kinealy C V O C I E F F Owens A Campbell Munro I R Mulroney M C H Ro C I E D S O C H Rheinhold G A C Smith C M G H B Steen R Steen Ashton Shortt W A Sykes D S O C Thomson A G Tressider C I E Street H J Walton L L Ward C M G A Denham White R C Wright C I E

Majors—C H P Allen R S Aspinall Sir T Carey Evans M C S N Hayes J M Hennessy R Lee J V Mitchell O B E H J Symons M C

Captains—M L Ahuja G R M Apsey R M Bharucha Dey Dutt F J David on J L Grix K H A Grose M C W A Khan C A Lakshmanan F E B Manning E A O'Connor I S Riddle A Rosenbloom J I Sheperd Pasuant Singh A Tait R A Tandon

Officers on Probation—Captain J H Crawford Captain W Happer Captain J J Quinlin Captain R J Wetson Lieutenant F C Jackson Lieutenant H Hennessen Lieutenant W I V Marrow Lieutenant R J Ried Lieutenant M Sendak

Medico-Legal

TRESPASS TO THE PERSON NEGLIGENCE AND BREACH OF CONTRACT

CHARGE AGAINST HOSPITAL AND SURGEON

In the King's Bench Division before the Lord Chief Justice and a special jury on June 14th and the three following days a case was heard in which Mrs Ellen Cull of Normandy Guildford claimed damages from the trustees and committee of management of the Royal Surrey County Hospital Guildford and from Mr H B Butler F R C S honorary surgeon to the hospital for what was described in the claim as trespass to the person negligence and breach of contract The complaint was that in November 1929 Mr Butler contrary to Mrs Cull's instructions and against her wishes performed on her at the hospital an operation for removal of the uterus The defendants admitted that the operation was performed but denied that it was contrary to the patient's instructions or wishes or was performed negligently or in breach of contract

CASE FOR PLAINTIFF

Mr J E Singleton K C who appeared for Mrs Cull said that she was now 32 years of age Since the age of 11 she had been subject to epileptic fits at long intervals She married at the age of 20 and had a child now 11 years of age healthy and strong A second child died at 12 months of age from pneumonia and a third was stillborn In 1929 she again became pregnant She had not had a fit for a considerable time, and both she and her husband were anxious

for a second child Not being well she was advised to go to the hospital where she was examined in October and returned home The hospital surgeon advised removal of the uterus After discussion with her medical attendant Dr Cranstoun it was decided that she should undergo the operation of curetting at the hospital and Dr Cranstoun wrote to the hospital stating that the desired operation was this minor one The letter reached the hospital office and there remained unseen by Mr Butler who having in mind the advice he had given when the patient came up previously for examination and unaware that the patient had desired differently performed the major operation of hysterectomy As a result the patient was not better in health but worse and in sixteen months had had as many fits

In evidence Mrs Cull said that when in hospital he had no idea that she had undergone the major operation and she would not have consented to its performance She denied that Dr Cranstoun had told her that it was undesirable for her to have any more children Evidence was also given by the husband who said that both he and his wife had objected to an operation which would mean that they would have no more children Mr John Ellison gynecologist stated that in his opinion it was probable that the disturbance caused by the operation had led to an increased frequency of fits He said also that the usual practice in hospitals when any serious operation was contemplated was to have a consent form signed by the patient or nearest relative

CASE FOR DEFENCE

Mr Charles Doughty K C for the hospital said that it was admitted that by accident the ordinary routine was not followed Dr Cranstoun's letter saying that Mrs Cull refused the major operation ought to have been brought to the notice of the operating surgeon but in fact in the hospital office it became detached from other papers relating to the case and the ward sister did not receive it before the operation The clerk in charge of patients records said in evidence that she attached the letter to the file with the ordinary in patient's letter and after the operation she remembered the letter found it and gave it to the ward sister The word for curettage were entered in the admission book and the same words would appear on the admission form which had been destroyed The ward sister stated that she showed the admission form to Mr Butler the day before the operation Mr Butler had said in the patient's hearing that he was going to remove the uterus and the patient made no reply The ward sister herself also asked Mrs Cull if she understood about her operation and she replied that she did and that Mr Butler and Dr Cranstoun knew all about it After the patient learned that the wrong operation had been performed she made no complaint

Mr Roland Oliver K C on behalf of Mr Butler pleaded that if there was any defect in the system at the hospital it was not Mr Butler's fault A technical assault had been committed on Mrs Cull by operating on her without her consent but it had been done in all innocence and she was really better off than before the operation Not only was epilepsy hereditary but each successive pregnancy for an epileptic woman was increasingly dangerous to the mother and offered less chance of survival for the child The jury might conclude that Mrs Cull was not unrelieved when she found that pregnancy which was increasingly attended with fits could never happen again She had been described as in a terrible condition of health since the operation but was it credible that a woman should have a fit every month and no medical man ever be asked to attend her?

Mr H B Butler said that when he first examined Mrs Cull and was told that she was epileptic he gathered that she was terrified by the experience of her former pregnancies and dreaded the continuance of the existing one He agreed that the admission form bore the word curettage but he thought it was a mistake and that if there had been disagreement with what he had recommended previously it would have been conveyed in a letter (as it was though he did not receive it) and not by such a remark on the admission form He went through the details of the case with the sister at the bedside bringing the patient as it were into the consultation and Mrs Cull made no remark The operation was completely successful and in his belief Mrs Cull was now much better off she was not a woman who ought to have another pregnancy

Dr Gordon Cranstoun of Worplesdon gave an account of his attendance on Mrs Cull and her epileptic condition In 1929 she and her husband consulted him as to the advisability of any future pregnancy His advice was against it on the ground that it made her epileptic condition worse In October of that year she was again pregnant and Mr Cull said that he hoped something could be done to bring the pregnancy to an end as her health was worse and her fits increasing A consultation was arranged with Mr Butler who advised removal of the uterus Later Mr Cull said that he and his wife had decided against the major operation as Mr Cull was going away to the Gold Coast for a time in connexion with his employment and could not leave his wife to undergo the major operation in his absence Dr Cranstoun made it plain to Mr Cull that if this pregnancy was terminated by the minor operation it must not be regarded as a matter of convenience there must be no more pregnancies and Mr Cull assured him on that point The subsequent increase of fits he explained by the fact that epilepsy was a progressive disease the present proceedings also would have a bad effect

Evidence for the defence was also given by Sir Henry Simson who said that from the medical and eugenic point of view Mrs Cull should certainly not have had any more pregnancies He believed the operation performed was the correct one in the circumstances and he had never heard it stated that removal of the uterus would make epilepsy worse Sir E Farquhar Buzzard said that Mrs Cull's medical history showed that she was suffering from major epilepsy and that pregnancy intensified the epileptic condition Such a tendency would be progressive In his view it would have been improper to terminate the pregnancy in 1929 without safeguarding against future pregnancies The operation could not permanently affect the epilepsy though there might be temporary nervous troubles

SUMMING UP AND VERDICT

The Lord Chief Justice said that it went against the grain to criticize the administration of a hospital or the conduct of a surgeon especially one so frank and candid as Mr Butler His lordship made a special point of the letter sent to the hospital by Dr Cranstoun saying that Mrs Cull refused the major operation How was it that this was not pointedly brought to Mr Butler's attention before he operated? There was something in the history of that letter which wanted clearing up Further it seemed to be suggested that even though the operation was carried out against the express wish of the patient it was a case for congratulation rather than damages But it was one thing to say that if the patient had consented the operation was the proper one and quite another thing to say that it was a proper one in the absence of such consent In this country a point had not been reached at which a surgeon considering that sterilization was advisable in a particular case could proceed to carry it out against the desire of the patient

After an absence of two hours the jury answered as follows the questions left to them by his lordship

> Was there a negligent breach of contract on the part of the hospital authorities?—Yes
> If so what damages?—£120
> Was there trespass on the part of Mr Butler?—Yes through the negligence of the hospital authorities
> If so what damages?—One farthing

The Lord Chief Justice postponed judgement for further arguments as regards Mr Butler's position as to costs Mr Butler having already paid £25 into court with a denial of liability

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BOGUS DOCTOR SENTENCED FOR FRAUD AND BIGAMY

At Somerset Assizes before Mr Justice Avory on June 7th William Faulkner alias Norman Neil on Earl up pleaded guilty to three charges—namely the commission of bigamy the obtaining of £68 by false pretences from the British North Borneo Company and the obtaining of £80 similarly from Mr J F Court of Clevedon The police court proceedings against this man when he was found guilty and fined £20 on each of

two charges—namely of posing as a Bachelor of Medicine and of falsely using the title Dr Kirkup or M D —were reported in the *Journal* of April 9th (p 690)

For the prosecution it was stated that the accused was 35 years of age and had no medical qualifications whatever but since 1928 he had obtained his living by a series of frauds under the false pretence that he was a medical man He had impersonated Norman Nelson Kirkup whose name appeared in the Colonial List of the *Medical Register* with an Ontario address and qualifications and who was understood to be practising in the United States After setting up as a doctor in Exeter Faulkner obtained a temporary post at Fishponds Mental Hospital Bristol entirely deceiving the hospital authorities Here he remained until in September 1931 he applied for and obtained a post with the British North Borneo Company to whom he furnished his supposed qualifications and sent testimonials purporting to come from the Government Mental Hospital Madras and from a missionary society Both testimonials were forged He had also gone through a form of marriage with a Miss Court of Clevedon who believed him to be a single man and a doctor he obtained money from her father on the strength of his Borneo appointment He received also £40 from the North Borneo Company for outfit £26 for diary and £2 vaccination fee After he had sailed from Southampton with Miss Court it was discovered that he was already married to a Belfast woman with whom he had been in communication right up to the time of sailing An extradition order was obtained by Mr Court and the accused was arrested at Singapore and brought back to England It appeared that he had been employed by a steamship company until 1914 when he joined the R A M C and served in Salonica being discharged in 1919 Afterwards he obtained employment in a shipbuilding yard at Glasgow and then came to London He obtained the confidence of many persons through posing as a medical practitioner He also posed as a clergyman and whilst engaged at Bristol Mental Hospital had undertaken the burial of the dead and preached sermons It was found that he had been convicted on six occasions since 1922 and in various names chiefly on charges of false pretences For the accused it was urged that he had done no one any physical harm while posing as a doctor and that in regard to the bigamy charge he had not gone through the form of marriage purely with a view to financial advantage

Mr Justice Avory said that the offence of bigamy in this case appeared to have no mitigating circumstances He could not do justice except by passing sentence of five years penal servitude on each of the three indictments the sentences to run concurrently

CHARGE OF NEGLIGENCE SURGEONS VINDICATED

RUSSELL v GROVES AND LANCASTER

A report appeared in last week's *Journal* (pp 1152–3) of the action heard in the King's Bench Division on June 9th and 10th before the Lord Chief Justice and a special jury in which Mr L G V Russell claimed damages from Mr E W Hey Groves senior honorary surgeon to the Bristol General Hospital and Dr Leonard Lancaster senior resident officer at that hospital for alleged negligent treatment of him as a patient On the second day of the trial Mr Sharp counsel for the plaintiff said that it was clear from the evidence of the defendants and of their eminent witnesses [Sir Robert Jones Mr C Max Page and Mr Russell Howard] that there was no negligence on the part of either defendant and he had accordingly advised his client not to proceed with the action and to submit to judgement The Lord Chief Justice said that in his opinion Mr Sharp had taken a very proper course and that it was idle to expect that any verdict could be found against either of the defendants On his direction the jury found a verdict for the defendants and judgement was duly entered with costs against the plaintiff

In our brief summary of the allegations made by the plaintiff it was stated that he was sent home from the Bristol Hospital on May 26th after which the septic condition was discovered as a result of which the leg had to be amputated first at the knee and later in the middle of the thigh The report also stated that the plaintiff in his evidence mentioned that the dressing of the wound after his discharge from the Bristol Hospital was so intensely painful that he had to have chloroform on many occasions

With reference to these allegations Mr Hey Groves in a communication dated June 18th writes

The bare facts were as follows The plaintiff was in the Bristol Hospital from May 20th to 26th During that time he had no rise of temperature or pulse and no pain in the heel The heel wound which was a superficial one ½ inch long and ¼ inch deep was observed and dressed Its presence was noted and a letter sent to his London doctor stating its existence On his arrival in London on May 26th he had pain in the heel and a temperature of 102° After two days the London doctor cut a window over the heel and fomented the wound and after two more days the condition was so satisfactory that no further pulse or temperature were recorded On June 18th three weeks after he had left Bristol the wound was probed dilated and a drain inserted a few days later he developed acute streptococcal cellulitis for which the leg was amputated at the knee by a guillotine amputation It was the dressing of this amputation stump which was so painful as to necessitate the daily administration of an anæsthetic

We have also received from Dr Frank Bodman chairman of the Bristol Division of the British Medical Association a communication dated June 20th drawing attention to important points of evidence for the defendants which were proved in court In particular (1) that the wound behind the heel was noticed and dressed at the Bristol Hospital (2) that the London doctor was informed of the presence of this wound by Mr Lancaster (3) that there were no signs or symptoms of sepsis whilst the patient was in Bristol (4) that the administration of an anæsthetic for dressings was necessary owing to a painful amputation stump and the first anæsthetic was given three weeks after the plaintiff had left Bristol

Universities and Colleges

UNIVERSITY OF LONDON

The following have been recognized as teachers of the University in subjects indicated

London (Royal Free Hospital) School of Medicine for Women W D Nicol (Mental Diseases)

King's College Hospital Medical School J G Y Bell (Surgery) J M Bickerton and L H Savin (Ophthalmology) R P Williams (Hygiene)

St Mary's Hospital Medical School I H W Williams (Obstetrics and Gynæcology) A D Wright (Surgery)

London School of Hygiene and Tropical Medicine C F Puchan and May Smith (Hygiene) N H Harley and P H Manson Bahr (Tropical Medicine) A B Hill (Medical Statistics)

Professor H E Roaf has resigned the Chair of Physiology at the London Hospital Medical School as from September 30th 1932 on his appointment to the Chair of Physiology in the University of Liverpool

University Readerships in experimental pathology (tenable at the Lister Institute of Preventive Medicine) and of pathological chemistry (tenable at the Cancer Hospital) are to be instituted in accordance with the regulations on University Titles

Lord Dawson of Penn and Dr A M H Gray have been reappointed to the Senate by the Faculty of Medicine and the General Medical Schools respectively

Professor C G Seligman has been appointed the representative of the University at the International Congress of Prehistoric and Protohistoric Sciences to be held in London August 1st to 6th 1932

UNIVERSITY OF BRISTOL

The following candidates have been approved at the examinations indicated

M D—P Phillips

Final M B Ch B (*Part II*)—A J Fyfe Brook (first class honours with distinction in surgery obstetrics and pathology) O E J Simpson (second class honours) K P Pentelow C I Pevar R G C G Carlson A McD Davies H I M Linzell E Fletcher J R Gibbs (with distinction in forensic medicine and toxicology) Frances A Salisbury

UNIVERSITY OF GLASGOW

At the graduation ceremony held on June 16th the following were among the degrees conferred

LL D (Honorary)—Roberto Alessandri professor of surgery University of Rome Sir James Alfred Ewing president of the British Association for the Advancement of Science Mr Adam Brown Kelly consulting surgeon for diseases of the throat and nose Victoria Infirmary Glasgow and Miss Helen Keller

M D—J S I Aiken K A Mackay Anne Laird H R MacLennan W W Morrison

NATIONAL UNIVERSITY OF IRELAND

UNIVERSITY COLLEGE CORK

The following candidates have been approved at the examinations indicated

M D (Psychological Medicine)—P J Courtney
M Ch—L Bourke
M A O—D Donovan
M B B Ch B A O—T A Kelly (second class honours) D J Barry S T Cuddigan R J S Doherty R A Good M S O Callaghan W F O Connell J A O Driscoll Mary O Mahony J J O Sullivan (*Part I*) C Delea (*Part II*)
D P H (*Part II*)—T A Neville

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Primary Fellowship Examination

At the recent primary examination for the Fellowship 202 candidates presented themselves of whom the following 67 were approved

T G Armstrong G L Bohn W J Bremner J J Brownlee J A B Burnett, J S Calcutt L A Canaan G W Causey F L Chapman J Charnley P W Clarkson J G Clothier J H Conyers C C Cookson J V Dacie D V Davies R W Doyle F C Durbin G T Du Toit W A Elliston C F Evans H T Fleming H J Gaudin P P Halemani C L Heanley G W Hearn K L James V S John A D W Jones P Jones R J Katrak F G Kergin A J C Latchmore H T Laycock T Levitt D D Lewis J P Lloyd Margaret M C Louden J S MacMahon W H B Magauran M N Mahmood H L C Maitland H S A Malik F R R Martin D V Maxwell J H *Moyer S B Morris D F E Nash H A Pacey A D P* Parker G D G Peirce A L Pereira N D Pitt W A Pritchard W O Reid V H Riddell M H B Robinson J D Rose T Schnire R B Scott I Slome J D Spalding G Steane S H Wass H A W Watson J A White F M Williams

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At the monthly meeting of the Royal Faculty of Physicians and Surgeons of Glasgow held on June 6th the following were admitted Fellows of the Faculty after examination M B Daver F J Ford W W Galbraith A I L Maitland J B Rennie

ROYAL COLLEGE OF SURGEONS IN IRELAND

Mr Frank Chetwode Crawley has been elected president and Mr Seton Pringle vice president

At the meeting on June 16th the examiners of Court A for examinations under the management of the Conjoint Committee were appointed

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The Royal Assent was given on June 16th to the Finance Act Public Health (Cleansing of Shellfish) Act Coal Mines Act Epsom College Scheme Confirmation Act Royal Society for the Prevention of Cruelty to Animals Act and to other measures

In the House of Lords on June 20th the Town and Country Planning Bill was read a second time

The House of Commons this week passed the National Health Insurance and Contributory Pensions Bill and discussed minor measures A vote of censure on the Government was moved and debated

National Health Insurance

In the resumed debate on the National Health Insurance and Contributory Pensions Bill on June 14th Miss RATHBONE said there had been much more sickness among women and especially among married women than the actuary allowed for Married women were a much unhealthier class than spinsters owing to maternity and its results It might be there was more sickness because more married women remained at work Women were more appreciative of the value of health assurance and applied for benefits more readily There was also the charge that married women were malingering The actuary's report showed that he thought the deficit was largely due to malingering Features in the report did point that way as regards a considerable proportion of young women claimants but among married working women from early middle life the standard of health was deplorably low She quoted opinions from Glasgow Stoke on Trent and Newcastle on Tyne concerning the under nourishment of women Glasgow midwives said they had to get more medical assistance because the women were not so strong as they used to be She hoped the Minister of Health would reconsider his proposal to reduce the benefits of married women

Mr MELLER said that the position of women and children in national insurance had given anxiety for twenty years Funds had been bolstered up by special means to keep up the solvency of the women's section of the funds

Mr MACMILLAN said that as long as claimants had a right to choose a doctor there was always a danger of temptation in the medical profession itself

An amendment to decrease the benefit of married women by only one shilling instead of two was defeated

Mr HERBERT WILLIAMS brought forward a new clause redefining the qualifications and rights of insured married women Sir HILTON YOUNG suggested that this important new clause should be deferred till the report stage

The committee stage then ended and the report stage was subsequently put down for June 21st

At the beginning of the report stage on June 21st the House considered the new clause in the names of Sir Francis Fremantle Mr H G Williams and other members which had been postponed at the suggestion of the Minister of *Health from the committee stage The clause dealt with* insurance benefits to married women On a point of order raised by Mr Buchanan the Minister intimated that it was not the intention of the Government to accept the amendment but in view of the fact that it was withdrawn in committee on the understanding that it should be moved on report it was unfair that it should not be discussed Mr H G WILLIAMS then moved the clause the main purpose of which was to impose a new test—namely that any woman who put in twenty six weeks actual work in one year after marriage was to be regarded as in real employment and entitled to insurance rights The people who were only pretending to work would be definitely removed from insurance They did not wish to breed up a great mass of married women to exploit the insurance system

Sir FRANCIS FREMANTLE seconded the new clause He said that it was not a case of the women affected being malingerers They were only taking advantage of the rights offered them by the State in the way of benefit as would be done by all classes where benefits were to be obtained from the State No doubt there would be hard cases but there were hard cases everywhere and the economy that would result from putting the clause into effect would more than compensate for any hardship

Miss HORSBURGH and Mrs TATE opposed the clause The MINISTER said that the clause did not contain the proper remedy for the admitted difficulties and went too far To remedy an abuse the clause would create a wholly new class of unemployed persons who were subjected to particular disadvantages in relation to insurance in comparison with other unemployed persons

The clause was negatived

On Clause 1 Mr LOGAN moved an amendment to prolong maternity benefit medical benefit and any additional benefits under the clause up to the end of 1935 The MINISTER opposed the amendment which would require financial extensions of which the scheme was incapable The amendment was negatived

On Clause 3 in reply to criticisms of insurance doctors by Mr Rhys Davies Dr O DONOVAN made a vigorous defence of the panel practitioners

The report stage was concluded and the Bill read the third time A fuller account of the medical speeches will appear next week

Employment of Children—In the House of Lords on June 13th the Children and Young Persons Bill was considered in committee Clause 48 provides that no child under 12 shall be employed Lord BANBURY moved to omit the provision that by laws made by local authorities might authorize the employment of children under 12 by their parents or guardians The amendment was carried Viscount ASTOR moved a new clause providing that a local authority might make by laws with respect to the employment of

persons under 18 years The clause was added to the Bill Lord BALFOUR OF BURLEIGH moved to delete a proviso that no girl under 18 should take part in any public performance in which her life or limbs were endangered He said that in families of acrobats training began at a very early age The amendment was accepted by the Government The committee stage was concluded

Insured Persons not on Panel of any Practitioner—Mr E BROWN informed Mr Macquisten on June 14th that no precise figures were available of the number of persons in England and Wales *entitled to medical benefit on* January 1st 1932 who had not at that date selected an insurance doctor by whom they wished to be attended or made alternative arrangements for obtaining treatment The number might be estimated at 500 000—approximately 3 per cent About 16 000 insurance doctors in England and Wales remained collectively liable to treat all or any such persons The total amount of the capitation fees payable to insurance doctors therefore covered that liability Mr MACQUISTEN asked if it was not a fact that the money of those people who refused to nominate a doctor was divided up among the insurance practitioners in accordance with the number of panel patients who had selected doctors and since the doctors were getting money from people whom they never attended and who refused to be attended if that was not legalizing the obtaining of money by false pretences Mr E BROWN said that was an *ex parte* statement and not evidence

Vaccination—Mr ERNEST BROWN told Mr GROVES on June 15th that Sir Hilton Young was not aware that certain local authorities paid fees to doctors for vaccinating children under 12 months of age at clinics where children were left in charge of a matron The matter was within the discretion of the local authorities and the Minister assumed that the consent of the parents or guardians was obtained in each case

Hospitals and Road Accidents—Asked by Mr ANSTRUTHER GRAY on June 15th to make inquiries into the amounts accruing to hospitals by reason of third party claims under the Road Traffic Act 1930 with a view to amending legislation Mr PYBUS said he sympathized with the position of the hospitals but it was not at present desirable to suggest the introduction of further legislation

Cerebro spinal Fever at Aldershot—On June 20th Mr GROVES asked if the two men in the 2nd Battalion Scots Guards at Aldershot who recently died of spotted fever were originally diagnosed as suffering from that disease or from small pox Mr DUFF COOPER replied that the cases were diagnosed as cerebro spinal fever from the beginning of the illness

Medical News

A dinner will be given on June 27th at the Savoy Hotel by Lady Howard de Walden and Mrs Edward Baron on behalf of Queen Charlotte's Maternity Hospital rebuilding fund Dr T Watts Eden and Lord Riddell will speak and a film illustrating the activities of the hospital will be shown

At the meeting of the Society for the Study of Inebriety to be held in the rooms of the Medical Society of London Chandos Street Cavendish Square W on Tuesday July 12th at 4 p m Dr Alexander Baldie will open a discussion on the causation treatment and control of the alcohol habit Each member and associate is at liberty to introduce visitors Tea and coffee at 3 45 p m

In connexion with the jubilee of the Society for Psychical Research Dr William Brown Wilde Reader in Mental Philosophy University of Oxford will give a lecture on psychology and psychical research on Monday July 4th at 8 30 p m in the Conway Hall Red Lion Square W C 1

The annual luncheon of the Irish Medical Schools and Graduates Association will be held at the Criterion Restaurant Jermyn Street W on Wednesday July 27th, at 1 p m sharp It is hoped that the President of the British Medical Association the Rt Hon Lord Dawson of Penn will be the chief guest and the chair will be taken by Dr Howard Humphris Tickets price 6s may be obtained from the honorary secretary for the provinces Dr Falkland L Cary at 67 King's Road Harrogate or after July 24th at the Haymarket Hotel Piccadilly Circus London Early application for tickets is desirable as there will be no seats available for members who have not applied beforehand

The Marchioness of Carisbrooke and the Executive Committee of the Ex Services Welfare Society have issued invitations for Monday June 27th to meet the Duke and Duchess of York on the occasion of their visit to the society's industrial centre at Erinvale Way Leatherhead

The British Social Hygiene Council has arranged a meeting for Tuesday July 5th at the Livingstone Hall Broadway Westminster S W when the president Sir Basil Blackett will give an address entitled A layman's plea for a positive health policy The chair will be taken at 5 p m by the Right Hon Sir Auckland Geddes After the address an educational film How to tell will be shown

The Fellowship of Medicine announces two demonstrations in medical ophthalmology at the Royal Westminster Ophthalmic Hospital on July 6th at 5 p m and July 7th at 8 p m These demonstrations are also specially suitable for M R C P candidates though they are open to all practitioners A course on diseases of children will be held from June 27th to July 8th at the Children's Clinic and other hospitals A course in cardiology will be given at the National Hospital for Diseases of the Heart from June 27th to July 8th and in proctology at St Mark's Hospital from July 4th to 9th These courses and demonstrations are open only to members of the Fellowship of Medicine 1 Wimpole Street W 1 to which address application should be made for syllabuses

The Council of Management of the *World List of Scientific Periodicals* announces the preparation of a new edition and invites the opinions of those concerned with the preparation of scientific abstracts etc respecting the system of abbreviation of names of journals used in the list For this purpose it is proposed to hold a meeting at the Zoological Society Regent's Park on Monday July 4th at 3 p m when those attending may give the benefit of their advice

The second medical tour to Canada and the United States organized by *L Univers Medical* will leave Paris on August 17th via Cherbourg to visit Quebec Montreal Toronto Lake Ontario the Niagara Falls Chicago Washington and Philadelphia returning to Paris via Cherbourg on September 18th The price of the return journey is 16 650 francs first class and 12 950 tourist class Further information can be obtained from La Direction de Voyages et Congres de l Univers Medical 33 Avenue de l Opera Paris

The issue of the *Zeitschrift fur die gesamte Neurologie und Psychiatrie* for May 10th contains a memoir and portrait of the late Professor von Economo who first described lethargic encephalitis

At the United Hospitals Athletic championship meeting held on June 8th at the White City T B L Bryan (St Mary's) L R J Rinkel (St Thomas's) and A T Marrable (St Thomas's) with a score of 10 points each shared temporary possession of the B M A Cup given by the Metropolitan Counties Branch for the best all round performance

The only medical recipient of the Goethe medal recently founded by the President of the German Reich is Dr Lohlein professor of ophthalmology at Jena

During the year 1930 5 867 persons were killed in Germany by motor cars and motor cycles

The Greek Government has presented a bust of Hippocrates to the German Museum of Hygiene at Dresden

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal British Medical Association House Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not for publication

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EDITOR OF THE *BRITISH MEDICAL JOURNAL* Aitiology *Westcent London*

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MEDICAL SECRETARY *Medisecra Westcent London*

The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62350 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Income Tax

Purchase of Professional Equipment

J T has recently taken over an ophthalmic practice and purchased £100 worth of instruments to bring the equipment up to date Of this expenditure about half was to replace apparatus which had become unsuitable and the remainder for essential but entirely new apparatus What deduction can he claim?

*** In our opinion the amount represents capital outlay so far as J T is concerned the amount of capital invested by him in the equipment being the cost to him of the apparatus as it stood when he took over the practice plus the £100 he expended to bring it up to the required standard

Car Replacement

X Y Z bought a car for *£700 in 1920 and has now* sold it for £30 buying a new car *for £350 What deduction* can he claim?

*** *Only the actual out of pocket expense—namely £350* − £30 = £320 Our correspondent would have received a greater total allowance if he had claimed annual depreciation

LETTERS NOTES ETC

The Begging letter Writer

The Bishop of Salisbury speaking at the Church Assembly last week declared that begging letters were the bane of the clergyman's existence Perhaps the medical profession is even more often the prey of the professional beggar than the clergy because there exists a popular idea that while the clergy are usually poor medical practitioners are usually well to do and that their generosity corresponds with their resources It is easy to throw begging letters into the waste paper basket but not so easy to dispel the thought that for nine undeserving appeals consigned to oblivion one really genuine appeal has gone unregarded It is satisfactory however to notice that one person whom bodies like the Charity Organization Society and the Royal Medical Benevolent Fund describe as the most persistent begging letter writer in the country and whose special field was the medical profession will be unable to exercise her art again until the close of next year At the London Sessions on June 8th Jean Atherton aged 26 pleaded guilty to obtaining sums of £3 from two medical men by false pretences and was sentenced to eighteen months imprisonment Her methods had an ingenuity worthy of a better cause From the large number of medical names and addresses in her possession she would select one practitioner abroad and one in this country and would write to the latter pretending to be the stepdaughter of the former and pitching a plaintive tale of her stepfather's illness and his poverty stricken circumstances The lady was well on the way to planting stepfathers in all the Dominions of the British Empire and in each case he was a brother in distress to the practitioner at home Her record divulged in court was a much more commonplace affair It showed that she had been convicted on various occasions and at different places especially seaports since 1929 on charges of false pretences and on one occasion of larceny Her father who it appeared had once been a medical student but failed to qualify was *in one case* charged with her and got six weeks imprisonment *for* false pretences She wrote her appeals also under the aliases of Mary Beale and *Millicent E Aldridge* I or the present there will be no more of these pathetic appeals for old times sake unless of course the publication of her method leads to imitation The medical profession is fortunate in one respect—namely in the organization of its charities—which give help to the deserving and have a sharp eye for the impostor

Adequacy of Contraceptive Methods

Dr T VIBERT PRAGE (Harrogate) writes In your issue of June 4th (p 1047) there is a short report of the interesting speech made by Dr Enid Charles at the conference on medical problems of contraception organized by the National Birth Control Association I have not had the advantage of reading her contribution in full but I should like to suggest that although the period at least a year seems adequate on first thoughts the time during which observation of the adequacy of contraceptive methods should be observed ought to be much longer Some figures have been published with reference to the spacing of pregnancies in the *Journal of Obstetrics and Gynaecology of the British Empire* (xxxix No 4) which seems to show that 75 per cent of women aborted within 4 97 years following a previous termination of pregnancy There was no evidence that *these women* had used *contraceptive methods* and hence it appears to me that observation for a considerably longer time would be desirable if the natural space between pregnancies is to be taken into account

Amidopyrin in Measles

Dr MAURICE O REGAN (London N W 1) writes There were *many* letters published last year *relating* to the treatment of measles by amidopyrin This spring there was a severe epidemic in this district and I had an excellent opportunity of observing the results obtained with this line of treatment I found that when amidopyrin was administered the temperature fell to normal within one or two days and that cases seen late when the measles was well developed and even with signs of bronchopneumonia *cleared up* under the influence of this drug The dosage I used was Children 2 years and over 5 grains four hourly under 2 years 2½ grains four hourly until the temperature fell to normal The results of this treatment are excellent and I hope it will come to the notice of my fellow practitioners as it may help to mitigate much of the suffering and anxiety in this disease

The Sacrum

Dr WILLIAM CLOW writes Absence on holiday is the excuse for a belated reference to the explanation of the word sacrum as discussed in the review of *Cunningham's Anatomy* (April 30th) and the letter on the same subject (May 14th) The writer of the letter carries the matter back to the time of the Emperor Hadrian but Hippocrates called the bone the sacred bone —*το ιερον οστεον* (On joints Ch *45 and 47* Withington's *Loeb edition*)—at least 400 years before Christ Will *someone* therefore still try to tell us the meaning of its sacredness?

Dysidrosis in Western Australia

Lieut Colonel I W COTTON RAMC (ret) (Western Australia) describes dysidrosis as quite a common disease in that *country especially in the tropical* coast belt It occurs mainly at times of high temperature accompanied by a high wet bulb reading and is rarely seen in children who commonly go about barefooted He writes For those who wear boots only *for decency's sake* the treatment is a white canvas boot and no socks Those who wear boots for protection's sake are constantly reinfecting themselves but the disease can be *kept in check by painting* with iodine and the use of frequent baths Dysidrosis is rapidly cured by the administration of calcium and is *presumably* due to a diet deficient in calcium

Vacancies

Notifications of offices vacant *in universities* medical colleges and of vacant resident and other appointments at hospitals will be found at pages 42 43 44 45 46 47 50 and 51 of our advertisement columns and advertisements as to partnerships assistantships and locumtencies at pages 48 and 49

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 347

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

575 Axillary Pleurisies

Though little is known about pleurisy localized in the axilla F HUMBERT (*Ann de Med* April 1932 p 436) believes that this condition is not so rare as is generally believed Cases of this nature may present all the usual types of pleuritic inflammation they may be dry or be associated with serous haemorrhagic purulent or gangrenous effusion As regards severity the illness is classifiable as acute subacute or chronic Their aetiology is diverse trauma and tuberculosis may be causative factors These pleurisies may moreover present a misleading clinical picture—namely the pseudo pleuritic syndrome of the base analogous to that described by Chauffard in interlobar forms Though their diagnosis is difficult it can be made by employing all the clinical methods of investigation radioscopic examinations and performing an exploratory puncture A marked differential sign is the rarity of cavity formation in acute purulent axillary pleurisy as compared with its great frequency in interlobar empyema Surgical intervention is usually an absolute necessity hence early diagnosis is important The pathogenesis of axillary pleurisy is briefly discussed by the author and the literature concerning this condition is reviewed Four cases treated by Humbert are also recorded

576 Exceptional Causes of Angina Pectoris

H EPPINGER (*Deut med Woch* April 8th 1932 p 567) describes two unusual cases of angina pectoris The first patient a woman had retrosternal pain with a sense of pressure on the heart after swallowing the symptoms suggesting cardiospasm When she was able to take a deep breath these symptoms were relieved It was found that she had a para oesophageal diaphragmatic hernia Subsequently the pain extended upwards in the chest and became more severe during the attacks the blood pressure fell Amyl nitrite had no effect on the pain Finally the patient died in the course of an attack At the necropsy a diaphragmatic hernia containing part of the stomach was found to be connected by a tough adhesion to the heart in the region of a branch of the left coronary artery There was evidence of obstruction of the artery and its lumen was obliterated Eppinger believes that at first the hernia was reducible but with the taking of each meal a gastric hernia was brought about the pressure of this on the coronary artery was the cause of the anginal attacks In the second patient a man aged 54 attacks of pain in the right arm were relieved by amyl nitrite After a full consideration of the case a diagnosis of angina dextra was made An *x* ray investigation revealed a widening of the aortic arch and the Wassermann reaction was positive The *x* ray picture suggested a dextro position of the aortic arch (due to the total persistence of the right aortic arch) this was confirmed at the necropsy the aorta passing backwards in the chest to the right and not to the left of the trachea The author considers it to be a *moot point* whether or not the dextro angina in this case was connected with the developmental anomaly

577 Influenzal Meningitis and Syphilis

C MOTTA REZENDE and A AUSTREGESILO FILHO (*Rev Sud Amer de Med et de Chir* March 1932 p 228) record a series of cases of influenzal meningitis confirmed by clinical and pathological methods being associated with syphilis They suggest that syphilitic patients may be relatively susceptible to this form of influenza Lumbar puncture was invariably beneficial it removed the severe headache lowered the fever and hastened convalescence In addition the administration of antimeningococcal serum (though not specific) aspirin quinine and Dover's powders brought about cures in all the cases In syphilitic meningitis neosalvarsan bismuth and potassium iodide used after the influenzal symptoms had subsided gave excellent results In several instances the presence of Guillain's sign was observed to run parallel with the meningeal reaction In this test pressure is exerted on the quadriceps femoris flexion at the thigh and knee with abduction being produced in the opposite leg It is regarded by the authors as possessing considerable clinical value

578 Relapses and Second Attacks of Infectious Diseases

J COMBY (*Arch de med des enf* April 1932 p 209) states that second attacks of eruptive fevers and similar diseases are much rarer than certain statistics suggest A second attack which occurs a considerable time after the first is a fresh disease due to reinfection whereas a relapse which develops much sooner is only a recrudescence of the first attack In typhoid fever for example true second attacks have become exceptional since paratyphoid fever has been discovered whereas relapses are still very frequent Second attacks are equally rare in small pox and chicken pox During a long period of observation Comby has never seen an example of relapse in chicken pox On the other hand he has seen several cases of second attacks of measles and of relapses occurring soon after the primary attack He has not however met with a second attack or relapse of rubella Undoubted second attacks and relapses may occur in scarlet fever Comby has never encountered a relapse or second attack of erythema nodosum which resembles the eruptive fevers in its mode of invasion eruption and desquamation Though rare in children undoubted second attacks of mumps may occur they have chiefly been reported by Army doctors Second attacks of whooping cough may develop in elderly people many years after the first attack

Surgery

579 Post operative Phlebitis Thrombosis and Embolism

E DAHL IVERSEN and L KAMBERG (*Hospitalstidende* February 25th 1932 p 171) have made a statistical analysis of the cases of post operative phlebitis thrombosis and embolism occurring in the Fifth Division of the Communal Hospital in Copenhagen in the period 1911–30 with a view to ascertaining among other things whether there had been a rise in the incidence of these conditions in the period under review The analysis was limited to post operative cases and cases of thrombosis following septic and pyaemic states were not included in the study Among 18 168 patients operated on there were 636 in whom these complications occurred—an incidence of 3·5 per cent there were 237 men and 399 women The incidence of these complications was 6·18 per cent in all the laparotomies 0·59 per cent in all the operations on the external genitals perineum anus vagina and uterus by the vaginal route 2·06 per cent in all the operations on the head neck trunk and limbs 6·13 per cent in all the operations on the kidneys bladder and prostate and 3·5 per cent in the herniotomies An age classification of the patients in 5 year age groups showed that after the 16–20 group there was an abrupt rise in the incidence of these complications till the 36–40 period was reached after which this incidence was maintained at its maximum till the age period 61–65 thereafter there was an abrupt fall When the sexes were studied separately in this respect it was found that while there was a steady rise among the men from the age 16–20 to the age 61–65 the incidence in the women showed a

more abrupt rise up to the age 26–30 The maximum was maintained till the age 40–50 was reached there after there was a steady decline In 258 cases information was available as to the state of general nutrition of the patients 128 of whom were over weight In about 56 per cent of all the cases there was no clinical or post mortem record of diseases of the heart or blood vessels In only about 29 per cent (183 out of 636 cases) did these complications follow 'unclean operations Thrombosis and embolism occurred in between 3 and 4 per cent of the cases in which a general anaesthetic had been given (chloroform ether 3 2 per cent and ether 3 9 per cent) This percentage was as low as 2 3 for the cases of local anaesthesia and 2 6 for those of lumbar anaesthesia No convincing evidence in favour of the suggestion that the incidence of these complications has increased in the period under review could be found

580 Surgical Emphysema

F BENEDETTI VALENTINI (*Il Policlinico Sez Prat* April 11th 1932 p 557) reports the case of a lad aged 18 who as the result of a fall fractured several ribs on the left side and speedily developed severe surgical emphysema On admission he was in a grave condition suffering from *intense dyspnoea* The face was oedematous and the eyelids were so swollen that he could not open them The lips were cyanosed and the heart was rapid and irregular there was much shock with restlessness The oedema affected the whole body from head to foot In view of the grave condition of the patient it was decided to operate by the method described by Lejar Under local anaesthesia a curved incision was made over the end of the sternum and the fascia was reached and incised Air escaped and in a comparatively short time after the operation the patient was much relieved he left the hospital in a month's time quite well The author enumerates the indications for operation in such cases as (1) when there is a progressive pneumothorax compressing the lung (2) when the emphysema affects the mediastinum and (3) when the emphysema is rapidly progressive and accompanied by severe general shock

581 Carcinoma of the Penis

W E LEIGHTON (*Amer Journ of Cancer* March 1932 p 251) gives a general description of that somewhat rare condition cancer of the penis Short notes on sixty seven cases are recorded and the results are summarized *The actual cause of the disease is unknown* but various factors appear to cause its onset Phimosis appears to be a *common contributory condition the disease is said to* be almost unknown among circumcised peoples Syphilis and trauma seem to have aetiological significance and contagion or implantation has been suggested The age incidence is the same as in cancer of other organs Carcinoma develops from the epithelium of the prepuce or glans rarely from the urethra and is of the epithelial type found elsewhere It begins either as an ulcer or as a warty excrescence which proliferates rapidly extensive ulceration may occur and the whole penis become destroyed Frequently the tumour persists for many years without causing much discomfort Extension to the corpus cavernosum is prevented by its fibrous sheath The growth spreads by the lymph channels which are superficially situated involvement of the inguinal glands occurring *early despite this the tumour grows* slowly Visceral metastases are rare and death is generally due to cachexia or haemorrhage following ulceration of the blood vessels The diagnosis of a well developed case is easy The principal lesions to be excluded are papilloma and syphilis So called precancerous conditions such as leucoplakia eczema or psoriasis must be recognized Treatment depends on the stage of the lesion When small the actual cautery should be employed silver nitrate or other caustics must be avoided When the disease is well established amputation becomes necessary The more radical the operation the better the end result The whole penis should be excised with a wide area about the growth the lymphatics and inguinal glands being removed

1–00 n

Therapeutics

582 Adult Serum in Infantile Encephalitis

A KRAMAR and G PETRANYI (*Arch f Kinderheilk March 4th 1932* p 96) state that during the period 1925 to May 1931 thirty three cases of encephalitis in patients aged from 6 weeks to 12 years were admitted to the children's clinic of the Royal Hungarian Elizabeth University of Pecs No epidemic increase was detected during this period Twelve of them were primary and twenty one occurred as sequels to the following infections pyelocystitis (1) pneumonia (7) whooping cough (1) influenza (9) dysentery (2) and vaccination (1) Twenty cases of which eight were fatal were treated by the ordinary methods including systematic lumbar puncture and drugs and thirteen of which two were fatal by large quantities (30 to 117 c cm) of adult serum While admitting that the experience gained from so small a number of cases is not conclusive the improvement (striking in four cases and gradual in seven) in the clinical picture after intramuscular injection of the serum of an adult such as a parent a relative or the doctor convinced the authors of the value of the treatment

583 A Lipo hepato soluble Bismuth Preparation

GALLIOT (*Bull Soc Franç de Dermat et de Syph* March 3rd 1932 p 416) recalls the discovery by Levaditi and Nicolau in 1924 that the spirillicidal action of bismuth was increased *in vitro* by the presence of hepatic extract Clinical trial of bismuth salts in conjunction with hepatic extract had proved unsatisfactory however on account of the severe local and general reactions which ensued Iscovesco has recently used a lipoid extract of liver discovered by him in 1914 20 grams of which represent 100 grams of dried liver ampoules have been prepared containing 1 c cm of lipoid to 2 5 c cm of a solution of bismuth triamphocarbonate representing 6 cg of metallic bismuth In clinical use this preparation has given rise to a minimum of local or general discomfort especially if a half ampoule is used for the first dose Primary and secondary lesions have been found to clear up rapidly no case showing tertiary lesions has yet been treated The Wassermann reaction has usually become negative by the end of a course of twelve injections or if not then at the end of another two or three weeks there have been some successes in persistently sero positive cases previously treated with other preparations The course of treatment has comprised twelve to fifteen injections two each week being given as long as lesions persist and one every five to seven days afterwards The author has noted an absence of febrile and asthenic conditions which are often a feature of bismuth treatment and it has appeared that the greater activity of bismuth associated with the lipoid enables a smaller dose than is usually employed in other preparations to be equally effective

584 Treatment of Distension after Abdominal Operation

W L DENNEY (*Canadian Med Assoc Journ* April 1932 p 430) discussing the treatment of the troublesome distension which not infrequently follows abdominal operation disparages the employment of local heat applications enemata and medication with eserine or pituitary extract all of which he has found to be unreliable and disturbing to the patient He tried diathermy in ten cases of distension following appendix operations with good results Since peristalsis must not be stimulated while *peritonitis* is still active the treatment cannot be begun until the third day after the operation An abdominal plate is placed in close proximity to the incision wound and a second plate *one third* larger is applied over the lumbar vertebrae Treatment commences with a dose of 250 milliamperes for ten minutes repeated twice daily for three days the dosage being gradually increased to 750 milliamperes for twenty minutes on the third day In view of the discovery by McVicar and Weir that such post operative distension is associated with a high blood urea content increased alkalinity and decreased blood

chlorides the intravenous administration of a solution consisting of 10 grams of sodium chloride and 100 grams of dextrose in a litre of water is commended especially when there is marked toxicity It has been shown however that such injections stimulate peristalsis and it is therefore probably inadvisable to use them until there is no active peritonitis present Blair found in his series of cases that diathermy seemed to obviate any tendency to intestinal motor disharmony and to render such injections unnecessary

585 Immunization by Diphtheria Anatoxin

G RAMON and R DEBRE (*Presse méd* April 9th 1932 p 545) discuss the present status of antidiphtheritic immunization by anatoxin and the various modifications of the method Millions of injections in different countries have shown that the reactions produced by it are perfectly harmless not only in the healthy person but also in the tuberculous subject An average of 94 to 96 per cent of those injected acquire within six weeks to two months sufficient immunity to render negative a previously positive Schick reaction The first injection should consist of 0·5 c.cm followed three weeks later by a second injection of 1 c.cm and after an interval of two or three weeks a third injection of 1·5 c.cm Modification of the method by instilling the anatoxin into the nostrils is not practical economical or certain in its action The same may be said of an attempt to produce immunization by the digestive tract in the form of pills containing anatoxin Lowenstein's method of injection with an ointment containing killed diphtheria bacilli and toxoid produces immunity in a much smaller number of cases than does the injection of anatoxin

Ophthalmology

586 Extraction of Senile Cataract

As the result of investigating 220 cases of extracapsular extractions of senile cataract and of a similar number of intracapsular extractions IRENA MRAZOVA TREGERZIA (*Bratislavské Lekarské Listy* December 1931 p 619) concludes that it is always advisable to try first the intracapsular method which should succeed in about 50 per cent of all cases The immediate and remote results of this procedure are more favourable while the complications such as prolapse of the vitreous and iris and late adhesions of the basal portion of the iris are not more frequent than when the extraction is extracapsular

587 Retrobulbar Neuritis

L PAUTRIQUE (*Journ de Méd de Lyon* March 20th 1932 p 187) describes retrobulbar neuritis as characterized essentially by an absolute or relative central scotoma with integrity of the optic fundus during most of its evolution and terminating most frequently in complete cure Though manifested in different ways according as the disease is acute or chronic unilateral or bilateral the fundamental symptoms are the same in all cases—namely decrease of the visual acuity disturbances of the visual field and integrity of the fundus Most frequently visual acuity is markedly lessened in bilateral forms the patient often sees better at dusk than during the day in some cases exact central vision is abolished but a certain degree of paramacular vision persists the patient seeing better to one side particularly the nasal The peripheral visual field is unaffected the central scotoma absolute in typical forms but frequently relative acts only on colours—first green then red The scotoma is never perceived by the patient and is usually revealed by perimetry Deformation of vision never occurs Causes of this neuritis fall into five groups intoxication especially alcohol and tobacco infection of the neuraxis as in disseminated sclerosis syphilis tuberculosis etc infection of nasal and sinus origin compression of the nerve as for instance by tumours and inflammations of the ocular globe The diagnosis is usually easy Retrobulbar neuritis is as a rule benign and treatment aims merely at hastening cure Various measures that may be employed are enumerated The disease is rarely prolonged with a termination in partial sclerosis of the nerve more rarely still does complete optic atrophy ensue

588 Sequels of Intraocular Foreign Body

F A KIEHLE (*Arch of Ophthalmol* February 1932 p 189) sounds a note of warning against undue optimism after extraction of an intraocular foreign body The eye is considered saved after the operation but the vision and soundness of the eye several years afterwards has only been recorded in a very few cases Late sequels such as detachment of the retina iridocyclitis and shrinkage of the globe are considered to be rare because the patient is no longer under observation when they occur Extraction involves a second trauma thereby increasing the liability of permanent damage If however the foreign body is left in *situ* degenerative changes with ultimate loss of sight usually ensue Removal should therefore be performed with the minimum of trauma and cases should be kept under observation for long periods

589 The Bucky Rays in Ophthalmology

According to certain authorities a causal relation exists between irradiation with x rays and the production of cataract IKRASSO (*Journ de Radiol et d'Electrol* March 1932 p 117) states that this is not the case if Bucky rays are employed and bases this opinion on experimental study and clinical results During two and a half years he has treated 450 cases by this method and has noted no ocular accident in any These rays can only be employed in superficial diseases of the cornea conjunctiva and sclerotic Remarkable results have been obtained in corneal ulcers superficial punctate and deep non degenerative keratitis corneal herpes infected ulcerations centripetal marginal ulcers acute and chronic conjunctivitis scleritis and episcleritis Early effects of this irradiation are a rapid cessation of the pains decongestion of the lids blanching of the globe and lessening or even disappearance of the conjunctival secretions Its advantages over x rays are its relative harmlessness and over ultra violet rays the absence of subsequent pains a shorter time for each application and a shorter period of treatment The technique is tersely described The dose ranges from 30 to 150 r this should be reduced in acute inflammatory and superficial affections The Bucky tube deteriorates with age and a change occurs in the quality and quantity of the rays the biological effects are different and the results less favourable for the same dose

Obstetrics and Gynaecology

590 Chronic Abdominal Pain

Discussing the aetiology of chronic pain in the lower part of the abdomen more particularly W FLETCHER SHAW (*Practitioner* February 1932 p 122) emphasizes the importance of searching for definite localizing signs before any surgical or other form of treatment is undertaken While gynaecologists must not overlook the possibility of chronic appendicitis visceroptosis mobile kidney intestinal adhesions and flatulence surgeons must be careful to examine the uterine adnexa The author asserts that it is never justifiable to remove from a woman an appendix affected by long standing inflammation through the gridiron incision it is essential to employ a central incision through which a thorough examination can be made of the pelvic and abdominal organs As regards the diagnosis between disease of the appendix and adnexa it is pointed out that recurrent attacks of sharp pain accompanied by sickness or nausea and tenderness over McBurney's point are indicative of appendix involvement while a pelvic infection due to tubal infection more often gives rise to chronic aching pain made worse by exertion to a tender mass situated at one side of the uterus and to tenderness and pain referred to a point one inch above the centre of Poupart's ligament Visceroptosis is common but more difficult to diagnose an x ray

mation is often essential Of all the gynaecological conditions causing chronic pain laxity of the pelvic floor is the commonest prolapse of the uterus in virgins is more common in the industrial North of England Parturition may damage a previously healthy pelvic floor to varying extents a double colporrhaphy corrects this but great care must be taken to suture the lax and torn muscles and to ensure that the patient puts no strain on them for three months Matting of the appendages—the next most common gynaecological cause of chronic pain—may date from a confinement or miscarriage or be due to gonococcal infection or be traceable back to tuberculous peritonitis in early life A secondary infection of the tubes by *B coli* may ensue Among the other causes of chronic pain mentioned are cystic ovaries and ovarian cysts degenerating fibroids associated with laxity of the pelvic floor carcinoma of the cervix in which it is unfortunately a late symptom prolapse of the ovary and varicocele of the broad ligaments A mobile retroflexion of the uterus seldom causes symptoms of itself though chronic pain results when this condition is accompanied by a lax pelvic floor endometritis or prolapse of the ovaries

591 Spontaneous Delivery in Unfavourable Face Presentation

W WALZ (*Zentralbl f Gynak* April 16th 1932 p 983) describes a case in which resolutely conservative treatment in an apparently unfavourable case of face presentation led to the natural delivery of a healthy infant Not only was the chin posterior but after twelve hours labour the head was still placed with the sagittal suture in the conjugate diameter of the pelvis The patient was a primipara with a normal pelvis and the membranes had ruptured an hour and a half before pains were felt the liquor being tinged green Nevertheless since the foetal heart sounds remained satisfactory rotation was awaited and the child 54 cm in length was born in the first face position after a labour of fifteen hours Walz has traced only two other cases in which the head presenting by the face engaged in the antero posterior pelvic diameter In one which was mento anterior delivery was spontaneous but in the other—a mento posterior—Caesarean section was performed In Walz s case the premature rupture of the membranes and the presence of a bicornuate uterus were regarded as aetiologically significant

592 Tuberculous Endometritis

A HEINRICH (*Amer Journ Obstet and Gynecol* April 1932 p 579) records two cases of tuberculosis of the body of the uterus which condition he believes to be of frequent occurrence and quotes Norris to the effect that with the exception of the Fallopian tubes the endometrium is the most frequently involved in genital tuberculosis in the female In neither of the two cases was tuberculosis suspected the first patient being operated on for a presumed fibroid while the second was thought to have a chronic non specific salpingitis Yet in both instances there was a history pointing to tuberculosis abdominal pain had been present for many years suggesting a low grade peritonitis which in the absence of a history or symptoms of gonorrhoea ought to have been regarded as of probable tuberculous causation One patient moreover had a definite history of dry pleurisy and rectal fissures The tuberculous endometritis in each case was early and the tubercles were only present in the fundal mucosa surrounding the tubal mouths Heinrich considers that this supports the view of Norris that the extension of infection from the tubes to the endometrium is by direct continuity through the opening of the tube into the uterus He also considers that a complete hysterectomy is advisable as soon as a diagnosis of tuberculous salpingitis is made in view of the risk of early uterine involvement This will obviate a stormy post operative course In one of his cases this procedure was employed recovery was rapid and uneventful In the other case however a tuberculous salpingitis was not so treated at first bowel involvement and sinus formation followed the first operation and a chronic discharging sinus persisted after a second one

Pathology

593 The Iron Content of Human Milk

A WALLGREN (*Acta Paediatrica* March 18th 1932 p 191) has found that the earlier estimations of the iron content of milk have not been satisfactory chiefly because the quantities employed in the investigations were too small He made forty two separate analyses of human milk obtained from thirteen mothers during the first nine months of lactation The samples of milk were taken before and after suckling at different hours during periods of from five to ten days the samples were mixed in glass containers placed in a refrigerator Each single percentage of iron was the average of two analyses of 500 c cm (approximately 17 6 oz) of milk Wallgren found a remarkable variation in the iron content in different cases and seasonal changes did not appear to influence these In order to ascertain whether the conclusion of previous observers was correct—namely that the percentage of iron decreases towards the end of lactation—he analysed the milk of seven wet nurses at intervals during twelve months In two cases during the last month the quantity of iron present was infinitesimal but in the whole series of specimens no continuous decrease was observed He found that the average percentage of iron in cow s milk is lower than those of human and goat s milk though the individual percentages varied considerably from time to time Human milk contains the highest percentage goat s milk comes next while cow s milk contains the smallest percentage of iron The author is unable to confirm the statements of some earlier investigators that the administration of iron salts will increase the iron content of human and of cow s milk He adds that a too exclusive diet of goat s milk for infants more often leads to anaemia than is the case with cow s milk or human milk and that there are evidently other factors which play a greater part than the absolute percentage of iron in the milk

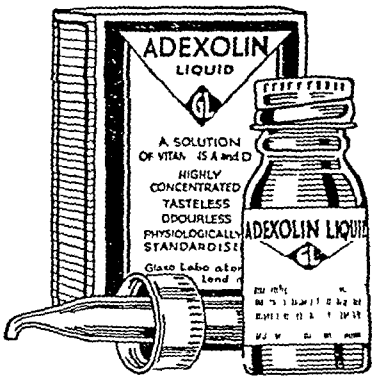
594 Lipaemia in Arteriosclerosis

S CACCURI (*Arch di Pat e Clin Med* February 1932 p 376) records the results of his investigations by the Bang Condorelli method of the lipoid content of the blood in fifty nine cases of arteriosclerosis which in twenty one was diffuse in five mainly renal and in four mainly cerebral in twenty two patients there were also myocardial and aortic lesions four had Raynaud s disease two suffered from Buerger s disease and one from angioneurotic oedema The results were as follows In many cases some of the lipoids were normal in amount but the complete lipoid content always showed some abnormality in the form of excess or defect of some lipoid As regards the relations between cholesterin and the blood pressure in some persons hypercholesterinaemia was accompanied by hypertension especially when they were above the age of 61 In nineteen patients the changes in the lipoid content of the blood was studied after a meal containing 4 grams of cholesterin and 200 c cm of milk but no regular changes in the lipoids were found

595 Post mortem Findings in Tularaemia

M FOULGER A M GLAZER and L LOSHAKOV (*Journ Amer Med Assoc* March 19th 1932 p 951) who record an illustrative case have found only eight previous examples of tularaemia on record in which the necropsy findings were described Their patient was a woman aged 37 who four days after dressing rabbits developed high fever and a papulo pustular lesion on the left index finger The little and middle fingers became subsequently affected and other lesions appeared on the chest and right thigh Symptoms of pneumonia and abdominal distension ensued and death preceded by coma of twenty four hours duration took place without any benefit having been derived from convalescent serum At the necropsy numerous tularaemic abscesses were found in the lungs liver spleen and lymph nodes pulmonary congestion and early lobular pneumonia fibrinous peritonitis subacute enteritis and toxic nephrosis

ADEXOLIN LIQUID . . .

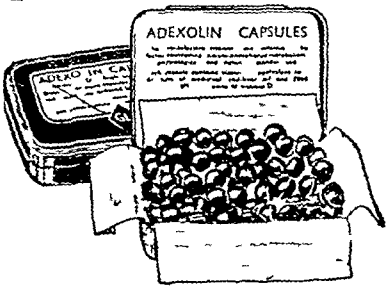


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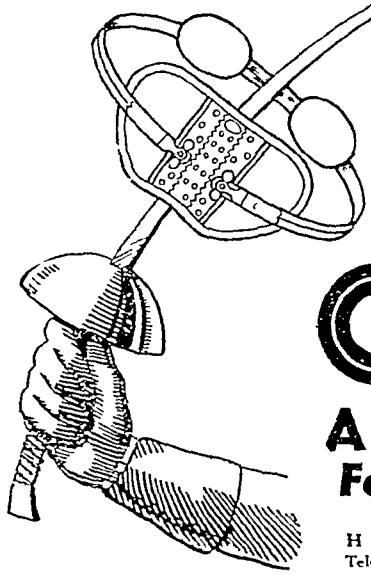
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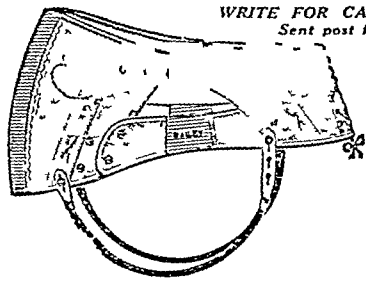
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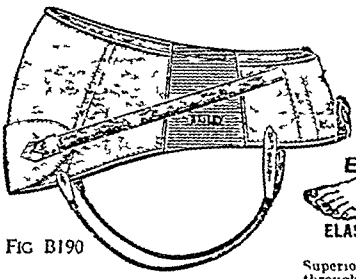
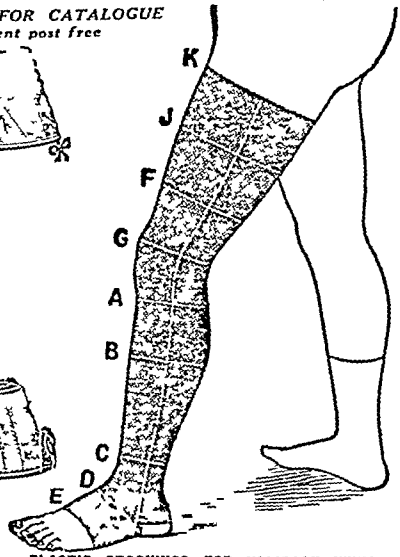


FIG B190

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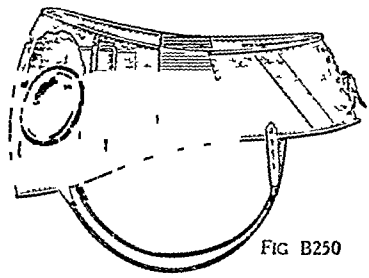
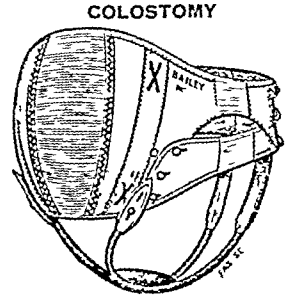


FIG B250

(Showing Interior of Cup)

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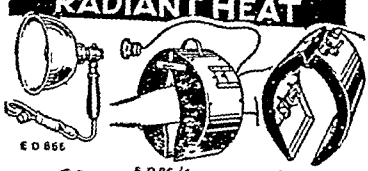


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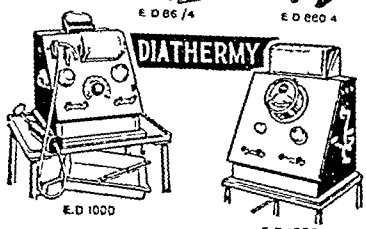
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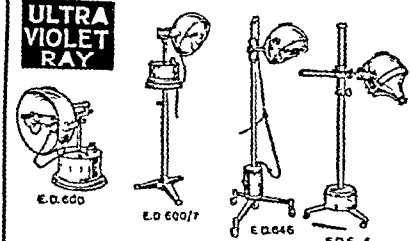
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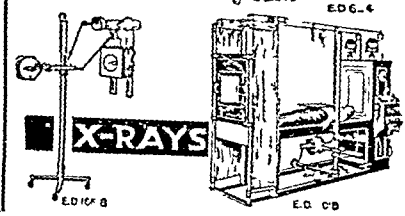
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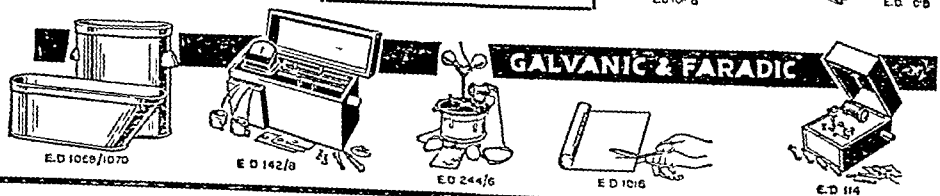
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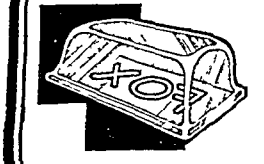
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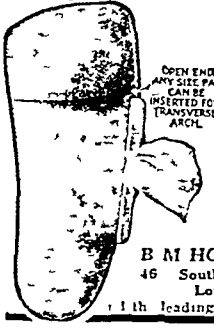
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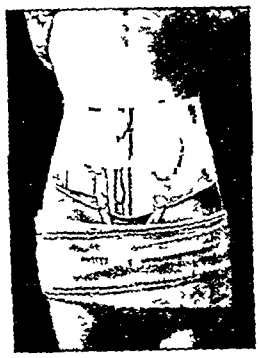
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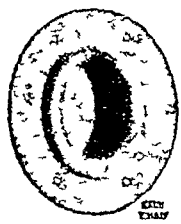
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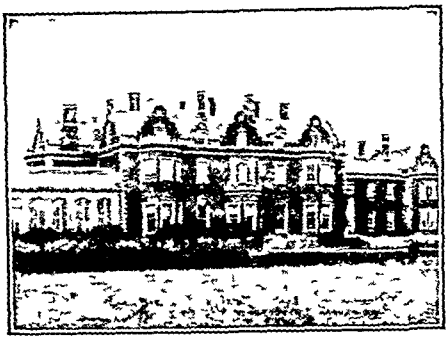
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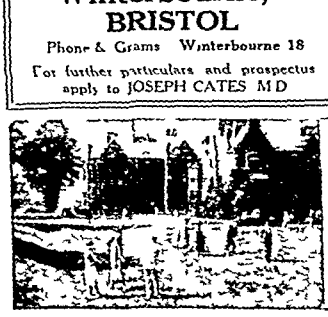
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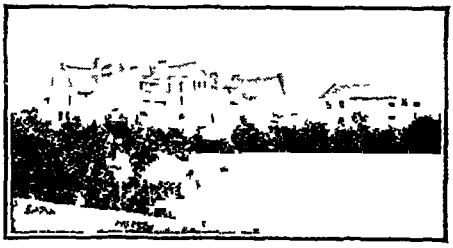
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SOME SUCCESSES

M.D. (Lond.),	1901-31 (9 Gold Medallists during 1915-31)	355
M.S. (Lond.),	1901-31 (including 4 Gold Medallists)	22
M.B., B.S. (Lond.),	*Final* 1906-31	280
	(Completed Exam.) *Primary*	173
	Final	174
F.R.C.S. (Eng.),	1906-31	199
M.R.C.P. (Lond.),	1914-31	308
D.P.H.	(Various) 1906-31 (Completed Exam.) 1918-31	50
F.R.C.S. (Edin.),		501
M.R.C.S., L.R.C.P.	Final 1910-31 (Completed Exam.)	
M.D.	Various By Thesis	Numerous successes

Preparation for the above and also for Medical Preliminary and for all examinations leading up to M.R.C.S., L.R.C.P. or M.B. of various Universities also for D.P.M., D.O.M.S., L.T.M. & H., D.T.O., D.C.O., D.M.R.E., M.M.S.A., L.M.S.S.A. etc. Numerous successes.

ORAL CLASSES

M.R.C.P., M.D., Primary and Final; F.R.C.S. (Edin.), Final; M.B., B.S. and M.R.C.S., L.R.C.P. Museum and Microscope Work. Also Private Tuition.

MEDICAL PROSPECTUS (48pp.)

CONTENTS.—The method and the cost of entering the Medical Profession. *Particulars of all* Postal Courses and Oral *Medical Examinations*. Suggestions for the Higher Medical Classes. Suggestions for the Special Examinations. Suggestions for the Special Clinical Examinations. Refresher Courses. Open Diploma Examinations. Hints for writing theses. Hints for Women. Medical Prospectus gratis, along with list of Medical Prospectus gratis along with list of Tutors etc. on application to the Principal Mr. E. S. WEYMOUTH, M.A., 17 Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

THE WILLIAM MORRIS RESEARCH FELLOWSHIP IN RADIOLOGY

Applications are invited for the above post and should reach the Secretary of the British Empire Cancer Campaign, 12 Grosvenor Crescent, S.W.1, not later than July 2nd, 1932.

The post is a whole-time one tenable at Mount Vernon Hospital and the remuneration offered is from £500—£1,000 per annum according to the status, qualifications, etc. of the selected candidate.

Further particulars can be obtained on application to the Secretary at the above address.

UNIVERSITY OF LONDON

EXTERNAL EXAMINERSHIPS, 1933

The Senate announce the following vacant Examinerships for the year 1933:

For the Second Examination for Medical Degrees

ANATOMY

For Final and Higher Examinations for Medical Degrees

BACTERIOLOGY, MEDICINE, MENTAL DISEASES AND PSYCHOLOGY, NEUROLOGY, OBSTETRIC MEDICINE, OTOLARYNGOLOGY, PATHOLOGY, STATE MEDICINE.

Associate Examiners

Applications will also be invited for Associate Examiners in Medicine, Obstetric Medicine, Pathology and Surgery. A separate application form must be used for Associate Examinerships and the word "Associate" must be written on it.

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar.

Candidates must send in their names to the External Registrar, GEO. I. GOODCHILD, M.A., LL.B., with any attestation of their qualifications they may think desirable on or before Monday, July 4th, 1932. (Envelopes should be marked "Examinership.")

The Senate desire that no application of any kind be made to individual members.

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership. The appointments will be made by the Senate in November. Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their applications.

EDWIN DELLER,
Principal.

University of London,
South Kensington, S.W.7.
June 1932.

COUNTY COUNCIL OF MIDDLESEX

COUNTY HOSPITAL, NORTH MIDDLESEX

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

The County Council invites applications for the above appointment. Candidates must be registered Medical Practitioners and should have held resident appointments in a General Hospital.

North Middlesex County Hospital is a modern General Hospital with accommodation for over 900 cases chiefly acute. 230 beds in the adjoining Edmonton Institution also are under the care of the Medical Staff of the Hospital. In addition the Hospital possesses a Pathological Laboratory and X-ray Roentgen Deep therapy, Radium, Electro-therapeutic, Massage, Ear, Nose and Throat, Ophthalmic and Dental Department.

The gentleman appointed will work under the control of the Medical Superintendent and devote his whole time to his official duties.

Salary £250 per annum together with board, lodging and laundry, subject to a small temporary abatement in view of the national situation. The appointment is for one year only, and is subject to one month's notice on either side. At the end of the period of one year's service the successful candidate if considered satisfactory in all respects will be eligible upon the recommendation of the Medical Superintendent for promotion to the post of Assistant Medical Officer. If not so recommended he will leave the Council's service.

Applications stating (1) age, (2) qualifications, and (3) previous experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than July 9th.

Canvassing directly or indirectly will be a disqualification.

No special application form are provided.

Envelopes must be endorsed "Junior Assistant."

(C.D/4.)

ERNEST S. W. HART,
Medical Officer.

Clerk of the County Council.

Middlesex Guildhall,
Westminster, S.W.1.
June 17th, 1932.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

LEVERHULME RESEARCH SCHOLARSHIPS

Two Leverhulme Research Scholarships will shortly be awarded by the Royal College of Physicians of London.

Each scholarship will be of the annual value of £500 and will be for one year in the first instance but renewable from year to year at the discretion of the College.

Scholars must be British subjects of not less than 25 years of age and may be of either sex; preference will be given to persons holding a medical qualification.

Scholars must devote themselves to the investigation of some clinical problem of disease as it occurs in man. The work must have as its base some established institution preferably in the United Kingdom in which full facilities for the research are available.

Applications must be sent before July 4th to the REGISTRAR, Royal College of Physicians, Pall Mall East, S.W.1, from whom all details may be obtained.

GUY'S HOSPITAL

THE SIR ALFRED FRIPP MEMORIAL FELLOWSHIP IN CHILD PSYCHOLOGY

Applications are invited for the above Fellowship which is of the value of £300 per annum and is tenable for a period of two years.

The Fellowship has been established with the object of promoting the advancement of knowledge and research in Psychology more particularly through the study of children in health and/or in disease. Each candidate must submit with his or her application a definite scheme of advanced study or research work to be carried out during the tenure of the Fellowship together with particulars of his or her previous career.

The investigations undertaken by the Fellow shall be carried out in the Hospital or Institutions of Guy's Hospital.

Men and women are eligible for the Fellowship. Candidates must be unmarried and must not be more than 30 years of age and must possess a recognized qualification to practise medicine.

Canvassing will be regarded as a disqualification.

Further particulars as to the regulations governing the Fellowship may be obtained from the DEAN, Guy's Hospital Medical School, S.E.1, with whom applications (10 copies) together with the names of three referees should be lodged not later than July 8th, 1932.

F.R.C.S. (Edin.)

Full PREP. COURSE with Anatomical (Cadaveric and Living Model) and Surg. Path. Demonstrations for next Exam. will commence shortly. POSTAL TUITION at any time.—H. C. ORTON, F.R.C.S., Surgeons' Hall, Edinburgh.

CITY OF STOKE-ON-TRENT

ASSISTANT MEDICAL OFFICER (1 of 3)

Applications are invited for the appointment of Assistant Resident Medical Officer at the London Road Institution near Newcastle. The Staff of London Road Institution is designed to such officers is £250 per annum with board and residence. The period of the appointment will be limited to one year, subject to termination by one month's notice on either side. The Institution accommodates about 1,000 inmates, including 600 in hospital (which is recognized as a major training school for nurses) and 150 in mental wards. The medical service to the adjacent Children's Homes is performed by the Institution staff who also require daily attendance to nurse.

Applications, accompanied by copies of not more than three testimonials of recent date, should be delivered to the undersigned immediately. Applicants should state particulars of their qualifications or degrees held, the date when they will be able to take up the duties, and experience since qualification. Preference will be given to those who have had experience in any of the following subjects: Obstetrics, Anæsthetics, Otology, Radiography.

Full assistance Officer, 1 of 3 SHARES.
Full particulars from CLERK,
High Street, Stoke-on-Trent.
June 16th, 1932.

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS

The Indian Medical Service offers wide opportunities of medical experience, including clinical, preventive, specialist and research work. At the beginning of his career an officer is employed on the military side, which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian service to have his name registered for transfer to the civil side, from which appointments are made to Civil Surgeoncies, which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes, to specialist (for example public health and bacteriological) services, to research posts, and to professorships at the Medical Schools.

Note.—*It is not possible to state at present what, if any, prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.*

PAY

Owing to the state of financial emergency at present prevailing in India, the existing monthly rates of pay, which are as follows, are being subjected under the authority of the Secretary of State in Council to a temporary reduction not exceeding 10 per cent.

Rank	Service in Rank	Basic Pay	Overseas Pay	Years of Total Service
		Rs.	Rs.	
Lieut.	—	400	100	1st.
			150	2nd.
Capt.	(i) During first 4 years service as Captain	600	150	4th.
			225	5th.
			300	6th.
	(ii) With more than 3 and less than 6 yrs. service as Captain	650	300	7th.
			375	8th.
	(iii) With more than 6 years service as Captain	800	450	9th.
			525	10th.
			600	11th.
Major	(i) During first 3 years service as Major	900	600	12th.
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1200		
Lieut.-Col.	(i) Until completion of 23 years total service	1400	£30	13th and over.
	(ii) During 24th and 25th years service	1600		
	(iii) After completion of 26 years total service	1700		
	(iv) When selected for increased pay	1800		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay, promotion, retirement and retired pay, but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph, is limited to one year.

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers, military or civil, and officers holding certain special appointments, officers are not debarred from taking private practice, so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave), which may not exceed 12 months in all during an officer's service, may be granted to officers desirous of pursuing special courses of study of a post-graduate nature. During such leave *study allowance* at present fixed at the rate of 12s. a day in the United Kingdom, £1 a day on the Continent of Europe and £1 10s. a day in the United States of America, is granted to *an officer* in addition to ordinary rates of leave pay.

PENSIONS

The rates of pension are as follows	Per annum
	£
After 17 years service for pension	400
,, 18 ,,	430
,, 19 ,, ,,	460
,, 20 ,,	500
,, 21 ,, ,,	540
,, 22	580
,, 23	620
,, 24 ,,	660
,, 25	700
,, 26 ,,	750
,, 27 ,,	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. With effect from October 1st, 1931, a reduction of 8½ per cent. has been made on this account from the amounts shown.

There are additional pensions ranging from £65 to £350 per annum for officers who have held *administrative* appointments.

PASSAGES

An officer on appointment is provided with free passage to India. The wives and families of officers who are married prior to the date of the officer's embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot, lasting approximately six months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in July next, and the selected candidates will be required to join a course of instruction commencing early in August 1932, *prior to sailing for India early in 1933*. Applications should be submitted as soon as possible.

THE WELSH NATIONAL SCHOOL OF MEDICINE
CARDIFF ROYAL INFIRMARY
AND
CARDIFF CITY COUNCIL

PART TIME LECTURER AND VISITING PHYSICIAN IN CHILDREN'S DISEASES

Applications are invited from specially qualified registered medical practitioners for a joint appointment by the Welsh National School of Medicine the Cardiff Royal Infirmary and the Cardiff City Council

The person appointed will be responsible to

1 The Welsh National School of Medicine as Part time Lecturer in Children Diseases at a salary *at the rate of £50 per annum*

2 The Cardiff Royal Infirmary as Honorary Physician to the Department of Children's Diseases (Medical)

3 The Cardiff City Council as Visiting Physician for Children's Diseases to the Corporation Hospitals at a salary at the rate of £100 *per annum*

The person selected must devote such time to the duties of the appointment as shall be deemed sufficient by each of the three bodies concerned

Subject to the foregoing private practice as a Consultant is permitted

Applications which must be received by *10 a.m. on July 4th 1932 should be addressed* to the Secretary Welsh National School of Medicine The Parade Cardiff from whom further particulars of the appointment can be obtained

S C EDWARDS

LLANELLY & DISTRICT WORKMEN'S MEDICAL COMMITTEE

Applications are invited for the appointment of EAR NOSE AND THROAT SURGEON at Llanelly Carmarthenshire

Candidates must be Fellows of the Royal College of Surgeons of England Edinburgh or Ireland or have had special experience in this branch of Surgery

Payment will be made per session for consultations and minor operations and per case for major operations at British Medical Association rates

The population of the town and district is approximately 75 000 Private practice and the holding of other appointments will be *allowed*

The successful candidate will be required to reside in Llanelly The appointment and subsequent management will be in the hands of a joint Committee of local medical men and members of the above Committee

Applications to be sent not later than June 28th stating age *qualification* and experience with copies of not more than three recent testimonials to the undersigned from whom further information can be obtained

ALI MORGAN MORGAN J P
Albert Street Llanelly Secretary

SCOTTISH BRANCH BRITISH RED CROSS SOCIETY

The Executive will shortly proceed to elect a SECRETARY for the Headquarters in Glasgow *in room of the present holder* of the office who retires on September 30th next on which date the gentleman appointed will be expected to be prepared to *assume the duties* The appointment is whole time and candidates should have administrative experience and organizing abilities and special consideration will be given to Officers of the Medical Services of the Navy Army (R.A.M.C. and I.M.S.) and Air Force *References will be given to a Scotsman* Mr J J SMITH C.B.E. 163 West George Street Glasgow will on behalf of the Executive answer any inquiries with respect to duties of the like and application marked Confidential accompanied by not more than five testimonials (copies only) should be lodged with him not *later than Tuesday July 5th*

LONDON COUNTY COUNCIL

Applications for
RESIDENT MEDICAL OFFICERSHIP
MALE AT THE
WEST LONDON HOSPITAL
and
MASTITIS HOSPITAL
which will be opened
be under the
of Health and must assist at other establishments of Council If required Salary £1 100 by £50 to £1 350 a year plus £100 a year as Medical Officer and Acting Master of Kensington Institution Unfurnished house or quarters provided free of rates etc valued provisionally at £100 a year Salaries etc are subject to temporary reduction

Candidates must have been duly qualified medical practitioners for at least five years House physician or house surgeon in public general hospital and have experience of hospital administration

Application forms obtainable (sample address foolscap envelope necessary) from Clerk of the Council County Hall S.E.1 to be returned by Jan 30th Canvassing disqualifies

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CITY OF PLYMOUTH

RESIDENT WOMAN MEDICAL OFFICER

Applications are invited from duly qualified and registered female medical practitioners for the post of Resident Woman Medical Officer at the CITY HOSPITAL Plymouth—a General Hospital of 540 beds

The person appointed will work under the control of the Medical Superintendent Candidates should have had previous experience as House Surgeons or House Physicians

The appointment will be for twelve months at a salary of £350 per annum (subject to a temporary reduction of 7½ per cent) and quarters food etc will be provided The appointment will be terminable by three months *notice on either side* Any further particulars may be obtained from Mr Lyor Lewis M.D M.S (Lond) the Medical Superintendent

Forms of application will not be provided but candidates should state their age their previous experience and present appointment Canvassing will disqualify

Applications endorsed Resident Medical Officer together with copies of three recent testimonials must be received by the undersigned on or before Saturday July 9th

A. F. VANKIVELL M.D. M.R.C.P. D.P.H. etc
Medical Officer of Health
Town Hall Stonehouse Plymouth
June 18th 1932

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE

SCHOOL MEDICAL INSPECTOR

The County Council of the West Riding of Yorkshire invite applications for the appointment of *School Medical Inspector* to act under the supervision of the County Medical Officer

Applicants may be of either sex

Salary £500 per annum rising by annual increments of £25 to £700 per annum The above salary is subject to a temporary deduction of 7½ per cent

Subject to the provisions of the Superannuation Act 1922 and Other

Form of application to be signed by whom of not more than to be received not

McCRATH
County Council

THE ROYAL EARLSWOOD INSTITUTION REDHILL SURREY
(Under Mental Deficiency Acts 1913 27)

JUNIOR ASSISTANT MEDICAL OFFICER required

Applicants must be registered practitioners males (British birth) unmarried and willing to assist in the games and amusements

The appointment is temporary for six months Inclusive salary at the rate of £250 per annum with board residence and washing Good facilities for post graduate studies class and *examinations*

Applications stating age religion and qualifications with copies of three testimonials of recent date and two references to be sent to the Medical Superintendent at the Institution by the 29th instant The envelope to be endorsed Assistant Medical Officer

H STEPHENS
June 8th 1932 Secretary

CITY OF LEICESTER

RESIDENT MEDICAL OFFICER

Junior Assistant Medical Officer (male) required for the CITY ISOLATION HOSPITAL AND SANATORIUM Groby Road The appointment will be for a period of twelve months Salary *at the rate of £300 per annum* with board residence and laundry

Applications stating age experience etc together with copies of three testimonials to be sent to the undersigned not later than July 7th

Health Department C KILLICK MILLARD
Leicester *Medical Officer of Health*
June 1932

THE ROYAL INFIRMARY SHEFFIELD
(500 Beds)

The Weekly Board of Management invite applications for the post of RURAL HOUSE SURGEON

The appointment is an important one The Rural Department [illegible]
32 [illegible]
Theatre etc are
tunities for g
attached to the
with board and
vice £100
copies of te
signed forthwith

JNO W BARNES F.C.I.S.
General Superintendent & Secretary
Board Room June 20th 1932

SOUTH AFRICAN RAILWAYS AND HARBOURS SICK FUND

APPOINTMENT OF OPHTHALMIC SURGEON EAST LONDON

Applications are invited *for the appointment* of Ophthalmic Surgeon to the Fund at East London South Africa at the salary of £960 p.a. with the right of private practice

The appointment will be made in terms of the Regulations of the Fund the duties including the necessary *advice and treatment in all cases* of eye trouble *arising amongst members of the* Railways and Harbours staff and their families *entitled to benefits* on the Cape Eastern System

Applications should reach the Chairman of the District Board S.A.R. & H. Sick Fund Station Buildings East London, South Africa not later than July 31st 1932 and should give applicant's full name date and country of birth qualifications and experience whether married or single whether fully *informed* or not and what other Government appointment if any is held by the applicant

Canvassing by or on behalf of any applicant will disqualify such applicant

The successful applicant will be required to reside at East London South Africa and to take up the appointment on October 1st 1932 or as soon thereafter as may be arranged

Further particulars may be obtained from the District Secretary at the above addr

Headquarters Offices I. H. ROGERS
Johannesburg *General Secretary*
June 1st 1932

COUNTY BOROUGH OF WEST HAM

APPOINTMENT OF JUNIOR ASSISTANT MEDICAL OFFICER

MATERNITY AND CHILD WELFARE

Applications are invited *from Women Medical* Practitioners for the post of a Junior Assistant Medical Officer in the Department of the Medical *Officer of Health*

The duties will mainly consist of work in connection with the Council's Maternity and Child Welfare Scheme

The person appointed will be required to give the whole time to the service of the Council and to work under the direction of the Medical Officer of Health

The commencing salary will be at the rate of £500 per annum rising by annual increments of £25 to £700 per annum subject to the appropriate abatement under the resolutions of *the Council for the time being in force viz* 2½ per cent on the first £200 3½ per cent on the next £100 and 5 per cent on the remainder

In the event of the person appointed desiring *to leave the Council's service three months* notice to terminate the engagement must be given The appointment will automatically *terminate on marriage*

The appointment will be subject to the provisions of the Local Government and Other *Officers Superannuation Act 1922* and to a medical examination as *required by the Council* for the purpose of that Act and the statutory *contributions* to the Superannuation Fund under the Act will be deducted from the salary

Application forms will be supplied by the Medical Officer of Health Municipal Health Offices Romford Road Stratford E.15 on receipt of a stamped addressed foolscap envelope and must be returned to the undersigned not later than Monday July 4th

Canvassing members of the Council is prohibited and will disqualify

By Order
Town Hall CHARLES I. CRANFIELD
West Ham E.15 *Town Clerk*
June 24th 1932

BOROUGH AND PORT SANITARY DISTRICT OF LOWESTOFT

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

The Town Council of Lowestoft hereby give notice that they *intend* at an early date to appoint a Medical Officer of Health and School Medical Officer for the above named Borough and Port Sanitary District and they invite applications for the appointment

The salary will be at the rate of £800 per annum (less a temporary deduction of 10 per *cent*) which will be apportioned in respect of the various offices

Further particulars of the duties terms and conditions of the appointment and the Health *form of application* may be obtained by sending a stamped and addressed envelope to the undersigned Applications must be made on the *prescribed form* and enclosed in a sealed envelope endorsed Medical Officer and must reach the undersigned not later than *Monday July 4th*

Canvassing *directly or indirectly* will disqualify

By Order
Town Hall C. ASHTON STAFF
Lowestoft *Town Clerk*
June 21st 1932

WESTMINSTER HOSPITAL
Broad Sanctuary SW1

THE WANDER SCHOLARSHIP IN DISEASES OF CHILDREN

Applications are invited for the office of WANDER SCHOLAR REGISTRAR AND CLINICAL PATHOLOGIST to the Children's Department Salary £250 per annum Duties to commence September 1st

Candidates must be registered medical practitioners who have held a resident post or post in one of the preferably in diseases of children The office is tenable for one year

Applications (six copies) together with six copies of three recent testimonials should be submitted to the undersigned from whom further details regarding the duties of the office can be obtained not later than Friday July 8th

By Order of the House Committee
CHARLES M LOWER Secretary

DEVONSHIRE HOSPITAL
BUXTON DERBYSHIRE (500 Beds)
(A National Hospital for Rheumatism and Allied Diseases)

Application are invited for the undermentioned posts

HOUSE PHYSICIAN (male) Salary £200 per annum

ASSISTANT HOUSE PHYSICIAN (male) Salary commencing £150 per annum rising to £175 per annum after three months service with board residence and laundry in each case

Candidates must be fully qualified and registered

The appointment will be for a minimum period of six months and may be extended for a further period of six months

Applicants should have had hospital experience and qualifications must be forwarded without delay to the undersigned from whom any further particulars may be obtained

The Committee offer clinical facilities for any gentleman desiring a thesis or wishing to undertake research work and the Hospital contains a Pathological Laboratory and Bio chemical and X ray Departments

Canvassing will disqualify
By Order of the Committee of Management
A JEFFERSON TURNER
Clerical Superintendent and Secretary

BRISTOL GENERAL HOSPITAL

SENIOR RESIDENT MEDICAL OFFICER (MALE)

The Committee invite application for the appointment at the rate of £200 per annum of a Senior Resident Medical Officer The Hospital Candidate must be registered under the Medical Act and preferably have had experience in children's diseases The good character and ability of the successful candidate will be required to confine his attention to the duties of the office during the period of appointment and therefore private practice will not be permitted

Applications accompanied by copies of testimonials of which must be sent direct to the undersigned not later than July 4th next from whom form of application and particulars of the duties may be obtained The Hospital contains 240 beds and the Medical School is attached to the University of Bristol

THOMAS W CROCK Secretary

CRICHTON SANATORIUM
NORTHAMPTON

Application are invited for the post of MEDICAL SUPERINTENDENT at CRICHTON SANATORIUM the Committee of the Northampton Borough Lunacy and District Mental Association for the Provision of Additional Sanatorium Accommodation for the Counties of Northampton Huntingdon and Rutland

The Sanatorium consists of Villas for the treatment of early cases of Mental Disorder The Institution is a Certified Institution for the Reception of Private Patients and is fully equipped for Surgical Treatment The Institution is situated in a healthy district and stands in its own grounds of 200 acres with free unfettered access to the Northampton Golf Links Tennis Courts and Bowling Green

All heating and garden produce is grown on the Estate

All maintenance and treatment of both sexes is undertaken

Applicants must be between the ages of 25 and 35 years and must be registered under the Medical Act 1858 and must have had experience in Mental Diseases

Applications together with copies of three recent testimonials should be sent by letter to the Secretary 10 Guildhall Road Northampton not later than July 6th

DISTRICT INFIRMARY ASHTON UNDER LYNE
(General Hospital 200 Beds mainly Surgical)

Wanted a HOUSE SURGEON for a period of six months with prospect of Obstetric work Salary at the rate of £100 per annum with board residence and laundry

The present Staff comprises a Resident Surgical Officer and three House Surgeons

Application with copies of testimonials to be sent to the undersigned

FRANK OLIVER
General Superintendent and Secretary
June 20th 1932

COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRY

A vacancy having arisen for an HONORARY AURAL SURGEON on the staff of the above named Hospital applications are invited for the post

In conformity with the Laws of the Institution candidates must hold the degree of Master in Surgery of an Irish University or the Fellowship of the Royal College of Surgeons of England Edinburgh or Ireland or an alternative holding the D L O

Application with original testimonials and Registration certificate must reach the undersigned on or before July 11th

Candidates will in due course receive notice of their eligibility or otherwise from the Secretary and after receipt of such notice eligible candidates are at liberty to send through the post printed copies of their application and testimonials to the Governors of the Hospital

A list of whose names and addresses will be furnished by the Secretary

Any such application or copies of testimonials received after the receipt of such notice shall not until the receipt of such notice from the Secretary

By Order of the Committee
(Mrs) R HOOLEY Secretary

June 15th 1932

KEIGHLEY AND DISTRICT VICTORIA HOSPITAL (WEST RIDING)

APPOINTMENT OF RESIDENT MEDICAL OFFICER (VACANT AUGUST 14TH)

Applications are invited from registered medical practitioners proof of registration to be furnished before appointment

Beds 104

Salary £180 per annum with board residence and laundry

Term six months renewable

Experience in giving anaesthetic essential

Application with particulars of age experience and nationality and with names of two referees and testimonials should be sent not later than July 4th to F W SADLER

Secretary to the Board of Management

LEICESTER ROYAL INFIRMARY

ORTHOPAEDIC SURGEON

Applications are invited for the post of Honorary Orthopaedic Surgeon to the Royal Infirmary Candidates must be Fellows of one of the Royal Colleges of Surgeons of Great Britain or Ireland or Members in Surgery of one of the Universities of Great Britain or Ireland The successful candidate will be required to confine his attention to Orthopaedic Surgery and Private Practice to Orthopaedic patients He will take charge of the surgical out patients' orthopaedic clinic and will allot 18 in patient beds

He will take up his duties as soon as convenient after appointment

Application with 100 copies of testimonials to be sent to the undersigned on or before July 2nd

An honorarium of 100 guineas will be paid

HARRY JOHNSON
Hon Governor & Secretary

June 13th 1932

LEICESTER ROYAL INFIRMARY
(472 Beds)

SECOND CASUALTY HOUSE SURGEON

Applications are invited for the post of Second Casualty House Surgeon for a period of six months Salary at the rate of £100 per annum Applicant should have had a Resident Hospital Post or had similar experience to the Hospital work

Application to the undersigned by July 4th with copies of three testimonials

HARRY JOHNSON
Hon Governor & Secretary

June 15th 1932

BURY INFIRMARY LANCS

Applications are invited for the post of THIRD HOUSE SURGEON who must be qualified Medical and Surgical practitioners The appointment is for six months at the salary at the rate of £130 per annum with board residence and laundry The duties will commence as soon as possible

Applicants must be qualified and registered in accordance with the Medical Acts 1858 to 1886 and must be between the ages of three and five and twenty four years

Applications must be sent to the undersigned not later than June 29th

Particulars of duties may be had on application

ALEX W MAITLAND
Hon Secretary

BRISTOL EAR DISPENSARY

Vacancy for HONORARY OPHTHALMIC Surgeon Duties light and could be combined with general work if desired Would suit retiring medical man or woman with good knowledge of Electrotherapeutics light work in pleasant educational centre Applications stating age and experience to Secretary (Medical) 1 Orchard St Bristol

HULL ROYAL INFIRMARY
(360 Beds)

Applications are invited from registered medical practitioners for the following posts

RESIDENT CASUALTY OFFICER Salary £200 per annum plus residence laundry and lunches Previous hospital experience limited to that of the Casualty Department

The duties of the post are equal to that of the Senior Resident Vacant now

THIRD HOUSE SURGEON Salary £150 per annum plus residence board and laundry Vacant now

HOUSE PHYSICIAN at the SUTTON BRANCH HOSPITAL Salary £160 per annum plus residence board and laundry Vacant now

The Branch Hospital contains 100 beds and is used for acute medical cases

All the above appointments will be for six months in the first instance and will be determinable by one month's notice on either side

The Hospital is recognized by the Royal College for the FPCS examination

Application giving particulars of age experience and nationality together with copies of three testimonials should be addressed to the undersigned

R J CARLESS
House Governor

June 17th 1932

ROYAL VICTORIA AND WEST HANTS HOSPITAL PORTSMOUTH
(Second Branch 170 Beds)

HOUSE SURGEON AND CASUALTY OFFICER (male British nationality) required to commence duties at the end of June Salary £150 per annum with board lodging and washing The appointment is tenable for six months and candidates must be registered in accordance with the Medical Act Application for registration of the Medical Act Application for registration of the Medical Act Application for registration of

KNOWLE MENTAL HOSPITAL FAREHAM HANTS

Application are invited for the po ts of THIRD AND FOURTH ASSISTANT MEDICAL OFFICERS Applicants hould be single and under 35 The salary in each ca is £350 rising by yearly increment of £25 to £450 with board lodging washing and attendance valued at £150

The pos tion of a Diploma in Psychological Medicine entitles the hold r to an extra £50 per annum

The Third Assistant Medical Officer hould have a good knowledge of laboratory work and would be in charge of the Laboratory receiving an additional £100 per annum

The salary is subject to deductions under the Asylums Officer Superannuation Act 1909 and to a temporary deduction under National Economy Scheme

Applications stating age and full particulars accompanied by copies of three recent testimonial hould be sent to the Medical Superintendent not later than July 9th

HARROW AND WEALDSTONE HOSPITAL (70 Beds)
HARROW ON THE HILL MIDDLESEX

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer The appointment is for a period of six months from October 1st after which period applications will be considered for *re-appointment for further periods not* exceeding two year in all

Salary at the rate of 140 guineas per annum with board residence and washing

Candidates who must be duly registered *Medical Practitioners* will not be expected to call on the Honorary Medical Staff, but should send their application with copies of three recent testimonials to me at the Hospital *not later than August 30th*

SYDNEY GARBUTT Secretary

EAST LANCASHIRE TUBERCULOSIS COLONY Barrowmore Hall Ct Barrow Chester

Under the Direction of the British Red Cross Society and the Order of St John of Jerusalem

HOUSE PHYSICIAN (male) required The appointment is for six month and is renewable Salary £100 per annum with board residence and laundry The appointment is terminable by one month's notice

The Institution deals with all stages of Pulmonary Tuberculosis and comprises hospital accommodation sanatorium accommodation extensive workshops for graduated work and a settlement

Application marked House Physician with copies of three recent testimonials to be sent to the Medical Superintendent at the above address

EVELINA HOSPITAL FOR SICK CHILDREN Southwark S E 1

Applications are invited for the post of *HOUSE PHYSICIAN (male) for six months from* July 1st (first two months in Casualty and Out patient Department) Salary at the rate of £120 per annum with board and residence

Applications stating age experience and qualifications accompanied by copies of four testimonials to be sent at once to the undersigned from whom rules and other particulars can be obtained

By Order of the Committee of Management
W H SIDNELL
June 10th 1932 Secretary Supt

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton S W 3

The Committe of Management invite application for the post of HOUSE PHYSICIAN (for which there are three vacancies) The duties include work in the Out patient Department as well as in the Ward The *appointment is for* six months commencing on August 1st with an honorarium of £50

Application with copie of testimonial must reach the undersigned not later than Saturday July 9th

Brompton S W 3 FREDERICK WOOD
June 1932 Secretary

ROYAL BUCKINGHAMSHIRE HOSPITAL AYLESBURY

Application are invited for the post of RESIDENT MEDICAL OFFICER (male) for six month To commence duties as soon as possible after July 1st Salary £200 per annum with board residence and laundry Candidates must be fully qualified and registered

Applications stating age qualification and experience with copies of not more than three testimonials should be sent to the undersigned at on

M W BROWN Secretary

ANCOATS HOSPITAL MANCHESTER

HOUSE PHYSICIAN required to commence *duties on July 1st next for a period of* six month Salary at the rate of £100 per annum with board apartments etc Candidates must be registered under the Medical Acts

Applications stating age qualifications experience if any to be forwarded to the undersigned on or before June 27th next together with copies of three recent testimonials

By Order of the Board
HERBERT T DAUFORN
Gen Supt & Secretary

Forthcoming Vacancies

House Surgeon (Orthopaedic) *September 1st*
House Surgeon (General) September 1st 1932

MONTAGU HOSPITAL MEXBOROUGH YORKS

Applications are invited for the position of JUNIOR HOUSE SURGEON (lady) at the above Hospital The commencing salary offered is at the rate of £100 per annum with the usual residential allowances One month's holiday is allowed yearly The hospital has 84 beds of which 64 are surgical and 20 maternity

Applications giving full st details as to experience should be sent to the undersigned so as to be received not later than first post Monday July 11th Applicants should state when they would be at liberty to commence duties and should give their experience in the administering of anaesthetics

DONALD WILSON Secretary

NORTH LONSDALE HOSPITAL BARROW IN FURNESS

SENIOR HOUSE SURGEON AND CASUALTY OFFICER (MALE APPOINTMENTS)

Applications are invited for the above resident appo is Hospital from erienced in the Salaries Senio nnum and Casu with board residence and laundry

Applications stating age qualifications experience and nationality and accompanied by copie of three recent testimonials to be sent to the Secretary as early as possible

SALFORD ROYAL HOSPITAL (263 Beds)

Applications are invited for the po t of CASUALTY HOUSE SURGEON (male) Salary £125 per annum

The appointment is for a period of six month with board and residence

Candidates must be registered under the Medical Act

Form of application *which may be obtained* from the undersigned must be d livered without delay

By Order of the Board
H B SHEISWELL
General Superintendent and Secretary
Salford Royal Hospital
June 20th 1932

SOUTH LONDON HOSPITAL FOR WOMEN Clapham Common S W 4 (120 Bed)

A General Hospital for Women and Children including Medical Surgical Ear Nose and Throat Ophthalmic Skin Urological and other Special Departments

Applications are invited from fully qualified medical women for the post of HOUSE SURGEON for six months dating from September 1st

Salary *at the rate of £100 per annum with* board residence and laundry Candidates are expected to call on the Hon Surgeons before Saturday July 2nd by which date applications and *copies of testimonials* must reach the Secretary at the Hospital

VICTORIA CENTRAL HOSPITAL WALLASEY

Applications are invited for the position of JUNIOR HOUSE SURGEON (male) Salary at the rate of £120 per annum with board residence and laundry with prospects of appointment to Senior House Surgeon in six months time at a salary of £150

Candidates chosen would be appointed for six month

Applications with copie of testimonials to be sent to the Secretary

CENTRAL LONDON OPHTHALMIC HOSPITAL *Judd Street St Pancras W C 1*

There are vacancies for the posts of SENIOR and JUNIOR HOUSE SURGEON Salaries at the rate of £120 and £100 per annum respectively with board and residence in the hospital Applications with testimonial from duly qualified candidates must be sent to the undersigned on or before July 5th

H R S BRUCE Secretary

ROYAL HALIFAX INFIRMARY

Wanted a THIRD HOUSE SURGEON (male *unmarried*) Candidates must be duly qualified and registered The appointment will be for a period ending October 31st Probable promotion if satisfactory Salaries of Resident Medical Staff are as follows —Resident Surgical Officer £250 First House Surgeon £200 Second House Surgeon £175 Third House Surgeon £150 per annum with residence board and laundry *The Hospital contains* 230 beds in a large Eye Ear Nose and Throat Department Maternity Ward and Pathological Laboratory Particulars of the duties may be obtained from the undersigned to whom applications should *be sent*

A MIDGLEY
June 20th 1932 Secretary

ROYAL DEVON AND EXETER HOSPITAL EXETER (225 Beds)

APPOINTMENT OF (a) HOUSE PHYSICIAN *(MALE) (b) HOUSE SURGEON (MALE)*

Applications are invited from qualified and registered candidates for each of the above appointments

Engagement for six months candidates being eligible for subsequent appointments

Salary at the rate of £150 per annum with board residence and laundry

Applications with copies of testimonials should be sent to the undersigned on or before July 7th

S S COLE
Secretary and Manager

THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E 2

OPHTHALMIC SURGEON

The Committee invite applications for the post of Ophthalmic Surgeon with charge of beds One attendance required weekly An honorarium to cover travelling expenses will be paid Candidates must be Fellows by examination of the *Royal College of Surgeons (England)*

Applications with copies of three recent testimonials which may be printed or typewritten should be sent on or before July 9th to the undersigned from whom further particulars may be obtained

CHARLES H BESSELL
June 1st 1932 Secretary

NORTH ORMESBY HOSPITAL MIDDLESBROUGH

Applications are invited for the following vacancies in the Resident Medical Staff

HOUSE PHYSICIAN salary at the rate of £120 per annum

HOUSE SURGEON salary at the rate of £135 *per annum*

With board residence and laundry Candidates must be unmarried

Applications stating age qualification previous experience *(if any)* with *copies of three* recent testimonials should be sent to the undersigned at once

GEORGE WATTS
June 14th 1932 Secretary Superintendent

THE BABIES HOSPITAL NEWCASTLE ON TYNE

Non resident MEDICAL OFFICER *required* in August

The duties are those of a House Physician for research work months subject to 75 per annum timonials and partments held must be the Secretary *from* may be obtained Road Newcastle on Tyne

LINCOLN COUNTY HOSPITAL

Wanted JUNIOR HOUSE SURGEON (male *unmarried*) Salary at the rate of £150 per annum rising to £200 *per annum at the* conclusion of six months approved service Board residence and washing will also be provided

Every candidate for the appointment must be registered *under the Medical Acts*

Applications stating age and other particulars with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained

Lincoln ARTHUR MOOR
June 18th 1932 Secretary Supt rintendent

ST MARY'S HOSPITALS MANCHESTER

HOUSE SURGEON for the WILLIAM III STREET WEST HOSPITAL (Maternity 101 beds) *from July 1st to October 31st* Salary at the rate of £50 per annum with board and residence Applications with copies of three testimonials to be sent to the undersigned on or before 29th inst.

R RATCLIFF Secretary

APPOINTMENTS—Important Notice

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B M A House, Tavistock Square W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd)*	**PUBLIC HEALTH**
EBBW VALE MON *(Workmen's Medical Society)*	MARKHAM MAIN SICK AND ACCIDENT SOCIETY ARMTHORPE *(Medical Practitioner)*	AYR COUNTY COUNCIL *(Springvale Fever Hospital Saltcoats)* *(Visiting Physician)*
CILFAGH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE *(Workmen's Medical Scheme)*	AYR COUNTY COUNCIL *(Assistant Medical Officer)*
LLWYNYPIA CILFACH VALE LLANCRAIG GLAMORGAN *(Workmen's Medical Scheme)*	NEATH AND DISTRICT *(Medical Aid Association)*	
LOWESTOFT MEDICAL INSTITUTE *(Medical Officer)*	OAKDALE MON *(Medical Officer for Medical Aid Association)*	
MAERDY GLAMORGAN *(Workmen's Medical Scheme)*	OCKOLE VALLEY GLAMORGAN *(Windham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	

(b) Overseas

Medical Practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B M A House Tavistock Square W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr J G HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St Sydney N S W	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)*	The Hon Sec Queensland Branch British Medical Association B M A Building Adelaide St Brisbane	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr G F V ANSO (Hon Sec New Zealand Branch) British Medical Association P O Box 156 Wellington New Zealand
VICTORIA *(All Institute or Medical Dispensaries)*	Dr J P MAJOR (Hon Sec Victorian Branch) British Medical Association Medical Society Hall East Melbourne Victoria	*(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*		WESTERN AUSTRALIA *(Contract and Lodge Practices)*	Hon Sec Western Australian Branch British Medical Association No 6 Bank of N S W Chambers St George's Terr Perth Western Australia

June 22nd 1932 By Order of the Council ALFRED COX Medical Secretary

THE CHILDREN'S HOSPITAL SHEFFIELD
(110 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) who will have charge of all medical and surgical cases in the Hospital Salary commencing at £175 per annum with board residence and laundry Previous resident experience essential Date of commencement August 1st

Applications are also invited for the following post vacant August 1st

HOUSE PHYSICIAN (male or female) Salary £100 per annum with board and lodging Six months' appointment

HOUSE SURGEON (male or female) Salary £100 per annum with board residence and laundry Six months' appointment

Application stating qualifications and experience with copies of three recent testimonials to be forwarded immediately to the undersigned

T H C CARTLAND Secretary

QUEEN'S HOSPITAL FOR CHILDREN
Hackney Road London E 2

HOUSE SURGEON required August 1st Six months' appointment Salary at the rate of £100 per year with board lodging and washing

Application must be made on form to be obtained from the undersigned and must be sent in with copies of not more than four testimonials on or before July 9th

CHARLES H BENSELL Secretary

June 10th 1932

ALTRINCHAM GENERAL HOSPITAL
(100 Beds)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS Salaries at the rate of £150 and £120 per annum respectively with board residence and laundry The appointments are for six months in the first instance

Application stating age and experience together with copies of recent testimonials to Secretary General Hospital Altrincham

WALSALL GENERAL HOSPITAL

The Committee invite applications from men or women for the post of HOUSE SURGEON Salary at the rate of £150 per annum

Candidates who must be registered under the Medical Act must produce three recent testimonials

The appointment will be for six months

The Hospital returns 100 beds and is equipped with special departments

Application stating age qualifications and experience must be received by the undersigned not later than the first post on Tuesday June 28th

WALTER FLANCOMBE
June 13th 1932 House Governor

WEST SUFFOLK GENERAL HOSPITAL BURY ST EDMUNDS
(108 Beds)

SENIOR RESIDENT MEDICAL OFFICER wanted for a period of one year at the end of July Applicant must be fully qualified and registered and should have had good experience and have held a hospital appointment Salary £150 per annum with board residence and laundry Applications with copies of recent testimonials to be sent to the undersigned not later than July 6th

F E HARDWICKE
June 20th 1932 Secretary

VICTORIA HOSPITAL, ACCRINGTON

The Governing Body of the Hospital invites application for the post of HOUSE SURGEON Candidates must be duly qualified and registered Number of beds 50 Salary £150 per annum with board and lodging

Conditions of appointment and particulars of duties may be obtained from the undersigned to whom application with copies of testimonials should be sent on or before July 4th next

W H WALHURST
Hon Secretary

Town Hall Accrington
June 1932

COUNTY MENTAL HOSPITAL LANCASTER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER Candidates must be male and under 35 years of age commencement salary £500 rising by annual increment of £25 to £600 with further increase on promotion subject to a deduction of 3 per cent under the Asylum Officers Superannuation Act There is no emolument The elected candidate will be required to live in the hospital and will be provided with board lodging and washing at a charge of £150 a year or under

A temporary allotment from the grade salary will be made the amount of the allotment in £900 being £18 15s

The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum

Application giving full particulars with testimonials (copies only) should be forwarded to the Medical Superintendent before June 29th

WORTHING HOSPITAL

Applications are invited for the post of HOUSE SURGEON vacant now

The appointment is for six months renewable (if terminable by three months' notice on either side)

Salary at the rate of £150 per annum with board lodging and laundry

Candidates (male) should forward application stating age nationality qualifications registrability etc together with copies of three testimonials to the Secretary at once

BEDFORD COUNTY HOSPITAL
(125 Beds)

SECOND HOUSE SURGEON (male) fully qualified unmarried required for a term of not less than six months at once Salary £150 with board lodging and laundry

Application stating age nationality qualifications registrability etc together with three recent testimonials to be sent to the Hon Secretary Hon Medical Staff Committee as soon as possible

(Appointments continued on p 50)

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQ LONDON W C 1
Telegrams Articulate Westcent London
Telephone Museum 9861 (4 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) **9s**
Each Additional Line 1s 6d
(a line averages 5 words)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

ASSISTANCIES

WANTED IMMEDIATELY ASSISTANT male unmarried indoor for pleasant sea side town Some experience preferred State qualifications age and experience Ability to drive car essential—Address No 121 B M A House Tavistock Square W C 1

WANTED IN A COLLIERY PRACTICE IN Glamorgan an ASSISTANT Must be young single fully qualified and British nationality Salary £300 per annum live in—Address No 218 B M A House Tavistock Square W C 1

WANTED YOUNG OUTDOOR ASSISTANT single for Private and Panel Practice in Lancashire Abstainer preferred able to drive car Usual bond Salary £400 State age and particulars—Address No 118 B M A House Tavistock Square W C 1

WANTED OUTDOOR ASSISTANT Bachelor for mixed Practice Midland Salary £300 all found If suitable have up to half will be offered—Address No 3586 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries —State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester

WANTED OUTDOOR ASSISTANTSHIP BY 1924 Scots Graduate experienced Hospital and G P not 34 married own car testimonials—Address No 108 B M A House Tavistock Square W C 1

WANTED OUTDOOR ASSISTANT YOUNG and well qualified Salary £400 per annum Near London—Address No 134 B M A House Tavistock Square W C 1

ASSISTANT (PART OR FULL TIME) LADY or Gentleman wanted shortly single live in one used to panel work preferred Would be required to act as Locum in August No midwifery State full particular—Address No 115 B M A House Tavistock Square W C 1

ASSISTANTSHIP WITH VIEW TO PARTNERship or succession wanted by experienced practitioner aged 55 married Some capital available good references interview anywhere—Address No 126 B M A House Tavistock Square W C 1

ASSISTANT MARRIED ENGLISH OR Scotch permanency with prospect £400 with unfurnished room Mixed panel Reliable reference—Address No 130 B M A House Tavistock Square W C 1

OUTDOOR LADY ASSISTANT REQUIRED IN panel and private Practice in London suburb Cyclist Living accommodation over branch Surgery with attendance provided—Address giving essential particulars No 114 B M A House Tavistock Square W C 1

OUTDOOR ASSISTANTSHIP WITH VIEW TO Partnership or succession wanted by married medical woman Experienced G P in panel and private Specialised midwifery Scotland preferred—Address No 128 B M A House Tavistock Square W C 1

LOCUMS

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4 ADAM ST Strand London W C 2
Telegrams Telephone
Epsomian London Temple Bar 9011
After Office Hours Epsom 9142

ACTIVE ELDERLY PRACTITIONER REquires LOCUM in country or country town Free any period during June July and August £5 5 weekly Can drive car—Address No 133 B M A House Tavistock Square W C 1

EXPERIENCED LOCUM M B (HONS) L M R C S aged 29 REQUIRES ENGAGEMENT July 30th for 14 16 days G P experience ex H P and R M O—Address No 102 B M A House Tavistock Square W C 1

GENERAL MEDICAL PRACTITIONER (RETired) undertakes LOCUM work Life abstainer Large experience in London and provinces Free now up to July 9th—Address No 220 B M A House Tavistock Square W C 1

HOSPITALITY LOCUM EQUIPED WITH car from July 29th for fortnight Country village near London Fishing golf tennis Work very light Ideal for married couple—Address No 127 B M A House Tavistock Square W C 1

LADY DISPENSER AGED 33 WISHES POST LOCUM Experienced Hall qualification—Address No 105 B M A House Tavistock Square W C 1

LADY LOCUM WANTED DURING ASSISTants holiday July 16 30 Very light work no midwifery—Dr WOOD 684 Lordship Lane Wood Green N 22

LOCUM TENENCY REQUIRED LONDON OR South Coast area preferred First class references well received Free end of June Own car—Address No 106 B M A House Tavistock Square W C 1

LOCUM WANTED FOR REALLY SMALL Practice in pretty Cotswold town from June 30th to July 28th approximately Town offers boating swimming Turkish bath golf tennis bowls Terms 42s weekly and hospitality for wife petrol and garage for car and cleaning—No 3592 B M A House Tavistock Sq W C 1

LOCUMS WANTED BY MEDICAL WOMAN 5 years experience G P panel and pub General and Children's Hospital experience Free now—Address No 110 B M A House Tavistock Square W C 1

LOCUM OR PART TIME WORK IN LONDON wanted by experienced doctor Good references Free now Used to panel work—Address No 129 B M A House Tavistock Square W C 1

WOMAN M B M R C S KEEN EXPEnienced general and private practice good testimonials drive car Free all July Moments notice—Address No 111 B M A House Tavistock Square W C 1

PARTNERSHIPS

GOOD CLASS PARTNERSHIP OR PRACTICE in or near London wanted in September by M B Cantab D P H aged 29 married three children Had own practice 3 years Income £1 200 to £1 500 Capital available—Address No 124 B M A House Tavistock Square W C 1

LANCS TOWN—PARTNERSHIP IN GOOD and old established Practice with receipts of over £1 700 yearly and increasing Panel 2 550 Price for one third to commence £1 000 —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

PARTNER WANTED WITH VIEW TO

PARTNER IN OLD ESTABLISHED PANEL and Private Practice wanted Share available about £900 p a One and a half years purchase Must be well qualified and have exceptional references—Address No 3506 B M A House Tavistock Square W C 1

PARTNER REQUIRED — THIRD SHARE large industrial Practice very near Newcastle on Tyne Panel Club Private Good opening for right man Premium £1 250 accountants reference —Address No 107 B M A House Tavistock Square W C 1

SHEFFIELD — PARTNERSHIP IN INDUStrial Practice old established Assets receipts last three years £1 300 Panel 1 600 Appointments transferable £300 Good commodious house with garage main road on tram £5 per annum Premium for 1/2 share including book debts drugs fittings furniture etc £1 250 Succession to whole in few months—Address No 219 B M A House Tavistock Square W C 1

SOUTH COAST—PARTNERSHIP IN FIRST class non disp PRACTICE of £3 000 p a in fav seaside resort succession few years Price £2 350 fine modern house available Applicant should be exp Grad in medicine not under 40 —No 3312 B M A House Tavistock Sq W C 1

MEDICAL POSTS DISPENSERS etc

WANTED AT ONCE BY LADY POSITION to ASSIST in Pathological Experienced Good references—Address 120 B M A House Tavistock Square W C 1

A LADY DISPENSER BOOKKEEPER supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Park 0969) Secretary 7 Westbourne Park Road W 2

A LA — — — R QUALIfied July 11th Expert Book keeper Experte d printin Salaries banking etc Accustomed take charge office Hosp & San exp Excellent testimonials —No 122 B M A House Tavistock Sq W C 1

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse Dispensers are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU 15 Lindsay House 171 Shaftesbury Avenue London W C 2

MEDICAL OFFICER (UNMARRIED) WITH British Degrees REQUIRED immediately for Government Service in Interior Residency of North Borneo Passage out and home paid plainly furnished quarters four years agreement in first instance—Apply for further particulars to the SECRETARY British North Borneo (Chartered) Company 17 St Helen's Place London E C 3

NURSE RECEPTIONIST — GENTLEWOMAN aged 25 three years Hospital training SEEKS EMPLOYMENT by Doctor or Dentist—Miss STEPHENSON 6 Hatherley Grove W 2

REQUIRED ELDERLY ACTIVE PRACTITIONER willing to reside over surgery and do night work for busy practitioner Small remuneration—Address No 103 B M A House Tavistock Square W C 1

S R N SHORTHAND TYPIST AGED 25 years desires POST as MEDICAL SECRETARY near London or South Coast preferred—Nurse ILE 49 Westbourne Terrace Hyde Park W 2

THE ROYAL ARMY MEDICAL CORPS Recruiting Station Queen Square (Tel 22) supplies qualified Laboratory Assistants Nursing Sisters Mental Nurses Dental Clerks etc without fees

TYPEWRITING AND DUPLICATING

[illegible] etc copied in style that work as specially BUREAU 3 Wyoming B M A

PRACTICES

WANTED HOUSE IN GOOD LOCATION OF with promising Practice by M D D P H (London) just returned from Fronts Experienced in general practice X Ray electro-therapeutics and clinical work Ready to install complete electro therapeutic clinic Partnership or other arrangements considered Would buy larger practice if vendor will give terms—Address No 3511 B M A House Tavistock Square W C 1

WANTED BY EXPERIENCED SURGEON good class PRACTICE with or without Gynaecology and Surgery about £1 500 to £2 000 Or would be prepared to take over Gynaecological portion of Practice Ample capital—Apply to No 6482 c/o IMPERIAL TYPEWRITING 4 Adam Street Adelphi Strand London W C 2

WANTED BY EXPERIENCED PRACTITIONER aged 46 Country of Country Town PRACTICE or PARTNERSHIP in South West or West Income about £1 000 Capital available —Address No 112 BMA Tavistock Square W C 1

WANTED BY EXPERIENCED PRACTITIONER assistantship General PRACTICE (Private and Panel) in London Capital available —Address No 338 BMA Tavistock Square London W C 1

WANTED IN A FEW MONTHS TIME BY middle aged practitioner an OPHTHALMIC PRACTICE (about £500 to £600) within 30 miles of London —Address No 131 BMA House Tavistock Square W C 1

WANTED MIDDLE CLASS PRACTICE South or South East preferred Income £2 000 or over Ample capital for Practice and House —Address No 152 BMA House Tavistock Square W C 1

BEDS — COUNTRY PRACTICE PARTNERship Nice house electric light garden garage Receipts £500 excellent opening Panel small Opposition weak Price Practice and house £1 -00 — MACCHESTER MEDICAL & SCHOLASTIC ASSOCIATION 6 Brown Street

CENTRAL LONDON — OWNER RETIRING Old established non panel PRACTICE no midwifery Nice modernised house long lease low rental of £90 p a Excellent district to develop large panel if desired Intro to suit purchaser Price £4 000 No 136 BMA House Tavistock Sq W C 1

DENTAL PRACTICE — FOR SALE In Edinburgh (South Side) PRACTICE of Early Dentist established five years Owner giving up on taking public appointment —Particular from Messrs CUBBON & GUILD W S 5 Lothian Square Edinburgh

FOR DISPOSAL OWING TO ILLNESS Medical PRACTICE in residential part of Liverpool Established seven years and capable of steady expansion Panel about 1 550 Gross approximately £1 800 per annum —Full particulars from LONSDALE & MAPES Chart reduced Accountant 26 North John Street Liverpool

FOR SALE—OLD AND WELL ESTABLISHED PRACTICE in important East Anglian town About £2 500 p a panel 2 800 Premium 2 years purchase Exceptionally good house for sale or hire Introductions by owner and present assistant who would continue as partner or assistant —Address No 3528 BMA House Tavistock Square London W C 1

FOR SALE — LANCS TOWN — DEATH Vacancy Established PRACTICE averaging over £900 p a including appointment £100 probable transferable Panel 1 030 Modern house 6 apt with garden and garage to rent Premium one year purchase —Address No 3589 BMA House Tavistock Square W C 1

FOR QUICK SALE VENDOR TAKING UP appointment Country PRACTICE in Shropshire Receipts average £700 (panel £160) Main house with 11 roomed garden Rent all in £70 —Address No 11 BMA House Tavistock Square W C 1

KENT COAST — LARGE TOWN WELL established PRACTICE retiring through bereavement Profits last 12 months estimated at £300 panel about 600 Nice accommodation Premium £1 000 Suitable for assistant part of time Plenty of scope —Apply LEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

LONDON E (INNER SUBURB) —WELL established Panel PRACTICE Very moderate premium accepted for quick sale Receipts £900 p a including Panel Good surgery accommodation —Apply LEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

NEAR HOLLAND PARK W —OLD ESTABlished Cash and Panel PRACTICE Receipts £1 600 a year Panel 2 200 Nice house on rental Premium about 2 years purchase Scope for increase thickly populated part —Apply LEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

NICE SEASIDE TOWN 60 MILES FROM London Old established PRACTICE Profits average £1 000 p a including panel Nice house to be sold with Practice Combined price £2 900 —Apply LEACOCK & HADLEY LTD 19 Craven Street Strand W C 2

PRACTICE OR PARTNERSHIP WANTED BY Graduate experienced in hospital and general practice Income required £1 500 to £2 000 Location South England preferably London or Home Counties House with garden required — No 119 BMA House Tavistock Square W C 1

TWO PURCHASERS — DO NOT BUY without expert assistance With 50 years experience Mr HERCHAL TURNER can advise in all cases Terms free on application to 4 Adam St Strand W C 2 Telephone Temple Bar 9011 Telegrams Epomian London

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BRIGHTON —ON NEW PRIVATE HOUSING Estate Recently constructed modern HOUSE eminently suitable for Doctor Exceptional opportunity for opening practice Comprising 4 bedrooms (2 of which are fitted with lavabasins with hand and water) 2 reception rooms (1 exceptionally large) Large kitchen Hot water to bath lavabasins and sink Electric power throughout Garage Large garden On Brendean Estate where it is proposed to erect 360 houses of erection The Estate erected or in course of which are actually houses occupied Price £1 325 freehold The adjoins Moulescombe on which there are 500 price includes road charge etc Mortgage can be arranged if required —Apply to Builders Messrs BRALLONS Ersendean Estate Lewes Road Brighton or to Head Office 39 St James's Street Brighton

CONSULTING ROOMS TO LET — HARLEY Street Wimpole Street and district Whole and part time Lists sent on application Rooms wanted in Harley Street district — EGOOD Co 10 Henrietta St Cavendish Sq W 1 Langham 2601

FLAT IN MANSION BLOCK —WESTMINSTER Ground Floor 4 rooms and bath Full service including valeting if required Porter and lift Suitable for Medical Practitioner etc £250 p a —CLARKE SQUAFF & MILLS Solicitors 28 Bolton Street Piccadilly W 1

FOR SALE WELL ESTABLISHED AND equipped NURSING HOME Rossenwire 7 beds 6 patients room 1 permanent patient no opposition Average gross takings £1 000 Premises can be purchased or leased Books audited —Address No 3508 BMA House Tavistock Square W C 1

FURNISHED ROOMS TO LET —SUITABLE for a Doctor Surrey dispensary waiting room bedroom bathroom telephone electric light every convenience Been used as doctor's surgery for a number of years Doctor just vacating Please write for appt London W 12 — No 135 BMA House Tavistock Sq W C 1

GOWER STREET (76) LONDON W C — HAREWOOD CHAMBERS —Bed Breakfast Bath 6/6 with Dinner 9/6 Reduction for Permanency 50 rooms hot and cold water — Museum 3941

HARD TIMES —THOSE REQUIRING PRIVATE SECRETARIAL SERVICES and small SHARE in fine CONSULTING ROOM Portland Place can have these cheaply —Apply SECRETARY 94 Goldhurst Terrace N W 8

HAMPSTEAD —NEAR BUS AND TUBE Suitable for Doctor or Dentist Converted into TWO FLATS and ONE MAISONETTE TOTAL FLAT LET at £110 FIRST FLOOR LET at £85 Lower maisonette vacant Estimated rent £160 Lease 33 yrs GR £10 Price for quick sale £2 150 —Apply OWNER 5 Gt Marlborough Street W 1 (Tel Gerrard 6372)

HARLEY STREET —PART TIME CONSULTING ROOM TO LET Hand or assistant wanted —Address No 113 BMA House Tavistock Square W C 1

KILVINGTON HALL —THIS RESIDENCE TO BE LET at a very reasonable rent Within easy reach of Harrogate Stand in its own grounds Has central heating electric light excellent water supply telephone etc Would make ideal Nursing Home or Convalescent Establishment All particulars gladly given by Captain H T FAWCETT Land Agent Yarm Yorkshire

OPPINGTON KENT —A RAPIDLY GROWing district 23 mins by electric trains from London HOUSE for sale on an important corner near station eminently suitable for a Doctor South aspect 6 bed and dressing room 2 reception bath (h and c) Water Garage Architect built pre war Price Freehold price reduced from £2 100 to £1 600 for quick sale —Address No 109 BMA House Tavistock Square W C 1

WINSLOW BUCKS

WELL SUITED FOR NURSING HOME PRE WAR FAMILY RESIDENCE IN EXCELlent repair 3 Reception 6 Bedrooms Bathroom Garage Stabling Card room Orchard & Paddock 4¼ acres Possession Bargain price — JAMES STYLES & WHITLOCK Estate Offices Ingleby

QUEEN ANNE STREET — HANDSOME Ground Floor CONSULTING ROOM with waiting room attendance and every convenience part time £40 per annum Delightful residential suite also available Low rent —No 3218 BMA House Tavistock Sq W C 1

RENT FREE —DOCTOR'S HOUSE IN NORTH London 6 room kitchen etc in EXCHANGE for ATTENDANCE on attached Surgery Preferences Would suit Doctor's widow and family —Address No 125 BMA House Tavistock Square W C 1

RESIDENTIAL CLUB FOR GENTLEMEN —Hampden Club Hampden Street N W 1 to King's Cross Station Large Club room 300 bedrooms and bed sitting rooms 15/ to 25/ per week Illustrated Prospectus Secretary Museum 3424

TWO TRAINED NURSES HAVE A WELL appointed HOUSE as a GUEST HOUSE for gentle people needing care and attention Moderate rate —Address No 222 BMA House Tavistock Square W C 1

WIMPOLE STREET —FIRST FLOOR CONSULTING ROOM Very light and open Left Rent £150 Also PART TIME CONSULTING ROOM very large 50 gus Handsome waiting room —Address No 101 BMA House Tavistock Square W C 1

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ROUNDHEAD STONE VILLAGE, EDGE HILL, Nr BANBURY

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FOR SALE—MOST LUXURIOUSLY SITTING and upholstered BATH CHAIR Adjustable back and leg rest Good as new cost £96 Messrs Carters make Reasonable offer accepted Mrs EDWARD LANE FOX Walton House Bolton Spa Yorks

FOR SALE PRIVATE SANATORIUM FOR Tuberculosis Average annual receipts for last 3 years exceed £1 500 Price including land Sanatorium buildings and doctors residence two year purchase—Address No 221 B M A House Tavistock Square W C 1

FOR SALE COMPLETE OUTFIT FOR SHIPS SURGEON or other officer height 5 ft 11 in BLUE UNIFORM AND WHITE drill and evening KIT with uniform case £8—Address No 224 B M A House Tavistock Square W C 1

SAFETY FIRST — ERNEST GRIMALDI [illegible] many concerning [illegible] valuable [illegible] present used cars guarantee
Special deferred terms for Doctors financed by ourselves to ensure strictest privacy List of cars available for immediate delivery posted on request Extensive list of testimonials available for inspection Personal attention guaranteed —ERNEST GRIMALDI Ltd 148/150 Great Portland Street W 1 Museum 3931 & 7236

APPOINTMENTS—Contd

THE INFANTS HOSPITAL Vincent Square Westminster

Applications are invited for the post of HOUSE PHYSICIAN (female) The appointment is for six months Salary at the rate of £75 per annum with board residence and laundry Applications and copies of testimonials should reach the undersigned not later than *June 30th*
ALFRED F SMART
Secretary

THE LIVERPOOL EAR EAR AND THROAT INFIRMARY Myrtle Street LIVERPOOL

Applications are invited for the post of HOUSE SURGEON (male) to the Out Patient Department Salary £120 per annum with board and lodging Duties mainly in Ear and Throat Department Applications stating age and qualifications together with copies of not more than three recent testimonials should be sent before July 1st to CHARLES W WRIGHT Esq 9 Harrington Street Liverpool

BRADFORD ROYAL INFIRMARY

HOUSE PHYSICIAN (male) wanted immediately for six months Candidates must be single and legally qualified Salary £135 per annum with board residence and washing Hours are 45 15 days and six resident officers
Applications stating age qualifications and previous experience with copies of recent testimonials should be sent to the undersigned by 1 o'clock June 28th
J J BALLON
Secretary Superintendent

APPLICATIONS ARE INVITED FOR THE post of *Resident Medical Officer* (male or female) ROYAL [illegible] contains over 100 beds is one of the premier provincial hospitals in Scotland and offers exceptional opportunities of gaining experience in *all branches of the profession* Salary at the rate of £100 rising to £150 per annum
Applications with testimonials to be forwarded to the TREASURER Dumfries and Galloway Royal Infirmary 3 King Street Dumfries at once

SCUNTHORPE & DISTRICT WAR MEMORIAL HOSPITAL (86 Beds)

Applications are invited for the post of Second Resident (male) as HOUSE PHYSICIAN to take up duties as early as possible Salary at the rate of £150 per annum with board residence and [illegible] must possess registration and applications to together with to
ARTHUR F MAW Secretary

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKE ON TRENT

ORTHOPAEDIC HOUSE SURGEON

The Committee invite applications for the post of Orthopaedic House Surgeon Salary £150 per annum with board residence and laundry Previous orthopaedic experience not essential Fractures constitute 80 per cent of cases
Applications with two copies of recent testimonials to be sent to the undersigned immediately
W STEVENSON
Secretary and House Governor

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKE ON TRENT

ASSISTANT HOUSE PHYSICIAN

The Committee invite applications for the post of Assistant House Physician Salary £125 per annum with board residence and laundry Previous hospital experience desirable
Applications with two copies of recent testimonial to be sent to the undersigned immediately
W STEVENSON
Secretary and House Governor

ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER (158 Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post to take up duties at an early date Six months £125 per annum with Laundry Candidates must state nationality to make [illegible] undersigned enclosing [illegible] monial

DONCASTER ROYAL INFIRMARY (185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Salary at the rate of £175 per annum with residence board and laundry The appointment is for six months and renewable
Applications accompanied by not more than three testimonials to be sent to the undersigned
WALTER J SMITH
Secretary Superintendent

THE STOCKPORT INFIRMARY

JUNIOR RESIDENT SURGEON (male) required Salary £150 per annum with board residence and laundry Applications with copies of three recent testimonials stating age University or Medical School and experience to be delivered to the undersigned not later than Wednesday June 29th
EDWIN J PEARCE
Secretary Superintendent

DARLINGTON GENERAL HOSPITAL (120 Beds)

Wanted SENIOR HOUSE SURGEON fully qualified unmarried Salary £175 per annum with board residence and laundry Applications stating age and qualifications with copies of two recent testimonials to be sent to *ARTHUR FIDDES Secretary General* Hospital Darlington

ROYAL BERKSHIRE HOSPITAL READING

CASUALTY OFFICER required as from July 9th The candidate must be fully qualified and registered Remuneration at the rate of £120 per annum with board residence and laundry Application with copies of testimonials to be sent to the undersigned not later than June 29th
F A LYON Secretary

BRISTOL GENERAL HOSPITAL

The Committee invites applications for the following appointments which become vacant August 1st next
TWO HOUSE PHYSICIANS TWO HOUSE SURGEONS RESIDENT OBSTETRIC OFFICER HOUSE SURGEON TO THE SPECIAL DEPARTMENTS and a CASUALTY HOUSE SURGEON
The appointments will be for six months Salaries at the rate of £80 per annum and the rate of £100 per annum for the Casualty House Surgeon and in the event of all appointments being held at the rate of £100 per annum in each case with board residence etc provided in the Hospital
Candidates must be registered under the Medical Acts and produce testimonials of good personal character and ability and must have *recent experience in the administration of anæsthetics*
Forms of application etc to be returned from the Secretary must be returned completed with copies of testimonials addressed to the undersigned on or before Monday July 11th from whom further particulars may be obtained
THOMAS W CLEGG Secretary

CARDIFF ROYAL INFIRMARY (Associated with Welsh National School of Medicine) No of Available Beds—490

Applications are invited for the post of CASUALTY SURGICAL OFFICER
Salary is at the rate of £75 per annum to an applicant with previous Hospital experience and £50 per annum without The appointment is for six months
Applications with copies of three testimonials should be submitted at the earliest moment as the post will become vacant on July 11th
F ARMSTRONG
June 21st 1932 Medical Superintendent

ROYAL INFIRMARY BLACKBURN (240 Beds—5 Resident)

YOUTH HOUSE SURGEON (male) required at a salary of £150 per annum rising to £200 with board residence laundry etc To commence duties July 1st if possible
Applications with copies of testimonials stating [illegible] to be sent [illegible] to A SMITH Hon Secretary To [illegible] of the Royal [illegible] preceding [illegible] Final Examination

STIRLING DISTRICT MENTAL HOSPITAL, LARBERT

THIRD ASSISTANT MEDICAL OFFICER required (lady) with *some previous experience* of modern Laboratory methods and Pathological work Well-equipped Laboratory and facilities given for Research work Salary commencing at £250 per annum with board lodging and laundry [illegible] to provision of the [illegible] munition Act Applications [illegible] particulars and [illegible] and testimonials to the

BUPSTEW HAYWOOD AND UNSTALL WAR MEMORIAL HOSPITAL

Wanted JUNIOR RESIDENT MEDICAL OFFICER (male) Salary £150 per annum with board and residence Must be fully qualified Experience in Ophthalmic and Ear Nose and Throat work will be an advantage
Applications stating age and experience together with copies of three recent testimonials to be sent to me
High Lane C F HOWARDES
Burslem Stoke on Trent Secretary

SOUTH EASTERN HOSPITAL FOR CHILDREN Sydenham S E 6

Applications are invited for the post of RESIDENT MEDICAL OFFICER (lady) The appointment will be for six months from July 7th Honorarium £100 per annum with board residence and laundry Applications for the post should be made on forms which may be obtained from the Hon Secretary Mr H E DENT 182 Tulse Hill Dulwich S E 21 to whom recent testimonials must be sent on or before July 4th

GENERAL INFIRMARY SALISBURY (General Hospital 161 Beds)

TWO HOUSE SURGEONS (male) required to commence duties on July 4th
Candidates must be unmarried fully qualified and registered Salary £150 per annum with board etc
Applications with copies of testimonials to be sent to the House Governor and Secretary from whom a copy of the Rules may be obtained on application

THE LONDON LOCK HOSPITAL
91 Dean Street London W

The Board of Management invite applications for the appointment of SURGICAL REGISTRAR Honorarium £100 per annum The appointment is for one year Candidate who must be fully qualified and fully registered are invited to send in their applications to either with three copies of testimonials to the Secretary at 285 Harrow Road W 9 not later than first post on Sun 24th Selected candidates will be required to attend a meeting of the Medical Committee on July 7th Copies of the Laws and Bye Laws relating to this appointment can be obtained on application to the Secretary Candidates must be Fellows (or Members) of the R C S England or Surgical Graduates of a University of the United Kingdom Duties to commence July 20th

By Order of the Board
H J FASON
Secretary

June 10th 1932

THE LONDON LOCK HOSPITAL
91 Dean Street London W

The Board of Management invite applications for the post of HOUSE SURGEON at the Male Lock Hospital Candidates must be doubly qualified and duly registered The appointment is at the rate of £175 per annum with furnished room full board and laundry The appointment is for six months duties to commence on July 10th Applications enclosing copies (only) of three recent testimonials to be sent to the undersigned on or before 10 a m on Wednesday June 29th

By Order of the Board
H J FASON
Secretary

June 9th 1932

VICTORIA HOSPITAL BURNLEY
(125 Beds)

HOUSE PHYSICIAN (Male)

Applications are invited for the above post which will become vacant on June 1st next The duties include the giving of a certain number of anæsthetics The appointment is for six months from June 1st and carries a salary of £150 per annum with board etc This Hospital is approved by the London University for the purpose of the MB and MS examinations

Applications stating full details of qualifications and experience and accompanied by copies of testimonials should be addressed to the undersigned forthwith

CECIL W COOLING
Secretary Superintendent

VICTORIA HOSPITAL BURNLEY
(125 Beds)

HOUSE SURGEON (MALE)

Applications are invited for the above post which will become vacant on July 1st next The appointment is for six months in the first instance and carries a salary of £150 per annum with board etc This Hospital is approved by the London University for the purpose of the MB and MS examinations

Applications giving full details of qualifications and experience and accompanied by copies of testimonials should be addressed to the undersigned forthwith

CECIL W COOLING
Secretary Superintendent

MANCHESTER ROYAL INFIRMARY

SURGICAL OFFICER TO OUT PATIENTS

The Board of Management invite applications from registered Medical Practitioners for the above appointment

The duty will be to assist in the treatment of Surgical out patients on two mornings a week The appointment (non resident) is for a period of one year but the holder of the office will be free for selection on two subsequent occasions for a similar period Salary £35 per annum

Candidates must send in their applications and testimonials to the undersigned not later than 9 a m on Thursday June 30th

Secretary
FRANK C HAZELL
General Superintendent and Secretary

ROYAL ALBERT HOSPITAL AND EAR INFIRMARY DEVONPORT

Applications are invited from duly registered and unmarried Practitioners for the following resident appointments

HOUSE SURGEON
ASSISTANT HOUSE SURGEON

Salaries House Surgeon £150 per annum Assistant House Surgeon £100 per annum apartments board and laundry free

Applications stating age qualifications with copies of not more than three testimonials should be forwarded to the undersigned not later than

By Order of the Committee
FRANK HOWE Secretary

HOSPITAL OF ST JOHN AND ST ELIZABETH
60 Grove End Road London N W 8

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (male) The appointment will be for six months from August 1st Salary at the rate of £100 per annum with full board Applications together with copies of three testimonials should reach the undersigned on or before June 29th

F DUDLEY HOBBS B A
Secretary

HORTON GENERAL HOSPITAL BANBURY OXON (60 Bed)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male or female) Vacant July 12th The appointment is for six months Salary £150 per annum with suite of room board laundry Applications with reference to

RICHARD H PRESCOTT
Secretary House Governor

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Terms post free on application

SUFFOLK—MIXED RESIDENTIAL DISTRICT 2/3 or 3/7 hars of £2 600 at 2 years purchase Panel of 4 000 (only house 3 rec 4 bed dressing bath 2 attics Separate offices etc Garden and garage To rent Partner about 30 35 desired—No 9041

BUCKS—1/4 SHARE OF £3 200 1/3 Partner Increasing Practice Panel 1 800 worth £1 050 Appt £310 Mid fees 3 to 10 gns Visits 5/6 to 21/ Good hours 3 recep surgery etc 4 bed 2 attics bath etc Small garden open country at back Could be managed about 30 desired—No 9040

LANCS TOWN—HALF SHARE IN PRACTICE of about £1 600 with panel worth £480 Mostly middle and working class with one Infirmary Visiting fees 2/6 to 21/ About 6 midwifery cases p a fees 3 to 10 gns No appt but possibility of one worth nearly £800 p a Double fronted house facing park 2 reception rooms library 4 bedrooms attics etc Good surgery accommodation with separate entrance Vendor open to arrangements re house Half share 1½ years purchase—No 9033

NORTH RIDING NEAR COAST—OVER £1 400 p a increasing Panel 1 275 Several appts About 30 mid cases p a fees 30/ to 42/ Visits 3/6 Modern house in garden village with open aspect 2 recep 3 bedrooms etc Rent 16/8 per week including rates Surgery near rent free Premium £2 200—No 9035

LONDON S W—ABOUT £900 P A ON MAIN road 7 000 panel increasing 10 to Insurance £50 40 mids cases p a fees 5 to 5 gns Visiting fees 5/6 to 10/6 Surgery 2 6 Good corner house Surg and wait room with splendid 9 other rooms and bathroom etc Would sell to a child or might rent Premium £1 400 Also nucleus about £2 per week plus Panel of 50—No 9034

YORKSHIRE—NEAR LEEDS—£700 1 Panel over 500 increasing Visiting fees 4/ to 7/6 Surgery 2/6 About 12 mid cases p a fees 2 to 4 gns Semi detached double fronted house surgery and wait room dining room 3 bedrooms bath etc Garage with room over Freehold £850 Premium for Practice 2 years purchase—No 9033

SOUTH WALES—LEADING COLLIERY VILLAGE near beautiful country £915 p a (Panel and contract £844) Offered about 20 mid cases p a fees 2 or 3 gns Convenient house 3 rec 3 bed bath and cup surgery Rent £45 Premium £800—No 9032

LONDON S E (WOMAN'S PRACTICE) £350 Lease Panel 145 Visits 3 6 Surg 2 6 Small flat at rent of £60 p a inclusive Premium £275 Also nucleus in Fulham Rd £60—£70 p a Panel 32 Lock up 25/ p w Premium £50 inclusive—No 8991

WEST RIDING—OLD ESTAB PRACTICE IN outskirts of industrial town Average £1 050 p a Panel 400 Two appointments Fees 3/6 to 10/6, some at 21/ Modern house 5 bed 2 recep large surgery etc Sell or let Alternative house with 6 bed 2 recep Separate surgery etc Rent £100 Very suitable Built for doctor Premium £1 550—No 9024

CHANNEL RESORT—RADIOLOGICAL PRACTICE About £500 p a scope for Electrotherapy No opposition Population of 40 000 covered by Practice Premises centrally situated at rental of 21/ per week Premium for good will and plant (cost £800) £700—No 9025

SOUTH COAST—FASHIONABLE RESORT—Good class Practice nominal opening with select panel Income over £950 Scope and new housing estate developing Visits 5/ to 10 6 Good house facing sea 4 recept on room 7 bedroom 2 bathroom Premium for Practice and lease (43 years to run) £2 800 each of which £950 can be raised on mortg—No 9014

SURREY HILLS OLD ESTABLISHED Country PRACTICE disposed £650 p a Fees 5 6 to 10 6 Panel 400 Premium 1½ years purchase Good house 6 bedrooms reception room electric light good garden about 1 acre with tennis court £1 600 or rent £80—No 8992

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Telegrams REASIDE TUBERCLE WESTRAND LONDON

KENT —PARTNERSHIP (half an hour's train journey from London) in good mixed class practice Receipts nearly £4 000 p a Panel over 3 000 Fees 3/ upwards Suitable house available Excellent scope for young and energetic man with experience preferably English or Scotch Premium for 1/2 share 2 years purchase

LONDON W —PARTNERSHIP in good mixed class residential locality Choice of houses Excellent scope for further increase Receipts £3 300 Panel 2 800 Fees 2/6 upwards Premium for 1/3 share with possible increase 2 years purchase

DURHAM —Middle class and industrial PRACTICE Average receipts approx £500 Panel 370 Medium sized house Branch surgery Fees 2/6 up No appointments Prem £725 or offer Excellent scope

HOME COUNTIES —PARTNERSHIP in good class Practice situated in well known country town Receipts approx £6 000 Select easily run panel Medium sized house to rent Premium for 1/4 share 3 years purchase This Practice has been known to the Agency for many years and is highly recommended It is essen that the incoming Partner shall hold the I R C S and be aged about 30 Appointment to Hospital Staff

LONDON E —Situated within short distance of City and West End Well established and growing PRACTICE in thickly populated locality Receipts approx £1 200 Panel about 1 000 House to rent Fees 2/ up Excellent scope one appointment Premium 2 years purchase or near offer

LONDON S W —Working class PRACTICE in thickly populated locality Very compact low expenses easily run Small house available Branch Surgery Receipts over £2 100 Panel nearly 2 300 Fees 1/6 upwards Premium £4 360 cash

YORKSHIRE —Mixed C I in large town Suitable house available Receipts £600—£700 Panel 512 increasing Premium 1½ years purchase

NORTHANTS —Well established Town PRACTICE Corner house (5 beds) garden garage Receipts over £1 100 Panel 1 000 Fees 2/6 upwards Premium £1 800

LONDON S W —NUCLEUS mixed C P in thickly populated locality Flat to rent on lease Receipts £400 to £450 Panel nearly 600 Fee 2/6 up Premium £500 cash

LONDON S W —West End PRACTICE non panel non dispensing Attractive house on lease Receipts £1 400 Fees 1 gn upwards Premium £2 600 to include lease carpets fixtures fittings etc

YORKSHIRE —Town PRACTICE in industrial locality Medium sized house (5 beds) Receipts approx £700 Panel 520 Fees 2/6 up Premium for Practice and free hold house £2 000 cash

HOLIDAY LOCUMS

We are now preparing our lists for Locum engagements for the forth coming Holiday Season Principals requiring a REALLY RELIABLE SUBSTITUTE are strongly advised to make early application

HANTS —Middle class Country PRACTICE Practically unopposed Suitable for semi retired Practitioner Receipts over £400 Panel 94 Fees 2/6 upwards Premium £450

NEWCASTLE (Near) — Well established middle class and club PRACTICE Medium sized house to rent Receipts over £450 Panel 500 Fees 2/6 upwards Premium £775 to include drugs instruments surgery fittings etc

LONDON S W (Near West End)—Mixed Italian PRACTICE Main thoroughfare Suitable house to rent at exceptionally low rental Receipts approx £1 000 p a all cash Panel 730 increasing Fees 3/6 to 1 gn Premium to include Practice lease drugs, furniture etc £3 500 or near offer

WEST END —ELECTRO THERAPEUTIC AND MECHANO PRACTICE— Situated in the Harley Street locality Rooms rented on agreement Fees 10/6 upwards Trained staff Premium to include equipment and goodwill £1 200

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1 WEST RIDING CITY —Industrial and Mixed PRACTICE Receipts av £656 p a Panel 512 and both steadily increasing Nice house garage etc

2 BIRMINGHAM — NUCLEUS IN BETTER class growing suburb Nice modern corner house

3 LANCS — FASHIONABLE RESIDENTIAL and SEASIDE TOWN Good class non dispensing Panel and Private PRACTICE Receipts £874 Good house for sale Gar etc.

4 NORTH [illegible] and Club £800 p a P Good house ener getic man

5 LANCS —Old stab and Industrial PRACTICE Receipts £2 242 and increasing Panel 1 450 Appointments worth about £95 Good hous to rent

6 LANCS (Large Town) — Non dispensing non panel large Surgical PRACTICE Receipts aver £1 179 p a and unlimited scope Good house etc

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1 DEVON —Near Sea —PARTNERSHIP Half share of £1 200 p a increasing Panel 600 Good house with large garden for sale Prem for Partnership £1 200

2 LONDON S E —Mixed PRACTICE Can be run as lock up Panel 177 Takings year £280 part time only Scope Prem £275 Flat with surg and waiting rm To rent £60 p ann

3 WESTERN CITY —PARTNERSHIP for young Practitioner Fifth share returning last year £530 net Increase to two fifths with in four years Panel 3 120 increasing Good house to rent £45 p a Price £900 to include book debts No dispensing

4 LANCASHIRE —Good class PRACTICE In pleasant seaside resort Panel 230 Receipts £870 p a Price £1 000 Good house

5 COUNTRY PRACTICE —Old established in pleasant country Last year £1 700 accounts Pan 1 946 Appt £120 In private hands 23 years Good house garage large yard in House and Practice £3 000 Borders of Monmouthshire

6 CORNWALL —PRACTICE in small country town near sea Average £1 300 p a Panel about 637 Plenty of scope especially for a Surgeon Prem £2 000 Could be let for sale

7 MIDLAND CITY —Old established Central and General PRACTICE Receipts last year £2 740 Pan 1 500 recently established Training House to rent Prem £2 000

8 LONDON S —BRANCH SURGERY Average takings last three years £765 Panel about 400 House on Lease Scope for man living on or near premises Price £1 000

9 S DEVON —Small Country PRACTICE for sale or turning £300 p a Panel over 200 Evening Surg Large house with grounds in charming locality to buy

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LANCS TOWN —Sound old-established MIXED PRACTICE Cash receipts last year £1 300 Panel 1 604 Excellent house 2 reception rooms 4 bedrooms garage and garden Can be rented or purchased Premium 1½ years purchase —No 359

MANCHESTER —Sound old-established INDUSTRIAL PRACTICE Average cash receipts £1 100 p.a. Panel 1 150 Select Surgery premises on main road Rent £40 p.a. Premium 1½ years purchase —No 360

EAST COAST —SEASIDE TOWN —Old established mixed-class PRACTICE Cash receipts last year £1 506 Panel 686 Excellent living and professional accommodation 2 reception 6 bedrooms Garage and small garden Rent £100 p.a. or Long Lease Premium 1½ years purchase —No 33...

MANCHESTER —Middle-class PRACTICE in pleasant suburb Cash receipts 1 51 £1 3.. Panel 453 Charming house to rent 3 reception 6 bedrooms Billiard room Large garden and garage Premium —Practice —1½ years purchase —No 322

LIVERPOOL —Outdoor ASSISTANT with view to partnership in about two years Cash receipts £1 500 p.a. Panel 1 900 Salary £350 £400 p.a. and accommodation —No 3624

MANCHESTER — Old-established PRACTICE Cash Receipts last year £1 915 Panel 1 585 Scope for increase Good house 2 reception 4 bedrooms Premium—Practice—1½ years purchase —No 3..3

LINCOLNSHIRE —UNOPPOSED COUNTRY PRACTICE in present hands 48 years Profitable district Average cash receipts £98.. p.a. Panel 1 ..00 Excellent house 2 reception 6 bedrooms Garage and large garden Rent £50 p.a. Premium 1½ years purchase —No 362

CHESHIRE BOLTON —SALE OF TOWN —PARTNERSHIP in very old-established MIDDLE CLASS PRACTICE Average cash receipts £..,000 p.a. Panel 1 900 Premium—half share—1½ years purchase —No 3..

NORTH WALES COAST —Mixed PRACTICE in beautiful district Average gross cash receipts £1 200 p.a. Panel ..50 Excellent house 3 reception 3 bedrooms Lavatory basin and modern conveniences Partial Premium for quick sale £1 ,00 (to include drugs at buying & fitting) —No 348

LEEDS —MIXED PRACTICE in good district Cash receipts last year £..00 Panel 9.. Scope for increase —Semi-detached house 3 sitting rooms Garage Rent £60 p.a. Premium 1½ years purchase —No 3.8

MEDICAL WOMAN'S PRACTICE —MANCHESTER —Cash receipts last year £64 Panel 450 Good scope Excellent house 3 reception 6 bedrooms Garage Rent £60 p.a. or lease Premium 1½ years purchase —No ..50

NEAR PRESTON —Mixed PRACTICE of considerable scope Cash receipts £..00 Panel ,00 Could be increased to £..0 p.a. Premium—Reasonable —No 3..

CHESHIRE COAST TOWN near LIVERPOOL —Middle-class PRACTICE Average cash receipts £1 184 p.a. Appointments £90 p.a. Small select panel Excellent corner house to rent 3 reception 5 bedrooms Premium—Practice—1½ years purchase —No 31..

NORTHUMBERLAND —PLEASANT COUNTRY TOWN —Mixed General PRACTICE Cash receipts last year £1 988 Panel 1 040 Appointments £100 p.a. Excellent house 2 reception 5 bedrooms Garage and garden Premium 1½ years purchase —No 351

DEATH VACANCY —LANCS TOWN — Mixed-class PRACTICE Average cash receipts £1 634 p.a. Panel 829 Scope for Surgery if desired Good accommodation to rent Premium 1 years purchase —No 335

DURHAM —Near LARGE CITY —PARTNERSHIP in sound industrial and colliery PRACTICE. Receipts £4 900 p.a. Panel 4 500 Suitable house for married man Premium 1/4 or 1/3 share—2 years purchase —No 357

EAST YORKS —Country Town near Coast —Unopposed mixed PRACTICE Cash receipts last year £860 Panel 630 Excellent detached house 3 reception 4 bedrooms garage and large garden Premium 1 years purchase —No 346

LANCS — PLEASANT COUNTRY TOWN —Sound Mixed PRACTICE Average cash receipts £1 374 p.a. Appointments (transferable) £65 p.a. Panel 1 03.. Excellent house 3 reception 6 bedrooms garage and large garden Premium—Practice—1½ years purchase —No 326

MANCHESTER —Resident Suburban Middle-class PRACTICE Suitable for two in partnership Cash receipts 1931 £4 5.8 Panel 1 400 Two excellent houses to let with ample accommodation Premium 1½ years purchase part time arrangement —No 2..

CHESHIRE TOWN near MANCHESTER —PARTNERSHIP in old established Practice Average cash receipts £5 1.1 p.a. Panel 3 600 Excellent house 2 receptions 3 bedrooms garage and garden Premium—one-fifth share—£1 ..0 —No 3..

LIVERPOOL —Small PRACTICE in growing suburb Cash receipts approx £300 p.a. Panel 309 Tremendous scope Good house with Garden and Garage to rent —No 354

SOUTH OF ENGLAND —OPHTHALMIC PRACTICE in centre of thriving City Cash receipts last year £1 ..5 Panel £1 1 .. £.. Must be well qualified Locum for disposal—ill health —No ..95

VENEREAL DISEASES PRACTICE —North receipts last year £1 ..5 Convenient house to rent at £60 p.a. Premium —moderate off —No 340

NEAR LIVERPOOL —COAST TOWN —Mixed PRACTICE Cash receipts last year £..00 Panel 1 .00 Good house (three reception 4 bedrooms Garage and garden Premium for half share —No 344

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(FOUNDED 1880)

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Medical Practitioners wishing to dispose of Practices or desiring to take Partners are advised to negotiate the business through the British Medical Bureau Vendors may depend upon receiving introductions only to eligible and bona fide purchasers All information is treated in strictest confidence Full and trustworthy information regarding Practices Partnerships etc for disposal supplied gratis to Purchasers

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Assistants and Locum Tenens can be secured at short notice It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out

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1 ESSEX AND HERTFORDSHIRE
NICE little Practice in beautiful district Receipts £100 from panel and club Nice (3 bedrooms and attic etc) large garden Gas and main water supply Rent £60 p.a. on lease Premium to effect a quick sale £300

2 LONDON W—GOOD CLASS NON DISPENSING PRACTICE averaging £2 735 p.a. in the West End No midwifery The house is in one of the best parts and can be rented on long lease Premium with good introduction £5 000

3 LONDON N W—GOOD CLASS NON DISPENSING PRACTICE in residential suburb Cash receipts last 3 years averaged £1 938 p.a. No panel Semi detached house (8 bed and dressing rooms) with nice garden and lawn for sale or rent Premium 2 years purchase

4 LONDON W—CASH AND PANEL PRACTICE OF £1 570 p.a. in well populated area Panel over 2 150 Surgery premises can be rented on lease Premium £3 500

5 LONDON S W — PRACTICE £580 P.A. IN SUBURBAN district Small panel Considerable scope House (3 bedrooms) on main road rent £70 p.a. Premium £750

6 HOME COUNTIES—PARTNERSHIP IN PRACTICE AVERAGING over £8 200 p.a. in country town under 30 miles from London Panel about 1 400 Partner required to assist in the Surgical work must hold the F R C S and have held H S appointment and preferably experienced in Ear Nose and Throat work One eighth share for deposit at 2 years purchase with further share later Cottage Hospital

7 MIDLANDS—BRANCH PRACTICE AVERAGING £620 P.A. in small clean manufacturing town Panel 500 Corner house (6 bedrooms) for sale Scope Premium £[illegible]

8 EAST ANGLIA — GOOD CLASS PRACTICE OVER £1 900 p.a. in important town No panel Well situated house (7 rooms) to rent First-class Hospital with good chance for well qualified man to go on staff Premium 1½ years purchase

9 BIRMINGHAM—PARTNERSHIP IN STEADILY INCREASING Practice over £1 900 p.a. Panel 1 000 Excellent house (6 bedrooms) garage and good garden for sale Scope for increase especially in Eye work Premium one third or two fifths share 2 years purchase

10 MIDLANDS — PARTNERSHIP IN PRACTICE OVER £2 700 p.a. in clean manufacturing town Panel between 1 700—1 800 House with 4 bedrooms garage and small garden to rent Good well equipped Hospital Share of one third to one half at 1½ years purchase

11 HOME COUNTIES — PARTNERSHIP IN EXCEPTIONALLY good and rapidly increasing Practice about £[illegible]0 000 p.a. in delightfully situated country town easy distance of coast At present house (4 bedrooms) to rent Partner must hold the F R C S and be aged about 30 Appointment on Hospital Staff Premium for one sixth to one fourth share 2 years purchase Preliminary Assistantship

12 EAST ANGLIA — [illegible] TRY PRACTICE nearly £4 700 p.a. [illegible] district Panel 3 000 Country house [illegible] grounds with picturesque garden [illegible] orchards and meadow for sale Considerable scope for increase Premium two thirds or four ninths share 2 years purchase

13 WORCESTERSHIRE — PARTNERSHIP IN PRACTICE nearly £1 900 p.a. in beautifully situated Market Town Moderate panel Suitable house with garden to rent Premium one half share 1½ years purchase

14 LONDON S W—PARTNERSHIP IN PRACTICE OVER £2 800 p.a. in pleasant residential suburb Panel 1 750 Suitable Flat available After Preliminary Assistantship a share which later would be increased to seven fifteenths would be sold to suitable man at 2 years purchase

15 N. OF ENGLAND—SEASON PRACTICE ABOUT £150 P.A. in small Inland Spa No panel or midwifery Good house (6 bedrooms etc) with nice garden to rent on lease Good scope for increase Premium £100

16 S. COAST — NUCLEUS OF PRACTICE IN DEVELOPING Seaside Place close to Popular Resort Semi detached house (3 bedrooms) facing sea with garage and garden for sale Opening would suit semi retired Practitioner

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Practices and Partnerships for Disposal (continued)

1" EASTERN COUNTIES — THIRD PARTNER REQUIRED for sound old-established Practice of £4,500 p.a. in particularly pleasant Market Town within easy reach of sea. Land 1,600 sq. ft. House. *Premium* 2 years' *purchase* for share of about £1,000 p.a. Option much more than a share within 3 years.

18 S. AFRICA—PRACTICE OF £2,000 P.A. IN A TOWNSHIP in one of the richest districts in the Union. Charming Bungalow to rent. *Premium* to include Book Debt, Dressings, Surgery and Household furniture £1,500.

19 N. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. *Premium £2,500.*

20 N.E. OF ENGLAND — RAILWAY INCREASING PRACTICE IN large town. Receipts past year £1,700 including Contract Panel of under 500. Well-situated house (6 bedrooms) in good residential part for sale. Ample scope for increase. *Premium* £2,750.

21 NORTHUMBERLAND — PRACTICE OF £2,000 P.A. IN small industrial town. Panel 1,040. House for sale. *Premium* —Practice—1½ years' purchase.

22 S. AFRICA — *PRACTICE OF ABOUT £2,000 P.A. IN A* famous Cape Peninsula situated detached Bungalow (5 bedrooms) garage and small garden for sale. Good hospital (with private ward). *Premium* £1,100.

23 S. WALES COAST — PRACTICE ABOUT £1,200 P.A. IN a most beautiful district. Panel 760. Excellent House (3 bedrooms) with first-class *Sport of all kinds. Premium* £1,500. Good scope.

24 S. COAST — PRACTICE AVERAGING £1,160 P.A. IN residential Cape and health resort. Panel 1,056. Practically no district nurse, as Panel much individual. Scope for considerable increase. *Premium* £1,750.

25 KENT—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice nearly £4,400 p.a. in an industrial town. Panel about 2,000. Detached house (4 bedrooms) with garden to rent. Units of scope for increase. One-fifth share 2 years' purchase.

26 LONDON WEST END — X-RAY AND ELECTRO-THERAPY Practice. Fees last nearly £620. Large house (8 bedrooms) to rent or lease. *Premium* £925.

27 S. COAST — FASHIONABLE HEALTH RESORT — PARTNERSHIP in steadily increasing non-dispensing Practice about £3,500 p.a. Small select panel. One-fourth share at 2 years' fresh. Applicants Partner should be Oxford, Cambridge or London man.

28 N. OF ENGLAND — INLAND HEALTH RESORT—NON-PANEL PRACTICE averaging £1,100 p.a. Small select panel. House (6 bedrooms) with large garden for sale or rent. *Premium* for practice 2 years' purchase.

29 LONDON, W. — PRACTICE £500 P.A. IN SUBURBAN district. Detached double-fronted house (6 bedrooms) and dispensing with small garden for sale. *Premium* 2 years' purchase.

30 W. OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of £1,165 p.a. in first-rate City. Panel 1,350. House (4 bedrooms) to rent. Share worth £500 p.a. at 2 years' purchase.

31 MIDLANDS — STEADILY INCREASING PRACTICE OF BE tween £1,100—£1,200 p.a. in thriving town one and a half hours by rail from London. Panel over 1,000. Excellent house (6 bedrooms) garage and garden to rent. Cottage Hospital. *Premium* 1½ years' purchase.

32 LONDON S.W. — CASH PRACTICE ABOUT £1,100 P.A. near Victoria. Panel about 1,250 which could be considerably increased. Valuable corner residence for sale. Premium for Practice £1,000.

33 LONDON E.—CASH AND PANEL PRACTICE OF £840 P.A., in populous district. Panel 570. Small house to rent on lease. *Premium* 1½ years' purchase.

34 ESSEX—PARTNERSHIP IN PRACTICE OF £5,400 P.A. IN developing country district easy distance of coast. Panel 3,200. Detached house (6 bedrooms) garage and good garden for sale. Scope for increase. One-fourth share 2 years' purchase.

35 S. COAST — PRACTICE AVERAGING £480 P.A. IN RURAL district on outskirts of popular holiday resort. Panel 400. Rent of surgery premises 10/- weekly. *Premium* £600.

36 W. OF ENGLAND — PARTNERSHIP IN PRACTICE NEARLY £2,600 p.a. in country town. Panel about 1,000. Good house (5 bedrooms) garage and garden of about half acre to rent. Good educational facilities. Cottage Hospital. Premium one-third share £1,550.

37 MIDLANDS — PRACTICE AVERAGING £1,710 P.A. IN growing town with nice surrounding. Panel 1,100. House available later. Good hospital and scope for surgery. *Premium* 3½ years' purchase.

38 HOME COUNTIES — NON-DISPENSING *PRACTICE* AVERAging £1,150 p.a. in growing residential watering-place. No panel. Detached house (4 bedrooms) with every modern convenience and attractive garden to rent. *Premium* 1 years' purchase.

39 SHROPSHIRE — PRACTICE £800 P.A. IN MARKET Town. Panel 170. Suitable house to purchase. *Premium* 1½ years' purchase.

40 S. WALES — MIXED PRACTICE IN GROWING DISTRICT of sport town. Receipts last year over £800. Panel 760. House (3 bedrooms) garage and garden to rent. Good prospects for scope. Premium £1,200.

41 LONDON N.W.—NON-DISPENSING *PRACTICE IN GOOD* residential district. Receipts last year nearly £900. No panel. Unfurnished house with garage and large garden to rent. *Premium* £900.

42 KENT—*COUNTRY PRACTICE OF OVER £800 P.A. IN* beautiful part. Panel nearly 400. Very attractive residence (5 bedrooms) central heating, grounds of 2 acres, orchard, etc. Rural Sport. Premium 1½ years' purchase.

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1 SOUTH MIDLANDS —Old established mixed class and steadily increasing PRACTICE situated in small country town in the midst of rich agricultural district Cash receipts for the past 3 years average nearly £1 700 p a last year £1 798 including panel of over 1 200 Very good house (6 bedrooms etc) with 2 an acre of garden Garage 1 rice free hold £1 500 1 remium 1½ years purchase

2 HOME COUNTIES —Country PRACTICE in very attractive district within easy reach of London Old established chiefly better class practice producing for last 12 months £970 Panel of over 500 and appointments worth about £60 Fees 2/6 to 21/ Not much mid wifery at from 3 gns The very nice house with all modern conveniences and good garden Garage 1 rice for freehold £1 700 1 remium £1 450

3 NORTH WEST LONDON —Old established better class non dispensing PRACTICE averaging for the last four years about £840 p a including panel of about 120 Fees 3/6 to 21/ Purchaser can choose his own residence if present house not required 1 remium £1 050

4 PARTNERSHIP —WITHIN THREE MILES OF CHARING CROSS— One half share is offered in a well established middle and working class Practice producing about £2 000 p a Panel of approximately 1 300 Visits 2/6 upwards 1 urchaser can choose his own residence 1 remium 2 years purchase

5 PARTNERSHIP —SIX MILES NORTH EAST OF LONDON —Owing to the retirement of the senior Partner (through advancing age) a third Partner is required in a very old established mixed class Practice £3 800 including appts £100 and panel over 3 700 Very little midwifery Good house with ample accommodation at moderate rental Fourth share to commence with Prem 2 years purchase

6 PARTNERSHIP —SOUTHERN COUNTY —Within 35 miles of London A HALF SHARE is offered in an increasing country practice situated in delightful residential district Gross cash receipts average over £3 000 p a Panel of 1 500 and appts worth about £200 p a Commodious house in good position with large hall 2 reception 9 bedrooms Garden and garage for two cars 1 rice for freehold for sale 1 remium 2 years purchase

7 YORKS —LARGE TOWN —Steadily increasing middle and working class PRACTICE producing nearly £700 p a including panel of over 500 Fees 2/6 to 7/6 Suitable house with surgery and waiting room dining room three bedrooms and bathroom Garden Garage 1 rice for freehold £850 Premium 1½ years purchase

8 PARTNERSHIP —YORKS —(Within easy reach of coast)—A ONE THIRD SHARE is offered in a very old established good mixed class practice situated in an attractive town having an up to date Hospital Gross cash receipts for the last three years average over £6 000 Panel of about 2 400 Fees 3/6 to 2 gns Midwifery 2 to 15 gns House in pleasant residential part of town contains 3 reception 5 bedrooms etc Good garden Garage Price £2 000 or might be rented Premium for share £3 250 Ingoing partner should be married and accustomed to good class work

9 HOME COUNTIES —(Within 15 miles of London)—PARTNERSHIP —In a very pleasant residential district the two fifths share of a very old established mixed class Practice is for disposal Cash receipts last financial year amounted to £1 900 including appts and panel of 845 Remaining partner has been in the Practice 13 years Nice house (surgery accommodation 2 reception 4 bedrooms etc) with good garden and garage 1 rice for freehold £1 325 1 remium for share £1 520

10 PARTNERSHIP —DESIRABLE OUTLYING RESIDENTIAL SUBURB —A suitable Partner (experienced preferably married about 30 years of age and having the necessary capital) can acquire a share in a first class income to commence with of about £1 250 in an old established good mixed class Practice worth nearly £8 500 last year Option of further additional share at stated interval up to one third Cool house with ample accommodation to rent or purchase Premium two years purchase

11 MIDLANDS —CATHEDRAL CITY —Old established 1 tter-class non panel PRACTICE producing for last twelve months £3 300 No appointments Fees from 5/ to 21 Not much midwifery Commodious house with 2 reception 6 bedroom etc 1 rice for freehold £2 000 part on mortgage Good Surgical scope if required 1 remium £5 000

12 ESSEX —COAST TOWN —Very old established non panel (but good scope for this if wished) middle class PRACTICE averaging £1 156 p a Visits 5/ to 10 6 medicine extra Fees little mid wifery Expenses light Detached house with 2 reception 3 bed rooms bathroom etc Garden 1 ent £100 p a on lease Premium 14 years purchase

13 YORKS —EAST RIDING —Well established unopposed PRACTICE within reach of the coast and near large town Cash receipts for last 12 months £3 350 including panel of 630 Fees 3/6 to 10/6 House contains 3 reception 5 bedrooms etc and professional room Garage One acre of garden 1 rice for freehold £900 part on mortgage Hunting shooting golf etc Premium £1 175

14 SOUTH COAST TOWN —Chiefly middle class non panel PRACTICE averaging over £500 p a but offering scope for increase Fees 7/6 to 10/ Eight roomed house with kitchen etc and professional rooms Can be rented or purchased Premium £600 Vendor retiring

15 PARTNERSHIP —EASTERN COUNTIES —A third Partner is required in a good mixed class Practice situated in very pleasant market town within reach of the sea The share offered at first will produce about £1 000 p a with increase eventually up to one half 1 ractice is old established and producing about £4 500 p a 1 anel of 1 600 Choice of houses or income Partner could reside in rooms 1 re mium 2 years purchase

16 SOUTH WEST OF ENGLAND —PARTNERSHIP —A one third share is offered in a good middle and better class Practice situated in an attractive country town near coast There is a Hospital of 50 beds and good Surgical scope Average gross cash receipts over £3 000 p a Selected panel of 570 Average fees 4/ to 21/ Choice of houses 1 remium 2 years purchase

17 YORKSHIRE —I ROSPEROUS TOWN —PARTNERSHIP —A one third share (with increase later) is offered in a good middle class non panel Practice averaging £3 300 p a Fees 3/ to 2 gns Nice house with 2 reception 4 bedrooms etc Small garden Electric light Garage 1 rice for leasehold £1 200 £800 on mortgage Good sport and excellent schools Very good Surgical 1 rospects Premium for share £2 000

18 WITHIN 40 MILES OF LONDON (EAST) AND CLOSE TO THE SEA —PARTNERSHIP —A fourth share is offered owing to the retirement of one of four partners in an old established Practice in very pleasant country district Income £5 400 p a with increase later Detached house with ample accommodation Garden etc Fencing 1 rice freehold £1 700 1 remium 2 years purchase

19 WITHIN 70 MILES NORTH OF LONDON —COUNTY TOWN — PARTNERSHIP —A one third or two fifths share is offered in a well established middle and working class Practice having very good scope for increase Receipts average over £2 000 p a 1 anel of nearly 2 000 Fees 2/6 to 7/6 Choice of houses on rental or purchase Premium only 1½ years purchase

20 SOUTH WEST OF ENGLAND —FAVOURITE TOWN —Old established —A share producing about £1 000 p a with further increase later is offered in an old established non panel and non dispensing Practice having large scope for development Fees from 3/6 to 21/ wifery 5 to 10 gns A suitable house can be rented and held M D London Premium for share 2 years purchase Good Hospital with over 200 beds Ingoing Partner should be experienced and

21 SOUTH OF ENGLAND —FAVOURITE COAST TOWN —Old established chiefly better class 1 RACTICE producing about £1 800 p a Small selected panel Fees 3/6 to 10/6 Not much midwifery Good house with ample accommodation and garden 1 reehold for sale Premium £3 000

22 NORTH MIDLAND CITY —PARTNERSHIP —Two Partners are required to take over a three fifteenths share each (with increase later) in a very sound old established and increasing 1 ractice in desirable town Average gross cash receipts for the past three years £5 000 Panel of about 4 000 No clubs and very little night work Fees from 5/ Suitable accommodation can be obtained 1 remium 2 years purchase Excellent sport and schools

23 PARTNERSHIP —WEST OF ENGLAND —A share producing about £700 p a is offered in a well established Practice averaging over £1 500 p a Ultimate succession later Panel of nearly 1 400 Choice of houses 1 remium £1 400

WANTED TO PURCHASE —(1) HOME COUNTIES —Well established 1 rac tice 1referably in good residential town producing from £1 000 to £1 500 p a 1anel not essential Nice house with garden Ample capital available (2) LONDON or Suburl preferably S W or W Income £1 500 to £2 000 with large 1anel Capital £4 000 (3) SUFFOLK or NORFOLK —Country practice having an income of not less than £1 500 p a with one 1anel Require 1 ar tic ulars once

ASSISTANTS REQUIRED —(1) YORKS Large Town —Indoor Salary £300 p a to experienced Scotch Graduate (2) DORSET —In four £300 p a Well established 1 RACTICE in country district (3) SOUTH WALES —Indoor £300 p a Young Irishman preferred Car provided (4) DURHAM —Outdoor £400 p a Country 1 ar TICE in pleasant district Must be single and Protestant (5) Favourite SOUTH COAST TOWN —Indoor £250 p a with view to 1artnership Easy work (6) LONDON North —Indoor £300 p a

The Agency has made arrangements for special facilities on very favourable terms to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership Full details on application

P inted and publ hed by the B t sh Med cal Assoc at on at their Office Tavistock Square in the Parish of St Pancras in the County of Lond n

PROTEIN METABOLISM

"Apart from the total amount and type of protein present in cows milk there is another great difference between it and breast milk and that is the type of curd formed from it during digestion and this is a difference in physical state In the digestive processes breast milk forms a fine flocculent curd while that formed from cows milk is large hard and tough The baby can deal with the former but has much difficulty in digesting the latter This, in my opinion is the reason of the infant's difficulty in dealing with the protein content of cows milk It has nothing to do with the protein per se, but the indigestible curd is to blame for the difficulty If the character of the curd can be modified the child will deal easily with the protein content of cows milk

(Proc Nat Con M C W 1930)

Paediatricians are now agreed that in the artificial feeding of infants the proteins of choice are the proteins of cows milk which contain all the amino acids necessary for growth These must be present however in sufficient quantity, and must be at the same time easily digested without any undue strain on the alimentary system

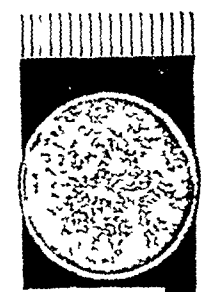
The proteins in Cow & Gate fulfil the above desiderata and while containing all the essential amino acid groups they give curds in the stomach which are comparable to those produced by breast milk

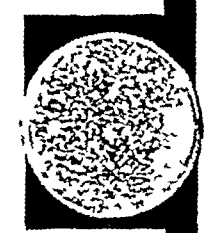
The use of Cow & Gate for the artificial feeding of infants thus supersedes the old-fashioned and undesirable modifications of raw cows milk by Lime Water, Sodium Citrate and other chemicals

These characteristic properties of Cow & Gate are arrived at by the rapid heat treatment of the Improved Roller process, which in addition retains the natural vitamins of the original milk

Clinical samples of Cow & Gate Milk Foods will be gladly sent on request to any Member of the Medical Profession

The attention of the Medical Profession is drawn to our new product Caprolac (Goats Milk in powder form) indicated in cases of allergic conditions and cows milk intolerance


Cow & Gate


Breast Milk


Raw Cows Milk


Spray Milk Powder

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INTRAVENOUSLY It is better tolerated than calcium chloride The acid-base factor is eliminated

INTRAMUSCULARLY It is painless and non-irritating It is the only calcium salt which can be so administered in adequate doses

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BY MOUTH for prolonged administration, to meet an increased demand by the organism

4—It is completely sufficient in itself as a therapeutic agent.

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